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Introduction

ManageEngine ServiceDesk Plus is a comprehensive help desk and asset management software that provides help desk agents and IT managers an integrated console to monitor and maintain the assets and IT requests generated from the users of the IT resources in an organization. The IT help desk plays an important part in the provision of IT Services. It is very often the first contact the users have in their use of IT Services when something does not work as expected. The IT help desk is a single point of contact for end-users who need help. Without this, an organization could certainly face losses due to inefficiencies.

The two main focuses of the ManageEngine ServiceDesk Plus are IT Request tracking and Asset Management. Using the following modules of ServiceDesk, technicians and system administrators can resolve issues of complex nature in no time and thus reduce the end-user frustration arising due to time consuming issue resolving process. They can also keep track of the needs of the organization with the help of asset management and proactively allocate resources to the right user/departments, thus increasing the productivity of the organization.

- Requests
- Problem
- Change
- Solutions
- Assets
- Purchase
- Contract
- Configuration Management Database

The request module functions as the Help Desk where requests are fetched and necessary solutions provided by assigning technicians to resolve issues reported.

When you log in to ManageEngine ServiceDesk Plus , the application displays the ServiceDesk Plus home page that contains information on pending requests, overdue requests, requests assigned to the user who has logged in, approved/unapproved changes by the logged in technician, open and unassigned problems assigned to the logged in technician, individual user's task list, and depending on the user login, the other dash board views such as Contract and Purchase Order summary may also be displayed.

Requests

Clicking on the Requests tab on the header pane takes you to the request module. This serves as the IT help desk module where the IT requests from individual users are fetched, tracked, technicians are assigned, and a solution is provided.

Problems

The objective of Problem Management is to minimize the adverse impact of Incidents and Problems on the business that are caused by errors within the IT infrastructure, and to prevent recurrence of Incidents related to these errors. In order to achieve this goal,

Problem Management seeks to get to the root cause of Incidents and then initiate actions ti improve or correct the situation.

Change

The goal of Change Management is to ensure that standardized methods and procedures are used for efficient and prompt handling of all Changes, in order to minimize the impact of change-related incidents upon service quality and consequently to improve the day-to-day operations of the organization.

Solutions

This module serves as a knowledge base for your IT help desk team as well as your users. Users can search this for solutions for issues and solve them themselves. Also when technicians resolve issues, they can directly convert these resolutions as knowledge base articles. To view the solutions, click the Solutions tab in the header pane.

Assets

Assets tab helps you to track & manage your assets efficiently. It tracks all your newly added assets, and have a record of all the assets in the organization. Assets can be categorized as IT, Non IT Assets & Asset Components in an organization. This includes Workstations, Printers, Routers, Software Licenses, Scanners, Projectors and even your air conditioning systems. Thus it offers a single view to track and manage all your assets in the organization.

Purchase

Here you can create new purchase orders and track them till the order has been delivered. The same details can also be maintained for future reference. Clicking the Purchase tab takes you to the Purchase module.

Contract

This module holds the details regarding the maintenance contracts between your organization and the vendor (s) from whom the assets of your organization have been purchased. Clicking the Contracts tab in the header pane takes you to the contract module.

Configuration Management Database

Configuration Management Database (CMDB) lets you track and manage all your Configuration Items (CIs) in a single repository. Unlike the asset database that comprises of a bunch of CIs, the CMDB in ServiceDesk Plus is designed to support a vast IT structure where the interrelations between the CIs are maintained and supported successfully. Its the CI relationship that makes the CMDB an effective decision making tool, impact and root cause analyzer.

In addition to these, ServiceDesk Plus has GUI-rich reports for requests and Assets modules. There are predefined sets of reports that help you evaluate the efficiency and productivity of your IT help desk team, the load of requests handled by the team, the assets distribution, and many more. Also, the ServiceDesk administrator can configure various help desk, asset, and enterprise-related settings, such as the working hours of the organization, service-level agreements, user roles, departments and many more.

Based on the permissions provided by the ServiceDesk Plus administrator to each of the users of the application, you will be able to access the above modules. If you do not have the access permission, contact your ServiceDesk Plus administrator.

ServiceDesk Plus Editions

ServiceDesk Plus is available in three editions namely,

- **Standard Edition** - comprises of Incident Management alone.
- **Professional Edition** - includes Asset Management, Purchase Management and Contract Management
- **Enterprise Edition** - includes Incident Management, Asset Management, Purchase and Contract Management along with Problem and Change Management.

The tabular below gives a quick view of the features available in the editions,

Modules/Features	Standard Edition	Professional Edition	Enterprise Edition
Incident Management	YES	YES	YES
Priority Matrix	-	-	YES
Problem Management	-	-	YES
Change Management	-	ADD-ON	YES
Asset Management	-	YES	YES
Software License Management	-	YES	YES
Purchase Management	-	YES	YES
Contract Management	-	YES	YES
Desktop Central Integration	-	-	YES
Service Catalog	-	ADD-ON	YES
Configuration Management Database (CMDB)	-	ADD-ON	YES

Contacting ZOHO Corporation

- Contact Information
- Sales
- Technical Support

Contact Information

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	Zoho Corporation Pte Ltd C/o Cananex Singapore Pte Ltd Block 1003 Bukit Merah Central #05-23 Inno-Center, Singapore 159836 **Main Line:** 63344486 **Fax:** 62819188 **Mobile:** 97552882 **Contact Person:** Ong Yang Peng **E-mail Address:** yangpeng.ong@cananex.com.sg

Sales

For purchasing ManageEngine ServiceDesk Plus from any part of the world, fill out the Sales Request Form. A sales person will contact you shortly. You can also send us e-mail at sales@manageengine.com

You can also call the Corporate office of ZOHO Corporation at the following numbers:

Phone: +1-925-924-9500
Fax: +1-925-924-9600 and request for Sales

Technical Support

One of the value propositions of ZOHO Corporation to its customers is excellent support. During the evaluation phase, the support program is extended to users free of charge.

For support, please mail to servicedeskplus-support@manageengine.com

Alternatively, you can submit your feedback from the ServiceDesk Plus product by clicking the **Feedback** link at the top right corner just above the header tabs after logging in to the application. Your feedback will be sent to the ServiceDesk Plus Support Team and they will get in touch with you. Do not forget to provide your e-mail address or your contact information for the team to get in touch with you.

Installation Guide

Introduction

The **ServiceDesk Plus Installation Guide** help you overcome the initial hiccups of installing ServiceDesk Plus successfully and starting ServiceDesk Plus as a service. This guide also provides step-by-step instructions for **setting up your database**, **performing a manual backup**, **restoration of the backup data**, **changing your server port to HTTPS** and **installing SSL Certificate**.

System Requirements

Hardware

The following table lists the hardware installation according to the number of Technician Login.

Technician Login	No of Nodes	Processor Type	Processor Speed	RAM	Free Hard Disk
5-20	50-200	Intel Core Duo	1.7 GHz	1GB	20GB
20-50	200-500		3.4 GHz	2GB	40GB
50-100	500-2000		2*3.4 GHz	4GB	40GB
100-200	1000-5000		4*3.4 GHz	4GB	80GB

Operating System

Windows

- Windows 2000 + SP4
- Windows 2000 / 2003 Server
- Windows XP Professional
- Windows 2008 Server
- Windows 7

Linux

- Red Hat Linux 7.2 and above
- Linux Debian 3.0

Supported Database

- MySQL 4.1.18
- MySQL 5.1
- MS SQL 2000, MS SQL 2005, MS SQL 2008

Install ServiceDesk Plus

Installation Files

The types of installation files for ServiceDesk Plus are,

Windows

- ManageEngine_ServiceDesk_Plus.exe
- ManageEngine_ServiceDesk_Plus_64bit.exe (**for 64 bit Windows OS**)

Linux

- ManageEngine_ServiceDesk_Plus.bin
- ManageEngine_ServiceDesk_Plus_64bit.bin (**for 64 bit Linux OS**)

Upgrade Service Pack

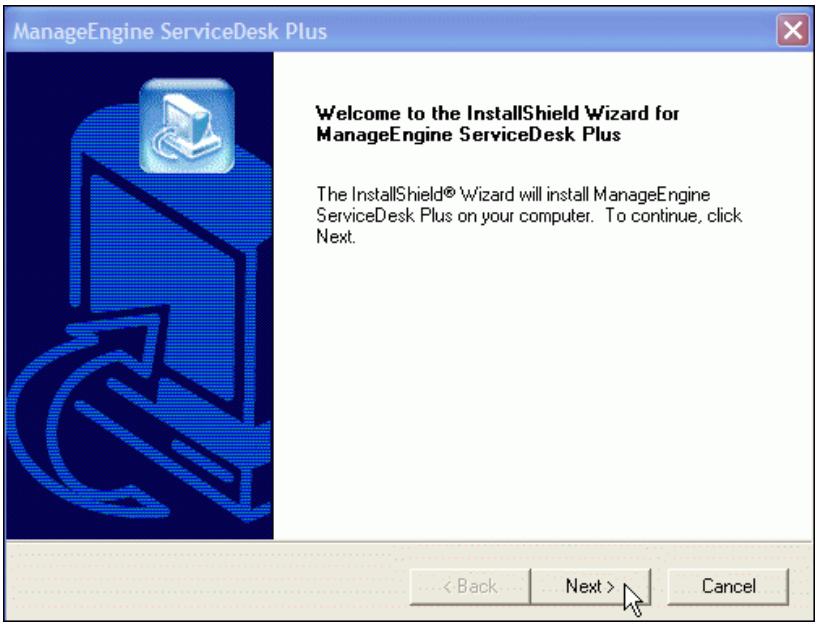
- ManageEngine_ServiceDesk_Plus_<latest_version>_SP-<build_number>.ppm

Click here to download your appropriate installation file.

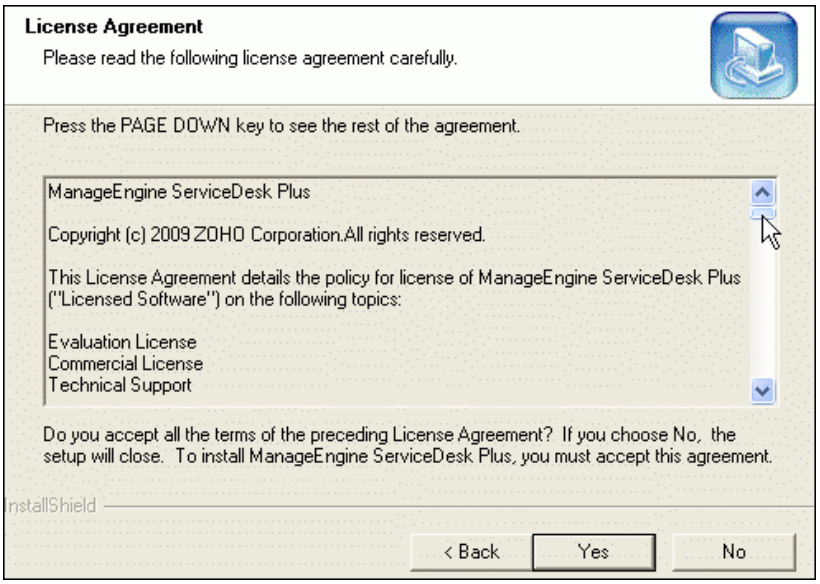
Installation on Windows

To install ServiceDesk Plus on a Windows machine,

1. Download **ManageEngine_ServiceDesk_Plus.exe** file.
2. Click the .exe file to begin the installation. The ServiceDesk Plus installation wizard appears.
3. Click **Next** to proceed with the installation.

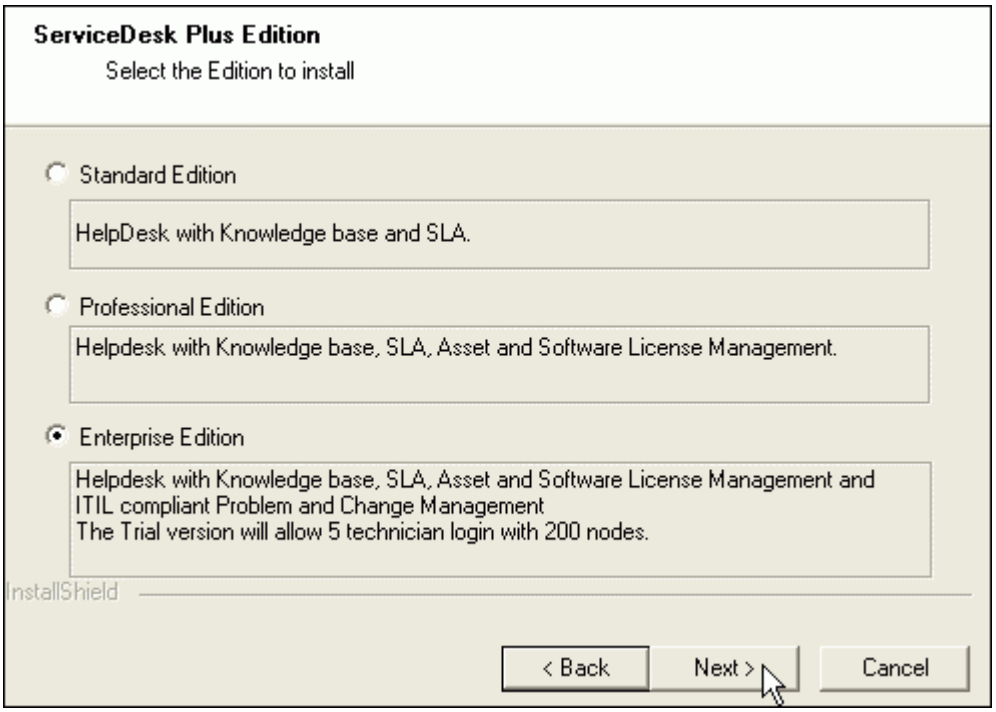


4. The **License Agreement** is displayed. Please read the license agreement carefully. You need to accept the license agreement to proceed with the installation.



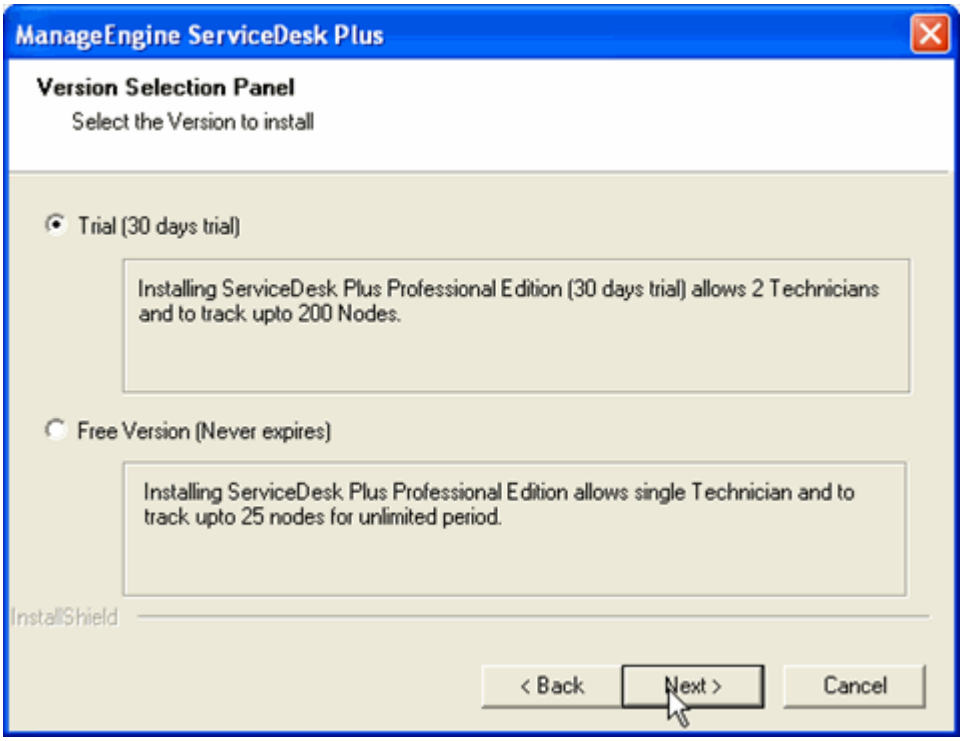
5. Click **Yes** to accept.
6. Select the **ServiceDesk Plus Edition** to install.
   - **Standard Edition** - This edition offers Help Desk Management, Self-Service Portal, Knowledge Base, SLA Management and Help Desk Report to help you manage and track your requests.
   - **Professional Edition** - This edition offers Software Compliance & License Tracking, Product Catalog, NMS Integration, Asset Reports and few other asset related process along with the features of Standard Edition.
   - **Enterprise Edition** - This is an ITIL ready help desk. It includes all features of Professional Edition plus Incident Management, Problem Management, Change Management & Configuration Management Database (CMDB).

     You can also refer the document ServiceDesk Plus Edition Comparison to choose your required edition.

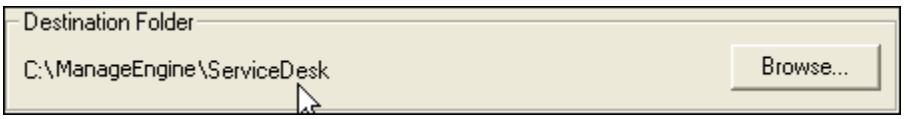


7. If you have selected Standard Edition or the Professional Edition, then the **Version Selection Panel** displays options to select either the **Trail Version** or the **Free Version**.
   - The **Trial Version** is valid for 30 days and allows 2 technician logins with 200 nodes. You need to apply a valid license key to continue using ServiceDesk Plus.

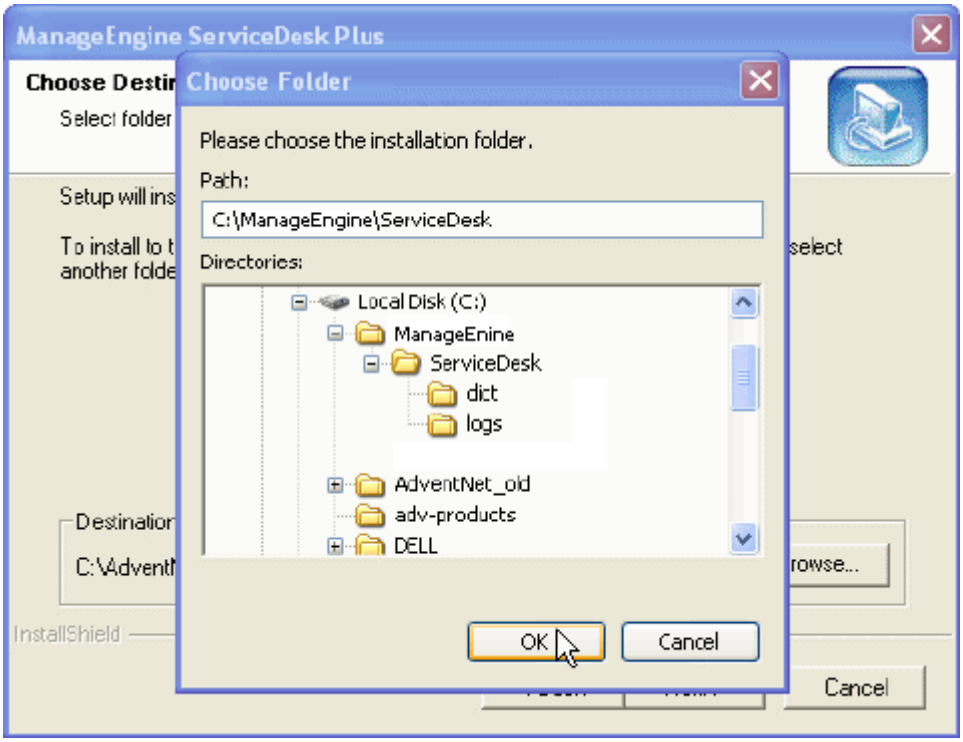
- The **Free Version**, on the other hand, never expires and can be used for unlimited time period without applying a valid license key. But the free version is restricted to a single technician login with 25 nodes.



8. If you have selected Enterprise Edition, then the **Version Selection Panel** displays only the 30 days Trial Version with 5 Technician login and up to 200 Nodes. You need to apply a valid license to continue using ServiceDesk Plus. Refer Register ServiceDesk Plus to apply the license key.
9. The next step is choosing the installation directory. By default, the application is installed in *C:\ManageEngine\ServiceDesk* directory.

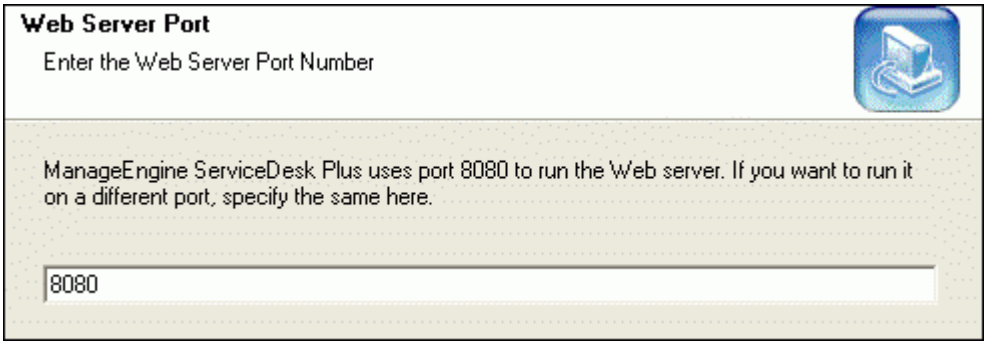


Click **Browse...** button to change the installation directory. Choose the installation folder and click **OK**.



NOTE: Please make sure that the installation directory or its parent directories do not have any space character in its name.

10. Click **Next**.
11. Provide a name that needs to appear in the **Program Folders**. By default, it is **ManageEngine ServiceDesk Plus.** Click **Next**.
12. Enter the **Web Server Port Number** to run the web server. The default port number provided is **8080**. If you already have another application running in that port, then enter the port number which is free and can be used to run the web server.

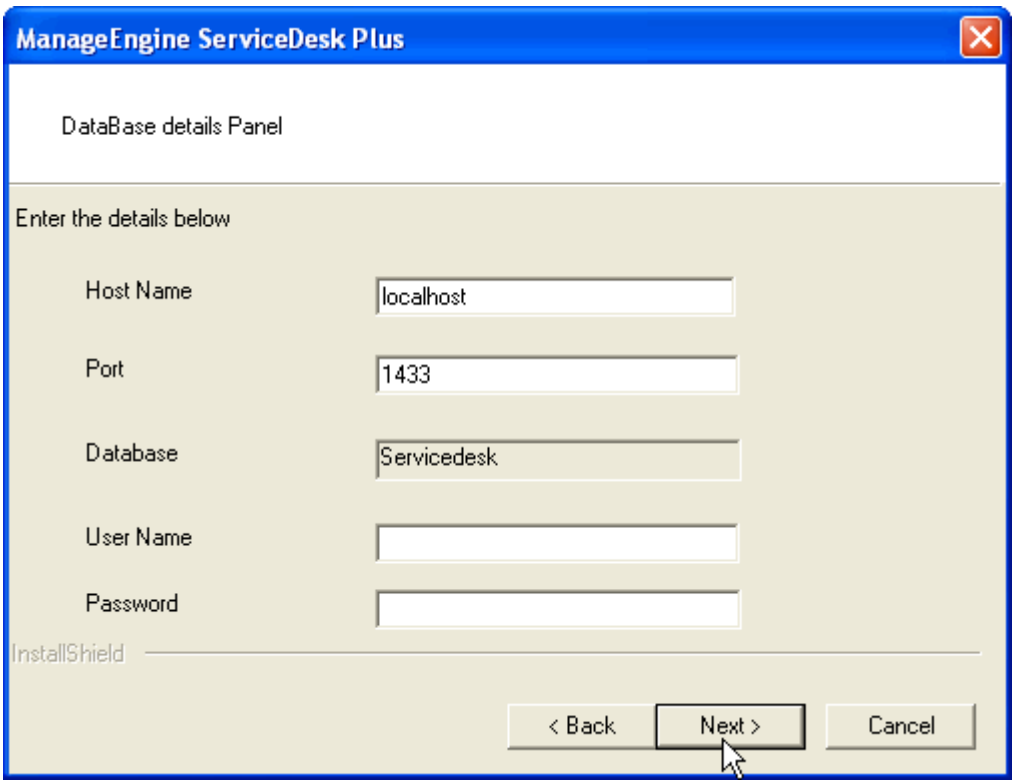


13. Click **Next**.
14. Choose the **Database** between MY SQL and MS SQL. By default ServiceDesk Plus supports **My SQL database.** To switch over to **MS SQL database** you need to

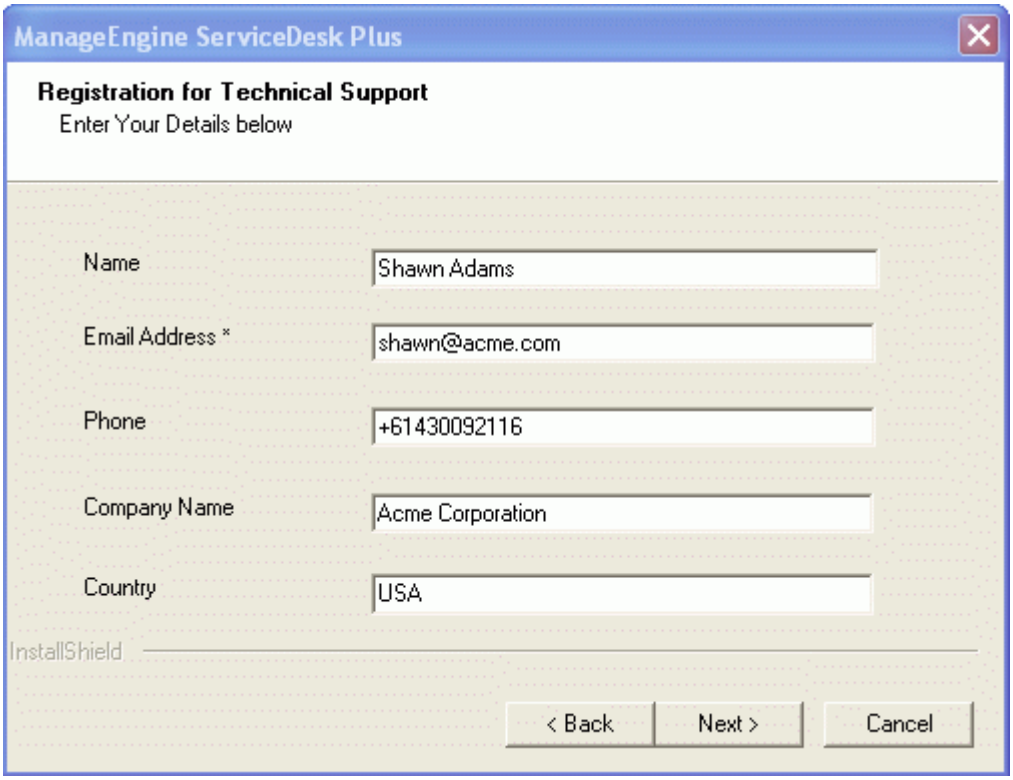
configure the SQL server to establish connection and start the server. Enter the database details as given below,

- **Host Name:** Enter the IP Address/host name in which the database is available. The default host name is 'localhost'.
- **Port:** Specify the port in the given text field. The default value is 1433.
- **Database:** By default the database name will be Servicedesk in non-editable format.
- **User Name:** Specify the user name to login to the server in the given text field.
- **Password:** Specify the password for the username in the given text field.

NOTE: To switch over to SQL database, you need to enable SQL authentication as Windows authentication will not work.

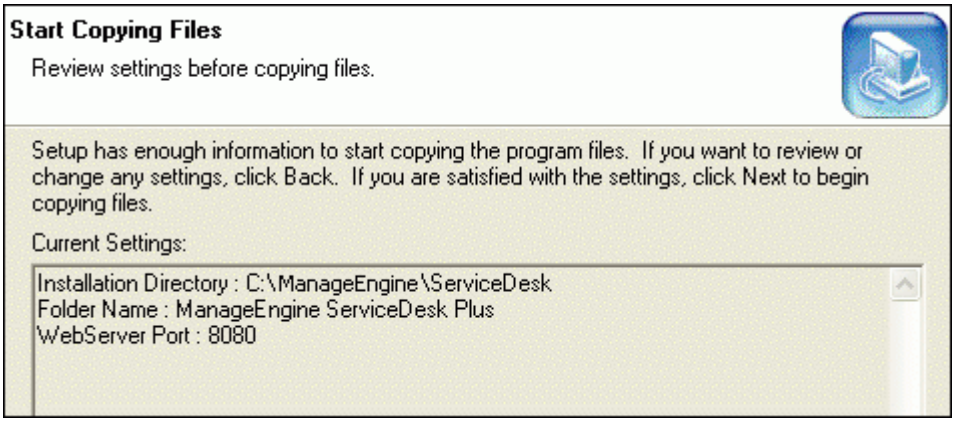


15. Click **Next**.
16. The **Registration for Technical Support** form is for acquiring technical assistance from our support team. By registering for technical support, our support team will be better informed about your organization and its specific needs, and hence provide a more focused support. Enter your details such as **Name**, contact **Email Address**, **Phone Number** (helps in making calls for immediate support), **Company Name** and **Country**. The Email Address is a mandatory field.



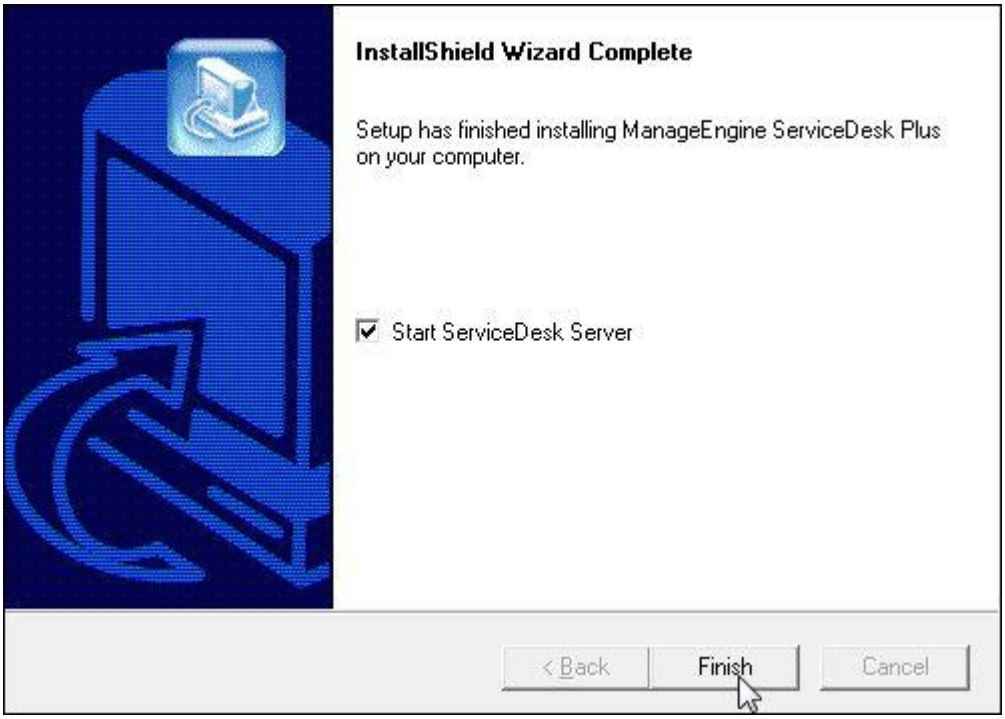
17. Click **Next**.
18. The details that you have provided till now is displayed for your confirmation:

Installation Directory: ***C:\ManageEngine\ServiceDesk***
Folder Name: ***ManageEngine ServiceDesk Plus***
Web Server Port: ***8080***



If the displayed information is correct, then click the **Next** button, or else click the **Back** button and make the necessary changes and proceed with the installation.

19. After you confirm the details, the application is installed.
20. On successful installation, the InstallShield Wizard Complete screen is displayed. By default, the option to start ServiceDesk Server is enabled. If you do not want to start ServiceDesk Plus Server, then deselect the options.
21. Click **Finish** to complete the installation. The **ReadMe** document is displayed in a pop up window.



If you had followed the instructions in the wizard and installed the application with the default settings, then the **ManageEngine ServiceDesk Plus** program group is created in the **Start** menu. If you chose to start ServiceDesk Server, then the server is started and the client window opens to view the login page. Enter the **Username** and **Password** as "administrator" to log into the application.

Installation on Linux

- Install ServiceDesk Plus on a Linux machine
- Install ServiceDesk Plus on a Linux machine without GUI
- Install ServiceDesk Plus as a Linux Service

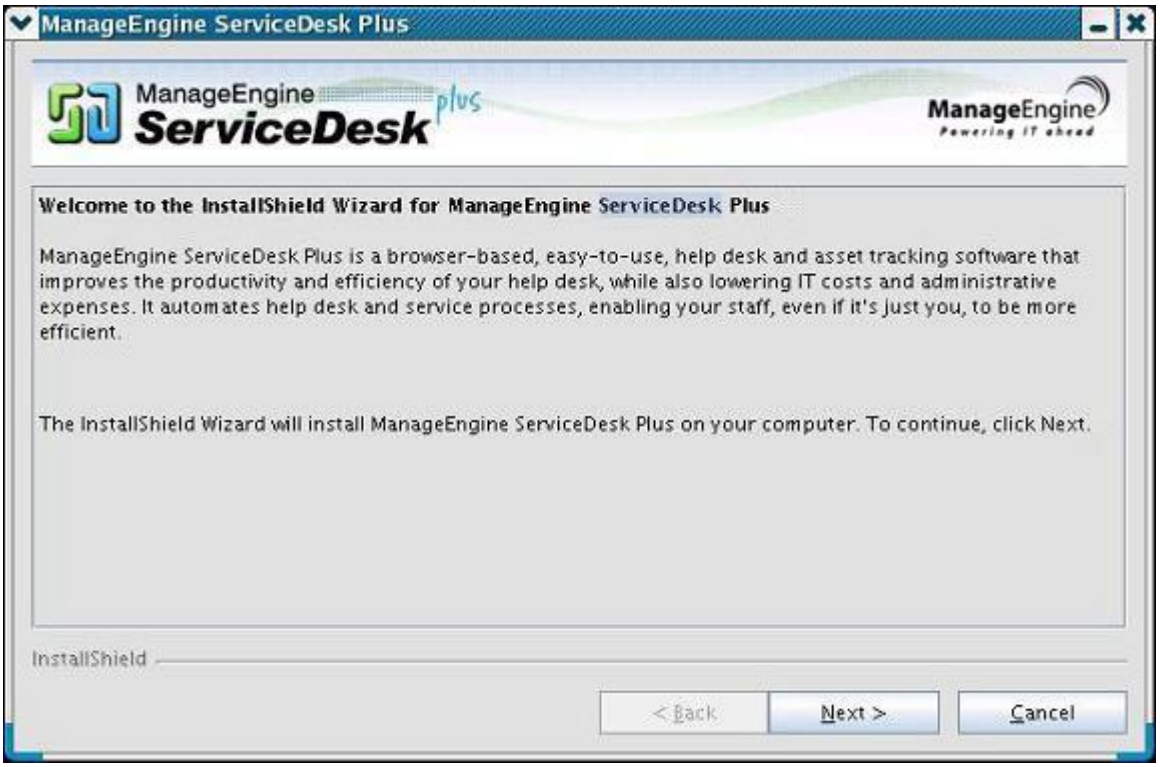
Install ServiceDesk Plus on a Linux machine

1. Download **ManageEngine_ServiceDesk_Plus.bin** file.
2. To execute .bin type files, you require the execute permission. Enter the command as given below in your command prompt.

   #chmod +xManageEngine_ServiceDesk_Plus_x_Linux.bin

3. Execute the .bin file.

   ./ManageEngine_ServiceDesk_Plus.bin
4. The **ManageEngine ServiceDesk Plus Installation Wizard** is displayed. Click **Next** to proceed with the installation.



5. The **License Agreement** is displayed. Please read the license agreement carefully. You need to accept the license agreement to proceed with the installation.
6. Click **Yes** to accept the license agreement.
7. Select the **ServiceDesk Plus Edition** to install.
    - **Standard Edition:** This edition offers Help Desk Management, Self-Service Portal, Knowledge Base, SLA Management and Help Desk Report to help you manage and track your requests.
    - **Professional Edition:** This edition offers Software Compliance & License Tracking, Product Catalog, NMS Integration, Asset Reports and few other asset related process along with the features of Standard Edition.
    - **Enterprise Edition:** This is an ITIL ready help desk. It includes all features of Professional Edition plus Incident Management, Problem Management, Change Management and Configuration Management Database (CMDB).

      You can also refer the document ServiceDesk Plus Edition Comparison to choose your required edition.

8. If you have selected Standard Edition or the Professional Edition, then the **Version Selection Panel** displays options to select either the **Trail Version** or the **Free Version**.
    - The **Trial Version** is valid for 30 days and allows 2 technician logins with 200 nodes. You need to apply a valid license key to continue using ServiceDesk Plus.
    - The **Free Version**, on the other hand, never expires and can be used for unlimited time period without applying a valid license key. But the free version is restricted to a single technician login with 25 nodes.
9. If you have selected Enterprise Edition, then the **Version Selection Panel** displays only the 30 days Trial Version with 5 Technician login and up to 200 Nodes. You need to apply a valid license to continue using ServiceDesk Plus. Refer Register ServiceDesk Plus to apply the license key.
10. The next step is choosing the installation directory. By default, the application is installed in *home/<user>/ManageEngine/ServiceDesk* directory. If you want to change the installation directory, then click the **Browse** button and choose the installation folder. Click OK.
11. Click **Next**.
12. Enter the **Web Server Port Number** to run the web server. The default port number provided is **8080**. If you already have another application running in that port, then enter the port number which is free and can be used to run the web server. Click **Next**.

    NOTE: If you want to provide a port number lesser than 1024 as the web server port, then you need to be the super-user of the system to successfully install and run ServiceDesk Plus application.

13. The **Registration for Technical Support** form is for obtaining technical assistance from our support team. By registering for technical support, our support team will be better informed about your organization and its specific needs, and hence provide a more focused support. Enter your details such as **Name**, contact **Email Address**, **Phone Number** (helps in making calls for

immediate support), **Company Name** and **Country**. The Email Address is a mandatory field. Click **Next**.

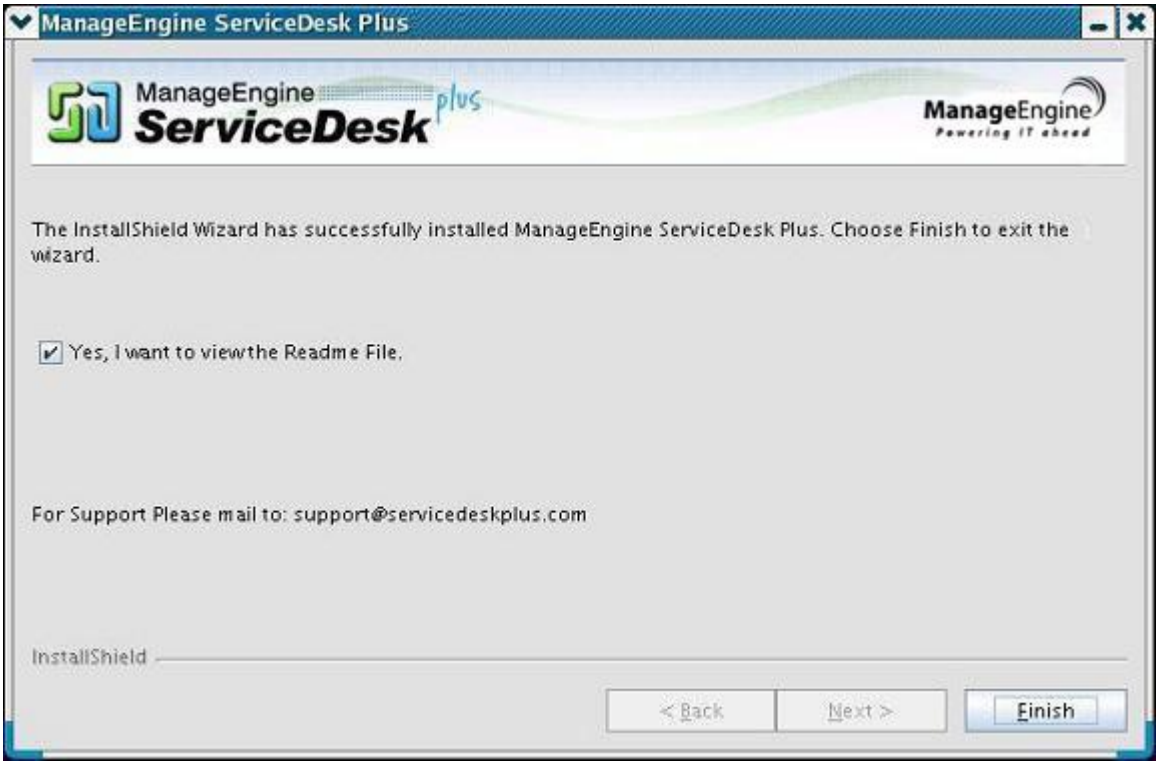
14. The details that you have provided till now are displayed for your confirmation.

    Installation Directory: ***home/<user>/ManageEngine/ServiceDesk***

    Product Size*: 62.8 MB*

    If the displayed information is correct, then click the **Next** button, or else click the **Back** button and make the necessary changes and proceed with the installation.

15. After you confirm the above details, the application is installed.
16. On successful installation, the **InstallShield Wizard Complete** screen is displayed. By default, the option to view the ReadMe file is enabled. If you do not wish to view the ReadMe file, deselect the check box.



17. Click **Finish** to complete the installation.

Install ServiceDesk Plus on a Linux machine without GUI

1. Download **ManageEngine_ServiceDesk_Plus.bin** file.
2. To execute .bin type files, you require the execute permission. Enter the command as given below in your command prompt.

#chmod +xManageEngine_ServiceDesk_Plus_x_Linux.bin

3. Execute the .bin file.

   ./ManageEngine_ServiceDesk_Plus.bin -console

```
[root@sdp-linux64 ~]# chmod a+x ManageEngine_ServiceDesk_Plus.bin
[root@sdp-linux64 ~]# ./ManageEngine_ServiceDesk_Plus.bin -console
InstallShield Wizard

Initializing InstallShield Wizard...

Searching for Java(tm) Virtual Machine...
.
Preparing Java(tm) Virtual Machine...
.................................
.................................
.................................
.................................
.................................
.................................
.................................
.................................
...............................
Welcome to the InstallShield Wizard for ManageEngine ServiceDesk Plus

ManageEngine ServiceDesk Plus is a browser-based, easy-to-use, help desk and
asset tracking software that improves the productivity and efficiency of your
help desk, while also lowering IT costs and administrative expenses. It
automates help desk and service processes, enabling your staff, even if it's
just you, to be more efficient.



The InstallShield Wizard will install ManageEngine ServiceDesk Plus on your
computer. To continue, click Next.

Press 1 for Next, 3 to Cancel or 4 to Redisplay [1]
```

4. Follow with the on-screen instructions to proceed with the installation.

Install ServiceDesk Plus as a Linux Service

1. **Download** the servicedesk.txt file from here.
2. Copy the **servicedesk.txt** to /etc/init.d/

   # cp servicedesk.txt /etc/init.d/servicedesk

3. **Edit** the servicedesk file to modify the MDIR Variable. MDIR refers to /bin. Typically, if you have installed ServiceDesk Plus as a guest user, then MDIR will be,

   MDIR=/home/guest/ManageEngine/ServiceDesk/bin

   NOTE: To edit the servicedesk file type **#vi servicedesk.txt**

4. Give executable permissions for servicedesk startup script.

   # chmod 755 /etc/init.d/servicedesk

5. Create a blank file under /var/log for logging purposes.

   # touch /var/log/servicedesk-plus.log

6. Use chkconfig command to add the script as a startup process.

   # chkconfig --add servicedesk

Upgrade Service Pack

- Upgrade Service Pack on Windows
- Upgrade Service Pack on Linux
  - Apply patch from console or command line

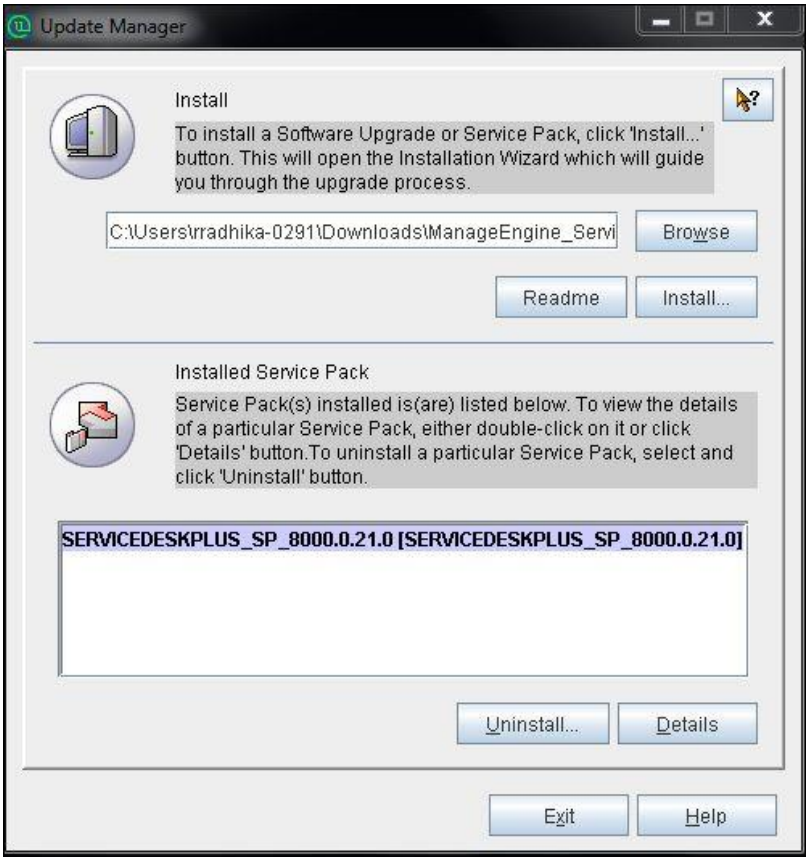
Upgrade Service Pack on Windows

To upgrade to the latest version and build of ServiceDesk Plus,

1. Stop **ManageEngine ServiceDesk** service.
2. Take a backup of the existing build for security reasons. Refer Backup Process to know how to take a backup of your data.

   NOTE: Taking a backup is essential to revert to the existing build without any loss of data if the upgrade fails due to unexpected reasons. The backup is stored under Backup folder in ServiceDesk Plus Home directory.
3. Click here to download the latest hotfix or the .ppm file.
4. Go to [ServiceDesk Plus Home]\bin and execute the file **UpdateManager.bat**.

   cmd> UpdateManager.bat
5. A Java UI pops up where you can browse for the location of the .ppm file and click install to start the installation process.



NOTE: If you are planning on performing multiple upgrades, please make sure to start and stop the application once after successfully applying a service pack, make a backup of this upgraded version and then proceed with the next service pack.

Upgrade Service Pack on Linux

1. Stop ManageEngine ServiceDesk Server.
2. Take a backup of the existing build for security reasons. Refer Backup Process to know how to take a backup of your data.
3. Click here to download the latest hotfix or the .ppm file.
4. Run the script **UpdateManager.sh** in the <ServiceDesk_Plus_Home>/bin folder.
5. From the Update Manager tool click **Browse** button to select the Service Pack file (ManageEngine_ServiceDesk_Plus__0_0_SP-x_0.ppm) that you had downloaded.
6. Click **Install...**. Follow the on-screen instructions to apply the Service Pack / Hotfix.
7. Once the upgrade is complete, start ServiceDesk Plus Server.

Apply patch from console or command line

To install a patch from console or command line,

Easiest option:

sh UpdateManager.sh -c

And it will guide the user through the steps.

Here are the other options:

sh UpdateManager.sh -u server/default/conf -c -option i -ppmPath <Patch file path including patch file name> -h <Product Home>

To un-install a patch: *sh UpdateManager.sh -u server/default/conf -c -option u -h <Product Home> -version <Patch version>*

To view installed patch versions: *sh UpdateManager.sh -u server/default/conf -c -option v -h <Product Home>*

To run UPDATEMANGER.bat from konsole mode: *UpdateManager.sh -c -option i ppmPath <Path where PPM is downloaded> -h C:\ManageEngine\ServiceDesk*

Start ServiceDesk Plus Server

- Start ServiceDesk Plus Server on Windows
- Start ServiceDesk Plus Server on Linux

Start ServiceDesk Plus Server on Windows

1. Click **Start -> Programs -> ManageEngine ServiceDesk Plus -> ServiceDesk Server** to start the web server. This takes approximately 2 minutes in a Windows XP, 512 MB RAM, and 1.0 GHZ processor. The server is started and the web client is launched in the default browser.
2. If the web client is not launched automatically, then click **Start -> Programs -> ManageEngine ServiceDesk Plus -> ServiceDesk Web Client** to start the web client. The ServiceDesk Plus login page in opened in the default web browser.
3. Enter the **User name** as "administrator" and the **Password** as "administrator" to log in to ServiceDesk Plus.

As soon as you login, the **Configuration Wizard** home page is displayed. Click **Next** button to proceed with the configurations. Refer Admin Configurations in the Admin Guide to know how to configure ServiceDesk Plus.

Start ServiceDesk Plus Server on Linux

1. Go to **<ServiceDesk Plus>/bin** directory and execute the run.sh file

   $ sh run.sh
2. To start the web client, open a web browser and type the following in the address field.

   http://localhost:8080

   Here, you need to replace the localhost with the corresponding server name where the ServiceDesk Plus web server is running and the port number 8080 should be replaced with the actual port where the server is running. The ServiceDesk Plus login page opens in the default web browser.
3. Enter the **User name** as "administrator" and the **Password** as "administrator" to login to ServiceDesk Plus.

As soon as you login, the **Configuration Wizard** home page is displayed. Click **Next** button to proceed with the configurations. Refer Admin Configurations in the Admin Guide to know how to configure ServiceDesk Plus.

Register ServiceDesk Plus

Once your trial evaluation period is over, you need to apply a valid license key to continue using ServiceDesk Plus. Please contact our sales team at sales@manageengine.com for a valid license key. Upon receiving the license file, you can register ServiceDesk Plus.

To register ServiceDesk Plus,

1. Log in to the ServiceDesk Plus application using the **User name** and **Password** of an admin user.
2. Click **Help** drop down menu -> select **License** option. The **License** window is opened.
3. Click the **Browse** button to locate the license file sent to you when you purchased the application.
4. From the file chooser window, select the license file and click **Open**.
5. Click **Upgrade**.

The registration of the ServiceDesk Plus application is complete. You can continue using the application.

Shutdown ServiceDesk Plus Server

- Shutdown ServiceDesk Plus on Windows
- Shutdown ServiceDesk Plus on Linux

Shutdown ServiceDesk Plus on Windows

1. Click **Start -> Programs -> ManageEngine ServiceDesk Plus -> Shutdown ServiceDesk**. A confirmation message is displayed.
2. Click **OK** to proceed with the shutdown.

Alternatively, right-click on the system tray icon and select **Shut down Server**. A confirmation message is displayed. Click **OK** to shut down ServiceDesk Plus.

Shutdown ServiceDesk Plus on Linux

Execute **shutdown.sh** file from the bin directory as given below,

sh shutdown.sh -S

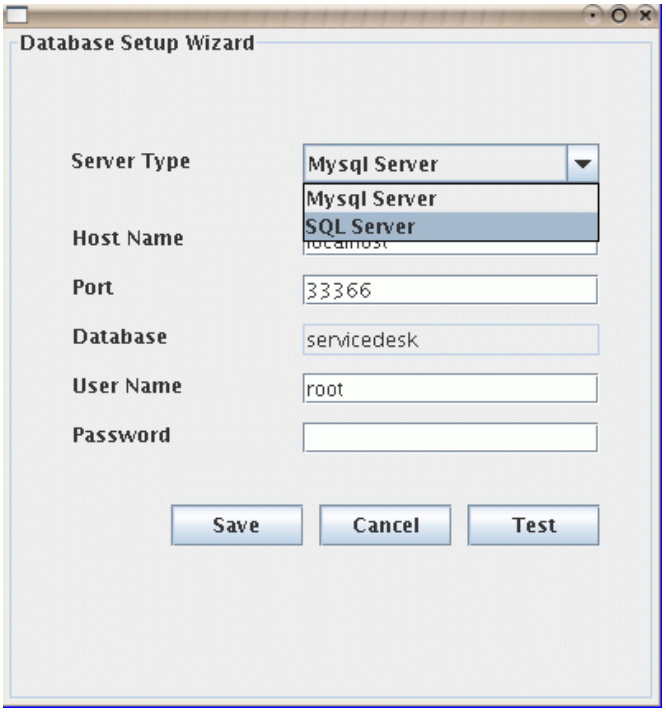
Configure the Database

- Configure the Database
  - **Configuring MS SQL Server**
  - **Configuring MY SQL Server**
- Non GUI Users
- Connect to My SQL Server
- Troubleshooting Tips

Configure the Database

By default ServiceDesk plus supports **MY SQL database** to switch over to **SQL database** you need to configure SQL server to establish connection and start the server.
Configuring MS SQL Server

1. Execute the **changeDBServer.bat** [**changeDBServer.sh for Linux**] file presented under the ServiceDesk Home. This opens the **Database Setup Wizard** page. Fill in the details of the form to configure SQL server.
   - **Server Type:** Select the server type from the combo box. Say, MS SQL
   - **Host Name:** Enter the IP Address/ host name in which the database is available. The default host name is 'localhost'.
   - **Port:** Specify the Port. The default port is 1433.
   - **Database:** By default the database name will be servicedesk in non-editable format.
   - **User Name:** Specify the User Name to login to the server
   - **Password:** Specify the Password.



2. To check the availability of connection, click the **Test** button. A pop up window pops up showing **'Connection Established'** message.
3. Click **OK** to proceed.
4. Click **Save** button to save the SQL server settings.

Configuring MYSQL Server

1. If you are using a remote MySql server and do not want to use the inbuilt server then,
2. Select **Server Type** as MySql server. This opens the database wizard page.
3. Specify the **Host Name, Port, User Name & Password.**
4. Click **Test** button and check the availability of the connection.
5. Once the **connections are established, save** the details and start the server.

Non GUI Users

Run the **changeDBServer.bat** [**changeDBServer.sh for Linux**] under command prompt by passing parameter as given below,

C:\[ServiceDesk Plus Home]\bin>changeDBServer.bat --console

It will get the DB Server necessary information from the console

```
"Usage : changeDBServer.bat --console  [for non GUI user]"
"Usage : changeDBServer.bat            [for GUI user]"
""
"=========================================================="
C:\ManageEngine\ServiceDesk\bin>changeDBServer.bat --console
"=========================================================="
""
"Usage : changeDBServer.bat --console  [for non GUI user]"
"Usage : changeDBServer.bat            [for GUI user]"
""
"=========================================================="
 requestScheme is http
*************************************************************
                  DB Server Setup wizard
*************************************************************

         1) Setup MYSQL Server
         2) Setup MSSQL Server
         3) Quit
                Go to [1/2/3] : 1

     Host : localhost
     Port : 33366
     User : root
 Password :
```

Connect to MY SQL Server

ServiceDesk Plus uses MYSQL as its default database.

Connect to MYSQL Server in Windows

1. Go to **[ServiceDesk Plus Home] \ mysql \ bin** in the command prompt.

   C:\> cd ManageEngine\ServiceDesk\mysql\bin

2. Enter the command: **mysql.exe -u root -P 33366 servicedesk**

   C:\> cd ManageEngine\ServiceDesk\mysql\bin> mysql.exe -u root -P 33366 servicedesk

ServiceDesk is the name of the database. **33366** is the port on which ServiceDesk Plus database runs. ServiceDesk Plus uses root account to connect to the database and does not use any password. You can connect to MYSQL database only from the server console.

```
C:\>cd ManageEngine\ServiceDesk\mysql\bin

C:\ManageEngine\ServiceDesk\mysql\bin>mysql.exe -u root -P 33366 servicedesk
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 8 to server version: 4.1.18-pro-nt

Type 'help;' or '\h' for help. Type '\c' to clear the buffer.

mysql>
```

Connect to MYSQL Server in Linux

1. Install the MYSQL client which supports your Linux version.
2. Once this is accomplished, make sure that the command "mysql" is in path. (Most often, mysql should be under path, if not, you may add the complete path to mysql command under PATH variable in the bashrc file.
3. Go to **[ServiceDesk Plus Home] \ mysql \ bin** in the command prompt.

   # cd [ServiceDesk Plus Home]/mysql/bin

1. Enter the command: **# mysql -u root -S ../tmp/mysql.sock servicedesk A**

```
[root@sdp-linux64 bin]# mysql -u root -S ../tmp/mysql.sock  servicedesk -A
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 4
Server version: 4.1.18-pro

Type 'help;' or '\h' for help. Type '\c' to clear the buffer.

mysql> select * from workorder;
Empty set (0.00 sec)

mysql> exit
Bye
[root@sdp-linux64 bin]#
```

Troubleshooting Tips

MY SQL Connection Resolution

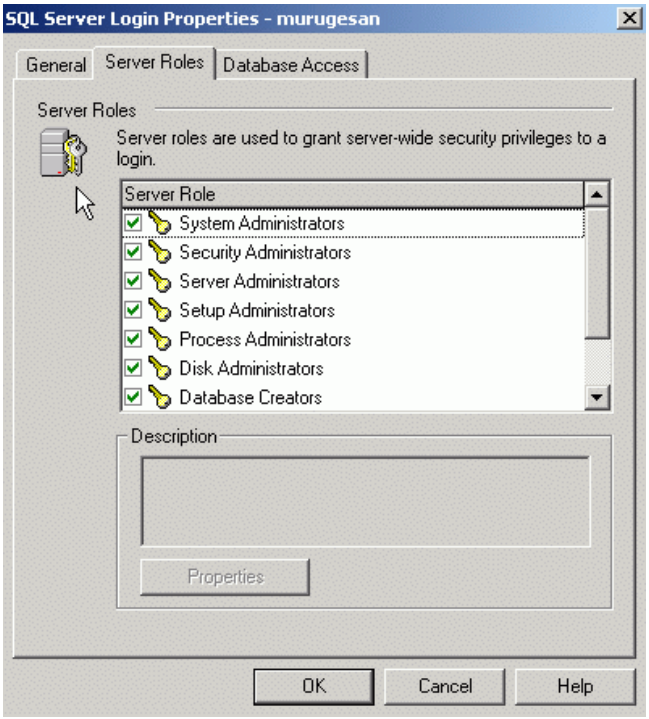
Verify the following,

- Check if MY SQL server is running.
- Check if the server name or the port number is misspelled or incorrect.
- If the MY SQL server is running in a remote machine then there may be a firewall blocking the port number you have entered.
- If none of the above mentioned issues matches then contact your system administrator.

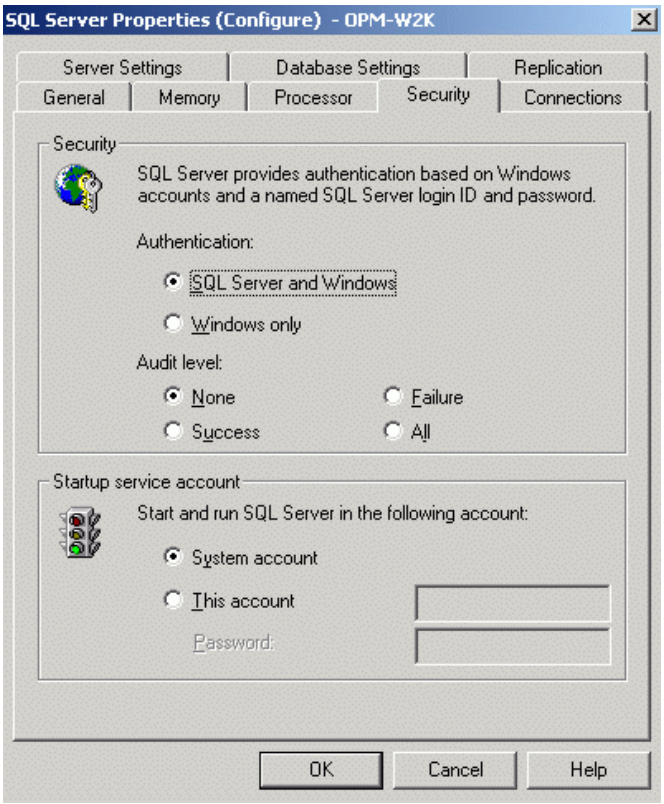
MS SQL Connection Resolution

If a connection is refused and an exception is thrown by SQL Server as 'unable to connect the server' then there could be following reasons why this could happen such as,

- The server name is misspelled or the port number is incorrect
- The SQL server may not be configured to use TCP/IP. In this case, enable TCP/IP from SQL server's network utility application.
- If there is a firewall blocking the port 1433 on the server then you will not be able to connect to the server.
- To confirm the firewall block connect to TCP/IP use \"telnet<server_host>1433\"\n to confirm the block.
- SQL Server Instance is not currently supported by ServiceDesk and will be available in the feature release. You can also connect to SQL Server named instance once if you know the machine name and port of the named instance.
- Create new user with full privileges as shown below,



- While configuring SQL server properties select the authentication type as SQL server as shown below. Windows authentication is not supported by ServiceDesk Plus currently.



Installing SSL Certificate

- Introduction
- Steps to install SSL in ServiceDesk Plus
- Install a .P7b Certificate
- Commands to install certificates of some common vendors

Introduction

ServiceDesk Plus can run as a HTTPS service. But it requires a **SSL (Secure Socket Layer) Certificate** signed by a valid Certificate Authority (CA).

By default, on first time start-up, it creates a self-signed certificate. This self-signed certificate will not be trusted by the user browsers. Thus, while connecting to ServiceDesk Plus, you need to manually verify the certificate information and the hostname of ServiceDesk Plus server carefully and should force the browser to accept the certificate.

To make ServiceDesk Plus server identify itself correctly to the web browser and the user, you need to obtain a new signed certificate from a CA for the ServiceDesk Plus host. You can use keytool (bundled with Java) to create your certificates, get them signed by a CA and use them with ServiceDesk Plus.

Steps to install SSL in ServiceDesk Plus

The steps involved in configuring ServiceDesk Plus to use the SSL are as given below.

Step 1: Create a Keystore file
Step 2: Create .CSR (Certificate Signing Request) file
Step 3: Install your SSL Certificate
Step 4: Configuring the Server

NOTE: In all the images, replace the highlighted text with the alias name you want to use for the SDP

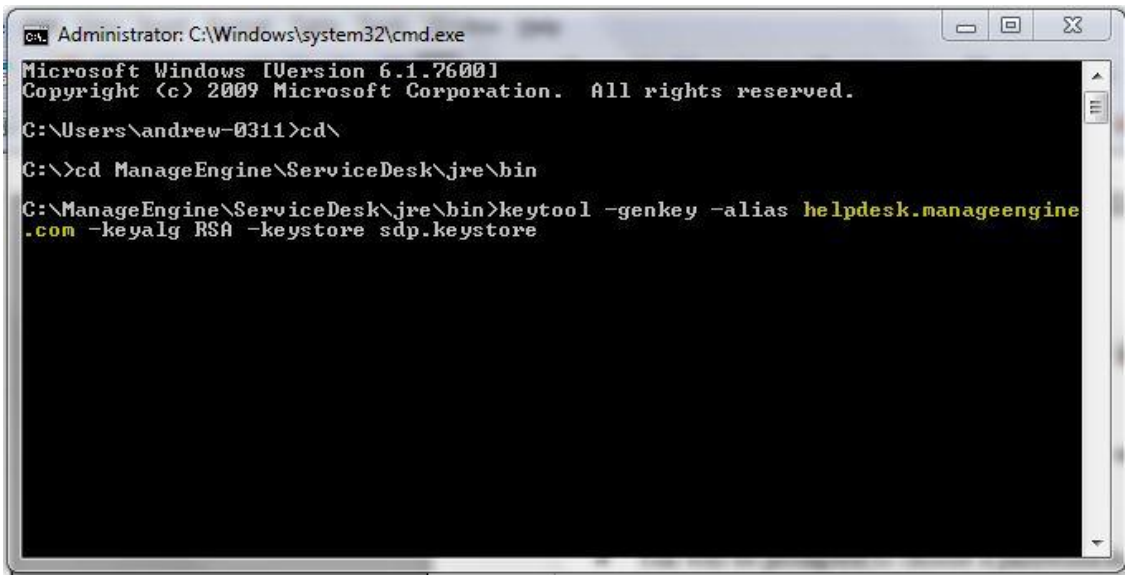
Step 1: Create a Keystore file

Before requesting for a certificate from a CA, you need to create tomcat specific **".keystore"** file and **".csr"** file. The **.keystore** file and **.csr** file will include information provided by the individual who creates the **.keystore** and **.csr** files.

To create the .keystore file follow the below steps,

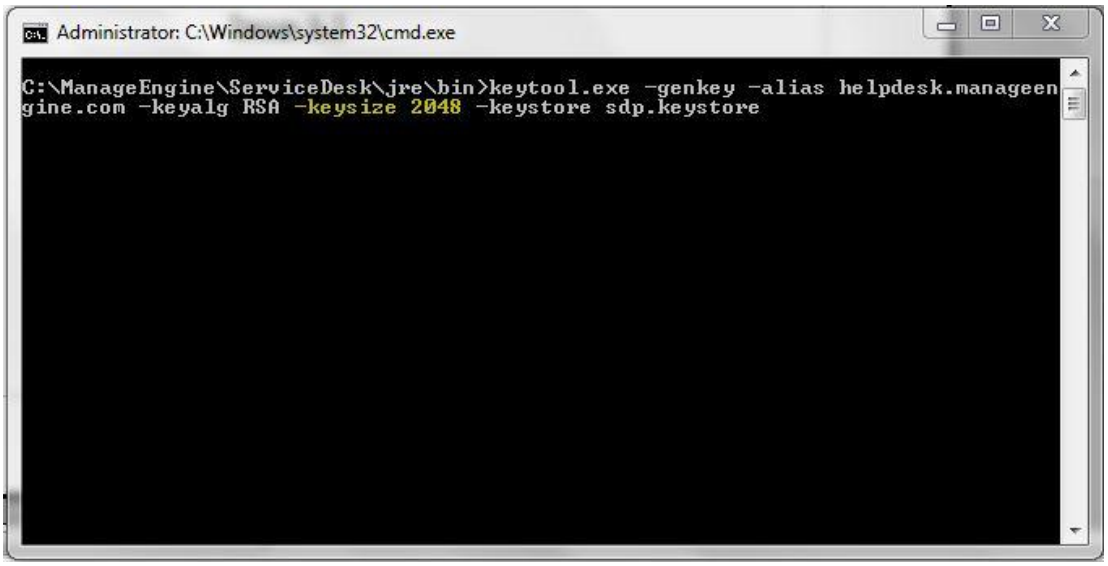
1. Open the Command Prompt.
2. From the location **<installation directory> \ jre \ bin** execute the command

   keytool -genkey -alias <your_alias_name> or [Domain Name] -keyalg RSA -keystore sdp.keystore



3. If your vendor requires a **CSR of size 2048** please use the command given below.

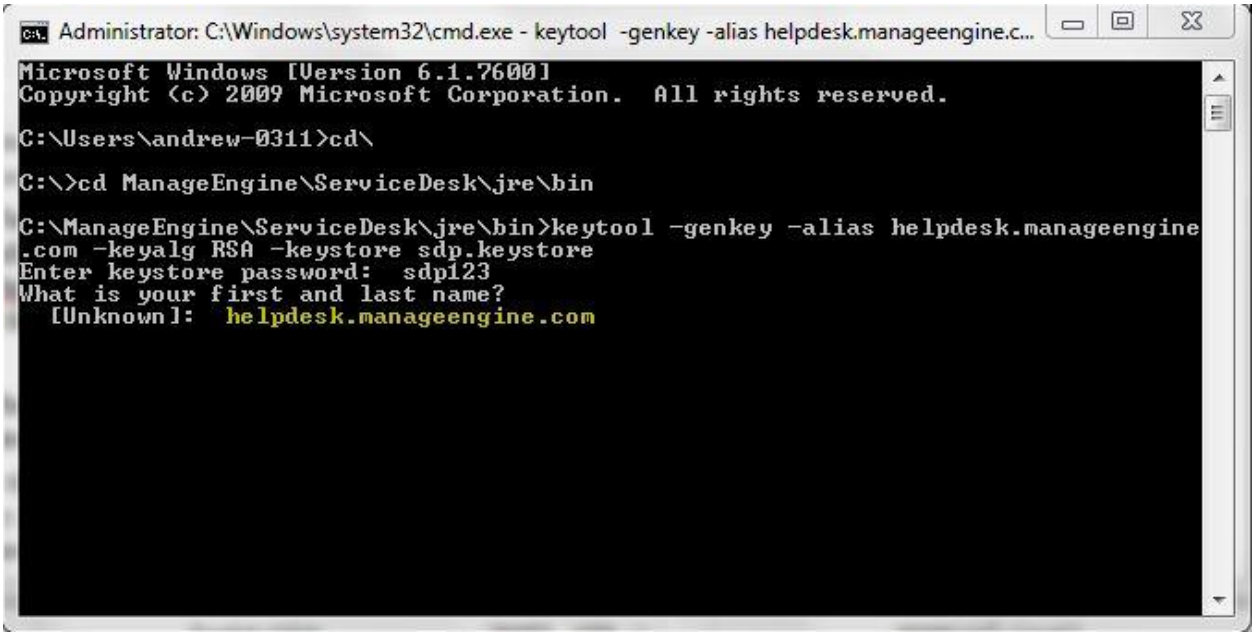
   keytool -genkey -alias <your_alias_name> or [Domain Name] -keyalg RSA -keysize 2048 -keystore sdp.keystore



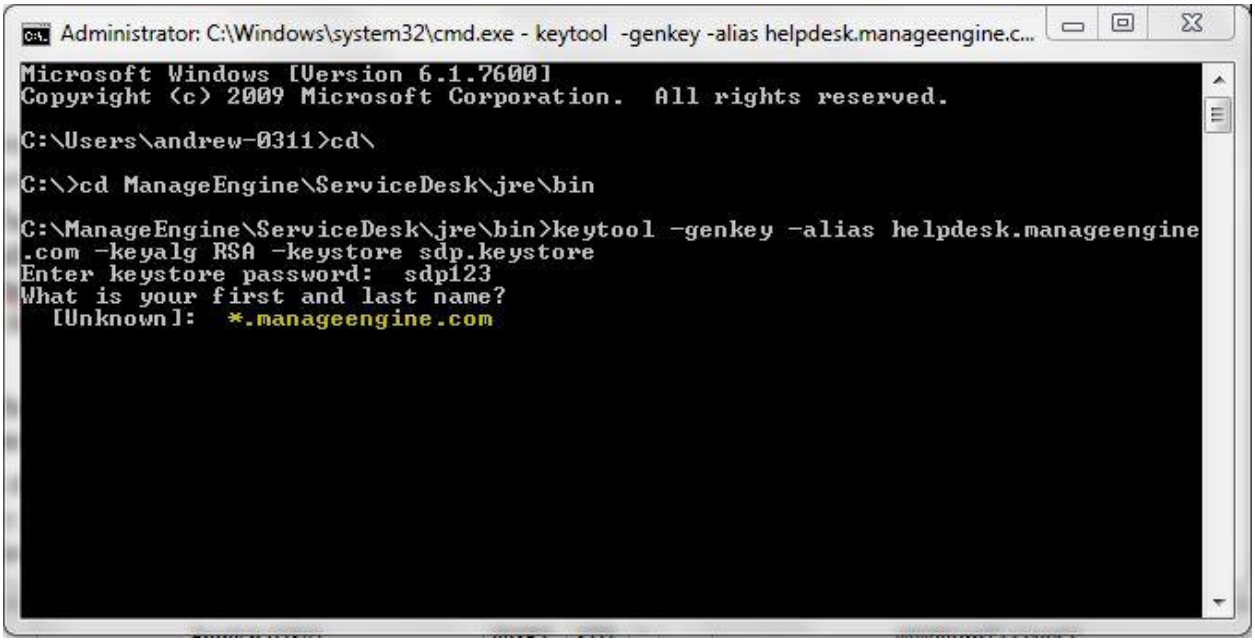
4. You will then be prompted to choose a password for your keystore.

   NOTE: Please note that the Password **should not contain $ symbol**.

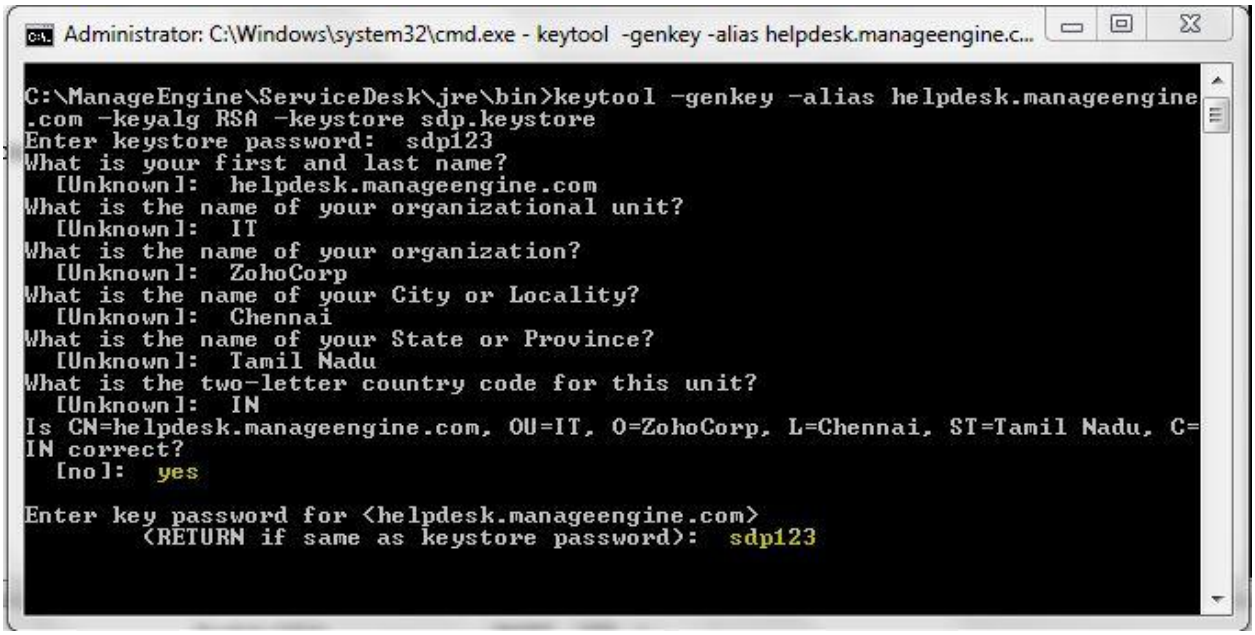
5. When it asks for first and last name, this is **NOT** your first and last name, but rather it is your **Fully Qualified Domain Name** for the site you are securing.



6. If you are ordering a **Wildcard Certificate** this must begin with the * character.



7. On entering the required information, confirm that the information is correct by entering 'y' or 'yes' when prompted.



8. At the end of executing the above command, you will be prompted to enter keystore password. Try giving the password **same as your key password**. Make sure to remember the password you choose.
9. Your keystore file named sdp.keystore is now created in your current working directory.

   NOTE: We request you to make a backup copy of the sdp.keystore file before installing the Certs. This backed up keystore can be used if the certificate installation goes wrong or when you renew your certificates the next year.

Step 2: Creating .CSR (Certificate Signing Request) file

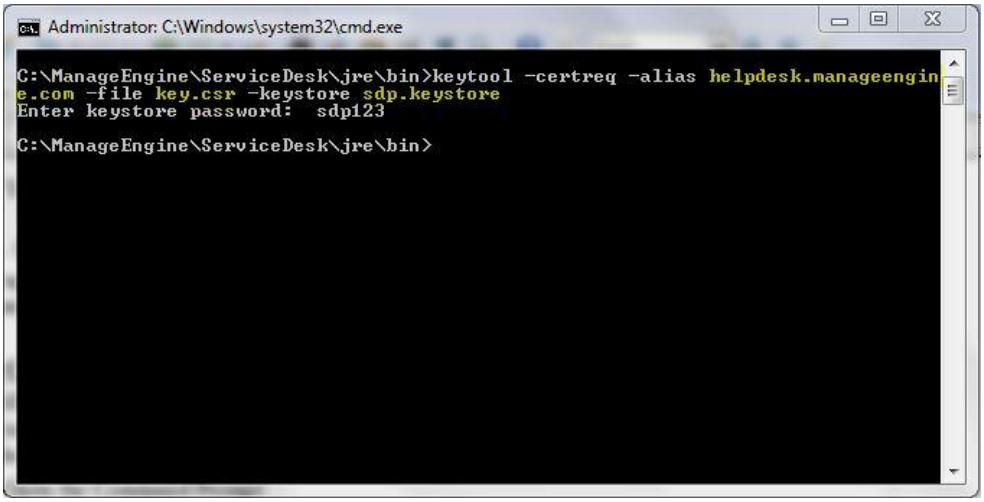
The .CSR (Certificate Signing Request) file is temporary and should be submitted to a CA to receive **CA-Signed Certificate** files.

Please follow the steps given below to create the CSR file.

1. Open the Command Prompt
2. From the location **<installation directory> \ jre \ bin** execute the below command.

   keytool -certreq -alias <your_alias_name> -file key.csr -keystore sdp.keystore

   In the above command **<your_alias_name>** is the alias name provided when creating the keystore, **key.csr** is the name of the CSR file that will be created after the command is executed.



Step 3: Install your SSL Certificate

Download the Certificate files received from the CA via e-mail to the directory where your keystore (sdp.keystore) was saved during the CSR creation process. The certificates must be installed to this exact keystore. If you try to install it to a different keystore it will not work.

The certificates you had downloaded must be installed to your keystore in the correct order for your certificate to be trusted. If the certificates are not installed in the correct order, then the certificate will not authenticate properly. To find the correct order, double click on the domain certificate and then go to 'Certification Path'.

These certificates are usually in the format .**cer or .crt**. If your certificate is with the **extension .p7b** please follow the instructions given in **Installing a .P7b Certificate** to export the certs to a .cer or .crt format.

Looking at the above certification path we can infer that we need to import two other certificates before the domain certificate. First is the **Root**, next the **Intermediate** and finally the **Domain Certificate**. Some CAs may also use another certificate called **Cross Intermediate**. These certificates can be downloaded from the Vendor's website.

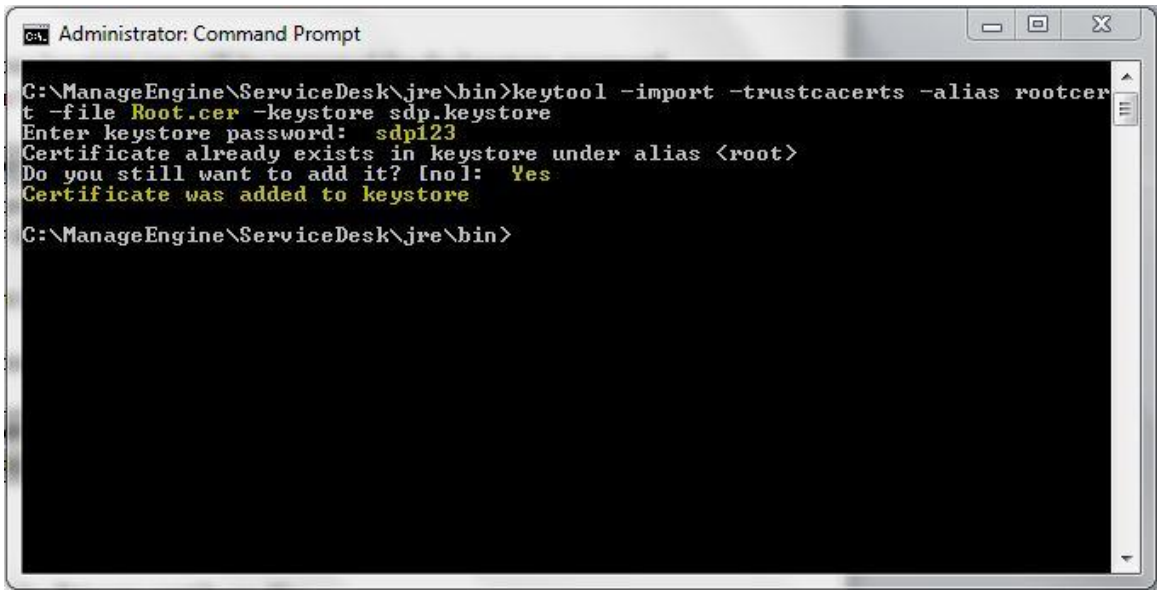
Installing the Root Certificate file

Each time you install a certificate to your keystore you will be prompted for the keystore password, which you chose while generating your CSR. Type the following command to install the Root certificate file:

keytool -import -trustcacerts -alias root -file <File_Name>.crt -keystore sdp.keystore

> **NOTE:** Choose '**Yes**' if you get prompted with a message that says "Certificate already exists in system-wide CA keystore under alias <Alias Name> Do you still want to add it to your own keystore? [no]:"

You will get a confirmation stating that the "Certificate was added to keystore".



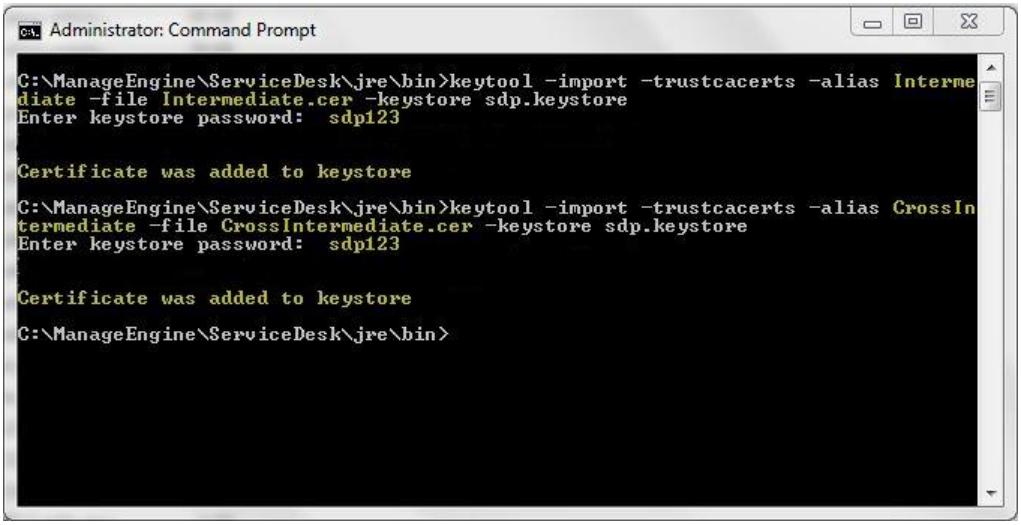
Install the Intermediate Certificates and Cross Intermediate Certificates (if any).

Follow the instructions provided by the CA.

keytool -import -trustcacerts –alias intermediate -file <File_Name>.crt -keystore sdp.keystore

keytool -import -trustcacerts –alias cross -file <File_Name>.crt -keystore sdp.keystore

You will get a confirmation stating that the "Certificate was added to keystore".

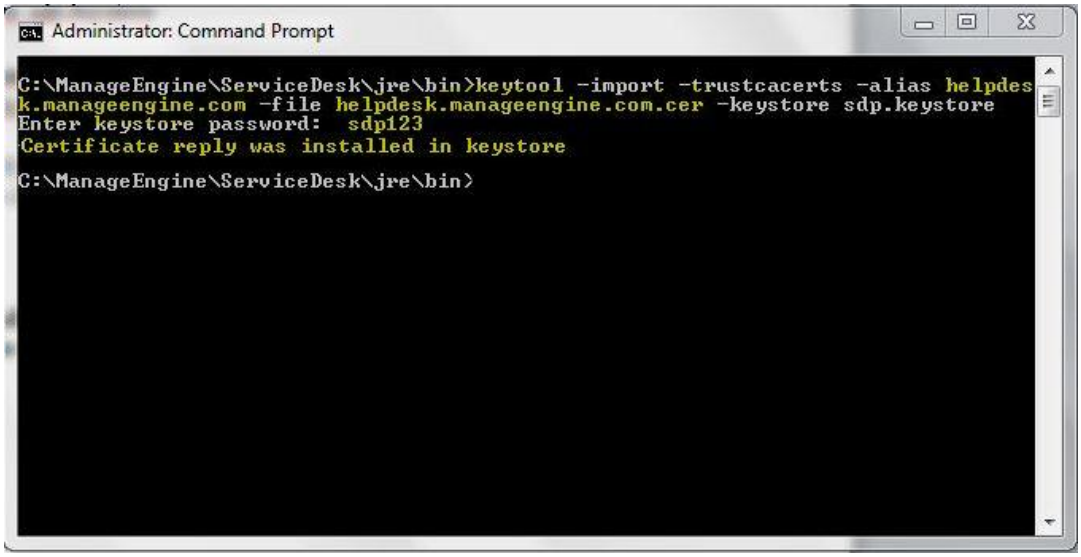


Install the Primary or the Domain Certificate file

Type the following command to install the Primary certificate file:

keytool -import -trustcacerts -alias <your_alias_name or [Domain Name]> -file your_domain_name.crt -keystore sdp.keystore

Please note that **<your_alias_name or [Domain Name]>** should be replaced with the alias name provided when creating the keystore (as discussed in Step 1). This time you will get a different confirmation stating that the **"Certificate reply was installed in keystore"**.

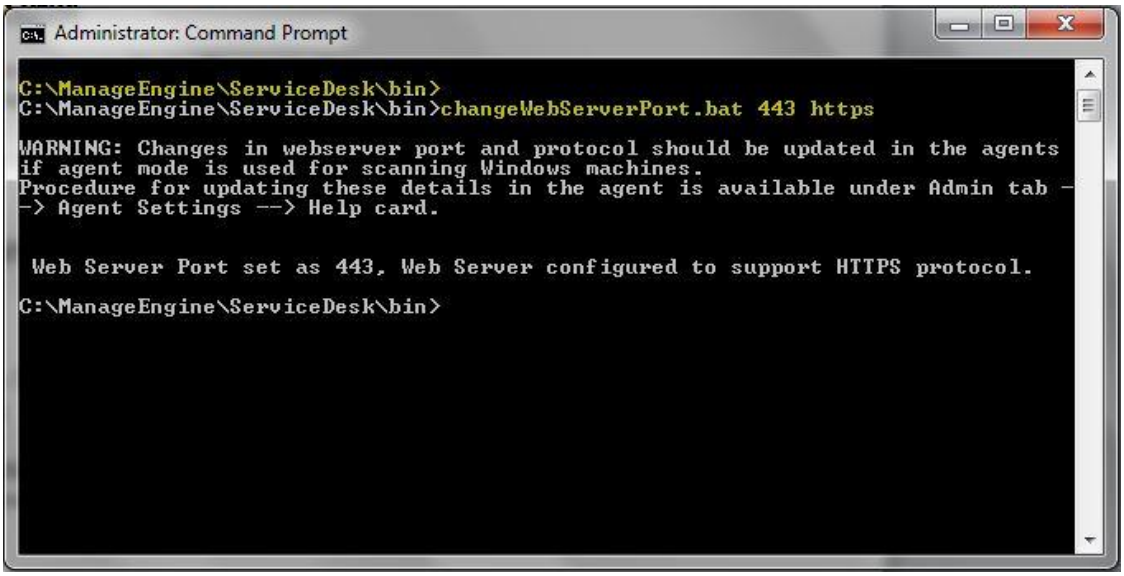


If you want to trust the certificate, then choose y or yes**.** Your Certificates are now installed to your keystore file (sdp.keystore).

Step 4: Configuring the Server

1. Copy the sdp.keystore file from **<ServiceDesk_Home>\jre\bin** to **<ServiceDesk_Home>\server\default\conf**
2. From the command prompt, execute **changeWebServerPort.bat** script to change the connection mode to HTTPS.

   Cmd**>[ServiceDesk Plus Home]\bin> changeWebServerPort.bat <WEBSERVER_PORT> https**



3. Finally, update the name of the keystore and the password, you gave in Step 1, while generating sdp.keystore in the file server.xml present under **<ServiceDesk_Home>\server\default\deploy\jbossweb-tomcat50.sar**

```
      <!-- SSL/TLS Connector configuration using the admin devl
guide keystore-->
      <Connector URIEncoding="UTF-8"
address="${jboss.bind.address}" clientAuth="false"
compressableMimeType="text/css,text/javascript,application/javas
cript,text/plain,text/html" compression="on"
compressionMinSize="2048"
keystoreFile="${jboss.server.home.dir}/conf/sdp.keystore"
keystorePass="sdp123" maxPostSize="-1" maxSpareThreads="15"
maxThreads="100" minSpareThreads="5"
noCompressionUserAgents="gozilla, traviata" port="443"
scheme="https" secure="true" sslProtocol="TLS"/>
```

4. Restart the service ManageEngine ServiceDesk Plus for the changes to take effect.

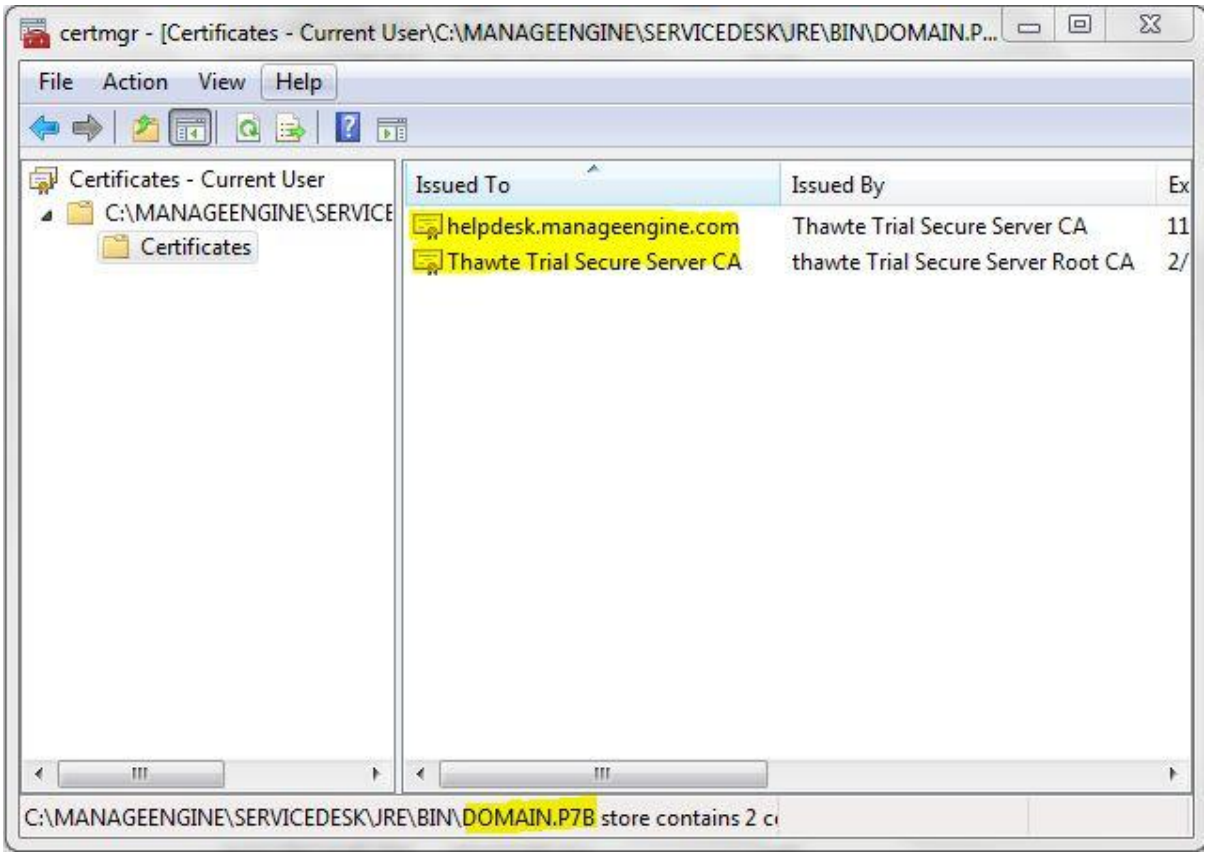
Install a .P7b Certificate

Some CA will provide the certificates with an extension .p7b. In such a case you can double click on this file to open a console which will list all the required certificates. You can export these certificates to Base-64 encoded X.509 (.cer) files. (*Please refer to the Screenshots given below)*.

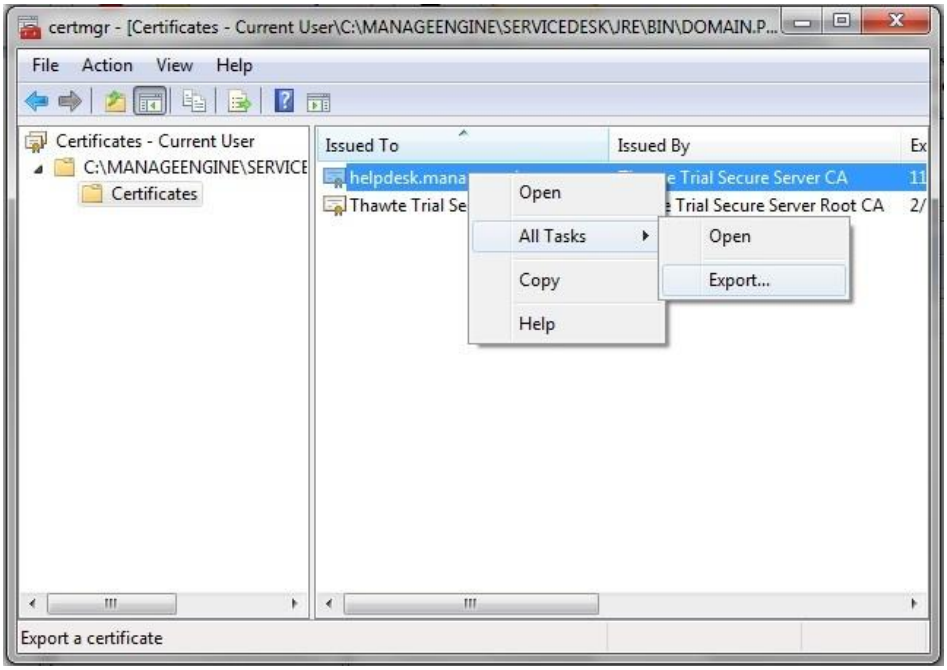
These certs can then be installed onto the keystore file using the instructions given in Step 3.

To export the certificate,

1. Go to **[ServiceDesk Plus Home] \ jre \ bin \ domain.P7B**.

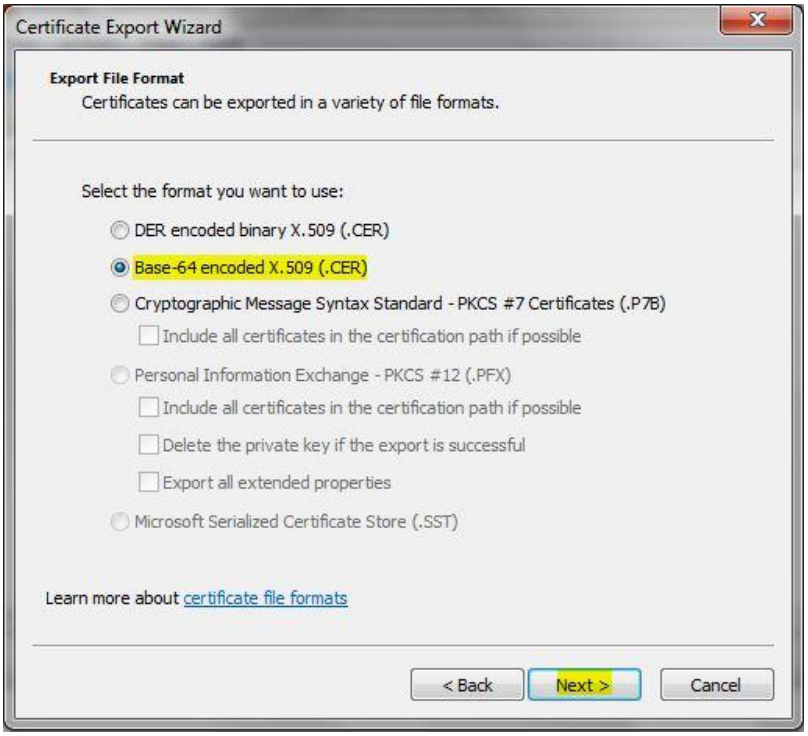


2. Right click on the certificate and select **All Tasks** -> **Export** option.

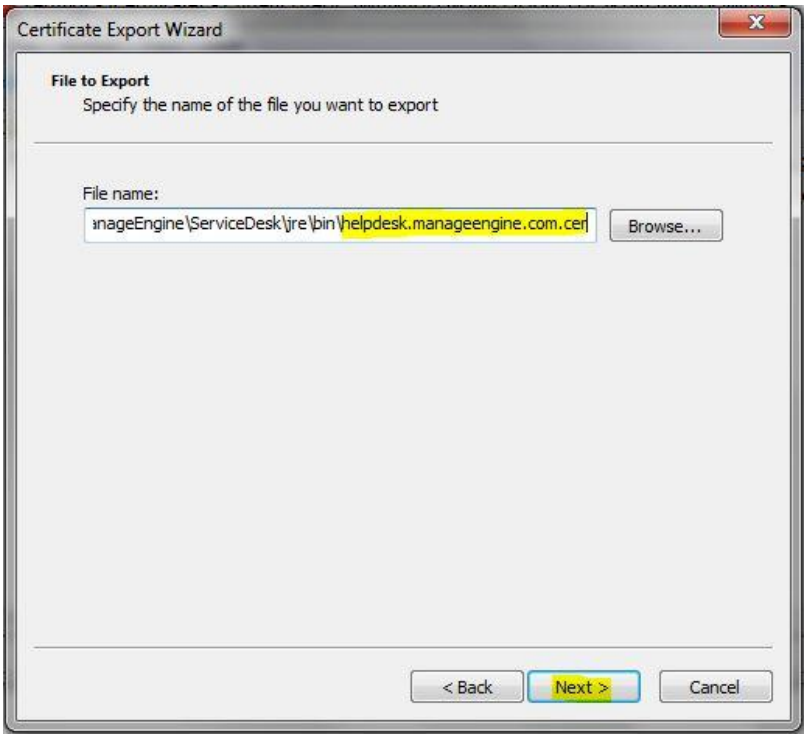


3. The Certificate Export Wizard dialog pops up. Click **Next** button to proceed.

4. Select the export file format as **Base-64 encoded X.509 (.cer)**. Click **Next**.

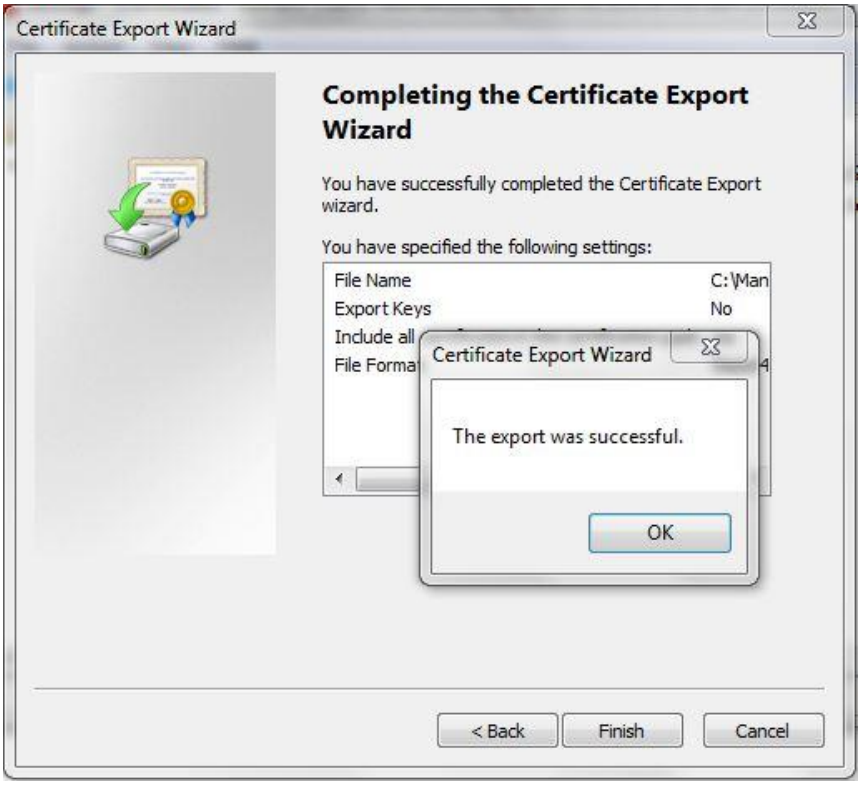


5. Specify the name of the file you want to export. Click **Next**.



6. The certificate export wizard is completed successfully. You can check for the settings you have specified. Click **Finish**.

7. A success message appears in a dialog box. Click **OK**.



Commands to install certificates of some common vendors

Please find below the commands you need to use to install certificates of some common vendors.

NOTE: These instructions might change depending on the Certificates issued by the CA.

GoDaddy

If your CA is **"GoDaddy"**, then the steps to follow will be:

keytool -import -alias root -keystore **<Keystore_Name>.keystore** -trustcacerts -file gd_bundle.crt

keytool -import -alias cross -keystore **<Keystore_Name>.keystore** -trustcacerts -file gd_cross_intermediate.crt

keytool -import -alias intermediate -keystore **<Keystore_Name>.keystore** -trustcacerts -file gd_intermediate.crt

keytool -import -alias ***<Alias Specified when creating the Keystore>*** -keystore **<Keystore_Name>.keystore** -trustcacerts -file **<CertificateName>.crt**

Verisign

If your CA is **"Verisign"**, then the steps to follow will be:

keytool -import -alias intermediateCA -keystore **<Keystore_Name>.keystore** -trustcacerts -file **<your_intermediate_certificate_name>.cer**

keytool -import -alias <***Alias Specified when creating the Keystore***> -keystore < **Keystore_Name>.keystore** -trustcacerts -file **<CertificateName>.cer**

Comodo

If your CA is **"Comodo"**, then the steps to follow will be:

keytool -import -trustcacerts -alias root -file AddTrustExternalCARoot.crt -keystore **<Keystore_Name>.keystore**

keytool -import -trustcacerts -alias addtrust -file UTNAddTrustServerCA.crt -keystore **<Keystore_Name>.keystore**

keytool -import -trustcacerts -alias ComodoUTNServer -file ComodoUTNServerCA.crt -keystore **<Keystore_Name>.keystore**

keytool -import -trustcacerts -alias essentialSSL -file essentialSSLCA.crt -keystore **<Keystore_Name>.keystore**

keytool -import -trustcacerts -alias ***<Alias Specified when creating the Keystore>*** -file **<Certificate-Name>.crt** -keystore **<Keystore_Name>.keystore**

Renew SSL Certificate

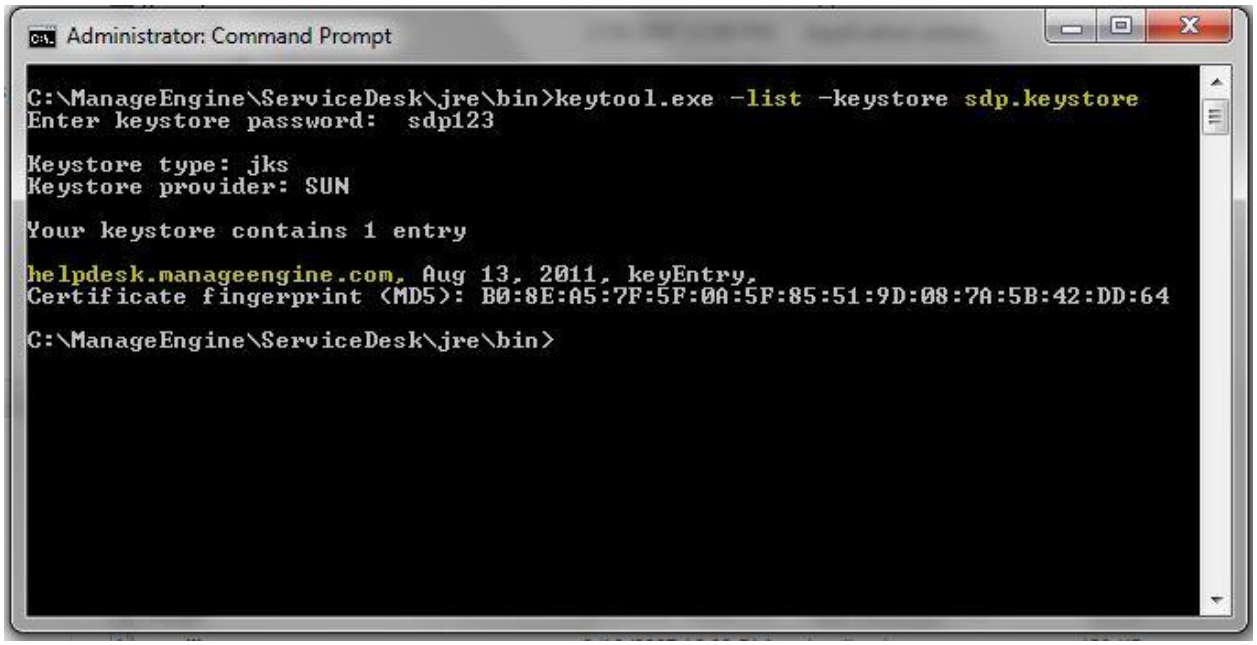
In order to use the renewed certificate, you need to have taken a backup of the existing keystore file (created while configuring the SSL), which was taken before the installation of any certs. If this file is present, then you can replace this file in the [ServiceDesk Home]\jre\bin folder and follow the instructions from Step 3: Install your SSL Certificate.

If you do not have a backup of the keystore file, then you need to start from scratch i.e., from Step 1, and get the certificates reissued for the new CSR (Certificate Signing Request).

You can use the following command to get the list of certificates installed in the keystore.

Keytool.exe –list –keystore sdp.keystore

Below is an example of how a keystore looks before installing any Certificates. It will only have the keyEntry.



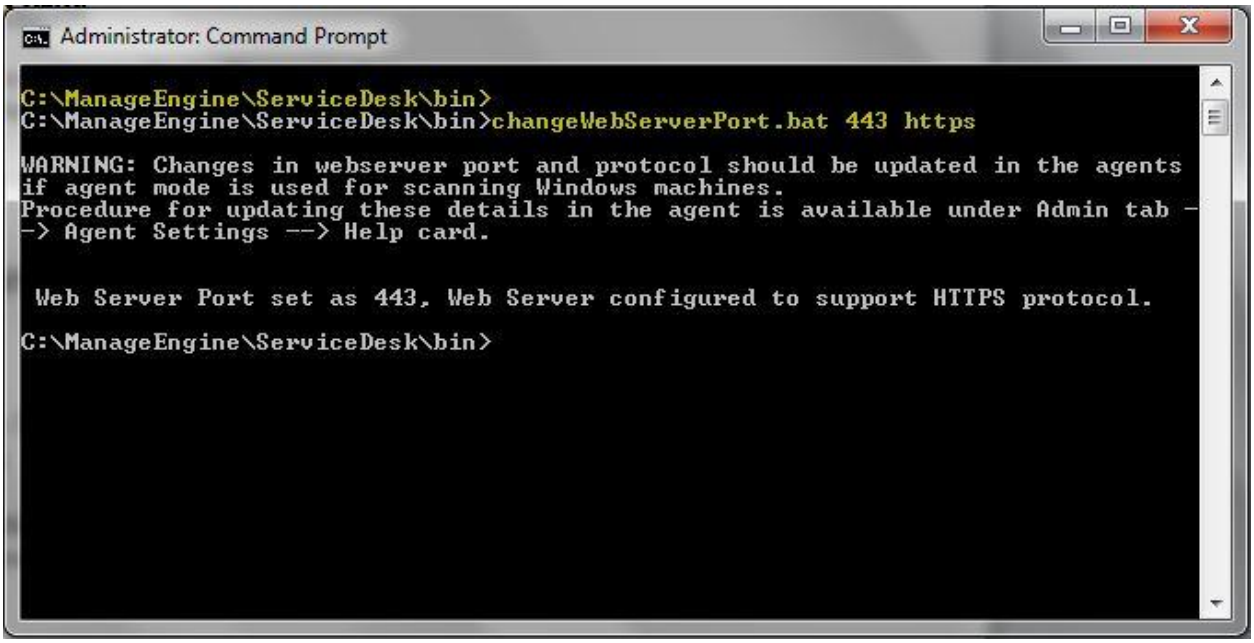
Installing .PFX Certificate

.PFX is an extension for security certificate. It defines a file format that stores private keys (generated by your server at the time the CSR was generated) and public key certificate (your SSL Certificate provided by the CA) in a single encrypted file.

To install a certificate with the extension .PFX,

1. Stop ManageEngine ServiceDesk Plus service.
2. Copy the .pfx file to the location **C:\ManageEngine\ServiceDesk\server\default\conf** (where C: is the drive in which ServiceDesk Plus is installed)
3. Change the web server port to 443 to run ServiceDesk Plus on secure mode. To change the web server port, open the command prompt and go to [ServiceDesk Plus Home]\bin. Enter the command as given below,

   [ServiceDesk Plus Home]\bin> changewebserverport.bat 443 https



4. Go to the location **[ServiceDesk Plus Home]\server\default\deploy\jbossweb-tomcat50.sar** and open the file 'server.xml' in a word pad.
5. Locate the below entries in the file.

```
<!-- SSL/TLS Connector configuration using the admin devl guide keystore
    <Connector port="8443" address="${jboss.bind.address}"
        maxThreads="100" minSpareThreads="5" maxSpareThreads="15"
        scheme="https" secure="true" clientAuth="false"
        keystoreFile="${jboss.server.home.dir}/conf/sdp.keystore"
        keystorePass="sdpsecured" sslProtocol = "TLS" />
```

6. Please replace the file name **sdp.keystore** with the pfx file name (name.pfx) and enter the ***keystoreType*="pkcs12"** after the file name. Also replace the 'sdpsecured' with the password for the .pfx file.
7. The entries should look like this,

```
<!-- SSL/TLS Connector configuration using the admin devl guide keystore
     <Connector port="8443" address="${jboss.bind.address}"
          maxThreads="100" minSpareThreads="5"
maxSpareThreads="15"
scheme="https" secure="true" clientAuth="false"
keystoreFile="${jboss.server.home.dir}/conf/name.pfx"
keystoreType="pkcs12"  keystorePass="your password" sslProtocol =
"TLS" />
```

8. **Restart** ManageEngine ServiceDesk Plus service.

Uninstalling ServiceDesk Plus

- Uninstall ServiceDesk Plus on Windows
- Uninstall ServiceDesk Plus on Linux

Uninstall ServiceDesk Plus on Windows

1. Click **Start -> Programs -> ManageEngine ServiceDesk Plus -> Uninstall ServiceDesk**.

Uninstall ServiceDesk Plus on Linux

1. Go to *<ServiceDesk>/_uninst* directory.
2. Execute uninstaller.bin as below:

   $ ./uninstaller.bin

Home Page

The home page of ServiceDesk Plus has various useful information displayed that enables an administrator or a technician to take necessary action.

The user you are logged in as is the **Administrator** and the following are available in home page,

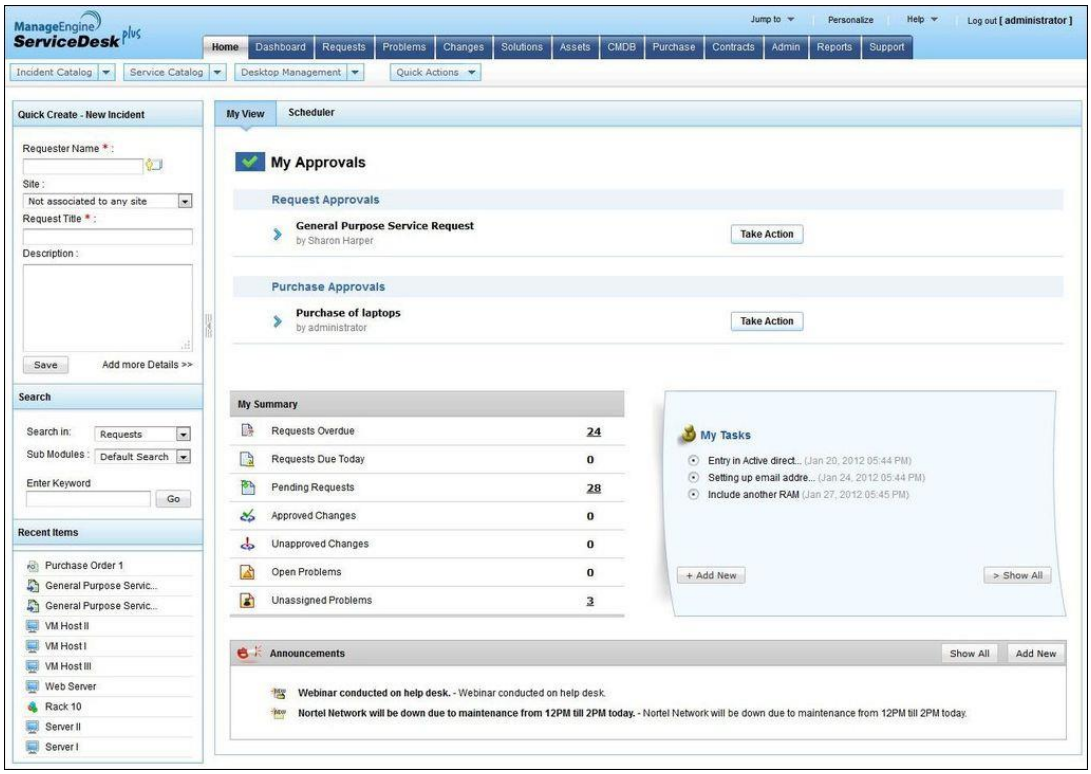
1. My View
2. Scheduler
3. Quick Create - New Incident
4. Search
5. Recent Items
6. Personalize
7. Quick Actions drop-down menu
8. Request Catalog drop-down menu, OR

   Incident Catalog drop-down menu

   Service Catalog drop-down menu

If you are on a Trial version, then the following links will appear along with the above,

1. License Expiry Alert
2. Get Quote



My View

The **My View** tab displays the following information,

- My Approvals
- My Summary
- My Tasks
- Announcements

My Approvals

This block lists all the approval actions to be taken by you for a service request and purchase order. To approve or reject, click **Take Actions** button. The approval for service requests and purchase orders are listed only if you have the approval permission.

My Summary

This block displays the summary of requests, problem and changes assigned to the logged in technician.

- **Request Overdue** - Number of requests assigned to the logged in technician that are overdue.
- **Requests Due Today** - Number of requests assigned to the logged in technician that are due for that day.
- **Pending Requests** - Number of pending requests that are assigned to the technician.
- **Approved Changes** - Number of changes assigned to the logged in technician that are approved.
- **Unapproved Changes** - Number of changes assigned to the logged in technician that are unapproved.
- **Pending Problems** - Number of Open problems assigned to the logged in technician.
- **Unassigned Problems** - Number of problems that are unassigned to technicians.

Scheduler

Scheduler gives a calender view of the number of open requests, problems, changes, task and reminder for a technician in a given month. Using the Technician Availability Chart, the availability of a technician on a given date can be viewed, based on which requests can be assigned to other technicians (backup technicians).

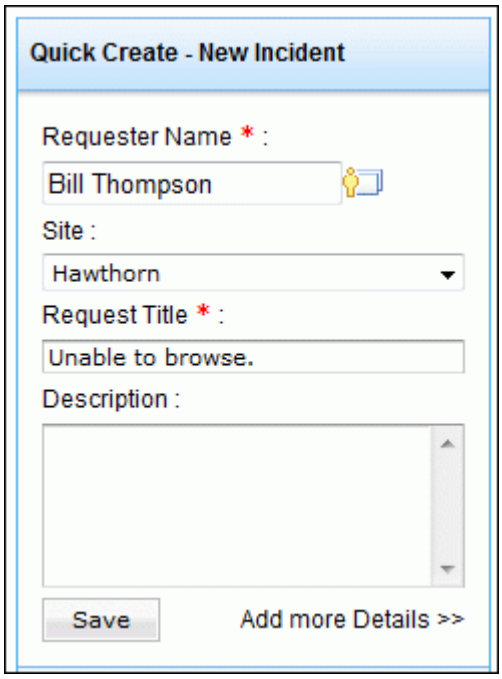
- My Scheduler
- Technician Availability Chart

Quick Create - New Incident

Quick Create - New Incident is an instant mode to create new incident when you are on a call with a requester. You can either conduct a search for the requester using the

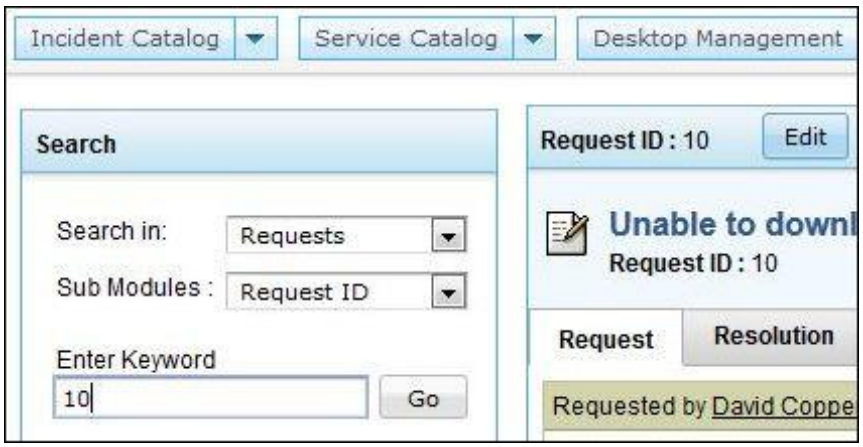
Requester List icon or you can enter the name of the requester in the field provided. Next, all you need to do is enter Request Title and Description. If you require additional details such as category, priority or assign a technician, click **Add More Details >>** link. This takes you to the New Incident form.

NOTE: The Quick Create - New Incident section is available only when '**Quick Create Settings**' option is enabled in the Self-Service Portal Settings.



Search

You can search for Requests, Archived Requests, Problem, Change, Assets, Workstation, Software, Purchase, Contract, Solutions, System Log and Requester from the home page. You can further enhance the request search by drilling it down to sub modules. You can search for notes, work log, resolution and request ID. Conducting a search using the request ID takes you to the request details page of the specified request ID.



Recent Items

While using ManageEngine ServiceDesk Plus, the application tracks your last viewed items and lists them in the **Recent Items** block. The items can comprise of requests, problems, changes, solution, purchase, contract and workstations that was last viewed. It lists the last 10 items with the latest viewed item appearing on the top of the list. Clicking on the item takes you directly to the item's details.

Personalize

You can change the language and time zone displayed in the application, customize your signature, and change your password from the Personalize link. Click here to view more.

Quick Actions drop-down menu

The **Quick Actions drop-down menu** functions as a instant navigator to the Add New forms, Scheduler, Tasks, Reminders, Asset - Groups, Scanning inventories and Archived Requests.

Request Catalog drop-down menu

The **Request Catalog** drop-down menu groups both, the Incident Requests and Service Request Templates based on the category.

The **Request Catalog** drop-down menu is made available to your technicians only if you has enabled the option "Combine incident and service templates listing for the service" in Self Service Portal Settings.

Incident Catalog drop-down menu

The incident templates made available to your technicians are grouped based on the Service Category and listed in the Incident Catalog drop down. Click **Incident Catalog** link to access the default incident template.

Service Catalog drop-down menu

The service categories and the service items available to you are listed in the Service Catalog drop down. The list is organized to view the service items under each service category. All you need to do is browse for the available services in the catalog and submit a request.

License Expiry Alert

The license expiry alert shows the number of days for the existing license to get expired. In addition, it also provides the date within which the license should be renewed and the contact information of the support team.

Get Quote

The Get Quote link is visible to users using the Demo or Trial version. Clicking **Get Quote** link navigates the page to the Get Quote form in the website. Entering the specifications in the form will help us to provide you with the exact details of your requirement. Click **Submit** on specifying the details and our sales team will contact you on receiving the e-mail.

My Tasks

My Tasks in the home page, under **My View** tab beside my requests summary block, shows all the **Tasks** assigned to you. These tasks could be added by you as a personal reminder of the due by tasks. Or, it can be the tasks assigned to you by other technicians.

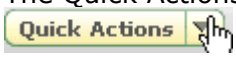
You can also assign tasks to other technicians through this option. On adding the tasks to other technicians, the added tasks will be listed in their home page under the My Tasks block and the technicians will be able to view the tasks immediately on logging in to ServiceDesk Plus application.

All your tasks including the requests assigned on your name can be added to this list as **My Tasks**, but you cannot maintain the log for the requests entered under my tasks list.

Adding Tasks

You can add Tasks from either the **My Tasks** block or from **Quick Actions** drop-down menu.

Quick Actions drop-down menu

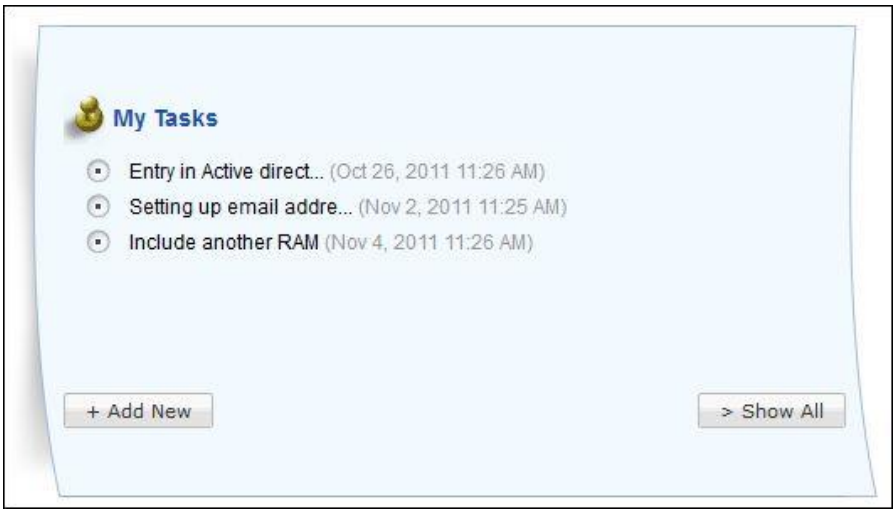
The Quick Actions drop-down is an instant means to access the task form. Click 

-> **Add New** option under Tasks.

My Tasks

1. Click **Add New** button. The Tasks form pops-up.
2. You can add a task instantly by using the pre-defined task templates in the application. Select a template from **Use Task Template** drop down. The task details such as **Title**, **Description**, assigned to **Group** or **Technician** and the task **Status** is automatically populated.
3. If you do not wish to use the Task Template, then specify the **Title** of the task in the given text field. This is a mandatory field.
4. Specify relevant information about the tasks in the **Description** field.
5. Select the **Scheduled Start Time** from the calendar button. Also select the **Scheduled End Time** for the task from the calendar button.
6. The **Actual Start Time** and **End Time** of the task will be entered by the technician doing (owning) the task.
7. The actual start time and end time is the real time schedule of the task. The scheduled start time and end time specified by the task owner is a tentative time schedule.
8. Select the **Owner (technician)** of the task from the combo box.
9. Specify the **Status** of the task. By default the **Status** of the task is **Open**.
10. Specify any relevant comment about the task in the **Comments** field.
11. If you wish to be reminded of the task previously then select the **Email me before** option and select the number of days from the combo box. This option will be selected based on the scheduled start time.

12. **Save** the values. You can see the added tasks getting listed under My Tasks block in the home page as shown below. The tasks will be listed under the tasks tab in ascending order based on the scheduled start time.



To view the details of the tasks click the title of the task to be viewed. This opens the Tasks page and you can view the details.

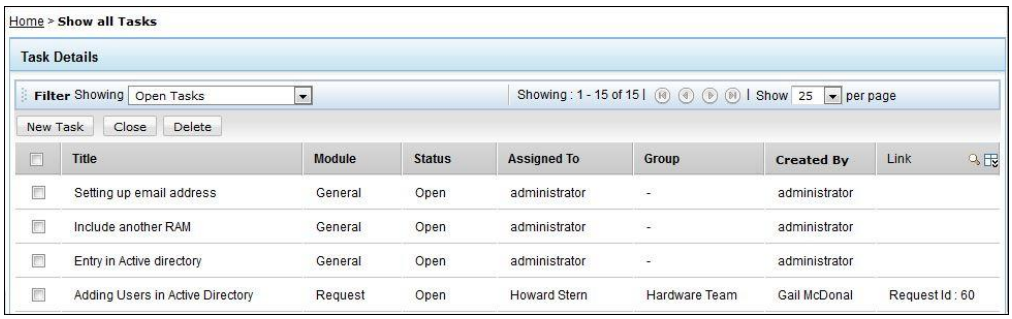
Closing Completed Tasks

When you have completed the task, you can just close the task by selecting the radio button beside the task. Alternatively,

1. Click the **Show All** link on the right hand side of the block. This opens the **Show all Tasks** page.
2. Select the tasks which has been completed by enabling the check box.
3. Click the **Close** button to close the task. You can see the tasks moved under closed status and in the home page you can see the tasks deleted from the My task block.

Viewing all Tasks

To view all the tasks added to the list, click the **>Show All** button on the down right hand side of the My Tasks block. This opens the **Show all Tasks** page as shown below,



You can also add new task through this page by clicking the **New Task** button available on the top right corner of the page.

To view the tasks based on the status-> click the **Filter Showing** combo box and select the task status from the list. You can see the tasks getting listed based on the selected status.

Alternatively, you can view **All tasks** and **tasks assigned to you** in **Quick Actions** under the Task block.

Viewing tasks based on Filters

Using the pre-defined filters in the Task details page, you can have a quick consolidated view of the tasks configured in the application.

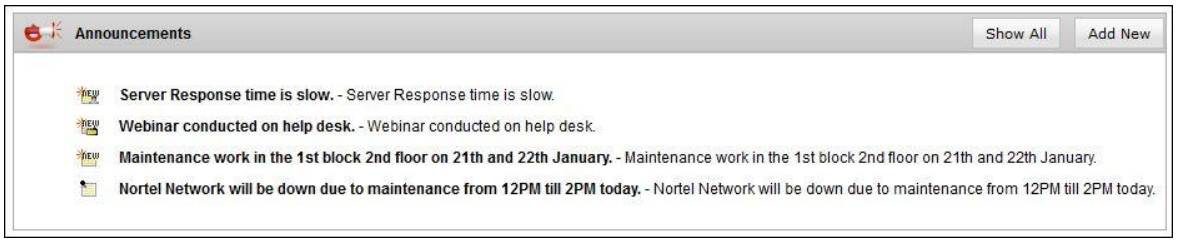
- **My Open Tasks**
  Lists all the tasks assigned to the logged in technician with status as Open.
- **My Overdue**
  Lists all the tasks assigned to the logged in technician that has exceeded the due date.
- **My Due Today**
  Lists all the tasks assigned to the logged in technician that are due to be completed today.
- **Open Tasks**
  Lists all the tasks with the status as Open.
- **Overdue**
  Lists all the tasks that has exceeded the due date.
- **Due Today**
  Lists all the tasks that are due to complete today.
- **Pending - My Group Tasks**
  Lists all the tasks assigned to the group associated to the logged in technician that are to be completed.
- **All Tasks**
  Lists all the tasks that are configured in the application irrespective of the status.

Deleting Tasks

1. Click the **>Show All** button on the down right hand side of the My Tasks block. This opens the **Show all Tasks** page as shown above.
2. Click the **Delete** button. A confirmation message pops up asking you confirm on the delete process.
3. Click **Yes** to proceed. You can see the task deleted from the Show all Tasks list as well as from the home page.

Publish Announcements

ServiceDesk Plus allows you to publish announcements company wide or just to the technicians group. The announcement board is available in the login home page of the my view tab, below the My Summary block. Any technician can add, edit, and delete announcements.



The recent announcements will be displayed in the box. To view all the announcements (even completed ones), click the **Show All** button. This will display the list of all announcements added till date.

To view an announcement, click the **Announcement Title** to open the complete announcement details in a pop-up. If there are more than one announcements, then you will notice a **Previous** and **Next** button in the pop-up. Using this you can navigate through the announcements list and view all the announcements without closing the pop-up window.

Representation of Icons

- Private Announcement i.e., announcements published to the technicians

- New Private Announcement

- Public Announcement i.e., announcements that are published to technicians and requesters.

- New Public Announcement

- Public Announcements restricted to certain User Groups

- Newly added Public Announcement restricted to certain User Groups

Adding Announcement

To add an announcement,

1. Click **Add New** button in the Announcements block. The Add New announcement window pops up.
2. Enter the **Announcement Title**. This can be a short statement that describes the announcement. This is mandatory field.

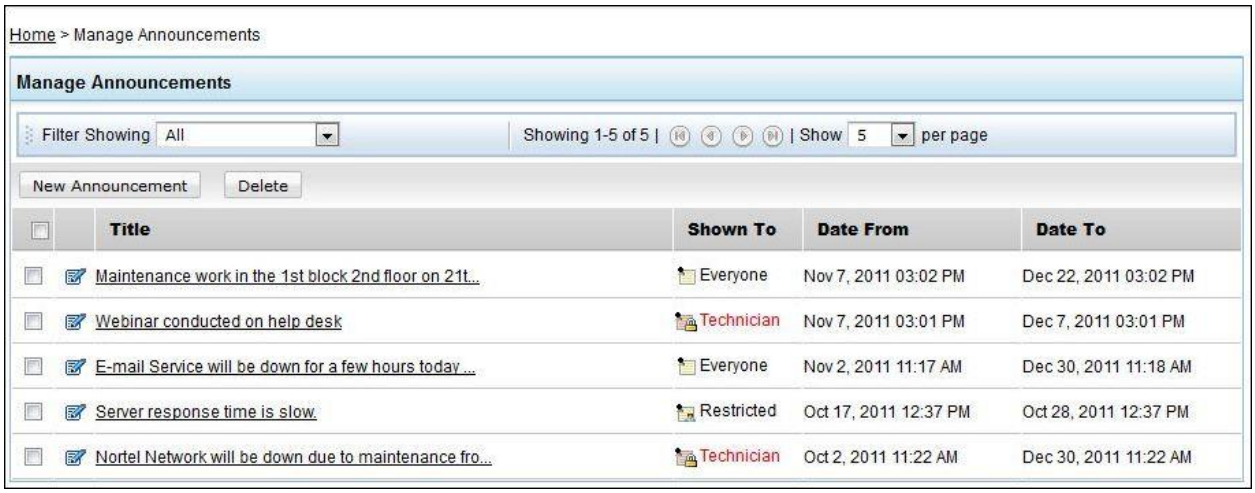
3. Type the **Announcement Content** in the text box provided for the same.
4. Select the **From** date and **To** date using the calendar icon beside the respective fields.
5. By default, the announcement is available to technicians. If you want to publish the announcement in the requester login, enable **Show to Requester** check box.

   If you have configured **User Groups**, then you can publish the announcement to requesters under the user group. Select the **User Group** from the available list, select **>>** button to move the list to the selected user group. The announcement is displayed in the home page with a lock beside it. Click here to know more on configuring User Groups.
6. If you wish to **Send this announcement as mail** then select the corresponding option by enabling the check box.
7. Click **Save**. At any point of time, you do not wish to add the announcement, click **Cancel**.

The announcement will be added and the pop-up will display the announcement details as entered by you. The announcement title will be displayed in the login home in bold text in the announcement box with a new icon beside it.

Viewing All Announcements

To view all the announcements that have been displayed in the application, click **Show All** button in Announcements block. The **Manage Announcements** page is displayed. From this page, you can Add Announcement, Edit Announcements and Delete Announcements.



By default, all the announcements are shown. You can select the announcements to displayed in the column view from **Filtering Showing** drop-down menu. You can view announcements that are **Currently Shown**, or announcements that are **To be shown** in the home page or announcements that are **Already displayed**.

Edit an Announcement

1. In the login home page, click the title of the announcement that you wish to edit. The announcement details are displayed in a **View Announcement** pop-up. If you have permissions to edit / delete the announcements, you will see an **Edit** and **Delete** button.
2. Click **Edit** button.
3. You can change all the fields of the announcement in the Edit Announcement form.
4. Click **Save**. At any point of time, you do not wish to edit the announcement, click **Cancel**.

All the changes made in the announcement will be saved.

Delete an Announcement

1. In the login home page, click the title of the announcement that you wish to delete. The announcement details are displayed in a **View Announcement** pop-up. If you have permissions to edit / delete the announcements, you will see an **Edit** and **Delete** button.
2. Click **Delete** button. A confirmation dialog pops up.
3. Click **OK** to delete, and **Cancel** to retain the announcement.

Alternatively,

1. In the login home page, click **Show All** button in the **Announcements** box.
2. In the announcements list view, select check boxes beside the announcement Title which you wish to delete.
3. Click **Delete**. A confirmation dialog pops up.
4. Click **OK** to delete, and **Cancel** to retain the announcements.

Scheduler

ServiceDesk Plus gives the provision of a schedule calendar showing the number of open requests, problems, changes, task and reminder for a technician in a given month. The availability of a technician can be viewed from the technician availability chart, depending on which, the task, requests, problems and change can be re-assigned to other technicians.

The following are available under Scheduler,

- My Schedule
- Technician Availability Chart
- Mark Unavailability

My Schedule

My Schedule is a calendar view displaying the number of open requests, problems, changes, tasks and reminders assigned to a technician for a given month. The calendar also shows the availability of the technician for a specific day in a given month.

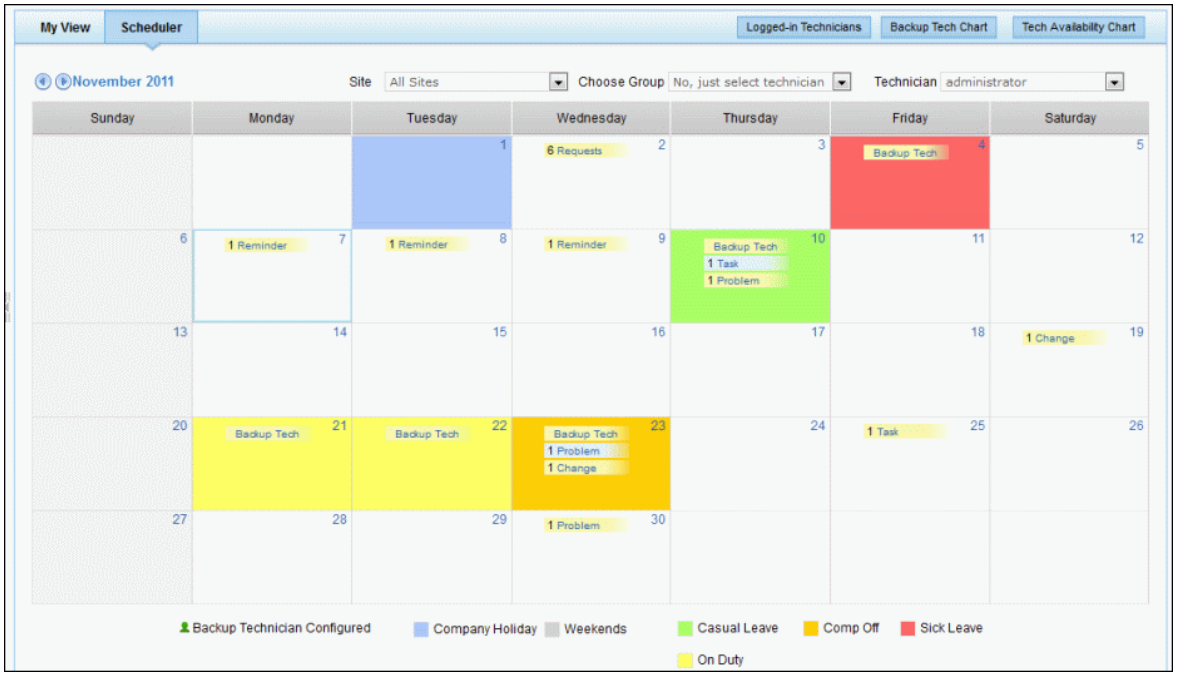
Note: The My Schedule calendar can be viewed by All Technicians.

- The **administrator** has the ability to view the number of open requests/ tasks/ problems / changes and availability of **All Technicians** in All Site.
- The **Site Admin** has the privilege to view the number of open requests/tasks/problems/changes and availability of technicians only in his site.
- The Technician can view only his open requests/ tasks/ problems/ changes and availability.

To view the My Schedule calendar,

1. Login to ServiceDesk Plus application using your username and password.
2. In the home page, click **Scheduler** tab beside My View tab (OR)

   Click **Quick Actions** -> **My Schedule** under the schedule block. This opens the **Schedule Calendar**. By default, the calendar shows the number of open requests, problems, changes, tasks and reminders assigned to you as shown below,



Schedule Calendar

- The Schedule Calendar shows the **current month** and **year** along with the navigation buttons on the left hand side of the page.
- The **Navigation buttons** helps to navigate to the previous and the forth coming months.
- The current date is marked in separate border.
- **For an administrator** all the sites should be listed along with its corresponding groups and technicians loaded in the drop down field.
  For a Site Admin, the site for which he is the administrator gets listed in the drop down box along with its corresponding groups and technicians.
  Technician can view only his open requests, problems, changes, tasks and reminders.
- The **number of Open Requests, problems, changes and task** assigned to the technicians for a specific date in a given month can be viewed.
- The unavailability of the technician is indicated in a different color.
- The company holidays and weekends is marked in a separate.

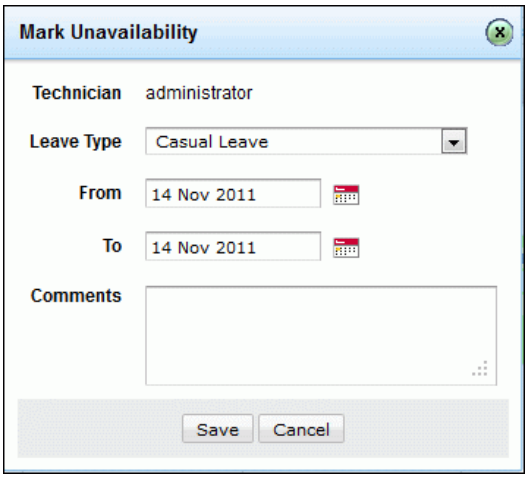
Using My Schedule, you can perform actions such as,

- Mark Leave
- Edit/Cancel Leave
- Add Task
- Add Reminders
- Viewing requests/task/problems/change
- Re-assigning requests/task/problem/change

Mark Leave

It is essential to keep a track of technicians on leave so that work is not assigned to them for that particular day. To mark leave,

1. From My Schedule, hover over the day on which you want to mark leave. The list of icons gets displayed on the right hand side below the date. Click **Mark Leave** icon. This opens the **Mark Unavailability** pop-up window as shown below,



2. The name of the **Technician** is displayed in non-editable text.
3. Select the **Leave Type** from the combo box. For ex. Casual Leave, Sick Leave etc.
4. Select the **From** and **To** date of leave from the calendar icon.
5. Specify any relevant **Comments** regarding the leave.
6. Click **Save**. The technicians holiday is indicated in a different color.

Leave can be marked to other technicians using Technician Availability Chart. You can configure your leave by clicking **Quick Actions** -> **Mark Unavailability** under the scheduler block. This opens the Mark Unavailability pop up window. Follow the above steps to mark leave.

Edit/Cancel Leave

If you wish to edit or cancel a leave then,

1. From the schedule calendar, hover over on the day the technician is on leave. Click the **Edit leave** icon on the right hand side below the date. This opens the **Mark Unavailability** pop-up window.
2. Click **Save** on making the changes.
3. If you wish to Cancel the leave then click **Cancel Leave**. The leave gets cancelled.

   NOTE: For continuous holidays, the entire series gets cancelled.

Add Task

You can also add, view and re-assign the tasks to other technicians. The tasks can be added to technicians for the current day and the forth coming days. To add task refer Add Tasks.

Viewing Requests/Tasks/Problems/Changes

The number open requests, tasks, problems and changes assigned to you gets listed in the calendar, by default. To view the details of the request/tasks/problem/change, click the link corresponding to the requests/task/problems/changes to be viewed for a specific day.

Re-assigning Requests/ Tasks/ Problems/ Changes

The requests, tasks, problems or changes assigned to a particular technician can be re-assigned to other technicians. For ex. If requests are assigned to a technician for a specific day and if the technician is unavailable on that day, then the request can be re-assigned to other technicians. Similarly tasks, problems and changes can be re-assigned.

To re-assign requests/tasks/problems/changes,

1. Click the requests/problems/tasks/changes on the day, of the corresponding technician you want to re-assign from the Schedule Calendar. This lists out all the open request for that day.
2. Enable the check box adjacent to the request which you want to re-assign.
3. Select the technician from the combo box to whom the task is re-assigned. Click **Re-assign** button. The task is re-assigned to the technician.

Reminders

The reminder option is available only for the logged in technician, that is, if the logged in technician is an administrator then the reminders of other technicians cannot be viewed by him. To know more on reminders refer Reminders.

Technician Availability Chart

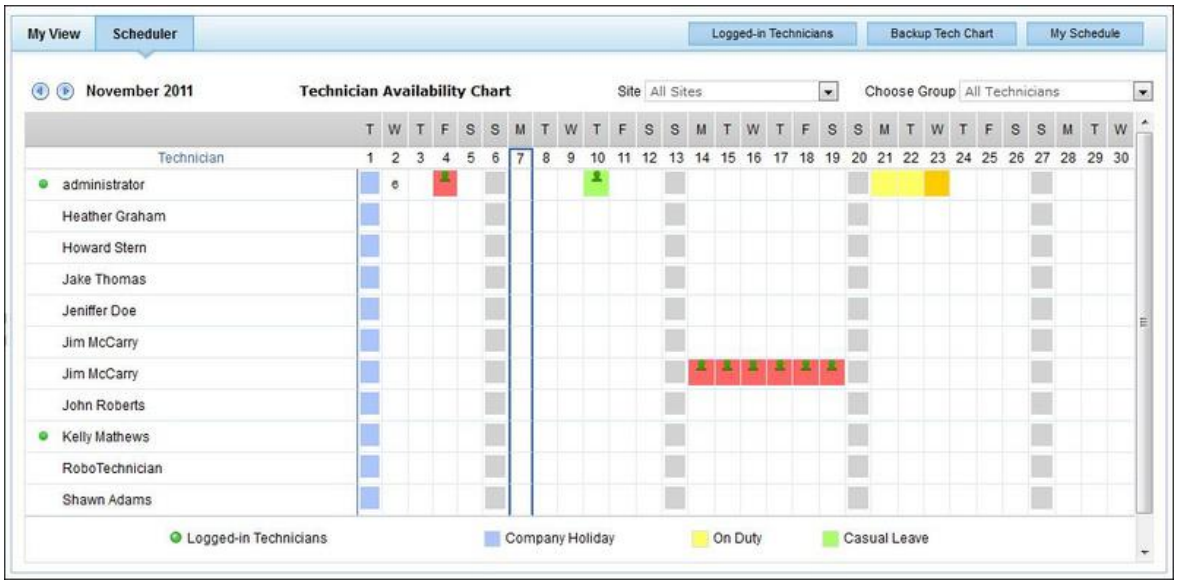
The Technician Availability Chart displays the list of technicians, along with the number of open requests assigned to them and their availability for a given month. The chart is a matrix view, indicating the availability of the technician for a specific day. It allows technicians to apply for leave, edit/ cancel leave and even configure backup technicians when a technician is unavailable.

Note: The Technician Availability Chart is available only for technicians with Admin privileges such as an administrator and Site Admin.

- The **administrator** has the ability to view the availability of technicians and the number of open requests assigned to **All Technicians** in All Sites.
- The **Site Admin** has the privilege to view the availability of technicians and the number of open requests of technicians only in his site.

To view the Technician Availability Chart,

1. Click **Scheduler** tab in the Home page. This opens the **Schedule Calendar** displaying the number of open requests, problems, changes, task and reminders assigned to the technician who has logged in.
2. Click **Tech Availability Chart** button on the right hand side of the page.
3. You can also choose **Tech Availability Chart** from the **Quick Actions** link under the header pane. This opens the **Technician Availability Chart.**



Technician Availability Chart:

- The Technician Availability Chart shows the **current month** and **year**.
- The **Navigation buttons** on the left top help to navigate to the previous and the forth coming months.
- The current date in the calendar is marked in blue border.
- By default, **for an administrator,** the list of all the technicians gets displayed, irrespective of the Site and Group. Using the "Site", "Group" and "Technician" combo boxes, the administrator can view the availability of a particular technician in a particular Site.
- **For a Site Admin,** the list of all technicians in his/her site is displayed irrespective of Groups. The number of **Open Requests** assigned to the technicians for a specific date is displayed in the Chart.
- Unavailability of a technician is indicated in pink color.
- Company holidays, weekends, logged-in technicians and backup technician are marked in other different colors.

Using the Technician Availability Chart, you can perform actions such as,

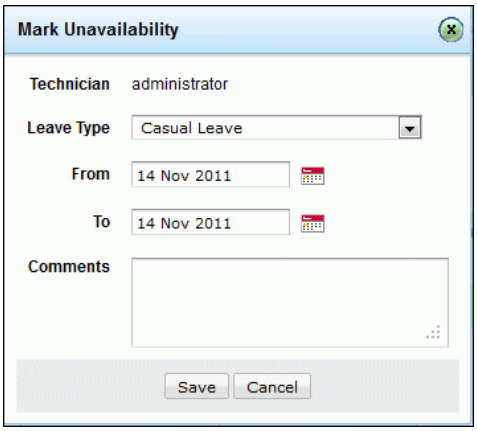
- Marking Leave
- Configuring Backup Technician
- Re-assigning Requests
- Editing/Cancelling Leave
- Viewing Request
- Viewing Logged-in Technician
- Backup Tech Chart

Mark Leave

The unavailability of a technician can be marked using the Technician Availability Chart. This is essential so that requests that are assigned to that particular technician on that day can be re-assigned to another technician.

To mark leave,

1. From the **Technician Availability Chart,** click on the day corresponding to the technician on leave. This opens the **Mark Unavailability** pop-up window as shown below,



2. The name of the **Technician** is displayed in a non-editable text format.
3. Select the **Leave Type** (Casual Leave, Sick Leave and so on) from the combo box.
4. Select the **From** and **To** date of leave by invoking the calendar icon.
5. Specify any relevant Comments regarding the leave in the **Comments** text box.
6. Click **Save**. The technicians holiday will be indicated in a different color.

Leave can also be marked by clicking **Quick Actions** -> **Mark Unavailability** under the Scheduler block. This opens the **Mark Unavailability** pop up window. Follow the above steps to mark leave.

Notifications rules can be configured to keep other technicians informed about the leave of absence of a technician. Once the technician applies leave, selected technicians or the group in which the technician is present will be notified about the leave when it is added, modified or cancelled.

Configure Backup Technician:

To configure a Backup Technician on the day of unavailability of a technician,

1. Click the **name of the technician** who will be on leave in the Technician Availability Chart. This opens the **Technician Calendar** for that month with the technician's days of unavailability indicated in a different shade.
2. Click **Backup Tech** link displayed in a different color. This opens **Backup Technician Assignment** screen.

3. Choose one of the 3 options provided to handle the upcoming requests assigned to the unavailable technician.

   - ***Move requests to unassigned state*** - The requests assigned to the technician on leave are moved to an unassigned state, which means, it is assigned to no technician. This is done so that the unassigned requests can be re-assigned to another available technician by the administrator or help desk coordinator.
   - ***Assign to following technician*** - This option allows you to configure a Backup Technician throughout the absence of a particular technician. On

choosing this option, one can select the **Backup Tech** from the list of technicians displayed in the drop down box. **If Sites are configured, this drop down box displays only the names of the technician who are associated with the same site as that of the technician who is on leave.**

- ***Don't take any action on the requests*** - This is the default option visible in the Backup Technician Assignment screen. In this case, no action is taken on the requests that is assigned to the technician. The request is assigned to the technician even if he is on leave.

4. Click **Save** after configuring the Backup Tech.
5. Once the Backup Tech is configured, an icon appears in the calendar indicating that the backup technician has been configured. By hovering the mouse pointer over the icon, a description box appears indicating the status of the backup technician configuration.

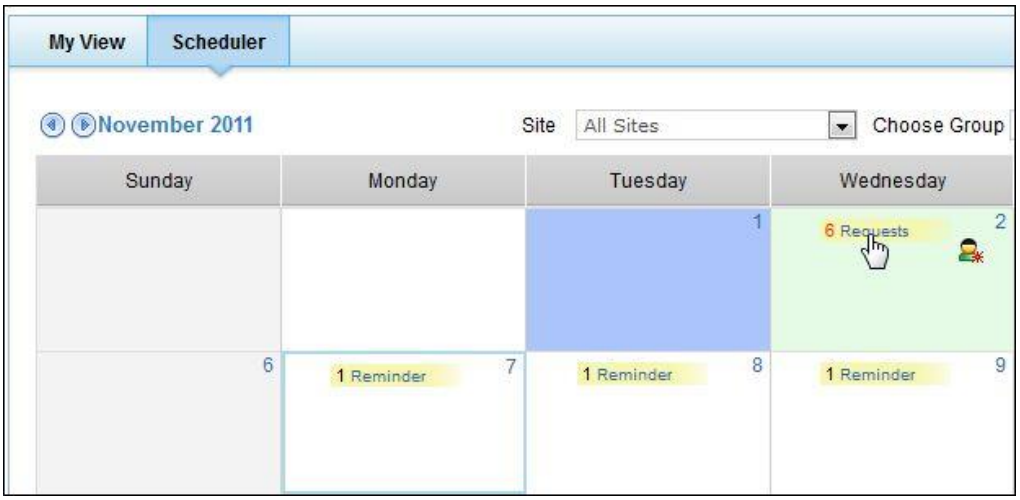
If notification rules are configured, Once the backup technician is configured, notification e-mails will be sent to selected technicians or the group in which the unavailable technician is present.

	Note: Backup Technicians can be configured **only up to one level**. This means, if the backup technician is on leave, another backup technician cannot be configured.

All information relating to unavailability of a technician, including the period of leave and backup technicians (if configured) are displayed in the Backup Tech Chart.

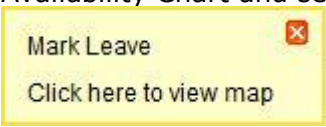
Re-Assigning Requests:

Requests assigned to a technician can be re-assigned to another technician through the Technician Calendar.



To re-assign requests to another technician,

1. Click the number of requests and this opens the Backup Technician Assignment screen along with the list of requests in the second half of the screen.
2. Select the requests that need to be re-assigned by clicking on the check boxes.
3. Select the Technician from the **Technician** drop down box.
4. Click **Re-Assign** button to assign the requests to another technician.
5. Click **Calendar View** to go back to the Technician Calendar.
6. You can also re-assign requests by clicking on the requests in the Technician Availability Chart and selecting Click here to view map from



pop-up. Follow the above steps to re-assign the requests.

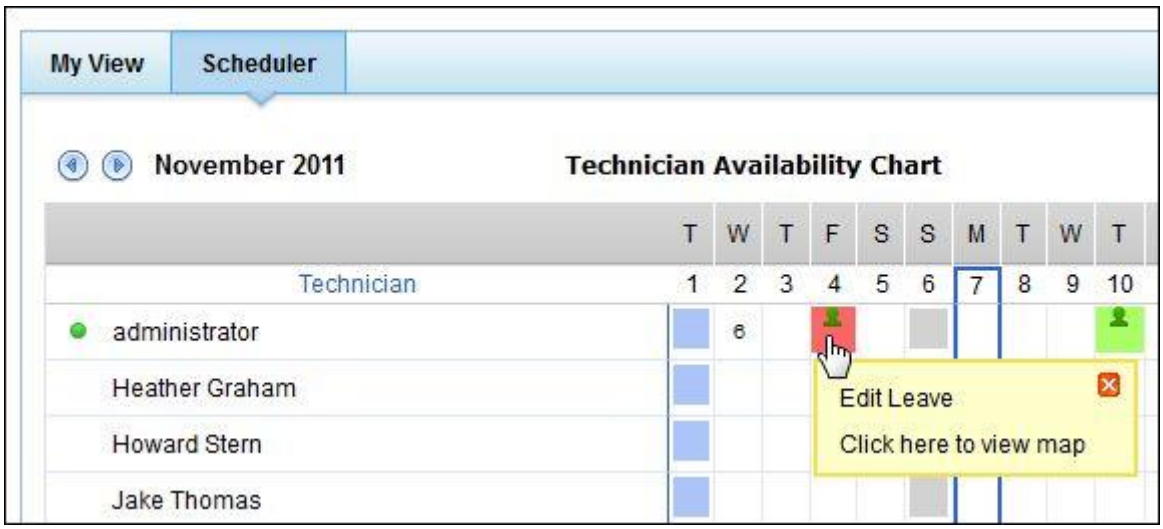
	Note: Re-assigning requests is different from assigning requests through Backup Tech. Although Backup Tech can be configured only up to one level, in the absence of the backup technician, the pending requests can be assigned to another technician through this feature.

Click the name of the technician to have a detailed view about the number of requests, problems, changes and tasks assigned to the particular technician in My Schedule.

Editing/Cancelling Leave

To edit leave,

1. Click on the leave of the technician that needs to be edited from the Technician Availability Chart. This opens the **Mark Unavailability** pop-up window.



2. Make necessary changes (Leave Type or Leave Period).
3. Click **Save**.

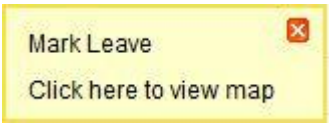
To cancel leave,

1. Click on the leave of the technician that needs to be cancelled from the Technician Availability Chart. This opens the **Mark Unavailability** pop-up window.
2. Click on **Cancel Leave** button. The leave gets cancelled.

	Note: If a continuous period of leave is applied, then the entire period will be cancelled.

Viewing Requests

To view the requests assigned to a technician for a particular day,

1. Click on requests on the day of absence of the corresponding technician from the Technician Availability Chart.
2. From the drop down box, 

select **Click here to view map**. This opens the list of all open request due for that day.
3. Click on the request you wish to see and the request information is displayed in the same screen.

Viewing Logged-in Technicians

If you are a SDAdmin, SDPSite Admin or SD Co-ordinator, then the Technicians logged-in the application is indicated in the Technician Availability Chart. Click **Logged-in Technician** button to view the list of logged in technician irrespective of the associated sites. You can also view the logged-in technicians from **Quick Actions** drop-down.

Backup Tech Chart

Backup Technician Chart displays information such as absence of leave of a technician, name of the technician and the backup technician configured through the period. This chart helps to keep a check on the backup technicians whenever a technician applies for leave. To view the Backup Technician Chart, click on the **Backup Tech Chart** link next to the My Schedule link.

Using the **Navigation buttons** at the left top of the screen one can navigate to the previous and the forth coming months to get a broader idea about the technicians on leave, their period of absence and the backup technicians configured for that period.

Reminders

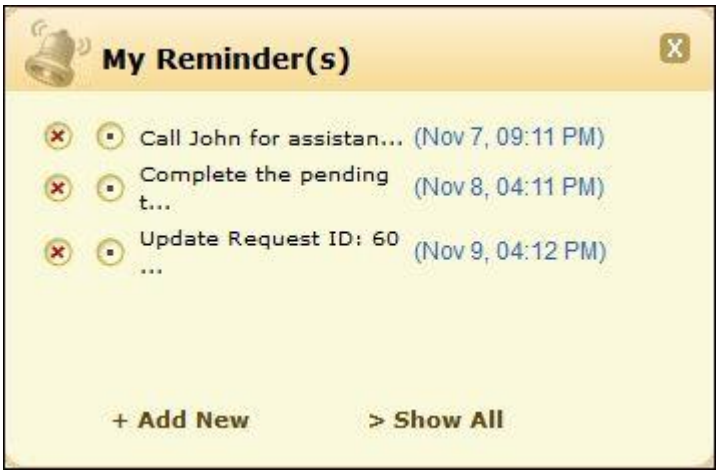
ManageEngine ServiceDesk Plus provides you with the option of tracking your tasks everyday. The tasks that you add to the **My Reminders** list act as substitute for your sticky notes or post-it notes which you would use to remember your tasks for the day.

Add Reminders

To add new reminders,

1. Log in to the ServiceDesk Plus application using your user name and password.
2. Click **Quick Actions** drop-down menu just below the header tabs -> select **Add New** option under the **Reminders** block. The Reminders form window pops up.

   Alternatively, you can add a new reminder by clicking **Quick Actions** -> **My Reminder (s).** The **My Reminder (s)** form pops up as shown below,



Click **+Add New** link at the bottom of the my reminders form. This opens **Reminders** window.

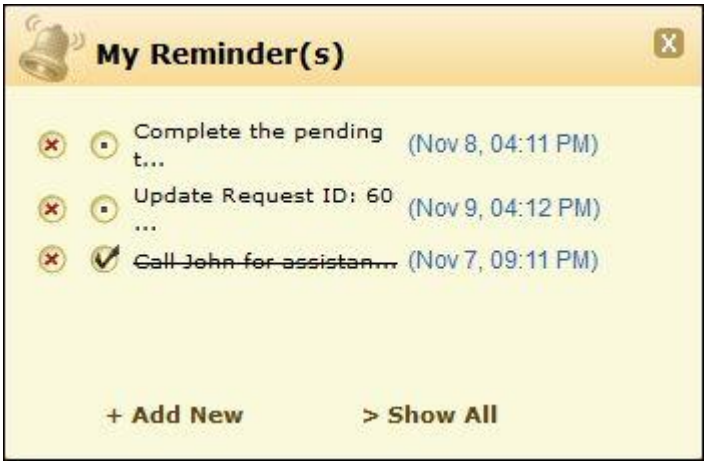
3. Enter the task summary in the text field provided.
4. Select the **Date & Time** for the reminder. The date field is set to the today's date and the time is set by default as 11:00 AM. Change the date and time settings. To change the **date**, click the calendar icon beside the date field and choose the date of your choice. From the time combo box, choose the time at which the task is scheduled. The values in the combo box are available in a gap of 5 min time interval.

5. Click **Add**. The new reminder is added and is listed along with the already existing reminders in the ascending order based on date and time.

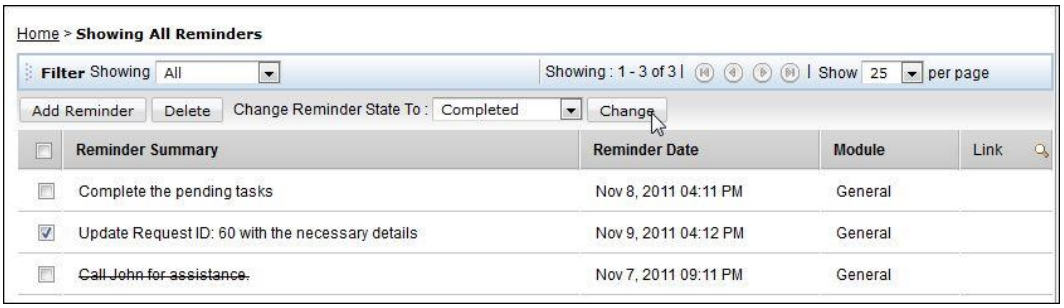
Changing Status

When you have completed a reminder, you can just strike the reminder to indicate that it is completed by selecting the radio button beside the reminder.

1. From the **My Reminders** form, click the status radio button to change the task status from incomplete to **Completed**. The task is struck through to indicate that it is completed.



2. Alternatively, you can also change the task state by executing the following steps :
   1. Click **Show all** at the bottom right of the **My Reminders** pop up window. The **All Reminders** window opens as shown below,



   2. Select the check boxes beside the **Reminder Summary** for which you wish to change the state.
   3. Select the state from the **Change Reminder State To** combo box, select the reminder state to **Completed**.
   4. Click **Change** button to change the status of the task. To indicate the change the task would be striked of.

Deleting Reminders

The reminders can be deleted by,

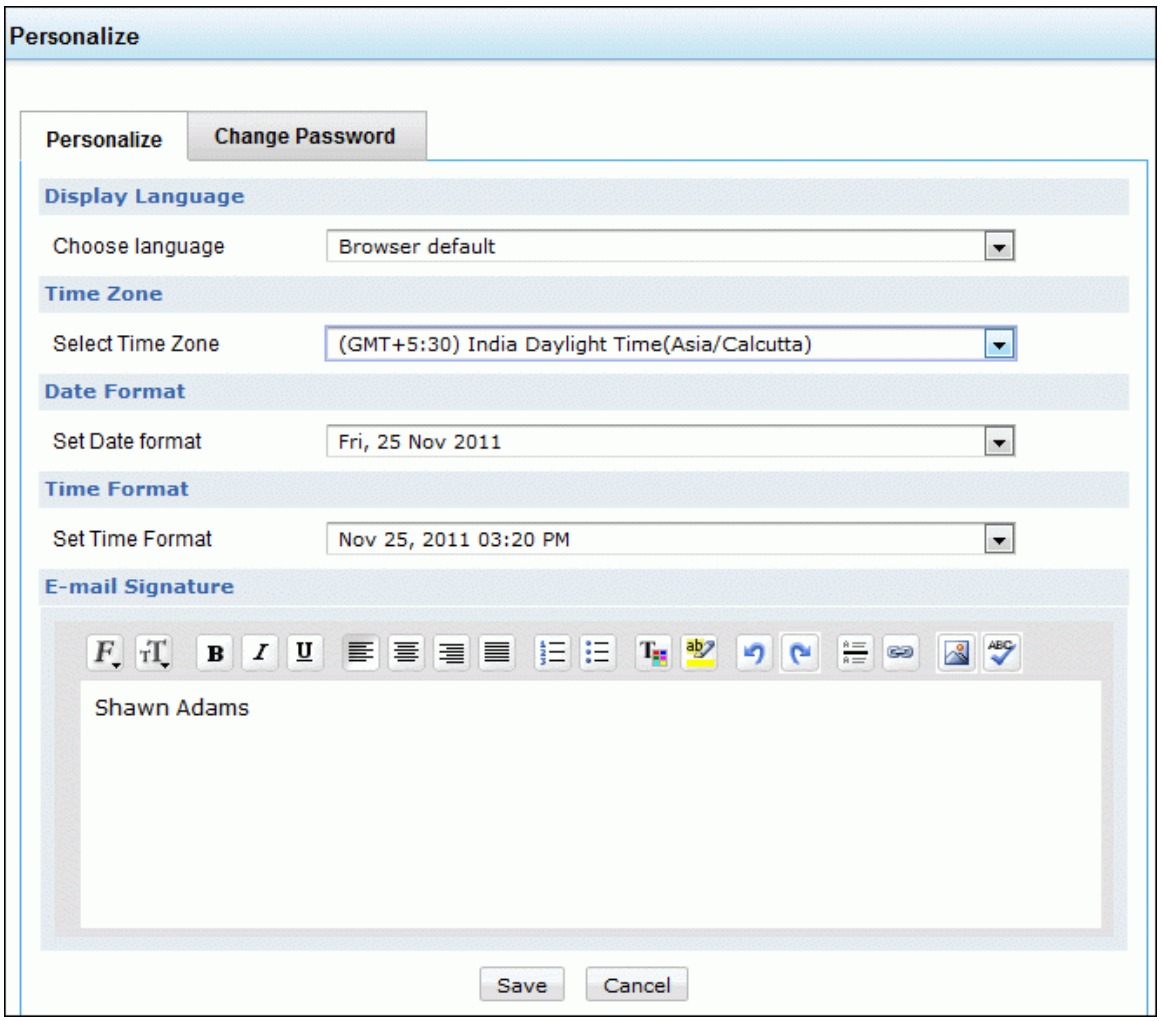
1. From the **My Reminders** form, click **Delete this reminder** radio button available beside the status radio button. The reminder gets deleted from the list.
2. Alternatively, from **All Reminders** window, enable the check box beside the Reminder summary to be deleted. Click **Delete**. A pop up window confirming the delete operation appears. Click **OK** to proceed. The reminder gets deleted from the list.

The advantage of moving the reminder to completed state instead of deleting it completely is that, you can revert the state of the reminder to **Open** again and edit its attributes. But once you delete the reminder, it is completely removed from the application and cannot be retrieved.

Personalize

You can localize your personalization such as display language, time zone and so on, as well as change your login password using this option. Apart from the option of changing password from the user management configurations, you can also change your individual password.

1. Log in to the ServiceDesk Plus application using your user name and password.
2. Click the **Personalize** link available at the top right corner of the page. This opens Personalize page which has two tabs which are, **Personalize** and **Change Password** as shown below,



Personalize

The personalize tab consists of display language, time zone, data format, time format and e-mail signature.

- **Display Language**

  Select the language of your choice from the **Choose Language** combo box. The selected language will be you default display language in the application. All the data will be displayed in the language selected by you.

- **Time Zone**

  Since the organizations can be situated in various sites, every site has its particular time zone. Select the time zone of the site of your organization from the **Select Time Zone** combo box. The date and time will be set according to the selected time zone. |

- **Date/Time Format**

  Select the format of the date such as, Tue 16 Sep 2008, from the Set Date Format combo box. Similarly you can also set the time format from Set Time Format combo box. The selected date and time format will be displayed where ever date/time is considered

  For Example: While creating a request, the request created on and due by time will be displayed in the selected date and time format corresponding to the selected time zone. The same can be viewed under Problem, Change, Solution and Purchase modules.

- **E-mail Signature**

  You can have your own personalized signature while replying to the mails using this option. Enter your signature in the text provided. Click **Save**.

Change Password

1. Click the **Change Password** tab in the personalize page. This displays the Change Password form.
2. Enter your old password in the **Current Password** field.
3. Enter your new password in the **New Password** field.
4. In the **Confirm New Password**, enter the new password again.
5. Click **Save** button.

License Expiry Alert

The **License Expiry Alert** shows the number of days for the existing license (or the trial version) to expire. If you wish to renew the license, then a renewal request must be sent to our support team, and they, in turn will provide you with the license file. To send a renewal request, click the **Renew** button. The page navigates to a **Renewal Form** where the **License ID** and **Customer ID** are pre populated. Enter the **Email Address** and your **Company Name**, also specify the **Number of Technicians and Nodes** license you wish to avail, and enable the **add-ons** if required. Enter relevant comments in the provided field and click **Submit**.

An email notification is sent to our support team, and they in turn will provide you with the license file. Once the license file is obtained, click the License link to install the license file. To know more on applying the license file, click Registering ServiceDesk Plus.

Dashboard

The Dashboard is a visual display of real-time information, consolidated and arranged in a single view so that it can be easily monitored. The Dashboard displays various statistical data related to number of requests, changes, problems, assets, software, POs and contracts based on various criteria.

	Note: Information displayed on the Dashboard largely depends on the site and roles associated to the technician.

Data shown in the Dashboard is restricted to the site the technician is associated to. When a technician is associated to multiple sites, then a drop down option with sites he is associated to appears. By choosing the site, information and data associated with that site are displayed to the technician.

Similarly, data displayed on the dashboard is also restricted based on the roles associated to the technician.

Dashboards contains the following sub tabs :

1. Helpdesk
2. Problem & Change
3. Assets

Helpdesk:

Under the Helpdesk tab, 8 small widgets are available to provide request based information at one glance.

- The first widget displays a matrix chart. It shows the total number of requests in Open, On Hold and OverDue statuses. This information can be viewed based on the criteria provided in the drop down box. Number of requests can be viewed based on Technician, Category, Level, Priority and Mode. Clicking on the numbers in the chart opens the corresponding list of requests.
- The second widget displays a pie chart. It shows the number of open requests that can be viewed based on Level, Mode, Priority and Category. By clicking on the graph, you can view the requests corresponding to each shaded criteria.
- The third widget displays a bar graph. It shows the number of SLA violated requests. A drop down box provided allows you to view the number of SLA violated requests based on Priority, Group, Level, Technician and Category. By clicking on each bar, you can view the SLA violated requests corresponding to the selected criteria.

- The next 3 are angular charts that show the number of unassigned and open requests, number of SLA violated open requests, and number of requests nearing SLA violation in the next 60, 120 and 180 minutes. Clicking on the number of requests present in the bottom of the widget opens the corresponding list of requests for viewing.

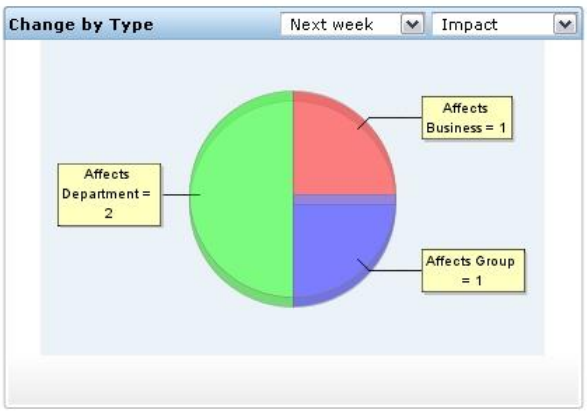
- The last 2 bar graphs show the number of requests that were created and closed in the last 20 days. Clicking on the bars on the graph, opens the corresponding requests for view.

Problem & Change:

Technicians who have permission to view the Problem and Change module can also view the Problem & Change widgets in the Dashboard.

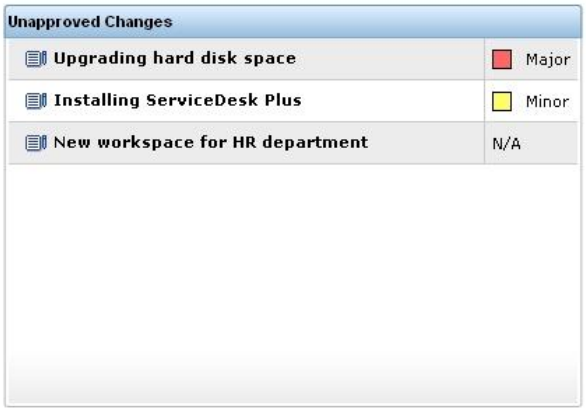
- The first widget in the dashboard is a pie chart that shows all the scheduled upcoming changes that are to be rolled out. The changes that are scheduled to be rolled out in the following time period (This week, Next week, This month and so on) by selecting the time period from the first drop down box. The changes can also be viewed based on criteria such as Change Type, Priority, Urgency and Impact.

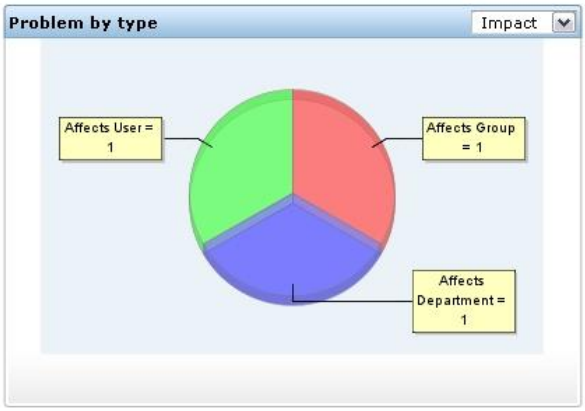
- The second widget shows a list of Approved changes that are scheduled to be rolled out. The list can be viewed based on the time period during which the changes are scheduled to be rolled out (This week, Next week, This month and so on). The list indicates the Title of the change along with the Change Type. Clicking on the title of the change opens a pop-up with the change details. By clicking on the title of the change in the pop-up, the complete change details page can be viewed.



- The third widget shows a list of unapproved changes along with the change type. Clicking on the title of the change opens a pop-up with the change details. By clicking on the title of the change in the pop-up, the complete change details page can be viewed.

- The last widget is a pie chart displaying the problems. The chart can be customized to be displayed based on Priority, Urgency and Impact.



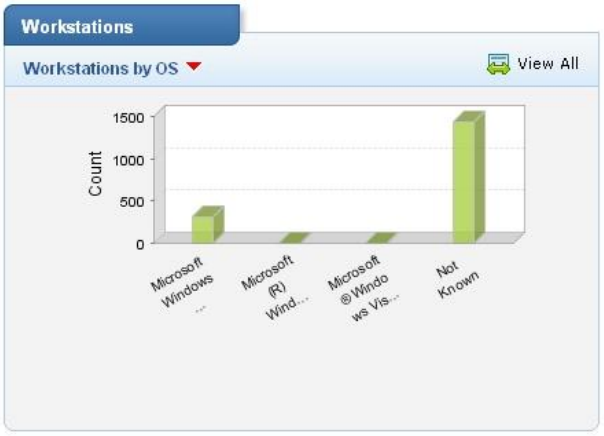


Assets:

Technicians who have permission to view Asset module can also view the Asset Dashboard and monitor the statistical data displayed on it. The widgets in the Asset Dashboard give complete summary of all physical assets (IT and non-IT), software assets, workstations and POs & contracts.

- The first widget shows a summary of all physical assets in the organization including IT and non-IT assets. By default only number of Workstations, Printers, Routers, Servers and Others are displayed. By clicking on "View All", the Others category is expanded and other IT and non-IT assets such as Access points, Switches are displayed. The number of workstations failed to be scanned is also indicated in this widget along with the option to Troubleshoot the failure operation. By clicking on the number displayed next to the assets, one can view the list of those assets under the Asset module.

- The second widget displays a bar graph indicating the number of workstations depending on various criteria. These criteria can be selected by clicking on the red drop down arrow at the top of the widget. By clicking on "View All", a pop-up showing the extended graph is displayed. Set of graph that is not included in the original widget is displayed in this pop-up. Mouse hovering over each bar displays the number of workstations corresponding to the selected criteria. By clicking on the bar, the list of workstations is displayed under the Asset module.



- The third widget shows software related information in a combination of pie chats and bar graphs. By clicking on the red drop-down arrow below the widget title, one can select the criteria based on which the graph should be displayed. By clicking on "View All", a pop-up showing the extended graph is displayed. Set of graph that is not included in the original widget is displayed in this pop-up. Mouse hovering over each bar/pie region displays the number of software corresponding to the selected criteria. By clicking on the bar/pie region, the list of software is displayed under the Asset module.

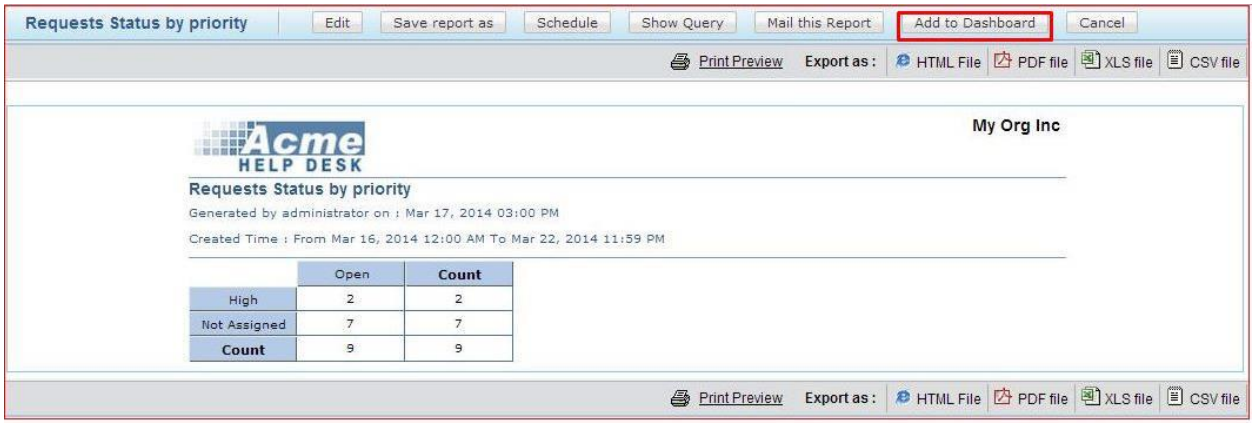
- The fourth widget shows a summary of Purchase Orders (POs) and Contracts. By selecting Purchase Order summary from the drop down, one can view the overdue POs, POs due in the next 7 days and the POs due in the next 30 days. By Selecting Contracts summary, one can view the contracts that have expired in the last 30 days, contracts expiring in the next 7 days and contracts expiring in the next 30 days.

Customizing your Dashboard

The dashboard can be customized as per your requirements by **adding reports as widgets** and grouping them under the respective tabs (**Helpdesk, Problem & Change, Assets**) available in the dashboard by following the steps mentioned in this page.

Adding Custom Widgets to Dashboard

1. **Select report** (which is to be added to the dashboard) from the Reports tab (**Example:** Request Status by Priority)
2. Click **Add to Dashboard** button available in the report's details page

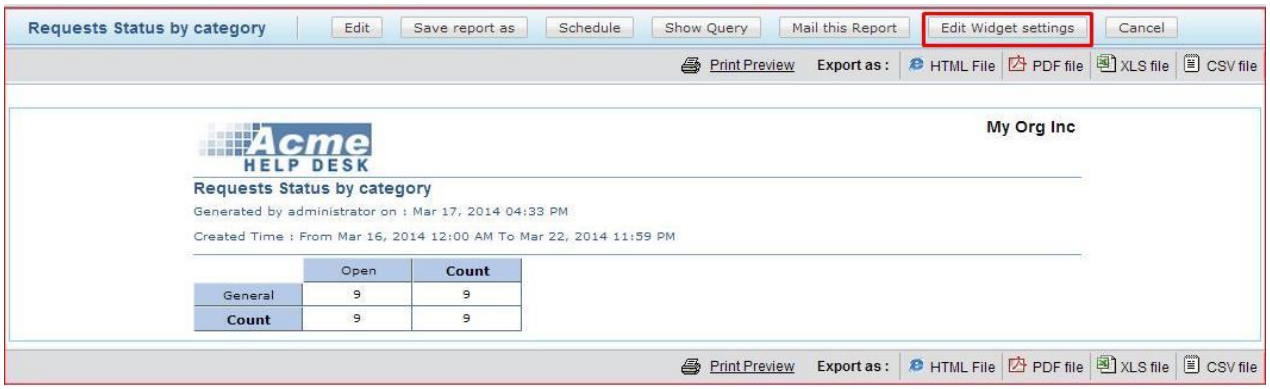


3. **Add to Dasboard** pop up opens up. Specify the following details.

   - Choose the **tab** (**Helpdesk, Problem & Change, Assets**) under which Reports widget is to be added
   - Decide whether the **widget** should be made public (visible to everyone) or should be kept **private** (visible only to you)
   - Provide suitable **description** for the widget and click **Add** button

Editing Custom Widget Settings

1. **Select report** (appearing as custom widget in the dashboard) which is to be edited (**Example**: Request Status by Priority)
2. Click **Edit Widget Settings** button available in the report's details page



3. **Edit Widget Settings** pop up opens up

- Edit the details as per your requirements (example: change the widget form public to private/private to public (or) change the tab to which the widget belongs etc)
- Click **Update Settings** button

Remove Custom Widgets from Dashboard:

1. Click **Remove Widget Icon** available at the top right corner of the custom widget
2. Okay the warning message
3. Custom Widget will be deleted

Note	1. Widgets available by **default** in the dashboard cannot be deleted/edited 2 Upto **20 Widgets** (including the ones available by default) can be added under each tab (**Helpdesk, Problem & Change, Assets**) 3 Only **Matrix-based** (or) **Chart-based reports** can be added as **widgets** to the dashboard 4 Custom Widgets cannot be deleted directly edited from the dashboard. To edit a custom widget, the respective report must be accessed 5 Only technicians with **SDAdmin, SDSiteAdmin and SDCo-ordinator roles** can create/edit/delete Custom Widgets in the Dashboard

Requests

The numerous help desk tickets raised in your organization are organized and tracked in the **Requests** module. The Requests module enables you to handle tickets promptly, assign tickets to technicians, merge similar requests and so on.

By keeping track of the outstanding and overdue requests, the Request module helps to improve the response time and resolution time by your IT help desk team. The Requests raised by your users are of two types namely, **Incident Requests** and **Service Requests**.

- **Incident Requests** are requests that denote the failure or degradation of an IT service. For example, Unable to print, unable to fetch mails and so on.
- **Service Requests** on the other hand are requests raised by the user for support, delivery, information, advice or documentation. Some examples are installing software in workstations, resetting lost password, requesting for hardware device and so on.

  NOTE: Please note that a Service Request is not an Incident.

The Requests module allows you to add relevant notes pertaining to the request that is being handled. The notes may contain information like, the exact scenario of the request or how the issue was resolved. Also, every action performed on the request in the ServiceDesk Plus is stored in the **Request History**.

Clicking the **Requests** tab takes you to the request module. Here the term request denotes any service (both incident requests and service requests) that is requested by a user from the internal IT services team. The requests is submitted to the system via mail or a web-based form. Sometimes, the requests can also be placed through a phone call during which, the help desk agent has to record the details of the phone call in the web-based form, and assign priority and technician based on the urgency of the request. The various actions that one can perform in the request module are explained in the respective sections.

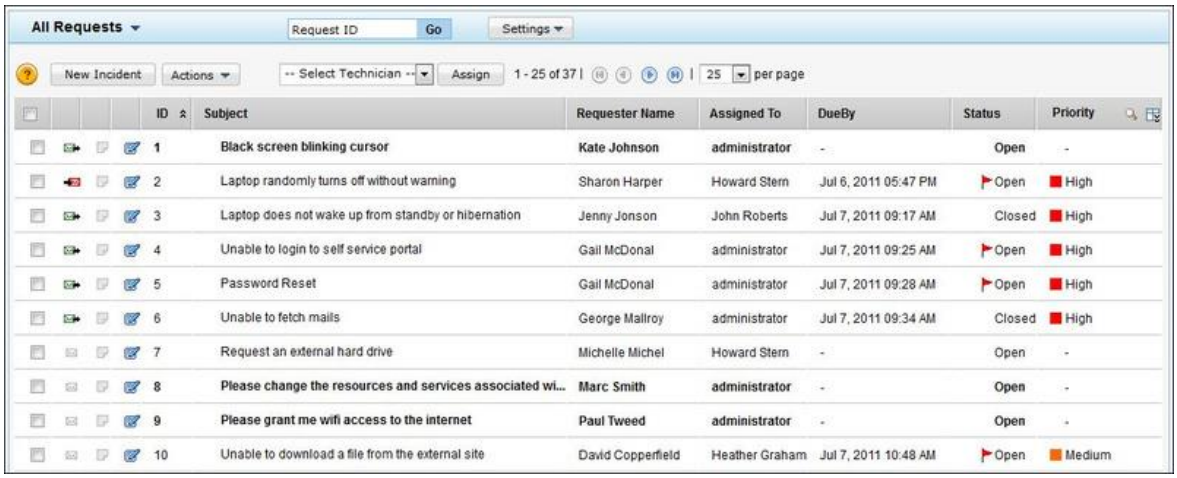
To ease the process of tracking the requests posted by individual requesters, a **Self Service Portal** has been provided. The Self Service Portal is used by the individual requesters to track the status of their requests and to look up solutions from the online knowledge base. To access the self-service portal, the requesters need to log in to the ServiceDesk Plus application using their respective user name and password. For more details on self-service portal, refer to Self Service Portal topic.

Request List view

The **Request List** view organizes and manages the help desk tickets raised into ServiceDesk Plus. In the Request List view, you have the facility to,

- View requests (incident and service requests) based on default filters
- Customize your own filters
- View Archived Requests
- Customize the columns in the list view
- Perform operations like edit, delete, assign and merge requests from the list view.

Click **Requests** tab in the header pane. The page redirects to the request list view page displaying all requests in the **Open** status, by default. The term '**All Requests'** denotes both the **Incident Requests** and the **Service Requests**.



- **Filter drop-down menu:** The Filter drop-down menu consists of default filter list which classifies requests into three categories namely, **My Group**, **Requests** and **My Views**. The filter has options to restrict the list view to display **Service Requests**, **Incident Requests** or both, and link to view **Archive Requests**.
- **Searching Requests based on Request ID:** View the details of a request instantly by entering the Request ID and click **Go** button.
- **Settings:** The Settings drop-down menu consists of options to Create Custom Views, Manage the Custom Views and set the frequency to auto refresh the request list view from every 3 minutes to 30 minutes.
    - **Creating Custom Views:** create filters to customize and organize your request list view The filters created can be made public or private.
    - **Manage Custom Views:** View, Edit and Delete your customized views.

- **New Incident:** Create new incident requests instantly using the **New Incident** button.
- **Actions drop-down menu:** Perform operations to bulk **Edit Requests**, **Delete Requests**, **Pick up Requests**, **Close Requests**, **Merge Requests** and **Link Requests**.
- **Column-wise Search:** Perform column-wise search for specific Groups, Requesters, Departments, Sites and so on.

Create an Incident

When users detect a failure of an asset/resource or a degradation of IT service, then they can sent an incident request to the system administration team.

Modes to report an incident

There are various modes of placing a request to the system administration team. Some of the most common modes are,

- Requesters **call** up the help desk agent and report an issue or explain the nature of their request. The help desk agent will then manually feed in the details into the application.
- Requesters log into the **Self Service Portal** and submit their requests, or
- Requesters **email** the request to the help desk team. The email is automatically converted to a new request in the application.

Apart from the above three modes, there are various other modes by which an incident request is created. For more information on adding additional modes, refer to Configuring Mode section.

Create Incident Requests from the application

A typical example for technicians to create an incident request from the application would be when a technician is on a call with the requester. The technician fills in the necessary details for future references.

There are three ways in which the new incident request form can be accessed in the application,

1. **New Incident drop-down menu**
2. **Quick Create - New Incident**
3. **Requests tab**

1. New Incident drop-down menu

The **New Incident drop-down menu** lists all the Incident Templates configured in the application. It is an instant means to quickly access the new incident form. For easy identification, the incident templates are grouped according to **Service Categories**. So all you need to do is browse through the available incident templates, select the one relevant to your issue and raise a new incident request.

The Incident Templates are configured in the **Admin** module under Helpdesk block.

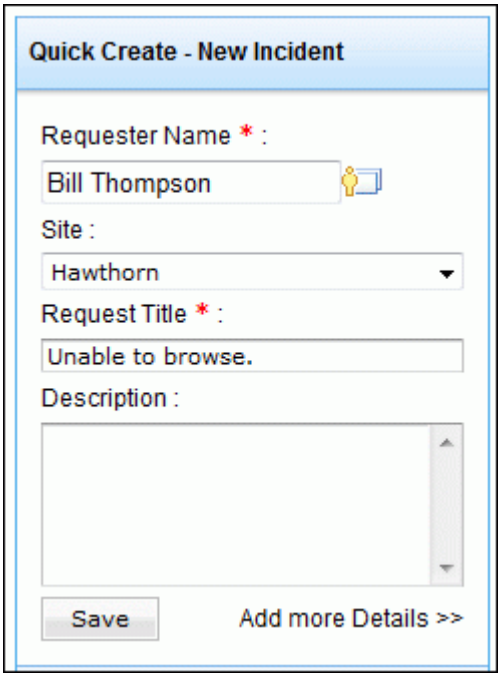
NOTE: The New Incident drop-down menu is available only if the administrator has disabled the option "Merge Incident and Service Templates" in Self Service Portal Settings.

2. Quick Create - New Incident

Quick Create - New Incident is an instant mode to create new incidents when you are on a call with a requester or when you are loaded with a lot of work. This section is available only when the 'Quick Create Settings' is enabled in the Self-Service Portal.

In the Quick Create - New Incident block, you can either conduct a search for the existing requesters using the icon or enter the requesters name in the field provided. Next, you need to enter **Request Title** and **Description**. Click **Save**. The incident is saved and the request details page is displayed.

If you require additional details such as category, priority or assign a technician, click **Add More Details >>** link. This takes you to the New Incident form.

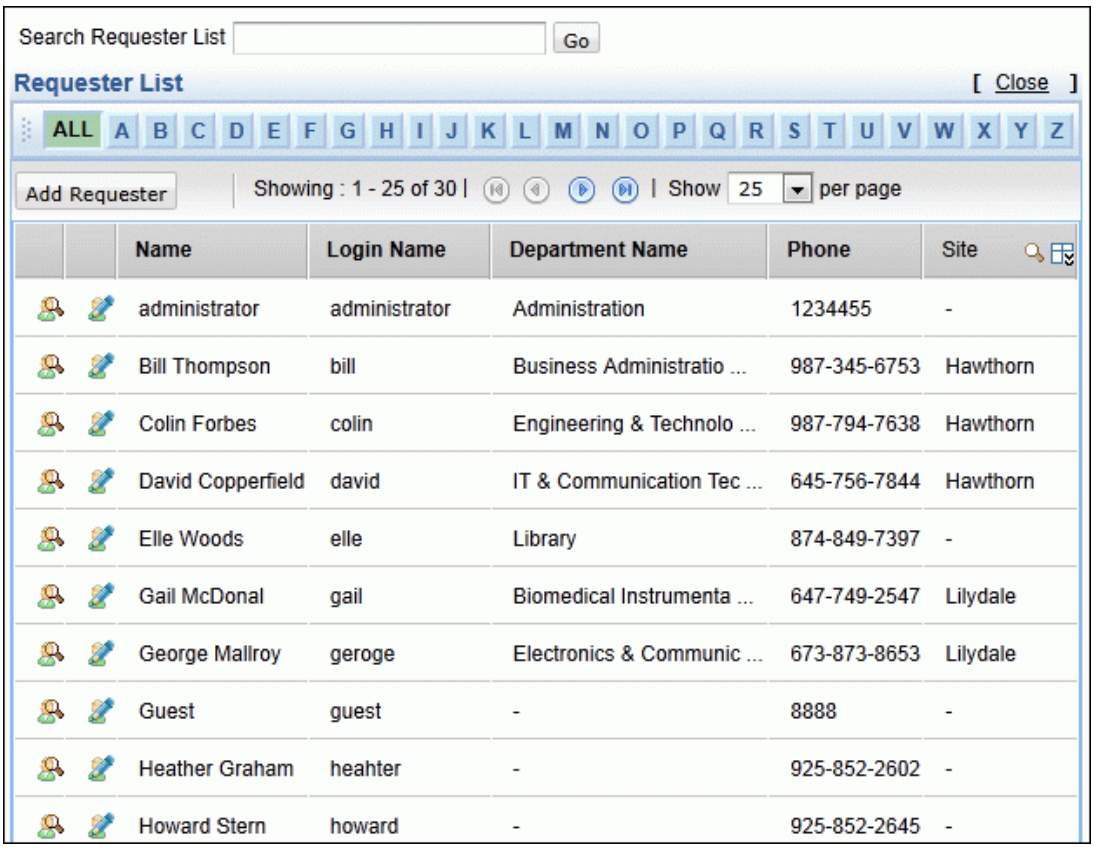


3. Requests Tab

To create a new request from the request tab,

1. Click **Requests** tab in the header pane.
2. From the Request List view, click **New Incident** button. By default, the 'Default Incident Template' form is displayed. From this form, you can select an incident template from the **Change Template** drop-down menu.
3. In the default request form, select the **Request Type** from the combo box. Request Type denotes the type of request sent by the requester to the help desk team. You can configure Request Type in the Admin tab.
4. Select the **Status** of the request, the **Mode** of request submission, **Level** and **Priority** of the request from the drop-down box.

5. Also, select the **Impact, Impact Details** and **Urgency** of the request from the corresponding drop-down box.
6. In the Requester Details block, specify the **Requesters Name**, **Contact Number**, **Job Title** and **Department** of the requester.
7. You can select the requester from the list of users configured in the application. Click **Requester lookup** icon beside the requester name field. The **Requester List** window pops up.



To select a requester from the list, click the hyper-linked requester **Name**. The requester name and details associated with the requester are populated in the requester details block.

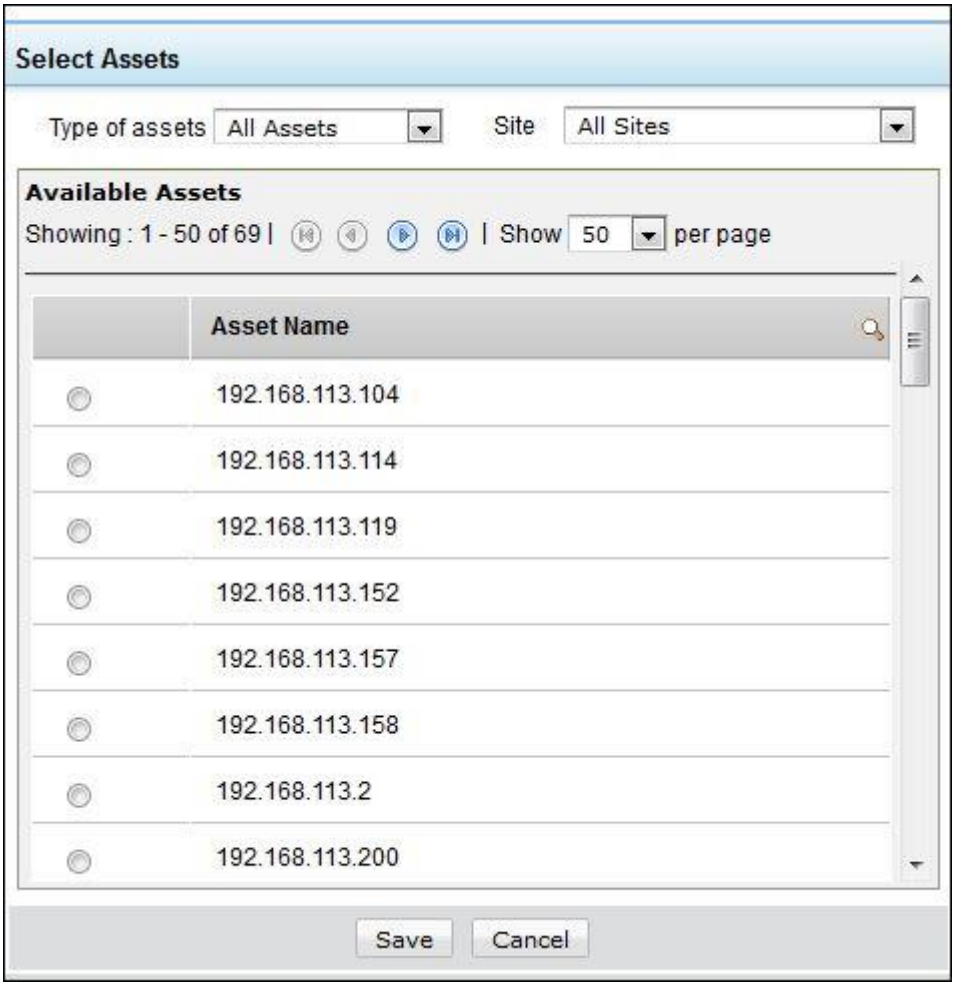
-
  1. If the requester list is huge, then click on the **Alphabets** at the top of the page to view only a selected group of requesters.
  2. Conduct an instant search for the requester by entering the search string in **Search Requester List** field and click **Go**.
  3. If you are aware of any requesters details such as name, login name, department, email and so on, then conduct a column-wise search using the search icon .
  4. In addition, add new requester directly by clicking the **Add Requester** button from the requester list page.

5. Also, you have an option to edit the requester details directly from this page. Click the **edit** icon beside the requester name to perform the edit operation.

8. The assets associated to the requester are populated in the **Asset** drop-down. Select the **Asset** from the drop-down. If the issue is caused by a network resource such as a router or an access point, then click the icon and select the asset.

   In **Select Assets** pop-up window, you can filter the assets by selecting the **Type of assets** such as, access point, routers, workstation and so on, from the drop-down. Selecting **All Assets**, lists all the assets available in the application, irrespective of the asset type. You can further filter the assets according to sites using the **Site** drop-down. Selecting a site lists the assets from that particular site. Say, for instance, if the site selected is "New York" and the asset type is "Access Point", then all the access points associated to the site New York are listed.

   NOTE: The sites associated to the logged in technician are listed in the Site drop-down.



9. By default, if the location of the requester is configured in the application, then the same is populated in the **Site** field. In certain scenarios, the requester may raise a request from one site to a problem in a another site. In this case, the site in which the issue persists should be selected.
10. On selecting the site, the groups corresponding to the site gets populated under the **Group** field. The request is routed to the particular group by selecting the Group name from the drop-down.
11. On selecting the Group, technicians associated with the Group alone are listed in the **Technician** drop-down list. Select a **Technician** to handle the request from the drop-down.
12. Select the **Service Category** which is effected by the incident from the drop-down.
13. Select the relevant category under which the request is classified from **Category drop-down** box.
14. Also, select the relevant **Sub-Category** and **Item** from the drop-down box.
15. If you wish to add a CC to the email loop, then select the **Email Id(s) to Notify** by clicking the icon . From the Requester List pop up window, enable the check box beside the requester name. Click **Add Requester**.

    Note: Please note that the email address should be configured for the selected requesters.
16. Specify the subject line to be displayed while sending the request in the **Subject** text field. The subject line is displayed as the request title and is a mandatory field.
17. Provide a detailed description with any other associated details relevant to the request in the **Description** text box.
18. To add any attachments relevant to the request, click the **Attach file** button in the Attachments block. The **Attach File** pops up as shown below,

    1. Click the **Browse** button and select the file to be attached from the file chooser window and click the **Open** button.
    2. Click the **Attach file** button. The selected file is listed below the **Attachments** heading. If you have more files to choose, follow steps 2 and 3 repeatedly till you have attached all the relevant files. Please ensure that the maximum size of the attachment is 10 MB.

       The attached documents is indicated with an attachment icon beside the title of the request in the request list view page.

18. While entering the request details, if you have a solution for the request, then the same can be entered in the Resolution field. The purpose of resolution field in the new request form is, when you are reported of a problem for which you are aware of the solution, then in this case, specify the solution in the resolution field, set the status as closed to close the request.

To add resolution, click the button beside Resolution title in the new request form. Specify the solution in the resolution text field. The entered resolution can be viewed by clicking the Resolution tab while viewing the request.

19. If there are any additional fields configured for the new incident form, then enter the values for the fields. To know more on adding user defined fields in the incident form, refer Incident - Additional Fields.
20. Click the **Add request** button. The request is added to the existing list of requests and can be viewed from the request list view.

Raise a Service Request

Service Requests are requests raised by the user for support, delivery, information, advice or documentation, and is not related to any failure in the IT structure. The two modes through which requesters can raise service requests to the system administration team are:

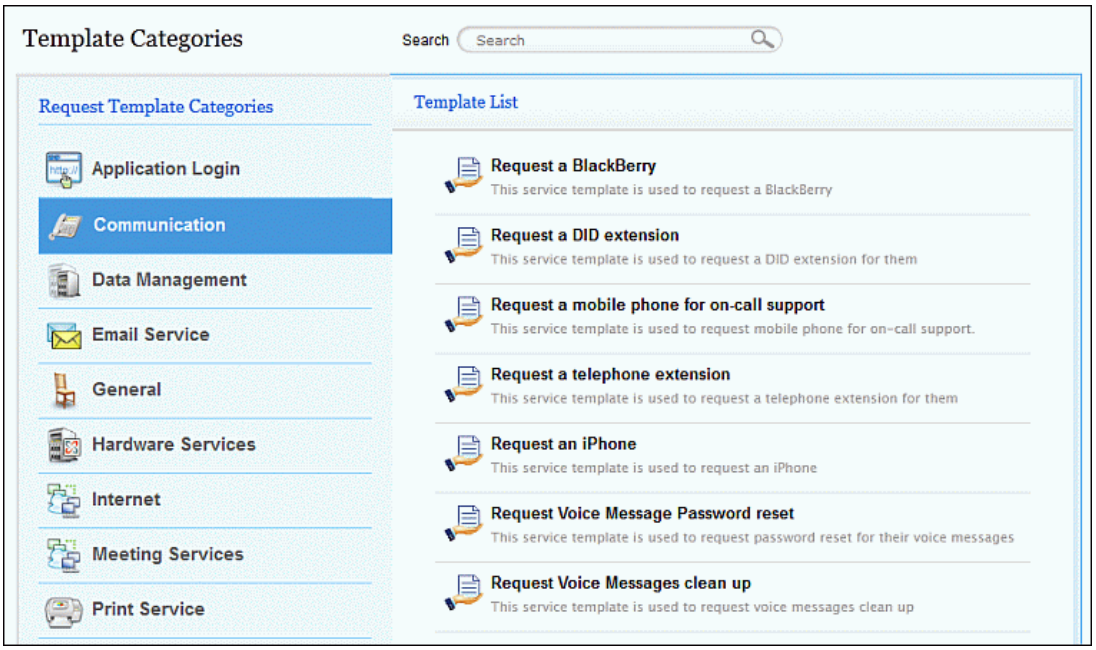
- Requesters can **call** up the help desk agent and request for service. The help desk agent will in turn raise a service request by conducting a search for the service item from the list and manually feed in the users details. OR,
- Requesters can log into the **Self Service Portal** and raise the service request by themselves.

The Service Catalog list

Similarly to the New Incident drop down menu, the **Service Catalog drop-down** menu lists all the service items configured in the application. The service items are grouped under a service category for easy reference and identification. From the list of service items available to you, you can browse and raise a service request.

> **NOTE:** If New Request drop-down is displayed instead of Service Catalog drop-down menu, then the administrator has enabled the option **Combine incident and service templates listing for the service** in Self Service Portal Settings. The **New Request** drop-down menu groups both, the Incident Requests and Service Request Templates based on the category.

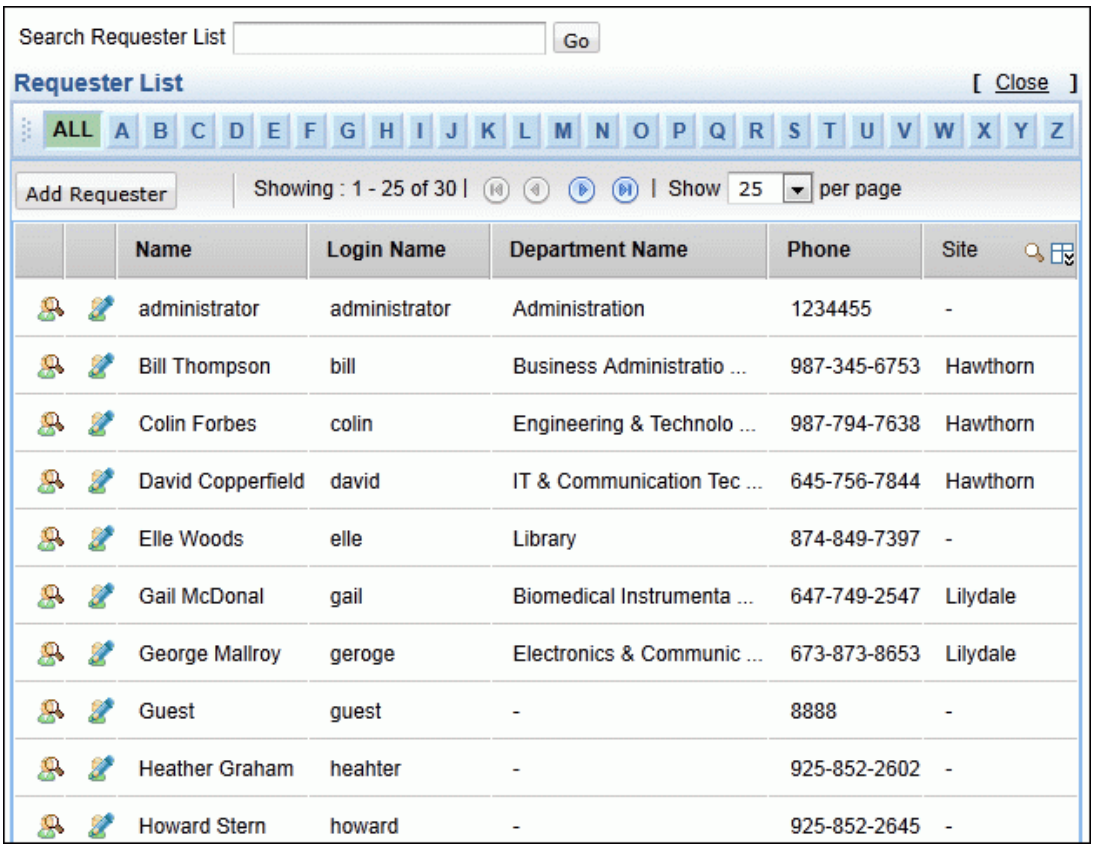
Click **Service Catalog** drop-down link to view the **Template Categories** and the **Template List**.



Raise a Service Request

Raising a new service request is as simple as creating a new incident request from the available templates. Browse through the Template List and select a service that is relevant to your needs.

1. Select the service item from the catalog. This takes you to the **New Service Request** form. The delivery time frame of the service is displayed. The delivery time frame is displayed only if an SLA is assigned to the service request.
2. Select the parameters such as Status, Level, Mode, Priority, Category, Sub category and so on, that is available in the template.
3. To select a **Requester** from the list of users configured in the application, click requester **lookup** icon beside the requester name field. The **Requester List** window pops up. Click the hyper-linked requester **Name**. The requester name and details associated with the requester are populated in the requester details block.



1. If the requester list is huge, then click on the **Alphabets** at the top of the page to view only a selected group of requesters.
2. Conduct an instant search for the requester by entering the search string in **Search Requester List** field and click **Go**.
3. If you are aware of any requesters details such as name, login name, department, email and so on, then conduct a column-wise search using the search icon .

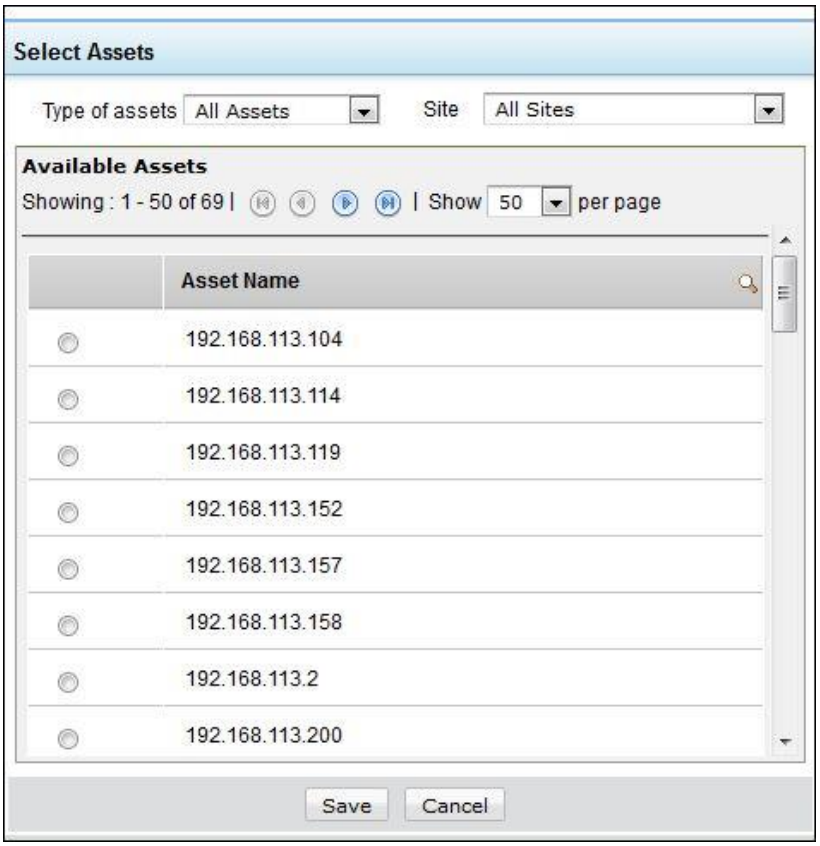
4. In addition, add new requester directly by clicking the **Add Requester** button from the requester list page.
5. Also, you have an option to edit the requester details directly from this page. Click the **edit** icon beside the requester name to perform the edit operation.

4. The assets associated to the requester are populated in the **Asset** drop down. Select the **Asset** from the drop down. You can also select assets by clicking the icon .

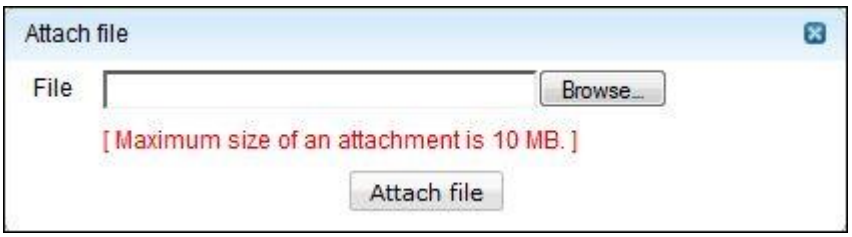
   In **Select Assets** pop-up window, you can filter the assets by selecting the **Type of assets** such as, access point, routers, workstation and so on, from the drop-down. Selecting **All Assets**, lists all the assets available in the application, irrespective of the asset type. You can further filter the assets according to sites associated to the logged in technician using the **Site** drop-down. Selecting a site lists the assets from that particular site.

   Say, for instance, if the site selected is "New York" and the asset type is "Access Point", then all the access points associated to the site New York are listed.

Tip:	If the Service Request is "Installing a Software", then select the workstation in which the software should be installed.



5. By default, if the site location of the requester is configured in the application, then the same is populated in the **Site** field.
6. On selecting the site, the groups corresponding to the site gets populated under the **Group** field. The request is routed to the particular group by selecting the Group name from the drop down.
7. On selecting the Group, technicians associated with the Group alone are listed in the **Technician** drop down list. Select a **Technician** to handle the request from the drop down.
8. If the editor field is enabled for the service request, then select the **Editor** from the icon . Refer the topic Service Request Editor to know the purpose of the editor and how to enable the editor field.
9. For a service request template, the subject line is already specified. You can change or modify the subject. The subject line is displayed as the request title and is a mandatory field.
10. Provide a detailed description with any other associated details relevant to the request in the **Description** text box.
11. To add any attachments relevant to the service request, click the **Attach file** button in the Attachments block. The **Attach File** pops up as shown below,



1. Click the **Browse** button and select the file to be attached from the file chooser window and click the **Open** button.
2. Click the **Attach file** button. The selected file is listed below the **Attachments** heading. If you have more files to choose, follow steps 2 and 3 repeatedly till you have attached all the relevant files. Please ensure that the maximum size of the attachment is 10 MB.

   The attached documents is indicated with an attachment icon beside the title of the request in the request list view page.

11. While entering the request details, if you have a solution for the service request, then the same can be entered in the **Resolution** field.
12. Click **Add New Request** button. The request details page is displayed from where you can perform further actions on the service request.

NOTE	Please note that the following operations cannot be performed on a service request - **Merging requests**, **Duplicating requests**, **Associating Problems to a request** and **Associating Changes to a request**.

Custom Views

The **Settings drop-down menu** consists of options to **Add Custom Views** and **Manage Custom Views**. **Custom Views** helps you sort requests by customizing the request list view to display requests based on certain criteria. The Custom Views are listed in the **Filter drop-down menu**.

Say, you are a technician who is concerned only with the high priority requests from a particular site. Instead of performing a search in the request list view, each and every time, you can create a custom view that will filter requests based on your specified criteria.

Add Custom Views

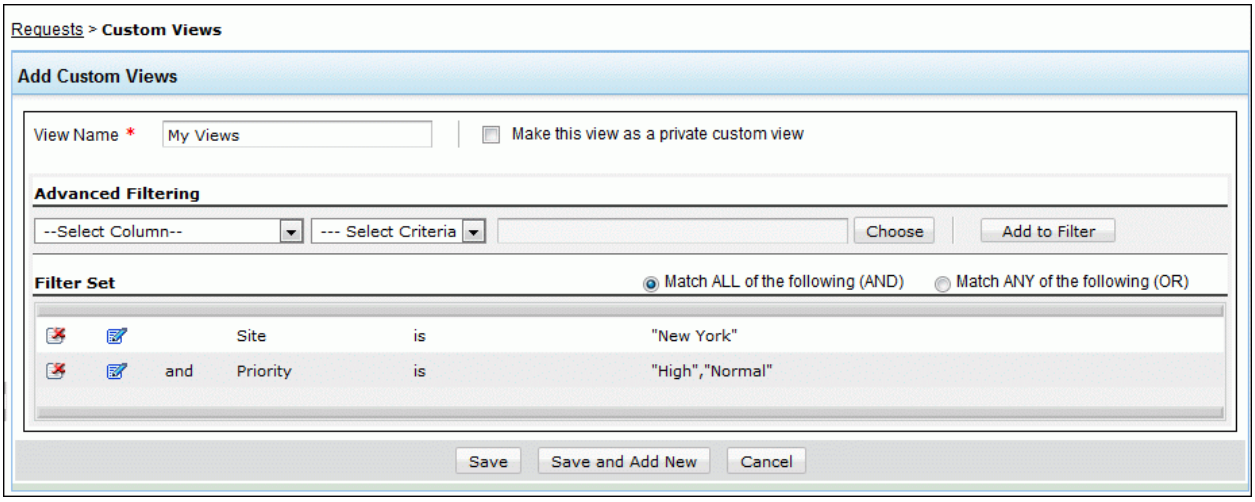
You can add custom views by specifying the criteria to filter requests accumulated in your request list view.

NOTE:

1. If you are logged in as the administrator, then you have the privilege to mark a custom view as private or public. **Public Custom Views** can be viewed by all the technicians but **Private Custom View** can only be viewed by the technician who has created the view.
2. If you are logged in as a technician, then the custom views created by you are marked as private, by default.

To create custom view,

1. Click **Requests** tab in the header pane. The **Request List view** page is displayed.
2. Click **Settings drop-down menu** and select **New Custom View** option. The **Add Custom Views** page is displayed.
3. Specify a name for the custom view in **View Name** text field. This field is mandatory.
4. Select the **Columns** and its **Criteria** from the drop-down box.
    1. Click **Choose** to select a value for the column.
    2. Click **Add to Filter** button. The filter criteria details is saved and listed in the **Filter Set** block. You can add more filter conditions to this view by selecting the column, criteria and condition of the filter.
    3. If you have more than two criteria, then select the **AND** or **OR** conditions by enabling either of the two radio buttons.



5. If you are logged in as the administrator, then you have the privilege to make your view as private by selecting **Make this view as private custom view** check box.
6. Click **Save** button. The custom view is saved and listed in Custom Views List view page.
7. Click **Save and Add New** button, to save and add another custom view.

The Custom Views are listed in the **Filter drop-down menu.** The Custom View marked as **Private** is listed under **My Views**, and the Views marked as Public is listed along with the remaining filters.

Manage Custom Views

Manage Custom Views helps manage your views by providing a consolidate view of all your public and private views. While viewing the custom views, you can edit, delete and add custom views.

1. Click **Requests** tab in the header pane. The **Request List view** page is displayed.
2. Click **Settings drop-down menu** and select **Manage Custom Views** option.

Edit a Custom View

To edit a custom view,

1. In the **Custom Views List** view, click the **Edit** icon beside the filter name to edit. The **Edit Custom Views** page is displayed.
2. Edit the details and save the changes.

Delete Custom Views

1. In the **Custom Views List** view, select the check box beside the custom views to delete.
2. Click **Delete** button. A dialog box confirming the delete operation appears.
3. Click **OK** to proceed. The Custom View is deleted from the list.

NOTE: The Public Views can be deleted by a technician with Administrator privileges.

View Request Details

To view a request available in the ServiceDesk Plus Request module,

1. Click **Requests** tab in the header pane.
2. In the Request List view, click the **Subject** link of the request to view. The Request Details page is displayed showing the following tabs by default namely, **Request**, **Resolution**, **Work Log** and **History**.

NOTE:

1. The **Conversations** and **Discussion Notes** block are displayed when the same are added to the request.
2. The **Approvals** sub tab appears when the request is submitted for approval. The **Approval Status** of the request is shown on the top right corner of the page below the Status and Priority. To know more refer Submit For Approval.
3. The **Tasks** sub tab appears when tasks are added to the request.
4. You can also associate Problems and Changes to the incident requests. Refer the topics Associating Problems to Incident and Associating Changes to Incidents to know more.

Request Tab

In the Request tab, the data is grouped in a logical manner. By default this page displays the **Subject** and **Description** of the request, **Request Details** and **Requester Details** blocks. The **Request ID** is displayed on the top left corner of the page below the tabs. The **Status** and **Priority** of the request is displayed on the top right corner of the page.

Request Details block

The **Request Details** block displays the Request fields like Status, Priority, Technician handling the request, Due Date and so on. You have inline edit option to edit all the request details under this block.

To edit a request field using inline edit option, click the link available for each of the request details against the request fields. Say for example, to change the Level of the request from Tier 2 to Tier 4, select Tier 2 link of the Level field. The field is displayed as a drop-down menu. Select the level from the drop-down menu.

If there are any additional user-defined fields that have been added to the new request form, they are grouped under the **Additional Request Details** head and displayed just below the Request Details block.

Requester Details block

In the **Requester Details** block, the details of the requester such as the **Requester Name, Contact Number, Department, Email Address & Mobile Number** of the requester are displayed. You have inline edit option to edit all the requester details under this block. To edit the details click the link available for each of the requester details against each field.

Asset belonging to the User, while adding users to ServiceDesk Plus in the Admin tab, you have an option to Associate Workstation to the user. If you have associated workstation to the user, you can view the list of all associated workstations under this block.

Conversations block

The **Conversations** block is displayed only if there are any mail transactions or threads exchanged between the technician and the requester. The Conversation block is displayed above the Request Details block.

By default, the conversation between the technician and the requester is displayed. Click **View All Conversations** to view mail transactions between technicians, and also the threads between the technician and requester.

NOTE: If any mail transactions/ threads has an attachment, then the same can be viewed in the Conversations block. To know more refer Request Conversation.

Discussion Notes

The **Discussion Notes** block appears only when a note is added to the request. The notes are displayed in descending order of their date of creation. If you select the option "Show this notes to requester" then the note will be listed as Public. Else it is listed as private. You also have an option to edit or delete the discussion notes.

Resolution Tab

The Resolution tab displays the resolution added for the request along with the date and time. You can edit the resolution using the **Edit** icon .

> **NOTE:** Editing a resolution requires permissions that can be enabled under **Admin** tab -> **Roles**.

If there are no resolutions available for the request, then you can added a resolution in the text field. You can either manually enter the resolution or add a resolution using the **Resolution Template**. You can also search for resolutions from the solutions database by clicking **Search Solutions** button.

The resolution is a documented information of how the issue was resolved and this documented can be very useful for future reference. You can add the resolution to the knowledge base by clicking **Save and Add to Solutions** button.

The status of the request can be modified while adding a resolution on selecting the status from **Change Status To** combo box.

You also have an option to **Add Time Entry** to the resolution. Select **Add Time Entry** check box and specify the details.

Work Log Tab

The time spent by a technician on a request is recorded in the **Work Log** tab. The Time Elapsed block lists details such as the executed time of the request, time elapsed, the technician handling the request and his charge. You can also add Work Logs from this tab.

Tasks Tab

The **Tasks** tab is displayed beside the Request tab and appears when tasks are added to the request. From this tab you can **Add Tasks from the Template**, **Delete** existing tasks and also **Organize** tasks.

Approvals Tab

The **Approvals** tab is displayed next to the **History** tab when a request is submitted for approval. It displays all the mails sent for approval in ascending order with the Approver e-mail address, Sent On, Status and acted on details of the request.

Once the request is approved by the manager the status of the request changes to **Approved.** If rejected by the manager the status of the request changes to **Denied.**

History Tab

To view the request history from the time of its creation, click the **History** tab in the view request page. The details that are displayed in the history are in the ascending order with the earliest performed action shown at the top of the page and the latest action at the bottom of the page.

Edit Request

To edit a single request available in the ServiceDesk Plus Request module

1. Click the **Requests** tab in the header pane. This opens the **Requests** list.
2. Click the **Title** of the request which you want to edit from the view list page. This opens the **View Request** page. Click the **Edit** tab on the top of the page to modify the request details. [OR]

   From the request list view page, click the edit icon beside the request to be edit. This opens the **Edit Request** form where you can add resolution while editing, change the status of the request from open to close, and so on.

   Alternatively, you also have an inline edit option to modify the request details in the view request page. Click the edit button beside each block which opens the request form fields in editable format. This comes in handy when you need to edit the values of the entire block say **Request Details** one by one.

   Note: While editing the request details block, the SLA, department and the template is in non editable mode. The SLA of the corresponding site selected on editing the request gets applied. The department of the corresponding technician selected on editing the request gets displayed.

4. On modifying the values, click **Update Request** to save the changes. If you do not want to save the changes, click **Cancel**.

Edit more than one Request

You have an option to edit more than one request simultaneously. For instance, you want to assign a group say, Printer to ten requests relating to Printer Problem or you want to assign a Category to bulk requests. Instead of editing the requests individually you can perform a bulk edit to edit the requests instantly.

1. Select the check box beside the requests to be edited from the request list view page.
2. Click **Edit Request** button. The **Edit Request** page opens. The title displays the request Ids that are grouped together to edit.
3. Edit the fields, say Category into Desktop. This will replace the categories of all the requests grouped together.
4. Specify the **Reason for Updating the request** in the given text field.
5. Click **Update** button to save the changes.

Close Request

When a requester is completely satisfied that his/her request has been completely attended to and the reported problem has been resolved, then the request can be moved to closed state. You can close a single request or multiple request from the request module.

While closing a request in ServiceDesk Plus, you need to check if **Request Closing Rule** and **Request Closure Code** are configured and enabled in **Admin** tab -> **Helpdesk Configurations**. Request Closing Rule imply certain rules while closing a request like confirming the users acknowledgement of the resolution and setting the mandatory request parameters for closing the request. Whereas, Request Closure Code denote the reason behind closing the request.

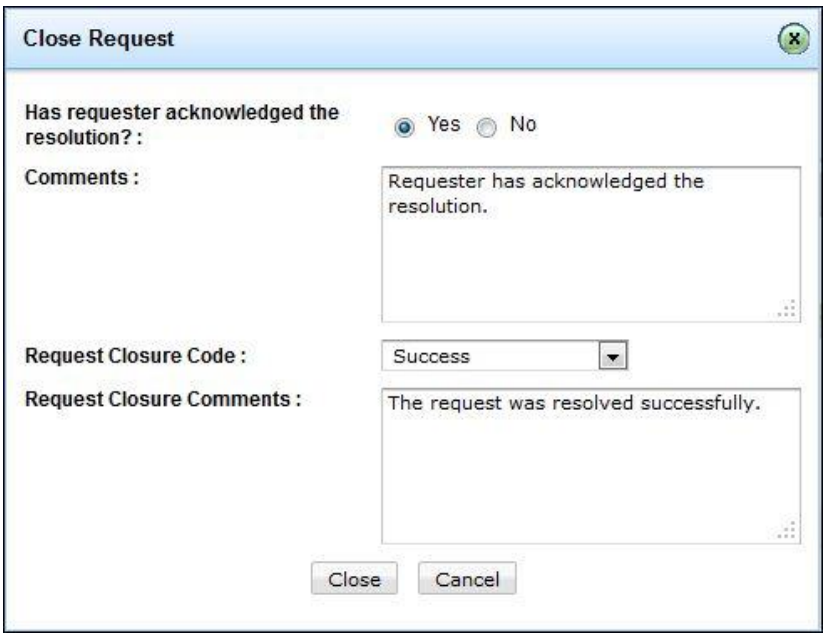
Close a single request

To close a request from the request details page,

1. Click **Requests** tab in the header pane. The request list view page opens.
2. Click the **Subject** link of the request.
3. From the details page of the selected request, click **Close** sub tab.
4. The request is closed and a success message appears.

NOTE:

- If you have selected the mandatory fields to be filled while closing the request in **Request Closing Rule**, then enter the mandatory fields and close the request.
- If you have enabled the option **"Yes, prompt a message"** to confirm a users acknowledgement in **Request Closing Rule**, then a **Close Request** dialog box appears.



1. If the requester has acknowledges the resolution, select '**Yes**' radio button. Else, enable '**No**' radio button.
2. Enter relevant **Comments** in the field provided.
3. Select the **Request Closure Code** from the drop down. The **Request Closure Code** denotes the reason for closing the request.
4. Enter relevant **Request Closure Comments** in the field provided.
5. Click **Close** to close the request. If you do not wish to close the request then click **Cancel**.

Alternatively, you can also change the status of the request to "Closed" through **in-line edit** or when the request is in **editable mode**.

Close more than one request

You can close bulk requests from the request list view. To close more than one requests,

1. In the **Request** list view page, enable the check box beside requests to close.
2. Click **Close** button. The selected requests are closed followed by a success message in the request list view page.

If you have selected **Request Closing Rules** like setting the mandatory fields before closing a request or prompting a message to confirm users acknowledgement, then refer the steps in the above NOTE to close the requests.

View Closed Requests

You can view all the closed requests from the list view. To view the closed/completed requests,

1. From the Request list view page, select **Completed Requests** from the **Filter drop-down** menu. This lists all the closed and resolved requests.
2. Select **My Completed Requests** from the **Filter drop-down** to view the list of closed/resolved requests that were assigned to you.

Reopen Closed Requests

Requests can be reopened from the closed state. You can reopen bulk requests or a single request. To reopen a single request,

1. From the **Request list view** page, select **Completed Requests** from the **Filter drop-down** to view the list of closed/completed requests.
2. Select the **Subject** link of the closed request to reopen. Click **Edit**. You can also bring the request in editable mode through in-line edit.
3. When the request is in editable mode, change the status field from **Closed** to **Open**.

When a request is opened from the closed state, you can also change the **Due By time** of the request. Also, the completed date is removed once the request is reopened. When

this request is finally closed, the **completed date** is updated and the **Time taken to close** is recalculated taking the reopened period into account.

To reopen bulk requests from the list view,

1. From the **Request list view** page, select **Completed Requests** from the **Filter drop-down** to view the list of closed/completed requests.
2. Enable the check box beside the requests to reopen.
3. Click **Edit Request** button. The **Editing Requests** window pops-up specifying the Request ID. All the fields in this pop-up window are editable.
4. Change the status field to **Open**.
5. Click **Save**.
6. A success message appears indicating that the selected requests are reopened.

Pick up Requests

ManageEngine ServiceDesk Plus provides the option of self-pick up of requests that are received in the requests module. If there are unassigned requests in the application, then the technicians can themselves pick up requests. This increases the efficiency in the turnaround time of the IT help desk team as the requests are assigned and answered sooner and waiting time of the request till it is assigned is reduced.

To pick up requests,

1. Click the **Requests** tab in the header pane. The unassigned requests will be in bold font.
2. Select the requests you would like to pick up by enabling the check box. Click **Pick up** button. The selected request will be assigned to you. (Or)
3. You can also pick up requests after viewing the request details. Click the title of the request to open **View Request** page.
4. Click **Assign** tab. Select **Pick Up** option to pick up the request.

Assign Request to Technician

Each request will be owned by a technician, who would be responsible for handling the request till it is closed.

To assign request to technician,

1. Click **Requests** tab in the header pane. This opens the **Requests** list.
2. Click the **Title** of the request for which you have to assign a technician. This opens the view request page.
3. The **View Request** page lists the **Tasks** that can be performed on the requests on top of the page. Here click the **Assign** link and select the assign option. This opens **Assign Group and Technician** page as shown below.

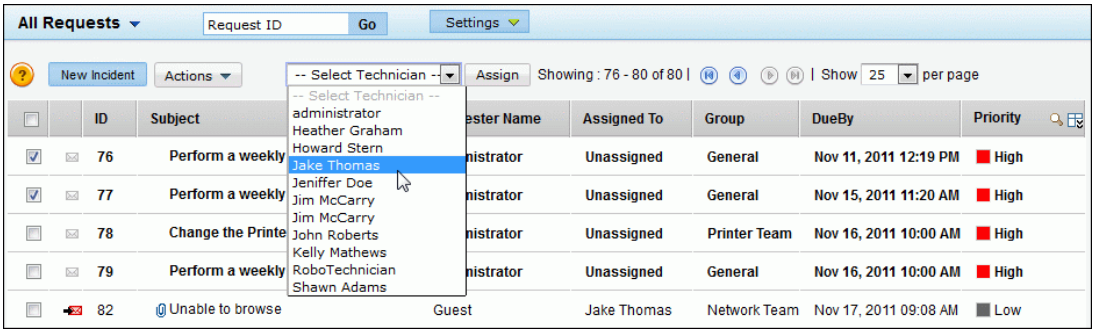
   Based on the issue you can assign this request to the appropriate **Group** and as well as to the **Technician** who belongs to that group. Or you can select either of the one. If you wish to select the technician alone then choose the technician from the list and click **Assign** button to assign the technician to handle the request. And when the technician logs into ServiceDesk Plus, he/she would see this request in the **My Open Requests** list.

4. Alternatively, you can also assign technician using inline edit option. Click the technician name shown in the request details block. This opens the drop down box as shown below. Select the technician from the list and click the icon to select the technician name else click cancel icon.

Bulk assign requests to technicians

You can also assign more than one request at a time to a technician.

1. In the **Requests** list view, select the requests to be assigned a technician by enabling the check box beside left side of each of the request title.



2. Select the **Technician** from the drop down menu.
3. Click **Assign** button to assign the selected requests to the technician.

Unassign Technician from Request

Each request will be owned by a technician, who would be responsible for handling the request till it is closed. You can unassign a request from the request and move it back to unassigned status.

To unassign a technician,

1. Click the **Requests** tab in the header pane. This opens the **Requests** list.
2. Click the **Title** of the request for which you have to unassign a technician. This opens the view request page.
3. The **View Request** page lists the **Tasks** that can be performed on the requests on top of the page. Click the **Assign** link and select the **Assign** option from the list. Alternatively, you can also unassign technician using inline edit option. Click the technician name shown in the request details block. This opens the drop down box as shown below. Select the technician name from the list and click the icon to select the technician else click cancel icon.
4. Now select the **NONE** option and click **Assign**. The request will be unassigned. If you do not wish to unassign the technician then you can just close the pop-up by clicking **Cancel**.

Start / Stop Request Timer

In certain scenarios, technicians may be unable to close a request due to lack of necessary information or awaiting a certain response from the requester to continue work on the request. In such circumstances, the request remains in the open state, eventually leading to the violation of SLA that governs the request. Also, the time taken to close the request reflects the efficiency of the technician handling the request.

With the **Start/Stop Timer** option, you can move the request status to On Hold until you are ready to resume work on the same.

NOTE: When requests are sent for approval to the concerned authority, the helpdesk team may not be held responsible for the delay in approval process. In order to minimize the SLA violations by the helpdesk team, you can stop the timer automatically for requests with status as 'pending approval' using the option available in Self Service Portal Settings.

The Start/Stop Timer is available under the Actions drop-down menu in the Request details page. To access the option,

1. Click the **Requests** tab in the header pane.
2. Click the **Subject** link of the request in the **Requests** list page. The Request details page is displayed.

Stop Timer

To stop timer for a request,

1. Click **Actions** drop-down menu and select **Stop Timer** option. A pop-up window opens, requesting the reason for stopping the timer.
2. Enter the relevant reason to stop timer in the text area provided for the same.
3. Click **Add** button. The status of the request is changed to **On Hold** and the reason gets appended to the request history.

Start Timer

To restart timer for the request,

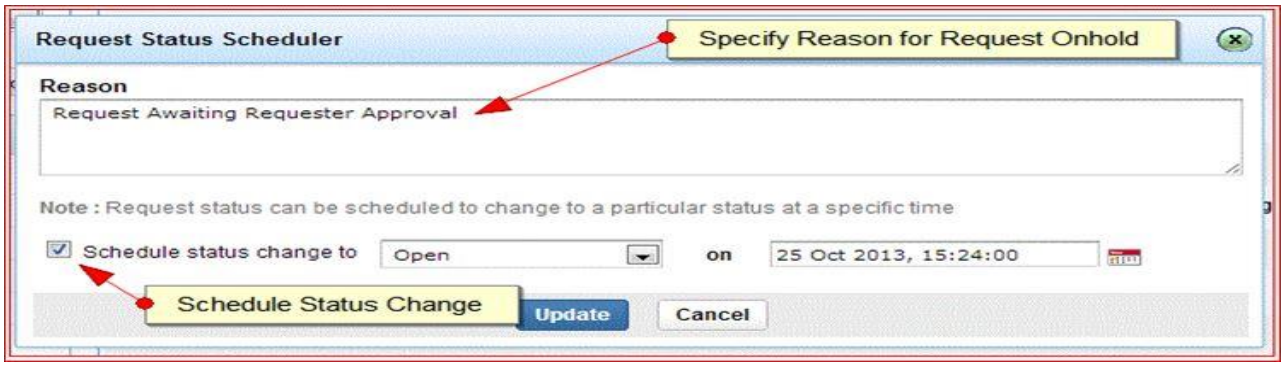
1. Click **Actions** drop-down menu and select **Start Timer** option. A pop-up window opens, requesting the reason for starting the timer.
2. Enter the relevant reason to stop timer in the text area provided for the same.
3. Click **Add** button. The status of the request is changed to **Open** and the reason gets appended to the request history.

Schedule Request Status Change

At times technicians might have to stall a request (that is, change it to onhold status, in progress status etc.,) for various reasons like company policy, technician seeking requester's approval and so on. Such stalled requests often face the risk of being forgotten owing to the technician's busy schedule.

To ensure these requests are not forgotten, ServiceDesk Plus allows its technicians to **schedule these requests** such that their status changes automatically (preferably from timer stopped status like 'onhold' to 'a timer running status like open') **based on the time & date specified by the technicians**, thus reminding them the request is yet to be closed and action needs to be taken**.**

1. **Select request** from **Request List View**
2. Click **Request Details Edit Button**. Request Details will change to editable mode
3. Change **Request Status** to **Onhold**
4. This action will pop up the **request status scheduler** dialog box



5. Specify **Reason** for scheduling **status change** for the request (as shown in the image)
6. Check **Schedule status change** to checkbox to **specify status the request would move to** next when schedule is over
7. Specify **Date & Time** (using Calendar Icon) when the **scheduled status change** would take place and click **Update** button.
8. **Request Schedule Icon** will appear besides **Request Status** (in the **request details page** as well as the **request view**) indicating the schedule has been configured
9. Save the request

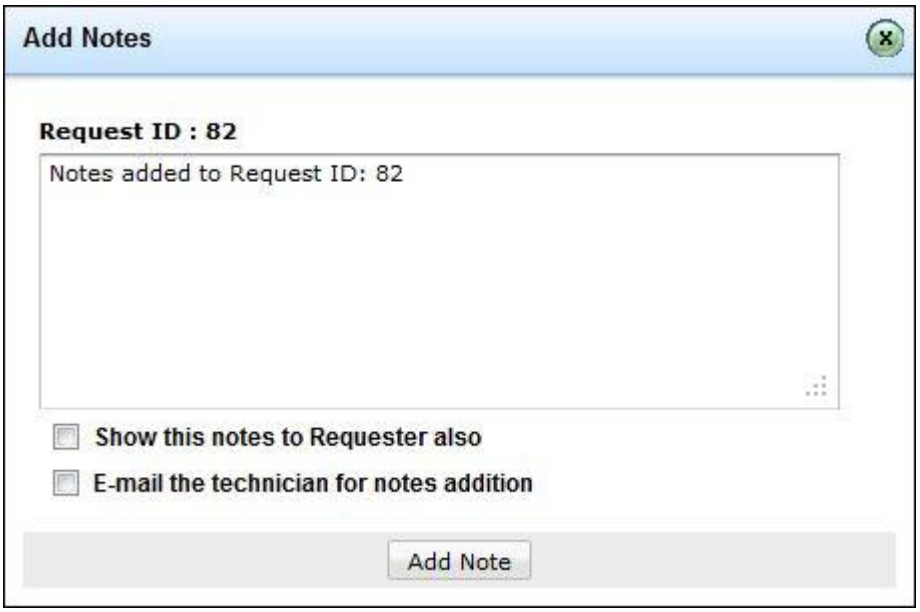
Note	1. **By default**, Request Status Scheduler applies only to **Onhold Status**, but can be configured for any **In Progress** status; more on this in the Configuring Request Status page) 2 An already configured **Request Status Schedule** can be edited using the **Edit Link** (appearing when **Request Schedule Icon** is clicked from the request details page). 3 When Request Status is scheduled, the **Request Timer will be stopped**, indicating that the SLA does not apply for the scheduled time period 4 **Request Timer will start again** when the schedule gets completed

Add a Note

When you would like to add some additional information including technical information to a particular request based on your observations, you can use **Add Notes**. You can also use notes to update the status of the request.

To add notes to a request,

1. Click **Requests** tab in the header pane.
2. Click the**Subject** link of the request to add the note.
3. In the Request Details page, click **Actions drop-down menu** and select **Add Notes** link. The **Add Notes** form pops up.
4. Enter your content in the text field.



There are two types of notes that can be added to the request namely, **Public Notes and Private Notes.**

Public Notes: Public notes can be viewed by the requesters and technicians.

Private Notes: Private notes can be viewed only by the technicians (all the technicians).

5. If you want the notes to be visible to the requesters (public), then select the **Show this notes to Requester also** check box. Else only the technicians will be able to view the notes (private).
6. If you want to notify the technician about the addition of the note, then select the check box, **E-mail the technician for notes addition**.

7. Click the **Add Note** button. The note is added at the bottom of the request along with a date and time stamp. The name of the person who added the note is also displayed.
8. You can add any number of notes to a request. The added notes will be displayed in the descending order with recently added note first. You can also edit or delete the notes that have been added.

Tasks

Sometimes, a request might involve multiple technician work. In that case, the request can be divided into several tasks and each task can be assigned to a technician/group.For example, consider a scenario where a new employee joins the organization. There is a list of tasks that need to be performed such as allocating seating location, providing a computer/laptop, installing necessary software, connecting telephone links, entering the employee's name in the active directory and so on. These operations can be considered as separate tasks and be can assigned to different technicians.

Adding Tasks

1. Click **Requests** tab in the header pane.
2. Click the **Subject** link of the request to which you would like to add tasks.
3. Click the **Actions** drop-down menu -> select **Add Task** option. The Tasks form opens in a pop up window.
4. To add routine tasks instantly, choose a Template from **Use Task Template** drop-down menu. The details added in the Template are populated in the Task form. Refer Task Template to know - how to configure Task Template.
5. If you are manually adding a task in the Task form, specify the **Title** of the task in the given text field. This is a **mandatory** field.
6. Specify relevant information about the tasks in the **Description** field.
7. Specify **Task Status** (Open by default).
8. Provide **Estimated Technician Effort** expected to be involved while technician is working on the task (will be useful in calculating Scheduled End Time of the Task)
9. Specify **Task Priority**
10. Choose Group/Technician for **assigning/marking** task

    Tasks can be assigned/marked:

    - to a **Group** alone,
    - to a **Group** and a specific **Technician** in the group,
    - to a **Technician** alone without selecting the group,
    - to no **Group** and no **Technician**.

1. **Optional**: Specify Scheduled Start time for Task (the same will be done automatically, in case you choose to trigger tasks)
2. Select **Task Type** from the list
3. **Optional**: More Fields button and Specify following details by clicking 'More Fields' button:

    - Actual Start-End Dates: To be filled upon task completion
    - % of Completion: To specify the extent to which task has been completed (eg: 30%, 70% etc.,)
    - Additional Costs (if any)
    - Specify relevant comments about the task in the Comments field.
    - If task being configured is dependent on another task, use Mark parent task(s) dropdown and select the parent task.

11. Click **Save** (or) Save and Add New

Note	Individual tasks (not associated with request, problem, change, project and milestone) will not have **Mark Parent Task(s)** option.

Mark/Assign Tasks

While **selecting Group/Owner for the task**, you have the option of either **marking (or) assigning the task** to the technician.

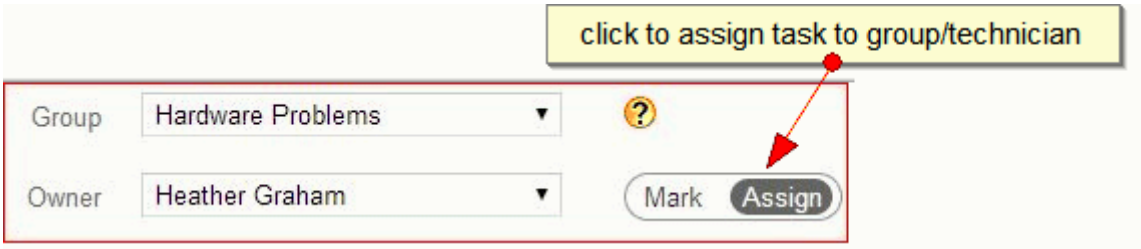
- Marking Task(s) is a way of **associating tasks to technicians** that helps administrator plan tasks in a better way
- Marking Task(s) is an **administrator activity that the technician never gets to know** until the task is assigned to him/her
- Marking Task(s) helps administrators to allocate 'marked tasks' to technicians **'only when it is time**' for the task to be executed and **not unnecessarily in advance**
- Marking Task(s) is especially useful for **dependent tasks** that heavily depend upon the **completion of parent task**. Under such circumstance, the **child task can be marked with a technician**, and can be later assigned to him/her based on the real-time completion of the parent task
- **Marked tasks** do not appear in the respective technician's **My Tasks** list (but only serve as a reference for the administrator) until the task is triggered.
    - Whereas **Assigning Tasks** to technicians will directly intimate the concerned technician about the task assigned (through notification) and will be listed on his/her **My Tasks** list.

Marking a Task

1. Select **Mark** button besides Owner dropdown
2. *** asterisk** icon will appear besides Group/Owner fields indicating task form is in marking Group/Technician mode
3. **Choose Group & Technician** to be marked with the task
4. Save the task

Assigning a Task

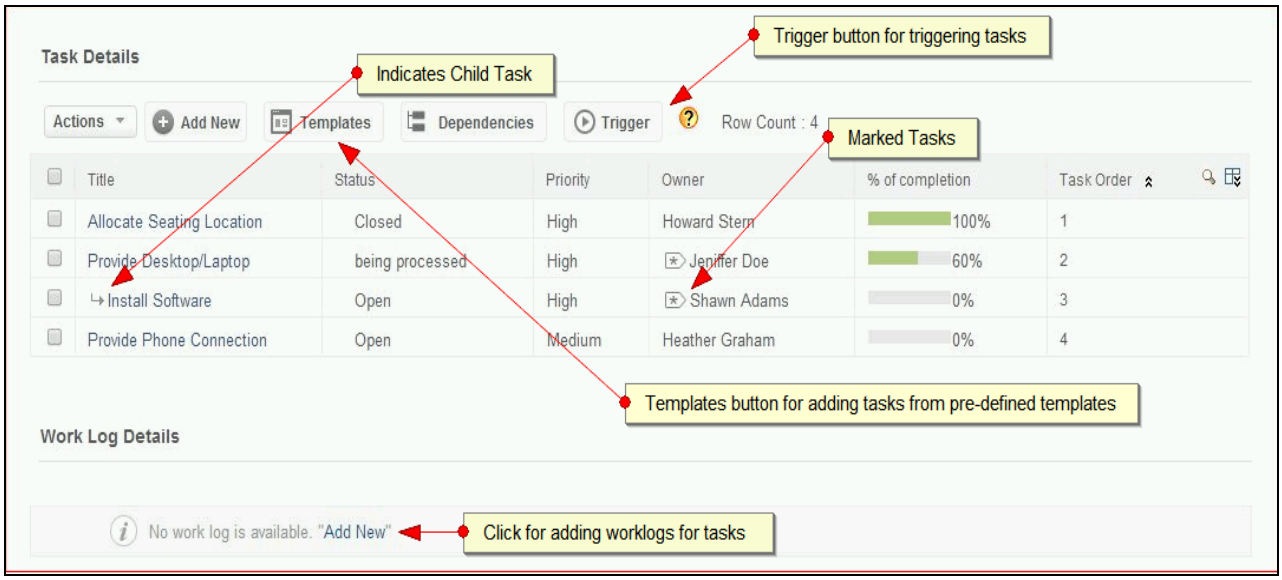
1. Select **Assign** button besides **Owner** dropdown
2. Choose **Group & Technician** to be assigned with the task
3. Save the task



Task List View Page

(Task List View Page of Associated Tasks)

Tasks Tab (or) Task List View Page of **task(s) associated with request, problem, change, project and milestone** will appear as shown below:



*In the image above, **Install Software** is the child task dependent on parent task **Provide Deskto/Laptop**, and is indicated using the arrow symbol; whereas the asterisk * icon (available besides Owner/Group) indicates task has been **marked to be assigned** to **technician Shawn Adams** of **Software-Related group**.*

From **Task List View Page**, you can do the following:

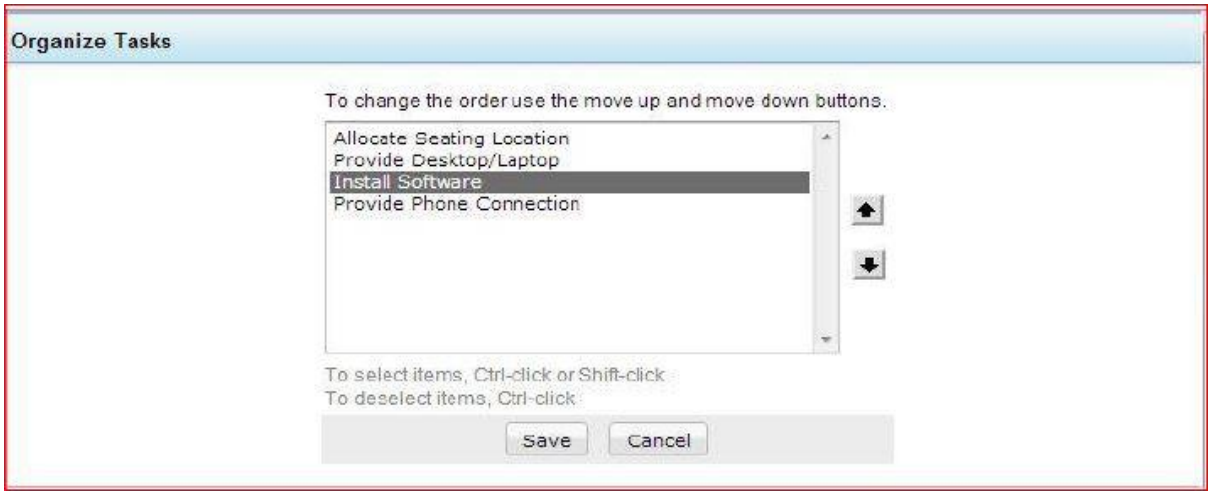
- **Organize/Close/Delete Tasks** using Actions dropdown
- Establish **dependencies** (relationship) between tasks
- **Add Tasks** using **Add New** button
- Add Tasks from **existing Task Template(s)** by clicking **Templates** button
- Trigger tasks manually using **Trigger** button
- Add **Worklog** Details

Note	Task List View pages of associated tasks and general tasks slightly differ from each other. Task List View page of general tasks does not have **Actions** dropdown menu, **Templates** and **Dependencies** button.

Organizing Tasks

While adding multiple tasks, by default they are ordered (using task order) sequentially. Now it is not always possible to remember: 1) the order in which these tasks would be executed 2) which task would be dependent (has a parent task) or independent while adding them. To solve these issues, you are provided with Organize Tasks option, which helps you organize tasks after they have been added.

1. Select **Actions** dropdown >> **Organize**.
2. **Organize Tasks page** opens up.



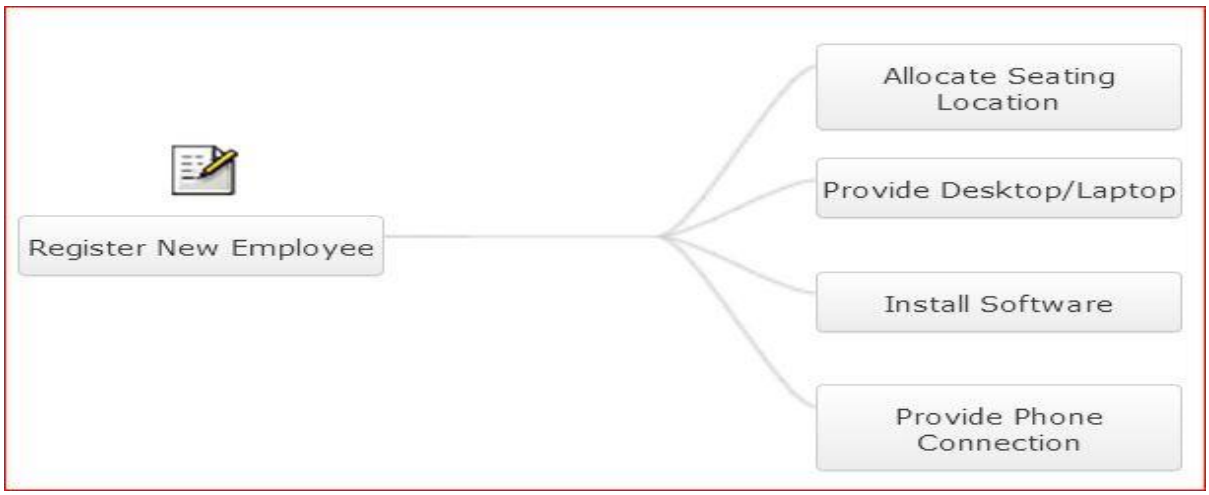
3. To change order in which a task appears:

- **Select task** by clicking **Ctrl+Click**
- Use **arrow keys** to move the task up or down
- Click **Save** after ordering task based on execution sequence
- Use **Ctrl+Click** to deselect items

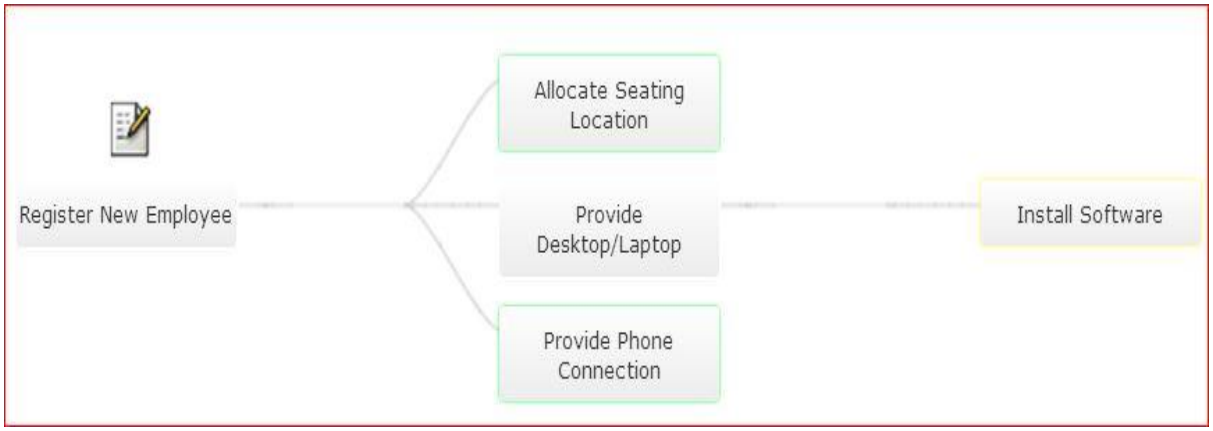
Configuring Task Dependency

When a task is dependent on another task, the task dependency (relationship) between them can be established as follows:

1. Click **Dependencies** button
2. **Dependencies Map** popup will open up



3. Select **parent for the dependent task** (in this case **Install Software** is the **child task** and **Provide Desktop/Laptop** is the **parent task**) by clicking **Select Parent** icon.
4. Task Dependency will be **established** as follows:



Triggering Tasks

To operate on tasks **sequentially** and to ensure child tasks are executed only upon the **completion of parent task**, use trigger button to trigger the tasks.

Using trigger button, you can trigger tasks individually or as a group based on your requirement.

Triggering Tasks

1. Select **all tasks** and click **trigger** (OR)
2. Select **a single task** and click **trigger**.

Note	If you choose to trigger tasks, please remember that there is no need to schedule those tasks, as they will be scheduled automatically while they are being triggered.

Task Details Page

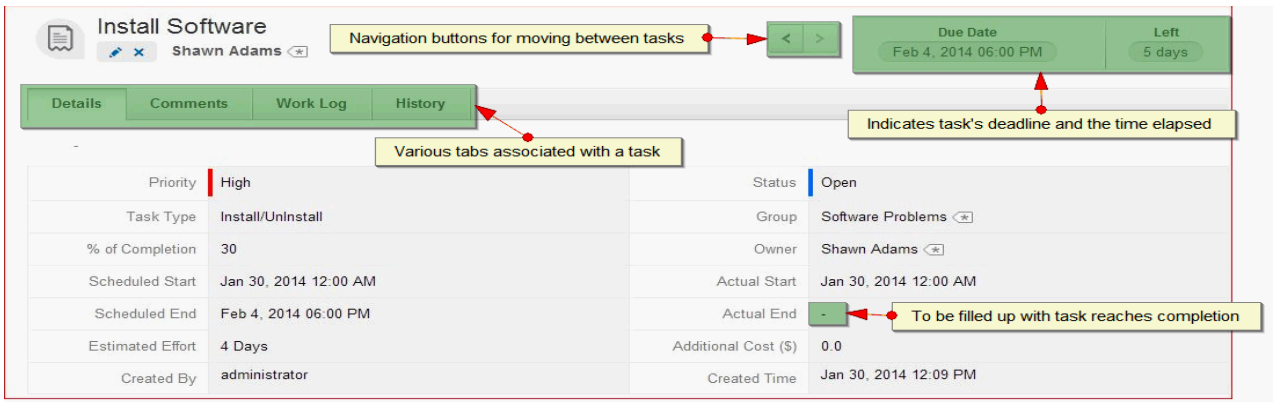
Click on a task to view the **task details** section. Once a task is saved, it would have the **following tabs:**

- **Details tab** - listing various details added using task form
- **Comments tab** - where technicians involved can add task-related comments
- **Worklog tab** - using which time spent by technicians and the cost incurred due to the task can be recorded
- **History tab** - to keep track of "who does what and at what time" within the task

Task Details

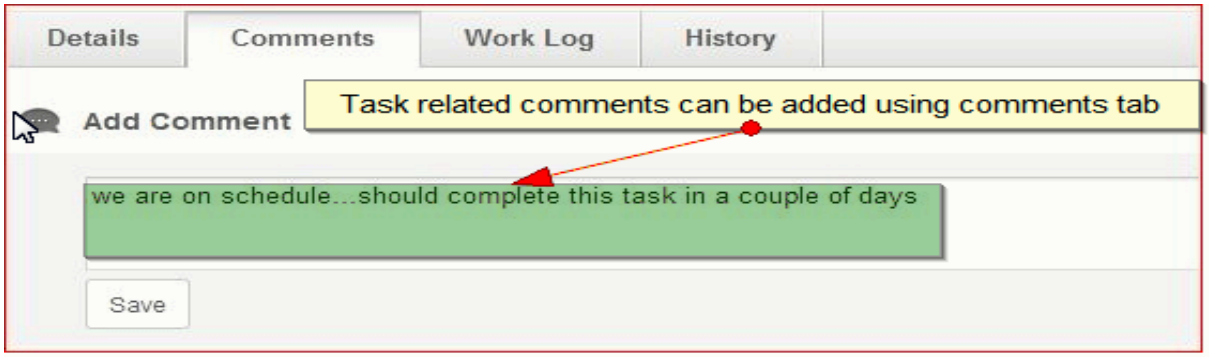
Details tab has an **editable task form** displaying various **task details/fields** which can be edited as the task progresses.

Sample **filled in task details page** (tab) is shown below:



Task Comments

Technician assigned with the task and other technicians involved with it can **discuss/offer views regarding the task's progress** and ways of bettering through comments.

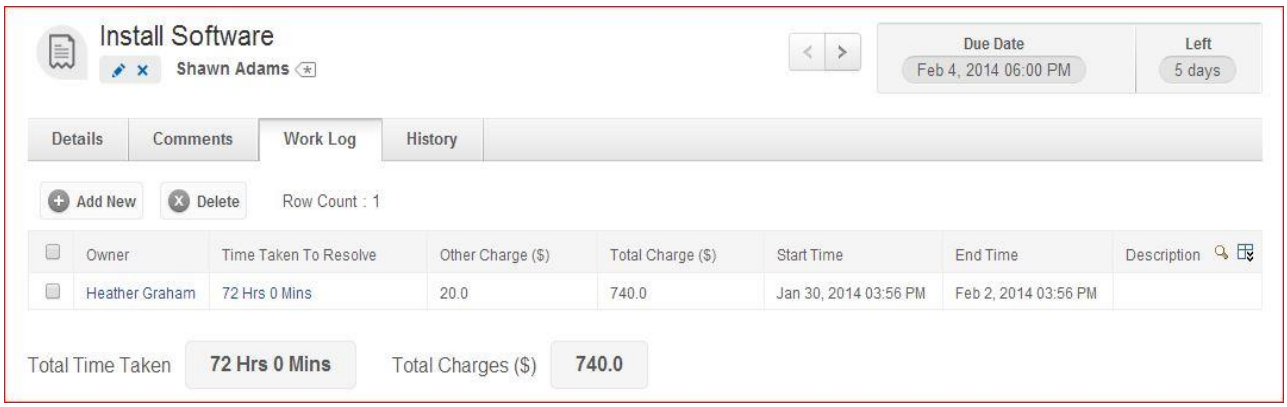


Task Worklogs

Technician Worklogs can be **added, updated or deleted** (if required) using/from Worklogs tab. To add a new Worklog,

- Use **Add New Button** (Add New Link in case you're about to add the first task); to delete Worklogs, use **Delete button**
- To know more about how to add Worklog, see: Adding Worklogs.

Sample Worklog tab (with an added Worklog) is shown below:



Task History

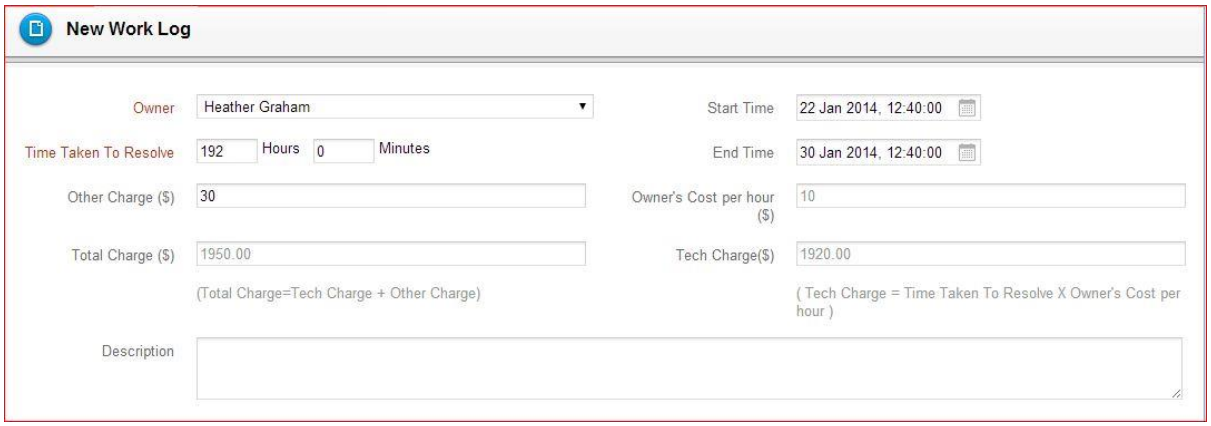
Keep track of actions being performed on your task and also understand '**who does what and at what time'** using History tab. Task History can be viewed on '**day-to-day'** basis.

Adding Worklogs

Record time spent by technicians (along with the cost involved) while working on tasks using Worklogs. Technician Worklogs can be added/viewed from **Work Log details** section.

To add a Worklog, click **Add New** link below Work Log details section and fill the Worklog form as follows:

1. Select **Task Owner** from **Owner Dropdown** list
2. Specify **Start** and **End Time**.
3. **Time Taken to Resolve** will be populated based on the duration provided
4. **Technician Charge** will be calculated and populated in the respective field by **multiplying technician cost per hour** (owner's cost per hour) with **Time Taken to Resolve data.**



5. Specify **Other Charges** (if any) in the respective field
6. Provide a suitable **description**
7. Click **Save** (or) Save and Add New to add another Worklog.

Note	1 Worklogs can also be added from the details page of the respective task 2 Owner's cost per hour (technician cost per hour) will be populated using the respective technician details saved under admin section

Add General Tasks

To add **general tasks** that are not associated with requests, problems, changes, projects and milestones, do the following:

1. Login into ServiceDesk Plus using your credentials
2. Click **Quick Actions dropdown** and select **Add New** under **Tasks block** (or)
3. Click **Home tab** of the header pane and click Click **Add New button** under My Tasks section
4. Add tasks in the same manner you would add task to associate with a request (refer: Adding Tasks)
5. Save the task

Viewing Tasks from Home Page

All the tasks present in ServiceDesk Plus application can be viewed from the home page by clicking the **Show All** button under **My Tasks** section (if you're a **technician** with **SDAdmin Role**).

Task List View of the Home Page also has the following options:

- **Trigger button** for triggering tasks
- **New Task button** for adding tasks
- **Close/Delete buttons** for closing/deleting tasks respectively

Editing Tasks from Home Page

Tasks can be edited right from the task list view (applies for independent as well as associated tasks) if the technician is directly assigned to the task (or) if he/she possesses the SDAdmin role.

To edit tasks from task list view, do the following:

- To edit **status** and **priority** associated with tasks, **click** on the respective fields and **choose** the appropriate optionClose/Delete buttons for closing/deleting tasks respectively
- To edit **group** and **technicians** assigned/marked with tasks, **click** on the respective field

  Select **technician** (or group) from **select technician/group** popup to whom you want the task to be reassigned

  Mark or Assign the task to him/her

  Click the **tick** mark

- To edit **scheduled start time and end time**, click the respective fields and select the desired date from the **calendar popup**

Identifying General Tasks and Associated Tasks

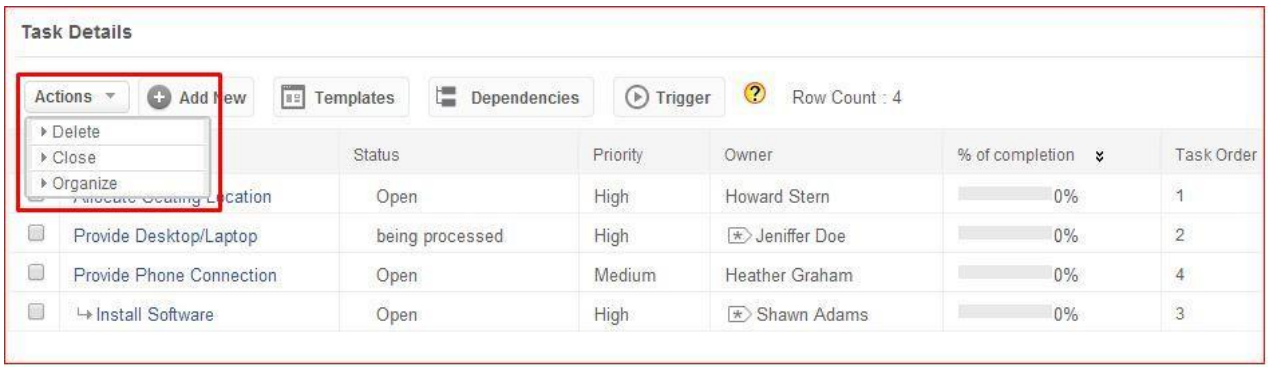
You can identify general tasks and associated tasks using the following details:To edit tasks from task list view, do the following:

- By enabling **Link** option in the **Column Customizer** box. Doing this will display **info regarding whether the task is associated** to request, problem, change, project or milestone in the **task list view page.**
- By **viewing the task's details by clicking on the respective task**. In the **right extreme of the task details page**, next to the navigation buttons, the **task's association** with the request, problem, change, project or milestone **will be displayed along with the task's status;** for independent/general tasks, no information will be shown.

Note	1 Technicians can also edit tasks by accessing the respective task's details page (by clicking on the task) 2 Bulk deletion/closing of tasks can be done from task list view page 3 Task view can also be changed based on the various task filters available

Close/Delete Tasks

1. Select **Actions** dropdown >> **Close** (for closing the task)
2. Select **Actions** dropdown >> **Delete** (for deleting the task)
3. Ok the confirmation message
4. Task will be closed (or) deleted based on the option chosen



Add a Reminder

You can add reminders to the request using this add reminders option. All the pending tasks specific to the request can be added as reminders. The technician can add these task list as a personal reminder to himself/her. On adding these reminders they get displayed in the **My Reminders** page.

To add a reminder,

1. Click the **Request** tab in the header pane.
2. Click the **Title** of the request to add reminders. This opens the View Request page.
3. Click on the **Actions** tab on the top right side of the page. Click **Add Reminder** link. This opens the Reminders page.
4. Specify the content in the given text field on the left side of the page.
5. Select the **Date** on clicking the calendar button to remind you of the task.
6. Select the **Time** of reminder from the combo box.
7. Select the buffer time from the **Remind me before** combo box.
8. Click **Add** button to add the reminder. You can see the reminder getting listed in the **My Reminders** page.

Merge Requests

You can merge two or more requests when a requester raises two similar requests for the same incident.

Consider a scenario where a requester sends an e-mail to the help desk for his desktop problem. He then calls the help desk to reconfirm his incidents registry but, in turn, the help desk creates another request for the same issue. The request, thus, is duplicated with the same requester and same incident.

In such cases, the requests can be merged and the requests/conversations would continue as a conversation thread under one request i.e., the parent request.

NOTE:

1. Please note that the purpose of merging requests is to **avoid duplicate entries** of an incident created by a requester.
2. Do not merge incident requests if multiple requesters have reported the same issue. Such incidents are usually analyzed and moved to Problem Management.
3. The merge operation requires special permission that can be enabled under Admin tab -> **Roles**.

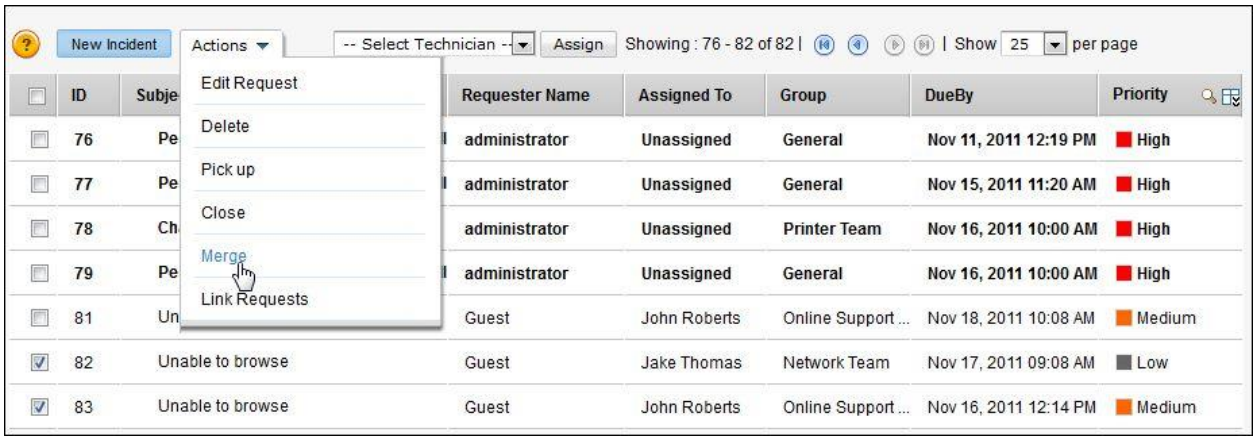
In ServiceDesk Plus, you can merge requests from the **Request List view** or from the **Request Details page**.

Merge Requests from the List View

While merging requests from the list view, the oldest request is the parent request and the other requests are attached as conversation thread under the parent request.

To merge two or more requests from the list view,

1. Click **Requests** tab in the header pane.
2. In the Request List View, select the check box beside the requests to merge.
3. Click **Actions** drop-down menu and select **Merge** link.



In the above image, on merging, the oldest request (Request ID: 82) becomes the parent request. While the other request (Request ID: 83) is attached as a conversation thread in the parent request.

NOTE:

1. If two different technicians or groups are assigned to the requests before the merging process, then the technician or group handling the oldest request is the owner of the parent request.
2. Similarly, the parent request inherits the due date and the request fields of the oldest request.
3. The conversation threads of the child request is continued as conversations in the parent request.
4. The Notes and Work Logs of the child request will be moved to the parent request.

Merge Requests from the Details page

To merge two or more requests from the Request Details page,

1. Click **Requests** tab in the header pane.
2. Click the subject link of the request to merge.
3. In the Request Details page, click **Actions drop-down menu** and select **Merge Request** link. The **Merge this Request** window pops up.

4. You can search for specific request by providing a search string in **Search for Request** field. Or, you can also select request based on filters from the **Show** drop-down menu.
5. To confirm if the request to be merged is the correct one, you can view the request details by clicking the subject link of the request. Click **<<Back** link to go back to Merge this Request page.
6. Click **Merge Request** icon beside the request to merge. A dialog box confirming the merge operation appears.
7. Click **OK** to proceed. The selected request is merged and becomes the parent request.

For example: Say, you are in the request details page of Request ID: 82. You choose Merge Request option from Actions drop down menu to merge this request with Request

ID 65. On merging, Request ID 65 becomes the parent request while Request ID 82 is attached as conversation thread to the parent request.

Once the requests are merged (either from the List View or from the Details page), the details about the merged request, the technician who merged the requests along with the date and time can be viewed in the **History** tab of the parent request.

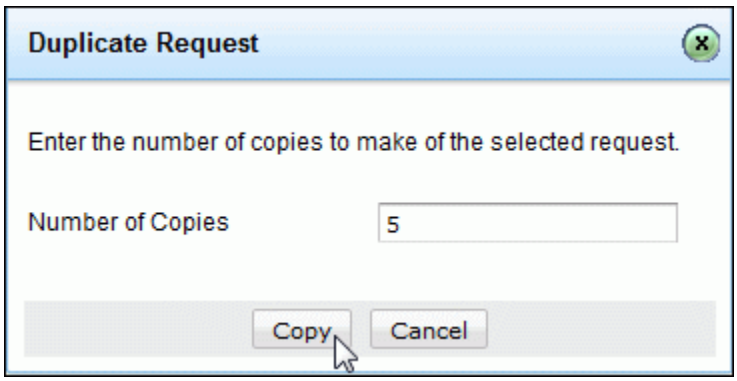
NOTE: You can split a conversation thread of a request into a new request. Refer the topic Request Conversations - Split as new Request to know how to split a conversation into a new request.

Duplicate a Request

When a single request has multiple issues in it that requires more than a single technician to handle them, then the request can be duplicated and each of the duplicated requests can have only one issue. This makes it easier for the technician to take ownership and complete the task independently.

To make multiple copies of a request,

1. Click the **Requests** tab in the header pane. This opens the request list view page.
2. Click the **Subject** link of the request that you want to duplicate in the view list page. This opens the Request details page.
3. Click **Duplicate Request** option under **Actions** combo box. A **Duplicate Request** pop-up window opens, requesting you to give the number of copies.



4. Enter the number of copies in the text field provided beside the **Number of Copies** label. The maximum value you can enter is 9. If you need more than 9 copies of the request, then you need to invoke **Copy Request** again.
5. Click **Copy** to make the copies of the request. The new copies of the request will be assigned new request ID that will uniquely identify them. The rest of the information such as the request details and description remains as it is.

Once you have created the copies of the request, you can edit the same to contain only the necessary information and assign appropriate technicians. You can modify the request copies by editing the copy of the request.

NOTE: While copying the request, the **Notes, Tasks, Reminders, Resolution and Approval status** of the original request (if any) will not be present in the duplicated requests. Also, the **Created Date** and **Due by Date** will be different from that of the original request.

Link Requests

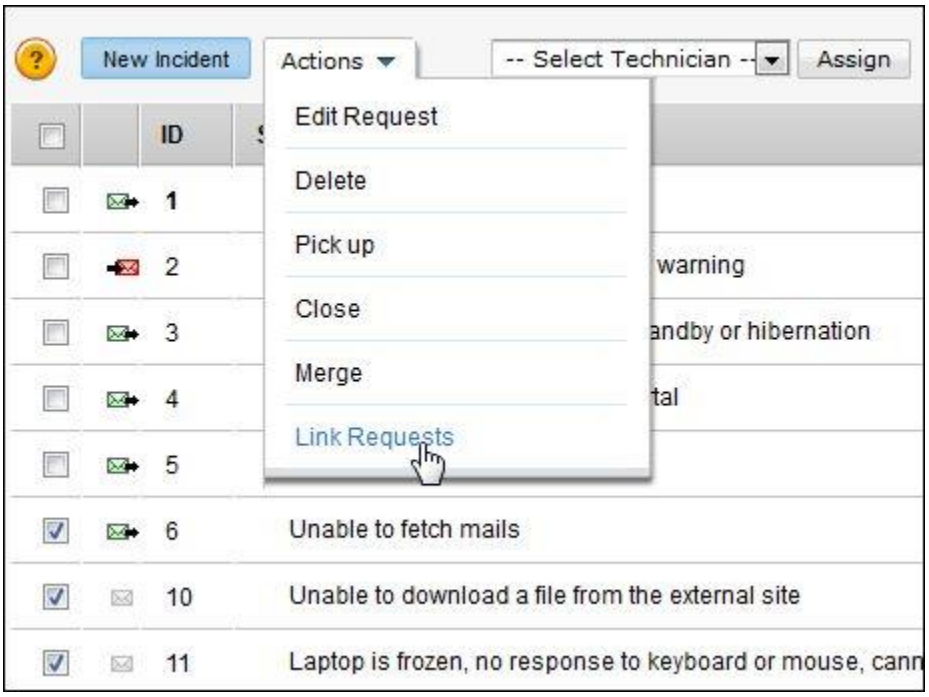
Linking Requests is a feature that primarily provides an option to relate requests to one another and set some references between them. Secondly, certain common operations such as adding notes, creating resolutions and adding work logs can also be linked between them.

When two or more requests are linked, one of the requests become the "Reference request" and the other requests are the "Linked requests".

Link requests from the Request List View page

To link two or more requests from the Request List view page,

1. Click **Requests** tab in the header pane.
2. From the Request List View page, select the requests that need to be linked by enabling the check boxes.
3. Click **Actions** drop-down menu -> **Link Requests** option.



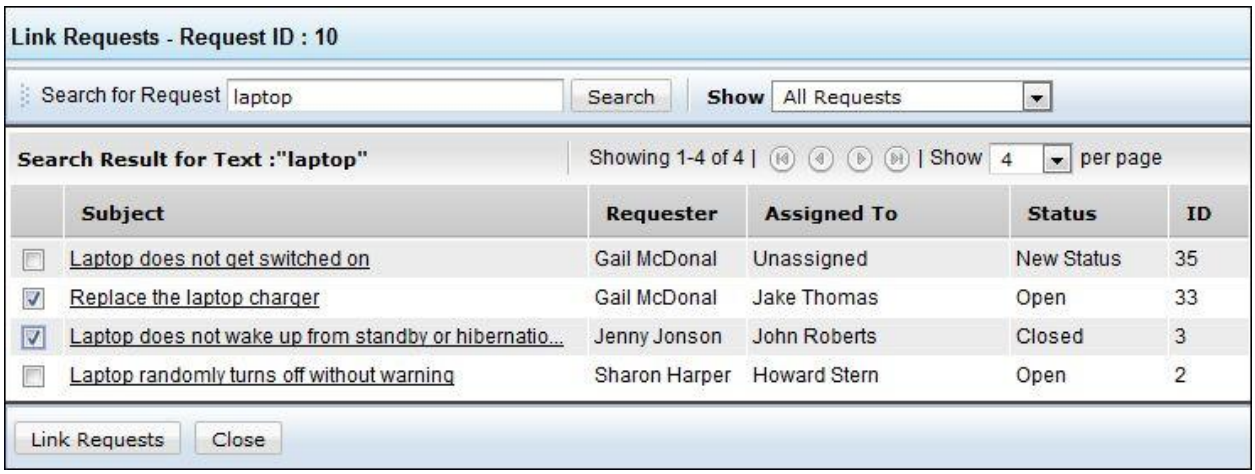
Here, among the selected requests, the oldest created request becomes the "Reference request" and the other requests become the "Linked requests".

In the above example, the oldest request (Request ID 25) is the Reference request while the other requests later created (Request ID 26, 27 and 28) become its Linked requests.

Link requests from the Request Details page

To link two or more requests from the Request details page,

1. Click the **Subject** link of the request you want to link. This opens the Request Details page.
2. In the request details page, click **Actions** drop-down menu and select the **Link Requests** option. This opens a pop-up window with a list of requests.
3. Select the requests that need to be linked by enabling the check boxes.
4. Click the **Link Requests** button to link the requests.



In this case, the request through which the linking is done becomes the "Reference request" and other requests are its "Linked requests". This option is useful when you want to choose a specific request as the Reference request instead of the oldest created request. A relatively new request can be made as Reference request with older requests related to it as Linked requests.

In the above example, linking is done through the details page of Request ID 27 and so it is made as the Reference request. Other older and newer requests (18, 25 and 28) linked to it are its Linked requests.

	Note: Linking requests is different from "Tasks" that are created within requests. Tasks are created in a request so that the request can be split into various activities and can be assigned to different technicians. All the tasks inside a request will be considered as a single request. However, Reference requests and the Linked requests are independent requests with only references set between them.

Attributes of Reference Request and Linked Requests:

1. Any Linked request can be associated with only one Reference request at any time.

2. Even though Linked requests are linked to a Reference request, they will still be considered as independent requests with their own SLA, Business Rules, and so on.

3. If a Reference request (A) is made as the Linked request of a new Reference request (B), then all the Linked requests earlier associated to Reference request A will be linked the new Reference request B.

4. Linked requests have their own independent work logs, resolutions and notes. Operations performed over the Linked requests have no impact over the Reference request. However, any work log, resolution or note added to the Reference request can be linked to all the Linked requests by enabling corresponding check boxes.

5. Notes added to a Reference request can be made available to the Linked requests by enabling the **Add notes to all linked requests** check box. The **Discussions Notes** section in the Linked request details page will show its own notes and the notes that have been linked from the Reference request. Editing notes in the Reference request has no impact on the notes that have been earlier linked to the Linked requests.

6. Similarly, work logs added to a Reference request can be made available to the Linked requests by enabling the **Add work log to all linked requests** check box. When work log from a Reference request is added to the Linked requests, the **Time Elapsed** section in the Linked request details page will show **sum** of time elapsed and **sum** of charges for the Linked request and the Reference request. However, any changes made to the work log in the Reference request will not change the work logs that were earlier linked to the Linked requests.

7. If a resolution written for a Reference request is linked to the Linked requests, then it overwrites any resolutions earlier added to the Linked requests. Editing resolutions for a Reference request will change the same in the Linked requests. All resolutions written for a particular Linked request can be viewed under the **History** tab of that Linked request. The **Click here** link opens a pop-up with all resolutions associated with that request. Also, **Change Status to** option applies only to the Reference request and does not have any impact on Linked requests upon linking.

8. While viewing a request's details page, indications are shown if there are any requests linked to the current request. By clicking on this indication, a description box opens and by clicking on the Request ID of the linked requests, one can navigate to the requests linked to the current request. Options to remove links between requests are also provided here.

9. Links between requests can be added, modified and also removed. Each of these operations will be recorded in the request History.

10. Links can be created between requests belonging to different request templates and even different sites. But, if the technician who has permissions in the site where the Base request is present does not have permission in the sites where the Linked requests are present, then the technician will not be able to perform operations on those Linked requests.

11. Closing and re-opening of requests is independent to both Reference and Linked requests.

12. Requests cannot be linked through API or E-Mail Command features.

Delete Request

You may receive lots of mails of which some may not qualify as requests at all and hence need to be removed from the ServiceDesk Plus application completely. In such cases, you can delete those individual requests in the view request page or select a group of requests in the list view page and delete them together.

To delete individual requests,

1. Click the **Requests** tab in the header pane. This opens the request list view page.
2. Click the **Subject** link of the request that you want to delete. This opens the request details page.
3. Click **Actions** combo box -> **Delete** option. A confirmation dialog pops up.
4. Click **OK** to proceed deleting. The notes, work logs and conversations (if any) added to the request gets deleted. Click **Cancel** to abort deletion.

To delete more than one request at a time

1. In the requests list view page, select the check boxes beside the request that you wish to delete.
2. Click the **Delete** button. A confirmation dialog pops up.
3. Click **OK** to proceed deleting. Click **Cancel** to abort deletion.

Associate Problem to Request

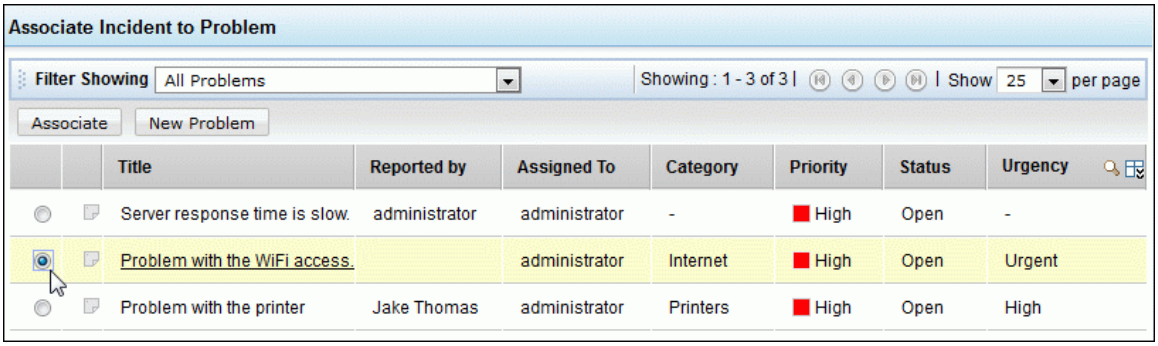
You have an option to add, associate, view and detach problem to requests. Similar problem occurred to Incidents (requests) can be associated in order to track the problem occurred for the same request. You can also add new problem or detach the existing problem to a request. While adding/associating/detaching a problem the approval status of the request does not change.

- Associating Problem to request
- Add Problem to request
- Viewing Associated problem
- Detach Request from Problem

Associate Problem to Request

You can also associate the existing problem to the request. To associate problem,

1. Click the **Requests** tab in the header pane. This opens the request list view page.
2. Click the **Subject** link of the request for which you want to add a problem. This opens the request details page.
3. Click the **Actions** drop-down menu -> select **Search Problems** link. The **Associate Incidents to problem** window pops up showing the list of Open Problems with Incident Category by default.
4. Select the type of problem to be displayed by selecting from the **Filter Showing** combo box on the top left hand side of the page. Ex: Open Problems or All Problems and so on. On selecting the problem type the corresponding problems gets listed.
5. Select any one problem to be associated with the request by enabling the radio button beside the title of the problem.



6. Click **Associate** button to associate respective problem to the request (particular selected request). You can associate the same problem to different requests.

   Once the problem is associated to the request, the **View Problem** and **Detach from Problem** option appears under **Actions** combo box.

Add Problem to requests

You can add new problem to requests. To add new problem,

1. From the request list view page, click the **Subject** link of the request for which you want to add a problem. This opens the request details page. Click New Problem button on the right hand side of description field.

   [OR]

   Alternatively, you add a new change from the **Associate Problem to Incident** pop up page. Click **New Problem** button below the filter showing combo box. This opens the **New Problem** form.
2. The details such as Status, Impact, Urgency, Priority, Category, Sub category, Item along with Subject and Description remains the same as of the request. If required, you can modify the same on selecting from the combo box.
3. Select the **Reported By** requester from the list by clicking on the Requester icon .This opens the requester list page and click the requester title.
4. Select the **Technician** from the combo box.
5. Select the **Due by Date** and the **Closed Date** from the calendar button.
6. Select the affected **IT Services** from the list by clicking on the icon .This opens the **Services Affected** pop up box. Select the affected IT services and **Save** the changes.
7. Select the Assets Involved with the problem by clicking the icon .This opens the **Select Assets** page. Select the **Type of Assets** or the category of assets to be involved from the combo box. Ex: Workstations, Routers, Switches and so on. Select the **Available Assets** under the selected type from the list and move to **Assets involved** using **>>** button. And **Save** the changes.
8. If you have any file attachments for the problem click the **Attach File** button and attach files. The maximum size of an attachment is 10 MB.
9. **Save** the changes. A new problem gets added in the problem list view page.

View Associated Problems

You have an option to view the newly added problems or the problems associated to the request.

To view the problem,

1. From the request list view page, click on the request for which you wish to view the problem. This opens the request details page.
2. Click **View Problem** button on the right hand side of the request description.

   [OR]

   Click **Actions** drop-down menu -> select **View Problem** option. This displays the Problems Details page of the problem added/associated to the request.

Detach Request from Problem

If you want to add another problem to the request then the existing problem has to be detached. To detach a problem,

1. From the request list view page, click the request you wish to detach the problem. This open the request details page.
2. Click **Actions** combo box -> **Detach from Problem** option. The request is detached from the problem.

Associate Change to Request

In some cases, a change may arise due to a request or a change may lead to the creation of a request. In either case, you can associate change to the request.

NOTE: While associating change to a request, the status of the request does not change.

To associate change to a request,

1. Click **Requests** tab in the header pane.
2. In the Request List view, click the **Subject** link of the request to associate the change.
3. In the Request Details page, click **Change Request** link. The **Change Request** dialog box pops up.

From the Change Request dialog box you can,

- **Associate the change initiated due to this request**
- **Associate the change due to which this request is raised.**

4. To associate the change, click the associate link icon. The **Associate Change to Incident** window pops up showing the list of Open Changes with Incident Category by default.
5. Select the type of change to be displayed by selecting from the **Filter Showing** combo box on the top left hand side of the page. Ex: Open Change or All Change and so on. On selecting the change type the corresponding changes gets listed.
6. Select any one change to be associated with the request by enabling the radio button beside the title of the change.

7. Click **Associate** button to associate change to the request. The Change ID of the change is displayed. Once the change is associated to the request, the **Detach Change** icon appears beside the Change ID.

NOTE:

1. If a change needs to be initiated due to a request, then you can add change from **Change Request** pop up. Click the **New Change** icon to access the form. Refer Create New Change to know how to add a change request.
2. In the Request Details page, an Associated Change link appears indicating that a change is associated to this request.
3. You can associate a change to different requests.

Detach Change from Request

If you want to associate another change to the request, then the existing change has to be detached.

To detach a change,

1. From the Request Details page, click **Associated Change** link. The **Change Request** dialog box pops up.
2. Click **Detach Change** icon beside the Change ID. The change is detached from the request.

Viewing the Change

To view the change associated to the request,

1. From the Request Details page, click **Associated Change** link. The **Change Request** dialog box pops up.
2. Click the **Change ID** link to view the change details. The details of the change is displayed.

Print the Request

You can customize the print preview of the request to satisfy your needs. To print a request,

1. Click the **Requests** tab in the header pane.
2. Select the **Title** of the request you wish to print.
3. Click **Actions** drop down list -> **Print Preview** option. The print preview of the request opens in a pop-up window.
4. By default, all the check box is enable under **Select the required information** block. To customize the print preview, disable the check box of the information that is not required. The disabled information disappears from the print preview.
5. Click the **Print** menu item from the browser **File** menu.
6. The default printer associated with your workstation is invoked. Set the required options and click **OK**. You can collect the printed copy of the request at the printer that is linked to your workstation.

Add a Resolution

You can add resolutions for the issues reported in the requests.

To add a new resolution,

1. Click the **Requests** tab in the header pane. This opens the request list view page.
2. Click the request **Title** for which you want to add the resolution.
3. Check if a resolution already exists for the request by clicking the **Resolution** tab in the **Request details** page.
4. If no resolution is available for the request, then the plain html text page is displayed. Specify the resolution in the text field.
5. On specifying the resolution the status can be changed by selecting the status from the combo box.
6. You can also add **Time Spent Entry** details for the request in this page.
7. **Save** the resolution. You can see the resolution is displayed in this page.
8. If you wish to add the specified resolution to the solutions database, then click **Save and Add to Solutions**, or else click **Save**.
9. On selecting **Save and Add to Solutions**, you get a **New Solution** form. The title of the solution is automatically filled with the title of the request. The **Contents** is filled with the resolution. If you wish you can edit the contents.
10. From the **Topic** drop-down list which contains all the available topics, select the relevant parent topic for the solution.
11. Enter relevant keywords for the solution in the **Keywords** text box. Separate each keyword by a comma. This option is provided for the users to improve the search capability and get appropriate solution for the problem.
12. If needed you can also attach files to the solution.
13. Click **Add**. This also adds the resolution to the list of solutions.

These added resolutions can be used for various purposes. One of them is to add these resolutions as knowledge base articles which can be used for future reference to solve the same issue if reported. The resolution of the request also helps other technicians to know the kind of solution provided to the reported issue. This serves as a documented proof of the way a reported issues was resolved.

Search for a Solution

From the request, you can search for solutions that might help you solve the issue described in the request.

To search for a solution,

1. Click the **Requests** tab in the header pane. This opens the request list view page.
2. Click the request **Title** for which you need to look up the solution.
3. In the **View Request** page, click the **Resolution** tab.
4. Click **Search Solution** link. Alternatively, you can also click the **Search Solutions** option under Actions combo box in the task block.
5. In the **Search Solutions** page, provide a search string in the **Search** field and click **Search** or press **Enter**. The solutions that match the search string are displayed.

Submit for Approval

For some incident and service requests you may want approval from higher officials before you proceed with resolving the request. The **Submit for Approval** option enables you to send an e-mail notification to the user to approve the request.

While most incident requests do not require an approval process, the service requests, on the other hand, may go through multiple stages of approval. These multiple stages are usually configured while configuring the work flow of a service item. Refer Service Item - Work Flow under Admin Configurations -> Service Catalog to know more on configuring multiple stage approval.

NOTE:

1. The Approvers may be technicians or requesters with permission to Approve Service Request and should possess an e-mail address in the application.
2. Apart from multiple stage approval, the steps to submit incident and service requests are similar. The topic explains steps to submit service request for approval

Submitting Service Request for Approval

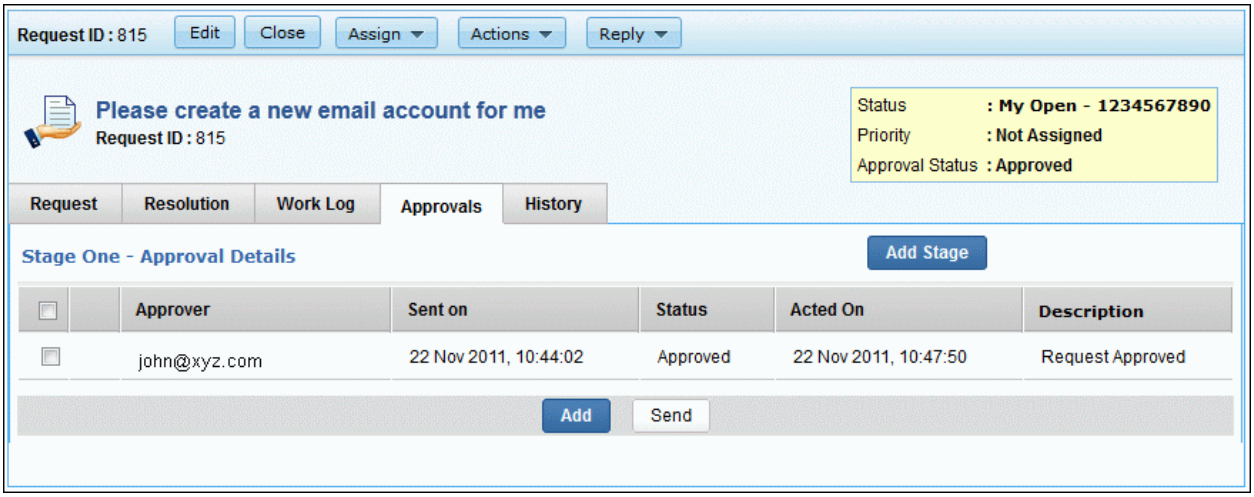
The Approval Details is usually configured while configuring the Service Request. You can configure up to 5 stages of approvals for a service request. Each stage may possess one or more approvers.

If you have not configured the Approval Details for a service request and want to submit the request for approval, then

1. Click **Requests** tab in the header pane.
2. Click the **Subject** link of the request to submit for approval.
3. In the Request Details page, click **Actions** drop-down menu and select **Submit for Approval** option. The **Submit for Recommendation** window pops up.
4. Specify the **To** address in the field. If you want to specify more than two e-mail addresses then use comma as the separator.
5. By default, the **Subject** of the e-mail is specified. You can edit the same, if required. The Subject is a mandatory field.
6. Specify the relevant **Description** in the given text field. The **$ApprovalLink** is a variable and should be available in the mail to replace the variable with the link where you have the request details.
7. Click **Send**. An e-mail notification is sent to the users specified in the To address. Using the link in the mail, the approver can approve/reject the request.

Simultaneously, the **Approvals** tab appears between the Work Log tab and History tab. The Approvals tab lists the e-mail address of the approvers, the status of the approval, the date and time of the approval notification, the date and time when the approver had approved/rejected the request and the comments provided by the approver.

> **NOTE: Submitting Incident Requests for Approval** follows similar steps (Step 1 to Step 7) as Submitting Service Request for Approval.



From the Approvals tab of a service request, you can either add the next consecutive approval stages or add another approver for a stage. You can also resubmit notification to an approver, if required.

Adding Approver to Stage

To add another approver to a stage,

1. Click **Add** button. The **Submit for Recommendation** window pops up.
2. Follow Step 4 to Step 7 in Submitting Service Request for Approval to send an e-mail notification to the approver.

Adding an Approval Stage

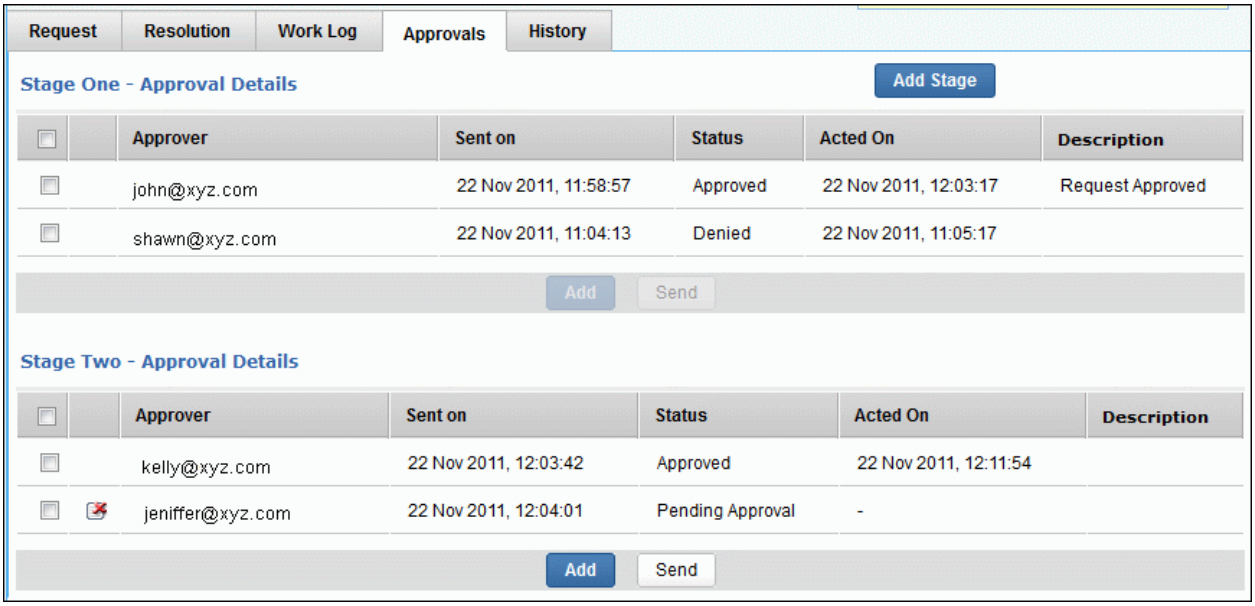
To add the next approval stage,

1. Click **Add Stage** button. The **Submit for Recommendation** window pops up.
2. Follow Step 4 to Step 7 to send an e-mail notification to the approver.

Multiple Stage Approval

The multiple stage approval are based on the notifications enabled in Work Flow.

If **Send approval notification automatically when a service request is raised** is enabled, then an approval notification is sent to the concerned authority each time a service request is raised. If you have configured multiple stages of approvals, then the notification is sent to the next consecutive stage only on approval from the previous stage i.e., any one approver can approve the service request.



If **All configured approvers have to approve the Service Request** is enabled, then its mandatory for all the configured approvers to approve the service request. If anyone of the approver (at any stage) rejects the service request, then the request does not proceed to the next stage.

NOTE: If you have selected more than one approver in a stage, then all the approvers in that stage should approve the request.

Resubmitting approval notification

To resubmit the notification to an approver,

1. Select the check box beside the approver and click **Send** button. A dialog box confirming the operation appears.
2. Click **OK** to proceed. An e-mail notification is resubmitted to the selected approver.

Deleting an Approver

You can delete an approver from any stage before the approver records his decision. If the approver has recorded his decision, then the delete icon would not appear.

1. Click the **Delete** icon beside the approver e-mail address. A dialog box confirming the delete operation appears.
2. Click **OK** to proceed. The approver is deleted from the list. The deleted approver will not be able to access the link provided in the e-mail notification.

View Requester Details

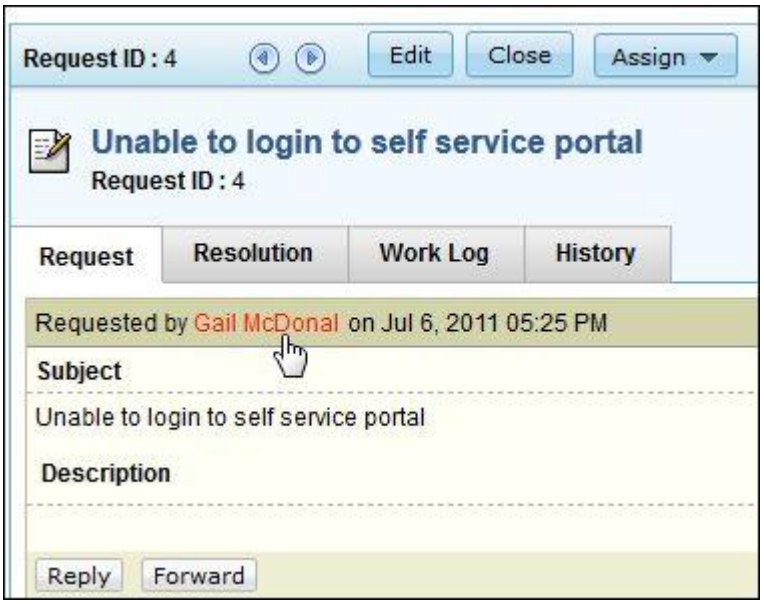
When attending to a request, you may want to contact the requester to get additional information. You can view details such as the **Requester Name**, **Employee ID**, **Department** and **Site** to which the requester belongs, **Designation**, **E-mail ID**, **Phone** and **Mobile number** of the requester.

To view the requester details,

1. Click the **Request** tab in the header pane. The **Request List view** page is displayed.
2. Click the**Subject** link of a request.
3. In the Request Details page, click **Actions drop-down menu** and select **View Requester Details** link. The **Requester Details** window pops up.

4. **Close** the window after viewing the details.

Alternatively, you can also view the Requester details by clicking the **Requester Name** link as shown below,

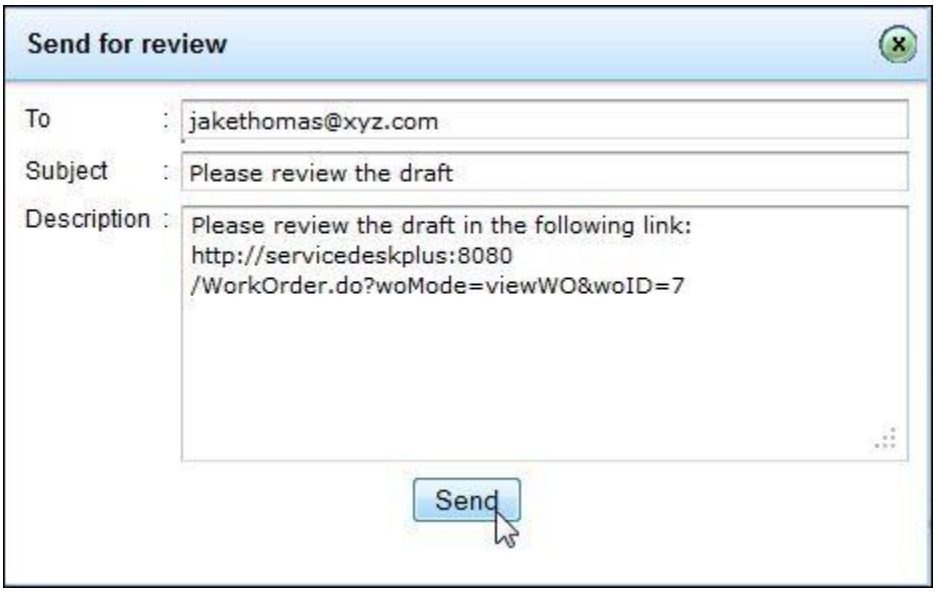

Request ID : 4
Edit
Close
Assign
Unable to login to self service portal
Request ID : 4
Request
Resolution
Work Log
History
Requested by Gail McDonal on Jul 6, 2011 05:25 PM
Subject
Unable to login to self service portal
Description
Reply
Forward

E-mail the Requester

Sending a response to the requester is required when a new request is received. Also, when a technician is ready to close a request, the same can be notified to the requester so that if the requester has any concerns about the same, he/she can raise. The technician can then address the same and close the request after the requester is completely satisfied with the way his/her request has been attended to.

To respond to the requester,

1. Click the **Requests** tab in the header pane.
2. Select the**Subject** link of the request in the requests list page.
3. In the Request details page, click **Reply** button just below the description of the request. Alternatively, you can reply to the requester from **Reply** drop down -> **Reply**. The **Mail to the Requester** window pops up.
4. The **To** field is pre-populated with the e-mail ID of the requester. If you wish to send the same information to more than one person then enter the e-mail IDs of those people in the **CC** field with comma as a separator.
5. Edit the **Subject** of the request, if required.
6. You can reply to a request using the Reply Template configured under the Admin section. Select the **Reply Template** from the drop down list.
7. Click **Attach File** button to add files as attachments to the mail.
8. Click **Send** to send the email to the requester. You can save the email and send it later to the requester by clicking **Save**. The email is saved as draft, in the request details page, above the title of the request along with **Send for review** and **Delete** button. To send the draft for review to the concern authority, click **Send for review**. A pop up as shown below appears,



9. Enter the e-mail ID in the To field. Click **Send**. The draft is sent for review.

The responses that have been sent to the requester can be viewed as **conversations** in the request details view.

NOTE: While editing the subject of the e-mail, ensure that the request ID value remains intact with the # symbols beside it. Else, the threading of requests may not be proper.

Forward the Request

If the technician is unable to resolve a request and requires further assistance, then the technician can forward the request to other technicians. The conversation thread between the technicians are private and hence cannot be viewed by the requester.

To forward a request,

1. Click the **Requests** tab in the header pane. This opens the request list view page.
2. Click the **Title** of the request in the requests list page.
3. In the **View Request** page, click **Forward** button just below the **Request Description**. Alternatively, you can click **Forward the Request** option under **Reply** combo box. This opens the **Forward Request** form.
4. Enter the e-mail ID of the person to whom you wish to forward the request in the **To** field. You can also mark a copy of the forward to others. To do this, enter their e-mail IDs in the **CC** field.
5. Edit the **Subject** and **Description** of the e-mail.
6. Click **Attach a File** button to add files as attachments to the mail
7. Click **Send**. The request is sent to all those whose e-mail ID is mentioned in the To and CC field. The forwarded requests will be shown in the conversation block.

E-mail the Technician

To e-mail a technician

1. Click the **Requests** tab in the header pane.
2. Click the **Title** of the request from the requests list page.
3. In the **View Request** page, on the right-side **Tasks** block, under **Notify**, click **E-mail the Technician**. This opens the **Mail to Technician** form.
4. Enter the E-mail ID in the **To** field. This is a mandatory field.
5. Edit the **Subject** and **Description** of the e-mail.
6. Click **Attach a File** button to add files as attachments to the mail. All the newly attached files will be listed in the **Newly attached files** field.
7. Click **Send**. An e-mail is sent to the technician. To send the information to more people, enter their e-mail IDs in the **To** field or **CC** separated by comma.
8. You also have an option to **Save** the mail as draft copy for later use.
9. If you wish to send the drafted mail for review to the higher authority then click **Send for review** button.

A technician can be notified when a new request is assigned or an already existing request is reassigned to him/her.

SMS the Technician

ManageEngine ServiceDesk Plus enables you to notify technicians through SMS. This option is available to the technicians assigned to requests.

To send an SMS to a technician,

1. Click the **Requests** tab in the header pane.
2. Select the **Subject** link of the request. Make sure that a technician is assigned to the request.
3. From the Request details page, click **Reply** sub tab -> **SMS the Technician** option. A **Mail to Technician** window pops-up with the **To** address as the **SMS Mail ID** configured for the technician in the admin tab.
4. Add your message in the **Description** field.
5. Click **Send**. The notification is added as a request conversation.

Before sending the SMS alert to technician, you can send it for review to your higher officials. Click **Send for review** button in Mail to Technician pop up window. A **Send for Review** dialog pops-up. Enter the **To** mail address and click **Send**.

To automatically alert the technician when a new request is assigned to them, click **Alert Technician by SMS when a request is assigned** option in **Notification Rules** under **Admin** tab. You can also modify the default content for Subject and Description by selecting **Customizing Template** link in Notification Rules.

Request Conversations

ServiceDesk Plus displays the mail transactions happening between the technician handling a request and the requester, as conversations. At times, the technicians can converse with other technicians regarding the request which also gets listed in the conversation block. The conversations are listed one below the other in the ascending order of the time when the notification (response) was sent (received). You can choose to view either **All conversation** or **Requester conversations**.

To view all the conversation details, click the **View All Conversation** link at the top of this block. This shows all the conversation between the technician and the requester and between the technicians. If the conversation has any attachments, then the attachment icon can be viewed in this block. To view only the requester conversation, click **View Requester Conversation** link.

Split As New Request

You can choose to split the requesters conversations into a new request. To split the conversation as a new request,

1. Expand the conversations by clicking on the **View All Conversation** link or by clicking the button on the left of the row which you wish to expand.
2. Click **Split as New request** button at the right bottom of that conversation.

This splits the conversation into a new request.

Delete Conversation

You can delete a specific requesters conversation. To delete a conversation,

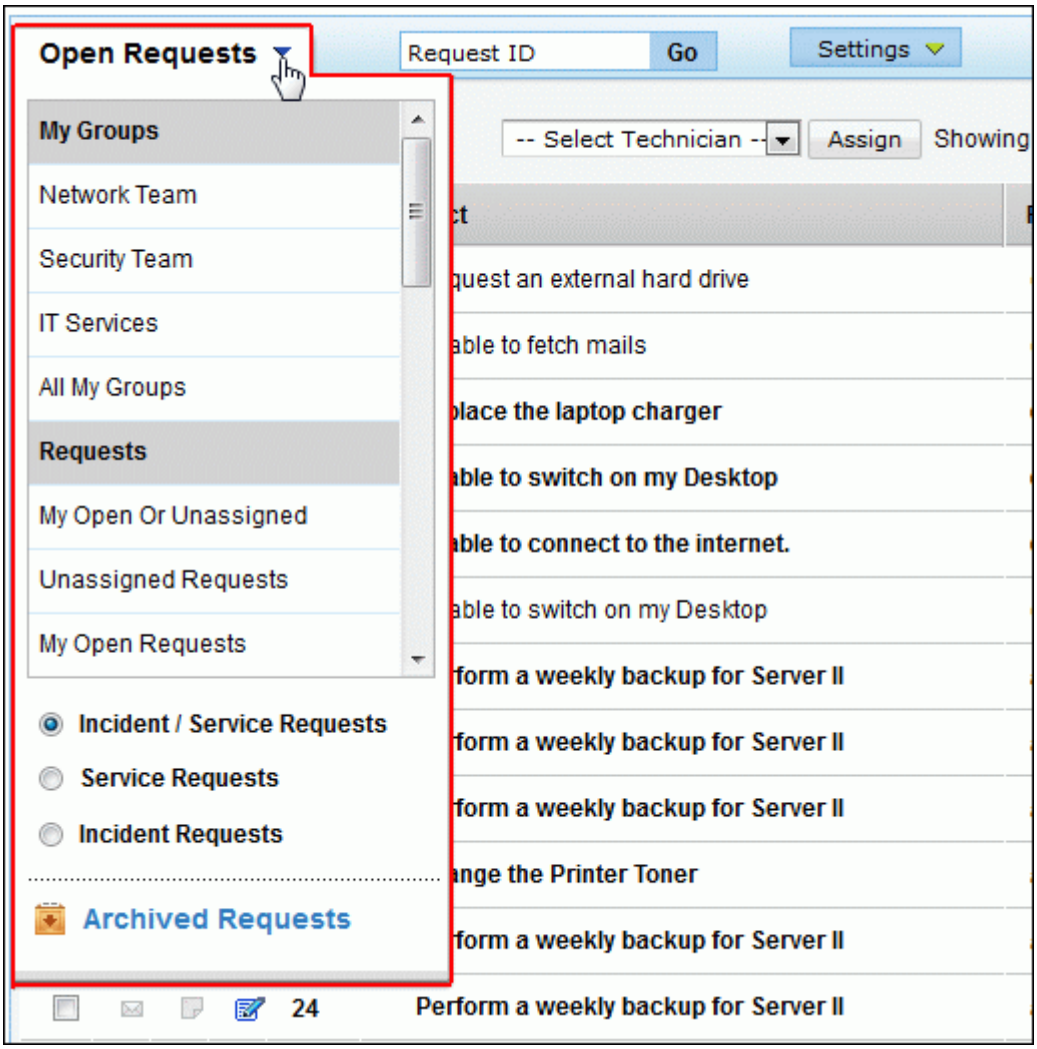
1. Expand the conversations by clicking on the **Expand all** link or by clicking the > button on the left of the row which you wish to expand.
2. Click **Delete** button at the right bottom of that conversation. A confirmation pop-up opens.
3. Click **OK** in the confirmation pop-up to delete the thread/conversation.

View Requests based on Filters

The Filter drop-down menu consists of default filter list which classifies requests into three categories namely, **My Group**, **Requests** and **My Views**. The filter has options to restrict the list view to display **Service Requests**, **Incident Requests** or both, and link to view **Archive Requests**.

To view requests under the filter categories,

1. Click **Requests** tab in the header pane.
2. Select the **Filter** drop-down menu to view the list of filters.



My Groups

The support groups to which you are assigned is listed under **My Groups**. You can view all the requests raised for a group using the filters.

Requests

The **Requests** consists of default filters which classifies requests based on the status.

- **My Open Or Unassigned Requests**

  All your open requests and the requests that are not assigned to any technicians will be listed under this option.

- **Unassigned Requests**

  All the requests that have not been assigned to any technician will be listed under this option.

- **My Open Requests**

  Lists all the open request assigned to the logged in technician.

- **My Requests On Hold**

  All your assigned requests that are kept on hold will be listed under this option.

- **My Overdue Requests**

  Lists the requests assigned to the logged in technician that has exceeded the due date.

- **My Pending Requests**

  Lists the requests assigned to the logged in technician that is unfinished.

- **My Requests Due Today**

  Lists the requests assigned to the logged in technician that is due to complete on that day.

- **My Completed Requests**

  Lists the requests assigned to the logged in technician that are completed and closed.

- **Requests Pending My Approval**

  Lists all the request that require approval from the logged in technician.

- **All My Requests**

  Lists all the requests assigned to the logged in technician.

- **Open Requests**

  Lists all the open request irrespective of the technician.

- **Requests On Hold**

  Lists all the request that are in on hold status.

- **Overdue Requests**

  Lists all the request that have exceeded the due date.

- **Requests Due Today**

  Lists all the request that are due for the day.

- **Requests Pending Approval**

  Lists all the request that are pending for approval.

- **Pending Requests**

  Lists all the unfinished request irrespective of the technician.

- **Completed Requests**

  Lists all the closed request irrespective of the technician.

- **All Requests**

  Lists all request irrespective of the status (closed, pending, open, on hold) and technician.

My View

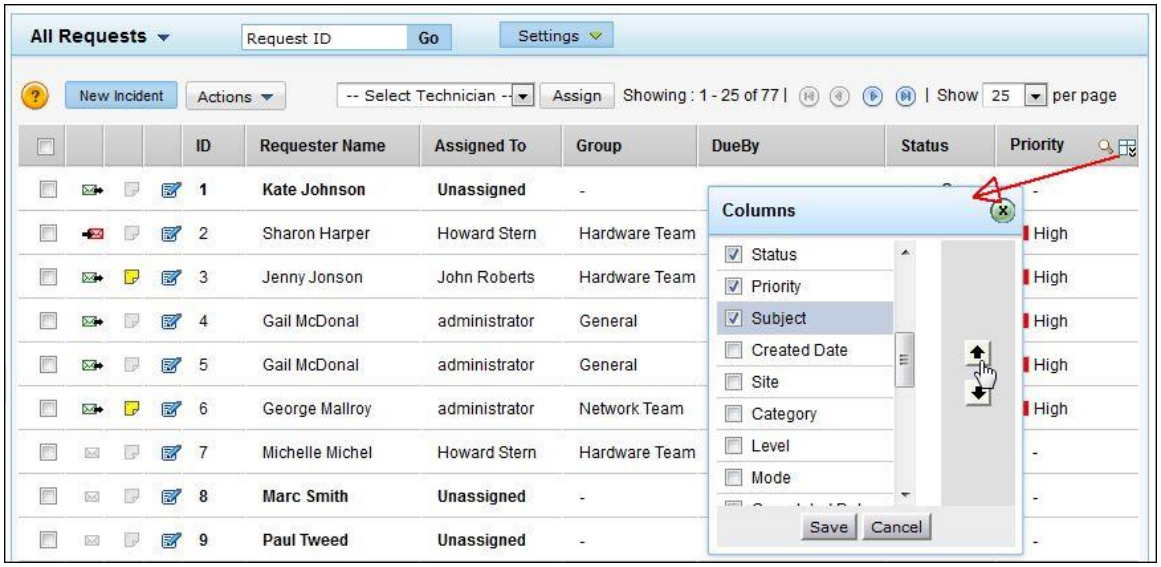
The customized private views are listed under **My Views**. You can create a custom view from **Settings** drop-down menu -> **New Custom View** option.

Customize Request List View

You can customize the request list view to display the columns of your choice.

To customize the list view,

1. Click the **Requests** tab in the header pane.
2. Click the **column edit** icon available at the corner of the request list headers. This opens the available columns that can be displayed in the list view. All those that are visible currently, will have the check box beside them selected.



3. To remove a column, remove the selection from the respective check box beside the column name.
4. To add a column to the list view, select the unchecked select box beside the column name.
5. To change the column order, click the up and down arrow after selecting the column that you wish to move.
6. Click **Save**.

This will add only those columns which you have chosen in the list view.

Search for a Request

You can search for a request using the **Keyword Search** or the **Column-wise Search** option.

Keyword Search

In **Keyword Search** option, you can search for requests based on a keyword, say laptop or printer. The keyword can be from the subject or description of the request or a value of the request fields (Priority, Status, Group and so on) like High, Open, Printer Team and so on. You can also search for requests assigned to a technician by entering the name of the technician as the keyword. The search results in a list of requests which matches the keyword.

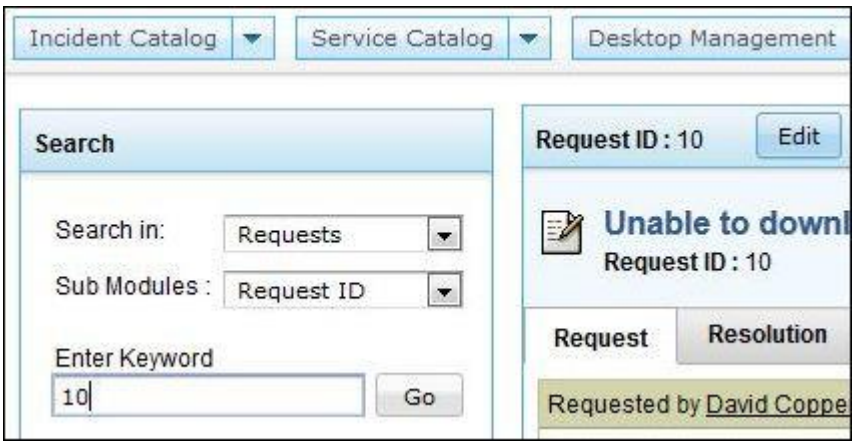
You can further sub divide the request module to search based on **Notes**, **Work Log**, **Resolution** and **Request ID**.

To perform **Keyword Search**,

1. Click **Requests** tab in the header pane.
2. In the **Search** block, select **Requests** in **Search in** drop down menu.
3. You can further fine grain your search by selecting the **Sub Modules**. You can search for requests based on Notes, Work Log, Resolution and Request ID.
4. Enter a keyword relevant to the request in **Enter Keyword** text field.

   NOTE:

   - If you have selected the sub module as **Notes**, then you can either enter a relevant keyword from the notes content or the name of the technician who has added the note.
   - If you are searching requests based on **Work Log**, then enter the technician's name as the keyword.



5. Click **Go**. The search results in requests that match the keyword.

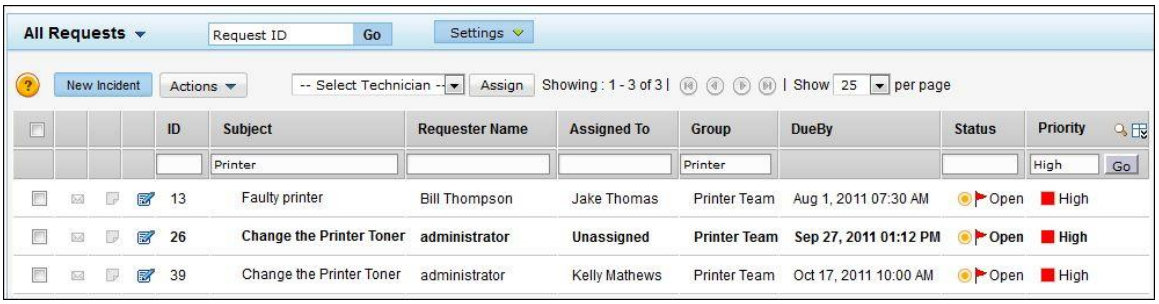
Column-wise Search

Column-wise Search allows you to search for requests using two or more keywords. For example, if you want to search for all the **High** priority requests assigned to the **Printer Group** with Subject as **Printer**, then you can so so using column-wise search option.

> **NOTE:** You cannot search for requests based on any of the date fields of the request.

To perform column-wise search,

1. Click **Requests** tab in the header pane.
2. In the **Request List view** page, click **Search** icon at the end of the request list view headers. This opens the search field just below every column that is visible in the list view.
3. Enter the search key in field under the column of your choice.
4. Click **Go**. The search results matching the search string(s) are displayed.



Multi site on Requests

An organization can have branches spread across different regions and sites of the globe to handle various specialized activities. In this globally distributed environment, a request can be raised from a site to a technician located in another branch of the organization. The request is resolved based on the admin configurations (operational hours, holidays, SLA and business rules) of the site from which the request was raised. Hence with site base configuration, the request module experiences an immense change.

If an organization has no branches and hence no sites configured, then while creating a new request then the default admin configurations gets applied to resolve the request.

Key entities in Request module

Creating Requests

- The admin configurations of the selected site in the new request form will get applied to the request.
- The Groups and Technicians corresponding to the selected site will be listed. Groups acts as a filter in choosing the technician to resolve the request.
- A request template with the group and technician pre-filled with values needs to be re-selected on choosing the requester, if the group/technician is not associated to the requester's site.

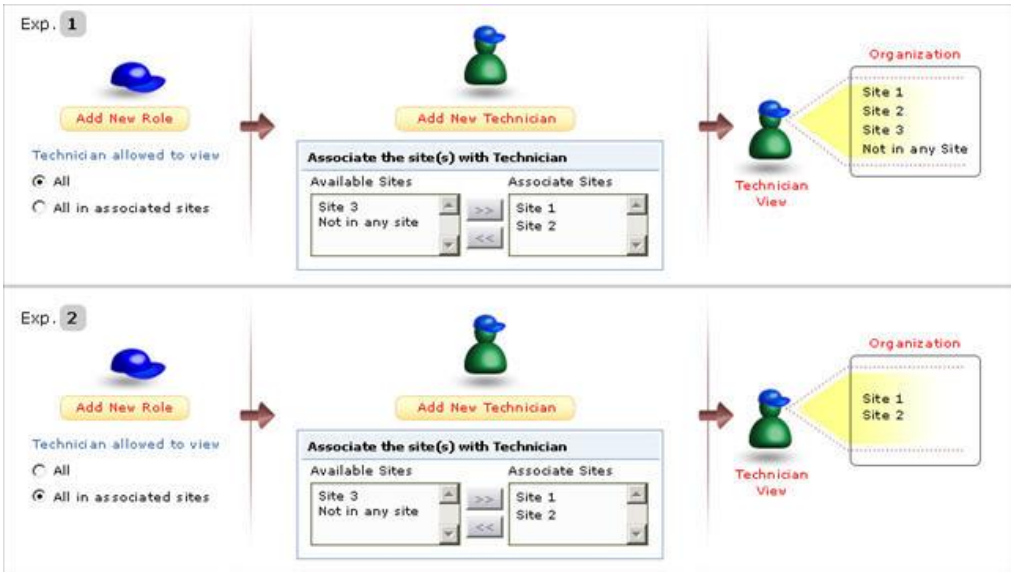
Editing Requests

If a request needs to be routed to a technician in another site, then on selecting the site, the SLAs and business rules for the site will be applied and the due by time recalculated accordingly.

Viewing Requests

Technicians can view all the requests of a site if,

- the technician is associated to the site and have the viewing permission as 'All' in Configuring Roles.
- the technician is associated to the site with the viewing permission as 'All in associated sites'.

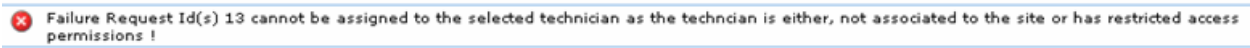


Assigning Technicians

ServiceDesk Plus provides you with an option to bulk assign requests to technicians. The request can be assigned to the technician if,

- The technician is associated to the site where the problem persist.
- The technician has the permission to view the requests in all sites. This can be done in Configuring Roles.

  If the technician is not associated to the site where the problem persist and if the technician has restricted view permissions then an error message occurs while assigning the request to the technician as shown below,



Scenario : Roles on Requests

A requester from London raises a demo related request persisting in Sydney through self service portal of the ServiceDesk Plus application. By default, the admin configurations for London will be applied to the request. The request is handled by John, a technician in London. John can view and re-assign the request,

- If John is only associated to London with the viewing permissions as '**All**', then he will be able to view the requests in all the sites of the organization. He will be able to assign the request to technicians associated in other sites but if he assigned the request to himself, then the site field automatically changes to London.

- If John is only associated to London with the viewing permissions as '**All in associated sites**', then he will be able to view all the requests raised in London. He will not have the privilege to re-assign the request to technicians in other sites.
- If John is associated to London and Sydney with the viewing permissions as 'All in associated sites', then he will be able to view all the requests raised in London and Sydney. He can re-assign the request to request to a technician in Sydney but not to technicians in other sites of the organization.

On assigning the request to Amy, the technician in Sydney, the SLAs and business rules configured for Sydney will be applied to the request and the due by time re-calculated. If Amy is assigned to a Group say, Support, then she can view and re-assign the request,

- If Amy is associated to Sydney along with the viewing permissions as '**All in Group and assigned to him**', then she will be able to view all the requests raised in the groups to which she is assigned.
- If Amy is associated to Sydney and London with the viewing permission '**All his requests**', then she will be able to view only the requests assigned to her. She will be able to re-assign the requests to other technicians in London and Sydney but will not be able to view the request as it does not fall under their permitted scope.

Request does not fall under your permitted scope.So you are not authorized to view the same

Create Service Request from Incident Request

It is possible for helpdesk technicians to create a **new service request** from an already **existing incident request**. For example: your organization might be recruiting new employees by creating a request called **register new employee with a set of tasks** associated to it. Now, while registering new employee/facilitating employee recruitment, one of the tasks will be to provide him/her with a laptop/desktop, which is typically a service request, as you might have to contact your vendor in case the asset is not already in store.

Under such circumstances, technicians can create a separate service request (provide desktop/laptop in this case) from the existing incident request.

To **create a service request from an incident request**,

1. Select the **incident request** from the **request list view** by clicking on the subject of request
2. Under **Actions dropdown**, select **Create Service Request** option
3. **Create Service Request** popup will open up as shown below:

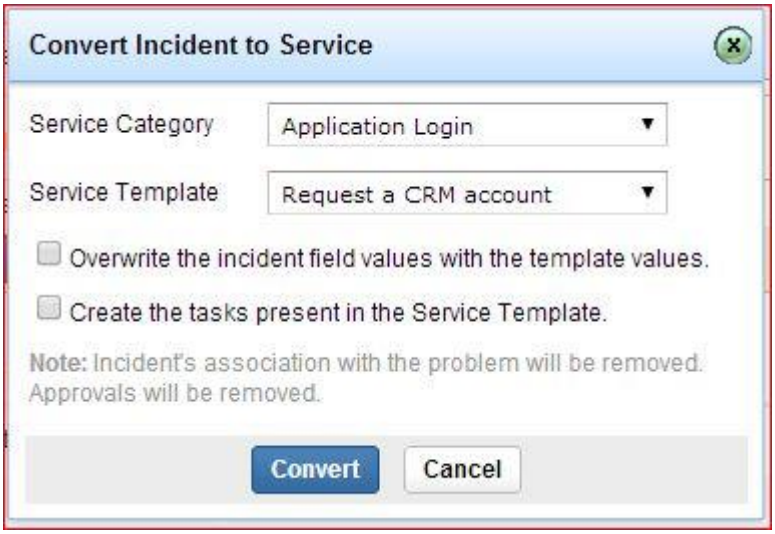
4. Select the **Service Category** and Choose the **Service Template**
5. Specify suitable comments
6. Click **Create Service Request** button

Note	1. Remember that you are creating a service request from an incident request **and not converting the incident request** into service request. 2 Therefore you will now have two requests: an already **existing incident request** and the **newly created service request** 3 Technicians also convert an existing incident request into service request; to know about this, visit: converting incident request to service request

Convert Incident Request to Service Request

To **convert an incident request to service request**,

1. Select the **incident request** from the **request list view** by clicking on the subject of request
2. Under **Actions dropdown**, select **Convert Incident to Service** option
3. **Convert Incident to Service** popup will open up as shown below:



4. Select the **Service Category** and Choose the **Service Template**
5. Check **Overwrite the incident field values with the template values** checkbox in case you want to **overwrite the existing request's values**
6. Check **Create the tasks present in the Service Template** checkbox if you want to **apply task hierarchy already defined as per the selected template** of the service request
7. Specify suitable comments
8. Click **Convert** button

Note	1. Remember the **problems associated with the request** (if any) will get dissociated when the request is converted 2 **Approvals associated with the request** being converted too will get dissociated

Associate Service Requests with Purchase Orders

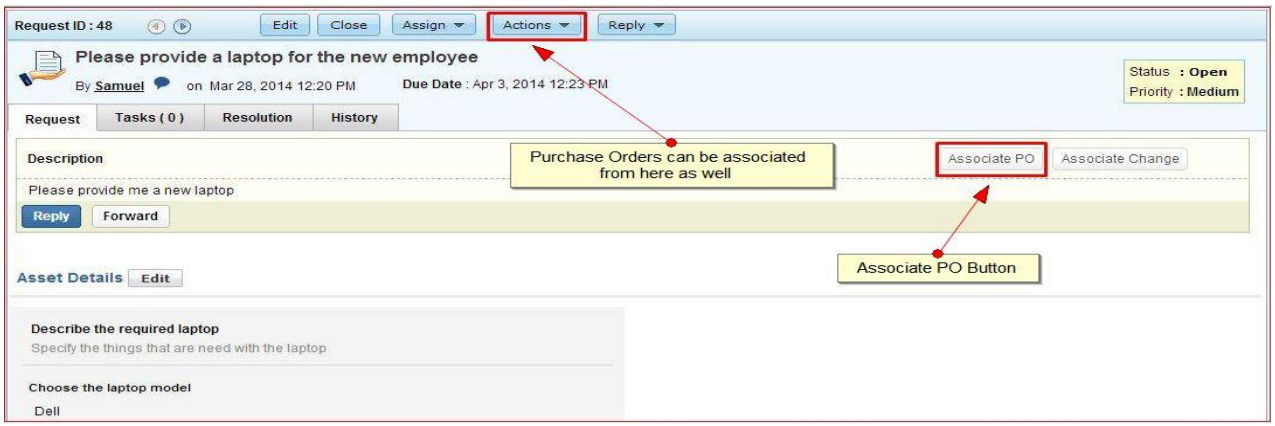
Service Requests involve delivery of some sort of service like laptop, phone, tablet etc., to the requester. This type of requests can be completed only after a series of tasks are performed. For example, in case of a laptop delivery, the technician will check whether the requested asset is available (in store) and might have to seek for higher authority's approval before proceeding with the service delivery. Now, when the requested service is not in store, then service delivery process has to begin from scratch: that is, first the purchase order (PO) for the service request will be created and submitted to the concerned vendor; then the asset will be acquired and provided to the requester.Under such circumstances, technicians can create a separate service request (provide desktop/laptop in this case) from the existing incident request.

Since Service Requests are often associated with Purchase Orders (maybe new or existing), ServiceDesk Plus provides an option to associate Service Requests with Purchase Orders (and vice versa) from the request details page as well as from the purchase details page.

Remember: Only **technicians having roles with permission to edit and view both request and purchase modules** can associate/detach purchase orders from service requests

Associate Service Request to Purchase Order

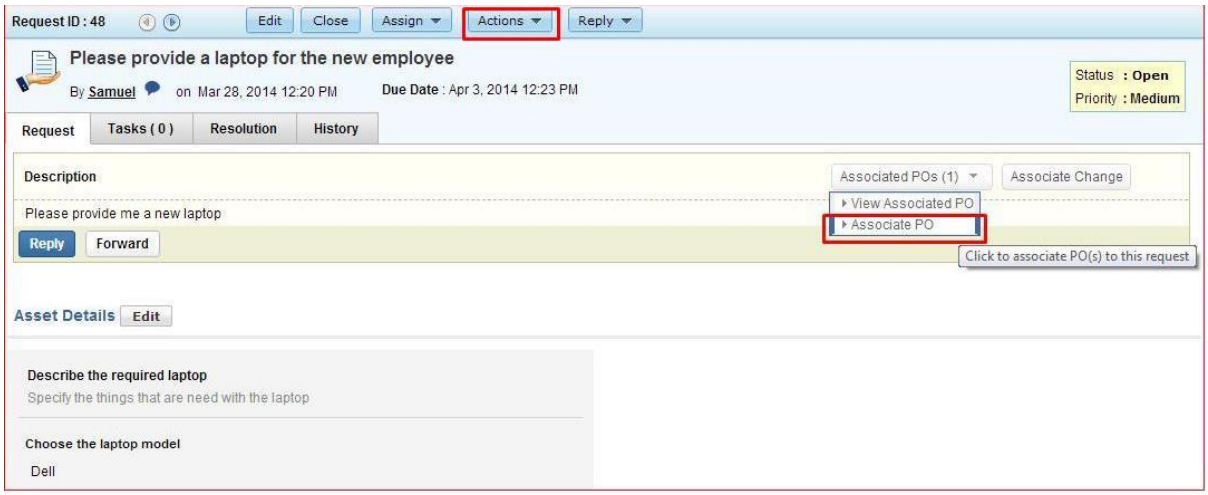
1. From the request list view, **select the service request** to be associated with the purchase order by clicking on the **subject of that request**
2. Click **Associate PO** button availabe in the **request details page** (present at the right side). **[OR]**
3. Click **Actions dropdown** and **select Associate PO** option
4. **Associate Purchase Orders popup** will open up
5. Select the purchase order from the **available list** (or) **by filtering the available list using various PO filters** options like Open POs, Pending POs, Closed POs etc., [OR]
6. You can also **search for the purchase order** using the **PO number**, **PO name**, **PO status** etc., using the search icon available at the right extreme of the columns.
7. Click **Associate PO** button



Associate Service Request to Multiple Purchase Orders

Sometimes a **single service request might involve several purchases** and therefore might have to be associated with **multiple purchase orders**. To associate a service request with multiple purchase orders, do the following:

1. Select **request** by clicking on the request subject
2. Click **Associated PO dropdown button** availabe in the request details page (present at the right side) and select **Associate PO** option [OR]
3. Click **Actions dropdown** and **select Associate PO** option
4. **Select PO(s)** that you want to associate with the Service Request and click Associate PO button



Viewing Associated Purchase Orders

1. Select **request** by clicking on the request subject
2. Click **Associated PO dropdown button** availabe in the request details page (present at the right side) [OR]
3. Click **Actions dropdown** and **View Associated PO** option
4. Click on the **PO Name link** and the purchase order will open up in **Print Preview** mode

Detach Request from Purchase Order

1. Select **request** by clicking on the request subject
2. Click directly on the **Associated PO(s)**
3. Select **Purchase Order**
4. Click **Detach PO** button

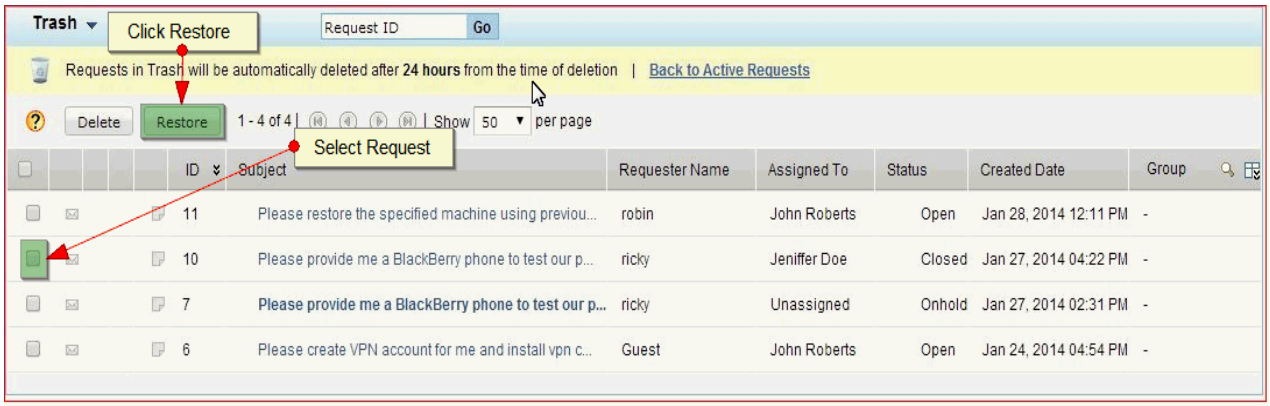
Note	1. **Technicians of the Service Request will be informed about the Purchase Order's status** - whether the PO related Items have been **received, partially received** (or) whether the Purchase Order has been **rejected** by higher authority - through notifications 2 **Any number of Purchase Orders** can be associated with a **Service Request**

Request Trash

Technicians usually delete requests when they are closed. But under certain circumstances closed requests might be needed for future reference. Therefore to prevent accidental deletion of closed requests which might be needed for future affairs, technicians are provided with the **Request Trash option** (available in the **Request Filter dropdown** below the **Request Filters**) which stores all the deleted requests for a period of 24 hours from the time of deletion - after which it will be deleted permanently from ServiceDesk Plus application.Under such circumstances, technicians can create a separate service request (provide desktop/laptop in this case) from the existing incident request.

Recovering deleted request(s) from Trash,

1. Click **Request Filter** dropdown
2. Select **Trash** option (available below request filters)
3. **Request Trash** will open up as shown below:



4. Select the request you want to recover
5. Click Restore button

To restore all the deleted requests, click the select box (available beside request id column), and click **Restore** button.

Note	Request Trash holds the deleted requests **only for 24 hrs** after which it will be deleted permanently

Mobile Client

ManageEngine ServiceDesk Plus Mobile Client improves the efficiency and productivity of your help desk system by providing technicians with the ability to instantly access their requests while they are away from their desk through their mobile devices.

It is a complete browser based web application supporting various request features like **viewing requests**, **adding requests**, **closing resolved requests**, **assigning request**, **adding work log**, **adding resolution** and **deleting requests**.

ServiceDesk Mobile Client is compatible with mobile devices such as Blackberry and iPhone, and is accessed through the mobile browser on typing the URL http://<machine-name>:<port-number>, which redirects to the 'mc' context.

Features

- A browser based web application to access tickets from any location.
- Supports request module features such as, creating incident request, viewing request details, adding resolution to a request, adding work log, assigning technician to a request, closing completed requests and deleting requests.
- Any actions performed on the requests are based on the Roles assigned to the technicians.

Limitations

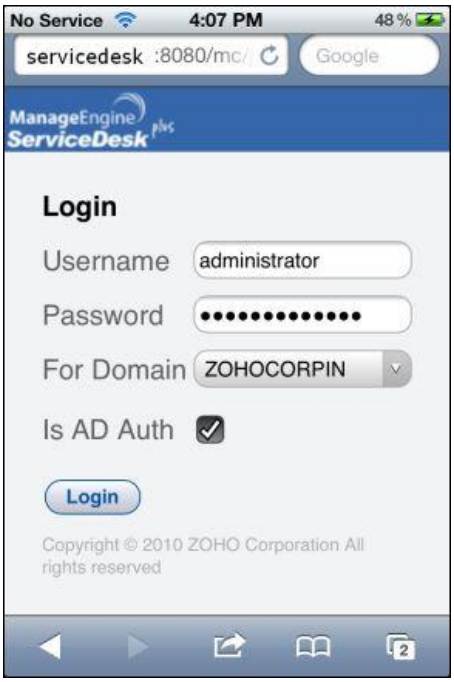
- Currently, ServiceDesk Plus Mobile Client supports only request module.
- Editing/Modifying requests cannot be performed.
- Compatible with mobile devices such as Blackberry and iPhone.

Logging into ServiceDesk Plus

On connecting your mobile device to http://<machine-name>:<port-number>/mc, the screen opens to displays the login page.

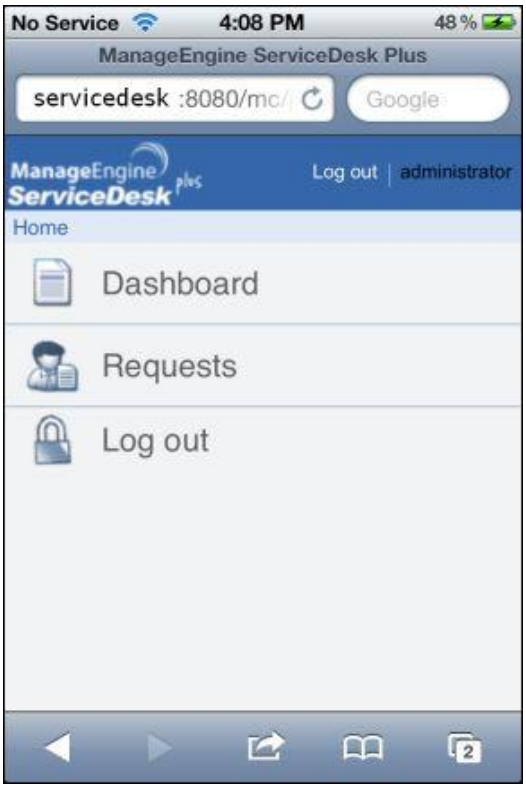
- **Username:** Username of the technician.
- **Password:** Password of the technician.
- **For Domain:** Choose the domain of the logged in technician. If the domain is not selected then it is considered as 'Not in any domain'.
- **Is AD Auth:** Select the check box for AD authentication.

NOTE: ServiceDesk Plus Mobile Client does not support Single Sign-On (SSO)



Click **Login** button.

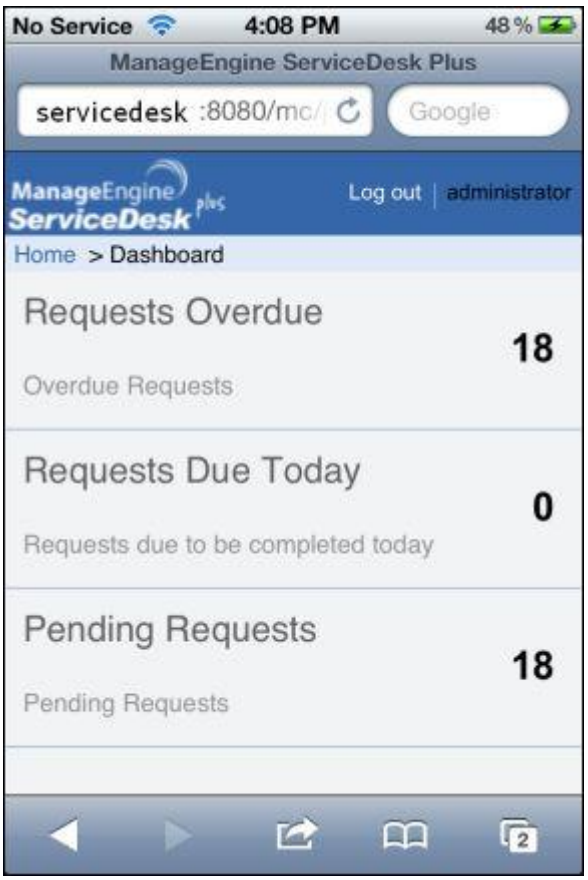
On logging into the application from your mobile device, the home page displays the **Dashboard**, **Requests** and **Log out** options.



- **Dashboard:** Displays the number of **Overdue Requests**, **Requests Due Today** and **Pending Requests** of the logged in technician.
- **Requests:** Displays the request list view with options to select, **My Pending Requests**, **All Pending Requests** and **Incident/Service Requests**.
- **Log out:** To log out from the mobile client.

Dashboard

The dashboard of the logged in technician comprises of the number of all overdue requests, requests due to be completed today and the pending requests. Click an option to display the list of request under it.



To revert back to the Home page click **Home** link on the top right corner of the page.

Requests

Selecting **Requests** from the dashboard takes you to **My Pending requests** by default. The requests view options comprises of My Pending Requests, All Pending Requests and Incident/Service Requests.

NOTE: The request list view and the actions performed on the requests is based on the roles assigned to the logged in technician.

Request List View

Request List View displays the title of the request, requester, status of the request, created date and time, technician assign icon, priority color code, first response time overdue flag, request overdue flag, and first response and resolution overdue flag.

Representation of icons from the Request List View

- - Indicates that the First Response Time is overdue
- - Indicates that the request is overdue
- - Indicates that the First Response Time and the Resolution Time are overdue
- - Indicates unassigned requests i.e., technician is not assigned to the request
- - Indicates technician is assigned to the request.
- - Indicates request assigned to the logged in technician

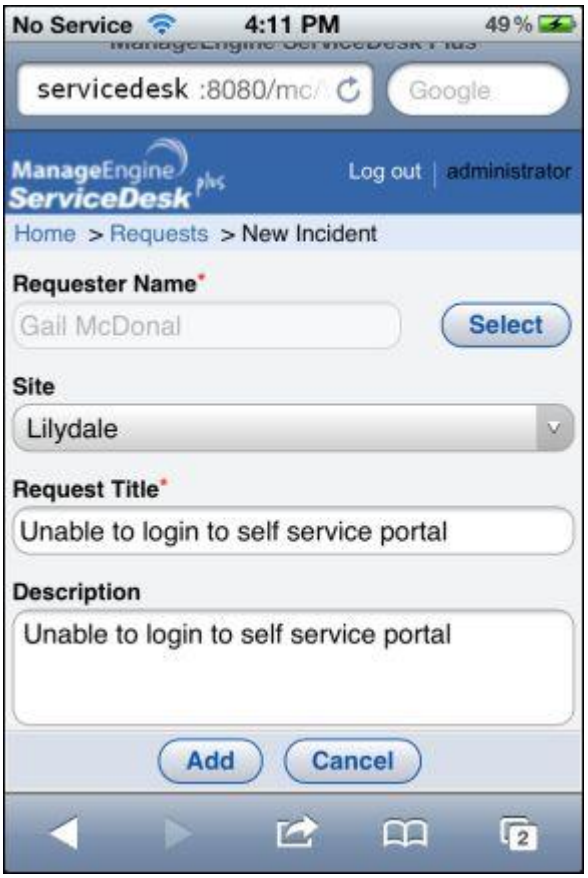
Operations performed from the Request List View

- **Search Requests based on Request ID:** Search for requests instantly by entering the Request ID in the Search field
- **New:** Option to create new incident requests
- **Pick:** Option to pick up unassigned requests
- **Assign:** Option to assign requests to other technicians
- **Close:** Option to close completed requests

The request list view displays a total of five requests in a page. You can navigate to other pages using the navigation options below the page. To revert back to the Home page, click the **Home** link on the top right corner of the page.

Creating Incident Request

Creating incident requests is simple and instant. All you need to do is enter the **Requester Name**, **Request Title** and **Description** of the issue. To create new request, click **New** button from the Request List View.



- **Requester Name:** Enter the name of the requester raising the request. To select and search for available requesters, click **Select**.
- **Request Title:** Enter a brief summary of the request
- **Description:** Enter detailed description of the request

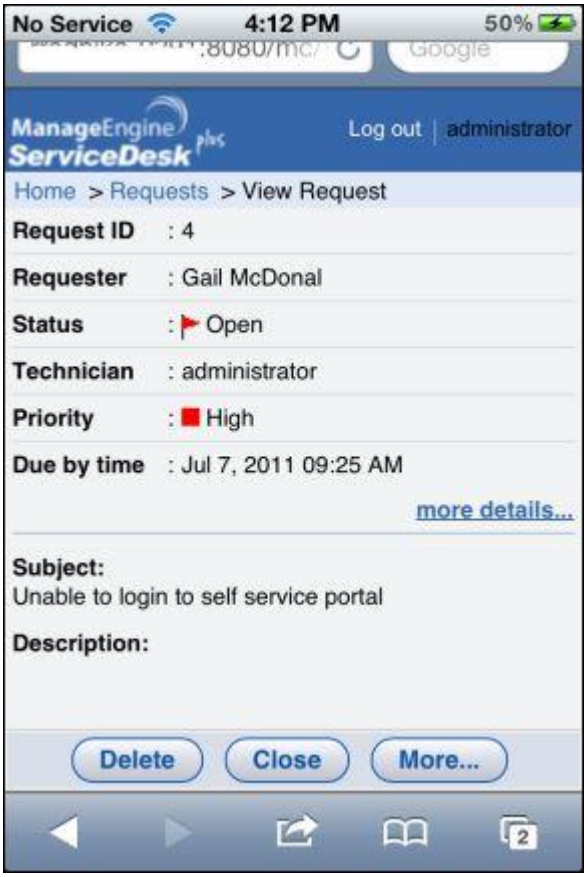
Click **Add** to save and add the request in the request list view.

NOTE:

- Requests cannot be created through Request Template though templates are configured in the server.
- Request details such as request type, priority, urgency, group, category, sub category and item cannot be added while creating a new request.

Viewing Request Details

Click the request you want to view from the request list view page. The request details page displays the **Request ID**, **Requester**, **Status** of the request along with the overdue flag, **Technician** assigned to the request, **Priority** along with color code, **Due by Time** of the request, **Subject** and **Description**.



Click **More details...** link to get the entire detail of the request such as, request type, impact, status, due by time, response due by time and so on.

If the description exceeds 250 characters then **(More...)** link appears. Click the link to view the entire description.

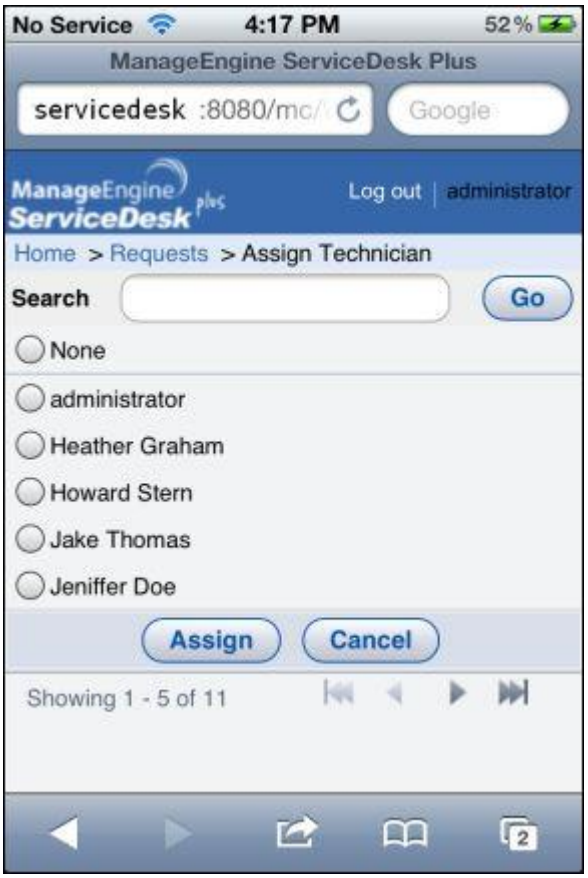
Click **More..** button to Add Resolution and Work Log.

If the request is resolved, click **Close**. Click **Delete** to discard the request completely from the application.

Assigning requests to technicians

If you are assigning requests to technicians using your mobile device, then the list of all the available technicians are displayed. Requests can be assigned to technicians provided the technician is associated to the site where the issue exists.

1. Select the check box beside the request.
2. Click **Assign**. Select the radio button beside the technician.
3. Click **Assign**.

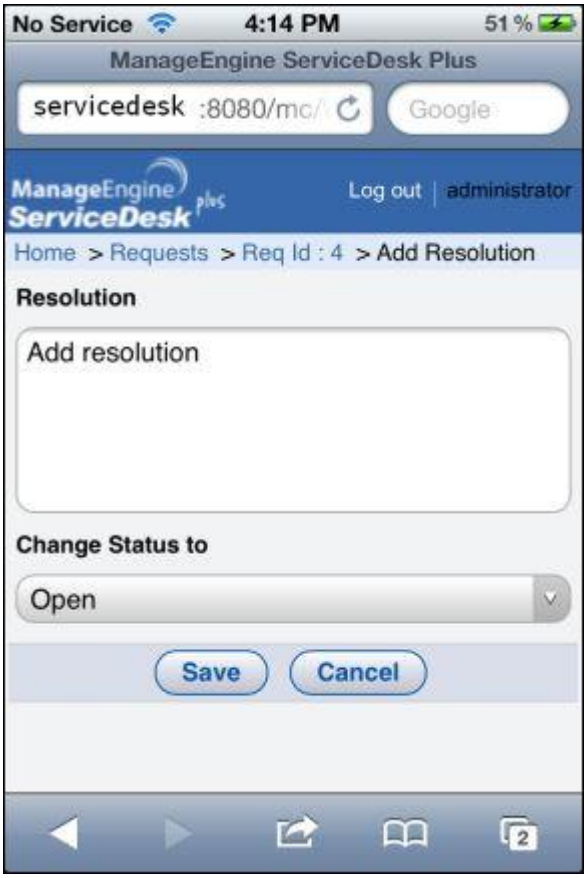


NOTE: Please note that an error message does not occur if a request is assigned to a technician with restricted access permission and if the technician is not associated to the site. Instead the request is not assigned to the technician.

Adding Resolution to a request

1. From the request details page, click **More..**
2. Click **Add** beside Resolutions. Enter the resolution in the text field.
3. You can also change the status of the resolution from **Change State to** drop down list.

4. Click **Save**.



NOTE:

- Resolutions can be added only as plain text.
- Resolutions cannot be created through resolution templates though the templates are configured in the server.
- Resolutions cannot be searched from Solutions module.

Viewing/Editing Resolutions for a request

1. Click **More..** from the request details page.
2. If the resolution is added to the request then the **Edit** and **View** link appears.
3. Click **View** to view the resolution. The resolution along with the technician submitted the resolution is displayed.
4. From the view resolution page, click **Edit** to modify the resolution. You can edit the request from **More..** -> **Edit** link.
5. Edit the content and if necessary change the status.
6. Click **Save**.

Adding Work Log for a request

You can add the time spent details for a request from your mobile device.

Click **More..** from the request details page.

- **Technician:** The name of the logged in technician is displayed in a non editable text by default.
- **Time Taken:** Enter the time taken to resolve the request in hours and minutes.
- **Incident Cost:** Enter the Incident Cost. The Incident Cost is **Time Taken x Technician's cost per hour**. The Technician Cost per hour is mentioned while adding a technician under Admin -> Technician.
- **Execution Time:** By default, the execution time displays the current date. Select the date and month from the drop down box.
- **Description:** Enter description about the time spent entry.

Click **Save**. The name of the technician along with the time taken to resolve the request and the cost is displayed. To know more on Adding Work Log refer **Cost of Request.**

NOTE:

- Work Log cannot be added for other technicians.
- The logged in Technician's Cost per hour should be configured in the server.

ServiceDesk Plus iPhone App

The **ServiceDesk Plus iPhone App** helps you perform requested related operations such as adding requests, editing requests, assigning requests to technicians, replying to requests, adding resolutions and work logs, and closing completed requests.

Features

- An iPhone App which helps access tickets from any location.
- Support **Request Management** features such as, creating new request, viewing request details, adding resolution to a request, adding work log, assigning technician to a request, closing completed requests and deleting requests.
- Any actions performed on the requests are based on the **Roles** assigned to the technicians.

The following Topics are discussed under this section,

- Downloading the ServiceDesk Plus iPhone App
- Configuring ServiceDesk Plus Server Settings
- Logging into ServiceDesk Plus iPhone App
- Request List View
- Adding Requests
- Performing Request Related Operations
- Limitations of ServiceDesk Plus iPhone App

Downloading the ServiceDesk Plus iPhone App

You can download the ServiceDesk Plus iPhone App from the iPhone App Store by searching for "**ServiceDesk Plus**". This will list out the ServiceDesk Plus iPhone App. It is a free App and does not require any licenses to be purchased.

After installing the App in the iPhone, a **ServiceDesk Plus icon** is displayed. Tap the icon to view the **Login screen**.

Configuring ServiceDesk Plus Server Settings

Before you login to ServiceDesk Plus iPhone App, you need to configure the **Server Name** and **Port Number** of the ServiceDesk Plus server.

To configure the server settings,

1. In the Login screen, tap **Server Settings**.
2. Enter the **Server name** of ServiceDesk Plus server. For example: demo.servicedeskplus.com
3. Enter the **Port Number** of ServiceDesk Plus server. For example: 80
4. Tap the **Protocol** of the ServiceDesk Plus server, whether server is running in HTTP or HTTPS mode.

5. Tap **Done** to save the server settings. The Login screen is displayed again.

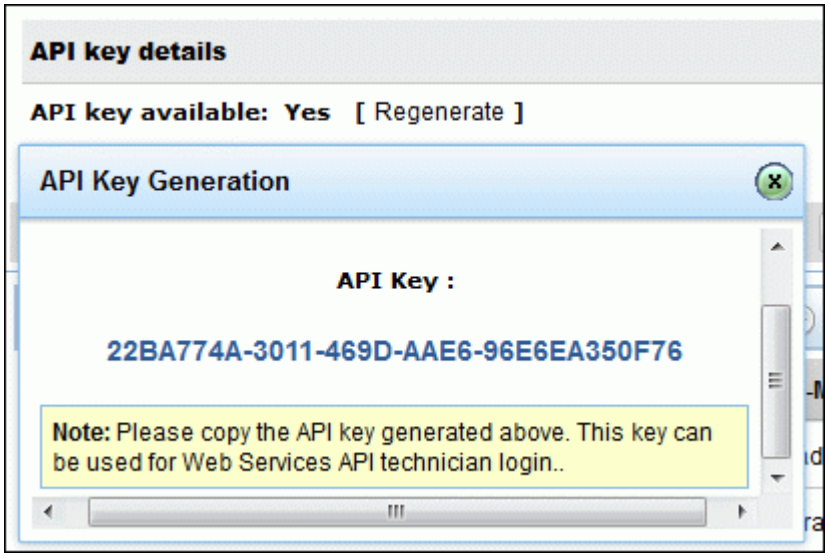
Logging into ServiceDesk Plus iPhone App

To login to the ServiceDesk Plus iPhone App, you need to generate an API Key. This API Key can be generated in the ServiceDesk Plus server. The generated API Key serves as authentication between ServiceDesk Plus server and the iPhone.

Generating API Key for Technician

To generate API Key for a technician,

1. Login to **ServiceDesk Plus** using the username and password of an Admin user.
2. Click **Admin** tab in the header pane.
3. Click **Technicians** icon under **Users** block.
4. Click the **Edit** icon beside the technician for whom u want to generate the API Key.
5. If the technician does not have login permissions, then you can provide the same by entering the **Login Credentials** and assigning **Roles** to the technician.
6. Under API Key details, click **Generate** link. Select a time frame for the key to expire or simply retain the same key perpetually.
7. Click **Generate** button. The API Key is generated.



8. Close the API Key Generation dialog box and click **Save** button.

NOTE:

1. Please note that the technician should be enabled with login permissions.
2. A logged in technician cannot generate an API Key for himself.

Logging into the iPhone App

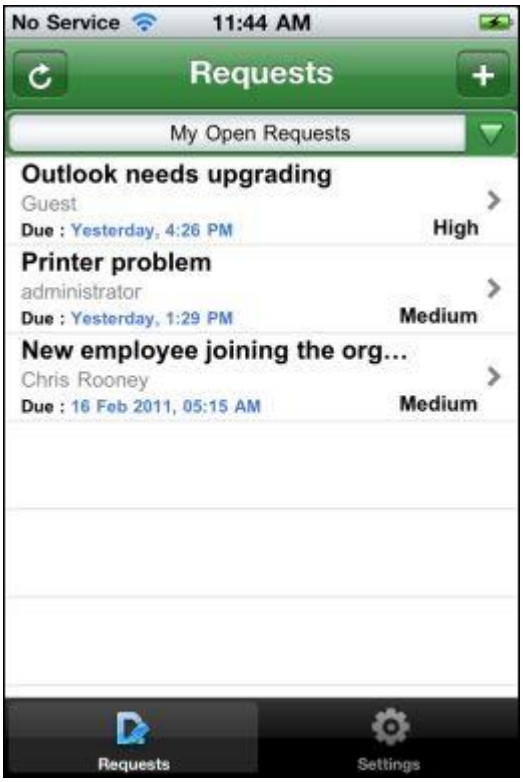
1. Enter your **User Name** and **Password**.
2. Tap **Login**.

NOTE:

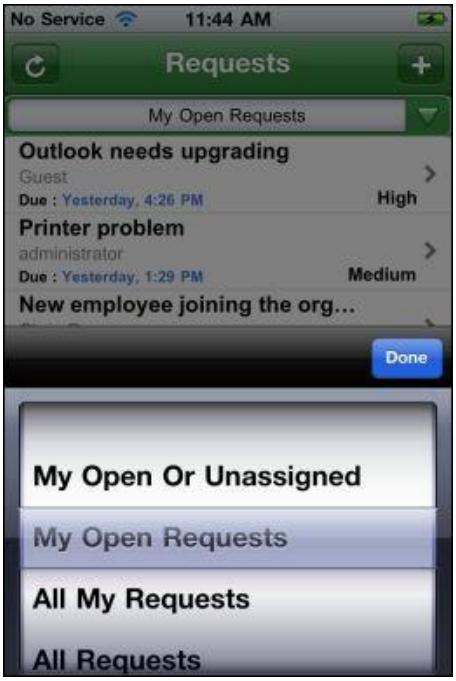
1. Please note that Technicians with an API Key can access the iPhone App through their iPhone.
2. As of now **Multiple Domain Authentication** is not supported. Say, if two technicians have similar login names in two different domains, then the technician will not be able to login in the iPhone App since the option to select the Domain in the login screen will not appear.
3. If AD Authentication is enabled in ServiceDesk Plus, then the technician should login to the ServiceDesk Plus iPhone App using his AD credentials.

Request List view

The **Request List view** displays the **Open or Unassigned requests** by default. The Request List view displays a maximum of 250 requests and each page displays a total of 50 requests. The requests are displayed along with the **Request Title**, **Requester Name**, **Due by Date** and **Priority** of the request.

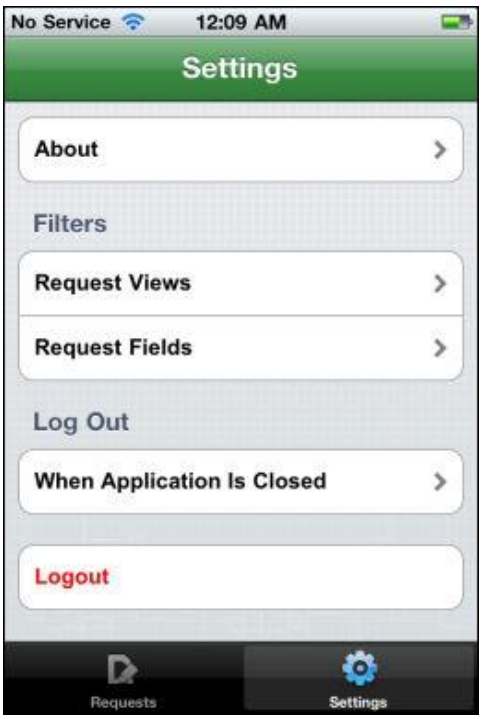


Using the **Filter** drop-down menu, you can select requests based on filters. From this page, you can also **Add Requests** and configure **Request Settings** .



Configuring Settings

Settings help you consolidate your request views by displaying only selected **Request Filters** in the request list view and selected **Request Fields** in the request details page. Apart from this, you can select **Logout Options** to automatically logout of the application; know more **about ServiceDesk Plus** and a **Logout** button to manually logout of the application.



Filters

You can select the request filters which you want to display in the request list view. And also, select the request fields that you want to view in the request details page.

To select **Request Filters**,

1. Tap **Request Views**.
2. Select the filters you want to show in the **Filter** drop-down menu in the request list view. The selected filters are indicated with a tick mark.
3. Tap **Settings** to go back to the Settings page.

NOTE: If you do not select any request filters, then the default filter **My Open or Unassigned** requests are listed.

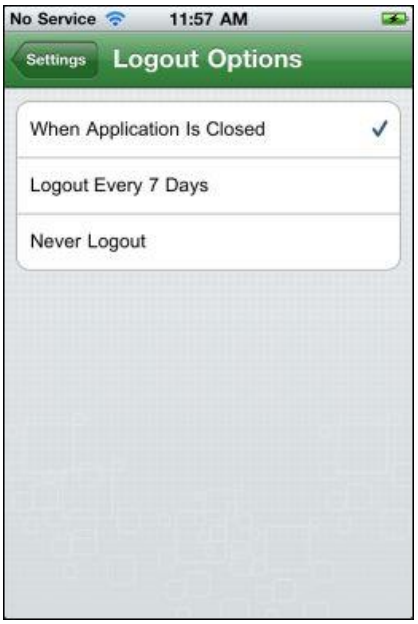
To select **Request Fields**,

1. Tap **Request Fields**.
2. Select the fields you want to show in the Request details page. The selected fields are indicated with a tick mark.
3. Tap **Settings** to go back to the Settings page.

NOTE: If you do not select any request fields, then the Request details page displays only the **Status**, **Priority** and **Due By Date** of the request.

Log Out

You can set the logout options to automatically logout of the ServiceDesk Plus application **when the application is closed**, or **logout every 7 days** or **never logout of the application**. Select the **Logout Options**.

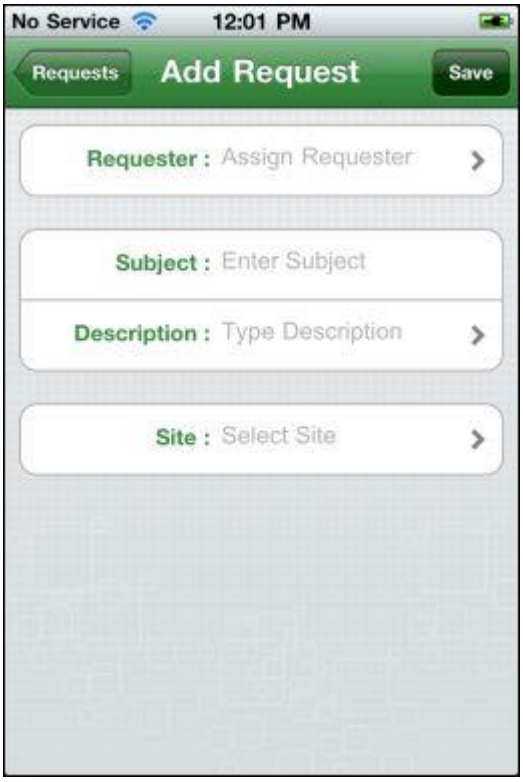


If you want to manually logout of the application, tap **Logout**.

Adding Requests

To add request using ServiceDesk Plus iPhone App,

1. In the Request List view, tap the **Add Request** icon . The **Add Request** form is displayed.



2. Select **Requester** to assign a requester to this request. In the Requester List page, you can either search for an existing requester or add a new requester.

   To search for a requester,

   1. Enter the search string of the requester in the search field.
   2. Tap **Search** button. The search result matching the search string is displayed.
   3. Select the requester from the search result.

   To add a new requester,

   1. Tap the **Add Requester** icon . The Add Requester form is displayed.
   2. Enter the name of the Requester in the field provided.

3. Tap **Done**. The Requester name is displayed in the Add Request form.

3. Enter the **Subject** of the request. The subject is a one liner which gives a brief summary of the incident. The subject is displayed as the request title and is a mandatory field.
4. Enter the detailed **Description** of the request. Tap **Done** to go back to the Add Request form.
5. Select the **Site** where the issue persists. The Sites configured in ServiceDesk Plus server are displayed. Select the site from the list.

   NOTE: Please note that you cannot add sites using the iPhone App.

6. Tap **Save**. The Request is displayed in the Request list view along with the Requesters Name and the Due by Date.

Performing Request related operations

Viewing Request Details

The Request Details page lists the details of the request such as the **Request Title**, **Request ID**, **Requester**, **Technician assigned to this request** and the **Request Fields**.

NOTE: Please note that only the request fields selected under **Settings** are displayed in the Request details page.

From the request details page, you can perform operations such as,

- Editing Request
- Picking up Request
- Assigning Technician to a request
- Closing Request
- Replying to the requester
- Deleting Request
- Adding and Editing Resolution
- Adding, Viewing, Editing and Deleting Work Log

Editing Requests

You can edit the **Subject**, **Description**, **Requester Name**, **Status**, **Priority**, **Due By Date** of the request and the **Technician** handling the request.
To edit a request,

1. In the request details page, tap the **Edit**. The Edit Request form is displayed.

2. Edit the request fields in the form.
3. Tap **Save**.

NOTE:

1. Please note that while editing, you will not be able to change the status of the request to Closed. The status can only be moved to On Hold or Resolved.
2. The fields to edit are limited to **Subject**, **Description**, **Requester Name**, **Status**, **Priority**, **Due By Date** of the request and the **Technician** handling the request.
3. While editing the Requester Name you can only search for an existing requester. You cannot add a new requester.
4. You can select only the default values for Status and Priority fields. Any custom fields added for Status and Priority will not be displayed.

Picking up Requests

You can self-pickup requests from the Request details page.

To pick up requests,

1. In the Request details page, tap **Pickup Request** icon .
2. Tap **Pickup Request**. The request is assigned to you. If you do not want to pick up the request, then tap **Cancel**.

Assigning Technician to a Request

To assign technician to a request,

1. In the Request details page, tap **Assign Request to Technicians** icon . The **Technician Groups** are listed.
2. Selecting a Technician Group lists all the technicians associated with that group.
3. Choose the **Technician** you want to assign the request.
4. A message appears stating the request is successfully assigned to the selected technician. Tap **OK**.

Closing Request

When the requester is completely satisfied that his/her request has been completely attended to and the reported problem has been resolved, then the request can be moved to closed state.

NOTE: In ServiceDesk Plus Server,

1. If you have selected the mandatory fields to be filled while closing the request in **Request Closing Rules**, then enter the mandatory field and close the request. Else an error message appears and the request cannot be closed unless the field value is entered.
2. If you have enabled the option **"Yes, prompt a message"** to confirm a user's acknowledgement in **Request Closing Rule**, then a **Close Request** page appears.

To close the request,

1. In the Request details page, tap **Close** icon .
2. If you have enabled User's acknowledgement in ServiceDesk Plus server, then the **Close Request** page is displayed.
3. If the requester has acknowledges the resolution, tap **Yes**.

4. Enter relevant **Comments** in the field provided.
5. Tap **Done**. A success message appears stating that the request is closed successfully. Tap **OK**.

Replying to the requester

1. In the Request details page, tap **Reply** icon . The **Reply** form is displayed.

2. Enter the **To** address of the requester.
3. If you want to send the same information to more than one person then enter the e-mail address of those people in the **CC** field with comma as a separator.
4. The **Subject** is pre-populated. You can edit the subject if required.
5. Enter your comments in the **Comments** field.
6. Tap **Send**. An e-mail is sent to the requester.

Deleting Requests

1. In the Request details page, tap **Delete** icon .
2. Tap **Delete Request**. The request is deleted from the list.

Resolution

Using Resolution option, you can enter resolution for a request, view existing resolution and edit them if required.

NOTE:

- Resolutions cannot be created through resolution templates though the templates are configured in the server.
- Resolutions cannot be searched from Solutions module.

Adding Resolution

1. In the Request Details page, tap **Resolution**.
2. Enter the **Resolution** in the field provided.
3. Tap **Save**.
4. A message appears stating that the resolution is saved successfully. Tap **OK**.
5. Tap **Close** to go back to Request Details page.

Editing Resolution

1. In the Request Details page, tap **Resolution**.
2. Tap **Edit**. The Edit option is available only if a resolution is added to the request.
3. Edit the resolution and tap **Save**.
4. A message appears stating that the resolution is saved successfully. Tap **OK**.
5. Tap **Close** to go back to Request Details page.

Work Log

Using Work Log option, you can record the total time spent on resolving a request. In ServiceDesk Plus iPhone App, you can **Add Work Log**, **Edit Work Log** and **Delete Work Log**.

Adding Work Log for a request

1. In the request details page, tap **Work Log**. The **All Work Logs** List view is displayed listing all the Work Logs added for the request. If no Work Logs are added to the request, then a **No Work Log Found** message is displayed.
2. From this page, tap the **Add Work Log** icon . The **Add Work Log** form is displayed along with the Request ID.

3. Tap **Select Technician** and select the **Technician** who had resolved the request.
4. Enter the **Time Taken to Resolve** the request in Hours and Minutes.
5. Enter the **Incident Cost** of the request.
6. Select the **Time** (Date and Time) taken to Execute the request using the calendar. Tap **Done** once you select the date and time.
7. Enter any relevant information about the time spent in the **Description** field.
8. Tap **Save**. The Work Log is added in the All Work Logs List view.
9. Tap **Close** to close the Work Log window.

Viewing Work Logs for a request

1. In the request details page, tap **Work Log** button. The **All Work Logs** List view is displayed listing all the Work Logs added for the request.
2. The Work Logs are displayed along with the name of the Technician who had resolved the request and the Time taken to Execute the request.
3. Select a Work Log to view the details.
4. The Work Log details page displays the data entered while adding the Work Log.

NOTE: From the Work Log details page, you can **edit** and **delete** the Work Log

Editing Work Log

1. In the Work Log details page, tap **Edit**. The fields in the Work Log form turn editable.
2. All the fields in the form are editable. You can select the **Technician**, edit the **Time Taken To Resolve** the request, edit the **Incident Cost**, select the **Execution Time** and edit the **Description** of the Work Log.
3. Tap **Save**. The details are saved and listed in the All Work Logs List view.

Deleting Work Log

1. In the Work Log details page, tap **Delete Work Log**.
2. Tap **Delete**. The Work Log is deleted from the All Work Log List view.

Limitations of ServiceDesk Plus iPhone App

Currently, the ServiceDesk Plus iPhone App,

- Supports only the Request module
- Supports only Incident Requests and not Service Requests
- Does not provide an option to view Archived Requests
- Lists a maximum of 250 requests in the Request List view
- Does not support to view the entire Description of a request
- Inline edit for changing the status of a request to Closed is not supported.

- While replying to a request, the e-mail address of the requester should be manually entered
- Supports only the default values for all the Helpdesk Customizer fields
- Renaming the default values for any Helpdesk Customizer field does not change the values in the iPhone App
- Does not support Multiple domain login i.e., if two technicians have similar login names in two different domains, then the technician will not be able to login in the iPhone App since the option to select the Domain in the login screen will not appear.
- Does not support LDAP login
- Log on to drop-down menu does not appear in the login screen when Active Directory Authentication is enabled. If AD Authentication is enabled in ServiceDesk Plus, then the technician should login to the ServiceDesk Plus iPhone App using his AD credentials.

Problems

Problem Management

This module is available only in the ServiceDesk Plus Enterprise edition.

A problem is an unknown underlying cause of one or more Incidents. The objective of Problem Management is to minimize the adverse impact of Incidents and Problems on the business that are caused by errors within the IT infrastructure, and to prevent recurrence of Incidents related to these errors. In order to achieve this goal, Problem Management seeks to get to the root cause of Incidents and then initiate actions to improve or correct the situation.

The Problem Management process has both reactive and proactive aspects. The reactive aspect is concerned with solving Problems in response to one or more Incidents. Proactive Problem Management is concerned with identifying and solving problems and known errors before incidents occur in first place.

Create New Problem

The goal of problem management is to minimize the adverse impact of incidents and problems on the business that are caused by errors within the IT infrastructure and to prevent recurrence of incidents related to these errors.

The new problem form can be accessed by two ways in ServiceDesk Plus application,

a. Quick Actions drop down

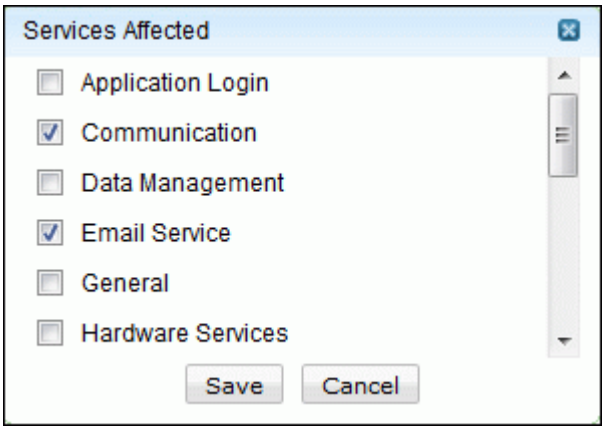
b. Problems Tab

Quick Actions drop-down menu

The Quick Actions drop-down menu is a quick navigator to instantly access the New Problem form. Click **Quick Actions drop-down menu** -> **Problem** under Create New block.

Problems Tab

1. Click the **Problems** tab in the header pane.
2. Click the **New Problem** button to open the New Problem form.
3. Specify the user who has requested the problem in the **Requested By** field. You can also select the user by conducting a search in the requesters list using the icon .
4. Select the **Technician** from the drop down. If you have configured **Sites** in the application, then **Sites** drop down appears. Select the Site in which the problem has occurred. The Technicians associated to the sites gets listed in the technicians drop down.
5. Select the **Category, Sub Category** and **Item** from the drop down.
6. Select the **Status** of the problem, say **Open** from the drop down.
7. Select the **Impact, Urgency and Priority** of the problem from the drop down.
8. Select the **Due by Date** and the **Closed Date** from the calendar button.
9. Select the affected **IT Services** from the list by clicking on the icon .This opens the **Services Affected** pop up box as shown below. Select the affected IT services and **Save** the changes.



11. Select the **Assets Involved** with the problem by clicking the icon . The **Select Assets** page pops up. Select the asset category from **Type of Assets** drop down. Say, Workstations, Printers, Routers, Switches, all assets, all site assets and so on. **All Assets** lists the assets within your permission scope.

    Say, John, a technician, is associated to Site1 and Site2. John has the privilege to view the assets associated to Site 1 and Site 2. So, if John is creating a problem arising in Site 1, the Type of Assets - All Site Assets lists the assets available only in the selected Site 1 and All Assets lists the assets available in Site 1 and Site 2.

    Select the **Available Assets** under the selected type from the list and move to **Assets involved** using **>>** button. Click **Save**.
12. Specify the **Title** of the problem. The title is a mandatory field.
13. Specify the details of the problem in the **Description** field.
14. If you have any file attachments for the problem click **Attach File** button and attach files. Maximum size of an attachment can be 100 MB.
15. **Save** the details.

View Problem Details

1. Click the **Problems** tab. This opens the problems list view page.
2. Click the **Title** of the problem to view the problem details. This opens the problem details page. By default the problem details page opens in the Problem tab.

Problem Tab

The problem tab shows general details of the problem such as, Category, Technician, Status, Priority, Urgency, Impact, Requester, Reported Date, Due By Date, Closed Date, affected IT Services and Assets Involved.

Click the **Edit** button to edit all the details of the change. You also have inline edit option for all the details. To modify the details of the problem click the details and choose the option from the combo box.

Analysis Tab

In the Analysis tab the technicians analyze the root cause and impact of the problem and attach the same in SDP as part of the problem. Also they specify the symptoms of the problem to identify the same problem in the future.

Solution Tab

In the solutions tab resolution for the problem is given as Workarounds and Solutions. Workarounds are temporary solutions that can be used by the technician till the actual solution is ready. Solutions are the permanent fixes to the problems raised.

Incidents Tab

The incidents tab shows the list of all associated incidents with the problem. You have **Attach** option to attach the incident with the problem. And the **Detach Incidents** option to detach associated incidents with the problem.

History Tab

The **History** tab shows the problem history from the time of its creation. It shows all the actions performed in the problem. The history tab also shows the incidents and the changes associated to the problem on clicking the **Property View** link available on the right hand side. The details that are displayed in the history are in the ascending order with the earliest performed action shown at the top of the page and the latest action at the bottom of the page.

Edit Problem

To edit a problem available in the ServiceDesk Plus Problem module

1. Click the Problems tab in the header pane. This opens the problems list view page.
2. Click the **Title** of the problem which you want to edit. This opens the **Problem** details page which list the **Tasks** that can be performed on the problem.
3. Click the **Edit** link on the top of the page to modify the problem details. This opens the **Edit Problem** page. From this page you can add status of the problem from open to close, and also change the entire template to a new one apart from the regular editing of the problem details.

   Alternatively, you also have an inline edit option to modify the problem details in the view problem page. Click the edit icon on the right side of each block which opens the problem form fields in editable format. After modifying the values, save the changes. This comes in handy when you need to edit the values of the entire block say **Problem Details** one by one.

Edit the Problem Details

In the editable problem form you can change the problem details, such as Status of the problem as **Closed or Open**, **Impact** details, **Urgency and Priority** details. You can also modify **affected IT Services** and **Assets Involved** in the problem.

Edit the Owner Details

You can modify the **owner** details and **technician** details of the problem. If you have configured **Sites** in the application, then **Sites** drop down appears. You can modify the site in which the problem has occurred. The corresponding technicians associated to the site is listed. You can also edit the **Reported Date** and **Due by Date** of the problem. If the problem has been closed, then the **Closed date** will be displayed beside this due by date.

Edit the Problem Category

You can change the **Category, Sub Category** and **Item** of the problem. If the same was not appropriately chosen at the time of submitting then the problem can be selected now from the drop down list.

Edit the Problem Description

You can modify the title and description of the problem to completely capture the actual nature of the task at hand.

Append Attachments

If you wish to attach more files to the problem, click the **Attach a File** button and attach as many files as you wish and click **Done**. You can also delete the attachments that were already available in the problem by clicking the delete icon available beside the attachment.

Close Problem

If a requester is completely satisfied that his/her problem has been attended and completely solved, then the problem can be closed.

To close a problem,

1. Click the **Problems** tab in the header pane.
2. Click the **Title** of the problem in the **Problems** list page. This opens the problem details page.
3. Click the **Close Problem** link under the **Tasks** block. This closes the problem.

NOTE: If the mandatory fields are not entered then an error message is shown asking you to enter the value in the fields.

You can reopen a problem from the closed state to open state. To do this, open the closed problem that you wish to reopen by clicking the edit button. Then change the status field from **Closed** to **Open** and save the changes. When a problem is opened from the closed state, you can change the **Due By time** of the problem. Also, the closed date is removed once the request is reopened. When this request is finally closed, the **completed date** is updated and the time taken to close is recalculated taking the reopened period into account.

To close more than one problem at a time:

1. In the **Problem** list page, select the problem from the list by enabling the check boxes available beside the **Problem Name.**
2. Now click the **Close** button.

To view the closed requests:

1. From the Problem list page, select **Closed Problems** from the Filter drop-down menu. This lists all the closed problems.
2. To view the closed problems which were assigned to you, select **My Closed Problems**.

Pick up Problems

ManageEngine ServiceDesk Plus provides an option to the technicians to self-pick up problem. If there are unassigned problems, the technicians can pick up any of the unassigned problems from the list. As the problems are picked up and answered quickly the waiting time to assign the problem to each technician and then closing the problem will be reduced. This in turn will increases the turnaround time and the efficiency of the IT help desk team.

To pick up problems,

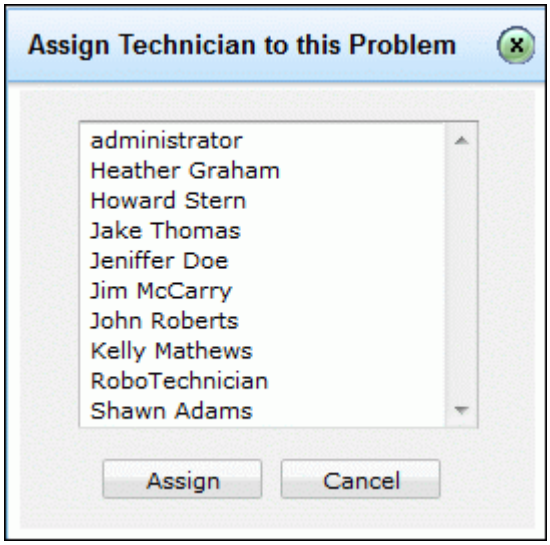
1. Log in to ServiceDesk Plus application using your **user name** and **password**.
2. Click the **Problems** tab in the header pane. The unassigned problems will be in bold font.
3. Select the problems you would like to pick up by enabling the check box. Click **Pick up** button. The selected problem will be assigned to you. (Or)
4. You can also pick up problems after viewing the problem details. Click the title of the problem to open **View Problem** page.
5. Click **Assign** tab. Select **Pick Up** option to pick up the problem.

Assign Technician to Problem

Each problem will be handled by a technician, who would be responsible for closing the problem.

To assign a technician to the problem,

1. Click the **Problem** tab in the header pane. This opens the **Problems** list page.
2. Click the **Title** of the problem for which you have to assign a technician. This opens the problem details page.
3. Click the **Actions** combo box on the right hand side of the page ->Click **Assign Technician** link from the list. This opens **Assign Technician to this Problem** pop up page as shown below. Select the technician from the list and **Assign** the problem to the technician.

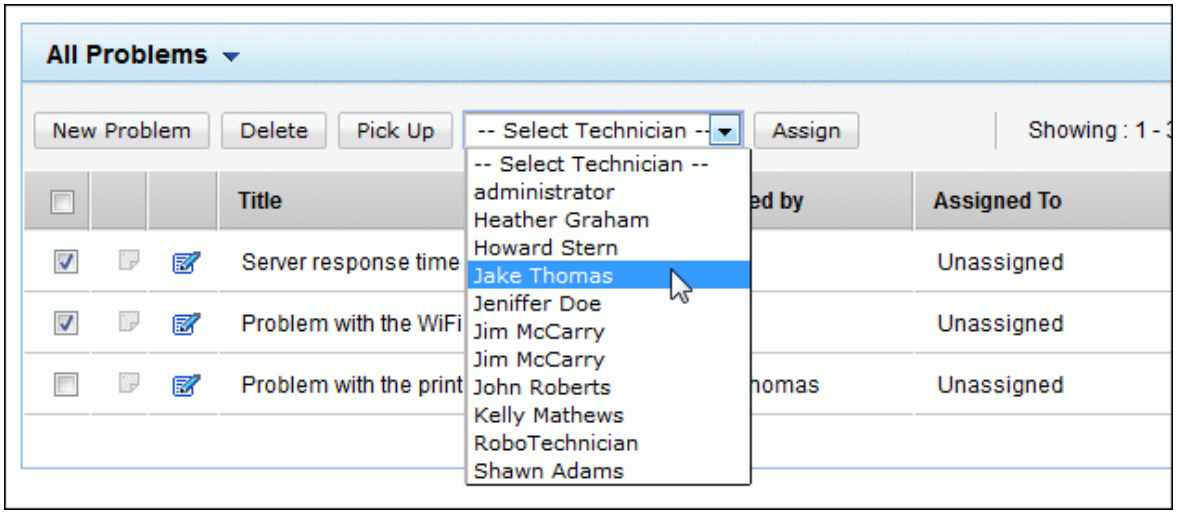


4. Alternatively, you can also assign technician using inline edit option. Click the technician name shown in the problem details block. This opens the drop down box as shown below. Select the technician from the list and click the icon to select the technician name else click cancel icon.

You can also assign more than one problem at a time to a technician.

To bulk assign problems to technicians

1. In the **Problems** list page, select the problems to be assigned a technician by enabling the check box beside left side each of the problem title.



2. Click the **Select Technician** check box. Select the technician from the drop down list.
3. **Assign** the technician**.**

Problem Analysis

The goal of Problem Management is to find the root cause of the incidents and reduce the impact on the business by providing solutions and workarounds. In the problem analysis the technicians analyze the root cause and impact of the problem and attach the same in SDP as part of the problem. Also they can specify the symptoms of the problem to identify the same problem in the future. The following are the steps to understanding the cause of the problem,

- Symptoms - Evidences helping in identifying the problem.
- Root Cause - Detecting the underlying cause of the incident.
- Impact - Adverse effect of the problem on the business.

To specify the Problem Analysis,

1. Log in to ServiceDesk Plus application using your user name and password.
2. Click the **Problems** tab -> click the title of the problem for which you need to specify the analysis. This opens the problem details page.
3. Click the **Analysis** tab.

Add **the Impact details**

1. Click the **Add** button. You can see the text area getting displayed for the impact details.
2. Specify the impact details in the text field and **Save** the changes. You can see the details getting displayed below the title. **(OR)**
3. If you like to attach a file on the impact details instead of entering the details in the text field then click **Attach File** button to attach a file for the impact details. The maximum size of the attachment should be 10MB.

Add **the Root Cause**

1. Click the **Add** button. You can see the text area getting displayed for the root cause.
2. Specify the root cause in the given text field and **Save** the changes. You can see the details getting displayed below the title. **(OR)**
3. If you like to attach a file on the root cause instead of entering it in the text field then click **Attach File** button to attach a file for the root cause. The maximum size of the attachment should be 10MB.

Add the **Symptoms**

1. Click the **Add** button. You can see the text area getting displayed for the symptoms.
2. Specify the symptoms in the given text field and **Save** the changes. You can see the details getting displayed below the title. **(OR)**
3. If you like to attach a file on the symptoms instead of entering it in the text field then click **Attach File** button to attach a file for the symptoms. The maximum size of the attachment should be 10MB.

Problem Solutions

Resolution for the problem can be given as Workarounds and Solutions in ServiceDesk Plus. Workarounds are temporary solutions that can be used by the technician till the actual solution is ready. Solutions are the permanent fixes to the problems raised. The problem is considered as a known error when a solution or work around is added to a problem.

To add resolution,

1. Log in to the ServiceDesk Plus application using your **user name** and **password**. This opens the ManageEngine ServiceDesk plus home page.
2. Click the **Problems** tab. This opens the problems list page.
3. Click the **Title** of the problem for which you like to view the reminder. This opens the problem details page.
4. Click the **Solution** tab.

To Add Workaround,

1. Click the **Add** button. You can see the text area getting displayed for the **Workaround** details. Specify the temporary solutions for the problem.
2. **Save** the details. You can see the details getting displayed.
3. Click **Attach File** button to attach a file for the impact details. The maximum size of the attachment should be 10MB.

To Add Solution

1. Click the **Add** button. You can see the text area getting displayed for the **Solution** details. Specify the permanent fixes to the problems.
2. **Save** the details. You can see the details getting displayed.
3. Click **Attach File** button to attach a file for the impact details. The maximum size of the attachment should be 10MB.

Add a Note

If you like to add additional information including technical information based on your observations to a particular problem, then you can **Add Notes** to that problem. You can also use notes to update the status of the problem.

To add a note to the problem,

1. Click the **Problems** tab in the header pane.
2. Click the **Title** of the problem to which you would like to add a note. This opens the problem details page.
3. Click the **Add New** combo box -> Select **Note** option. The Add Notes text pops up.
4. Enter your content in the text box. These notes are public.
5. Save the details. The note is added at the bottom of the problem along with a date and time stamp. The name of the person who added the note is also displayed.

You can add any number of notes to a problem. The added notes will be displayed in the ascending order. You can also edit or delete the notes that have been added.

Add a Task

Using this option you can assign different tasks to different technicians. Task is a sub-unit of an activity. If a problem involves multiple technicians work, then the technician whoever receives the problem (owner of the problem) can assign different tasks to different technicians.

To add a task,

1. Click the **Problems** tab in the header pane.
2. Click the **Title** of the problem to which you would like to add tasks.
3. Click the **Add New** menu -> select **Task** option. This opens the **Tasks** window.
4. You can either select the task template from **Select Template** drop down list or you can add a new task.
5. Specify the **Title** of the task in the given text field. This is a mandatory field.
6. Specify relevant information about the tasks in the **Description** field.
7. Select the **Scheduled Start Time** from the calendar button. Also select the **Scheduled End Time** for the task from the calendar button.
8. The **Actual Start Time** and **End Time** of the task will be entered by the technician doing (owning) the task.

   The actual start time and end time is the real time schedule of the task. The scheduled start time and end time specified by the problem owner is a tentative time schedule.

10. Select the **Group** to which the task needs to be assigned. Select the **Technician** of the task from the combo box. Tasks can be assigned either:

    - to a Group alone,
    - to a Group and corresponding technician from the group,
    - to a Technician alone,
    - to no Group and Technician.

11. Specify the **Status** of the task.
12. Specify any relevant comment about the task in the **Comments** field.
13. If you wish to be reminded of the task previously then select the **Email me before** option and select the number of days from the combo box. This option will be selected based on the scheduled start time.
14. **Save** the values. You can see a Tasks tab getting created next to the solution tab. All the tasks created for the problem will be listed under the tasks tab in descending order. The tasks assigned to other technicians can be viewed in their **Task summary list** in the home page.

Add bulk Task to a Problem

Certain problem may require more than one task involving different technicians. In this case, rather than adding tasks one by one, you can add bulk tasks to the problem from the task template.

1. From the problem details page, click the Task tab. The task details page opens.

2. Click **Add Task from Template** button. The Task Template window pops up listing all the active templates.
3. Select the check box beside the templates and click **Add Template** button. The tasks selected are added under Task Details.

Delete Tasks

1. From the tasks details page, select the check box beside the task you wish to delete.
2. Click the **Delete** button. A confirmation message appears.
3. Click **OK** to continue. The task is deleted from the list.

Add a Work Log

You can enter the technicians **time spent** details for the problem using this option. The total time spent will exclude the time that the problem was kept on hold. It takes the time of creation to till the problem was closed.

To add a Work Log,

1. Select the **Technician Name** from the combo box.
2. Specify the **Executed Time** (date & time) taken to resolve the problem from the calendar button.
3. The **Technician Cost per hour** will be fetched automatically from the technician details, which is a non-editable field. If you have already entered the per hour cost of the technician while adding the technician details, then the details will be fetched automatically. If you wish to change these values, you can do so manually.
4. The **Incident Cost** will be automatically calculated taking the (total time spent to resolve the problem * Technician's cost per hour).
5. If there are any extra charges specify in the **Other Charges** field.
6. Using the above two data the **Total Charges (Technician Charges + Other Charges)** will be displayed automatically.
7. Specify any relevant information about the time spent in the description field.
8. **Save** the details.

Delete Problem

You have an option to delete individual problems or group of problems together.

To delete a problem,

1. Click the **Problems** tab in the header pane.
2. Click the **Title** of the problem to be deleted in the problems list view page. This opens the **Problem Details** page.
3. Click the **Actions** combo box on the top right hand side of the page.
4. Click the **Delete** link from the list. A dialog pops up asking you to confirm on the delete process.
5. Click **OK** to proceed. You can see the problem deleted from the list.

To delete more than one problem at a time,

1. In the Problem list view page, select the problems to be deleted by enabling the check boxes.
2. Click the **Delete** button. A dialog pops up asking you to confirm on the delete process.
3. Click **OK** to proceed deleting Or click **Cancel** to abort deletion.

Associate Incidents to Problem

You have an option to associate Incidents to the problem. Similar Incidents to problem can be associated in order to track the number of incidents occurred for the same problem and also to track the priority and severity of the problem based on the number of incidents.

To Associate Incidents to a Problem,

1. Click the **Problems** tab. This opens the **Problem List View** page. Click the problem title to be associated with the Incidents. This opens the problem details page.
2. Click the **Actions** drop-down menu on the top right side of the page. Click **Associate Incidents** option. The **Associate Incidents to problem** window pops up.
3. Select the type of requests to be displayed by selecting from the **Show** combo box on the top left hand side of the page. Ex: Open Requests or All Requests and so on. On selecting the request type the corresponding requests gets listed.
4. Select the Incidents from the list by enabling the check box beside each incident.
5. Click **Associate Incidents** to associate respective requests to the problem (particular selected problem). The associated incidents gets listed in the Incidents tab in the problem details page.

Associate Changes to Problem

You have an option to associate Changes to the problem. Similar Changes to problem can be associated in order to track the number of changes occurred for the same problem.

To associate Changes to a problem,

1. Click the **Problems** tab. This opens the **Problem List View** page.
2. Click the problem **Title** to be associated with the Incidents. This opens the problem details page.
3. Click the **Actions** combo box on the top right side of the page. Click **Search Changes** option. This opens **Associate Problem to Changes** window pops up.
4. Select the type of change to be displayed by selecting from the **Filter Showing** combo box on the top left hand side of the page. Ex: Open Change or All Change and so on. On selecting the change type the corresponding changes gets listed.
5. Select the Changes from the list by enabling the check box beside each change.
6. Click **Associate** button to associate respective changes to the problem (particular selected problem).

Add a Reminder

You can add reminders to the problems using this option. All the pending tasks specific to the problem can be added as reminders. The technician can add these task list as a personal reminder to himself/herself. On adding these reminders they get displayed in **My Reminder(s)** under **Quick Actions**.

To add a reminder,

1. Click the **Problems** tab in the header pane. This opens the problems list page.
2. Click the **Title** of the problems from the list. This opens the problems details page.
3. Click on the **Add New** combo box on the top right side of the page. Click the **Reminder** link. This opens the Reminders page. Specify the content in the given text field.
4. Select the reminder **Date** and Time by invoking the calendar icon.
5. To be reminded of the task in advance, select the time from the **Email me before** combo box.
6. The problem id is shown in non editable mode.
7. Click **Add** button to add the reminder. You can see the reminder getting listed in the **My Reminder(s)** pop up window in ascending order.

View Reminders

You can view the reminders specific to each problem in this module.

To view reminders,

1. Click the **Problems** tab. This opens the problems list page.
2. Click the **Title** of the problem for which you like to view the reminder. This opens the problem details page.
3. Click the **Actions** combo box -> Click the **View Reminders** option. This opens the **Showing All Reminders** Page as shown below. This lists all the reminders in ascending order based on the date.
4. Once the task is completed you can change the state of the reminder from open to completed. To do this, select the **reminder** from the list to be closed by enabling the check box beside each of the reminder.
5. Select the **Change Reminder State To** Completed then -> click **Change** button to change the state. The reminder is stroked off to indicate the change.

   Alternatively, you can also view the reminders by, clicking **Quick Actions** link -> **My Reminder(s)** option under the Reminders block. This opens the **My Reminders** pop up window as shown below. This shows all your reminders irrespective any specific module.

You can also add new reminders by clicking **+Add New** link at the bottom of the my reminders form. The new task is added and is listed along with the already existing tasks in the ascending order based on date and time.

When you have completed the task, you can just strike out the task to indicate that it is completed by selecting the radio button beside the task summary.

You can also delete the task by clicking the delete icon beside the task.

Publish Announcements

ServiceDesk Plus gives you an option to publish announcements while fixing the problem without breaking the work flow. Say if you want to inform the company that, the mail server will be down for next five hours and your are fixing the problem then in this case you need not go to the home page to make an announcement you can publish the announcement from the problem module.

To publish an announcement,

1. In the Problem details page click the **Actions** combo box and select the **Make an announcement** option. This opens the **Add New** page.
2. The announcement **Title and Description** of the problem gets displayed automatically. This is a mandatory field. You can also modify the title and description of the problem.
3. Specify any relevant information about the announcement in the **Description** field. Also specify the result under the **Resolution** title.
4. Specify the date and time to **Show this announcement between these dates** from the calendar button. If this field is not entered the announcement will be displayed in the home tab for ever.
5. Select **Show to Requester** check box to make this announcement visible in the self-service portal.
6. To **Send this announcement as mail** select the check box.
7. **Save** the changes. You can see the announcement page as shown below. To view the next and previous announcement in the dash board click the **Next** and **Previous** buttons on the right side of the page.

You can also edit and delete the announcement in the same page.

To edit the announcement,

1. Click **Edit** button. This opens the Edit Announcement form.
2. Change the details of the announcement in form.
3. **Save** the changes. All the changes made in the announcement will be saved.

To delete an announcement,

1. To delete the announcement click **Delete** button. A dialog pops up asking you confirm on the delete operation.
2. Click **OK** to delete. Or click **Cancel** to retain the announcement.

Alternatively you can also publish announcements company wide or just to the technicians group from the **Home page.** The announcements are displayed just below the my view requests tab in the home page.

All recent announcements will be displayed first based on the date. To view all the announcements (even completed ones), click the **Show All** button on the right side of the page. You can also add new announcements from the home page.

Send Notifications

To send notifications specific to the problem to the CAB members, technicians or to any concerned person then,

1. Click the **Problems** tab in the header pane. This opens the problem list view page.
2. Click the title of the problem to which the notification has to be sent. This opens the problem details page.
3. Click the **Actions** combo box and select the **Send Notification** link. This opens the **Send Notification** page.
4. Specify the **To** and **CC** address in the given text field.
5. Specify the **Subject** of the notification in the given text field.
6. Specify relevant information about the notification in the **Description** field.
7. **Send** the notification.

Print the Problem

To print a problem,

1. Log in to the ServiceDesk Plus application using your user name and password.
2. Click the Problems tab in the header pane.
3. Click the **Title** of the problem you would like to print.
4. Click the **Print Preview** link on the right side **Tasks** block. The print preview page of the problem opens in a pop-up window.

   In the print preview page you can view the Impact Analysis, Root Cause, Symptoms, Workaround, Solution, Problem Details Notes and their attachments.

5. Click the **Print** menu item from the browser **File** menu.
6. The default printer associated with your workstation is invoked. Set the required options and click **OK**. You can collect the printed copy of the problem at the printer that is linked to your workstation.

Changes

Change Management

Changes arise as a result of problems. But, a lot of changes can come from pro-actively seeking business benefits such as reducing costs or improving services. The goal of Change Management is to ensure that standardized methods and procedures are used for efficient, and prompt handling of all changes, in order to minimize the impact of change-related incidents upon service quality and consequently to improve the day-to-day operations of the organization.

The change is initiated by creating a change request, entering values in the defined additional fields, selecting the time duration and assigning the change to a technician.

Change has 6 stages, all of which go through several status(es) before reaching completion.

Features:

- A Six-Stage Change Life Cycle
- Workflow configuration for each and every change stage
- Change Templates for designing the change as per your requirements
- Change Progress Indicator indicating stage-to-stage progress of change
- Emergency Workflow for changes with pressing urgency or deadlines
- Well-planned Change Role System

Change can be:

- A solution to long persisting incidents/problems
- Proactive measure against future incidents/problems

Change Stages – Overview

Stage	Purpose	Stage Status Involved	Expected Stage Status Workflow
Submission	Deciding Change's properties like Change Workflow, Change Type, Risk Involved, Priority, Urgency etc.,	Requested Requested for Info Submitted for Authorization Accepted/Rejected	Requested → Submitted for Authorization → [Requested for Info] → Accepted/Rejected **Authority Directly Involved**: Change Requester and Line Manager
Planning	Analyzing and Working Out: Change Impact, Roll Out Plan, Backout Plan, Checklist and Downtime concerned with the Change	Planning In Progress Requested for Info Approved/Rejected Submit for Review	Planning In Progress → Submit for Review → [Requested for Information] → Approved/Rejected **Authority Directly Involved:** Change Planning Team and Change Owner
Approval	Convening CAB(s) (Change Advisory Board) to assess change plans and get their approval for change implementation.	Approval Pending Approved/Rejected	Approval Pending→Approved (or) Rejected **Authority Directly Involved:** Change Advisory Board and Change Manager
Implementation	Materializing the Change through Projects and Tasks,	In Progress Requested for Information Onhold/Backout Completed	In Progress → [Requested for Info] → [Onhold] → Completed [Back Out] **Authority Directly Involved:** Change Implementation Team and Change Owner
Review	Reviewing Change and deciding whether it can be released or not	In Progress Completed (or) Failed	In Progress → Completed/Failed **Authority Directly Involved:** Change Review Team
Closing	Formal closing of Change by associating it with a suitable closure code that represents how the change was closed.	In Progress Completed Cancelled	In Progress → Completed/Cancelled (depending on how the Change is closed) **Authority Directly Involved:** Change Manager and Change Requester

Submission

Change Submission involves thorough assessment of the proposed change and its various attributes - like its Impact, Risk involved, Urgency, Priority etc. – based on which the **methodology needed for deploying the change (workflow and template)** will be worked out.

First step in Change Submission is **creating a Change Request** using **New Change form.**

But before accessing the change form, you have to plan the following:

- Decide what your Change will be: general (or) retrospective (or) emergency
- Decide Change Template (see: Configuring Change Template for more info)
- Decide Change Workflow (see: Configuring Change Workflow for more info)

Then, create the change request, by filling out the change form.

New/General Change:

Changes are of two types: new and retrospective. New change(s) are implemented when organizations demand for an unexpected change in the environment which hasn't been dealt with previously. In this case, the procedure for handling the change is not known and therefore has to be worked out from scratch. Example: keeping IT organizations updated based on the technology changes (occurring in the industry) whose pattern cannot be predicted easily.

Retrospective Change:

Changes which have been already implemented based on need/urgency by getting approvals through voice calls, mails etc. are known as retrospective changes. These changes will be recorded for tracking purpose..

Emergency Change:

For scenarios that demand the change to be implemented immediately without any delay, Emergency Change will suit them better. With a change workflow that skips the basic preliminaries (submission and planning), Emergency Change ensures change(s) get implemented immediately to meet the pressing deadline.

Create New Change

The new change form can be accessed in two ways in ServiceDesk Plus application using,

a. Quick Actions drop down (Quick Actions → Create New → Change)

b. Changes tab of Header Pane

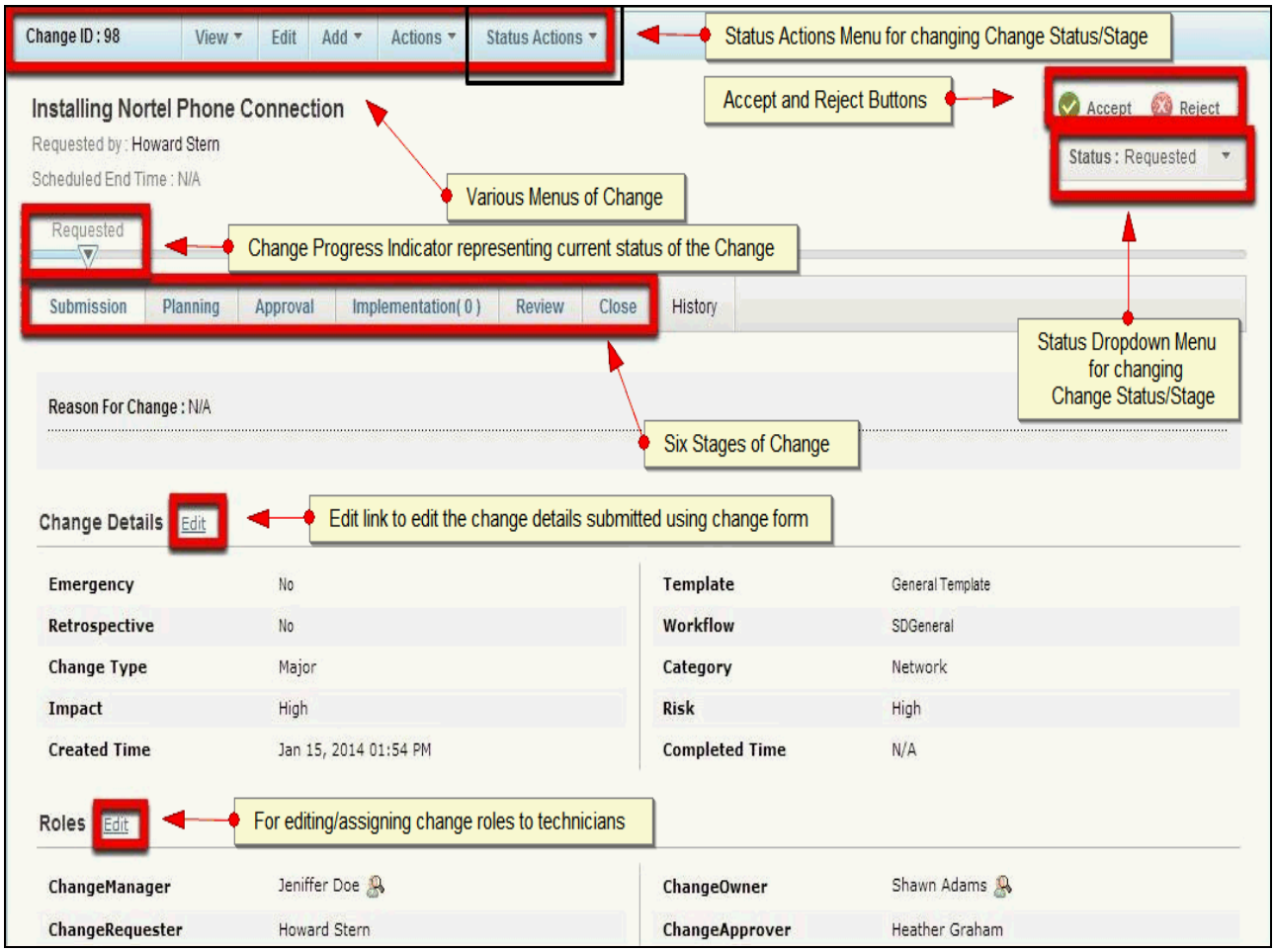
Changes tab

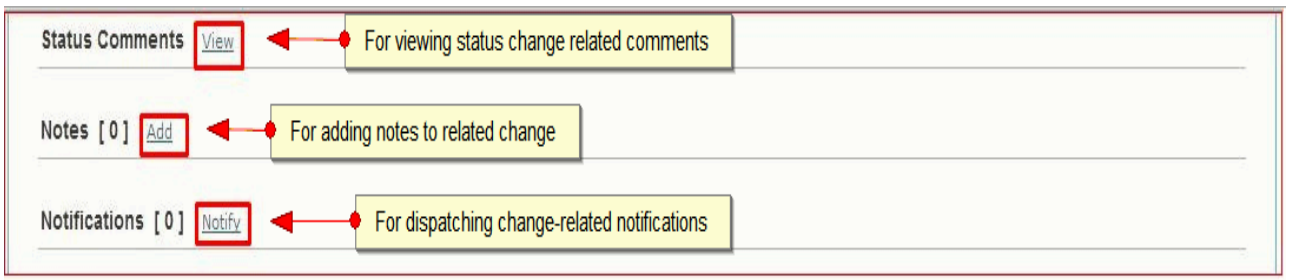
1. Select **Changes tab** from the header pane and click on New Change button.
2. **Change Template** and **Change Workflow** will be selected by default (see setting Change Template as default) which can be changed as per your requirements by clicking on the respective dropdowns.
3. In case the change has been implemented already, **mark it as retrospective** by selecting the respective checkbox
4. In case it is an emergency change, **mark it as emergency** using emergency checkbox and choose the corresponding template and workflow (exclusively designed for Emergency Changes) from the available list.
5. Select **Change Requester** from the available list by clicking icon and selecting the requester by clicking on his/her respective name.
6. Select **Change Owner** from the drop-down (all technicians available in the application will be displayed).
7. Select **Change Manager** from the drop-down (only technicians with SDChangeManager role will be displayed).
8. Set the **Change Stage** (Submission for general change and Approval for emergency change, by default)
9. Specify **Risk** Involved (High, Low & Medium by default)
10. Specify **Scheduled Start Date** by clicking Calendar Icon.
11. Specify **Services Affected** due to the change by clicking on icon.
12. Specify **Change Type** (Major, Minor, Significant & Standard, by default)If you have any file attachments for the change click the **Attach File** button and attach files. Maximum size of an attached file can be 10MB.
13. Categorize change using **Category** dropdown
14. Specify **Change Impact** (High, Low & Medium, by default)
15. Set **Change Status** (Requested for general change and Approval Pending for emergency change, by default)
16. Specify **Status Comments** (Reason for set status; will read 'The above stage/status is set as part of 'Change' creation' by default)

17. Specify **Scheduled End Date** by clicking Calendar Icon)
18. Specify the **Assets Involved** by clicking on icon
19. Specify **Title for the Change** (mandatory field)
20. Specify **Reason for Change** by selecting it from the drop down
21. Provide a **suitable description** for the change
22. Append attachments to the Change (if any) using **Attach File** button
23. Save the Change

NOTE	**Please Note:** Normally Change will be initiated in Submission stage and reaches completion in change closing stage. But the Emergency Change (by default) has been designed such that it begins at Approval (stage) skipping the initial stages, Submission and Planning but can be changed as per your requirement.

Screenshot View of Submitted Change





Editing and Viewing Change Details

Change technicians with Edit and View permissions (see: configuring Change Roles) of Submission stage can reassess the submitted change details and modify it if required.

Note: All Change Roles – except for change requester, owner and manager - can be assigned only in this part of Submission stage and not during change form creation.

Change can be edited (by the concerned change technicians) in the following manner:

- To **edit details of the change form**, click Edit link besides **Change Details section** (under change submission stage)
- **To edit the assigned change template and change workflow**, click **Edit button** of Action Menu bar (available above change stages)
- To **edit/assign change roles**, click Edit link besides Roles section (under change submission stage). To know more about assigning/editing Change Roles, see: Assigning Change Roles

Editing Change Details

1. Click **Edit link** besides **Change Details** section. The Change Details section will change to editable mode
2. **Edit Change Details** as per the requirements
3. Click **Save** to save the details (or) Click **Reset** in case you want to retain previously configured values and start editing again (or) Click **Cancel** to cancel editing

Editing Change Template and Change Workflow

1. Click **Edit button** of **Actions Menu bar** (available above change stages)**Edit Change Details** as per the requirements. Change form will turn to editable mode
2. Reset **Change template** and **Change workflow** as per the requirement Change form will turn to editable mode
3. Mark it as '**Emergency**' or '**Retrospective**' if needed
4. **Save** the Change

Viewing Change Details

Change details can be viewed in two ways: **Stage-wise & Status-wise**

1. **Stage-wise:** To view change details stage-wise, all the change technician has to do is click on the respective stage**Edit Change Details** as per the requirements
2. **Viewing Status History:** Use View menu (available in Action Menu bar) Click View --> select Status History.
3. Technicians can also view following details using **View menu**: **Change Workflow**, **Reminders** and **Approval Summary** concerned with the change

Assigning Change Roles

1. Click **title of the change** for which change roles are to be assigned to the concerned change staff
2. Click **Submission tab** and Scroll down to the **Roles section** --> and click **Edit link** (under submission stage)
3. Roles section will change to **editable** mode
4. To **select technicians** for a specific role, click icon and **select technician** from the available list and --> click **Add** button
5. **Repeat the process** to assign various **change roles** to the concerned technicians
6. Save it

Adding Notes

Change technicians can add notes for their reference and the reference of other technicians involved using Notes option.

Notes can be added in two ways:

- Using **Notes** option within **Submission** stage (scroll down to **Notes** Section --> click **Add** --> enter note --> Save it)
- Using **Add** menu (available above Change Stages) (click **Add** menu --> select **Note** option --> enter note --> Save it)

NOTE	**Please Note:** Notes section within submission stage is primarily for change technician's (working in submission stage) use; other technicians can use Add menu to add notes.

Stage-Status Involved

What is Stage-Status?

Every Change Stage involves certain number of status(es) amongst which a Change toggles with the help of **Status Drop-Down** (or) **Status Actions Menu** before reaching completion.

For example, let say, a change has been initiated but the change technicians are unable to work on it, as information provided by the change requester is insufficient; under such circumstance, change technicians can switch the change status to **Requested for Information (RFI)** and wait till the change requester provides them with the concerned information, before proceeding with the change.

Here **Requested for Information** is a **status** of the stage **Submission.**

Note: Any number of (change) status(es) can be available for a particular change stage. (see: configuring change status)**.**

Stage-Status can be **accessed** in two ways:

- Using **Status dropdown (**within **Change Pane)**
- Using **Status Actions dropdown** (available in **Status Actions Menu bar**)

Stage-Status for Submission Stage (available by default)

Status	Purpose
Requested	Indicates Change has been requested
Accepted	Indicates Change has been accepted by concerned authority
Rejected	Indicates Change has been rejected by concerned authority
RFI (Request for Information)	Indicates Change Staff is seeking more info on the proposed change
Submit for Authorization	Indicates Change has been submitted for higher authority approval

NOTE	**Please Note:** Status(es) responsible for moving change from existing stage to a succeeding/preceding stage (Accepted/Rejected, in this case) depending on the change workflow cannot be deleted, but can be renamed as per your requirement

Technician's Role in Submission Stage

Change technicians who has been given permission to work (edit only) only on Change Submission stage,

Can:

- **Edit change details** (if required) after assessing the submitted details
- **Assign change roles** to change technicians (by clicking on edit link)
- **Add notes** to the change
- **Add reminders** (using Add menu)
- **Publish change related announcements** (using Actions menu)
- Send **change-related notifications**

Cannot:

- Edit the assigned **change template** and **workflow**
- **Approve/Reject the Change** and therefore cannot move the Change from submission to planning stage

NOTE	**Please Note:** Only change technicians provided with **SDChangeManager role** will have permission to edit/reassign the configured **change template and workflow** (by clicking on the edit button available in the **Action Menu bar)**

Change Progress

Moving Change from Submission Stage to Planning Stage:

When change has been assessed thoroughly and (change) roles have been assigned, it will be moved (after receiving higher authority approval) to the next stage, which is change planning**.**

To move change to next stage:

1. Click **Status Drop-Down** (available within **change pane**)
2. Click **Status Actions Drop-Down** (available in **Action Menu bar**)
3. Choose **Status Accepted** and specify comments for status change
4. Click Save

Please Remember: Status Accepted can be **changed** to some other name (like finished, stage over etc.,) - see configuring change roles - but **cannot be deleted**

NOTE: Permission to move change from stage to stage will be provided only to higher authority like Line Manager (only for submission stage), Change Manager, Change Approver, Change Owner etc.

Planning

All design work concerned with implementing the change like drafting change plan, analyzing its impact, preparing a fallback plan (to be used in case of implementation failure), working out a to-do list, and planning the downtime (outages) are done in this stage:

Change Planning is **split into two sections**

- **Analysis** – where Change is analyzed and various plans are worked out
- **Problems/Incidents** - where Change can be associated with already raised problems/incidents

Change Analysis

Impact Analysis

Under this section technicians record the impact (both positives & negatives) change will have before and after implementation. Thorough analysis of the change by technicians in this phase will ensure there is no room for any assumptions

Rollout Plan

Change can be implemented in phased manner or could be brought out wholly using a single change or a series of changes. This methodology that will be followed while releasing change will be recorded under rollout plan section.

Backout Plan

Contingency plan to be implemented in case change technicians decide to back out of the change will be recorded/planned under the backout plan section. The detailed procedure on how to backout by restoring the original state is described here

Checklist

A to-do list listing the essential steps to be completed in order to verify whether the change implementation is completed with all requirements fullfilled.

These analyses (Impact, Rollout, Backout & Checklist) can be either added manually or attaching ready planned documents.

Appending Attachments:

1. Click Add link under the respective section
2. Enter the details /Attach the details
3. Save them

Downtime Scheduling

Downtime Scheduling is an integral part of Change Implementation process and therefore the change planning section allows technicians to plan in advance the downtime scheduling to be followed during the Change Implementation process.

Scheduling Downtime

1. Click **Add link** under **Downtime Scheduling** section
2. Provide a suitable description providing the **asset details**, reason for downtime etc.
3. Using **Calendar Icon** , select **Start and End time**
4. **Multiple Downtimes** too can be added **consecutively** using **Add Downtime** button
5. **Click Save**

NOTE	**Please Note:** Add Downtime button appears besides End Time Calendar Icon; you also have Delete Downtime button to delete downtime entries

Editing Downtime

1. Click Edit Icon appearing **on-hover** the Downtime Schedule
2. **Edit** the details
3. Click **Update** Button

Deleting Downtime

1. Click **Delete Icon** appearing on-hover the Downtime Schedule
2. **Confirm Deletion** when prompted
3. Downtime will be **deleted**

Associating Problems/Incidents to Change

Problems/Incidents which caused the change as well as future problems/incidents which can be addressed by the change can be associated to it under this section.

Associating Problems with Change

1. Select **Problems/Incidents** tab
2. Click **Attach button** under **Problems List** section
3. **Choose Problems to be associated** with the Change
4. Click **Associate Problems** button

Associating Incidents with Change

1. Select **Problems/Incidents** tab
2. Click **Attach button** under **Requests List** section
3. Choose **Incidents to be associated** with the Change
4. Click **Associate Incidents** button

NOTE	
	1 Associated incidents/problems can be disassociated using **Detach Request(s) (or) Detach Problem(s) buttons** respectively 2 Both types of requests (**requests** which were the **cause for the change** and **requests** which will be **caused due the change**) can be associated with the change

Stage-Status Involved

Stage-Status for Planning Stage (available by default)

Status	Purpose
Planning In Progress	Indicates planning is in progress
Requested for Information (RFI)	Indicates technicians are seeking more info on the change
Submit for Review	Indicates Change has been submitted to higher authority for Review
Approved	Indicates Change Plan has been approved
Rejected	Indicates Change Plan has been rejected

NOTE	
	Status(es) responsible for moving change from existing stage to a succeeding/preceding stage (Approved/Rejected, in this case) depending on the change workflow cannot be deleted, but can be renamed as per your requirement

Technician's Role in Planning Stage

Change technicians who has been given permission to work (edit only) only on Change Planning stage,

Can:

- **Associate problems/incidents** to the change
- **Add notes** to the change (using Add menu)
- **Add reminders** (using Add menu)
- **Publish change related announcements** (using **Actions** menu)
- Send **change-related notifications** (using **Actions** menu)

Cannot:

- Edit the assigned **change template** and **workflow**
- **Approve/Reject the Change** and therefore cannot move the Change from planning to implementation stage

NOTE	
	1 Only change technicians provided with **SDChangeManager role** will have permission to edit/reassign the configured **change template and workflow** (by clicking on the edit button available in the **Action Menu bar**) 2 Permission to move change from stage to stage will be provided only to higher authority like Change Manager, Change Approver, Change Owner etc.,

Change Progress

Moving Change from Planning Stage to Implementation Stage:

When change has been assessed thoroughly and (change) roles have been assigned, it will be moved (after receiving higher authority approval) to the next stage, which is change planning**.**

To move change to next stage:

1. Click **Status Drop-Down** (available within change pane)
2. Click **Status Actions Drop-Down** (available in Action Menu bar)
3. Choose **Status Approved** and specify comments for status change
4. Click **Save**

Please Remember: Status Approved can be changed to some other name (like finished, stage over etc.,) - see configuring change roles - but cannot be deleted

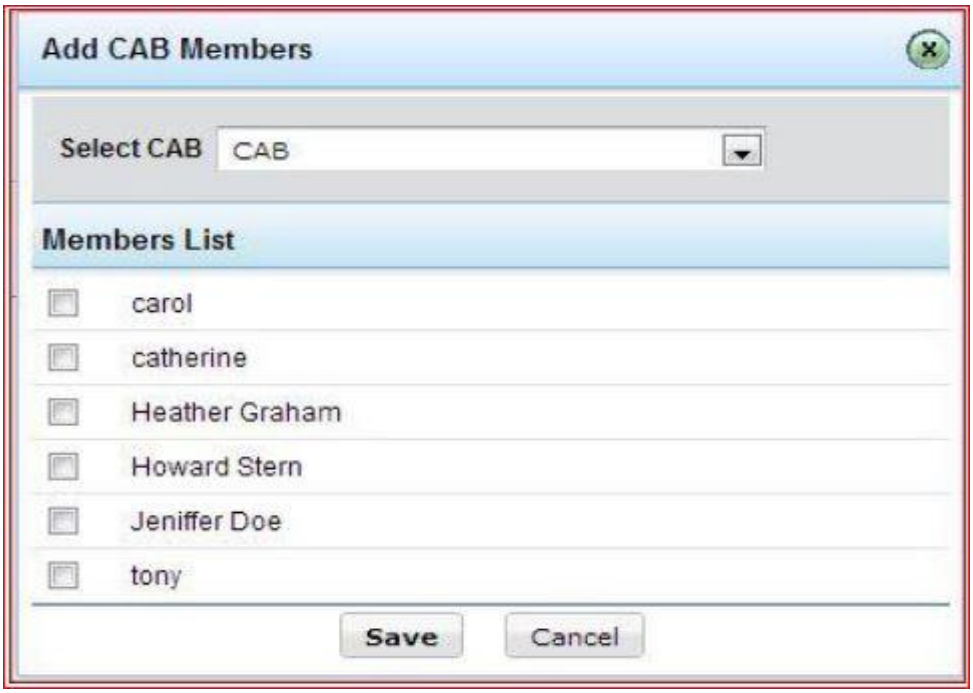
Approval

Change Advisory Board (CAB) is formulated and exposed to the change. Their job is to scrutinize the drafted change plan and provide advice as to whether it is ready to be implemented or not, based on which further actions will be taken. CAB voices its opinion about the change after CAB meetings which all CAB members will attend.

Please Remember: Change Manager's decision will be final here in this Approval stage.

Adding CAB Members

1. Click **Add CAB Member** button
2. **Add CAB Members** dialog box opens up
3. **Select CAB** from drop down (CABs should have been already configured for them to be available under Admin Section, see: configuring CABs)
4. **Members** belonging to the selected CAB will get listed
5. Click **Save** to add them



NOTE	
	• Make sure e-mail ids are configured for all CAB Members

Send for Recommendation

Notifications seeking CAB's opinion about the change-to-be-implemented can be dispatched using Send for Recommendation button (available under Change Approval stage/tab).

1. Select **CAB Members**
2. Click **Send for Recommendation** button
3. **Submit Change for Approval** dialog box will open
4. Provide suitable **Subject & Description** for the notification
5. Click **Send**

NOTE	
	• A non-login url will be available for each CAB, using which they can recommend/reject the change without logging into ServiceDesk Plus.

Stage-Status Involved

Stage-Status for Approval Stage (available by default)

Status	Purpose
Approval Pending	Indicates planning is in progress
Approved	Indicates technicians are seeking more info on the change
Rejected	Indicates Change has been submitted to higher authority for Review

NOTE	
	• Status(es) responsible for moving change from existing stage to a succeeding/preceding stage (Approved/Rejected, in this case) depending on the change workflow cannot be deleted, but can be renamed as per your requirement

CAB(s) Role in Approval Stage

CAB members involved in the Change Approval Stage,

Can:

- **Recommend (or) Reject a Change** using the respective buttons (available under Approval Stage)

Cannot:

- **Approve/Reject Change** (that is, cannot move change from one stage to another)

NOTE	
	• Permission to move change from stage to stage will be provided only to higher authority like Change Manager, Change Approver etc.,

Change Progress

Moving Change from Approval Stage to Implementation Stage

To move change from approval stage to next stage:

1. Click **Status Drop-Down** (available within change pane)
2. Click **Status Actions Drop-Down** (available in Action Menu bar)
3. Choose **Status Approved** and specify comments for status change
4. Click **Save**

Please Remember: Status Approved/Rejected can be **changed** (edited) to some other name (like finished, stage over etc.,) - see configuring change roles - but cannot be **deleted**.

NOTE	
	Change Manager (or) Change Approver will have the rights to **approve (or) reject** the change after examining the CAB recommendations

Implementation

Change is finally materialized through **projects** and tasks and is **assigned to various technicians** in this stage by higher change authority.

Note: Although a change can have **multiple projects, only one can be associated** to it at a given time.

Associating Projects to Change

1. Click **Associate a Project link** (under Change Implementation stage)
2. **Associate Change to Project pop-up** will open up
3. Click **New Project** button
4. **New Project form** will open up
5. Specify **Project Details** (see: creating project)
6. **Save** the Project

Associating Change to an Existing Project

1. Click **Associate a Project link** (under Change Implementation stage)
2. **Associate Change to Project pop-up** will open up
3. **Select Project** to be Associated
4. Click **Associate**

Editing Downtime as per requirements

Downtime Schedule configured in change planning stage will be available under change implementation stage as well, so that the project/task scheduling can be done based on the configured downtime. Apart from this, due to some unanticipated reasons, if there arises a need to reconfigure downtime, the same can be done from change implementation stage. That is, the configured downtime can be edited from change implementation stage, if required.

1. Click the configured **Start Time (or) End Time** Date links
2. Select **Calendar icon** and **reschedule** date & time
3. Click on hover **tick mark** to save it

Note: Asset details or any description added cannot be edited here in this stage.

Stage-Status Involved

Stage-Status for Implementation Stage (available by default)

Status	Purpose
In Progress	Indicates Change Implementation is in progress
Back Out	Indicates Change Implementation has been cancelled
Completed	Indicates Change Implementation has been completed successfully
On Hold	Indicates Change Implementation Stage has been put On Hold
Requested for Information	Indicates Technicians have Requested for Information

NOTE	Status(es) responsible for moving change from existing stage to a succeeding/preceding stage (Approved/Rejected, in this case) depending on the change workflow cannot be deleted, but can be renamed as per your requirement.

Technician's Role in Implementation Stage

Change technicians who has been given permission to work (edit only) only on Change Implementation stage,

Can:

- **Add Tasks** individually (or) in groups
- **Add Worklog details** for technicians
- **Reconfigure downtime** scheduling (if required)
- **Organize Tasks**/Establish **Task Dependencies**
- **Trigger** Tasks

Cannot:

- **Edit the change details**, change template or change workflow
- **Move Change** from implementation stage to next stage

Change Progress

Moving Change from Implementation Stage to Next Stage

1. Click **Status Drop-Down** (available within change pane)
2. Click **Status Actions Drop-Down** (available in Action Menu bar)
3. Choose **Status Approved** and specify comments for status change
4. Click **Save**

Please Remember: Status Completed can be changed (edited) to some other name (like finished, stage over etc.,) - see configuring change roles - but cannot be deleted.

NOTE	Permission to move change from stage to stage will be provided only to higher authority like Change Manager, Change Approver etc.,

Review

Change Implementation is followed by Change Review during which the Review Committee reviews the change and ensures that it is ready for release.

Adding Review

1. Click **Add link** (under Change Review tab)
2. **Add Review Section** opens up
3. Enter the Review
4. Add Attachments (if any) using **Attach a file** link
5. **Schedule date** for next review (see: scheduling next review)
6. Click **Save**

Editing Review

1. Click **Edit link** (under Change Review tab)
2. Edit the Review
3. **Reschedule date** for the next schedule (if required)
4. **Add Attachments** (if any) using Attach a file link
5. Click **Save**

Scheduling Next Review

1. Click **Calendar Icon** besides **Next Review Schedule** option (available below **review section**)
2. **Select date** for the next schedule
3. **Specify/Schedule** time for the review
4. **Save it**

Stage-Status Involved

Stage-Status for Review Stage (available by default)

Status	Purpose
In Progress	Indicates Review is in progress
Completed	Indicates review committee has completed reviewing the change
Failed	Indicates change review was unsuccessful

NOTE	Status(es) responsible for moving change from existing stage to a succeeding/preceding stage (Approved/Rejected, in this case) depending on the change workflow cannot be deleted, but can be renamed as per your requirement

Change Reviewer's Role

Reviewers involved in the Change Review Stage,

Can:

- Review the Change
- Append Change Review related attachments
- Move Change from **review stage to next stage**

Cannot:

- Edit the **change details**, **change template** or **change workflow**

NOTE	Permission to move change from stage to stage will be provided only to higher authority like Change Manager, Change Approver etc.,

Change Progress

Moving Change from Review Stage to Next Stage

1. Click **Status Drop-Down** (available within change pane)
2. Click **Status Actions Drop-Down** (available in Action Menu bar)
3. Choose **Status Completed** and specify comments for status change
4. Click **Save**

Please Remember: Status Completed can be **changed** (edited) to some other name (like finished, stage over etc.,) - see configuring change roles - but **cannot be deleted.**

Closing

Change Closing Stage allows technicians to formally close a change by adding a closure code to it. Change Closure Codes represent how the change was closed: whether it was after successful completion or rejection, or after getting the concerned approval, and so on.

Stage-Status Involved

Stage-Status for Closing Stage (available by default)

Status	Purpose
In Progress	Indicates Closing is in progress
Completed	Indicates review committee has completed reviewing the change
Failed	Indicates change review was unsuccessful

Associating Closure Code

In the Closure Code popup (that opens up when status closed or canceled is selected) specify the following to formally close the change by associating it with a closure code:

1. Select **Closure Code** from Closure Code dropdown
2. Options available by default (under Closure Code dropdown)
3. **Specify comments** for selecting the closure code
4. **Scan Assets Involved** to ensure Changes done to reflect in Asset DB has been successfully implemented (by checking Trigger Asset Scanning Process)
5. **Save** it

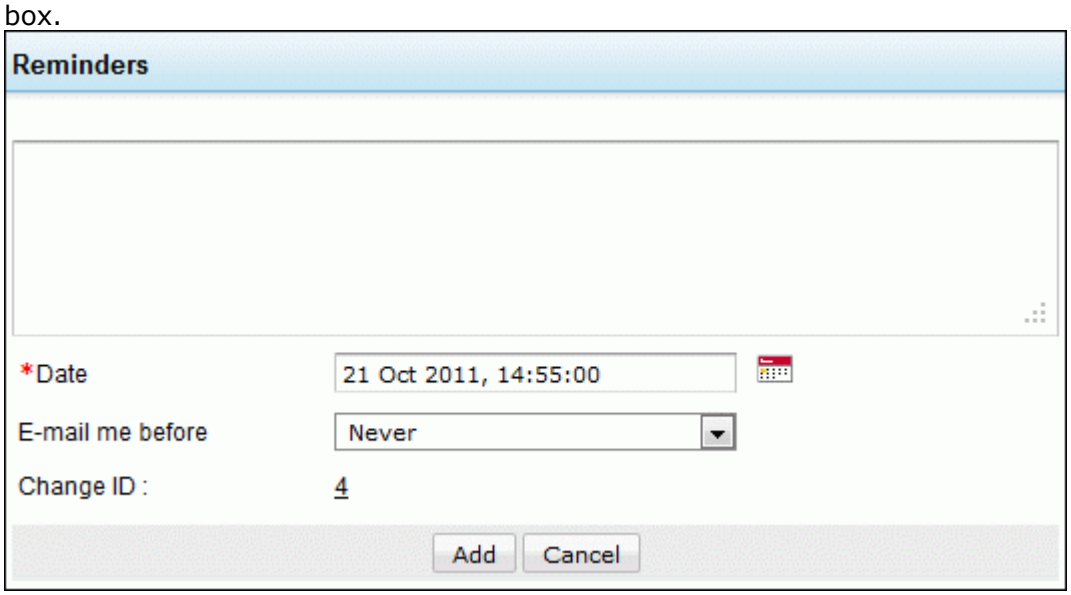
NOTE	Approval Summary (available under View menu above change stages) will also be available in the closing stage, displaying a complete decision summary of whole workflow based on **who approved which stage and at what time.** Closure Code can be edited (if required) by clicking on **edit link** that appears beside an **already added Closure Code.**

Adding Reminders to Change

Technicians can set up personal reminders concerning the change in which they are currently involved, using Reminders option under Add menu (available in Action Menu bar), so that they do not miss out on important events associated with the change.On adding these reminders they get displayed in My Reminder(s) under Quick Actions.

To add a reminder,

1. Click **Add New** menu (available in **Actions Menu** bar) and select **Reminder** option. This pops up the Reminders window. Specify a suitable summary for your reminder.
2. Select the reminder **Date** and **Time** by using the **calendar** icon.
3. To be reminded of the task in advance, set the time using the **Email me before** combo box.



4. The **change ID** will be shown in non-editable mode.
5. Click **Add** button to add the reminder. You can see the reminder getting listed in the **My Reminder(s)** under **Quick Actions** dropdown

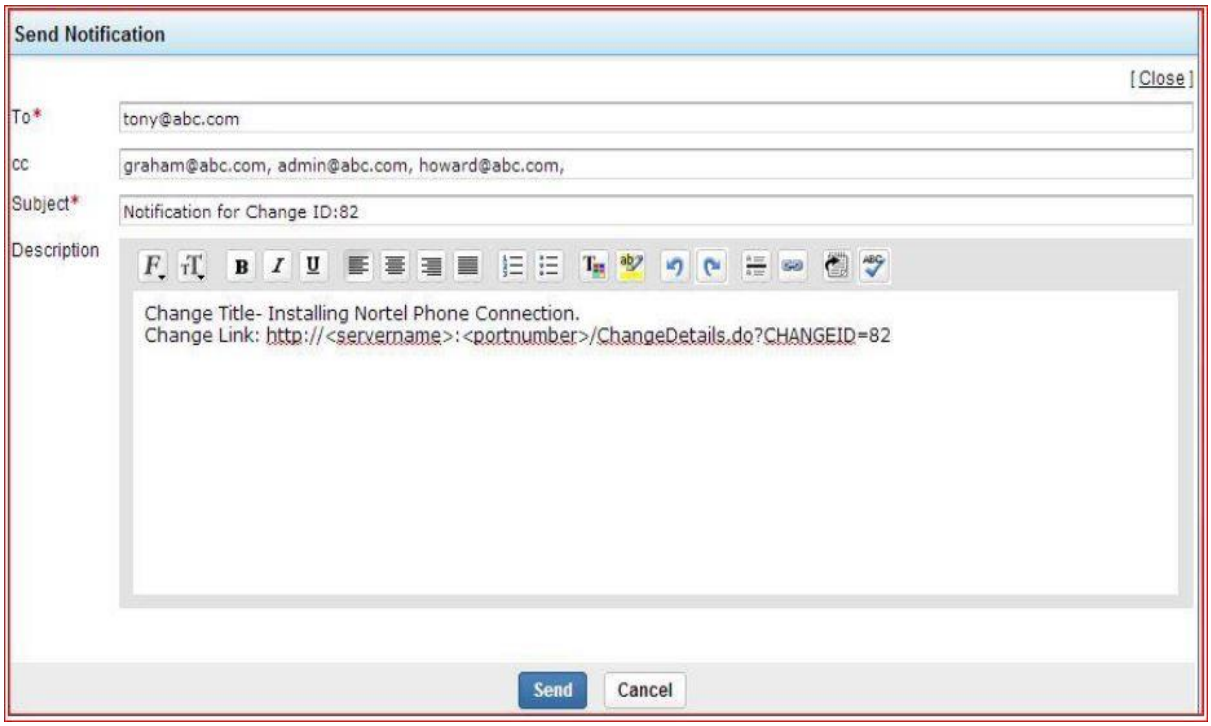
Sending Change-related Notifications

Technicians can dispatch change-related notifications in two ways:

- Using **Actions Menu** (**Actions** --> **Send Notifications**) Select the reminder Date and Time by using the calendar icon.
- Using **Notify link** (under **Change Submission** stage)

To send change-related notifications, fill the following in the Send Notification popup

1. Specify **recipients of the Notifications** in the To/CC fields respectively
2. Specify the **Subject of the notification** in the given text field
3. Specify relevant information about the notification in the **Description** field.
4. Click **Send**



Publish Announcements

Announcements help technicians publish important information regarding the change. This information can also be displayed to the users. For example, let's say, downtime has been scheduled for a given Change, and you want it displayed to the technicians and users involved, then this can be done using announcements.

To make an announcement,

1. Click **Actions** drop down --> select **Make an announcement** option. This opens the **Announcements** pop-up.
2. Specify a title for the announcement in the **Announcement Title** text field. This is a mandatory field.
3. Specify the detailed description about the announcement in the **Announcement Content.**
4. Specify the date and time to **Show this announcement between these dates** from the calendar button. If this field is not entered the announcement will be displayed in the home tab for ever
5. Select **Show to Requester** check box to make this announcement visible in the self-service portal
6. Select the check box to **Send this announcement as mail**
7. **Save** the changes

NOTE	To view announcements, go to **Announcements** section under **Home** tab, and click on the respective announcement.

Viewing Stage-Status Comments

When technicians move Change from one status to another (eg: from requested to submitted for authorization status) within a change stage, or from one stage to another, they will be prompted to enter comments, stating reason for the status change. These comments are known as Status Comments and they can be viewed from Status Comments section available under each and every change stage.

To view status comments,

1. Scroll down to **Status Comments** section.
2. Click **View** link

NOTE	Both **Status History and Status Comments** indicate/keep track of Change Status/Stage movement.

Printing the Change

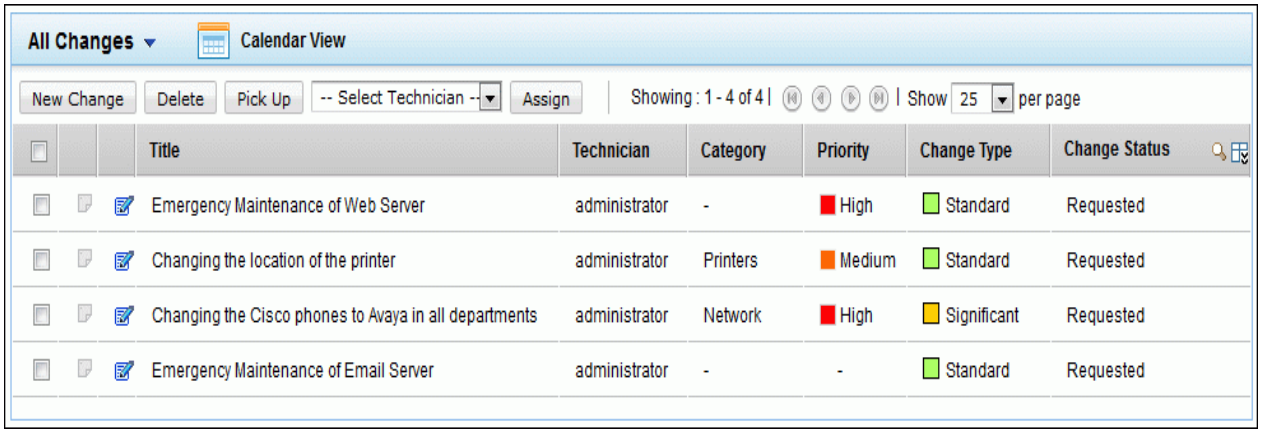
1. From change list view, click the **Title of the change** you would like to print
2. Select **Actions** menu --> click **Print**
3. The **print preview page of the change** opens up displaying the change details.
4. The **default printer** associated with your workstation will be invoked. Select Actions menu --> click Print
5. Set the required options **and click OK.**

Change List View

From Change List View you can,

- View Changes based on **default filters**
- Have **Different Views** of the available Changes
- **Customize the columns** in the list view
- Perform operations like **edit, bulk delete and bulk assign Changes** to technicians

Click Changes tab in the header pane. Change list view page displaying all changes in open status will be displayed by default.



Get **different views of the available changes** using,

- **Filter drop-down menu:** The Filter drop-down menu consists of default filter list which classifies changes into eight categories namely, My Open Changes, My Closed Changes, My Approved Changes, **My Unapproved Changes, All Changes, Open Changes, Closed Changes** and **Unassigned Changes**, where changes with My mean Changes in which the technician is directly involved
- **List View & Calendar View:** By default Changes will be displayed in list view format. Click **Calendar View button** (besides All Changes filter dropdown menu) to get a calendar view of the available changes. Calendar Icon can be further tweaked using **Week and Month icons**.
- Perform operations like edit, bulk delete and bulk assign Changes to technicians

Customizing Columns appearing in **Change List View** as per your requirements:

- Click **Columns Customizer** icon
- **Columns pop up box** opens up
- **Choose Columns** that have to appear on Change List View
- **Order them** using Up & Down Arrows
- **Save it**

Perform operations like **edit, pick up, bulk deletion/bulk assigning of Changes to technicians** as follows:

- **Editing Change:** Click Edit Icon besides respective Change that needs to be edited
- **Pick up Changes:** Technicians can assign the Change to themselves using Pick Up button
- **Bulk Delete:** Select all Changes and click Delete button
- **Bulk Assigning of Changes**

1 Select all Changes

2 Choose Technician from Select Technician drop down (below Calendar View icon)

3 Click Assign (right beside drop down)

NOTE	While picking up/ assigning Changes, the technician involved will be assigned **the role of Change Owner** with rights to the entire Change

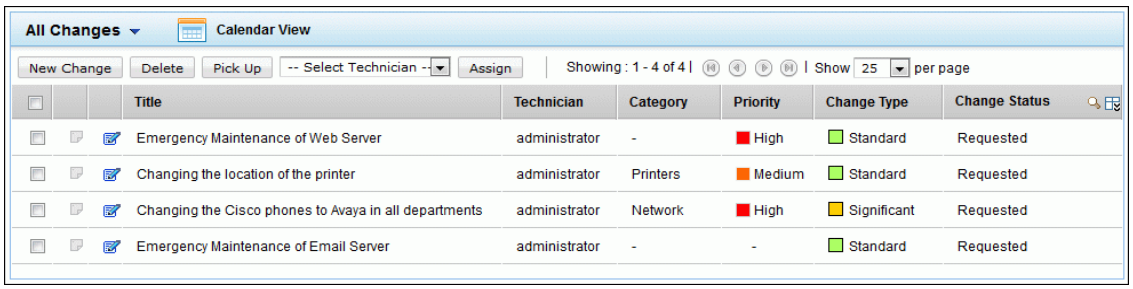
Change Calendar View

The change home page shows two types of views, **List View** and **Calendar View.** The list view shows the list of all changes to be made. And the Calendar View shows the changes with start & end schedule time marked in different colors based on the type.

To view the schedule,

1. Log into ServiceDesk Plus using your **user name** and **password**.
2. Click the **Changes** tab in the header pane. This opens the change list view page by default as shown below.

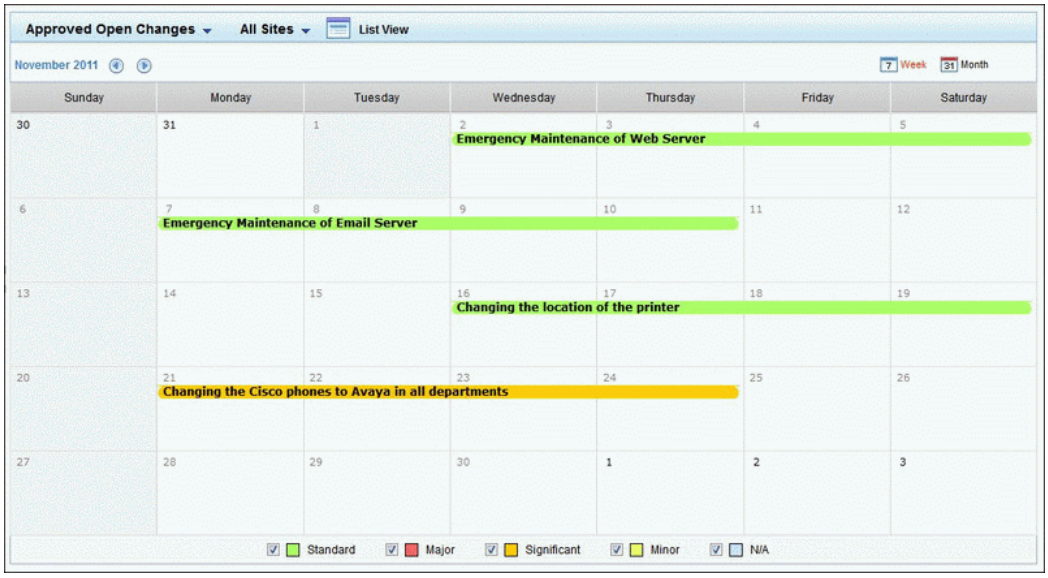
List View



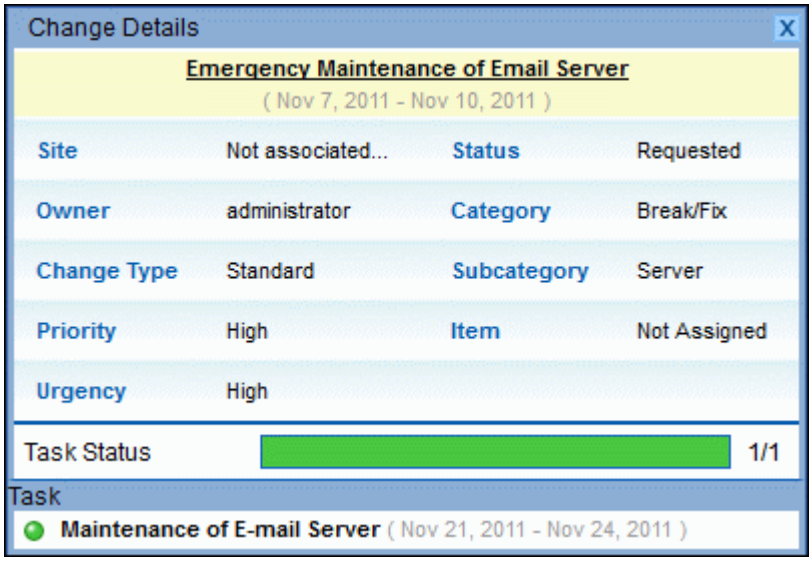
Forward Schedule of Change (Calendar View)

1. Click the **Calendar View** tab next to the list view tab in the home page. This opens the calendar view of change as shown below.

   To display the changes in the **Calendar View**, the changes should have the scheduled start time and end time.



- The Calendar View displays all the scheduled changes for the entire month. Click the forward arrow to go to the next month. Click the backward arrow to go to the previous month.
- You can choose the type of change from the **Filter Showing** combo box. You can view the Open Changes, Approved Open Changes, All Changes and Completed Changes.
- If **Sites** is configured in the application, then the Site drop down appears. list of sites associated to the logged in technician appears. Here, the logged in technician can view the sites to which he is associated and the changes raised for a specific site.
- A thick strip will be running across the scheduled **start date** and **end date** of the change. The outward curve **(** Change regarding at the beginning of the strip indicates the start date. And the inward curve **)** Change regarding at the end of the strip indicates the end date.
- The color of the strip depends on the type of the change. Say standard, major,minor and so on.
- At the bottom of the page you have all the four change types with one N/A type displayed along with the check boxes. For ex: If you wish to view only the standard changes for the month in the calendar view, then select the Standard check box and de-select the other change types. If you wish to view all the change types then select all the change type by enabling the check box.
- The backward arrow in the strip Change Regarding Building. indicates the previous week continuation of the change.
- And the forward arrow in the strip indicates that the change will be continued for the next week.
- On clicking at any part of the strip you will be able to view the change details page.



In the change details page,

- If there are any tasks associated with the change then the task status bar will also be displayed.
- If all the tasks are completed then the status bar would be in green color.
- Out of two tasks, if One task is complete and the other task is incomplete then the status bar would show half green color.
- You will be able to view the number of tasks completed / the total number of tasks. Say 1tasks completed out of 2 tasks.
- You will also be able to see the Status of the task and owner at the bottom of the page. If the status is completed then the bullet point would be in green color. If the status of the task is incomplete then the bullet point would be in red color.

- The calendar can show only three changes in a particular date. If there are more than three changes in a date, then the calendar will show the extra more changes in the text form as **+n more** as shown below.
- Clicking the **+ n more text link**, will list all the displayed changes in the calendar, plus the extra more changes in the left hand side of the page as shown below. They can also be viewed by clicking the **dates of the marked changes** in the calendar. Say by clicking the date 22 you will be able to view the list.
- A calendar on the top left hand side of the page, shows the current date marked in a box. All the changes in the current month will be underlined and bold. On clicking any of the underlined date will list all the scheduled change for the particular date below the calendar.
- Click the **Week** link at the Top of the page to view the weekly change schedule as shown below. Click the forward arrow to view next week change schedules. Click the backward arrow to view the previous week change schedules.

Change History

Apart from Status History (under View menu) and Status Comments (under each & every Change Stage), technicians are also provided with Change History tab that keeps track of every single event that happens within the Change.

To view Change History,

1. Select **History** Tab (within the Change)
2. Click **Show All** button
3. History will be displayed **day-wise**
4. Proceedings of a particular day alone can also be viewed using **Expand/Collapse** buttons (present at the right extreme)
5. **Property View** allows technicians to view Change History based on Change Attributes like Technician, Title, Created Time, Scheduled End Time etc.,
6. You can alternate between **Day View & Property View** using the respective links

Note: Day View will be selected by default

Change related FAQs

1. Who can change the Change Stage at any point of time?

If the logged-in technician is the assigned CM (Change Manager) or CO (Change Owner) of the given change, then he/she can edit the RFC (Request for Change) Form Fields including Stage/Status at any given time. However remember that a SDChangeManager too has rights to edit stage/status of change and can do so incase a Change Manager/Change Owner has not been exclusively assigned for the given change.

2. Who can edit Change Roles at any given time?

If logged-in technician is the assigned CM (Change Manager) or CO (Change Owner) of the given change, then he/she can edit (or reassign) roles at any stage. However remember that a SDChangeManager too can edit the change roles at any given stage and can do so incase a Change Manager/Change Owner has not been exclusively assigned for the change.

3. Who can approve the change in the Change Approval stage?

Technician should possess the Change Manager or Change Approver role for the given change in order to approve it in the approval stage. Non technicians (users) too can be assigned with the Change Approver role.

.

4. What is the scope of SDChangeManager?

SDChangeManager is the one with absolute control over the entire change module. A role designated to supervise the entire change module, SDChangeManger can also operate on all changes (or) can choose to work only on Changes that do not have exclusive Change Manager/Change Owner.

5. What about users with System Role: edit permissions? What rights will they have?

- Users with SDAdmin Role (or) Users with Change Module Edit Permissions can edit RFC (Request for Change) form fields. (note: this editing will not be possible once change moves away from the Submission Stage)
- They will be allowed to edit the fields of the stage the change is currently in and will also have the rights to move change from one status to another.

These users will not have the rights to move change from one stage to another.

6. Regarding Change List/Calendar view

In Change List view /Calendar View:

- Closed Changes and My Closed Changes views will list only the Close-Completed changes alone. Close-Cancelled changes will be listed under All Changes view.
- My XXX Views e.g 'My Open Changes' will list out only the Changes in which the user has been assigned with a role to play e.g CAB in those 'Changes'

Approved changes will list changes only those changes that have undergone Approval - Approved status.

7. Regarding Change related Reports:

Completed Changes report will list only the **close-completed** changes alone.

8. When is the completed time of change logged?

Completed Time is logged in two cases: close-completed and close-canceled.

9. What if user is not associated to the site, but he/she plays role in the change?

Site restricted technicians can view their assigned changes even though they are not asociated to the site.(Due to the SystemRole: Technicians allowed to view Assigned to him (OR) All in associated sites options)

10. How can I change the status of a change?

Following menus can be used to change the status of a change:

a**. Status drop down menu** - status(es) associated with a given change stage will be listed here from which the technicians can choose desired status

b. **Status Actions drop down menu** - action name of all status(es) in a given change stage will be shown. If action name is not assigned to a status, then status name will be displayed.

Action Name of a status denotes the action technicians can perform using a given status. For example: Status Accepted is denoted using the Action Name Accept using which technicians can move the change from one stage to another.

11. What are the operations work based on other module's permission?

Following operations are allowed without stage scope restriction but module based scope permissions i.e Edit Requests, Edit Problem.

1. Associate Incidents
2. Associate Problems.

12. When worklog can be added?

Worklog can be added at any point of time irrespective of whatever stage the Change is in, but the concerned technician should have Edit Change or Edit Implementation Stage permissions.

13. On what basis is the user list generated while users are being assigned with change roles?

User listing happens as per Site Configurations:

1. Change role defined as Technician only, will list users based on the site of a change.
2. Change role defined as ALL , will list all users based on the sites associated to loggedin tech.

14. How does the pre approval change mechanism work?

Pre approved changes skip the approval process alone i.e if the change workflow is defined to go through the approval stage, it will be bypassed automatically.

15. What are the points to be noted for Non Login View?

a. All data will be in viewable mode only except Notes, Notification, Status Action and Close stage. (availability of these options depends on the user's scope in a given change)

b. Task/Worklog section will not be shown under Implementation tab.

16. How can I configure workflow for my custom status?

A custom status which has 'Action Name' defined will be listed in change workflow configuration section where user can configure workflow for the custom status.

17. Editing Site field and Selecting Change Owner?

After editing site field from Submission tab, a page refresh is required to list site based technicians. (under Change Roles section).

18. When new Change ticket is created, change manager doesn't receive an email about the new request.

Do the following to solve this:

1. Configure status such that Requested status (Submission==>Requested) notifies Change Manager about the request (To configure status, go to Admin==>Problem/ChangeManagement==>Stage/Status wizard)
2. While creating a change ticket, configure Change Manager role and submit the ticket. (other wise choose default change managers here: Admin==>Helpdesk==>Category : click edit button and choose change managers for respective categories)

19. How to create a change with the Status to go straight to Planning in Progress?

Preconfigure the change template such that the change begins with Planning/Planning in Progress as the intial stage/status (To preconfigure change template, go to Admin==>Problem/ChangeManagment==>Change Template)

20. How can I by pass the CAB section? In other words, how can I set the ticket as pre-approved once created?

Preapproved changes will by pass the CAB section.

For e.g By default the Standard Change Type is set as Preapproved change. Therefore when a change is created with **change type as Standard** then this change ticket will be a preapproved one and won't have a CAB section at all.

Project Management

Project management - the discipline of planning, organizing, and controlling resources to achieve specific goals is now a part of ServiceDesk Plus. Using project management you can create projects: a temporary endeavor to achieve certain objective/change (within a specific time period) beneficial to your organization.

Effective management of resources like time, budget, manpower and the quality of work, is the **primary goal** of project management.

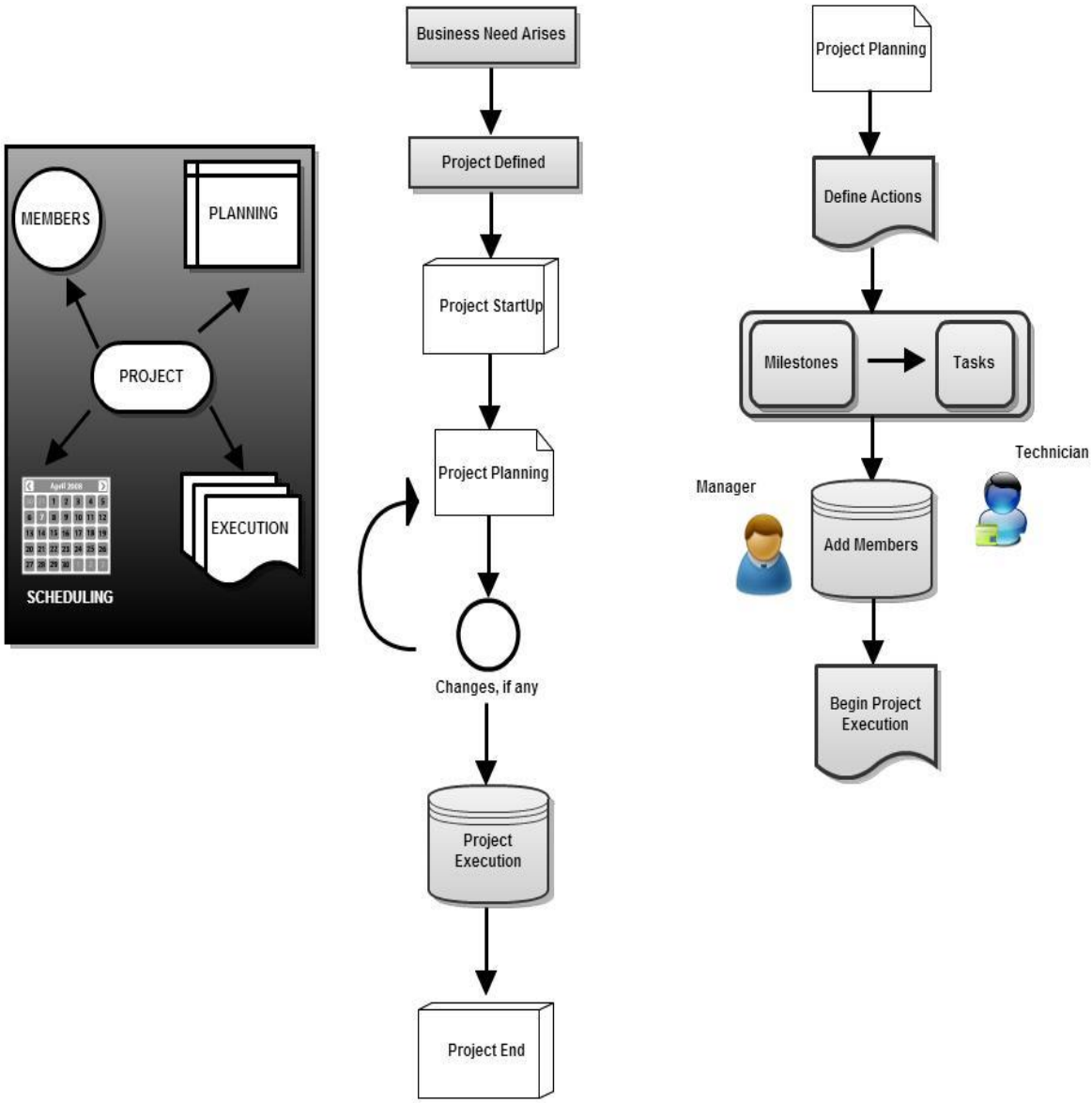
Features:

- **Milestones:** These help you plan theproject, decide its various stages, and also serve as landmarks that identify how close a project is to completion.
- **Tasks:** Entities that decide the Work Breakdown Structure (WBS) of the project. They are a part of Milestones.
- **Task Relationship:** Decide parent/dependent tasks, connect tasks that are similar, by establishing Task Relationship.
- **Flexibility in Swapping Member Roles:** Ability to switch/change "member roles" anytime allows administrators to focus on Milestones/Tasks requiring immediate attention, thus speeding up the project by focusing on grey areas.
- **Gantt View:** Chart presenting a bird's eye view of the project: a standpoint from where not only the entire project can be viewed but also can be reconfigured based on the approaching deadline.
- **Timesheet:** Log for tracking time spent on tasks involved in the project. It helps administrators take necessary steps based on the project's progress rate.
- **Comments:** Comments that enable members/administrators to share their views on each other's tasks for the betterment of the project.
- **Project Overview Map:** Map presenting 'a clear picture' of the entire project.

Projects created within the Projects Module can also be:

- **Associated with Change** using 'Associate Change' option

Project Management Workflow



Working with Projects

Learn how to create, edit, delete, and associate change with projects under this section.

Contents

- Creating Projects
- Scheduling Projects
- Editing Projects
- Deleting Projects
- Project Overview Map
- Associating Change

Creating Projects:

There are two ways to accessing a New Project Form in ServiceDesk Plus application,

a. Quick Actions drop down

b. Projects Tab

a. Quick Actions drop-down menu

The Quick Actions drop-down menu is a quick navigator to instantly access the New Project form. Click **Quick Actions drop-down menu** -> **Project** under Create New block.

b. Projects Tab

1. Click the **Projects** tab in the header pane.
2. Click the **New Project** button to open the New Project form. (Use '**Add New Link**' while creating first Project)
3. Specify the **Project Title, Description** and **Code**
4. Select the **Project Type, Status** and **Priority** from the drop down list.
5. Specify Project **Schedule Start** and **Schedule End** date

Adding more details to the Project:

To evaluate Project against the projected plan, you are provided with the following additional fields:

1. **Actual Start Date** and **Actual End Date** (for recording real-time project completion date).
2. **Projected On Date** (planned date for project completion)

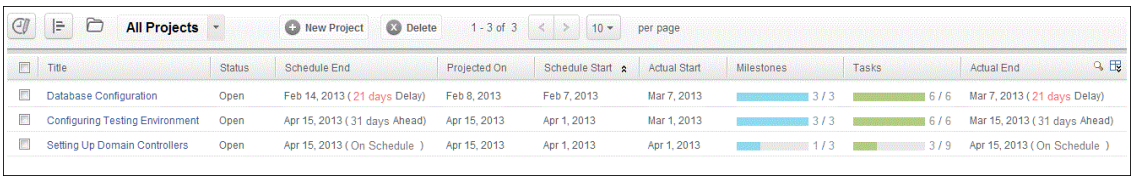
3. **Estimated Hours** and **Actual Hours** (fields recording 'planned and real-time' time taken for the Project).
4. **Estimated Cost** and **Actual Cost** (fields recording 'planned and real-time' expenditure towards the Project).
5. For adding attachments to the Project, click Attach file button in the project's pane.

Scheduling Projects:

Project Scheduling not only helps you schedule the project but also determine whether the project is **'on-schedule', 'delayed' or 'ahead'** by comparing it against real-time completion.

To schedule the project do the following:

1. Configure the **Scheduled Start** and **Scheduled End Date**
2. Fill in the **Actual Start** and **Actual End Date** (upon project completion)
3. Based on **Scheduled/Actual Dates,** project would be considered:
    - **On Schedule** if the Scheduled Date and Actual Date are the same.
    - **Delayed** if the Project (Actual Date) has past the Scheduled Date. (no of days by which project is delayed gets displayed on the project list view page)
    - **Ahead** if the Project (Actual Date) is completed before the Scheduled Date**.** (no of days by which project is ahead gets displayed on the project list view page)



Editing Projects

- Select the Project in the Project List View page and click on **Edit Icon** in the Project pane.
- Implement the necessary changes and click on **Update Project**

Deleting Projects

Project can be deleted in two ways:

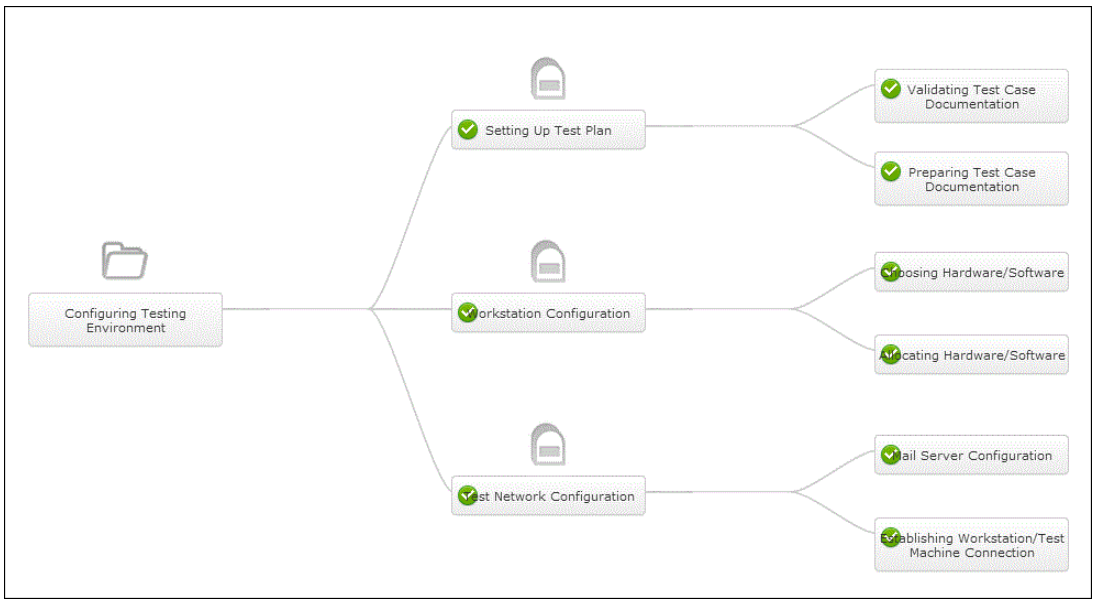
a. Bulk Delete: From **Project List View**, select Project(s) to be deleted, and click on **Delete Icon.**

b. Single Delete: Enter the Project to be deleted - by clicking on Project Title - and click on **Delete Icon**

Project Overview Map

Project Overview Map (appearing upon clicking Actions Button within project's pane) provides a bird's eye view of the project. It's a map that walks you through the entire project with its Milestones and Tasks representing clearly the different layers existing within the project.

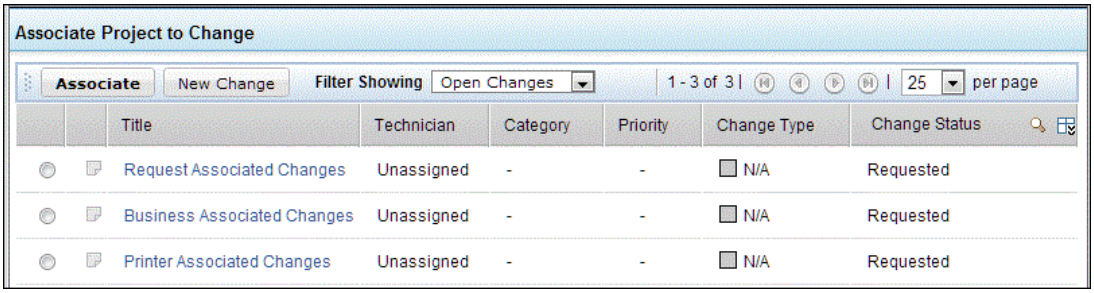
This map also indicates whether Milestones/Tasks have been completed by means of a Tick Mark.



Associating Change

Projects, apart from serving as entities that help achieve some specific goal, can also be associated with Change in the form of Change Implementation.

Project can be used as a large scale change implementation which has its own members and tasks. To **associate project with Change**, click on Actions button and select **Associate Change** option.



Note: An associated project can be dissociated by clicking on 'dissociate' option.

Milestones

Milestones are critical events which receive special attention within the project management framework. Besides serving as markers that indicate a project's progress milestones allow you to group Tasks, establish relationship between Tasks, and organize their order. They ensure the project is moving in the right direction.A completion of a milestone is a major step towards completion of the project.

Scenario:

To understand Milestones better let us consider an IT Test Environment SetUp Project:

Superfically speaking, an IT Test Environment Set Up can be split into:

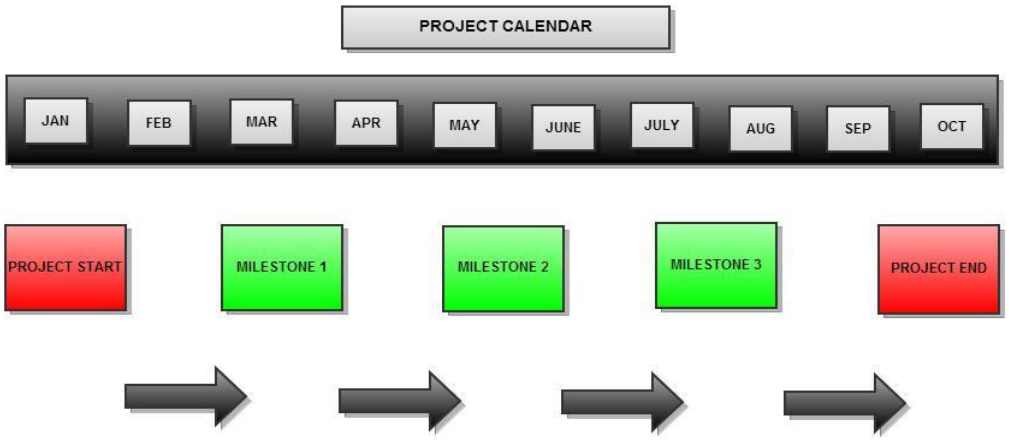
- Database Configuration
- Workstation Configuration
- Test Network Configuration

These major tasks - that outline the entire project - which in turn will **contain several other tasks** are known as **Milestones**.

Advantages:

- Uninterrupted workflow with no delays
- Proper classification of Tasks, their relationships and dependencies.
- Clear presentation of 'who does what, when, and for how long'
- Ensure projects are onschedule.

Milestones - Stepping Stones to Project's Completion



Working with Milestones

Adding Milestones is the first step to creating a project.They help outline the entire project and present a clear picture of the innumerable Tasks involved by allowing project members to design the Task Hierarchy and Task Dependency.

In this section you will learn how to: create, edit, and delete Milestones.

Contents

- Creating Milestones
- Scheduling Milestones
- Editing Milestones
- Deleting Milestones

Creating Milestones:

1. Click on **Milestones** tab in the Projects pane.
2. Click the **Add New Button** to open the New Milestone form. (Use 'Add New Link' while creating first Milestone)
3. Specify the **Milestone Title** and Milestone Description**.**
4. Select the **Status** and **Priority** from the drop down.
5. Specify Project **Schedule Start** and **Schedule End** date

Adding more details to Milestone::

1. **Actual Start Date** and **Actual End Date** (for recording real-time milestone completion date).
2. **Projected On Date** (planned date for milestone completion)
3. **Estimated Hours** and **Actual Hours** (fields recording 'planned and real-time' time taken for the milestone).
4. **Estimated Cost** and **Actual Cost** (fields recording 'planned and real-time' expenditure towards the milestone).
5. For adding attachments to the Milestone, click Attach file button in the milestone's pane.

Scheduling Milestones

Milestone Scheduling not only helps you schedule the milestone but also determine whether the milestone is **'on-schedule', 'delayed' or 'ahead'** by comparing it against real-time completion.

To schedule the milestone do the following:

1. Configure the **Scheduled Start** and **Scheduled End Date**

2. Fill in the **Actual Start** and **Actual End Date** (upon project completion)
3. Based on **Scheduled/Actual Dates,** milestone would be considered:

    - **On Schedule** if the Scheduled Date **and** Actual Date are the same.
    - **Delayed** if the Project (Actual Date) has past the Scheduled Date. (no of days by which project is delayed gets displayed on the project list view page)
    - **Ahead** if the Project (Actual Date**)** is completed before the **Scheduled Date.** (no of days by which project is ahead gets displayed on the project list view page)

Title	Status	Schedule End	Projected On	Schedule Start	Actual Start	Actual End
Database Configuration	Closed	Mar 21, 2013 (4 days Ahead)	Mar 21, 2013	Mar 14, 2013	Mar 14, 2013	Mar 17, 2013 (4 days Ahead)
Workstation Configuration	Closed	Apr 17, 2013 (On Schedule)	Mar 30, 2013	Apr 8, 2013	Apr 10, 2013	Apr 17, 2013 (On Schedule)
Test Network Configuration	Closed	May 1, 2013 (9 days Delay)	May 1, 2013	Apr 25, 2013	May 1, 2013	May 10, 2013 (9 days Delay)

Editing Milestones

- Select the Milestone from the Milestone List View page and click on **Edit Icon** in the Milestone pane.
- Implement the necessary changes and click on **Update Milestone**

Deleting Milestones

Milestones can be deleted in two ways:

a. Bulk Delete: From Milestone List View, select Milestone to be deleted, and click on Delete Icon.

b. Single Delete: Enter the Milestone to be deleted - by clicking on Milestone - and click on **Delete Icon**

Working with Tasks

Contents

- What are Tasks?
- Configuring Tasks
- Scheduling Tasks
- Editing/Deleting Tasks

What are Tasks?

Task is an activity that is a part of a Project. In other words, Project has multiple phases with Task being a small incident/part of each and every phase. Tasks can be associated with Milestones or can be directly linked to the project. In general, Tasks are the most basic elements that ensure various actions are performed in an orderly manner within the project.

Scenario:

To understand Tasks better let us consider the same IT Test Environment SetUp Project used for Milestones:

IT Test Environment Set Up can be split into 3 major phases - that is, milestones:

- Database Configuration
- Workstation Configuration
- Network Configuration

These Milestones can further be divided into following steps: **determining database purpose**, **organizing required information, dividing information into tables** and so on for database configuration. Likewise workstation and test configuration too would have several steps. These actions that may or may not be a part of Milestone are known as **Tasks**.

Configuring Tasks:

1. Click **Tasks** tab in the header pane.
2. Click **Add New Button** to open the **New Task form.** (Use **'Add New Link'** while creating first Task)
3. Specify **Task Title** and **Task Description**.
4. Select **Status** and **Priority** from the drop down.
5. Specify Task **Scheduled Start** and **Scheduled End** date

Adding more details to Task(s):

To indicate Task's progress and to discuss about ways of bettering it, you are provided with the following fields:

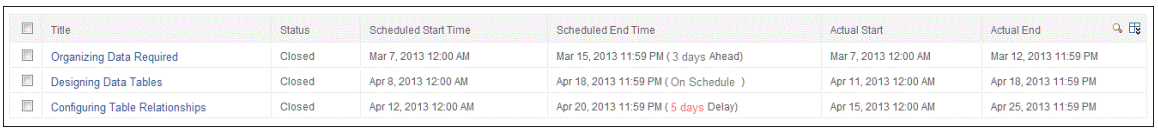
1. **% of completion** that helps denote the extent to which the task has been completed (any value between 1 - 100)
2. **Comments** that lets project members communicate between themselves about the task as well as the project
3. **Additional Cost**, if any, can be recorded in this field.

Scheduling Tasks:

Task Scheduling not only helps you schedule the task but also determine whether the task is **'on-schedule', 'delayed' or 'ahead'** by comparing it against real-time completion.

To schedule the task do the following:

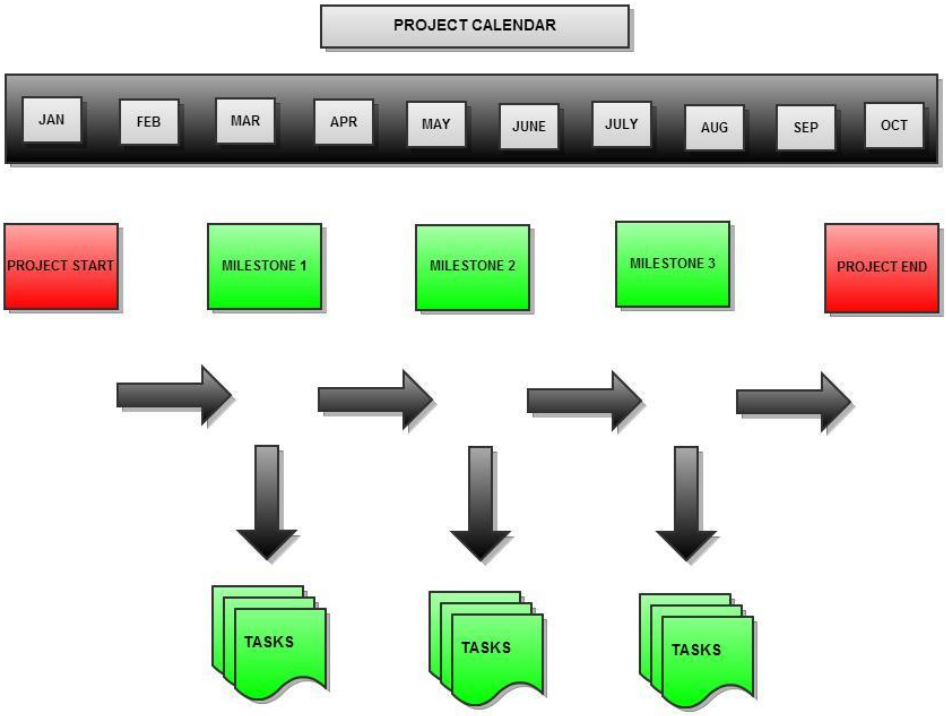
1. Configure the **Scheduled Start** and **Scheduled End** Date
2. Fill in the **Actual Start** and **Actual End** Date (upon project completion)
3. Based on **Scheduled/Actual Dates,** task would be considered:
    - **On Schedule** if the **Scheduled Date and Actual Date** are the same.
    - **Delayed** if the Task (**Actual Date)** has past the **Scheduled Date**. (**no of days** by which **project is delayed** gets displayed on the **project list view page**)
    - **Ahead** if the Task **(Actual Date)** is completed before the **Scheduled Date.** (**no of days** by which **project is ahead** gets displayed on the **project list view page**)



Title	Status	Scheduled Start Time	Scheduled End Time	Actual Start	Actual End
Organizing Data Required	Closed	Mar 7, 2013 12:00 AM	Mar 15, 2013 11:59 PM (3 days Ahead)	Mar 7, 2013 12:00 AM	Mar 12, 2013 11:59 PM
Designing Data Tables	Closed	Apr 8, 2013 12:00 AM	Apr 18, 2013 11:59 PM (On Schedule)	Apr 11, 2013 12:00 AM	Apr 18, 2013 11:59 PM
Configuring Table Relationships	Closed	Apr 12, 2013 12:00 AM	Apr 20, 2013 11:59 PM (5 days Delay)	Apr 15, 2013 12:00 AM	Apr 25, 2013 11:59 PM

Editing/Deleting Tasks:

- Select the **Milestone** from the **Milestone List View** page and click on **Edit Icon** in the **Milestone pane**.
- Implement the necessary changes and click on **Update Milestone**
- **Bulk Delete**: From Milestone List View, select Milestone to be deleted, and click on Delete Icon
- Single Delete: **Enter the Task** to be deleted - by clicking on Task Title - and click on **Delete Icon** in the project's pane.



Tasks - Basic Elements of Projects

Task Dependency & Task Order

Contents

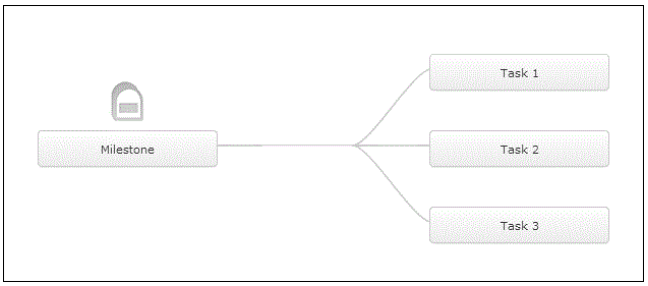
- Configuring Task Dependency
- Configuring Task Order

Configuring Task Dependency

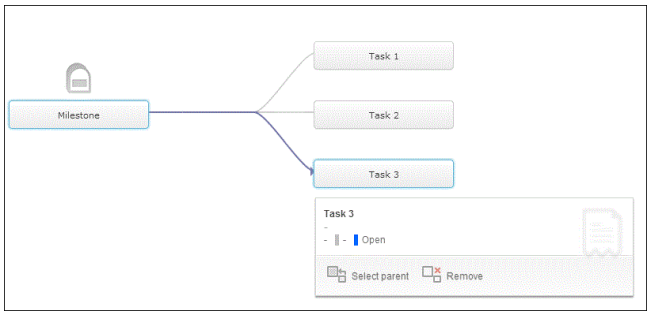
Projects contain innumerable tasks which in some way would be connected to each other since they are working in unison towards the same goal. To clearly define such relationships between tasks and to distinguish parent tasks from child tasks you are presented with the option of configuring task dependencies.

To configure **task dependency**, click on **Dependencies button** and follows the steps mentioned below:

1. Select **Tasks** tab
2. Click **Dependencies** button
3. Dependency Chart displays all available Tasks



4. To configure Task Dependency, move mouse over a Task
5. **Mouse Hover** opens up **Task Dependency Dialog** box
6. **Task Dependency Dialog box** has two options: **Select Parent** & **Remove** buttons



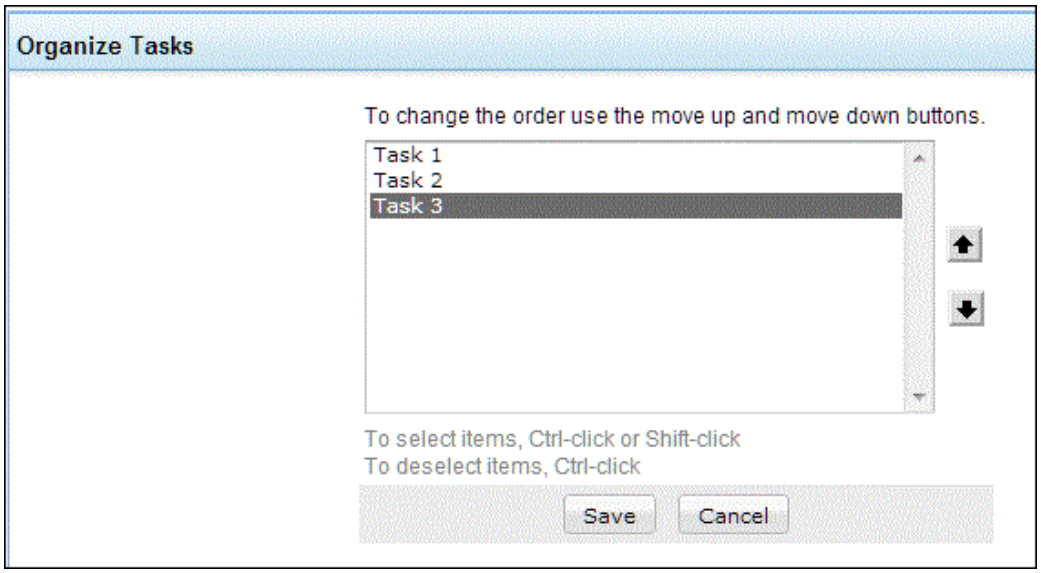
7. Click on Select Parent button. All Tasks present would be highlighted from which the Parent Task can be chosen
8. Click Remove button to remove/reconfigure the established relationship

Configuring Task Order

Task dependency helps decide which task depends on what thus giving a structure to the project. But still it does not give a definite structue in the sense it does not decide the order in which these tasks would be executed. **Task organization/ordering** is very essential for a project's success and this can be **brought about by clicking** on **Organize button.**

To organize tasks follow the steps mentioned below:

1. Select **Tasks** tab
2. Click **Organize** button. The **Organize Tasks** pane opens up.



3. To reorganize a Task, **Ctrl + Click** (or) **Shift + Click** on the Task
4. Use **'Move Up'** and **'Move Down'** buttons to change Task's position
5. Click on 'Save'
6. To de-select a Task, click Ctrl + Click

Project Members

Efficient staff alone does not ensure a project's success. Meticulous planning of project staff; the permissions given to a projectrole; the flexibility in changing project roles and more come into play to ensure the project as a whole turns out to be a success.

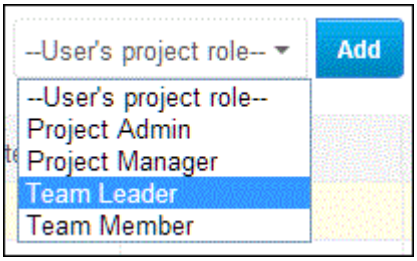
To configure the project's staff, that is, to add members to a project, assign roles to project members and establish the project hierarchy click on Members tab.

Contents

- Adding Project Members
- Changing Member Roles
- Changing Member Status
- Deleting Project Members
- Member Hierarchy Diagram

Adding Project Member(s)

- Click on **'Members'** tab. Select '**Add Members'** link
- **Available Technicians'/Users' List** already configured in ServiceDesk Plus would be displayed.
- **Select Project Member(s)** (from the available Technician list (OR) add Technicians of your choice).
- Select **Project Role** from Project Role drop-down and click on ADD button.



Changing Project Member Roles

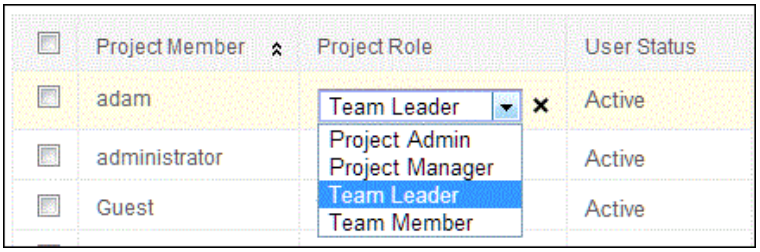
However well-planned your project might be things are bound to go off-course when there are innumerable Tasks to be executed. To ensure project managers are ready enough to face such incidents they are allowed to 'change project member role' as and when required.

This feature is predominantly used to ensure grey areas of the project get enough attention. That is, let's say a project member has completed his part and is free, yet the

project is progressing at a rather slow rate, then this member could be assigned some other role that might help speed up the project.

Speeding up the Project is not the sole objective, you can also use this option just to Change Project Member Role, if such a need arises.

- Click on **Members** tab
- Click on **'Project Role'** of the member whose role is to be changed
- From Project Role drop-down, select the role to be assigned



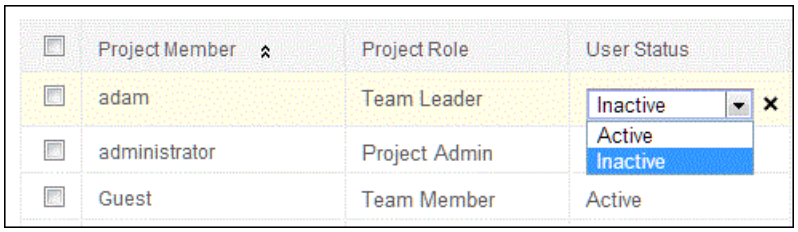
Changing Project Member Status

While creating a Project a number of unforeseen events that might occur should be taken into account. For example: a member falling sick, a member deciding to quit, or a member requesting a role change and so on.

Such project members can be kept in the bench by changing their status to **Inactive**. Milestones and Tasks associated with inactive members can be assigned to other project members. Inactive project members can be reinstated by change their status to active.

- Click on **'Members'** tab
- Click on **'User Status'** to be changed
- Select **Inactive** to keep Project Member in the bench
- Select **Active** to reinstate Project Member

Note: At a given time, only one role can be assigned to a project member.



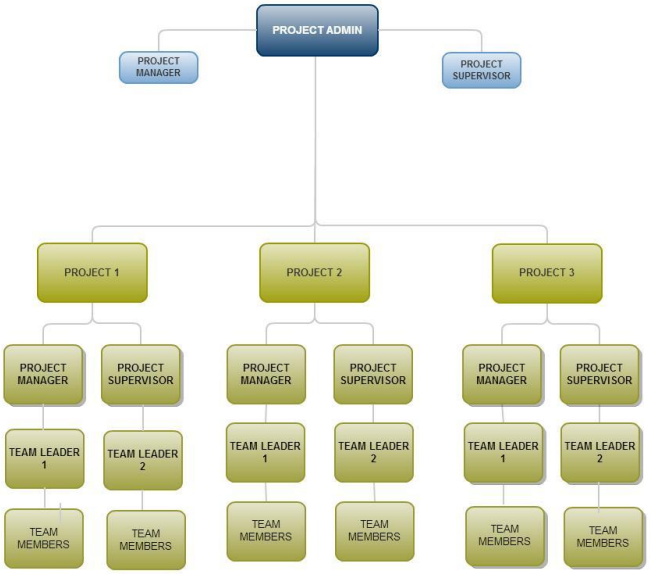
Deleting Project Member(s)

Project Members can be deleted in two ways:

a. Bulk Delete: From Member List View, select Project Members to be deleted, and click on **Delete Icon.**

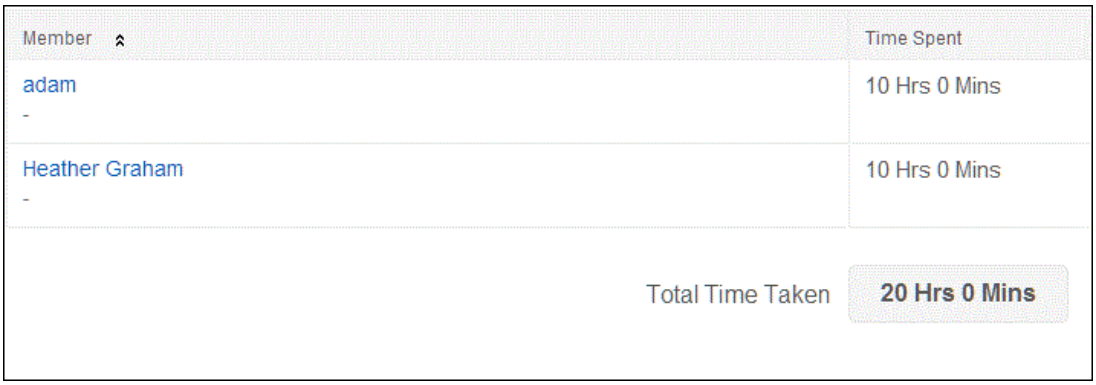
b. Single Delete: Select Project Member to be deleted and click on **Delete Icon**

Member Hierarchy Diagram Example



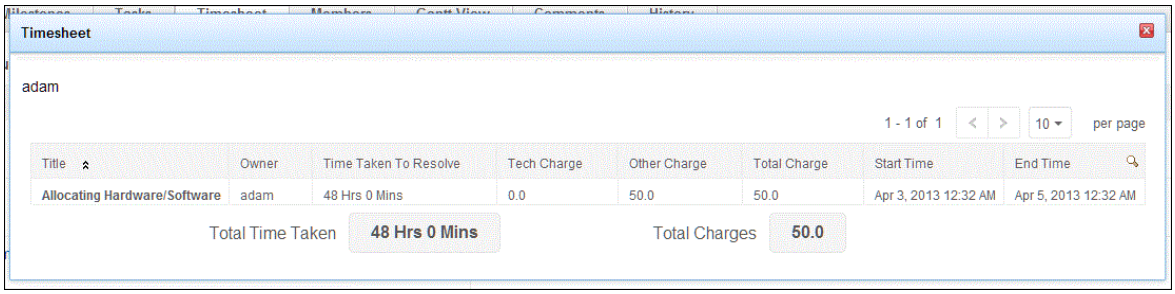
Timesheet

Timesheet Tab is a single stop solution for viewing the **total time spent** by project members on **various Tasks of a Project**. And by summing up the total time spent, the Timesheet tab, **also displays the cumulative time spent** by all the **project members on various tasks**.



Note: Timesheet reflects the **technician hours spent** information from the **worklogs** of various Tasks.

It is also possible to view separately the **worklog details of tasks pertaining to a project member . To view these details, click the respective member's name** in the **Timsheet List View.**



Advantages:

- Provides bird's eye view of total time spent on the project
- Aids in preventive maintainence while working on similar projects in the future
- Helps evaluate scheduled project against the real-time project
- Supplements on-schedule project completion

	Note: **Milestone Timesheet** logs time spent on **Tasks belonging to Milestones**, whereas **Project Timesheet** tab logs timespent on **overall Tasks belonging to a Project**.

Comments & History

- What are Comments?
- How can comments be added/deleted?
- History Tab
- Recent History Updates Button

What are Comments?

Comments allows project members to communicate with each other. High level authorities can use them to dispatch orders to their subordinates. Above all, the most important aspect of this feature is that it allows members belonging to different ranks share their ideas, discuss about what they are doing, and work towards the betterment of the project.

Adding/Deleting Comments

1. **Adding:** Click on **Comments Tab**. Type your Comment and Save it
2. **Deleting:** Click on Delete Button to delete a Comment.

History Tab

History tab lets you view all the events that occur within a project. It lets you know 'who does what and at what time'. To access a project's history click on History tab.It is possible to hide/show a project's history by clicking on the 'show/hide' history button.

Recent History Updates Button

Recent History Updates Button present in the projects list view page lists events that occur across various projects present in the projects module, unlike history tab which presents information pertaining only to a specific project. Project administrators who might own all the projects present in the module benefit greatly from this option.

Gantt Chart

Contents

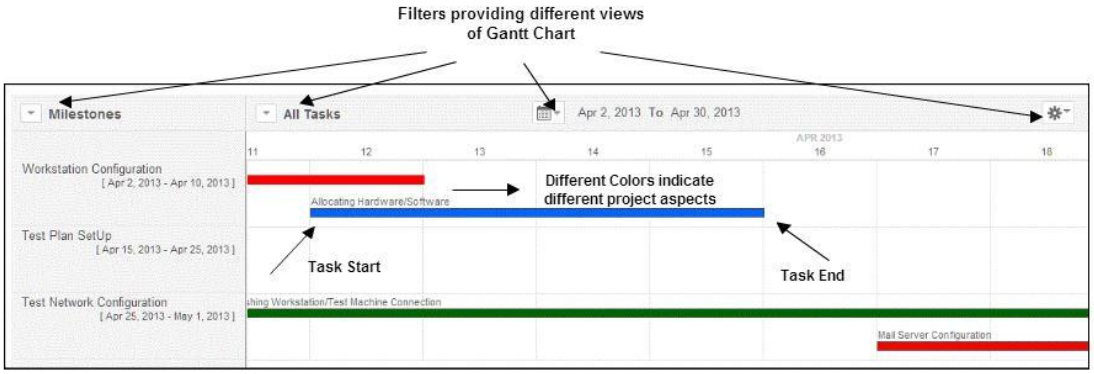
- What is Gantt Chart?
- Viewing and Configuring Gantt View
- Accessing Projects via Gantt Box
- Gantt View Tab and Gantt View Across All Projects Button

What is Gantt Chart?

Gantt Chart is a bar chart that illustrates a project schedule. This chart also illustrates project elements - along with their schedule against the project calendar - and summarizes the entire project using the chart. It presents a clear picture of the different phases of the project and also of the various activities that occur in the project's work breakdown structure (WBS).

Advantages:

- Provides bird's eye view of a project and also serves as a one stop solution for accessing the entire project module with all it projects (provided, the technician is assigned with Project Admin role).
- Effective Resource Management as project constraints like time, manpower and amount of work remaining can be viewed and regulated as per situation demands.
- Rescheduling of Milestones/Tasks and project member role change, if such a need arises, can also done via Gantt Chart.



Viewing and Configuring Gantt View:

1. Click on **Gantt View Tab**

2. Gantt Chart with its default view will get displayed.
3. **Configure Gantt Chart** as per your requirement using

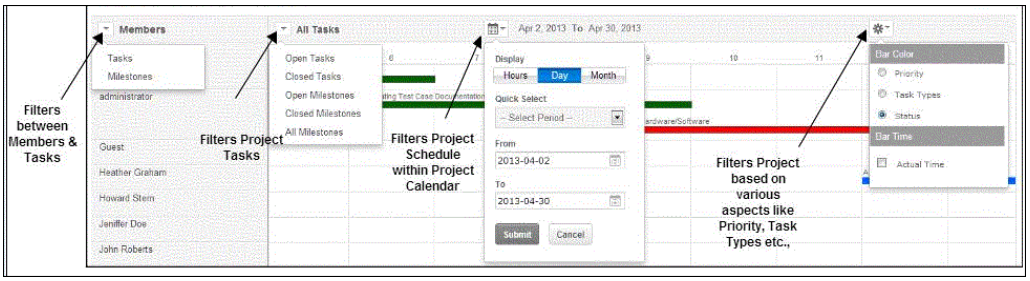
   a. Gantt Row Type Filter: Available options are Members, Milestones and Tasks.

   b. Gantt Column Type Filter: Available options are Tasks (Open, Closed and All) & Milestones (Open, Closed and All)

   c. Project Calendar Filter: Available options are Hours, Day and Month &

   d. More Settings Filter: Available options are Priority, Task Types and Status

4. Gantt Chart would be modified based on your requirements.

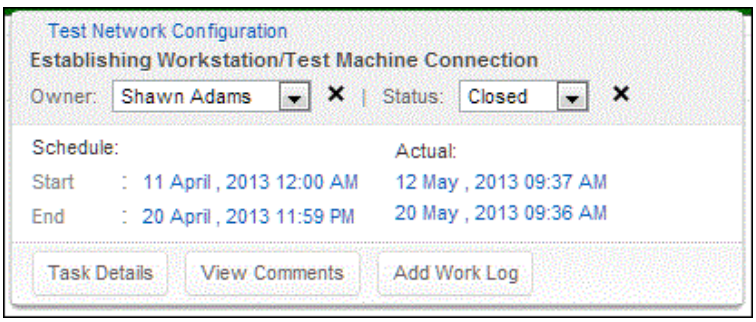


Accessing Projects via Gantt Box:

Gantt Box that appears on mouse over a "milestone/task" serves as a window through which the "milestone/task" can be accessed and edited according to the changes taking place within a project. An entire project can be accessed through Gantt Box if the project member has the rights to do so. This quick access enhances the effectiveness of Gantt Chart and is very useful in supervising the project.

Using **Gantt Box** the following can be done:

1. Rescheduling of Milestones (or) Tasks and Changing of Milestone/Task details
2. Reassigning of Milestones/Tasks to Project Members
3. Changing of Milestone/Task Status
4. Adding Worklogs and Comments



Gantt View Tab and Gantt View Across All Projects Button:

Gantt Chart can be accessed in two different ways:

- By clicking on "**Gantt View**" Tab (in the project's pane) (or) by clicking on "**Gantt View Across All Projects Button**"
- As the name suggests, the latter presents the gantt view of all projects present in projects module
- Gantt View Across All Projects Button present in the projects list view page is useful for project administrators
- Using this button gantt chart can not only be filtered based on milestones and tasks but also based on project names and project status.

Solutions

The ManageEngine ServiceDesk Plus application provides a facility to record the solutions for the received requests. The recorded solutions function as a knowledge base of solutions. Thus, when you receive a request, refer to the recorded solutions and solve it. This reduces the turnaround time in attending to the requests generated by the requesters and closing the same.

All requesters and technicians who have permissions to view the solutions module can access this section of the application. The ServiceDesk Plus administrator can assign access privileges to the various technicians for the solutions section. This access privilege can vary from just view only privilege to full control privilege. For setting the access privileges to technicians, refer to the Configuring Technicians and Configuring Roles sections. Moreover, new technicians joining the organization can browse through these recorded solutions to have an idea of the frequently resolved problems.

You can access the approved solutions even without logging in to the application, but will be able to view only those solutions that are published in the Self Service Portal. To access the knowledge base directly without having to login to the application, type the URL provided below in the address bar of the browser:

http://<server name>:<port number>/sd/SolutionsHome.sd

where, the <server name> is the name of the server where ServiceDesk Plus is installed and <port number> is the port where the application is running.

About Solutions

1. Click the **Solutions** tab. This brings up the Solutions list view page. By default, the list of **All Solutions** is displayed.
2. Select the corresponding filter option from the **Filter Showing** combo box. You can view the solutions with different status levels using filters. They are,

    - **All Solutions**
      All the solutions irrespective of the status can be viewed under this category.
    - **Approved Solutions**
      All the approved solutions are listed under this category.
    - **Approval Pending Solutions**
      The solutions which are sent for approval are listed under this category.
    - **Unapproved Solutions**
      The **s**olutions which are not approved and has to be sent for approval are listed under this category.
    - **Rejected Solutions**
      All the rejected solutions are listed under this category.

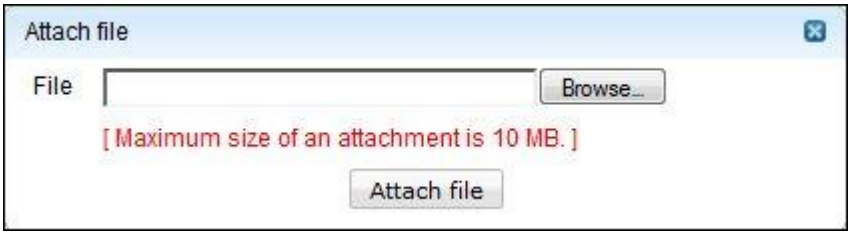
Add New Solution

The solutions module is a knowledge base with resolutions for the problems encountered by your help desk team. The solutions can be grouped under topics to access the solutions with ease. In addition, the solutions can be restricted to specific user groups. The requesters under the user group can view the solutions on logging into the application.

To add new solutions to the existing knowledge base,

1. Click the **Solutions** tab in the header pane. This opens the solutions list view page. By default, the list of all solutions gets displayed. Click **New Solution** button. (OR)

   Click **Quick Actions** drop-down menu -> select **Solutions** under the Create New block. This opens the New Solutions page. The title, contents and the topics fields are mandatory fields.
2. Enter a title for the solution you wish to add in the given text field. This can be a summary of the complete solution in one line that will exactly tell what the solution is all about.
3. Enter the complete solution in the **Contents** text field.
4. If this solution requires any additional files to support the article, then you can attach the same by clicking **Attach File** button. The **Attach File** window pops up as shown below,



   i. Click **Browse** and select a file from the file chooser window. Click **Open**.
   ii. Click **Attach File** button. The attached file gets listed along with its size.
   iii. Repeat steps 1 and 2 to attach another file.
6. The **topic** field is a combo box that lists all the available topics and sub-topics. Select the topic in which you wish to add the current solution.
7. The **keywords** are optional, but the presence of a keyword for the solution will help in improving the search capability and will provide accurate search results. While entering multiple keywords, separate them with comma.
8. To make this solution available in the self service portal for the logged in and non logged in users, select **Publish this solution in Self-Service Portal also** check box.

   If you have configured **User Groups**, then you can restrict the solutions to a specific user group by selecting the user group from the available list, use **>>** button to move it to the selected user group block. The solution will be available to the user group on logging into the application.
9. Click **Add**. If you do not wish to add the solution then click **Cancel**.

View Solution Details

To view the details about a solution, click the **Subject** link or the **Solution ID** from the Solutions module. The Solution Details page, displays the **Solution ID** and the **Status** of the solution on the right hand side. Along with the **Subject** of the solution, the **Type** and **Category** of the solution is displayed. The list of **Keywords** for the solution is displayed just below the description. Other solution details such as, Created By, Created On, Last Updated By, Last Updated On, Type, Views, View Type (whether Public or Private) and Status of the solution is displayed in the **Solution Details** block. The **Comments History** lists the history and comments about the solution. The updated status of the solution is also displayed.

From the Solution Details page, you can Edit the solution, Delete the solution and **Forward the solution**. If you are the administrator, then you would be able to perform **Approval Actions** such as, Submit the solution for approval to higher authorities and Approve or Reject the Solution.

Edit Solution

To edit a specific solution,

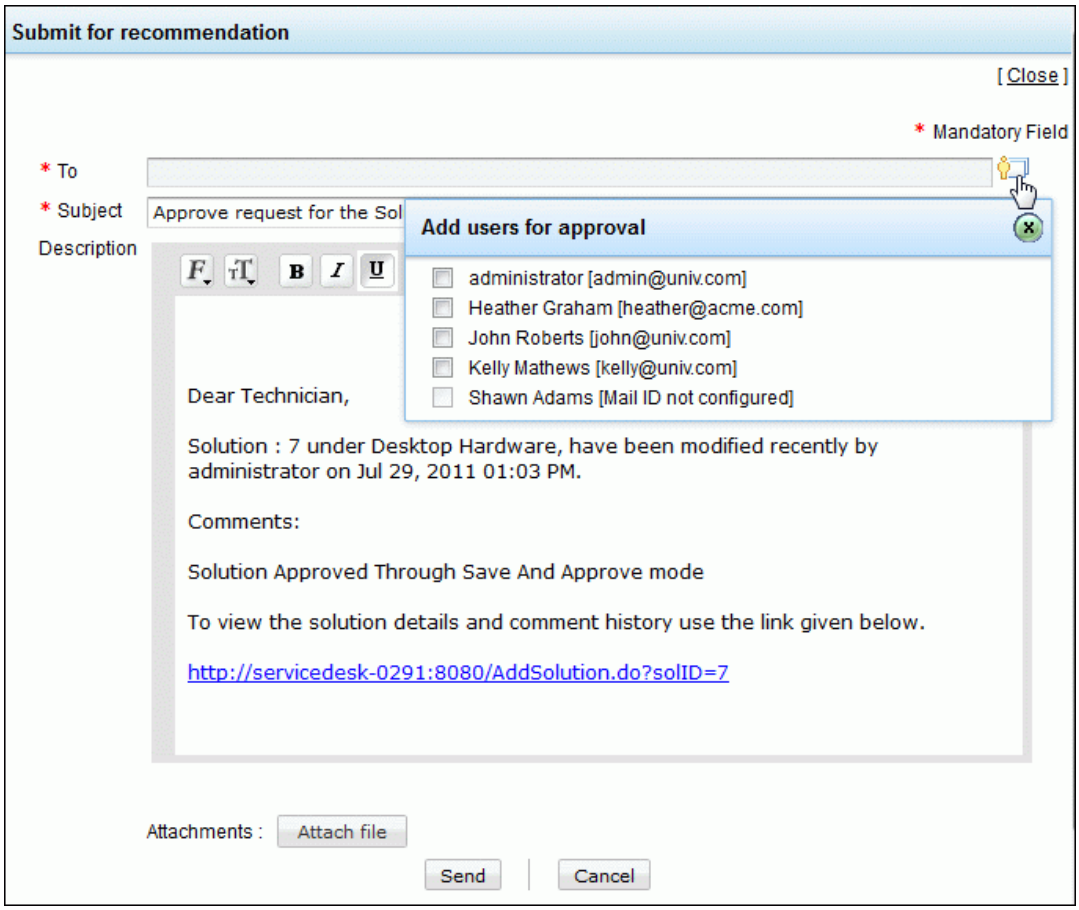
1. From the solutions list view page, click the Subject link of the solution which you want to edit.
2. Click **Edit** button available on the right hand side of the View Solutions Details page.
3. In **Edit Solutions** page, make the necessary modifications. The title, contents, and the topic under which you wish to place the solution are mandatory fields. You can also add more attachments or delete existing ones.
4. Click **Save** button. If you do not want to save the changes and get back to the solutions listing, click **Cancel**.
5. On saving the solution, the status of the solution shows **Unapproved**. The solution has to be submitted for approval to the concerned technician. To know more on refer Submit for Approval.

Submit for Approval

The newly added solutions has to be approved by the concerned technician, in order to be viewed by the requesters in the self service portal. To provide access permission to approve solutions refer Configuring Roles.

To submit for approval,

- From the solutions list view page, select **Unapproved Solutions** from the filter showing combo box. The list of all Unapproved solutions gets displayed.
- Click the subject of the solution which you want to submit for approval. This opens the View Solutions page. The Status is shown as Unapproved below the Solution Id.
- Select **Submit for Approval** under the **Approve Actions** combo box on the right hand side of the page. The Submit for recommendation window pops up.
- Select the **To** address by invoking the icon . The **Add users for Approval** pops up as shown below,



- Enable the check box adjacent to the user whom you want to submit the solution for approval.
- The **To** text field gets filled with the mail id of the corresponding administrator.

5. The **Subject and Description** is entered as given in Notification Rules email template. If needed you can modify the subject and description content manually, else you can change the same from the Notification Rules email template under Helpdesk.
6. If there is any relevant files to be attached then, click **Attach File** button.
7. Click **Send** to submit the solution for approval.

The mail notification is sent to the person who was addressed in the To field of the notification. The mail contains the link to the specific solution which needs approval. On clicking the link, it leads you to the login screen, where on providing the proper credentials, the solution awaiting approval opens. To approve/reject solutions refer Approve/Reject Solutions.

Approve/Reject Solution

On submitting the solutions for approval, a mail notification is sent to the concerned technician requesting the approval of the solution along with the solution link. The solution can be either approved or rejected. The approval access permission is given in Configuring Roles.

To approve/reject solution,

1. Click the link to open the solution.
2. Login to the ServiceDesk Plus application using your username and password. This opens the view solution details page of the solution pending for approval. The status of the solution shows Approval Pending on the right hand side of the page.
3. Click **Approve Actions** combo box -> **Approve Solution**. This opens the **Approve Comments** pop up window. Specify any related **Comments** in the field provided. Click **Approve**.
4. If you wish to reject the solution then, select **Reject Solution** under **Approve Actions**. This opens **Reject Comments** pop up window. Specify comments, such as reason to reject the solution in the **Comments** field. Click **Reject**.

To approve/reject bulk solutions,

1. From the solution list view page, select **Unapproved Solutions** from the filter showing combo box. Enable the check box adjacent to the solutions which you want to approve/reject.
2. Click **Approve Actions** combo box -> **Approve Solution**. This opens the **Approve Comments** pop up window. Specify any related **Comments** in the field provided. Click **Approve**.
3. If you wish to reject the solution then, select **Reject Solution** under **Approve Actions**. This opens **Reject Comments** pop up window. Specify comments, such as reason to reject the solution in the **Comments** field. Click **Reject**.

The approved solutions can be viewed by the requesters in the self service portal. The rejected solutions can be edited and sent for approval to the concerned technician. Thus the solution is not completely deleted from the list.

Delete Solutions

To delete a specific solution,

1. From the solutions list view page, click the subject link of the solution which you want to delete.
2. Click the **Delete** button. A dialog box confirming the delete operation appears.
3. Click **OK** to proceed with the deletion.

To delete multiple solutions,

1. **Select** the check box beside the solution to delete.
2. Click **Delete** button. A dialog box confirming the delete operation appears.
3. Click **OK** to continue. The solution gets deleted from the list.

Search for a Solution

ManageEngine ServiceDesk Plus allows you to search for solutions using the **Keyword Search** or the **Column-wise Search**.

To perform **keyword search**,

1. Click **Solutions** tab in the header pane.
2. In the Search block, enter a keyword relevant to your solution like laptop or printer.
3. Click **Search Solutions** button or press the **Enter** key in your keyboard. The search results display all the solutions that match the search string.

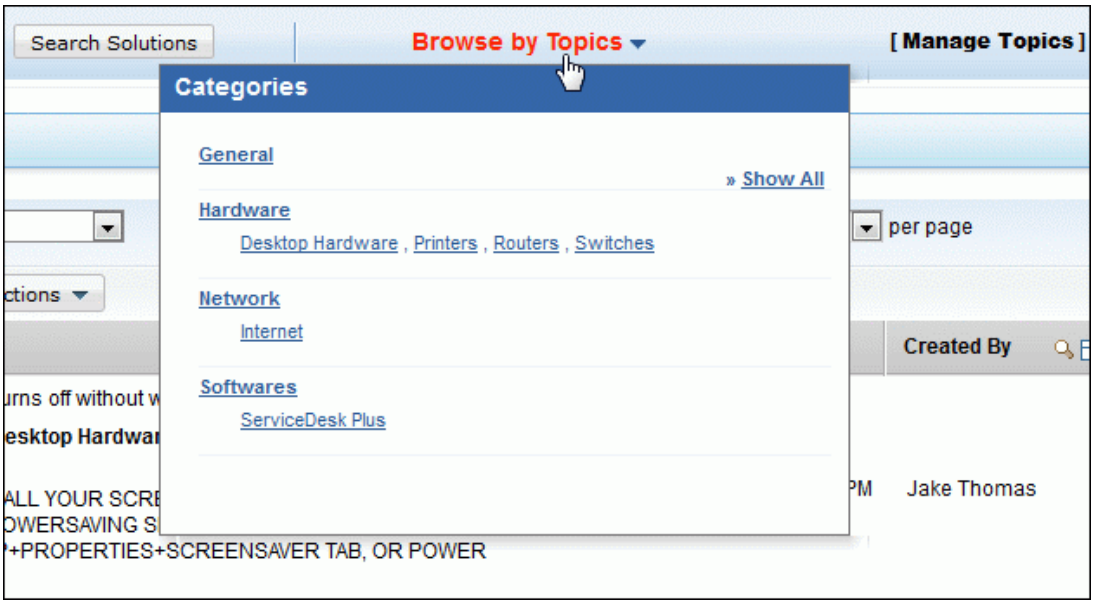
To perform **column-wise search**,

1. Click the **search** icon at the end of the solution list view headers. This opens the search field just below every column in the list view.
2. Enter the search key in field under the column of your choice. You can enter keywords in more than one column to perform a combined column search.
3. Click **Go**. The search results matching the search string(s) are displayed.

Browse Solutions by Topic

To browse for solutions using topics,

1. Click the **Solutions** tab in the header pane. This opens the Solutions list view page.
2. Hover over **Browse By Topics** drop-down menu. This opens the **Categories** window listing all the topics and their sub topics as shown below,



4. To view all the sub topics, click **>>Show All** link on the right hand side of the page. This lists out the topics and sub topics in a logical manner.
5. On clicking the topic, the solutions of the topic and its corresponding sub topics gets listed. Click the sub topic to view the solutions only in that sub topic.

Manage Topics

You can add new topics, rename an existing topic, and move topics and subtopics to a different parent topic. This provides you the ability to organize your solutions in a logical manner that would meet your organization's needs.

To manage topics

1. Click the **Solutions** tab in the header pane.
2. In the **Actions** block, click **Manage Topics** link (OR) Click the **Manage Topics** link available in the **Solutions** list view page adjacent to the Browse by Topics combo box. The manage topics page is displayed with the available topics and their subtopics listed in the hierarchy. From here you can add, rename, move, and delete topics.

Add New Topic

To add a new topic,

1. In the **Manage Topics** page, click the **Add New Topic** button. The add new topic form is displayed just above the available topics list with the **Topic Name** and the list of parent topics as the two fields. If there are no topics available then the **Choose a parent topic** field will have the **/Topic Root** alone.
2. Enter the name of the topic in the **Topic Name** field and choose the parent topic under which you want to place the new topic.
   For example - if you want to add the new topic as a main level topic, choose **/Topic Root** as the parent topic. Or else, choose any other topic as the parent topic.
3. Click **Add**. The topic is added as subtopic to the parent that you chose and is displayed in the available topics list. A message is displayed stating that the new topic is added successfully.

Rename a Topic

To rename a topic,

1. In the **Manage Topics** page, click the **Rename** link of the topic that you wish to rename. The Rename topic form is opened.
2. Type the new name for the topic in the topic name field.
3. Click **Save**.

The changes made to the topic name are displayed in the available topics list and a message is displayed above the list.

Move a Topic

To move a topic to a different parent,

1. In the **Manage Topics** page, click the **Change Parent** link in the row of the topic that you wish to move. The Change Parent Topic form is displayed. In the

Choose the parent topic text box, by default, the current parent topic of the topic that is to be moved is selected.
2. Select the new parent topic.
3. Click **Save**. If you do not want to move the topic to a different parent topic, then click **Cancel**.

	Note: You cannot move a topic as a subtopic to its current child topic itself.

Delete a Topic

To delete a topic,

1. In the **Manage Topics** page, click the **Delete** link in the row of the topic that you wish to delete. A confirmation page opens.
2. Click **Confirm** to delete the topic or click **Cancel** to retain the topic. If you click **Confirm**, then the topic is deleted and a message is displayed stating that the topic is deleted.

When a topic is deleted, by default, the solutions present under the topic are also deleted and if there are any subtopics, then these are moved to the **/Topics Root**. You can later choose to move the topics as child topics to other parent topics. But if you want to override the default actions performed during the delete operation, move the subtopics of the topic which you plan to delete, under a different parent topic of your choice. Also, if you do not wish to delete the solutions that are available under the topic to be deleted, then you can move the solutions to other topics. For this, when you click the Delete link and are led to the confirmation page,

1. Select the check box below the first point. This opens the topic list box, and enables you to move the reference of the solutions of the topic to a different parent topic of your choice.
2. Select the parent topic of your choice from the list box.
3. To move the subtopics to a different parent topic, select the check box below the second point in the confirmation page.
4. In the topic list box, select the parent topic of your choice under which the subtopics of the current parent topic that is being deleted can be moved.
5. Click **Confirm**.

This deletes the topic after moving the solutions and subtopics from the deleted topic to the parent topic you selected.

Note: You cannot move a subtopic of the topic that is going to be deleted, as a subtopic to another child topic of the same parent topic which is going to be deleted.

Assets

ManageEngine ServiceDesk Plus helps to manage all your IT and Non-IT assets. ServiceDesk Plus offers a single view to track and manage all your assets with ServiceDesk Plus, you can track and manage ownership of

- IT, Non-IT and Asset Components.
- Software Asset Management

IT & Non-IT Asset Management

ServiceDesk Plus helps you to manage,

- IT assets such as, workstations, switches, routers, printers, and access points
- Non-IT assets such as basic fixtures, furniture, chairs, tables, projectors, and desk phones
- Asset Components such as keyboards, Mouse and even your printer inks.

Software Asset Management

Software License Management

ServiceDesk Plus helps you to manage software licenses installed across the enterprise. You can consolidate and manage all your software licenses from a single screen. ServiceDesk Plus will scan and automatically pickup license keys for Microsoft Windows and Microsoft Word. You can key-in all the licenses purchased earlier and track future purchase of software licenses through the Purchase module.

Software Metering

ServiceDesk Plus helps you to track the usability of the installed software across organization. It gives the count of rarely used, frequently used and occasionally used software.

Software Compliance

ServiceDesk Plus tracks purchased versus installed licenses helping you to ensure software license compliance. The scheduled scan alerts you when an unauthorized software installation is detected, ensuring software compliance on an on-going basis.

IT Assets

All IP based assets are discovered under IT assets. The list of possible IT assets are given below,

- Workstations
- Printers
- Switches
- Servers
- Routers
- Access Points

- Add New IT Asset
- Edit IT Asset
- Add IT Assets to Groups
- Assign IT Assets to Department
- Modify State of IT Assets
- Change log-in Credentials for IT Assets
- Bulk Scan of IT Assets
- Delete IT Asset
- Import IT Asset from CSV
- View IT Asset Details
- Copy Resources
- Attach Assets
- Attach Components
- Attach Documents
- Assign Assets to Users/Departments/Assets
- Add New Workstation
- Bulk Scan of Newly Added Workstations
- Chang Workstation as Server
- View Workstation Details
- Print the Workstation Details
- Modify Type
- Add Software
- Delete Workstation

Add New IT Asset

IT Assets other than workstations are configured under IT Assets. To add a new asset,

1. Log in to the ServiceDesk Plus application using your **user name** and **password**. This opens the ManageEngine ServiceDesk plus home page.
2. Click **Assets** tab in the header pane. This opens the Asset home page.
3. Click **Quick Actions** drop-down menu and select **Asset** option. Choose the Product from **Add Asset/Component** dialog box. Click **Save**. The Add New form for the selected product is displayed. (OR)

   Click **IT Assets** under Assets block on the left side of the page -> Select any one of the listed IT assets link. e.g. Access points, printers etc. This opens the particular IT asset page.
4. Click **New** button. This opens Add Asset page.
5. Select the **Product Name** of the asset from the combo box. If required, you can add a new product name by clicking **Add New** link beside the product name field. This is a mandatory field.
6. Select the **Vendor Name** from the combo box. If required, you can add a new vendor by clicking the **Add New** link beside the vendor name text field.
7. Specify the **Asset Name** in the given text field. This is a mandatory field.
8. Specify the **Asset Tag, Asset Serial No, Bar Code** and **Asset Cost** in the corresponding text fields.
9. Specify the **Acquisition Date & Expiry Date** from the calendar button.
10. Select the **Site** from the combo box.
11. Specify the **Location** in the given text field.
12. Specify the **Asset State** by selecting the current status of the asset from the combo box.

    If the asset is in **Use** state you need to associate or assign asset to department or user or asset.
    1. Allocate the asset to an **Asset** or to an **User** or to the **Department** by selecting any of the two radio button. Say Associate to Asset or Assign User/ or Department.
    2. If you choose to associate asset to an asset then select the asset name from the **Choose Asset** combo box. Or if you have chosen to assign to user or the department then select User or Department from the combo box.
    3. If the asset is leased select the check box Asset is **Leased**. If the asset is leased then specify the **From** and **To** date from the calendar button.
13. Click **Save** button to save the changes. To save and add another asset click **Save and add new button**.

Edit IT Asset

To edit the resource details,

1. Click the **Assets** tab -> select the **IT Assets link** on the left hand side of the page. This opens the list view page of the IT assets.
2. Click the **title of the IT asset** to be edited. This opens the **Asset details** page.
3. Click **Edit** button on the top right hand side of the page (OR)

   Click the **Actions** combo box next to the edit resource button -> select the **Edit** option. This opens the **Edit Asset** page.
4. Edit the Asset Details block such as **Product Name**, **Asset Name, Tag, Serial No, Bar Code, Vendor Name, Cost, Acquisition Date, Expiry Date, and Location.**
5. Modify the Asset State details such as, **Current usage status** of the assets like In Use, In Repair and so on. Then the **Associate** the asset to **User or Department** details or **Assign** to **User or Department** details.
6. **Update** the changes. You can see the assets details getting updated.

Add IT Assets to Group

You have two types of groups in ServiceDesk Plus say, **Static** group and **Dynamic**. Add to group option in asset list view page is to group bulk of assets. These assets will be grouped under the Static group by default.

To Add IT Assets to group,

1. Log in to ServiceDesk Plus application using your **user name** and **password**.
2. Click any of the **IT Assets** link under the Assets block on the left hand side of the page. Select any one of the listed IT assets link. e.g. Access points, printers etc. This opens the particular IT asset page.
3. Select the assets to be added to the group by enabling the check box. Click **Actions** button -> **Add to Group** option. This opens the **Add Resource(s) to** page.
4. By default you can group assets only to the static group. Either to the **Existing static group** or **New static** group can be added.
5. If you would like to group the assets under **existing static group** then click the corresponding radio button. Select the **group name** from the combo box.
6. Else, if you would like to add a new static group and group the assets, click **New Group** radio button. Specify the **Group Name** and relevant information about the group in the **Description** field.
7. Click **Save** button to save the changes.

Assign IT Assets to Department/Site

Assign IT Asset to Department

1. Click the **Assets** tab in the header pane. This opens the assets home page.
2. Select the **IT Assets** title under the **Assets** block. Select the corresponding IT Asset link say, servers, workstations and so on. This opens the selected **Assets list** view page.
3. Click on the **Asset Name** to be assigned to a **Department/Site** by enabling the check box.
4. Click the **Actions** menu -> select **Assign to Department** option from the list. This opens **Add Resource(s) to** pop-up window.
5. Select the **Department Name** from the combo box and **Save** the details.

Assign IT Asset to Site

1. From the Asset list view page, click the **Actions** menu -> select **Assign to Site** option from the list. This opens **Assign Resource(s) to Site** pop-up window.
2. Select the **Site name** from the combo box.
3. **Save** the details. Else click **Cancel** button.

Modify State of IT Assets

To modify the state of IT Assets,

1. Click the **Assets** tab in the header pane. This opens the assets home page.
2. Select the **IT Assets** title under the **Assets** block. Select the specific IT Asset link. This opens the Assets list view page.
3. Select the assets to be modified of their status by enabling the check box. Click the **Actions** menu and select the **Modify State** option. This opens the **Modify State** pop up window.
4. Select the **State** from the combo box. For ex, In Store, In Use and so on.
5. **Save** the changes.

Change log-in Credentials for IT Assets

You can change the log-in credentials for bulk of assets. You have **Global** credentials and **Local** credentials. Global credentials are common login permissions for all the assets. Local credentials are private login permissions for an asset (generally used to restrict the access permissions to everyone).

To change the login credentials,

1. Click the **Assets** tab in the header pane. This opens the assets home page.
2. Click **IT Assets** under **Assets** block on the left hand side of the page. Select the respective IT assets link. e.g. Access points, Printers and so on. This opens the corresponding IT asset page.
3. Select the IT Assets to change the log-in credentials by enabling the check box. This opens the assets list view page. Click the **Actions** combo box --> and select the **Change Credentials** option. This opens the corresponding page.
4. Select either **Global Credentials** or **Local Credentials** by selecting the radio button.

Global Credentials

1. Select the **Mode** from the drop down. For Windows Workstations select Domain Mode.
2. If you have selected Network mode, then select the **Network** from the drop-down menu. Refer the topic Network Scan to know how to configure the remaining fields in the form.
3. For Domain Mode, select the **Domain** from the drop-down menu.
4. Specify the **User Name** and **Password** of the selected Domain.
5. **Save** the details. If you would like to **Save and Scan now** click the corresponding option.

Local Credentials

1. Select the **Device Type** from the drop down menu. Say, Windows, Unix or other devices.
2. If the selected Device Type is **Windows**, enter the **Login Credentials** of the asset.
3. If the selected Device Type is **Unix**, then refer the topic Network Scan to know more to configure the fields in the form.
4. If the asset is VMWare host machine, then select the Device Type as **Other Devices** and enter the HTTPS login credentials in the **Login Name** and **Password** fields.
5. **Save** the details. If you would like to **Save and Scan Now** click the corresponding option.

Bulk Scan of IT Assets

Scan now option is to scan group or bulk of assets for assets data. Each time when a new asset is added, instead of scanning all the assets, you can scan the newly added assets for resource details.

If you have changed the credentials for the assets or if you want to specify the log-in credentials for an asset then select the **Change Credentials** option under the actions menu and specify the details. Then click **Save and Scan now** button for scanning the assets.

To scan bulk of IT Assets,

1. Click the **Assets** tab in the header pane. This opens the assets home page.
2. Select the **IT Assets** title under the **Assetss** block. Select the specific IT Asset link. This opens the Assets list view page.
3. Select the assets to be scanned by enabling the check box. Click the **Actions** tab -> select **Scan Now** option. This opens the Scan wizard page with total number of scanned and failed assets. And you can view the asset details in the Resource details page.

Delete IT Asset

To delete assets,

1. Click **Assets** tab -> Click **IT Asset** link under the assets block on the left hand side of the page. This opens the IT Assets list view page.
2. From the assets list view page, select assets to be deleted by enabling the check box.
3. Click **Delete** button to delete the selected assets. You can see the selected assets deleted from the list.

Import IT Asset from CSV file

ServiceDesk Plus helps you to import your asset details saved in CSV (Comma Separated values) format. If you have asset details in .XLS files, open it with Microsoft Excel and save it as .CSV files and then import it.

1. From the Assets view list page, click the **Import from CSV** link. This opens the **Resource Import Wizard** page.
2. Select the **Resource Category** from the combo box, IT or NON IT. This is a mandatory field.
3. Select the **Resource Type** from the combo box.

If you have selected **Non-IT** as resource category then the resource type would display components and assets. **(OR)** If you have selected **IT** as resource category then the resource type would display, **components and IT Assets. Under IT Assets you have** workstations and other IT-Assets. This is a mandatory field.

4. Locate the **.CSV file** using the **Browse** button.
5. Click on **Step2** button to go to the next page. Click Previous button if you need to go the previous page.
6. If you have selected the resource type as workstations then select the **Workstation details** from the combo box. Also specify the **Asset Details** by selecting from the combo box. The columns in .CSV file are populated in the select boxes beside each field label. Manage Engine ServiceDesk Plus asset field's needs mapping with the field names from the .CSV file.
7. Map the **Workstation Name for workstation details**. For **asset details map the Product Type, Product Name, Asset Name** from the combo box. These are mandatory fields.
8. Map the Model, Tag, Manufacturer, Operating System and Domain details for the workstation details.
9. Map the Asset Tag, Asset Serial No, Bar Code, Vendor Name, Asset Cost, Warranty Expiry Date, Expiry Date, Location, Assigned to User, Assigned to Department from the combo box.
10. Map the Acquisition Date field with the relevant field in the .CSV file. Also map the order of the acquisition date i.e. date/month/year available in the .CSV file.
11. Click **Step3** to go the next page. Click Previous button if you need to go the previous page.
12. Click **Import Now** button to import the existing data from the .CSV file. Once the data is imported, you can see the Import Wizard page with result break-up.

View IT Asset Details

1. Log in to the ServiceDesk Plus application using your **user name** and **password**. This opens the ManageEngine ServiceDesk plus home page.
2. Click **Assets** tab -> Click **IT Asset** link on the left hand side of the page. This opens the IT Assets list view page.
3. Click the IT Asset name to view the IT Assets details. By default **Resource Info** tab details are displayed.

View Resource Info Details

Resource Info tab displays the Resource Details such as,Resource Name, Tag, Bar Code, Serial No Region, Cost, Acquisition Date and many other details are displayed.

View Relationships

The Relationship tab shows the default relationships of the asset with other assets. If you are have configured CMDB in the application, then the relationship map is displayed. Refer Defining CI Relationship to know more on configuring the relationships between assets.

On clicking the tab -> click the Add Relationship button on the top right hand side of the page.

Connection Relationship

1. Click the Connection Relationship option from the list. This opens the **Connection Relationship** page.
2. To connect the assets to other assets select the **Assets** radio button.
    1. Select the assets to be connected from the **Asset List**.
    2. Move the selected asset to the **Connected Assets list** using the >> button.
    3. Save the details. You can see the connected assets under the **Connected to Assets** block.
3. To connect the assets to the **Business Services** select the corresponding radio button.
    1. Select the business services from the list to be connected to the assets such as, Email, Internet Access and so on.
    2. Move the selected assets from the **Business Service** list to the **Connected Services** list using the >> button.
    3. **Save** the changes. You can see the connected business services under the **Business Services block**.

Usage Relationship

1. Click the Usage Relationship option from the list. This opens the Usage Relationship page.
2. Select the **Assign the asset to User/Department** radio button to associate the asset to the user/department.

    1. Select the **User** from the combo box.
    2. Select the **Department** to be associated from the combo box.
    3. If the **Asset is Leased** then select the corresponding check box.
    4. **Save** the changes. (Or)
3. Select the **Associate to Asset** radio button to assign the asset to the asset.
    1. Choose **Asset** to be associated from the combo box.
    2. **Save** the details.

Container Relationship

1. Click the Container Relationship option from the list. This opens the Container Relationship page.
2. Select the **Components** radio button to associate the components to the user. Select the type of components to be displayed in the list by selecting it from the choose product combo box.
3. Select the components from the **Components List** and move it to the **Attached components list** using >> button.
4. **Save** the details.

View History of IT Asset

Click the **History tab** to view the IT Asset history. This gives the complete IT - Assets **Resource Ownership History on date and State of the components.**

Request Details

On clicking the Request Details page you will be able to view all the requests raised for the asset.

On Clicking the request title you can view the details of the request, requester details, Assets belonging to the user, Time elapsed to solve the request, resolution for the request and history of the request

Also you can send reply for the request or forward the request to the technician. You can Search associated problem and change or add new problem or change to the request.

View Contracts of the IT Asset

Click Contracts tab to view the contracts attached to the IT Asset. This gives the complete details about the contract such as, vendor name, support details, contract rules, expiry date, cost and other rules.

View Costs

1. Click the Costs tab to view the costs associated to the IT Asset.
2. Click **Add Cost** button at the right side of the page to add cost to the IT Asset.

3. Select the **Cost Factor** from the combo box. For ex. Service Cost. This is a mandatory field.
4. Specify the description about the cost in the **Description** field. Say if the cost factor is service cost you can specify important information about the service cost.
5. Specify the **Amount** in $ in the Amount field. This is a mandatory field.
6. Select the **Date** from the calendar button. This is mandatory field.
7. Click **Add Cost** button to add the cost. You can see the cost added to the IT Asset shown in the Other Costs list view page.

Copy Resource

Using Copy Resource option you can make multiple copies of the resource and its details. On making multiple copies of the resource, it becomes easier for the technician to add bulk of similar assets. The technician need not manually enter all the resource details for each resource. The new copies of the resource will be assigned with new asset name and rest of the details is retailed as is.

Example: If you have ten printers of the same configurations in your organization, then in this case, enter the configurations for one printer and save it. Then copy the same printer for ten times and add its configurations to other printers.

To make multiple copies of the Resources,

1. Click the **Assets** tab in the header pane. This opens the assets home page.
2. Click **IT Assets** under Assets block on the left hand side of the page. Select the respective IT assets link. e.g. Access points, Printers and so on. This opens the corresponding IT asset page.
3. Click the **Title** of the assets to be duplicated. This opens the Asset details page.
4. Click the **Actions** menu on the right hand side of the page. Select **Copy Resource** option. This opens the Copy Resource dialog pops up.
5. Specify the **Number of Copies** to be made for the resource in the given text field.
6. **Copy** the resource. You can see the list of resource copies listed in the list view.

Attach Assets

To attach assets to the IT Assets,

1. Click the **Assets** tab in the header pane. This opens the assets home page.
2. Select the **IT Assets link** under the Assets block on the left hand side of the page. Select the corresponding IT Asset link say, Printers, Access Points and so on. This opens the Asset list view page.
3. Click the title of the asset to be attached with an asset. This opens the asset details page.
4. Click the **Actions** combo box -> select the **Attach Asset** option from the list. This opens the **Attach Asset** pop up window.
5. If you would like to display the list of all assets or filter specific asset then select the assets to be displayed from the **List** combo box. Ex: Printer, Access Points and so on. Also select the type of asset such as asset in store, in use and so on from the **of type** combo box.
6. You have two columns, such as **Asset list** and **Attached Assets** list. You have to select the assets to be attached from the assets list and move it to the attached assets list using the **>>** button. To remove the assets from the attached assets list use the **<<** button.

   Example:
   If you would like to attach a printer to a workstation then select the list of assets to be attached from the assets list and move it to the attached assets list.
7. **Save** the changes. If you would like to detach all the attached assets then select the **Detach All** option.

Attach Components

To attach components to an asset,

1. Click the **Assets** tab in the header pane, this opens the assets home page.
2. Select the **IT Assets link** under the Assets block on the left hand side of the page. Select the corresponding IT Asset link say, Printers, Access Points and so on. This opens the IT asset list view page.
3. Click the **Title** of the asset to be attached with an component. This opens the asset details page.
4. Click the **Actions** combo box -> select the **Attach Component** option from the list. This opens the **Attach Component** pop up window.
5. If you would like to display the list of all components or filter specific components then select the components to be displayed from the **List** combo box. Ex: keyboard, mouse and so on. Also select the type of component such as component in store, in use and so on from the **of type** combo box.
6. You have two columns, such as **Component list** and **Attached Components** list. You have to select the components to be attached from the components list and move it to the attached components list using the **>>** button. To remove the component from the attached component list use the **<<** button.

   Example:

   If you would like to attach a keyboard and a mouse to a workstation then select the list of components to be attached from the component list and move it to the attached component list.

7. **Save** the changes. If you would like to detach all the attached components then select the **Detach All** option.

Attach Documents

To attach documents,

1. Click the **Assets** tab in the header pane. This opens the Asset home page.
2. Select **IT Assets** link under the **Assets** block on the left hand side of the page. Select the corresponding IT Assets say, Printers, Routers and so on. This opens the IT asset list view page.
3. Click the Asset Name of the asset to which the document needs to be attached. This opens the **Asset details** page.
4. Click the **Actions** combo box on the top right hand side of the page -> select the **Attach Documents** option. This opens the **Attach File** pop up window.
5. Choose the file to be attached by clicking the **Browse** button. The maximum size of the attached file can be 10 MB.
6. Click **Attach File**. The attached document will be listed in Asset details page under Attached Documents. The attached file can be deleted by clicking the delete icon beside file name.

Assign IT Assets to Users/Departments/Assets

1. Click the **Assets** tab in the header pane. This opens the assets home page.
2. Select the **IT Assets** title under the **Assets** block. Select the specific IT Asset link. This opens the selected Assets list view page.
3. Click the **Asset Name** to be assigned a user/department/asset. This opens the Asset details page.
4. Click the **Assign** sub tab on the right hand side of the page. This opens the **Assign/Associate** page.
5. If you would like to assign the asset to user or department then, select **Assign User and or Department** radio button. Or if you would like to associate with an asset then select **Associate to Asset** radio button.

Assign User and or Department

1. On selecting this radio button, select the **User name and Department name** from the combo box.
2. If the asset is leased then enable the **Asset is Leased** check box and specify the **From and To** date of the lease.

Associate to Asset

1. On selecting this radio button, **Choose the Asset** to be associated from the combo box.

7. **Save** the details.

Add New Workstation

1. Log in to the ServiceDesk Plus application using your **user name** and **password**. This opens the ManageEngine ServiceDesk plus home page.
2. Click **Assets** tab in the header pane. This opens the asset home page.
3. Click **IT Asset** link under the resource block on the left hand side of the page. Select the corresponding assets say, Printers, Routers and so on. This opens the Asset list view page. Click **New** button. (OR)

   Click **Quick Actions** drop-down menu and select **Workstation** option. The **Add New Workstation** page is displayed.

Computer Details

4. Specify the **Name** of the computer in the name text field and select the **Model** of the workstation from the combo box. This is a mandatory field. **Ex: Latitude D620.**
5. Specify the **Service Tag & Manufacturer** of the workstation in the given text field.
6. Specify the **Processor Count, Processor Info, Clock Speed** and **Manufacturer** of the processor in the given text fields.
7. Specify the **RAM** and **Virtual Memory** in (MB) the given text fields.
8. Also specify the **Name** and **Service Pack** of the operating system in the corresponding fields.

Resource Info Details

9. Specify the resource info details such as, **Resource Tag, Resource Serial No, Bar Code** & **Location** in the given text fields.
10. Select the **Site** and **Vendor Name** of the workstation from the combo box.
11. Select the **Acquisition Date, Expiry Date & Warranty Expiry Date** from the calendar button.

Asset State Details

12. Select the status of the asset from the **Asset State** combo box. **Ex:** In Store, In Use and so on

Network Adapter Details

13. Specify the network adapter details such as, **Network IP Address, MAC Address, NIC, Network, DNS Server name & Default Gateway** in the given text field.
14. Select the **Domain** name from the combo box.
15. If you would like to enable **DHCP** then select the check box.

Input/Output Devices Details

16. Also specify the input/output devices details of the workstation. Specify the **Monitor Type, Mouse Type, Keyboard Type** & their corresponding manufacturers in the respective fields.
17. **Save** the details. If you would like to **Save and Add New** workstation then click the corresponding button.

Bulk Scan of newly Added Workstation

Using this option you can scan a new workstation added to the domain for its hardware and software details. This is very useful when you have to scan a single or a set of newly added workstations. In such case you don't have to scan the entire domain for adding the workstations to the network.

To Scan New Workstation,

1. Click the **Assets** tab in the header pane -> click the **Workstations** link under the **Assets** tab on the left side of the page. This opens Workstations list view page.
2. Click the **New Scan** button. This opens the Scan Configuration page.
3. Specify the **Name/IP** of the workstation. This is a mandatory field.
4. Select the log-in credentials for the workstation by selecting either of the two radio buttons. Say **Global** or **Local** credentials. By default Global Credentials option will be selected.

Global Credentials

1. Select the **Scan type** from the combo box. Say **Domain mode or Network mode.**
2. Select the **Domain/Network** name from the combo box. This is a mandatory field.
3. Specify the **Login Name** and **Password** for the selected domain.

Local Credentials

1. Specify the local **Login Name** and **Password.**
2. Select the **Protocol** to connect it to the workstation by enabling either of the two radio buttons. Say SSH or Telnet.
3. If you would like to scan software in Linux workstation then select the corresponding check box.
4. Click **Scan** to scan the workstation. Else click **Cancel**.

Change Workstation as Server

You can change workstation as server,

1. Click the **Assets** tab in the header pane. This opens the assets home page.
2. Click **IT Assets** under Assets block on the left hand side of the page. Click the **Workstations** link. This opens the workstations list view page.
3. Select the workstations name to be changed as server by enabling the check box.
4. Click the **Actions** menu and select the **Change as Server** option. The **Modify Device Type** window pops up.
5. Select the **Type** of the server from the combo box.
6. **Save** the details.

View Workstation Details

1. Log in to the ServiceDesk Plus application using your **user name** and **password**. This opens the ManageEngine ServiceDesk plus home page.
2. Click **Assets** tab -> Click **Workstation** link under **IT Assets** title on the left hand side of the page. This opens the workstations list view page.
3. Click the workstation name to view the workstations details. By default **Resource Info** tab details are displayed.

View Resource Info Details

Resource Info tab displays the Resource Details & Workstation Details. Resource details such as Resource Name, Tag, Bar Code, Serial No etc. Workstation details such as Computer Name, OS version, Service pack, Processor details, memory information and many other details are displayed.

View Hardware Details

Click **Hardware tab** to view the complete Hardware details of the workstation. The hardware tab is broadly divided in to four major blocks such as **Workstation Details** block, **Network Details**, **Discs and Drive Details, Printer Details** and **Other Details.**

Under the workstation block you can view computer system, operating system, processor, memory and installed memory details. Under network block you can view the network adapters details. Under disks and drives block you can view the hard disks, logical drives and physical drives details. The printer details can be viewed under the printer details block. Under other details block you can view the keyboard, mouse, monitor, multimedia, ports, USB controllers details.

View Software Details

Click **Software tab** to view the software details of the workstation. This opens the software details page with the list of all installed software's in the workstation. By default the list of All Software will be displayed.

Select the corresponding filter option from the Filter Viewing combo box. There are different status levels of the **software, such as Excluded, Managed, Prohibited, Freeware, Shareware and Unidentified.** You can select any of these status levels and filter the software's listed.

Click on the **software title** to view the software details such as, number of **licensed installations**, **number of unlicensed installations** and **number of Purchased licenses**.

If there are any **license violations a warning message is displayed saying: License Violation.** Software installations are more than purchased licenses.

View Relationships

The Relationship tab shows the default relationships of the asset with other assets. If you are have configured CMDB in the application, then the relationship map is displayed. Refer Defining CI Relationship to know more on configuring the relationships between assets.

On clicking the tab -> click the Add Relationship button on the top right hand side of the page.

Connection Relationship

1. Click the Connection Relationship option from the list. This opens the **Connection Relationship** page.
2. To connect the assets to other assets select the **Assets** radio button.
    1. Select the assets to be connected from the **Asset List**.
    2. Move the selected asset to the **Connected Assets list** using the >> button.
    3. Save the details. You can see the connected assets under the **Connected to Assets** block.
3. To connect the assets to the **Business Services** select the corresponding radio button.
    1. Select the business services from the list to be connected to the assets such as, Email, Internet Access and so on.
    2. Move the selected assets from the **Business Service** list to the **Connected Services** list using the >> button.
    3. **Save** the changes. You can see the connected business services under the **Business Services block**.

Usage Relationship

1. Click the Usage Relationship option from the list. This opens the Usage Relationship page.
2. Select the **Assign the asset to User/Department** radio button to associate the asset to the user/department.
    1. Select the **User** from the combo box.
    2. Select the **Department** to be associated from the combo box.
    3. If the **Asset is Leased** then select the corresponding check box.
    4. **Save** the changes. (Or)
3. Select the **Associate to Asset** radio button to assign the asset to the asset.
    1. Choose **Asset** to be associated from the combo box.
    2. **Save** the details.

Container Relationship

1. Click the Container Relationship option from the list. This opens the Container Relationship page.
2. Select the **Components** radio button to associate the components to the user. Select the type of components to be displayed in the list by selecting it from the choose product combo box.

3. Select the components from the **Components List** and move it to the **Attached components list** using >> button.
4. **Save** the details.

View History of workstation

Click the **History tab** to view the workstation history. This gives the complete Workstation **Scan History and Resource Ownership History on date.**

Request Details

On clicking the Request Details page you will be able to view all the requests raised for the asset.

On Clicking the request title you can view the details of the request, requester details, Assets belonging to the user, Time elapsed to solve the request, resolution for the request and history of the request

Also you can send reply for the request or forward the request to the technician. You can Search associated problem and change or add new problem or change to the request.

View Contracts of the workstation

Click Contracts tab to view the contracts attached to the workstation. This gives the complete details about the contract such as, vendor name, support details, contract rules, expiry date, cost and other rules.

View Costs

1. Click the Costs tab to view the costs associated to the workstation.
2. Click Add Cost button to add cost to the workstation.
3. Select the Cost Factor from the combo box. For ex. Service Cost. This is a mandatory field.
4. Specify the description about the cost in the description field. Say if the cost factor is service cost you can specify important information about the service cost.
5. Specify the Amount in $ in the Amount field. This is a mandatory field.
6. Select the Date from the calendar button.
7. Click Add Cost button to add the cost. You can see the cost added to the workstation shown in the Other Costs list view page.

Print the Workstation Details

You can view the preview of the workstation details in printable format.

To view the Preview of Workstation Details,

1. Click the **Assets** tab in the header pane. This opens the assets home page.
2. Click **IT Assets** under **Assets** block on the left hand side of the page. Select the **Workstations** link. This opens the workstation details page.
3. Click the **Workstation Name** to view the preview of the workstation details. This opens the Workstation details page.
4. Click the **Actions** menu on the right hand side of the page. Select **Print Preview** option. This opens the **Resource Details** pop up window. You can view the complete resource details, workstation details, network details, disks & drives details, printer details, other details, software details, installed service packs details, resources attached details, workstations scan history details, resource ownership history details, contracts details & costs details.

Modify Type

To Modify Device type,

1. Click the **Assets** tab in the header pane. This opens the assets home page.
2. Click **IT Assets** under **Assets** block on the left hand side of the page. Select the Workstations link. This opens the workstation list view page.
3. Click the **Workstation Name** to be modified of the device type. This opens the Workstation details page.
4. Click the **Actions** menu on the right hand side of the page. Select **Modify Type** option. This opens the modify device type pop up window.
5. Select the device type from the **Modify Type** combo box.
6. **Save** the details.

Reconcile IT Assets

The Reconcile option is to merge two resources and delete one of the resource. This is essential when the assets received from a Purchase Order are associated to Departments or Groups, and on performing a domain scan or a network scan, these assets are duplicated.

Say, "LD400 - PO # 2[10]" is the workstation purchased and has been renamed as "SDP-dept". On performing a scan, both the workstations (LD400 - PO # 2[10] and SDP-dept) appear in the List View. To avoid duplication, you can reconcile the workstations, where LD400 - PO # 2[10] is deleted and SDP-dept is retained. The reconcile option can be performed from either the PO details page or from the asset list view page.

To reconcile from the asset list view page,

1. Click the **Assets** tab in the header pane.
2. Click **IT Assets** under the Assets block.
3. Select any of the IT asset, say workstation. From workstation list view, enable the check box beside the two workstations to reconcile.
4. Click **Actions** drop down -> **Reconcile** option. Click **OK** to proceed with the reconcile operation.

NOTE: Please note that if both the assets are received via Purchase Order, then the assets cannot be reconciled.

Add Software

Using this option you can add multiple software to the workstation.

To add Software to the workstation,

1. Click the **Assets** tab in the header pane. This opens the assets home page.
2. Click **IT Assets** under Assets block on the left hand side of the page. Select the **Workstations** link. This opens the workstation list view page.
3. Click the **Workstation Name**. This opens the Workstation details page.
4. Click the **Actions** menu on the right hand side of the page. Select **Add Software** option. This opens the **Add Software** pop up window.
5. Select the software from the list to be added to the workstation. You can select multiple software to be added to the workstation using ctrl or shift keys.
6. **Save** the details. Else **Close** the pop-up window.

Delete Workstation

1. Click **Assets** tab -> Click **IT Asset** link on the left hand side of the page. This opens the IT Assets list view page.
2. From the Workstations view list page, select workstations to be deleted by enabling the check box.
3. Click **Delete** button to delete the selected workstations. You can see the selected workstation deleted from the list.

Identifying the Uniqueness of Workstations

While performing a scan in ServiceDesk Plus, the criteria that helps to identify the uniqueness of the workstations is in the following order,

1. **Agent ID (only for Agent based Scan)**
2. **Service Tag**
3. **Workstation Name**
4. **MAC Address**

With the help of these criteria, ServiceDesk Plus differentiates between workstations and assumes the Agent ID, Service Tag, MAC Address and Workstation Name to be unique for each workstation. If any criteria match for two workstations, then the workstation details will be overwritten.

The procedure in which the workstations are overwritten for each criteria are explained below,

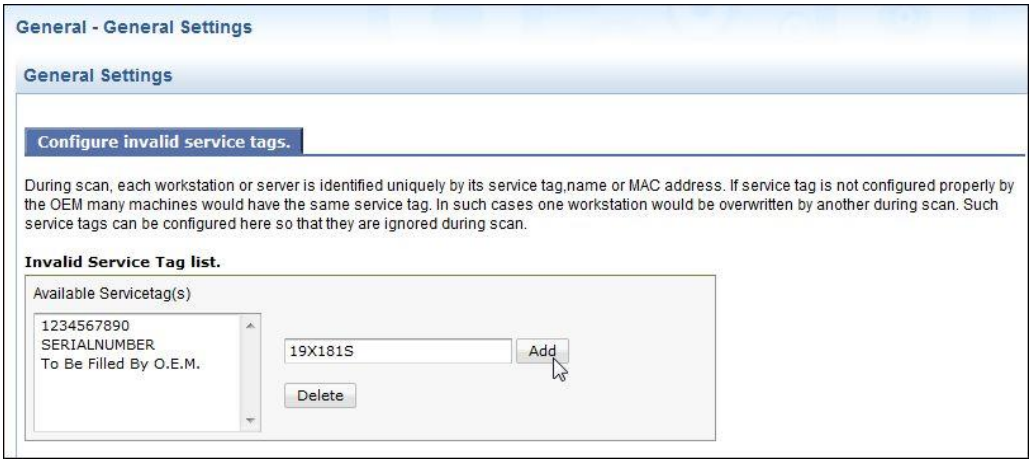
Service Tag

Consider two workstations, Machine A and Machine B with similar Service Tag as 12345. The names of the workstations are MachineA.domain.com and MachineB.domain.com respectively. Consider that only Machine A has been scanned by the application. Upon scanning Machine B, since the Service Tag is the same, the workstation details of Machine A will be overwritten by that of Machine B.

The Solution: Configuring Invalid Service Tags

If the Service Tag is not configured properly by the OEM, then many machines would have similar Service Tags. In this case one workstation would be overwritten by another during scan. Such service tags can be ignored during scan by adding them under the **Invalid Service Tag list**.

This configuration is under **Admin** tab -> **General Settings** (Under Discovery section).



Workstation Name

In general, while scanning workstations, the application will first look for Service Tag. If the Service Tag is empty the next parameter i.e., the computer name will be considered and workstations will be overwritten accordingly. Consider the workstation, MachineA.domain.com, is already available in the application. If another machine with same name is scanned then the details in former workstation (MachineA.domain.com) will be replaced by the latter.

MAC Address

The third criteria which the application looks for while overwriting workstations are the MAC Addresses. Consider a workstation with different name and Service Tag, but with same MAC address as the one already available in the application. On performing a scan, the details of the existing workstation will be replaced by the newly scanned workstation.

The Solution:

In certain environments there are possibilities of MAC address being the same in many machines (VMware or machines connected through VPN). Unique MAC address identification can be enabled or disabled under **Admin** tab -> **General Settings** (Under Discovery section).

Scenarios: When does the machine be renamed with _old

Scenario 1:

When the workstations are swapped in the network.

Consider two workstations, MACHINE-A with service tag ST-1 and MACHINE-B with ST-2. Both the workstations are swapped in the network. On swapping the workstations configurations is, MACHINE-A with ST-2 and MACHINE-B with ST-1. If you scan MACHINE-A, then the workstation MACHINE-B will be overwritten as MACHINE-A and the workstation MACHINE-A will be renamed as MACHINE-A_old. If you scan MACHINE-B again, it will overwrite the MACHINE-A_old as MACHINE-B.

Scenario 2:

The workstation is already discovered with a valid Service Tag but scanned again with a different service tag. In this case ServiceDesk Plus will rename the existing workstation with '_old' and add the machine again with the new Service Tag.

Case 1:

In certain cases, the workstations might be discovered with valid service tag. But during its life cycle, you might change the motherboard of the workstation, thus changing the service tag. In this case, the existing workstation is renamed with _old and the workstation with the new service tag is added again.

Case 2:

The workstation MACHINE-A with service tag ST-1 is already scanned in the network. Another workstation, MACHINE-A with service tag ST-2 is added to the network. If you scan the workstation MACHINE-A again, it will rename the workstation as MACHINE-A_old and will add the newly added workstation as MACHINE-A.

Case 3:

In case of VMware machines, when the host is changed, the Service Tag gets changed too.

Workstations overwritten with _old during Agent Based Scan:

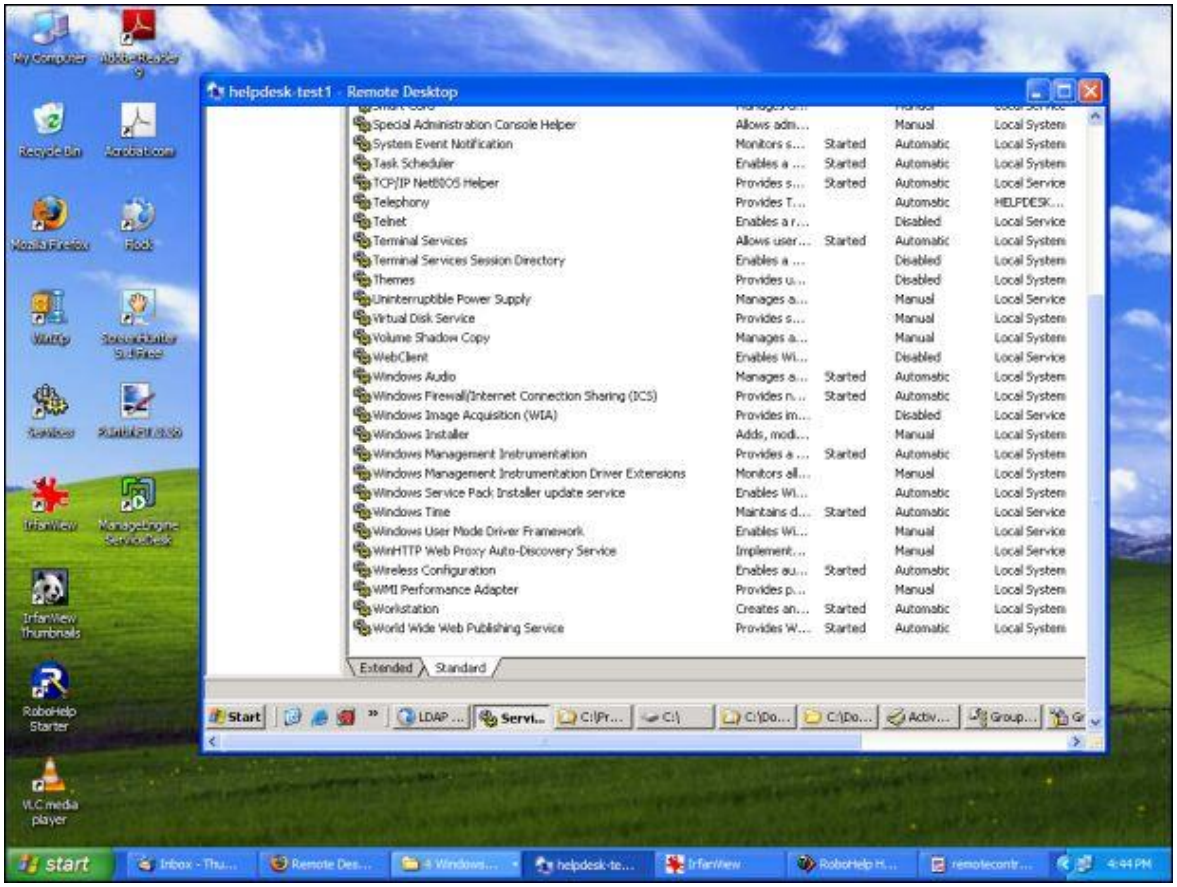
If you have enabled Agent Base Scan, then the Agent ID (a unique ID which is created on all workstations when the agent is installed on them for the first time) will be considered as a unique parameter for fetching the workstation details.

If the agent is deployed through an 'Image', then the same Agent ID will be copied to all the client machines. This in turn, will create duplicate entries for the workstations when scanned and subsequently appends the previous workstation with _old. To overcome this issue, we request you to uninstall the agent completely from the registry and deploy it through AD GPO.

Remote Desktop

With multiple site support, ManageEngine ServiceDesk Plus has emerged as a globally supported IT helpdesk software, effectively resolving issues raised from various locations. Sometimes, there may be issues that require technicians to access machines in remote location say, a SAP related issue in New York requires immediate attention and your support team is located in California. Likewise, when a request is raised via phone call, it would be great if the technician can access the requesters machine from his desk to resolve the issue instantly.

That is where Remote Desktop Sharing comes into play ! Instead of launching a whole bunch of different software to access remote machines, ServiceDesk Plus Remote Desktop Sharing helps you to access all your scanned workstations and resolve issue in no time !



Browsers compatible for accessing remote desktop

- Internet Explorer (version 5.5 and above)
- Firefox

Access Remote Control

1. Click the **Asset** tab in the header pane.
2. From the Assets block, select **Workstations** under IT assets. The list of all the workstations is displayed.
3. Select the workstation you wish to gain remote access.
4. From the workstation details page, click on **Remote Control** tab.

   Note: Please note that the credentials should be configured before selecting the remote control tab. If the credentials are not configured then the log-in credentials window pops up.
5. Click **Save and Remote Control**.

The following activities occur on clicking the Remote Control tab from the workstation details page.

File Transfer

The Agent.exe file is installed in the C drive of the remote machine and an ActiveX control is run as a viewer. The following should be configured in the remote machine for the file transfer.

- Enable "File and Printer share" on executing the command (given below) in the command prompt of the remote machine

netsh firewall set service FILEANDPRINT

- User should have permission to write in C drive of remote machine.

The above two steps are required only on performing remote control to a workstation for the first time. The ports for pushing the agents are TCP 135, 138, 139 and 445.

Instead of opening these ports and giving permission to all the scanned workstations for transferring files, you can push the agent.exe from Active Directory to all the machines.

To push the agent to remote machine from Active Directory,

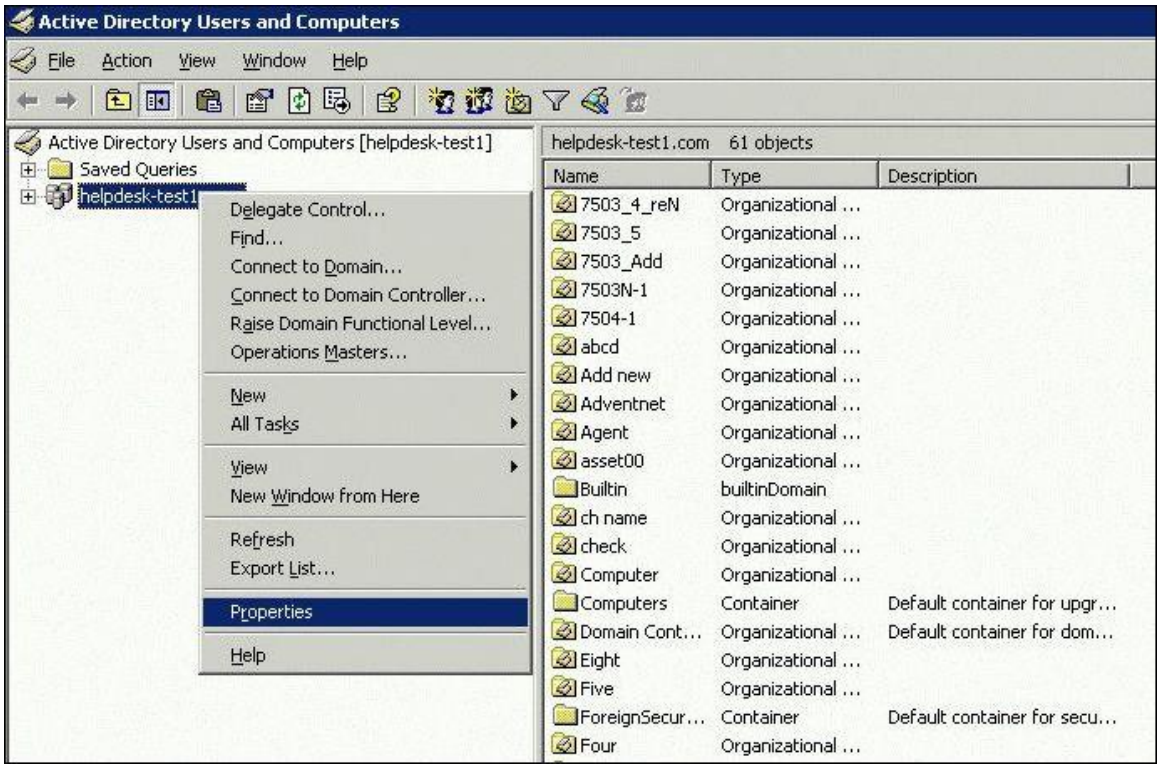
1. Download the contents in the batch file and copy it to the ActiveDirectory machine. The contents in the batch file are,

   copy file://network/ share\agent.exe c:\ /y

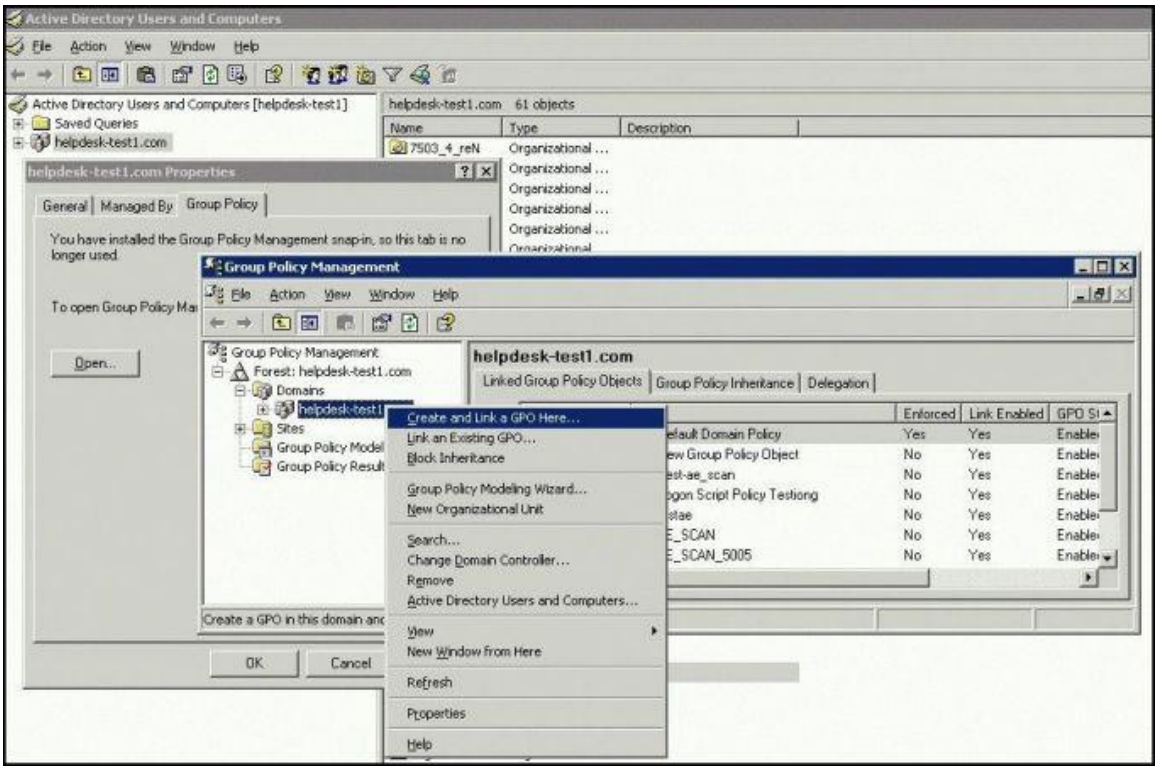
   copy file://network/ share\install.iss c:\ /y

   copy file://network/ share\uninstall.iss c:\ /y

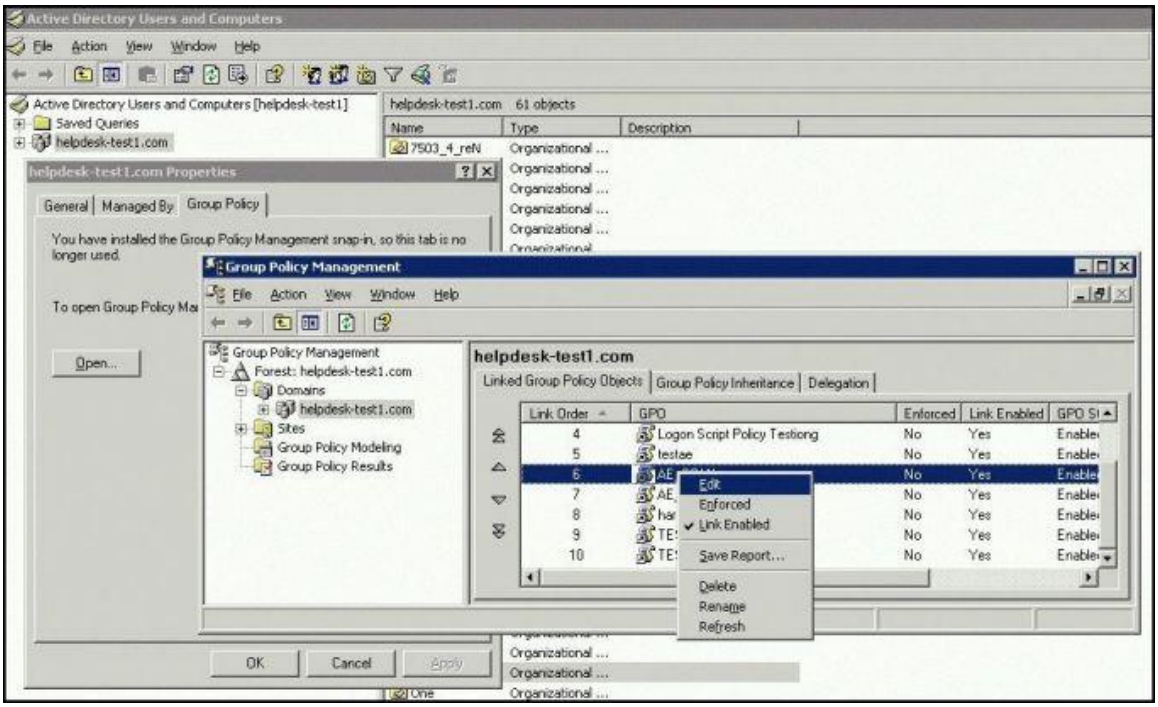
2. Copy the files from *<SDP-Home>\server\default\conf\agent*.** to the Active directory machine.
3. In the script, the path from where the files are to be copied is specified as "network share". Replace this path to where you have copied the files to.
4. From your Domain controller, click **Start** -> **Administrative Tools** -> **Active Directory Users and Computers**.
5. In the console tree, right click on your domain, and select **Properties**.



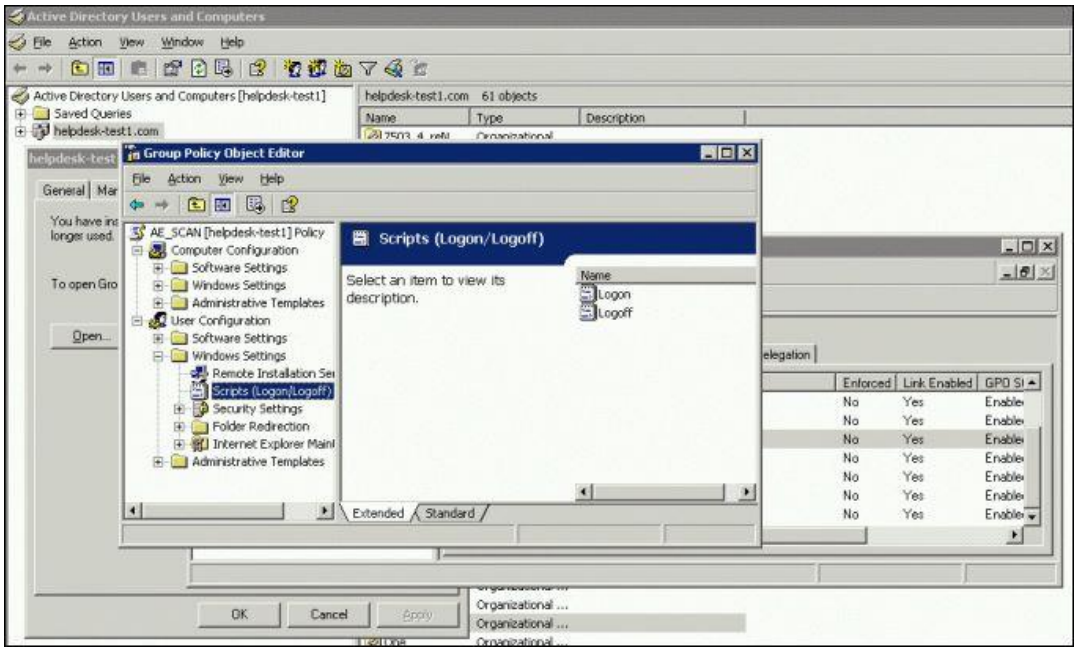
6. Select **Group Policy** tab, and click **Open** (New) button. The Group Policy Management window opens.
7. Right click on the name of domain or the Organizational unit for which you would like to configure the script. Click **Create and Link a GPO Here...** option.



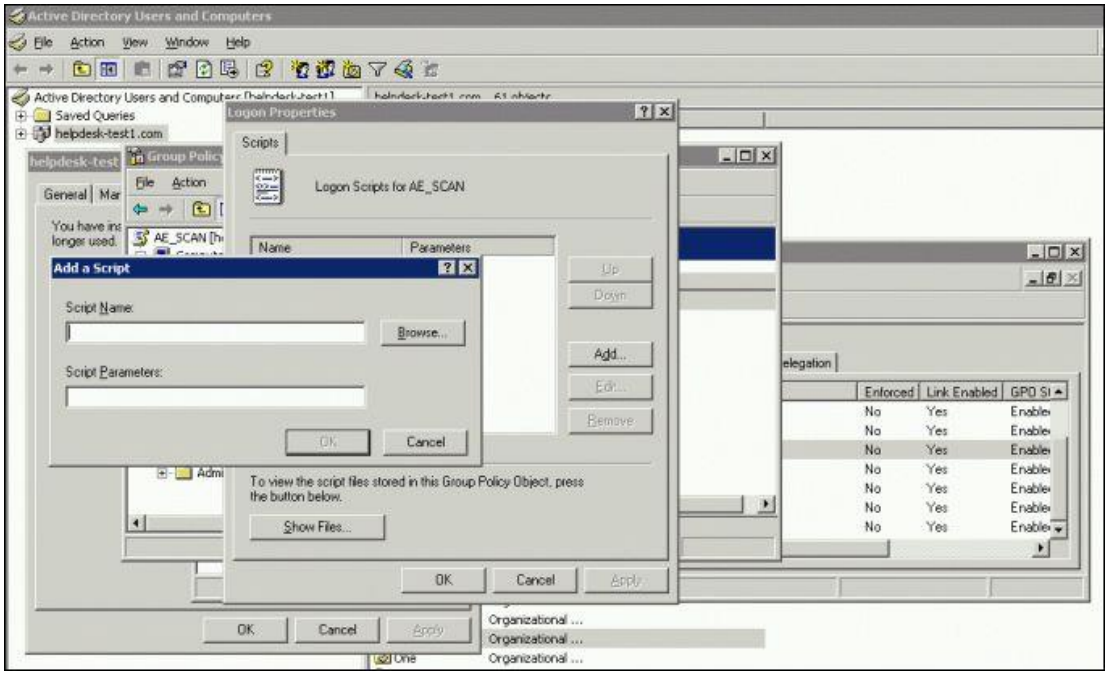
8. Type a name for the new GPO (for example; REMOTECONTROL), and click **Ok**. The GPO is added to the existing list.
9. Right click on the newly created GPO and click on **Edit** option.



10. From the Group Policy Object Editor window, select **User Configuration** -> **Windows settings** -> **scripts** -> **double click logon.**



11. In the new Logon Properties window click on **Add**. The **Add a Script window** opens. Browse and select the Script name "CopyAgent.bat" and the script should be accessible by the remote machines.



12. Click **OK** on Logon Properties window.

Installing the Agent and starting the Service

Using Windows Management Instrumentation (WMI), the agent is installed and the remote workstation can be accessed. The ports to install and start the agent as service in WMI are TCP 135, 445 and one random port greater than 1024. The service starts with the name ManageEngine AssetExplorer-RemoteControl.

Note: You can verify the installation of the agent by check the files under the directory *C:\ProgramFiles\AdventNet\ME\AssetExplorer\RemoteControl* of the remote machine.

Installing ActiveX Viewer in the browser

On starting the service in the remote machine, the ActiveX viewer is installed in the client machine, which connects the remote machines as add on to the browser. In Firefox 2 browser, the viewer is installed each time the remote control button is selected.

Acknowledge

An acknowledge message appears in the client window from which you try to connect the remote machine. Click Ok to allow technician to access your workstation.

Meeting

The Meeting is established between the remote machine and the client machine (this may or may not be server machine). The port TCP/ 10443 should be opened in the firewall between the remote machine and the client machine for this communication.

Disconnect Remote Control

When you close the pop up window of Remote Control, the service running in the target computer will be stopped using WMI.

Configure Asset Depreciation

Most of the products purchased by your organization, wear out and decrease in value, or depreciate, over a period of time. Calculating the depreciation of such products becomes utmost essential while creating the financial report of your organization.

ServiceDesk Plus provides 4 methods to calculate asset depreciation, which can be configured in two levels namely, Product Level and Asset Level.

- **Product Level Depreciation Configuration:**
  The Depreciation Configuration at the product level is generally configured under **Admin** -> **Product**. The depreciation configuration is applicable for all the assets under the product.
- **Asset Level Depreciation Configuration:**
  The Asset Level Depreciation Configuration denotes the depreciation details configured for individual assets.

NOTE:

1. Please note that you can configure depreciation only for assets and components.
2. The Depreciation configuration at the asset level will always override the depreciation configuration at the product level.

Methods of Calculating Depreciation & Terminology

The four methods of calculating the asset depreciation are:

- Declining Balance
- Double Declining Balance
- Straight Line
- Sum of the Years Digit

Before we begin configuring depreciation, there are certain terms related to depreciation calculation:

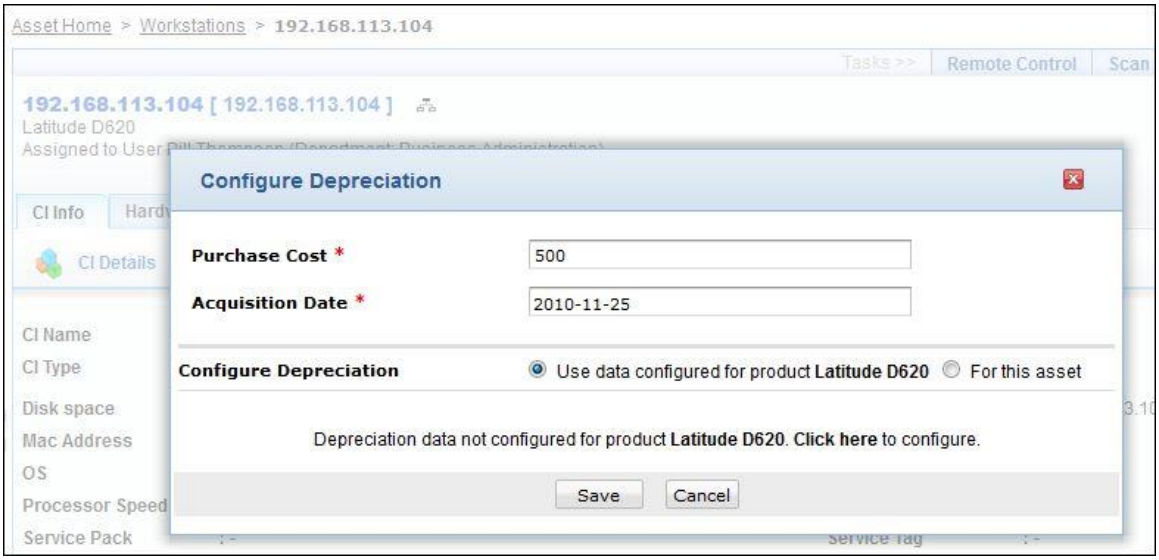
- **Useful Life:** The period during which an asset is expected to be available for use.
- **Salvage Value:** The estimated selling value of any asset, after it has reached the end of service life, or its value has depreciated substantially. It is the total net worth of any asset after it has exhausted its useful life span.

Product Level Depreciation Configuration

In most cases, the depreciation details at the product level will be configured while adding the product under the Admin module. You can refer the topic Configure Depreciation to know how to configure the depreciation details while adding the product.

If the depreciation details are not configured at the product level, then you can do so from the asset details page.

1. Click the **Assets** tab in the header pane.
2. Select any IT Asset, Non-IT Asset or Component. Let's take the example of the IT Asset - Workstation.
3. Select a workstation from the List view.
4. In the details page, click **Actions** drop-down menu and select **Configure Depreciation** option.
5. Specify the **Purchase Cost** and the **Acquisition Date** of the asset.
6. To configure depreciation details at the product level, select **Use data configured for product** radio button.
7. Click **Click here** link to select the Depreciation Method.



8. Choose the **Depreciation Method** from the drop down. If the Depreciation Method is **Declining Balance**, then the **Useful Life** radio button and **Decline Percent** radio button appears. If the depreciation method is **Straight Line**, then the **Useful Life** radio button and **Depreciation Percent** radio button appears.
9. If you have selected **Useful Life** radio button, then specify the **Useful Life** of the product. Alternatively, if you have selected **Decline Percent** or **Depreciation Percent** radio button, then specify the **Decline Percent** or **Depreciation Percent** of the product.
10. Specify the **Salvage Value** of the product.
11. Click **Save** button. The configured depreciation details will be applicable for all the assets with Model Latitude D600.

Asset Level Depreciation Configuration

You can configure the depreciation details at the asset level from the **asset List view**. To configure depreciation for individual assets,

1. Click the **Assets** tab in the header pane.
2. Select any IT Asset, Non-IT Asset or Component. For an example, let’s consider the IT Asset-Workstation.
3. In the List view, select the check box beside the asset to configure depreciation.
4. Click **Actions** drop-down box and select **Configure Depreciation** option. The Configure Depreciation pop-up is displayed.

5. Choose the **Depreciation Method** from the drop down. If the Depreciation Method is **Declining Balance**, then the **Useful Life** radio button and **Decline Percent** radio button appears. If the depreciation method is **Straight Line**, then the **Useful Life** radio button and **Depreciation Percent** radio button appears.
6. If you have selected **Useful Life** radio button, then specify the **Useful Life** of the product. Alternatively, if you have selected **Decline Percent** or **Depreciation Percent** radio button, then specify the **Decline Percent** or **Depreciation Percent** of the product.
7. Specify the **Salvage Value** of the product.
8. Click **Save** button.

If the depreciation is configured for the selected asset(s), then a dialog box confirming the change in depreciation configuration appears. Click **OK** to proceed. The depreciation details are successfully saved.

Alternatively, you can also configure asset level depreciation while **adding a new asset** and from the **asset details page**. To configure depreciation from the asset details page,

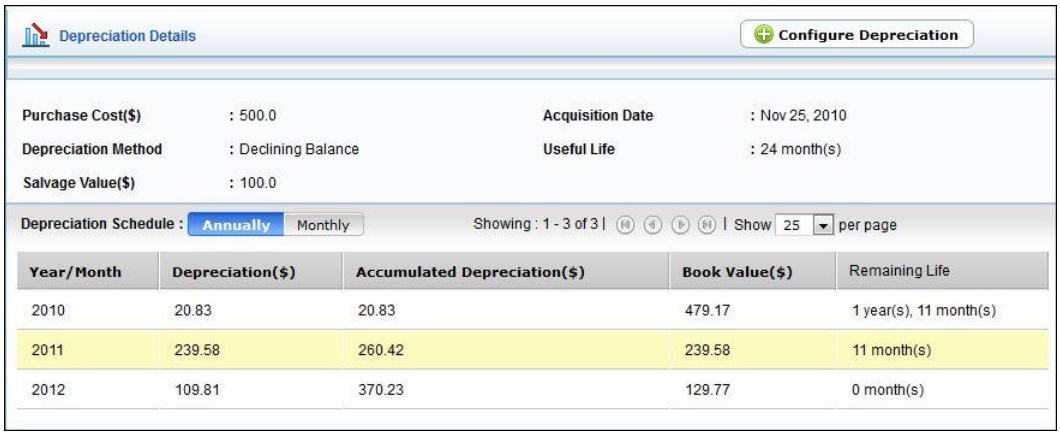
1. Click **Actions** drop-down menu and select **Configure Depreciation** option. The Configure Depreciation pop-up is displayed.
2. Specify the **Purchase Cost** and **Acquisition Date** of the asset, if not mentioned.
3. To configure the depreciation details at the asset level, click **For this asset** radio button.
4. Select the **Depreciation Method** to calculate the depreciation for this asset.
5. Specify the **Useful Life** and **Salvage Value** of the asset.
6. Click **Save** button.

View Depreciation Details

You can view the depreciation details of an asset from the asset details page.

1. From the Asset List view, select the asset to view the details.
2. In the asset details page, click **Costs** tab.

The Depreciation Details block shows information such as the **Purchase Cost** and **Acquisition Date** of the asset, the **Depreciation Method**, the **Useful Life** and the **Salvage Value** of the asset. The Depreciation Schedule lists the depreciation details in tabular format and can be viewed either **Annually** or **Monthly.**



Asset Components

A part of the asset (ie. associated with the asset) which does not stand alone are grouped under Components. The list of all possible components are given below,

- Keyboard
- Mouse

- Add New Component
- Add Components to Group
- Delete Components
- View Component Details
- Edit Component
- Associate Asset to Component
- Copy Resource
- Attach Documents

Add New Component

1. Log in to the ServiceDesk Plus application using your **user name** and **password**. This opens the ManageEngine ServiceDesk plus home page.
2. Click **Quick Actions** link on the top left hand side of the page -> Click **Asset** option from the drop down menu. This opens Add Asset page. (OR)

   Click **Asset Components** under Assets on the left side of the page -> Select any one of the listed IT assets components link. e.g. Keyboards etc. This opens the particular Asset Component page.
3. Click **New button**. This opens Add Asset page.
4. Select the **Product Name** from the combo box. If required, you can add a new product name by clicking **Add New** link beside the product name field. This is a mandatory field.
5. Select the **Vendor Name** from the combo box. If required, you can add a new vendor by clicking the **Add New** link beside the vendor name text field.
6. Specify the **Asset Name** in the given text field. This is a mandatory field.
7. Specify the **Asset Tag, Asset Serial No, Bar Code, Asset Cost** in $ in the corresponding text fields.
8. Specify the **Acquisition Date & Expiry Date** from the calendar button.
9. Select the **Site** from the combo box.
10. Specify the **Location** in the given text field.
11. Specify the **Asset State** by selecting the current status of the asset from the combo box.

    If the asset is in **Use** state you need to associate or assign asset to department or user or asset.
    1. Allocate the asset to an **Asset** or to an **User** or to the **Department** by selecting any of the two radio button. Say Associate to Asset or Assign User/ or Department.
    2. If you choose to associate asset to an asset then select the asset name from the **Choose Asset** combo box. Or if you have chosen to assign to user or the department then select User or Department from the combo box.
    3. If the asset is leased select the check box Asset is **Leased**. If the asset is leased then specify the **From** and **To** date from the calendar button.
12. Click **Save** button to save the changes. To save and add another asset click **Save and add new button**.

Add Components to Group

You have two types of groups in ServiceDesk Plus say, **Static** group and **Dynamic**. Add to group option in component list view page is to group bulk of components. These components will be grouped under the Static group by default.

To add components to group,

1. Click any of the **Components** link under the Assets block on the left hand side of the page. This opens the components list view page.
2. Select the components to be added to the group by enabling the check box. This opens the **Add Resource(s) to** page.
3. By default you can group components only to the static group. Either to the **Existing static group** or **New static** group can be added.
4. If you would like to group the components under **existing static group** then click the corresponding radio button. Select the **group name** from the combo box.
5. Else, if you would like to add a new static group and group the components, click **New Group** radio button. Specify the **Group Name** and relevant information about the group in the **Description** field.
6. Click **Save** button to save the changes.

Delete Components

1. Click **Assets** tab -> Click **Asset Components** link under assets block on the left hand side of the page. This opens the components list view page.
2. From the components list view page, select assets to be deleted by enabling the check box.
3. Click **Delete** button to delete the selected assets. You can see the selected assets deleted from the list.

View Component Details

1. Click **Assets** tab -> Click **Components** link under on the left hand side of the page. This opens the components list view page.
2. Click the components name to view the components details. By default **Resource Info** tab details are displayed.

View Resource Info Details

Resource Info tab displays the Resource Details such as, Resource Name, Tag, Bar Code, Serial No Region, Cost, Acquisition Date and many other details are displayed.

View History of Components

Click the History tab to view the components history. This gives the complete components **Resource Ownership History on date and State of the components.**

Request Details

On clicking the Request Details page you will be able to view all the requests raised for the Component.

On Clicking the request title you can view the details of the request, requester details, Assets belonging to the user, Time elapsed to solve the request, resolution for the request and history of the request

Also you can send reply for the request or forward the request to the technician. You can Search associated problem and change or add new problem or change to the request.

Contracts Details

Click Contracts tab to view the contracts attached to the components. This gives the complete details about the contract such as, vendor name, support details, contract rules, expiry date, cost and other rules.

Costs Details

1. Click the Costs tab to view the costs associated to the components.
2. Click **Add Cost** button to add cost to the components.
3. Select the **Cost Factor** from the combo box. For ex. Service Cost. This is a mandatory field.
4. Specify the description about the cost in the **Description** field. Say if the cost factor is service cost you can specify important information about the service cost.
5. Specify the **Amount** in $ in the Amount field. This is a mandatory field.
6. Select the **Date** from the calendar button. This is mandatory field.
7. Click **Add Cost** button to add the cost. You can see the cost added to the components shown in the Other Costs list view page.

Associate Asset to Component

To associate an asset to a component,

1. Click the **Assets** tab in the header pane. This opens the Asset home page.
2. Select the **Asset Components link** under the assets block on the left hand side of the page. This opens the asset components list view page.
3. Click the title of the component to be associated with an asset. This opens the component details page.
4. From the components details page, click **Associate** tab on the top right hand side of the page. This opens the **Associate to Assets** pop up window.
5. Select the Asset to be associated from the **Choose Asset** combo box.
6. **Save** the details. Component associated to an asset can be viewed under the relationships tab of the selected asset details page.

Copy Resource

Using Copy Resource option you can make multiple copies of the component and its details. On making multiple copies of the resource, it becomes easier for the technician to add bulk of similar components. The technician need not manually enter all the components details for each component. The new copies of the component will be assigned with new component name and rest of the details is retailed as is.

Example: If you have twenty keyboards of the same configurations in your organization, then in this case, enter the configurations of one keyboard and save it. Then copy the same keyboard for twenty times and add its configurations to other keyboards.

To make multiple copies of the resource,

1. Click the **Assets** tab, this opens the asset home page -> select the **Asset Components link** on the left hand side of the page.
2. From the list view page of the **Asset Components** -> click the title of the asset component to be duplicated. This opens the asset components details page.
3. Click the **Actions** combo box -> select the **Copy Resource** option. The **Copy Resource** dialog pops up.
4. Specify the **Number of Copies** to be made for the resource in the given text field.
5. **Copy** the resource. You can see the list of resource copies listed in the list view.

Edit Component

To edit the component details,

1. Click the **Assets** tab -> select the **Asset Components** under assets block on the left hand side of the page. This opens the list view page of the asset components.
2. Click the **title of the Asset Components** to be edited. This opens the **Asset details** page.
3. Click **Edit** button on the top right hand side of the page.
4. Modify the component details in the Edit form such as, **Product Name**, **Asset Name**, **Asset Tag**, **Asset Serial No.**, **Bar Code**, **Vendor Name**, **Purchase Cost**, **Acquisition Date** and **Expiry Date**
5. Modify the Asset State details such as, **Current usage status** of the assets like In Use, In Repair and so on. Then the **Associate** the asset to **User or Department** details or **Assign** to **User or Department** details.
6. **Update** the changes. You can see the components details getting updated.

Attach Documents

To attach documents to a component,

1. Click the **Assets** tab -> select the **Assets Components** link under the assets block on the left hand side of the page. This opens the IT asset list view page.
2. Click the **title of the component** to be attached to other assets. This opens the **Asset details** page.
3. Click the **Actions** combo box on the top right hand side of the page -> select the **Attach Documents** option. This opens the **Attach File** pop up window.
4. Choose the file to be attached by clicking the **Browse** button. The maximum size of the attached file can be 10 MB.
5. Click **Attach File**. The attached document will be listed in Asset details page under Attached Documents. The attached file can be deleted by clicking the delete icon beside file name.

Non-IT Assets

All non IP based assets are grouped under Non - IT assets. The list of all possible non-it assets are given below,

- Projectors
- Scanners
- Tables
- Chairs
- Telephones

- Add Non-IT Asset
- Edit Non-It Asset
- Add Non-It Asset to Group
- Assign bulk Non-It Asset to Department/Site
- Modify the State of Non-It Assets
- Delete Non-It Asset
- View Non-It Asset Details
- Assign Non-It Asset to Users and/or Department
- Copy Resources
- Attach Asset
- Attach Component
- Attach Documents

Add Non-IT Asset

1. Click **Assets** tab -> Click **Quick Actions** on the top left hand side of the page -> Click **Asset** option from the drop down menu. This opens Add Asset page. (OR)

   Click **Non-IT Assets** under assets on the left side of the page -> Select any one of the listed Non-IT assets link. e.g. Projectors, Scanners. This opens the particular Non-IT asset page.
2. Click **New** button. This opens Add Asset page.
3. Select the **Product Name** of the asset from the combo box. If required, you can add a new product name by clicking **Add New** link beside the product name field. This is a mandatory field.
4. Select the **Vendor Name** from the combo box. If required, you can add a new vendor by clicking the **Add New** link beside the vendor name text field.
5. Specify the **Asset Name** in the given text field. This is a mandatory field.
6. Specify the **Asset Tag, Asset Serial No, Bar Code, Asset Cost** in $ in the corresponding text fields.
7. Specify the **Acquisition Date & Expiry Date** from the calendar button.
8. Select the **Site** from the combo box.
9. Specify the **Location** in the given text field.
10. Specify the **Asset State** by selecting the current status of the asset from the combo box.

    If the asset is in **Use** state you need to associate or assign asset to department or user or asset.
    1. Allocate the asset to an **Asset** or to an **User** or to the **Department** by selecting any of the two radio button. Say Associate to Asset or Assign User/ or Department.
    2. If you choose to associate asset to an asset then select the asset name from the **Choose Asset** combo box. Or if you have chosen to assign to user or the department then select User or Department from the combo box.
    3. If the asset is leased select the check box Asset is **Leased**. If the asset is leased then specify the **From** and **To** date from the calendar button.
11. Click **Save** button to save the changes. To save and add another asset click **Save and add new button**.

Edit Non-IT Assets

To edit the non-it assets details,

1. Click the **Assets** tab -> select the **Non-IT Assets link** on the left hand side of the page. This opens the list view page of the IT assets.
2. Click the **title of the Non-IT asset** to be edited. This opens the **Asset details** page.
3. Click **Edit** button on the top right hand side of the page (OR)

   Click the **Actions** combo box next to the edit resource button -> select the **Edit** option. This opens the **Edit Asset** page.
4. Edit the Asset Details block such as **Product Name**, **Asset Name, Tag, Serial No, Bar Code, Vendor Name, Cost, Acquisition Date, Expiry Date, and Location.**
5. Modify the Asset State details such as, **Current usage status** of the assets like In Use, In Repair and so on. Then the **Associate** the asset to **User or Department** details or **Assign** to **User or Department** details.
6. **Update** the changes. You can see the assets details getting updated.

Add Non-IT Assets to Group

You have two types of groups in ServiceDesk Plus say, **Static** group and **Dynamic**. Add to group option in Non-IT asset list view page is to group bulk of Non-IT assets. These assets will be grouped under the Static group by default.

To Add Non-IT Assets to group,

1. Click any of the **Non-IT Assets** link under the assets block on the left hand side of the page. This opens the Non-IT assets list view page.
2. Select the Non-IT assets to be added to the group by enabling the check box. This opens the **Add Resource(s) to** page.
3. By default you can group Non-IT assets only to the static group. Either to the **Existing static group** or **New static** group can be added.
4. If you would like to group the Non-IT assets under **existing static group** then click the corresponding radio button. Select the **group name** from the combo box.
5. Else, if you would like to add a new static group and group the Non-IT assets, click **New Group** radio button. Specify the **Group Name** and relevant information about the group in the **Description** field.
6. Click **Save** button to save the changes.

Assign Bulk Non-IT Assets to Department/Site

1. Click the **Assets** tab in the header pane. This opens the assets home page.
2. Select the **Non-IT Assets** title under the **assets** block. Select the specific Non-IT Asset link. This opens the Assets list view page.

Assign Bulk of Assets to Department

1. Click the Non-IT assets to be assigned to a **Department** by enabling the check boxes. Click **Actions menu** -> select **Assign to Department** option. This opens **Assign Resources to** pop-up window.
2. Select the **Department Name** from the combo box.
3. **Save** the details.

Assign Bulk of Assets to Site

1. Click the Non-IT assets to be assigned to a **Site** by enabling the check boxes. Click **Actions** menu -> select **Assign to Site** option. This opens **Assign Resources to** pop-up window.
2. Select the **Site Name** from the combo box.
3. **Save** the details.

Modify the State of Non-IT Assets

To modify the state of Non-IT Assets,

1. Click **Assets** tab -> Click **Non-IT Asset** link on the left hand side of the page. This opens the Non-IT Assets list view page.
2. From the Assets list view page, select the asset to be modified by enabling the check box beside the asset title.
3. Click the **Actions** combo box -> select the **Modify State** option. (OR)

   From the Asset details page, click the **Change** link beside the Resource State on the right hand side of the page. This opens the **Modify State** page.
4. Select the **Modify State** from the combo box. Ex: In Use, In Store and so on.
5. **Save** the changes.

Delete Non-IT Asset

1. Click **Assets** tab on the header pane. This opens the Asset home page.
2. Click **Non-IT Assets** link under assets block on the left hand side of the page. This opens the Non-IT Assets list view page.
3. Enable the check box beside the assets to be deleted. Click **Delete** button.
4. A confirmation dialog appears. Click **OK** to continue. You can see the selected assets deleted from the list.

View Non-IT Asset Details

1. Log in to the ServiceDesk Plus application using your **user name** and **password**. This opens the ManageEngine ServiceDesk plus home page.\
2. Click **Assets** tab -> Click **Non-IT Assets** link under on the left hand side of the page. This opens the Non-IT Assets list view page.
3. Click the Non-IT Asset name to view the Non-IT Assets details. By default **Resource Info** tab details are displayed.

View Resource Info Details

Resource Info tab displays the Resource Details such as, Resource Name, Tag, Bar Code, Serial No Region, Cost, Acquisition Date and many other details are displayed.

View History of Non-IT Assets

Click the History tab to view the Non-IT Assets history. This gives the complete Non-IT Assets Resource Ownership History on date and State of the Non-IT Assets.

Request Details

On clicking the Request Details page you will be able to view all the requests raised for the Non-IT Asset.

On Clicking the request title you can view the details of the request, requester details, Assets belonging to the user, Time elapsed to solve the request, resolution for the request and history of the request

Also you can send reply for the request or forward the request to the technician. You can Search associated problem and change or add new problem or change to the request.

Contracts Details

Click Contracts tab to view the contracts attached to the Non-IT Assets. This gives the complete details about the contract such as, vendor name, support details, contract rules, expiry date, cost and other rules.

Costs Details

1. Click the Costs tab to view the costs associated to the Non-IT Assets.
2. Click **Add Cost** button to add cost to the Non-IT Assets.
3. Select the **Cost Factor** from the combo box. For ex. Service Cost, Purchase Cost etc. This is a mandatory field.
4. Specify the description about the cost in the **Description** field. Say if the cost factor is service cost you can specify important information about the service cost.
5. Specify the **Amount** in $ in the Amount field. This is a mandatory field.
6. Select the **Date** from the calendar button. This is mandatory field.
7. Click **Add Cost** button to add the cost. You can see the cost added to the Non-IT Assets shown in the Other Costs list view page.

Assign Non-IT Assets to Users and/or Department

To assign assets to asset/users/departments,

1. Click the **Assets** tab -> select the **Non-IT Assets link** on the left hand side of the page. This opens the list view page of the Non-IT assets.
2. Click the **title of the Non-IT asset** to be assigned to users or departments. This opens the **Asset details** page.
3. Click **Assign** button. This opens the **Assign/Associate** page.
4. Select the **Assign the asset to User/Department** radio button to associate it to the user/department.
    1. Select the **User** from the combo box.
    2. Select the **Department** to be associated from the combo box.
    3. If the **Asset is Leased** then select the corresponding check box.
    4. **Save** the changes.
5. Else select the **Associate to Asset** radio button to associate to the asset.
    1. Choose **Asset** to be associated from the combo box.
    2. **Save** the details.

Once you save the details the page is refreshed with a message saying **'Owner assigned successfully for this resource'.**

Copy Resource

Using Copy Resource option you can make multiple copies of the resource and its details. On making multiple copies of the resource, it becomes easier for the technician to add bulk of similar assets. The technician need not manually enter all the resource details for each resource. The new copies of the resource will be assigned with new asset name and rest of the details is retailed as is.

To make multiple copies of a Resource,

1. Click the **Assets** tab in the header pane. This opens the assets home page.
2. Click **Non-IT Assets** under **assets** block on the left hand side of the page. Select the respective Non-IT assets link. e.g. Projectors, Scanners and so on. This opens the corresponding Non-IT asset page.
3. Click the **Title** of the assets to be duplicated. This opens the Asset details page.
4. Click the **Actions** menu on the right hand side of the page. Select **Copy Resource** option. The Copy Resource dialog pops up.
5. Specify the **Number of Copies** to be made for the resource in the given numeric field.
6. Click **Copy** to make the copies of the Non -IT asset. The new copies of the Non-IT asset will be assigned with new asset name that will uniquely identify them. The rest of the information is retained as is. If required, you can also edit the resource details.

Attach Assets

To attach assets to the IT Assets,

1. Click the **Assets** tab -> select the **Non - IT Assets link** on the left hand side of the page. This opens the list view page of the Non-IT assets.
2. Click the **title of the Non-IT asset** to be attached to other assets. This opens the **Asset details** page.
3. Click the **Actions** combo box on the top right hand side of the page -> select the **Attach Asset** option. This opens the **Attach Asset** page.
4. You have two columns, such as **Asset list** and **Attached assets** list. You have to select the assets to be attached from the assets list and move it to the attached list using the **>>** button. To remove the asset from the attached asset list use the **<<** button.

   Example: If you would like to attach a scanner to a list of workstations then select the list of workstations from the asset list and move it to the attached asset list.

6. **Save** the changes. If you would like to detach all the attached assets then select the **Detach All** option.

   If you would like to display the list of all assets or a specific asset in the organization such as Linux workstations, Laptops D620 etc, then in this case select the assets to be displayed from the **List** combo box. Also select the **type of asset** such as assets in store, in use and so on from the **of type** combo box.

Attach Components

To attach component to an Non -IT asset,

1. Click the **Assets** tab in the header pane, this opens the assets home page -> select **Non-IT Assets** under **assets** block on the left hand side of the page. Click the specific Non - IT asset link. This opens the Non-IT assets list view page.
2. Click the title of the Non-IT asset to be attached with an component. This opens the Non-IT asset details page.
3. Click the **Actions** combo box and --> select the **Attach Component** option from the list. This opens the **Attach Component** pop up window.
4. If you would like to display the list of all components or filter specific components then select the components to be displayed from the **List** combo box. Ex: keyboard, mouse and so on. Also select the type of component such as component in store, in use and so on from the **of type** combo box.
5. You have two columns, such as **Component list** and **Attached Components** list. Select the components to be attached from the components list and move it to the attached components list using the **>>** button. To remove the component from the attached component list use the **<<** button.

   Example: If you would like to attach a keyboard and a mouse to a workstation then select the list of components to be attached from the component list and move it to the attached component list.

7. **Save** the changes. If you would like to detach all the attached components then select the **Detach All** option.

Attach Documents

To attach documents to an Non-IT Asset,

1. Click the **Assets** tab -> select the **Non-IT Assets link** under the assets block on the left hand side of the page. This opens the IT asset list view page.
2. Click the **title of the Non-IT asset** to be attached to other assets. This opens the **Asset details** page.
3. Click the **Actions** combo box on the top right hand side of the page -> select the **Attach Documents** option. This opens the **Attach File** pop up window.
4. Choose the file to be attached by clicking the **Browse** button. The maximum size of the attached file can be 10 MB.
5. Click **Attach File**. The attached document will be listed in Asset details page under Attached Documents. The attached file can be deleted by clicking the delete icon beside file name.

Software Asset Management

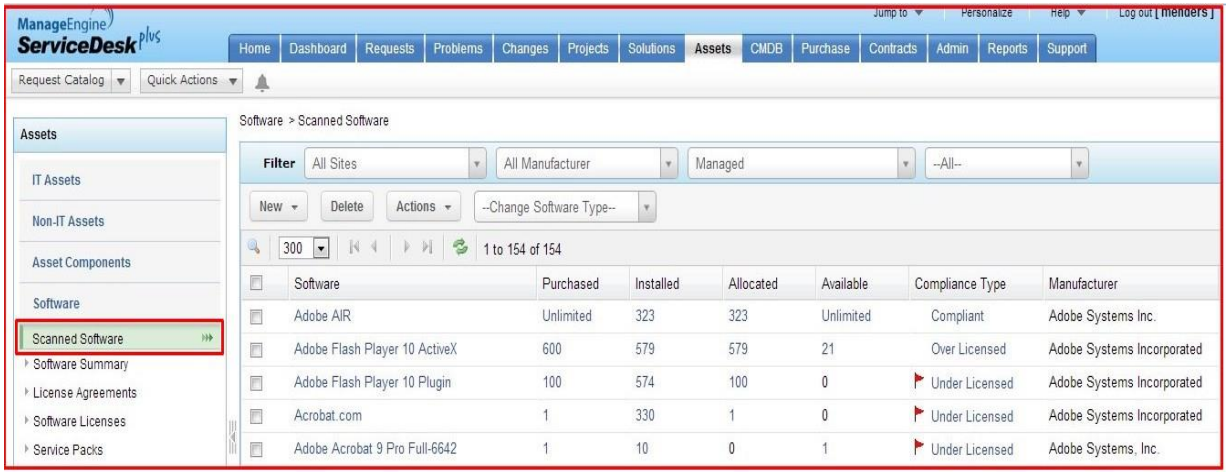
Software applications have become crucial assets that play a vital role in the performance of a business. But tracking, organizing and maintaining the software information becomes a tough challenge if your organization does not follow effective strategy to reduce security risk and ensure license compliant.

Software Asset Management (SAM) enables you to keep track of your software so that you know exactly what you have, where it is running and what you require. With SAM, you can reduce the cost and risk of software vendor audits, eliminate security threats caused by unauthorized software, minimize cost on unnecessary software and optimizes the use of existing software.

Software Asset Management in ServiceDesk Plus allows you to perform regular audits on workstations, track the usage frequency of the software, checks for software compliance through reports and audits, and eliminates the use of unauthorized software.

Scanned Software

Scanned software page displays the list of software(s) installed in the workstations associated with a given site. This information obtained during workstation scanning assists you in analyzing the software(s) being used in your organization and in turn helps you to monitor them effectively. Monitoring a software involves: viewing the software's usage (no. of installations a software has and the no. of users using it), viewing the licenses allocated to a software (for checking software compliance), changing a software's details as per your requirements (example: change a software to type 'prohibited' to prevent your organization users from using it) and more.Option to view the scanned software based on the Sites, Manufacturer and Software Type.



The actions which can be performed from this page are listed below:

1. **Filter Software based on Sites:** Software list being displayed can be filtered based on the Sites available in your organization
2. **Filter Software based on Manufacturer:** Software list being displayed can be filtered based on the Software Manufacturers as well
3. **Filter Software based on Software Type**: Software list being displayed can be filtered based on the Software Types (Managed, Freeware, Sharewre etc.,) as well
4. **Filter Software based on Software Compliance:** Software list being displayed can be filtered based on the following license compliance types: under licensed, over licensed and compliant.
5. **Edit Software-related Details:** A software's details can be edited using Actions dropdown

You can change software's category, software's manufacturer, group software(s) belonging to same manufacturers (using software suites) and modify a software's CI Type using the Actions dropdown.

- **Change Software Category:** To change a software's category
  - Select the Software from Software List View
  - Click Actions dropdown and Select Change Category
  - Choose Category as per requirements and
  - Click Save
- **Change Software Manufacturer:** To change a software's manufacturer
  - Select the Software from Software List View
  - Click Actions dropdown and Select Change Manufacturer
  - Choose Manufacturer
  - Click Save
- **Add Software to Suite: To add a software to software suite**
  - Select the Software from Software List View
  - Click Actions dropdown and Select Change Manufacturer
  - Click Add to suite --> Select Software Suite (from available options)
  - Click Add to Suite
- **Modify Software's CI Type:**
  - Select the Software from Software List View
  - Click Actions dropdown and Select Modify CI Type
  - Choose the required CI Type and
  - Click Save

Note: Every action stated under edit software related details can also be performed in bulk by selecting a group of software(s) and selecting the respective option from Actions dropdown.

6. **Change Software Type:** To change Software Type
   - Select Software from Software List View
   - Click Change Software Type dropdown
   - Select Software Type
   - Okay the warning message

7. **View Other Significant Software Related Details**: From Software List View Page (or) Software Summary Page you can also:

    - Check for the number of purchased licenses, allocated licenses, available licenses and the compliance type (that is, whether the software is over-licensed, under-licensed or complaint). This information is not just displayed as data but serve as links which direct you the to the respective software's details page. You can also check for licenses Allocated to Downgrades from Software List View page.
    - Click Software's Usage through Frequently Used, Rarely Used and Occasionally Used columns
    - Check for the number of Purchased CAL through Purchased CAL column for softwares using CAL licensing
    - Note: By default, column fields Frequently Used, Rarely Used, Occasionally Used and Purchased CAL will not be available and to include them you have to click the dropdown button - and then select the desired options - that appears when the pointer is onhover the various column headers

Note: By default, column fields Frequently Used, Rarely Used, Occasionally Used and Purchased CAL will not be available and to include them you have to click the dropdown button - and then select the desired options - that appears when the pointer is onhover the various column headers.

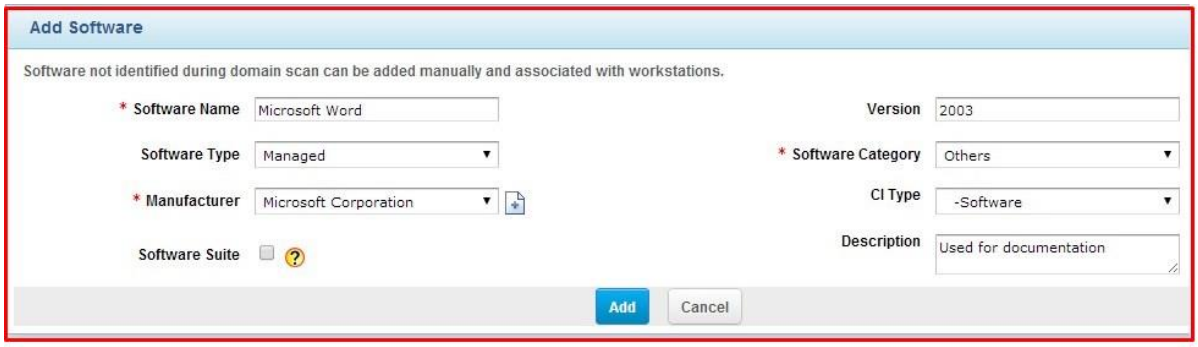
Note	1. Software(s) which failed workstation scan can be added manually by clicking New dropdown --> Software. View Add New Software for more details. 2 You can also add Software Suites to group software(s) belonging to the same manufacturer. View Add New Software Suite for more details.

Add New Software

Software(s) which could not be detected during workstation scanning along with new software(s) to be included in your organization can be added manually from Scanned Software page as follows:

1. Click the **Assets** tab in the header pane. This opens the assets home page.
2. Click **Software** title under **Assets** block on the left hand side of the page. Click the **Scanned Software** link. This opens the software list view page. By default the list of **All softwares** will be listed.
3. Click **New dropdown** and select **Software** option

4. **Add Software pop-up** box opens up as shown below:



5. Specify **Software details** as follows:

   - Specify Software **Name** and **Version**
   - Select **Software Type** (Managed, Prohibited, Freeware etc.,) and **Software Category** (Accounting, Database, Development etc.,)
   - Select **Software Manufacturer** (in case Manufacturer hasn't yet been included in the application, then click **Add New Manufacturer** Icon and add the same)
   - Select **CI Type** for the Software (Server, Database etc.,)
   - Specify relevant information about software in the Description field
   - Click **Add**

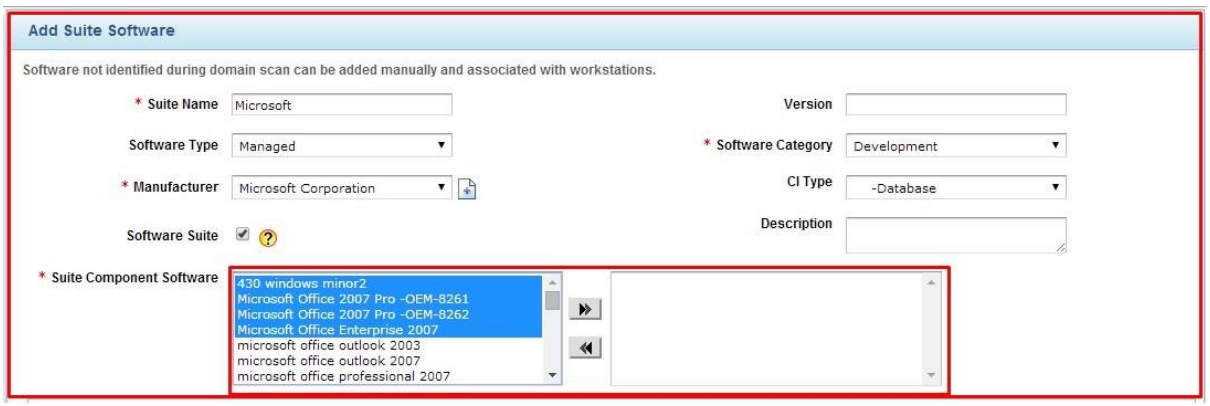
Add New Software Suite

Group softwares belonging to the same manufacturer (like Adobe, Microsoft etc.,) by creating various software suites so that they can be managed easily and effectively.

To add a new **Software Suite**:

1. Click **New dropdown** and select **Software Suite** option

2. Specify **suitable name** for the Software Suite (like Microsoft Development Software, Microsoft System Administration Software etc.,) and specify the version
3. Select **Software Type** (Managed, Freeware, Shareware etc.,) and **choose Software Category** (database, development, operating system etc.,)
4. Select **Software Manufacturer** (Microsoft Corporation, Adobe etc.,). This will list all softwares related to the selected Manufacturer as shown in the image below.



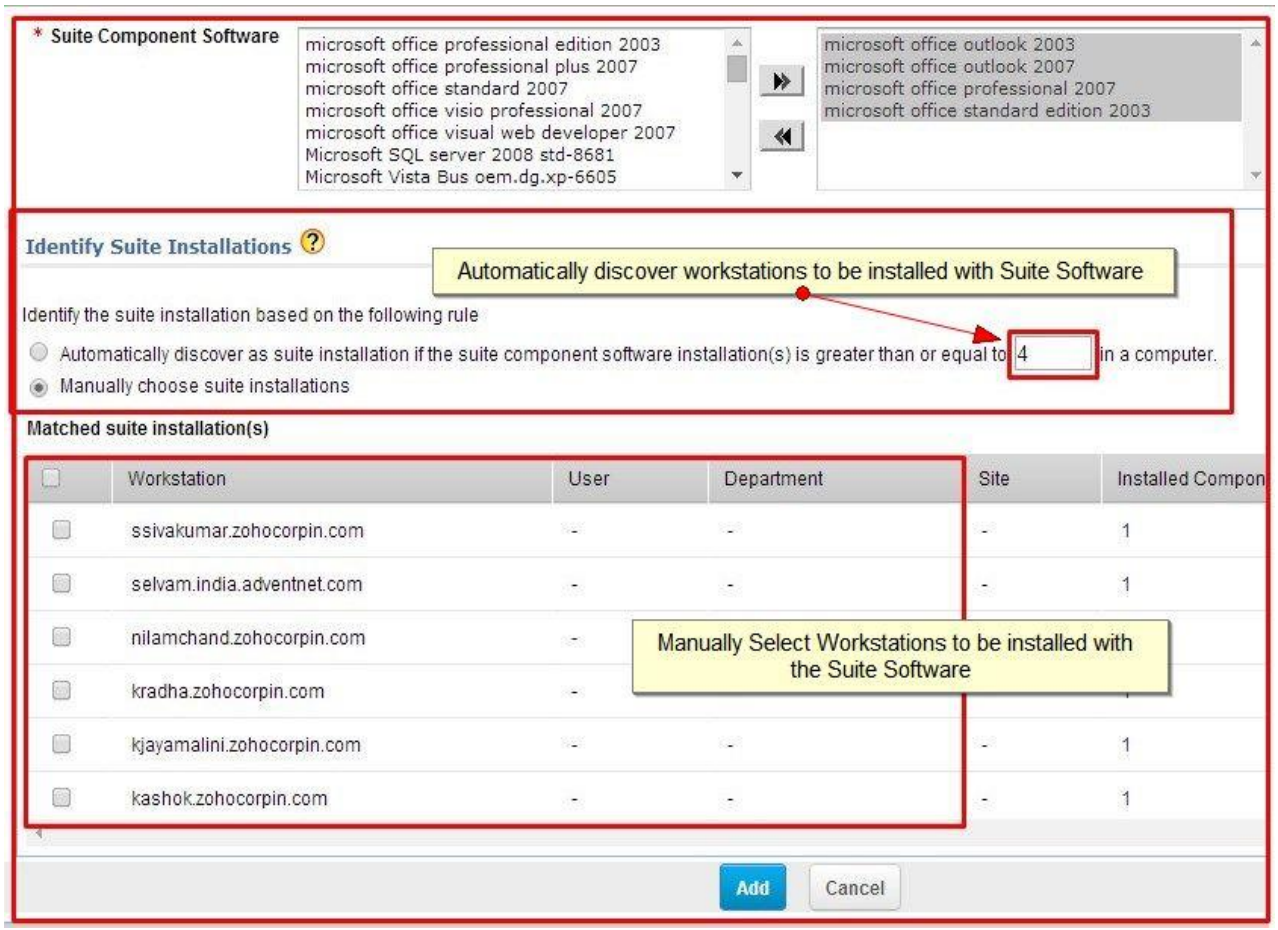
5. Select **software(s) depending on your requirements** that will become a part of this software suite.

When it comes to **choosing workstations for software suite installation**, you will be provided with two options:

- **Automatically discover workstations containing the selected software**: When this option is selected, all workstations containing all or some of the selected suite products [as specified by you] will become a part of the software suite being created.

  Note: The no. of suite products which should be present in a given workstation to make it eligible for software suite being created should be specified by you as shown in the image below.

- **Manually choose workstations which are to be a part of the sofltware suite:** When this option is selected, all workstations containing at least one of the selected suite products will get listed, from which you can select the required workstations that will become a part of the software suite being created.

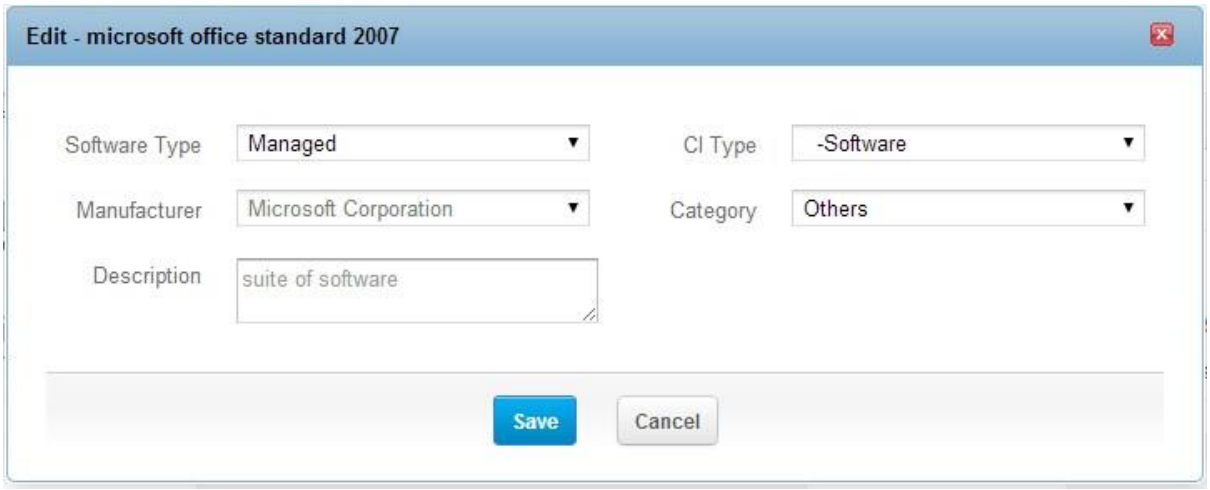


6. Click Add.

Editing Software Details

To edit software related information like software type, software category, CI type etc., **from software details page**, do the following:

1. Select Software from **Scanned Software page** by clicking on it
2. The **software details page** of the selected software will open up
3. Click the **Edit** button [available besides **Actions** dropdown] of the software details page
4. **Edit software details popup** will open up as shown below



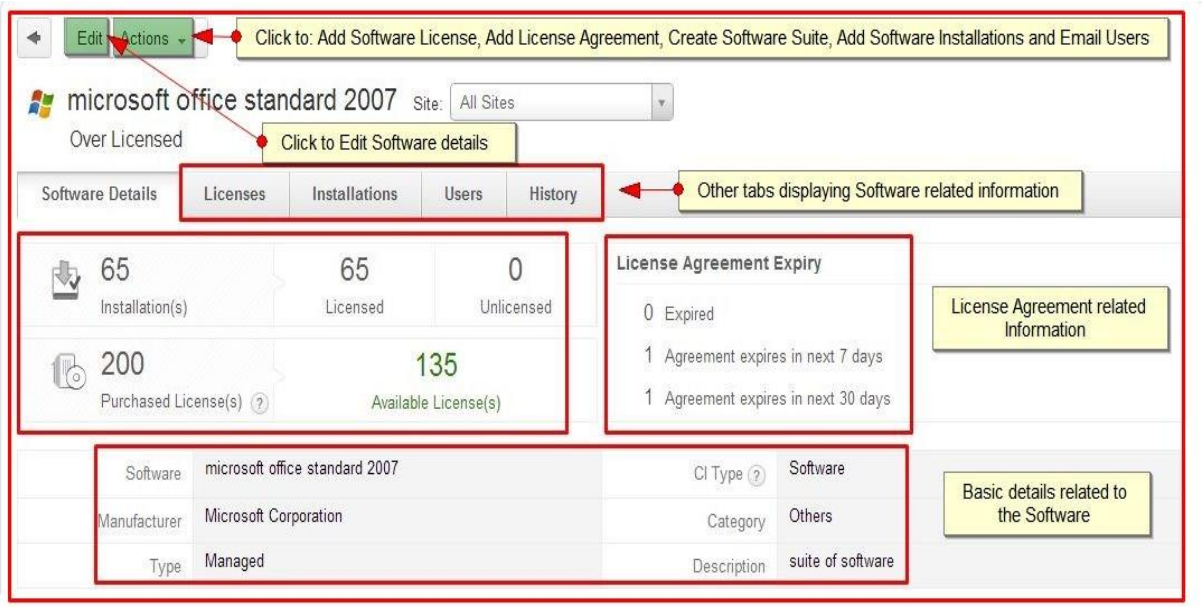
5. Edit software details as per your requirements and **click save**

Note	1 **Software's Details** can also be edited from **software list view page** by **choosing** the desired **software** --> clicking **Actions** dropdown --> and **editing its details** 2 **Software's Details** can also be accessed from the **software licenses page** (by **selecting** the respective **license** --> and clicking on the **software name** from the license details page)

View Software Details

The software details page gives you information related to the software by:

- **displaying the number of purchsed license(s)** associated with the software
- **displaying the number of installations** of the software
- **displaying the number of users** using the software
- **displaying license agreement expiry details** (if the associated license is bound by a license agreement)



Software details page has **5 tabs** with **software details tab** (selected by default) displaying vital information needed for monitoring the software like **Unlicensed Installations** and **License Agreement Expiry** and so on.

Other available tabs are listed below:

- **Licenses**: Here you can view license(s) associated with software along with various other details like licensing type, number of available licenses, total number of licenses and more depending the license chosen [see: License Types]. You can also add/delete new licenses and allocate these licenses to unlicensed workstations from this page by clicking **Actions** dropdown and --> selecting **New** --> **Standard/Upgrade** License
- **Installations**: This tab lists workstations which have been installed with the software. Information like total number of installations, number of licensed and unlicensed installations can also be viewed from this page and the licenses can be allocated accordingly. You can also add more instances of the software [that is, add more installations] by clicking on **Add Software Installations** button. It is also possible for you to **send mails** [to the users of the software] regarding the software installation and can also **deallocate licenses** [from the licensed installations] from this tab.

- **Users**: This tab lists users associated with workstations that have been installed with the software. This list can be filtered based on **licensed users** as well as **unlicensed users**. Here too you are provided with the option of allocating license and sending emails to the users of the software.
- **History**: This tab records the software's history and provides you with information like the day/time period within which: **a set of software installations/uninstallations** happened using which you can analyze the software's usage.

Note	1 Software Details can be filtered as per the Sites available in your organization. 2 Suite Software will be represented by Suite Icon in the list view page, which when clicked will display the software(s) available in the suite.

Allocate License [from Software Details Page]

From Installations Tab:

Software details page will display the number of unlicensed installations (if any) which when clicked will lead you to Installations tab from where you can allocate the available license by doing the following:

1. Click Allocate License button
2. Select the license which you wish to allocate to the software
3. Click Allocate License button

From Licenses Tab:

You can also allocate licenses to the unlicensed software installations (if any) from the licenses tab by doing the following:

1. Click Allocate License button
2. Select Allocate license if license key matches (or) Allocate license based on license availability based on your requirements
3. Click Allocate License button

From Users Tab:

You can also allocate licenses to the unlicensed software installations (if any) from the licenses tab by doing the following:

1. Click Allocate License button
2. Select Allocate license if license key matches (or) Allocate license based on license availability based on your requirements
3. Click Allocate License button

Note	Software Licenses can also be allocated (as well as added) from the respective software's license details page

Create Software Suite [from Software Details page]

You can also create software suite from within a software details page [apart from using New --> Software Suite option from Scanned Software page] in order to group softwares belonging to the same manufacturer by following the steps mentioned below:

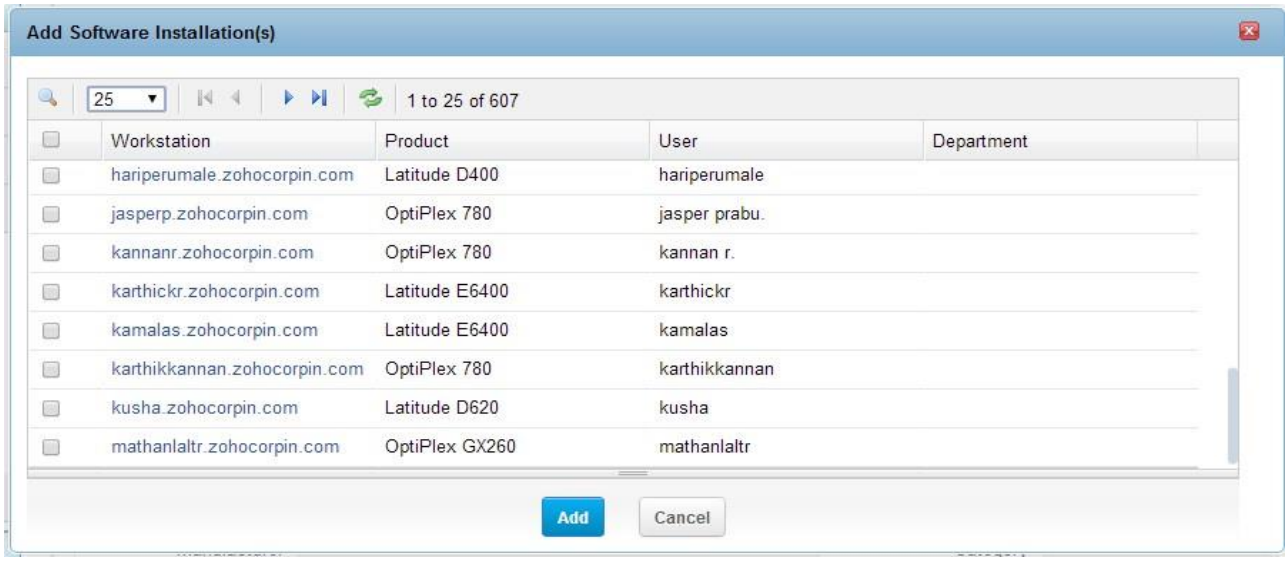
1. Click **Actions** dropdown and select **Create Software Suite** option
2. **Suite Component Software popup** opens up as shown below

3. **Select softwares** which will be a part of the software suite
4. Click **Add**

Add Software Installations

To add instances of the software installation to various workstations being included in your organization, follow the steps mentioned below:

1. Click Actions dropdown and select **Add Software Installations(s)** option
2. **Add Software Installation(s) popup** will be displayed

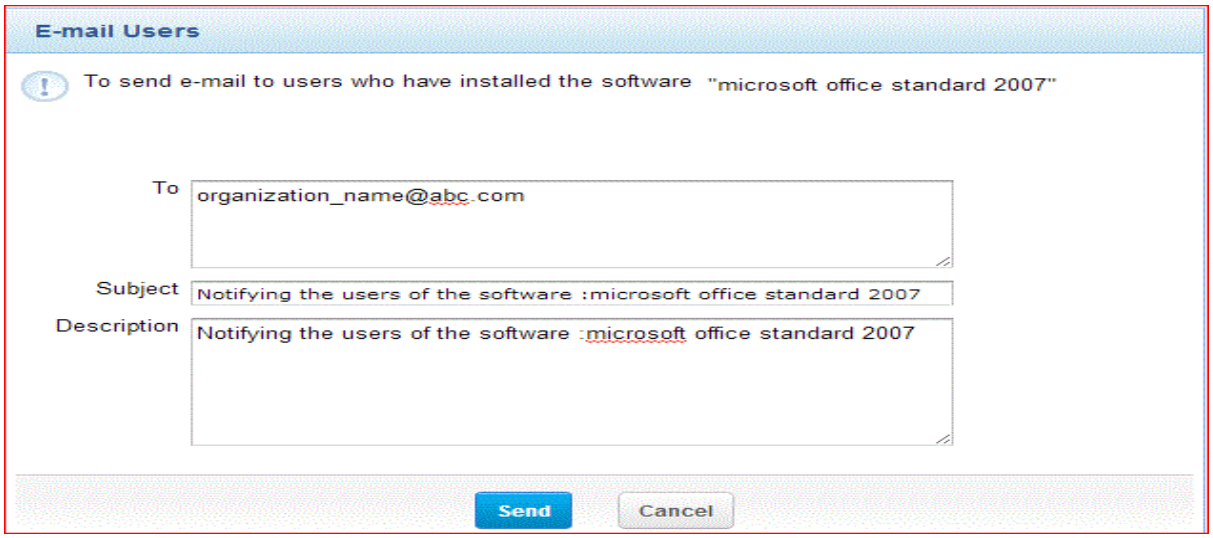


3. **Select workstations** which are to be installed with the software
4. Click **Add**

E-mail Users

To send software-related notifications to users, follow the steps mentioned below:

1. Click **Actions** dropdown and select **E-mail Users** option
2. Specify **e-mail addresss, subject and description** for the mail as shown below



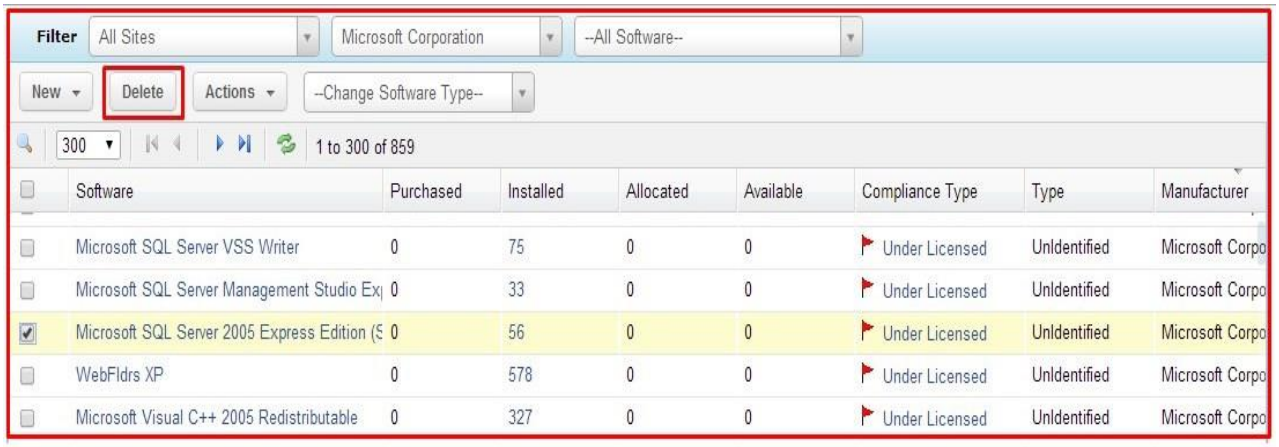
3. Click **Send**

Note	
	Software-related maild can also be sent from **Users** tab as well as **Installation** tab using the respective **Send Mail** buttons

Delete Software

Do the following to delete a software from Software List View page (Scanned Software page):

1. Select Software from the Software List View page
2. Click the Delete button.

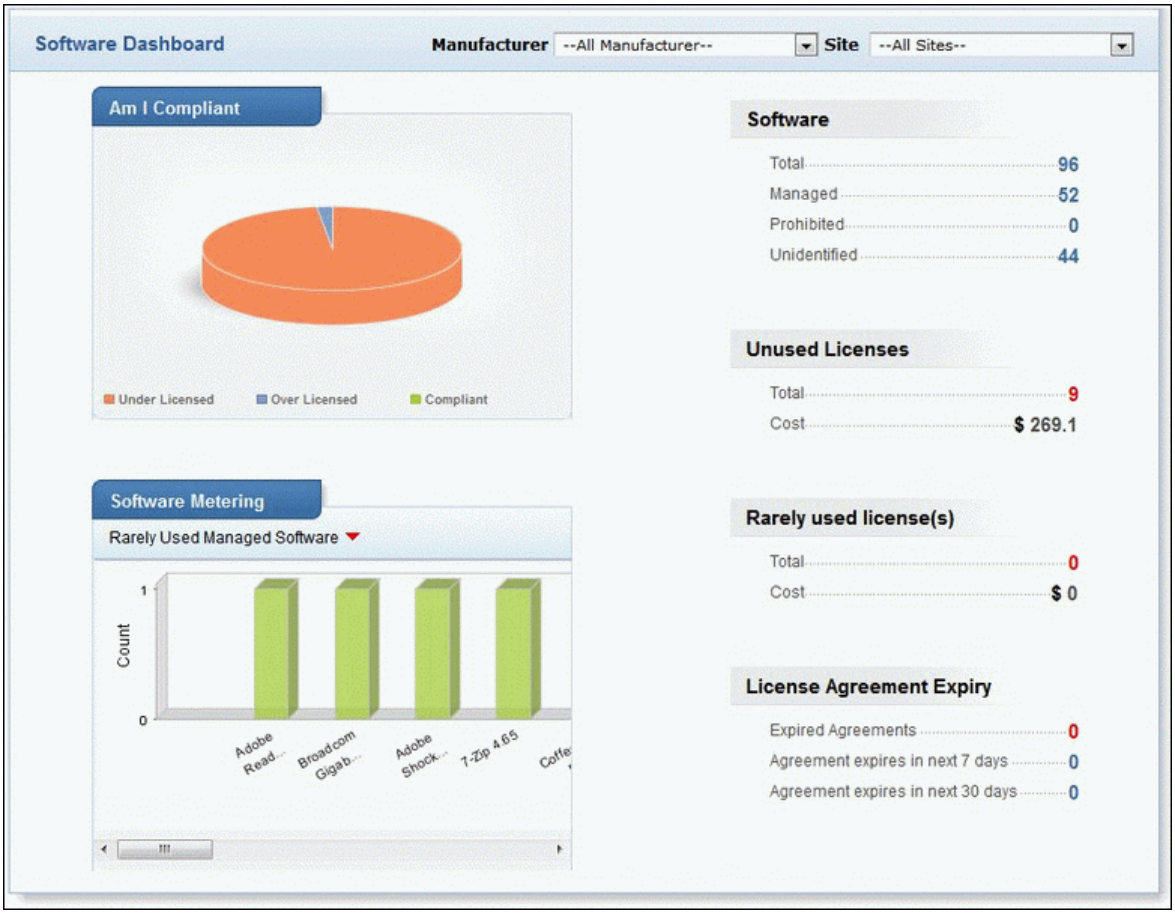


3. Okay the warning message
4. Software will get deleted from the list

Software Summary

ServiceDesk Plus scans your network and automatically discovers all software available in the workstations. From the Software Dashboard, Asset Managers can

- group the software according to the Manufacturers and the Site in which they are associated.
- easily ensure compliance by keeping a check on the list of compliant, under licensed and over licensed software.
- facilitate easy access to view the total number of software that are unused, rarely used, managed, prohibited and unidentified for the selected Manufacturer and Site.
- view the number of expired license agreement, agreement to be expired in the next 7 days and agreement to expire in the next 30 days.
- Software Metering - tracks the usage of software in each workstation.



License Agreement

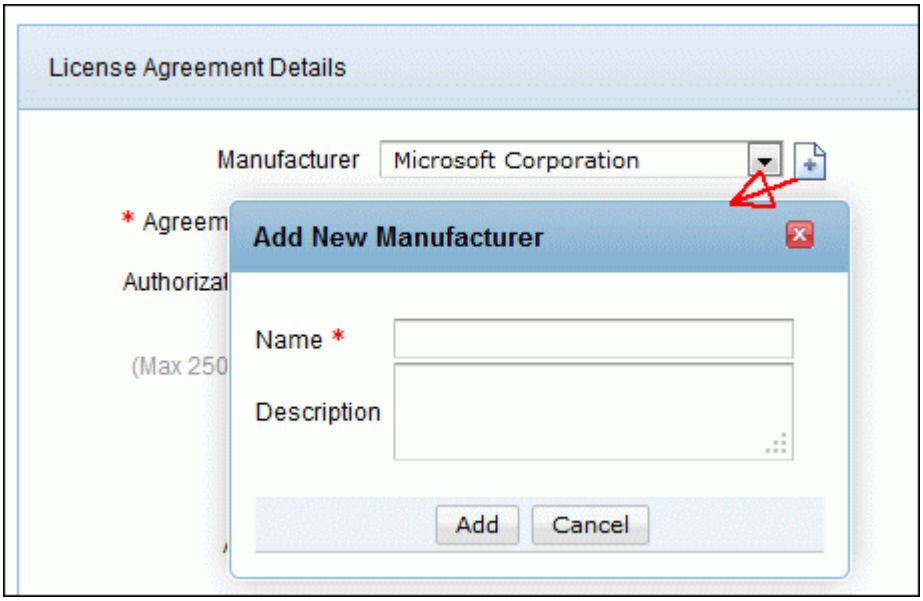
Software License Agreement is a contract between the software vendor and the purchaser. Software companies often make special contracts, such as contract for support and warranty with large businesses. Also, the license agreement consists of the acquisition date, expiry date, terms and conditions on how to implement the software in the organization. These documents are called as the End User License Agreement (EULA).

ManageEngine ServiceDesk Plus provides an option to maintain the license agreements in the database by adding the license agreement in the application. Also you can associate the license agreement with the software licenses.

Add New License Agreements

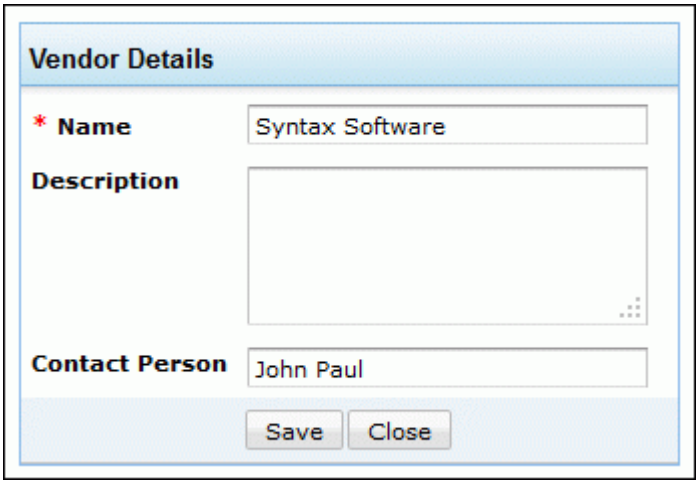
1. Click **Assets** -> **License Agreement** under **Assets** block. The available license agreement is listed.
2. Click **Add New** button.
3. Select the **Manufacturer** of the software for which the license agreement is created from the drop down.

   If the manufacturer is unavailable in the list, select the **add new** icon . Enter the **Manufacturer** and **Description** in the pop up.



4. Specify the **Agreement Number** and **Authorization Number**. The Agreement Number is a mandatory.
5. Select the **Acquisition Date** and **Expiry Date** of the software using the calendar icon.
6. Select the **Vendor** from whom the software was purchased from the drop down.

   If the vendor detail is unavailable in the list, select the add new icon and enter the **Vendor Name**, **Description** and name of the **Contact Person**.



7. Specify the **Description** and **Terms** for the license agreement.
8. If required, you can also attach relevant documents to the agreement. Click **Attach File** button. **Browse** through the file and click Attach file.
9. You can add additional license agreement fields directly from this form by clicking **Add More Fields**.

   You can choose the type from Single-line, multi-line, picklist, numeric and date/time fields. Enter the Label and Default Value (for single-line and multi-line) to be displayed in the form.

10. Specify the Purchase and Invoice Details such as, **Purchase Order Number**, **Purchase Order Name**, the date of purchase of the software in the respective fields.
11. Also, enter the **Invoice Number**, **Invoice Date** from the calendar icon and the **Total Cost** of the software.
12. You can either **associate the license with an existing software license** (provided there are unassociated license available for the selected manufacturer) or **add a new software license and associate the agreement**.

Associate existing license to agreement

1. Click **Associate to Existing License** button.
2. From the Associate Existing License pop up window, choose the **Site** and **Software** from the filter drop down.
3. Enable the check box beside the license to be associated with the license agreement.
4. Click **Associate to agreement** button. The selected licenses is associated and listed below the Purchase Software License block.

Add New License and Associate

You can instantly add a software license and associate it to the license agreement.

1. Click **Add New License and associate** button.

2. From the pop up window, select the **Software**, **License Type**, **License Options**, **Installations Allowed**, **License Key** and the **Cost ($)** from the drop down. The License Type, License Options and Installations Allowed are mandatory fields.
3. You can add licenses for other software by clicking the **Add** icon and repeat the steps as above.
4. Click **Associate to agreement** button. The license is associated and listed below the Purchase Software License block.

13. You can notify users before the license agreement expires by selecting the users to be notified from the **Users List**. Click >> button to move the selected user to **Notified User List** block.
14. Select the **Days** before which the selected users should be notified of the license agreement expiry. If you have selected the users to be notified of the license expiry then this field is mandatory.
15. Click **Save**.

Edit and Delete License Agreement

You can modify and delete the existing license agreement from the application.

Edit License Agreement

1. Select **Assets** tab -> **License Agreement** under **Assets** block. The list of available license agreement is displayed.
2. Select the Agreement Number to be edited.
3. From the License Agreement details page, click **Actions** -> **Edit Agreement** option.

   The Edit License Agreement form appears with details populated while creating the license agreement. The Manufacturer field is non-editable.
4. **Modify** the details and **Save** the changes.

Delete License Agreement

1. Select **Software** -> **License Agreement** under **Assets** block. The list of available license agreement is displayed.
2. Enable the check box beside the Agreement Number to be deleted.
3. Click the **Delete** button. The agreement is deleted from the list.

Print the License Agreement

You can preview and print the entire license agreement details using Print Preview option.

To print the license agreement,

1. Click **Assets** tab -> **License Agreement** under **Assets** block. The list of available license agreement is displayed.
2. Select the **Agreement Number** link of the license agreement to print.
3. From the License Agreement details page, click **Actions** -> **Print Preview** option. The license agreement details appears in a printable form in a pop up window.
4. Click **CTRL + p** keys to print the contract details.
5. Set the required options and click **OK**.

Software License

ServiceDesk Plus helps you to manage software licenses installed across the enterprise. You can consolidate and manage all your software licenses from a single screen. ServiceDesk Plus will scan and automatically pickup license keys for Microsoft Windows and Microsoft Word. You can key-in all the licenses purchased earlier and track future purchase of software licenses through the Purchase module.

Software License can be added in the following ways:

- By accessing **Quick Actions menu** --> and selecting **Software Licenses**
- By accessing **Assets module** --> and selecting **Software Licenses**

A software license can be:

- **Upgraded** so that the latest version of the software can be run using the same license
- **Downgraded** so that the prior versions of the software can be run using the same license

Add Software License

Using this option, you can create a software license for the existing software. The software license form can be accessed by two ways in ServiceDesk Plus application.

a. Quick Actions drop down

The Quick Actions drop down is a quick navigator to instantly access the Software License form from the home page. To add a new Software License, go to Step 2 in Software Tab.

b. Assets Tab

1. Click **Assets** tab in the header pane.
2. Select **Software** -> **Software License** under **Assets** block. The list of available software license is displayed.
3. Click **Add New** dropdown --> and select **Standard License**
4. **Add Software License** form opens up. Fill in the required details as specified below
5. **Select Manufacturer** of the software
6. Select the **Managed Software** from the dropdown for which the license is to be provided [in case the software is in **Unmanaged Category**, it can be **Changed as Managed** by clicking on icon]
7. Select **License Type** (trial license, enterprise license, client access license etc.,) from the available list [OR] add new license type using the Add New License Type icon and fill in the details accordingly [default license types and their respective details]
8. Select **Vendor Name** from the available list [OR] if vendor has to be added newly in the application, then use on **Add New Vendor** icon
9. Select the date of purchase of the software license from the calendar button in **Acquisition Date** field.
10. Select the **Expiry Date** of the software license from the calendar icon.
11. Specify the cost of the software license in **Purchase Cost** field.
12. Select the department for which the software was purchased in **Purchased for** drop down list.
13. If you have configured Sites, select the site name to which the software license belongs, from **Allocated to Site** drop down.
14. Provide suitable **description** for the license
15. Click **Save** button

Note	1. Please remember that the license being added can also be provided with downgrade/upgrade rights 2 Also remember that you can add license to a software and upgrade the same from its details page by clicking **Actions** dropdown --> **Add Software License** --> selecting **Standard License** (or) **Upgrade License** option and specifying the necessary details.accordingly.

License Types and their respective details

1 Individual License/OEM

1. Select the **License Option** as either Full Package Product (FPP) or Others from the drop down.
2. Specify the **Number of licenses** required for the selected product.
3. Enter the **License Key (s)** for the software in the given text box. The license keys values should be in comma separated values format. Say XBVJD,YCCYR,7DF28,JH2PX,MYT7M.
4. **Save** the details The license is listed in the software license list view page.

2 Volume License/Trial License

1. Mention the **Number of licenses** required for the selected product.
2. Specify the number of **Installations allowed** per license.
3. Specify the **License Keys** in the given text field. Say XBVJD,YCCYR,7DF28,JH2PX,MYT7M.
4. **Save** the details. The license is listed in the software license list view page.

3 Enterprise License (Perpetual and Subscription)

1. Mention the **Number of licenses** required for the selected product.
2. Specify the number of **Installations allowed** per license.
3. Specify the **License Keys** in the given text field. Say XBVJD,YCCYR,7DF28,JH2PX,MYT7M.
4. **Save** the details. The license is listed in the software license list view page.

4 Client Access License (CAL)

The Client Access License consists of the following License Options,

- **Per Seat-Device/ Per Seat-User:** License given to each unique user/device to avail the server software product. The number of CALs is equal to the number of devices/users accessing the server software.
- **Per Server:** License given to each server. The number of devices accessing the server simultaneously is limited and is primarily recommended for servers that require limited access.
- **Per Processor:** Connect unlimited users/workstations to the server product.
- **Per Mailbox:** License for each mailbox using Exchange Server.

Select the **License Option** from the combo box.

Per Seat-Device

1. Enter the required **Number of CALs**.
2. Specify the **License Keys** in the given text field. Say XBVJD,YCCYR,7DF28,JH2PX,MYT7M.
3. If there are any additional information required, then the same can be specified under **Additional Information** block.
4. You can select the workstations that can access the software from **Choose CAL Installation** block.

   Select the workstation by either choosing the client software from **Filter by** or from **Departments** drop down. You can also search for the workstation on entering the name in **Search** field and selecting Go button. The list of server/workstations is displayed. Select the workstations. Click **>>** button to move to CAL Installation box.

   Note: The number of workstations selected should be lesser than or equal to the specified number of CALs.
5. **Save** the details. The license is listed in the software license list view page.

Per Seat-User/ Per-Mailbox

1. Specify the details similar as above.
2. Instead of selecting the workstations from Choose CAL Installation block, choose the **Users** to access the software from the list displayed.
3. **Save** the details. The license gets listed in the software license list view page

Per-Server

1. Specify the details similar as in Per-Device.
2. Associate the specified number of CALs to the server selected from **Associate to Server** drop down list.
3. **Save** the details. The license gets listed in the software license list view page

Per-Processor

1. Specify the **Number of Processor (s)** that supports the ability to connect unlimited users/workstations in the given field. Since unlimited users/workstations can connect to the server software product the CAL Installation block is not available.
2. Specify the details as configured above.
3. **Save** the details. The license is listed in software license list view page.

5. Named User License/Concurrent User License

1. Select License Option as either Full Package Product (FPP) or Others from the drop down
2. Specify no. of users allowed (for **Concurrent User License** only).
3. Specify **License Keys** in the given text field. Say XBVJD, YCCYR, 7DF28, JH2PX, MYT7M.
4. **Save** the details. The license is listed in the software license list view page.

6. Node Locked User License Mention the **Number of licenses** required for the selected product.

1. Select License Option as either Full Package Product (FPP) or Others from the drop down
2. Specify workstation configurations Host ID and Operating System (OS)
3. Specify **License Keys** in the given text field. Say XBVJD, YCCYR, 7DF28, JH2PX, MYT7M.
4. **Save** the details. The license is listed in the software license list view page.

Downgrade Software License

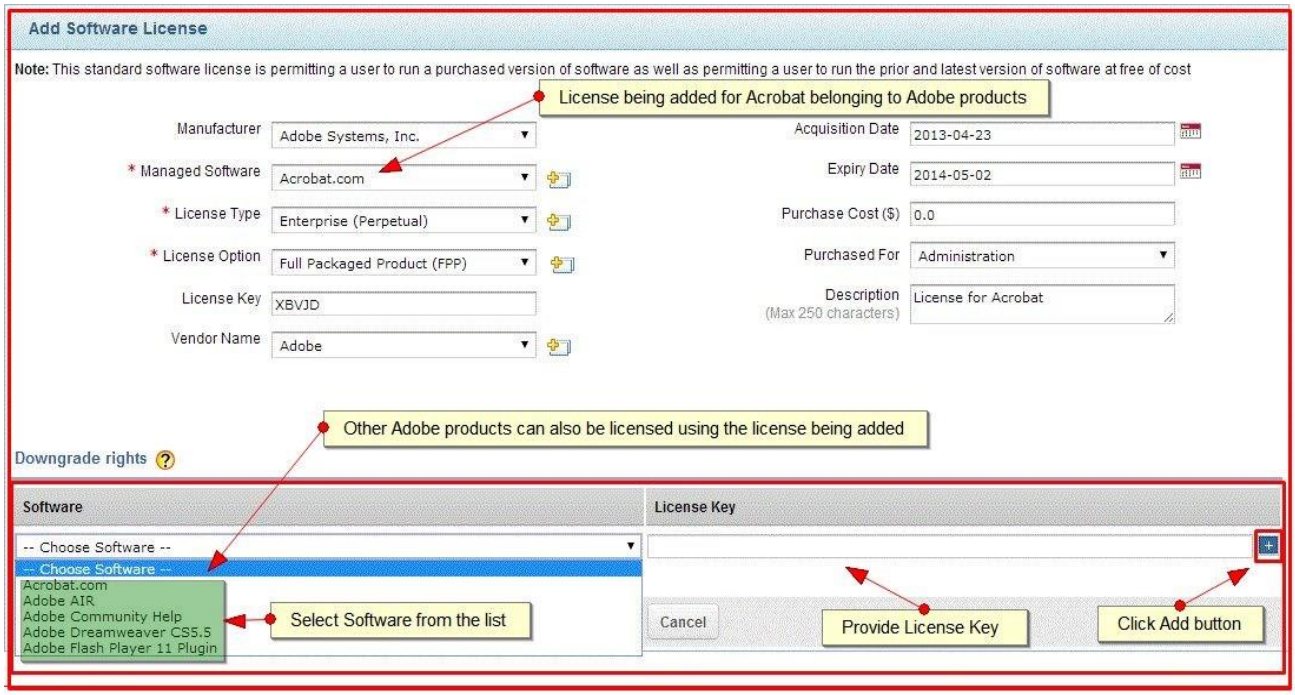
You can also provide downgrade rights to a software license so that the same license can be used for licensing: prior versions of the software being added (or) other software(s) belonging to the same suite.

Follow the steps mentioned below to provide **downgrade rights** to a software license.

Note: Steps have been written assuming you've filled the software license form [see: creating software license to understand how a license form is filled] and are about to provide the license with downgrade rights.

Under **Downgrade Rights** section:

1. **Select Sotware** [prior version of the software being added (or) other software(s) belonging to the same manufacturer] from dropdown
2. Provide **License Key** and click **Add** button



3. **Save** the License

Note	• 1. Multiple software(s) (belonging to the same manufacturer) too can be bound by a single software license with downgrade rights • 2 Downgrade rights can be provided to software licenses not only when they are being added but also while editing them [see editing software license for more details]

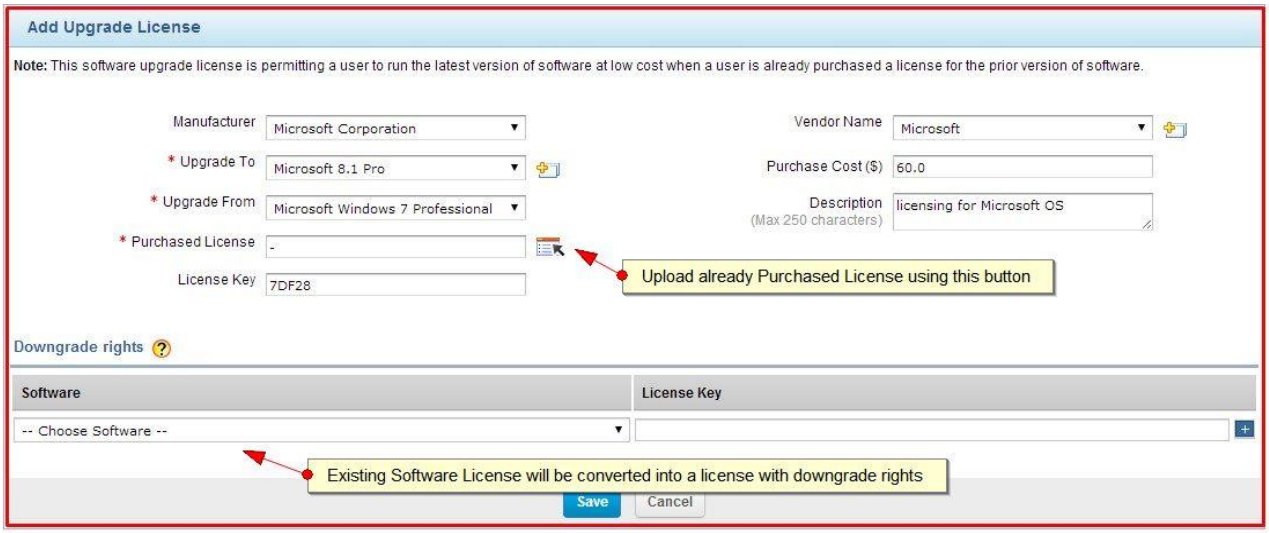
Upgrade Software License

You can also update an existing software license so that it runs the latest version of the licensed software.Follow the steps mentioned below to provide downgrade rights to a software license.

Note: Steps have been written assuming you've filled the software license form [see: creating software license to understand how a license form is filled] and are about to provide the license with upgrade rights.

Follow the steps mentioned below to **upgrade a software license**.

1. Click **Add New dropdown** --> and select **Upgrade License** option
2. **Add Upgrade License** page opens up
3. **Select Software License** which is to be updated using Upgrade From dropdown
4. **Select Software License** using which the exisiting Software License will be updated from the Upgrade To dropdown
5. Upload the existing **purchased license**



6. Specify **License Key** and provide **Vendor Name**
7. Specify the **license purchase cost**
8. Provide **description** specifying reason behind license upgrade
9. Click **Save**

Note	
	• Software license being upgraded will be converted into a downgrade license

View Software License

Software license details page (which opens when the respective **License** is clicked from **Software Licenses list view**) contains: Select Assets tab -> **Software License** under **Assets** block. The list of available software license is displayed.

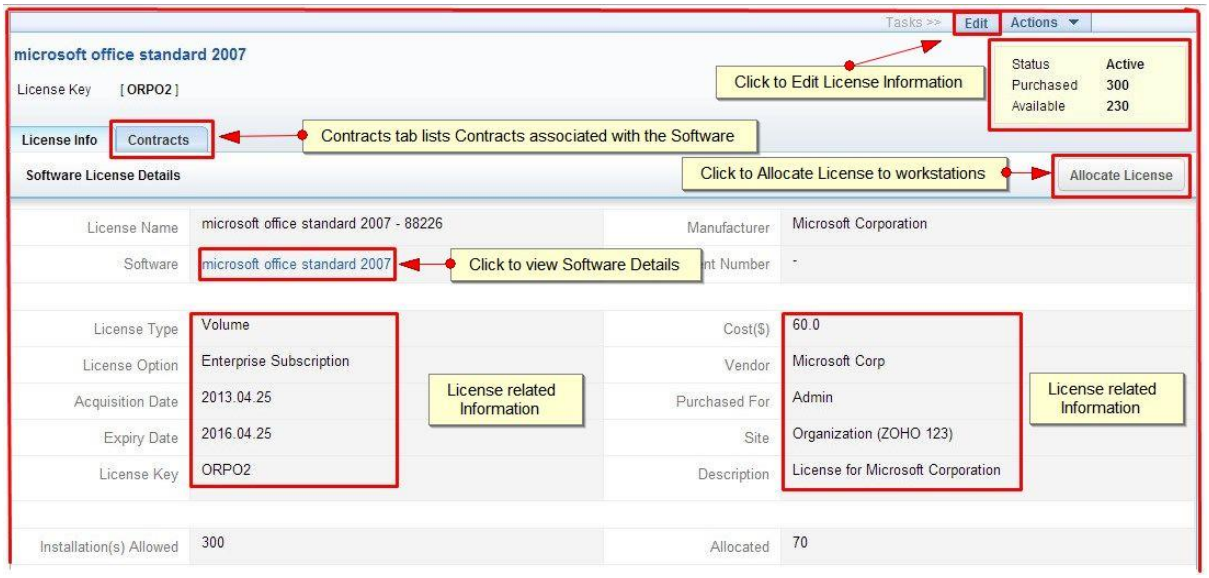
- **License related information** like license type, license key, license acquisition and expiry date
- **List of licensed workstations**
- **Allocate License** and **Deallocate License buttons** that let you allocate/deallocate licenses respectively
- **Edit button** which lets you to edit the license related details
- **Actions dropdown** which let you attach license related documents

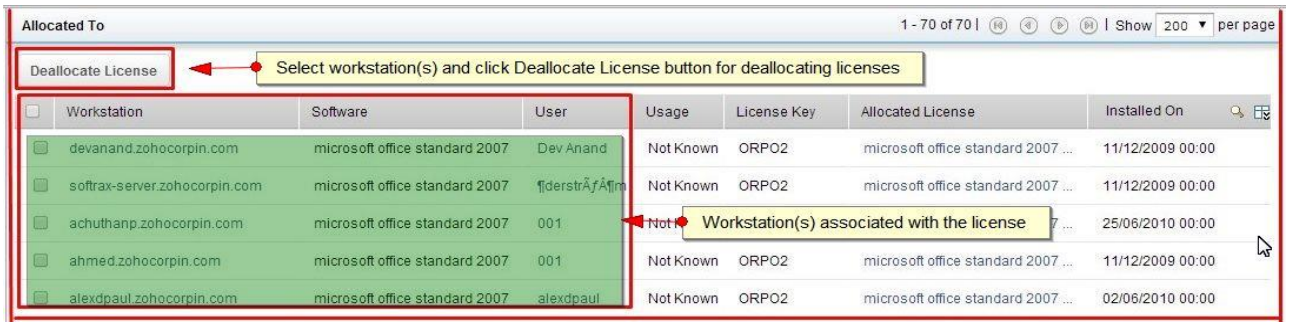
To view **software license** details,

1. Select **Software License** (example: license for Microsoft Office Standard 2007 etc.,) from **Software Licenses list view** by clicking on it
2. Software Details page which opens up will contain **2 different tabs**: **License Info** (selected by default) and **Contracts**

   License Info: this tab displays all the license related info and various actions like **license allocation/deallocation**, **editing license related details** and **attaching license-related documents** can be performed hereSelect Software License using which the exisiting Software License will be updated from the Upgrade To dropdown

   Contracts: this tab displays contracts associated with the software. These are contracts added using Contracts tab.





Allocating Software License

In case there are any **unlicensed installations** (workstations) available, the same can be licensed from the **software license details page** itself by doing the following:

1. Click Allocate License button available at the right hand side of the **Software License Details** page [see image above]
2. **Allocate licenses to unlicensed installations** popup opens up listing all the unlicensed workstations
3. **Select workstations** and click **Allocate License** button
4. License will be allocated to the workstations

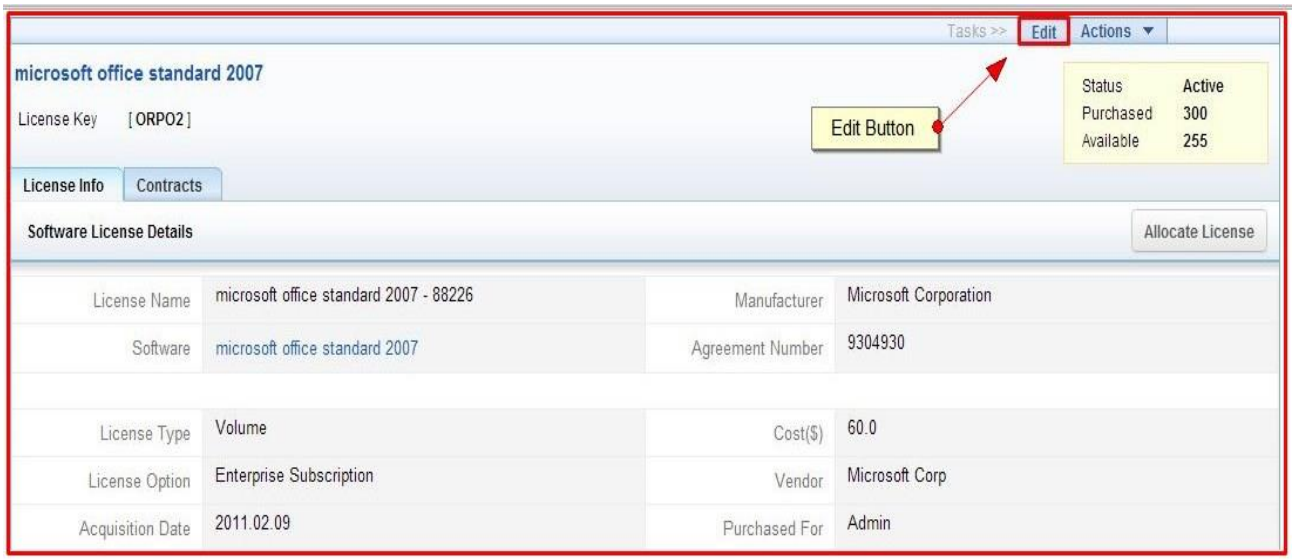
Deallocating Software License

You can also deallocate license associated with workstatons by doing the following:

1. **Select workstations** from the **list of licensed workstations** (available at the bottom of the page)
2. Click **Deallocate License** button
3. Okay the warning message
4. **License will be removed** from the selected workstations

Edit Software License

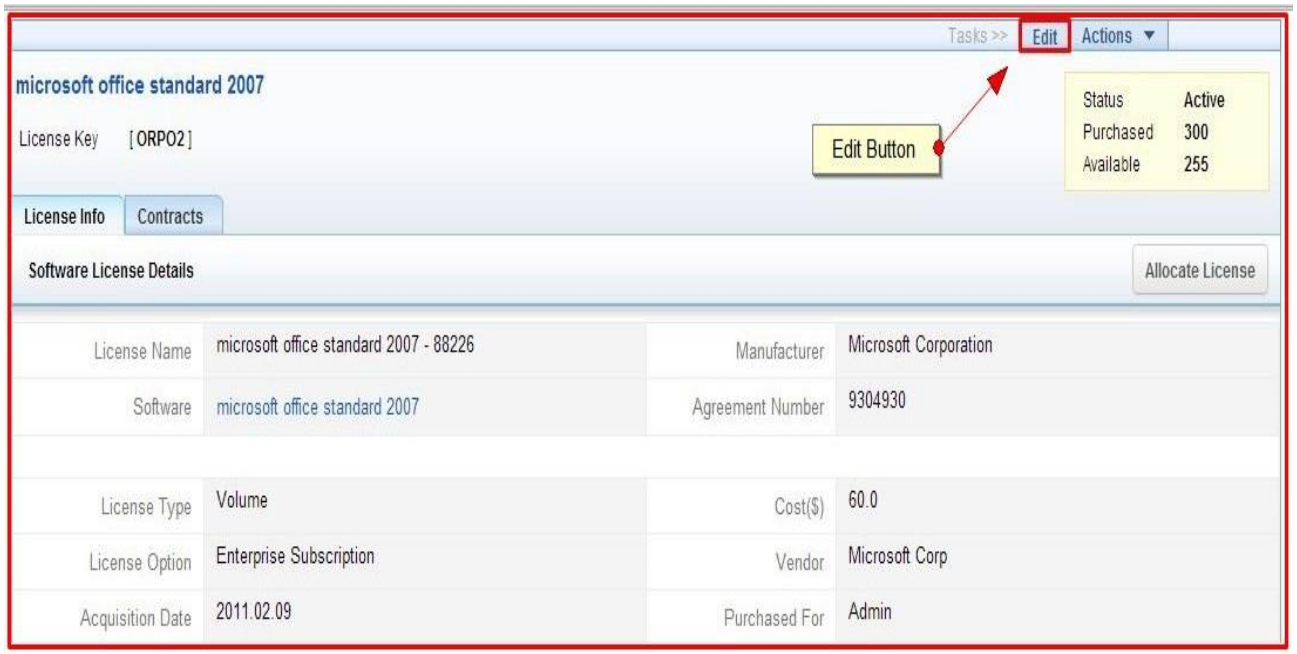
1. Select **Software License** from **Software Licenses list view** page
2. Click **Edit** button (available besides **Actions dropdown** at the **top right corner** of license details page)
3. **Modify license details** as per your requirements
4. Click **Save** button



Note	
	• **Software License** can also be accessed from the respective **software details page** (by clicking **license tab** --> and selecting the **respective license**)

Delete Software License

1. Select **Software License** from **Software Licenses list view** page
2. Click **Delete** button (available at the **top** of **Software Licenses** list view page)



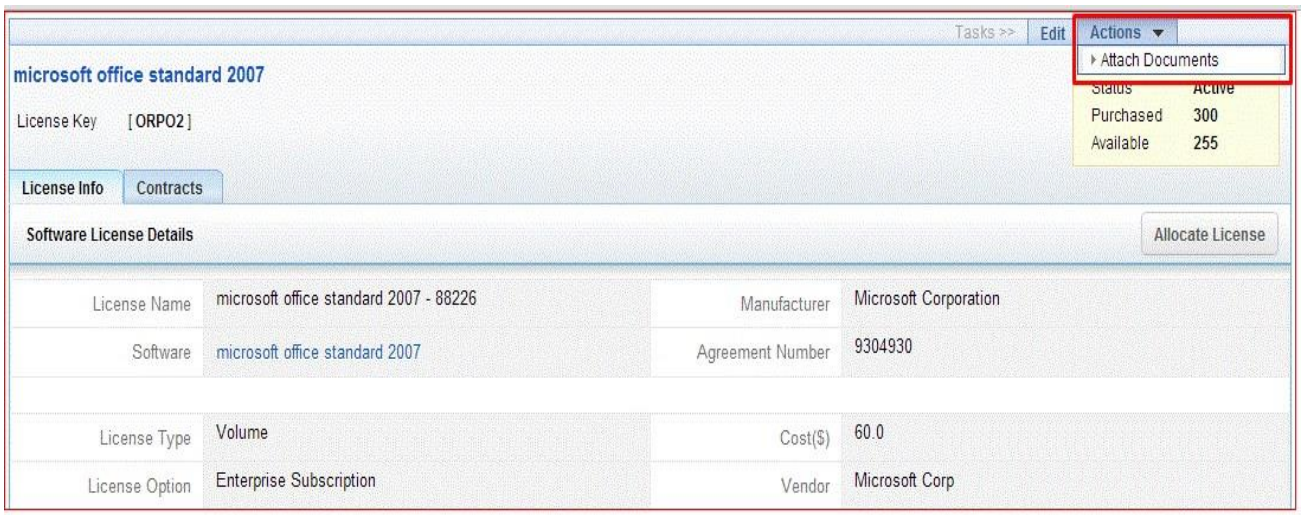
Note	
	• Make sure the license you are about to delete is no longer associated with any workstation because license(s) in use can be deleted only after they are dissociated from the respective workstations.

Attach Documents

To attach software license related documents,

1. Select **Software License** from Software Licenses list view page
2. **Software License Details page** will be displayed
3. Click **Actions** dropdown (available close to **Edit** button at the **top right corner**)
4. Select **Attach Documents** option
5. Select **Attachment** and click **Attach file** button
6. The attachment will get uploaded and will be available under **Attached Documents** section (available below the **licensed list of workstations**)

Note: The maximum size of the attached file can be **10 MB.**



Service Packs

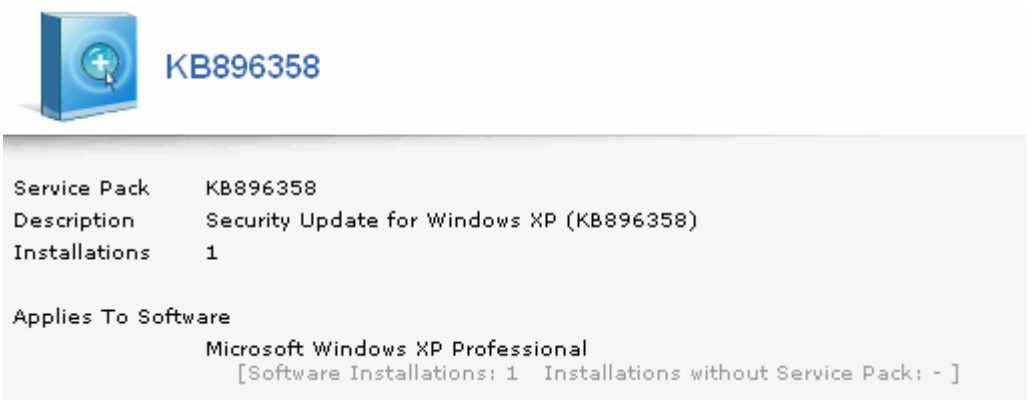
ServiceDesk Plus keeps track of all the service packs such as hotfix, security update, installer, on scanning the workstations.

To view the Service Packs details,

1. Click **Software** title -> **Service Packs** link under **Assets** block. The service pack list view page opens.
2. Click the service pack name to view the service pack details.

The details page displays the complete detail about the service pack with number of installations, and installation without service packs. It also provides information on the number of software the service pack applies to.

Say, If the service pack **Security Update for Windows XP** is applicable for **Microsoft Windows XP Professional** and **Microsoft Windows 2000 Professional** then this software list would be displayed before the service pack installations list.



Service Pack Installations

Under this block you get the list of all service pack installations with the Workstation name, User name, Installed On and Installed By details.

Software Installations without Service Packs

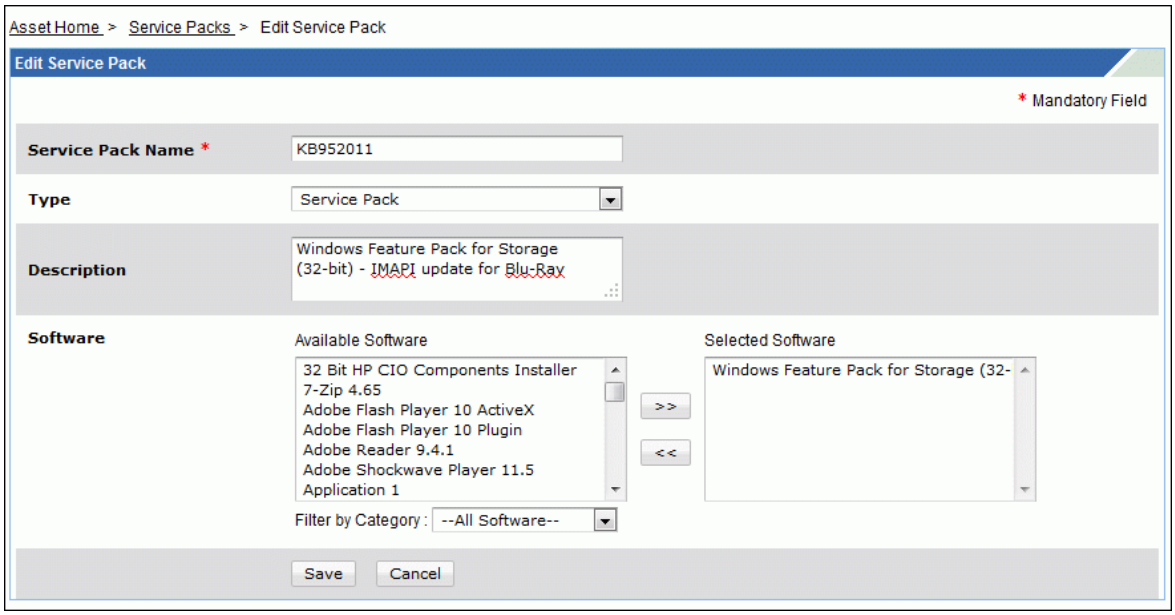
Under this block you get the list of all software installations without the service packs along with the Workstation name, User name, Software and Usage details.

Edit and Delete Service Packs

ServiceDesk Plus gives you an option to modify and delete the existing Service Packs.

Edit Service Packs

1. Click **Software** title -> **Service Packs** link under **Assets** block. The service pack list view page opens.
2. Select the Service Pack name to be edited from the list.
3. From the Service Pack details page, click the **Edit** button. This opens the Edit Service Pack page.



Modify the **Service Pack Name**, **Type** and **Description** of the service pack. Also, you can add software or service packs to the existing service pack list. To add to the list, select from the available list of software and move to the selected software using **>>** buttons.

4. **Save** the changes.

Delete Service Packs

1. Click **Software** title -> **Service Packs** link under **Assets** block. The service pack list view page opens.
2. Enable the check box beside the Service Packs to be deleted from the list.
3. Click **Delete** button. A confirmation message appears.
4. Click **OK** to continue. The Service Pack is deleted from the list.

Groups

ManageEngine ServiceDesk Plus helps you to organize assets by grouping them based on certain asset properties. Grouping assets gives a more fine-grained control over the assets, enabling you to manage them effectively. Say, for instance, when you are getting ready for migration, you will be able to pinpoint assets with 256MB RAM that need upgrade before rolling out Windows Vista.

There are two types of asset grouping in ServiceDesk Plus.

- **Static Group:** Lets you group assets as per your wish.
- **Dynamic Group:** Groups assets based on certain criteria like Product Type, Department, OS, Manufacturer and so on.

- Create New Group
- Remove Assets from a Group
- Edit and Delete Group

Create Asset - Groups

To access Groups in ServiceDesk Plus,

1. Click **Assets** tab in the header pane.
2. Click **Groups** in **Assets** block on the left hand side of the page.
3. Click **New Group** link. The **Create Group** form is displayed.

Alternatively, you can access the Create Group form from **Quick Actions** link on the top left side of the page. Select **New Group** under Assets-Groups.

Creating a Group

1. Specify a name for the group in **Group Name** text field. This is a mandatory field.
2. Specify relevant information about the group in the **Description** field.
3. Select the **Group Type** by enabling anyone of the radio button.
   - **Static Group:** Grouping assets as per your wish. By default, this option is enabled.
   - **Dynamic Group:** Grouping assets based on certain criteria.
4. Click **Save** button to save the group. The **Edit Group** page is displayed and based on the selected Group Type, you can either pick assets from the existing list or you can define criteria to group assets.

Adding Assets to Static Group

1. In **Pick resources to add** block, select the filter criteria from **Showing** drop-down list. For instance, the filtered criteria is **All Assets** in state **In Use**. This will list all assets with asset state as **In Use**.
2. If your asset list is lengthy, then you can conduct a search for assets by specify the **Search** criteria.
3. From the list of assets under Pick resources to add block, select the check box beside the asset to add to this group.
4. Click **Add** button. A message confirming the number of items added to the group is displayed along with a View button.
5. Click **View** button to view the assets in the group.

NOTE: To delete assets from a static group, refer Removing Assets from Static Group.

Adding Assets to Dynamic Group

1. In **Dynamic Group Criteria's** block, you can define the **criteria** and **condition** to filter assets according to specific asset properties. The **Criteria** drop-down lists criteria based on **Resources** like product type, vendor, department, etc and **Workstation Criteria** such as model, OS, Processor Type, IP Address and so on.
2. Select the **Criteria** and the **Condition** from the drop-down list.
3. Click **Choose** button to select the resource or workstation based on the selected criteria. Click **OK**. The selected criteria and condition is displayed.

Say, for instance, you have selected the criteria as "**Product Type**" and conditions as "**is**". On clicking choose button you will get the list of all product types such as, access points, scanners, keyboard, printers and so on.

4. If you have defined more than one criteria, then select any one of the **Match Criteria** radio buttons i.e., Match ALL of the following (AND) or Match ANY of the following (OR).
5. Click **Save & View Group** button to save the defined criteria and view resources in the group.

Remove Assets from Static Group

You can remove assets from a static group but you cannot remove resources from a dynamic group. Removing assets from the static group can be performed in two ways,

1. From the list view page of the Static Group, or
2. While editing a Static Group.

Remove Assets from the Static Group list view page

To remove assets from the list view page of the Static Group,

1. Click **Assets** tab in the header pane.
2. Click **Groups** in **Assets** block on the left hand side of the page.
3. Click **Manage Group** link.
4. From the Manage Group window, click the static group. The list of assets grouped to the selected static group is displayed.
5. Select the check box beside the asset name to remove from this static group.
6. Click **Remove from Group** button. The selected assets are removed from the list.

Remove assets while editing a static group

To remove assets from the static group while editing,

1. Click **Assets** tab in the header pane.
2. Click **Groups** in **Assets** block on the left hand side of the page.
3. Click **Manage Group** link.
4. From the Manage Group window, click **edit** link beside the static group.
5. In **Resources in group** block, select the check box beside the resource name to remove from the static group.
6. Click **Remove** button. The selected assets are removed from the list.

Editing and Deleting Groups

Editing Groups

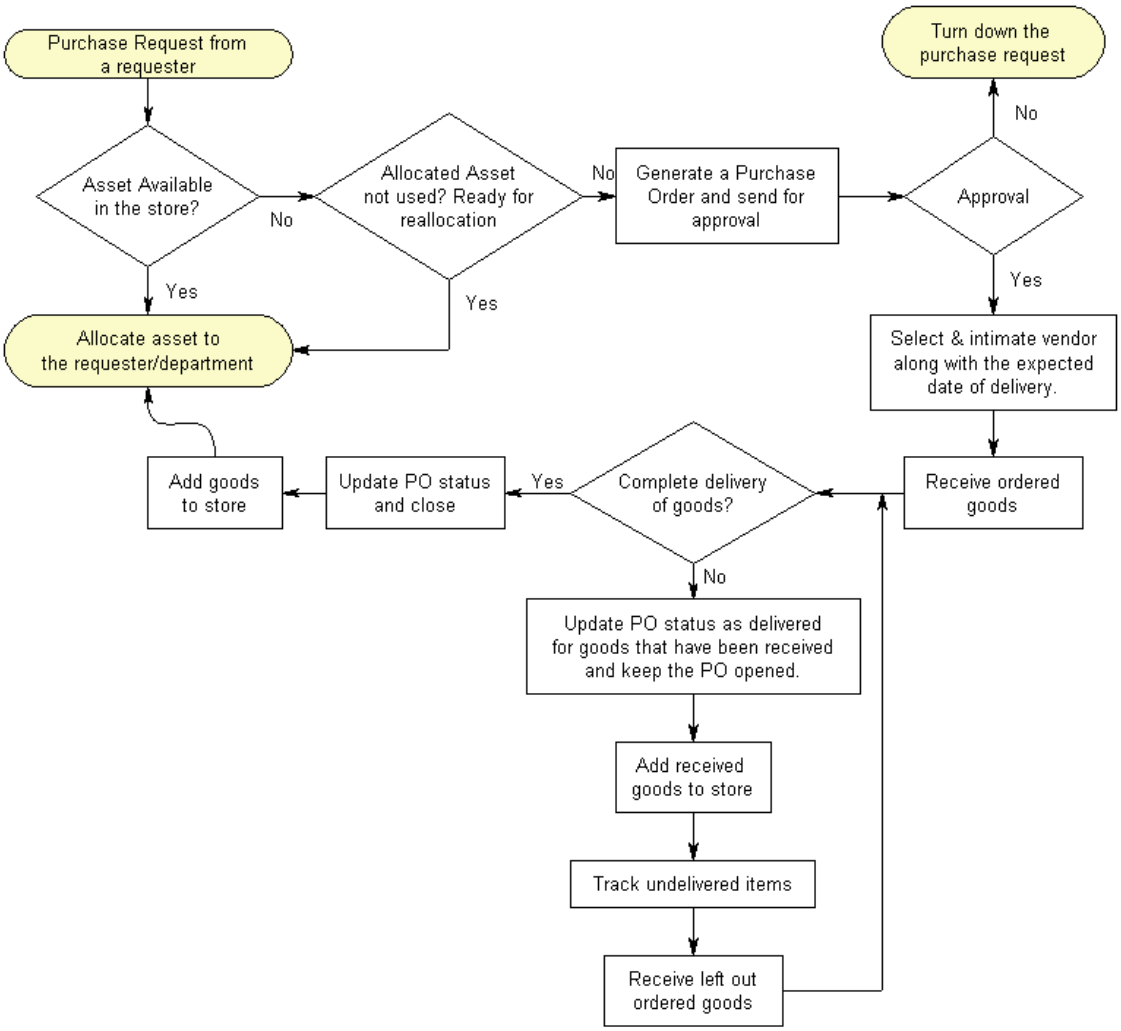
1. Log in to ServiceDesk Plus application using your **Username** and **Password**.
2. Click the **Assets** tab in the header pane.
3. Click **Groups** in **Resources** block on the left hand side of the page.
4. Click **Manage Groups** link.
5. From Manage Group window, click **Edit** link beside the group to edit. The **Edit Group** page is displayed.
6. If you are editing a Static Group, then you can either add assets to the group or you can remove existing assets from the group. For Dynamic Group, select the criteria and conditions from the drop-down list.
7. If you want to change the name of the group, then select **Edit** button beside Group block in Edit Group page.
8. Edit the **Group Name** and **Description**. The Group Type is in non editable text.
9. Click **Save** button.

Deleting Groups

1. Log in to ServiceDesk Plus application using your **Username** and **Password**.
2. Click the **Assets** tab in the header pane.
3. Click **Groups** in **Resources** block on the left hand side of the page.
4. Click **Manage Groups** link.
5. From the Manage Group window, click the corresponding **Delete** link to be deleted on the right hand side of the page.
6. A pop up window pops up to get your confirmation on the delete operation. Click **OK** to proceed. You can see the group deleted from the list.

Purchase

The Purchase module streamlines the procurement of required components and allows you to add them as unassigned assets. The Purchase module is tightly integrated with the Inventory. You can configure the vendor-related information and the products supplied by those vendors and their price quotes in ServiceDesk Plus. This information helps in making the choice of vendors while generating the Purchase Order (PO) by comparing the pricing of each vendor. The purchase process starts with a purchase request and is completed when the requested component or item has been purchased and reaches the requester of the purchase request. Below is the workflow that details the various steps involved in a purchase process.



To reach the purchase module, log in to the ServiceDesk Plus application using your user name and password and click the **Purchase** tab in the header pane.

Create New Purchase Order

To create a new purchase order,

1. Log in to the ServiceDesk Plus application using your **user name** and **password**.
2. Click the **Purchase** tab in the header pane. This opens the purchase order list view page.
3. Click the **New Purchase Order** button available in the Purchase Order block. (OR)

   Click **Quick Actions** drop-down menu --> click **Purchase Order** option under Create New option. This opens the **Add Purchase Order** form. By default, the status of the Purchase Order while adding will be **New PO**, after which the status changes to **Open**.
4. Specify the **Order No** in the given field. For ex: 140. This is mandatory field.
5. Enter the **PO Name** say, Purchase of monitors, and select the **Required By Date** from the calendar. The PO name in mandatory field.
6. Select the **Vendor Name** from the combo box. This is mandatory field. If the specified vendor name is not available in the list, click **Add New link** adjacent to the Vendor field and specify the vendor details like Name, Contact Information and Contact Person of the vendor. Click **Save** button to save the details.
7. Select the **Shipping and Billing Address** from the combo box. You can also add the shipping and billing address by clicking the Add New link . Enter relevant details in the pop up window.
8. On selecting the Vendor, the corresponding **Product Type** and **Products** gets populated in the combo box. Select the Product type and the Products, the items gets listed one below the other along with the price details.

   You can also add new product to the specified vendor by invoking the icon beside the product combo box. This opens the Products Details pop up window. Specify the **Product Name** and the **Product Type** of the item which are mandatory fields. Specify the **Part No** and the **Price** of the item in the given fields. Click **Save**, the item gets added to the list.
9. By default, the check box beside the item will be enabled. Specify the price of the item if it is not mentioned and the quantity of items to be ordered in the text box. The cost calculations of the item changes accordingly to the number of items purchased.
10. Under the general information block, select the **Cost Center** and the **GL Code** from the combo box. By default, the **Requested By** will be the name of the technician creating the PO. The **Created Date** and the **Owner** is in non editable text.
11. Enter the description for the PO or any other information that you wish to add in the **Remarks** field.
12. If there are any specific terms associated with the PO, enter the same in the **Terms** field.
13. If you would like to attach a file then click **Attach file** button.
14. Select the Approvers of the purchase order from the **PO Approver(s) list** pop window by clicking the icon .
15. Specify the **Signing Authority** of the company in the respective field.
16. Click **Save the Purchase Order** button to save the details

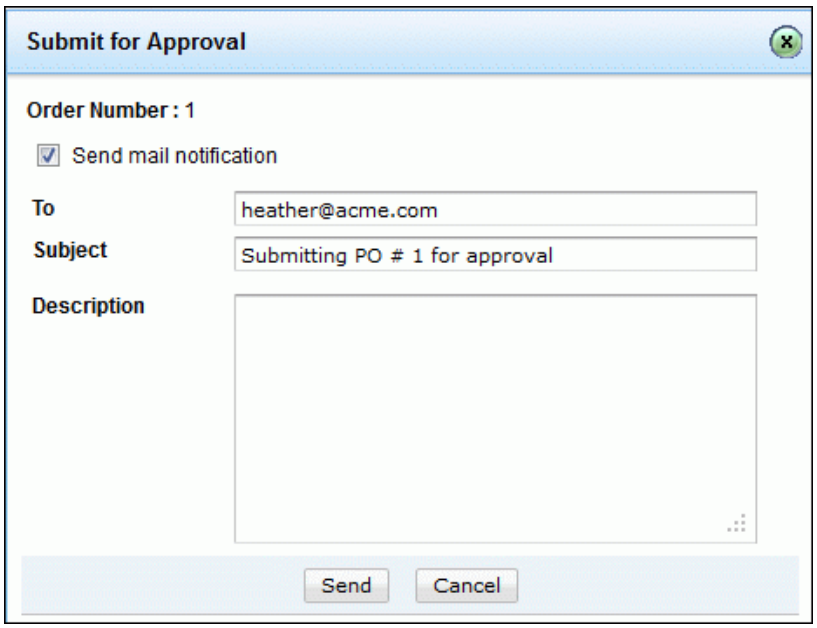
PO Approval Process

Once the Purchase Order is created, the PO should be Submitted for Approval to the concern authority. The approval process is initiated by sending a request for approval to the concerned authority and depending on their decision the PO is approved or rejected.

- The technician/requester approving the purchase order should be assigned with the **Purchase Order Approver** role.
- While creating a purchase order the approver should be selected from the approver's list to send for approval.
- If the approver is not selected or if there are no approver in the list, a warning message appears while submitting the PO for approval.
- Once the request is submitted for approval the status of the PO changes to PO Pending Approval.

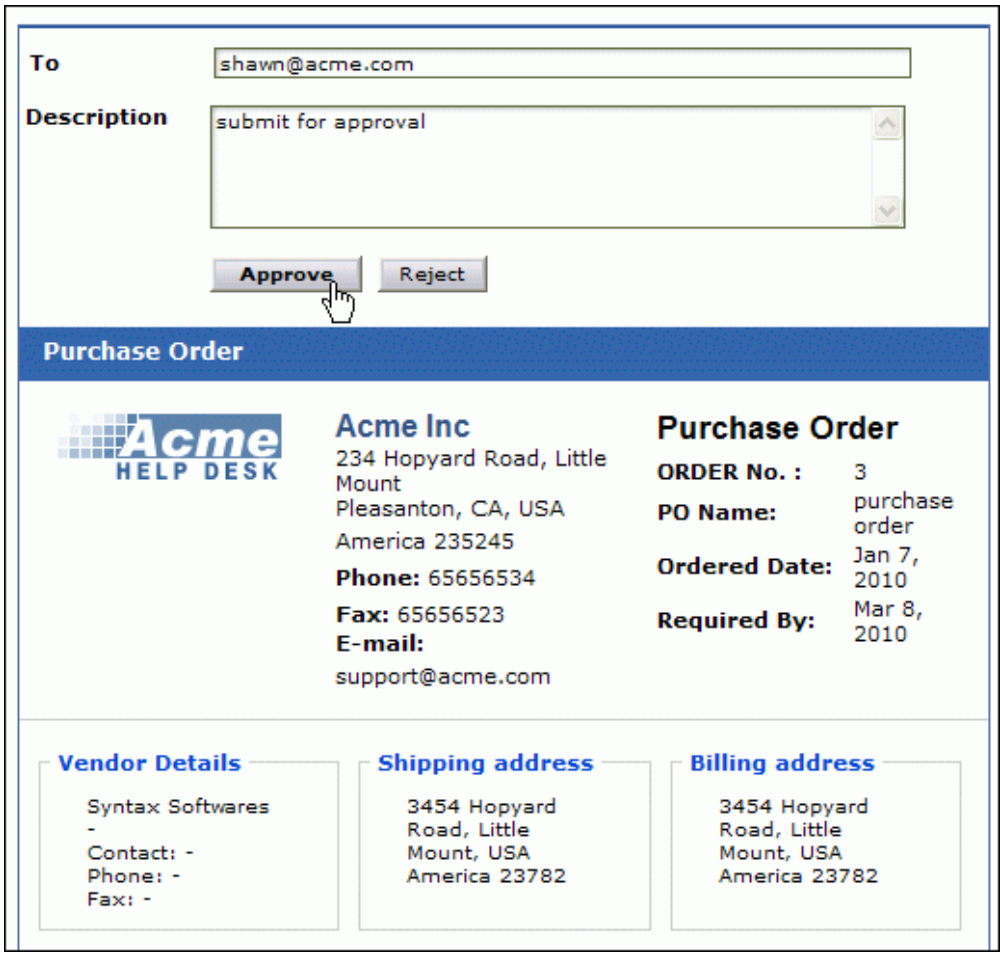
Submit PO for Approval

1. Click the **Purchase** tab in the header pane to open the PO List View page.
2. Select the Open POs to be submitted for approval using the **Filter** drop down. Click the **PO name** link.
3. From the PO details page, click **Actions** tab -> **Submit for Approval** option. The Submit for Approval dialog pops up.
4. Enable Send Mail Notification check box, if you wish to send a mail to the approver regarding the PO Approval.
5. The To field is pre populated with the email address of the approvers. If required, you can modify the subject content manually.
6. Type in the message text for mail notification in the **Description** field.
7. Click **Send**. The mail notification is sent to the user addressed in the **To** field of the notification.



Approve / Reject PO

Once the PO is submitted for approval, a mail is sent to the user addressed in the To field. The email contains the link to the PO requiring approval. Clicking the link displays the PO awaiting approval. The user can also approve/reject the PO directly from the application.



Approve/Reject PO from the application

If you have the permission to approve/reject a Purchase Order,

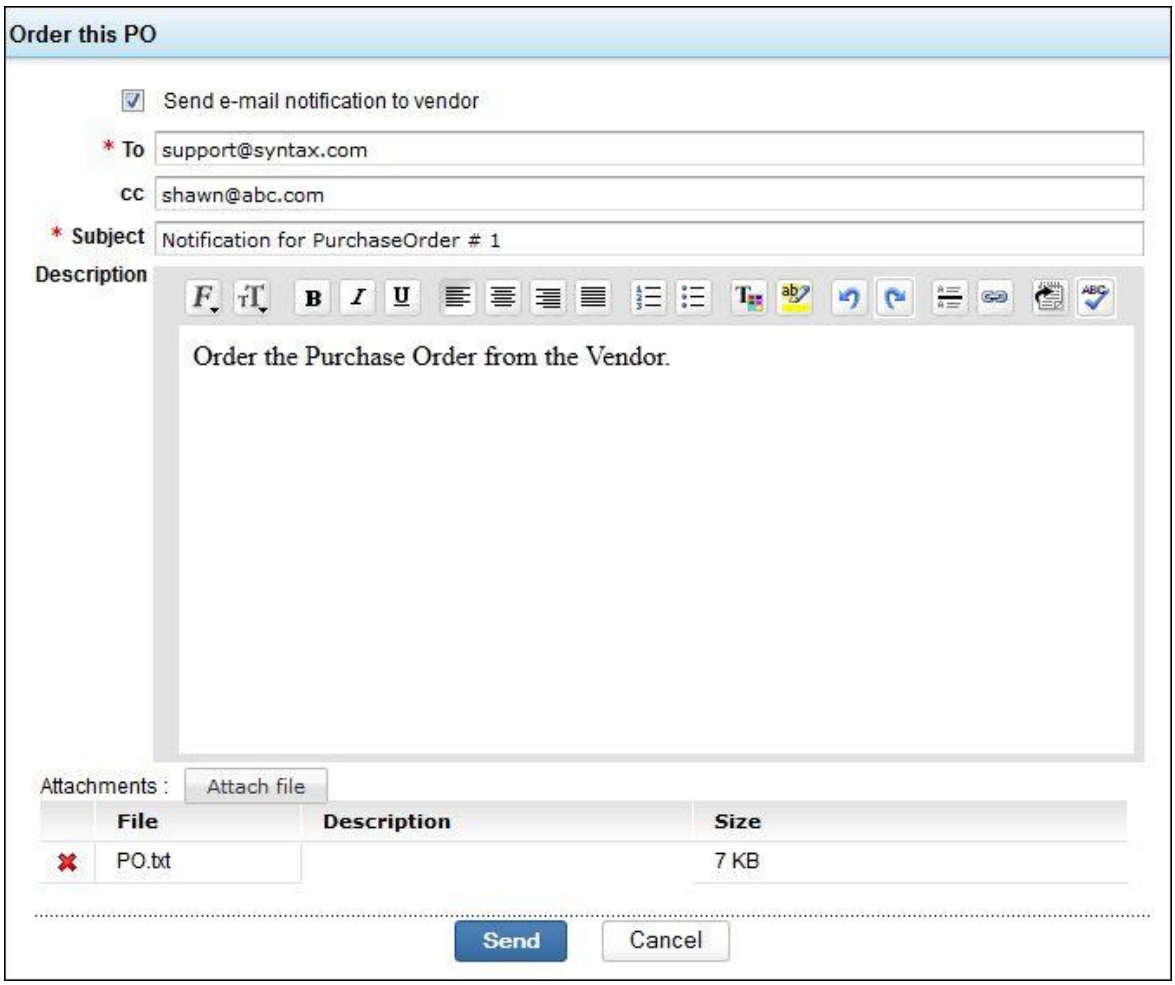
1. Login to the ServiceDesk Plus application with your login credentials.
2. Click the **Purchase** tab in the header pane.
3. Select the POs Pending for Approval using the **Filter** drop down. Click the **PO name** link.
4. From the PO details page, click **Actions** tab -> **Approve/Reject** option. You can send an email notification to the PO owner regarding your decision.

The approved Purchase Order is grouped under the status Approved POs while all the rejected Purchase Orders is grouped under Rejected POs status. The Rejected POs can be deleted completely from the system or can be edited and sent for approval again.

Order PO from Vendor

Once the Purchase Order is approved by the concern personnel, you need to order the items from the vendor.

1. Click the **Purchase** tab in the header pane to open the PO List View page.
2. Select Approved POs from the **Filter** drop down. Click the **PO name** link.
3. From the PO details page, click **Actions** tab -> **Order this PO** option. The Order this PO dialog pops up.



4. Enable **Send Mail Notification** check box, if you wish to send a mail to the vendor regarding ordering of items.
5. Enter the Email address of the Vendor in the To field. You also have an option to CC this mail.
6. If required, you can modify the **Subject** content manually and type in the message text for mail notification in the **Description** field.
7. Click **Attach file** button to attach relevant files to the Order.
8. Click **Send**. The status of the PO is changed to 'Ordered'.

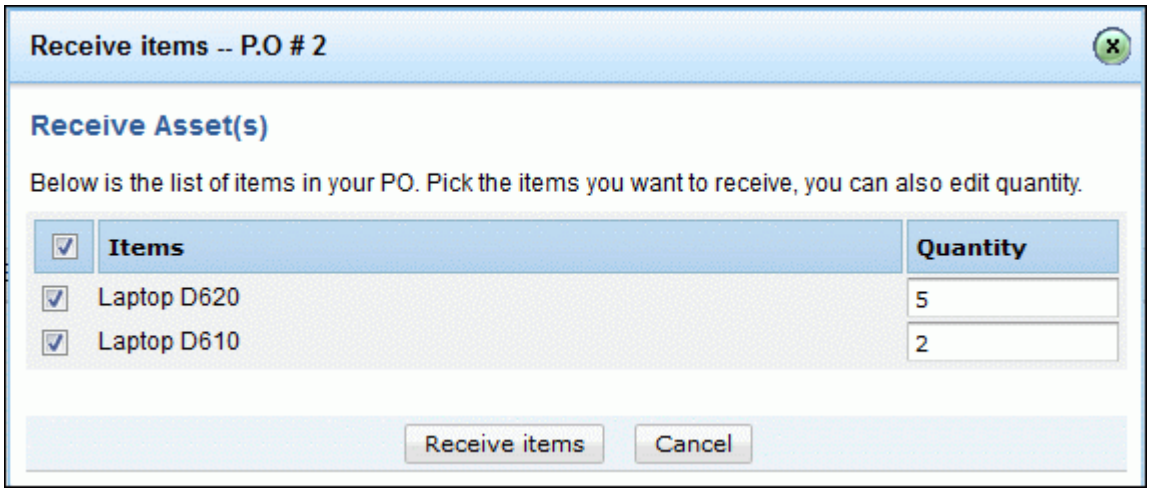
Receive PO Items

The Approved PO is sent to the vendor to acquire the ordered items. The vendor can dispatch the items either completely or partially, providing a receipt in both cases.

ServiceDesk Plus has the ability to change the status of the PO accordingly, i.e., when the items are received partially, the PO Status is automatically changed to **Partially Received** and on receiving all the items, the PO Status changes to **Items Received**.

To mark partially or completely receive items,

1. Click the **Purchase** tab in the header pane to open the PO List View page.
2. Select Ordered POs from the **Filter** drop down. Click the **PO name** link.
3. Click **Actions** tab -> **Receive Items** option. The Receive Items dialog pops up.



4. Enable the check box beside each of the received items. If only a part of the ordered items are delivered, enter the Quantity that have been received.
5. Click **Receive items** button. The PO form is updated with the Received Quantity value and the status is moved to Partially Received POs.

S.No.	Items	Part No.	Price ($)	Tax Rate (%)	Quantity		Amount ($)
					Ordered	Received	
1	Laptop D610		299.00	0.00	5	2	1495.00
2	Laptop D620		300.00	0.00	10	5	3000.00

Sub Total ($)	4495.00
- Discount($)	0.00
Total (Net)($)	4495.00
+ Shipping Cost ($)	0.00
+ Sales Tax ($)	0.00
+ Additional Tax ($)	0.00
Price Adjustment ($)	0.00
TOTAL($)	4495.00

All the received items is added as assets automatically, except for the items with Product Type as Consumable. [Refer Product Type]

Associate Assets

To associate assets,

1. From the Purchase Order details page, click on **Actions** tab -> **Associated Assets** option. All the received assets for the PO is displayed.
2. Enable the check box beside the asset to associate the asset to a group. Click **Actions** drop down -> **Add to Group**. The **Add Resource (s) to** dialog pops up.
3. Select the group from the existing list of groups or enable the radio button beside **New Group,** to add a new group. The asset gets associated to the corresponding group.

Reconcile PO Items

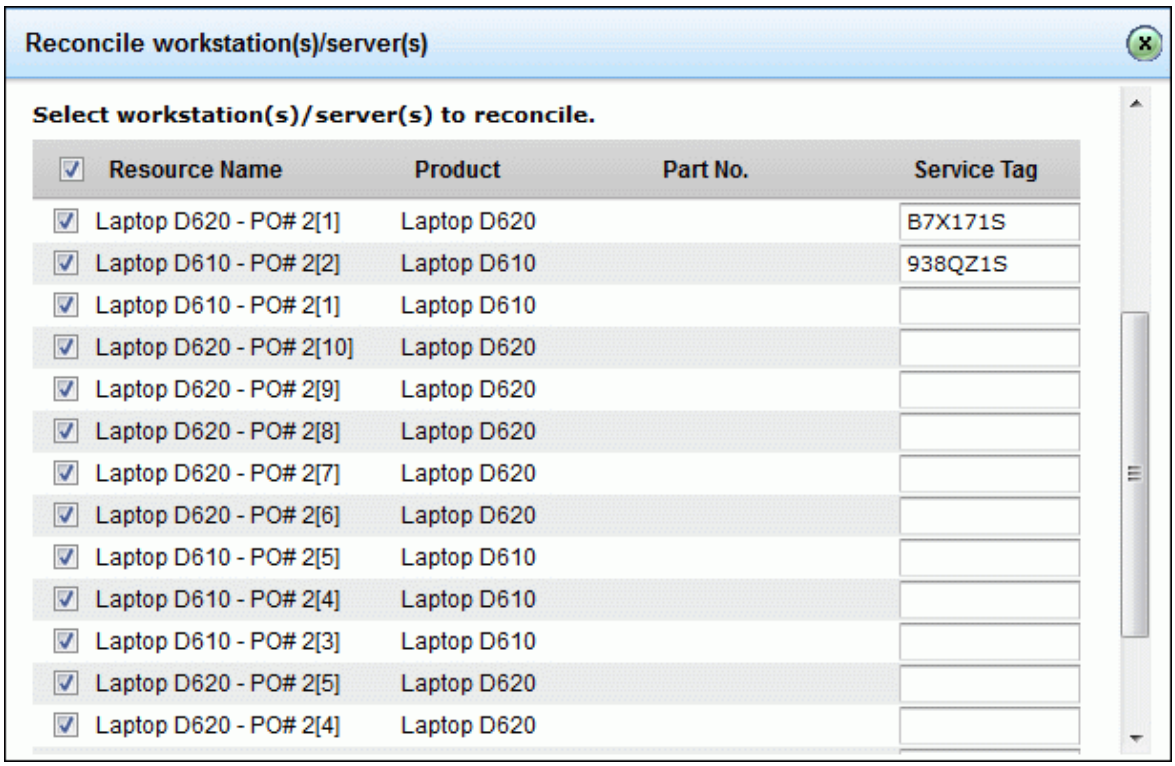
Once the resources are received from Purchase Order, the resources are associated to Department or Groups. But on performing domain scan or network scan, the associated IT assets get duplicated.

Say, "LD400 - PO # 2[10]" is the workstation purchased and has been renamed as "AE-dept". On performing a scan, both the workstations appear in the List View. To avoid this you can reconcile the assets from either the PO details page or from the asset list view page.

Note	1. Items with the Product Type as Consumables are not added to the assets and hence cannot be reconciled. 2. The scanned workstations can be reconciled only once. 3. You cannot reconcile workstations from the same purchase order.

To reconcile assets from the purchase order details page,

1. Click the **Purchase** tab in the header pane to open the Purchase Order list view page.
2. Click the **PO# name** link of the purchase order for which the items needs to be reconciled. You can also use the Filter drop down to sort and select the PO.
3. From the purchase order details page, click **Actions** -> **Reconcile** option. The Reconcile Workstation(s)/Server(s) pops up.



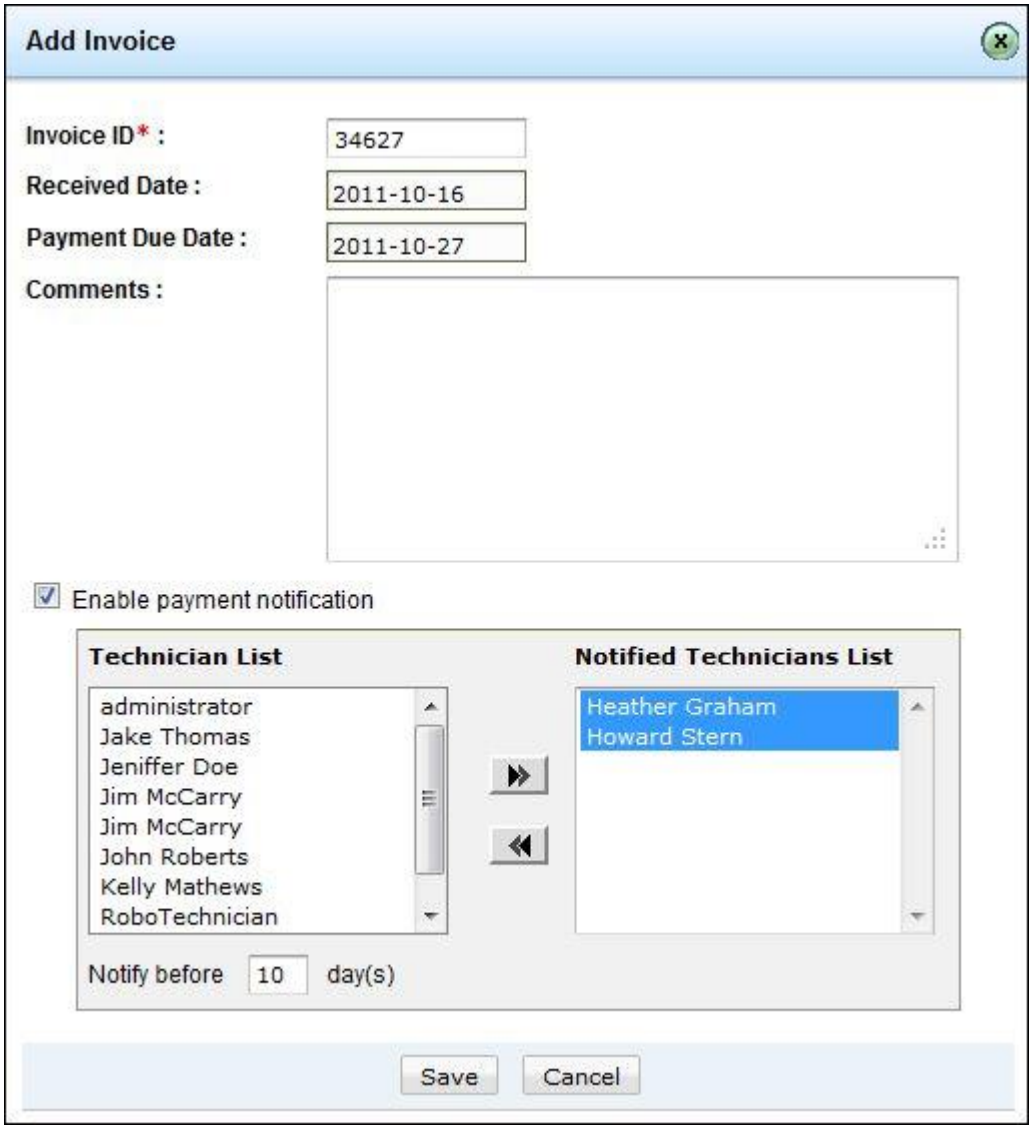
4. In case of workstations and servers, select the check box beside the resource name and enter the Service Tag of the scanned workstation/server.
5. Click **Reconcile** button. The data in the purchased workstation is copied to the scanned workstation copied. On reconciling, the purchased workstation is deleted.

Add Invoice details and Notification

Once the PO is approved by the concern personnel, the Invoice and Payment options gets populated in the Actions tab. On receiving the Invoice from the Vendor, you can add the Invoice details and also sent a notification to the concern technicians.

Add Invoice

1. Click the **Purchase** tab in the header pane to open the purchase list view page.
2. Click the **PO Name** link of the Purchase Order to add an Invoice.
3. From the PO details page, click **Actions** drop-down menu -> **Add Invoice** option. The Add Invoice dialog pops up.



4. Enter the **Invoice ID**. This field is mandatory.
5. Select the **Receive Date** and the **Payment Due Date** from the calendar.

6. If required, enter the relevant comments from regarding the Invoice in the **Comments** field.
7. You can also enable payment notification to the technicians by enabling the check box.
8. Select the technicians from the list for payment notification. Click **>>** button.
9. Enter the **Days** before which the notification should be sent to the selected technicians.
10. Click **Save**.

Receive Invoice

Once the Invoice is received from the Vendor, you can notify the same to the PO approvers.

1. Click **Actions** drop down -> **Receive Invoice** option. The Receive Invoice dialog pops up.
2. Enable **Send Mail Notification** check box.
3. Enter the email address in the **To** field.
4. If required, you can modify the **Subject** content manually and type in the message text for mail notification in the **Description** field.
5. Click **Send**. The status of the PO changes to **Invoice Received**.

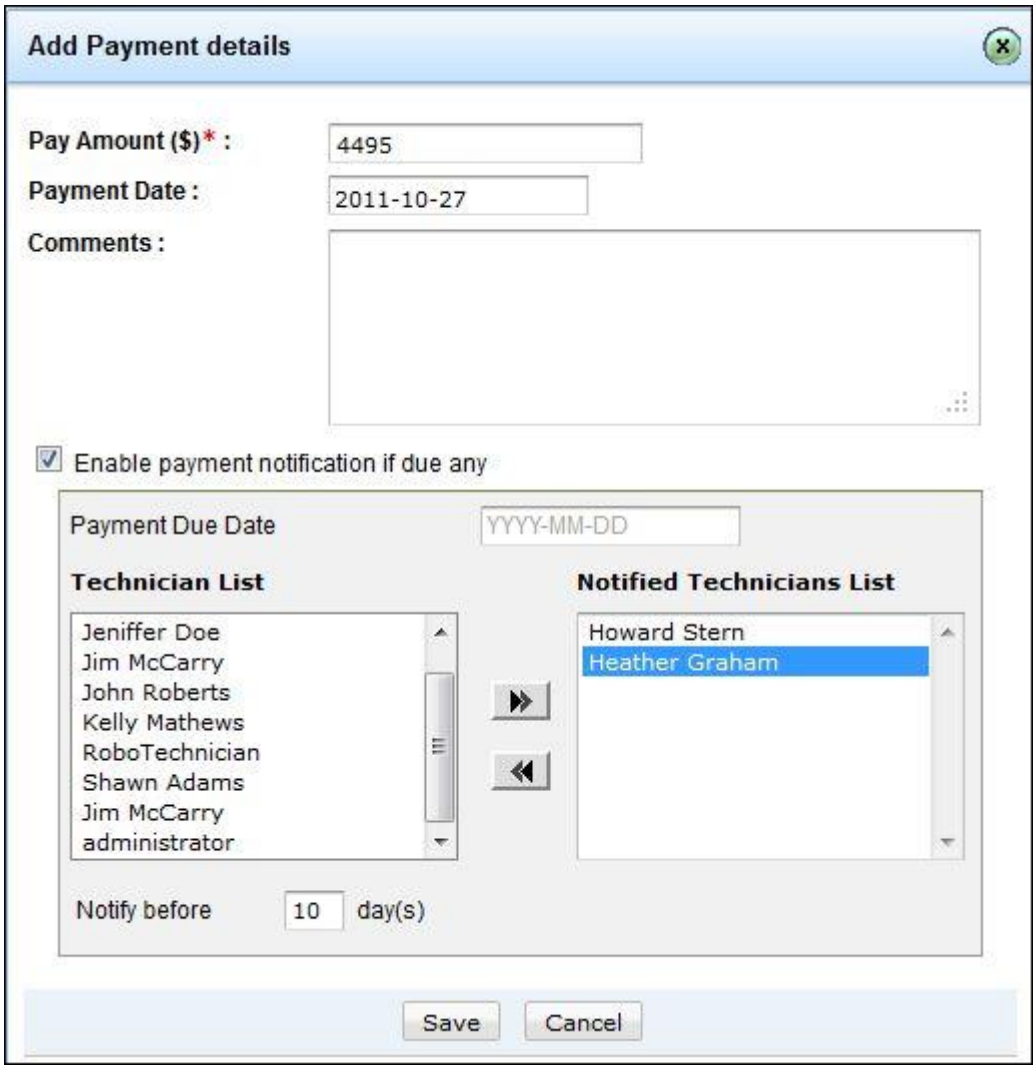
The Invoice details such as the Invoice ID, Received Date, Payment Due Date and Created by can be viewed in the PO details page under **Invoice and Payment** tab.

Add Payment details and Notification

Once you receive the Invoice from the Vendor, you can proceed with the payment process and notify the approvers done the payment is done.

Add Payment Details

1. Click the **Purchase** tab in the header pane to open the purchase list view page.
2. Click the **PO Name** link of the Purchase Order to add an Invoice.
3. From the PO details page, click **Actions** drop-down menu -> **Add Payment** option. The Add Payment details dialog pops up.



4. Enter the **Pay Amount ($)**. This field is mandatory.s
5. Select the **Date of Payment** from the calendar.
6. If required, enter relevant comments in the **Comments** field.
7. You can also enable notification if there are any dues in the payment by enabling the check box.

8. Select the **Payment Due Date** from the calendar icon.
9. Select the technicians from the list for payment notification. Click **>>** button.
10. Enter the **Days** before which the notification should be sent to the selected technicians.
11. Click **Save**.

Payment Done

Once the payment is done, you can notify the same to the PO approvers.

1. Click **Actions** drop-down menu -> **Payment Done** option. The Payment Done dialog pops up.
2. Enable **Send Mail Notification** check box.
3. Enter the email address in the **To** field.
4. If required, you can modify the **Subject** content manually and type in the message text for mail notification in the **Description** field.
5. Click **Send**. The status of the PO changes to **Payment Done**.

The Payment details such as the Payment Date, Amount Paid, Payment Due Date (if any) and Created by can be viewed in the PO details page under **Invoice and Payment** tab.

E-mail PO Owner

By default, the logged in technician creating the Purchase Order is the PO owner. You can send email notifications to the owner regarding the progress of the Purchase Order using this option.

To send an Email to the owner,

1. Click on the **Purchase** tab in the header pane to open the Purchase Order List View page.
2. Click the **PO # name** link. You can use the **Filter** drop down to sort and select the Purchase orders.
3. From the Purchase Order details page, click **Actions** tab -> **E-mail the Owner** option. A **Send E-mail** notification window opens with the owner's **email ID** in the **To** field. The subject reads as "Notification for Purchase Order" with the notification number. Say, Notification for Purchase Order # 1.
4. To notify the contents of the email to any other person other than the owner, specify the **Email ID** in the **Cc** field.
5. To attach any file to the mail, select **Attach file** link.
    1. Click **Browse** button to choose a file.
    2. Select the file and click **Attach file** button to attach the files. You can see the file attached with the file size.

       Note: Files up to the file size of 10 MB can be attached.
6. Enter the email content in the **Description** area.
7. Click **Send** button to send the mail. This displays a message showing that the Notification has been sent successfully.
8. Close the window.

E-mail the Vendor

Once the purchase items are ordered from the vendor, you can send e-mail notifications to the vendor regarding the progress of the items received i.e., if the organization has received the items partially or completely.

To e-mail the vendor,

1. Click the **Purchase** tab in the header pane to open the purchase order list view page.
2. Click the **PO # Name** link. You can use the **Filter** drop down to sort and select the PO.
3. From the purchase order details page, click the **Actions** tab -> select **E-mail the Vendor** option. The **Send E-mail** notification window opens.
4. Enter the vendor address in the **To** field. You can also notify the contents of the e-mail to more than one person by entering their email address in the **CC** field.
5. By default, the **Subject** reads as "Notification for Purchase Order" with the notification number. Say, Notification for Purchase Order # 1.
6. Enter the e-mail content in the **Description** area.
7. To attach any attachment to the mail select **Attach file** link.
    1. Click **Browse** button to choose a file.
    2. Select the file and click **Attach** file button. You can see the file attached with the file size.

    Note: Files up to the file size of 10 MB can be attached.

6. Click **Send** button to send the mail. This displays a message showing that the Notification has been sent successfully.
7. Close the window.

Edit Purchase Order

ManageEngine ServiceDesk Plus provides an option to modify the created Purchase Order.

1. From the PO List View page, select the **PO# Name** link to view the PO details page.
2. Click **Actions** tab -> **Edit Purchase Order** option. The PO form opens in an editable form with the values populated while creating the Purchase Order.
3. Modify the details and **Save** the changes.

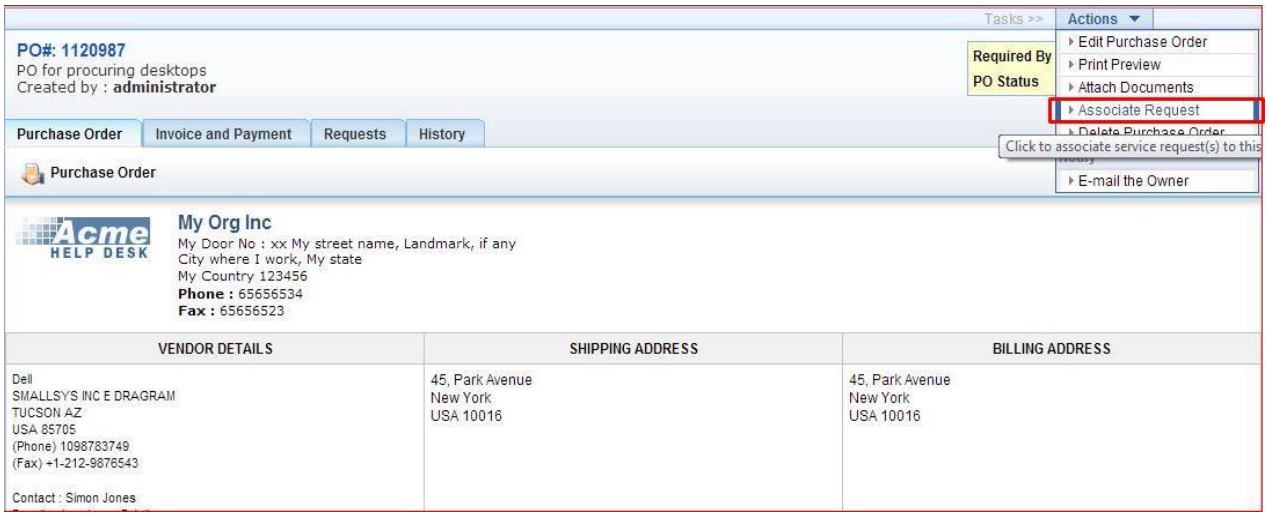
NOTE: While editing an approved PO the status on saving changes to Pending Approval.

Associate Service Requests with Purchase Order

Purchase Order-Service Request association offers authority dealing with the organization's purchases a clear picture of the service request in demand by providing them with vital information like the priority, urgency, impact etc., of the service request based on which the purchase order cycle (that usually involves quote enquiry, bidding negotiations, finalizing a vendor, delivery of goods etc.,) can be formulated and executed as per the requester's needs.This association ensures service requests do not go into an indefinite 'onhold status' by keeping requesters/technicians and the purchase department well-informed about the progress of purchase orders and service requests accordingly.

Associating Purchase Order with Service Requests

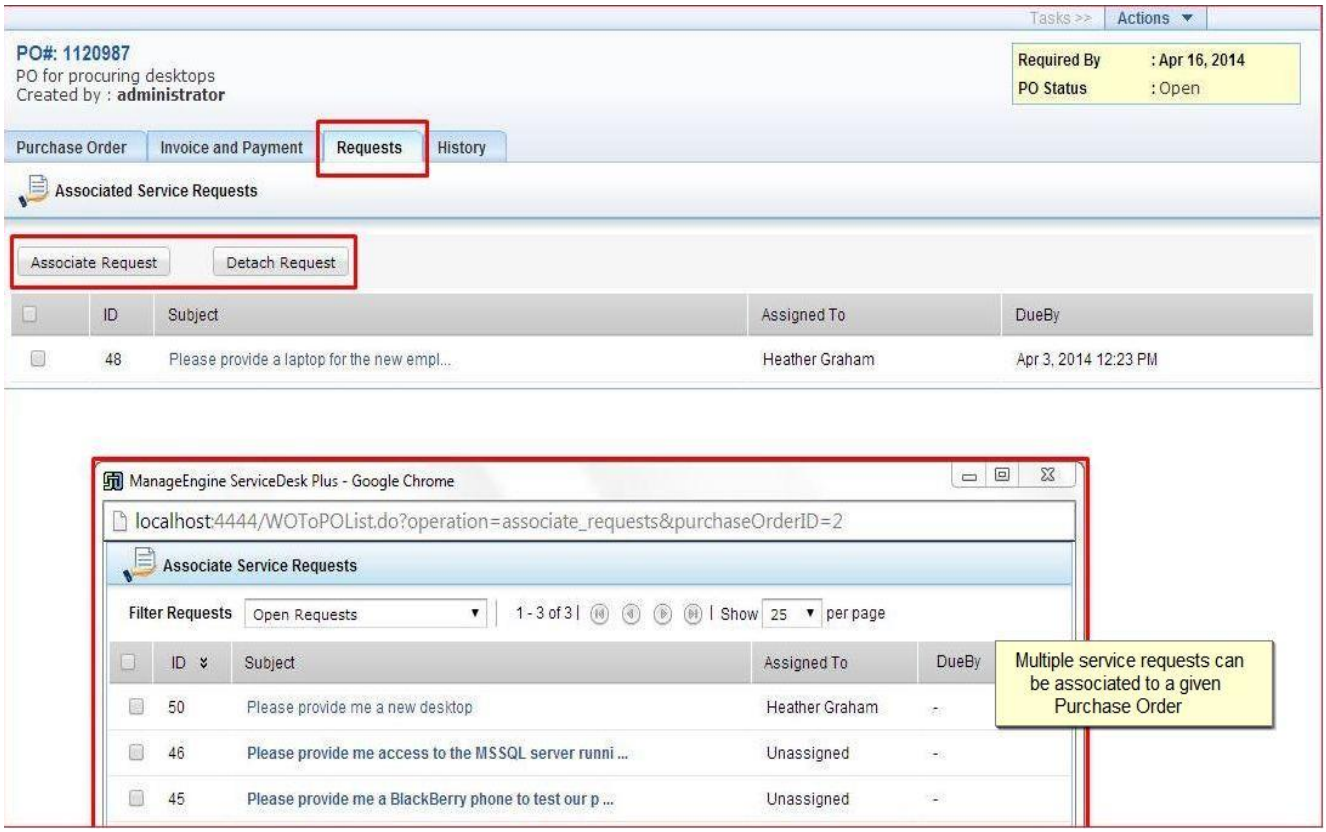
1. Click the **Purchase** tab in the header pane. This opens the purchase order list view page.
2. Select the **Purchase Order** to be associated with service requests by clicking on the respective **purchase order number** (or) purchase order name.
3. From the **Actions dropdown** (available at the right extreme of PO details section) select **Associate Request** option.
4. **Associate Service Requests** popup box will open listing all the **available service requests**



5. Select the **service request to be associated** with the purchase order
6. Click **Associate Request** button

View Service Requests Associated with Purchase Order

1. Click the **Purchase** tab in the header pane. This opens the purchase order list view page.
2. Select the **Purchase Order** by clicking on the respective **purchase order number** (or) **purchase order name**.
3. In the purchase details page, click on **Requests** tab
4. **Service Requests associated with the Purchase Order** will be displayed under this section
5. Click the **subject of the request** that you want to view
6. Request details will be displayed in a pop-up window in **print preview** mode



Detaching Service Requests from Purchase Order

1. Click **Purchase** tab in the header pane. This opens the purchase order list view page.
2. Select **Purchase Order** >> Click **Requests** tab.
3. Select **service request to be detached** from the purchase order
4. Click **Detach Request** button

Print the Purchase Order

You can preview and print the entire Purchase Order details using Print Preview option.

To print a Purchase Order,

1. Click the **Purchases** tab in the header pane to open the purchase list view page.
2. Click the **PO # Name** link of the purchase order you wish to print. You can use the **Filter** drop down to sort and select the PO.
3. From the Purchase Order details page, click **Actions** tab -> **Print Preview** option. The Purchase Order details is displayed in a printable format.
4. Click **Print** option or **Ctrl +p** to print the Purchase Order details.
5. Set the required options and click **Ok**.

Delete Purchase Order

You can delete a Purchase Order either from the List View or from the PO details page.

Delete PO from List View

Delete bulk Purchase Orders using this option.

1. Enable the check box beside the Purchase Order to delete. You may use the **Filter** drop down to sort and select the PO to delete.
2. Click **Delete** button. A confirmation message appears.
3. Click **OK** to proceed. The PO is deleted from the list.

Delete PO from details page

Individual Purchase Order can be deleted using this option,

1. Select the **PO Name** link of the Purchase Order to delete. You may also use the **Filter** drop down to sort and select the PO to delete.
2. From the PO details page, click **Actions** tab -> **Delete Purchase Order** option.
3. A confirmation message appears. Click **OK** to proceed. The PO is deleted from the list.

Close Purchase Order

ManageEngine ServiceDesk Plus provides an option to Close PO manually on receiving all the items and the invoice, or after making the payment.

To close a Purchase Order,

1. Click the **Purchase** tab in the header pane to open the purchase list view page.
2. Click the **PO Name** link of the Purchase Order to close. You can use the Filter drop down to sort and select the PO.
3. From the PO details page, click **Actions** drop down -> **Close PO** option. The Close PO dialog pops up.
4. Enable **Send Mail Notification** check box.
5. By default, the email address of the technician is displayed in the **To** field.
6. If required, you can modify the **Subject** content manually and type in the message text for mail notification in the **Description** field.
7. Click **Send** button. The status of the purchase order is changed to Closed.

View Purchase Order based on Filters

1. Log in to ServiceDesk Plus application using your **user name** and **password**.
2. Click on **Purchase** tab in the header pane. This brings up the Purchase Orders list view page. By default the status of the Purchase Order will be 'All POs'.
3. Select the corresponding filter option from the **Filter Showing** combo box. You can view purchase orders with different status levels using filters. They are,

   - **All POs**
     All Purchase Orders irrespective of the status will be listed. This is the default status on opening the purchase order list view.
   - **Open POs**
     The newly added Purchase Order will fall under this category. These POs are not submitted for approval.
   - **POs Pending Approval**
     The Purchase Orders which are submitted and waiting for approval from the purchase order approvers will be listed under this category.
   - **Approved POs**
     All the Purchase Orders which are approved but the purchase items are not yet received will be listed under this category.
   - **Rejected POs**
     All the Purchase Orders rejected by the purchase order approver gets listed under this category.
   - **Ordered POs**
     Lists all the POs for which the items have been ordered by the vendor.
   - **Partially Received POs**
     Purchase Orders, which are partly received from the vendor, will be listed under this category.
   - **Received POs**
     Lists the POs for which the items has been completely received.
   - **Invoice Received POs**
     Lists all the POs for which the invoice is received from the vendor.
   - **Payment Done POs**
     Lists all the POs for which the payment is done.
   - **Closed POs**
     The Purchase Order gets listed under this category when the purchased items are fully received from the vendor.
   - **Overdue POs**
     Purchase orders not delivered and have exceeded the delivery date will be listed under this category.
   - **POs due in next 7 days**
     Outstanding Purchase Orders, expiring in next 7 days will be listed under this category.
   - **POs due in next 30 days**
     Outstanding Purchase Orders, expiring in next 30 days will be listed under this category.
   - **Searched POs**
     While searching for the Purchase Order under Search, the list of Searched POs will fall under this category.

Contracts

Every organization would maintain an annual maintenance contract with third-party vendors to maintain its infrastructure and function without any major downtime due to bad maintenance of the assets owned by it. ManageEngine ServiceDesk Plus gives you a provision to track such contract details, its date of commencement, and date of expiry, alert you with a reminder in advance about the expiry of the contract, the cost incurred for the purchase and renewal of the contract, the kind of maintenance support provided by the third party vendor, and the third party vendor name with whom the contract has been signed. Any other related documents to the contract can also be maintained along with these details as attachments to the contract. To open the contracts module, log in to the ServiceDesk Plus application using your user name and password and click the **Contracts** tab in the header pane.

- About Contracts
- Creating a New Contract
- Viewing Contract
- Editing and Deleting Contract
- Viewing Contract Owner Details
- Renewing Contract
- Print Preview of Contract
- E-mailing the Contract Owner
- E-mailing the Vendor
- Search Contracts

Create New Contract

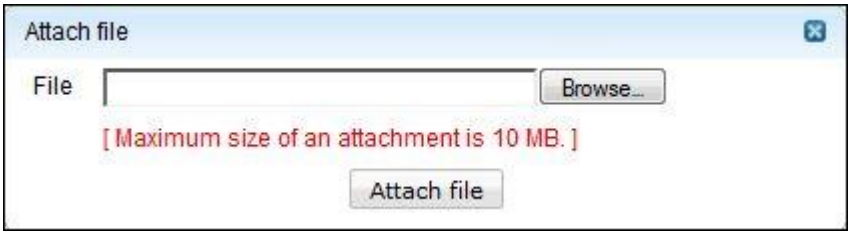
To create a new contract for asset,

1. Click the **Contract** tab in the header pane. This opens the contracts list view page.
2. Click the **New Contract** button in the contract index page. (OR)

   Click **Quick Actions** drop-down menu --> click **Contracts** option under Create New. This opens the Add Contract form. This form has three major sections: **Contract Details**, **Contract Rules**, and **Notification Rules**.
3. Specify a name for the contract in the **Contract Name** field. This is mandatory field.
4. Enter relevant **Description** for the contract in the respective text field.
5. Select the **Maintenance Vendor** from the combo box listing all the vendor names available. This is mandatory field. If the vendor is not listed, then click **Add New Vendor** button beside the combo box.

   1. Specify the name of the vendor in the given field. This is mandatory field.
   2. Enter a brief description about the vendor in the respective field.
   3. Specify the **Contact Person** in the given field.
   4. Click **Save**. The added vendor is selected and is displayed in the combo box. If you do not wish to add a new vendor then click **Close**.

7. In the **Support** field below it, enter the details regarding the kind of support that will be provided by the vendor to you.
8. You can add files that are related to the contract and are necessary to be maintained and referred to along with the contract information. Click **Attach File** button. The Attach File window pops up as shown below,



   1. Click the **Browse** button to open the file selector window.
   2. Select the file that you wish to add and click the **Attach File** button. The selected file is added and is displayed in the same window just below the file selection field. The total size of the attachments should not exceed 10 MB.
   3. The attached file gets listed along with the File name and the size. The file can be deleted on clicking the **Delete** icon beside the file name.

9. In the **Contract Rules** section, you need to choose the assets that are to be maintained under this contract and mention the maintenance period and maintenance cost. Select the **Assets** that are covered under the contracts from the **Maintained Assets** list.
10. To add more resources to the list, click **Select Resources for this contract** link. This opens Select Resources page.
    1. Specify the **Resource Name** or **Product Type** or **Product** in the search field.
    2. Click **Search** button to get the result. Select the required resources by enabling the check box.
    3. Click **Add Items** button to add the selected items.
    4. Click **View Resources>>** button to view the selected resources.
    5. Click **Add Resources** to Contract button to add resources to the Maintained Assets list.
    6. Click **Remove Selected Resources** icon to remove selected resources from the list.
11. The **Active period** of the contract is a mandatory field where you need to enter the **From** and **To** date of the contract period. Choose the dates from the calendar.
12. Enter the maintenance cost in terms of $ in the **Maintenance Cost** field.
13. Select the check box beside **Enable Notification**. This displays the notification rules information. Here you need to select the technician who needs to be notified about the expiry of the contract and how many days before the expiry, the notification needs to be sent.
14. Click **Save**.

View Contract Details

To view a contract and its details,

1. Log in to the ServiceDesk Plus application using your **user name** and **password**.
2. Click the **Contracts** tab in the header pane. By default, the list of **Open Contracts** is displayed.
3. Select the status of the contract you wish to view using the Filter Showing combo box.
4. Click the **Contract Name** link that you wish to view. This opens the View contract page.

The **Contract ID** is a unique ID given to the contract during the time of its creation. This is system generated and is used to identify and track the contract uniquely. The contract details are grouped under three major heads: **Contract Details**, **Contract Rules**, and **Notification Rules**. Based on the entries made in the contract during the time of its creation, the details will be displayed in the respective section.

In the **Contract Rules** block, the assets that are maintained under the current contract are displayed. These assets are hyperlink to display their respective details. Click any of the asset names to open the **Edit Asset** form. Here you can edit the required information and update the same. To know more on editing assets, refer to the Editing Asset Details section.

Edit and Delete Contract

Edit Contract

To edit a contract,

1. Log in to the ServiceDesk Plus application using your **user name** and **password** or using admin login.
2. Click the **Contracts** tab in the header pane. By default, the list of **Open Contracts** is displayed.
3. Select the status of the contract you wish to edit using the Filter Showing combo box.
4. Click the **Contract Name** link that you wish to edit. This opens the View Contract page.
5. Click the **Edit** button on the right hand side of the page. (OR)

   Click **Actions** combo box - > **Edit Contract** option. This opens the Edit Contract form.
6. The existing details of the contract is displayed. As the contract ID is a system generated ID, it is not available in the edit contract form. You can edit all the other details.
7. Once you are done with editing, click **Save**. If you entered wrong information and want to know what the initial values were, then instead of **Save**, click **Reset**.

Delete Contract

To delete contract,

1. Log in to the ServiceDesk Plus application using your **user name** and **password** or using admin login.
2. Click the **Contracts** tab in the header pane. By default, the list of **Open Contracts** is displayed.
3. Select the status of the contract you wish to delete using the Filter Showing combo box.
4. Click **Delete** on enabling the check box beside the contract.
5. A pop up window confirming the delete operation appears. Click **OK** to proceed. The contract will be deleted from the list.

View Contract Owner Details

By default, the owner of a contract is the person who enters the contract details into the application.

To view the owner details,

1. Log in to the ServiceDesk Plus application using your **user name** and **password** or using admin login.
2. Click the **Contracts** tab in the header pane. By default, the list of **Open Contracts** is displayed.
3. Click the **Contract Name** link to view the contract owner details. This opens the View Contract details page.
4. Click **Actions** combo box - > **View Owner Details** option. A pop up window containing the owner details such as, name, employee id, designation, contact information appears.
5. Click **Close** to close the pop-up.

Renew a Contract

To renew a contract,

1. Log in to the ServiceDesk Plus application using your **user name** and **password** or using admin login.
2. Click the **Contracts** tab in the header pane. By default, the list of **Open contracts** is displayed. Select the status of the contract which you wish to renew using the Filter Showing combo box.
3. Click the **Contract Name** link that you wish to renew. This opens the View Contract page.
4. Click **Actions** combo box -> **Renew Contract** option. The **Renew Contract** form is displayed with the contract rules of the original contract. As the contract ID is a system generated ID, it is not available in the renew contract form. The contract name is appended with the word **renewed**. You can edit the name but ensure that the contract name is unique and does not have the old name.
5. Enter the **Description** for the contract.
6. Choose the maintenance vendor from the combo box. If the vendor is not listed, then click **Add new link** beside the combo box. The Vendor Details page pops up. Specify the name of the vendor, description, and the contact person name in the pop-up window. **Save** the changes.
7. If you have any information on the type of support, enter the same in the **Support** text area.
8. If there are any documents that you wish to attach to the contract, click the Attach File button. The Attach File window pops up.
    1. Click the **Browse** button to open the file selector window.
    2. Select the file that you wish to add and click the **Attach File** button. The selected file is added and gets listed along with the File Name and size. If you wish to delete any of the file then click the delete icon beside the file. The total size of the attachments should not exceed 10 MB.
9. Select the Assets that are covered under the contracts from the Maintained Assets list. To add more resources to the list,
    1. Click **Select Resources** link. This opens Select Resources page.
    2. Specify the **Resource Name or Product Type or Product** in the Search field.
    3. Click **Search** button to get the result.
    4. Select the required resources by enabling the check box.
    5. Click **Add Items** button to add the selected items.
    6. Click **View Resources>>** button to view the selected resources.
    7. Click **Add Resources** to **Contract** button to add resources to the Maintained Assets list.

10. The **Active period** of the contract is a mandatory field where you need to enter the **From** and **To** date of the contract period. Choose the dates from the calendar that can be invoked by clicking the icon.
11. Enter the maintenance cost in terms of $ in the **Maintenance Cost** field.
12. Select **Enable Notification** option by enabling the check box. On enabling you get the **User list & Notified User** list. To notify users regarding contract expiry select the user from the User list and click forward **>>** button to move the user to the Notified User List. Specify the days before which the information has to be notified in the Notify before field.
13. Select the check box, **Disable all notifications for the old contract**, to disable notifications of the old contract.
14. Click **Save**.

Print the Contract

To print a contract,

1. Log in to the ServiceDesk Plus application using your **user name** and **password** or using admin login.
2. Click the **Contracts** tab in the header pane. By default, the list of **Open Contracts** is displayed.
3. Select the corresponding filter option from the **Filter Showing** combo box.
4. Click the **Contract Name** that you wish to print. This opens the view contract page.
5. Click Actions combo box -> click **Print Preview** option. The contract details are displayed in a printable format in a pop-up window.
6. Click the **Print** option to print the contract details.
7. Set the required options and click **OK**.

E-mail the Contract Owner

By default, the owner of a contract is the person who enters the contract details into the application.

To send an e-mail to the owner,

1. Log in to the ServiceDesk Plus application using your **user name** and **password** or using admin login.
2. Click the **Contracts** tab in the header pane. By default, the list of **Open Contracts** is displayed in the contract list view page.
3. Click the **Contract Name** link of the contract you wish to e-mail the owner. This opens the view contract page.
4. Click **Actions** combo box -> **E-mail the Owner** option. A **Send Notification** window opens with the owner's e-mail ID in the **To** field. The subject reads as **Notification for Contract ID <number>**.
5. If you wish to notify about the contents of the e-mail to anyone else also, then enter their e-mail ID in the **CC** field.
6. Enter the e-mail content in the **Description** area.
7. Click **Send**. A message is displayed saying that the e-mail has been sent successfully.
8. Click **Close**.

E-mail the Vendor

To notify the vendor,

1. Log in to the ServiceDesk Plus application using your **user name** and **password** or using admin login.
2. Click the **Contracts** tab in the header pane. By default, the list of **Open** contracts are displayed in the contract list view page.
3. Click the **Contract Name** link of the contract you wish to notify the vendor. This opens the **View Contract** page.
4. Click Actions combo box - > click **E-mail the Vendor** option. A **Send Notification** window opens with the vendor's e-mail ID in the **To** field. The subject reads as **Notification for Contract ID <number>**.
5. If you want to send the same notification to anyone else, then add their e-mail ID in the **CC** field.
6. Enter the e-mail content in the **Description** area.
7. Click **Send**. A message is displayed saying that the e-mail has been sent successfully.
8. Click **Close**.

Search for a Contract

You can search for contracts with the Search in contracts option of the ServiceDesk Plus application.

To search for a contract,

1. Log in to the ServiceDesk Plus application using your **user name** and **password** or using admin login.
2. In the **search** block on the left hand side of the page, choose **Contract** from the **Search in** combo box. If you are in contracts section, then by default, contract is selected.
3. In the **Enter Keyword** field, type in your search string.
4. Click **Go** or press the **Enter** key in your keyboard. The search result displays all contracts that match the search string.

You can search for contracts based on the contract name, asset names added in the contract, and owner of the contract.

View Contracts based on Filters

1. Click **Contracts** Tab. This brings up the Contracts view list page. By default, the list of **Open Contracts** will be displayed.
2. Select the corresponding filter option from the Filter Showing combo box. You can view the contracts with different status levels using filters. They are,
    - **Open Contracts**
      Contracts which are active and yet to get expired comes under this category.
    - **All Expired Contracts**
      All the expired contracts will be listed under this category.
    - **Contracts expired in last 30 days**
      Contracts which expired in the last 30 days gets listed under this category
    - **Contracts expiring in next 7 days**
      Contracts, which will be expiring in next 7 days, will b listed under this category.
    - **Contracts expiring in next 30 days**
      Contracts, which will be expiring in next 30 days, will be listed under this category.

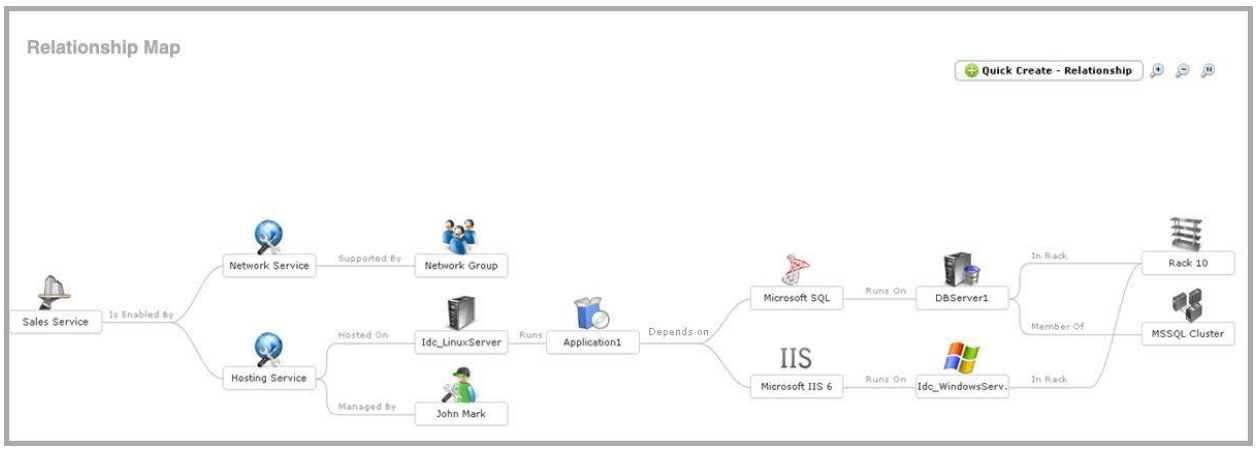
Configuration Management Database (CMDB)

Configuration Management Database (CMDB) is a centralized repository that stores relevant information about all the significant entities in your IT environment. The entities, termed as **Configuration Items (CIs)** constitutes of Hardware, the installed Software Applications, Documents, Business Services and People that are part of your IT system. Unlike the asset database that comprises of a bunch of CIs, the CMDB is designed to support a vast IT structure where the interrelation between the CIs are maintained and supported successfully.

Each CI within the CMDB is grouped under specific CI Types, and is represented with **Attributes** and **Relationships**. Attributes are data elements which describe the characteristics of CIs under a CI Type. For instance, the attributes for CI Type Server would be Model, Service Tag, Processor Name and so on. Relationships denote the link between two CIs that identifies the dependency or connection between them.

The CMDB in ServiceDesk Plus, keeps a track of all the pending requests, problems and change raised for the CI Type - Assets, Business and IT Services. Any impact cause by the malfunctioning of these CIs on other CIs can be identified using the Relationship Map, and specific measures can be adapted to minimize the effect. The CMDB, thus, functions as an effective decision making tool by playing a critical role in **Impact Analysis** and **Root Cause Determination**.

Before you begin populating the CIs into the CMDB, you need to configure the CMDB configurations (Configuration Item Types and Relationship Types) in the Admin tab.



Populate CIs in CMDB

The CMDB, when catered to the IT environment, functions as a decision making tool, impact and root cause analyzer. But, by populating a large amount of data, your CMDB may turn complex, causing a loss in structure and information, thereby making its analysis less effective.

So how can you build an efficient CMDB without turning it complex? ServiceDesk Plus gives you a step-by-step process to identify the essential CIs and populate them in your CMDB.

Steps to populate CIs in CMDB

To set up a less complicated CMDB design, strategize on your CI List and their supported attributes and relationships. Given below are 3 easy steps through which you can effectively populate CIs in your CMDB.

Step #1: Narrow down the CI List

The first step is to identify the business critical CIs as per your organizations environment. Next, group them in appropriate CI Types. Each CI Type holds its own attributes and relationships that are defined with key stakeholders from the Service Catalog Management, Change Management and the likes.

Some of the entities that can contribute to your CI list are,

- Business Service
- Hardware (IT and Non IT assets, components)
- Software (which are installed in the server/workstation like applications, operating systems, database)
- Department
- Documents (license agreement, contract, lease agreement)
- Users and Support Groups

NOTE: Please note that not all software are considered as CIs. The software which are installed in the server/workstation, and group under a CI Type are alone considered as Configuration Items (CIs).

Step #2: Populate the Configuration Items

After the CI List is strategized and confirmed, you need to populate the Configuration Items (CIs). ManageEngine ServiceDesk Plus gives you various ways through which you can effectively populate CIs into your CMDB.

Populate Workstation/Devices

- Windows Domain Scan
- Network Scan

Populate Users/Technicians

- Importing from Active Directory (for Windows machine)
- Importing from LDAP

Populate other CIs such as IT services, Business Services, Department

- Importing CIs from CSV file
- Manual Addition of CIs

NOTE: Make sure that the CI information in your CMDB is updated from time-to-time.

Step #3: Create the Information Model

The overall information model is complete only when the relationships between the CIs are defined. While populating Configuration Items using any of the methods in Step 2, the inter-dependencies between the CIs are identified and established. The relationships can be viewed from the Relationship Map which helps in impact and root cause analysis.

Import CIs from CSV file

If the CIs are recorded in a .csv file, then you can import the same using Import CIs from CSV file option. The easy-to-use CSV import option in ServiceDesk Plus allows you to import the CI information from the existing database as well as from other applications.

To import CIs from a CSV file,

1. Click **CMDB** tab in the header pane. By default, the CIs under Business Service are displayed.
2. Click **Import CIs from CSV file** link. The **CI Import Wizard** is displayed.

Steps to Import CIs from CSV file

Step #1: Locate CSV file

1. Select the CI Type for which the CIs should be imported.
2. Click **Browse** button to select the CSV file.
3. On locating the CSV file from the file chooser window, click **Open**. The path to the file appears automatically in Locate CSV file field.
4. Click **Submit** button.

The above image shows CI Import Wizard page and the CIs to be import are of the CI Type 'Workstation'.

Step #2: Customize Mapping

1. Select the date format to represent all the date fields.
2. Map the CI field with the field names from the CSV file. If there are any additional attributes configured, then the same appears in the customized mapping form.
3. Click **Import** button. The details of the CIs from CSV are imported.
4. On completion, the data on the total CIs, the number of CIs imported and the number of CIs failed to import are displayed.

Warning	If there are any failure records while importing the CIs, do not re-import the same .csv file. Instead, download the FailedCIsList.csv available in the Imported Result page, correct the errors and then import to avoid duplicate CIs.

Notes

1. If the CI Type chosen in Step #1 is a parent and if a CI row in the .csv file corresponds to sub CI Type, then the same can be mapped in the customize mapping form.
2. The Sub Type specified in .csv file should already be configured in the application.

3. If existing CIs are imported again under a different CI Type, then the CIs are grouped under the new CI Type.

CMDB List View

The **Configuration Items** (CIs) under each CI Type can be viewed in the **CMDB List** view. If you have not populated your CIs into the CMDB, then you can follow the steps given in the document Populating CIs in CMDB.

NOTE: If you are not the administrator, then you would require **Enable CMDB** role to access the CMDB module.

Click **CMDB** tab in the header pane. The page navigates to view the Configuration Items (CIs) under the CI Type - Business Services, by default. To view all the CIs in the CMDB irrespective of the CI Type, click **All CIs** link. The CIs are listed with the Name, the CI Type and the Site to which they belong.

From the CMDB List view, you can perform various actions such as,

- View CIs under each CI Type
- Add CIs under a CI Type
- Modify CI Type for the CIs
- View Relationship Map
- Bulk delete of CIs

View CIs under a CI Type

You can view CIs under a specific CI Type by selecting the CI Type from the **Configuration Items** block. Click ▸ icon to view Sub CI Type. To view the Sub CI Types of all the CI Types, click icon.

While viewing the CIs under a CI Type, the list view columns displays the CI attributes that were configured while adding the CI Type. For instance, the CI Type - Workstation would have attributes like Model, Service Tag, Service Pack, IP Address and so on. While viewing the CIs under CI Type - Workstation, the configured attributes would listed in the list view column.

If you are viewing the list view column of a child CI Type, say Windows Workstation or Unix Workstation, then the list view column would display the CI attributes configured for the parent CI Type as well as the attributes configured for the child CI Type.

Note	
	1. While viewing CIs under a parent CI Type, the CIs under its Sub CI Type are also listed. 2. The attributes in the column list view for Sub CI Type comprises of the parent CI Type attributes and the sub CI Type attribute.

Add a CI under a CI Type

To add a CI under a CI Type,

1. Select the CI Type from the Configuration Items block.
2. Click **New** button and enter the CI details in the Add New form.

   The **Add New** form consists of the attributes configured while adding the CI Type. In case of **Sub CI Types**, the attributes configured while adding the Sub CI Type and the parent CI Type is displayed.

Edit the CI Type for a CI

You can modify the CI Type for a CI. An **Actions** drop-down button is available in the List view for CIs that are also tracked in the asset module, such as Keyboard, Access Points, Servers and so on. If you wish to track CIs under a specific CI Type in the asset module also, then enable **Track as asset** option while configuring the CI Type.

From the Actions drop-down, you can **modify a CI Type** for a CI. To do so,

1. Enable the check box beside the CI name.
2. Click **Actions** drop-down, select **Modify CI Type** option. The Modify CI Type dialog pops-up.
3. **Select the CI Type** from the drop-down.
4. Click **Save**.

View Relationship Map

Relationship Map gives a consolidated view of the relationship between the CIs. To view the relationship map of a CI, click **View Relationship Map** icon beside the CI. The Relationship Map opens in a new window.

Delete CIs

To delete CIs from the CMDB List View

1. Select the CI Type under which the CIs should be deleted (OR) Click **View All CIs** to view all the CIs irrespective of the CI Type.
2. Enable the check box beside the CI to delete.
3. Click **Delete** button. A confirmation dialog appears.
4. Click **OK** to proceed. The selected CIs are deleted from the list.

NOTE: In delete operation, the related financial and history details of the CI is deleted.

Defining CI Relationships

CI Relationships form a major part of your CMDB, as it is the relationships between the CIs that differentiate the CMDB from the Asset database. A CMDB without relationships constitutes a bunch of CIs in a single database; fetched through scan or import process, or by manual addition. But with relationships, the users accessing CMDB can understand the inter-dependencies between the CIs, and in the case of a failure, the impact caused on another CI can be identified.

NOTE: To make your CMDB structure less complex, consider the relationships you will require in your CMDB and ensure to use the right relationship type to define the nature of relationship.

Topics discussed under this section:

- Defining Relationships
- Access Relationships Tab
- View Relationships from the Relationship Tab
- Add Relationship from the Relationship Tab
- Delete Relationship

Defining Relationships

In order to define the CI relationships in your CMDB, three piece of information is required.

1. **The CI for which the relationship is created**
2. **The Type of Relationship denoting the inter-dependencies between the CIs, and**
3. **The dependent CI.**

For example, consider a sentence like "*ServiceDeskServer Depends on CentOS2Server*". Here, **ServiceDeskServer** is the CI for which the relationship is created, **Depends on** denotes the nature of relationship, and **CentOS2Server** forms the dependent CI.

Access Relationships Tab

Each CI in ManageEngine ServiceDesk Plus is represented with **Attributes** and **Relationships**. The Attributes are data elements that describe the characteristics of the CIs. The Relationships, on the other hand, help in understanding the inter-dependencies between the CIs. The relationships between the CIs can be defined from the relationships tab.

To access the **Relationships** tab of a CI,

1. Click **CMBD** tab in the header pane.

2. Select the CI Type from the **Configuration Items** block. Say, Workstation. Else, select **All CIs** link to view all the CIs irrespective of the CI Type.
3. Select the CI **Name** link to view the CI details.
4. From the CI details page, click **Relationships** sub-tab.

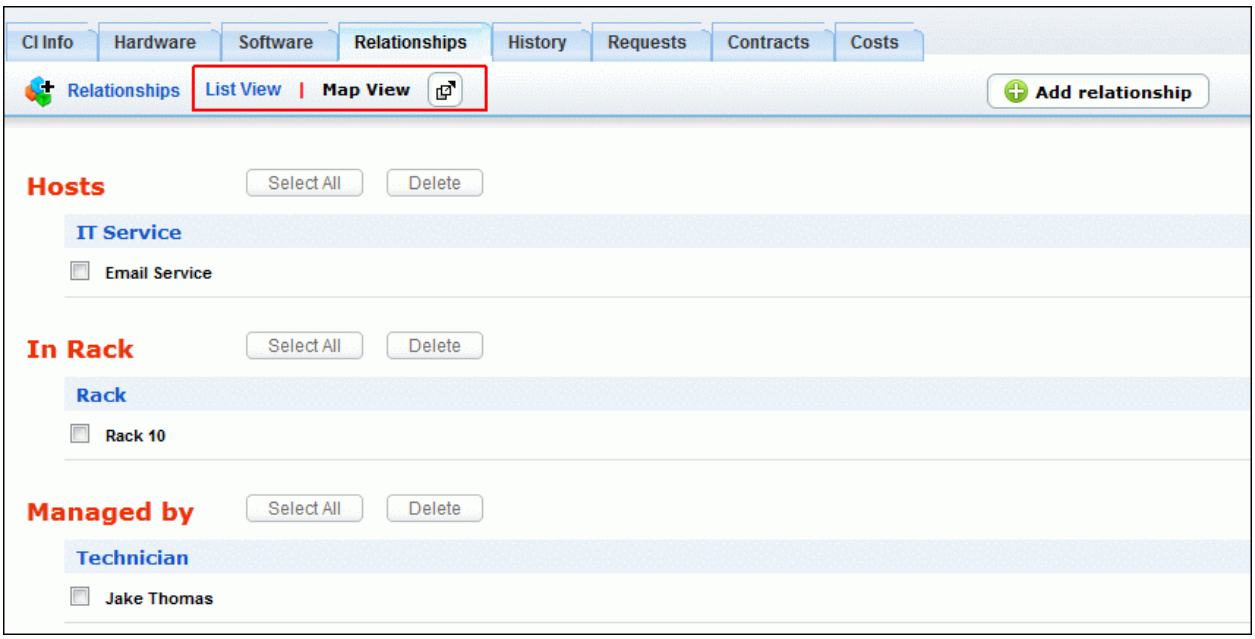
View Relationships from the Relationships tab

The relationship between the CIs is viewed in the Relationship tab. From the Relationship tab, you can

- View the Relationships in **Map View** and **List View**
- Access the full screen of the **Relationship Map**
- **Zoom in** and **Zoom out** the relationships linked in the map
- Add Relationships

By default, the relationship editor is shown in **Map View**. To access the full screen view of the relationships, click **view relationship map** icon. Use the **Zoom in** and **Zoom out** icon to view particular magnifying levels of the CI relationship. Click **Reset** icon to reset the relationship map to the default view instantly.

The **List View** groups the CIs according to the Relationship Type. You can delete relationships from the List View.

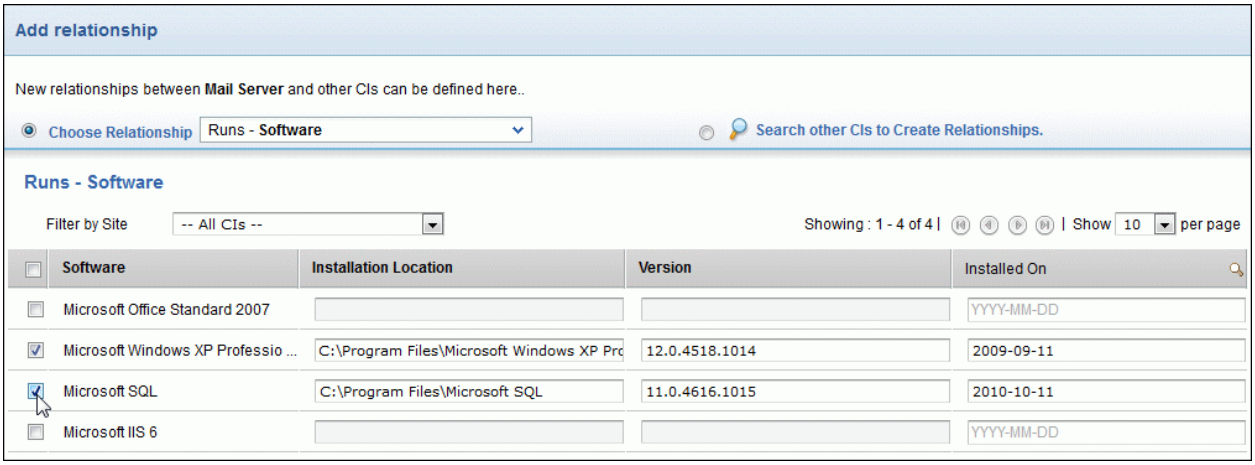


Add Relationship from the Relationship tab

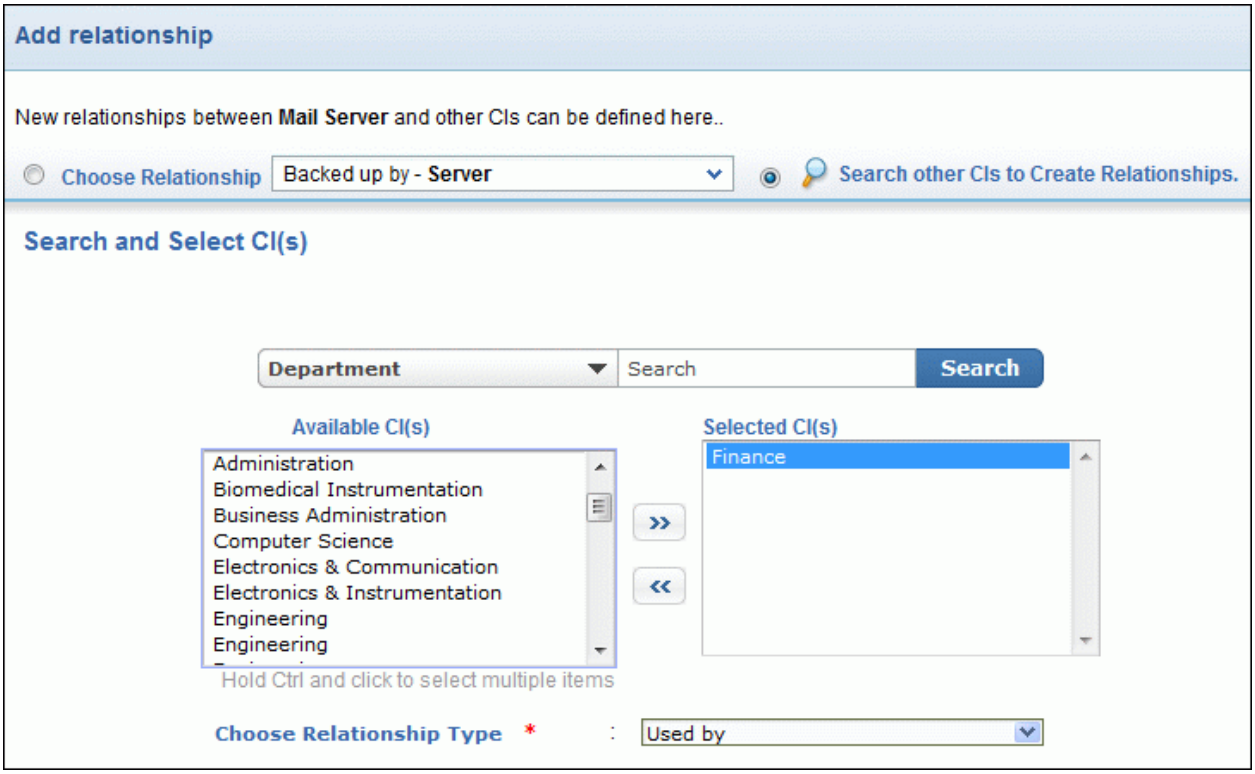
To add relationships from the relationship tabs,

1. Click **Add relationship** button. The Add relationship window pops up.

2. The default relationships configured for the CI Type "Server" is listed in the **Choose Relationship** drop-down. Select the relationship from the drop-down, say, "Runs - Software". The CIs under the CI Type "Software" are listed along with the configured relationship attributes.



3. If you would like to create relationships with other CIs, enable **Search other CIs to Create Relationships** radio button.
4. By default, the CIs available in the CMDB are listed in the Available CI(s) column. If the CI list is excessive in length, then you can conduct a search for the CI by entering the search string. Click **Search** button. The search result is displayed in the Available CI(s) column.
5. You can also view CIs under a specific CI Type. Select the **CI Type** from the drop-down, say, Department. The CIs available for the CI Type Department are listed under **Available CI(s)** column. You can also conduct a search operation if the CI list under a CI Type is excessive in length. Say, for the CI Type Department, the entered search string is "Finance". On clicking **Search** button, "Finance" appears in the Available CI(s) column.



6. Select the CI(s) from the Available CI(s) column. Click **Move Right >>** button to move the selected CI(s) to the Selected CI(s) column.
7. Select the nature of relationship between the CIs from **Choose Relationship Type** drop down.
8. Click **Add**. The relationship is added in the relationship map.

Delete Relationship

To delete a relationship from the relationship map,

1. Click **List View** link. The relationship between the CIs are listed according to the relationship type.
2. Enable the check box beside the CI to delete. If you wish to delete all the CIs under a specific relationship type, click **Select All** button.
3. Click **Delete** button. The selected CIs are deleted from the relationship map.

NOTE: Please note that you cannot delete a relationship from the Relationship Map.

Relationship Map

The **Relationship Map** is uniquely designed to provide the ability to understand the dependencies between the CIs. The relationships between the CIs are discovered automatically while populating the CIs into the CMDB. You can also manually add the relationship between the CIs from the Relationship Map.

The Relationship Map shows the number of pending requests, problems and changes raised for the Assets, Business and IT Services. You can view the pending requests, problems and changes directly from the relationship map.

Using the Relationship Map, you can analyze the impact caused by the CI on a business service and identify the root cause of the impact, thus establishing appropriate measures to gradually eliminate the perpetual issues faced by your organization.

This section has the following contents,

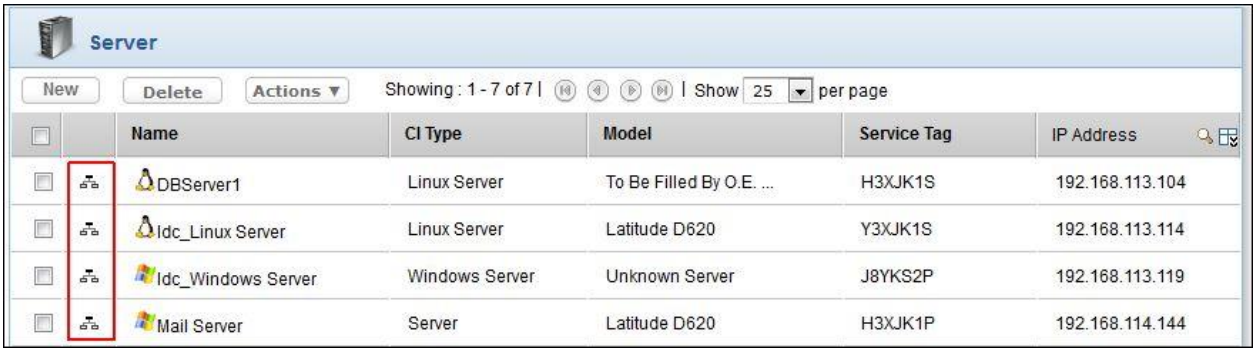
- Access the Relationship Map
  - From CI List View
  - From CI Details Page
- Using the Relationship Map
  - Quick Create - Relationship
  - Viewi CI Details
  - View Pending Requests, Problems and Changes
  - View Relationship Attributes
  - Add Relationships

Access the Relationship Map

In ManageEngine ServiceDesk Plus, all the CIs are represented with a **Relationship Map** icon to have a quick view of the relationships between the CIs. You can find this relationship map icon in the CI List View and in the CI details page.

From CI List View

1. Click **CMDB** tab in the header pane.
2. Select the CI Type from the Configuration Items block to view the list of CIs. Else, select **All CIs** link to view all the CIs irrespective of the CI Type.
3. To launch the relationship map in a new window, click the **Relationship Map** icon beside the CI in the CI List View.



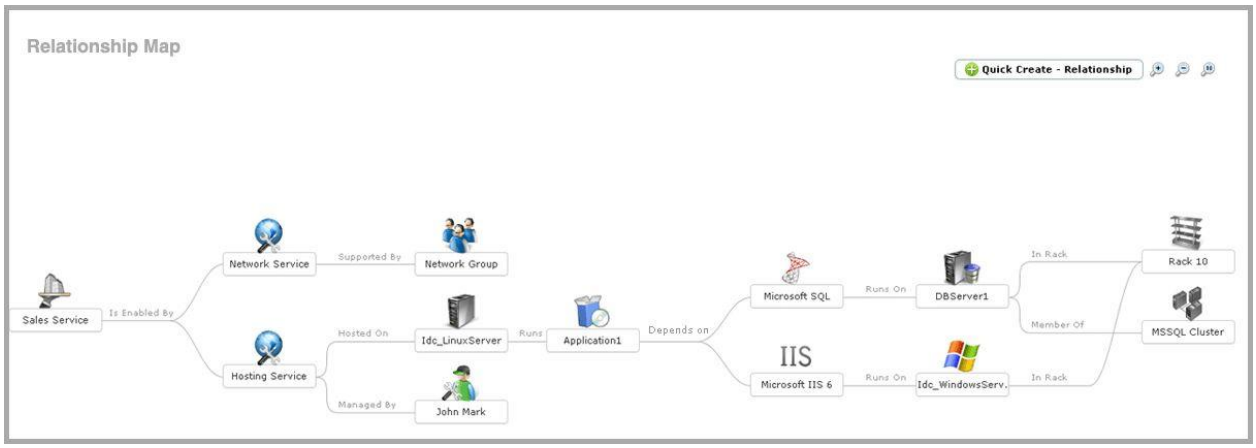
From CI Details page

1. Click **CMDB** tab in the header pane.
2. Select the CI Type from the Configuration Items block. Else, select **All CIs** link to view all the CIs irrespective of the CI Type.
3. Click the CI **Name** link to view the CI details.
4. In the CI details page, click the **Relationship Map** icon to launch the Relationship Map in a new window.

Using the Relationship Map

From the Relationship Map, you can perform the following operations;

- Create relationships instantly using the **Quick Create-Relationship** option
- **View CI details** of the CIs
- View the **pending requests, problems and changes** raised for Assets, Business and IT Services
- **Add Relationships** between the CIs
- View **Relationship Attributes** configured for the CIs.



Quick Create - Relationship

The Quick Create - Relationship is an instant means to create relationships between the CIs. You can create relationships for the existing CIs in the relationship map or create dependencies between other CIs using this option.

In order to create a relationship using the Quick Create - Relationship option, three piece of information is required.

1. The CI for which the relationship is created.
2. The Relationship Type, denoting the inter-dependencies between the CIs.
3. The dependent CI.

Say for example, enter a sentence like *"ServiceDeskServer Depends on CentOS2Server*". Here, **ServiceDeskServer** forms the first piece of information, **Depends on** is the relationship type and **CentOS2Server** forms the dependent CI.

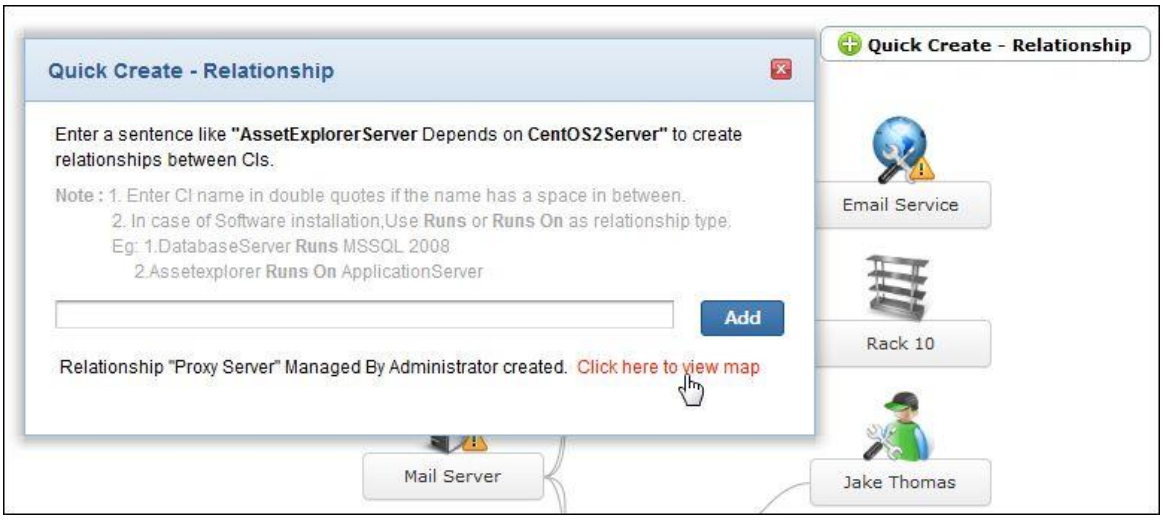
If the CI name has a space in between, specify the name in double quotes like, "ManagegEngine ServiceDeskServer" Depends on CentOS2Server.

NOTE: To denote installed software, use the relationship "Runs::Runs on".

To create relationships using the Quick Create - Relationship option,

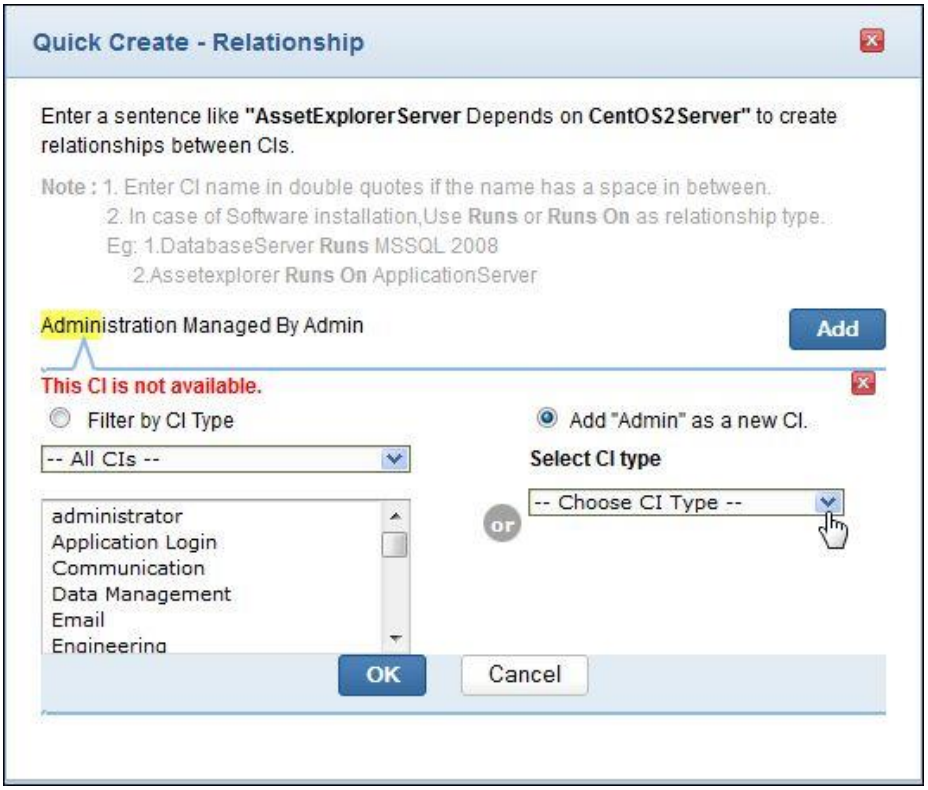
1. Select the **Quick Create - Relationship** button in the Relationship Map. The Quick Create - Relationship dialog pops-up.
2. Enter a sentence with the CIs and the relationship type. Example, ServiceDeskServer Depends on CentOS2Server.
3. Click **Add**. The CI dependencies are added in the Relationship Map.

For dependencies added between two CIs that are not present in the Relationship Map, select **Click here to view map** link to view the relationship map between those CIs.



In case of conflict between CIs with similar CI names, such as "Administration" and "Administrator", the Quick Create - Relationship option provides the list of CIs, from where, you can choose the appropriate CI. To ease your selection process, choose the CI Type from the drop-down.

You can also create relationships between CIs that are not available in your CMDB. Say, for instance, if Admin is unavailable in your CMDB, then you can add Admin as a new CI by selecting the CI Type from the drop-down. Click **OK** to view the CI in the relationship map.



View CI Details

While viewing the Relationship Map, you can also view the details of a CI. To view the CI details,

1. Move the mouse pointer over the CI.
2. Click **View CI details** button. The CI details pops-up.

View Pending Requests, Problems and Changes

The CMDB in ServiceDesk Plus keeps a track of all the pending requests, problems and change raised for the CI Type - Assets, Business and IT Services. To identify if a request, problem or change is raised for the CI, the CI is denoted with a warning icon . Move your mouse pointer over the CI to view the number of pending requests, problem and changes raised for the CI. You can also view the details of the request, problem and change from the Relationship Map.

View Relationship Attributes

Relationship Attributes provide additional information on the relationship between the CIs. Say, for instance, if a server runs a software application, then details such as the Installation Path, Version, Installed On and so on can be configured as relationship attributes.

The Relationship Attributes are configured while setting the default Relationships for a CI Type. To view these relationship attributes on the relationship map, move the mouse pointer over the CI.

NOTE: The Relationship Attributes can be viewed only if the attributes are configured for the relationship.

Add Relationship

To add relationships from the relationship map, click **Add Relationship** button. The Add relationship window pops up. Adding relationships from the relationship map is similar to the method discussed in Adding Relationships from the Relationship tab.

Admin Configurations

When you login to the application, for the first time, with the login credentials of an administrator, the **Configuration Wizard** page is displayed. The Configuration Wizard page in the **Admin** tab lists the settings of all the modules. You need to configure the setting for each module to make ServiceDesk Plus available for real time functioning.

To access the Admin Configurations,

1. Login to ServiceDesk Plus using the **Username** and **Password** of an admin user.
2. Click the **Admin** tab in the header pane.

The various configurations are grouped under the following major heads:

- Helpdesk Configuration
- Organization Details
- User Management
- Problem/Change Management
- Discovery
- Asset Management
- Software Management
- Purchase/Contract Management
- User Survey
- General Settings

Each of these configurations is explained in detail in the following sections.

Helpdesk Configurations

The **Helpdesk Configurations** lets you configure the helpdesk settings before the request module is opened for real time functioning of fetching the customer support mails and tracking the same.

Customizing the Request Form

The new request form is highly customizable and can be configured to suit the needs of your organization. You can add your own values to be set for the **Category**, **Priority**, **Level**, and **Mode** of the request. By default, these configurations will have some values. You can delete them and add new values, or you can edit them to suit your needs. If you want to set the priority of a request automatically, you can do so using the **Priority Matrix**. The Priority Matrix enables to determine the priority of a request based on the Impact and Urgency.

Apart from this, you can also add your own **custom fields** for the new request form. Using the custom fields, you can collect organization specific information for getting a better and clearer idea about the reported issue. The custom fields are of three types: Text field, Numeric field and Date/Time field.

A variety of templates can be configured and stored in ServiceDesk Plus. You can **customize templates** for frequently raised Incidents, common Resolutions, repeated Tasks and repetitive response to requests. **Incident Templates** enables you to customize individual forms for the most frequently raised request like, printer problem or mail fetching problem. The fields can be pre-filled with values so that an incident request can be raised instantly.

Finally, through **Service Catalog**, you can portrait the wide range of services offered by your IT department to the end-users. Users can easily browse through the services, raise requests instantly and monitor their status thereon.

Status

Requests fetched in ServiceDesk Plus application will be in various stages of completion by the technician. To determine the status of a request and for easy management, you can create various request status under which the requests can be grouped. These status can either be **In Progress** or **Closed**.

While creating a status, you can also choose to stop the request timer for the status that is being created. Depending on the need of your organization, you can create various such status, which will be listed in the status drop-down menu in the **New Request** form.

To open the status configuration page,

1. Log in to the ServiceDesk Plus application using the user name and password of an admin user.
2. Click the **Admin** tab in the header pane.
3. In the **Helpdesk** block, click the **Helpdesk Customizer** icon . The next page displays the list of request form attributes that can be customized on the left menu and the category list page.
4. Click **Status** from the left menu, or click the **Next** button on the top of the category list page. The **Status List** page is displayed. You can add, edit, or delete the request status.

Add a Status

To add a request status,

1. Click the **Add New Status** link.
2. Enter a unique status name to identify the status in the **Name** field.
3. Select the **Type** to which the status belongs. The status type allows you to identify whether the status that you are adding is still in progress and hence should be a part of the open requests or should be moved to the closed requests.
4. If the added status requires the timer of the request to be stopped, then you need to set the check box **Stop timer**.
5. If you wish, you can enter the status **Description**.
6. Click **Save**.

If you want to add more than one status, click **Save and add new** button. This adds the new status and reopens the add status form.

At any point, if you decide not to add the new status, then click **Cancel** to get back to the status list. Clicking the **View List** link on the top right corner of the add status form will also take you to the status list view.

Edit a Status

To edit an existing status,

1. Click the **edit** icon beside the status name that you wish to edit.
2. In the **Edit Status** form, you can modify the name of the status.
3. If the status belongs to the In Progress type, then you can choose to stop or start timer. If the request status belongs to the completed type then you cannot edit the type of the request status.
4. If you wish you can edit the **Description** of the status.
5. Click **Save** to save the changes. At any point, if you wish to cancel the operation that you are performing, click **Cancel**.

Even while editing a status, you cab add a status by clicking **Save and add new** button.

Note: Option to edit the default status (Name and Description) from the list view. So, while adding a new status, the default status name **(Open / Closed / Resolved / OnHold)** should not be specified as the new status name.

Delete Status

1. Click the **delete** icon beside the status name you wish to delete. A dialog box confirming the delete operation appears.
2. Click **OK** to proceed with the deletion. If you do not want to delete the status, then click **Cancel**.

NOTE: If the status is greyed instead of getting deleted, then the status is being used by a module. Greying indicates that the status value will not be available for further usage. To bring the status value back to usage, click the edit icon beside the greyed out status and deselect **Status not for further usage** check box.

Level

Request level is a measure to indicate the complexity of a request. For example, if the received request just has some information and does not require any action to be taken, then it can be classified as Level 1. If there is a minor level action, such as providing the requester some tips to resolve the issue, then it can be classified as Level 2, and so on. To open the request level configuration page

1. Login to the ServiceDesk Plus application using the user name and password of an admin user.
2. Click the **Admin** tab in the header pane.
3. In the **Helpdesk** block, click **Helpdesk Customizer** icon . The next page displays the list of request form attributes that can be customized on the left menu and the category list page.
4. Click **Level** from the left menu. The **Level List** page is displayed. You can add, edit, or delete the request levels.

Adding Level

To add a request level,

1. In the **Level List** page, click **Add New Level** link at the top right corner.
2. In the **Add - Level** form, enter the level **Name**. If you want, you can enter the level **Description** also. Please note that you cannot add two levels with the same name. Each level name should be unique.
3. Click **Save**. The new level gets added to the already existing list.

If you want to add more than one level, then instead of clicking Save, click **Save and add new** button. This adds the new level and reopens the add level form.

At any point, if you decide not to add the new level, then click **Cancel** to get back to the level list. Clicking the **View List** link on the top right corner of the add level form will also take you to the level list view.

Editing Level

To edit an existing level

1. In the **Level List** page, click the edit icon beside the level name that you want to edit.
2. In the **Update - Level** form, you can edit the name and description of the level.
3. Click **Save** to save the changes. At any point, if you wish to cancel the operation that you are performing, click **Cancel**.

Even while editing a level, if you wish to add new level, then click **Save and add new** button instead of clicking Save button after making the changes.

Deleting Level

1. In the **Level List** page, select the check box beside the level name to delete.
2. Click **Delete** button. A dialog box confirming the delete operation appears.
3. Click **OK** to proceed with the deletion. If you do not want to delete the level, then click **Cancel**.

NOTE: If the level is greyed instead of getting deleted, then the level is being used by a module. Greying of level indicates that the level value will not be available for further usage. To bring the level value back to usage, click the edit icon beside the greyed out level and deselect **Level not for further usage** check box.

Mode

There are different modes of submitting a request to the IT help desk team. ServiceDesk Plus provides you the option of submitting the request through an online form. Instead, a requester can call up the IT help desk agent and inform him/her regarding an issue faced, where the help desk agent will ensure to log the details discussed over the phone call through the web-based form. The other mode by which you can submit a request is by sending a mail to the IT help desk team. The IT help desk will then log the details of the mail through the web-based form in the ServiceDesk Plus application. If there are other methods of reporting a request to the IT help desk team in your organization, you can add the corresponding mode. To open the mode configuration page

1. Login to the ServiceDesk Plus application using the user name and password of an admin user.
2. Click the **Admin** tab in the header pane.
3. In the **Helpdesk** block, click the **Helpdesk Customizer** icon . The next page displays the list of request form attributes that can be customized on the left menu and the category list page.
4. Click **Mode** from the left menu. The **Mode List** page is displayed. You can add, edit, or delete the request mode.

Add a Mode

To add a request mode

1. In the **Mode List** page, click **Add New Mode** link at the top right corner.
2. In the **Add Mode** form, enter the **Mode Name**. If you want, you can enter the mode **Description** also. Please note that each **Mode Name** needs to be unique.
3. Click **Save**. The new mode gets added to the already existing list.

If you want to add more than one mode, then instead of clicking Save, click **Save and add new** button. This adds the new mode and reopens the add mode form.

At any point, if you decide not to add the new mode, then click **Cancel** to get back to the mode list. Clicking the **View List** link on the top right corner of the add mode form will also take you to the mode list view.

Edit a Mode

To edit an existing mode

1. In the **Mode List** page, click the edit icon beside the mode name that you wish to edit.
2. In the **Edit Mode** form, you can modify the name and description of the mode.
3. Click **Save** to save the changes. At any point, if you wish to cancel the operation that you are performing, click **Cancel**.

Even while editing a mode, if you wish to add new mode, then click **Save and add new** button instead of clicking Save button after making the changes.

Delete Mode

1. In the **Mode List** page, select the check box beside the mode name to delete.
2. Click Delete button. A dialog box confirming the delete operation appears.
3. Click **OK** to proceed with the deletion. If you do not want to delete the mode, then click **Cancel**.

NOTE: If the mode is greyed instead of getting deleted, then the mode is being used by a module. Greying indicates that the mode value will not be available for further usage. To bring the mode value back to usage, click the edit icon beside the greyed out mode and deselect **Mode not for further usage** check box.

Impact

Impact is a measure of the business criticality of an Incident or a Problem. Impact is often measured by the number of people or systems affected. By default you have four Impact details listed in the list view.

To open the impact configuration page,

1. Log in to the ServiceDesk Plus application using the user name and password of an admin user.
2. Click the **Admin** tab in the header pane.
3. In the **Helpdesk** block, click the **Helpdesk Customizer** icon. This opens the Configuration Wizard page.
4. Click the **Impact** link at the left side of the page under the Helpdesk block. This opens the Impact page from where you can add, edit and delete the impact.

Add an Impact

1. Click **New Impact** link on the top right hand side of the page. This opens the **Add** impact details page.
2. Specify the **Name** of the impact in the given text field.
3. Specify the details about the impact in the given **Description** field.
4. **Save** the changes.
5. Click the **Save and add new** button to save the Impact and add another Impact.

Edit an Impact

To edit an existing impact,

1. In the **Impact List** page, click the edit icon beside the impact name that you wish to edit.
2. In the **Edit Impact** form, edit the fields you want to change.
3. Click **Save** to save the changes. At any point, if you wish to cancel the operation that you are performing, click **Cancel**.

Even while editing a impact, if you wish to add a new impact, then click **Save and add new** button instead of clicking Save button after making the changes.

Delete Impact

1. From the **Impact List** page, select the check box beside the impact name that you want to delete.
2. Click **Delete** button. A dialog box confirming the delete operation appears.
3. Click **OK** to proceed with the deletion. The impact gets deleted from the available list. If you do not wish to delete the impact, then click **Cancel**.

NOTE: If the impact is greyed instead of getting deleted, then the impact is being used by a module. Greying indicates that the impact value will not be available for further usage. To bring the impact value back to usage, click the edit icon beside the greyed out impact and deselect **Impact Details not for further usage** check box.

Urgency

Urgency is about the necessary speed of solving an incident of a certain impact. To open the urgency configuration page,

1. Log in to the ServiceDesk Plus application using the user name and password of an admin user.
2. Click the **Admin** tab in the header pane.
3. In the **Helpdesk** block, click the **Helpdesk Customizer** icon . This opens the Configuration Wizard page.
4. Click the **Urgency** link at the left side of the page under the Helpdesk block. This opens the Urgency page. By default you have four Urgency details listed in this page.

Add New Urgency

1. Click **New Urgency** link on the right hand side of the page. This opens the **Add** urgency details page.
2. Specify the **Name** of the Urgency in the given text field. This is a mandatory field.
3. Specify the urgency details in the **Description** field.
4. **Save** the changes.
5. Click the **Save and add new** button to save the urgency and add another urgency.

Edit an Urgency

To edit an existing urgency,

1. In the **Urgency List** page, click the edit icon beside the urgency name that you wish to edit.
2. In the **Edit Urgency** form, edit the fields you want to change.
3. Click **Save** to save the changes. At any point, if you wish to cancel the operation that you are performing, click **Cancel**.

Even while editing a urgency, if you wish to add a new urgency, then click **Save and add new** button instead of clicking Save button after making the changes.

Delete Urgency

1. From the **Urgency List** page, select the check box beside the urgency name that you want to delete.
2. Click **Delete** button. A dialog box confirming the delete operation appears.
3. Click **OK** to proceed with the deletion. The urgency gets deleted from the available list. If you do not wish to delete the urgency, then click **Cancel**.

NOTE: If the urgency is greyed instead of getting deleted, then the urgency is being used by a module. Greying indicates that the urgency value will not be available for further usage. To bring the urgency value back to usage, click the edit icon beside the greyed out urgency and deselect **Urgency not for further usage** check box.

Priority

Priority of a request defines the intensity or importance of the request received by the IT help desk team. To open the request priority configuration page

1. Login to the ServiceDesk Plus application using the user name and password of an admin user.
2. Click the **Admin** tab in the header pane.
3. In the **Helpdesk** block, click the **Helpdesk Customizer** icon . The next page displays the list of request form attributes that can be customized on the left menu and the category list page.
4. Click **Priority** from the left menu. The next page displays the available list of priorities. You can add, edit, or delete the request priorities.

Add a Priority

To add a request priority,

1. In the **Priority List** page, click the **Add New Priority** link at the top right corner. This opens the **Add Priority** form.
2. Enter the priority name in the **Name** text field. The provided name has to be unique and cannot be duplicated. This is a mandatory field.
3. If required, select the **Color** code to identify the priority by invoking the icon . The selected color has to be unique for every priority specified.
4. You can enter a short description about the priority in the **Description** field. This can help in understanding the kind of priority associated with the name mentioned in the Name field.
5. Click **Save**. The new priority is added to the already existing list. At any point you wish to cancel the operation that you are performing, click **Cancel**. If you want to add more than one priority then, click **Save and add new** button. This adds the new priority and reopens the add priority form.

	Note: The priority name along with its color code can be view in the request list view page provided the priority check box is enabled in the column chooser.

Edit a Priority

To edit an existing priority

1. In the **Priority List** page, click the edit icon beside the priority name that you wish to edit.
2. In the **Edit Priority** form, edit the fields you want to change.
3. Click **Save** to save the changes. At any point, if you wish to cancel the operation that you are performing, click **Cancel**.

Even while editing a priority, if you wish to add a new priority, then click **Save and add new** button instead of clicking Save button after making the changes.

Delete Priority

1. From the **Priority List** page, enable the check box beside the priority name that you wish to delete.
2. Click **Delete** button. A dialog box confirming the delete operation appears.
3. Click **OK** to proceed with the deletion. The priority gets deleted from the available list. If you do not wish to delete the priority, then click **Cancel**.

NOTE: If the priority is greyed instead of getting deleted, then the priority is being used by a module. Greying indicates that the priority value will not be available for further usage. To bring the priority value back to usage, click the edit icon beside the greyed out priority and deselect **Priority not for further usage** check box.

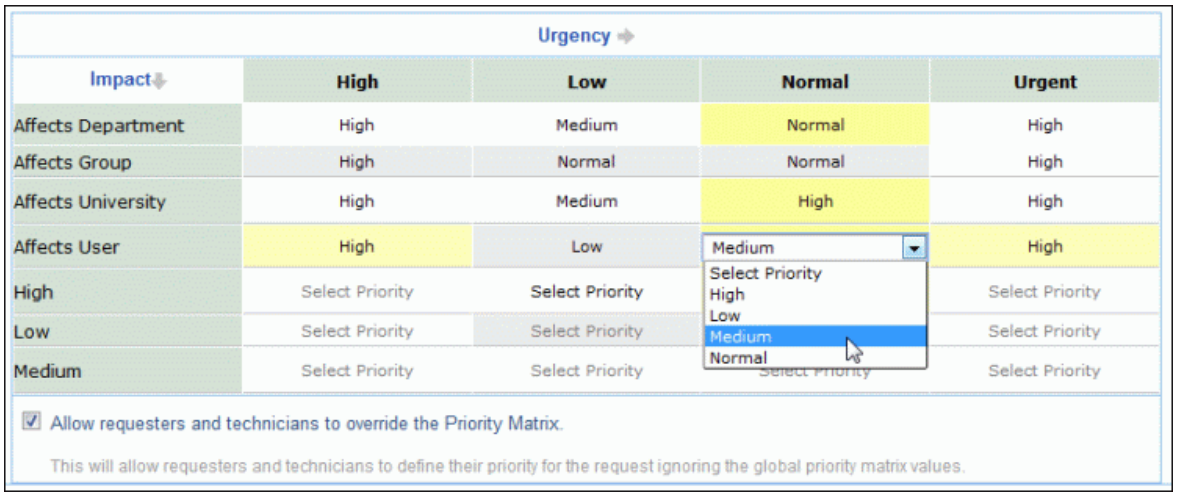
Priority Matrix

The priority matrix helps you determine the Priority automatically based on Impact and Urgency of a request. Impact is listed in the y-axis, and Urgency list in the x-axis of the matrix. Priority Matrix requires a one-time configuration by the Administrator.

Once you set the Priority for specific Impact and Urgency in the priority matrix, when a requester selects a similar impact and urgency combination in the new request form, then the priority of the request will be determined based on the matrix.

To set up Priority Martix,

1. Login to the ServiceDesk Plus application using the user name and password of an admin user.
2. Click the **Admin** tab in the header pane.
3. In the **Helpdesk** block, click the **Helpdesk Customizer** icon . The next page displays the list of request form attributes that can be customized on the left menu and the category list page.
4. Click **Priority Matrix** from the left menu. The next page displays priority matrix with impact list in the y-axis and the urgency list in the x-axis.
5. From the Priority Matrix page, click the priority link against specific urgency and impact, this opens the drop down box.



6. Select the corresponding priority from the list. The priority will be set for the particular **Impact and Urgency** combination.

Example	**In priority matrix :** If **Impact** is *Affects Business* and **Urgency** is *High* then **Priority** should be *High*. **Result in request form :** If requester/technician selects *Affects Business* for impact and *high* for urgency in the request then, the priority field gets filled automatically and displays as *high*.

Request Type

Request Type is the type of request sent by the requester such as an incident or request for any information. ServiceDesk Plus gives you the provision of configuring your request type other than the default options. This is essential while creating a new request under the request module.

1. Login to ServiceDesk Plus application using the username and password of the admin user.
2. Click the **Admin** tab in the header pane.
3. In the **Helpdesk** block, click the **Helpdesk Customizer** icon . This displays the list of request form attributes that can be customized on the left menu.

Add a Request Type

To add a new request type,

1. Click the **Add Request Type** link on the right hand side corner of the Request Type list page. This opens the Add Request Type form.
2. Specify the name of the request type such as, Incident, Request for Information in the **Name** text field. This is mandatory field.
3. Enter a brief description about the type of requests which fall under the category in the Description text field.
4. Click **Save**, to save and return to the list view page. Click **Save and Add New** to save and create another request type.

Edit a Request Type

1. From the Request Type list page, click the edit icon beside the request type which you want to edit. This opens the **Update- Incident** page.
2. Modify the changes in Name and Description text field.
3. Click **Save** to save the changes. You can also Save and add a new request type by clicking **Save and Add New**.

Delete Request Type

1. From the Request Type list page, select the check box beside the request type to delete.
2. Click **Delete** button. A dialog box confirming the delete operation appears.
3. Click **OK** to proceed. The request type gets deleted from the list.

NOTE: If the request type is greyed instead of getting deleted, then the request type is being used by a module. Greying indicates that the request type will not be available for further usage. To bring the request type back to usage, click the edit icon beside the greyed out priority and deselect **Request Type not for further usage** check box.

Request Closure Code

Request Closure Code denotes the reason behind closing a request, whether the request was closed successfully, unsuccessfully, cancelled and so on. Using the request closure code, the administrator is able to comprehend the purpose of closing the request by the technician. In addition, comments can be provided to give a detailed explanation for closing the requests. The configured request closure code list appears while closing the request, and the data entered is viewed in the request details page.

To access the Request Closure Code list page,

1. Click **Admin** tab in the header pane to open the Configuration Wizard page.
2. In the **Helpdesk** block, click **Helpdesk Customizer** icon .
3. Select **Request Closure Code** from the left menu. The available request closure code is displayed. From this page you can add, edit and delete a closure code.

Add New Closure Code

1. Click **Add New Closure Code** link.
2. Specify a unique **Name** for the request closure code. The name is a mandatory field.
3. Provide a brief **Description** about the request closure code.
4. Click **Save** to save the request closure code and return to the list view.

To add more than one request closure code, click **Save and Add New** button. This adds the new closure code and reopens the Add Request Closure Code form.

Click **Cancel** to exit the add request closure code form and return to the list view. Clicking the **View List** link on the top right corner of the add request closure code form also take you to the Closure Code list view.

Edit a Request Closure Code

1. In the Request Closure Code list view page, click the edit icon beside the closure code name to edit. The Update form is displayed.
2. Modify the Name and Description.
3. Click **Save**, to save the request closure code and return to the list view.

Even while editing a closure code, if you wish to add a new request closure code, click **Save and Add New** button. This updates the request closure code and reopens the Add Request Closure Code form.

Click **Cancel** to exit the add request closure code form and return to the list view. Clicking the **View List** link on the top right corner of the add request closure code form also take you to the Closure Code list view.

Delete Request Closure Code

1. From the Request Closure Code list view, enable the check box beside the closure code to delete.
2. Click **Delete** button. A dialog box confirming the delete operation appears.
3. Click **OK** to continue. The request closure code is deleted from the list.

If the request closure code is used in a request, the closure code is not deleted, instead it is grayed (made inactive) and will not be available for further usage.

To bring the request closure code back to the active state,

1. Click the edit icon beside the inactive request closure code. The update form is displayed.
2. De-select the **Request Closure Code not for further usage** check box.

3. Click **Save**. The request closure code is save and will be available for further usage.

Click **Save and Add New**, to save and add another request closure code. Click **Cancel** to exit the add request closure code form and return to the list view.

Request Closing Rules

Request closing rules can be used to select the mandatory fields to be filled in by the technicians while closing the requests. You can also use it to confirm user acknowledgement to the technician and close requests either manually or automatically.

To preset the request closing rules,

1. Log in to the ServiceDesk Plus application using the user name and password of an admin user.
2. Click the **Admin** tab in the header pane.
3. In the **Helpdesk** block, click the **Helpdesk Customizer** icon. This opens the Configuration Wizard page.
4. Click the **Request Closing Rules** link at the left side of the page under the HelpDesk block. This opens Request Closing Rules page.
5. Select the mandatory fields for closing the request from the list by enabling the check box.

Confirm User Acknowledgement

On closing the request, the resolution is acknowledged by the requester through mail (if the option is enabled in Notification Rules). If you want to prompt a confirmation message to the technician asking if user has acknowledged the resolution then enable **Yes, prompt a message** radio button, else enable **No, don't prompt a message** radio button.

Request Closing Process

Manual Closing

1. If you would like to close the request manually select the **Manual radio button**.
2. **Save** the changes. On resolving the request each time you have to close the request manually.

Automatic Close

1. Select the **Automated Close** radio button to close the request automatically.

   In the automatic mode,

   - An email is sent to the requester when the Request is put in **Resolved** state
   - The Requester can **Close the Request** with the close link given or **Re-open the Request by replying to the mail.**
   - If the Requester takes no action the Request will be closed after the number of days specified in the combo box.

2. Select the **close resolved request after n number of days** from the combo box. After the selected number of days the resolved requests will be closed automatically if the requester does not take any action.
3. Save the details.

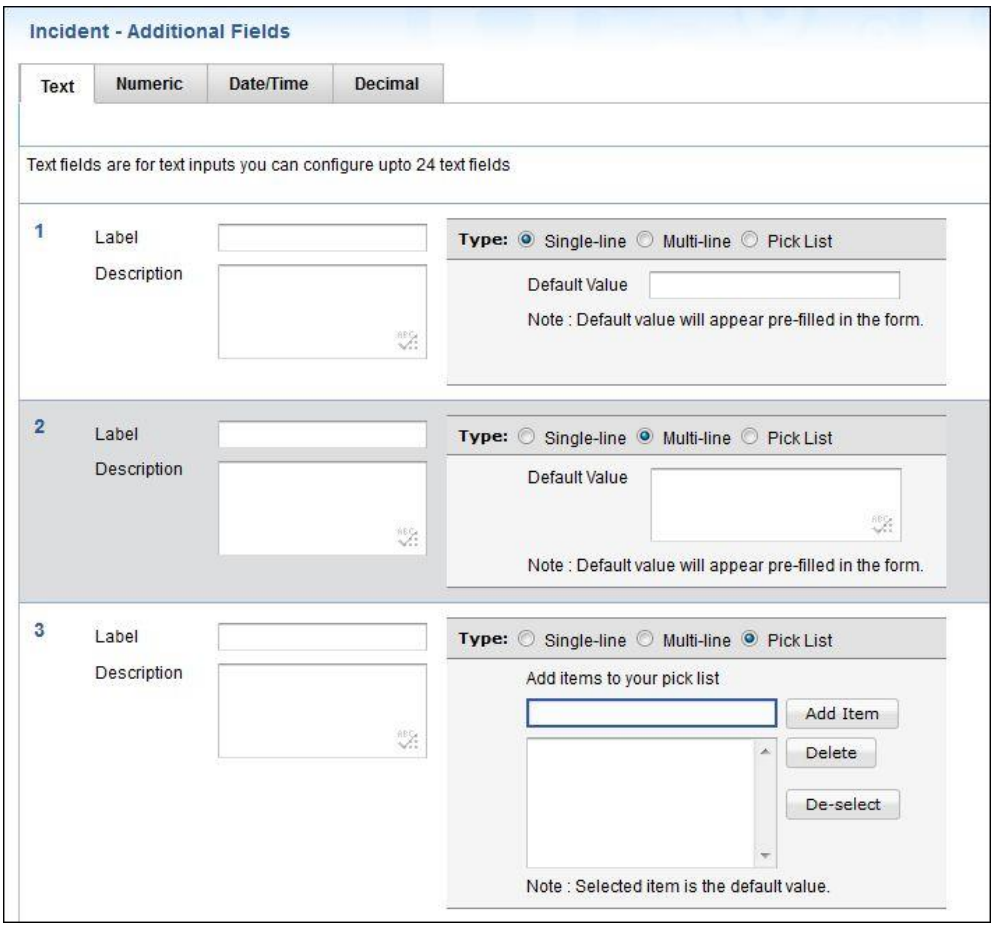
Example: If you have selected Resolution as a mandatory field, then the technician fixing the problem, should enter the reason and solution for the problem in the resolution text field before closing the request, else an error message pops up asking you to enter the details in the resolution field. If **Yes, prompt a message** radio button is enabled then, a confirmation message is prompted to the concerned technician if user has acknowledged the resolution.

Incident - Additional Fields

While creating an incident, you may want to capture additional details about the incident apart from the preset fields in the New Incident form. The **Incident - Additional Fields** help you configure the additional fields to display in the New Incident form. You can configure different types of fields in the form namely, **Text** fields, **Numeric** fields, **Data / Time** fields and **Decimal** fields.

To access the **Incident - Additional Fields**,

1. Log in to ServiceDesk Plus application using the user name and password of an admin user.
2. Click the **Admin** tab in the header pane.
3. In the **Helpdesk** block, click the **Helpdesk Customizer** icon . The next page displays the Category List view page along with the list of request form attributes that can be customized on the left menu.
4. Click **Incident - Additional Fields** from the left menu. The Incident - Additional fields page has 4 tabs as shown below. Click the tab to configure the type of additional field you require.



Text Additional Fields

If the additional fields requires alphabets and alphanumeric characters, then use the Text Additional Fields. You can add up to 24 Text fields in the New Incident form.

1. By default the **Text** tab is selected. Specify the **Label** name for the additional field.
2. Specify any relevant information about the additional field in the **Description** text field.
3. You have 3 types of text field namely, **Single-line**, **Multi-line** and **Pick List** (drop-down menu).
   - **Single-line:** A Single-line text field is for text which can be accommodated in a single line. You can specify the **exact value of length** that should be entered for the field. The exact value of length can be anything from 1 to 250. Your text field can also be configured to support only numbers. For that, select **Allow only numbers** check box.
   - **Multi-line:** The Multi-line text field is for text which requires a lengthy description.
   - **Pick List (drop-down menu):** The Pick List or drop-down menu allows you to add a list of items from which you can select. To add the items, enter the value in the highlighted text field. Click **Add Item**. The value is added to the list. To delete an item, select the item and click the **Delete** button.
4. You can also specify the **Default Value** to appear in the new incident form.
5. Click **Save** button to save the settings.

Numeric Additional Fields

If the additional fields requires only numeric characters, then use the Numeric Additional Fields. You can add up to 8 Numeric fields in the New Incident form.

1. Click **Numeric** tab.
2. Specify the **Label** name for the additional field.
3. Specify any relevant information about the additional fields in the **Description** field.
4. You can specify the exact value of length for the numeric field in **Exact Value Length**. The exact value of length can be anything from 1 to 19.
5. **Save** the settings.

Data / Time Additional Field

If the additional field requires data and time, then use the Date / Time Additional Fields. You can add up to 8 Date / Time fields in the New Incident form.

1. Click the **Date / Time** tab.
2. Specify the **Label** name for the additional field.
3. Specify any relevant information about the additional fields in the **Description** text fields.
4. **Save** the settings.

Decimal Additional Fields

If the additional fields requires Decimal characters, then use the Decimal Additional Fields. You can add up to 8 Decimal fields in the New Incident form.

1. Click the **Decimal** tab.
2. Specify the **Label** name for the additional field.
3. Specify any relevant information about the additional fields in the **Description** text fields.
4. **Save** the settings.

NOTE: While specifying the decimal value, the allowed length of digits for the integer part should be less than or equal to 13, and the allowed length of digits after the decimal is 2. If the value exceeds, then the value would be truncated and saved.

Once you save the additional fields, a success message would appear asking you to configure the newly added fields in the Incident Template. The success message is followed by a Click here to configure link which takes you to the default request template. Here you can add the field onto the canvas using the Drag and Drop method. Refer Incident Template to learn more on customizing the templates.

Delete Additional Fields

To delete an incident - additional field,

1. From the Incident - Additional Fields page, remove the label name of the additional field you want to delete.
2. Click **Save** button. The field is removed from the Incident - Additional Fields page and would not appear in the New Incident form.

Incident Template

In real world, there is a need to support different types of incident request which might require different fields in the form layout. Request Template supports to configure different set of fields for different type of requests. Thereby creating individual form for each request template for the most frequently raised requests such as, printer problem or mail fetching problem. The fields can be pre filled with values so that a request can be created instantly.

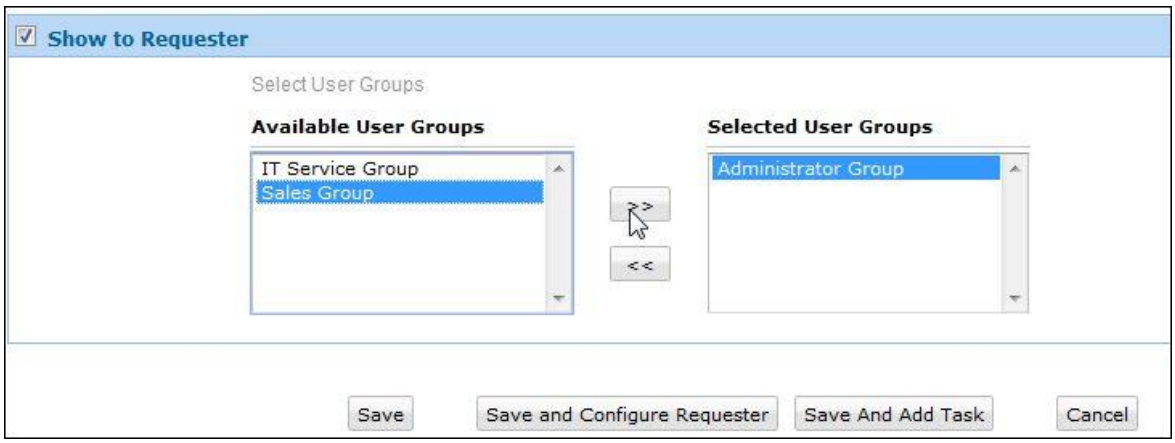
To open the request template form,

1. Click the **Admin** tab in the header pane. The configuration wizard page opens.
2. Click **Incident Templates** icon under the helpdesk block. This opens the Incident Template list view page.

Create an Incident Template

1. Click **Create New** button. This opens the add incident template form view for the technician.

   The incident template form consists of three blocks namely, Header, Field list, Canvas and Show to Requester.
   - **Header :** The header consists of the **Template Name**, **Comments** and the **Undo** and **Redo** buttons.
   - **Field List :** The field list consists of the list of fields and the add new field option.
   - **Canvas :** The canvas decides the form look and has drag and drop area.
   - **Show to Requester :** The incident template can be made available to requesters by enabling "Show to Requester" check box.
     If you have configured User Groups, the template can be restricted to the requesters of a specific user group by selecting the user groups from the list. Click here to know more on configuring User Groups.



The following are the actions that can be performed in the form,

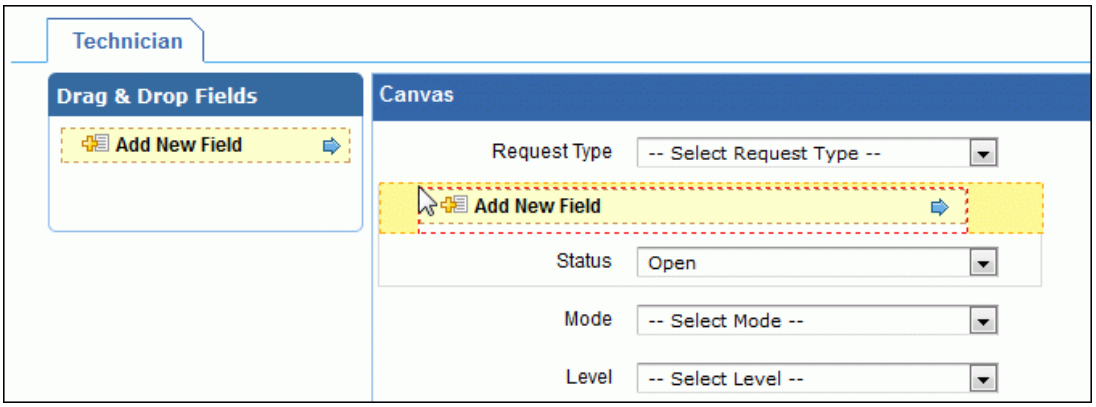
-
  - Form Customization
    - Add New fields
    - Drag and Drop fields
    - Setting Field Property
  - Request Preview
    - Technician View
    - Requester View
    - Add Tasks
  - Edit incident Template
  - Delete incident Template

Form Customization

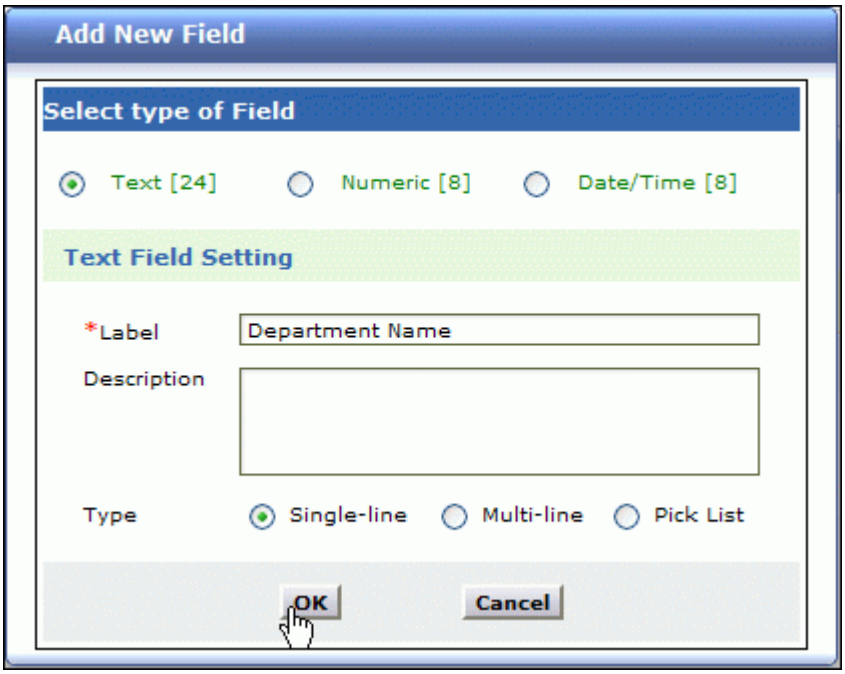
The layout of the form can be customized by, add/remove fields, set field properties and re-arrange the fields in the Canvas for an incident template.

Add New Field

1. You can add new fields by dragging the **Add New Field** option under the Drag and Drop field on to the canvas.



2. This opens the **Add New Field** pop up window as shown below,



2. Select the **type of field** such as, text, numeric, by enabling the radio button beside it.
3. In the text field settings block, specify the **Label Name** in the field provided. This is mandatory field. If required, enter the significance of the field in the **Description** text field.
4. Select the **type of the text field** such as single-line, pick list.
5. Click **OK**, the field gets added in the dragged place in the canvas with the above specifications.

The newly added fields are common for all the templates. The field name will also be same for all the templates. The newly added field can be edited or deleted only in **Request - Additional Fields**.

Drag and Drop

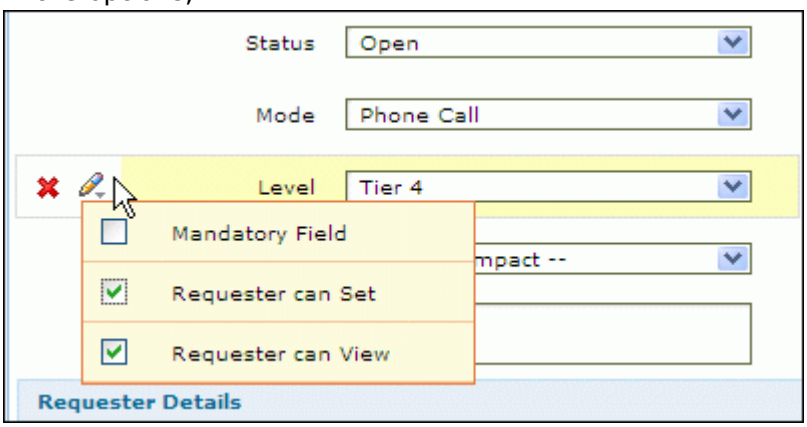
1. Drag the field from the **Field List** and drop it onto the canvas. The drop areas will be highlighted. The dragged field can be dropped only in the highlighted area.
2. The fields in the form can also be re-arranged by dragging the field and placing it over an empty cell. The field can be placed only in the highlighted area. The request details can be moved as a whole block.
3. If you want to **Undo**/**Redo** the changes then click the corresponding buttons.

Setting Field Properties

You can customize the fields such as, status, priority, mode by either changing the field properties, that is, making the fields mandatory or closing the fields. Thus you

can customize the entire form by keeping the relevant fields in the canvas for a template. To customize the form,

1. Hover over the field, an Edit Field properties and Remove Field icons appears.
2. Click the **Edit Field Properties** icon . A drop down appears containing the options,



- **Mandatory Field** : The field can be made mandatory by enabling the check box adjacent to this option.
  Note: If the Item field is marked as mandatory then the category and sub category will automatically be marked as mandatory. Similarly, if the Impact details is marked as mandatory then the Impact field will automatically be marked as mandatory.
- **Requester can Set:** Enabling this option, provides the requester with the privilege to set the field values in the new request form of the requester login. Selecting this option automatically enables requester can view' option.
- **Requester can View:** The requesters can view the field in the request details page but cannot set nor edit the value.

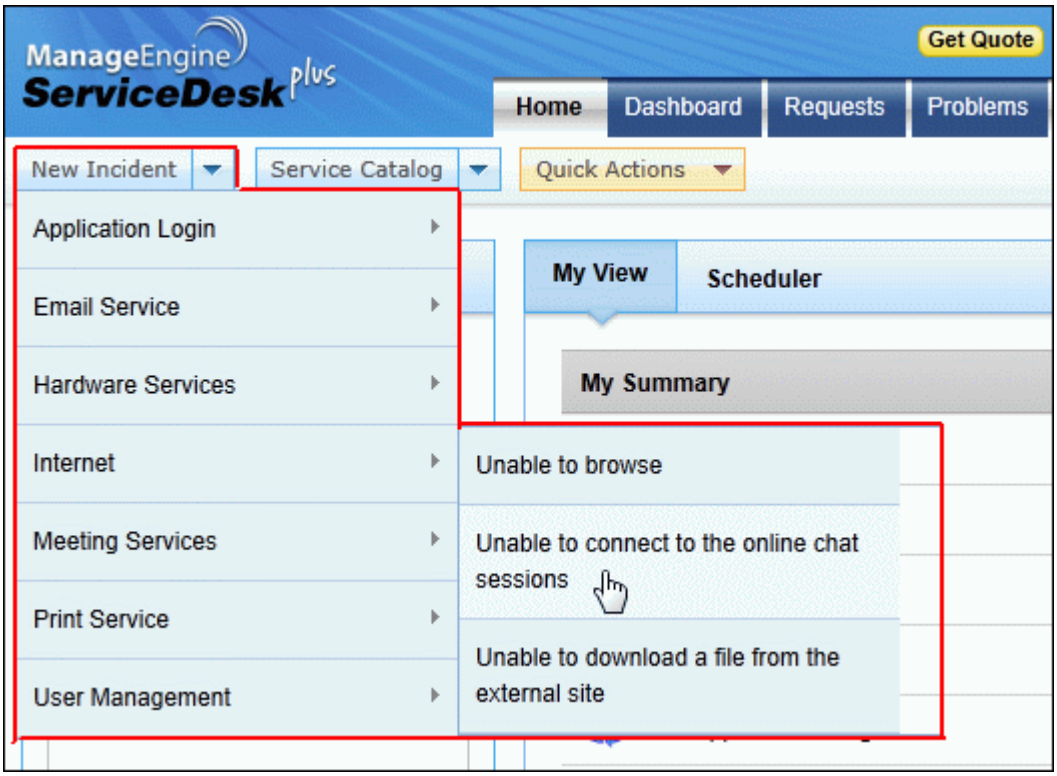
	Note: The fields such as requester details, subject and description do not have field properties and hence can be only re-arranged in the canvas.

3. Click **Remove Field** ✖ icon to remove the field from the canvas. The detached fields are added under drag and drop field list. The fields like status, priority, description, subject and requester details does not have the Remove Field option.

On customizing the form layout, you can pre fill the fields with values. Click **Save**. The template is added to the available list in the Incident Template list view page. To save and add tasks for the template, click **Save and Add Task** instead of Save.

At any point, if you do not wish to add the Incident template and would like to get back to the list view page, click **Cancel**. Clicking the **View List** link on the top right corner of the Incident template form will also take you to the Incident template list view page.

The incident templates are populated under **New Request** drop down. To obtain the default request form, click New Request link. The default form can neither be deleted nor renamed. Requests created through mail is also based on the default template.



Request Preview

On customizing the request form for both the requesters as well as technicians, you can see the preview for both the logins using this option.

From the Incident Template list view page, click the Template name to preview.

Technician View

By default, the incident template form for a technicians is opened. You can drag and drop fields in the canvas, re-arrange, add/remove and set properties for the field.

Requester View

You can view the incident template form for a requester if the **Show to requester** option is enabled. To view the incident template form for a requester, click the **Requester** tab on the top left hand side of the page. The header section is grayed and hence is non editable. In the requester preview page, certain fields are hid from the requester while the rest of the fields can only be re-arranged.

Add Tasks

You can view and add tasks related to the incident template on clicking the **Tasks** tab. This displays the list of tasks for the template. You can add tasks by clicking **Add Task** button. To add task refer Add Task.

Edit Incident Template

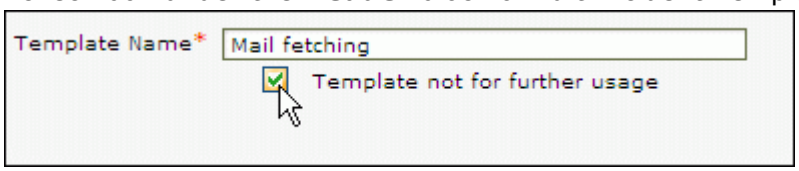
You can edit the incident template and also have a preview of the incident templates for a technician and a requester.

1. Click the incident template name from the incident template list view page. By default, the incident template form for a technicians is opened.
2. You can drag and drop fields in the canvas, re-arrange, add/remove and set properties for the field.
3. You can view the incident template form for a requester if the **Show to requester** option is enabled. To view the incident template form for a requester, click the **Requester** tab on the top left hand side of the page.
4. In the requester preview page, the fields can only be re-arranged. The header section will be grayed and hence will be non editable.
5. You can also view and add tasks related to the request by clicking on the **Task** tab. This displays the list of tasks for the template. You can also add tasks by clicking **Add Task** button.

Delete Incident Template

1. From the incident template list view page, enable the check box adjacent to the template which you want to delete.
2. Click **Delete** button, a pop up window appears confirming the delete operation.
3. Click **OK** to continue. The template gets deleted from the list. If the template is been used by a request then the template will be marked in grey indicating no further usage of the template in the incident template list view page.

   To bring the form back to usage, disable '**Template not for further usage**' check box under the **Header** block of Edit Incident Template form.



Resolution Template

Resolution templates can be created to handle repeated requests with the same solution. The solutions of frequently raised requests, such as printer configuration can be made into a Resolution Template. Thus the technicians need not type the same resolution repeatedly for the request raised.

To open the configuration page for resolution template,

1. Login to ServiceDesk Plus application with the **username** and **password** of an admin user.
2. Click the **Admin** tab in the header pane.
3. In the **Helpdesk** block, click **Resolution Template** to open the Resolution Template list page.

Add New Template

1. Click **New Template** button to open the Add-Resolution Template form.
2. Specify a unique name for the template in the **Name** text field.
3. Enter the resolution in the **Description** text field. Both the Name and Description are mandatory fields.
4. You can mark this template as inactive by enabling the check box beside **Mark as InActive**. The inactive template is marked in grey and does not get listed in the resolution template drop-down while resolving a request.
5. Click **Save**. To save and add another resolution template, click **Save and Add New**.

Edit a Resolution Template

1. In the Resolution Template list page, click on the **Edit** icon beside the template you wish to edit.
2. In the **Edit Resolution Template** form, modify the required changes mentioned while adding the resolution.
3. Click **Update**. Even while editing, if you wish to add a new resolution template, then click **Update and add new** button. At any point you wish to cancel the operation that you are performing, click **Cancel**.

Delete Resolution Template

1. In the Resolution Template list page, select the check box beside the template you wish to delete.
2. Click the **Delete** button. A confirmation message appears. Click **Ok** to continue. The resolution template gets deleted from the list.

Reply Template

While replying to requests, technicians tend to type the same response repeatedly to many requests. With Reply Template, technicians can create templates for the repetitive response to requests, thus saving time and easing their work.

To open the configuration page for reply template,

1. Login to ServiceDesk Plus application with the **username** and **password** of an admin user.
2. Click the **Admin** tab in the header pane.
3. In the **Helpdesk** block, click **Reply Template** to open the Reply Template list page.

Add a Reply Template

1. Click **New Template** button to open the Add Reply Template form.
2. Specify a unique name for the template in the **Template Name** text field.
3. Enter the content of the template in the **Description** text field. Both the Name and Description are mandatory fields
4. You can mark this template as inactive by enabling the check box beside **Mark this template INACTIVE**. The inactive template is marked in grey and does not get listed in the reply template drop-down while replying to requests.
5. Click **Save**. To save and add another resolution template, click **Save and Add New**.

Edit a Reply Template

1. In the Reply Template list page, click on the **Edit** icon beside the template you wish to edit.
2. In the **Edit Reply Template** form, modify the required changes mentioned while adding the Reply.
3. Click **Update**. Even while editing, if you wish to add a new Reply template, then click **Update and add new** button. At any point you wish to cancel the operation that you are performing, click **Cancel**.

Delete Reply Template

1. In the Reply Template list page, select the check box beside the template you wish to delete.
2. Click the **Delete** button. A confirmation message appears.
3. Click **OK** to continue. The reply template gets deleted from the list.

Task Template

Certain tasks need to be repeated by the technicians for different users and scenarios. With Task Template, repeated tasks can be pre-defined thus saving time on creating and assigning tasks to the technicians. Task Template can be applied while adding a task to a request, problem and change.

To open the configuration page for task template,

1. Login to ServiceDesk Plus application using your **username** and **password**.
2. Click the **Admin** tab in the header pane.
3. In the helpdesk block, click **Helpdesk Customize** icon . The configuration wizard page opens.
4. Click **Task Template** on the left hand side of the page in the helpdesk block. The list of available task templates is displayed.

Add Task Template

1. Click **New Template** button to open the Add-Task Template form.
2. Specify a unique name for the task in **Template Name** text field.
3. Specify the **Title** of the task in the field. The Template Name and Title are mandatory fields.
4. Enter a brief Description about the task template in the field provided.
5. Select the group to assign the task from Groups drop down list.
6. The list of technicians associated to the selected Group is listed in Owner combo box. Select the **Owner** of the task.
7. Select the **Status** of the task, say Open or Closed, from the drop down list.
8. Specify relevant comments for handling the tasks in the **Comments** text field.
9. You can mark the template as inactive on selecting the check box beside **Mark Template as Inactive**. The inactive template is marked in grey and do not get listed in the Add task form while adding tasks to requests, problem or change.
10. Click **Save**. To save and add another task, click **Save and Add New**.

Edit a Template

1. In the task template list view page, click on the **Edit** icon beside the template you wish to edit.
2. In the **Edit-Task Template** form, modify the changes mentioned while adding the task template.
3. Click **Update**. While editing, if you wish to add a new Task Template click **Update and Add New** button. At any point, if you wish to cancel the operation you are performing, click **Cancel**.

Delete Template

1. In the task template list view page, select the check box beside the template you wish to delete.
2. Click the **Delete** button. A confirmation message appears.
3. Click **OK** to continue. The task template is deleted from the list.

Service Catalog

Enterprises today seek for an approach to enhance and streamline the communication between IT and end-users. While the IT department has services and the users have needs, the manner in which the services must be exposed to the users is a crucial task. This is where Service Catalog in ManageEngine ServiceDesk Plus plays a vital role in your organization.

Service Catalog is where you can portrait the wide range of services offered by your IT department to the end-users. Some of the most common day-to-day IT services required by the users are, installation, relocation, internet access, email access, virus protection, provision of hardware and software, mail server, account management and so on. With the simplicity and clarity through which the services are exposed in ServiceDesk Plus allows users to easily browse through the services, raise requests instantly and monitor their status thereon.

To access the service catalog configuration wizard page,

1. Click the **Admin** tab in the header pane to open the configuration wizard page.
2. Click **Service Catalog** icon under **Helpdesk** block. The Service Catalog page opens listing the service categories available in the application.

From this page, you can **add new service category**, **manage the service items** and also **add services** under each category. The number of services available is specified under each service category.

Getting Started

To start off with configuring your personalized Service Catalog, you need to first define **Service Categories**. Service Categories holds classified group of service items and can be configured from the **Manage** drop down. Apart from this, an instant means to get to the add service category form is by clicking the **Add Service Category** button. The configured Service Categories are displayed in the list view with an icon to depict its uniqueness.

From the Manage drop down, you can also configure the **Additional Fields** and **Service Level Agreement** for the service requests. If the default parameters in the template does not contain key information that is relevant to your organization, then the same can be configured from the *Additional Fields*. Using *Service Level Agreements*, your help desk team effectiveness and efficiency can be determined.

Service Requests for a service category is configured using the **Add Service** button beside the category. The list of services under a service category can be viewed using the drop down icon beside them, and on hovering over the services, the **delete**, **edit** and **disable** icons appear. Using these icons, the preferred operations can be performed.

Representation of icons in Service Catalog list view screen,

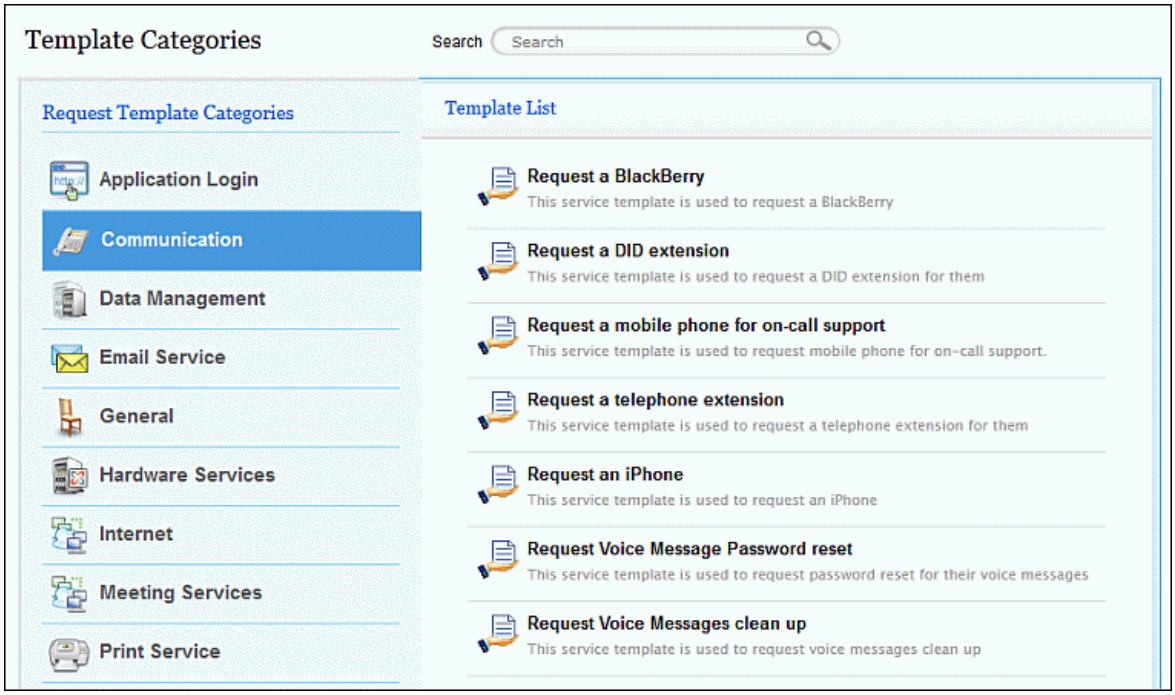
- icon to delete a service item.

- icon to edit a service item.

- icon to disable a service item.

- icon to enable a service item.

The configured service items are listed under the **Service Catalog** drop-down menu. With Service Catalog, services are easily accessed, facilitating users to browse for services, submit requests for IT services and monitor their status. Click **Service Catalog** drop-down menu to view the **Template Categories** and the **Template List**.


Template Categories
Search
Search
Request Template Categories
Application Login
Communication
Data Management
Email Service
General
Hardware Services
Internet
Meeting Services
Print Service
Template List
Request a BlackBerry
This service template is used to request a BlackBerry
Request a DID extension
This service template is used to request a DID extension for them
Request a mobile phone for on-call support
This service template is used to request mobile phone for on-call support.
Request a telephone extension
This service template is used to request a telephone extension for them
Request an iPhone
This service template is used to request an iPhone
Request Voice Message Password reset
This service template is used to request password reset for their voice messages
Request Voice Messages clean up
This service template is used to request voice messages clean up

Service Catalog - Service Categories

Service Category is a comprehensive list of **IT Services** and the **Business Services** provided by the IT department to the end-users. Each service category has a classified group of service items which are exposed to user groups who are approved to access it.

To access the Service Category configuration page,

1. Click **Admin** module in the header pane. The configuration wizard page opens.
2. Click **Service Catalog** icon under **Helpdesk** block.
3. From the Service Catalog configuration wizard page, click **Manage** drop down and select **Service Categories** option.

The Service Categories list view page lists all the IT Services and the Business Services. You can add, edit and delete a service category from this page. Apart from this, an instant means to get to the add service category form is by clicking the **Add Service Category** drop-down menu in the Service Catalog configuration wizard page.

Adding Service Category

1. Click **Add Service Category** drop-down menu. You can add either an IT Service Category or Business Service Category. Select the appropriate option to view the add form.
2. Specify a **Name** for the Service Category. This field is mandatory.
3. Enter a brief **Description** about the IT service details in the field provided.
4. Set an **Icon** for the service category. You can choose the icon from the icon set or upload an icon. The **Icon set** consists of the icons available in the application, by default. To upload an icon, click **Upload an icon** link and browse through the icons.
5. Click **Save** to save the details and return to the list view. Click **Cancel** to return to the list view.

NOTE:

1. The default fields in the form such as, **Service Support Hours**, **Business Criticality**, **Department**, **Incident Restoration Target**, **Availability Target**, **Cost**, **Managed By** and **Business Impact** are configured while adding the Configuration Item Types. If you want to add or remove any of these fields then you can do so under **Admin** tab -> **Configuration Item Types**.
2. The newly added Service Category (either IT Service Category or Business Service Category) are listed as CIs in CMDB module.

Editing a Service Category

1. From the Service Category list view page, click on the **edit** icon beside the service category to edit. The Service Category page opens.
2. All the fields in the form are editable. Modify the necessary fields.
3. Click **Save** to save the details and return to the list view. Even while editing a service category you can add a new service category by selecting **Save and Add New** button. Click Cancel to return to the list view

Deleting a Service Category

1. From the Service Category list view page, enable the check box beside the service categories to delete.
2. Click **Delete** button. A dialog box confirming the delete operation appears.
3. Click **OK** to continue. The service category is deleted from the list.

NOTE: If the service category is greyed instead of getting deleted, then the service category is being used by a module. Greying indicates that the service category will not be available for further usage. To bring a service category back to usage, click the **edit** icon beside the greyed out service category and deselect **Service not for further usage** check box.

Service Catalog - Additional Fields

While customizing the service request form, you may want to capture additional details about the service apart from the preset fields. The **Service Catalog - Additional Fields** is where you can configure additional fields for the service requests. You can configure additional fields for all the service requests (irrespective of the service category) or for service requests of specific service category. The different types of fields are, **Text** fields, **Numeric** fields, **Date / Time** fields and **Decimal** fields.

To add additional fields,

1. Click **Admin** tab in the header pane. The configuration wizard page opens.
2. Click **Service Catalog** icon under **Helpdesk** block.
3. From the Service Catalog configuration wizard page, click **Manage** drop down and select **Additional Fields** option.
4. Select the **Service Category** for which the additional field should appear. If the additional field should appear in all the service request forms, then select "common fields".

Text Additional fields

If the additional fields requires alphabets and alphanumeric characters, then use the Text Additional Fields. You can add up to 24 Text fields in the New Incident form.

1. By default, the **Text** tab is selected. Specify the **Label** for the Additional field.
2. Specify any relevant information about the additional field in the **Description** text field.
3. You have 3 types of text field namely, **Single-line**, **Multi-line** and **Pick List** (drop-down menu).
   - **Single-line:** A Single-line text field is for text which can be accommodated in a single line. You can specify the **exact value of length** that should be entered for the field. The exact value of length can be anything from 1 to 250. Your text field can also be configured to support only numbers. For that, select **Allow only numbers** check box.
   - **Multi-line:** The Multi-line text field is for text which requires a lengthy description.
   - **Pick List (drop-down menu):** The Pick List or drop-down menu allows you to add a list of items from which you can select. To add the items, enter the value in the highlighted text field. Click **Add Item**. The value is added to the list. To delete an item, select the item and click the **Delete** button.
4. You can also specify the **Default Value** to appear in the new incident form.
5. Click **Save** button to save the settings.

Numeric Additional fields

If the additional fields requires only numeric characters, then use the Numeric Additional Fields. You can add up to 8 Numeric fields in the New Incident form.

1. Click the **Numeric** tab.
2. Specify the **Label** for the additional field.
3. Specify any relevant information about the additional fields in the **Description** text field.
4. You can specify the exact value of length for the numeric field in **Exact Value Length**. The exact value of length can be anything from 1 to 19.
5. **Save** the settings.

Date / Time Additional fields

If the additional field requires data and time, then use the Date / Time Additional Fields. You can add up to 8 Date / Time fields in the New Incident form.

1. Click the **Date/Time** tab.
2. Specify the **Label** for the additional field.
3. Specify any relevant information about the additional fields in the **Description** text fields.
4. Click **Save** to save the settings.

Decimal Additional fields

If the additional fields requires Decimal characters, then use the Decimal Additional Fields. You can add up to 8 Decimal fields in the New Incident form.

1. Click the **Decimal** tab.
2. Specify the **Label** for the additional field.
3. Specify any relevant information about the additional fields in the **Description** text fields.
4. Click **Save** to save the settings.

NOTE: While specifying the decimal value, the allowed length of digits for the integer part should be less than or equal to 13, and the allowed length of digits after the decimal is 2. If the value exceeds, then the value would be truncated and saved.

These additional fields will appear in the **Service Fields** section of the new service form. To delete the user-defined fields, instead of adding the label names, delete the existing label names you wish to remove from the fields of the form and click **Save**.

Service Catalog - Service Level Agreement

Service Level Agreement evaluates the efficiency, effectiveness and responsiveness of the help desk team. The services created in the application can be exclusively assigned with specific SLAs thereby setting a due by date for the service requests. Escalation rules can also be set if the request is not attended and resolved within the specified time.

To access the SLA configuration wizard page,

1. Click **Admin** tab in the header pane. The configuration wizard page opens.
2. Click **Service Catalog** icon under **Helpdesk** block.
3. From the Service Catalog configuration wizard page, click **Manage** drop down and select **Service Level Agreements** option. The SLA List page appears from where you can add, edit and delete a SLA.

Adding SLA

1. Click **Add New SLA** link. The SLA form has three blocks of information, namely SLA Details, SLA Rules, and Escalations.
2. The **SLA details** consists of the SLA name and description.
    1. **SLA Name** uniquely identifies the SLA. It is a mandatory field.
    2. You can provide a brief explanation of the SLA in the **Description** field.
3. **SLA Rules** is where you need to set the **Agreed Upon Time** (due by time) for the service request. Enter the agreed upon time in terms of days, hours and minutes. If the service request should be fulfilled irrespective of the working hours and holidays, then enable **Should be fulfilled irrespective of the operational hours** check box.
4. **Escalate** the service requests to other technicians if the request is not resolved within the specified resolution time. Select the check box beside **Enable Level 1 Escalation**. Click **Choose** button to select the technicians to whom the SLA violation should be escalated.
5. You can choose to escalate before or after the SLA violation. If you wish to escalate the request before the SLA violation, click **Escalate Before** option. This informs the technician about the impending of the violation. Specify the number of days before the SLA violation in the text box. You can also specify the time of escalation.

6. Click **Escalate After** option to escalate after the violation. Specify the number of days after the SLA violation has occurred in the text box. You can also specify the time of escalation.
7. Similarly, there are four levels of escalation when the resolution time violates.
8. Click the **Save** button to save the SLA and return to the list view.

   Click the **Save and Add New** button to save the SLA and add another SLA. Click **View List** to view the SLA list view page. To return to the Service Catalog configuration wizard page, click **Go Back**.

Editing SLA

1. From the Service Category list view page, click **edit** icon beside the SLA name to edit. The edit SLA page opens.
2. The fields, SLA details, SLA rules and escalations are editable. **Modify** the necessary details.
3. Click **Save** button to save the SLA and return to the list view. Even while editing, you can add a another SLA on clicking **Save and Add New** instead of the Save button. Clicking on **Cancel** takes you to the list view.

Deleting SLA

1. Enable the check box beside the SLA to delete.
2. Click the **Delete** button. A dialog box confirming the delete operation appears.
3. Click **OK** to proceed with the deletion. If you do not want to delete the SLA, then click **Cancel**.

NOTE: If the an SLA is greyed instead of getting deleted, then the SLA is being used by a service request. Greying indicates that the SLA will not be available for further usage. To bring the SLA back to usage, click the edit icon beside the greyed out SLA and deselect **SLA not for further usage** check box.

Service Catalog - Service Items

The day-to-day IT services such as installation, relocation, internet access, email access, virus protection, provision of hardware and software, mail server and so on are configured under this section. The service items are classified and grouped under Service Categories, which are displayed in the Home page.

The Service Request form consists of a drag and drop template that should be configured in order to meet the end-user requirement. If the service involves the need of any resources, then the same can be configured under the **Resource Info** block. Furthermore, you can configure multiple stages of Approvals, set Service Level Agreement and assign Tasks for individual service request.

To configure Service Items,

1. Click the **Admin** tab in the header pane to open the configuration wizard page.
2. Click **Service Catalog** icon under **Helpdesk** block. The Service Catalog page opens listing the service categories available in the application.
3. Click **Add Service** button beside a service category to add service under it. The Add Service Item form opens to display three tabs namely, Form Designer, Workflow and Requester View. By default, the form Designer is displayed.

This following are explained under this section.

- Configuring Form Designer
    - Configuring Resource Information
    - Show to Requester option
- Configuring Workflow
    - Approver Details
    - SLA
    - Adding Tasks to service requests
    - Template Action
- Requester View
- Enabling/Disabling Service Item
- Editing Service Item
- Deleting Service Item

Configuring Form Designer

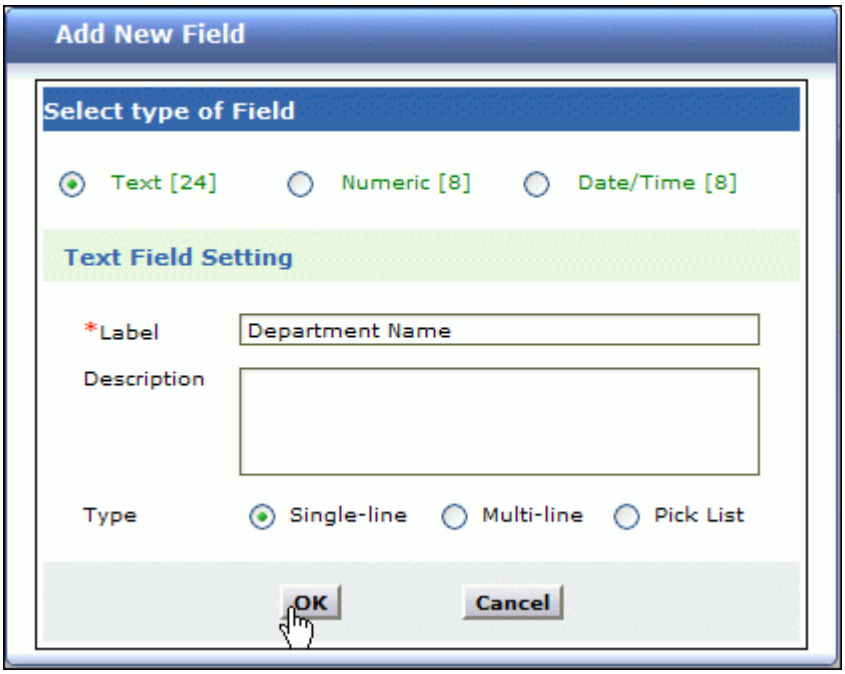
To add services under a service category,

1. Click **Add Service** button beside the service category. The service request for **Technician View** appears consisting of the **Header**, **Service Fields** and **Service Preview**.

    - **Header :** The header consists of the **Service Name** and **Description**.
    - **Service Field :** The service fields consist of the list of available parameters and an option to add new fields for the service item.
    - **Service Preview :** The service preview decides the form look and consists of drag and drop template area, the **Undo** and **Redo** options, **Resource Info** block and **Show to Requester** check box. With the template, individual forms can be customized for each service by dragging the available service fields into the service preview form, remove fields from the form, set the field property and also rearrange fields in the form.

2. To add a new field in the form, drag **Add New Field** option in the service preview form. Place the field only in the yellow highlighted area of the form.

    i. An **Add New Field** pop up appears where you can select the type of field to be added in the canvas. The field can be text, numeric or Date/Time field.



ii. Specify a unique **Label** in the field provided. This field is mandatory. Also, enter the significance of the field in the **Description** text field.
iii. For Text field, select the field type from Single-line, Multi-line or Pick-list. Enable any one of the radio button.
iv. Click **Ok** to add the field in the canvas with the above specifications.

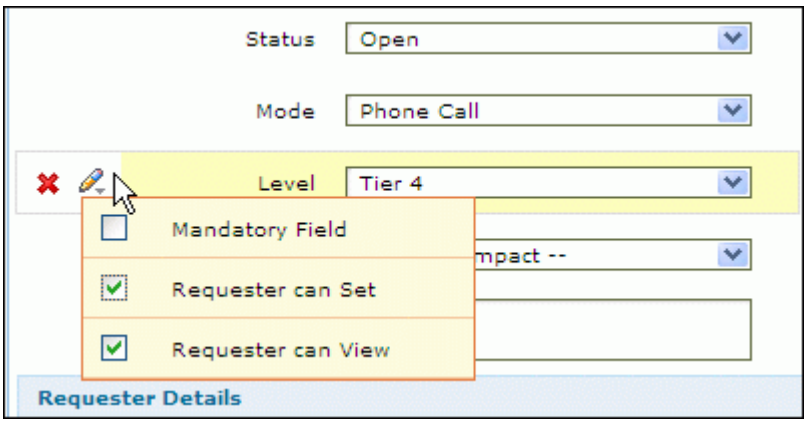
4. The newly added fields are common for all the service items under a service category. Alternatively, you can also add new fields in Additional Field. From this section, you can also edit and delete the additional fields.
5. Similarly, you can drag the **Service fields** onto the service preview form. If required, the fields in the service preview form can be rearranged by dragging the field and placing it over the yellow highlighted area.
6. While raising a service request, the IT team would be well assisted if all the required information is provided in the form. But usually that may not be the case. The service request may be raised with half-filled information and may require a user to edit and provide the remaining details.

   The **Editor**, mostly a requester, can be configured for a service request by dragging the Editor Field onto the service preview. When this service request is raised with the Editor Field filled, the status of the request is automatically moved to **On Hold**. The **On Hold** status states that the service request is waiting for further update from the editor. Refer the topic Service Request Editor to know more about the Editor field.
7. While rearranging the fields, if you want to **Undo/Redo** a change, click the corresponding button.
8. You can also add or select the default values to appear in the form.
9. To customize and remove undesirable fields in the form, hover over the field, the **Edit Field Properties** icon and the **Remove Field** icon appears.

   i. Click **Edit Field Properties** icon . A drop down containing the following options appears,

- **Mandatory Fields :** Enabling this option sets the field as mandatory.
- **Requester can set :** Enabling this option allows the users to edit the field, i.e., they can enter or select values for the field while raising a new service request. Enabling this option automatically enables 'requester can view' check box.
- **Requester can view :** Enabling this option alone allows users to view the field in the service request form but they cannot enter values for the field while raising a service request.

ii. Click **Remove Field** icon ✖ to remove the fields from the service preview form. The fields detached from the form are listed in the Service Fields block.



NOTE	1. If the Item field is marked as mandatory then the corresponding Category and Sub category will be automatically marked as mandatory. Similarly, if the Impact details is marked as mandatory then the Impact field will also be marked as mandatory. 2. The fields such as Requester Details, Subject and Site do not have Edit Field Properties icon and hence these fields can only be re-arranged. 3. Fields such as Status, Description, Requester Details, Site and Subject do not have Remove Field icon.

8. **Save** the service before proceeding to the Resources block.

Configuring Resource Information

If the service involves any resources then you can mention them under the **Resource Info** block. The process of adding resources involves a series of questions, and the resources can be displayed in either of the following formats - check box, drop down, plain text or with simple yes/no.

Take the case of a new employee joining your organization. The resources provided to the new employee would be, providing a desktop/laptop, installing the necessary

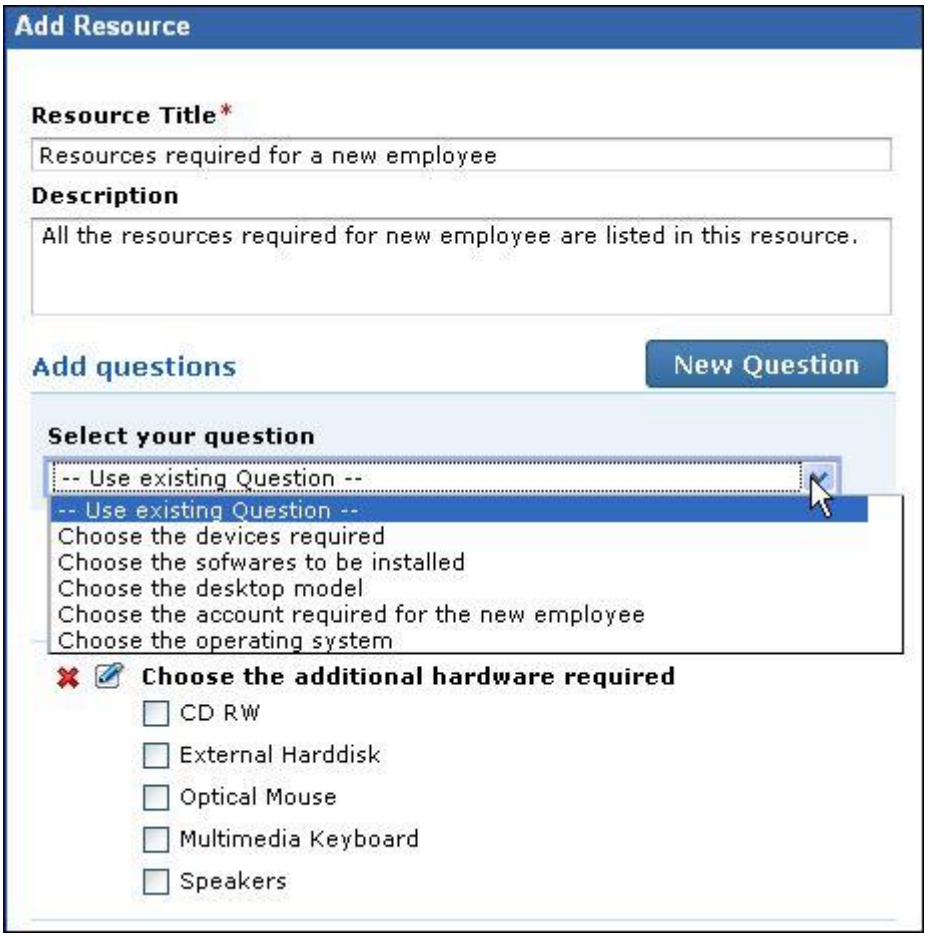
software, provision of any additional hardware resource, communication device, entry into application logins like Active Directory, VPN, Email, Payroll, CRM and so on. These resources are entered under Resource Info block of the service request.

To add resources,

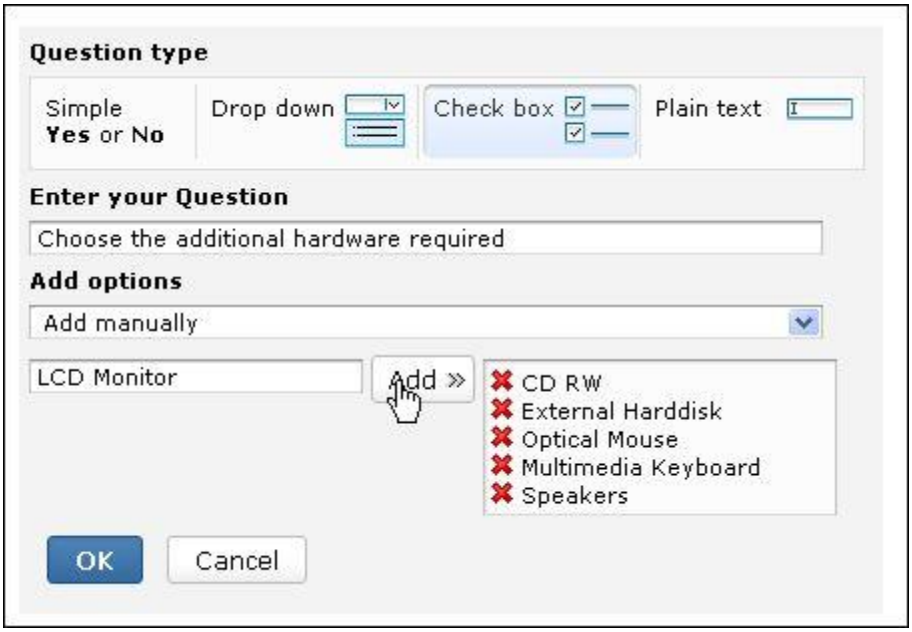
1. Click **Add Resource** button in the Resource Info block.
2. In the Add Resource pop up, specify the **Resource Title** and a brief **Description** on the purpose for adding this resource. The Resource Title is a mandatory field.
3. Next, you can either choose to select the question from the existing question list or create a new question.

   Selecting from existing question list:

   To select a question from the existing question list, use the **Select your question** drop down.



Select a question from the list, say "Choose the additional hardware required". The question is displayed along with an edit and delete icon. If you wish to add another additional hardware to the list, click on the **edit** icon . Enter your option and add it to the existing list as shown below. Click **Ok** to save the question.

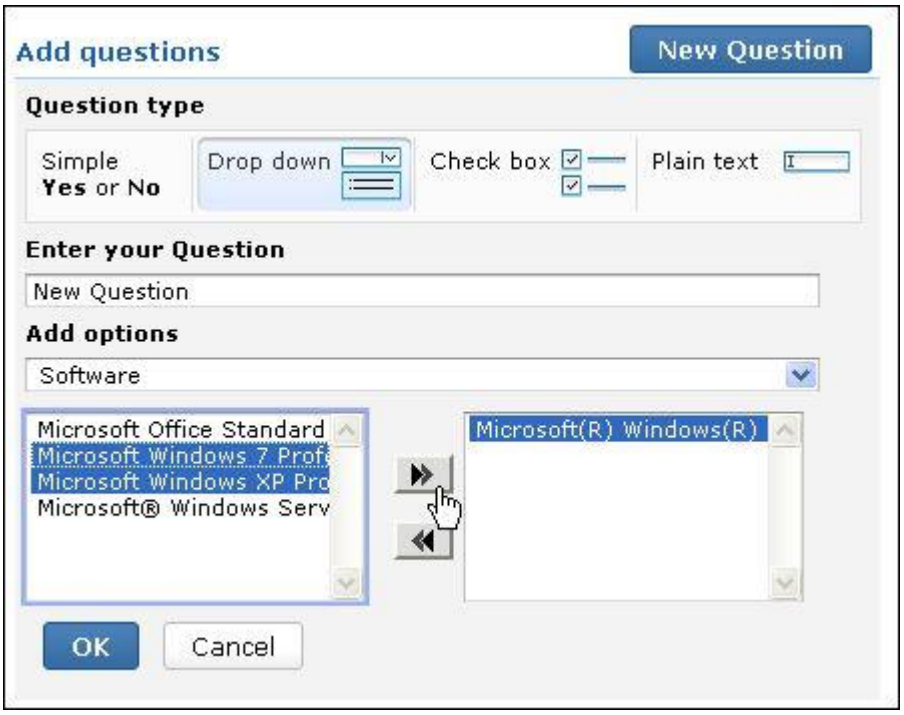


Adding New Question:

If your desired question is not in the existing question list, then you can add a new question by clicking **New Question** button. **Enter your Question** and select the question format from the options provided. The question can be displayed either in a simple yes or no format, drop down, check box or as a plain text.

If you have selected the **Question Type** as check box or drop down, then the **Add Options** appears, listing all the product types configured in the application. Selecting a product type lists all the products (configured in the application) under that product type.

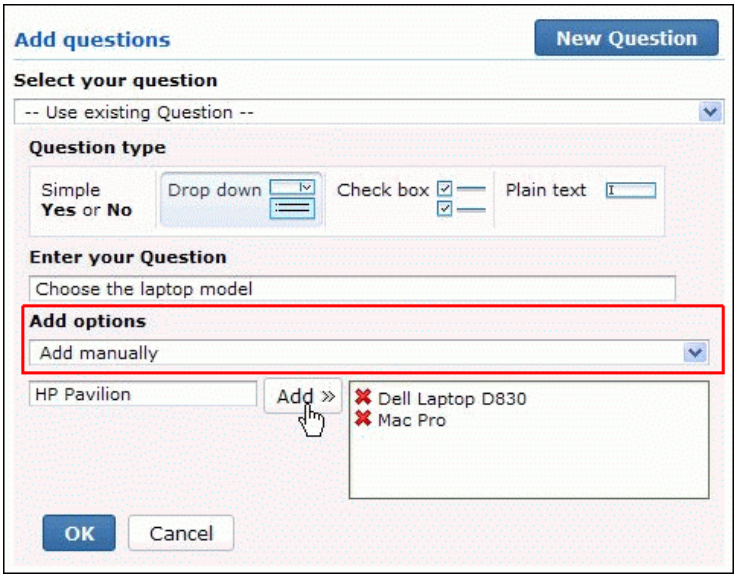
For instance, if the selected product type is "Software", then all the managed software available in the application are listed. If the selected product type is "Workstation", then the workstations configured and scanned in the application are listed.



Select the assets/software to be displayed in the question by clicking **>>** (move right) button as shown in the image. Click **Ok** to save the question.

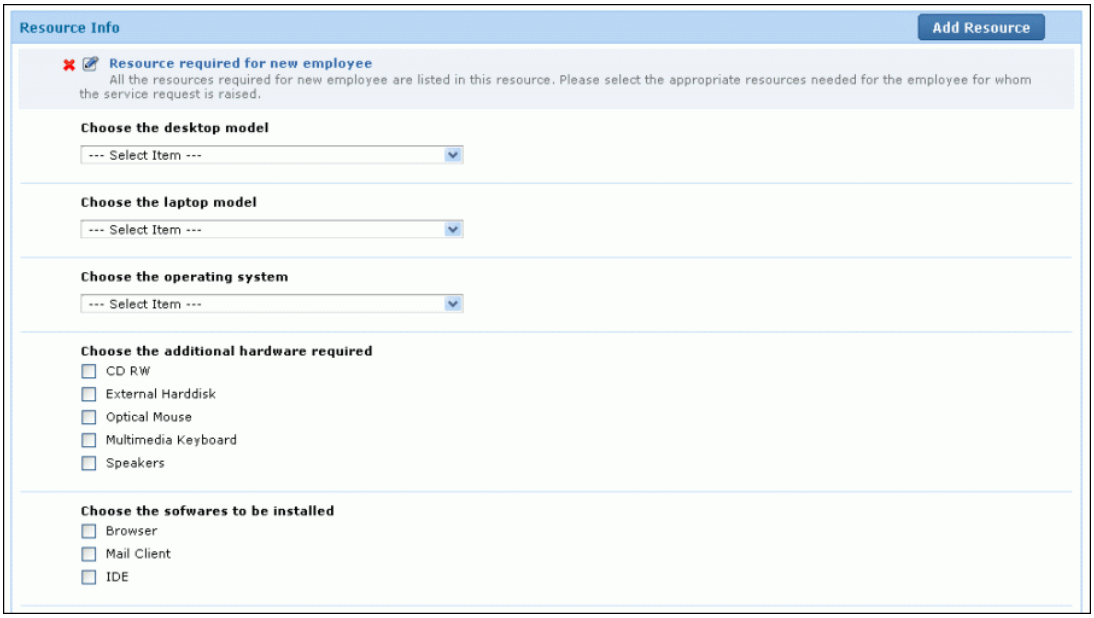
Manual addition of Resources:

Apart from resources in the application, you can manually add resources that are not configured in the application. To add resources manually in the application, select **Add manually** from **Add options** drop-down. Enter the resource in the text field as shown in the image.



In this case the resource is "HP Pavilion" and click **Add >>** to make the resource available in the question. Click **Ok** to save the question. To add another question, click **New Question** and follow the process as above.

4. Click **Save** to save the resource information. The questions are displayed in the **Resource Info** block of the service preview form from where you can also edit or delete the added resources.



Show to Requester

To make the service request accessible in the requester's login, select **Show to Requesters** check box. If User Groups are configured in the application, then you can select specific user groups to whom the service request should be made available too. Selecting the user groups makes a clear indication of the end users who can subscribe to the services.

Say for instance, if a service request should be shown to the requesters in the Sales department, then, configure the user group by selecting the "Department" as "Sales" under **Admin** -> **User Management** -> **User Groups**. Once the user group is configured, enable "Show to Requester" check box in the service item form and select the user group as "Sales User Group". To know more on configuring user groups, refer User Groups.

Click **Save** to save the details. Click **Save and Configure Workflow** button, to configure the service request workflow.

Work Flow

The Work Flow tab consists of options to select the approvers, map Service Level Agreement and assign Tasks for individual service requests.

Approver Details

Certain service request raised in the application requires approvals from the concerned users to go ahead with the request. The approvers can be technicians or requesters with the permission to **Approve Service Requests**, and should possess an email address in the application. You can configure up to 5 stages of approvals for a service request. Each stage may possess one or more approvers.

Select the **Approver**s for the service request using the icon . The approver(s) can also be the department head to which the requester belongs provided the approver has the permission to approve service requests.

On selecting the approver, the appropriate notifications have to be selected.

- **Send approval notification automatically when a service request is raised** - Enable this check box to send an approval notification to the concerned authority each time a service request is raised. If you have configured multiple stages of approvals, then the notification is sent to the next consecutive stage only on approval from the previous stage.
- **All configured approvers have to approve the Service Request** - Enabling this check box makes it mandatory for all the configured approvers to approve the service request. If anyone of the approver (at any stage) rejects the service request, then the request does not proceed to the next stage.

  NOTE: If you have selected more than one approver in a stage, then all the approvers in that stage should approve the request.

- **Do not assign technician before Service Request is approved** - This option is enabled only on selecting " Send approval notification automatically when a service request is raised" check box. On selecting this option, a technician is assigned to a service request only when the service request is approved by the concern authority.

SLA

Each service request created in the application is assigned with a specific SLA to set the due by date. Select the SLA for the service request from the drop down. You can also add new SLAs using **Add New SLA** link.

Adding Tasks to Service Requests

You can add tasks to a service request if the request involves multiple technician work.

To add Tasks to service requests,

1. Click the **Tasks** tab -> click **Add Task** button from the tasks list view page.
2. In the Add Task form, specify the **Title** of the task. The Title is a mandatory field.
3. Specify relevant information about the tasks in the **Description** field.
4. Select the **Group** to which task has to be assigned. Select the **Technician** of the task from the combo box. Tasks can be assigned either:

    - to a **Group** alone,
    - to a **Group** and a specific **Technician** in the group,
    - to a **Technician** alone without selecting the group,
    - to no **Group** and no **Technician**.

5. If there are multiple tasks for a service request, the implementation of one task may be dependent on the completion of another. In this case, the dependencies on tasks can be captured by clicking on the relevant tasks under **Task Dependency** block.
6. Select the **Status** of the task from the drop down.
7. Specify any relevant comment about the task in the **Comments** field.
8. Click **Save** to save the details. Click **Save and Add New**, to save the details and open another Add Task form. Click **Cancel** to go back to the tasks list view.

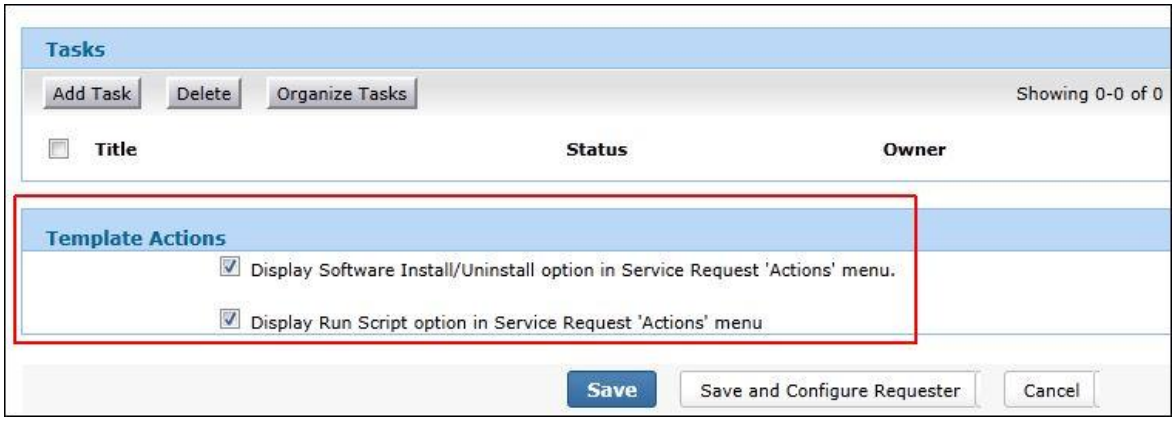
You can also organize tasks from the list view to suit your desired priority. Click **Organize Tasks** button and change the order of the tasks using the up and down buttons.

The tasks for a service request are automatically created and assigned to the configured technician each time the service request is raised.

Template Action

If the service request involves installing/uninstalling software or executing scripts, then the same can be performed from the centralized server through Desktop Central Integration. The Desktop Central activities are performed with the aid of a Desktop Central Agent that should be installed in the Windows workstation.

To avail this functionality, configure the Server Name and Port number of the Desktop Central server in SDP application. Since all service requests do not require Desktop Central operations, this activity is limited by providing a **Template Action** check box in each service item form. This functionality is attainable only when Desktop Central 7.0 and above is integrated with SDP. Refer Desktop Central Integration to know more.



Click **Save** to save the details. Click **Save and Configure Requester** button, to configure service request form for requesters.

Requester View

The "Requester View" tab is available in the service form only if the requesters have permission to view the service request. Click the **Requester** View tab to view the requester preview of the service request.
The service form is similar to the technician preview except,

- the header section is grayed indicating that its non editable,
- the service fields has limited parameters and the option to add new field is unavailable
- parameters such as Mode, Request Type, Level, Impact, Impact Details and Urgency are unavailable for the requester preview.
- the Edit Field Properties option is absent for the fields.

You can drag the available service fields onto the service preview form. Place the field only in the yellow highlighted area of the form. You can also rearrange the existing fields in a similar manner. In addition, you can also set default values for the fields to appear while raising the service request.

Click **Save** to save the configured details. Click **Cancel** to exit the form.

Disabling/Enabling Services

By default, a newly added service is enabled in the list view. To disable a service,

1. Click the icon beside the service category to list the services under them.
2. Hover over the service to disable. Click **disable service** icon . The service is grayed and will not be listed along with the existing services in the home page.

To enable a service.

1. Click the icon beside the service category to list the services under them.
2. Hover over the service to enable. Click **enable service** icon . The service is enabled and is listed along with the existing services in the home page.

Editing Services

To edit a service under a service category,

1. Click the icon beside the service category to list the services under them.
2. Hover over the service item to edit. Click the **edit** icon . The service form for a technician opens where you can add new fields, rearrange the existing fields and edit the default values.
3. Click **Save** to save the configurations. Similarly, you can edit all the remaining tabs from the service catalog page.

   Click **Save and Configure Requester** button, to configure service request form for requesters. To add tasks, click **Save and Add Tasks**.

Deleting Services

To delete services under a service category,

1. Click the icon beside the service category to list the services under them.
2. Hover over the service item to delete. Click the **delete** icon . A confirmation dialog appears.
3. Click **OK** to proceed. The service item is deleted from the list.

Organization Details

Organization Details lets you configure the details of your organization such as, geographic region in which your organization is located, the list of branches, working hours, holiday list and departments. If you have multiple branches across the globe, this information is essential in setting the due date of the requests.

Apart from this, you can set the **Incoming and Outgoing E-mail Settings**, define **Rules to Automate** the tickets and define **Service Level Agreements** to set the due date for the requests.

You can also set certain rules to alert technicians after the completion of a task using **Notification Rules**. You can set notification rules for the Requests, Problems, Changes and Solutions module.

Organization Details Configurations

The following are the Organization Details configurations,

- **Organization Details**
  Set the details about your organization such as the Name, Logo, Address and Contact Information. This information is displayed in the Purchase Order form.

- **Mail Server Settings**
  Set the Incoming and Outgoing E-mail Sever Settings, configure Spam Filter and option to parse your e-mail tickets using E-mail Command.

- **Regions**
  Configure the various geographic locations of your organization.

- **Sites**
  Configure the various branches in each region.

- **Operational hours**
  Set the working hours of the organization. This is essential in calculating the due date for the request.

- **Holidays**
  Set the holidays during which your firm would remain closed. The holiday list is exclusive of the weekly holidays.

- **Departments**
  Configure the various departments in your organization. The department is essential while adding requesters and technicians since each requester or technician will be associated to a particular department of the organization.

- **Business Rules**
  Define Rules to Automate the incoming request (via web form and e-mail) and perform actions such as delivering them to groups, assigning status and other request parameters.

- **Service Level Agreements**
  Define rules based on requester, department or priority, to set the due date for the incoming incident requests.

- **Notification Rules**
  Set rules to alert technicians after the completion of a task.

- **Preventive Maintenance Tasks**
  Schedule periodic tasks, such as changing the printer toner or performing a service shutdown, for regular maintenance.

Configure Organization Details

You can configure your organization's details in the ServiceDesk Plus application. This information will be used in various cases. To configure your organization's details

1. Login to the ServiceDesk Plus application using the user name and password of an admin user.
2. Click the **Admin** tab in the header pane.
3. In the **Helpdesk** block, click the **Organization** icon. The **Organization Details** form is displayed.
4. Enter the **Name** of your organization. You cannot leave the name field empty. The other fields can be empty. But if you have the required information, then enter them as explained in the following steps.
5. The **description** field can contain information about what your organization specializes.
6. The next block collects the **address** of your organization. Enter the address details in the relevant fields, such as address, city, postal code, state, and country.
7. If you have a common contact e-mail ID, then enter the same in the **E-mail ID** field.
8. Enter the phone and fax number, and the URL of your company's web site.
9. You can import the company logo and use that in places where the organization details are being used.
    1. Click **Import Image** button beside the Company **Logo field**.
    2. Click the **Browse** button and choose the image file from the file chooser window and click **Open**.
    3. Click **Import**.
10. By default, the **Use this image** check box is enabled. If you do not wish to use this image, then disable the check box.
11. Click **Save**.

At a later time, if you wish to edit the information that you entered now, you can do so by following the same procedure explained above.

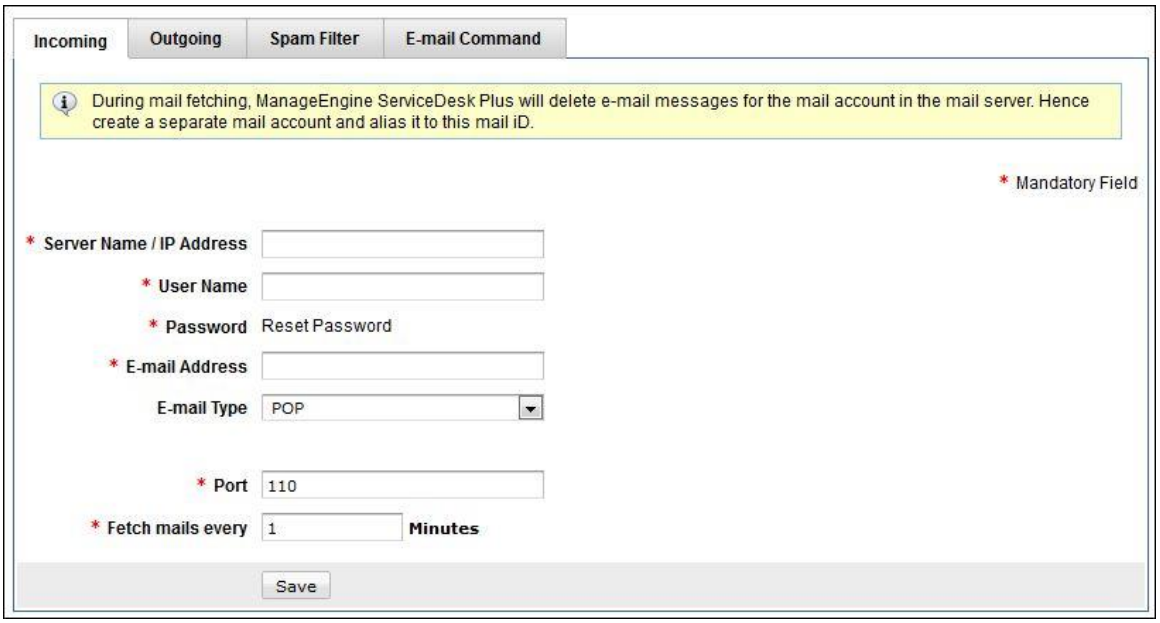
Mail Server Settings

ServiceDesk Plus allows you to configure the incoming e-mail settings and the outgoing e-mail settings such that it fetches the mails that are sent to the IT help desk team and sends notifications/feedback to the technicians, requesters, and vendors.

Incoming Mail Settings

To configure the incoming e-mail settings,

1. Login to the ServiceDesk Plus application using the user name and password of an admin user.
2. Click the **Admin** tab in the header pane.
3. In the **Helpdesk** block, click the **Mail Server Settings** icon . The **Mail Server Settings** page displayed will be as shown in the figure, with the incoming e-mail settings tab selected by default:



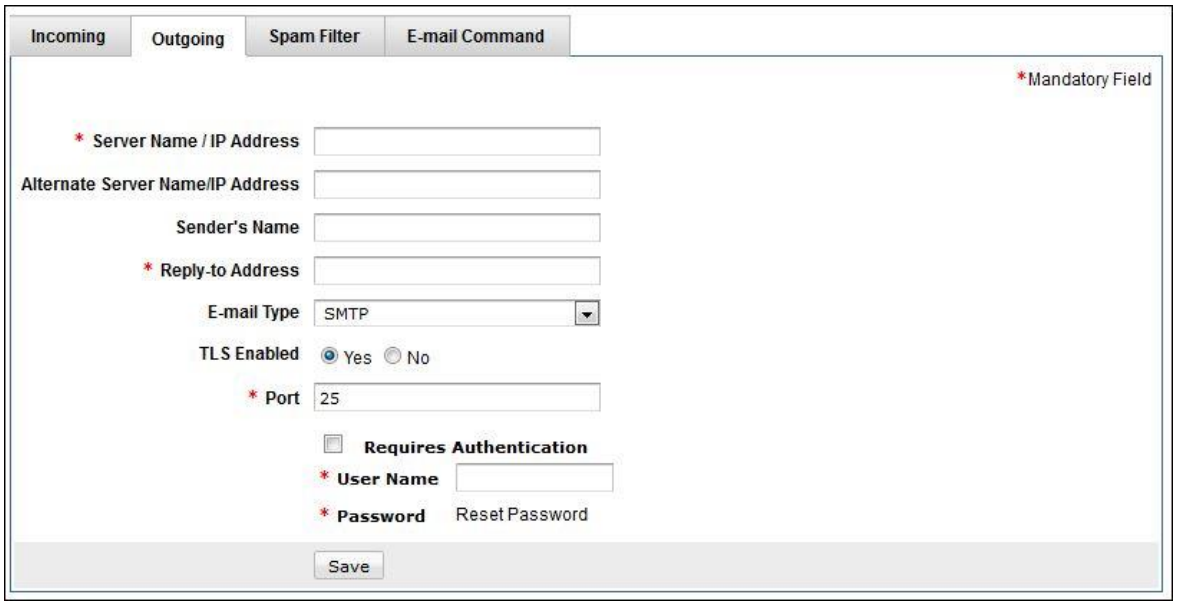
4. All the fields marked * are mandatory fields. Enter the server name, user name, password, e-mail address, email type, port, and the time interval in which the mail needs to be fetched periodically. The time period is in minutes. The e-mail type is a combo box from which you need to select the value. If you have selected IMAPS then you have an option to enable **Transport Layer Security** (TLS).
5. Click **Save**. On successful connection to the server, the success message is displayed.

To start fetching the mails, click the **Start Fetching** button. Once the mail fetching is started, the **Save** button in the incoming mail server settings is disabled. If you wish to

change any of the settings, then you need to stop mail fetching, make the changes, save them and then restart the mail fetching.

Outgoing Mail Settings

To configure the outgoing mail settings,



1. In the **Email Settings** page, click the **Outgoing** tab. The outgoing mail settings form is displayed as above.
2. Enter the outgoing mail server name / IP address, reply-to e-mail address, and port. These three are the mandatory fields.
3. If there is an alternate server, then enter its name in the **Alternate Server Name / IP Address** field.
4. Enter the name of the sender in the **Sender's Name** field.
5. Choose the e-mail type, which is usually SMTP and SMTPS. By default, the port associated to SMTP is 25 and the port associated to SMTPS is 465.
6. If required, you can enable **Transport Layer Security** (TLS) from the drop down.
7. If your SMTP server for outgoing mails require authentication, then select the check box **Requires Authentication**.
8. Enter the **User Name** and **Password** in the respective fields.
9. Click **Save**.

Spam Filter

You can mark all you junk mails into spam by defining filter criteria for the mails. Once you set a criteria say, "Subject contains Out of Office or Spam", then mails matching this criteria will be dropped and no new request will be created out of them. To configure Spam Filter,

1. Click **Spam Filter** tab.

2. Define a rule on selecting a **Criteria** from the drop down list and also mention the Condition.
3. Specify the filter content in the given text field by clicking choose button.
4. Say, if criteria is Sender and condition is is then the content can be "mailer-daemon".
5. Click **Add to Rules** button to add the criteria to the rules and match it with the incoming mails. Specify **Match all of the following (And) or Match any of the following (OR)** option to match with the rule by selecting any of the radio buttons.
6. Click Save.

E-Mail Command

Currently, when e-mails are received, various fields are set according to business rules. E-mail Command allows the technician to delimit fields in the e-mail, according to which the e-mail can be parsed and corresponding fields can be set.

Consider a scenario where business rules needs to be created for the following criteria:

- To assign Category based on subject:

    1. When Subject contains “Printer”, set Category as “Printers”
    2. When Subject contains “Network”, set Category as “Network”
    3. When Subject contains “Routers”, set Category as “Hardware”
    4. When Subject contains “Switches”, set Category as “Hardware”

- To assign Priority based on subject:

    1. When Subject contains “High Priority”, set Priority as “High”
    2. When Subject contains “Low Priority”, set Priority as “Low”

- To assign Urgency based on subject:

    1. When Subject contains “Urgent”, set urgency as “Urgent”
    2. When Subject contains “High Urgency”, set urgency as “High”

For example, when the subject contains “Printer” and “High Priority” or when the subject contains “Printer” and “Low Priority”, separate business rules have to be written for each criteria. This becomes complicated further when more fields need to be set based on the incoming e-mail. We need to have hundreds of business rules to achieve combinations of several fields and that will complicate the entire business rule section.

Also, consider another scenario where business rules for incoming e-mails are set as follows:

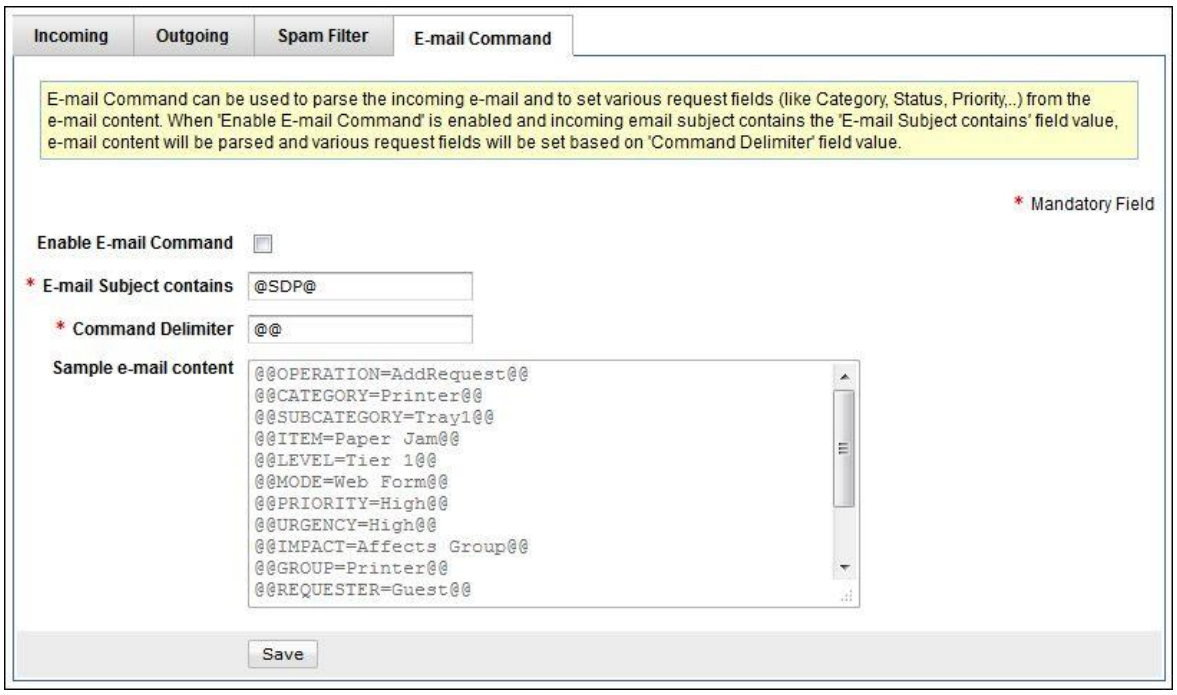
- When Category is “Printer”, Subject contains “Crash” and Priority is “Low”, place in Group “Hardware problems”

Suppose an incoming e-mail has a subject line "Printer Crash" with high priority, then the request field will be set as 'Category = Printer' with 'Priority = Low' based on the existing business rule.

E-mail command overcomes this complication. Request fields can be defined through an e-mail itself. An incoming e-mail is parsed, and various request fields are set from the e-mail content based on the parsing delimiters.

To configure E-mail Command,

1. In the E-mail Settings page, click on **E-mail Command** tab. The E-mail Command configuration screen is displayed.
2. Click on the check box **Enable E-mail Command** to activate the e-mail parsing feature. If this option is not selected, then the incoming e-mail will be handled as a normal mail based on established business rules even if the incoming e-mails contain the parsing string in the subject.
3. In the **E-mail Subject contains** text box, enter valid subject that determines the e-mails which have to be parsed. E-mails containing this text will be parsed for various fields. Assume the E-mail Subject identifier is given as @@SDP@@, then all e-mails with subject as @@SDP@@ alone will be considered for parsing.
4. Provide any special character (@@, ##, $$, %%, &&, so on) as the **Command Delimiter**. The field values assigned between these special characters are assigned to the corresponding fields while the requests are created. Assume if the Command Delimiter is @@and category field needs to be set to Printer, then the email description should contain @@Category=Printer@@.



Notes:

- A request can be created/edited/closed/picked up by a technician through e-mails. Operational string "Operation = AddRequest", "Operation = EditRequest", "Operation = CloseRequest" and "Operation = PickupRequest" is used for this purpose.
- To edit, pick up or close a request through e-mail, the corresponding operational string (EditRequest/PickupRequest/CloseRequest) and the RequestId must be present. If not, the e-mail will be processed normally and treated as a new request.
- When a request is edited through an e-mail, the conversation will not be added in the request. Hence attachments and inline images in the e-mail will not be updated in the request. However, the update information will be added in the history.
- If the field name given in the e-mail is not available in ServiceDesk Plus, then parsing will be excluded for that field.
- If there is more than one value present for a particular field in an e-mail, then the last value alone will be taken and others will be discarded.
- Request threads with subject containing the "RequestId" and no operational string (UpdateRequest) will be updated as a normal conversation and a new request will not be created.
- The e-mail sender should have a log in for ServiceDesk Plus for the E-mail Command to happen. This is because, various operations that can be handled by a user to parse an e-mail are defined by the user's Role. Request authorization (close a request, pick up a request, update a request, accept closure of a request and so on) are set using Roles in ServiceDesk Plus.
- The e-mail sender will be considered as the requester if the requester name is not specified in the e-mail.
- Permissions and Parameters supported:
    - If the e-mail sender is a requester with requester permissions, then the fields that be parsed are limited. A requester can parse only those fields that he can view in the request form while creating a request.
    - If the e-mail sender is a technician with technician permissions, then the fields that can be parsed are same as those fields that he can view in the request form while creating a request.
    - Fields that can be parsed are LEVEL, MODE, PRIORITY, URGENCY, IMPACT, CATEGORY, SUBCATEGORY, ITEM, GROUP, TECHNICIAN, TECHE-MAIL, REQUESTER, REQUESTERE-MAIL, REQUESTID, REQUESTTEMPLATE, REQUESTTYPE, STATUS, SITE, ASSET and additional field label (the field label given in the e-mail must match the field label set in the product)
    - To change the fields that a requester or a technician can parse, go to **Admin --> Request Templates** (under Helpdesk domain), select **Default Template** and add or remove the fields.
- The RequestId present in the description of the e-mail it will be given higher precedence over the RequestId present in the subject of the e-mail.

Consider an example:

1. **To create** an e-mail that has to be parsed, the subject of the e-mail should be same as defined in the configurations (**E-mail Subject contains**), for example, **"**@@SDP@@" and the content is as follows:

@@CATEGORY = Printers@@
@@PRIORITY = High@@
@@URGENCY = Normal@@
@@LEVEL = Tier 4@@
@@MODE = E-mail@@
@@IMPACT = Affects User@@
@@GROUP = Network@@

When the request is created, say with a Request ID 6735352, the fields for the request are set based on the above content from the parsed e-mail.

2. **To edit** this request, say to assign a Technician or a Sub-Category, operational string "OPERATION = EditRequest" along with the RequestId (or WorkOrderId) and the delimiting fields have to be specified in the e-mail as follows:

@@OPERATION = EditRequest@@
@@REQUESTID = 6735352@@
@@TECHNICIAN = Administrator@@

This updates the request 6735352 and assigns 'Administrator' to the 'Technician' field.

3. **To pick up** the request through an e-mail, the technician who has 'AssigningTechnician' permission should specify the operational string "PickupRequest" along with the RequestId should be mentioned in the e-mail. The technician can pick up the request only if the request falls under his site.

@@OPERATION = PickupRequest@@

@@REQUESTID = 6735352@@

3. **To close** the above request (6735352) through an e-mail, the operational string (CloseRequest) and the Request ID has to be present in the content of the e-mail.

@@OPERATION = CloseRequest@@

@@REQUESTID = 6735352@@

Regions

Organizations can have various branches to handle various specialized activities. Such branches can be located at different regions and data from each of these branches need to be maintained in the same place. You can configure the various locations of your branches in the ServiceDesk Plus application.

To open the organization regions configuration page,

1. Login to the ServiceDesk Plus application using user name and password of an admin user.
2. Click the **Admin** tab in the header pane.
3. In the **Organizational Details** block, click the **Regions** icon. The next page displays the available list of regions. You can add, edit, or delete regions.

Add a Region

To add a new region,

1. Click **Add New Region** link available at the top right corner of the **Region list** page.
2. In the **Add Region** form, enter the **Region Name**. It is mandatory field.
3. Specify brief description about the core activities taking place in the branch in the **Description** text field.
4. Click **Save** to save and return to the list view. Click **Save and Add New** a to save and add a new region. At any point, if you do not wish to add the region and would like to get back to the location list, click **Cancel**.

Edit a Region

To edit an already existing region,

1. In the **Region List** page, click the edit icon beside the **Region Name** that you wish to edit.
2. In the **Edit Region** form, modify the Region name and its Description.
3. Click **Save** to save the changes. At any point, if you wish to cancel the operation that you are performing, click **Cancel**. Even while editing a region, if you wish to add another new region, then click **Save and add new** button.

Delete Region

1. In the **Region List** page, click the delete icon beside the **Region Name** that you wish to delete. A confirmation dialog appears.
2. Click **OK** to proceed with the deletion. If you do not want to delete the region, then click **Cancel**.

On deleting a region, the corresponding sites and attributes such as groups, SLA, business rules, holidays and so on is also deleted. If the Region is specified in a module, then the region cannot be deleted from the list.

Sites

If your organization has various regional offices across the globe, then these offices are configured as **Sites** in ServiceDesk Plus. The purpose of configuring Sites is to maintain a single ServiceDesk Plus installation irrespective of the location, working hours and IT operations executed in the sites. By configuring Sites, you can restrict technicians from viewing requests, problems, changes and assets of certain sites, organize your IT operations across sites and enable prompt handling of requests raised from different sites.

When you get started with ServiceDesk Plus configurations, the Operational Hours, Holidays, Departments, Business Rules and Service Level Agreements configured is considered as the **Default Settings**. So while adding sites, you have options to either copy these default settings, refer the default settings, or configure separate settings for the site.

Example:

The options – Refer Default Settings and Custom Settings – can be explained better with an example.

Let's say your head office is in New York, USA and you also have offices in Boston, Washington and Tokyo. The IT operations in the USA region are handled by technicians located in Boston. And the IT operations in Japan are handled by technicians in Tokyo. Assume the office in Tokyo works 6 days a week, while the office in USA region works 5 days a week. The Departments, Business Rules and Service Level Agreements are similar for all the sites. And, you have configured the default settings to suit the USA region.

In ServiceDesk Plus, the offices in New York, Boston, Washington and Tokyo are configured as sites. Since the default settings suit the USA region, you can **Refer the Default Settings** for the sites – New York, Boston and Washington. When you refer a default setting, the site will not have separate site based configurations i.e., these sites will not be listed in the drop down menu while viewing the settings.

Since the site Tokyo works 6 days a week, you need to customize the operational hours for the site by selecting **Custom Settings** beside operational hours. The site will be listed in Operational Hours for drop-down box and you can customize the operational hours for the site.

NOTE: Technicians with administrator privilege can add sites in ServiceDesk Plus. The Site Admin does not have the privilege to add sites but he can view, edit and delete his associated sites details.

To access the Sites configuration page,

1. Login to ServiceDesk Plus application using the username and password of the admin user.
2. Click **Admin** tab in the header pane.
3. On the **Helpdesk** block, click **Sites** icon.

	Note: The administrator has the privilege to Add/Edit/Delete a site. The Site Admin can only View/Edit/Delete the sites to which he is associated from the Site List page.

Add Site

1. In the Site List view page, click **Add New Site** link on the right hand side corner. The Add New Site form opens.
2. Enter the **Site Name** in the text field provided. It is mandatory field.
3. Enter brief information in the **Description** field about what your organization does in the above mentioned site.
4. Select the **Region** and the **Time Zone** of the site from the combo box. The specified time zone is essential to calculate the operational hours for the site. Hence, any request raised in the site can be resolved within its operational hours.
5. Specify the **Address** of the organization along with City, Postal Code, State and Country.
6. Enter the **Contact Information** such as E-mail Id, Phone no, Fax no and the Web URL of your organization.
7. Enable any of the following related settings,
   - **Refer Default Settings:** The site follows the default settings configured in ServiceDesk Plus. Any change made under the default settings is also applied to the site.

     Let's take the same example of the 3 offices in the USA region. Since the default settings are configured to suit the USA region, you just need to refer the default settings to the 3 sites.

   - **Copy Default Settings:** A separate copy of the default settings is maintained for the site. With this separate site based configuration, you can alter the name of the default settings like the Department – IT Services can be renamed as IT operations in the site configuration. Or you can add additional holidays, business rules, technicians, support groups and service level agreements for the site alone.

     NOTE: Any change made in the default settings, say a new holiday is added in the default list, then the same is reflected in copy default settings.

   - **Custom Settings:**The site with this setting will neither follow the default setting nor maintain a separate copy of the default setting. You need to customize the configurations for the site.

     Taking the above example about the office in Tokyo that operates 6 days a week unlike the default operational hours that operates 5 days a week. While adding the site, select Custom Settings beside Operational Hours, after which, you can configure the working days for the site –Tokyo in Operational Hours.

8. Click **Save** button to save the site details and return to the list view. Click **Save and add new** button to save and add another site. If you wish to cancel the operation then click **Cancel**.

Edit Site

1. From the site list page, click the **edit** icon beside the site which you wish to edit. The Edit Site page opens with the existing details.
2. You can modify all the fields in this page.
3. Click **Save** to save the modified changes and return to the list view.

Even while editing a site, if you wish to add a new site, click Save and Add New button. This updates the site and reopens the Add Site form.

Delete Site

If the site is being used by a module, the site cannot be deleted. In turn, the site is grayed (marked inactive) to avoid the further usage of the site. If the site is associated to a Requester, Asset, Request Template or Preventive Maintenance task, then you have an option to associate a different site to these parameters.

To delete a site,

1. Select the site you wish to delete by enabling the check box.
2. Click **Actions** drop down -> **Delete Site(s)** option. A confirmation dialog appears.
3. Click **OK** to proceed.
4. If the Site is associated to a requester, asset, request template or a preventive maintenance task, **Change Site association** pop up appears listing the parameters to which the site is associated.
5. To associate these parameters to a different site, select the site from the drop down. By default, not associate to any site is populated.
6. Click **Associate**. The parameters are associated to the newly selected site. The site to be deleted is marked inactive and will not be populated wherever site is specified.

To bring the site back to active state,

1. Click the **edit** icon beside the site name.
2. From the edit site page, disable **Site not for further usage** check box.
3. Click Save to save the site details and return to the list view.

If the site is not used by any module, the site is removed from the site list view.

Auto change of site from inactive to active state: a. Succeeding an Active Directory import, the grayed out site is automatically changed to the active state.

b. On performing a CSV Import of Users and assets.

c. Adding and Editing requesters associated to the inactive site through API.

d. Editing a inactive site through API.

Inactive sites will not be auto activated for the following scenarios:

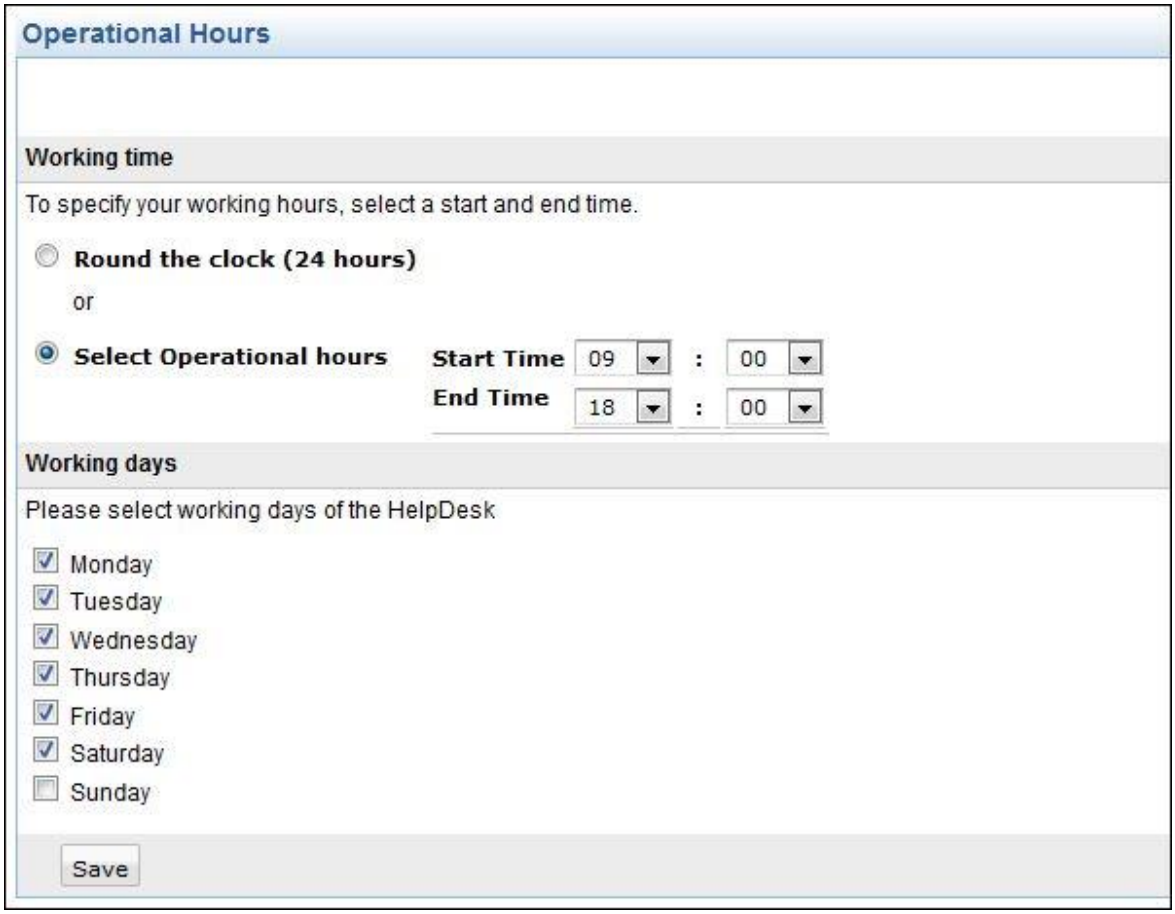
a. Creating requests through E-mail Command for an inactive site.

b. Creating and Editing Requests, Asset, Technician for an inactive site through API.

Operational Hours

You can set the operational hours of your organization situated in various sites. The operational hours for a site depends on the time zone configured for that site. The operational hours that you configure is used while calculating the request due by date and time. To set the organization's operational hours,

1. Login to the ServiceDesk Plus application using the user name and password of an admin user.
2. Click the **Admin** tab in the header pane.
3. In the **Organizational Details** block, click the **Operational Hours** icon. The **Operational Hours** form is displayed as shown below,



4. Select the site from the **Operational hours for** comb box. By default, the Operational hours for combo box will display **Default Settings**.

	Note:The Site Admin can set the operational hours for the sites to which he is associated. The sites can be selected from the **Operational Hours for** combo box. The Operational hours for combo box will appear if the site is configured in Admin- Sites.

5. If your organization works round the clock, then select **Round the clock (24 hours)** radio button. If you do not work round the clock then, select the radio button beside **Select Operational Hours**. Specify the working hours of your organization by selecting the **Start Time** and the **End Time** from the drop down boxes.
6. Now, select the days that your organization works by selecting the check boxes provided beside the days of the week.
7. Click **Save**.

You can also view the operational hours of a site by selecting the site from Operational Hours for combo box.

If you have already set the operational hours and wish to modify the same, you still need to follow the same procedure as specified above. But in this case, when you click **Operational Hours** from the **Admin Home** page, it will open the **Operational Hours** form with the details that have been set earlier. You can make the necessary modifications and then click **Save**.

Holidays

You can set the holidays of your organization that is situated in various sites using the **Holidays** option available in the **Admin** page. This has the list of holidays during which the firm would remain closed and is exclusive of the weekly holiday when the firm does not function. You can also set repeated holidays such as, New Years Day, to an organization in a site. Thus by doing so you need not manually add the holiday every year in the Holidays option.

The holiday list along with the operational hours will be used for calculating the expected completion time of a service request, depending on the priority or SLA applicable to that request. To open the holiday configuration page,

1. Login to the ServiceDesk Plus application using the user name and password of an admin user.
2. Click the **Admin** tab in the header pane.
3. In the **Organizational Details** block, click the **Holidays** icon . This displays the **Default Settings** of the available list of holidays. You can add, view, edit, or delete holidays for a particular site.

	Note: The Site Admin can add and view the holidays to the site which he is associated. To view the holidays in a particular site, select the site from the **Holidays for** combo box. If the sites are not configured then the Holidays for combo box will not appear. To configure the sites refer Sites under Organizational Details block.

Add a Holiday

To add holidays in a site,

1. Select the site for which you want to add the holiday from the **Holidays for** combo box. If the sites is not selected then the holidays gets added under **Default Settings**.
2. Click **Add New Holiday** link available at the top right corner of the **holiday list** page. This opens the **Add New holiday** form.
3. Select the **Date** on which you want to add the holiday by invoking the calendar icon . This is mandatory field.
4. Enter a brief description of the significance of the holiday in the **Description** text field.
5. If the holiday occurs every year such as, 25th December (Christmas), then enable **Check if this is recurring holiday** check box. This will automatically add the holiday every year for the site.
6. Click **Save**. If you do not wish to add the holiday and would like to get back to the holiday list, click **Cancel**.

Edit a Holiday

1. Select the site for which you want to edit the holiday from the **Holidays for** combo box. This lists out the holidays for the corresponding site.
2. Click the edit icon beside the holiday **Date** that you wish to edit.
3. Modify the date and the description of the holiday, and enable/disable the 'check if this is recurring holiday' check box in the **Edit Holiday** form.
4. Click **Save** to save the changes. At any point, if you wish to cancel the operation that you are performing, click **Cancel**.

Delete Holiday

1. Select the site for which you want to delete the holiday from the **Holidays for** combo box. This lists outs the holidays in that site.
2. Enable the check box beside the holiday **Date** which you want to delete from the holiday list page.
3. Click the **Delete** button on the left hand side of the page. A dialog box confirming the delete operation appears.
4. Click **OK** to proceed with the deletion. If you do not want to delete the holiday, then click **Cancel**.

Departments

There can be various departments in an organization which can be situated in different sites, and each of these departments have a group of employees managed by a Department Head. In ServiceDesk Plus you can add, edit, or delete the various departments of your organization. These departments are essential while adding requesters and technicians since each requester or technician will be associated to a particular department of the organization.

To open the department configurations,

1. Login to the ServiceDesk Plus application using the user name and password of an admin user.
2. Click the **Admin** tab in the header pane.
3. In the **Organizational Details** block, click the **Departments** icon . This displays the available list of departments. You can add, edit, or delete departments.

	Note:The Site Admin can configure the department in the sites which he/she is associated. The list of departments associated to the site can be viewed by selecting the sites from the **Departments for** combo box. The Department for combo box will appear if the site is configured in Admin- Sites.

Add Department

To add a department for an organization in a site,

1. Select the site for which you want to add the department from the **Departments for** combo box. By default, the department gets added under **Default Settings**.
2. Click **Add New Department** link available at the top right corner of the **Department list** page. This opens the **Add Department** form.
3. Enter the **Department Name** in the text field. This is mandatory field.
4. Provide a brief **Description** about the department in the text field provided.
5. The **Department Head** manages the department and plays a vital role in approving the service request. To select the Department Head, click the icon . The Requester List window pops up. Click on the name of the requester to select the department head.
6. Click **Save**. At any point, if you do not wish to add the department and would like to get back to the department list from the add department form, click **Cancel**.

Edit Department

To edit an existing department,

1. Select the site for which you want to edit the department from the **Departments for** combo box. This lists out the available departments corresponding to the site.
2. Click the edit icon beside the **Department Name** that you wish to edit. This opens the **Edit Department** form.

3. Modify the department name and its description.
4. Click **Save** to save the changes. At any point, if you wish to cancel the operation that you are performing, click **Cancel**.

Delete Departments

1. Select the site for which you want to edit the department from the **Departments for** combo box.
2. Enable the check box beside the department name which you wish to delete from the department list page.
3. Click **Delete** button.A dialog box confirming the delete operation appears.
4. Click **OK** to proceed with the deletion. If you do not want to delete the department, then click **Cancel**.

Business Rules

You can define Business Rules for various sites of your organization. Business Rules enable you to organize the incoming requests (via web form and e-mail) and perform actions such as delivering them to groups, assigning status and other request parameters. Business Rule can be applied to a request when it is created (or received), edited or both. Notification can also be sent to the technicians once the Business Rule is executed.

To open the Business Rule configurations page,

1. Login to the ServiceDesk Plus application with admin username and password.
2. Click the **Admin** tab in the header pane.
3. On the **Helpdesk** block, click the **Business Rule** icon . The resulting page displays the available list of business rules under the Default Settings. You can add, edit, delete or organize business rules of a particular site.

	Note: The Site Admin can add and view the business rules to the site which he is associated. To view the business rules of a site, select the site from the Business Rules for combo box. If the sites are not configured then the **Business Rules for** combo box will not appear. To configure the sites refer Sites under Organizational Details block.

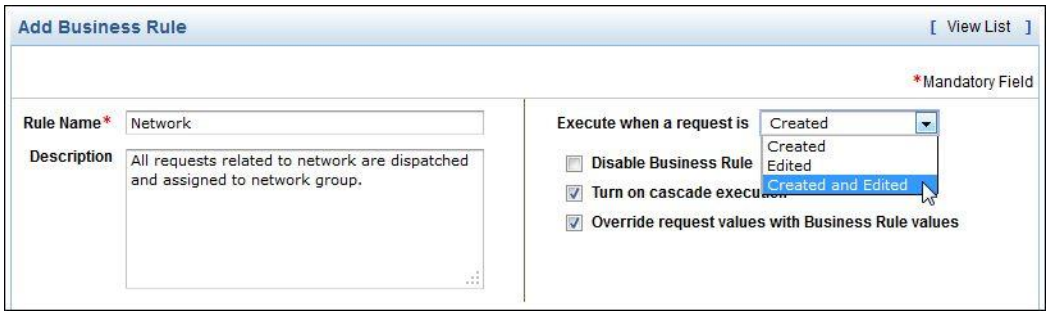
Add a Business Rule

To add a Business Rule,

1. Select the site to which you want to add the business rule from the **Business Rules for** drop-down list. By default, the 'Default Settings' option is selected.
2. Click **Add New Business Rule** link available at the top right corner of the Business Rules List page.
3. The Add Business Rule form consists of three blocks to be configured namely, **Business Rule Details**, **Criteria and Actions** and **Notification**.

Business Rule Details

The details of the Business Rule are exclusively for the newly added business rule.



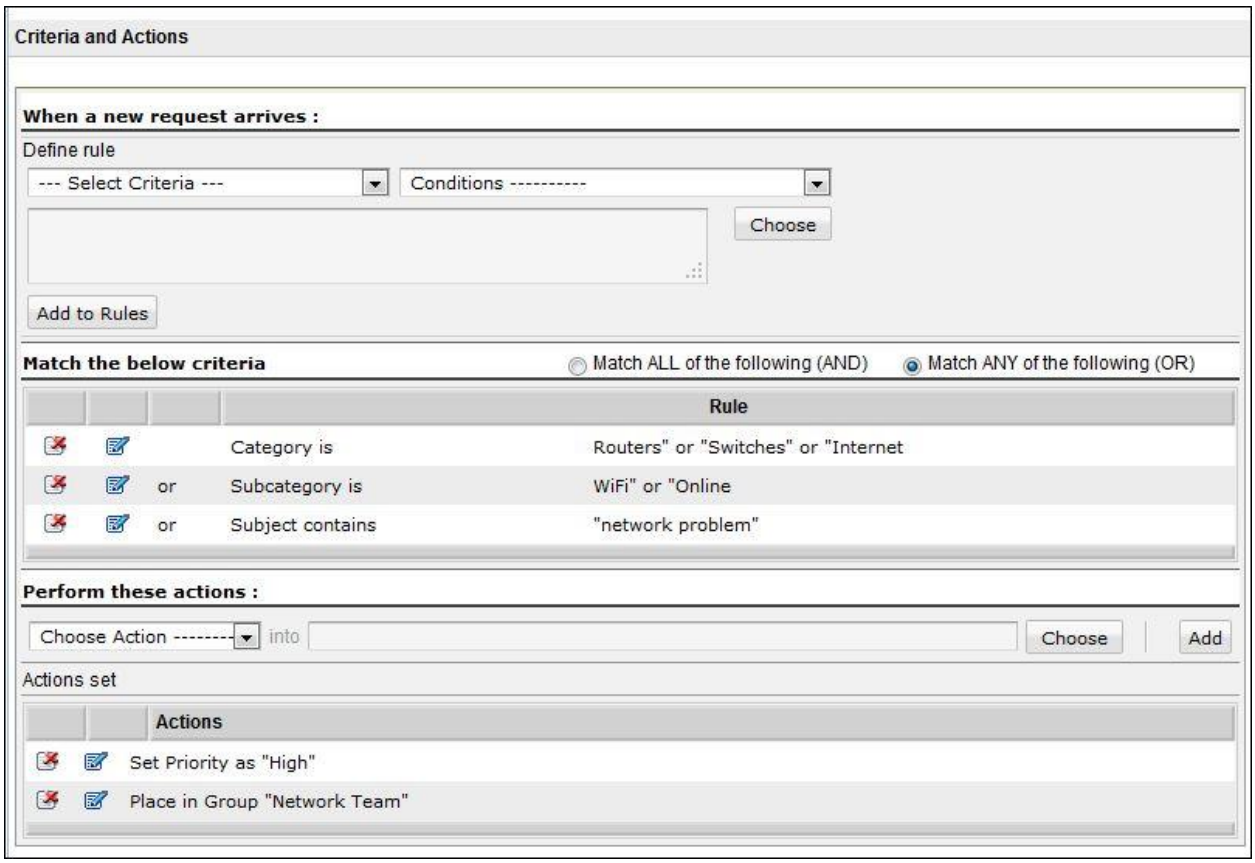
1. Specify a unique **Rule Name** in the given text field. It is a mandatory field.
2. The **Site** selected in Business Rules for drop down box is displayed in non editable text.
3. Provide the content to describe the business rule in the **Description** text field.
4. Business Rule can be executed on a request when it is created via web form (or received via email), edited or both on choosing the options from **Execute when a request is** drop-down list. By default, the 'Created' option is selected.
5. You can disable a Business Rule by selecting **Disable Business Rule** check box. On disabling a Business Rule, the rule will not get executed on any new or edited request. The disabled business rule will be marked in grey in the list view.
6. By default, the execution of the business rule will stop once a rule is applied on a request. To continue execution of successive business rules even after a business rule is applied on a request, select **Turn on Cascade Execution** check box.
7. By default, when a business rule is applied, the request values will be changed with the values in the business rule only if the request value is empty. If the request value is not empty, the business rule value will not be applied. To override the request values with the values in the business rule enable **Overrideequest values with Business Rule values**.

   Example: If the **Priority** in a request is set to 'High' and the **Actions Set** in the business rule is 'Set Priority to Low', then the priority is automatically set to 'Low' when the business rule is applied.

	Note: Bulk actions such as delete, disable/enable business rules, turn on/off cascade execution can be performed on a business rule by selecting the check box beside the business rule and click **Actions** drop down button. To turn on/off cascade execution to a business rule from the list view, click the icon beside the business rule. A confirmation message appears. Click **Ok** to continue. The icon will be grayed if the cascade execution is discontinued.

Criteria and Actions

Under this block, define the rules and criteria that need to be satisfied by the incoming request.



1. **Select the Criteria** and **Condition** from the respective drop-down list, and then the individual values that needs to be matched by clicking the **Choose** button. The values from the database for that particular parent criteria that you chose from the drop down list opens. Choose the values you want and click **Ok**.

   Example: If you want to match the requester name John, then select **Requester Name** in the Select Criteria drop down box. Now select the condition **is** or **is not** from the drop down list. The list varies for each criteria. Click **Choose** button to open the list of requesters in a pop-up window. Select the requester name from the list and click **Ok**. For multiple selection, press **Shift** or **Ctrl** key while selecting the names. The selected names appears in the text box just beside the choose button.
2. Click **Add to Rules** to add the defined rule to the rules table.
3. By default, the radio button **Match ALL of the following is selected**. If you do not want all of them to be checked but if it is enough if any one of the rules are matched, then select the radio button **Match ANY of the following**.
4. After defining the rules, you need to define the actions that need to be performed on the request matching the criteria. Choose the action from the **Choose Action** drop down list.
5. Click **Choose** button to select the values for the chosen action.

   Example: If the action you had chosen was to **Place in Group**, then click the Choose button to display the list of groups available in the

corresponding site. Select the group to which the request has to be placed and click **Ok**.

6. Click **Add** to add the action in the actions table.

Notification

You can send Email and SMS notification to technicians once a business rule is applied.

Caution: Configure Mail Server Settings before enabling Notification.

To enable Email notification,

- Select the check box beside **Email**. Click **Add** to select the list of technicians from Select Assign to Technicians pop up window. Click **OK** to add the technicians.

To enable SMS notification,

- Select the check box beside **SMS**. Click **Add** to select the list of technicians from Select Assign to Technicians pop up window. Click **Ok** to add the technicians.

To edit the Email Template,

- Click **Edit Email Template** link to open the email template form. Make the required changes in the Subject and Message text field. Click **Ok**.

Click **Save**. If you want to add more than one business rule, then click **Save and Add New**. At any point, if you do not wish to add the business rule and would like to get back to the business rules list from the add business rule form, click **Cancel**.

Edit a Business Rule

To edit an existing business rule,

1. In the **Business Rules List** page, click the edit icon beside the **Business Rule Name** that you wish to edit.

2. In the **Edit Business Rule** form, you can modify all the fields mentioned in the add business rule form.
3. To edit the **Match the below criteria** set, click the **edit** icon beside the individual criteria. The respective selection window is opened in a separate pop-up. You can choose more values or remove a few values by de-selecting them.
4. You can also delete a criteria completely. To delete a criteria, click the delete icon beside the individual criteria.
5. In the actions to be performed, you can add new actions, edit or delete the existing actions.
6. Click **Save** to save the changes performed. At any point you wish to cancel the operation that you are performing, click **Cancel**. Even while editing a business rule, if you wish to add another new business rule, then click **Save and Add New** button.

Delete Business Rule

1. From the **Business Rule List** page, enable the check box beside the **Rule Name** you wish to delete.
2. Click **Actions** drop down button, and select the **Delete** option. A confirmation dialog opens.
3. Click **OK** to proceed with the deletion. If you do not wish to delete the business rule, then click **Cancel**.

Organize Business Rules

Organizing the business rules decide the order in which the rule is applied on the incoming request. You can organize the business rule to appear in a particular order in the list view,

1. Select the site for which you wish to rearrange the order of the business rule from the **Business Rules for** combo box.
2. Click **Organize Business Rules** link at the top tight hand corner of the Business Rules List view page. A pop-up window opens displaying the list of available business rules in the order that is appearing in the list view.
3. Select a business rule, and click **Move up** or **Move Down** button beside the list.
4. Click **Save**.

Service Level Agreements

You can have Service Level Agreements (SLAs) defined for intra-organization service provided by the IT help desk team. These SLAs help evaluating the efficiency, effectiveness,and responsiveness of your help desk team. The SLAs can be defined for each individual, or departments, or workstations in a site. The priority for an incoming service request is automatically set if the request is governed by an SLA rule. Also, if the request is not attended and resolved within the time specifications of the SLA, then you can set the escalation rules.

To open the SLA configurations page,

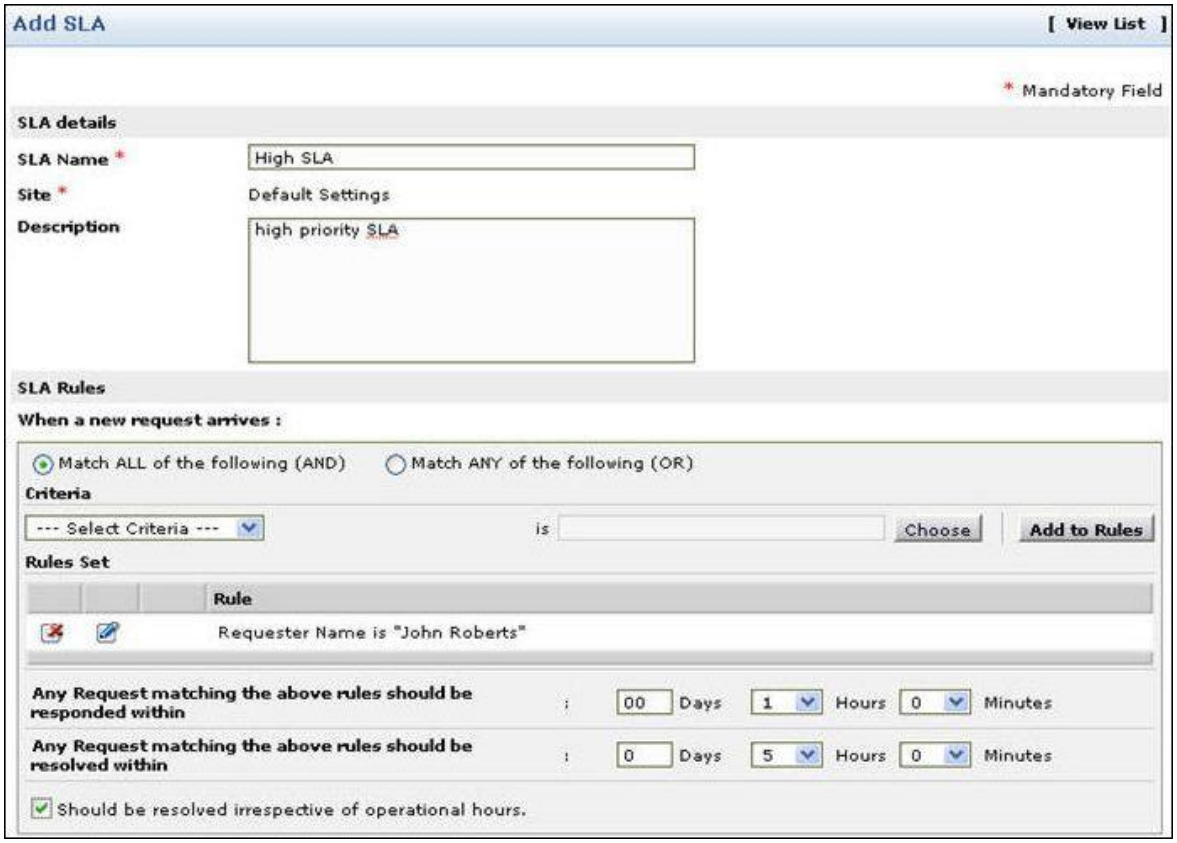
1. Login to the ServiceDesk Plus application with admin username and password.
2. Click the **Admin** tab in the header pane.
3. In the **Helpdesk** block, click the **Service Level Agreement** icon. The SLA list page opens. You can add, edit, or delete SLAs.
4. By default, all SLA based mail escalations will be enabled. If you wish to disable the escalation click **Disable Escalation** button.
5. By default, there are four SLAs set namely, High, Medium, Normal,Low SLAs. You can also add more SLAs to the list.

	Note: The Site Admin can configure the SLA for the sites to which he is associated by selecting the site from the **Service Level Agreement for** combo box. The list of all SLAs corresponding to the selected site gets displayed. If the sites are not configured then the Service Level Agreement combo box will not appear. To configure the sites refer Admin- Sites.

Add a Service Level Agreement

To add an SLA,

1. Select the site to which you want to add the SLA from the **Service Level Agreement for** combo box. By default, the 'Default Settings' option is selected.
2. Click **Add New SLA** link at the top right corner of the **SLA list** page.
3. In the Add New SLA form, specify the **SLA Name** in the text field provided. It is a mandatory field.
4. The **Site** selected in Service Level Agreement for drop down box is displayed in non editable text.
5. If required, you can provide a corresponding **Description** for the SLA.



6. In the SLA rules block, set the rules and criteria for the SLA. By default, the radio button **Match ALL of the following is selected**. If you do not want all of them to be checked but if it is enough if any one of the rules are matched, then select the radio button **Match ANY of the following**.
7. **Select the Criteria** and **Condition** from the respective text box, and then choose the individual values that need to be matched by clicking on the **choose** button. The values from the database for that particular parent criteria that you chose from the drop down list opens. Choose the values you want and click **Ok**.

   Example: If you want to match the requester name John, then select **Requester Name** in the combo box. Now click **Choose** button, to open the list of requesters in a pop-up window. Select the requester name from the list and click **Select**. For multiple selection, press **Shift** or **Ctrl** key while selecting the names. The selected names will appear in the text field just before the choose button.
8. Click **Add to Rules** to add the defined rule to the **Rules Set**.
9. Set the **Response Time** and the **Resolution Time** in terms of days, hours and minutes.

   Note: The Response Time is the initial response sent out by the technician to the requester for a request. Automatic replies from Service Desk Plus will not be counted as a response. The specified response time should be less that the resolution time.
10. If you want this duration to override the operational hours, the select the check box beside **Should be resolved irrespective of operational hours**. By selecting this, you will be overriding the operational hours of your organization

and the due by time will be calculated from the creation time without taking into consideration the holidays and operational hours.

11. The request can be escalated to other technicians when the request is not responded or resolved within the specified time. There are two blocks of escalations, one for the **Response Time** and the other for the **Resolution Time**.

Response Time:

There is only one level of escalation if the response time elapses.

i. To enable escalation, select the check box beside Enable Level 1 notification.
ii. Click **Choose** button to choose the technicians to whom the SLA violation should be escalated.
iii. You can choose to escalate before the violation or after the violation. If you wish to escalate the request before the SLA violation then click **Escalate Before** option. Specify the number of days before the SLA violation is about to happen in the text box. This is to escalate to the technician about the onset of the violation. You can also specify the time of escalation.
iv. Similarly, click **Escalate After** option to escalate after the violation. Specify the number of days after the SLA violation has occurred in the text box. You can also specify the time of escalation.

Resolution Time:

There are 4 levels of escalation if the specified resolution time elapses.

i. To enable escalation, select the check box beside Enable Level 1 notification.
ii. Click **Choose** button to choose the technicians to whom the SLA violation should be escalated.
iii. You can choose to escalate before the violation or after the violation. If you wish to escalate the request before the SLA violation then click **Escalate Before** option. Specify the number of days before the SLA violation is about to happen in the text box. This is to escalate to the

technician about the onset of the violation. You can also specify the time of escalation.

iv. Similarly, click **Escalate After** option to escalate after the violation. Specify the number of days after the SLA violation has occurred in the text box. You can also specify the time of escalation.

9. Click the **Save** button to save the SLA and return to the list view. If you want to add more than one SLA, then click **Save and Add New**.

At any point, if you do not wish to add the SLA and would like to get back to the SLA list from the add SLA form, click **Cancel**. Clicking the **View List** link on the top right corner of the add SLA form will also take you to the SLA list view.

Edit a Service Level Agreement

To edit an existing SLA,

1. Select the site of the SLA you wish to edit from the **Service Level Agreement for** combo box. The lists of all the SLA corresponding to that site is displayed.
2. Click the edit icon beside the **SLA Name**.
3. In the **Edit SLA** form, you can modify all the fields mentioned in the add SLA form.
4. Click **Save** to save the changes. At any point you wish to cancel the operation that you are performing, click **Cancel**. Even while editing an SLA, if you wish to add another new SLA, then click **Save and Add New** button.

Delete Service Level Agreement

1. Select the site of the SLA you wish to delete from the **Service Level Agreement for** combo box. The list of SLA corresponding to the site gets displayed.
2. Enable the check box beside the SLA. Click the **Delete** button. A confirmation dialog appears.
3. Click **OK** to proceed with the deletion. If you do not want to delete the SLA, then click **Cancel**.

Organize Service Level Agreements

Organizing the SLAs decide the order in which the SLA is applied on the incoming request. You can organize the SLA to appear in a particular order in the list view,

1. Select the site for which you wish to rearrange the order of the SLA from the **Service Level Agreement for** combo box.
2. Click **Organize SLA** link available above the list of SLAs in the **SLA List** view. A pop-up window is opened with the list of available SLAs in the order that is appearing the list view.
3. Select an SLA, and click **Move up** or **Move Down** button beside the list.
4. Click **Save**.

Notification Rules

ManageEngine ServiceDesk Plus allows you to send notifications to requesters and technicians through notification rules. The notifications can be of two types: email and SMS. These notification modes can be set across various modules of the application, such as requests, problem, change and solution. Any default actions that you might want to perform when the state of any item changes can also be defined.

Note	For all modules, notification will not be sent to the logged in technician. Say, for notification like, "Alert Technician by Email when a request is assigned.", if a technician picks up a request then a notification will not be sent to the technician. Similarly, for notifications like "Alert the following technicians by email when a new request is created", notification will not be sent to the logged in technician if he is included in the notify list.

Further you can also customize the email template of the notification and prevent unwanted acknowledgements or notifications being sent to requesters/technicians through Junk Mail notification.

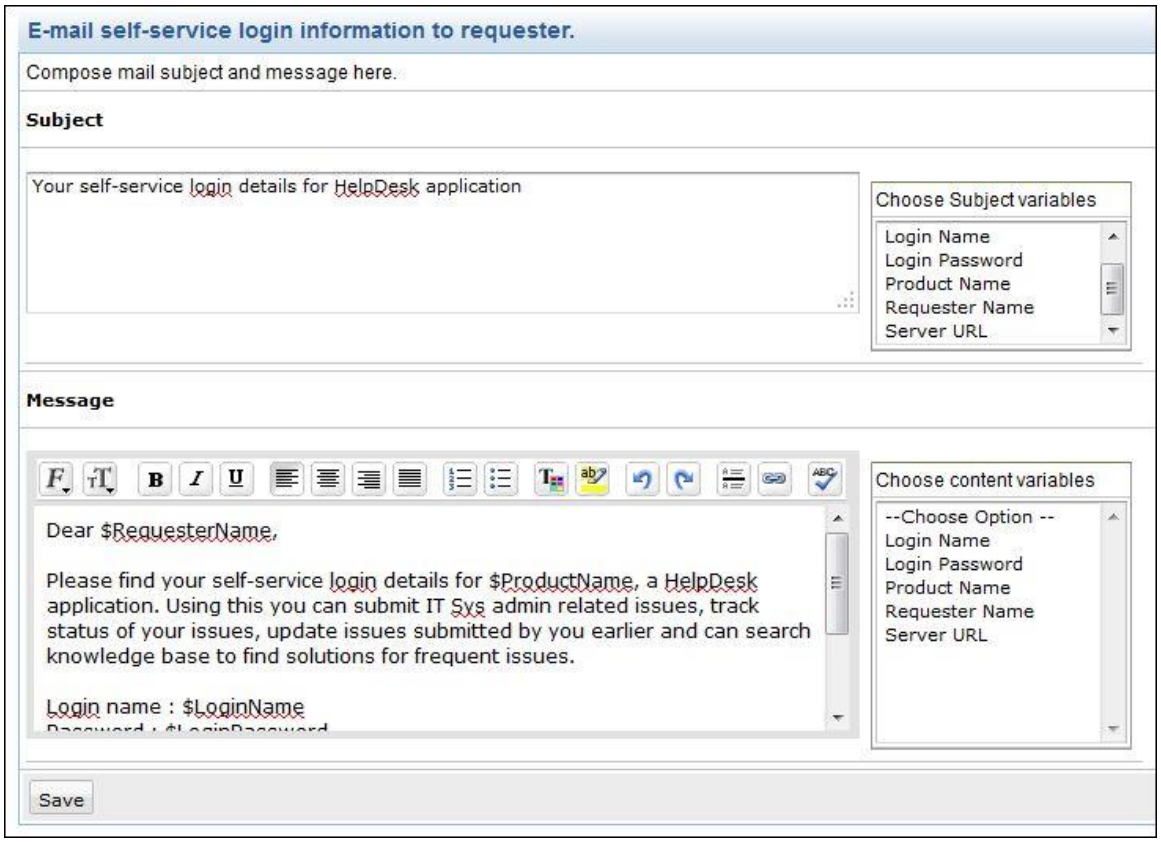
To set the notification rules and the message template,

1. Login to the ServiceDesk Plus application using the user name and password of an admin user.
2. Click the **Admin** tab in the header pane.
3. In the **Helpdesk** block, click the **Notification Rules** icon under Helpdesk block.
4. By default, all notifications are sent in Rich text format. Clicking on **Plain text formatting** button will switch all the notifications in Plain text format.
5. Click on the appropriate tabs to configure for request, problem, change and solution modules.
6. To enable or disable any of the notification rules, select or de-select the check box beside each of the rules.
7. For certain notifications you need to select the technicians who need to be notified when a new request is created.
    - Click **Choose** button.
    - Select the technicians from the list of technicians is displayed in a pop-up window.
    - For multiple selections, press **Shift** or **Ctrl** key and then select the technicians.
    - Click **OK**.
    - The selected technicians get listed in the text box beside the **Choose technician(s) button**.
8. Click **Save**.

Customize the Message Template

You can customize the message template for each of the notifications.

1. Click **Customize Template** link beside the notification for which you wish to modify the content that is being sent.



2. You can change the subject and the message content by typing the text of your choice and also adding other variables that you wish to display as a part of the subject or message content. To add more variables, just click the corresponding variable from the list box beside the respective field.

Junk Mail Notification

Junk Notification Filters prevents unwanted acknowledgements or notifications being sent to requesters / technicians when an information mail reaches the help desk. These mails are not requests and do not require any action to be taken.

Say, acknowledgement email like Out of Office replies, notifications that bounce back when the mail destination is not reachable (because of a wrong mail address) can be stopped from being acknowledged or notified.

To define a Junk Mail Notification,

1. Click **Edit Criteria** link.
2. Define a rule by select the criteria and condition from the drop down combo list.
3. Click **Choose**.
4. Enter the value in the field provided. Click **Save**.
5. Click **Add to Rule**.
6. You can either match all of the following (AND) or match any of the following (OR) criteria. Select an appropriate radio button.
7. Click **Save**.

You can also edit or delete the criteria on clicking the appropriate icon.

Preventive Maintenance

You can create a Preventive Maintenance Task for regular maintenance such as changing the printer toner every month or perform a regular service shutdown. Creating a preventive maintenance is a two step process -

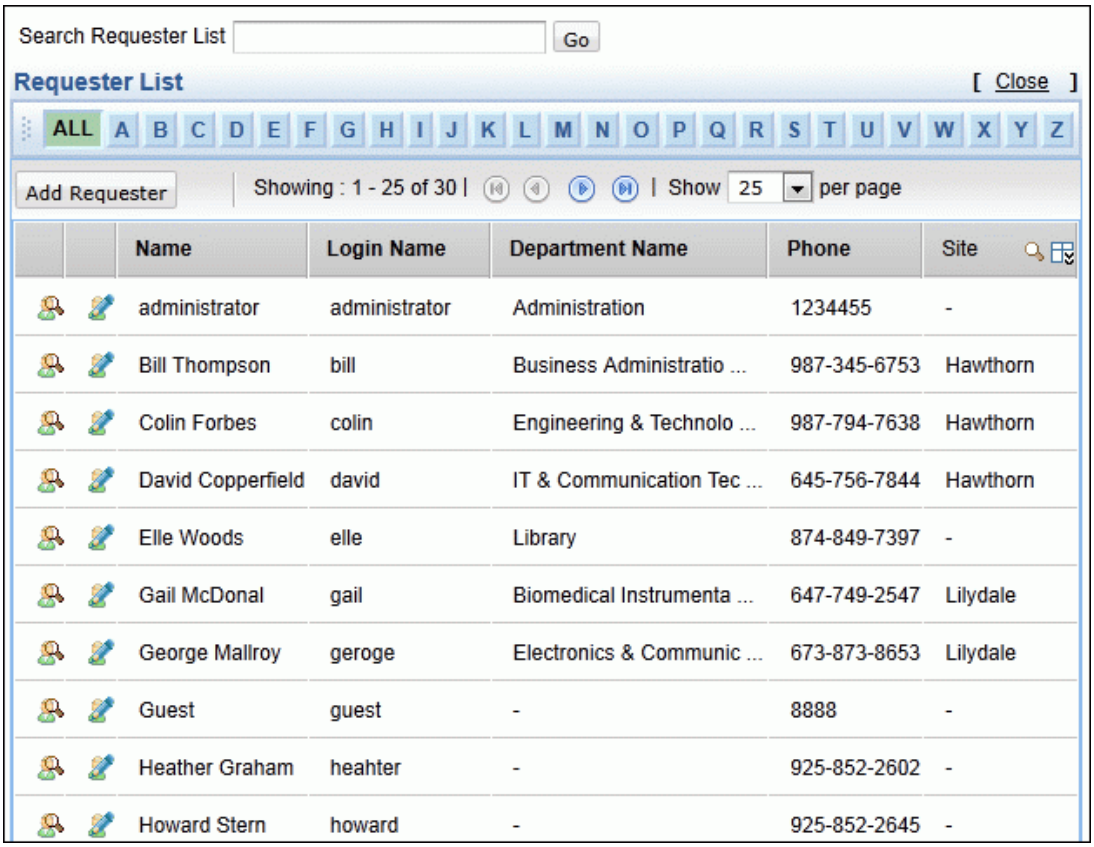
1. **Creating a Task Template**
2. **Task Scheduling**

To schedule a preventive maintenance task,

1. Log in to the ServiceDesk Plus application using the user name and password of an admin user.
2. Click the **Admin** tab in the header pane.
3. In the **Helpdesk** block, click the **Preventive Maintenance Tasks** icon . This opens the Configuration Wizard page.
4. Click the **Preventive Maintenance Tasks** link at the left side of the page under the HelpDesk block. This opens Request Maintenance Tasks page.
5. Click **Add New PM Task** link. This opens Add Preventive Maintenance Task page.

Create a Task Template

1. The Task Template opens to view the 'Default Incident Template' form configured in Incident Template. To schedule a request using the templates, select the template from **Change Template** drop down.
2. In the default incident template, select the Request Type from the combo box. Request Type denotes the type of request sent by the requester to the help desk team.
3. Select the **Status** of the request, the **Mode** of request submission, **Level** and **Priority** of the request from the drop down box.
4. Also, select the **Impact**, **Impact Details** and **Urgency** of the request from the corresponding drop down box.
5. In the Requester Details block, specify the **Requesters Name**, **Contact Number**, **Job Title** and **Department** of the requester.
6. You can select the requester from the list of users configured in the application. Click requester **lookup** icon beside the requester name field. The **Requester List** window pops up.

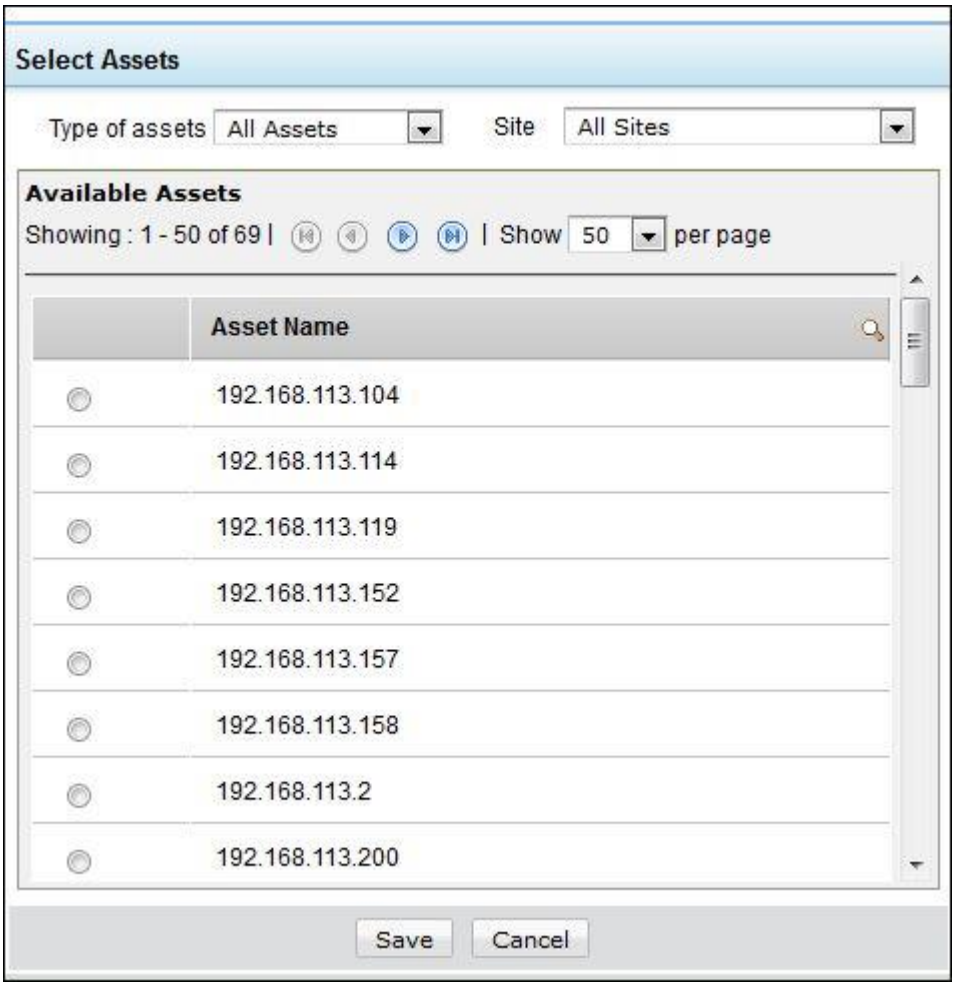


To select a requester from the list, click the hyper-linked requester **Name**. The requester name and details associated with the requester are populated in the requester details block.

-
  1. If the requester list is huge, then click on the **Alphabets** at the top of the page to view only a selected group of requesters.
  2. Conduct an instant search for the requester by entering the search string in **Search Requester List** field and click **Go**.
  3. If you are aware of any requesters details such as name, login name, department, email and so on, then conduct a column-wise search using the search icon .
  4. In addition, add new requester directly by clicking the **Add Requester** button from the requester list page.
  5. Also, you have an option to edit the requester details directly from this page. Click the **edit** icon beside the requester name to perform the edit operation.

8. The assets associated to the requester are populated in the **Asset** drop down. Select the **Asset** from the drop down. If the issue is caused by a network resource such as a router or an access point, then click the icon and select the asset.

In **Select Assets** pop-up window, you can filter the assets by selecting the **Type of assets** such as, access point, routers, workstation and so on, from the drop-down. Selecting **All Assets** from drop-down menu lists all the assets available in the application, irrespective of the asset type.



9. By default, if the location of the requester is configured in the application, then the same is populated in the **Site** field. In certain scenarios, the requester may raise a request from one site to a problem in a another site. In this case, the site in which the issue persists should be selected.
10. On selecting the site, the groups corresponding to the site gets populated under the **Group** field. The request is routed to the particular group by selecting the Group name from the drop down.
11. On selecting the Group, technicians associated with the Group alone are listed in the **Technician** drop down list. Select a **Technician** to handle the request from the drop down.
12. Select the **Service Category** which is effected by the incident from the drop down.
13. Select the relevant category under which the request is classified from **Category** drop down box.
14. Also, select the relevant **Sub-Category** and **Item** from the drop down box.

15. Specify the subject line to be displayed while sending the request in the **Subject** text field. The subject line is displayed as the request title and is a mandatory field.
16. Provide a detailed description with any other associated details relevant to the request in the **Description** text box.
17. To attach a file to the task template click **Attach File** button to attach files.
18. Click **Next>>** button for Task Scheduling.

Task Scheduling

To schedule a task, select the time frame from the listed options:

Daily Schedule: To run a daily maintenance task, click **Daily Schedule** radio button.

1. Select the **Time** at which the maintenance task should be scheduled from the combo box.
2. Select the **Date** on when the maintenance task should be scheduled from the **Calendar** button.
3. Save the details.

Weekly Schedule: To run a weekly maintenance task, click **Weekly Schedule** radio button.

1. Select the day of the week by enabling the corresponding check box beside the day of the week.
2. Else if you wish to schedule on all days of the week, then click **Everyday** check box.
3. Select the **Time** frame to schedule the task from the combo box.
4. Save the details.

Monthly Schedule: To run a monthly maintenance task, click **Monthly Schedule** radio button.

1. Select the month to run the task by enabling the check box beside **Every Month**.
2. Select the **Date** on when the task should be scheduled from the combo box.
3. Select the **Time** at which the task should be scheduled from the combo box.
4. Save the details

Periodic Schedule: To run a periodic maintenance task, click **Periodic schedule** radio button.

1. Specify the day (s) in the given text field to schedule the maintenance task. i.e after every specified nth day the maintenance task will be executed.
2. Save the details.

One Time Schedule: To run a one time maintenance task, click **One Time Scheduling** radio button.

1. Select the **Date & Time** on when the maintenance task should be executed.

2. Save the details.

For Example:

If you wish to schedule a monthly task to change the printer cartridges,

1. Select **Monthly Schedule** radio button.
2. Select the check box **every month**.
3. Choose the **date** from the combo box. Ex: 3rd of every month.
4. Select the **time** from the combo box. Ex: 1500 hrs.
5. **Save** this schedule. A task to change cartridge will be sent to you every month on 3rd at 1500 hrs helping you to complete the regular maintenance task in advance without any request sent from the users.

User Management

For making ServiceDesk Plus available and usable for all your users, you need to add Requesters and Technicians. The user information can be imported, if located in Active Directory or LDAP server, or can be manually added in the application. Each user accessing the help desk tool is assigned with Roles to execute specific tasks in the application. This enables the requesters to login to the Self-Service Portal to check the status of the requests reported by them, submit requests, and search the Knowledge Base online.

Support Groups enables you to classify your technicians into various support teams. This facilitates the incoming requests to be categorized and assigned to the specific group respectively.

With Technician Auto Assign, you don't have to reply on Business Rules to assign technicians to requests. The Technician Auto assign follows the Round Robin or Load Balancing methods, and based on the availability of the technicians, the requests are assigned.

Apart from this, the User Management block consists of **User - Additional Fields** which help you add additional fields in the requester and technician form. And User Groups to restrict certain users to view service items, solutions, announcements and request template.

Roles

Each technician accessing the help desk tool will have a set of permissions to execute specific tasks in the application. These access permissions are termed as **Roles** in ServiceDesk Plus. Roles are defined based on the various modules in the application.

The Administrator has the privilege to create multiple roles and assign it to technicians based on the requirement. You can also view the list of technicians assigned to a particular role from the Role List View page.

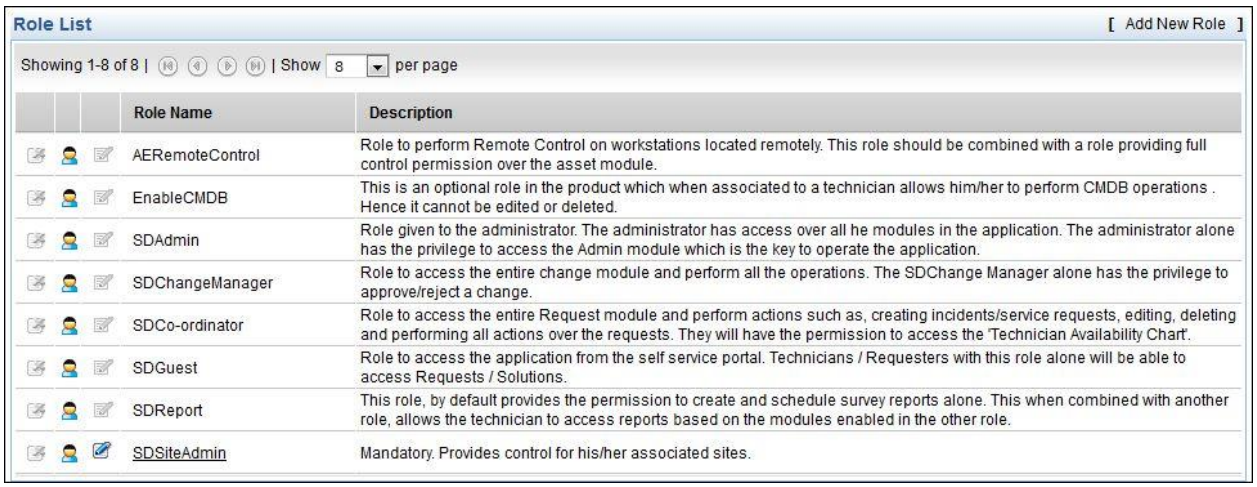
	Note: Please note that **Roles** can be assigned to technicians alone. The **Roles for requesters** are pre-defined and hence cannot be configured.

To access Roles Configuration Wizard:

1. Login to ServiceDesk Plus application using the **Username** and **Password** of a ServiceDesk Plus administrator.
2. Click the **Admin** tab in the header pane.
3. In **Users** block, click **Role** icon. The role list view page is displayed.

Role List View page

The Roles List View page displays the list of default roles available in the application. You can perform actions such as, adding roles, editing and deleting roles, and viewing technicians assigned to a role.


Role List [Add New Role]

Showing 1-8 of 8 | | Show 8 per page

Role Name	Description
AERemoteControl	Role to perform Remote Control on workstations located remotely. This role should be combined with a role providing full control permission over the asset module.
EnableCMDB	This is an optional role in the product which when associated to a technician allows him/her to perform CMDB operations . Hence it cannot be edited or deleted.
SDAdmin	Role given to the administrator. The administrator has access over all he modules in the application. The administrator alone has the privilege to access the Admin module which is the key to operate the application.
SDChangeManager	Role to access the entire change module and perform all the operations. The SDChange Manager alone has the privilege to approve/reject a change.
SDCo-ordinator	Role to access the entire Request module and perform actions such as, creating incidents/service requests, editing, deleting and performing all actions over the requests. They will have the permission to access the 'Technician Availability Chart'.
SDGuest	Role to access the application from the self service portal. Technicians / Requesters with this role alone will be able to access Requests / Solutions.
SDReport	This role, by default provides the permission to create and schedule survey reports alone. This when combined with another role, allows the technician to access reports based on the modules enabled in the other role.
SDSiteAdmin	Mandatory. Provides control for his/her associated sites.

The list of technicians assigned to a particular role can be viewed from the **Role List View** page by clicking **View Technicians configured with this role** icon. This makes it feasible for the administrator to assign access permissions to technicians. To know more on viewing technicians assigned to a role, refer Viewing Technicians assigned to a Role.

Default Roles

The default roles (also known as **System Roles**) are pre-defined. The roles and their description is given in the tabular column below,

Roles	Description
AERemote Control	Role to perform **Remote Control** on workstations located remotely. This role should be combined with a role providing full control permission over the assets module.
Enable CMDB	Role to access the CMDB module. If a technician is provided with this role alone, then he would be able to view the Assets and CMDB module. Apart from viewing the relationship map in CMDB module, he would also be able to **Import CIs from a CSV file**. If the technician is provided with Asset module permissions like add, edit and delete, then the same operations can be performed in the CMDB module for the CIs. To add attributes and relationships, the technician should be provided with add and edit permission over the assets module. Technician, without SDAdmin role, would not be able to setup the Configuration Item Types and Relationship Types in the Admin module.
SDAdmin	Role given to the administrator. The administrator has access over all the modules in the application. The administrator alone has the privilege to access the **Admin module** which is the key to operate the application.
SDChange Manager	Role to access the entire **Change module** and perform operations such as adding change, editing, deleting and assigning change to technicians. The SDChange Manager alone has the privilege to approve/reject a change. The **Dashboard** display widgets related to Change module such as, **Change by Type**, **Approved Changes** and **Unapproved Changes**. Technicians with this role can also view only their schedule in **Schedule calendar**.
SDCo-ordinator	Role to access the entire **Request module** and perform actions such as, creating incident/service requests, editing, deleting and performing all the actions over the requests. The **Dashboard** display widgets related to Requests module such as, **Requests by Technicians**, **Open Requests by Priority**, **SLA Violation by Priority**, **Unassigned and Open Requests**, **SLA Violated requests** and **Requests Approaching SLA Violation**. Technicians with this role can also view the **Technician Availability Chart**.

Roles	Description
SDGuest	Role to access the application from self service portal. Technicians/Requesters with this role can only add requests and view solutions.
SDReport	This role, by default, provides permission to create and schedule survey reports alone. This role when combined with another role, allows the technician to access reports based on the modules enabled in the other role.
SDSiteAdmin	If Sites are configured in the application, the SDSite Admin role provides full control permission over his/her associated sites. The Site Administrator can configure all the Admin configurations pertaining to his/her site alone.

Note: The above seven default roles cannot be deleted. However, SDSiteAdmin Role can be edited to suit your organizations needs.

Contents

- **Add a Role**
- **Edit a Role**
- **Viewing Technicians Assigned to a Role**
- **Delete a Role**

Add a Role

To add a role,

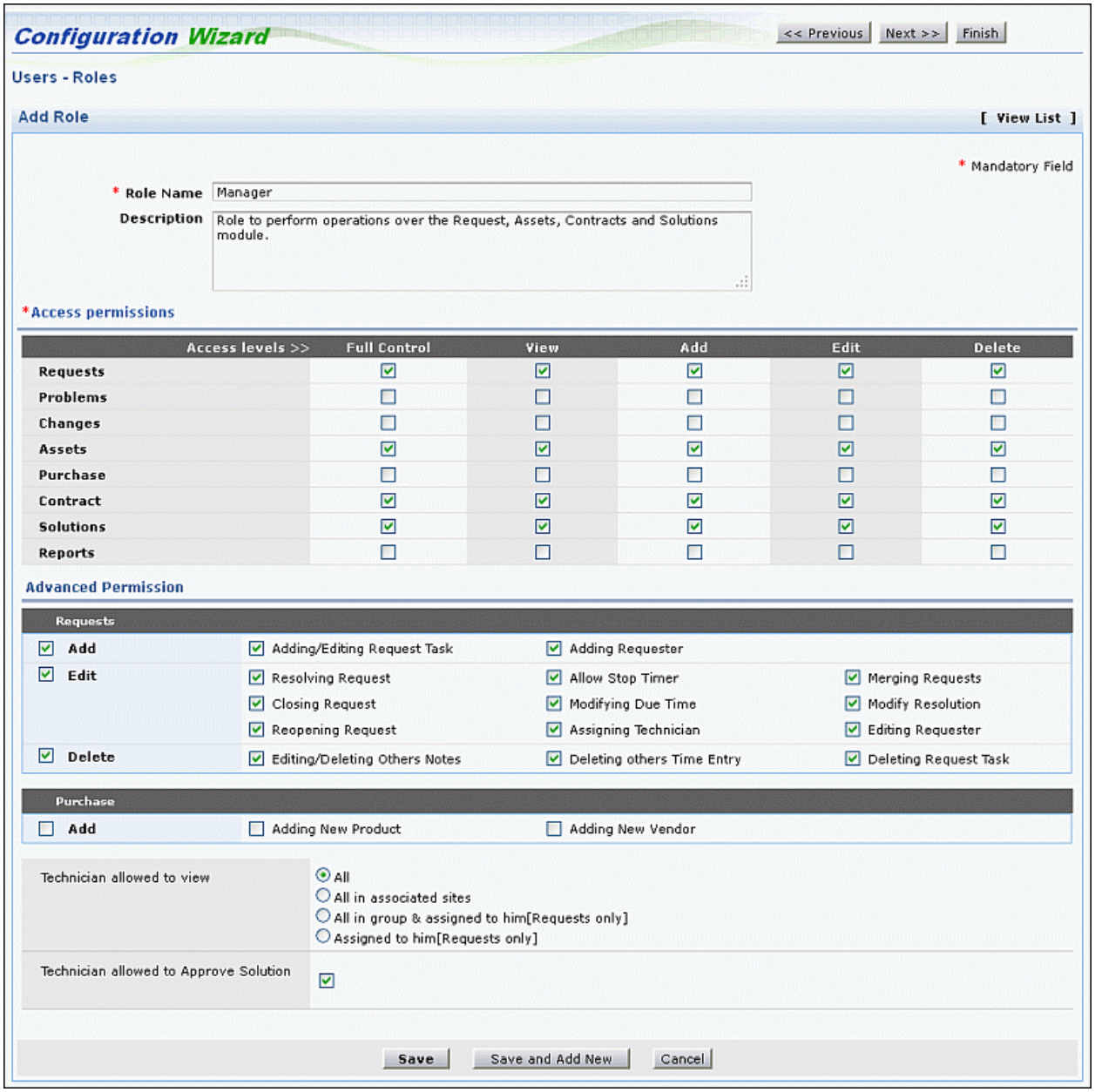
1. Click the **Add New Role** link.
2. In the Add Role form, enter a unique name for the role in **Role Name** field. The Role Name is a mandatory field.
3. Enter a brief description about the role in the **Description** field.
4. Set the **Access Permissions** for the role by selecting the check boxes beside the access levels defined for each module of the application.

Access Permissions

The following are the access permissions for the eight modules in the application:

Access Permissions	Description
View	View permission enables the technician to only view the selected module. They cannot perform any further operation.
Add	Add permission allows the technician to perform Add operation for the selected module. On selecting the Add option for a module, the View permission check box is automatically enabled. **Note:** If you have selected **Add** check box for request module, then the Add option under **Advanced Permission - Request module** is automatically enabled. Similarly, if Add check box is selected for purchase module, then the Add option under Advanced Permission - Purchase module is also enabled.
Edit	Edit permission enables the technician to perform Edit operation for the selected module. The technician cannot perform Add or Delete operation. However, on selecting the Edit option for a module, the View permission check box is automatically enabled. **Note:** If you have selected **Edit** check box for request module, then the Edit option under **Advanced Permission - Request module** is automatically enabled. Similarly, if Edit check box is selected for asset module, then the Edit option under Advanced Permission - Assets module is also enabled.
Delete	Delete permission allows the technician to perform Delete operation for the selected module. The technician cannot perform Add nor Edit operation. However, on selecting the Delete option for a module, the View permission check box is automatically enabled. **Note:** If you have selected **Delete** check box for request module, then the Delete option under **Advanced Permission - Request module** is automatically enabled.
Full Control	Selecting full control check box for a module automatically enables View, Add, Edit and Delete check box for that module. Full control allows the technician with full access over the selected module. If the selected module has Advanced Permissions, then those options are enabled automatically. **Note:** If an action is disabled in Advanced Permission, say, Adding Requesters under Request module, then Full Control permission for request module gets automatically disabled.

Example: If you wish to provide full control permissions over the requests, assets, contract and solutions module, then select **Full Control** check box beside these modules. This will automatically enable all the operations of the corresponding modules.



5. The access permissions for modules Requests, Purchase and Assets are further categorized and defined under **Advanced Permission**.

Request FGA (Fine Grained Authorization):

Set the advanced permission for **Add**, **Edit** and **Delete** operations by enabling any of the following check box.

Advanced Permissions	Description
Adding/Editing Request Task	Permission to Add/Edit the request tasks.
Adding Requesters	Permission to add new requesters on the fly while creating a new requests/problem/change. Adding requesters without this permissions pops up an error message stating "Requester Does not Exist".
Resolving Request	Permission to change a request status to Resolved.
Disabling Stop Timer	Permission to change the status of a request to OnHold.
Merging Requests	Permission to merge two or more requests.
Closing Request	Permission to change the status of a request to Closed.
Modifying Due Time	Permission to change the Due By Time and also the First Response Time of a request.
Modify Resolution	Permission to add/edit a resolution for a request.
Re-opening Request	Permission to change the status of the request to Open from the previous state.
Assigning Technicians	Permission to assign/reassign requests to technicians.
Editing Requester	Permission to edit the requesters name while viewing the request.
Deleting Others Notes	Permission to edit/delete notes added by other users/technicians. If the option is disabled, then the technician can delete the notes added by him/her.
Deleting Others Time Entry	Permission to delete the Work Order details entered by other technicians. If the option is disabled, then the technician can only edit/delete his/her Work Order Entry.
Deleting Request Task	Permission to delete the request tasks of a request.

Scan FGA (Fine Grained Authorization):

Advanced Permissions	Description
Scan Now	Permission to scan workstations from the workstation details page.

Purchase FGA (Fine Grained Authorization):

Advanced Permissions	Description
Adding New Product	Permission to add new products while creating a purchase order.
Adding New Vendor	Permission to add new vendors while creating a purchase order.

Note: For instance, if all actions under Advanced Permission Request - Edit are disabled, then the technician is allowed other edit permissions such as editing the request type, status, mode, level, urgency, priority, impact and category of the request.

6. You can also choose to restrict technicians from viewing the requests, problems, changes and assets in the application. To do this, select the corresponding radio button in **Technicians allowed to view**,
   - **All:** The technician can view the requests, problems, changes and assets for all the configured sites.
   - **All in associated Site:**The technician can view the requests, problem, changes and assets for his/her associated sites alone. To associate sites to a technician refer Technician.
   - **All in Group & assigned to him [Requests only]:** The technician can view only the requests assigned to his/her associated group, and also the requests that are assigned to him/her.
   - **Assigned to him [Requests only]:** The technician can view only the requests assigned to him/her alone.

     Example: A site has two groups, say Group1 and Group2. Adam is a technician associated to Group1 with the privilege to view requests All in group & assigned to him. Adam can view all the requests in Group1and the requests assigned to him. He has the privilege to re-assign the requests to other technicians in his associated sites but once this is executed, the request will not be visible to Adam.

NOTE: Please note that the technician has permission to view Requests, Problems, Changes and Assets only if the **View** permission for these modules is enabled under **Access Permissions**.

7. You can also provide permission to approve solutions by enabling the check box beside **Technician allowed to Approve solution**. The technician assigned with this role will be able to approve solutions.
8. Click **Save** button. The role is displayed in the list view page. If you want to add another role, click **Save and Add New** button.

At any point, if you decide not to add the new role, then click **Cancel** to get back to the role list. Click **View List** link to go back to the role list view page.

Edit a Role

To edit an existing role,

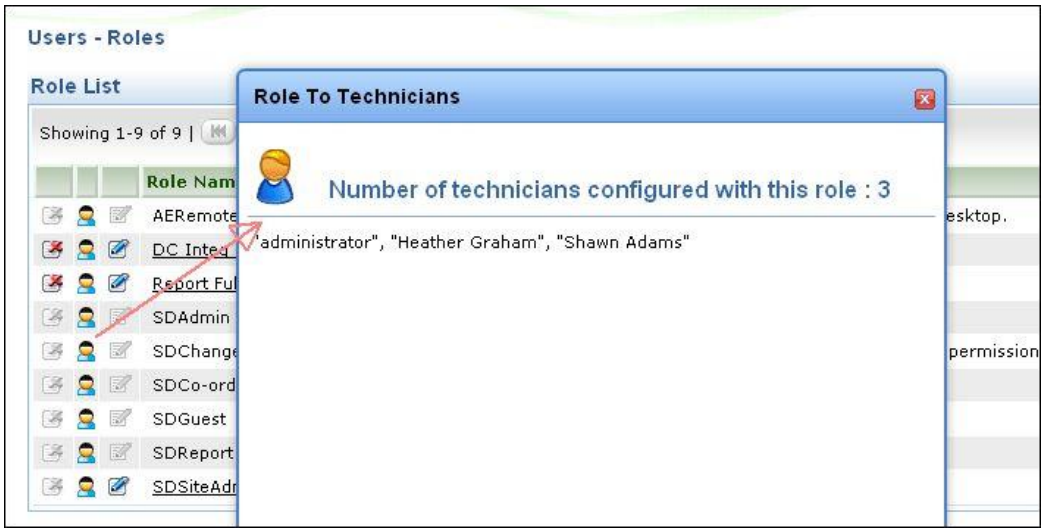
1. In the **Role List** page, click the **edit** icon beside the role name that you want to edit.
2. In the Edit Role form, you can modify the name of the role, description, and the permissions associated with the role.
3. Click **Save** to save the changes. At any point, if you wish to cancel the operation that you are performing, click **Cancel**.

While editing a role, if you wish to add a new role, then click **Save and add new** button.

Viewing Technicians Assigned to a Role

To view technicians assigned to a role,

1. In the Role List page, click **View Technicians configured with this Role** icon .
2. The **Role to Technicians** pop up appears listing the number of technicians configured with this role. The names of the technicians are also displayed.



Deleting Role

1. In the **Role List** page, click the delete icon beside the role name that you want to delete. A dialog box confirming the delete operation appears.
2. Click **OK** to proceed with the deletion. If you do not want to delete the role, then click **Cancel**.
3. If technicians are assigned with the role, then the **Technician List** is displayed in a popup window.
4. You can notify the technician by selecting the technician and clicking **Send Notification** check box. The e-mail address of the technician appears in the **To** filed. You can add **CC** recipients for this notification, if required. Enter the **Subject** and **Description**. Click **OK**. The notification is sent to the technician.

User - Additional Fields

While adding new requester or technician, you might want to record additional information about the users apart from the preset fields. The **User - Additional Fields** lets you configure any number of additional fields that would appear in requester or technician forms, or common fields for both requester and technician.

To access **User - Additional Fields** configuration wizard,

1. Login to the ServiceDesk Plus application using the **user name** and **password** of a ServiceDesk Plus administrator.
2. Click the **Admin** tab in the header pane.
3. In the **Users** block, click the **User - Additional Fields** icon .

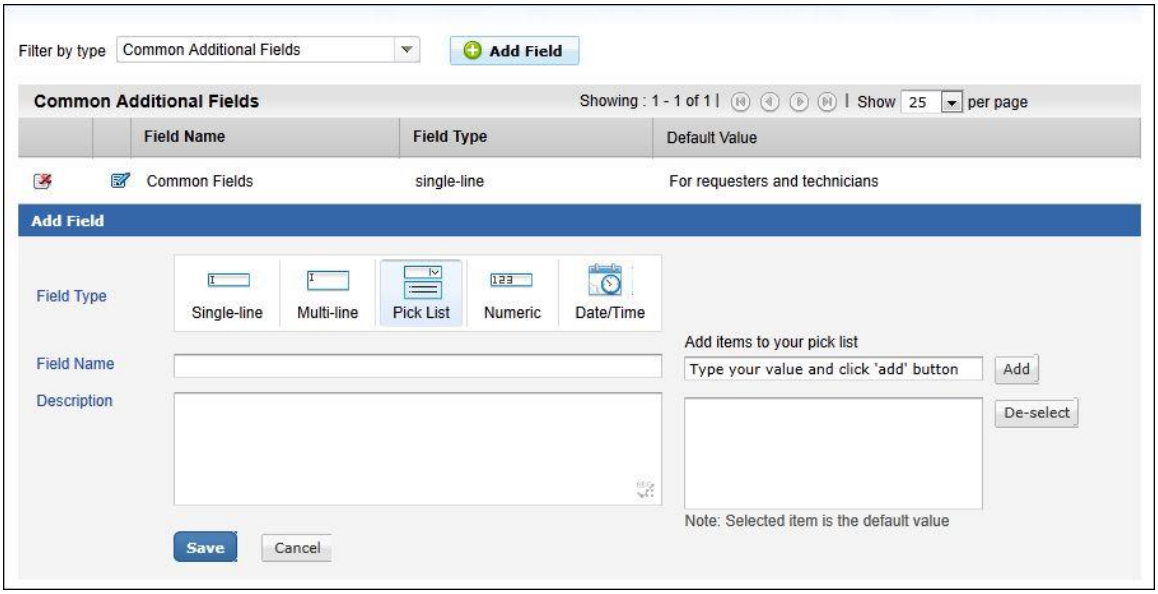
By default, the User - Additional Field list view displays the list of **Common Additional Fields** that are configured in the application. To view the Requester Additional Fields list, select **Requester Additional Fields** option from **Filter by Type** drop-down menu. Similarly, if you want to view the Technician Additional Field list, select **Technician Additional Field** option.

Adding Custom Fields

Say for instance, you want to configure additional fields that should appear in the requester as well as the technician forms i.e., Common Additional Fields. To add the custom fields,

1. In **Filter by type** drop-down menu, select **Common Additional Fields** option. The list of Common Additional Fields configured in the application are displayed.
2. Click **Add Field** button.
3. In the Add Field form, select the type of field. The Field Type are **Text**, **Numeric** and **Date/Time** Fields. The **Text** Fields are of 3 types namely,
   - **Single-line Text Fields:** A Single-line text field allows you to add just a text field.
   - **Multi-line Text Field:** The Multi-line text field allows you to add a text box where a lengthy description can be added
   - **Pick List Fields:** A Pick List allows you to add a list menu from which you can select.

     To add items for the pick list, enter the value in the text filed and click **Add Item**. The value will get added to the list below. To select the default selected value of the list, click on the value in the list.



4. Enter a unique name for the additional field in the **Field Name** text field.
5. If you have selected Single-line or Multi-line text fields, then you can enter **Default Value**. The default value is displayed in the new requester/technician form and can be edited, if required.

   NOTE: Please note that you cannot enter default values for Date/Time fields.

6. Enter brief description about the field in the **Description** text field.
7. Click **Save** button. The additional fields appear in the List view of the selected Filter by type.

   NOTE: If you want to add additional fields for requester, then select **Requester Additional Fields** option from **Filter by type** drop-down menu, and follow the steps given above. Similarly, if you want to add additional fields for technician, then select **Technician Additional Fields** option.

Editing Custom Fields

1. In the User - Additional Fields List view, select the filter type under which you want to edit the additional fields.
2. Click **Edit** icon beside the Field Name to edit. The Add Field form is displayed with values filled while adding the field.
3. **Edit** the fields in the form.
4. Click **Update** button.

Deleting Custom Fields

1. In the User - Additional Fields List view, select the filter type under which you want to delete the additional fields.

2. Click **Delete** icon beside the Field Name. A dialog box confirming the delete operation appears.
3. Click **OK** to proceed. The additional field is deleted from the list.

   NOTE: Please note that while deleting the additional fields, the value entered in the new requester or technician form will be lost.

Requesters

You can add, edit, or remove requesters from ServiceDesk Plus application and also provide them with login permissions to access the self-service portal.

To open the requester configuration page:

1. Log in to the ServiceDesk Plus application with the **user name** and **password** of a ServiceDesk Plus administrator.
2. Click the **Admin** tab in the header pane.
3. In the **Users** block, click the **Requesters** icon. The next page displays the available list of requesters. You can add, edit, or delete requesters.

Add Requester

There are three ways through which you can add requesters in the application

- Importing requesters from Active Directory
- Import from CSV
- Add New Requester from the application

Adding Requesters from the application

1. Click **Add New Requester** link from the **Requester List** page. This opens the Add Requester form
2. In the Personal Details block, enter the **Full Name** and **Employee ID** of the technician. The name is a mandatory field. Specify any relevant information about the requester in the **Description** text field.
3. In the contact information block, enter a valid **e-mail ID**. If the requester has a **phone** and a **mobile** number, you can enter the same in the space provided for entering these values.
4. Specify the department details such as, **Site** and the corresponding **Department Name** to which the requester belongs from the combo box. The requester has an option to view, only his requests, all his department requests or all the requests in the site to which he is associated. Select the options from the **Requester allowed to view** combo box. Specify the **Job Title** of the requester in the field provided.
5. If you have added any organization-specific fields for the new requester form, those will be available under the **Additional Requester Details** block. Enter the relevant information.
6. In the **Self-Service Access Details** block, enter the **Login Name** and **Password**, if you wish to provide self-service access to the requester. Enter the password again in the **Re-type Password** field.
7. If the requester is associated to a domain then select the **Domain** from the drop down list.
8. Certain requesters can also approve purchase order in an organization. Upon enabling the check box adjacent to **Purchase Order Approvers,** a link is sent to the requester to accept or reject the PO. Also, set the **Approver Limit** within which the requester can approve the PO.

9. You can also provide requester with the privilege to approve Service Requests raised in the application. Enable the check box beside **Service Request Approver**.
10. Click **Save**. If you want to add more than one requester then, click **Save and add new** button.

At any point if, you decide not to add the new requester, then click **Cancel** to get back to the requester list. Clicking the **View List** link on the top right corner of the add requester form will also take you to the requester list view.

Import Requesters from Active Directory

You can also import requesters from an active directory. To import requesters from active directory

1. Click **Import from Active Directory** link in the **Requester List** page. The **Import From Active Directory** window pops up.
2. From the list of domains that are listed in the **Domain Name** combo box, select the domain name in which the active directory from which you wish to import is installed. If the other details such as domain controller name, user name, and password have already been entered in the Domain scan page, then that will be populated automatically. Else enter the name of the domain controller in the **Domain Controller Name** field, login name and password in the corresponding fields.
3. **Select the Fields for Import** from the active directory by enabling the check box. The fields name configured in Active Directory can be specified beside the corresponding text fields. The unselected fields are not imported.
4. Click **Import Now !**. The import wizard displays the various **Organizational Units** (OUs) available in that domain. Choose the specific OU from which you wish to import users by selecting the check box beside it.
5. Click **Start Importing**. Once the import is complete, the data on how many records were added, how many overwritten, and how many failed to import will be displayed.

Import Requester from CSV (Comma Separated Value) Files

You can also add requesters by importing from CSV files. To import requesters from CSV file

Step 1: ***Locate the CSV file***

1. Click **Import from CSV** link in the **Requester List** page. The **Import Wizard** opens in a pop-up window.
2. Click the **Browse** button in the wizard.
3. Select the CSV file in the file chooser window and click **Open**.
4. Click **Next**.

Step 2: ***Customize Mapping***

1. The CSV column names are populated in the select boxes beside each label. Map the ServiceDesk Plus requester fields with the field names from the CSV file.

2. Click **Next**.

Step 3: *Import*

1. Click **Import Now** button. The values from the CSV file will be imported to the requester details. Once the import is complete, the data on how many records were added, how many overwritten, and how many failed to import.

If at any point you wish to stop importing from the CSV file, click the **Exit** button.

	Note 1: Login name column will be the identifier for requesters. No two requesters can have the same login name. Hence the existence of a requester will be checked based on the login name value. So, if by mistake there was any mismatch of fields during mapping, and a new import of CSV is performed, the records will be updated based on the login name value. If there were any records that did not have any login name at all or there was mismatch in the login name itself, then duplicate entries will be created. In these cases, delete such entries from the requester list and import again or manually edit the information available. **Note 2:** While Importing users using CSV, the existing user information is overwritten based on two criteria - Username and Domain, and the Email id. If the Domain is not specified for a user and on performing a new import of CSV, the user information will be overwritten but the Domain will remain null even if the field is specified.

Viewing Requester Details

To view the details of a requester, click the name of the requester. While viewing the details of the requester, you have options to

- Edit the details of the requester
- Change the requester as technician
- Associate Workstations to the requester
- View requests raised by the requester, and
- Attach any documents related to the requester.

Editing Requester details

To edit the requester details,

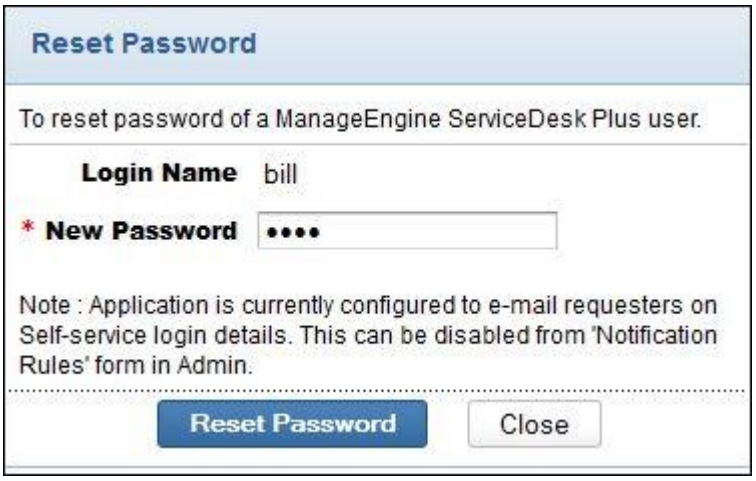
1. In the Requester details page, click **Edit** button. The **Edit Requester** form is displayed.

2. You can modify all the fields displayed. You can also change the login name of the requester.
3. Click **Save**. If you do not wish to modify any of the details, click **Cancel**.

Resetting Requester Password

You can change the requester's password while editing the requester details.

1. To change the password of the requester, click the **Reset Password** link. The reset password window is opened.



2. Below the **Login Name** display, enter the **New Password** in the text field.
3. Click **Reset Password**. If you do not wish to change the password, click **Close** instead of **Reset Password**.

Change Requester to Technician

You can change a requester to technician without having to delete the requester information and recreate the same as a technician. To change requester to technician,

1. In the Requester details page, click **Change as Technician** option. The page refreshes to display the edit technician form.
2. Change the roles assigned to the requester from **SDGuest** to any other role that you wish to provide the technician.
3. Enter any other details that you wish to enter including the **Cost per hour** and so on.
4. Click **Save**. If you do not wish to change the requester to technician, click **Cancel** instead of **Save**.

If you want to continue adding technician after converting a requester to technician, then instead of clicking **Save**, click **Save and add new** button. This saves the technician details and reopens the add technician form after displaying a success message for changing the requester to technician.

Associate Workstation to Requester

You can also associate a workstation with the requester. To associate a workstation with the requester

1. Click **Associate Workstation** option. The associate workstation window is opened.
2. In the **Associate Workstation** pop-up, select the workstations that you wish to associate with the requester from the **Workstation List** and move them to the **Associated Workstations** list by clicking the >> button. To dissociate workstations, select the respective workstations in the **Associated Workstations** list and click the << button. If you wish to dissociate all the workstations, then click **Dissociate All**.
3. After associating the required workstations, click **Save Changes**.
4. A message is displayed. Click the **Close** button.

View Requests

While viewing the Requester details, you can view all the open requests raised by the requester. Click **View Requests** option. The page redirects you to the Requests module where the list of all **Open Requests** raised by the requester is displayed.

Delete Requesters

1. In the **Requester List** page, enable the check box beside the requesters to delete.
2. Click **Actions** drop-down menu -> **Delete User(s)** option. A dialog box confirming the delete operation appears.
3. Click **OK** to proceed with the deletion. If you do not want to delete the requester, then click **Cancel**.

Search Requesters

To search requesters

1. In **request list** view, click on the alphabet with which the name of the requester starts. This lists the requesters whose name starts with that alphabet.
2. If you are unsure of the starting letter, then you can type the name (first name or the last name, which ever you know) or email ID or any other parameter that will identify the requester in the field beside the **Search Requester List**. This lists the requesters whose details matches the search string that you entered.

You can also search requesters from the **Search** available on the left menu in the other pages of the application. From the **Search in** combo box, select **Requesters** and type your search string in the **Enter Keyword** text field. Click **Go** or press **Enter**. The requester names that match the search string are listed in a separate pop-up window.

Another option to search requesters will be using the column-wise search option. To perform a column-wise search

1. Click the **search** icon at the end of the requester list view headers. This opens the search field just below every column that is visible in the list view.
2. Enter the search key in field under the column of your choice.
3. Click **Go**. The search results matching the search string(s) are displayed.

Requester List View Customization

To customize the requester list view

1. Click the **column edit** icon available at the corner of the requester list headers. This opens the available columns that can be displayed in the list view. All those that are visible currently, will have the check box beside them selected.
2. To remove a column, disable the check box beside the column name.
3. To add a column to the list view, enable the check box beside the column name.
4. To change the column order, click the up and down arrow after selecting the column that you wish to move.
5. Click **Save**.

This will add only those columns which you have chosen in the list view. You can also sort the list view based on columns. To sort requester list by column, click the column header. Clicking it once will sort it in ascending order. Clicking twice will sort the column in descending order.

Technicians

The IT help desk team comprises of technicians who are responsible for handling requests raised by the employees of the organization. Each technician in the help desk team is assigned with Roles to perform specific tasks in the application. If your organization is spread across multiple sites, then you can associate sites to the technicians. The site association restricts the technician's access to other site information.

Apart from this, you can also assign technicians to specific Technician Groups. Grouping technicians facilitates the incoming requests to be categorized and assigned to the specific group respectively.

To access Technician configuration wizard,

1. Login to ServiceDesk Plus application using the **Username** and **Password** of a ServiceDesk Plus administrator.
2. Click the **Admin** tab in the header pane.
3. In the **Users** block, click **Technicians** icon. The Technician List view is displayed where you can add, edit, and delete technicians from the application.

NOTE:

1. If multiple sites (with **Related Settings** as *Copy default settings* or *custom settings*) are configured in the application, then a **Technicians associated for** drop-drown box is displayed in the Technicians List view.
2. If you are logged in as a **Site Administrator**, then you have the privilege to add, edit and delete technicians associated to your sites.

Topics discussed under this section:

- Adding Technicians
- Editing Technicians
  - Changing Password
  - Adding/Removing Login Permissions
- Associating/Dissociating Workstations to Technicians
- Changing Technicians as Requesters
- Associating Technicians to Site
- Dissociating Technicians to Site
- Deleting Technicians

Adding Technician

To manually add a technician in ServiceDesk Plus,

1. In the Technician List view, click **Add New Technician** link.
2. Enter the **Personal Details** of the technician, such as the **Name** and **Employee ID**. The name is a mandatory field.

3. Specify the **Contact Information** of the technician, such as the **E-mail Address**, **Phone Number**, **Mobile Number** and **SMS Mail ID**.
4. Specify the **Cost per hour** of the technician.
5. Select the **Department** of the technician and the designation in Job Title field.
6. If you have configured sites in the application, then **Associate the site(s) with Technician** block is displayed. The sites configured in the application are displayed in **Available Sites** column. To associate sites with technician, select the sites and click **>>** button. The selected sites are listed in **Associate Sites** column.

   NOTE: If a technician is not associated to any site, then by default, the technician is associated to **Not in any Site**.

7. The technician groups configured in the application are listed in **Available Groups** column. To assign groups for the technician, select the groups and click **>>** button. The selected technician groups are listed in **Associated Groups** column.
8. If you have configured any **Technician-Additional Fields**, then the same is displayed under **Additional Technician Details** block. Enter relevant values for the additional fields.
9. If you want the technician to approve service requests, then select **Service Request Approver** check box. An email is sent to the technician to approve or reject the service request.
10. You can also assign the technician with the privilege to approve **Purchase Orders** by selecting **Purchase Order Approver** check box. Set the **Approver Limit** within which the technician can approve the PO. An email is sent to the technician to accept or reject the PO.

NOTE: If you have selected any of the check boxes (Service Request Approver or Purchase Order Approver), then the email address of the technician should be specified.

Providing Login Credentials and Roles

1. Select **Enable login for this technician** check box. The **Login Details** block is displayed.
2. Enter the **Login Name** and **Password** for the technician. Re-type the password in the **Re-type Password** field. Please ensure that the login name and password are mandatory fields. Also note that the login name should be unique for each technician.
3. Select the **Domain** of the technician from the drop-down box.
4. Select **Roles** to be assigned to the technician. The Role will define his access privilege to various modules of the application.
   - **Enable Administrator Privileges (SDAdmin):** Technician with this role will has complete access over all the modules in the application. The administrator alone has the privilege to access the Admin module which is the key to operate the application.

     NOTE: If you are logged in as a Site Administrator, then this option will not be available.

- **Enable administrator privileges for the sites selected above (SiteAdmin):** Technician with this role has complete administrator access for the above selected sites. The Site Admin can configure all the Admin configurations pertaining to his/her site alone.
- **Enable Custom Privileges:** The Roles configured in the application are listed in **Available Roles** column. To assign roles, select one or more roles from the Available Roles column and click **>>** button. The selected role(s) is listed in the **Assigned Roles** column.

5. While enabling login permission to a technician, you can also provide the technician with Desktop Central login access and DC Role. The two DC Roles are **DC Admin** and **DC Guest**. Select the check box **Enable to access Desktop Management Functionality** and provide either of the role to the technician. When the technician logs into ServiceDesk Plus using his/her credentials, the technician can view the **Desktop Management** drop-down menu, from where, the technician can perform Desktop Management functionality from within ServiceDesk Plus web console.
6. The **API Key** for the technician is essential while integrating ServiceDesk Plus with **REST API** or with **Desktop Central** application. The API Key performs as an authentication mechanism between the two applications.

   To generate the API Key, click the **Generate** link. Select a time frame for the key to expire or simply retain the same key perpetually. If a key is already generated for the technician, a **Re-generate** link appears.

11. Click **Save** button. If you want to add more than one technician then, click **Save and Add New** button. If you decide to give the login access for the technician at a later time, then you can save the technician details without the login details. For this you need to stop with Step 10 and click Save. You can add the login details by editing the technician details.

    At any point, if you decide not to add the new technician, then click **Cancel** to get back to the technician list.

In general, the users are imported into the application using any of the following methods namely, **Active Directory Import**, **LDAP** or **Import from CSV file**. The imported users are listed in **Admin -> Requesters**. From the Requesters List view, you can categorize the users into Requesters and Technicians. To change a user as technician, click **Change as Technician** option and associate sites, assign technician group and provide access permissions to the technician.

Editing Technician

If you want to add/remove the login credentials for a technician or you want to change a technician's password, then you can so while editing the technicians details.

To edit the technician information.

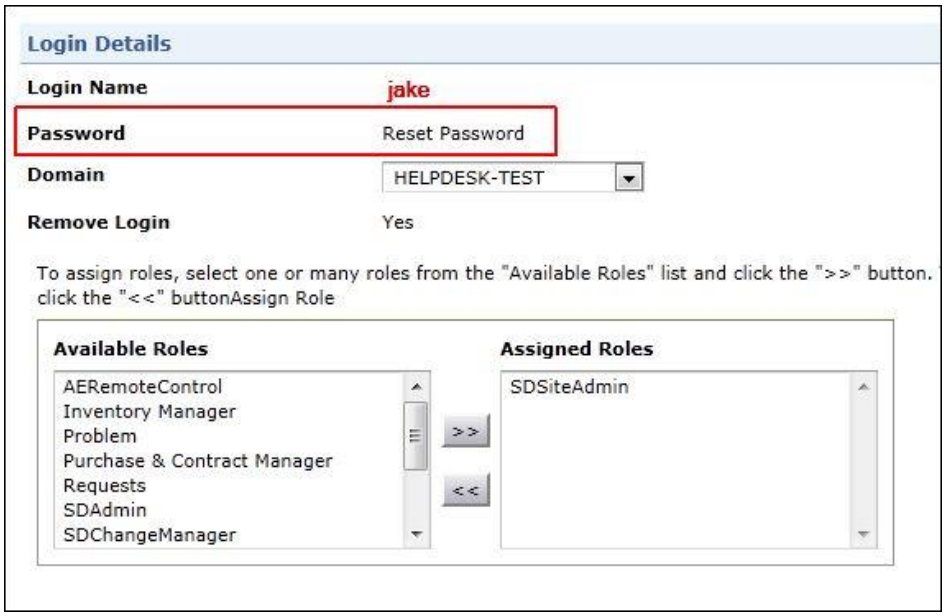
1. In the Technician List view, click the **edit** icon beside the technician to edit.

2. Modify the details in **Personal Details** block, **Contact Information** block, **Cost Details** clock and **Department Details** block. You can also associate/dissociate sites with the technician, and also assign/unassign groups for the technician.
3. Click **Save** button. Even while editing a technician, if you wish to add a new technician, then click **Save and add new** button after making the changes. At any point, if you want to cancel the edit operation, then click **Cancel**.

Changing Password

You can change the password of the technician while performing the edit operation.

1. Click **Reset Password** link beside the Password field.



2. In **Reset Password** popup window, enter the **New Password** in the field provided.
3. Click **Reset Password** button. If you do not want to change the password, then click **Close** button.

1.

4. If you have enabled **Send Self Service Login details** option in **Admin -> Notification Rules**, then the new password is sent as an email notification to the requester.
5. Click **Save** in the technician form.

Adding/Removing Login Permissions

You can add/remove the login permission of the technician while performing the edit operation.

Adding Login Permission

To add login credentials for the technician, refer the topic Providing Login Credentials and Roles under **Adding Technicians**.

Removing Login Permission

1. In Login Details block, click the **Yes** link beside **Remove Login** field. A dialog box confirming to remove the login permission for the technician appears.
2. Click **OK** to proceed. If you do not want to remove the login permission, click **Cancel**.
3. Click **Save** in the technician form.

Associating/Dissociate Workstations to Technicians

To associate workstations to the technician,

1. In the Technician List view, select the technician to associate workstation.
2. Click **Associate Workstation** option. The Associate Workstation window pops up. By default, all the workstations configured in the application are listed in **Workstation List** column. You can also choose to display the unassigned workstations alone by selecting **Show unassigned only** link.

   NOTE: Selecting **Show unassigned only** link changes the link to **Show assigned only**.

3. To associate workstations, select one or more workstations from Workstation List column and click **>>** button. The selected workstation(s) are listed in **Associated Workstations** column.
4. Click **Save** button.

To dissociate workstations for the technician,

1. In the Technician List view, select the technician to dissociate workstation.
2. Click **Associate Workstation** option. The Associate Workstation window pops up. By default, all the workstations configured in the application are listed in

Workstation List column. The workstations associated with the technician is listed in **Associated Workstation** column.
3. Click **Dissociate All** button. The workstations are dissociated from the technician.

Changing Technicians as Requesters

To change technician as requester,

1. In the Technician List view, select the check box beside the technicians to change as requesters.
2. Click **Actions** drop down button.
3. Select **Change as Requester** option. A dialog box confirming the operation appears.
4. Click **OK** to proceed. The selected technicians are changes as requesters and listed in the Requester List view.

Associate Technicians to Site

You can associate bulk technicians to sites using this option. If you have added the technician without associating the sites then the same can be done from the Technician List view.

1. Select the check box beside the technician(s) to associate site.
2. Click **Actions** drop down button.
3. Select **Associate to Site** option. The Associate Technician(s) to site pops up.
4. Select the **Site** to which you want to associate the technician.
5. Click **Associate** button. The technician is associated to the site.

Dissociate Technicians from Site

You can dissociate bulk technicians from a site using this option.

1. In Technician List view, select the check box beside the technician dissociate site.
2. Click **Actions** drop down button.
3. Select **Dissociate from Site** option. The Dissociate Techncian(s) from site pops up.
4. Select the **Site** from which you want to dissociate the technician.
5. Click **Dissociate** button. A dialog box confirming the operation appears.
6. Click **OK** to proceed. The technician gets dissociated from the site.

NOTE: Dissociating the technicians from a site will remove all their traces from SLA, Business Rules and Groups associated to that site.

Deleting Technicians

To delete technician(s),

1. In the Technician List view, select the check box beside the technician to delete.
2. Click **Delete** button. A dialog box confirming the delete operation appears.

3. Click **OK** to proceed with the deletion. The selected technician(s) is deleted from the list.

   NOTE: The delete icon will not be present for the technicians logged into the application. To delete that technician, you need to log out and log in as a different technician and then delete the details. Also, the administrator technician details can be deleted only by another technician with administrative privileges.

Support Groups

Support Groups denote the classification of your help desk team, so that the incoming requests are categorized and based on the technicians expertise, the requests are distributed.

By configuring support groups, multiple support teams can be managed by classifying them into individual groups with e-mail settings for each group. So when an e-mail is sent to a group mail ID, the request is fetched and automatically sent to the group.

Say for instance, you are managing two support groups - hardware and network with the email IDs hardware@domain.com and network@domain.com respectively. The two mail IDs are linked to a single mail account that is fetched by ServiceDesk Plus. So on configuring the group mail IDs, e-mails sent to hardware@domain.com are automatically assigned to the hardware group and the conversation threads possesses the group mail ID in the address field.

Further, you can restrict technicians to view requests in their Group alone. This can be done by creating a Role "All in group & assigned to him" and assigning this role to the technician to restrict his view. Refer Roles to know more.

You can also enable notifications to be sent to the technicians on receiving a new request and if a request is left unpicked. The configured groups are listed in the groups drop-down menu in the **New Request** form.

To open the Group configuration page

1. Click the **Admin** tab in the header pane.
2. In the **Users** block, click the **Support Groups** icon . The available support groups are listed. From this page you can add, edit and delete groups.

Add Support Group

1. Click **Add New Group** link available at the right top corner of the **Group list** page.
2. In the **Add Support Group** form, enter the group name in the **Name** field. This is mandatory field.
3. Select the Business Impact caused by this support group on other CIs.
4. Select the technicians that you wish to group under this Support Group from the **Available Technicians** list box and click **>>** button to move them to **Technicians interested in this Group**.
5. You can choose the technicians of the Group to whom you wish to notify for a new request creation in the Group. To do this,
    1. Select the check box **Send notification to Group technician(s) when a new request is added to this Group**.
    2. Click **Choose** button. The technicians under the group is listed in a pop-up window.
    3. Select the technicians to notify and click **OK**.
6. To choose the technicians to send notification for unpicked requests in the Group,

   1. Select the check box **Send notification to technician(s) when a request in this Group is left unpicked**.
   2. Click **Choose** button. The complete list of technicians available in your help desk appears in a pop-up window.
   3. Select the technicians from the list box and click **OK**. The technicians get listed in the field provided.
   4. Enter the time period, from the creation of the request in Group, after which the notification of unpicked requests will be sent to the selected technicians.
7. If you wish to describe the Group in detail enter the same in the **Description** text box.
8. If you wish to automatically assign the incoming tickets to the group, enter the **Group E-mail ID**. Each support group can possess multiple e-mail IDs which should be unique and separated by commas or semi colon.

   Note: Please note that the group e-mail IDs should be aliased to a mail account which is fetched by ServiceDesk Plus.
9. Specify the **Sender's Name** and the **Sender's E-mail** in the given text field. The senders name will be specified while sending e-mails.
10. Click **Save**. The new Group is added to the support group list.

At any point, if you decide not to add the new Support Group, then click **Cancel** to get back to the Group list. Clicking the **View List** link on the top right corner of the add Group form will also take you to the Group list view.

!	**Note:** Enabling the check boxes while adding Group does not ensure that the notification will be sent. This setting is just to choose the technicians to whom the notification needs to be sent and the time frame after which the unpicked request notification is to be sent. To actually send the notification, you need to enable the corresponding setting under the **Notification Rules** under the Admin tasks, which are: 1. Notify Group technician by mail when request is added to Group. 2. Notify technician by mail when request is unpicked in Group.

Edit Support Group

To edit an existing Support Group

1. In the **Support Group List** page, click the **edit** icon beside the group name to edit.
2. In the **Edit Support Group** form, you can modify the name of the Group, the technicians belonging to the Groups, the notification settings, and description.
3. Click **Save** to save the changes. At any point, if you wish to cancel the operation that you are performing, click **Cancel**.

Even while editing a Group, if you wish to add a new Group, then click **Save and add new** button instead of clicking **Save** button after making the changes.

Delete Support Group

1. In the **Support Group List** page, enable the check box beside the group name to delete.
2. Click **Delete** button. A dialog box confirming the delete operation appears.
3. Click **OK** to proceed with the deletion. If you do not want to delete the Group, then click **Cancel**.

User Groups

You can classify all the ServiceDesk Plus end-users (requesters) within your organization into various User Groups. In Site based implementation, categorizing users into groups is especially necessary to prevent users from accessing certain items. The users can be restricted to view certain service items, solutions, announcements and request template.

For instance, the announcement - Nortel network is down for a day due to maintenance in the site New York. This announcement is vital for users in site New York alone. A user group is created such that the announcement is available only to the users associated to site New York. The user group can also be filtered based on Department, Email ID, Job Title and Name.

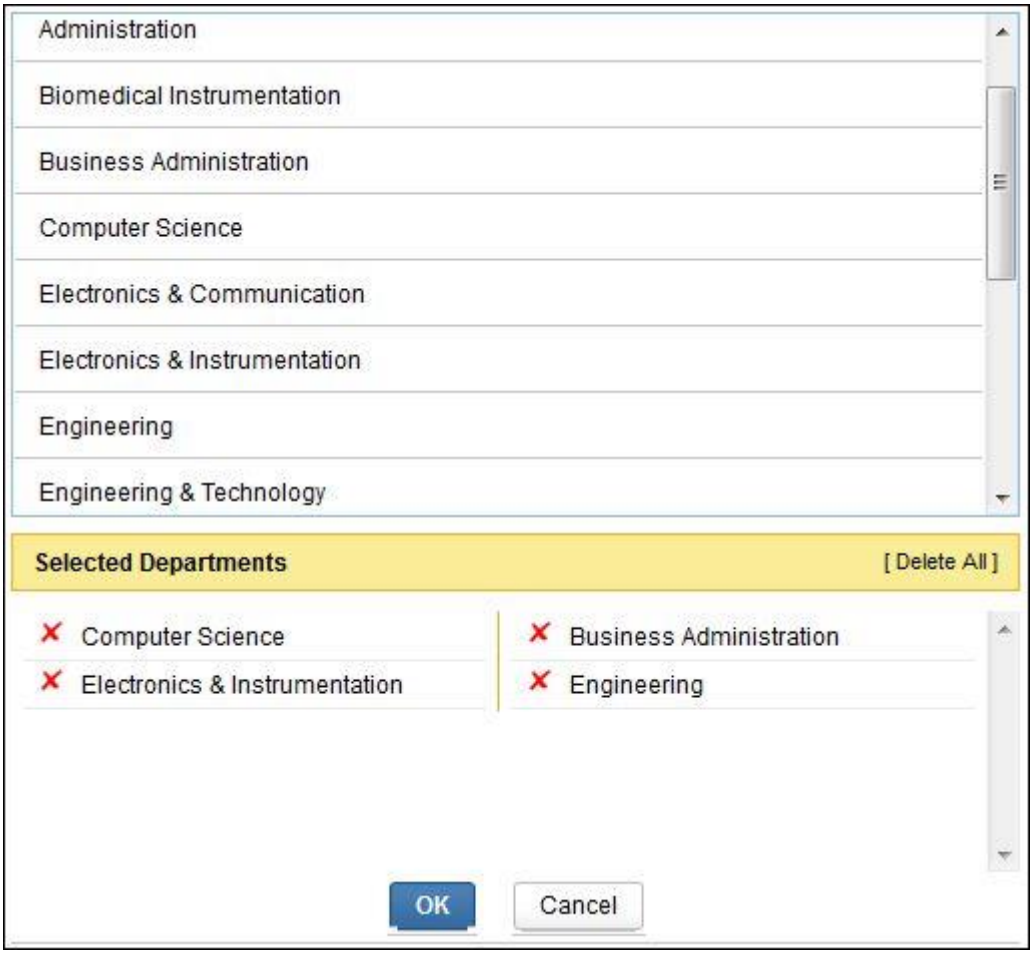
To access the user group configuration page,

1. Click **Admin** tab in the header pane to open the configuration page.
2. Click **User Groups** icon under Users block. The User Group list view page is displayed where you can add, edit and delete a user group.

Adding New User Group

1. Click **Add User Group** link from the User Group list view page.
2. Specify a unique **Name** for the user group. Say, Sales Team in New York. This field is mandatory.
3. Enter a short **Description** about this user group.
4. **Set the Filter** by selecting the Criteria and Condition from the drop down. Enter the value in the text field.

   You can also perform a search operation for the values using the search icon . A pop up listing the values for the selected criteria appears. Select a value click ok.



5. To view the requesters under the specified criteria, click **Preview** button. The requesters list appears in a pop up window.
6. To add another criteria, click the addition button + and repeat the similar process. Choose to match **All the conditions** (And) or **Any one of the condition** (Or) from the drop down.
7. Click **Save** to save the user group and return to the list view. Click **Save and Add New**, to save the user group and add another.

The configured User Groups appear while creating a new Service Item, solution, announcement and request template.

Editing User Groups

1. From the User Groups list view page, click the **edit** icon beside the user group name to edit. The Edit User Group form appears.
2. Modify the Name and Description field.
3. You can also alter the existing filters set or add new filters using the criteria and condition drop down.
4. Click **Save**, to save the user group and return to the list view. Even while editing, you can add another user group by clicking **Save and Add New** button.

Deleting User Groups

1. From the User Groups list view page, enable the check box beside the user group to delete.
2. Click **Delete** button. A confirmation dialog appears.
3. Click **OK** to proceed. The User group is deleted from the list.

Active Directory

You can configure to authenticate the requester login with the active directory (AD). On configuring AD authentication, if there are any changes made in the password made in AD, the same is reflected in ServiceDesk Plus. So the requesters can login using the login name and password of the system.

	Note: Please ensure that before you start configuring the AD Authentication, you have already imported the requesters. Only if a user account is available in ServiceDesk Plus application, it will authenticate the password for that user account from the active directory. Hence, when none of the users have been imported from the active directory, the authentication cannot be done for the user account.

To configure the Active Directory Authentication,

1. Log in to the ServiceDesk Plus application using the **user name** and **password** of a ServiceDesk Plus administrator.
2. Click the **Admin** tab in the header pane.
3. In the **Users** block, click the **Active Directory Authentication** icon . Here you can enable or disable active directory authentication. By default the AD authentication will be disabled.
4. If you have already imported requesters from the any of the domains in your network, then click **Enable** button.

Even after enabling Active Directory (AD) Authentication, if you would like to bypass the AD Authentication, then in the application login screen, you need to select **Local Authentication** from the Domain list box after entering the login name and password, and then click **Login** button to enter ServiceDesk Plus.

Configure Pass - through Authentication

On enabling single sign-on, ServiceDesk plus directly authenticates your windows system user name and password. Hence you need not login over again to enter into ServiceDesk plus or remember too many passwords.

ServiceDesk Plus Pass through Authentication uses NTMLV2 which provides better security and validates the credentials using NETLOGON service.

1. Enabling Active Directory, activates the Pass-through authentication **(Single Sign-on)** option.
2. If you like to activate single sign - on, select the **Enable Pass-through Authentication (Single Sign-On)** option.
3. You can enable Pass-through authentication for users from a particular domain. To do so, select the **Domain Name** from the drop down list. Enabled domain should be two way trusted.
4. Specify the **DNS Server IP** of the domain in the provided field.
5. To use the NTLM security provider as an authentication service a computer account needs to be created in the Active Directory with a specific password.

Specify a unique name for the **Computer Account** and **Password** for this account.

6. The **Bind String** parameter must be a fully qualified DNS domain name or the fully qualified DNS hostname of a particular AD server.
7. **Save** the authentication. You will get a confirmation message on the authentication.

Upon saving the details, a new computer account will be created on the Active Directory (with the help of VB Script). If the user specifies existing computer accountname, the password specified here will be reset on the Active Directory for the computer account. User can choose to reset the password of computer account by clicking on the Reset Password link as well.

Even if there is a problem creating Computer Account or Resetting Password of already created Computer Account using VB script from SDP server(upon save, the script will be called automatically) , the details specified here will be saved and user can execute the script locally on the AD server specifying the same details to create computer account / reset password.

If there is an issue with computer account creation, user can specify an already created computer account name and reset password of that computer account with the help of reset password script.

Importing Requesters= from Active Directory

If you have not yet imported requesters from any of the domains, you can import them by clicking **Import Requesters from Active Directory** link. The **Import From Active Directory** window pops up.

1. From the list of domains that are listed in the **Domain Name** drop-down box, select the domain name in which the active directory from which you wish to import is installed. If the other details such as domain controller name, user name, and password have already been entered in the Domain scan page, then that will be populated automatically. Else, enter the name of the domain controller in the **Domain Controller Name** field, login name and password in the corresponding fields.
2. You also have an option to select the fields to be imported from Active Directory. To do this, enable the check box beside the default fields namely, Phone, Department, Job Title, Mobile, Site Name and E-mail. Specify the field name configured in Active Directory for the selected fields.

   Say, if "Phone" is configured as "telephoneNumber" in active directory, then enter telephoneNumber in the text field provided. The unselected fields are not imported. This is to avoid over ridding of the new values by the old values from the directory.
3. Apart from the default fields, you can also **Import Requester Additional Field** details from the active directory. If you have not configured any requester additional fields, then select **Click here to configure** link. This takes you to Requester - Additional Field page, from where you need to configure the additional fields to be imported from Active Directory. The configured requester additional fields - Text, Numeric and Date/Time fields, appear in **Import from Active Directory** window indicated in the colors Blue, Green and Red respectively. Enable the check box beside the requester additional fields to

import, and specify the field name configured in active directory beside the selected field. The unselected fields are not imported.

Field Name	Field Type	Distinguished Name (DN) in Active Directory	Description
Email Address	Text	mail	Email Address of the requester
Country Code	Numeric	countryCode	Country Code of the requester
Last Log on	Date/Time	lastLogon	Last Logged on date/time of the requester.

Note:	1. To configure the date format according to your Active Directory settings, update the entry in globalconfig table as, globalconfig set paramvalue ="Date-Format", where category ="AD_DATEFORMAT" and parameter="UDF_DATE". Restart the application to reflect the changes. 2. The numeric additional fields hold up to 19 digits. If your numeric value exceeds 19 digits, then configure the value in text field.

4. If the site associated to the user/department is changed in Active Directory, then the assets belonging to the user/department should be moved to the new site. To update this information on every import, enable **Move associated assets** check box. De-selecting this check box will not move the asset to the new site.
5. Click **Import Now**. The import wizard displays the various **Organizational Units** (OUs) available in that domain. Choose the specific Organizational Unit from which you wish to import users by selecting the check box beside it.
6. Click **Start Importing**. Once the import is complete, the data on how many records were added, how many overwritten, and how many failed to import will be displayed.

Schedule AD import

You have an option to schedule Active Directory import in specified number of days. When you schedule an Active Directory Import, data from all the domains available in the application is imported at the specified number of days.

1. Select the **Schedule AD import** check box. Specify the number of days in the text box. The requester details gets imported automatically once in specified number of days.
2. Click **saveADSync** button to be in sync with the active directory.

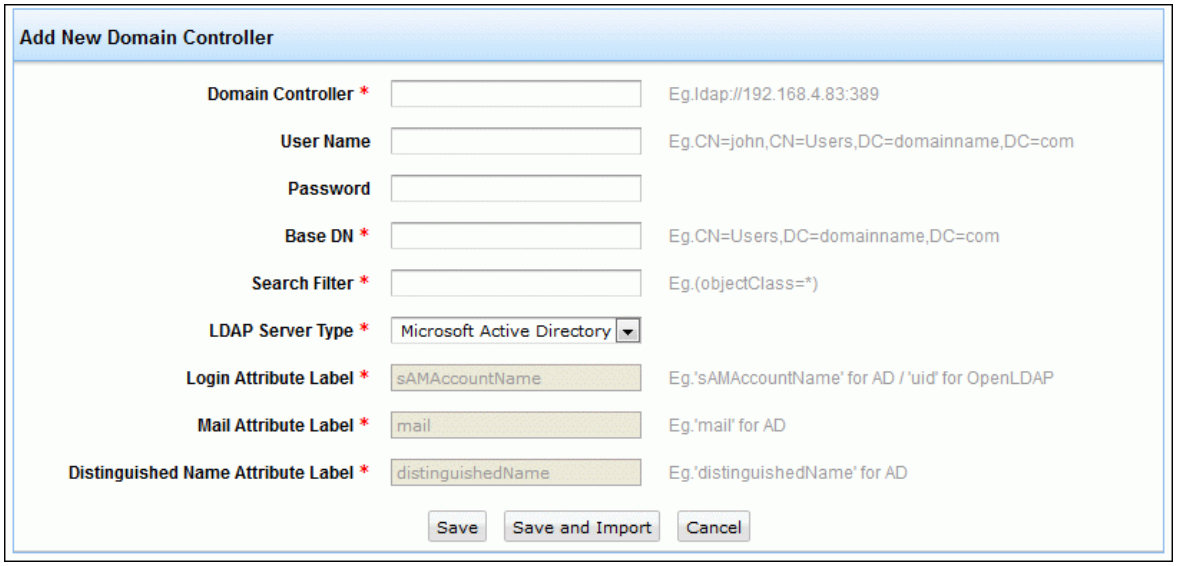
LDAP

You can also import users from the LDAP server through the domain controller. On enabling the LDAP authentication, the users can login using their LDAP credentials. By default, the LDAP authentication will be disabled.

	Note: Ensure that before you start configuring LDAP authentication the users are already imported from the domain. The LDAP authentication supports both linux and windows users. On enabling LDAP authentication for windows users, the AD authentication gets disabled automatically.

To import users from a New Domain,

1. Login to ServiceDesk Plus application using your username and password.
2. Click the **Admin** tab in the header pane.
3. In the **Users** block, click the **LDAP Authentication** icon . By default, the LDAP authentication will be disabled.
4. Click **Add New Domain** button under Domain Controllers block. This opens the Add New Domain Controller form as shown below,



5. Specify the Domain Controller from where the users have to be imported in the **Domain Controller** text field. For ex: ldap://<server name>:<port number>. The default port is 389.
6. Enter the **User Name** along with the Organizational unit (OU) in the given field. For ex, CN:john, CN=Users, DC=domain name, DC=com.
7. Specify the **Password** in the respective field.
8. Specify the **Base DN** which represents the distinguished base name such as, CN = Users, DC = domain name, DC = com.
9. Specify the criteria which you want to apply on that particular domain controller in the search filter text field. For ex: mail=* will import users from the parameter mail in the specified domain controller.
10. Select the **LDAP Server Type** from the combo box. For ex. OpenLDAP.

	Note: If you have chosen the Server type as default LDAP such as, Microsoft Active Directory, Novell eDirectory and OpenLDAP then the Login Attributes Label, Mail Attribute Label and Distinguished Name Attributed Label will appear in a non editable text.

11. If the LDAP Server Type is **Others** then, specify the **Login Attribute Label** and **Mail Attribute Label** in the respective fields.
12. The **Distinguished Name Attributed Label** is similar to the Base DN.
13. Click **Save** to save the domain controller. If you want to save and import the users, click **Save and Import.**

You can also import users from the existing domain by clicking **Import Now** of the corresponding Domain Controllers. The existing data will be over written on importing the users from the same domain. Once the users are imported, **Enable LDAP Authentication** by selecting the check box.

Click **Save**. The user can login to the application using his LDAP credentials.

Edit Domain Controller

1. Click domain controller name which you wish to edit. This opens the Add new domain controller form.
2. Modify the changes and click **Save**. To save and import the users from the domain controller, click **Save and Import**.

Delete Domain Controller

1. From the domain controller list view page, enable the check box adjacent to the domain controller which you wish to delete.
2. Click **Delete** button. A pop up window confirming the delete operation appears. Click **Ok** to continue. The domain controller gets deleted from the list.

On deleting a domain controller, the users imported from that domain controller will not be able to login to the application using LDAP credentials.

Leave Types

In most cases, your technicians may be unable to work for a day or two. In order to avoid requests being assigned to them, the technician can apply for leave under Scheduler.

The most common reasons for applying leave is configured in **Leave Types**. You can denote the type of leave with the help of color code. This facilitates the administrator to comprehend the reason for applying leave by the technician.

To access Leave Types configuration wizard,

1. Login to ServiceDesk Plus application using the Username and Password of an admin user.
2. Click the **Admin** tab in the header pane.
3. In Users block, click **Leave Types** option. By default, there are four Leave Types displayed in the List View. From this page, you can add, edit and delete leave types.

Add Leave Type

1. In Leave Types List view, click **New Leave Type** link. This opens the **Add-Leave Type** form.
2. In Add New Leave Type form, enter the Name of the leave type. For example, Sick Leave, On Duty, Optional and so on. The Name should be unique and is a mandatory field.
3. Select a **Color** to denote the leave type in the Technician Availability Chart using icon.
4. Specify brief description about the leave type in the **Description** text field.
5. Click **Save** button. The leave type is saved and displayed in the list view. Click **Save and Add New** button to add another leave type.

Edit Leave Type

1. In Leave Types List view, click the **edit** icon beside the leave type to edit. The Edit Leave Type form is pre-filled with values configured while adding the leave type.
2. Modify the Name, the Color code and the Description of the leave type.
3. Click **Save** button. You can also save and add another leave type from Update page by clicking **Save and Add New** button.

Delete Leave Type

1. In Leave Types List view, select the check box beside the leave type to delete.
2. Click **Delete** button. A dialog box confirming the delete operation appears.
3. Click **OK** to proceed. The leave type is deleted from the list.

Robo Technician

Using Robo Technician you can reset the user password quickly & easily. This involves two steps process to reset the user password such as, 1) configure robo task 2) creating a request template.

To open the robo technician page,

1. Log in to the ServiceDesk Plus application using the **user name** and **password** of a ServiceDesk Plus administrator.
2. Click the **Admin** tab in the header pane.
3. In the **Users** block, click the **Robo Technician** icon . On purchasing the license for the robo technician the Robo Task Configuration page is displayed.

Configuring Robo Task

1. Click **Enable robo task** option to perform the robo task operations by clicking the enable icon. By default the status of the robo task would be disabled.
2. There are three blocks available in the configuring robo task page such as, **Task Options, Action On Success & Action On Failure**. In the Task Options block select **Password Reset Type** from the combo box. You have four passwords reset types such as,

   Random Password: In this case the robo technician assigns a random password to the user.

   Typed Password: In this type the logged in technician will enter the password in the given text field.

   Same as the User Name: The robo technician will assign the same user name a password.

   Blank Password: In this type the password assigned will be a blank password.

3. If you wish, you can select **User must change password on next login** check box. Generally this option should be enabled for security purpose.
4. On resetting the password successfully you can configure the corresponding actions to be performed in the Action On Success block. Select the **Request Status** you wish from the combo box.
5. Specify the **Resolution Details** in the text field.
6. If the password-reset action is failed then you can configure the corresponding actions to be performed in the Action On Failure block. To assign the event to the currently logged in user select **Assign to Invoker** check box.
7. Or you can assign it to the **Group** under which the problem is associated.
8. And also you can assign the problem to the corresponding **Technician**.
9. Specify the notes about the issue in the **Notes** text field.
10. Click **Save** button to save the details.
11. Click **Save and go to Template** button to go to the Request Template page.

Creating a Request Template

On installing Robo Technician it automatically creates a default Request Template for a particular Robo Task. You can also edit this request template based on your needs.

Example: Say if a user requests technician for password reset, and if the technician has already configured robo task, then he can create a request to reset password using this default template.

Technician Auto Assign

Apart from assigning technicians to requests using Business Rule, selection of category or from the UI, technicians can be automatically assigned to requests on configuring the Technician Auto Assign option. The Technician Auto assign follows the Round Robin or Load Balancing methods, and based on the availability of the technicians, the requests are assigned. So if a technician is unavailable on a specific day, and the due by time of certain requests falls on that day, the technician on leave will not be assigned to those requests.

Note	For site specific requests, the technicians associated to the sites are auto assigned to the requests. Similar for requests associated to groups, the technicians associated to the groups are assigned to the requests.

To access Technician Auto Assign Configuration,

1. Click the **Admin** tab in the header pane to open the configurations wizard page.
2. Click **Technician Auto Assign** icon under **Users** block. The Technician Auto Assign page opens.

Enabling Technician Auto Assign

1. Select **Enable Technician Auto Assign** check box.
2. Requests are assigned to the technicians either through **Round Robin** or **Load Balancing** model.

   Load Balancing: The number of requests that are In progress and assigned to a technician is taken as the load of the technician. So on selecting this model, technicians with the least load are assigned to requests.

   Round Robin: In this model, technicians are assigned to the request irrespective of the load.

3. The tech auto assign is executed for newly created requests, edited requests or, to both created and edited requests. Select your option by enabling the radio button.
4. On creating a new request, the technician auto assign can be applied to either the **Unassigned Requests** or to the assigned/unassigned **Requests**.

   Unassigned Requests: On selecting this option, the technician auto assign is applied to requests that are unassigned even after passing through all the Business Rules and Category selections.

   All Requests: When this option is selected, the technicians assigned to the requests through business rules or category selection, will be overridden.

Note	While editing a request, technician auto assign is applied to requests that remain unassigned even after the application of Business Rules and Category selection. The auto assign is not applied to requests that are assigned to technicians.

Excluding Technicians from auto assign

You can exclude certain technicians from being auto assigned say, the administrator, site admin, change manager.

1. Click **Exclude the following Technician** check box.
2. Click **Add Technicians to exclude** link. The list of technicians available in the application appear.
3. Select the technicians to be excluded by clicking on their Name link. These technicians get listed under **Selected Technicians**. Click **Ok** button.

   You can delete individual technicians from the Selected Technicians list using the delete icon. Click **Delete All** link to delete all the technicians from the Selected Technician list.

Excluding Requests from auto assign

You can also exclude certain requests from being auto assigned to technicians. Say for example, requests with the priority as "High" should not be auto assigned to technicians.

1. Select **Enable Exceptions** check box.
2. Choose the **Column** from the drop down and its corresponding **Value** using the icon .
3. Choose to match all the exceptions (AND) or any of the exceptions (OR) from the drop down.
4. **Save** the details.

Problem / Change Management

The goal of Problem Management is to find the root cause of incidents and reduce the impact on business. The goal of Change Management is to control and manage approved changes with accepted risk. ServiceDesk Plus allows you to implement a comprehensive problem management and change management system. Problem/Change related configurations are:

1. Problem Additional Fields
2. Problem Closure Rules
3. Change Type
4. Change Status
5. Change Advisory Board
6. Change Additional Fields
7. Change Closure Rules

To access Problem/Change related configurations:

1. Log in to the ServiceDesk Plus application using the **user name** and **password.**
2. Click the **Admin** tab in the header pane. The problem/change management block is below the Help Desk block.

Problem Additional Fields

You have pre-defined fields by default in the New Problem form to enter the details about the problem. If you need any additional fields in the New Problem form then, you can add your own additional fields using this option. You can add text, numeric and date/time fields in the form.

To add your own custom fields in the New Problem form:

1. Login to the ServiceDesk Plus application using the **user name** and **password** of a ServiceDesk Plus administrator.
2. Click the **Admin** tab in the header pane.
3. In the **Problem/Change Management** block, click the **Problem - Additional Fields** icon . This opens the Problem - Additional Fields page. You can add three types of fields in the form: text, numeric and date/time.
4. To add the text fields, enter the label name in the form fields below the **Label** heading. If required, enter the description for the field.
5. You can choose the type of text field that you wish to add by selecting the radio buttons.
   - A **Single-line text field** allows you to add just a text field.
   - The **Multi-line text field** allows you to add a text box where a lengthy description can be added.
   - A **Pick List** allows you to add a list menu from which you can select. In all the three cases, you can add default values for the text field in the space provided for the same.
6. To add items for the pick list, enter the value in the text filed and click **Add Item**. To select the default selected value of the list, click on the value in the list.
7. To add numeric fields, click the **Numeric** tab and then enter the label name in the form fields provided for the same.
8. To add date/time fields, click the **Date/Time** tab and enter the required details.
9. Click **Save**. A message for successful creation of the fields is displayed.

These fields appear under the grouping **Additional Problem Details** in the **New Problem** form. To delete the user-defined fields, in step 4 through 7, instead of adding the label names, delete the label names that you wish to remove from the fields of the form and click **Save**. The respective fields that you deleted will be removed from the New Problem form.

Problem Closure Rules

Problem closing rules can be used to select the mandatory fields to be filled in by the technicians while closing the problems and also includes optional rules that can be enabled by the technician on closing the problem.

Example: If you have selected '**Associated Tasks should be closed**' as a mandatory field in this page, then the technician whoever resolving the problem, should close all the related tasks to a problem and enter the details in the corresponding field before closing it. Else an error message pops up, asking you to fill the details in the field. If you have selected the optional rules as, **E-mail all requesters affected by this problem** and **Close all associated incidents**, on closing the problem a pop up window listing the selected optional rules appears. Based on the incident the technician can enable the check box corresponding to the optional rules.

To configure the problem closing rules,

1. Login to the ServiceDesk Plus application using the **user name** and **password.**
2. Click the **Admin** tab in the header pane.
3. In the **Problem/Change Management** block, click the **Problem Closure Rules** icon. This opens the Problem Closure Rules page.
4. Select the **Mandatory Fields** from the list to be filled in before closing the problem by enabling the check box.
5. Select the **Optional Rules** by enabling the check box. The selected rules will get listed to the technician on closing the problem. Based on the incident the technician can,
    - **E-mail technician working on incidents associated with this problem:** An e-mail notification is sent to the concerned technicians working on the incident associated with the problem.
    - **E-mail all requesters affected by this problem:** An e-mail notification is sent to all requesters who have raised requests concerning the problem.
    - **Copy problem solution and workaround to all associated incidents:** The solution to the problem and workaround is copied to all associated incidents.
    - **Close all associated incidents:** All the associated incidents is closed on resolving the problem.
6. **Save** the details.

Change Type

The change types shows the significant changes in the organization which involves cost and time. By default you have four change types and Standard is a pre-defined change type hence cannot be edited. And the Standard Change type is a pre-approved change type which will not require approval from the change manager.

To access the Change Type configuration wizard,

1. Login to the ServiceDesk Plus application using the **user name** and **password.**
2. Click the **Admin** tab in the header pane.
3. In the **Problem/Change Management** block, click the **Change Types** icon. This opens the **Change Type list** page.

Adding Change Type

1. Click on the **New Change Type** link. This opens the **Add New** page.
2. Specify the **Name** for the change Type in the given text field, say **Significant.** This is a mandatory field.
3. Select the **Color** by clicking the color icon to indicate the severity of the change. This is a mandatory field.
4. Specify the **Description** about the change type in the description field.
5. **Save** the changes. You can see the change type getting listed in the change type list view.
6. **C**lick the **Save and add new** button to save the Change Type and add another Change Type.

Editing Change Type

To edit an change type,

1. In the Change Type list page, click the edit icon beside the change type name that you wish to edit.
2. In the **Edit Change Type** form, edit the fields you want to change.
3. Click **Save** to save the changes. At any point, if you wish to cancel the operation that you are performing, click **Cancel**.

Even while editing a change type, if you wish to add a new change type, then click **Save and add new** button instead of clicking Save button after making the changes.

Delete Change Type

1. From the Change Type list page, enable the check box beside the change type name that you wish to delete.
2. Click **Delete** button. A confirmation dialog appears.
3. Click **OK** to proceed with the deletion. The change type gets deleted from the available list. If you do not wish to delete the change type, then click **Cancel**.

Change Risk

Changes involve some level of risk during implementation. To assess the level of risk - high, low, medium etc., - and to inform about the same to the technicians involved, ServiceDesk Plus provides you with the change risk option. By default, the application provides three risk levels in the list view. To access the Change Risk configuration wizard,

1. Login to the ServiceDesk Plus application using the **user name** and **password.**
2. Click the **Admin** tab in the header pane.
3. In the **Problem/Change Management** block, click the **Change Risk** icon. This opens the **Status List** page.

Adding New Change Risk

1. Click **Add button**. This action will direct you to **Add New Risk** box.
2. Specify **Name** for the risk level in the given text field, say **Normal**. (This is a mandatory field).
3. Specify **Description** about the change risk in the description field.
4. **Save** the changes. You will see the added change type getting listed in the change type list view.

Editing Change Risk

To edit an change risk,

1. In **Change Risk list page**, click the **on-hover edit icon** appearing **beside the change risk level** you wish to edit.
2. Edit fields as per your requirement.
3. Click **Update** to update the changes made.

Delete Change Risk

1. In **Change Risk list page**, click the **on-hover delete icon** appearing **beside the change risk level** you wish to delete.
2. Click **Delete** button. A confirmation dialog appears.
3. Click **OK** to proceed with the deletion. The change risk gets deleted from the available list.

Reason for Change

Reason for Change denotes the purpose of initiating a change request. For instance, if a printer in your organization does not work due to a damage in the printer cartridge, then the reason for change can be **Printer is not working** and the change request initiated can be **Change the printer cartridge.**

Similarly, you can **document the most frequent reasons** for initiating a change request. This helps the management to **obtain reports on the reasons behind the change(s)** occuring in the organization.Login to the ServiceDesk Plus application using the **user name** and **password.**

1. Click the **Admin** tab in the header pane.
2. In the **Problem/Change Management** block, click the **Reason for Change** icon

Adding New Reason for Change

1. Click **Add** button. This action will direct you to **Add Reason for Change** box.
2. Specify **Reason for Change**, say **Anti-Virus Installation**. (This is a mandatory field).
3. Specify a **Description** elaborating on the reason for change in the description field.
4. **Save** the changes. You will see the added **Reason for Change** getting listed in the reason for change list view.

Editing Reason for Change

To edit an change risk,

1. In **Reason for Change list** page, click the **on-hover edit icon** appearing beside the reason for change you wish to edit.
2. Edit fields as per your requirement.
3. Click Update to update the changes made.

Delete Reason for Change

1. In **Reason for Change list** page, click the **on-hover delete icon** appearing beside the change risk level you wish to delete.
2. Click **Delete** button. A confirmation dialog appears.
3. Click OK to proceed with the deletion. The reason for change gets deleted from the available list.

Change Advisory Board

The Change Advisory Board (CAB) is a body that exists to approve changes and to assist Change Management in the assessment and prioritise of changes. The members of the CAB are selected based on their expertise and capability to assess change adequately from business and technical point of view.

To add new a CAB,

1. Login to the ServiceDesk Plus application using the **user name** and **password**.
2. Click the **Admin** tab in the header pane.
3. In the **Problem/Change Management** block, click the **Change Advisory Board** icon. The **Change Advisory Board (CAB)** page opens.
4. Click **New CAB** button to open the Add CAB page.
5. Specify the **Name** of the CAB in the given text field. It is a mandatory field.
6. Specify the **Description** of the CAB in the description field.
7. Click **Add CAB Member** icon to select the members for the CAB. The list of users appears in a pop up window. If the list is vast, select the number of users to be listed in a page from **Show page** drop down box. You can navigate to the next and previous pages using the navigation options.
8. Select the members of the CAB from the users list by enabling the check box beside their name and clicking **Add CAB Member** button. Click Add CAB Member and close, to add a CAB Member and close the pop up window.
9. The selected **Members in this CAB** are listed in the Add CAB page. You can delete a CAB Member on selecting the delete icon beside their name.
10. Click **Save** to save the CAB details and return to the list view. Click **Save and Add New** button to save the CAB and add another CAB.

Change Roles

ChangRoles are access permissions defined exclusively for the change module. Unlike the module-level System Roles, the Change Roles are defined based on the stages in the change lifecycle. While the System Roles are pre-assigned to users with login permission, the Change Roles are dynamic, and can be assigned to both login and non login users at the time of creating or editing a change request The Change Roles assigned to users differ for each and every change request. A Change Role when assigned to a user allows the user to perform tasks defined in the role for that change request alone.

For instance, in one change, a user can play the role of a Change Manager with privilege to control the change across all the stages. At the same time, the user can also play the role of a Reviewer, in another change, with permission to control the Review Stage alone.

Users assigned with full control permission over the change module via System Role can access change requests whether or not they are assigned with a change role. But these users do not have the privilege to approve changes, unless they are assigned with a Change Role having Approval permission.

For instance, a technician possessing the role of SDChange Manager can edit all the change requests across the change module whether he/she is assigned with a change role or not. If the same technician is assigned as the Change Manager for a change request, then apart from edit permissions, he/she has the privilege to approve/reject the change request.

When a Change Role is assigned to a user without any login permission, an e-mail notification with Non Login URL is sent to the user, allowing him/her to perform tasks based on the permission defined in the role.

Note: The Login users assigned with a Change Role should possess System Role with View permission enabled for Change module.

Roles	Description
Change Advisory Board (CAB)	The dynamic group of people who assist the Change Manager in assessing, prioritizing and scheduling of changes. They have the authority to recommend a change.
Change Approver	The person who has the authority to approve/reject the change in approval stage.
Change Manager	The person who has full authority over the change and has the privilege to approve/reject a change.
Change Requester	The person who is assigned ownership of a change and ensures its successful completion.
Implementer	The person who initiates the change.
Line Manager	The person who authorizes the initial level of acceptance of a new change request.
Reviewer	The person who authorizes the initial level of acceptance of a new change request.

Adding New Change Roles

To access the Change Roles configuration wizard,

- Login to the ServiceDesk Plus application using the **user name and password**
- Click the **Admin tab** in the header pane
- In the **Problem/Change Management block**, click the **Change Roles icon** Icon

To configure Change Roles, follow the steps mentioned below:

1. Click **Add button** (available above and below **default change roles'** list)
2. Specify **a name for the change role** in the field provided, like, **change planner, change implementer etc.,**
3. Provide a brief description about the change role.
4. Decide whether the change role would apply to **all users or only technicians** of your application and **by selecting the respective radio buttons** (All Users/Technicians Only).
5. Configure **Access Permissions across all Change Stages for the change role**. Say, if you want to provide **Approval** permission for the **Stages Submission and Review**, then select the **Approve check box corrosponding to both these stages.**

   The following are the **access permissions for the six default stages** in the change lifecycle.

   - **View**: View permission enables users to view the change request in the selected stage. They cannot perform any further operations
   - **Edit**: Edit permission enables users to edit the change request in the selected stage. They do not have permission to approve/reject a change. On selecting the Edit option for a stage, the View permission check box is automatically enabled.
   - **Approve**: Approve permission enables the user to approve/reject the change request in the selected stage. On selecting the Approve option for a stage, the View permission check box is automatically enabled.

   Users with full control permission over change module via System Role such as **SDChange Manager** or the **SDAdmin** do not have the privilege to **approve/reject a change.**

6. You can also provide **complete access permission over all the** stages by selecting **All access permission check box** (available above **stage permissions**).
7. Click **Save button**. The change role will be saved and listed in the Change Role List View.

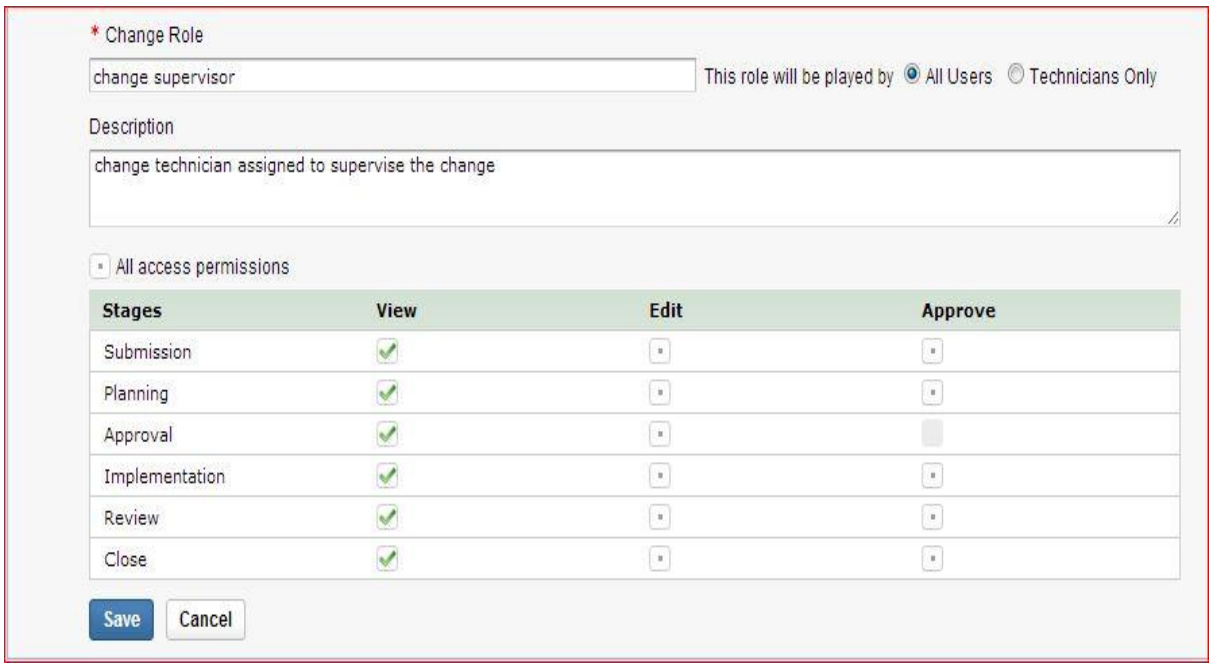
Editing Change Roles

To edit an already configured change role,

1. In **Change Roles list page**, click the **on-hover edit icon** appearing **beside the change role** you wish to edit.
2. Edit fields as per your requirement.
3. Click **Update** to update the changes made. At any point, if you wish to cancel the operation that you are performing, click **Cancel**.

Deleting Change Roles

1. In **Change Roles list page**, click the on-hover delete icon appearing beside the change role you wish to delete.Edit fields as per your requirement.
2. Click **Delete** button. A confirmation dialog appears.
3. Click **OK** to proceed with the deletion. The change role gets deleted from the available list.



Change Stage

Changes undergo six stages in the Change Lifecycle before being successfully completed and closed as planned. Each Stage in the Change Lifecycle requires approval before proceeding the change to the next stage.

Application provides six default Change Stages, namely **Submission, Planning, Approval, Implementation, Review** and **Close**.

You can **edit the existing Stage Name and Description for Change Stage(s)** but you cannot add a new Change Stage or delete the default Change Stages.

To access the Change Stage configuration wizard,

1. Login to the ServiceDesk Plus application using the user name and password.
2. Click the Admin tab in the header pane.
3. In the Problem/Change Management block, click the Change Stages icon Requester - Additional Field Icon..

Editing Change Stage(s)

To edit an change risk,

1. In the **Change Stage(s) list page**, click the **on-hover edit icon** appearing beside the change stage you wish to edit.
2. Edit fields as per your requirement.
3. Click **Update** to update the changes made.

Change Stage-Status

The lifecycle of a change request usually involves six stages, and these six stages may possess many status(es). At the beginning/completion of each status, a notification is sent out to users playing certain change roles alerting them on the progress of the change request.

The **Stage - Status Configuration Wizard lets you define status(es) under each stage**. And, also allows you to **modify and delete the existing status(es).**Click the **Admin** tab in the header pane.

To access the **Change Stage-Status** configuration wizard,

1. Login to the ServiceDesk Plus application using the **user name** and **password**.
2. Click the **Admin** tab in the header pane.
3. In the **Problem/Change Management** block, click the Change **Stage-Status icon**.

Adding Change Status

1. Click **Add** button available below the corrosponding **change stage**
2. Specify **name** for the status
3. Provide a **brief description** about the status
4. Specify **Action Name** for this status The **Action Name** is an **abbreviated form** of the **Status Name**. For instance, "**Submitted for Authorization**" can be expressed as "**Awaiting Authorization**" and so on.The **Action Name** gets listed in **Status Actions drop down menu** in the change details page.
5. Using "**Notify to**" option, choose the change technicians who will receive alerts via e-mail notifications whenever a change enters this status, by clicking on **choose roles** (technicians) icon
6. Next, you have to configure the **notification template**, by adding text (or) using already existing **content variables**
7. Click **Save** button
8. Saved status will be added to the existing status list

Editing Change Status

1. In the Change Status list page, click the **on-hover edit icon** beside the **change status** that you wish to edit..
2. Edit fields as per your requirement.
3. Click **Update** to update the changes made.

Delete Change Status

1. In **Change Status list page**, click the **on-hover delete icon** appearing **beside the change status** you wish to delete.
2. Click **Delete** button. A confirmation dialog appears.
3. Click **OK** to proceed with the deletion. The reason for change gets deleted from the available list.

Change Workflow

Organizations face various kinds of changes which differ in process and control. Changes such as, replacing switches or routers across the organization requires a systematic flow with approvals at every stage. Whereas, changes initiated frequently or carried out periodically like, upgrading the RAM for users or changing the printer toner; do not have to undergo the entire change lifecycle process. Such changes can be implemented directly and closed, and at times may not even require approval from the concerned authority.

The Change Workflow Wizard lets you simplify the change lifecycle by configuring change workflows that suits your organizations needs. The configured workflows are listed in the Workflow drop down field in new change form, enabling the change request to follow the process defined in the selected workflow.

Adding Change Workflow

Administrators can configure change workflow by deciding the stage and status the change **would move to for a given status like approved or rejected or requested for information etc.** and choosing the techncians to be notified **when the specified change status is reached** and also choosing the technicians who will be notified **when the change progresses from current status to next stage.**

While working out change workflows, administrators are provided with the option of configuring the workflow right away (when it is being added) or can save it and configure the same at a later date after elaborate planning.

This section explains the second option of **adding the workflow and configuring it at a later date.**

To add a change workflow, follow the steps given below:

1. Click **Add** button (available above **change workflow list view**). This action leads you to the change workflow form.
2. To set the workflow being configured as the default one, check **Set as default** check box.

   Remember: When a workflow is set as default:

   - The new change workflows that will be subsequently created will copy the workflow configurations of the defaultf workflow (but this can be edited as per your requirements).
   - While creating a change request using new change form, the workflow field will be populated with the default workflow (this too can be changed).
   - **To set another workflow as default:** check **Set as default** check box while creating the workflow. A message will appear indicating **that another workflow is currently being used as the default one. Do you want to change it?** Ok the message. The chosen workflow will become the default one.

3. Enter a brief description about the workflow in **Description** field.
4. Add worfklow reference chart, if you have one, using **Add a workflow chart reference file** link
5. Click **Save** button

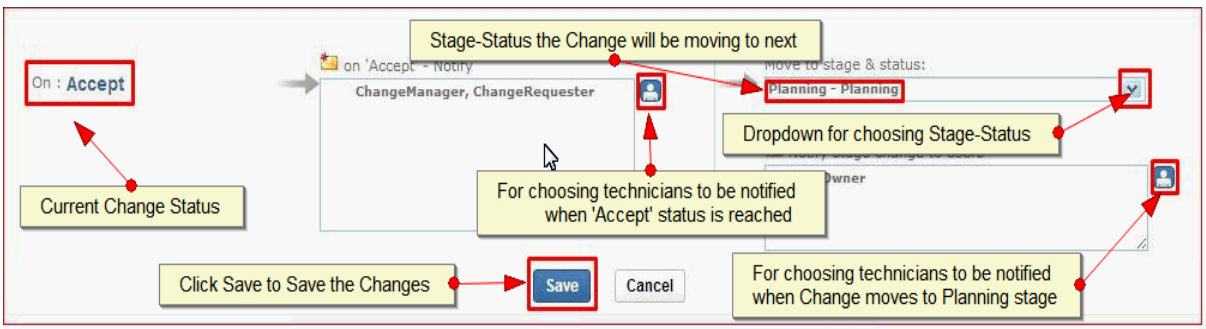
Note	1. The Filter drop down menu lets you organize the change workflow list view. You can either View All the change workflows or View General Workflows/View Emergency Workflows alone. 2. By default, two workflows - **SDGeneral and SDAdmin** - will be available in Change Workflow listview. 3 From the Change Workflow List View, you can edit, delete and duplicate workflows. 4 Click **Configure Workflow button** beside a change workflow to configure change workflow

Configuring Change Workflow

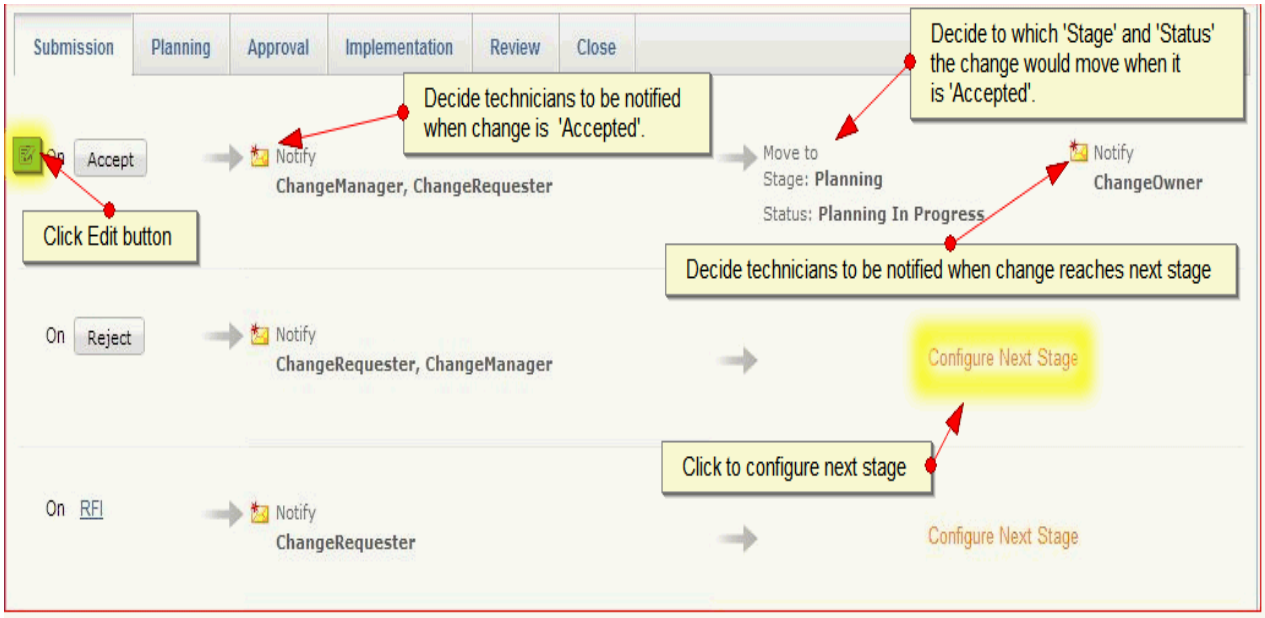
Administrators can configure change workflow by deciding the stage and status the change would move to **for a given status like approved or rejected or requested for information etc.** and choosing the techncians to be notified **when the specified change status is reached** and also choosing the technicians to be notified **when the change progresses from current status to next stage.**

To configure the change workflow, follow the steps mentioned below:

1. While adding change workflows click **Save and Configure** button (or) click **Configure Workflow button** beside the added workflow available in the Change Workflow list view.
2. Workflow configuration page will open up (**submission stage** will be selected by **default**)
3. Each stage will have 2-3 status(es) below it, of which 2 status(es) will be default status - eg: approved-rejected; completed-failed; etc.,- which cannot be deleted.
4. Click **on-hover Edit button** (appearing beside the **change status**) or click **Configure Next Stage** link (available at the **right hand side**) to configure workflow for the respective change stage you're in.
5. Change workflow page will turn to **editable format as shown in the image**.



6. Click **Notify link** and **choose the change technicians to be notified** when change reaches this stage and click ok
7. Then, select **Stage-Status** the change would move to next using **Move to stage & status** dropdown
8. Click **Notify link** (below Move to stage & status dropdown) and choose the change technicians to be notified when change **reaches the selected change stage-status.**
9. Repeat the steps specified above for configuring the remaining **5 change stages.**



Note	1. Two view using which change workflow section can be viewed: **Tab View (or) Single View** 2. You can also duplicate change workflows from this page using **Duplicate link** (available at the **top-right corner** of the change workflow configuration page).

Duplicating Change Workflow

Administrators are provided with the option of duplicating workflows; that is, copying an already existing workflow and reusing it again - under some other name - as it is or by making slight modifications based on their requirements. Duplicating workflows allows administrators to create workflows quickly, as it provides them with a definite picture of how each and every stage can be progressed and which technicians should be involved in the respective stages, since they're using an already configured workflow for reference.

To **duplicate a change workflow**, follow the steps given below:

1. Click the change workflow **duplicate** icon appearing on-hover the **change workflow list view.**
2. Specify a **name** for the change workflow (by default, it will be named as **Copy of "Workflow Name being Copied"**)
3. Mark it as Emergency (by selecting the corrosponding checkbox), if required
4. Provide a suitable description in the **description** field
5. Click **Save and Configure**

Change Additional Fields

You have pre-defined fields by default in the New Change form to enter the change details in the form. If you need any additional fields in the New Change form then, you can add your own additional fields using this option. You can add text, numeric and date/time fields in the form.

To add change additional fields:

1. In the **Problem/Change Management** block, click the **Change Additional Fields** Icon.
2. This opens the **Change Additional Fields** page. You can add three types of fields: **text, numeric and date/time.**
3. To add the text fields, enter the label name in the form fields beside **Label** field. If required, enter the description for the field. Provide a suitable description in the description field
4. You can choose the **type of text** field to be added from the following **radio buttons:**

    - A **Single-line** text field allowing you to add a text field with single line.
    - The **Multi-line** text field allowing you to add a text with multiple lines.
    - A **Pick List** allowing you to add a list menu from which you can select the desired option. In all the three cases, you can add default values for the text field in the space provided for the same.

1. To add items for the pick list, enter the value in the text filed and click **Add Item**. To set a default value for the list, **click on the value** in the list and save it.
2. To add numeric fields, click the **Numeric** tab and then enter the label name (and description) in the form fields provided for the same
3. To add date/time fields, click the **Date/Time** tab and enter the required details.
4. Click **Save**

These added additional change fields will appear in the Drag and Drop section of the current **Default Change Template** and they can be added onto the change template through drag and drop.

Deleting Change Additional Fields

To delete the user-defined fields, **access the field-to-be-deleted** >> delete the **respective label name** >> click **Save**. The respective fields that you deleted will be removed from the existing change templates.

Change Template

Change Template lets you custom create change templates for the most common and frequently requested changes. Each template can possess different fields, field values and workflow, thus customizing or pre-defining change forms so as to suit the changes that may arise in your organization.

The change template enables the Change Requester to initiate a change quickly with all the necessary fields pre-filled, thereby increasing the productivity of your help desk team.

Remember: New change templates being configured will copy the configurations of the **change template that is set as default.**

To access the **Change Template** configuration wizard,

1. Login to the ServiceDesk Plus application using the **user name and password**.
2. Click the **Admin tab** in the header pane.
3. In the **Problem/Change Management** block, click the Change Template icon

To custom create a new change template, follow the steps mentioned below:

1. Click on **Add Change Template** button available in the **Change Template List View.**
2. **Add Change Template page** will open up, This page will be split into 3 sections: **Template-Workflow** section, **Canvas** and **Drag and Drop Fields** section.
3. To add the text fields, enter the label name in the form fields beside **Label** field. If required, enter the description for the field.

Template-Workflow Section

This section will help you do the following:

- Provide a **name** to the change template
- **Decide the workflow** the change template would follow (by allowing you to select workflow from Follows Workflow dropdown)
- Set the change template being configured as the **default template** (by checking Set as default checkbox)
- Mark the change template being configured as the **emergency template** ,if necessary(by checking Mark as Emergency checkbox)
- Provide a **short description** for the change template

Canvas Section

This section helps you design the change form by letting you:

- **Add/Delete** fields available in the canvas
- **Adding Fields:** Click and drag fields onto the canvas from Drag and Drop fields section of change template
- **Deleting Fields:** By clicking on on hover Delete Edit Icon icon
- **Set fields as mandatory** (by clicking on **on hover Edit dropdown** and selecting **mandatory field** checkbox)

Drag and Drop Section

This section helps you design the change form by letting you:

- **Drag and Drop fields** onto the Canvas
- **Configure new fields**, store them in the drag and drop section, and add them to the Canvase based on your requirements
- **Configuring new fields:** Drag and drop Add New Field section from Drag and Drop and decide whether the field to be added is text or numeric or Date/Time field using Add New Field pop-up and okay it for the field to be added.

4. Click **Save** to save the template

Change Closure Code

Change Closure Code are codes that denote the reason for closing a change request: whether the change was closed due to completion, rejection, and so on. Using the closure code, the change mangement can understand how the change was closed.

To access the **Change Closure Code** configuration wizard,

1. Login to the ServiceDesk Plus application using the **user name** and **password.**
2. Click the **Admin tab** in the header pane.
3. In the **Problem/Change Management** block, click the **Change Closure Code** icon. This opens the Change Closure Code list view page

Adding Closure Code

1. Click **Add Closure Code** button
2. Specify a **unique Name** for the change closure code. This field is **mandatory**.
3. Provide a brief **Description** about the change closure code.
4. Click **Save** button. The change closure code is saved and listed in the list view.

Note: The configured change closure codes and a section for comments appear in the Close Stage of a change request. Here, the Change Owner can select the closure code and provide detailed explanation for closing the change.

Change Closure Rules

Change closing rules can be used to select the mandatory fields to be filled in by the technicians before closing the changes. **Example**: If you have selected Impact as a mandatory field, then the technician whoever doing the change, should enter all the impact details of the change before closing it. Else an error message pops up, asking you to enter the details of the impact in the corresponding field.

Setting up Closure Rules:

1. Login to the ServiceDesk Plus application using the **user name** and **password**.
2. Click the **Admin** tab in the header pane.
3. In the **Problem/Change Management** block, click the **Change Closure Rules** Icon . This opens the Change Closure Rules page.
4. Select the mandatory fields for closing the change from the list by enabling the check box.
5. Save the details

Discovery

Discovery - Scan Workstations and Other Network Devices

With ServiceDesk Plus you can scan all your windows domain, networks part of your enterprise, Linux, MAC, Solaris, AIX machines and IP based IT assets. Also, you can set up audits for scheduling periodic scanning and regular cleanup, scan assets in remote locations and perform individual scan for newly added workstations.

Note	1. Please note that, only **technicians with administrator privilege** can perform and configure a Scan. 2. ServiceDesk Plus currently supports scanning for the following OS - **Linux, Solaris, MAC, IBM-AIX** and IP devices - **Printers, Routers, Switches and Access Points**.

Scanning Mechanisms

- Windows Domain Scan

  Scans all the **Windows Workstations and Servers** that are,

  a. part of **Windows domain**
  b. scanned using **Active Directory**, and
  c. part of **Windows workgroup**

  You can also scan workstations using an Agent or Agentless mode (scans machines using WMI).

- Network Scan

  Scan workstations and devices that are part of your network range. Network Scan supports,

  a. OS workstations like, **Linux, MAC, Solaris, IBM-AIX** machines
  b. **Windows workgroup** (workstations that are not part of any domain controller).
  c. IP devices like **Printer, Router, Switches** and **Access Points**.

- Schedule Scan

  Schedule scan at periodic intervals to scan domains and networks that are part of your enterprise. Also, you can set re-scanning intervals to discover newly added workstations.

- Scanning machines outside a domain/network

  Scan **Windows Workstations and Servers** outside a domain/network using **Standalone Workstation Audit** or by installing an **Agent** in the remote machine. Both these methods involves script installed in the remote workstations which scans and pushes the inventory details to the SDP server.

- Workstations/Device Scan

  Use this option to scan an individual or newly added machines in your network. Machines like **Windows**, **Linux**, **Solaris**, **IBM-AIX**, **MAC** and IP devices like **Printers**, **Routers**, **Switches** and **Access Points** are currently supported.

- Distributed Asset Scan

  For all your remotely located workstations that cannot be accessed by the Central SDP server, a Remote AE server is installed in each location which scans the workstation information, and pushes the data to the Central server either manually or automatically.

Scan Windows Machine

ServiceDesk Plus provides you various options to scan your Windows machines. You can scan machines that are part of a domain, network, workgroup and even schedule to scan the windows machines. Apart from this, you can scan remotely located Windows machines and workstations that are manually entered in the application.

Scanning Mechanisms

- Types of Scan
- Modes of Scan

Types of Scan

The list below shows the different methods through which a Windows machine can be scanned:-

- Windows Domain Scan

  Scans all the **Windows Workstations and Servers** that are,

  a. part of **Windows domain**
  b. scanned using **Active Directory**, and
  c. part of **Windows workgroup**

  By default, when you start the application for the first time, the Windows domain in the network are automatically discovered.

- Network Scan

  Windows workstation that are part of a network can be scanned using the Network Scan. The communication protocol and login credentials for windows workstations are given below,

  a. **Communication Protocol:** WMI or Agent
  b. **Login Credentials:** Credentials of the domain controller

- Scanning machines outside a domain/network

  The Windows workstations/servers that are not part of a domain or network are scanned using **Standalone Workstation Audit** or by installing an **Agent** in the remote machine. The remote workstations are scanned using a script and the inventory details are pushed to the SDP Server.

- Workstation/Device Scan

  Scan your newly added windows machines by specifying the workstation/device credentials.

Modes of Scan

- Agent Mode

  Agent based scanning involves an agent to be deployed in Windows workstations through Active Directory or Windows Domain Scan. deployed manually or from the ServiceDesk Plus Application. The Agent mode is easy to deploy, more secure and provides easy access for remote control.

- Agentless Mode

  Agentless mode uses a built-in agent such as *Windows Management Instrumentation* (WMI) installed in each Windows machines. The ServiceDesk Plus server should be installed in a Windows machine to scan Windows workstations and servers.

Modes of Scan: Agent and Agentless

With the evolution of network discovery solutions in recent times, two technologies have emerged into existence - Agent and Agent-less mode of scan. While Agent-less scans inventories using WMI (*Windows Management Instrumentation*) and does not involve any client side software installed in the host, the Agent is an instance of a software, installed in the host to scan inventories and access them remotely.

ManageEngine ServiceDesk Plus supports both, Agentless and Agent modes to scan all your **Windows workstation and servers**.

This section will cover the following topics:-

- Agent Mode
    - Methods of Deployment
    - Uninstalling Agent
- Agentless Mode

Agent Mode

For a wide spread organization with a complex network infrastructure, the Agent based scanning is most effective and provides easy deployment, more security and low bandwidth.

The application provides an agent, which can be deployed in the network workstations through various methods. [Refer Methods of Agent Deployment]. Once the agent is deployed in the network workstations, it scans all the workstations and provides easy access for remote assistance.

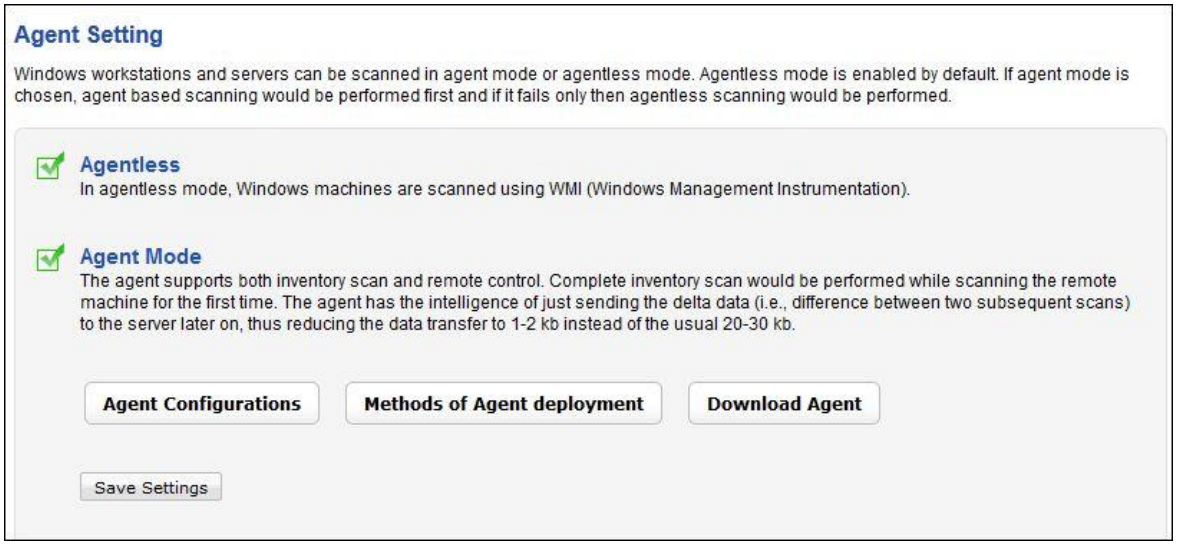
The following topics are discussed in this section:-

- Agent Settings
- Agent Configuration in ServiceDesk Plus application
- Delta Scan
- Pros and Cons of Agent mode

Agent Settings

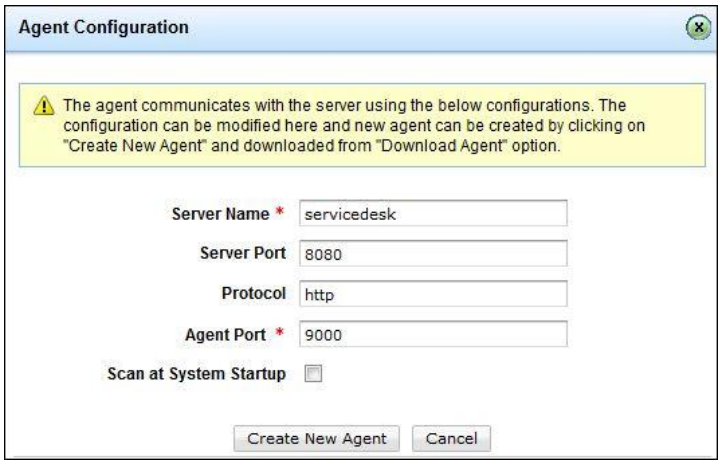
Choose to scan all your Windows workstations in both, Agent and Agentless mode by selecting the corresponding option from Agent Settings under the Admin tab. If you have enabled Agentless mode, the Windows workstation and servers are scanned using WMI. If you have enabled both the modes, the agent based scanning is performed and if that fails, the agentless scanning is performed.

Note	
	1. **Windows** is the only Supported Platform for Agent. 2. The Ports used in Agent based Scanning are TCP 9000.



Agent Configurations

For a successful scan, the agent should communicate with the ServiceDesk Plus server. The server details are configured under **Agent Configurations**. By default, the server in which the application is installed is populated as the server details.



You can modify these configurations to create your own Agent Configurations.

- **Server Name:** The server name or IP address of the computer where ServiceDesk Plus is installed. The agent residing in the client computers communicates with the ServiceDesk Plus server using this Server Name/IP address.
- **Server Port:** The port configured for the application.
- **Protocol:** The protocol used to communicate with the server.
- **Agent Port:** The port number of the agent.
- **Scan at System Startup:** On enabling this option, the agent scans the workstation on every startup.

Click **Create New Agent** button. Clicking on **Cancel** takes you to the agent settings page.

NOTE:

a. You can also modify the configurations to create your own Agent Configurations.
b. If the agent is installed in all the Windows machines and if any of the below circumstances occurs, the agent details can be updated using a script.
    a. ServiceDesk Plus application is moved from one server to another or if the AE port or protocol (http or https) has been changed.
    b. If agent port needs to be changed in all the machines or enable/disable scanning on system startup.

This script can be run as a logon script in the Active Directory or manually in each machine to update the configurations in the agent. While executing the script, the parameters should be in the format "-servername <AE server name> -port <AE port> -protocol <http or https >".

Please contact our support team for the script.

Delta Scan

While performing a scan (Domain scan or Scheduling a scan) through Agent or Agentless mode, some amount of data is obtained in the ServiceDesk Plus Server. The data obtained in the AE Server through an Agent scan is comparatively minimal to that of Agentless. The agent transfers only the changes ("delta") that occur between two subsequent scans to the server, and automatically strips out any unchanged data, thus reducing the data transfer to 1 - 2kb instead of the usual 20 - 30kb.

Pros and Cons of Agent Mode

Agent based scan Pros:

1. Only one port is required during scan, which can be configured under Admin -> Agent settings -> Agent Configuration -> Agent Port.
2. Performs scan on system boot up and pushes the data to AE application.
3. The data transfer in agent scan is very minimal compared to agentless scan and even more less when compared to delta scan (difference in data between two subsequent scans is fetched).
4. Quick access to the remote machine on performing Remote Control.
5. Easy to deploy agent through active directory.
6. Dependencies over DCOM and RPC settings are eliminated.
7. Once the agent is installed in all the machines, you can scan those machine from Linux server.

Agent based scan Cons:

1. Agent should be upgraded if the version is changed. This can be performed from the Active Directory.

Methods of Agent Deployment

If you have enabled Agent Mode, you can deploy the agent in the Windows machine through any of the methods given below,

Agent Deployment Methods

ServiceDesk Plus installed in Windows server:

1. Import from Active Directory logon script
2. ServiceDesk Plus Application
   - Bulk Deployment of Agent
   - Upgrading the Agent
   - Installing Agent in individual machine
3. Manual Installation of Agent
4. Installing Agent through PsExec utility

ServiceDesk Plus installed in Non-Windows server:

1. Import from Active Directory logon script
2. Manual Installation of Agent
3. Installing Agent through PsExec utility
4. Configuring Agent details using Orca editor

ServiceDesk Plus installed in Windows server

If ServiceDesk Plus is installed in a Windows server, then you can deploy the agent using the following methods,

1. **Import from Active Directory logon script**
2. **Deploying Agent from ServiceDesk Plus Application**
3. **Manual Installation of Agent**
4. **Installing Agent through PsExec utility**

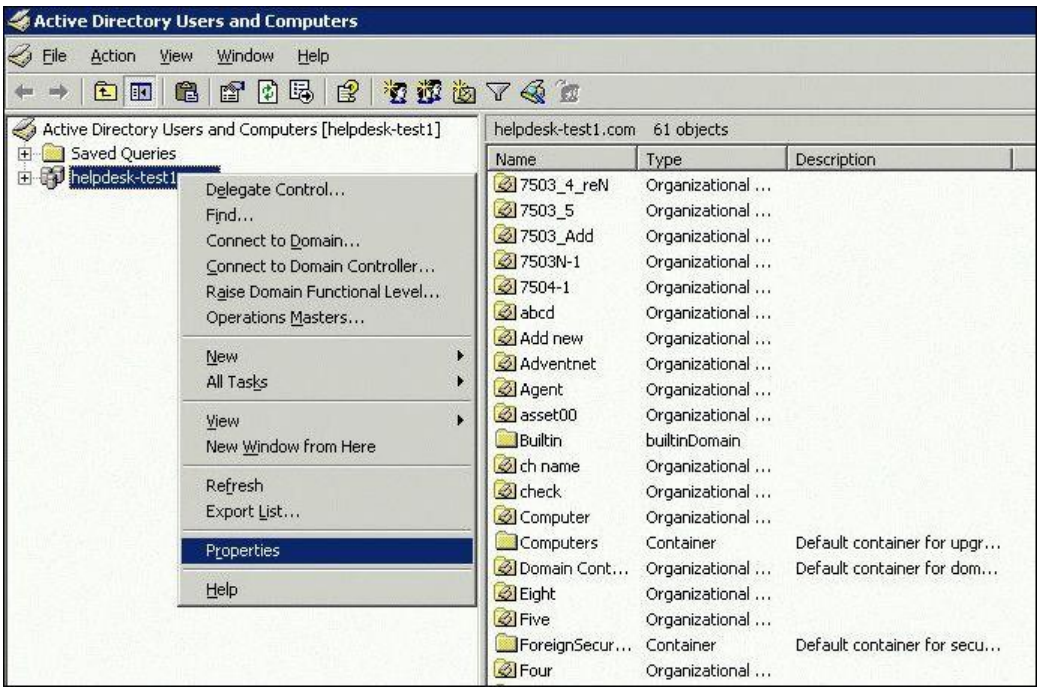
Method #1: Import from Active Directory logon script

An instant method to push the agent in all the Windows machine within a domain is through Active Directory logon script. Instead of providing permission to all the scanned workstations for file transfer, the agent is installed once the user logs into the machine. In addition, the agent can be deployed to all the newly added workstations automatically on scheduling an AD Import.

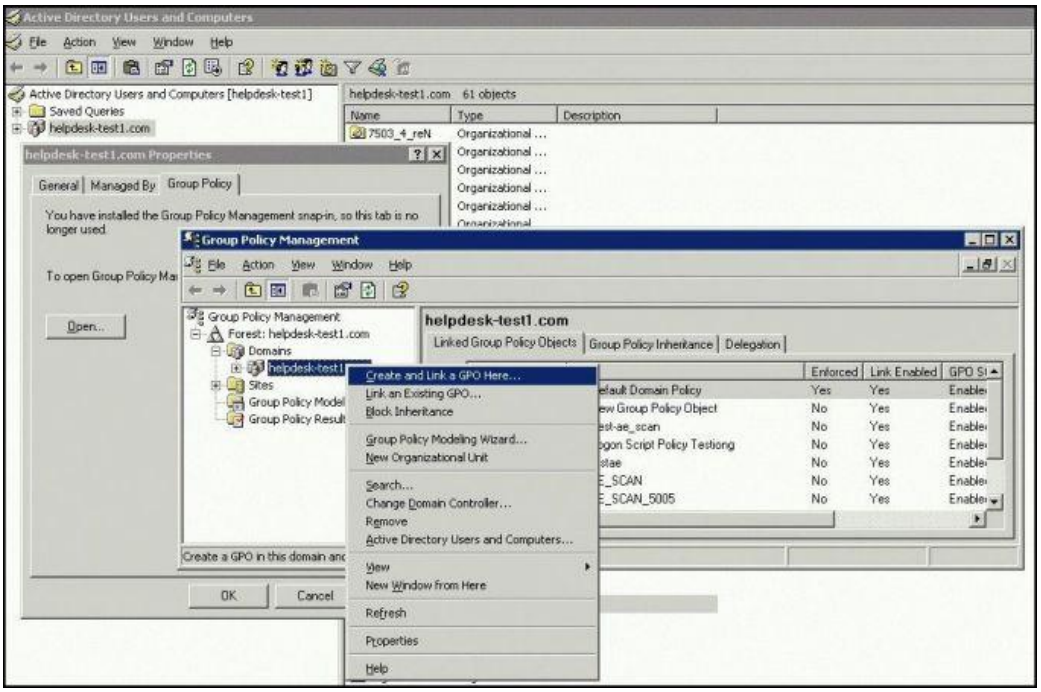
To install the agent from Active Directory,

1. Create a network share like, \\MyServer\MyShare
2. Click **Download Agent** and run the agent.msi file.
3. Save the agent and the script in the network share.
4. In your Domain controller, click **Start** -> **Administrative Tools** -> **Active Directory Users and Computers**.

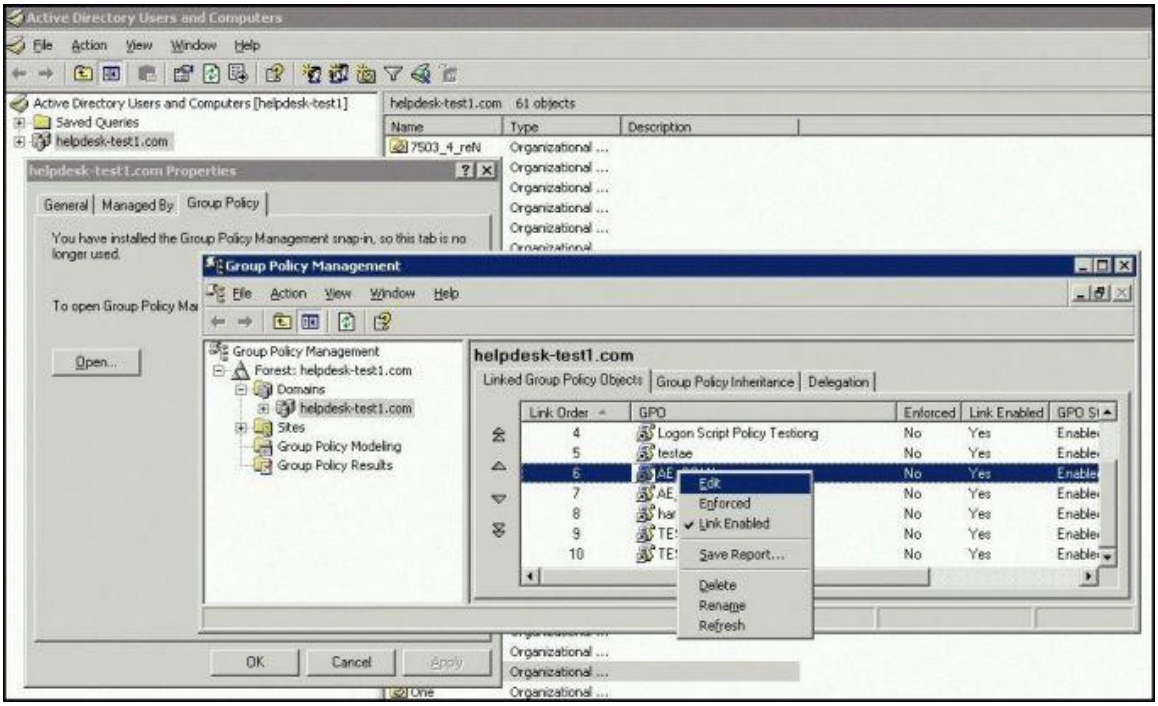
5. In the console tree, right click on your domain, and select **Properties**.



6. Select **Group Policy** tab, and click **Open** (New) button. The Group Policy Management window pops up.
7. Right click on the name of domain or the Organizational unit for which you would like to configure the script. Click **Create and Link a GPO Here...** option.



8. Type a name for the new GPO say, AGENT DOWNLOAD and click **Ok**. The GPO is added to the existing list.
9. Right click on the newly created GPO and click on **Edit** option.



10. In the new window go to the **User Configuration** -> **Windows settings** -> scripts -> double click Logon.
11. In the new Logon Properties window click on **Add**. Now Browse and select the script "\\MyServer\MyShare\InstallAgent.vbs". The script should be accessible by the target workstations.
12. Specify the Script parameters as msi file name with path (eg. \\MyServer\MyShare\ManageEngineServiceDesk PlusAgent.msi) and click **Ok**.
13. Close the Group Policy Window and click **Ok**.
14. Quit the Active Directory Users and Computer Window.
15. When the client computer starts the agent is automatically installed.

Note	1. The agent can be deployed to all the Windows Workstations and Servers within the domain. 2. The agent is deployed when the user logs into the machine.

Method #2:Deploying the Agent from ServiceDesk Plus Application

Apart from Active Directory which involves deployment of agent in workstations of a particular domain, you can deploy agents in workstations that are part of a network group or workgroup from the ServiceDesk Plus application. You can choose to deploy the agent as a bulk or in individual machines.

Configurations essential to deploy the agent from the AE application

1. Scan the workstations using the Scanning Prerequisites.
2. After a successful scan, enable "File and Printer share" on executing the command (given below) in the command prompt of the workstation to install the agent.

netsh firewall set service FILEANDPRINT

a. Bulk Deployment of Agent

1. From the Workstation Configuration page, click on **Agent Details** link. The workstations for which the agent is not installed is listed.

2. Select the check box beside the workstations for which the agent should be installed.
3. Click **Install Now**. The agent is installed in the selected workstations.

b. Upgrading the Agent

In certain cases, the agent installed in the workstation may be of an older version. You can upgrade to the latest agent version from the AE application,

1. Select Agent with older version from the Filter drop down.
2. Select the check box beside the workstations for which the agent should be upgraded.
3. Click **Upgrade**.

c. Installing Agent in Individual machine

In credentials for Agent Installation page,

- **Name/IP:** Enter the workstation name or the IP address of the workstation for which the agent should be installed.
- **Login Credentials:** Select the login credentials as either Global or Local. Global credentials are common login permissions for all the assets. Local credentials are private login permissions for an asset.
- If you have enabled **Local Credentials**, specify the login credentials to your machine.

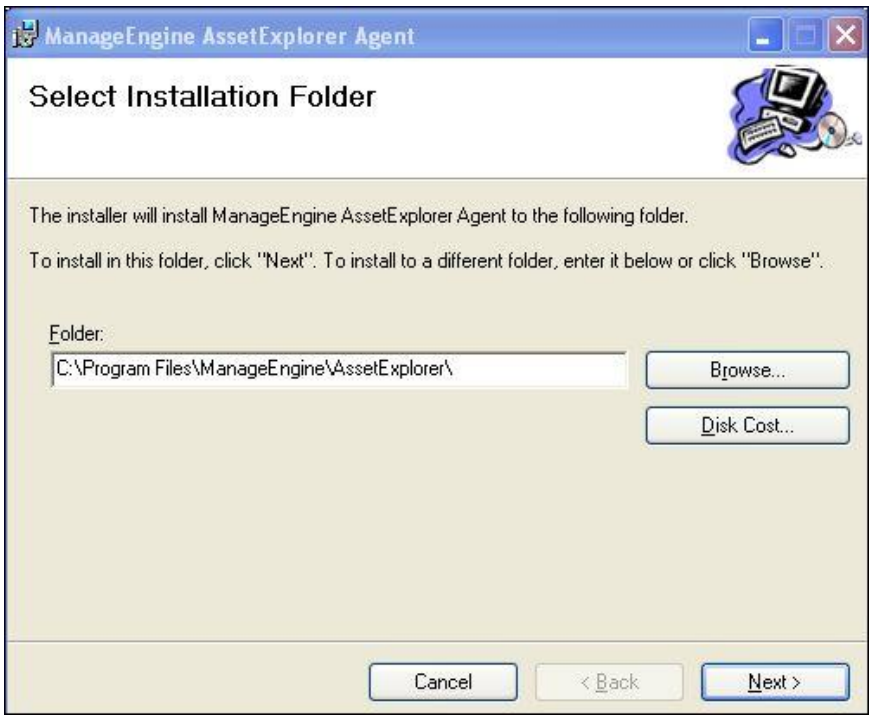
If you have enabled **Global Credentials**

- **Scan Type:** Specify the scan type as Domain mode/Network mode under which the workstation is configured.
- **Domain Name:** Select the Domain name/network under which the workstation is configured.
- **Login Name & Password:** Specify the domain credentials.

Method #3: Manual Installation of Agent

To download and install the agent as a service.

1. Click on **Download Agent** button.
2. Run the ManageEngineServiceDesk PlusAgent.msi file. The **ManageEngine Asset Explorer Agent Setup Wizard** appears.
3. Click **Next >**.
4. Choose the **Installation folder** name under which the Agent needs to be installed. By default, the folder name is specified as *C:\ManageEngine\ServiceDesk Plus* directory.



If you want to change the installation directory, then, click the **Browse** button beside the directory path. From the file chooser window, choose the directory of your choice and click **Ok**.

5. Click **Next >**.
6. The next step is **Agent Configurations**, if you have not yet configured the agent, you can specify the server details and agent settings. Click **Next >**.
7. You also have an option to enable scan when ever the **system starts up**. Click **Next** to install the agent.

Method #4: Installing Agent through PsExec Utility

You can install agents through PsExec utility in Windows Workgroup.

1. Download the PsTools.
2. Install the software in one of the Windows machine.
3. From the command prompt, go to the directory where the PsTools is installed.
4. Execute the command as given below, to install the agent on each computer listed in the file.

   psexec.exe @<file name> -u <domain name\user name> -p <password>
   msiexec /i <msi file name>

   For example:

   psexec.exe @ComputersList.txt -u WORKGROUP\administrator -p password
   msiexec /i "\\ae-test1\msi\ManageEngineServiceDesk PlusAgent.msi"

ServiceDesk Plus installed in Non - Windows Server

If ServiceDesk Plus is installed in a Non - Windows server say, Linux, you can still use the Agent Mode to scan Windows machines. But, you can neither configure the Agent details from Agent Settings page nor install and upgrade the agent from the Linux server.

Some of the methods through which you can configure and deploy the agents are,

1. **Importing from Active Directory logon script**
2. **Installing Agent through PsExec utility**

Method #1: Import from Active Directory logon script

To deploy the agent through Active Directory, use the logon script and provide additional parameters as given below,

<agent with directory name> <server protocol> <server ip> <server name> <server port> <agent port>

For example:

\\server\share\ManageEngineServiceDesk PlusAgent.msi http 192.168.112.153 servicedesk 8080 9000

On entering the additional parameters, follow the steps as in Active Directory logon script.

Method #2: Installing Agent through PsExec Utility

You can install agents through PsExec utility in Windows Workgroup.

1. Download the PsTools.
2. Install the software in one of the Windows machine.
3. From the command prompt, go to the directory where the PsTools is installed.
4. Execute the command as given below, to install the agent on each computer listed in the file.

   psexec.exe @ComputersList.txt -u administrator -p Zoho123SDP msiexec /i <msi file name> SERVERIP=<server ip address> SERVERNAME=<servername> PROTOCOL=<http or https> PORT=<port no> AGENTPORT=<agent port> SCANATBOOT=<0 or 1>

For example:

psexec.exe @ComputersList.txt -u WORKGROUP\administrator -p password msiexec /i "\\Linux_Agent.msi" SERVERIP=199.1.1.1 SERVERNAME=servicedesk PROTOCOL=http PORT=8080 AGENTPORT=9000 SCANATBOOT=1

Configuring Agent details using Orca editor

To configure the agent details, you need to modify the .msi file using Orca editor and then proceed with the installation. Once the parameters are configured, you can install the agent using Active Directory logon script or through PsExec utility.

1. Download the Orca editor.
2. Install the editor in one of the Windows machine.
3. Download the agent from ServiceDesk Plus server and copy it to the Windows machine having the Orca editor.
4. Right-click the .msi file and select **Edit with Orca** option. The Orca editor window pops-up, listing all the tables on the left hand side.
5. Click **Property** table.
6. In the right panel, right-click and select **Add Row** option.
7. Enter the **property** as SERVERNAME and **value** as the name of the ServiceDesk Plus server. Also, provide the following details,

PROPERTY	VALUE
SERVERIP	IP Address of the ServiceDesk Plus Server
PORT	Port No. of the ServiceDesk Plus Server
PROTOCOL	Protocol used by the server, whether it is http or https.
AGENTPORT	Port No. of the Agent. This port should be open in the Windows machine to install the agent.

8. **Save** the provided details.
9. **Close** the editor and proceed with the installation.

Uninstall the Agent

You can manually un-install the agent from Add/Remove Programs or from the ServiceDesk Plus application. If you are unable to un-install the agent from the Control Panel then follow the steps below,

1. Click **Workstations** link from the Assets block.
2. From the Workstation list view page, click on **Agent Details** link. By default, the workstations for which the agent is not installed is listed.
3. Select the options either **Agent with older version** or **Agent installed Workstations** from the **Filter** drop down.
4. Select the check box beside the workstations to un-install the agent.
5. Click **Un-install** button. The agent is removed from the selected workstations.

Agentless Mode

As the name suggests, the Agentless mode does not involve any client side software installed in the host. Instead, the agent-less mode uses a built-in agent such as **WMI** (***Windows Management Instrumentation***) installed in each Windows machines to scan the inventory details and to access the workstation remotely.

The agentless mode is most appropriate for small organization where the network is less complex and does not involve installing, upgrading and maintaining an additional software program on each machine.

Credentials for Scans

NOTE: Please note that the agentless supports only 'Windows' platform.

Communication Protocol	***Login Credentials***	***Ports***
WMI (Supports only Windows platform)	Credentials of Domain Controller.	TCP 135, 445 and one random port greater than 1024.

Configuring RPC and DCOM Settings

The accessibility of the data using WMI is controlled by the RPC and DCOM settings which should be configured in the workstations.

For Windows Firewall and DCOM option

1. Download the file **scan_setup.txt**
2. Copy the file as "scan_setup.vbs" in the target workstation.
3. Execute the script using Cscript from command prompt as follows:
   DIR_OF_SCRIPT_FILE> CSCRIPT scan_setup.vbs
4. **Restart** the workstation.

NOTE: This script can also be configured as Logon Script in the Domain Controller, to configure Firewall for all computers in the domain. Click here to know more.

Pros and Cons of Agentless mode

Agentless scan pros:

1. Does not involve an agent to be installed, upgraded and maintained in each workstation.

Agentless scan cons:

1. The DCOM and RPC settings should be configured.
2. More number of ports used when compared with agent mode.
3. ServiceDesk Plus server should be installed in a Windows machine to scan windows workstations/servers.

Scan Linux, Solaris, MAC and AIX machines

Apart from scanning Windows machines, ServiceDesk Plus scans workstations/servers of other Operating Systems such as Linux, Solaris, MAC and IBM-AIX.

There are two methods through which these machines can be scanned in ServiceDesk Plus application,

- Network Scan - Scan workstations/servers that are part of your network.
- Workstation/Device Scan - Scan your newly added machines by specifying the workstation credentials.

Ports and Credentials to perform scan for these machines are,

Communication Protocol	Login Credentials	Port
Telnet	Telnet Credentials	23
SSH (Secure Shell)	SSH Credentials	22

Click here to know more on ports used for scan.

Scan VMWare Hosts

ServiceDesk Plus scans the VMHost machines in your network and also determines the VMs that are running on these hosts. Apart from this, the scan would also discover the complete hardware details of the VMHost and the relationships between the VMHost and the VMs.

There are two methods through which these machines can be scanned in ServiceDesk Plus application,

- Network Scan - Scans the VMHosts that are part of your network.
- Workstation/Device Scan - Scan the VM Host machine by specifying the HTTPS credentials.

Ports and Credentials to perform scan for these machines are,

Communication Protocol	***Login Credentials***	***Port***
VMWare vSphere web services API	HTTPS Username and Password	443 (default)

Click here to know more on ports used for scan.

Scan Printers, Routers, Switches and Access Points

ServiceDesk Plus currently supports the scanning of IP devices namely, Printers, Routers, Switches and Access Points.

There are two methods through which these devices can be scanned in the application,

Network Scan - Scans devices that are part of your network.

Workstation/Device Scan - Scan your newly added devices by specifying the their credentials.

Note: Please note that ServiceDesk Plus does not scan other IP devices like Firewall, Hubs, IP Telephones and so on.

Ports and Credentials to perform device scan

Communication Protocol	***Login Credentials***	***Port***	***Service Performed***
SNMP (Simple Network Management Protocol)	SNMP Credentials	161	Fetches and Identifies the IP devices.
SSH (Secure Shell)	SSH Credentials	22	Fetches additional information on Routers and Switches.

Click here to know more on ports used for scan.

Windows Domain Scan

You can configure and scan all the available **Windows Workstations and Servers** in your domain network using ManageEngine ServiceDesk Plus. When you set up the ServiceDesk Plus application and start it for the first time, the application automatically discovers all the available Windows domain in your network.

To discover workstations in a domain,

- Select a **Domain** and enter the domain controller and login credentials for the domain controller.
- Select the **Organizational Units** (OUs) from the list.
- The workstations in the OUs are retrieved, enumerated and scanned (ten workstations are scanned simultaneously)
- The machines in the specified domain then is **Pinged**.
- If the machine responds to the ping, **scan the inventories** (hardware/software information) in the machine using Agent or Agentless mode.

The Windows Domain Scan page can be access in two ways,

a. Quick Actions drop down

b. Admin Tab

Quick Actions drop down

The Quick Actions drop down is a quick navigator to instantly access the Domain List page.

Admin Tab

1. Click **Admin** tab in the header pane to open the configuration wizard page.
2. Click **Windows Domain Scan** icon under **Discovery**. The Domain list view page opens where you can add, edit, delete and scan a domain.

Add a New Domain

If you find that there are some domains that are missing in the list, then you can add those domains manually.

1. Click **Add New Domain** link.
2. Enter the **Domain Name**. The name should be unique to identify the domain and is a mandatory field. Say, Acme.
3. If you want the domains to be displayed in the login screen when Active directory Authentication is enabled, select the check box beside **Public Domain**. Else un-check the Public Domain check box to list the domain as **Private Domain**.

4. Enter the **Domain Controller** name for the Active Directory Server. The organizational units are listed only if the domain controller name is provided.
5. Specify the Login Credentials for the domain controller in **Username** and **Password** fields.
6. If you wish to add any description for the domain, enter it in the **Description** text box.
7. Click **Save**. The domain is listed in the domain list view page.

Click **Save and Scan now** button to save and scan the domain immediately. Clicking on **Cancel** button takes you back to the list view.

Note	For the workstation scan to execute successfully the following things need to be true: a. WMI should be enabled in the workstation where the Asset Explorer server is running. b. COM/DCOM service should be switched on in all the workstations belonging to the windows domain.

Scanning a Domain

1. Click **Scan Domain** icon of the domain to be scanned from the Domain list view page.
2. Choose the **Organizational Units** for which you want to import the workstations by enabling the check box.
3. Select the **Site** to associate the scanned workstations from the **Choose Site** option. This option is available only if the sites is specified
4. Click **Start Scanning** button to start the scanning process.

You will get the complete report of the scan listing the total number of scanned workstations, successful scanned workstations and the number of failed workstation list.

Editing a Domain

1. Click **Edit** icon beside the **Domain Name** you wish to edit.
2. In the **Edit Domain** form, you can modify the name of the domain, login name, password, and description of the domain.
3. Click **Save** to save the changes performed. Click **Save and Scan now** button to save and scan the domain immediately. At any point, if you wish to cancel the operation that you are performing, click **Cancel**.

Deleting a Domain

1. Click **Delete** icon beside the **Domain Name** you wish to delete. A dialog box confirming the delete operation appears.
2. Click **OK** to proceed with the deletion. The domain gets deleted from the list. If you do not wish to delete the domain, then click **Cancel**.

Network Scan

With Network Scan you can discover all the **Linux, Solaris, MAC, IBM-AIX machines** and devices such as **Printers, Routers, Switches and Access Points** that are part of your network. In addition, you can also scan **Windows machines** and **Workgroup** (Windows machines that are not part of a domain), and **VMWare Host** machines.

To discover workstations in a network,

- Enter the **Network Range** to scan.
- The workstations and devices in the network are retrieved, enumerated and scanned (ten workstations are scanned simultaneously)
- The machines in the specified range is **Pinged.**
- If the machine responds to the ping, **scan the inventories** (hardware/software information) in the machine. Use **SSH or Telnet** for Linux, Solaris, MAC, IBM-AIX machines, **SNMP** for Printers, Routers, Switches and Access Points, **WMI** for windows machines.

The Network Scan page can be accessed by two ways in ServiceDesk Plus application,

a. Quick Actions drop down menu

b. Admin Tab

Quick Actions drop down menu

The **Quick Actions drop down** menu is a quick navigator to instantly access the Network Scan page. From the Quick Actions drop down select **Network Scan** option.

Admin Tab

1. Click the **Admin** tab in the header pane to open the configuration wizard page.
2. Click **Network Scan** icon under Discovery block. The Network list view page opens where you can add, edit, delete and scan a network.

Ports and Credentials to scan machines using Network Scan

- Linux, MAC, Solaris, IBM-AIX

  Communication Protocol: Telnet or SSH

  Login Credentials: Telnet Credentials

  Port for Telnet: 23

Port for SSH: 22

- VMWare Host machines

  Communication Protocol: VMWare vSphere web services API

  Login Credentials: HTTPS Username and Password

  Port: 443 (default port)

- Printers, Routers, Switches, Access Points

  Communication Protocol: SNMP + SSH (devices are identified and fetched using SNMP. If SSH credentials is provided, additional information on routers and switches can be fetched)

  Port for SNMP: 161

  Port for SSH: 22

- Windows Machines

  Communication Protocol: WMI or Agent

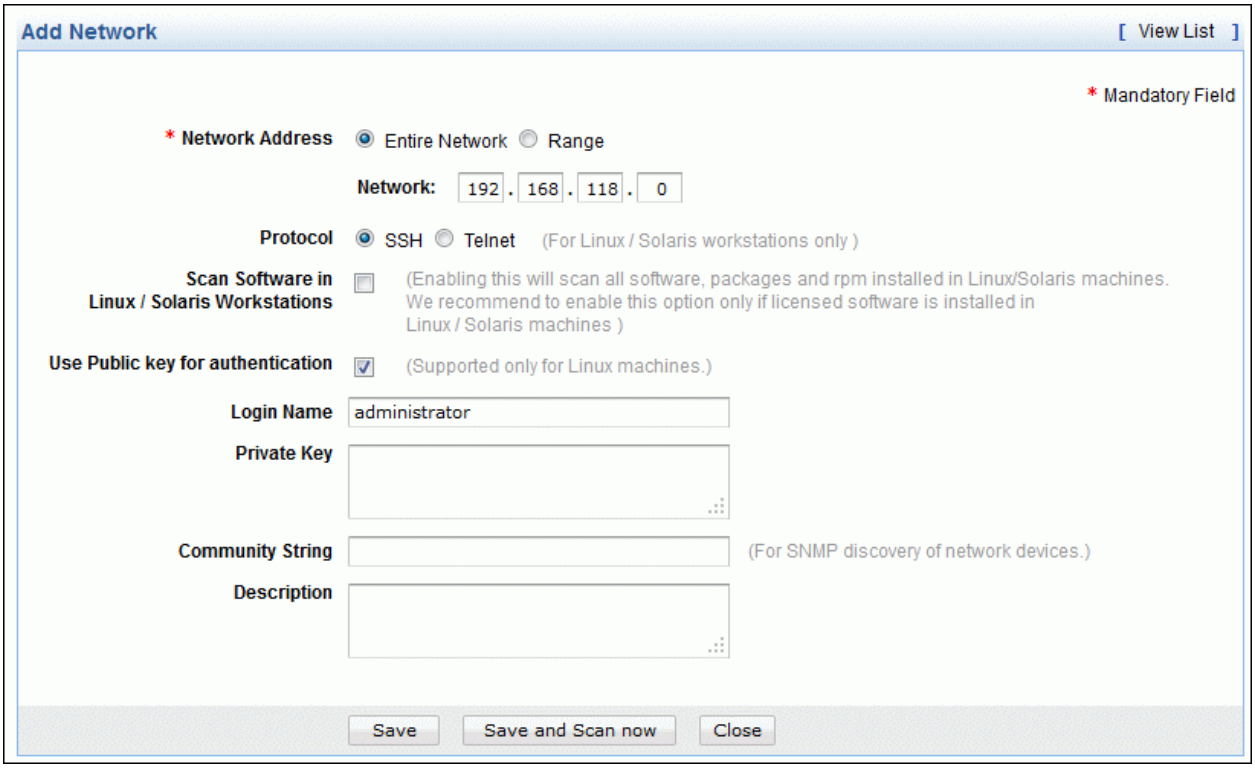
  Login Credentials: Credentials of the domain controller

Add New Network

Linux, MAC, Solaris, IBM-AIX

1. Click **Add New Network** link.
2. Enter the **Network Address**. You can either scan the **Entire Network** say, all workstations under 192.168.27.0 or particular **Range of Network** say 192.168.27.0 to 192.168.27.30 by clicking the corresponding options.
3. Select the **Protocol** say, SSH or Telnet.
4. If license software are installed in Linux and Solaris machines, enable **Scan Software in Linux and Solaris workstations** check box.
5. If you have enabled SSH, then you have an option to enable key based authentication for Linux machines.

   The key based authentication is an alternative authentication mechanism of the username and password, and its know to be more secure. To enable key based authentication, you need to generate a pair of public and private keys from a Linux machine. Select **Use Public Key for authentication** check box and enter the **Private Key** in the field provided.



6. If you have enabled SSH, enter the SSH login credentials. If you have enabled Telnet, enter Telnet Credentials in the **Login Name** and **Password** fields.
7. Provide any relevant information pertaining to the network details in the **Description** field.
8. Click **Save**. Click **Save and Scan now**, to save and scan the workstations in the specified range.

VMWare Host Machines

1. Click **Add New Network** link.
2. Enter the **Network Address**. You can either scan the **Entire Network** say, all workstations under 192.168.27.0 or particular **Range of Network** say 192.168.27.0 to 192.168.27.30 by clicking the corresponding options.
3. Enter the HTTPS credentials in the **Login Name** and **Password** fields.
4. Provide any relevant information pertaining to the network details in the **Description** field.
5. Click **Save**. Click **Save and Scan now**, to save and scan the workstations in the specified range.

Printers, Routers, Switches and Access Points

1. Click **Add New Network** link.
2. Enter the **Network Address**. You can either scan the **Entire Network** say, all workstations under 192.168.27.0 or particular **Range of Network** say 192.168.27.0 to 192.168.27.30 by clicking the corresponding options.
3. If the **Protocol** is SSH, enable the corresponding radio button.

4. If SSH is enabled, enter the SSH **Login Credentials** which provides additional information on routers and switches.
5. For SNMP discovery of network devices enter the **Community String**.

   SNMP is used for identification of printers, routers, switches and access points. In case of printers the complete inventory is being fetched using SNMP. In case of routers and switches basic inventory is being fetched using SNMP and a more detailed inventory is done using SSH or telnet (if credentials are provided).
6. Provide any relevant information pertaining to the network details in the **Description** field.
7. Click **Save**. Click **Save and Scan now**, to save and scan the devices in the specified range.

Windows Machine

1. Click **Add New Network** link.
2. Enter the **Network Address**. You can either scan the **Entire Network** say, all workstations under 192.168.27.0 or particular **Range of Network** say 192.168.27.0 to 192.168.27.30 by clicking the corresponding options.
3. Enter the **Login Credentials** of the domain controller in the **Login Name** and **Password** fields. The login Name should be provided as <DOMAIN_NAME>/<USER_NAME>. For instance, ACME/administrator
4. Provide any relevant information pertaining to the network details in the **Description** field.
5. Click **Save**. Click **Save and Scan now**, to save and scan the workstations in the specified range.

Scan Domain

1. From the Network List View page, click **Scan Network** icon .
2. If your organization is distributed across various sites, select the **Site** to which the workstations/devices are associated.
3. Click **Start Scanning**. Once scanned, you will get the complete report on the success and failed workstations of the scan.

Edit Network

1. From the Network List View page, click the **Edit** icon of the network to be edited.
2. Edit the network details and **Save** the changes. Click **Save and Scan now**, to save and scan the workstations in the specified range

Delete Network

1. From the Network List View page, click the **Delete** icon beside the network to delete.A dialog box confirming the delete operation appears.
2. Click **OK** to continue. The network is deleted from the list.

Workstation/Device Scan

If a new workstation/device is added in your network, and you wish to scan only the newly added workstation instead of the entire network, you can specify the workstation/device credentials and scan.

You can scan workstations/devices using **Global** Credentials or **Local** Credentials. Global Credentials are common login permission for all assets which can be scanned with Domain mode or Network Mode. Local credentials are private login permissions i.e., login permission to the workstation/device to be scanned.

Note	Local Credentials are generally selected for scanning devices such as servers and routers which needs private or local user name and password. You can also scan VMHost machines using Local Credentials.

The Workstation/Device Scan can be access by two ways in ServiceDesk Plus application,

a. Quick Actions drop down

b. Asset Tab

Quick Actions drop down

Click Quick Actions drop down -> **Workstation Scan** option. The Quick Actions drop down is a quick navigator to instantly the **Scan configuration page**.

Asset Tab

1. From the **Assets** block, click any one of the IT Assets.
2. Click **New Scan** button to open the Scan Configuration page.
3. Specify the **Name or IP address** of the workstation to be scanned. This field is mandatory as the workstation in the network is identified with the Name or IP address.
4. Select any one of the credentials by enabling the radio button.

Global Credentials

1. Select the **Scan Type** from the drop down. The scan type can be either Domain Mode (if the workstation is Windows) or Network Mode.
2. Choose the **Domain Name/Network** from the drop down. If the domain/network is unavailable in the list, you can add a new domain/network using the **Add New** link. [Refer Network Scan to add a new network].
3. Specify the **Login Credentials** for the Domain/Network in the Login name and Password field.
4. If you have selected Network Mode to scan a device, enter the **Community String** of the device in the field provided.

5. Click **Scan**. The workstation/device is scanned and the information is obtained.

Local Credentials

1. Select the **Device Type** from the drop-down. Say, Windows, Unix or other device.
2. Select the communication **Protocol** as SSH or Telnet for workstations like Linux, Solaris, MAC, AIX and devices such as router, switches, access points and printers.
3. If license software are installed in Linux and Solaris machines, enable **Scan Software in Linux and Solaris workstations** check box.
4. If you have enabled SSH, then you have an option to enable key based authentication for Linux machines.

   The key based authentication is an alternative authentication mechanism of the username and password, and its know to be more secure. To enable key based authentication, you need to generate a pair of public and private keys from a Linux machine. Select **Use Public Key for authentication** check box and enter the **Private Key** in the field provided.
5. Specify the **Login Credentials** for the workstation/device in the Login Name and Password field.
6. Click **Scan**.

   NOTE: To scan VMWare host machines, select the Device Type as **Other devices** from the drop-down menu and enter the HTTPS login credentials in the **Login Name** and **Password** fields.

Scanning Machines outside a domain/network

All Windows workstations/servers that are not part of a domain/network are scanned using **Standalone Workstation Audit** or by installing the **Agent** in the remote machine. Both the methods involve a script installed in the remote workstations which scans and pushes the inventory details to the SDP server.

Method #1: Standalone Workstation Audit

Scanning remote workstations involves two simple steps,

1. Download the **ae_scan.vbs** script from ServiceDesk Plus application and execute the script in the workstation to be scanned.
2. On executing the script a XML file is generated. Import the XML file into the ServiceDesk Plus application. You can see the standalone workstation details in the list view.

The script can also be configured as Logon/Startup script in the Domain Controller.

Accessing Standalone Workstation Audit configuration

The standalone Workstation Audit can be accessed from the **Quick Actions drop down**. Click Quick Actions drop down -> **Standalone Workstation Audit** option. The Quick Actions drop down is a quick navigator to instantly the Scanning Windows Workstation through WMI Script page.

1. Click the **Click to Download** option

to download the **ae_scan.vbs** script. Save the file.
2. Open the command prompt. Change the directory to folder where the script is saved and execute the following script.

CSCRIPT ae_scan.vbs

3. On executing the script, a XML file is generated in the same folder.
4. Import the XML file to the application and **Submit** it.
5. On importing the XML file, the standalone workstation is scanned and gets listed in the Workstation list view page.

Method #2: Installing Agent in the remote machine

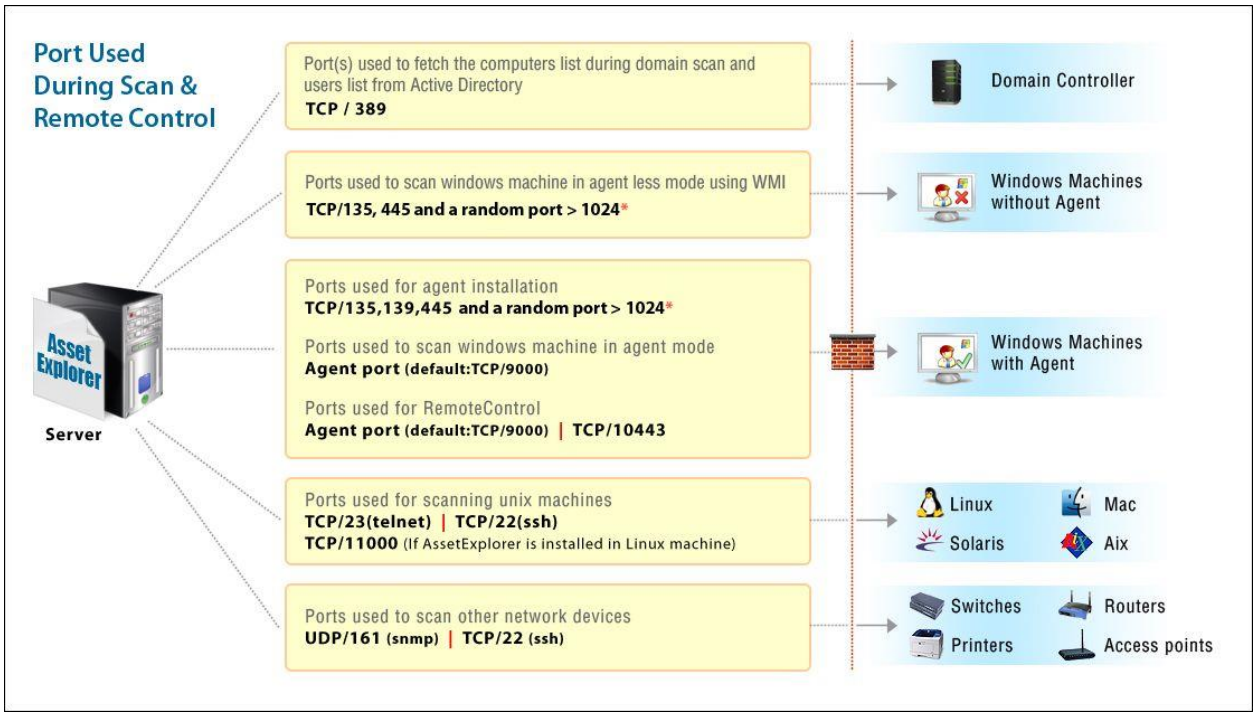
The Windows workstations/servers that are not part of the domain/network can also be scanned using the **Agent**. The steps involved to scan machines outside a domain/network,

1. Install the agent in the remote machines with "**Scan on system startup**" option enabled.

2. Make sure your ServiceDesk Plus server is on a **public IP** to accomplish this process.
3. **Restart** the remote machine. The system is scanned and the xml is pushed to the ServiceDesk Plus server.

Ports used during Scan

The various ports used during the scan and remote control is illustrated with the help of a diagram below,



* The range of the random port can be minimized. Click here to know how to restrict random ports.

Note:

1. The ports - **ICMP echo** and **ICMP echo reply**, should be allowed in the firewall as it is used to ping the target machines.
2. If the target machine has non English OS, then port TCP/7 should be added in the exception list of the firewall.

Scan WAN environment

For a *Wide Area Network* (WAN) such as an organization distributed across various geographical locations, two methods of scanning mechanism can be put to practice

- Distributed Asset Scan

  This method involves a Remote AE server to be installed in each geographical location to scan and maintains all the workstations, and user information of the respective sites. The data from the Remote AE Server is pushed to the Central AE Server either manually or by scheduling the data periodically.

- Open the Firewall ports between the sites.

  To know more on this section refer Ports used for scan.

Schedule Scan

With Schedule Scan, you can schedule periodic scanning of your domain/network, enable regular cleanup of scanned information and set re-scanning interval for scanning workstation.

To access the schedule scan configuration page,

1. Click the **Admin** tab in the header pane to open the configuration wizard page.
2. Click **Schedule Scan** icon under **Discovery** block. The Schedule Scan form opens.

Enabling Schedule Scan

Select **Enable Scheduled Scan** check box to configure regular scanning of the workstations. Select any of the 5 radio buttons below:

- **Scan Once**
  Select the date on which you want to scan your network using the calendar icon. And set the time to scan on the chosen date.
- **Daily Scan**
  Select the time (hours and minutes) from the combo box to scan workstations on a daily basis. Then select the date from the calendar button to schedule scans.
- **Weekly Scan**
  In the weekly scan option, you can also choose to schedule a daily scan. Select **Everyday** check box to enable scan on all the days of the week. Or, select the check box beside a particular day of the week. Then set the time (hours and minutes) of the scan to start the scanning process on the selected day of the week.
- **Monthly Scan**
  In the monthly scan option select the check box **Every Month** to scan every month throughout the year. Or, you can also choose the months you want to scan by selecting the check box beside the name of the months.

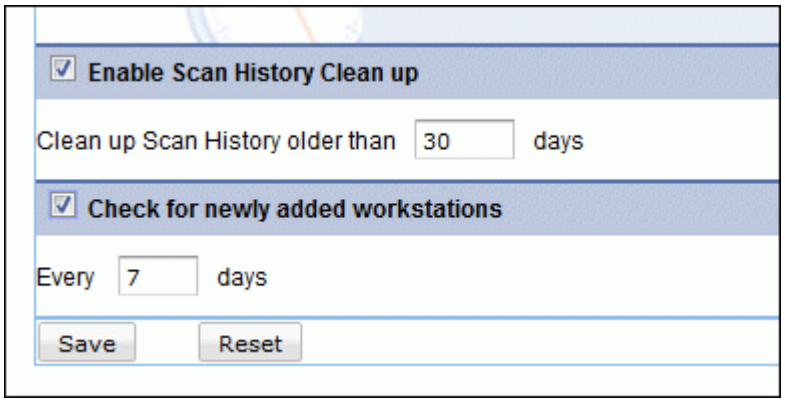
  Also, you can choose to schedule a weekly scan by enabling the radio button **Day** and select the scanning day of the week from the drop down. Or, select Date radio button and select the date from the drop down.

  Finally select the time (hours and minutes) of the scan.
- **Periodic Scan**
  You can enter a random period of time to repeat the scan. Enter the number in the field provided. The scan will be performed on every specified nth day. Where n is the number you enter in the field. The default value is 7th day.

Scan History Clean up

You can enable regular cleanup of the scanned information, by selecting the **Enable Scan History Clean up** check box and specifying the number of days after which the scanned history information should be deleted.

NOTE: We suggest you to clean up the scanned history periodically to enhance ServiceDesk Plus performance.



Checking for Newly Added workstations

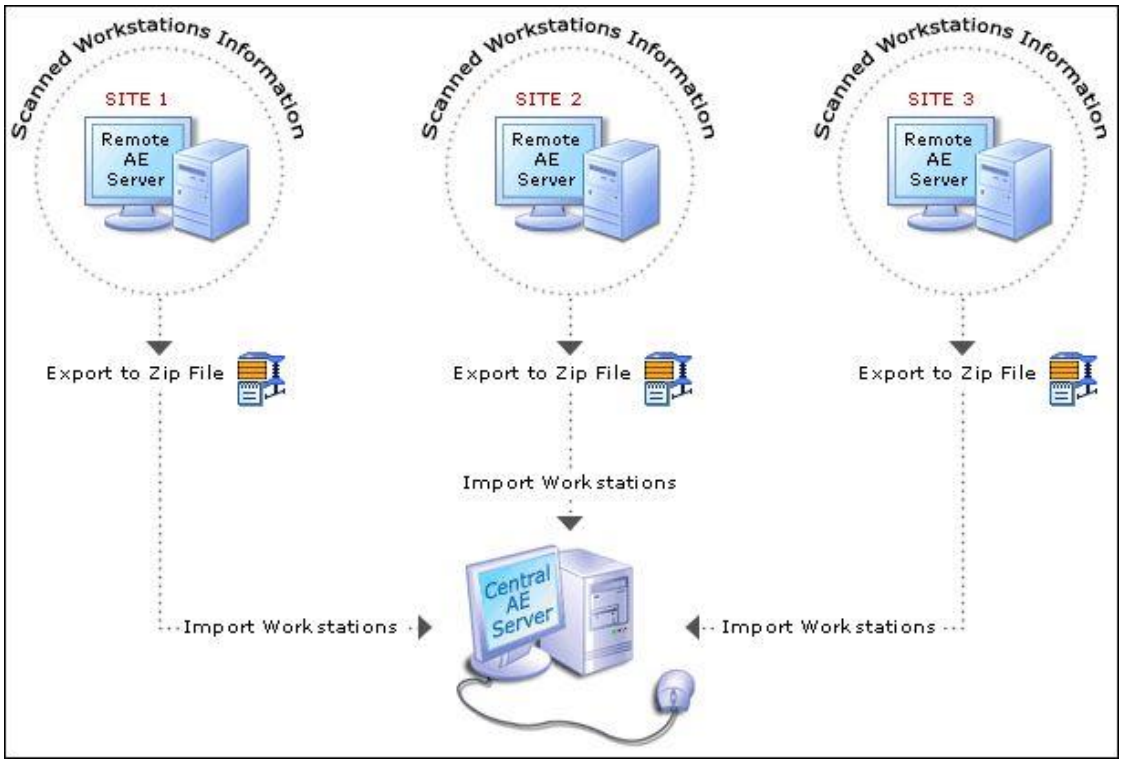
You can also check for newly added workstations by performing a re-scan of your domain/network. For this you need to select **Check for newly added workstations** check box and enter the number of days when the periodic re-scanning of your domain/network should be performed.

Click **Save**, to save the details. Click **Reset** button to reorganize the settings.

Distributed Asset Scan

In a wide spread organization distributed across various sites, the ServiceDesk Plus server may not be able to access all the assets in sites. Hence, a Remote AE server is installed in each site which scans and maintains all the workstations, and user information of the respective sites. The data from the Remote AE Server is pushed to the ServiceDesk Plus Server either manually or by scheduling the data periodically.

Since there is a constant need to update the users and workstation information in the ServiceDesk Plus Server, you can automate the process by specifying the central server details in the remote server thereby synchronizing the two servers.



Methods to perform Distributed Asset Scan

Manual

1. Extract the data in a **zip format** from the Remote AE server and **export** it to the SDP server.
2. **Import** this zip file into the SDP Server.

Auto Synchronization

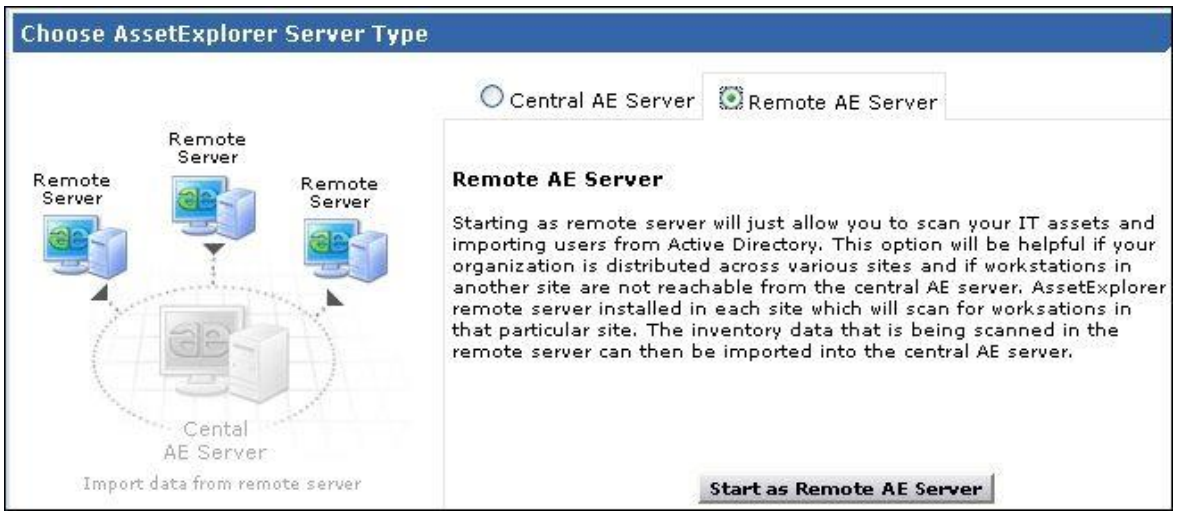
1. Configure the SDP Server details in **Central Server Settings**.
2. Select **Export and Push data to Central Server now** button. The data is automatically pushed to the SDP server provided the server is reachable.

Asset Scan in Remote AE Server

The scanned information in the Remote AE Server can be updated periodically either manually or automatically to the SDP Server.

Installing the Remote AE Server

You can install AssetExplorer as a Remote Server by choosing the server type as Remote AE Server on starting the application for the first time. The application gets started as the Remote AE Server.



Accessing the Configuration

1. Click the **Admin** tab in the header pane.
2. Click **Distributed Asset Scan** icon under **Discovery** block.

Methods to export the data

The data can be exported manually or pushed automatically in the SDP Server.

Manual

1. Click on **Export Data** to export the asset data into a zip file.
2. A confirmation message appears. Click **Ok** to proceed.
3. If the data has be generated successfully, an **Export Data** box pops up.
4. Click on the link to download the zip.
5. Send the zip file to the central server location through E-mail or through some storage device.

Auto Synchronization

If the central server is reachable, configure the details of the SDP Server by clicking on Central Server Settings.

- **Server Name:** Enter the Server Name or IP Address of the SDP Server.
- **Server Port:** The port where the SDP Server is installed.
- **Server Protocol:** The protocol to connect the SDP server and the remote server. Say, Http, Https
- **Site:** Site where the Remote AE Server is installed. The site specified must be configured in the SDP server so that the assets and users is associated to the appropriate site.
- **Username & Password:** Credentials of the SDP Server.
- **Domain Name:** Specify Domain Name if Active Directory authentication is enabled in SDP Server.

The Central Server may be connected through a proxy server. In this case,

- Enable **Is connected through Proxy Server** check box.
- **Proxy Server Name:** The Server Name or IP Address of the Proxy server.
- **Proxy Server Port:** The port of the proxy server.
- **Proxy Username & Password:** Credentials of the Proxy Server.

On configuring the Central Server Settings, you can export and push the data to central server automatically by clicking on **Export and Push Data to Central Server Now** button. The executed date, status of the operation and related comments is displayed in the List View.

Schedule Pushing of data to SDP Server

You can schedule to push the data from the remote AE server to the SDP Server at periodic intervals.

1. Click on **Schedule to synchronize data with Central Server** link.
2. Select **Enable** radio button.
3. Select the number of days after which the data should be pushed to the central server.
4. Select the date from the calendar icon to start the process. Also select the **Time** in hours and minutes from the drop down.
5. If there is a failure in pushing the data to the central server, you can send a **Notify** to the technician. Specify the email address in the text provided.

Importing data into SDP Server

Accessing the Configuration

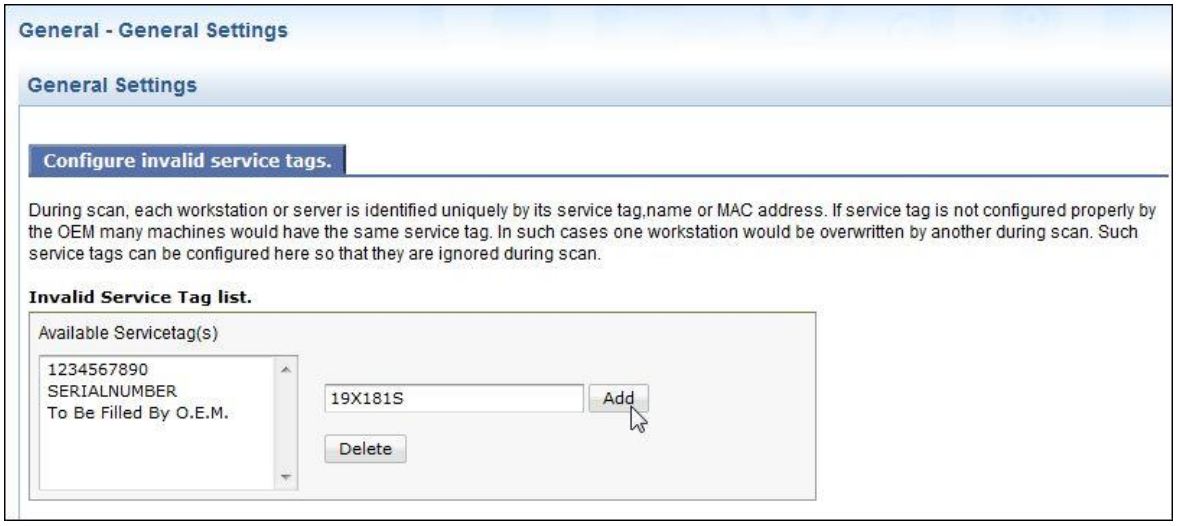
1. Click the **Admin** tab in the header pane.
2. Click on **Distributed Asset Scan** icon under Discovery block.
3. Click **Browse** and locate the zip file of the scanned assets.
4. Select the **Site** of the remote server from the drop down.
5. Click **Import** button to import the data. On importing the data successfully you get a success message.

General Settings

In General Settings, you can configure Invalid Service Tags, provide option for MAC address identification during scan, and for OIDs with unknown type; option to specify the product type and product name.

Configure Invalid Service Tags

While performing a scan, the Workstations and Servers are uniquely identified based on its Service Tags, Name and MAC address. So when the service tags are not incorrectly configured by the OEM, many machines would result in similar service tags. In such cases, if a scan is performed, one workstation details would be overwritten by the other. To avoid this, you can add the service tag under Invalid Service Tag list such that, the workstations with the service tag is ignored during a scan.

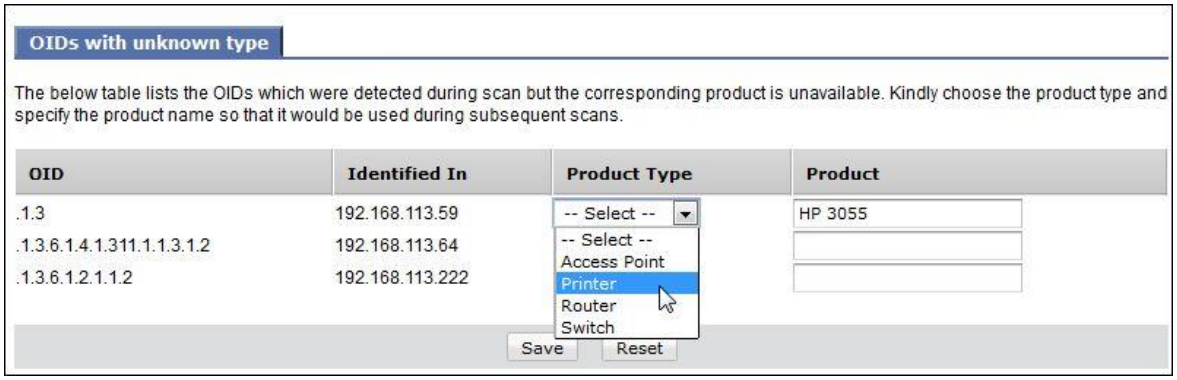


Enable/Disable MAC address identification during scan

Machines connected through VPN or VMware have similar MAC address. So while performing a scan in similar network environment, one machine is overwritten by the other. Hence you can uniquely identify the MAC address by enabling/disabling the radio button.

OIDs with Unknown Type

While performing a scan, the routers, switches, printers and access point in the network generate an OID which uniquely denotes the assets. If the OID of the asset is not available in the database, a new entry is populated from where you can choose the product type and specify the product name.


OIDs with unknown type
The below table lists the OIDs which were detected during scan but the corresponding product is unavailable. Kindly choose the product type and specify the product name so that it would be used during subsequent scans.
OID
Identified In
Product Type
Product
.1.3
192.168.113.59
-- Select --
HP 3055
.1.3.6.1.4.1.311.1.1.3.1.2
192.168.113.64
.1.3.6.1.2.1.1.2
192.168.113.222
-- Select --
Access Point
Printer
Router
Switch
Save
Reset

Asset Management

The Asset module of the ServiceDesk Plus application enables you to keep track of the various assets available in your organization and their corresponding usage and availability. It also helps you monitor your assets online in any of the networks in your firm. This helps you in proactively planning your resource allocation and purchases. Before you start using the inventory module, you have to configure the inventory-related information.

The inventory-related configurations are:

- **Product Type**:
  Categorize all the products purchased by your organization into specific product types.
- **Product**:
  Denotes the assets purchased by your organization.
- **Vendors**:
  Configure the vendors with whom your organization has business contacts for purchasing resources.
- **Workstation-Additional Fields**:
  Set your own custom fields apart from the default fields in the add workstation form.
- **Assets-Additional Fields**:
  Set your own custom fields apart from the default fields in the add assets form.
- **Resource State**:
  Configure the various states of a resource in the Asset Lifecycle.
- **CMDB - Configuration Item Types (CI Types)**:
  Categorize your CIs into specific CI Types. Also configure default attributes and relationships for each CI Type.
- **CMDB - Relationship Types**:
  Configure relationships types between the CIs. The Relationship Types shows how the CIs are interconnected and interdependent with other CIs.

Configuring Product Types

Each product purchased by a firm can be categorized into a specific product type. This is the high-level categorization for the assets that are bought. For example, Adobe Photoshop or Macromedia Flash can be categorized under the product type Software, while HP Inkjet Printer can be categorized under the product type Printer. In general, product type is a parent category under which you can group each of the specific assets owned by your firm. Proper categorization helps in estimating how much has been spent for purchasing each of the product type assets (Printer, Scanners, etc.), how much assets in each of the product types are available in the organization and so on.

- **Product Type:** Product Type is the high level categorization in grouping products. Say, Workstations in an organization are grouped under the product type "Workstations".
- **Type:** Type is a subdivision of product types that is classified into Asset, Components and Consumable. Say, Workstation is an Asset, Keyboard is a Component and the Printer Toner is Consumable.
- **Category:** Category is a common attribute of Product Types and Types. They are classified into IT and Non-IT. Say, Workstation is an IT asset, and Projector and Scanners are Non - IT assets.

Example **:** Adobe Photoshop & HP Inkjet Printer can be categorized as,

Assets	Product Type	Type	Category
Adobe Photoshop/Macromedia Licenses	Software Licenses	Components	IT
HP Inkjet Printer	Printer	Asset	IT

To open the product type configuration page:

1. Log in to the ServiceDesk Plus application using the user name and password of an admin user.
2. Click the **Admin** tab in the header pane.
3. In the **Asset Management** block, click the **Product Types** icon. The next page displays the available list of product types. You can add, edit, or delete product types.

Adding Product Type

To add a product type,

1. Click **Add New Product Type** link.
2. In the **Add Product Type** form, specify the **Product Type Name** which will uniquely identify the individual product types. Say, Printer.
3. Select the **Type** from the drop down. Say, Asset, Component, Consumable.

4. Select the **Category** from the drop down. Say, IT, Non-IT.
5. Specify any relevant information about the product type in the **Description** field.
6. Click **Save** button.

If you want to add more than one product type, then instead of clicking Save, click **Save and add new** button. This adds the new product type and reopens the add product type form after displaying a message that the a new product type is added.

At any point, if you decide not to add the new product type, then click **Cancel** to get back to the product type list. Clicking the **View List** link on the top right corner of the add product type form will also take you to the product type list view.

Editing Product Type

To edit a product type,

1. In the **Product Types List** page, click the **edit** icon beside the **Product Type Name** that you wish to edit.
2. In the **Edit Product Type** form, you can edit the product type name, type, category and the description.
3. Click **Save**. At any point, if you wish to cancel the operation that you are performing, click **Cancel**.

Even while editing a product type, if you wish to add new product type, then click **Save and add new** button instead of clicking **Save** button after making the changes.

Deleting Product Types

To delete a product type,

1. In the **Product Types List** page, select the check box beside the product type to delete.
2. Click **Delete** button. A dialog box confirming the delete operation appears.
3. Click **OK** to proceed with the deletion. If you do not want to delete the product type, then click **Cancel**.

Configure Products

Products refer to the commodities purchased by your organization. For instance, the workstation "Latitude D600" is a Product with the Product Type "Workstation". You can either import the product details from a CSV file or manually add the products in the application. Configuring products are essential while adding assets in the Asset module and while purchasing products using the Purchase Order form.

As and when the firm purchases a product, the product details should be entered in the application. If a product is discarded, then you can remove it from the list by deleting the same.

Most of the products wear out and decrease in value, over a period of time. For such products, calculating the depreciation is essential for financial reporting. You can configure depreciation using any of the 4 methods provided in the application.

To access the **Product** configuration wizard,

1. Login to the ServiceDesk Plus application using the user name and password of an admin user.
2. Click the **Admin** tab in the header pane.
3. In the **Asset Management** block, click the **Products** icon. The **Product List** view is displayed. You can add products, edit and delete products, and configure depreciation for products.

Adding Product

To add products,

1. In the **Product List** page, click **Add New Product** link available at the top right corner.
2. In the **Add Product** form, select the **Product Type** under which you wish to classify the product that you are adding from the drop-down.
3. Enter the **Product Name**. This field cannot be blank.
4. If you know the manufacturer of the product, enter the same in the **Manufacturer** field.
5. Enter the **Part No.** of the product.
6. If required, you can add relevant **Description** for the product.
7. Click **Save**. A message is displayed and the product is added. Click **Save and Add New** to save the product details and open the add product form to add another product. Click **Cancel** to go back to the Product List page, without saving the details.

Configuring Depreciation

If the selected Product Type is an asset or component, then the **Depreciation Details** block is displayed. ServiceDesk Plus allows 4 methods to calculate the depreciation of a product.

Methods of Calculating Depreciation

- Declining Balance
- Double Declining Balance
- Straight Line
- Sum of the Years Digit

Before we begin configuring depreciation, there are certain terms related to depreciation calculation:

- **Useful Life:** The period during which an asset is expected to be available for use.
- **Salvage Value:** The estimated selling value of any asset, after it has reached the end of service life or its value has depreciated substantially. It is the total net worth of any asset after it has exhausted its useful life span.

To configure depreciation details while adding the product,

1. Select the **Depreciation Method** from the drop down box. If the Depreciation Method is **Declining Balance**, then the **Useful Life** radio button and **Decline Percent** radio button appears. If the depreciation method is **Straight Line**, then the **Useful Life** radio button and **Depreciation Percent** radio button appears.
2. Specify the **Useful Life** of the product. If you have enabled Decline Percent or Depreciation Percent radio button, then specify the **Decline Percent** or **Depreciation Percent** of the product.
3. Specify the **Salvage Value** of the product.
4. Click **Save** button.

If you have not configured the depreciation details for a product, then you can also configure it from the Product List view.

1. Select the check box beside the product for which you want to configure depreciation.
2. Click **Configure Depreciation** button.
3. Select the **Depreciation Method** from the drop down box.
4. Specify the **Useful Life** and the **Salvage Value** of the product.
5. Click **Save** button. The depreciation details is configured for the selected product(s).

The configured Depreciation Details can be viewed in the **Costs** tab of the Assets details page. The depreciation is calculated only if the Purchase Cost and Acquisition Date is specified for the asset.

Associating Vendor

You can also associate the vendor to a product. To do so,

1. Click the **Vendor** tab.
2. Select the vendor of the product from **Vendor Name** drop-down.
3. Enter the **Price** of the product. The Vendor Name and Price are mandatory fields.
4. If there are any **Tax Rate** for the product, specify the same in the field provided.

5. If you know the warranty period of the product, enter it in the **Warranty Period** by choosing the number of years and months from the combo box.
6. Select the **Maintenance Vendor** of the product from the drop-down.
7. If you wish to add any comments, add it in the **Comments** text box.
8. Click **Save** to save the details. You can add more than one vendor who supplies the product. The vendors associated to the product information is displayed below the add vendor form.

If you do not wish to associate the vendor now, then click **Cancel**. It goes back to the **Product List** page.

Edit Product

You can edit the product details from the Product List page. To edit the product information,

1. Click the **Edit** icon beside **Product Name** in the **Product List** page.
2. Edit the fields in the form.
3. Click **Save** to save the details. While editing a product, you can also add new product by clicking Save and Add New button. Click Cancel to go back to the Product List page.

In some instances, you may add the product without associating the vendor. In such cases, you need to edit the product to associate the vendor.

1. Click the **Vendor** tab to associate a vendor for the product.
2. The Product Name is a non-editable field but you can add/edit the other fields in the form.
3. Click **Save**.

Delete Product

If a product is not used by a module, then you can delete the product from the list.

1. In the **Product List** page, enable the check box beside the product name.
2. Click **Delete** button. A dialog box confirming the delete operation appears.
3. Click **OK** to proceed. The product is deleted from the list.

Configure Vendors

An organization can have business contacts with more than one vendor for buying the various resources of the organization. It is very essential for the firm to keep track of its vendors and the products supplied by these vendors. To configure these details, you can use the configuring vendors option available in the admin page.

1. Log in to the ServiceDesk Plus application using the user name and password of an admin user.
2. Click the **Admin** tab in the header pane.
3. In the **Asset Management** block, click the **Vendors** icon. You can add, edit, or delete vendors.

Add Vendors

To add vendors:

1. In the **Vendor List** page, click **Add New Vendor** link available at the top right corner.
2. In the **Add Vendor** form, enter the **Vendor Name**. This name needs to be unique and this field cannot be blank. All the other fields are optional.
3. Enter relevant **Description** for the vendor.
4. Enter the **Contact Name** at the vendor location.
5. Enter the **address** details of the vendor in the respective fields.
6. Enter the vendor e-mail ID, phone, fax, and web URL.
7. Click **Save**. A message is displayed and the vendor is added. Simultaneously, a **Products** tab is also added. This tab is for adding the list of products that are supplied by the vendor.
8. Click the **Products** tab.
9. Click **Associate Product** button.
10. In the associate product form, choose the **product name** from the combo box and enter the **price** of the product. These are the two fields that are mandatory.
11. If you know the warranty period of the product, enter it in the **Warranty Period** by choosing the number of years and months from the combo box.
12. Choose the **maintenance vendor** from the combo box.
13. If you wish to add any comments, add it in the **Comments** text box.
14. Click **Add**. The page is refreshed to display the product association information. Repeat the steps 9 - 14, till you have added all the products supplied by this vendor.

If you do not wish to add the product list after opening the associate product form, then click **Cancel**. It goes back to the **Vendor Details** tab.

If you wish to add more than one vendor, then in step 7, instead of clicking Save, click **Save and add new button**. This would add the vendor and open the add vendor form for you to add more vendors. In this case, the product list needs to be added later. To get back to the vendor list page without adding the vendor or after adding the list of product supplied by the vendor, click **View List** link at the top right corner of the **Add Vendor** form.

Edit Vendor

If you have added the vendor without adding the product list, then you have to add the list of product supplied by the vendor only by editing the vendor information.

To edit the vendor information:

1. Click the edit icon beside **Vendor Name** in the **Vendor List** page.
2. In the **Edit Vendor** form, you can edit all the form fields mentioned in the add vendor procedure.
3. Click the **Products** tab to add the list of products supplied by the vendor and follow the steps 9 through 14 in add vendors.

Even while editing the vendor information, if you wish to see the vendor list page, click the **View List** link at the top right corner of the **Edit Vendor** form. Also if you want to add a new vendor, then in the vendor details tab, click the **Save and add new** button.

Delete Vendors

To delete a vendor, it is necessary that the product vendor association is first removed and then the vendor is deleted. Also ensure that the particular vendor is not used elsewhere. Follow the steps below to delete a vendor:

1. In the **Vendor List** page, click the edit icon beside **Vendor Name**.
2. Click the **Products** tab.
3. Click the delete icon beside the **Products**. A confirmation dialog is opened.
4. Click **OK** to proceed with the deletion. Delete all the products listed.
5. Click **view list** link on the top right corner of the center pane.
6. Now, click the delete icon beside the **Vendor Name** for which you removed the product list. A confirmation dialog is opened.
7. Click **OK** to proceed with the deletion. If you do not wish to delete the vendor, click **Cancel**.

Workstation Additional Fields

You can define your own organization specific fields that need to appear in the new workstation form apart from the default fields. You can add text fields, numeric fields, and date/time type fields in the form.

Adding Workstation Additional Fields

1. Click the **Admin** tab in the header pane.
2. Click **Workstation Additional Fields** icon in the Configuration Wizard page. This opens Workstation – Additional Fields page.

Configuring Additional Text fields

1. By default the list of all additional text fields are displayed. Specify the **Label** for the Workstation Additional Fields.
2. Specify any relevant information about the additional fields in the **Description** text field.
3. Specify the **Type** of the text field by enabling the radio button. It can be either **Single- Line, Multi – Line or drop down menu list.**
4. Specify the **Default Values** in the given text field.
5. Click **Save** to save the settings.

Configuring Additional Numeric fields

1. Click the **Numeric** tab.
2. Specify the **Labe**l for the additional field. This is a mandatory field.
3. Specify any relevant information about the additional fields in the **Description** text field.
4. Click **Save** to save the settings.

Configuring Additional Date/Time fields

1. Click the **Date/Time** tab.
2. Specify the **Label** for the additional field. This is a mandatory field.
3. Specify any relevant information about the additional fields in the **Description** text fields.
4. Click **Save** to save the settings.

Asset Additional Fields

You can define your own organization specific fields that need to appear in the new asset form apart from the default fields. You can add text fields, numeric fields, and date/time type fields in the form.

Adding Asset Additional Fields

1. Click **Admin** tab in the header pane.
2. Click **Assets Additional Fields** icon in the Configuration Wizard page. This opens Assets – Additional Fields page.

Configuring Additional Text fields

1. By default the list of all additional text fields are displayed. Specify the **Label** for the asset additional fields.
2. Specify any relevant information about the additional fields in the **Description** field.
3. Specify the **Type** of the text field by enabling the radio button. It can be either **Single- Line, Multi – Line or drop down** menu list.
4. Specify the **Default Values** in the given text field.
5. Click **Save** to save the settings.

Configuring Additional Numeric fields

1. Click the **Numeric** tab.
2. Specify the **Label** for the additional field. This is a mandatory field.
3. Specify any relevant information for the additional fields in the **Description** field.
4. Click **Save** to save the settings.

Configuring Additional Date/Time fields

1. Click **Date/Time** tab.
2. Specify the **Label** for the additional field. This is mandatory field.
3. Specify any relevant information for the additional fields in the **Description** field.
4. Click **Save** to save the settings.

Asset State

Asset State denotes the different states of assets in the organization such as, assets in Use, In Store, Expired and so on.

To access the asset state configuration wizard page,

1. Click the **Admin** tab in the header pane. This opens the Configuration Wizard page.
2. Under the Asset Management block click the **Asset State** icon . This opens the Asset State List page where you can add, edit and delete an asset state. By default, you have five asset state available in ServiceDesk Plus which can neither be edited nor deleted.

Add Asset State

1. Click **New Asset State** link.
2. Enter a name for the **Asset State.** This field is mandatory.
3. Specify any relevant information about the asset state in the **Description** field.
4. Click **Add Asset State** button. The newly added asset state is added to the Asset State List.

Edit Asset State

1. From the Asset State List view page, click the **Edit** icon beside the asset state to edit. The edit form is pre-filled with the values entered while adding the asset state.
2. **Modify** the Asset State and Description.
3. Click **Update Asset State** button to update the changes.

Delete Asset State

1. From the Asset State List view page, click the **Delete** icon beside the asset state to delete. A dialog box confirming the delete operation appears.
2. Click **OK** to proceed. The asset state is deleted from the list.

Configuration Item Types (CI Types)

Configuration Item Types (CI Types) denote the broad classification of different entities, under which, the **Configuration Items (CIs)** are categorized. Any organization specific entity can be considered as a CI Type, such as Business Services, Workstations, Servers, Documents and even the People working for your organization.

Each CI Type can be defined with specific **Attributes** and **Relationships** that are unique for the CIs classified under them.

In case your CI Type structure is granulated and possess various types, then you can further drill it down to **Sub Types**. For instance, the CI Type-Server may possess various sub types such as File Server, Application Server, Database Servers and so on.

To access the **Configuration Item Types List** view,

1. Click **Admin** tab in the header pane.
2. In Asset Management, click **Configuration Item Types**. The Configuration Item Types List view is displayed.

From this page, you can add CI Types, create new CIs for a CI Type, view CIs under a CI Type, and also view the relationship map with the default relationship attributes.

Topics discussed under this section:

- **Representation of Icons in the CI Type List view**
- **Adding CI Type**
- **Attributes**
  - Setting Attributes for CI Type
  - Using Drag and Drop Field
  - Editing & Deleting Attributes
- **Setting default Relationships**
  - Adding Relationships
  - Adding Relationship Attributes
  - Viewing Relationship Map
  - Editing & Deleting Relationship

Representation of Icons in the CI Type List View

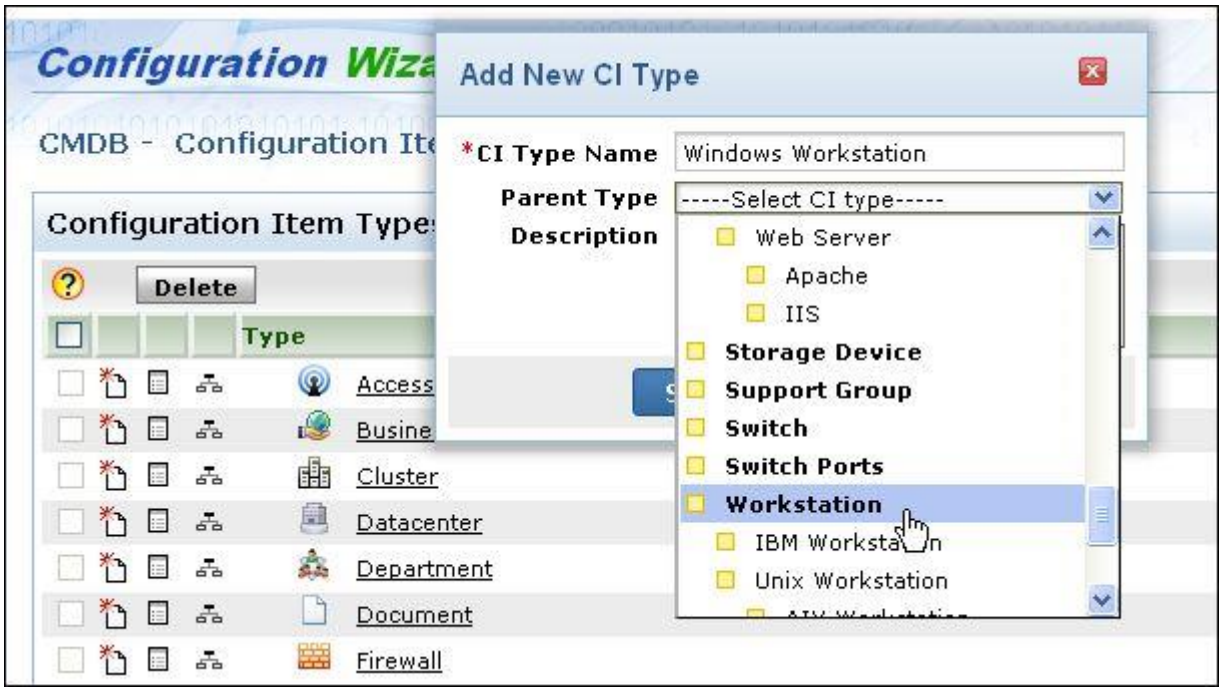
- - To create a new CI under a CI Type. Clicking this icon takes you to the Add New CI form.
- - To view CIs under a CI Type.
- - To view the relationship map for a CI Type. The relationship map holds the default relationships configured for the CI Type.

Adding CI Type

To add CI Type from the **Configuration Item Types** list view page,

1. Click **Add New CI Type** link. The Add New CI Type form pops-up.
2. Enter a **Name** for the CI Type. For example, Workstations, Business Services, Department. This field is mandatory.
3. If the structure of the CI Type is granulated, then you can further drill it into Sub Types. For instance, the CI Type-Workstation can be further drilled down into Sub Types like IBM Workstation, Unix Workstation and Windows Workstations.

   If the entered CI Type name is a sub type, then select the **Parent Type** from the drop down.



4. Enter brief **Description** about the CI Type in the field provided.
5. Click **Save** button.

   The page navigates to the **Edit Configuration Item Type** with the CI Type name, Parent Type and Description pre-populated with the specified values.

6. Choose an **Icon** to depict this CI Type in the list view. By default, an icon is uploaded for the CI Type. To upload a different icon, click **Change** link. Click **Browse** to select the image and click **Import Image** button.

   NOTE: The support formats to import images are **jpg**, **gif** and **png**.

7. Most of the CIs populated in the CMDB may be assets or components, such as Workstations, Servers, Access Points, Keyboards and so on. These CIs can be tracked as assets in the asset database.

   To track CIs under a CI Type as an IT or Non-IT assets/components in the Asset module, enable **Track as asset** check box. Select the **Category** and asset **Type** from the drop down.

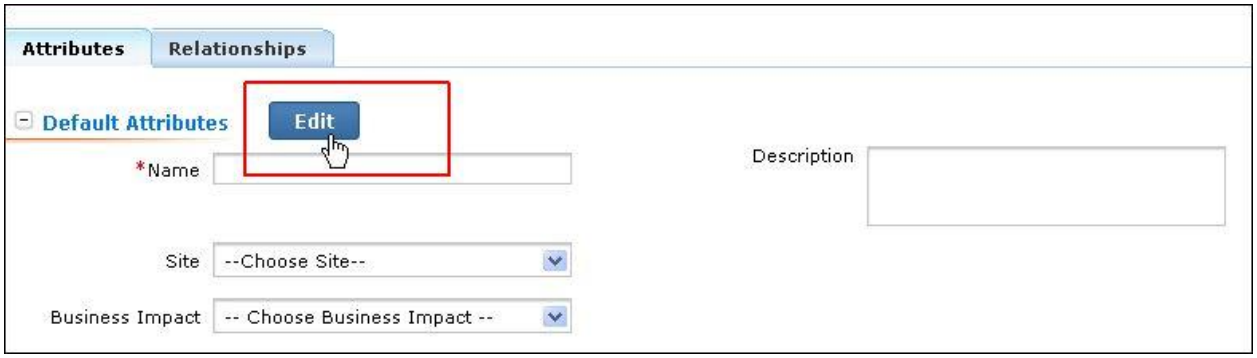
   NOTE: The **Track as asset** option is available only for the parent CI Type.

Attributes

Attributes are data elements that describes the characteristics of the CI Type. For instance, the attributes for the CI Type-Workstation could include Model, Service Tag, IP Address, Processor Speed and so on. By default, the form displays the Attributes tab.

Setting Attributes for CI Type

You can set two type of attributes for a CI Type namely, **Default Attributes** and **Attributes Specific to CI Type**. Default Attributes are common to all the CI Types, such as Name, Site, Department and so on. To add a default attribute, click **Edit** button. [Refer **Using Drag and Drop Fields** topic to know more on configuring default attributes].



CI Type Specific Attributes provide more information on a particular CI Type. The attributes for the CI Type-Workstation can be considered as the attributes specific to the CI Type. The attributes, both default attributes and CI Type specific attributes, are configured using the **Drag and Drop fields**.

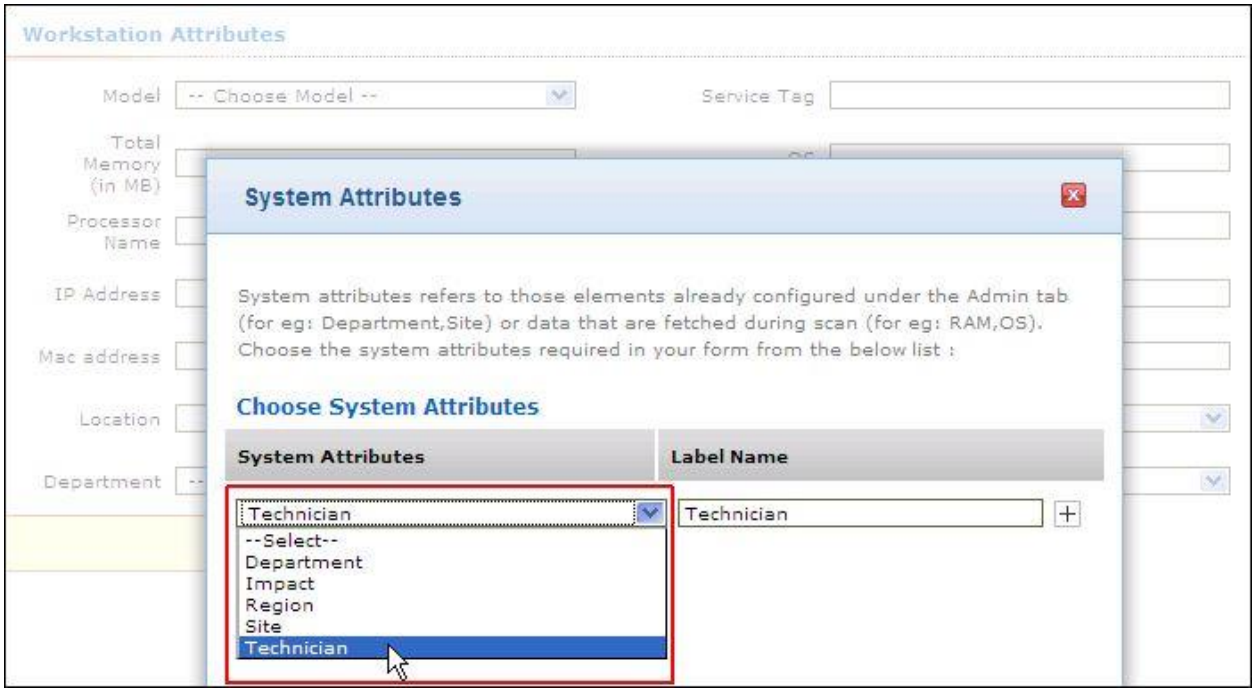
Using the Drag and Drop Fields

The Drag and Drop Field section consists of different customizable fields such as, **Single line**, **Multi line**, **Pick List**, **Numeric** and **Date** fields. Apart from these customized

fields, **System Attributes** (entities configured in the Admin tab or data fetched during scan) can also be set as attributes for the CI Type.

Adding System Attributes

1. Drag the **System Attribute** field in the form. The System Attributes form opens.
2. Choose the System Attributes from the drop down. You can enter a different name for the system attribute in **Label Name** field.

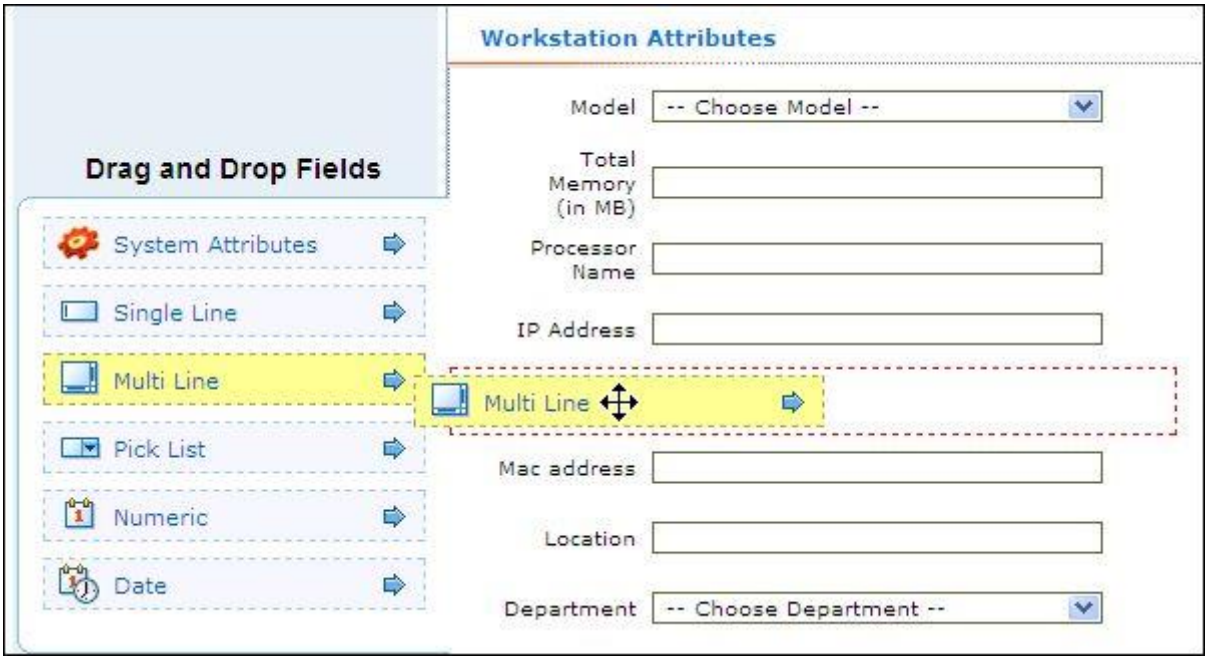


2. Click icon to add another system attribute.
3. Click **Add** button to add the system attribute(s) in the form.
4. Click **Save**.

Adding Customizing Fields

To add the other customized fields,

1. Drag and drop the field (Single Line, Multi Line, Pick List, Numeric or Date field) in the CI Type attribute form.



2. The **Add Attribute** form pops up where you need to enter the **Attribute Name** and **Description**. In the case of Pick List fields, enter the options to add to the list.
3. Click **Save**. The customizable field is added in the form.

You can re-arrange fields in the form by dragging the fields and placing it over the highlighted area.

NOTE:

1. Newly added **Product Type** with **Type** field as ***Assets or Components*** will be considered as CI Type and populated automatically in the CI Type List view.
2. You cannot create a sub type for the CI Type - People. Instead you can create sub types for Requesters and Technicians.
3. The sub types inherit the Attributes and Relationships from the parent CI Type. Apart from this, attributes and relationships can also be configured for sub type.

Editing CI Attributes

To edit a customized attribute,

1. Click the **Edit** icon beside the field to modify. The **Edit Attribute** form pops up with the values pre-filled while adding the attribute.
2. Modify the **Attribute Name** and **Description** field.
3. Click **Save**. The form is populated with the newly added changes.

Deleting CI Attributes

You can remove unwanted attributes from the CI Type form. To delete a customized attribute,

1. Click the **Delete** icon beside the field. A dialog box confirming the delete operation appears.
2. Click **OK** to proceed. The field is removed from the form and is added to system attributes list.

WARNING: Deleting a CI Type attribute will remove the attribute from the form. You may lose the data configured for the attribute in the CI form.

Setting Default Relationships

You can establish default relationships between the newly added CI Type and other CI Types from the **Relationships** tab. For instance, the relationship set for the CI Type Workstation can be,

Workstation	**Runs**	**Software**
(Newly added CI Type)	(Relationship Type)	(CI Type)

the inverse of this relationship type will be automatically added for CI Type - Software as,

Software	**Runs on**	**Workstation**
(CI Type)	(Relationship Type)	(CI Type)

Setting default relationships provides feasibility while adding relationship between the CIs categorized under the CI Type. For a sub type, the parent CI Type relationships are adapted, apart from which new relationships can also be created. Using the **Relationship Map**, the relationship configured with other CI Types can be viewed, and the map can be exported or printed.

Adding Relationships

To establish a relationship between two CI Types,

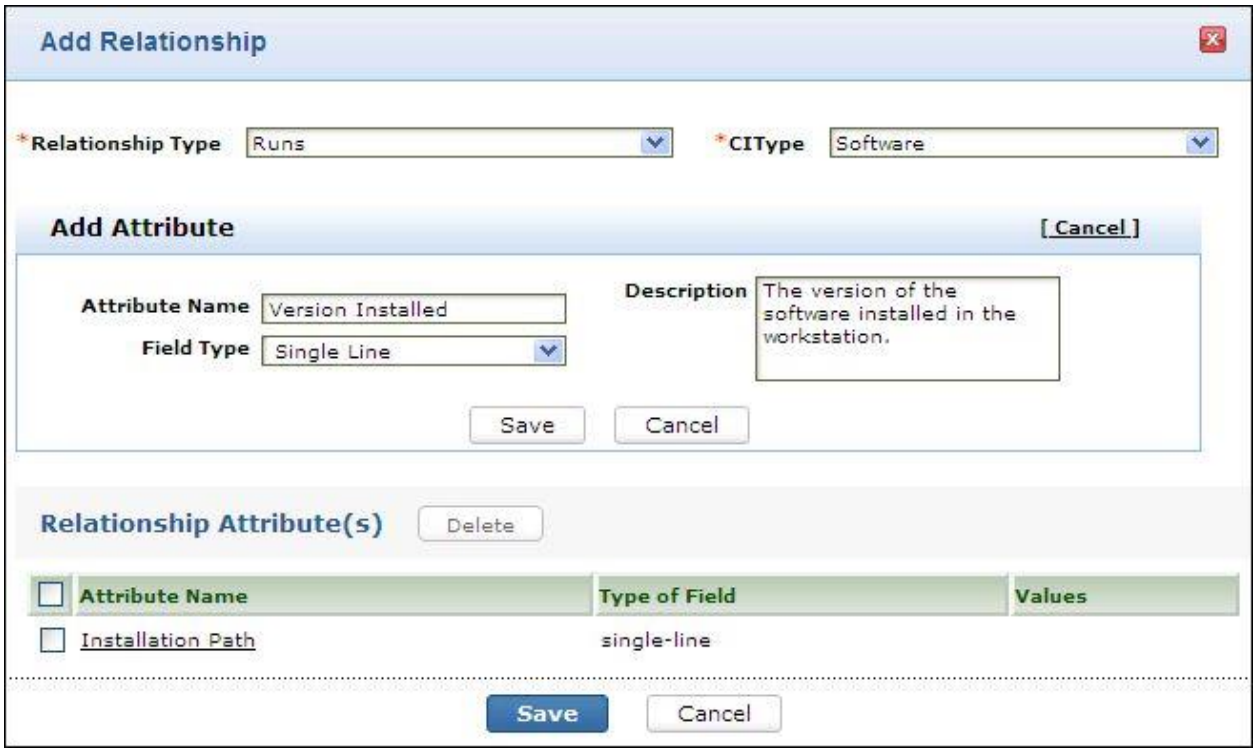
1. Click **Relationships** tab in Edit Configuration Item Type form.
2. Click **Add** button. The Add Relationship form pops up.
3. Select the nature of the relationship between the CI Type and another CI Types from **Relationship Type** drop down.
4. Select the **CI Type** to which the relationship is established. Both the Relationship Type and CI Type are mandatory fields.
5. Click **Save**. The attributes associated to the relationship can be set.

Adding Relationship Attributes

Relationship Attributes provides more information on the relationship between the CI Types. For instance, the relationship attributes between the CI Type Workstation and Software can be, the Version of the software installed, the Installation path, Installed on, service pack details and so on.

To add relationship attributes,

1. Click **Add Relationship Attribute** button.
2. Enter the **Attribute Name**. Say, Version Installed.
3. Select the **Field Type** from the drop-down. The field type can be either Single Line, Multi Line, Pick List, Numeric or date field.
4. Enter brief **Description** about the relationship attribute in the field provided.
5. Click **Save**. The attribute is added to the relationship attribute list.



To delete a relationship attribute,

1. Enable the check box beside the **Attribute Name** in the Add Relationship form.
2. Click **Delete** button. A dialog box confirming the delete operation appears.
3. Click **OK** to proceed. The relationship attribute is deleted from the list.

Relationship Map

The default relationships configured with other CI Types are viewed in the **Relationship Map**. Click **Relationship Map** icon to view the map.

Editing Default Relationships

To edit a CI Type relationship,

1. Click the **edit** icon beside the CI Type relationship to edit. The **Edit Relationship Type** form pops up pre-filled with values configured while adding the relationship.
2. **Modify** the Relationship Type and CI Type. Both the fields are mandatory.
3. Even while editing, you can add new relationship attributes or edit the existing relationship attributes by clicking on the **Attribute Name** link.
4. Click **Save**.

Deleting Default Relationships

To delete a CI Type relationship,

1. Click the **delete** icon beside the CI Type relationship. A dialog box confirming the delete operation appears.
2. Click **OK** to proceed. The relationship is deleted from the CI Type relationship list.

WARNING: Deleting a CI Type relationship will remove the relationship from the relationship map.

Relationship Types

Relationship Types denotes the nature of relationship between a CI and another CI. It shows how the CIs are interconnected and interdependent with other CIs. The Relationship Type is expressed twice, one as **Relationship Type** and the other as **Inverse Relationship Type**. Some of the examples of relationship types are *Runs::Runs On*, *Sends data to::Receives data from*, *Located In::Houses* and so on.

Let's take a look at an example with the Relationship Type as *Runs::Runs On*. The relationship between a server and application is expressed as **Server1 *Runs* Application1**, while the relationship between the application and server is automatically expressed with the inverse relationship type, **Application1 *Runs On* Server1**.

Using relationship types, CI Type relationships can be set from Admin -> CI Type and from the CI form. For establishing relationship using the Relationship Types, refer Relationships under CI Types.

To access the Relationship Type configuration wizard,

1. Click the **Admin** tab in the header pane.
2. Click **Asset Management** in the left pane and select **Relationship Types** option. The Relationship Types List view is opens,displaying the default relationship types. From this page, you can add a new relationship type, edit relationship type and perform bulk delete of relationship types.

Adding New Relationship Type

1. Click **Add New Relationship Type** link.
2. In the Add New Relationship Type form, enter the **Relationship Type** and the **Inverse Relationship Type**. For example, Runs::Runs On. Both fields are mandatory.
3. Enter brief **Description** about the nature of the relationship type in the field provided.
4. Click **Save**. The relationship type is saved and displayed in the list view. To cancel the operation and return to the list view, click **Cancel**.

Editing Relationship Type

1. In the Relationship Types List view, select the relationship type to edit. The **Edit Relationship type** form opens with the fields pre-filled with values entered while adding the relationship type.
2. Modify the field values for Relationship Types, Inverse Relationship Type and Description.
3. Click **Save**. The changes are saved and displayed in the list view. If you do not want to edit the relationship type, then click **Cancel**.

NOTE: The following default relationship types cannot be edited, *Depends On::Used By*, *Uses::Used By*, *Runs::Runs On*, *Connected to::Connected to* and *Includes:: Member of*.

Deleting Relationship Type

To delete the newly added relationship types from the list view,

1. Enable the check box beside the Relationship type to delete.
2. Click the **Delete** button. A dialog box confirming the delete operation appears.
3. Click **OK** to proceed. The relationship type(s) is deleted from the list view.

NOTE: Please note that the pre-configured relationship types cannot be deleted.

Software Management

Software

Software helps you to configure all the software related tasks such as Software Type, Software Category, Software License Types and Additional fields for software license and license agreement.

- Software Type
- Software Category
- License Additional Fields
- Software License Types
- Agreement Additional Fields
- Import License (s) from CSV

Configuring Software Type

All different forms of software such as, licensed, prohibited, freeware, shareware, excluded and un-identified software comes under this category.

To access the Software Type configuration page,

1. Click the **Admin** tab in the header pane. This opens the Configuration Wizard page.
2. Click the **Software Type** icon under the Software block. This opens the **Software Type list** view page. By default there are six software types that cannot be edited nor deleted.
   - **Shareware:** Software that is available free of charge, may be distributed for evaluation with a fee requested for additional features or a manual etc.
   - **Freeware:** Software that is provided without charge.
   - **Prohibited:** Software that is prevented from use.
   - **Excluded:** Software that is omitted from use.
   - **Managed:** All licensed software comes under this software type.
   - **Un-Identified:** Unknown software can be categorized under this software type.

Adding New Software Type

1. Click the **New Software Type** link. This opens the Software Type Details page.
2. Specify the **Software Type** name in the given text field. This is a mandatory field which will uniquely identify individual software type.
3. Specify any relevant information about the Software Type in the description field.
4. Click **Add Software Type** button. This adds the software type to ServiceDesk Plus and gets displayed below the add software form.

Editing Software Type

1. From the Software Type list view page, click the **Edit** icon beside the software type to edit.
2. Modify the necessary changes.
3. Click **Update Software Type** button.

Deleting Software Type

1. From the Software Type list view page, click the **Delete** icon beside the software type to delete. A dialog box confirming the delete operation appears.
2. Click **OK** to proceed. The software type is deleted from the list.

Software Category

The software available in the application are organized by grouping them into specific Software Categories. Some of the default software categories available in the application are Accounting, Internet, Graphics, Multimedia, Operating System, Game and much more.

To access the software category configuration wizard,

1. Click the **Admin** tab in the header pane to open the configuration wizard page.
2. Click **Software Category** icon under **Software** block. The Software Category list view page opens. From this page, you can add, edit and delete a software category.

By default, there are nine software categories listed in the application. These software categories can neither be edited nor deleted.

Adding Software Category

1. Click **New Software Category** link.
2. Specify a unique name for the **Software Category** in the provided field. The Software Category is a mandatory field.
3. Specify any relevant information about the category in the **Description** field.
4. Click **Add Software Category** button to add the software category to the list. Click **Cancel** to go back to the list view. The added software categories are displayed while adding a new software.

Editing Software Category

1. Click the **Edit** icon beside the software category to edit.
2. Modify the **Software Category** name and **Description** fields.
3. Click **Update Software Category** to update the changes.

Deleting Software Category

1. Click the **Delete** icon beside the software category to delete. A dialog box confirming the delete operation appears.
2. Click **OK** to proceed. The software category is deleted from the list.

License - Additional Fields

If you require any further additional information while adding the software license details, apart from the pre-set fields in the Add software licences form you can configure them under License - Additional Fields. You can add **text** fields, **numeric** fields, **date** type fields and **Cost** fields as the additional fields in the form.

To add license - additional fields,

1. Click the **Admin** tab in the header pane to open the configuration wizard page.
2. Click **License - Additional Fields** icon under **Software** block. The License Additional page opens to view the following tabs namely, **Text**, **Numeric**, **Date/Time** and **Cost**. You can add up to twelve text and cost fields, and four numeric and date/time fields.

Configuring Additional Text fields

1. By default, the **Text** tab is selected. Specify the **Label** for the Additional field.
2. Specify any relevant information about the additional field in the **Description** text field.
3. Select the **Type** of the text field by enabling the radio button. It can be either **Single-Line, Multi-Line or Pick List (drop down list)**.
4. You can also specify default values to be pre-filled in the software license form.
5. **Save** the settings.

Configuring Additional Numeric fields

1. Click the **Numeric** tab.
2. Specify the **Label** for the additional field.
3. Specify any relevant information about the additional fields in the **Description** text field.
4. **Save** the settings.

Configuring Additional Date/Time fields

1. Click the **Date/Time** tab.
2. Specify the **Label** for the additional field.
3. Specify any relevant information about the additional fields in the **Description** text fields.
4. Click **Save** to save the settings.

Configuring Cost fields

1. Click the **Cost** tab.
2. Specify the **Label** for the Additional field.
3. Specify any relevant information about the additional field in the **Description** text field.
4. You have two cost type fields, **Add cost** (for cost addition) and **Subtract cost** (for cost subtraction). Click the corresponding radio button to select the cost fields and also specify the **Default values** to be pre-filled in the software license form.

These additional fields will appear while adding a software license under the **Additional Informations** block. To delete a user-defined fields, instead of adding the label names, delete the existing label names you wish to remove from the fields of the form and click **Save**. The fields are automatically removed from the Software License form.

Software License Types

Every software manufacturing company has their unique software license type apart from the several common license types. Since it is not feasible to support all these license types, ServiceDesk Plus helps you customize the license types for all software manufacturers based on the workstations and users.

To access the Software License Types configuration page,

1. Click the **Admin** tab in the header pane to open the configuration wizard page.
2. Click **Software License Type**s icon under **Software** block. The list of default license types filtered by the manufacturer are displayed.
   - **Individual:** License type for single installation
   - **OEM (Original Equipment Manufacturers):** License type for software that are already installed in the hardware.
   - **Named User License:** License Type for a specific user.
   - **Volume:** License Type supporting multiple users.
   - **Client Access License (CAL):** License type that gives a user the rights to access the services of the server.
   - **Trial License:** License Type for trial versions of a software.
   - **Enterprise (Perpetual):** License Type that does not require renewal and is for life long.
   - **Concurrent License:** License Type for a software that can be accessed by a specific number of users at a time.
   - **Free License:** License Type for freeware software.
   - **Enterprise Subscription:** License Type that requires renewal for every specific period.
   - **Node Locked:** License Type for workstations with specific configurations.

Apart from the default license types available in the application, you can add, edit and delete Software License Types.

Adding New License Type

1. Click **Add New License Type** link.
2. Enter the **License Type** say Volume, Enterprise, Standard and so on. In general, each manufacturer depicts their license types uniquely and so the license type needs to be specified accordingly to the manufacturer. This field is mandatory.
3. Select the software **Manufacturer** from the drop down. If required, you can also add a new manufacturer using the **Add New Manufacturer** icon.
4. The software license can be tracked by workstations or users.
   - **Workstations :** The license is allocated to the workstation.
   - **User:** The license is allocated to the workstation as well as the user.

   Select the corresponding option from **Track By** drop down.

5. Choose any one option from **Installation allowed** drop down.

    - **Single :** Similar to Individual license, only one installation is allowed for this license type.
    - **Volume :** Multiple installation(s) is allowed for this license type.
    - **Unlimited :** Unlimited installation(s) is allowed for this license type.
    - **OEM (Original Equipment Manufacturers) :** The software license is attached to the hardware i.e. hardware say, laptops for which the software is installed. The software cannot be transferred to another workstation and the license expires once the workstation is moved to Disposed state.

6. If you have selected **Workstation** as the Track By option, the **Is Node Locked** option appears. This option can be enabled for workstation with specific configurations. Enabling this option automatically changes the Installation Allowed field to Single.
7. If you have selected **Users**, the **Users Allowed** field appears. From this field you can select the number of users who can access the software, say, Single, Volume (multiple) or Unlimited.
8. If the software is one time installation and does not require a renewal, enabled **Is Perpetual** check box.
9. If the software is freeware with unlimited installations and no expiry date, enable **Is Free License** check box.
10. Few software license type can be divided into sub license types say for instance, with Client Access License (CAL) you can purchase license for every user who access the server (Per User) or license for every device that accesses the server (Per Device).

    Enter the **License Option** and click **Add** to add it in the pick list field. You also have an option to delete the License Option from the pick list field. Select the license option and click the delete icon .

Editing License Type

1. From the Software - License Types page, click on the **Edit** icon beside the License Type you wish to edit.
2. The Software - License Types page opens with the values populated while adding the License Type.
3. Modify the required details and Save the changes.

Deleting License Type

1. From the Software - License Types page, select the Manufacturer from the **Filter** drop down.
2. Select the check box beside the license type to be deleted.
3. Click **Delete** button. A dialog box confirming the delete operation appears.
4. Click **OK** to continue. The Software - License Type is deleted from the selected manufacturer list.

License Agreement- Additional Fields

If you require any further additional information while adding the software license agreement details, apart from the pre-set fields in the licence agreement form you can configure them under License Agreement - Additional Fields. You can add **text** fields, **numeric** fields, **date** type fields and **Cost** fields as the additional fields in the form.

To add license - additional fields,

1. Click the **Admin** tab in the header pane to open the configuration wizard page.
2. Click **Agreement - Additional Fields** icon under **Software** block. The License Agreement Additional page opens to view the following tabs namely, **Text**, **Numeric**, **Date/Time** and **Cost**. You can add up to twelve text and cost fields, and four numeric and date/time fields.

Configuring Additional Text fields

1. By default, the **Text** tab is selected. Specify the **Label** for the Additional field.
2. Specify any relevant information about the additional field in the **Description** text field.
3. Select the **Type** of the text field by enabling the radio button. It can be either **Single-Line, Multi-Line or Pick List (drop down list)**.
4. You can also specify default values to be pre-filled in the license agreement form.
5. **Save** the settings.

Configuring Additional Numeric fields

1. Click the **Numeric** tab.
2. Specify the **Labe**l for the additional field.
3. Specify any relevant information about the additional fields in the **Description** text field.
4. **Save** the settings.

Configuring Additional Date/Time fields

1. Click the **Date/Time** tab.
2. Specify the **Label** for the additional field.
3. Specify any relevant information about the additional fields in the **Description** text fields.
4. Click **Save** to save the settings.

Configuring Cost fields

1. Click the **Cost** tab.
2. Specify the **Label** for the Additional field.
3. Specify any relevant information about the additional field in the **Description** text field.

4. You have two cost type fields, **Add cost** (for cost addition) and **Subtract cost** (for cost subtraction). Click the corresponding radio button to select the cost fields and also specify the **Default values** to be pre-filled in the license agreement form.

These additional fields will appear while adding the license agreement details. To delete a user-defined fields, instead of adding the label names, delete the existing label names you wish to remove from the fields of the form and click **Save**. The fields are automatically removed from the License Agreement form.

Importing License From CSV

Adding license information for each and every software scanned in ServiceDesk Plus application is tedious and endless. Hence with the easy-to-use CSV import option, you can import software license information from your existing database or even from other applications. The License Key is a pivotal identifier to add or update the software license(s). So the license key should be unique to avoid overwriting with the existing ones.

To import contacts from CSV file,

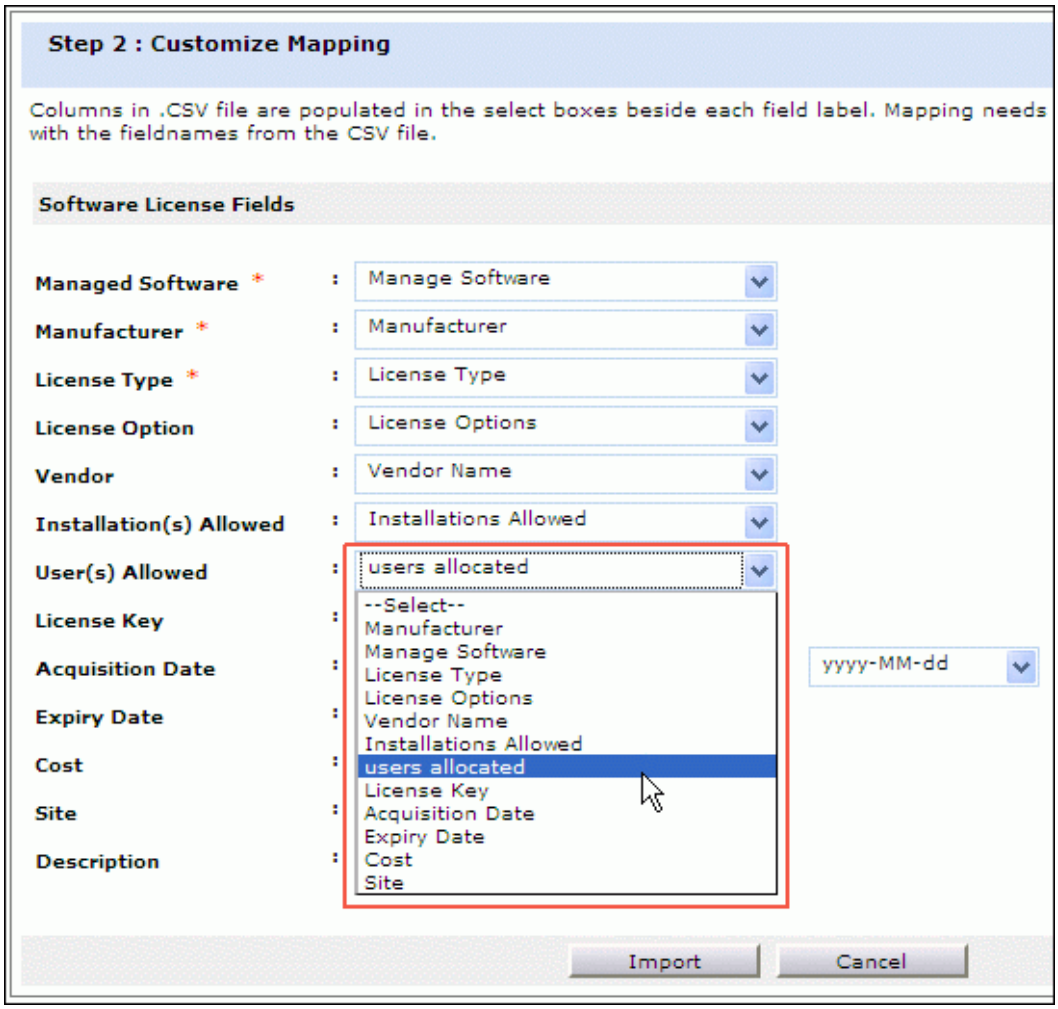
1. Click the **Admi**n tab in the header pane to open the configurations wizard page.
2. Click **Import License from CSV** icon under the Software block.

Step 1: Locate CSV file

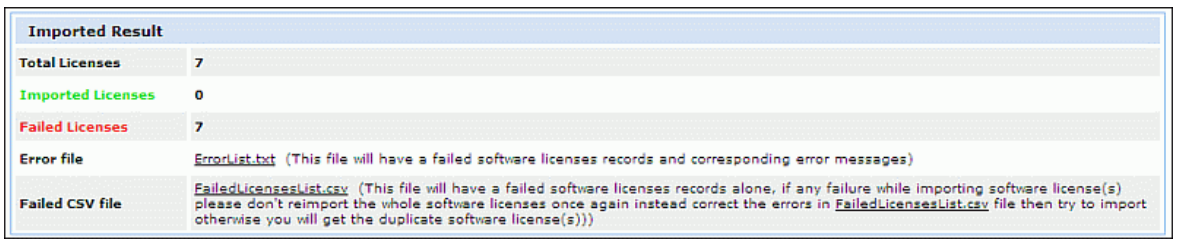
1. Click **Browse** button to select the CSV file.
2. On locating the CSV file from the file chooser window, click **Open**. The path to the file appears automatically in Locate CSV file field.
3. Click **Submit**.

Step 2: Customize Mapping

1. Map the application software license fields with the field names from the CSV file. If there are any additional fields configured under License - Additional Fields, the same appears in the customized mapping form.



2. Click **Import** button. The software license details from the CSV file is imported.
3. Once the import is complete, the data on the total number of license, the number of license imported and the number of failed to import license is displayed.



Imported Result	
Total Licenses	7
Imported Licenses	0
Failed Licenses	7
Error file	ErrorList.txt (This file will have a failed software licenses records and corresponding error messages)
Failed CSV file	FailedLicensesList.csv (This file will have a failed software licenses records alone, if any failure while importing software license(s) please don't reimport the whole software licenses once again instead correct the errors in FailedLicensesList.csv file then try to import otherwise you will get the duplicate software license(s)))

Warning	If there are any failure records while importing software license (s), don't re-import the same CSV file. Instead download the FailedLicensesList.csv from the Imported Result page and correct the errors on comparing with ErrorList.txt file. The Error List file shows the failed software license records along with the corresponding error message. This is to avoid duplication of the software license(s).

Purchase / Contract Management

Purchase/Contract Configurations

You need to configure the purchase/contract configurations before creating a Purchase Order and Contract.

The Purchase/Contract Configurations are,

- Purchase - Additional Fields
  Require Additional Fields while creating a Purchase Order ? This configuration provides option to add text, numeric, date/time and cost fields.
- Purchase Default Values
  Set default values to be populated in the New Purchase Order form.
- Cost Center
  The Business Units are budgeted and tracked for the cost, income and allocation.
- GL Code
  Add General Ledger Codes that can be associated with the Purchase Order.
- Contract Additional Fields
  Require Additional Fields while creating a contract ? This configuration provides option to add text, numeric and date/time.
- Notification Rules
  Notify Technicians of an Overdue Purchase Order or when the lease period of the asset is about to expire.

Purchase Order Additional Fields

You can configure purchase additional fields that need to appear in the new purchase order form.

1. Log in to ServiceDesk Plus application using your **user name** and **password**.
2. Click the **Admin** tab in the header pane.
3. In the Purchase/Contracts management block, click the **Purchase - Additional Fields** icon . This opens the Purchase - Additional Fields page. You can add four types of fields in the form: text, numeric, date/time and cost.

4. To add the text fields, enter the label name in the form fields below the **Label** heading. If required, enter the description for the field.
5. You can choose the type of text field that you wish to add by selecting the radio buttons.
   - **Single-line text field:** Allows you to add just a text field in the new purchase order form.
   - **Multi-line text field:** Allows you to add a text box where a lengthy description can be added in the new purchase order form.
   - **Pick List:** Allows you to add a combo box in the new purchase order form. Contents of the combo box can be added by specifying it in the text field and adding it to the list. This gives you an option to select from the list. In all the three cases, you can add default values for the text field in the space provided for the field.

6. To add numeric fields, click the **Numeric** tab and then enter the label name in the form fields provided for the same.
7. To add date/time fields, click the **Date/Time** tab and enter the required details.
8. To add the cost field, click the **Cost** tab. You have two cost type fields, **Add cost** (for cost addition) and **Subtract cost** (for cost subtraction). Click the corresponding radio button to select the cost fields.
9. Click **Save**. A message for successful creation of the fields is displayed.

These fields (except for cost) appear under the General Information in the **New Purchase Order** form. To delete the user-defined fields, in step 4 through 7, instead of adding the label names, delete the label names that you wish to remove from the fields of the form and click **Save**. The respective fields that you deleted will be removed from the New Purchase form.

Purchase Default Values

With this option, you can set the default values to be populated in the New Purchase Order form. You can set default values for fields such as tax rate, the billing and shipping address, the purchase order terms and conditions and so on. Thereby, making it feasible to add create a Purchase Order instantly.

Also, from this option, you can set the mandatory fields to be filled in before closing a PO. These fields are the additional fields configured under Purchase Additional Fields.

To access the purchase default value configuration page,

1. Click the **Admin** tab in the header pane.
2. In the Purchase/ Contracts block, click **Purchase - Default Values** icon . This opens the Purchase Default Values page.

Configuring Purchase Default Values

- **Default Currency:** The default currency to be displayed in all the purchase orders (PO) generated and in places where money is being used. Say, USD, $
- **Default Tax Rate (%):** Tax rate used for calculating the sales tax in all the POs generated. You can provide different tax rate to a specific PO by entering the new rate while creating the PO.
- **Signing Authority:** Signing Authority's name.
- **Tax Shipping:** Enable the check box for additional tax in shipping of the items.
- **Shipping Address:** Select the default Site to which the PO items needs to be shipped.
- **Billing Address:** Select the default Site for invoice and billing the PO items.
- **Cost Center:** Default cost center department to be displayed.
- **Approver (s):** Approvers for the purchase order. The approvers can be the users or technicians in your organization.
- **PO Owner as Approver:** Enable the check box if you wish to add the PO owner as the approver.
- **Multi Approval:** If there are more then one approvers, on enabling multi approval check box, the PO is approved only if all the approvers approve the PO. The PO is rejected even if one of the approvers rejects the PO.
- **Terms and Remarks:** Terms and remarks while making the purchase.
- **PO# Start From:** Customize the PO number.

Mandatory fields for closing PO

The fields listed in this block are the PO additional fields configured in the application. Enable the check box beside the field that should be filled in before closing the PO. Click **Save** to save the settings.

Cost Center

Individual department or a group of department makes a Cost center. These cost centers are budgeted and tracked for the cost, income and allocation. These cost centers will be associated with the purchase order while making a new purchase in your organization.

To access the Cost Center configuration,

1. Click the **Admin** tab in the header pane.
2. Click **Cost Center** icon under the Purchase/ Contract Management block. The Cost Center List view page opens where you can add, edit and delete a cost center.

Add Cost Center

1. Click the **New Cost Center** link. The Cost Center form has four mandatory fields namely, **Cost Center Code, Name** and **Owner**.
2. Specify the code for the cost center in **Cost Center Code** field.
3. Specify the **Name** of the cost center.
4. The departments configured in ServiceDesk Plus application is listed under Departments. Select the **Department** from the available list.
5. Specify the **Owner** of the cost center. The owner is generally the department head and employee of the organization.
6. If required, enter relevant information about the cost center in the **Description** field.
7. Click **Add Cost Center** button. The cost center is added to the List View.

Edit Cost Center

1. Click the **Edit** icon beside the cost center you wish to modify. The details while adding the cost center is populated in the edit form.
2. Modify the required details in the fields.
3. Click **Update Cost Center** button.

Delete Cost Center

1. Click the **Delete** icon beside the cost center to be deleted. A confirmation dialog appears.
2. Click **OK** to proceed. The cost center is deleted from the list.

General Ledger Code (GL Code)

You can add all the general ledger codes using this option. A general ledger account will have a specific code for all transactions in the organization. On specifying the GL code you will be able to track the necessary information for a specific transaction.

Say, if you like to know all your company's IT purchases for the November month 2007, then you can specify the GL code for IT purchases in November 2007 and get the details.To access the Cost Center configuration,

1. Click the **Admin** tab in the header pane.
2. Click **GL Code** icon under the Purchase/ Contract Management block. The Cost Center List view page opens where you can add, edit and delete a cost center.

Add GL Code

1. Click the New GL Code link. The GL Code form has two fields namely, GL Code and Description.
2. Enter the GL Code. This field is mandatory.
3. Specify any relevant information about the GL Code in the Description field.
4. Click the Add GL Code button. The GL Code is added to the List View.

Edit GL Code

1. Click the Edit icon beside the GL code to modify. The details while adding the GL Code is populated in the edit form.
2. Modify the required details in the fields.
3. Click Update GL Code button.

Delete GL Code

1. Click the Delete icon beside the GL code to delete. A confirmation dialog appears.
2. Click OK to proceed. The cost center is deleted from the list.

Currency

Different currencies used while procuring assets/services from different vendors can be added under the currencies list. ServiceDesk Plus supports all currencies out of which the ones you'll be using can be selected and added.

Two benefits of configuring a currency list:

- **Currencies added** can be associated with the vendors as they are added to the application
- Purchase orders will list the **respective currency being used by the vendor** (upon vendor selection) along with its **exhange rate with respect to base currency** when the purchase order is being created

Note: Default currency used by you - known as **base currency** - cannot be **deleted.**

To access Currency option,

1. Click the **Admin** tab in the header pane.
2. Click **Currency** icon under the Purchase/ Contract Management block. The GL Code List view page opens where you can add, edit and delete a GL Code.

Add Currency

1. Click the **Add New Currency** link.
2. **Add New Currency** pop-up box opens up. It has the **following options**:

    - **Currency** dropdown
    - **Currency Symbol** box
    - **Exchange Rate**

3. Select the **currency to be added** using the Currency dropdown
4. Specify the **Currency Symbol** in the currency symbol box
5. Specify the **exhange rate** of the currency being added
6. Click Save

Edit Currency

1. Click the **Edit icon** beside the currency you wish to modify. Added currency will change to editable mode.
2. Edit details as per your requirements
3. Click **Save** button.

Delete Currency

1. Click the **Delete** icon beside the currency to be deleted. A confirmation dialog appears.Edit details as per your requirements
2. Click **OK** to proceed. The currency will be deleted from the list.

Contract Additional Fields

You can configure contract additional fields that need to appear in the new contract form.

1. Log in to ServiceDesk Plus application using your **user name** and **password**.
2. Click the **Admin** tab in the header pane.
3. In the Purchase/Contracts management block, click the **Contract - Additional Fields** icon . This opens the Contract - Additional Fields page. You can add three types of fields in the form: text, numeric and date/time.

4. To add the text fields, enter the label name in the form fields below the **Label** heading. If required, enter the description for the field.
5. You can choose the type of text field that you wish to add by selecting the radio buttons.
   - **Single-line text field:** Allows you to add just a text field in the new contract form.
   - **Multi-line text field:** Allows you to add a text box where a lengthy description can be added in the new contract form.
   - **Pick List:** Allows you to add a combo box in the new contract form. Contents of the combo box can be added by specifying it in the text field and adding it to the list. This gives you an option to select from the list . In all the three cases, you can add default values for the text field in the space provided for the field.

   To add items for the pick list, enter the value in the text filed and click **Add Item**. To select the default selected value of the list, click on the value in the list.

6. To add numeric fields, click the **Numeric** tab and then enter the label name in the form fields provided for the same.
7. To add date/time fields, click the **Date/Time** tab and enter the required details.
8. Click **Save**. A message for successful creation of the fields is displayed.

These fields appear under the **Additional Contract details** in the New Contract form. To delete the user-defined fields, in step 4 through 7, instead of adding the label names, delete the label names that you wish to remove from the fields of the form and click **Save**. The respective fields that you deleted will be removed from the New Contract form.

Notification Rules

Notification Rules are helpful when an event has to be notified to the technicians. Say, when Purchase order is overdue or Audit changes during discovery or Software under Compliance during discovery or when prohibited software is identified during discovery.

When the above-mentioned situations are managed suitably, it not only helps technicians in efficient management of the assets but also brings in cost savings to the organization.

Enabling Notification Rules

1. Click the **Admin** tab in the header pane. The configuration wizard page opens.
2. In Purchase/Contract Management block, select **Notification Rules** icon . The Notification Rules page opens.
3. To set the notification rules select the relevant notification rules by enabling the check box. These notification rules are self-explanatory.
4. Except for **Purchase order Overdue**, You can assign technicians to notify of the fault for all the other notification rules.
5. To assign technician select **Choose** button, this brings up the **Choose Technician Name** page.
6. Select as many as technicians from the list using ctrl or shift keys.
7. Click **OK** button to save. You can see the selected technicians displayed in the choose technicians grayed out field.
8. Click **Save** button to save the set notification rules. The notification to the administrator or to the technicians will be generally sent through email.

Customize Message Template

You have default message template for Contract notification. To customize email templates as per your requirement,

1. Under Customize Message Template, click **Edit Template** link.
2. You can change the **Subject** and the **Message** content by typing the text of your choice and also adding other variables that you wish to display as a part of the subject or message content.
3. To add more variables, just click the corresponding variable from the list box beside the respective field.
4. Click **Save**.

User Survey

You can easily configure the customer satisfaction survey to collect information on various key parameters that you would like to measure about the support team and the response quality. You can define your own survey and the reports will be generated based on the survey that you have defined. You can also set the frequency of conducting the survey.

The various survey related configurations that you can perform are

1. Configuring Survey Settings
2. Defining a Survey

Apart from the above the you can also do the following survey related actions:

1. Sending Survey for a Request
2. Viewing the Survey Results

Once you have completed configuring and defining the survey, you can have a look at the preview of the survey by clicking the Survey Preview link on the left menu or the Survey Preview icon in the Admin tab.

To access the user survey related configurations

1. Log in to the ServiceDesk Plus application using the **user name** and **password** of a ServiceDesk Plus administrator.
2. Click the **Admin** tab in the header pane. The **User Survey** block is below the Users block.

Survey Settings

Survey settings enables you to configure the default values for welcome message, survey success or failure message, and thank you message. You can also choose to enable or disable a survey. If you enable a survey you can also schedule the periodicity of conducting the survey.

To configure the survey settings

1. Log in to the ServiceDesk Plus application with the **user name** and **password** of a ServiceDesk Plus administrator.
2. Click the **Admin** tab in the header pane.
3. In the **User Survey** block, click the **Survey Settings** icon. The **Survey Settings** page is displayed.
4. To enable the survey, select the check box **Enable User Survey**.
5. Under the **Survey Details** block,enter the **Welcome Message,** which you wish to display as soon as the user reaches the survey page. or when the user is taking the survey.
6. **Email Content:** Specify the purpose of the email in the Email Content text field. This content will be displayed in the mail sent to the requesters. $RequesterName & $SurveyLink are variables which changes based on the requester & application URL.
7. **Success Message:** Enter the message that will be displayed once the survey has been successfully answered and submitted by the user.
8. **Failure Message:** When the survey is taken by a person who has already submitted the answers for the survey, then you will have to display a failure message. You can enter the same in the **Failure Message** text area.
9. **Thanks Message:** Enter the thanks message. This message will be displayed just before the submit button in the survey form.
10. To schedule the survey, in the **Schedule Survey** block, choose the radio button that you wish to set as a criteria for sending the survey. The options are,
    - **A request is closed:** For closing every one request a survey mail will be sent
    - **Requests are closed:** Specify the number of requests to be closed of all the available requests in the text box. Once the specified number of requests is closed a survey mail will be sent.
    - **Requests from a requester are closed:** Specify the number of requests to be closed for a requester in the text box. Once the specified number is reached a survey mail is sent to the requester. This text box can take only integer values as input.
11. Click **Save** to save the survey settings.

Define Survey

You can define your own survey by adding your own questions and satisfaction levels that will suit the needs of your organization and users.

To define your survey,

1. Log in to the ServiceDesk Plus application using the **user name** and **password** of a ServiceDesk Plus administrator.
2. Click the **Admin** tab in the header pane.
3. In the **User Survey** block, click the **Define a Survey** icon . Here you can add, edit, or delete your survey questions and satisfaction levels.

Add Survey Questions

To add a survey questions

1. Click the **+ Add Question** button available in the **Questions** tab in the **Define Survey** page.
2. In the Question pop-up window, type your question in the text area provided.
3. Click **Save**. The question will get added in the Define Survey Questions tab.

You can add any number of questions to the survey by following the above steps. As you keep adding questions it will get appended at the end of the list of questions. You can change the order of the questions by clicking the **Move Up** and **Move Down** link that is available beside each question.

Edit a Survey Question

To edit the survey question

1. In the **Questions** tab, click the **Edit** link beside the question that you wish to edit.
2. In the Question pop-up window, edit the question displayed in the text area.
3. Click **Save**. The **Define Survey** page is refreshed to display the modifications made.

Delete a Survey Question

1. In the **Questions** tab, click **Delete** link beside the question that you wish to delete. A confirmation dialog pops up.
2. Click **OK** to delete the question.

Note: If you delete a question from a survey, then it will have an impact on the survey results that have been collected previously.

Add Satisfaction Levels

To add satisfaction levels that will be displayed as choices for each of the survey questions

1. Click the **Satisfaction Levels** tab in the **Define Survey** page.
2. Click **+ Add Level** button.
3. In the satisfaction level pop-up window, enter the satisfaction level in the text area provided.
4. Click **Save**. The satisfaction level is added and the **Define Survey** page is refreshed to display the added satisfaction level.

You can add any number of satisfaction level to the survey by following the above steps. As you keep adding the levels it will get appended at the end of the list of already added levels. You can change the order of the same by clicking the **Move Up** and **Move Down** link that is available beside each question. Satisfaction levels scales from good to bad, good at the top bad at the bottom. Moving up or down changes the satisfaction levels.

Edit a Satisfaction Level

To edit a Satisfaction level

1. In the **Satisfaction Levels** tab, click the **Edit** link beside the satisfaction level that you wish to edit.
2. In the satisfaction level pop-up window, edit the satisfaction level displayed in the text area.
3. Click **Save**. The **Define Survey** page is refreshed to display the modifications made.

Delete a Satisfaction Level

1. In the **Satisfaction Levels** tab, click the **Delete** link beside the satisfaction level that you wish to delete. A confirmation dialog pops up.
2. Click **OK** to delete the satisfaction level.

	Note: If you delete a satisfaction level from a survey or change its order, then it will have an impact on the survey results that have been collected previously.

Survey Translate

If you have purchased the license along with multi language, then the **Survey Translate** tab appears. The survey can be displayed in various languages supported by ServiceDesk Plus to users located in various locations.

Add New Translation

To add new translation,

1. In the Define Survey page, click on **Survey Translate** tab.

2. In Translate Languages list view page, select **New Translation** link. The New Translation form appears.
3. Select the **Survey Language** from the drop down list. The languages supported by ServiceDesk Plus is displayed. The languages for which a translation is added does not appear again in the Survey Language drop down list.
4. Enter the **Survey Questions** in the language selected in Survey language drop down list.
5. Similarly, specify the **Satisfactory Levels** and **Messages** in the respective fields.
6. Click **Save** to save the new translation in the list view. By default, while adding a new translation the language is enabled. To disable the language, select the check box beside the language to be disabled and click **Disable** button.

The survey form for the requester consists of Display Language drop down listing all the enabled languages configured under Survey Translate tab. Select the language to view the survey.

Edit a Translation

While editing a translation, the Survey Language cannot be modified.

1. In the Translate Language page, click the **Edit** icon beside the language you wish to edit. The New Translation form appears
2. The Survey Language is in non editable text. Modify the details in **Survey Question**, **Satisfactory Levels** and **Messages**.
3. Click **Update** to save the changes.

Delete a translation

1. In the Translation Language page, select the check box beside the language you wish to delete.
2. Click **Delete** button. A confirmation box appears. Click **Ok** to continue. The translated language is deleted from the list.

Send a Survey

If the survey is enabled in the survey settings, then a technician or the ServiceDesk Plus administrator can manually send a survey to the requesters once the survey is closed.

To send the survey

1. Log in to ServiceDesk Plus application using your **user name** and **password** or that of the ServiceDesk Plus administrator.
2. Click the **Requests** tab.
3. In the Request list view, select the filter **Closed Requests** or **My Closed Requests**.
4. Click the request **Title** for which you wish to send the survey.
5. Click **Send Survey for this Request** link available under the **Tasks** block. A success message that the survey has been sent for the request is displayed and the survey will be sent to the requester who created the request as a mail with a URL which opens the survey.

	Note: The following conditions need to be true for the Send Survey for this Request link to be visible: 1. Either a technician or administrator should have logged in. 2. The request must be closed. 3. The **User Survey** must be enable in the **Survey Settings**.

View Survey Results

Once the requester completes the survey, the administrator and the requester who took the survey can view the survey results.

To view the survey results

1. Log in to the ServiceDesk Plus application using the **user name** and **password** of a ServiceDesk Plus administrator.
2. Click the **Requests** tab.
3. In the Requests list view select the **Closed Requests** or **My Closed Requests** filter.
4. Click the request **Title** for which you wish to see the survey results.
5. Click **View Survey Results** link available under the **Tasks** block. The survey results opens in a pop-up window.
6. Once you have viewed the results, click the **Close** button.

You can view the survey results filled in by the requester from this page. A survey is defined and a survey mail is sent to the requester. By sending the survey mail you ask the requester to answer the survey questions to improve the service provided by the technicians. The survey results answered by the requesters will be listed under this section.

	Note: 1. The View Survey Results link appears only if the requester has completed taking the survey. Else this link will not be present. 2. Once the survey is submitted, the responses cannot be changed.

Project Configurations

To access Project related configurations:

1. Log in to the ServiceDesk Plus application using the user name and password.
2. Click the Admin tab in the header pane. Project Configurations would be available in Project Managment block.

In this section, you learn about:

1. Setting Up a Project - Learn about projects, its members and their roles, with an example project and sample member hierarchy diagram.
2. Configuring Project Types - Learn how to create new project types, assign a specific color, change them to inactive status via this page.
3. Configuring Project Roles - Learn how to create new project roles, configure access permissions and assign them to members via this page.
4. Configuring Project Status - Learn how to configure new project status, assign a specific color, chang them to inactive status via this page.

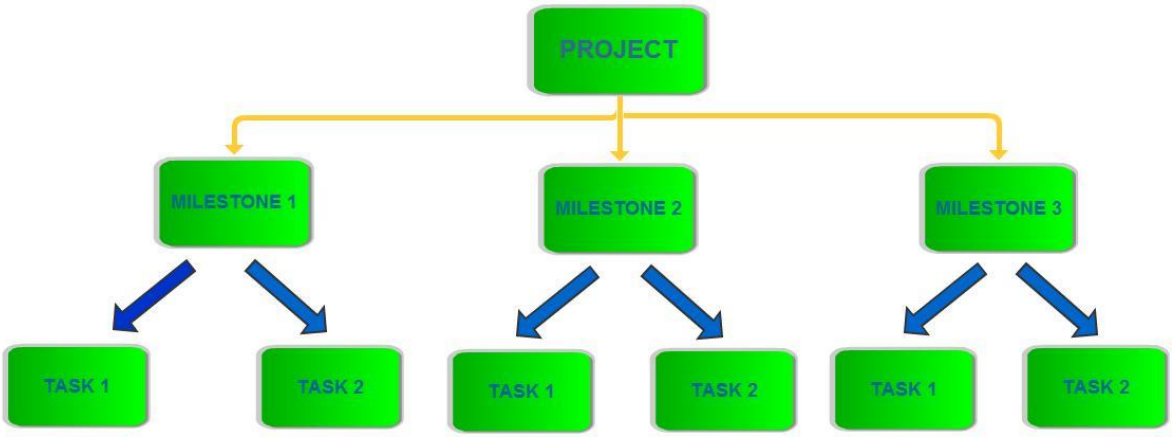
Setting up a Project

Contents

- What are Projects?
- Project Members
- Project Types and Project Status

Projects

Systematic approach to completing a Task can be termed as a Project. Creating a Work Breakdown Structure (WBS), providing a crystal clear view of the "work in progress", through various stages namely Milestones and Tasks, is the Project's ultimate objective. Setting up realistic goals, working against a reasonable time schedule, with a multitude of members assigned to various roles concentrating on different aspects of the "work in progress", are some of the features of project(s).Anything from a simple "office shifting" to an IT project like "setting up a datacenter" can be considered a project. The basic WBS of a Project is as follows: Milestones, Tasks and related Tasks.



Let us take the example of "Setting up an IT Test Environment" and see how it is implemented with projects. As stated earlier, a project can be divided into: Milestones, Tasks and related Tasks. Superficially speaking, the basic WBS of the Test Environment would be like: Database Configuration, Workstation Configuration and Network Configuration. These three major tasks outining the entire Project can be considered as Milestones.

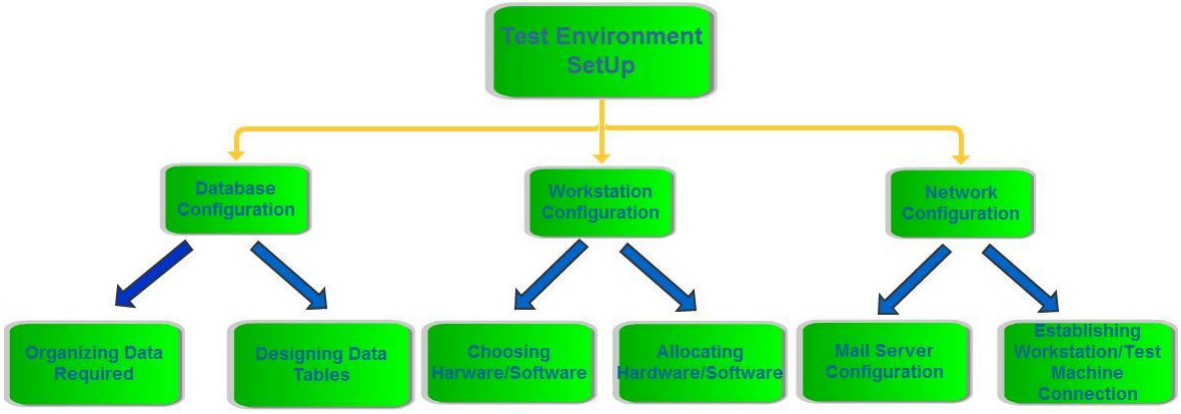
Milestones, or major Tasks (mentioned above), would inturn require no. of actions to be carried out for the Milestone to be completed. For example, the Milestone "Workstation Configuration" would involve: deciding the "hardware/software required", "allocating

hardware/software efficiently" (to respective workstations), and so on. These actions under a Milestone are known as Tasks.

Sample IT Test Environment, along with its Milestones and Tasks, represented through a project.

Project	Milestone	Task 1	Task 2
Test Environment Setup	Database Configuration	Organizing Data Required	Designing Data Tables
	Workstation Configuration	Choosing Hardware/ Software	Allocating Hardware/Software
	Network Configuration	Mail Server Configuration	Establishing Connection between Workstations and Test Machines

The flowdiagram for 'Test Environment Setup' project would be as follows:



Project Members

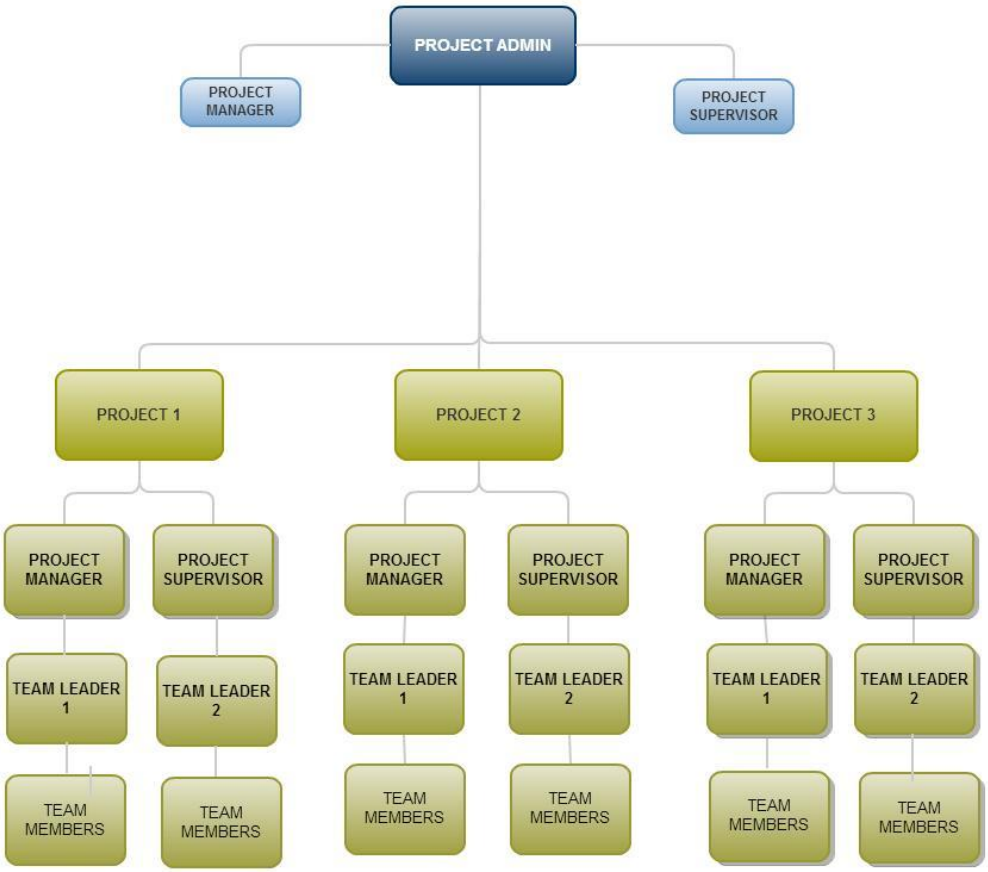
Project member is one to whom a part of the project is assigned. It could be a milestone, task or the entire project itself. Based on the assigned role, the member would be provided with a set of access permissions. For example, let's say, you have a deluge of tasks in your project and therefore need a member to supervise the tasks alone, then you can define a role like Task Supervisor. In similar manner, you could have members specific to Milestones as well.

Member roles available by default are:

- **Project Admin**: Role that allows members to access/control entire project module (that is,control over all available projects)
- **Project Manager**: Role that allows members to access/control an entire project (add, edit and delete Projects)

- **Team Leader**: Role that allows members to access/control Milestones (add, edit and delete Milestones)
- **Team Member**: Role that allows members to access/control Tasks (add, edit and delete Tasks)

Sample Member Hierarchy Diagram



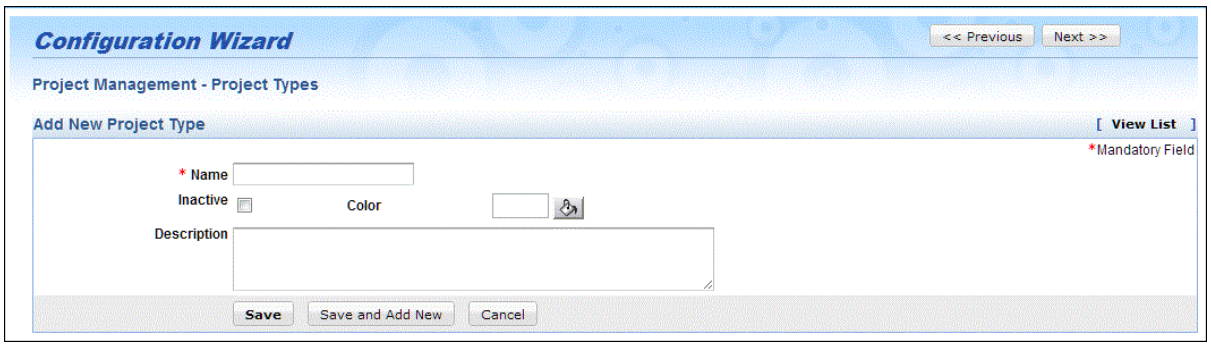
Project Types and Project Status

Specify project types and indicate the project status using Project Types and Project Status respectively.For example: let's say yours is a business project, then such a project can be classified as of the type 'business'. Similarly, Project Status is useful in indicating the project's progress rate which plays a crucial part in letting project administrator/ manager decide what steps should be taken further within to improve it.

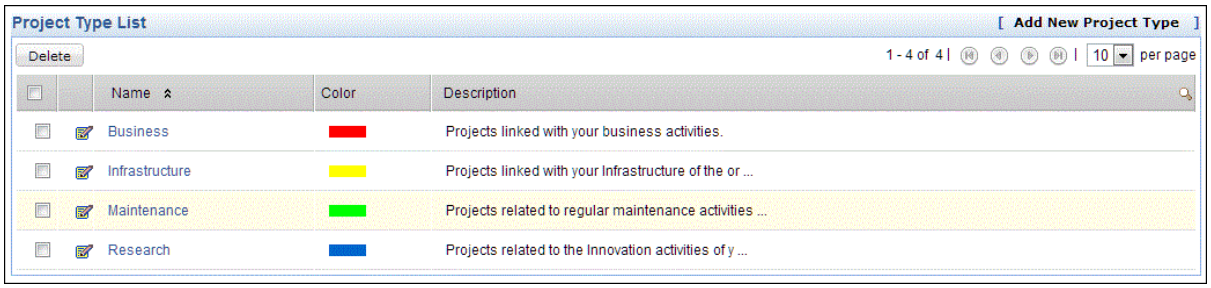
Default Options	Default Project Types	Default Project Status
	Business	Open
	Infrastructure	Onhold
	Maintenance	Closed
	Research	Cancelled

Configuring Project Types

1. Click on **Admin Tab** and select **Project Types**
2. Click the **Add New Project Type** Link (present at **top-right corner** of the Project Type List View)
3. In Add New Project Type form, provide the Project Type Name
4. Select color representing the Project Type; provide description regarding the Project Type
5. **Inactive check box** lets you keep the Project Type dormant; that is, the **Project Type can be reinstated** as and when required by **unchecking this option**.



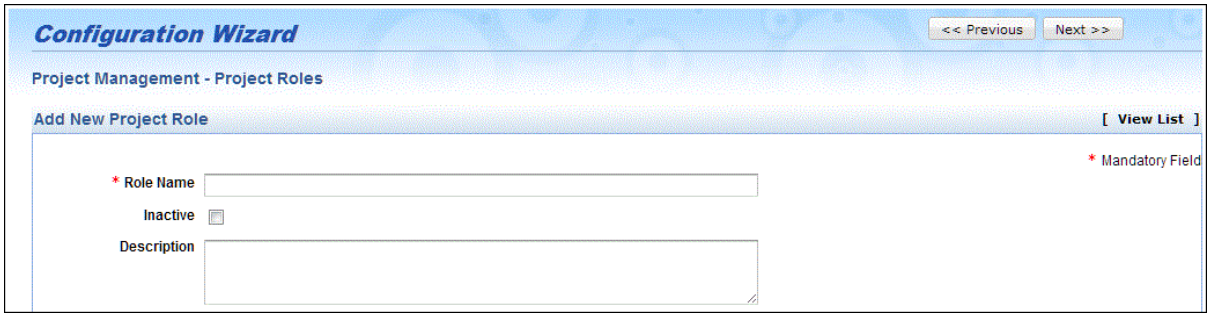
6. By **default** the following project type options are available:



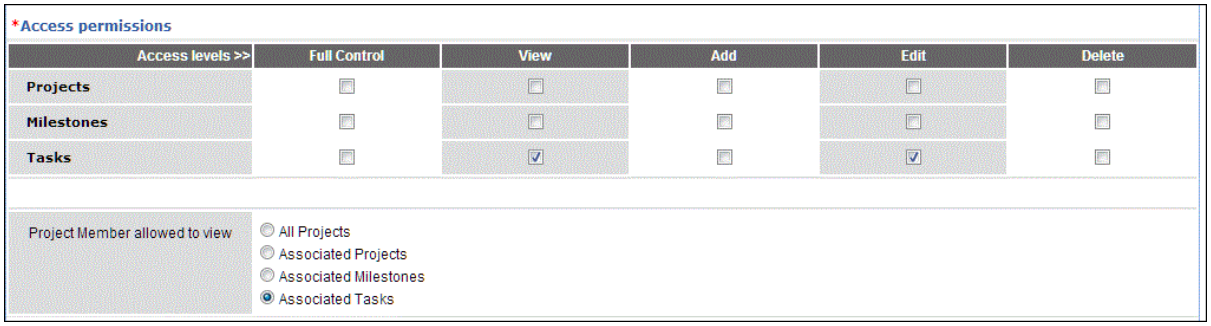
	Note : • Click **Edit Icon** to edit project types • **Bulk Deletion of Project Types** is possible; to do so, select **multiple projects types** and**click on Delete Button**

Configuring Project Roles

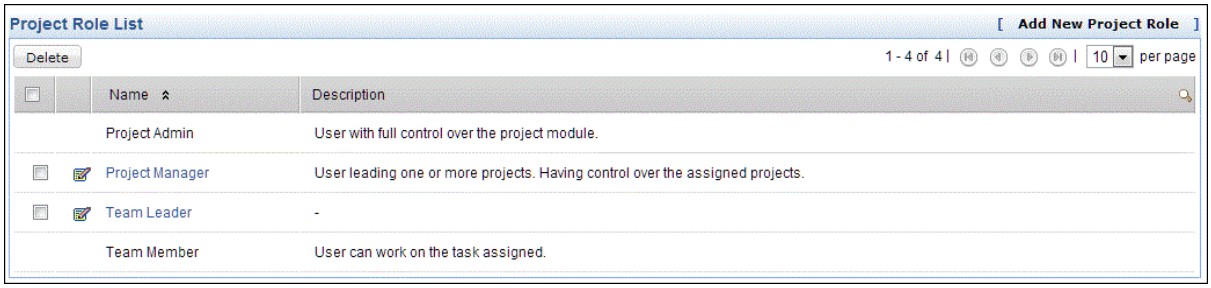
1. Click on **Admin Tab** and select **Project Roles**
2. Click the **Add New Project Role** Link (present at **top-right corner** of Project Role List View page)
3. In Add New Project Role form, provide the Project Role Name
4. Provide description for the new Project Role



5. Choose the **Access Permissions** for the newly formed **project role**
   - Like already stated there would be 2 non-editable default options: **Project Admin & Team Manager**
   - **Project Admin** would have full control over Project Module and **Team Manager** would have permission to work on Tasks assigned to him
   - Also it is impossible to uncheck Task View option as it is mandatory for a project role
   - Configure project roles as per requirement and assign them to project members



6. Based on the **permissions configured** the **project member** will be associated with anyone of the following: **All Projects/Associated Projects/Associated Milestones/ Associated Tasks** (pointed out by **Project Member allowed to view** radio button).
7. By default the following project roles are available:

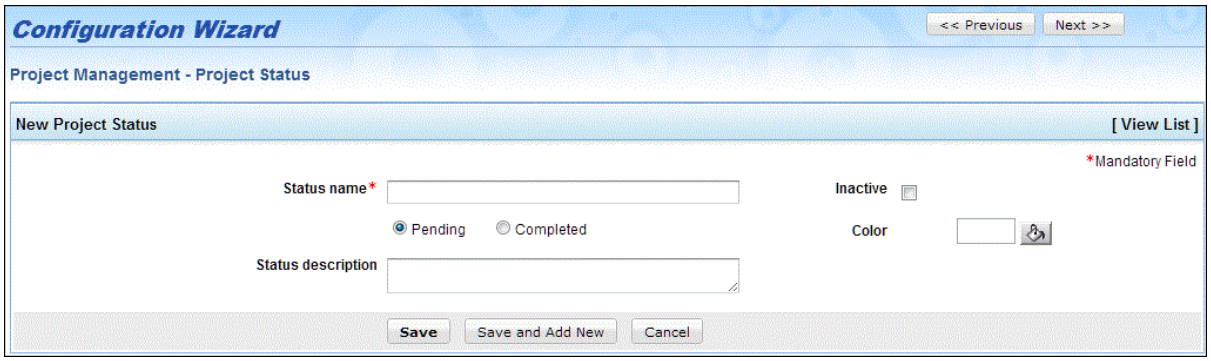


Note :

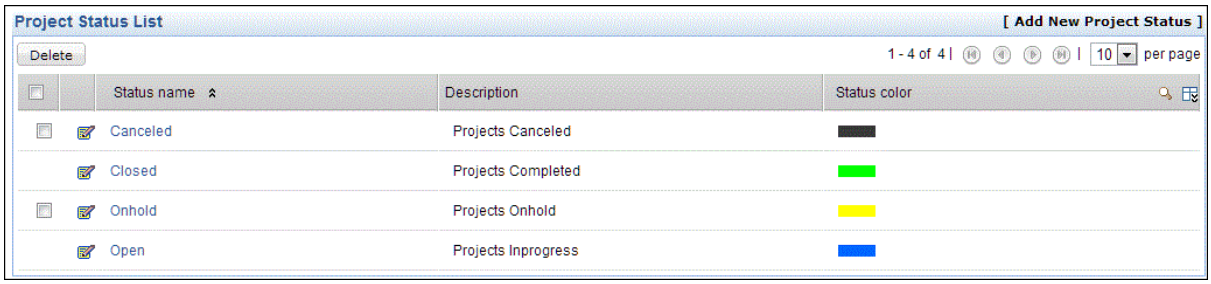
- **Users/Requesters** (when they are imported in ServiceDesk Plus) can be **assigned a default project role.** These **default project roles do not override project specific roles;** they serve as **default options when no project role is configured** for the user/requester.
- **Project Admin** and **Team Member** are **non-editable/non-deletable** roles
- **Bulk Deletion of Project Roles** is possible; to do so, select multiple projects roles and click on **Delete Button**

Configuring Project Status

1. Click on **Admin Tab** and select **Project Status**
2. Click the **Add New Project Status** Link (present at **top-right corner** of the Project Status List View)
3. In Add New Project Status form, provide the Project Status Name
4. Select the color to represent the Project Status; provide description regarding the Project Status



5. To render a project status inactive click **Inactive** checkbox**.**
6. By default the following project status options would be available.



	Note : • Click **Edit Icon** to **edit project status** • For **Bulk Deletion** of Project Status select multiple project status, **click Delete Button**

General Settings

General Settings configurations are,

- Self Service Portal

  Select fields to be displayed in the self service portal of the end-user login.

- Backup Scheduling

  Schedule a backup of all your files and attachments at regular intervals.

- Data Archiving

  Boost the performance of your help desk by archiving closed/resolved requests.

- Desktop Central Integration

  Automate desktop management activities like installing software, patches and service packs in your Windows environment from a single point.

- Translations

  Personalize ServiceDesk Plus by modifying any text displayed in the web interface to suit your organization needs.

Configuring Self Service Portal Settings

Self-Service Portal Settings allows you to select fields to displayed in the Self Service Portal. The Self Service Portal Settings also includes options to select the display language, customize the start day of the week in your calendar, enable Remote Control access for all workstations, customize the login and header images and much more.

To access the Self-Service Portal Settings Configuration Wizard,

1. Login to ServiceDesk Plus using the user name and password of an admin user.
2. Click the **Admin** tab in the header pane.
3. Click **Self Service Portal Settings** icon under the **General** block.

Default Currency

Specify the default currency in the given text field. This unit will be used in all the places where cost calculation is done. The default currency specified is $.

Display Language

ServiceDesk Plus supports different languages as part of the application. You can choose default language of your choice to be displayed in the application. To select the language of your choice,

Click **Browser default** combo box. Select the language of your choice from the list.

Calendar Customization

You can customize the calendar view by selecting the **start day of the week** from the drop-down. The selected day will be considered as the starting day of the week in all the calendar views.

My Reminder(s)

If you wish to show all your tasks as reminders to the requesters then select '**Yes**' radio button else select '**No**' option. The reminders will be shown in the home page.

Requester List

1. While entering the requester name in the new request form, the list of all available requesters will be automatically listed. If you wish to list the technicians name along with the requesters name then select **Yes** radio button.
2. You can allow requesters to **Reopen** their closed or resolved requests from the Self-Service Portal. Click **Yes** radio button to enable this option. When the status of the request is moved to Closed or Resolved, a **Reopen** tab is displayed in the request details page.
3. You can also allow requesters to **Close** their requests from the Self-Service Portal. Click **Yes** radio button to enable this option. When the status of the request is moved to Resolved, a **Close** tab is displayed in the request details page.

Request Feature List

Includes options to change the status of requests to Open when requesters reply to On Hold requests, actions to perform when requesters reply to closed requests, stop timer for requests awaiting approval and option to show site details in the request details page.

1. If you wish to change the request status to **Open** when a requester replies to an **On Hold** request, click '**Yes**' radio button.
2. Select the following options when a **requester replies to a Closed request**:
    - The request is reopened always.
    - If the requester replies within the specified number of days from the closed time, the request is reopened. Else, the reply is created as a new request.
    - The reply is appended as a conversation and notified to the technician. The status of the request remains unchanged.
    - The reply is created as a new request.
3. In most cases, when a request is sent for approval to the concerned authority, the help desk team may not be held responsible for the delay in approval process. In order to minimize the SLA violations by the helpdesk team, you can stop the timer for requests with status as 'pending approval'. Select the check box to avail this option. You can also select the request status from the drop-down box.

Note	1. The Status with **Type** as **In Progress** and with **Stop Timer** enabled is listed in the drop-down box. 2. The Stop Timer is automatically disabled once the decision of the concerned authority is recorded. 3. The Stop Timer is applicable for **incident** as well as **service requests**. 4. In case of incident requests, first the **Business Rules** is applied and the status set by the Business Rule is overridden with the status set for Stop Timer. 5. When Stop Timer is enabled, the option to open the on hold requests on requesters reply will not be applied.

4. When a request is submitted for approval, the requesters would be interested to know the progress and status of their requests. For such cases, you can show the approval details to the requesters. The **Approvals tab** would show information such as the approver's e-mail address, the date when the request was submitted for approval, the status of the request (whether the request is approved, pending approval or denied), the date when the concerned authority recorded their decision and the comments provided by them. The **Approvals Tab** is shown to the requester who has initiated the request and to the requester who can approve requests. Select **Show Approval Tab to requester** check box to avail this option.
5. If you wish to view the **Site details** such as, site name, address and contact information from the request details page, click '**Yes**' radio button. A **View Site details** icon appears beside the site parameter in the request details page to

view the site details. To remove the View Site details icon from the request details page, click '**No**' radio button.

6. You can **Combine the Incident and Service Templates** configured in the application. Click **Yes** radio button to enable this option. The Incident and Service Templates will be grouped according to specific categories and listed under New Request drop-down menu.
7. By default, the default request template is shown to the requester. If you do not want the requester to view the default request template, then click **Yes** radio button for **Disable default request template for requesters** option.

Dynamic User Addition

By default, when a user is not imported into the application but imported through Active Directory, then the user can login to the application using the AD credentials. This will automatically provide login access to the application. If you do not wish to provide dynamic user addition when the user is not imported into the application then enable the '**No**' radio button.

User Login Addition

By default, if a mail fetched by the ServiceDesk Plus application has a requester name and email ID that is not available in the requester or technician list already, then the name is automatically added in the requester list and the login name and password is created. The first part of the e-mail ID is set as the name and the entire e-mail ID is set as login name and password. The requester can log in to the self-service portal and change his/her password. If you do not wish to provide login access to users created through email requests then enable the '**No**' radio button.

Override User based on Email ID

While importing users using Active Directory, CSV and LDAP, the existing user information is overwritten based on two criteria - The first criteria is based on the username and Domain, and the second criteria is based on email id. If you do not wish to override user information based on email id then enable '**No**' radio button else enable **'Yes'**.

Enable Local Authentication Login

On enabling Active Directory, if you wish to allow users to login to the application using the password configured in ServiceDesk Plus then enable **'Yes'**. The user should select Local Authentication from the Log on to drop down list in the Login screen. If you wish to allow users to login to the application using the system password then enable **'No'** option.

Email from New User

Using this option, you can prevent mails, from a new email address to be fetched into the application. To block mails from the email address that is unavailable in ServiceDesk Plus database, click '**No**' radio button. The mails are discarded and will not be logged in as a new request or appended as a conversation in the application. To process mails from a new email address, click '**Yes**' radio button.

Quick Create Settings

If you wish to show the quick create section to the technicians in the home page, then enable the '**Yes**' radio button else select the '**No**' button.

Auto Assign Asset

In ServiceDesk Plus, you can assign multiple workstations to a requester. So while creating a request through email, by default, the first workstation is displayed. If you do not wish to display the workstation information in the request details page, then enable '**No**' radio button else enable '**Yes**'.

Requester Details

You can allow requesters to view their profile in Self Service Portal by enabling **View their profile** check box. A **My Details** tab appears in the header pane where the requester can view his/her details.

You can also allow your requesters to edit their profile and maintain it up-to-date in Self Service Portal. Select **Edit their profile** check box. By selecting this check box, View their profile option is automatically enabled but its greyed.

By default, all the workstations configured by the administrator will be listed in the new request form of the self service portal. If you want the requester to view only the workstations associated to them, then enable the check box '**Show workstation associated to requester in Self-Service Portal**'.

Solutions Settings

By default, the solution approvers can approve their own solutions rather than submitting it for approval. If you do not want the solution approvers to approve their own solution, enable '**No**' radio button.

Remote Control Access

If you want to enable Remote Control Access to all the workstations then select **'Yes'** radio button else select **'No'** button.

Alias URL

To provide an alternate URL

1. In the text field provided beside the http:// text, enter the URL (along with the port number if needed).

2. Click **Open alias URL in a new window** link just below the text field, to test if the alias URL works.

Customize ServiceDesk

You can customize the application by choosing to display your custom logo. You need to add the logo in two dimensions, one for the login page and the other for the header image that you see on the top left corner of the pages once you login. The login page image should be of the dimensions 252 px x 61 px (W x H), while the header image needs to be 166 px x 46 px.

To import the login page image,

1. Click **Import image...** button.

2. Click **Browse** button to select the image.

3. In the file chooser window, select the file that you wish to import and click **Open**.

4. Click **Import**.

The image that you just imported will be replaced instead of the login page image. Follow the same process for header image also.

Click **Save**, to save the changes made in the settings.

Backup Scheduling

You can configure backup scheduling to take back up of all the files at regular intervals.

1. Click **Admin** tab in the header pane. The configuration wizard page opens.
2. In the General block, select **Backup Scheduling** icon .

Scheduling a Backup

1. Click **Edit Scheduling** link on the right hand side of the page. The Edit settings page opens.
2. Enable backup scheduling by selecting **Enable** radio button.
3. Select the **number of days** from the combo box to schedule the backup process. For every n number of days selected the backup will be taken for the available data.
4. Select the date to start the backup on invoking the calender icon from **Start Backup on** field. Also select the **Time** in hours and minutes from the combo box.
5. In case of any failure in the backup, you can notify it to a particular technician by specifying their email address.
6. You can take a **Backup** of either the entire Database or only the File Attachments or both. Select the check box accordingly.
7. Specify the location to store the backup data in **Backup Location** field.
8. **Save** the changes. If you do not wish to configure backup scheduling, click **Cancel**.

Deleting Backup Files

1. From the list of backup files, enable the check box beside the files you wish to delete.
2. Click **Delete** button. A confirmation dialog opens.
3. Click **Ok** to continue. The backup file is deleted from the list.

Data Archiving

Data archiving enables the user to archive closed and/or resolved requests and move them to a separate storage state. It is most useful since thousands of accumulating active requests could hinder the performance of the help desk on a longer run.

Archived requests:

- Requests that have been moved to the archived state (archived requests) will be removed from the current active requests list. These archived requests are considered as a separate set with separate search options and reports. The current active requests list, current active requests search option and the current active requests report will not include the archived requests.
- The archived requests cannot be modified, deleted or moved back to the active state.
- Any reply to an already archived request will be added as a new request and not as a thread to the existing archived request.

To view Archived Requests,

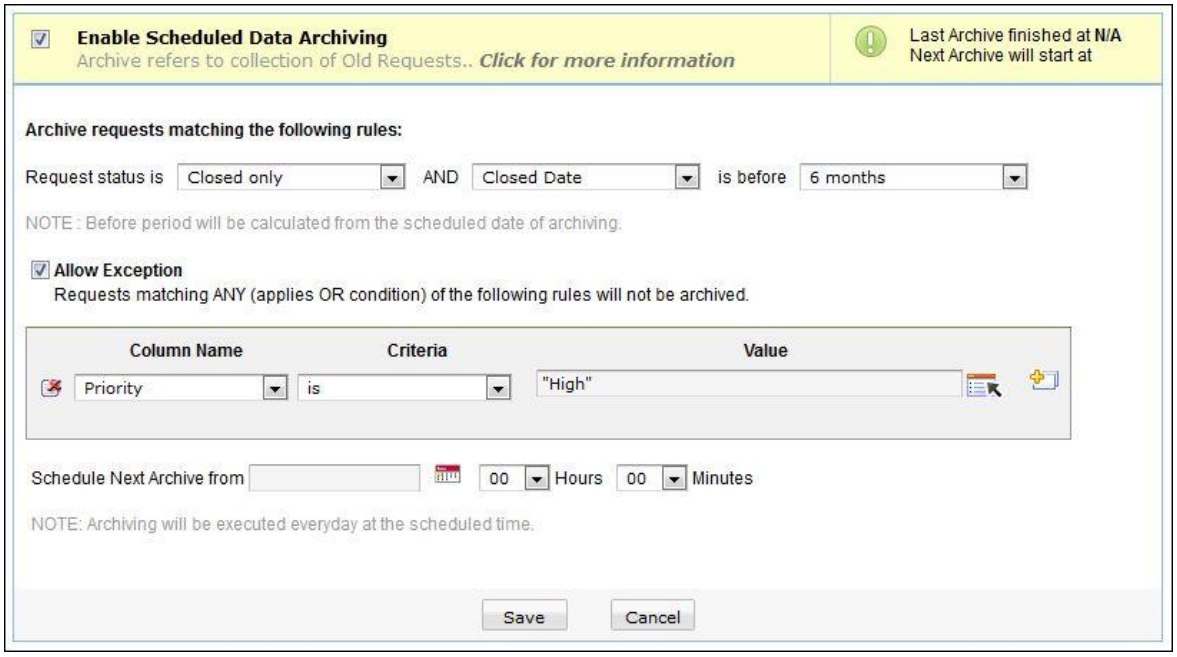
- To view the archived requests list, click on the **Requests** tab in the top header panel. Then click on **Archived Requests** link at the top right side, below date and time.
- You can also view the archived requests by clicking on **Quick Actions** at the top left side and choosing **Archived Requests** from the drop down menu.

To configure Data Archiving,

1. Log in to ServiceDesk Plus using the **Username** and **Password** of the admin user.
2. Click the **Admin tab** in the header pane.
3. Click **Data Archiving** icon under the **General** block.
4. Click on the check box **Enable Schedule Data Archiving**.
5. Set the parameters of the requests that need to be archived

    - The Status of the requests,
    - Time of creation/closure of the requests,
    - Column Name, Criteria and Values for the specific requests that need to be retained, and
    - The Schedule Time for archiving process.

6. Click **Save** to save the set parameters. The archiving process takes place as per the configured schedule.



Request status:

Request status reflects the current status of the requests that have to be archived.

- Completed – Completed requests are those that have been resolved by the technicians and closed by the end user.
- Resolved – Resolved status reflects the requests that have been attended and answered by the technicians but have not been closed by the end user.
- Any status – All requests in any state (open, closed, resolved, on hold, feedback, follow up and so on) will be considered for archiving.

Choose the status of the requests that have to be archived are in.

Time period:

Requests can be archived based on two factors of time:

- Requests can be archived based either on the Created or Closed Time.
- They can also be archived based on the Time Period during which they were created or closed.

Requests can be archived by selecting a combination of the above two factors. The requests Created/Closed before the configured time period will be moved to the Archived State during the next scheduled archiving process.

> * For example, if the archiving is to take place on 2006-11-20 (November) and you choose "Closed requests", "Closed Date" and "6 months" from the combo boxes, then the requests closed by the technicians as well as the end users before 2002-06-20 (June) would be archived.

* Similarly, if the archiving is to take place on 2006-11-20 and you choose "Any request", "Created Date" and "1 year" form the combo boxes, then all requests created before 2005-11-20 would be archived irrespective of the state they are currently in.

Exceptions:

A small check box **Allow Exception** is available in the Data Archiving. This option allows certain requests that fall under the archiving configurations to be retained in the current active request list without being moved into archived folder. It follows the OR condition where requests matching the any of the selected conditions are not archived.

Exceptions are rules that are defined by certain parameters. These rules can be configured by selecting parameters (**Column Name**, **Criteria** and **Value**) from the 3 combo boxes present in the feature. The first 2 parameters are chosen from the drop down list box while the third parameter, an attribute of the first parameter, is chosen from the pop up window by clicking on the choose/pick value icon.

Multiple exceptions can be added to retain more specific requests by clicking on **Add more exception** or by clicking the add icon and providing the necessary parameters.

For example, if you choose the first parameter as "Priority", the second parameter as "is", and the third parameter as "High" from the pop up box, then requests that have high priority will not be moved to the archived state.

An exception can be deleted by clicking on the cross/delete icon.

Process Schedule:

Schedule the archiving process by entering valid data in the "date", "hours", and "minutes" combo boxes. This can be done by selecting the required date from the calendar pop up box, and the hours and minutes from the drop down boxes. This process can be executed on a daily basis at the scheduled time.

If you choose '2006-11-20' from the calendar pop up box, '21' from the hours drop down box, and '00' from the minutes drop down box, then the Data Archiving process takes place at 9 o'clock in the night of the scheduled date and repeats everyday at the same time.

Desktop Central Integration

Desktop Central (DC) is a web - based **Windows Server** and **Desktop Management Software** from ManageEngine. And, with Desktop Central Integration in ServiceDesk Plus (SDP), you can configure and manage your Windows environment from a single point. Desktop Central automates regular desktop management activities like installing software, patches and service packs in the windows workstations and servers available in your network. You can also execute scripts for a user or workstation.

Desktop Central Integration Requirement:

1. You should have installed both **Desktop Central** and **ServiceDesk Plus** products.
2. The ServiceDesk Plus version should be above **8** and should be running the **Enterprise Edition**.
3. Desktop Central version should be build number #**70211** and above.

NOTE: If you have installed ServiceDesk Plus version 8.0 and above, then the DC operation works for **Service Requests** and not Incident requests.

Topics discussed under this section:

- Prerequisites for performing Desktop Central activities
  Lists the prerequisites for performing desktop central activities.
- Getting Started with DC Integration
  Step by step configuration to establish the integration and perform desktop management activities.
- Authentication Mechanism between the two applications
  Authentication between SDP and DC application is through an application level key. This section explains about generating this authentication key.
- Handling Desktop Management activities from ServiceDesk Plus
  Procedure on handling DC operations like install/uninstall software and executing scripts from ServiceDesk Plus.
- Enabling Notification to Technician
  Send notification to the concern technician when the task is updated in Desktop Central.
- Integration when DC is running in HTTPS mode
  Steps to establish connection when Desktop Central is running in HTTPS mode.

Prerequisites for performing Desktop Central activities

Desktop Central activities are performed only if,

- The Workstations and Servers are part of a **Windows** domain.
- The domain should be managed by **Desktop Central**, and
- A **Desktop Central Agent** should be installed in the workstations/servers.

Getting Started with DC Integration

To get started with Desktop Central Integration, the following tasks should be performed to establish the Integration and perform desktop management activities:-

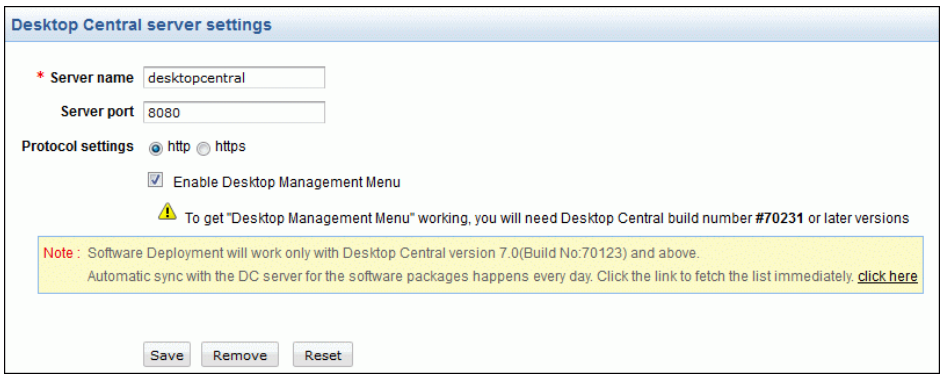
1. Desktop Central Server Settings
2. Enabling access to Desktop Management Functionality
3. Enabling Template Actions in the Service Item form

Step 1: *Desktop Central Server Settings*

If you have installed both ServiceDesk Plus and Desktop Central servers, you just have to provide the details of the computer where Desktop Central is installed along with its Port Number. On entering these details and save, ServiceDesk Plus will try to establish a connection with the Desktop Central server. Once the connection is established, the configured software details and scripts from Desktop Central server are fetched.

1. Click **Admin** tab in the header pane.
2. Click **Desktop Central Server Settings** icon under **General** block.
3. In the Desktop Central Server Settings page, enter the **Server where Desktop Central application** is installed.
4. Enter the **Port Number** of the Desktop Central server.
5. Select the **Protocol Settings**. Say, http or https. If the Desktop Central Server is running in HTTPS mode, refer SDP-DC integration with DC in HTTPS mode, to know more on establishing connection.
6. To display Desktop Central drop-down menu, select **Enable Desktop Management Menu** check box. The Desktop Management menu will be displayed only for Desktop Central build number #70242 and above.
7. Click **Save.** The settings are saved and ServiceDesk Plus tries to establish a connection with Desktop Central server. When the connection is established, ServiceDesk Plus fetches the software details and scripts from DC.

ServiceDesk Plus automatically sync with Desktop Central server for configured software packages day-to-day. So, if you need to fetch the configured software packages instantly, select **click here** link.

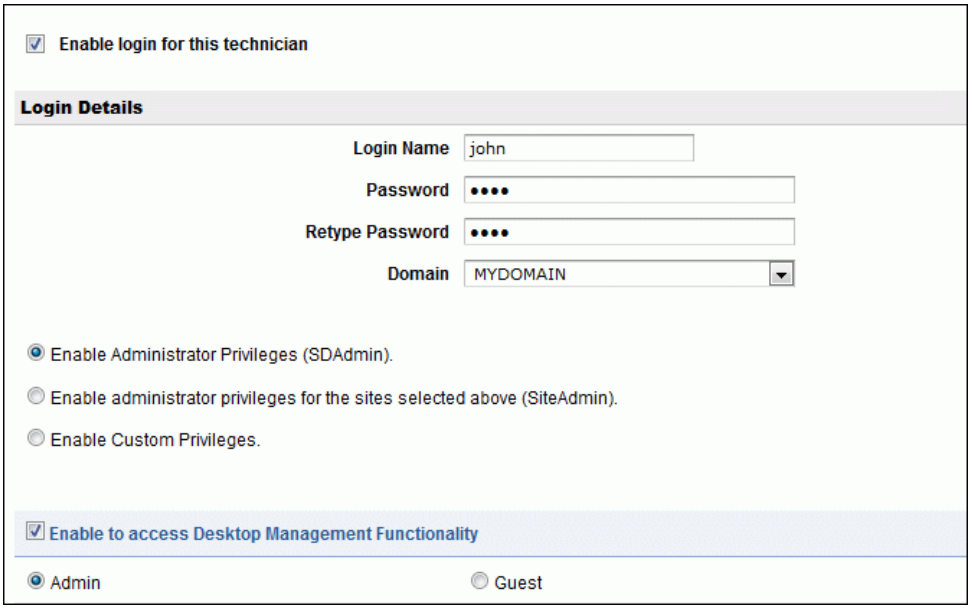


Step 2: ***Enabling access to Desktop Management Functionality***

While enabling login permission to a technician, you can also provide the technician with Desktop Central login access and DC Role. The two DC Roles are DC Admin and DC Guest. Select the check box **Enable to access Desktop Management Functionality** and provide either of the role to the technician. When the technician logs into ServiceDesk Plus using his/her credentials, the technician can view the Desktop Management drop-down menu, from where, the technician can perform Desktop Management functionality from within ServiceDesk Plus web console.

NOTE:

1. Selecting the check box **Enable to access Desktop Management Functionality** and a DC Role will create an user with same login credentials in Desktop Central application.
2. You will be able to select **Enable to access Desktop Management Functionality** check box only when the connection between Desktop Central and ServiceDesk Plus is established successfully. If the integration is not successful, then this option is greyed.



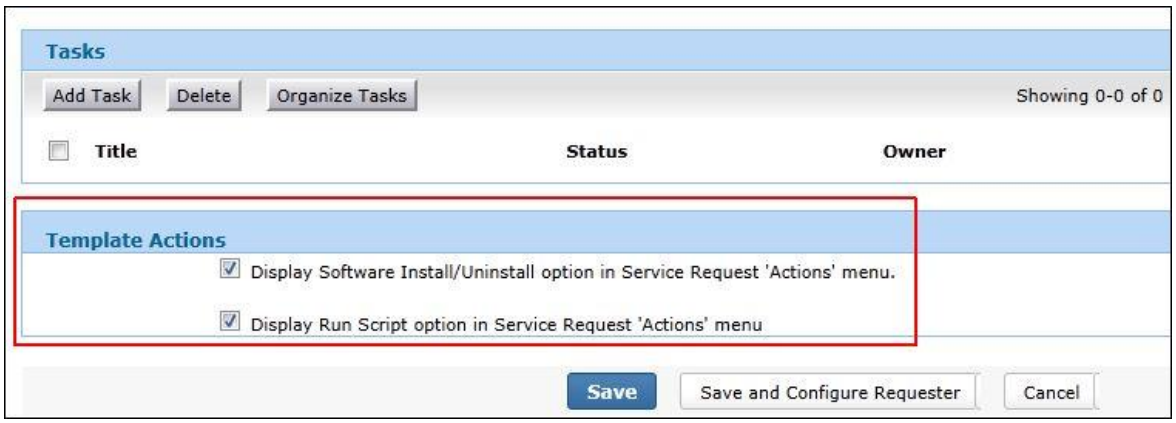
Step 3: ***Enabling Template Actions for a Service Request***

Apart from providing technicians with the privilege to perform Desktop Central operations, you need to enable Template Actions for a service item. The Template Action lists two options:-

1. Display Software Install/Uninstall option in Service Request 'Actions' menu.
2. Display Run Script option in Service Request 'Actions' menu.

Select the check boxes to provide these options in the Actions drop-down menu of the service request. Since all service requests do not require Desktop Central operations, this activity is limited by providing a **Template Action** check box in each service item form.

The Template Action option is available under the **Work Flow** tab of a service item.

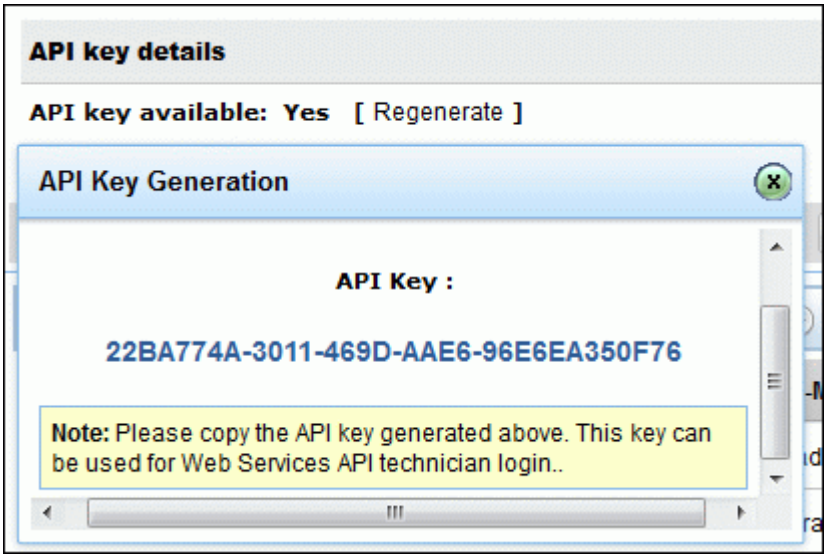


This functionality is available only when Desktop Central 70211 and above is integrated with ServiceDesk Plus. If the integration is not established, then this option is grayed.

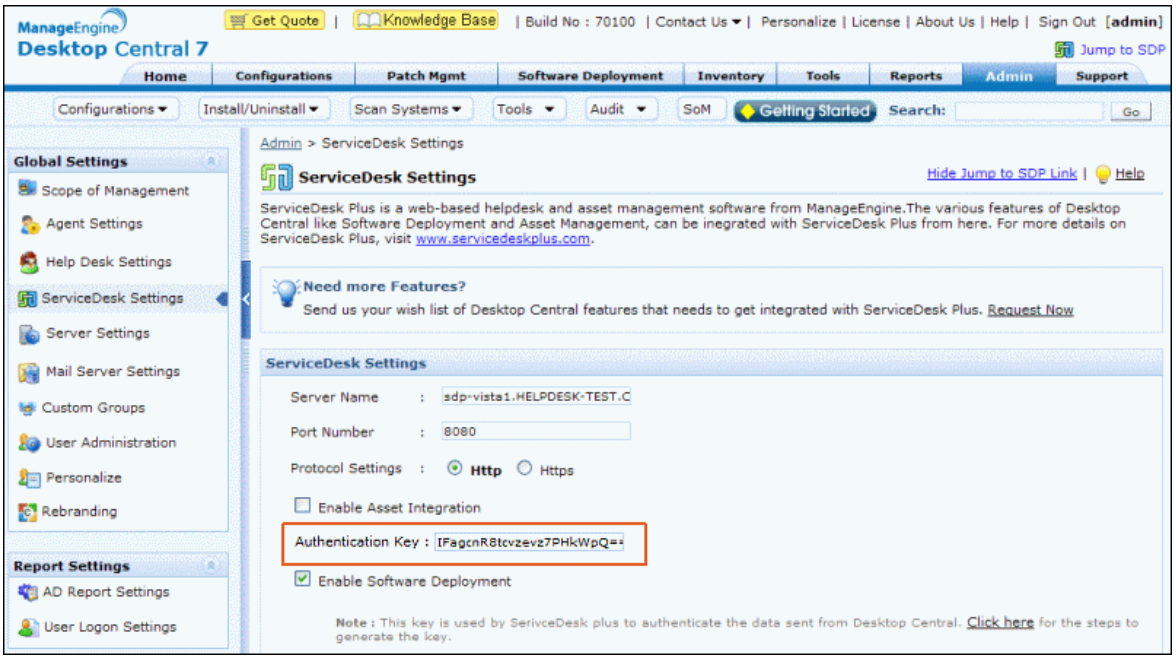
Authentication mechanism between the two applications

The authentication between ServiceDesk Plus and Desktop Central is through an application level key that functions as a handshake mechanism between the two applications. A unique key is generated for a technician in ServiceDesk Plus application.

1. Click **Admin** -> **Technicians** icon under User block.
2. Click the **edit** icon beside the technician to generate the API key. Please note that the technician should be enabled with login permission.
3. Click **Generate**. If a key is already generated for the technician, a Regenerate link appears.



The generated key is specified as the **Authentication Key** under ServiceDesk Settings in Desktop Central application. So whenever Desktop Central contacts ServiceDesk Plus, the authentication key is passed. This key is validated against ServiceDesk Plus database and if found valid, the process continues, else an error is thrown.



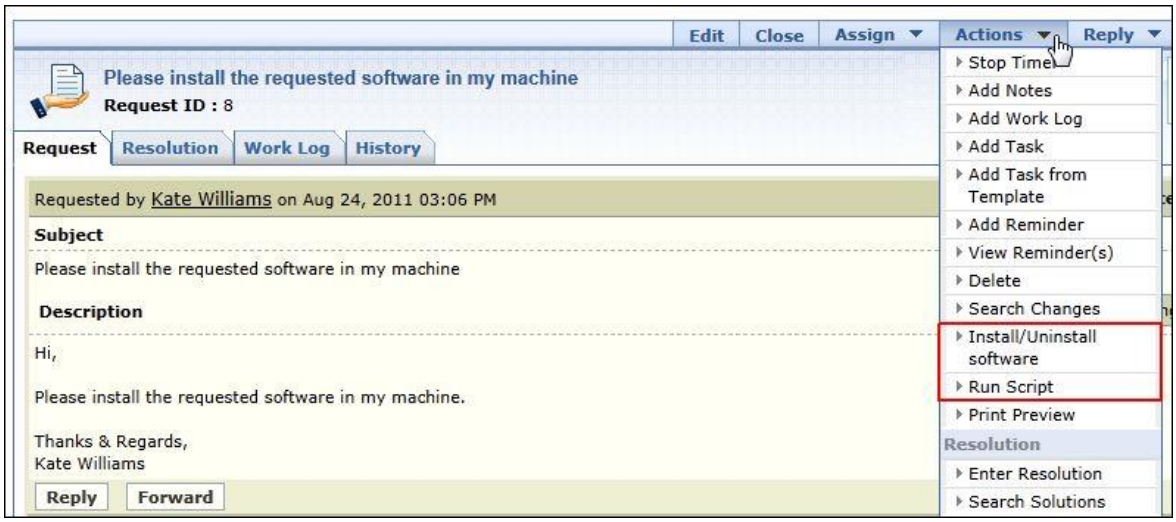
Handling desktop management activities from ServiceDesk Plus

Since the whole idea of this Integration is to perform regular desktop management activities from ServiceDesk Plus application, the list of software and scripts are fetched from Desktop Central periodically and populated in ServiceDesk Plus database.

So when an end-user raises a service request for "installing software", the technician with Desktop Central role can log into ServiceDesk Plus application and perform the installation operation.

Performing desktop management activities

From the request details page of the service request, click **Actions** drop-down menu. The options **Install/Uninstall software** and **Run Script** are listed as shown below,



Install/Uninstall Software

Click **Install/Uninstall Software** option. The Install/Uninstall Software window pops up.

Package Settings

1. Select the **Installer Type**, whether the software to be installed is of the format MSI or EXE.
2. The list of software under the selected Installer Type is listed under **Package Name**. Choose the software from the drop down.
3. Specify the name of the user for which the installation should run in **Run As** field.
4. Enter the **Password** of the specified user.
5. The type of operation, say Install or Uninstall is listed in **Operation Type** drop down. If the Installer Type is MSI, the operation type consists of Install, Advertise and Uninstall. For EXE, the operation type consists of Install and Uninstall.
6. If the execution file is in a network share, then the file or folder can be copied to the client machine by selecting the option from **Copy Option** drop down.

Deployment Settings

1. The domains available in ServiceDesk Plus is listed under the **Domain** drop down. Select the domain of the user/workstation.

2. The installation can be for a user or a workstation. Select the option from **Install for** drop down.
3. You can set and schedule the installation operation. If the Install for is selected as User, the installation can occur During or after Login into the machine, during login or after login. Similarly for a workstation, the installation can occur During Startup, After Startup, During or After Startup.
4. You can also schedule a time for the deployment operation by enabling the check box beside **Schedule Operation** check box. Select the Schedule Date and Time using the calendar icon.
5. Set the **Reboot Policy** from the drop down. You can either force a reboot when the user logs into the machine, force a shut down when the user has logged in or allow the users to skip the reboot/shut down.

Selecting Users/Workstations

1. You can select the Users/Workstations for the installation from the icon . The Users/Workstations under the selected domain is listed in a pop up window.

   NOTE: Selecting Users/Workstations depends on the Install for option under Deployment Settings. If you have selected Users, Select Users appears and vice versa.

2. Enable the check box beside the user/workstation.
3. Click **Select User/Workstation** button. The users/workstations are listed under Selected Users/Workstation. Click **Select Users/Workstation and Close** button to add the users/workstations to the list and close the pop up window.
4. **Save** the details.

Executing Scripts

To execute scripts on a workstation/user,

1. Click **Run Script** option. The Run Script window pops up.
2. Select the **Script Name** from the drop-down box. The scripts files are uploaded in Desktop Central, and ServiceDesk Plus will store these script files in SDP database. These script files are periodically updated in SDP database.
3. If required, specify the Script Arguments.
4. Select the Domain to which the user/workstation belongs.
5. You can execute the script either for a workstation or user. If you want to install the script for a workstation, select **Workstation** from the **Install for** drop-down box. The **Select Workstation** block is displayed. Click the icon to select workstations.
6. To execute the script for users, select **Users** from the **Install for** drop-down box. The **Select Users** block is displayed. Click **Select user** link. The list of users belonging to the selected domain is displayed. Select the check box beside the user(s). Click **Select User** button. Click **Select user and close** button to add the selected users and close the pop-up window.
7. Click **Save** button.

On saving, a task is generated for the request in ServiceDesk Plus application. Simultaneously, a request is generated in Desktop Central with the form values, along

with a call back URL. Desktop Central validates the request and if valid, proceeds with the specified task.

Once the operation is executed, Desktop Central sends the updated information using the call back URL for that specific task. The authentication key is sent along with the task. This key is validated against ServiceDesk Plus database and if found valid, the status of the task is updated in SDP application. If the authentication key is invalid, an error is thrown and the status is not updated.

> **NOTE:** Please note that if the request is deleted or moved to the archive state, then the status does not get updated in SDP application.

Enabling Notification to Technician

Once the software installation/uninstallation task is performed and the status is updated by Desktop Central, you can enable notification to the concern technician regarding the update under Notification Rules.

1. Click **Admin** -> **Notification Rules** icon under Helpdesk block.
2. In the Request section, Enable "**Notify Technician when a software Installation/Uninstallation task is updated**" check box.
3. **Save** the details.

Integration when Desktop Central is running in HTTPS mode

If Desktop Central Server is running in HTTPS mode, then the following steps should be followed to establish connection between ServiceDesk Plus and Desktop Central servers.

1. Download the .zip file from the link given below and extract it to ManageEngine\ServiceDesk

   http://bonitas.zohocorp.com/servicedesk/11Mar2010/certgeneration.zip

2. Connect to the command prompt. Goto ManageEngine\ServiceDesk and run the batch file with following format:

C:>ManageEngine\ServiceDesk>gencert.bat dcservername:portnumber

3. On running the command, you will receive an exception PKIX and then it will ask you to enter a value. Provide value 1 which will generate a file named jssecacerts under ManageEngine\ServiceDesk.
4. Copy the jssecacerts file under ManageEngine\ServiceDesk\jre\lib\security folder and then restart the ServiceDesk Plus application.

Translations

Translations let you personalize ServiceDesk Plus by modifying any text displayed in the web interface to suit your organization needs. You can modify sentences or change specific words such as, Request to Tickets, Admin to Configurations, or Requesters to Users using Translations.

If you have multi language edition, then you can modify the transcripts for all the languages supported by ServiceDesk Plus.

NOTE:

1. To view the modified text, make sure you restart the server.
2. For sentences with curly braces {}, make sure you enter the curly braces even after modifying the sentence.

To access **Translations** Configuration Wizard,

1. Click **Admin** tab in the header pane.
2. Click **Translations** icon under **General** block. By default, the language set in the Translations page is English. The total number of text in the application, and the number of modification make by you is represented in the form of a link. You can select the link to view the same.

In case of other language, the English text and the other language text is displayed one below the other.

Modifying Sentences

If you want to modify a sentence, then an instant means is by performing a search for the sentence.

1. Enter the sentence in **Search for English** text field. Say, Mark this template Inactive to.
2. Click **Search** button. The search result shows the list of sentences having Mark this template Inactive.
3. Click **Modify** link below the sentence.
4. Enter the modified sentence in the text provided. Say, Mark as Inactive.
5. Click the icon to save. The entered value is saved in the file present in the custom/i18n directory. A Reset link is displayed beside the modified sentence. Click the **Reset** link to revert the changes.

Modifying a specific Text

If you want to call Admin as Configurations, or Requesters as Users, then you can do so using the Find & Replace button.

1. Click **Find & Replace** button.
2. Enter the keyword to search in **Find** text box.
3. Specify the keyword to be replaced in the **Replace** text box.
4. Click **Proceed** button.
5. The search result shows sentences with the search keyword and the corresponding sentences with the replaced keyword at the side.
6. Select the check box beside the sentences to replace the word.
7. Click **Replace** button. The sentence is modified and displayed along with a Reset link. Click **Reset** link to revert the changes.

API

ServiceDesk Plus API

- Purpose of API in ServiceDesk Plus
- API Types and supported Operations
- Procedure
    - Servlet API
    - REST API
- Difference between Servlet and REST API
- Future Enhancements

Purpose of API in ServiceDesk Plus

Application Programming Interface (API) is used to integrate various applications and facilitate sharing of data between them. The integration can be achieved with any third party (external) applications or web services that is capable of sending the data via http protocol.

With API, ServiceDesk Plus operations can be accessed from other applications or web services. In case of request operations, it provides a convenient method to raise requests (other than the default e-mail or web form) directly into ServiceDesk Plus without logging into the application. If required, you can also have an option to create your own web form for using API.

API Types and supported Operations

ManageEngine ServiceDesk Plus supports both *Servlet* and *REST API*. While the functionality are similar for both, Servlet consists of http form based submission whereas, REST conforms to the REST specifications. Both the api methods can be implemented simultaneously in the application provided, the operation is performed with the corresponding syntax definitions.

The servlet Http form submission based API supports operations such as,

- Adding new request, editing, closing, deleting, viewing existing requests and adding notes for existing requests.
- Adding new site, editing and deleting the existing site.
- Adding new technician, editing and deleting the existing technician.
- Adding new requester, editing and deleting the existing requester.
- Adding a workstation/server, updating a workstation/server, adding an asset, updating an asset and deleting assets.

While the *REST API* supports only **request related operations** such as,

- Adding new request, editing, closing, deleting and viewing existing requests.

- Adding new notes to a request, editing, deleting and viewing existing notes.
- Adding work log to a request, editing, deleting and viewing existing work logs.

Difference between Servlet and REST API

Servlet API	REST API
The servlet is a form based input submission by the external applications. While the output is exposed in XML format.	The input data is sent as an XML string and the output is exposed as an XML string.
The http form is submitted to, *http://<machine_name>:<port_number>/servlets/RequestServlet*	The general form of the api url is, *http://<servername>:<port number>/sdpapi/<module>*
Authentication is through **User Name and Password** for every API operation.	Authentication is through **Technician Key** for every API operation.
Supports operations on features such as Request, Site, Technician, Requester and Assets.	Supports operations on Requests alone.

Future Enhancements

- Support the remaining modules namely problem,change, purchase, contracts, cmdb and admin.

Servlet API

- About Servlet API
- Servlet API Supported Operations
- Troubleshooting Tips

About Servlet API

Servlet http form based submission is one of the methods of API in SDP. In this case, a **html form** is created directly from the web browser or by plugging in small piece of code in the integrating applications. This form helps users to access ServiceDesk Plus from other applications.

Scenario:

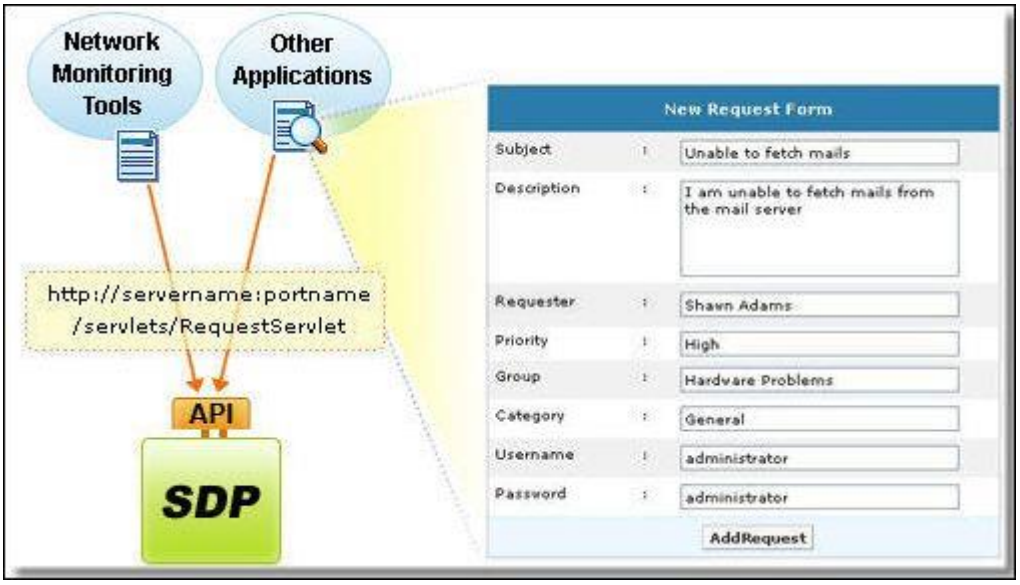
Say for instance, the html form for creating requests is exposed in your organization's intranet. Users can use this form to raise requests instantly in ServiceDesk Plus without accessing the application. The result of the operation contains the status of the operation and key information such as the request ID.

Similar operations can be performed on requests, sites, technician, requesters and assets from the external application, for which the sample forms are shown in the following documents.

The field values to be set in Request, Site, Technician, Requester and Assets are added as parameters in HttpRequest details. The fields unavailable in the form are set as empty (or default). The Operation performed is decided based on the http parameter **'operation'**. The html form is submitted to /servlets/RequestServlet as,

http://machine_name:Port_Number/servlets/RequestServlet

URL or submitting the request programmatically to the above link. Authorization to the ServiceDesk Plus server is based on the username and password provided.



Servlet API supported operations

The servlet Http form submission based API supports operations such as,

- Adding new request, editing, closing, adding notes, deleting and viewing a request.
  Adding new site, editing a site and deleting a site.
- Adding new technician, editing and deleting technician.
- Adding a new requester, editing and deleting requester.
- Adding a workstation/server, updating a workstation/server, adding an asset, updating an asset and deleting assets.

Troubleshooting Tips

If login failed for a correct userName and password,

1. Check if the user is imported from Active Directory.
2. If user is not imported from Active Directory, then submit only the **username** and **password** to the below link for authentication.

   http://machinename:portname/servlets/RequestServlet
3. If user is imported from Active Directory, then submit the **username** and **password** along with **DOMAIN_NAME** and **logonDomainName** to the below link for authentication.

   http://machinename:portname/servlets/RequestServlet

Note	**DOMAIN_NAME** represents the Domain to which the User belongs, **logonDomainName** represents Authentication Mode, **Local Authentication** or empty value refers to Local Authentication mode, and **AD_AUTH** refers to Active Directory Authentication Mode.

Request Attributes and xml Response

The request attributes for all request operations should be defined as mentioned. The operations on requests are based on the "Roles" assigned to the users.

	1. Attributes are case sensitive and should be used as defined. 2. Operations on request can be performed based on the Roles assigned to the user. 3. While renaming the button in the sample html form, specify 'operation' as hidden element.

- Add Request
- Updating Request
- Assign Request
- Close Request
- Delete Request
- Add Notes
- Add Work Log
- Delete Work Log
- Get Request

Add Request

The details necessary for Adding a Request should be set in http request parameters and the 'operation' command should be 'AddRequest'.

Attribute	***Comment***
targetURL="/servlets/RequestServlet"	Operation target URL for Adding Request
operation='AddRequest'	Operation command for Adding Request
reqTemplate	name of the Request Template
subject	Subject of the request
description	Description of the request
resolution	Resolution
requester	Requester
requesterEmail	Email ID of Requester
priority	Priority
level	Level
status	Status

Attribute	Comment
mode	Mode
urgency	Urgency
impact	Impact
impactDetails	Impact Details
requesttype	RequestType
site	Site
category	Category
subcategory	SubCategory
item	Item
group	Group
technician	Technician Name
technicianEmail	Technician Email ID
UDF Alias Name	Name of the UDF field specified while creating the field.
username	Login Name for SDP Authentication
password	Password for SDP Authentication
DOMAIN_NAME	Domain Name to which the user belongs. Domain Name needs to be specified on selecting AD authentication.
logonDomainName	Authentication Mode [AD or Local Authentication]. AD_AUTH refers to Active Directory Authentication. Local Authentication or empty value refers to Local Authentication.

Note:

1. Requester and Technician is identified based on their **UserName** and **EmailID**.
2. While creating a request in Requester Login, the **Site** field is set with the site of the requester.
3. For a Technician login, **Not in Any Site** is specified by empty value or 'NULL' for site.
4. While creating request through Requester Login, the Requester is restricted to create request for the asset associated to him/her only if **Show workstations associated to requester in Self-Service Portal** is selected under Admin -> Self Service Portal Settings.
5. If a Technician (with restricted access permissions) creates request for a site unassociated to him, then the Request Site field is set as 'Not In Any Site'.
6. If a Technician (with restricted access permissions) creates a request for the site specified in the template, the Request Site field is set as 'Not in Any Site'.

7. While creating a request, if **Subject** field is left empty, then '(no subject)' is set as subject for the Request.
8. If a field is not available for a request template but given through API, then the field is discarded.
9. If the **Requester** information is not provided, then the logged in user is set as the Requester for the request.
10. While creating a request, if the mandatory fields specified in Request Template are not provided, then the request is created with the information provided by RequestServlet and a System Log is populated with an error message.

The sample form to create request can be accessed here.

The html form is submitted to http://machine_name:Port_Number/servlets/RequestServlet and a response in xml format displays "Success" message along with the WorkOrder ID.

If the technician creating the request does not have permission to create new requests or has limited access permissions then a "Failure" message appears in the xml form.

Update Request

The details to be updated should be set in the http request parameters along with 'workOrderID' parameter. The 'workOrderID' parameter is mandatory for request update. The 'operation' command should be 'UpdateRequest'. Requesters do not have permission to update requests.

Attribute	***Comment***
targetURL="/servlets/RequestServlet"	Operation target URL for updating Request
operation='UpdateRequest'	Operation command for Updating Request
workOrderID	Request ID of the request to update.
reqTemplate	Name of the Request Template
subject	Subject of the request
description	Description of the request
resolution	Resolution
requester	Requester
requesterEmail	Email Id of Requester
priority	Priority
level	Level
duebytime	Due By time to be applied for the request
status	Status
mode	Mode
urgency	Urgency
impact	Impact
impactDetails	Impact Details
requesttype	RequestType

Attribute	Comment
site	Site
category	Category
subcategory	SubCategory
item	Item
group	Group
technician	Technician Name
technicianEmail	Technician Email ID
UDF Alias Name	name of the UDF field specified while creating the field.
username	Login Name for SDP Authentication
password	Password for SDP Authentication
DOMAIN_NAME	Domain Name to which the user belongs. Domain Name needs to be specified on selecting AD authentication.
logonDomainName	Authentication Mode [AD or Local Authentication]. "AD_AUTH" refers to Active Directory Authentication. "Local Authentication" or empty value refers to Local Authentication.

Note:

1. Requester and Technician is identified based on their **UserName** and **EmailID**.
2. Empty Values can be updated to request by passing the value as **NULL** .
3. Requester cannot update a request.

A sample form for updating requests can be viewed here.

A Success message appears in a xml format if the request is updated successfully.

If the technician does not have permission to update the request (Edit Request permission under Roles), a Failure message appears in the xml form.

In some cases, the technicians view permission is restricted say, a technician with the permission to view only
"Requests assigned to him" cannot update requests assigned to other technicians.

Similarly, technicians who are associated to "not associated in any site" option have permission to update requests assigned to him and requests not associated to any sites.
Click here to view the xml response.

Assign Request

Assign Request is similar to Update Request except the Technician Name should be set in the request parameters along with workOrderID' parameter. The 'workOrderID' parameter is mandatory for assigning a request to other technicians. The 'operation' command should be 'UpdateRequest'. Requester does not have permission for updating a request.

The sample form for assigning/picking up request is similar to that of Updating requests. Requests are assigned to technicians associated to the specified site. If Group is mentioned then the technician should be assigned to the group. If the request is assigned to a technician unassociated to the site, the response in xml format does not display an error message and the request is not assigned to the technician.

Close Request

A request can be closed in two ways,

- Set the 'staus' parameter as 'Closed' along with the 'workOrderID' parameter (mandatory parameter) and operation command as 'UpdateRequest'.
- Set 'workOrderID' parameter (mandatory for request update) and 'operation' command as 'CloseRequest'. Set the 'Close comments' parameter as 'closeComment'. The Close Comment can be added, if 'Confirm User Acknowledgment' is selected as 'YES' in 'Request Closing Rules'. Requester does not have permission for closing a request.

Attribute	***Comment***
targetURL="/servlets/RequestServlet"	Operation target URL for closing Request
operation='CloseRequest'	Operation command for closing Request
workOrderID	Request ID of the request to close.
closeComment	Close Comments
username	Login Name for SDP Authentication
password	Password for SDP Authentication
DOMAIN_NAME	Domain Name to which the user belongs. Domain Name needs to be specified on selecting AD authentication.
logonDomainName	Authentication Mode [AD or Local Authentication]. AD_AUTH refers to Active Directory Authentication. Local Authentication or empty value refers to Local Authentication.

The sample form to close request can be accessed here.

A success message appears in xml format on submitting the form to http://macine_name:Port_Number/servlets/RequestServlet.

At time if the request ID mentioned does not exist then "WorkOrder not found for ID : 20" appears in the xml form.

If the technician has restricted access permission or does not have permission to close the request then a Warning message appears in the xml form.

Delete Request

The 'workOrderID' parameter should be set in the http request parameters along with the 'operation' command as 'DeleteRequest'. Requester does not have permission for deleting a request.

Attribute	***Comment***
targetURL="/servlets/RequestServlet"	Operation target URL for deleting Request
operation='DeleteRequest'	Operation command for Deleting Request
workOrderID	Request ID of the request to delete.
username	Login Name for SDP Authentication
password	Password for SDP Authentication
DOMAIN_NAME	Domain Name to which the user belongs. Domain Name needs to be specified on selecting AD authentication.
logonDomainName	Authentication Mode [AD or Local Authentication]. "AD_AUTH" refers to Active Directory Authentication. "Local Authentication" or empty value refers to Local Authentication.

The sample form to delete requests can be viewed here.

A Success message appears if the technician has permission to delete the request.

If a technician without delete permission or with restricted viewing permission, is trying to delete a request then a Failure message appears as the xml response.

Add Notes

The parameters namely, 'Notes', 'isPublic', 'workOrderID' should be set in the http request parameters along with the 'operation' command as 'AddNotes'.

Attribute	Comment
targetURL="/servlets/RequestServlet"	Operation target URL for adding notes to request
operation='AddNotes'	Operation command for closing Request
workOrderID	Request ID of the request to add notes
notesText	Notes to be added to the given Request Id
isPublic	isPublic=true denotes Public Notes isPublic=false denotes Private NotesClose Comments
username	Login Name for SDP Authentication
password	Password for SDP Authentication
DOMAIN_NAME	Domain Name to which the user belongs. Domain Name needs to be specified on selecting AD authentication.
logonDomainName	Authentication Mode [AD or Local Authentication]. AD_AUTH refers to Active Directory Authentication. Local Authentication or empty value refers to Local Authentication.

The sample form to add notes can be accessed here.

Technicians with permission over request module can add notes. A Success message appears if the note is added successfully.

At times, technicians may not have permission (Edit permission under Roles) or their access is restricted for which a Failure message appears.

Add Work Log

The 'workOrderID' parameter along with the 'operation' command as 'AddWorkLog' should be sent to the http request parameters. Only technicians have permission to add work log.

Attribute	Comment
targetURL="/servlets/RequestServlet"	Operation target URL for adding notes to request
operation='AddWorkLog'	Operation command for adding work log to request
workOrderID	Request ID

Attribute	Comment
technician	Technician Resolving the Request
technicianEmail	Email-ID of technician Resolving the Request
description	description
workHours	Time Taken To Resolve in hours
workMinutes	Time Taken To Resolve in minutes
cost	Incident Cost
executedTime	Executed Time
username	Login Name for SDP Authentication
password	Password for SDP Authentication
DOMAIN_NAME	Domain Name to which the user belongs. Domain Name needs to be specified on selecting AD authentication.
logonDomainName	Authentication Mode [AD or Local Authentication]. AD_AUTH refers to Active Directory Authentication. Local Authentication or empty value refers to Local Authentication.

Note:

1. If the fields, 'technician' and 'technicianEmail' is left unfilled, the logged in technician is considered as the technician resolving the request.
2. If the 'cost' field remains empty, then 'cost per hour' will be taken as the Incident Cost.
3. If the execution time is left unfilled, the current time is taken as the 'execution time'.
4. The Execution Time should be in the format 'dd MMM yyyy, HH:mm:ss[08 Nov 2009, 21:15:26]'.

The sample form to add Work Log can be accessed here.

A Success message appears along with the 'requestChargeID' in xml format on submitting the form to http://macine_name:Port_Number/servlets/RequestServlet.

If the technician is not provided with the role to add work log a Failure message appears in the xml response.

At times, the access to view requests is restricted for which a Failure message appears in xml form. Click here to view the response.

Delete Work Log

The 'requestChargeID' parameter along with the 'operation' command as 'DeleteWorkLog' should be set in the http request parameters. Only technicians have the permission to delete work logs. The requestChargeID is provided while adding the work log.

Attribute	***Comment***
targetURL="/servlets/RequestServlet"	Operation target URL for deleting work log
operation='DeleteWorkLog'	Operation command for Deleting work log
requestChargeID	Work Log ID to delete
username	Login Name for SDP Authentication
password	Password for SDP Authentication
DOMAIN_NAME	Domain Name to which the user belongs. Domain Name needs to be specified on selecting AD authentication.
logonDomainName	Authentication Mode [AD or Local Authentication]. "AD_AUTH" refers to Active Directory Authentication. "Local Authentication" or empty value refers to Local Authentication.

The Delete Work Log sample form can be accessed here.

The work log is deleted successfully if the technician has permission to delete the Work Log. Click here to view the xml response.

Get Request

The 'workOrderID' parameter should be set in the http request parameters along with the 'operation' command as 'GetRequestDetails'. Requester does not have permission for deleting a request.

Attribute	***Comment***
GetRequestDetails	Operation command for Getting Request Details
workOrderID	Request ID
username	Login Name for SDP Authentication
password	Password for SDP Authentication
DOMAIN_NAME	Domain Name to which the user belongs. Domain Name needs to be specified on selecting AD authentication.
logonDomainName	Authentication Mode [AD or Local Authentication]. AD_AUTH refers to Active Directory Authentication. Local Authentication or empty value refers to Local Authentication.

The sample form to view the request details can be accessed here.

The request details is displayed as the response in xml if the technician has permission to view requests. The fields unspecified in the form are set as 'null' as shown.

A failure message appears as shown if the technician does not have permission to view requests or has restricted access permission.

Site Attributes and xml Response

The site attributes along with their actions should be used as defined below.

Note	1. The site operations that can be performed through API are adding, updating and deleting sites. 2. Site operations can be performed by technicians only with administrator privilege. The Site Administrator can neither add, edit nor delete a site. 3. The attributes are case sensitive and should be used as defined. 4. While renaming the button in the sample html form, specify 'operation' as hidden element.

- Add Site
- Update Site
- Delete Site

Add Site

The details necessary for adding a site should be set in HttpRequest parameters and Httprequest parameter value for operation attribute should be 'AddSite'.

Attributes	***Comments***
targetURL="/servlets/SiteServlet"	target url for adding site
operation='AddSite'	operation command for Adding site.
siteName	Organization Name
description	Description for the site
region	The Region to which the site belongs
timeZone	Time Zone of the site
doorNo	Address of the organization.
street	Address where the company is located in the specified site.
landmark	Provide a landmark if required.
city	City where the company is located.
postalCode	Address where the company is located in the specified site.

Attributes	Comments
state	Address where the company is located in the specified site.
country	Address where the company is located in the specified site.
email	Email address of the organization.
phone	contact information of the organization.
fax	Fax number of the organization.
webUrl	website of the organization.
OperationalHoursSettings	Related Settings for Operational hours of the site. Allowed values: **copy** (Copy Default Settings), **refer** (Refer Default Settings), **custom** (Custom Settings)
HolidaysSettings	Related Settings for Holidays setting of the site. Allowed values: **copy** (Copy Default Settings), **refer** (Refer Default Settings), **custom** (Custom Settings)
DepartmentsSettings	Related Settings for Departments setting of the site. Allowed values: **copy** (Copy Default Settings), **custom** (Custom Settings)
TechSiteAssociationSettings	Related Settings for Technicians/Site Association setting of the site. Allowed values: **copy** (Copy Default Settings), **refer** (Refer Default Settings), **custom** (Custom Settings)
GroupsSettings	Related Settings for Groups setting of the site. Allowed values: **copy** (Copy Default Settings), **refer** (Refer Default Settings), **custom** (Custom Settings)
BusinessRulesSettings	Related Settings for Business Rules setting of the site. Allowed values: **copy** (Copy Default Settings), **refer** (Refer Default Settings), **custom** (Custom Settings)
SLASettings	Related Settings for Service Level Agreements setting of the site. Allowed values:

Attributes	Comments
	copy (Copy Default Settings), **refer** (Refer Default Settings), **custom** (Custom Settings)
username	Login Name for SDP Authentication
password	Password for SDP Authentication
DOMAIN_NAME	Domain Name to which the user belongs. Domain Name should be specified on enabling AD authentication.
logonDomainName	Authentication Mode [AD or Local Authentication]. "AD_AUTH" refers to Active Directory Authentication. 'Local Authentication" or empty value refers to Local Authentication.

Note:

1. If the Region specified for the site is not configured in the ServiceDesk Plus, then the region field does not get populated in the application.
2. If any of the Related Settings other than DepartmentSettings is left unselected, 'Refer Default Settings' option is selected is selected as default. In the case of DepartmentSettings, Custom Default Settings is selected by default.
3. If any of the following namely, TechSiteAssociationSettings, GroupsSettings, BusinessRulesSettings or SLASettings is selected as Refer Default Settings, the other three is set to refer in the application.
4. Technicians with SDSiteAdmin role have the privilege to edit the site information. However, they cannot edit 'Related Settings.'

The sample form to add a new site can be viewed here.

The html form is submitted to http://machinename:Portnumber/servlets/SiteServlet and a response in xml format displays Success message along with the Site ID.

A failure message appears if,

- A technician without admin permission is trying to add a new site. [xml response]
- The specified site name already exist. [xml response]

Update Site

The details to be updated should be set in the http request parameters with the 'operation' command as 'Update'. It is a mandatory field while updating a site.

Attributes	Comments
targetURL="/servlets/SiteServlet"	target url for adding site
operation='UpdateSite'	operation command for Adding site.
oldSiteName	Site Name for update
siteName	New Organization Name
description	Description for the site
region	The Region to which the site belongs
timeZone	Time Zone of the site
doorNo	Address of the organization.
street	Address where the company is located in the specified site.
landmark	Provide a landmark if required.
city	City where the company is located.
postalCode	Address where the company is located in the specified site.
state	Address where the company is located in the specified site.
country	Address where the company is located in the specified site.
email	Email address of the organization.
phone	contact information of the organization.
fax	Fax number of the organization.
webUrl	website of the organization.
OperationalHoursSettings	Related Settings for Operational hours of the site. Allowed values: **copy** (Copy Default Settings), **refer** (Refer Default Settings), **custom** (Custom Settings)
HolidaysSettings	Related Settings for Holidays setting of the site. Allowed values: **copy** (Copy Default Settings), **refer** (Refer Default Settings), **custom** (Custom Settings)

Attributes	Comments
DepartmentsSettings	Related Settings for Departments setting of the site. Allowed values: **copy** (Copy Default Settings), **custom** (Custom Settings)
TechSiteAssociationSettings	Related Settings for Technicians/Site Association setting of the site. Allowed values: **copy** (Copy Default Settings), **refer** (Refer Default Settings), **custom** (Custom Settings)
GroupsSettings	Related Settings for Groups setting of the site. Allowed values: **copy** (Copy Default Settings), **refer** (Refer Default Settings), **custom** (Custom Settings)
BusinessRulesSettings	Related Settings for Business Rules setting of the site. Allowed values: **copy** (Copy Default Settings), **refer** (Refer Default Settings), **custom** (Custom Settings)
SLASettings	Related Settings for Service Level Agreements setting of the site. Allowed values: **copy** (Copy Default Settings), **refer** (Refer Default Settings), **custom** (Custom Settings)
username	Login Name for SDP Authentication
password	Password for SDP Authentication
DOMAIN_NAME	Domain Name to which the user belongs. The Domain Name should be specified on enabling AD authentication.

Attributes	Comments
logonDomainName	Authentication Mode [AD or Local Authentication]. "AD_AUTH" refers to Active Directory Authentication. "Local Authentication" or empty value refers to Local Authentication.

The sample form to update sites can be viewed here.

A Success message appears in the xml form when the site details are updated successfully.

Delete Site

The 'siteName' parameter along with the operation command as 'DeleteSite' should be set in HttpRequest parameters.

Attributes	Comments
targetURL="/servlets/SiteServlet"	target url for Adding site
operation='DeleteSite'	operation command for deleting site
siteName	Organization Name
username	Login Name for SDP Authentication
password	Password for SDP Authentication
DOMAIN_NAME	Domain Name to which the user belongs.
logonDomainName	Authentication Mode [AD or Local Authentication]. AD_AUTH refers to Active Directory Authentication. Local Authentication or empty value refers to Local Authentication.

The sample form to delete site can be accessed here.

A Success message appears in xml format once the site is deleted successfully.

A Failure message appears if,

- A SiteAdmin is trying to delete the sites. [xml response]
- If the site is used by a module. [xml response]

Technician Attributes and xml Response

The technician attributes along with their actions should be used as defined below.

Note	1. The technician operations that can be performed through API are adding, updating and deleting. 2. Only technicians with roles of SDAdmin and SDSiteAdmin can perform add, update and delete operations. 3. The attributes are case sensitive and should be used as defined. 4. While renaming the button in the sample html form, specify 'operation' as hidden element.

- Add Technician
- Update Technician
- Delete Technician

Add Technician

The details necessary for adding a technician should be set in HttpRequest parameters and Httprequest parameter value for operation attribute should be 'AddTechnician'.

Attributes	***Comments***
targetURL="/servlets/TechnicianServlet"	target URL for Adding technician
operation='AddTechnician'	operation command for Adding technician.
name	Technician name
employeeId	Employee ID of the technician
email	Email Address of the technician
phone	Phone Number of the technician
mobile	Mobile number of technician
smsMailId	SMS mail id of technician
costPerHr	technician's cost per hour
departmentName	department name to which the technician is associated to.
techSiteName	site name to which the technician is associated to.
jobTitle	Job title of the technician.

Attributes	Comments
associateSites	Associated sites of the technician
associateGroups	Associated groups of the technician
approvePurchaseOrder	Purchase Order Approver Allowed Values:**true**,**false**.
UDF aliases name	additional fields should be specified based on their column names
enableLogin	parameter for Enable Login for Technician Allowed Values:**true**,**false**.
loginName	Technician's login name
pwd	Technician's password
userDomainName	Domain to which the technician belongs to
associateRols	roles associated with the technician
username	Login Name for SDP Authentication
password	Password for SDP Authentication
DOMAIN_NAME	Domain Name to which the user belongs
logonDomainName	Authentication Mode [AD or Local Authentication]. "AD_AUTH" refers to Active Directory Authentication. "Local Authentication" or empty value refers to Local Authentication.

Note:

i. If the technician is associated to many sites, the sites should be specified in comma separated format in 'associateSites' say, India, US, London.
ii. If the technician is assigned to more than one group, the groups should be specified in comma separated format in 'associateGroups' as sitename-groupname'.
iii. If the technician is 'Not associated to any site', specify the value as 'default' in 'associateSites'.
iv. To assign a technician to a department of 'Not associated to any site ', 'techSiteName' should be specified as 'default'.
v. If invalid values are provided for 'departmentName' and 'techSiteName', then technician is associated to 'Not associated to any site'.
vi. 'approvePurchaseOrder' is enabled only when the email ID of the technician is specified. The values permitted for 'approvePurchaseOrder' are 'true' and 'false'. By default, the value is 'false'.
vii. The values permitted for 'enableLogin' are 'true' and 'false'. By default, the value is 'false'.

viii. If 'pwd' is not specified, the pwd for the technician is the same as the specified 'loginName'.
ix. Login is not provided to the technician if 'loginName' is not specified.
x. Technicians with SDSiteAdmin privileges but restricted access permissions can add technicians only for their associated sites.

The sample form to add a new technician can be viewed here.

The html form is submitted to http://machinename:Portnumber/servlets/RequestServlet and a response in xml format displays Success message along with the User ID.

A failure message appears if,

1. a technician without admin privilege is trying to add a technician. [xml response]
2. A technician with restricted access is trying to create a technician not associated to his site. [xml response]
3. the specified technician login name already exists [xml response]

Update Technician

The details necessary for adding a technician should be set in HttpRequest parameters and Httprequest parameter value for operation attribute should be 'UpdateTechnician'.

Attributes	***Comments***
targetURL="/servlets/TechnicianServlet"	target URL for Updating technician.
operation='UpdateTechnician'	operation command for Updating technician.
techUserName	Technician Name to update
techLoginName	Login Name of the technician
techDomainName	Domain Name to which technician the technician belongs
techEmailId	Email ID of the technician
userid	Technician ID
name	Technician name
employeeId	Employee ID of the technician
email	Email Address of the technician
phone	Phone Number of the technician
mobile	Mobile number of technician
smsMailId	SMS mail id of technician
costPerHr	technician's cost per hour
departmentName	department name to which the technician is associated to.
techSiteName	site name to which the technician is associated to.

Attributes	Comments
jobTitle	Job title of the technician.
associateSites	Associated sites of the technician
associateGroups	Associated groups of the technician
UDF aliases name	additional fields should be specified based on their column names
username	Login Name for SDP Authentication
password	Password for SDP Authentication
DOMAIN_NAME	Domain Name to which the user belongs
logonDomainName	Authentication Mode [AD or Local Authentication]. "AD_AUTH" refers to Active Directory Authentication. "Local Authentication" or empty value refers to Local Authentication.

Note:

1. While performing the edit operation, technicians are identified based on the order below,

   i. The users are first identified based on the 'techLoginName' and 'techDomainName'.
   ii. If the 'techDomainName' is not specified, the user is identified based on the 'techLoginName' with 'techDomainName' as an empty value.
   iii. If the technician does not fall under the above criteria, the user is identified based on the 'techEmailid'.
   iv. If the technician is unavailable in the above specified criteria, the technician is identified based on the 'techUserName'.
   v. If the technician cannot be identified from the above criteria, then the technician is identified based on 'userid'.
   vi. Based on the reqUserName or reqEmailId, if more than one technicians are identified then the technician details is not updated nor deleted.

2. Login details and 'approvePurchaseOrder' value cannot be updated through API.
3. Technicians with SDSiteAdmin privileges but restricted access permissions can add technicians only for their associated sites.

The sample form to update technicians can be accessed here.

A success message appears if the technician is updated successfully.

A failure message appears if,

1. A technician without admin privilege is trying to update a technician. [xml response]
2. A technician with restricted access is trying to update a technician not associated to his site. [xml response]

Delete Technician

The details necessary for adding a technician should be set in HttpRequest parameters and Httprequest parameter value for operation attribute should be 'UpdateTechnician'.

Attributes	***Comments***
targetURL="/servlets/TechnicianOperationServlet"	target URLl for deleting technician
operation='DeleteTechnician'	operation command for deleting technician
name	Technician Name
loginName	Technician's Login Name
domainName	Technician's login domain name
emailId	Technician's email ID
userid	Technician ID
username	Login Name for SDP Authentication
password	Password for SDP Authentication
DOMAIN_NAME	Domain Name to which the user belongs.
logonDomainName	Authentication Mode [AD or Local Authentication]. “AD_AUTH” refers to Active Directory Authentication. “Local Authentication” or empty value refers to Local Authentication.

Note:

1. Technician with 'SDAdmin' can be deleted only by other 'SDAdmin'.

The sample form to delete a technician can be viewed here.

The response in xml displays a Success message if the technician has permission to delete technicians.

Requester Attributes and xml Response

The requester attributes along with their actions are given below,

Note	1. The requester operations that can be performed through API are adding, updating and deleting requester. 2. Technicians with restricted access permission can perform add, edit and delete operations on requesters associated to their sites. 3. The attributes are case sensitive and should be used as defined. 4. While renaming the button in the sample html form, specify 'operation' as hidden element.

- Add Requester
- Update Requester
- Delete Requester

Add Requester

The details necessary for adding a requester should be set in HttpRequest parameters and Httprequest parameter value for operation attribute should be 'AddRequester'.

Attributes	***Comments***
targetURL="/servlets/RequesterServlet"	target URL for Adding requester
operation='Addrequester'	operation command for Adding requester
name	Requester name
employeeId	Employee ID of the requester
description	Description about employee
email	Email Address of the requester
phone	Phone Number of the requester
mobile	Mobile number of requester
site	site to which requester is associated to
departmentName	department name to which the requester is associated to
jobTitle	Job title of the requester.
requestViewPermission	permission for 'Requester allowed to view'.

Attributes	Comments
	Allowed Values: OWN REQUEST:for Requester allowed to view- Show only their own requests, DEPARTMENT REQUEST:for Requester allowed to view-Show all their Department requests, SITE REQUEST:for Requester allowed to view-Show all their Site requests
approvePurchaseOrder	Purchase Order Approver Allowed Values:**true**,**false**.
UDF aliases name	additional fields should be specified based on their column names
loginName	login name
pwd	password
userDomainName	Domain with which the requester is associated to
username	Login Name for SDP Authentication
password	Password for SDP Authentication
DOMAIN_NAME	Domain Name to which the user belongs
logonDomainName	Authentication Mode [AD or Local Authentication]. "AD_AUTH" refers to Active Directory Authentication. "Local Authentication" or empty value refers to Local Authentication.

Note:

1. If the requester is not associated to any department in a site, the site value is automatically set to 'not associated to any site'.
2. By default, the value for approvePurchase Order is false.
3. 'approvePurchaseOrder' is enabled only when the email ID of the requester is available.
4. If 'requestViewPermission' value is vacant, then the value is set as 'Show only their request'.
5. If a technician with 'SDAdmin' role provides values for 'techSiteName' and 'departmentName' which is unavailable in the database, then the requester is associated to the site and department specified in 'techSiteName' and 'departmentName'.

6. If a technician with restricted access permission provides values for 'techSiteName' and 'departmentName' which is unavailable in the database, then the requester is associated to 'Not associated to any site'.

The sample form for adding a new requester can be viewed here.

The html form is submitted to http://machinename:Portnumber/servlets/RequesterServlet and a response in xml format displays Success message along with the userID or Requester ID.

A failure message appears

- If the technician adding the requester is not associated to the site and has restricted access permissions.
- A technician without administrator privilege is trying to add a requester. [Click here to view the xml response]

Update Requester

The details necessary for updating a requester should be set in HttpRequest parameters and Httprequest parameter value for operation attribute should be 'Updaterequester'.

Attributes	***Comments***
targetURL= "/servlets/requesterServlet"	target URL for Updating requester.
operation='Updaterequester'	operation command for Updating requester.
reqUserName	Requester Name to update
reqLoginName	Requester Login Name to update
reqdomainName	Domain Name to which the requester belongs to
reqEmailId	Requester Email ID to update
userid	Requester ID
name	Requester name
employeeId	Employee ID of the requester
description	Description about employee
email	Email Address of the requester
phone	Phone Number of the requester

Attributes	Comments
mobile	Mobile number of requester
site	site to which requester is associated to
departmentName	department name to which the requester is associated to
jobTitle	Job title of the requester
requestViewPermission	permission for 'Requester allowed to view'. Allowed Values: OWN REQUEST:for Requester allowed to view- Show only their own requests, DEPARTMENT REQUEST:for Requester allowed to view- Show all their Department requests, SITE REQUEST:for Requester allowed to view-Show all their Site requests
approvePurchaseOrder	Purchase Order Approver Allowed Values:**true**,**false**.
UDF aliases name	additional fields should be specified based on their column names
loginName	login name
pwd	password
userDomainName	Domain with which the requester is associated to
username	Login Name for SDP Authentication
password	Password for SDP Authentication
DOMAIN_NAME	Domain Name to which the user belongs
logonDomainName	Authentication Mode [AD or Local Authentication]. “AD_AUTH” refers to Active Directory Authentication. “Local Authentication” or empty value refers to Local Authentication.

Note:

1. While performing the edit operation, requesters are identified based on the order below,

    - The users are first identified based on the 'reqLoginName' and 'reqDomainName'.

- If the 'reqDomainName' is empty, the user is identified based on the 'reqLoginName' with 'reqDomainName' as an empty value.
- If the requester does not fall under the above criteria, the user is identified based on the 'reqEmailid'.
- If the requester is unavailable in the above specified criteria, the user is identified based on the 'reqUserName'.
- If the user cannot be identified from the above criteria, then the user is identified based on 'userid'.
- Based on the reqUserName or reqEmailId, if more than one users are identified then the user is not updated nor deleted.

2. Login information of requesters cannot be edited through API.
3. To enable 'Purchase Order Approver' role while editing a requester, 'email' should be specified along with 'approvePurchaseOrder' even if 'email' has been configured for the requester.
4. Technician associated only to 'Not associated to any site' will not be allowed to create/edit requesters.
5. If a technician with 'SDAdmin' role provides values for 'techSiteName' and 'departmentName' which is unavailable in the database, then the requester is associated to the site and department specified in 'techSiteName' and 'departmentName'.
6. If a technician with restricted access permission provides values for 'techSiteName' and 'departmentName' which is unavailable in the database, then the requester is associated to 'Not associated to any site'.

The sample form to update requester can be accessed here.

The requester details are updated successfully indicated with a Success message in the xml form.

Delete Requester

The details necessary for deleting a requester should be set in HttpRequest parameters and Httprequest parameter value for operation attribute should be 'Updaterequester'.

Attributes	***Comments***
targetURL="/servlets/requesterOperationServlet"	target URL for deleting requester
operation='Deleterequesters'	operation command for deleting requester
name	requester Name
loginName	Requester's Login Name
domainName	Requester's login domain name
emailId	Requester's email ID
userid	Requester id
username	Login Name for SDP Authentication
password	Password for SDP Authentication

Attributes	Comments
DOMAIN_NAME	Domain Name to which the user belongs.
logonDomainName	Authentication Mode [AD or Local Authentication]. "AD_AUTH" refers to Active Directory Authentication. "Local Authentication" or empty value refers to Local Authentication.

The sample form to delete requesters can be viewed here.

A Success message appears as the xml response if the technician has permission to delete requesters.

Asset Attributes and xml Response

The asset attributes along with their actions should be used as defined below.

Note	1. The asset operations that can be performed through API are adding, updating and deleting assets. 2. Asset operations can be performed by technicians only with Inventory privilege. 3. The attributes are case sensitive and should be used as defined. 4. While renaming the button in the sample html form, specify 'operation' as hidden element.

- Add/Update Workstation and Server
- Add/Update Asset
- Delete Asset

Add/Update Workstation and Server

The Details necessary for adding workstation should be set in HttpRequest parameters and HttpRequest parameter value for 'operation' attribute can be 'AddAsset','UpdateAsset' or 'SaveAsset'.

Attributes	***Comments***
targetURL="/servlets/AssetServlet"	Target URL for adding/updating workstation/server
assetName	Name of the asset (workstation/server)
assetType	asset Type
model	Model No. of the asset (workstation/server)
productName	Product Name of the asset (workstation/server)
siteName	Site to which workstation/server is associated
ipAddress	IP Address of workstation/server.
serviceTag	Service Tag of workstation/server
wsManufacturer	Workstation Manufacturer
proCount	Processor Count of workstation/server
proType	Processor Type of workstation/server
proSpeed	Processor Speed (in MHz) of workstation/server
proManufacturer	Processor Manufacturer of workstation/server

Attributes	Comments
ramSize	RAM details (in MB) of workstation/server
virtualCapacity	Virtual Memory (in MB) of workstation/server
osName	Operating System Name of workstation/server
osServicePack	Operating System ServicePack of workstation/server
resTag	Resource Tag of workstation/server
resSlNo	Resource Serial No. of workstation/server
barCode	Bar Code of workstation/server
location	Location of workstation/server
vendor	Vendor of workstation/server
acqDate	Acquisition Date of workstation/server (Supported Format:yyyy-MM-dd)
expiryDate	Expiry Date of workstation/server (Supported Format:yyyy-MM-dd)
warrantyExpDate	Warranty Expiry Date of workstation/server (Supported Format:yyyy-MM-dd)
assetState	State of the of workstation/server
assetToAssociate	Associate the asset to other assets.(Valid only for Asset State 'In Use').
associateToUser	Associate the asset to user.(Valid only for Asset State 'In Use').
associateToDepartment	Associate the asset to department.(Valid only for Asset State 'In Use').
UDF Column Aliases	UDF aliases name should be specified
macAddress	MAC Address of workstation/server
nicInfo	Nic Info of workstation/server
netAddress	Net Address of workstation/server
domain	Domain of workstation/server
dnsServer	DNS Server of workstation/server
gateway	Default Gateway of workstation/server
dhcpEnabled	is DHCP Enabled for workstation/server. Values allowed: true, false. Default value: false.
monitorType	Monitor Type of workstation/server
monitorSerialNumber	Serial Number of the monitor.
monitorManufacturer	Monitor manufacturer details
mouseType	Mouse Type of workstation/server
mouseSerialNumber	Serial Number of mouse
mouseManufacturer	Mouse manufacturer details
keyboardType	Keyboard Type of workstation/server

Attributes	Comments
keyboardSerialNumber	Serial Number of keyboard
keyboardManufacturer	Keyboard manufacturer details
username	Login Name for SDP Authentication
password	Password for SDP Authentication
DOMAIN_NAME	Domain Name to which the user belongs
logonDomainName	Authentication Mode [AD or Local Authentication]. AD_AUTH refers to Active Directory Authentication. Local Authentication or empty value refers to Local Authentication.

Note:

1. The 'assetName' is unique and hence cannot be duplicated and edited.
2. If 'ServiceTag' is specified, then the information provided for the workstation/server is considered only for that Service Tag and not for the specified asset name.
3. Product Type should be specified as the 'assetType'. This field is mandatory.
4. Product of the asset should be specified as the 'productName'.
5. If the specified 'model' or 'productName' is invalid or empty, then the model is created as 'Unknown ProductType' say, Unknown Workstation.
6. If the specified 'site' is invalid, the workstation/server is associated to 'Not associated to any site.'
7. If the specified 'vendor' is invalid and if the technician has permission to add a vendor, then the Vendor is created as specified by the user.
8. The Resource State should be specified in 'assetState'.
9. Workstations/Servers with the 'assetstate' as 'In Use', can be associated to departments, users or assets.
10. If the 'assetstate' is specified as 'In Use' then the values should be specified in the following fields, 'assetToAssociate','associateToUser' or 'associateToDepartment'.
11. If the assetState is 'In Use' and if the invalid values are provided for the following fields 'assetToAssociate','associateToUser' or 'associateToDepartment', the state is set to 'In Store'
12. Workstations/Servers in disposed state cannot be assigned users or departments.
13. Workstations/Servers in disposed state cannot be assigned with other assets.
14. Technician with restricted access can create/update workstations/servers only for their associated site.
15. Technician with restricted access can assign/ associate asset based on his access for that site alone.
16. To configure the asset additional fields for a workstation, specify the attribute as 'asset_LabelName'

Add Workstation/Server

The sample form to Add Workstations/Servers can be accessed here. The 'AddAsset' operation performs only the add operation.

The operation status is Success when the workstation/server is added successfully. The xml response also displays the 'resourceid' and the 'resourcename' along with the message. Click here to view the xml response.

The operation status is failure if

- The mandatory fields are not specified
- The technician with restricted access is trying to create a new workstation/server.

Update Workstation/Server

The sample form to Update Workstations/Servers can be accessed here. The 'UpdateAsset' operation performs only the update of existing assets with the information provided.

The operation status is Success when the workstation/server is updated successfully. Click here to view the xml response.

Save Workstation/Server

The sample form to Save Workstation/Server can be accessed here.

While performing SaveAsset operation, if the asset is already available with the specified criteria, the asset is updated. Else, a new asset is created with the information provided.

Add/Update Asset

The details to add/update assets should be set in the Http Request parameters and the Http Request parameter value for 'operation' command can be 'AddAsset', 'UpdateAsset' or 'SaveAsset'.

Attributes	***Comments***
targetURL="/servlets/AssetServlet"	Target URL for adding/updating asset
assetName	Name of the asset
assetType	Type of asset
productName	Product Name of the asset
siteName	Site to which asset is associated
assetTag	Asset Tag
assetSlNo	Serial No. of the asset
barCode	Bar Code of asset
location	Location of asset
purchaseCost	Purchase Cost of the asset
vendor	Vendor of asset
acqDate	Acquisition Date of asset
expiryDate	Expiry Date of asset

Attributes	Comments
warrantyExpDate	Warranty Expiry Date of asset
assetState	State of the of asset
assetToAssociate	Associate the asset to other assets.(Valid only for Asset State 'In Use').
associateToUser	Associate the asset to user.(Valid only for Asset State 'In Use').
associateToDepartment	Associate the asset to department.(Valid only for Asset State 'In Use').
username	Login Name for SDP Authentication
password	Password for SDP Authentication
DOMAIN_NAME	Domain Name to which the user belongs
logonDomainName	Authentication Mode [AD or Local Authentication]. AD_AUTH refers to Active Directory Authentication. Local Authentication or empty value refers to Local Authentication.

Note:

1. The 'assetName' is unique and hence cannot be duplicated or edited.
2. Product Type should be specified as the 'assetType'. This field is mandatory.
3. Product of the asset should be specified as the 'productName'.
4. If the specified 'model' or 'productName' is invalid or empty, then the model is created as 'Unknown ProductType' say, Unknown Workstation.
5. If the specified 'site' is invalid, the workstation/server is associated to 'Not associated to any site.'
6. If the specified 'vendor' is invalid and if the technician has permission to add a vendor, then the Vendor is created as specified by the user.
7. The Resource State should be specified in 'assetState'.
8. Assets with the 'assetstate' as 'In Use', can be associated to departments, users or assets.
9. If the 'assetstate' is specified as 'In Use' then the values should be specified in the following fields, 'assetToAssociate','associateToUser' or 'associateToDepartment'.
10. If the assetState is 'In Use' and if the invalid values are provided for the following fields 'assetToAssociate','associateToUser' or 'associateToDepartment', the state is set to 'In Store'
11. Assets in disposed state cannot be assigned users or departments.
12. Assets in disposed state cannot be assigned with other assets.
13. Technician with restricted access can create/update Assets only for their associated site.
14. Technician with restricted access can assign/ associate asset based on his access for that site alone.

Add Asset

Click here to access the sample form.

The operation status is Success when the asset details are added successfully. The xml response also displays the 'asseteid' and the 'resourcename' along with the message. Click here to view the xml response.

The operation status is failure if,

- The mandatory fields are not specified
- The technician with restricted access is trying to create a new asset.

Update Asset

The sample form to Update Asset can be accessed here. The 'UpdateAsset' operation performs only the update of existing assets with the information provided.

The operation status is Success when the asset is updated successfully. Click here to view the xml response.

Save Asset

The sample form to Save Workstation/Server can be accessed here.

While performing SaveAsset operation, if the asset is already available with the specified criteria, the asset is updated. Else, a new asset is created with the information provided.

Delete Asset

The details necessary for deleting assets should be set in HttpRequest parameters and Httprequest parameter value for operation attribute should be 'DeleteAsset'.

Attributes	***Comments***
targetURL="/servlets/AssetServlet"	target URL for deleting asset
assetName	Name of the asset
assetType	type of asset
username	Login Name for SDP Authentication
password	Password for SDP Authentication
DOMAIN_NAME	Domain Name to which the user belongs.

Attributes	Comments
logonDomainName	Authentication Mode [AD or Local Authentication]. AD_AUTH refers to Active Directory Authentication. Local Authentication or empty value refers to Local Authentication.

The sample form to delete asset can be accessed here.

The operation status is a Success if the asset is deleted successfully. Click here to view the xml response.

REST API

- About REST API
- Generating API Key
- REST API Supported Operations

About REST API

Representational State Transfer (**REST**) has similar functionality as that of Servlet API except for a few distinctness [Refer Different between Servlet and REST API to know more]. The REST API is completely automated, and users need not log into ServiceDesk Plus to perform operations. The purpose of REST API can be explained with the help of a scenario.

Scenario:

Let's take the case of a network monitoring tool (external application) that is installed in your network. In general, when an alarm is raised by the network monitoring tool, an e-mail notification is sent as a ticket to ServiceDesk Plus application. The field values (priority, level, impact, category and so on) should be filled by the technician manually in ServiceDesk Plus. This mechanism is time consuming and eventually results as a dip in your helpdesk productivity chart.

With *REST API*, you can automate this ticketing process. When an alarm is triggered, the network monitoring tool provides the field details and raises a ticket automatically in ServiceDesk Plus via http protocol. The ticket ID is sent back to the network monitoring tool in order to perform any further operations over the request.

When the cause for the alarm is resolved, ServiceDesk Plus will invoke an URL (callback URL) that was provided by the monitoring tool. The URL functions as a notification to the external application indicating that the ticket is resolved. If this URL (callback URL) is not provided, ServiceDesk Plus will not perform any additional operation on the ticket. When ServiceDesk Plus invokes the callback URL, the network monitoring tool can perform "any" internal operations based on the URL invocation. However, the expectation is that the application will clear the alarm (which was raised as a ticket) at their end.

Note: Please note that the callback URL is applicable only while creating and editing requests.

The operations performed with REST API is based on the **'operation'** parameter and is sent to the url via HTTP POST method. The url format is as shown below,

http://<servername>:<port number>/sdpapi/<module>

Authentication to the ServiceDesk Plus application is key based i.e., an API key is sent along with the url for every operation. This key is technician based and can be generate for technicians with login privilege. The role given to the technician is also taken into consideration, so the key is valid only for the role given to the technician. Once the key is generated, the key is manually transferred to the integrated application so that the application can use the key for further API operations. If the key is invalid (key is expired or the technician login is disabled), the operation fails and an error is propagated to the integrated application.

Note	1. Please note that the administrator alone has the privilege to generate the authentication key for technicians with login permission. 2. If a login for the technician is disabled, then the technician key is deleted. 3. The operations can be performed based on the Role provided to the technician.

Currently, XML is the supported input and output format. The input data is sent as an XML string along with the technician key and operation name, while the output is exposed as an XML string.

Generating API Key

The authentication between ServiceDesk Plus and integrated application is through an API key. A unique key is generated for a technician with login permission in ServiceDesk Plus application.

1. Click **Admin** -> **Technicians** icon under User block.
2. If you want to generate the API key to the existing technician, click the **edit** icon beside the technician.

   If you want to generate the API key to a new technician, click **Add New Technician** link, enter the technician details and provide login permission.
3. Click **Generate** link under the API key details block. You can select a time frame for the key to expire using the calendar icon or simply retain the same key perpetually.

   If a key is already generated for the technician, a **Re-generate** link appears.

The key in the above image is generated for an existing technician. A time frame for the key is selected which shows the date, month, year and the time (in hours and minutes) when the key will expire.

REST API supported operations

The *REST API* supports only request related operations which can be separated into:-

Operations on request: adding new request

Operations on a specific request:

editing, closing, deleting and viewing existing requests.

adding new notes to a request, editing, deleting and viewing existing notes.

adding worklog to a request, editing, deleting and viewing existing worklogs.

Request Operations

The operations on request such as adding new request, updating, closing, deleting and viewing the existing request are discussed under this section.

To perform operations on the request, the following URL patterns should be used.

For adding request:

http://<servername>:<port number>/sdpapi/request/

For operations on a specific request:

http://<servername>:<port number>/sdpapi/request/<request id>

Contents

- Adding Request
- Editing Request
- Viewing Request
- Deleting Request
- Closing Request
- Get Conversations
- Get Conversation
- Add Attachment
- Adding Resolution
- Editing Resolution
- Get Resolution
- Pickup Request
- Assign Request
- Reply Request
- Get Requests
- Get Notification
- Get Notifications
- Get All Conversations

Adding Request

Say, you are running ServiceDesk Plus with the server name "localhost" in the port "8080". You are creating a new request for the requester Shawn Adams, who is unable to browse the internet. The input and output XML formats for the above scenario are given below,

To add a new request, the URL is given as:

http://<servername>:<port number>/sdpapi/request/

So for the scenario above, the URL is:

http://localhost:8080/sdpapi/request/

Key Points:

1. The operation name "ADD_REQUEST" should be sent as a "POST attribute" with key "OPERATION_NAME".
2. The technician key should be sent as a "POST attribute" with key "TECHNICIAN_KEY".
3. Input is an XML string sent as a "POST attribute" with key "INPUT_DATA".

Note: Please note that the **Input** and **Output XML** formats have been changed. But for compatibility reasons, the Input operation will support both the formats.

Input - Format 1:

```
<Operation>
<Details>
        <parameter>
                <name>requester</name>
                <value>Shawn Adams</value>
        </parameter>
        <parameter>
                <name>subject</name>
                <value>The subject of the request</value>
        </parameter>
        <parameter>
                <name>description</name>
                <value>The description of the request</value>
        </parameter>
        <parameter>
                <name>callbackURL</name>
```

```
        <value>http://localhost:8080/CustomReportHandler.do</value>
    </parameter>
    <parameter>
        <name>requesttemplate</name>
        <value>Unable to browse</value>
    </parameter>
    <parameter>
        <name>priority</name>
        <value>High</value>
    </parameter>
    <parameter>
        <name>site</name>
        <value>New York</value>
    </parameter>
    <parameter>
        <name>group</name>
        <value>Network</value>
    </parameter>
    <parameter>
        <name>technician</name>
        <value>Howard Stern</value>
    </parameter>
    <parameter>
        <name>level</name>
        <value>Tier 3</value>
    </parameter>
    <parameter>
        <name>status</name>
        <value>Open</value>
    </parameter>
    <parameter>
        <name>service</name>
        <value>Email</value>
```

```
        </parameter>
</Details>
</Operation>
```

Input - Format 2:

```
<Operation>
<Details>
        <requester>Shawn Adams</requester>
        <subject>Specify Subject</subject>
        <description>Specify Description</description>
        <callbackURL>http://localhost:8080/CustomReportHandler.do</callbackURL>
        <requesttemplate>Unable to browse</requesttemplate>
        <priority>High</priority>
        <site>New York</site>
        <group>Network</group>
        <technician>Howard Stern</technician>
        <level>Tier 3</level>
        <status>open</status>
        <service>Email</service>
</Details>
</Operation>
```

Output:

The Output format for the operation "Add Request" supports both the formats.

```
<?xml version="1.0" encoding="UTF-8"?>
<operation name="ADD_REQUEST">
<result>
        <status>Success</status>
        <message>Request added successfully</message>
</result>
<Details>
```

```
        <workorderid>25</workorderid>
</Details>
<Details>
        <parameter>
                <name>workorderid</name>
                <value>25</value>
        </parameter>
</Details>
</operation>
```

Editing Request

To edit a request, the URL is given as:

http://<servername>:<port number>/sdpapi/request/<request id>

Assume the Request ID to edit is 25, then the URL is: http://localhost:8080/sdpapi/request/25

Key Points:

1. The operation name "EDIT_REQUEST" should be sent as a "POST attribute" with key "OPERATION_NAME"
2. The technician key should be sent as a "POST attribute" with key "TECHNICIAN_KEY"
3. Input is an XML string sent as "POST attribute" with key "INPUT_DATA".

Note: Please note that the **Input** and **Output XML** formats have been changed. But for compatibility reasons, the Input operation will support both the formats.

Input - Format 1:

```
<Operation>
<Details>
        <parameter>
                <name>level</name>
                <value>Tier 3</value>
        </parameter>
</Details>
</Operation>
```

Input - Format 2:

```
<Operation>
<Details>
        <level>Tier 3</level>
</Details>
</Operation>
```

Output:

```
<?xml version="1.0" encoding="UTF-8"?>
<operation name="EDIT_REQUEST">
<result>
        <status>Success</status>
        <message>Request 25 successfully edited</message>
</result>
</operation>
```

Viewing Request

To view a request, the URL is given as:

http://<servername>:<port number>/sdpapi/request/<request id>

Assume the Request ID to view is 24, then the URL is: http://localhost:8080/sdpapi/request/24/

Key points:

1. The operation name "GET_REQUEST" should be sent as a "POST attribute" with key "OPERATION_NAME".
2. The technician key should be sent as a "POST attribute" with key "TECHNICIAN_KEY".
3. Input is not required for viewing requests.

Note: Please note that the **Input** and **Output XML** formats have been changed. But for compatibility reasons, the Input operation will support both the formats.

Output:

```xml
<?xml version="1.0" encoding="UTF-8"?>
<operation name="GET_REQUEST">
<result>
	<status>Success</status>
	<message>Request details fetched successfully</message>
</result>
<Details>
	<parameter>
		<name>workorderid</name>
		<value>24</value>
	</parameter>
	<parameter>
		<name>requester</name>
		<value>Howard Stern</value>
	</parameter>
	<parameter>
		<name>createdby</name>
		<value>Howard Stern</value>
	</parameter>
	<parameter>
		<name>createdtime</name>
		<value>31 May 2011, 20:52:26</value>
	</parameter>
	<parameter>
		<name>duebytime</name>
		<value>01 Jun 2011, 10:00:00</value>
	</parameter>
	<parameter>
		<name>timespentonreq</name>
		<value>0hrs 0min</value>
	</parameter>
	<parameter>
		<name>subject</name>
		<value>The subject of the request</value>
	</parameter>
	<parameter>
		<name>requesttemplate</name>
		<value>Unable to browse</value>
```

```
        </parameter>
        <parameter>
                <name>sla</name>
                <value>High SLA</value>
        </parameter>
        <parameter>
                <name>service</name>
                <value>Email</value>
        </parameter>
        <parameter>
                <name>technician</name>
                <value>Howard Stern</value>
        </parameter>
        <parameter>
                <name>status</name>
                <value>Open</value>
        </parameter>
        <parameter>
                <name>priority</name>
                <value>High</value>
        </parameter>
        <parameter>
                <name>level</name>
                <value>Tier 3</value>
        </parameter>
        <parameter>
                <name>group</name>
                <value>Network</value>
        </parameter>
        <parameter>
                <name>description</name>
                <value>The description of the request</value>
        </parameter>
        <Notes URI="http://localhost:8080/sdpapi/request/24/notes/"/>
        <Worklogs
        URI="http://localhost:8080/sdpapi/request/24/worklogs/"/>
</Details>
</Operation>
```

Deleting Request

To delete a request, the URL is given as:

http://<servername>:<port number>/sdpapi/request/<request id>

Assume the Request ID to delete is 21, then the URL is: http://localhost:8080/sdpapi/request/21/

Key points:

1. The operation name "DELETE_REQUEST" should be sent as a "POST attribute" with key "OPERATION_NAME".
2. The technician key should be sent as a "POST attribute" with key "TECHNICIAN_KEY".
3. Input is not required for deleting requests.

Note: Please note that the **Input** and **Output XML** formats have been changed. But for compatibility reasons, the Input operation will support both the formats.

Output:

```
<?xml version="1.0" encoding="UTF-8"?>
<operation name="DELETE_REQUEST">
<result>
        <status>Success</status>
        <message>Request deleted successfully</message>
</result>
</operation>
```

Close Request

To close a request, the URL is given as:

http://<servername>:<port number>/sdpapi/request/<request id>

Assume the Request ID to close is 25, then the URL is given as:
http://localhost:8080/sdpapi/request/25

Key points:

1. The operation name "CLOSE_REQUEST" should be sent as a "POST attribute" with key "OPERATION_NAME".
2. The technician key should be sent as a "POST attribute" with key "TECHNICIAN_KEY".

3. The input XML is optional. If specified, then the input is an XML string sent as "POST attribute" with key "INPUT_DATA".

Note: Please note that the **Input** and **Output XML** formats have been changed. But for compatibility reasons, the Input operation will support both the formats.

Input - Format 1:

```
<Operation>
<Details>
        <parameter>
                <name>closeAccepted</name>
                <value>Accepted</value>
        </parameter>
        <parameter>
                <name>closeComment</name>
                <value>The Closing Comment</value>
        </parameter>
</Details>
</Operation>
```

Get Conversations

To get conversation of all requests, the URL is given as:

http://<servername>:<port number>/sdpapi/request/<request id>/conversation/

Assume the Request ID is 25,then the URL is given as:
http://localhost:8080/sdpapi/request/25/conversation/

Key points:

1. The operation name "GET_CONVERSATIONS " should be sent as a "POST attribute" with key "OPERATION_NAME".
2. The technician key should be sent as a "POST attribute" with key "TECHNICIAN_KEY".
3. Input is not required for Get Request Conversations

Note: Please note that the **Input** and **Output XML** formats have been changed. But for compatibility reasons, the Input operation will support both the formats.

Output Format:


```
<?xml version="1.0" encoding="UTF-8"?>
<operation name="GET_CONVERSATIONS">
        <result>
                <statuscode>200</statuscode>
                <status>Success</status>
                <message>Conversation details fetched
                successfully</message>
        </result>
        <Details type="conversation">
            <record URI="http://<servername>:<port-
            number>/sdpapi/request/<requestId>/conversation/1">
                <parameter>
                    <name>CONVERSATION ID<name>
                    <value>1<value>
                </parameter>
                <parameter>
                    <name>FROM<name>
                    <value>administrator<value>
                </parameter>
                <parameter>
                    <name>CREATEDTIME<name>
                    <value>1343844854421<value>
                </parameter>
                <parameter>
                    <name>TYPE<name>
                    <value>MERGE<value>
                </parameter>
            </record>
            <record URI="http://<servername>:<port-
            number>/sdpapi/request/<requestId>/conversation/2">
                <parameter>
                    <name>CONVERSATION ID<name>
                    <value>2<value>
                </parameter>
                <parameter>
                    <name>FROM<name>
                    <value>administrator<value>
                </parameter>
```

```
                <parameter>
                    <name>CREATEDTIME<name>
                    <value>1343844854421<value>
                </parameter>
                <parameter>
                    <name>TYPE<name>
                    <value>MERGE<value>
                </parameter>
            </record>
        </Details>
</operation>
```

Get Conversation

To get conversation of a request, the URL is given as:

http://<servername>:<port number>/sdpapi/request/<request id>/conversation/<conversationId>

Assume the Request ID is 25 and the Conversation ID is also 25, then the URL is given as:
http://localhost:8080/sdpapi/request/25/conversation/25

Key points:

1. The operation name "GET_CONVERSATION " should be sent as a "POST attribute" with key "OPERATION_NAME".
2. The technician key should be sent as a "POST attribute" with key "TECHNICIAN_KEY".
3. Input is not required for Get Request Conversation

Note: Please note that the **Input** and **Output XML** formats have been changed. But for compatibility reasons, the Input operation will support both the formats.

Output Format:

```
<xml version="1.0" encoding="UTF-8">
<operation name="GET_CONVERSATION">
        <result>
                <statuscode>200</statuscode>
                <status>Success</status>
                <message>Conversation details fetched
                successfully</message>
        </result>
        <Details type="conversation">
```

```
            <record>
                <parameter>
                    <name>CONVERSATION ID<name>
                    <value>1<value>
                </parameter>
                <parameter>
                    <name>TITLE<name>
                    <value>title<value>
                </parameter>
                <parameter>
                    <name>DESCRIPTION<name>
                    <value>description<value>
                </parameter>
                <parameter>
                    <name>TOADDRESS<name>
                    <value>xyz@abc.com<value>
                </parameter>
                <parameter>
                    <name>CCADDRESS<name>
                    <value>xyz@abc.com<value>
                </parameter>
            </record>
        </Details>
</operation>
```

Add Attachment

To append attachments to requests, the URL is given as:

http://<servername>:<port number>/sdpapi/request/<request id>/attachment

Assume the Request ID is 25,then the URL is given as:
http://localhost:8080/sdpapi/request/25/attachment

Key points:

1. The operation name "ADD_ATTACHMENT " should be sent as a "POST attribute" with key "OPERATION_NAME".
2. The technician key should be sent as a "POST attribute" with key "TECHNICIAN_KEY".

Note: Please note that the **Output XML** format has been changed. But for compatibility reasons, the Input operation will support both the formats.

Attachment Client Side Snippet:

The snippet provided below is an example of how you can append "Attachments to Requests" written in java.

```
{
    /**
    * 1. Create a MultipartPostMethod
    * 2. Construct the web URL to connect to the SDP Server
    * 3. Add the filename to be attached as a parameter to the
    MultipartPostMethod with parameter name "filename"
    * 4. Execute the MultipartPostMethod
    * 5. Receive and process the response as required
    * /
    HttpClient client = new HttpClient( );
    String weblinkURL =
    "http://<SDPServer>:<PortNumber>/sdpapi/request/<requestId> /attachment?
    OPERATION_NAME=ADD_ATTACHMENT&TECHNICIAN_KEY=<general
    technician API key>";
    MultipartPostMethod method = new MultipartPostMethod( weblinkURL );
    String fileName = "C:" + File.pathSeparator + "ManageEngine" +
    File.pathSeparator +
    "ServiceDesk" + File.pathSeparator + "a.csv";
    File file = new File(fileName);
    method.addParameter("filename", file );



    try {
            client.executeMethod( method );
            String response = method.getResponseBodyAsString();
            System.out.println( response );
    } catch  (HttpException he) {
            System.out.println( he );
    } catch (Exception e) {
            System.out.println( e );
    } finally {
            method.releaseConnection( );
    }
}
```

Note: Please note that the **Input** and **Output XML** formats have been changed. But for compatibility reasons, the Input operation will support both the formats.

Output:

```
<?xml version="1.0" encoding="UTF-8"?>
<operation name="ADD_ATTACHMENT">
<result>
        <statuscode>200</statuscode>
        <status>Success</status>
        <message>Attachments added successfully</message>
</result>
<Details type="attachment"/>
</operation>
```

Adding Resolution

To add new resolution to a request, the URL should be given as:

http://<servername>:<port number>/sdpapi/request/<request ID>/resolution

Assume the Request ID is 25,then the URL is given as:

http://localhost:8080/sdpapi/request/ 25/resolution

Note: Please note that the **Input** and **Output XML** formats have been changed. But for compatibility reasons, the Input operation will support both the formats.

Input Format:

```
<Details>
    <resolution>
            <resolutiontext>asd</resolutiontext>
    </resolution>
</Details>
```

Output Format:

```
<?xml version="1.0" encoding="UTF-8"?>
<operation name="ADD_RESOLUTION">
    <result>
        <statuscode>200</statuscode>
        <status>Success</status>
        <message>Resolution added Successfully</message>
    </result>
</operation>
```

Editing Resolution

To edit a resolution to a request, the URL should be given as:

http://<servername>:<port number>/sdpapi/request/<request ID>/ resolution

Assume the Request ID is 25,then the URL is given as:

http://localhost:8080/sdpapi/request/25/

Note: Please note that the **Input** and **Output XML** formats have been changed. But for compatibility reasons, the Input operation will support both the formats.

Input Format:

```
<Details>
    <resolution>
        <resolutiontext>asd</resolutiontext>
    </resolution>
</Details>
```

Output Format:

```
<?xml version="1.0" encoding="UTF-8"?>
<operation ssname="EDIT_RESOLUTION">
    <result>
        <statuscode>200</statuscode>
```

```
            <status>Success</status>
            <message>Resolution edited Successfully for
            request<request ID></message>
        </result>
    </operation>
```

Get Resolution

To get a resolution, the URL should be given as:

http://<servername>:<port number>/sdpapi/request/ <requestid>/

Assume the Request ID is 25,then the URL is given as:

http://localhost:8080/sdpapi/request/25/

Note: Please note that the **Input** and **Output XML** formats have been changed. But for compatibility reasons, the Input operation will support both the formats.

Output:

```
<?xml version="1.0" encoding="UTF-8"?>
<operation name="GET_RESOLUTION">
    <result>
            <statuscode>200</statuscode>
            <status>Success</status>
            <message>Resolution details fetched Successfully for
            request<requestid></message>
    </result>
    <Details>
            <resolution>resolution</resolution>
            <lastupdatedtime>1352100738881</lastupdatedtime>
            <resolver>301</resolver>
    </Details>
</operation>
```

Pickup Request

To pick up request, the URL should be given as:

http://<servername>:<port number>/sdpapi/request/ <requestid>/

Assume the Request ID is 25,then the URL is given as:

http://localhost:8080/sdpapi/request/25/

Note: Please note that the **Input** and **Output XML** formats have been changed. But for compatibility reasons, the Input operation will support both the formats.

Output:

```
<?xml version="1.0" encoding="UTF-8"?>
<operation name="PICKUP_REQUEST">
    <result>
        <statuscode>200</statuscode>
        <status>Success</status>
        <message>Request picked up Successfully</message>
    </result>
</operation>
```

Assign Request

To assign request, the URL should be given as:

http://<servername>:<port number>/sdpapi/request/ <requestid>/

Assume the Request ID is 25,then the URL is given as:

http://localhost:8080/sdpapi/request/25/

Note: Please note that the **Input** and **Output XML** formats have been changed. But for compatibility reasons, the Input operation will support both the formats.

Input:

```
<?xml version="1.0" encoding="UTF-8"?>
<Details>
<parameter>
        <name>technicianid</name>
        <value>4</value>
</paramter>
</Details>
```

Output:

```
<?xml version="1.0" encoding="UTF-8"?>
<operation name="ASSIGN_REQUEST">
    <result>
        <statuscode>200</statuscode>
        <status>Success</status>
        <message>Request assigned Successfully</message>
    </result>
</operation>
```

Reply Request

To assign request, the URL should be given as:

http://<servername>:<port number>/sdpapi/request/ <requestid>/

Assume the Request ID is 25,then the URL is given as:

http://localhost:8080/sdpapi/request/25/

Note: Please note that the **Input** and **Output XML** formats have been changed. But for compatibility reasons, the Input operation will support both the formats.

Input:

```
<Details>
    <parameter>
        <name>to</name>
        <value>vivin@sdplinmail.com</value>
    </parameter>
    <parameter>
        <name>cc</name>
        <value>vivin@sdplinmail.com</value>
    </parameter>
    <parameter>
        <name>subject</name>
        <value>subject text</value>
    </parameter>
```

```
        <parameter>
                <name>description</name>
                <value>description text</value>
        </parameter>
    </Details>
```

Output:

```
    <?xml version="1.0" encoding="UTF-8"?>
    <operation name="REPLY_REQUEST">
        <result>
            <statuscode>200</statuscode>
            <status>Success</status>
            <message>Request assigned Successfully</message>
        </result>
    </operation>
```

Get Requests

To get request, the URL should be given as:

http://<servername>:<port number>/sdpapi/request/

Assume the Request ID is 25,then the URL is given as:

http://localhost:8080/sdpapi/request/

Input Format:

```
    {
        "operation:"
        {
            "details":
            {
                "from" : "0",
                "limit" : "50",
                "filterby" : "Open_User",
            }
        }
    }
```

Note: Please note that the **Input** and **Output XML** formats have been changed. But for compatibility reasons, the Input operation will support both the formats.

Output:


```
<?xml version="1.0" encoding="UTF-8"?>
<operation name="GET_REQUEST">
    <result>
            <statuscode>200</statuscode>
            <status>Success</status>
            <message>Request replied Successfully</message>
    </result>
<Details type="GET_REQUESTS">
<record URL="http://localhost:8080/sdpapi/request/<requestid>
    <parameter>
            <name>workorderid</name>
            <value><requestid></value>
    </parameter>
    </parameter>
            <name>requester</name>
            <value>administrator</value>
    </parameter>
            <name>createdby</name>
            <value>administrator</value>
    </parameter>
    </parameter>
            <name>createdtime</name>
            <value>12321434324324</value>
    </parameter>
    </parameter>
            <name>duebytime</name>
            <value>11234321412454</value>
    </parameter>
    </parameter>
            <name>subject</name>
            <value>subject</value>
    </parameter>
```

```
</parameter>
        <name>technician</name>
        <value>administrator</value>
</parameter>
</parameter>
        <name>priority</name>
        <value>High</value>
</parameter>
</parameter>
        <name>status</name>
        <value>open</value>
</parameter>
</parameter>
        <name>isoverdue</name>
        <value>false</value>
</parameter>
</record>
<record URL="http://localhost:8080/sdpapi/request/<requestid>"
<parameter>
        <name>workorderid</name>
        <value><requestid></value>
<parameter>
        <name>requester</name>
        <value>administrator</value>
<parameter>
<parameter>
        <name>createdby</name>
        <value>administrator</value>
<parameter>
<parameter>
        <name>createdtime</name>
        <value>1232143323543</value>
<parameter>
<parameter>
        <name>duebytime</name>
        <value>1123432143534</value>
<parameter>
<parameter>
```

```
                <name>subject</name>
                <value>subject</value>
        <parameter>
        <parameter>
                <name>technician</name>
                <value>administrator</value>
        <parameter>
        <parameter>
                <name>priority</name>
                <value>High</value>
        <parameter>
        <parameter>
                <name>status</name>
                <value>open</value>
        <parameter>
        <parameter>
                <name>isoverdue</name>
                <value>false</value>
        <parameter>
        </record>
</Details>
</operation>
```

Get Notification

To get notifications of a request, the URL should be given as:

http://<servername>:<port-number>/sdpapi/request/<requestId>/notification/<notificationId>

Assume the Request ID is 25 and the notification is 10, then the URL is given as:

http://localhost:8080/sdpapi/request/25/ notification/10

Note: Please note that the **Input** and **Output XML** formats have been changed. But for compatibility reasons, the Input operation will support both the formats.

Input:

```
<?xml version="1.0" encoding="UTF-8"?>
```

```
<operation name="GET_NOTIFICATION">
    <result>
            <statuscode>200</statuscode>
            <status>Success</status>
            <message> Notification details fetched
            successfully</message>
    </result>
<Details type="GET_NOTIFICATION">
    <record>
    <parameter>
            <name>NOTIFYID</name>
            <value>1</value>
    </parameter>
    <parameter>
            <name>FROM</name>
            <value>administrator</value>
    </parameter>
    <parameter>
            <name>CREEATEDDATE</name>
            <value>1343844854421</value>
    </parameter>
    <parameter>
            <name>TITLE</name>
            <value>Re: [Request ID :##1##] : asdasd</value>
    </parameter>
    <parameter>
            <name>DESCRIPTION</name>
            <value><p>Category : <br />Description :
            </p></value>
    </parameter>
    <parameter>
            <name>TOADDRESS</name>
            <value>abc@sdplinmail.com</value>
    </parameter>
    <parameter>
            <name>CCADDRESS</name>
            <value>xyz@sdplinmail.com</value>
    </parameter>
    <parameter>
```

```
                <name>TYPE</name>
                <value>Notification</value>
        </parameter>
        <parameter>
                <name>SUBTYPE</name>
                <value>REQREPLY</value>
        </parameter>
        </record>
    </Details>
    </Operation>
```

Get Notifications

To get notifications of a request, the URL should be given as:

http://<servername>:<port-number>/sdpapi/request/<requestId>/notification/

Assume the Request ID is 25, then the URL is given as:

http://localhost:8080/sdpapi/request/25/ notification/

Note: Please note that the **Input** and **Output XML** formats have been changed. But for compatibility reasons, the Input operation will support both the formats.

Input:

```
<?xml version="1.0" encoding="UTF-8"?>
<operation name="GET_NOTIFICATIONS">
    <result>
            <statuscode>200</statuscode>
            <status>Success</status>
            <message> Notification details fetched
            successfully</message>
    </result>
<Details type="GET_NOTIFICATIONS">
<record URI="http://<servername>:<port-
number>/sdpapi/request/<requestId>/notification/1">
    <parameter>
            <name>NOTIFYID</name>
            <value>1</value>
```

```
        </parameter>
        <parameter>
                <name>FROM</name>
                <value>administrator</value>
        </parameter>
        <parameter>
                <name>CREEATEDDATE</name>
                <value>1343844854421</value>
        </parameter>
        <parameter>
                <name>TYPE</name>
                <value>Notification</value>
        </parameter>
        <parameter>
                <name>SUBTYPE</name>
                <value>REQREPLY</value>
        </parameter>
    </record>
    <record URI="http://<servername>:<port-
number>/sdpapi/request/<requestId>/notification/2">
        <parameter>
                <name>NOTIFYID</name>
                <value>2</value>
        </parameter>
        <parameter>
                <name>FROM</name>
                <value>administrator</value>
        </parameter>
        <parameter>
                <name>CREEATEDDATE</name>
                <value>1343844834134</value>
        </parameter>
        <parameter>
                <name>TYPE</name>
                <value>Notification</value>
        </parameter>
        <parameter>
                <name>SUBTYPE</name>
```

```
                    <value>REQFORWARD</value>
        </parameter>
    </record>
  </Details>
  </Operation>
```

Get All Conversations

To get notifications of a request, the URL should be given as:

http://<servername>:<port-number>/sdpapi/request/<requestId>/allconversation/

Assume the Request ID is 25, then the URL is given as:

http://localhost:8080/sdpapi/request/25/ all conversation/

Note: Please note that the **Input** and **Output XML** formats have been changed. But for compatibility reasons, the Input operation will support both the formats.

Input:

```
<?xml version="1.0" encoding="UTF-8"?>
<operation name="GET_ALL_CONVERSATIONS">
    <result>
            <statuscode>200</statuscode>
            <status>Success</status>
            <message> Notification details fetched
            successfully</message>
    </result>
<Details type="GET_ALL_CONVERSATIONS">
  <record URI="http://<servername>:<port-
  number>/sdpapi/request/<requestId>/allconversation/1343844854421">
    <parameter>
            <name>NOTIFYID</name>
            <value>1</value>
    </parameter>
    <parameter>
            <name>FROM</name>
            <value>administrator</value>
    </parameter>
```

```
        <parameter>
                <name>CREEATEDDATE</name>
                <value>1343844854421</value>
        </parameter>
        <parameter>
                <name>TYPE</name>
                <value>Notification</value>
        </parameter>
        <parameter>
                <name>SUBTYPE</name>
                <value>REQREPLY</value>
        </parameter>
        <parameter>
                <name>DESCCRIPTION</name>
                <value></value>
        </parameter>
    </record>
    <record URI="http://<servername>:<port-
number>/sdpapi/request/<requestId>/allconversation/1343844834134">
        <parameter>
                <name>NOTIFYID</name>
                <value>2</value>
        </parameter>
        <parameter>
                <name>FROM</name>
                <value>administrator</value>
        </parameter>
        <parameter>
                <name>CREEATEDDATE</name>
                <value>1343844834134</value>
        </parameter>
        <parameter>
                <name>TYPE</name>
                <value>Notification</value>
        </parameter>
        <parameter>
                <name>SUBTYPE</name>
                <value>REQFORWARD</value>
```

```
        </parameter>
        <parameter>
                <name>DESCRIPTION</name>
                <value></value>
        </parameter>
    </record>
    <record URI="http://<servername>:<port-
    number>/sdpapi/request/<requestId>/allconversation/1357110660162">
        <parameter>
                <name>CONVERSATION ID</name>
                <value>1</value>
        </parameter>
        <parameter>
                <name>FROM</name>
                <value>guest</value>
        </parameter>
        <parameter>
                <name>CREEATEDDATE</name>
                <value>1357110660162</value>
        </parameter>
        <parameter>
                <name>TYPE</name>
                <value>Conversation</value>
        </parameter>
        <parameter>
                <name>DESCRIPTION</name>
                <value></value>
        </parameter>
    </record>
  </Details>
  </Operation>
```

Notes Related Operations

The notes related operations on specific request such as adding new notes, updating, deleting and viewing the existing notes are discussed under this section.

To perform the notes related operations on an existing request, the following URL patterns should be used.

For adding notes to a request:

http://<servername>:<port number>/sdpapi/request/<request id>/notes

For operations on a specific note for a request:

http://<servername>:<port number>/sdpapi/request/<request id>/notes/<notes id>

Contents

- Adding Note
- Editing Note
- Viewing Note
- Viewing all the Notes
- Deleting Note

Adding Note

Say, you are running ServiceDesk Plus with the server name as "localhost" in the port "8080". You are adding a note for an existing request for which the input and output XML format is given below,

For adding a note to an existing request, the URL is given as:

http://<servername>:<port number>/sdpapi/request/<request id>/notes

So for the above scenario, the URL is: http://localhost:8080/sdpapi/request/24/notes/

Key Points:

1. The operation name "ADD_NOTE" should be sent as a "POST attribute" with key "OPERATION_NAME"
2. The technician key should be sent as a "POST attribute" with key "TECHNICIAN_KEY"
3. Input is an XML string sent as "POST attribute" with key "INPUT_DATA".

Note: Please note that the **Input** and **Output XML** formats have been changed. But for compatibility reasons, the Input operation will support both the formats.

Input - Format 1:

```
<Operation>
<Details>
	<Notes>
		<Note>
			<parameter>
				<name>isPublic</name>
				<value>false</value>
			</parameter>
			<parameter>
				<name>notesText</name>
				<value>Text added to the note</value>
			</parameter>
		</Note>
	</Notes>
</Details>
</Operation>
```

Input - Format 2:

```
<Operation>
<Details>
	<Notes>
		<Note>
			<isPublic>false</isPublic>
			<notesText>Text added to the note</notesText>
		</Note>
	</Notes>
</Details>
</Operation>
```

Output:

```
<?xml version="1.0" encoding="UTF-8"?>
<operation name="ADD_NOTE">
<result>
	<status>Success</status>
	<message>Note added successfully for request 24</message>
</result>
</operation>
```

Editing Note

To edit a note of an existing request, the URL is given as:

http://<servername>:<port number>/sdpapi/request/<request id>/notes/<note id>

Assume the Note ID to edit the note is 301, then the URL is:
http://localhost:8080/sdpapi/request/24/notes/301

Key Points:

1. The operation name "EDIT_NOTE" should be sent as a "POST attribute" with key "OPERATION_NAME"
2. The technician key should be sent as a "POST attribute" with key "TECHNICIAN_KEY"
3. Input is an XML string sent as "POST attribute" with key "INPUT_DATA".

Note: Please note that the **Input** and **Output XML** formats have been changed. But for compatibility reasons, the Input operation will support both the formats.

Input - Format 1:

```
<Operation>
<Details>
	<Notes>
		<Note>
			<parameter>
				<name>notesText</name>
				<value>edited the subject</value>
			</parameter>
		</Note>
	</Notes>
</Details>
</Operation>
```

Input - Format 2:

```
<Operation>
<Details>
	<Notes>
		<Note>
			<notesText>edited sub</notesText>
		</Note>
	</Notes>
</Details>
</Operation>
```

Output:

```
<?xml version="1.0" encoding="UTF-8"?>
```

```
<operation name="EDIT_NOTE">
<result>
        <status>Success</status>
        <message>Note 301 successfully edited for request 24</message>
</result>
</operation>
```

Viewing Note

To view one of the notes of an existing request, the URL is given as:

http://<servername>:<port number>/sdpapi/request/<request id>/notes/<note id>

Assume the Note ID to view the note is 301, then the URL is:
http://localhost:8080/sdpapi/request/24/notes/301

Key Points:

1. The operation name "GET_NOTE" should be sent as a "POST attribute" with key "OPERATION_NAME"
2. The technician key should be sent as a "POST attribute" with key "TECHNICIAN_KEY"
3. Input is not required in this case.

Note: Please note that the **Input** and **Output XML** formats have been changed. But for compatibility reasons, the Input operation will support both the formats.

Output:

```
<?xml version="1.0" encoding="UTF-8"?>
<operation name="GET_NOTE">
<result>
        <status>Success</status>
        <message>Note details fetched successfully</message>
</result>
<Details>
        <Notes>
                <Note>
                        <parameter>
                                <name>userid</name>
                                <value>301</value>
                        </parameter>
                        <parameter>
                                <name>ispublic</name>
                                <value>false</value>
                        </parameter>
                        <parameter>
                                <name>notesText</name>
                                <value>Text added to the note</value>
```

```
                    </parameter>
                    <parameter>
                          <name>username</name>
                          <value>Shawn Adams</value>
                    </parameter>
                    <parameter>
                          <name>notesid</name>
                          <value>301</value>
                    </parameter>
                    <parameter>
                          <name>notesdate</name>
                          <value>1275373443722</value>
                    </parameter>
                    <parameter>
                          <name>workorderid</name>
                          <value>24</value>
                    </parameter>
              </Note>
        </Notes>
</Details>
</Operation>
```

Viewing all the Notes

To view all the notes of a request, the URL is given as:

http://<servername>:<port number>/sdpapi/request/<request id>/notes/

Assume the Request ID to view all the notes is 24, then the URL is:
http://localhost:8080/sdpapi/request/24/notes

Key Points:

1. The operation name "GET_NOTES" should be sent as a "POST attribute" with key "OPERATION_NAME"
2. The technician key should be sent as a "POST attribute" with key "TECHNICIAN_KEY"
3. Input is not required in this case.

Note: Please note that the **Input** and **Output XML** formats have been changed. But for compatibility reasons, the Input operation will support both the formats.

Output:

```
<?xml version="1.0" encoding="UTF-8"?>
<operation name="GET_NOTES">
<result>
      <status>Success</status>
      <message>Notes details fetched successfully</message>
</result>
```

```
<Details>
	<Notes>
		<Note URI="http://localhost:8080/sdpapi/request/24/notes/302/">
			<parameter>
				<name>ispublic</name>
				<value>false</value>
			</parameter>
			<parameter>
				<name>notesText</name>
				<value>Note added to the request</value>
			</parameter>
			<parameter>
				<name>username</name>
				<value>Shawn Adams</value>
			</parameter>
			<parameter>
				<name>notesdate</name>
				<value>1275373948835</value>
			</parameter>
		</Note>
		<Note URI="http://localhost:8080/sdpapi/request/24/notes/301/">
			<parameter>
				<name>ispublic</name>
				<value>false</value>
			</parameter>
			<parameter>
				<name>notesText</name>
				<value>Text added to the note</value>
			</parameter>
			<parameter>
				<name>username</name>
				<value>Shawn Adams</value>
			</parameter>
			<parameter>
				<name>notesdate</name>
				<value>1275373443722</value>
			</parameter>
		</Note>
	</Notes>
</Details>
</operation>
```


Deleting Note

To delete a note of an existing request, the URL is given as:

http://<servername>:<port number>/sdpapi/request/<request id>/notes/<note id>

Assume the Note ID to delete the note is 301, then the URL is:
http://localhost:8080/sdpapi/request/24/notes/301

Key Points:

1. The operation name "DELETE_NOTE" should be sent as a "POST attribute" with key "OPERATION_NAME"
2. The technician key should be sent as a "POST attribute" with key "TECHNICIAN_KEY"
3. Input is not required in this case.

Note: Please note that the **Input** and **Output XML** formats have been changed. But for compatibility reasons, the Input operation will support both the formats.

Output:

```
<?xml version="1.0" encoding="UTF-8"?>
<operation name="DELETE_NOTE">
<result>
        <status>Success</status>
        <message>Note deleted successfully</message>
</result>
</operation>
```

Worklog Related Operations

The worklog related operations on specific request such as adding worklog, updating, deleting and viewing the existing worklogs are discussed under this section.

To perform worklog related operations the following URL patterns should be used.

For adding worklog to an existing request:

http://<servername>:<port number>/sdpapi/request/<request id>/worklogs

For operations on a specific worklog:

http://<servername>:<port number>/sdpapi/request/<request id>/worklogs/<worklog id>

Contents

- Adding Worklog
- Editing Worklog
- Viewing Worklog
- Viewing all the Worklogs
- Deleting Worklog

Adding Worklog

To add a worklog for an existing request, the URL is given as:

http://<servername>:<port number>/sdpapi/request/<request id>/worklogs

So for the scenario above, the URL is:
http://localhost:8080/sdpapi/request/24/worklogs/

Key Points:

1. The operation name "ADD_WORKLOG" should be sent as a "POST attribute" with key "OPERATION_NAME".
2. The technician key should be sent as a "POST attribute" with key "TECHNICIAN_KEY".
3. Input is an XML string sent as "POST attribute" with key "INPUT_DATA".

Note: Please note that the **Input** and **Output XML** formats have been changed. But for compatibility reasons, the Input operation will support both the formats.

Input - Format 1:

```
<Operation>
<Details>
	<Worklogs>
		<Worklog>
			<parameter>
				<name>description</name>
				<value>Adding a New Worklog</value>
			</parameter>
			<parameter>
				<name>technician</name>
				<value>Howard Stern</value>
			</parameter>
			<parameter>
				<name>cost</name>
				<value>25</value>
			</parameter>
			<parameter>
				<name>workMinutes</name>
				<value>20</value>
			</parameter>
			<parameter>
				<name>workHours</name>
				<value>6</value>
			</parameter>
		</Worklog>
	</Worklogs>
</Details>
</Operation>
```

Input - Format 2:

```
<Operation>
<Details>
	<Worklogs>
		<Worklog>
			<description>Adding a New Worklog</description>
			<technician>Howard Stern</technician>
			<cost>25</cost>
			<workMinutes>20</workMinutes>
			<workHours>6</workHours>
		</Worklog>
	</Worklogs>
</Details>
</Operation>
```

Output:

```
<?xml version="1.0" encoding="UTF-8"?>
<operation name="ADD_WORKLOG">
<result>
	<status>Success</status>
	<message>Work Log added successfully for request 24</message>
</result>
</operation>
```

Editing Worklog

To edit a worklog of an existing request, the URL is given as:

http://<servername>:<port number>/sdpapi/request/<request id>/worklogs/<work log id>

Assume the Worklog ID to edit is 302, then the URL is:
http://localhost:8080/sdpapi/request/24/worklogs/302

Key Points:

1. The operation name "EDIT_WORKLOG" should be sent as a "POST attribute" with key "OPERATION_NAME".
2. The technician key should be sent as a "POST attribute" with key "TECHNICIAN_KEY".
3. Input is an XML string sent as "POST attribute" with key "INPUT_DATA".

Note: Please note that the **Input** and **Output XML** formats have been changed. But for compatibility reasons, the Input operation will support both the formats.

Input - Format 1:

```
<Operation>
<Details>
	<Worklogs>
		<Worklog>
			<parameter>
				<name>description</name>
				<value>Editing Worklog</value>
			</parameter>
		</Worklog>
	</Worklogs>
</Details>
</operation>
```

Input - Format 2:

```
<Operation>
<Details>
	<Worklogs>
		<Worklog>
			<description>Editing Worklog</description>
		</Worklog>
	</Worklogs>
</Details>
</Operation>
```

Output:

```
<?xml version="1.0" encoding="UTF-8"?>
<operation name="EDIT_WORKLOG">
<result>
	<status>Success</status>
	<message>Work Log 302 successfully edited for request 24</message>
</result>
</operation>
```

Viewing Worklog

To view one of the worklog of an existing request, the URL is given as:

http://<servername>:<port number>/sdpapi/request/<request id>/worklogs/<work log id>

Assume the Worklog ID to view worklog is 302, then the URL is:
http://localhost:8080/sdpapi/request/24/worklogs/302

Key Points:

1. The operation name "GET_WORKLOG" should be sent as a "POST attribute" with key "OPERATION_NAME".
2. The technician key should be sent as a "POST attribute" with key "TECHNICIAN_KEY".
3. Input is not required in this case.

Note: Please note that the **Input** and **Output XML** formats have been changed. But for compatibility reasons, the Input operation will support both the formats.

Output:

```
<?xml version="1.0" encoding="UTF-8"?>
<operation name="GET_WORKLOG">
<result>
	<status>Success</status>
```

```
        <message>Work log details fetched successfully</message>
</result>
<Details>
        <Worklogs>
                <Worklog>
                        <parameter>
                                <name>dateTime</name>
                                <value>1275375445281</value>
                        </parameter>
                        <parameter>
                                <name>executedTime</name>
                                <value>1275375433484</value>
                        </parameter>
                        <parameter>
                                <name>cost</name>
                                <value>21.6666666666667</value>
                        </parameter>
                        <parameter>
                                <name>WORKORDERID</name>
                                <value>24</value>
                        </parameter>
                        <parameter>
                                <name>workHours</name>
                                <value>0</value>
                        </parameter>
                        <parameter>
                                <name>workMinutes</name>
                                <value>7800000</value>
                        </parameter>
                        <parameter>
                                <name>technician</name>
                                <value>Howard Stern</value>
                        </parameter>
                        <parameter>
                                <name>description</name>
                                <value>Worklog 2</value>
                        </parameter>
                        <parameter>
                                <name>requestCostID</name>
                                <value>301</value>
                        </parameter>
                </Worklog>
        </Worklogs>
</Details>
</Operation>
```

Viewing Worklogs

To view all the worklogs of a request, the URL is given as:
http://<servername>:<port number>/sdpapi/request/<request id>/worklogs/

Assume the Request ID to view all the worklogs is 302, then the URL is: http://localhost:8080/sdpapi/request/24/worklogs/

Key Points:

1. The operation name "GET_WORKLOGS" should be sent as a "POST attribute" with key "OPERATION_NAME".
2. The technician key should be sent as a "POST attribute" with key "TECHNICIAN_KEY".
3. Input is not required in this case.

Note: Please note that the **Input** and **Output XML** formats have been changed. But for compatibility reasons, the Input operation will support both the formats.

Output:

```
<?xml version="1.0" encoding="UTF-8"?>
<operation name="GET_WORKLOGS">
<result>
	<status>Success</status>
	<message>Work log deleted successfully</message>
</result>
<Details>
	<Worklogs>
		<Worklog
		URI="http://localhost:8080/sdpapi/request/24/worklogs/301/">
			<parameter>
				<name>dateTime</name>
				<value>1275375445281</value>
			</parameter>
			<parameter>
				<name>executedTime</name>
				<value>1275375433484</value>
			</parameter>
			<parameter>
				<name>cost</name>
				<value>21.6666666666667</value>
			</parameter>
			<parameter>
				<name>WORKORDERID</name>
				<value>24</value>
			</parameter>
			<parameter>
				<name>workHours</name>
				<value>0</value>
			</parameter>
```

```
            <parameter>
                <name>workMinutes</name>
                <value>7800000</value>
            </parameter>
            <parameter>
                <name>technician</name>
                <value>Howard Stern</value>
            </parameter>
            <parameter>
                <name>description</name>
                <value>Worklog 2</value>
            </parameter>
            <parameter>
                <name>requestCostID</name>
                <value>301</value>
            </parameter>
        </Worklog>
            <Worklog
            URI="http://localhost:8080/sdpapi/request/24/worklogs/302/">
            <parameter>
                <name>dateTime</name>
                <value>1275375861188</value>
            </parameter>
            <parameter>
                <name>executedTime</name>
                <value>1275375861188</value>
            </parameter>
            <parameter>
                <name>cost</name>
                <value>25.0</value>
            </parameter>
            <parameter>
                <name>WORKORDERID</name>
                <value>24</value>
            </parameter>
            <parameter>
                <name>workHours</name>
                <value>0</value>
            </parameter>
            <parameter>
                <name>workMinutes</name>
                <value>22800000</value>
            </parameter>
            <parameter>
                <name>technician</name>
                <value>Howard Stern</value>
            </parameter>
            <parameter>
                <name>description</name>
                <value>Adding a New Worklog</value>
            </parameter>
            <parameter>
```

```
                        <name>requestCostID</name>
                        <value>302</value>
                    </parameter>
                </Worklog>
        <Worklogs>
</Details>
</operation>
```

Delete Worklog

To delete a worklog from a request, the URL is given as:

http://<servername>:<port number>/sdpapi/request/<request id>/worklogs/<work log id>

Assume the Worklog ID to delete is 301, then the URL is:
http://localhost:8080/sdpapi/request/24/worklogs/301

Key Points:

1. The operation name "DELETE_WORKLOG" should be sent as a "POST attribute" with key "OPERATION_NAME".
2. The technician key should be sent as a "POST attribute" with key "TECHNICIAN_KEY".
3. Input is not required in this case.

Note: Please note that the **Input** and **Output XML** formats have been changed. But for compatibility reasons, the Input operation will support both the formats.

Output:

```
<?xml version="1.0" encoding="UTF-8"?>
<operation name="DELETE_WORKLOG">
<result>
        <status>Success</status>
        <message>Work Log deleted successfully</message>
</result>
</operation>
```

Change-related API Operations

Perform Change-related operations Add, Update, Get, Get All, and Delete without logging into ServiceDesk Plus using REST APIs.

To get change related information use the following URL pattern:

http://<servername>:<port number>/sdpapi/change/

Assuming you are going to work on changes available in the local server with port number 8080 the URLs should follow the following pattern:

http://<localhost>:<8080>/sdpapi/change/

Change related API operations

You can perform the following operations on Change using REST API.

- Add Change
- Update Change
- Get Change Details
- Get All Change Details
- Add Attachment
- Delete Change

Operation Add Change

To add a Change use the following URL format:

http://<servername>:<portnumber>/sdpapi/change/

Assuming you are adding a change in the local server with port number 8080, the URL should be given as::

http://<localhost>:<8080>/sdpapi/change/

Contents

- Sample Input Format
- Sample Output Format

Keypoints:

1. The operation name "ADD" should be sent as a "POST attribute" with key "OPERATION_NAME".
2. The technician key should be sent as a "POST attribute" with key "TECHNICIAN_KEY".

Note: Please note that the **Input** and **Output XML** formats have been changed.

Input Format

```
<Details>
    <parameter>
            <name>title</name>
            <value>change subject</value>
    </parameter>
    <parameter>
            <name>description</name>
            <value>description with tags</value>
    </parameter>
    <parameter>
            <name>scheduledendtime</name>
            <value>26 Apr 2013, 11:11:11</value>
    </parameter>
    <parameter>
            <name>scheduledstarttime</name>
```

```
            <value>26 Apr 2013, 10:11:11</value>
        </parameter>
        <parameter>
            <name>requester</name>
            <value>administrator</value>
        </parameter>
        <parameter>
            <name>technician</name>
            <value>vivin</value>
        </parameter>
        <parameter>
            <name>category</name>
            <value>Software</value>
        </parameter>
        <parameter>
            <name>subcategory</name>
            <value>Adobe Reader</value>
        </parameter>
        <parameter>
            <name>item</name>
            <value>Install</value>
        </parameter>
        <parameter>
            <name>priority</name>
            <value>High</value>
        </parameter>
        <parameter>
            <name>status</name>
            <value>Requested</value>
        </parameter>
        <parameter>
            <name>sitename</name>
            <value />
        </parameter>
        <parameter>
            <name>urgency</name>
            <value>High</value>
        </parameter>
```

```
        <parameter>
                <name>changetype</name>
                <value>Major</value>
        </parameter>
        <parameter>
                <name>impact</name>
                <value>High</value>
        </parameter>
        <parameter>
                <name>servicesaffected</name>
                <value>Email</value>
                <value>Hardware</value>
        </parameter>
        <parameter>
                <name>assets</name>
                <value />
        </parameter>
    </Details>
```

The **output format** would be as follows:

Note: Please note that the **Input** and **Output XML** formats have been changed.

Output Format:

```
<API version="1.0">
    <response>
    <operation name="ADD">
    <result>
        <statuscode>200</statuscode>
        <status>Success</status>
        <message>New Change Added Successfully with change ID :1</message>
    </result>
    <Details type="Change"/>
    </operation>
    </response>
</API>
```

Operation Update Change

To update a Change use the following URL format:

http://<servername>:<port-number>/sdpapi/change/<changeID>

Assuming you are about to update a change (with Change ID I) in the local server with port number 8080, then the URL should be given as:

http://localhost:8080/sdpapi/change/1

Contents

- Sample Input Format
- Sample Output Format

Keypoints:

1. The operation name "UPDATE" should be sent as a "POST attribute" with key "OPERATION_NAME".
2. The technician key should be sent as a "POST attribute" with key "TECHNICIAN_KEY".

Note: Please note that the **Input** and **Output XML** formats have been changed.

Input Format

```
<Details>
    <parameter>
        <name>title</name>
        <value>change subject</value>
    </parameter>
    <parameter>
        <name>description</name>
        <value>description with tags</value>
    </parameter>
    <parameter>
        <name>scheduledendtime</name>
        <value>26 Apr 2013, 11:11:11</value>
    </parameter>
    <parameter>
        <name>scheduledstarttime</name>
```

```
            <value>26 Apr 2013, 10:11:11</value>
        </parameter>
        <parameter>
            <name>completedtime</name>
            <value>26 Apr 2013, 13:11:11</value>
        </parameter>
        <parameter>
            <name>requester</name>
            <value>administrator</value>
        </parameter>
        <parameter>
            <name>technician</name>
            <value>vivin</value>
        </parameter>
        <parameter>
            <name>category</name>
            <value>Software</value>
        </parameter>
        <parameter>
            <name>subcategory</name>
            <value>Adobe Reader</value>
        </parameter>
        <parameter>
            <name>item</name>
            <value>Install</value>
        </parameter>
        <parameter>
            <name>priority</name>
            <value>High</value>
        </parameter>
        <parameter>
            <name>status</name>
            <value>Requested</value>
        </parameter>
        <parameter>
            <name>sitename</name>
            <value />
        </parameter>
```

```
        <parameter>
                <name>urgency</name>
                <value>High</value>
        </parameter>
        <parameter>
                <name>changetype</name>
                <value>Major</value>
        </parameter>
        <parameter>
                <name>impact</name>
                <value>High</value>
        </parameter>
        <parameter>
                <name>servicesaffected</name>
                </value>
        </parameter>
        <parameter>
                <name>assets</name>
                </value>
        </parameter>
    </Details>
```

The **output format** would be as follows:

Note: Please note that the **Input** and **Output XML** formats have been changed.

Output Format:

```
<API version="1.0">
    <response>
    <operation name="UPDATE">
    <result>
        <statuscode>200</statuscode>
        <status>Success</status>
        <message>Change With ID : 1 updated successfully</message>
    </result>
    <Details type="Change"/>
    </operation>
    </response>
</API>
```

Operation Get Change Details

Contents

- Operation Get Change
- Operation Get All Change

GET CHANGE DETAILS

To fetch details of a specific Change from the available Change list use the following URL format:

http://<servername>:<port-number>/sdpapi/change/<changeID>

Assuming you are about to fetch details of a change (with ID 10), in the local server with port number 8080, the URL should be given as::

http://<localhost>:<8080>/sdpapi/change/10

Keypoints:

1. The operation name "GET" should be sent as a "POST attribute" with key "OPERATION_NAME".
2. The technician key should be sent as a "POST attribute" with key "TECHNICIAN_KEY".

Note: Please note that the **Input** and **Output XML** formats have been changed.

Output Format

```
<API version="1.0">
<response>
<operation name="GET">
    <result>
            <statuscode>200</statuscode>
            <status>Success</status>
            <message>Change details fetched successfully</message>
    </result>
    <Details type="Change">
    <record>
            <parameter>
                    <name>changeid</name>
                    <value>1</value>
```

```
</parameter>
<parameter>
        <name>title</name>
        <value>vivin</value>
</parameter>
<parameter>
        <name>description</name>
        <value>description with tags</value>
</parameter>
<parameter>
        <name>scheduledendtime</name>
        <value>1366308840000</value>
</parameter>
<parameter>
        <name>scheduledstarttime</name>
        <value>1366222440000</value>
</parameter>
<parameter>
        <name>createdtime</name>
        <value>1366220289736</value>
</parameter>
<parameter>
        <name>completedtime</name>
        <value>0</value>
</parameter>
<parameter>
        <name>technician</name>
        <value>vivin</value>
</parameter>
<parameter>
        <name>category</name>
        <value>Software</value>
</parameter>
<parameter>
        <name>subcategory</name>
        <value>Adobe Reader</value>
</parameter>
<parameter>
```

```
                <name>item</name>
                <value>Install</value>
            </parameter>
            <parameter>
                <name>priority</name>
                <value>High</value>
            </parameter>
            <parameter>
                <name>status</name>
                <value>Requested</value>
            </parameter>
            <parameter>
                <name>approvalstatus</name>
                </value>
            </parameter>
            <parameter>
                <name>urgency</name>
                <value>High</value>
            </parameter>
            <parameter>
                <name>changetype</name>
                <value>Major</value>
            </parameter>
            <parameter>
                <name>impact</name>
                <value>High</value>
            </parameter>
            <parameter>
                <name>servicesaffected</name>
                <value>{Application Login, Communication, Data
                Management}</value>
            </parameter>
            <parameter>
                <name>assets</name>
                <value>{vivin-0415.cse>.zohocorpin.com.}</value>
            </parameter>
        </record>
        </Details>
```

```
</operation>
</response>
</API>
```

GET ALL CHANGE DETAILS

To get details of all changes available in the change list, use the following URL format:

http://<servername>:<port-number>/sdpapi/change/

Assuming you are using local server with port number 8080, then the URL should be given as:

http://localhost:8080/sdpapi/change/

Key points:

1. The operation name "GET_ALL " should be sent as a "POST attribute" with key "OPERATION_NAME".
2. The technician key should be sent as a "POST attribute" with key "TECHNICIAN_KEY".

Note: Please note that the **Input** and **Output XML** formats have been changed.

Output Format

```
<API version="1.0">
<response>
<operation name="GET_ALL">
    <result>
            <statuscode>200</statuscode>
            <status>Success</status>
            <message>Change details fetched successfully</message>
    </result>
    <Details type="Change">
    <record URI="http://localhost:8080/sdpapi/change/1/">
            <parameter>
                <name>changeid</name>
                <value>1</value>
            </parameter>
            <parameter>
```

```
            <name>title</name>
            <value>vivin</value>
        </parameter>
        <parameter>
            <name>description</name>
            <value>description with tags</value>
        </parameter>
        <parameter>
            <name>scheduledendtime</name>
            <value>1366308840000</value>
        </parameter>
        <parameter>
            <name>scheduledstarttime</name>
            <value>1366222440000</value>
        </parameter>
        <parameter>
            <name>createdtime</name>
            <value>1366220289736</value>
        </parameter>
        <parameter>
            <name>completedtime</name>
            <value>0</value>
        </parameter>
        <parameter>
            <name>requester</name>
            <value>administrator</value>
        </parameter>
        <parameter>
            <name>technician</name>
            <value>vivin</value>
        </parameter>
        <parameter>
            <name>category</name>
            <value>Software</value>
        </parameter>
        <parameter>
            <name>subcategory</name>
            <value>Adobe Reader</value>
```

```
</parameter>
<parameter>
        <name>item</name>
        <value>Install</value>
</parameter>
<parameter>
        <name>priority</name>
        <value>High</value>
</parameter>
<parameter>
        <name>status</name>
        <value>Requested</value>
</parameter>
<parameter>
        <name>approvalstatus</name>
        </value>
</parameter>
<parameter>
        <name>urgency</name>
        <value>High</value>
</parameter>
<parameter>
        <name>changetype</name>
        <value>Major</value>
</parameter>
<parameter>
        <name>impact</name>
        <value>High</value>
</parameter>
<parameter>
        <name>servicesaffected</name>
        <value>{Application Login, Communication, Data
        Management}</value>
</parameter>
<parameter>
        <name>assets</name>
        <value>{vivin-0415.cse>.zohocorpin.com.}</value>
</parameter>
```

```
</record>
<record URI="http://localhost:8080/sdpapi/change/2/">
        <parameter>
            <name>changeid</name>
            <value>2</value>
        </parameter>
        <parameter>
            <name>title</name>
            <value>vivin asd</value>
        </parameter>
        <parameter>
            <name>description</name>
            </value>
        </parameter>
        <parameter>
            <name>scheduledendtime</name>
            <value>1366308840000</value>
        </parameter>
        <parameter>
            <name>scheduledstarttime</name>
            <value>1366222440000</value>
        </parameter>
        <parameter>
            <name>createdtime</name>
            <value>1366220289736</value>
        </parameter>
        <parameter>
            <name>completedtime</name>
            <value>0</value>
        </parameter>
        <parameter>
            <name>requesterid</name>
            <value>301</value>
        </parameter>
        <parameter>
            <name>requester</name>
            <value>administrator</value>
        </parameter>
```

```
<parameter>
        <name>technicianid</name>
        <value>4</value>
</parameter>
<parameter>
        <name>technician</name>
        <value>administrator</value>
</parameter>
<parameter>
        <name>category</name>
        <value>Telephone</value>
</parameter>
<parameter>
        <name>subcategory</name>
        <value>Blackberryr</value>
</parameter>
<parameter>
        <name>item</name>
        </value>
</parameter>
<parameter>
        <name>priority</name>
        <value>Low</value>
</parameter>
<parameter>
        <name>status</name>
        <value>Completed</value>
</parameter>
<parameter>
        <name>approvalstatus</name>
        <value>Approved</value>
</parameter>
<parameter>
        <name>urgency</name>
        <value>Low</value>
</parameter>
<parameter>
        <name>changetype</name>
```

```
                <value>Standard</value>
            </parameter>
            <parameter>
                <name>impact</name>
                <value>Low</value>
            </parameter>
            <parameter>
                <name>servicesaffected</name>
                <value></value>
            </parameter>
            <parameter>
                <name>assets</name>
                <value></value>
            </parameter>
        </record>
        </Details>
    </operation>
    </response>
    </API>
```

Operation Add Attachment

Content

- Add Attachment

Add Attachment

To append attachments to changes, the URL pattern should be as follows:

http://<servername>:<port number>/sdpapi/change/<change id>/attachment

Assuming Change ID is 25, then the URL is given as:
http://localhost:8080/sdpapi/change/25/attachment

Key points:

1. The operation name "ADD_ATTACHMENT " should be sent as a "POST attribute" with key "OPERATION_NAME".
2. The technician key should be sent as a "POST attribute" with key "TECHNICIAN_KEY".

Note: Please note that the **Output XML** format has been changed.

Attachment Client Side Snippet:

The snippet provided below is an example of how you can append "Attachments to Changes" written in java.

```
{
    /**
    * 1. Create a MultipartPostMethod
    * 2. Construct the web URL to connect to the SDP Server
    * 3. Add the filename to be attached as a parameter to the MultipartPostMethod with parameter name "filename"
    * 4. Execute the MultipartPostMethod
    * 5. Receive and process the response as required
    * /
    HttpClient client = new HttpClient( );
    String weblinkURL = "http://<SDPServer>:<PortNumber>/sdpapi/change/<changeId>/attachment?OPERATION_NAME=ADD_ATTACHMENT&TECHNICIAN_KEY=<general technician API key>";
```

```
        MultipartPostMethod method = new MultipartPostMethod( weblinkURL );
        String fileName = "C:" + File.pathSeparator + "ManageEngine" + File.pathSeparator +
        "ServiceDesk" + File.pathSeparator + "a.csv";
        File file = new File(fileName);
        method.addParameter("filename", file );

        try {
                client.executeMethod( method );
                String response = method.getResponseBodyAsString();
                System.out.println( response );
        } catch  (HttpException he) {
                System.out.println( he );
        } catch (Exception e) {
                System.out.println( e );
        } finally {
                method.releaseConnection( );
        }
    }
```

Note: Please note that the **Input** and **Output XML** formats have been changed.

Output:

```
<?xml version="1.0" encoding="UTF-8"?>
<operation name="ADD_ATTACHMENT">
<result>
        <statuscode>200</statuscode>
        <status>Success</status>
        <message>Attachments added successfully</message>
</result>
<Details type="attachment"/>
</operation>
```

Operation Delete Change

To delele a change, use the following URL format:

http://<servername>:<port-number>/sdpapi/change/<changeID>

Assume you have to delete a change (with ID 1) in local server with port number 8080, then the URL is given as:

http://localhost:8080/sdpapi/change/1

Key points:

1. The operation name "DELETE " should be sent as a "POST attribute" with key "OPERATION_NAME".
2. The technician key should be sent as a "POST attribute" with key "TECHNICIAN_KEY".

Note: Please note that the **Input** and **Output XML** formats have been changed. But for compatibility reasons, the Input operation will support both the formats.

Output:

```
<API version="1.0">
    <response>
    <operation name="DELETE">
    <result>
        <statuscode>200</statuscode>
        <status>Success</status>
        <message>Change With ID : 1 deleted successfully</message>
    </result>
    <Details type="Change"/t>
    </operation>
    </response>
</API>
```

CMDB API

All the Configuration items present in the product can be accessed via CMDB API. If a Server is dependent on another server, relationship between two servers can be easily added using CMDB API. All the business critical items can be mapped using API. It helps us to build a complete CMDB relationship between the CIs in the product using external applications. A technician can easily add a relationship between a mobile device/workstation to an user.

Using the CMDB API you can work on the following entities:

- CI (Configuration Item)
- CI Type (Configuration Item Type)
- CI Relationships (Relationship between Configuration Items)

CMDB API Supported Operations

- Add CIs
- Add CI Relationships
- Update Cis
- Get Cis
- Add CI Type
- Add CI Type Attributes
- Get CI Type Count
- Get CI Type Details
- Get CI Relationship Details
- Delete CI
- Delete CI Type
- Delete CI Relationship
- Status Codes
- Using Third Party Tools

Add Configuration Item (CI)

To add CIs use the following URL format:

http://<servername>:<portnumber>/api/cmdb/ci/

Assuming you are adding a CI in the local server with port number 8080, the URL should be given as:

http://localhost:8080/api/cmdb/ci

Keypoints:

1. The operation name "add" should be sent as a "POST attribute" with key "OPERATION_NAME".
2. The technician key should be sent as a "POST attribute" with key "TECHNICIAN_KEY".

To know more about adding CIs, visit the following pages:

- Add Workstation/Server CI
- Add Other Asset CI(s)
- Add Business Service CI
- Add Requester CI
- Add Software CI
- Add Support Group CI
- Sample Response

Add Workstation CI

To add CIs use the following URL format:

http://<servername>:<portnumber>/api/cmdb/ci/

Assuming you are adding a CI in the local server with port number 8080, the URL should be given as:

http://localhost:8080/api/cmdb/ci

Keypoints:

1. The operation name "add" should be sent as a "POST attribute" with key "OPERATION_NAME".
2. The technician key should be sent as a "POST attribute" with key "TECHNICIAN_KEY".

Note	1. Technician with rights to adding assets (asset addition role) can perform add operations on assets CIs like workstaions,printers etc. 2 Technician having SDAdmin role can perform add operations on admin CIs like Business Service, Department etc. 3 CI-ID of the newly added entry is returned along with the CI Name in the response. 4 Technicians can add more than one C(s) using the <record> </record> tags. 5 CI Attributes, Global Attributes and custom CI Attributes for the corresponding CI Type can be added. 6 All asset additional attributes can be added 7 Parameter Result Format - Optional. specifies the return format (XML or JSON) 8 If no result format specified then API will return output in JSON format.

Sample Input for adding Workstation/Server


```
<?xml version="1.0" encoding="UTF-8"?>
<API version="1.0" locale="en">
   <records>
   <record>
      <parameter><name>CI Name</name><value>sdp-w2k3-2</value></parameter>
      <parameter><name>CI Type</name><value>Windows Workstation</value></parameter>
      <parameter><name>Product Name</name><value>Latitude Optimus</value></parameter>
      <parameter><name>Site</name><value>Japan</value></parameter>
      <parameter><name>Business Impact</name><value>High</value></parameter>
      <parameter><name>Asset Tag</name><value>MY RES TAG</value></parameter>
      <parameter><name>Resource Serial No.</name><value>KIJH-KPOJ-IOO9-
IO98</value></parameter>
      <parameter><name>Bar Code</name><value>(empty)</value></parameter>
      <parameter><name>Cost</name><value>23.98</value></parameter>
      <parameter><name>Vendor</name><value>Zoho Corp</value></parameter>
      <parameter><name>Expiry Date</name><value>2010-08-23</value></parameter>
      <parameter><name>Warranty Expiry Date</name><value>2010-08-23</value></parameter>
      <parameter><name>Acquisition Date</name><value>2008-8-23</value></parameter>
      <parameter><name>Location</name><value>(empty)</value></parameter>
      <parameter><name>Asset State</name><value>In use</value></parameter>
      <parameter><name>Location</name><value>Japan</value></parameter>
      <parameter><name>Description</name><value>Japan\r\nAXL</value></parameter>
      <parameter><name>Barcode</name><value>101001100010101</value></parameter>
      <parameter><name>Service Tag</name><value>AXL90OSASASD</value></parameter>
      <parameter><name>Total Memory</name><value>1024</value></parameter>
      <parameter><name>Virtual Memory</name><value>1024</value></parameter>
      <parameter><name>OS</name><value>Microsoft Windows XP Professional
2007</value></parameter>
      <parameter><name>Service Pack</name><value>Microsoft Windows XP Professional
2007</value></parameter>
      <parameter><name>Manufacturer</name><value>Zoho Corp</value></parameter>
      <parameter><name>Monitor Type</name><value>LG 360</value></parameter>
      <parameter><name>Monitor Manufacturer</name><value>LCD Flat monitor</value></parameter>
      <parameter><name>Monitor Serial
Number</name><value>AADSD90KL88767</value></parameter>
      <parameter><name>Mouse Type</name><value>LOGITECH</value></parameter>
      <parameter><name>Mouse Manufacturer</name><value>Microsoft Corp</value></parameter>
      <parameter><name>Mouse Serial
Number</name><value>MOUSE_AADSD90KL88767</value></parameter>
      <parameter><name>Keyboard Type</name><value>LG 480</value></parameter>
      <parameter><name>Keyboard Manufacturer</name><value>Microsoft Corp</value></parameter>
      <parameter><name>Keyboard Serial
Number</name><value>KBD_AADSD90KL88767</value></parameter>
      <!-- Adding ownership details -->
      <multi-valued-parameter name="Assign Ownership">
         <record>
            <parameter><name>Department</name><value>Sales</value></parameter>
            <parameter><name>Department's site</name><value>Pleasanton,CA</value></parameter>
         </record>
      </multi-valued-parameter>
      <multi-valued-parameter name="Asset Lease Information">
         <record>
```

```
            <parameter><name>Start Date</name><value>2010-09-21</value></parameter>
            <parameter><name>End Date</name><value>2011-09-21</value></parameter>
         </record>
      </multi-valued-parameter>
      <multi-valued-parameter name="Network Details">
         <record>
            <parameter><name>DHCP
Server</name><value>www.dbexplorer.com</value></parameter>
            <parameter><name>IP Address</name><value>192.168.112.234</value></parameter>
            <parameter><name>MAC Address</name><value>AS2.168.112.234</value></parameter>
            <parameter><name>NIC</name><value>MY NIC</value></parameter>
            <parameter><name>Network</name><value>192.168.112.0</value></parameter>
         </record>
         <record>
            <parameter><name>DHCP
Server</name><value>www.dbexplorer1.com</value></parameter>
            <parameter><name>IP Address</name><value>192.168.112.233</value></parameter>
            <parameter><name>MAC Address</name><value>AS2.168.112.232</value></parameter>
            <parameter><name>NIC</name><value>MY NIC-1</value></parameter>
            <parameter><name>Network</name><value>192.168.112.12</value></parameter>
         </record>
      </multi-valued-parameter>
      <multi-valued-parameter name="Processor Details">
         <record>
            <parameter><name>Processor Count</name><value>1</value></parameter>
            <parameter><name>Processor Type</name><value>Intel.</value></parameter>
            <parameter><name>Processor Speed</name><value>1025</value></parameter>
            <parameter><name>Processor Manufacturer</name><value>SSL
Corporation</value></parameter>
         </record>
         <record>
            <parameter><name>Processor Count</name><value>1</value></parameter>
            <parameter><name>Processor Type</name><value>Intel.</value></parameter>
            <parameter><name>Processor Speed</name><value>2025</value></parameter>
            <parameter><name>Processor Manufacturer</name><value>SSL Corporation
(India)</value></parameter>
         </record>
      </multi-valued-parameter>
      <!-- Asset/Workstation Additional parameters Start -->
      <parameter><name>Cost Center</name><value>Sales</value></parameter>
      <parameter><name>Account Number</name><value>0166440001754</value></parameter>
      <parameter><name>Resolution</name><value>NO RESULT</value></parameter>
      <parameter><name>Bank Account</name><value>1298374</value></parameter>
      <parameter><name>Depreciation Amount</name><value>2022</value></parameter>
      <parameter><name>Renewal Date</name><value>2010-10-23</value></parameter>
      <parameter><name>My Child Data</name><value>Japan-Kollam</value></parameter>
      <parameter><name>Asset Data</name><value>My data&#xA;Textas</value></parameter>
      <parameter><name>Asset Number</name><value>98765</value></parameter>
      <!-- Asset Additional parameters Start -->
   </record>
   </records>
</API>
```

Add Other IT Asset(s) CIs

To add CIs (other than workstations) use the following URL format:

http://<servername>:<portnumber>/api/cmdb/ci/

Assuming you are adding a CI in the local server with port number 8080, the URL should be given as:

http://localhost:8080/api/cmdb/ci

Keypoints:

1. The operation name "add" should be sent as a "POST attribute" with key "OPERATION_NAME".
2. The technician key should be sent as a "POST attribute" with key "TECHNICIAN_KEY".

Note	1. Technician with rights to adding assets (asset addition role) can perform add operations on assets CIs like workstaions,printers etc. 2 Technician having SDAdmin role can perform add operations on admin CIs like Business Service, Department etc. 3 CI-ID of the newly added entry is returned along with the CI Name in the response. 4 Technicians can add more than one C(s) using the <record> </record> tags. 5 CI Attributes, Global Attributes and custom CI Attributes for the corresponding CI Type can be added. 6 All asset additional attributes can be added 7 Parameter Result Format - Optional. specifies the return format (XML or JSON) 8 If no result format specified then API will return output in JSON format.

Refer below xml for **adding all IT assets** like Firewall, Keyboard, Printer, Projector, Router, Scanner, Storage Device and Switch.

Sample Input for adding other IT Assets (Access Point):


```
<?xml version="1.0" encoding="UTF-8"?>
<API version="1.0" locale="en">
   <records>
   <record>
      <parameter><name>Name</name><value>192.168.112.1</value></parameter>
      <parameter><name>CI Type</name><value>Access Point</value></parameter>
      <parameter><name>Product Name</name><value>Cisco 123 ACC</value></parameter>
      <parameter><name>Site</name><value>Japan</value></parameter>
      <parameter><name>Business Impact</name><value>High</value></parameter>
      <parameter><name>Asset Tag</name><value>MY RES TAG</value></parameter>
      <parameter><name>Resource Serial No.</name><value>KIJH-KPOJ-IOO9-
IO98</value></parameter>
      <parameter><name>Bar Code</name><value>(empty)</value></parameter>
      <parameter><name>Cost</name><value>23.98</value></parameter>
      <parameter><name>Vendor</name><value>Zoho Corp</value></parameter>
      <parameter><name>Expiry Date</name><value>2010-08-23</value></parameter>
      <parameter><name>Warranty Expiry Date</name><value>2010-08-23</value></parameter>
      <parameter><name>Acquisition Date</name><value>2008-8-23</value></parameter>
      <parameter><name>Location</name><value>(empty)</value></parameter>
      <parameter><name>Asset State</name><value>in use</value></parameter>
      <parameter><name>Location</name><value>Japan</value></parameter>
      <parameter><name>Description</name><value>Japan - AXL</value></parameter>
      <parameter><name>Barcode</name><value>101001100010101</value></parameter>
      <!-- Asset Additional parameters Start -->
      <parameter><name>Cost Center</name><value>Sales</value></parameter>
      <parameter><name>Account Number</name><value>0166440001754</value></parameter>
      <parameter><name>Resolution</name><value>NO RESULT</value></parameter>
      <parameter><name>Bank Account</name><value>112</value></parameter>
      <parameter><name>Depreciation Amount</name><value>2022</value></parameter>
      <parameter><name>Renewal Date</name><value>2010-10-23</value></parameter>
      <parameter><name>Asset Data</name><value>My data&#xA;Textas</value></parameter>
      <parameter><name>Asset Date</name><value>2011-09-23</value></parameter>
      <parameter><name>Asset Number</name><value>98765</value></parameter>
      <!-- Asset Additional parameters Start -->
      <multi-valued-parameter name="Assign Ownership">
       <record>
         <parameter><name>Associate to Asset</name><value>192.168.11.29</value>
          <parameter><name>Department's site</name><value>Pleasanton,CA</value></parameter>
       </record>
      </multi-valued-parameter>
      <multi-valued-parameter name="Asset Lease Information">
      <record>
         <parameter><name>Start Date</name><value>2010-09-21</value></parameter>
         <parameter><name>End Date</name><value>2011-09-21</value></parameter>
      </record>
      </multi-valued-parameter>
   </record>
   </records>
</API>
```

Add Business Service CI

To add non-IT asset CIs use the following URL format:

http://<servername>:<portnumber>/api/cmdb/ci/

Assuming you are adding a non-IT asset CI in the local server with port number 8080, the URL should be given as:

http://localhost:8080/api/cmdb/ci

Keypoints:

1. The operation name "add" should be sent as a "POST attribute" with key "OPERATION_NAME".
2. The technician key should be sent as a "POST attribute" with key "TECHNICIAN_KEY".

Note	1 Technician having SDAdmin role can perform add operations on admin CIs like Business Service, Department etc. 2 CI-ID of the newly added entry is returned along with the CI Name in the response. 3 Technicians can add more than one C(s) using the <record> </record> tags. 4 CI Attributes, Global Attributes and custom CI Attributes for the corresponding CI Type can be added. 5 All asset additional attributes can be added 6 Parameter Result Format - Optional. specifies the return format (XML or JSON) 7 If no result format specified then API will return output in JSON format.

Attributes

All the default attributes and custom attributes present in the CI Type details (specified below) can be added.

- Business Service
- Department
- Requester
- Software
- Support Group

Note: Attributes for other default CI Types like Cluster, Document, IT Service, Network,Switch Ports and Datacenter can be added by referring the CI Type details page.

Sample Input for adding non-IT assets (Business Service):

```
<?xml version="1.0" encoding="UTF-8"?>
<API version="1.0" locale="en">
   <records>
   <record>
      <parameter><name>CI Name</name><value>Tomcat Server 8</value></parameter>
      <parameter><name>CI Type</name><value>Business Service</value></parameter>
      <parameter><name>Site</name><value>China</value></parameter>
      <parameter><name>Business Impact</name><value>High</value></parameter>
      <parameter><name>Description</name><value>Domain Conroller </value></parameter>
      <parameter><name>Availability Target(%)</name><value>200</value></parameter>
      <parameter><name>Service Support Hours</name><value>24X5</value></parameter>
      <parameter><name>Cost</name><value>8080</value></parameter>
      <parameter><name>Incident restoration target</name><value>90%</value></parameter>
      <parameter><name>Global Attr</name><value>Gobal attribute</value></parameter>
   </record>
   </records>
</API>
```

Add Department CI

To add non-IT asset CIs use the following URL format:

http://<servername>:<portnumber>/api/cmdb/ci/

Assuming you are adding a non-IT asset CI in the local server with port number 8080, the URL should be given as:

http://localhost:8080/api/cmdb/ci

Keypoints:

1. The operation name "add" should be sent as a "POST attribute" with key "OPERATION_NAME".
2. The technician key should be sent as a "POST attribute" with key "TECHNICIAN_KEY".

Note	1 Technician having SDAdmin role can perform add operations on admin CIs like Business Service, Department etc. 2 CI-ID of the newly added entry is returned along with the CI Name in the response. 3 Technicians can add more than one C(s) using the <record> </record> tags. 4 CI Attributes, Global Attributes and custom CI Attributes for the corresponding CI Type can be added. 5 All asset additional attributes can be added 6 Parameter Result Format - Optional. specifies the return format (XML or JSON) 7 If no result format specified then API will return output in JSON format.

Sample Input for adding non-IT assets (Department)

```
<?xml version="1.0" encoding="UTF-8"?>
<API version="1.0" locale="en">
   <records>
   <record>
      <parameter><name>Name</name><value>Research and Development1</value></parameter>
      <parameter><name>CI Type</name><value>Department</value></parameter>
      <parameter><name>Site</name><value>Japan</value></parameter>
      <parameter><name>Business Impact</name><value>Medium</value></parameter>
      <parameter><name>Description</name><value>Research and
development</value></parameter>
   </record>
   </records>
</API>
```

Add Requester CI

To add requester CI use the following URL format:

http://<servername>:<portnumber>/api/cmdb/ci/

Assuming you are adding a requester CI in the local server with port number 8080:

http://localhost:8080/api/cmdb/ci

Keypoints:

1. The operation name "add" should be sent as a "POST attribute" with key "OPERATION_NAME".
2. The technician key should be sent as a "POST attribute" with key "TECHNICIAN_KEY".

Note	1 Technician with rights to adding assets (asset addition role) can perform add operations on assets CIs like workstaions,printers etc. 2 Technician having SDAdmin role can perform add operations on admin CIs like Business Service, Department etc. 3 CI-ID of the newly added entry is returned along with the CI Name in the response. 4 Technicians can add more than one C(s) using the <record> </record> tags. 5 CI Attributes, Global Attributes and custom CI Attributes for the corresponding CI Type can be added. 6 All asset additional attributes can be added

Sample Input for adding Requester

```
<?xml version="1.0" encoding="UTF-8"?>
<API version="1.0" locale="en">
  <records>
  <record>
    <parameter><name>Name</name><value>Prakash</value></parameter>
    <parameter><name>CI Type</name><value>Requester</value></parameter>
    <parameter><name>Site</name><value>Japan</value></parameter>
    <parameter><name>Business Impact</name><value>Medium</value></parameter>
    <parameter><name>Description</name><value>New user joined to ZOHO</value></parameter>
    <parameter><name>Employee ID</name><value>0658</value></parameter>
    <parameter><name>E-mail</name><value>prakash_jp_4323@zoho.com</value></parameter>
    <parameter><name>Phone</name><value>9159840336</value></parameter>
    <parameter><name>Mobile</name><value>9159840336</value></parameter>
    <parameter><name>Department Name</name><value>Finance</value></parameter>
    <parameter><name>Department's site</name><value>Pleasanton,CA</value></parameter>
    <parameter><name>Job title</name><value>MTS</value></parameter>
  </record>
  </records>
</API>
```

Add Software CI

To add software asset CI use the following URL format:

http://<servername>:<portnumber>/api/cmdb/ci/

Assuming you are adding an software asset CI in the local server with port number 8080, the URL should be given as:

http://localhost:8080/api/cmdb/ci

Keypoints:

1. The operation name "add" should be sent as a "POST attribute" with key "OPERATION_NAME".
2. The technician key should be sent as a "POST attribute" with key "TECHNICIAN_KEY".

Note	2 Technician having SDAdmin role can perform add operations on admin CIs like Business Service, Department etc. 3 CI-ID of the newly added entry is returned along with the CI Name in the response. 4 Technicians can add more than one C(s) using the <record> </record> tags. 5 CI Attributes, Global Attributes and custom CI Attributes for the corresponding CI Type can be added. 6 All asset additional attributes can be added 7 Parameter Result Format - Optional. specifies the return format (XML or JSON) 8 If no result format specified then API will return output in JSON format.

Sample Input for adding Software CI

```
<?xml version="1.0" encoding="UTF-8"?>
<API version="1.0" locale="en">
   <records>
   <record>
      <parameter><name>Name</name><value>zenity-1</value></parameter>
      <parameter><name>CI Type</name><value>Database</value></parameter>
      <parameter><name>Site</name><value>Japan</value></parameter>
      <parameter><name>Description</name><value>Adding a software instance</value></parameter>
      <parameter><name>Software</name><value>zenity</value></parameter>
      <parameter><name>Workstation</name><value>nprasanna-
0157.csez.zohocorpin.com</value></parameter>
      <parameter><name>Installation Path</name><value>C:\AdventNet\ME\SSL
Reports</value></parameter>
      <parameter><name>Version</name><value>1.0.0</value></parameter>
      <parameter><name>Installed On</name><value>2011-01-28</value></parameter>
      <parameter><name>License Key</name><value>SADD-DSDS-SK90-KSAL</value></parameter>
```

```
  </record>
  <record>
    <parameter><name>Name</name><value>Accelerometer</value></parameter>
    <parameter><name>CI Type</name><value>Web Server</value></parameter>
    <parameter><name>Site</name><value>China</value></parameter>
    <parameter><name>Description</name><value>Adding a software instance</value></parameter>
    <parameter><name>Software</name><value>Apache Tomcat 6.0.18</value></parameter>
    <parameter><name>Workstation</name><value>nprasanna-
0157.csez.zohocorpin.com</value></parameter>
    <parameter><name>Installation Path</name><value>C:\Program Files\Apache\Apache
Tomcat</value></parameter>
    <parameter><name>Version</name><value>6.0.10</value></parameter>
    <parameter><name>Installed On</name><value>2013-01-28</value></parameter>
    <parameter><name>License Key</name><value>SAADD-DSDS-SK90-KSAL</value></parameter>
  </record>
  </records>
</API>
```

Add Support Group CI

To add support group CI use the following URL format:

http://<servername>:<portnumber>/api/cmdb/ci/

Assuming you are adding a support group CI in the local server with port number 8080, the URL should be given as:

http://localhost:8080/api/cmdb/ci

Keypoints:

1. The operation name "add" should be sent as a "POST attribute" with key "OPERATION_NAME".
2. The technician key should be sent as a "POST attribute" with key "TECHNICIAN_KEY".

Note	1. Technician with rights to adding assets (asset addition role) can perform add operations on assets CIs like workstaions,printers etc. 2 Technician having SDAdmin role can perform add operations on admin CIs like Business Service, Department etc. 3 CI-ID of the newly added entry is returned along with the CI Name in the response. 4 Technicians can add more than one C(s) using the <record> </record> tags. 5 CI Attributes, Global Attributes and custom CI Attributes for the corresponding CI Type can be added. 6 All asset additional attributes can be added 7 Parameter Result Format - Optional. specifies the return format (XML or JSON) 8 If no result format specified then API will return output in JSON format.

Sample Input for adding Support Group

```
<?xml version="1.0" encoding="UTF-8"?>
<API version="1.0" locale="en">
   <user_key>B1263980-9435-4305-A42B-D783F9AAD44B</user_key>
   <records>
   <record>
      <parameter><name>Name</name><value>CART</value></parameter>
      <parameter><name>CI Type</name><value>Support Group</value></parameter>
      <parameter><name>Site</name><value>Japan</value></parameter>
      <parameter><name>Description</name><value>Customer Active Response
Team</value></parameter>                <parameter><name>Business
Impact</name><value>Low</value></parameter>
      <parameter><name>Owned By</name><value>nprasann</value></parameter>
   </record>
   </records>
</API>
```

Sample Response

XML Format:

```
<?xml version="1.0" encoding="UTF-8"?>
<API locale="en" version="1.0"> <user_key>B1263980-9435-4305-A42B-D783F9AAD44B</user_key>
   <response>
         <result>
            <statuscode>200</statuscode>
            <status>Success</status>
            <message>Successfully Added</message>
            <created-date>Mar 22, 2013 10:58 AM</created-date>
            <records failed="0" success="1" total="1">
            <success>
                        <ci id="610">CART</ci>
            </success>
         </result>
  </response>
</API>
```

JSON Format:

```
{
 "API":{
     "locale":"en",
         "response":{
           "operation":{
                    "result":{
                            "created-date":"May 8, 2013 04:36 PM",
                      "records":{
                                "total":"1",
                                 "failed":[
                                  "1",
                                  {
                                      "ci":{
                                        "error":"Workstation [sdp-w2k3-12] is already exists.",
                                         "name":"sdp-w2k3-12"
                                  }
                                 }
                                ],
                            "success":"0"
                                },
                        "message":"Unable to add the CI(s), please refer the error message.",
                      "status":"Failed",
                     "statuscode":"3016"
                        },
                  "name":"add"
                     }
                    },
              "version":"1.0"
                }
            }
```

Add CI Relationships

To add relationship between CIs, use the following format:

http://<hostname>:<portnumber>/api/cmdb/cirelationships

Assuming you are adding relationship between CIs in the local server with port number 8080, the URL should be given as:

http://localhost:8080/api/cmdb/cirelationships

Keypoints:

1. The operation name "add" should be sent as a "POST attribute" with key "OPERATION_NAME".
2. The technician key should be sent as a "POST attribute" with key "TECHNICIAN_KEY".

To know more about adding CI relationships, visit the following pages:

- Add CI Relationship
- Sample Response

Add Relationship between two CIs

Adding relationship between a workstation and a access point with relationship attributes.


```xml
<?xml version="1.0" encoding="UTF-8"?>
<API version="1.0" locale="en">
  <records>
    <relationships>
      <addrelationship>
        <toci>balaguru.zohocorpin.com</toci>
        <relationshiptype>Connected to</relationshiptype>
        <relatedcis>
          <citype>Printer</citype>
          <ci>
            <name>DLF11thFloor-I.csez.zohocorpin.com</name>
            <relationattributes>
              <attribute>
                <name>AMC</name>
                <value>5789</value>
              </attribute>
              <attribute>
                <name>Maintained By</name>
                <value>IT Department</value>
              </attribute>
            </relationattributes>
          </ci>
          <ci>
            <name>firstfloor.zohocorpin.com</name>
            <relationattributes>
              <attribute>
                <name>AMC</name>
                <value>3789</value>
              </attribute>
              <attribute>
                <name>Maintained By</name>
                <value>IT Department</value>
              </attribute>
            </relationattributes>
          </ci>
        </relatedcis>
      </addrelationship>
    </relationships>
  </records>
</API>
```

Sample Input XML for relating a CI to

```
<?xml version="1.0" encoding="UTF-8"?>
<API version="1.0" locale="en">
  <records>
    <relationships>
      <addrelationship>
        <toci>balaguru.zohocorpin.com</toci>
        <relationshiptype>Connected to</relationshiptype>
        <relatedcis>
          <citype>CPU Cores</citype>
          <ci>
            <name>rack-012W23</name>
          </ci>
        </relatedcis>
        <relatedcis>
          <citype>Disks</citype>
          <ci>
            <name>disk-01123</name>
          </ci>
        </relatedcis>
        <relatedcis>
          <citype>Processors</citype>
          <ci>
            <name>Dual-Core-Procesor-011212</name>
          </ci>
        </relatedcis>
      </addrelationship>
    </relationships>
  </records>
</API>
```

Note	Parameter **Result Format - Optional**. specifies the return format (XML or JSON) If no result format specified then API will return output in **JSON** format**.**

Sample Output

XML Format (for failure)

```
<?xml version="1.0" encoding="UTF-8"?>
<API locale="en" version="1.0"> <user_key>B1263980-9435-4305-A42B-D783F9AAD44B</user_key>
   <response>
         <result>
            <statuscode>3024</statuscode>
            <status>Duplicate record found.</status>
            <message>Relationship 'Connected to' is already added to 'gemini.zohocorpin.com'.</message>
         </result>
  </response>
</API>
```

XML Format (for success)

```
<?xml version="1.0" encoding="UTF-8"?>
<API locale="en" version="1.0"> <user_key>B1263980-9435-4305-A42B-D783F9AAD44B</user_key>
   <response>
         <result>
            <statuscode>3024</statuscode>
            <status>Duplicate record found.</status>
            <message>Relationship 'Connected to' is already added to 'gemini.zohocorpin.com'.</message>
         </result>
  </response>
</API>
```

XML Format (for success)

```
{
   "API":{
      "locale":"en",
      "response":{
         "operation":{
            "result":{
               "created-date":"Mar 22, 2013 04:03 PM",
               "message":"Relationship added successfully.",
               "status":"Success",
               "statuscode":"200"
            },
            "name":"add"
         }
      },
   "version":"1.0"
```

```
}
}
```

Update Configuration Item (CI)

To update CIs use the following URL format:

http://<servername>:<portnumber>/api/cmdb/ci/

Assuming you are updating a CI in the local server with port number 8080, the URL should be given as:

http://localhost:8080/api/cmdb/ci

Keypoints:

1. The operation name "update" should be sent as a "POST attribute" with key "OPERATION_NAME".
2. The technician key should be sent as a "POST attribute" with key "TECHNICIAN_KEY".

To know more about adding CIs, visit the following pages:

- Update Workstation/Server CI
- Update Other Asset CI(s)
- Update Business Service CI
- Sample Response

Update Workstation CI

To update CIs use the following URL format:

http://<servername>:<portnumber>/api/cmdb/ci/

Assuming you are updating a CI in the local server with port number 8080, the URL should be given as:

http://localhost:8080/api/cmdb/ci

Keypoints:

1. The operation name "update" should be sent as a "POST attribute" with key "OPERATION_NAME".
2. The technician key should be sent as a "POST attribute" with key "TECHNICIAN_KEY".

Note	1. Technician with rights to adding assets (asset addition role) can perform add operations on assets CIs like workstaions,printers etc. 2 Technician having SDAdmin role can perform add operations on admin CIs like Business Service, Department etc. 3 CI-ID of the newly added entry is returned along with the CI Name in the response. 4 Technicians can add more than one C(s) using the <record> </record> tags. 5 CI Attributes, Global Attributes and custom CI Attributes for the corresponding CI Type can be added. 6 All asset additional attributes can be added 7 Parameter Result Format - Optional. specifies the return format (XML or JSON) 8 If no result format specified then API will return output in JSON format.

Sample XML input for updating Server (Can update workstation using the same set of fields).

```
xml version="1.0" encoding="UTF-8"?>
<API version="1.0" >
   <citype>
      <name>Windows Workstation</name>
      <criterias>
         <criteria>
            <parameter>
               <name compOperator="IS">CI Name</name>
               <value>sdp-w2k3-13</value>
            </parameter>
         </criteria>
      </criterias>
      <newvalue>
      <record>
      <!-- Product Name/Type cannot be updated using Update Operations-->
```

```
    <!--parameter><name>Product Name</name><value>Unknown Server</value></parameter-->
    <parameter><name>Site</name><value>China</value></parameter>
    <parameter><name>Asset Tag</name><value>MY RES TAG_1</value></parameter>
    <parameter><name>Asset State</name><value>In use</value></parameter>
    <parameter><name>Asset Serial No.</name><value>KIJH-KPOJ-IOO9-IO98_1</value></parameter>
    <parameter><name>Cost</name><value>1223.98</value></parameter>
    <parameter><name>Vendor</name><value>HP</value></parameter>
    <parameter><name>Expiry Date</name><value>2012-08-23</value></parameter>
    <parameter><name>Warranty Expiry Date</name><value>2012-08-23</value></parameter>
    <parameter><name>Acquisition Date</name><value>2002-8-23</value></parameter>
    <parameter><name>Location</name><value>Beijing</value></parameter>
    <parameter><name>Business Impact</name><value>High</value></parameter>
    <parameter><name>Description</name><value>Beijing\r\nAXL_EXT</value></parameter>
    <parameter><name>Barcode</name><value>101001100010101_1</value></parameter>

    <!-- Inventory data -->
    <parameter><name>Service Tag</name><value>AXL90OSASASD_1</value></parameter>
    <parameter><name>Total Memory</name><value>2024</value></parameter>
    <parameter><name>Virtual Memory</name><value>2024</value></parameter>
    <parameter><name>OS</name><value>Microsoft Windows XP Professional
2010</value></parameter>
    <parameter><name>Service Pack</name><value>Microsoft Windows XP Professional
2010</value></parameter>
    <parameter><name>Disk space</name><value>22</value></parameter>
    <parameter><name>Manufacturer</name><value>HP</value></parameter>
    <parameter><name>Is Virtual</name><value>true</value></parameter>
    <parameter><name>Monitor Type</name><value>LG 360_EXT</value></parameter>
    <parameter><name>Monitor Manufacturer</name><value>LCD Flat
monitor_EXT</value></parameter>
    <parameter><name>Monitor Serial
Number</name><value>AADSD90KL88767_EDXT</value></parameter>
    <parameter><name>Mouse Type</name><value>LOGITECH_EXT</value></parameter>
    <parameter><name>Mouse Manufacturer</name><value>Microsoft Corporation</value></parameter>
    <parameter><name>Mouse Serial
Number</name><value>MOUSE_AADSD90KL88767_EXT</value></parameter>
    <parameter><name>Keyboard Type</name><value>LG 480_EXT</value></parameter>
    <parameter><name>Keyboard Manufacturer</name><value>Microsoft
Corporation</value></parameter>
    <parameter><name>Keyboard Serial
Number</name><value>KBD_AADSD90KL88767_EXT</value></parameter>

    <!-- Asset Additional fields -->
    <parameter><name>Asset Data</name><value>My data\r\nTextas_EXT</value></parameter>
    <parameter><name>Asset Date</name><value>2012-09-23</value></parameter>
    <parameter><name>Asset Number</name><value>987654321</value></parameter>

    <!-- Workstation Additional fields -->
    <parameter><name>WS Data</name><value>My data\r\nTextas_EXT</value></parameter>
    <parameter><name>WS Date</name><value>2013-09-23</value></parameter>
    <parameter><name>WS Number</name><value>987654321</value></parameter>

    <!-- Ownership details -->
    <multi-valued-parameter name="Assign Ownership">
      <record>
        <parameter><name>Department</name><value>Finance</value></parameter>
```

```
            <parameter><name>Department's site</name><value>Pleasanton,CA</value></parameter>
         </record>
      </multi-valued-parameter>

      <multi-valued-parameter name="Asset Lease Information">
         <record>
            <parameter><name>Start Date</name><value>2013-09-21</value></parameter>
            <parameter><name>End Date</name><value>2013-09-21</value></parameter>
         </record>
      </multi-valued-parameter>

      <multi-valued-parameter name="Network Details">
         <record>
            <parameter><name>DHCP
Server</name><value>www.dbexplorer.com_bak</value></parameter>
            <parameter><name>IP Address</name><value>192.168.112.200</value></parameter>
            <parameter><name>MAC Address</name><value>AS2.168.112.200</value></parameter>
            <parameter><name>NIC</name><value>MY NIC_BAK</value></parameter>
            <parameter><name>Network</name><value>192.168.112.255</value></parameter>
         </record>
         <record>
            <parameter><name>DHCP
Server</name><value>www.dbexplorer1.com_BAK</value></parameter>
            <parameter><name>IP Address</name><value>192.168.112.255</value></parameter>
            <parameter><name>MAC Address</name><value>AS2.168.112.255</value></parameter>
            <parameter><name>NIC</name><value>MY NIC-1_BAK</value></parameter>
            <parameter><name>Network</name><value>192.168.112.100</value></parameter>
         </record>
      </multi-valued-parameter>
      <multi-valued-parameter name="Processor Details">
         <record>
            <parameter><name>Processor Count</name><value>2</value></parameter>
            <parameter><name>Processor Type</name><value>Intel Inside 2</value></parameter>
            <parameter><name>Processor Speed</name><value>2025</value></parameter>
            <parameter><name>Processor Manufacturer</name><value>SSL
Corporation_BAK</value></parameter>
         </record>
         <record>
            <parameter><name>Processor Count</name><value>2</value></parameter>
            <parameter><name>Processor Type</name><value>Intel Inside 2</value></parameter>
            <parameter><name>Processor Speed</name><value>4025</value></parameter>
            <parameter><name>Processor Manufacturer</name><value>SSL Corporation
(India)_bak</value></parameter>
         </record>
      </multi-valued-parameter>
      </record>
      </newvalue>
   </citype>
</API>
```

Update Other Asset CIs (other than Workstation)

To update a CI use the following URL format:

http://<servername>:<portnumber>/api/cmdb/ci/

Assuming you are updating a CI in the local server with port number 8080 the URL should be given as:

http://localhost:8080/api/cmdb/ci

Keypoints:

1. The operation name "update" should be sent as a "POST attribute" with key "OPERATION_NAME".
2. The technician key should be sent as a "POST attribute" with key "TECHNICIAN_KEY".

Note	1. Technician with rights to adding assets (asset addition role) can perform add operations on assets CIs like workstaions,printers etc. 2 Technician having SDAdmin role can perform add operations on admin CIs like Business Service, Department etc. 3 CI-ID of the newly added entry is returned along with the CI Name in the response. 4 Technicians can add more than one C(s) using the <record> </record> tags. 5 CI Attributes, Global Attributes and custom CI Attributes for the corresponding CI Type can be added. 6 All asset additional attributes can be added 7 Parameter Result Format - Optional. specifies the return format (XML or JSON) 8 If no result format specified then API will return output in JSON format.
Note	Since all IT Assets share the attributes similar to that Access Point, refer this xml to update other IT Assets as well.

Sample XML for updating Access Point

```
<?xml version="1.0" encoding="UTF-8"?>
<API version="1.0" >
  <citype>
    <name>Access Point</name>
    <criterias>
      <criteria>
        <parameter>
          <name compOperator="IS">CI Name</name>
          <value>192.168.112.33</value>
        </parameter>
      </criteria>
    </criterias>
    <newvalue>
    <record>
      <!-- Product Name/Type cannot be updated using Update Operations-->
      <!--parameter><name>CI Name</name><value>(empty)</value></parameter-->
      <!--parameter><name>CI Type</name><value>My Test Access1</value></parameter-->
      <!--parameter><name>Product Name</name><value>My Access Point1</value></parameter-->
      <parameter><name>Site</name><value>chennai</value></parameter>
      <parameter><name>Asset Tag</name><value>MY RES TAG-1</value></parameter>
      <parameter><name>Serial Number</name><value>KIJH-KPOJ-IOO9-IO98-
EXT</value></parameter>
      <parameter><name>Barcode</name><value>MY BAR CODE</value></parameter>
      <parameter><name>Cost</name><value>68884.98</value></parameter>
      <parameter><name>Vendor</name><value>Zoho Corp</value></parameter>
      <parameter><name>Expiry Date</name><value>2011-08-23</value></parameter>
      <parameter><name>Warranty Expiry Date</name><value>2011-08-23</value></parameter>
      <parameter><name>Acquisition Date</name><value>2011-09-23</value></parameter>
      <parameter><name>Location</name><value>Porur</value></parameter>
      <parameter><name>Asset State</name><value>In Use</value></parameter>
      <parameter><name>Business Impact</name><value>high</value></parameter>
      <parameter><name>Description</name><value>Mydescription</value></parameter>

      <!-- Multi value parameters -->
      <multi-valued-parameter name="Assign Ownership">
        <record>
          <parameter><name>Associate to Asset</name><value>sdp-w2k3-13</value></parameter>
          <parameter><name>Department's site</name><value>Pleasanton,CA</value></parameter>
        </record>
      </multi-valued-parameter>
      <multi-valued-parameter name="Asset Lease Information">
        <record>
          <parameter><name>Start Date</name><value>2010-09-21</value></parameter>
          <parameter><name>End Date</name><value>2011-09-21</value></parameter>
        </record>
      </multi-valued-parameter>
    </record>
    </newvalue>
  </citype>
</API>
```

Update Business CI

To update a non-asset CI use the following URL format:

http://<servername>:<portnumber>/api/cmdb/ci/

Assuming you are updating a non-asset CI in the local server with port number 8080 the URL should be given as:

http://localhost:8080/api/cmdb/ci

Keypoints:

1. The operation name "update" should be sent as a "POST attribute" with key "OPERATION_NAME".
2. The technician key should be sent as a "POST attribute" with key "TECHNICIAN_KEY".

Note	1 CI-ID of the updated entry is returned along with the CI Name in the response. 2 CI Attributes, Global Attributes and custom CI Attributes for the corresponding CI Type can be added. 3 If the field is non-english, same can be given in the xml to update the data. 4 Parameter Result Format - Optional. specifies the return format (XML or JSON) 5 If no result format specified then API will return output in JSON format.

Sample Input for updating Business Service


```
<?xml version="1.0" encoding="UTF-8"?>
<API version="1.0" >
   <citype>
      <name>Business Service</name>
      <criterias>
         <criteria>
            <parameter>
               <name compOperator="IS">Name</name>
               <value>Tomcat Server 8</value>
            </parameter>
         </criteria>
      </criterias>
      <newvalue>
      <record>
         <parameter><name>Site</name><value>Japan</value></parameter>
         <parameter><name>Business Impact</name><value>Low</value></parameter>
         <parameter><name>Description</name><value>Tokyo \ !@#$%^\&lt; &amp; aaa &gt;*\r\nAXL-
EXT</value></parameter>
         <parameter><name>Service Support Hours</name><value>12345678</value></parameter>
         <parameter><name>Owned By</name><value>Charles</value></parameter>
         <parameter><name>Cost</name><value>1234</value></parameter>
         <parameter><name>Incident restoration target</name><value>12345</value></parameter>
         <parameter><name>Availability Target(%)-1</name><value>500</value></parameter>
         <parameter><name>Technician</name><value>np</value></parameter>
         <parameter><name>Service Port</name><value>9090</value></parameter>
         <parameter><name>Cost Center</name><value>Finance</value></parameter>
         <parameter><name>Global Attr</name><value>Finance</value></parameter>
      </record>
      </newvalue>
   </citype>
</API>
```


Sample Output

XML Format:


```
<?xml version="1.0" encoding="UTF-8"?>
<API locale="en" version="1.0">
  </response>
         <result>
            <statuscode>200</statuscode>
            <status>Success</status>
            <message>Successfully Updated</message>
            <created-date>Mar 22, 2013 10:58 AM</created-date>
            <records updated ="1">
                  <ci id="7293">sdp-w2k3-13</ci>
            </records>
         </result>
  </response>
</API>
```

Get CI Details

To read details of CI(s) use the following URL format:

http://<servername>:<portnumber>/api/cmdb/cirelationships

Assuming you are fetching relationship of all CIs in the local server with port number 8080 the URL should be given as:

http://localhost:8080/api/cmdb/cirelationships

Keypoints:

1. The operation name "update" should be sent as a "POST attribute" with key "OPERATION_NAME".
2. The technician key should be sent as a "POST attribute" with key "TECHNICIAN_KEY".

To know more about adding CI relationships, visit the following pages:

- Get All CI Details
- Get CI Details using filter
- Get CI Count

Get All Configuration Item (CI) Details

To read details of CI(s) use the following URL format:

http://<servername>:<portnumber>/api/cmdb/ci/list/all/<pagenumber>/

Assuming you are fetching relationship of all CIs in the local server with port number 8080 the URL should be given as:

http://localhost:8080/api/cmdb/ci/list/all

Keypoints:

1. The operation name "update" should be sent as a "POST attribute" with key "OPERATION_NAME".
2. The technician key should be sent as a "POST attribute" with key "TECHNICIAN_KEY".

Note	1 To fetch all CIs without CI Type details, use all 2 Parameter-related: To fetch CI for a specific CI Type, pass the CI Type value in the URL. 3 Parameter-related: Page Number - Optional. Specifies the page or results to retrieve. 4 Parameter-related: Result Format - Optional. specifies the return format (XML or JSON) 5 If no result format specified then API will return output in JSON format.

Sample XML Output


```
<API version="1.0">
   <response>
         <result>
            <statuscode>200</statuscode>
            <status>Success</status>
            <message>Successfully fetched.</message>
            <created-date>May 7, 2013 11:18 AM</created-date>
            <field-names>
               <name type="String">CI Name</name>
               <name type="String">CI Type</name>
               <name type="String">Site</name>
               <name type="String">Description</name>
            </field-names>
            <field-values totalRecords="8">
  <record>
     <value>Microsoft(R) Windows(R) Server 2003, Standard Edition (assetexplorer.helpdesk-
test.com)</value>
     <value>Operating System</value>
     <value>(null)</value>
     <value>(null)</value>
  </record>
  <record>
      <value>balaguru.zohocorpin.com</value>
      <value>Windows Workstation</value>
      <value>(null)</value>
      <value>(null)</value>
  </record>
  <!-- Truncated -->
   <record>
       <value>1 (hp2650.csez.zohocorpin.com)</value>
       <value>Switch Ports</value>
       <value>(null)</value>
       <value>Created while scanning..</value>
     </record>
      <record>
         <value>2 (hp2650.csez.zohocorpin.com)</value>
         <value>Switch Ports</value>
          <value>(null)</value>
          <value>Created while scanning..</value>
      </record>
                </field-values>
          </result>
   </response>
</API>
```

Sample JSON Output


```
{ "API" : { "response" : { "result" : { "created-date" : "Sep 2, 2013 12:08 PM",
            "field-names" : { "name" : [ { "content" : "CI Name",
                    "type" : "String"
                  },
                  { "content" : "CI Type",
                    "type" : "String"
                  },
                  { "content" : "Site",
                    "type" : "String"
                  },
                  { "content" : "Description",
                    "type" : "String"
                  }
                ] },
            "field-values" : { "record" : [ { "value" : [ "administrator",
                        "Technician",
                        "(null)",
                        "3ED8AEC2-A7D1-42F6-9A90-8B848E70D077"
                      ] },
                  { "value" : [ "Administration",
                        "Department",
                        "Pleasanton,CA",
                        "(null)"
                      ] },
                  { "value" : [ "Engineering",
                        "Department",
                        "Pleasanton,CA",
                        "(null)"
                      ] },
                  { "value" : [ "Sales",
                        "Department",
                        "Pleasanton,CA",
                        "(null)"
                      ] },
                  { "value" : [ "Finance",
                        "Department",
                        "Pleasanton,CA",
                        "(null)"
                      ] },
                  { "value" : [ "IT Services",
                        "Department",
                        "Pleasanton,CA",
                        "(null)"
                      ] },
                  { "value" : [ "nprasanna-0157.csez.zohocorpin.com.",
                        "Windows Workstation",
                        "(null)",
                        "(null)"
                      ] },
                  { "value" : [ "Microsoft Windows 7 Professional (nprasanna-0157.csez.zohocorpin.com.)",
                        "Operating System",
```

```
                "(null)",
                "(null)"
              ] },
            { "value" : [ "dept1",
                "Department",
                "(null)",
                "(null)"
              ] },
            { "value" : [ "dept2",
                "Department",
                "(null)",
                "(null)"
              ] },
            { "value" : [ "dept3",
                "Department",
                "(null)",
                "(null)"
              ] },
            { "value" : [ "Research and Development",
                "Department",
                "(null)",
                "(null)"
              ] },
            { "value" : [ "Healthcare",
                "Department",
                "(null)",
                "(null)"
              ] },
            { "value" : [ "HR",
                "Department",
                "(null)",
                "(null)"
              ] },
            { "value" : [ "Service",
                "Department",
                "(null)",
                "(null)"
              ] }
          ],
          "totalRecords" : "15"
        },
        "message" : "Successfully fetched.",
        "status" : "Success",
        "statuscode" : "200"
      } },
  "version" : "1.0"
} }
```

Get CI Details using Criteria

1 Fetching CI Details using conditions with relational operator (OR)

```
<API version="1.0" locale="en">
    <criterias>
        <criteria>
            <parameter>
                <name compOperator="START WITH">CI Type</name>
                <!-- Can give Non english values in the parameter names as well as in the data-->
                <value>Windows Workstation</value>
            </parameter>
            <reloperator>OR</reloperator>
            <parameter>
                <name compOperator="CONTAINS">CI Name</name>
                <value>sdp</value>
            </parameter>
        </criteria>
    </criterias>
    <returnparameters>
        <name>CI Name</name>
        <name>CI Type</name>
        <name>Business Impact</name>
        <name>Site</name>
        <name>Description</name>
    </returnparameters>
    <sortparameters sortOrder="desc">
        <name>CI Name</name>
        <name>Site</name>
    </sortparameters>
    <!-- If the total number pages is 100, we can give the navigation from 50 to 50 -->
    <range>
        <startindex>1</startindex>
        <limit>50</limit>
    </range>
</API>
```

2 Fetching CI Details using DATE criteria

```
<?xml version="1.0" encoding="UTF-8"?>
<API version="1.0">
    <citype>
        <name>Workstation</name>
        <criterias>
            <criteria>
                <parameter>
                    <name compOperator="IS">Acquisition Date</name>
                    <value>2011-12-30</value>
                </parameter>
            </criteria>
        </criterias>
        <returnFields>
            <!-- Syntax to return all available column(s). <name>*</name> -->
            <name>CI Name</name>
            <name>CI Type</name>
            <name>Owned By</name>
            <name>Site</name>
            <name>Description</name>
            <name>Acquisition Date</name>
            <name>Warranty Expiry Date</name>
            <name>Expiry Date</name>
            <name>Asset Tag</name>
            <name>Serial Number</name>
            <name>Barcode</name>
            <name>Product Name</name>
            <name>Resource State</name>
            <name>Vendor</name>
            <name>Location</name>
            <name>Mac Address</name>
            <name>WS UDF Date</name>
            <name>WS UDF Num</name>
            <name>WS UDF Multi</name>
            <name>WS UDF String</name>
            <name>Sites</name>
        </returnFields>
        <sortFields sortOrder="desc">
            <name>Product Name</name>
        </sortFields>
    </citype>
</API>
```

3 Sample XML Response (truncated)


```xml
<?xml version="1.0" encoding="UTF-8"?>
<API locale="en" version="1.0">
  <response>
      <range>
        <startindex>40</startindex>
        <limit>50</limit>
      </range>
      <result>
        <statuscode>200</statuscode>
        <status>Success</status>
        <message>Successfully fetched.</message>
        <created-date>May 10, 2013 12:52 PM</created-date>
        <field-names>
          <name type="String">CI Name</name>
          <name type="String">CI Type</name>
          <name type="String">Site</name>
          <name type="String">Description</name>
        </field-names>
        <field-values totalRecords="14">
          <record>
            <value>21 (hp2650.csez.zohocorpin.com)</value>
            <value>Switch Ports</value>
            <value>(null)</value>
            <value>Created while scanning..</value>
          </record>
          <!--
          Truncated
          <record>
            <value>10 (hp2650.csez.zohocorpin.com)</value>
            <value>Switch Ports</value>
            <value>(null)</value>
            <value>Created while scanning..</value>
          </record>
          <record>
            <value>1 (hp2650.csez.zohocorpin.com)</value>
            <value>Switch Ports</value>
            <value>(null)</value>
            <value>Created while scanning..</value>
          </record>
        </field-values>
      </result>
  </response>
</API>
```

Get All CI(s) Count

Note	1 To read CIs count of a specific CI Type, give the CI Type's name in the URL instead of all. 2 Parameter Result Format - Optional. specifies the return format (XML or JSON) If no result format specified then API will return output in JSON format.

Sample XML Output for Get All CI(s) Count:


```
<?xml version="1.0" encoding="UTF-8"?>
<API version="1.0">
    <response>
        <result>
            <statuscode>200</statuscode>
            <status>Sucess</status>
            <message>Successfully fetched.</message>
            <created-date>Mar 13, 2013 05:10 PM</created-date>
            <field-names>
                <name type="Integer">Count</name>
            ; </field-names>
            <field-values totalRecords="1">
                <record>
                    <value>30</value>
                </record>
            </field-values>
        </result>
    </response>
```

Sample JSON Output for Get All CI(s) Count:


```
{
   "API": {
      "response": {
         "result": {
            "created-date": "Sep 2, 2013 12:11 PM",
            "field-names": {
               "name": {
                  "content": "Count",
                  "type": "Integer"
               }
            },
            "field-values": {
               "record": {
                  "value": "1"
               },
               "totalRecords": "1"
            },
            "message": "Successfully fetched.",
            "status": "Success",
            "statuscode": "200"
         }
      },
      "version": "1.0"
   }
}
```

Add CI Type

To add a CI Type, use the following URL format:

http://<servername>:<portnumber>/api/cmdb/ci/

Assuming you are adding a new CI Type in the local server with port number 8080 the URL should be given as:

http://localhost:8080/api/cmdb/ci

Keypoints:

1. The operation name "update" should be sent as a "POST attribute" with key "OPERATION_NAME".
2. The technician key should be sent as a "POST attribute" with key "TECHNICIAN_KEY".

To know more about adding CI relationships, visit the following pages:

- Sample XML Input for Adding Asset CI Type
- Sample XML Input for Adding Child CI Type
- Sample XML Input for Adding Non-Asset CI Types
- Sample XML Response

Sample Input XML for adding Asset CI Type

```
<?xml version="1.0" encoding="UTF-8"?>
<API version="1.0" locale="en">
<records>
   <record>
      <parameter><name>Name</name><value>Sensors</value></parameter>
      <parameter><name>IsAsset</name><value>True</value></parameter>
      <parameter><name>Type</name><value>Asset</value></parameter>
      <parameter><name>Category</name><value>IT</value></parameter>
      <parameter><name>Parent</name><value>(empty)</value></parameter>
      <parameter><name>Description</name><value>Added via automation
script</value></parameter>
      <parameter><name>description</name><value>11Added via automation
script</value></parameter>
   </record>
</records>
</API>
```

Sample Input XML for adding Child CI Type

```
<?xml version="1.0" encoding="UTF-8"?>
<API version="1.0" locale="en">
<records>
   <record>
      <parameter><name>Name</name><value>Thermal
Sensors</value></parameter>
      <parameter><name>Parent</name><value>Sensors</value></parameter>
      <parameter><name>Description</name><value>Adding a child CI Type for
Sensor</value></parameter>
   </record>
</records>
</API>
```

Note	1 IType-ID of the newly added entry is returned along with the CI Type in the response. 2 Technician having SDAdmin role can add CI Type(s). 3 CI Attributes can be added separately 4 Parameter Result Format - Optional. specifies the return format (XML or JSON) 5 If no result format specified then API will return output in JSON format.

Sample Input XML for adding Non-Asset CI Types

```
<?xml version="1.0" encoding="UTF-8"?>
<API version="1.0" locale="en">
      <records>
         <record>
          <parameter><name>Name</name><value>VOIP Phone</value></parameter>
          <parameter><name>IsAsset</name><value>False</value></parameter>
          <parameter><name>Description</name><value>Creating a non-asset CI Type</value></parameter>
            <parameter><name>Parent type</name><value>(empty)</value></parameter>
         </record>
      </records>
</API>
```

Note	1 IType-ID of the newly added entry is returned along with the CI Type in the response. 2 Technician having SDAdmin role can add CI Type(s). 3 CI Attributes can be added separately 4 Parameter Result Format - Optional. specifies the return format (XML or JSON) 5 If no result format specified then API will return output in JSON format.

Sample XML Response

```
<?xml version="1.0" encoding="UTF-8"?>
<API locale="en" version="1.0">
<response>
<result>
         <statuscode>200</statuscode>
         <status>Success</status>
         <message>Successfully added</message>
         <created-date>Mon Jul 05 18:18:39 GMT+05:30 2010</created-date>
         <records failed="0" success="1" total="1>
               <sucess>
                        <citype typeid="909">UPS</citype>
               </sucess>
</result>
</response>
</API>
```

Add Configuration Item CI Attributes

To add CI Attributes to a CI Type, use the following URL format:

http://<servername>:<portnumber>/api/cmdb/ci/citypeattributes

Assuming you are adding a new CI Type in the local server with port number 8080 the URL should be given as:

http://localhost:8080/api/cmdb/ci/citypeattributes

Keypoints:

1. The operation name "update" should be sent as a "POST attribute" with key "OPERATION_NAME".
2. The technician key should be sent as a "POST attribute" with key "TECHNICIAN_KEY".

Note	1 Technician having SDAdmin role can perform add operation on CI Type. 2 Can add more than one attribute at a time, but only one single CI Type can be added. 3 Parameter Result Format - Optional. specifies the return format (XML or JSON) 4 If no result format specified then API will return output in JSON format.

Sample Input XML for adding CI Type Attributes to CI Type Access Point

```
<?xml version="1.0" encoding="UTF-8"?>
<API version="1.0" locale="en">
   <addattribute>
      <tocitype>Access Point</tocitype>
      <attributes>
            <attribute>
               <parameter><name>Attribute Name</name><value>Cost Center</value></parameter>
               <parameter><name>Description</name><value>Access Point coverage area in
meters</value></parameter>
               <parameter><name>Type</name><value>single-line</value></parameter>
            </attribute>
            <attribute>
               <parameter><name>Attribute Name</name><value>Account Number</value></parameter>
               <parameter><name>Description</name><value>Issues in business service for mulit
line</value></parameter>
               <parameter><name>Type</name><value>single-line</value></parameter>
            </attribute>
            <attribute>
               <parameter><name>Attribute Name</name><value>Resolution</value></parameter>
               <parameter><name>Description</name><value>Issues in business service for mulit
```

```
line</value></parameter>
                <parameter><name>Type</name><value>multi-line</value></parameter>
            </attribute>
            <attribute>
                <parameter><name>Attribute Name</name><value>Bank Account</value></parameter>
                <parameter><name>Description</name><value>number of issues while creating business
service</value></parameter>
                <parameter><name>Type</name><value>number</value></parameter>
            </attribute>
            <attribute>
                <parameter><name>Attribute Name</name><value>Depreciation Amount</value></parameter>
                <parameter><name>Description</name><value>number of issues while creating business
service</value></parameter>
                <parameter><name>Type</name><value>number</value></parameter>
            </attribute>
            <attribute>
                <parameter><name>Attribute Name</name><value>Renewal Date</value></parameter>
                <parameter><name>Description</name><value>Dated issues while creating business
service</value></parameter>
                <parameter><name>Type</name><value>datetime</value></parameter>
            </attribute>
           <attribute>
                <parameter><name>Attribute Name</name><value>Pick Service Type</value></parameter>
                <parameter><name>Description</name><value>Types of services while creating business
service</value></parameter>
                <parameter><name>Type</name><value>pick-list</value></parameter>
                <parameter><name>List Item</name><value>Switch-1,Switch-2,Switch3</value></parameter>
            </attribute>
        </attributes>
    </addattribute>
</API>
```


Sample XML Response


```
<?xml version="1.0" encoding="UTF-8"?>
<API locale="en" version="1.0">
<response>
<result>
        <statuscode>200</statuscode>
        <status>Success</status>
        <message>Relationship added successfully.</message>
        <created-date>Mon Jul 05 18:18:39 GMT+05:30 2010</created-date>
</result>
</response>
</API>
```

Get CI(s) Type Count

To get the number of CI types available, use the following URL format:

http://<servername>:<portnumber>/api/cmdb/ci/citype/count

Assuming you are adding a new CI Type in the local server with port number 8080 the URL should be given as:

http://localhost:8080/api/cmdb/ci/citype/count

Keypoints:

1. The operation name "update" should be sent as a "POST attribute" with key "OPERATION_NAME".
2. The technician key should be sent as a "POST attribute" with key "TECHNICIAN_KEY".

Note	1 To get the **count of all CIs**, use **all** keyword in the URL 2 Parameter **Result Format - Optional**. specifies the return format (XML or JSON) 3 If no result format specified then API will return output in JSON format.

Sample JSON Output for Get All CI(s) Count:


```
{
   "API": {
      "response": {
         "result": {
            "created-date": "Sep 2, 2013 01:01 PM",
            "field-names": {
               "name": {
                  "type": "Integer",
                  "content": "Count"
               }
            },
            "message": "Successfully fetched.",
            "field-values": {
               "record": {
                  "value": "1"
               },
               "totalRecords": "1"
            },
            "status": "Success",
            "statuscode": "200"
         }
      },
      "version": "1.0"
   }
}
```

Get CI Type Details

To get the number of CI type's details, use the following URL format:

http://<servername>:<portnumber>/api/cmdb/ci/citype/<CIType>

Assuming you are adding a new CI Type in the local server with port number 8080 the URL should be given as:

http://localhost:8080/api/cmdb/<CIType>

Keypoints:

1. The operation name "update" should be sent as a "POST attribute" with key "OPERATION_NAME".
2. The technician key should be sent as a "POST attribute" with key "TECHNICIAN_KEY".

Note	1 CI Type - Mandatory. CI Type name. (Can be case insensitive). 2 Parameter **Result Format - Optional**. specifies the return format (XML or JSON) 3 If no result format specified then API will return output in JSON format.

Sample XML Output


```xml
<?xml version="1.0" encoding="UTF-8"?>
<API version="1.0">
   <response>
      <result>
         <statuscode>200</statuscode>
         <status>Success</status>
         <message>Successfully fetched.</message>
         <created-date>Sep 2, 2013 01:02 PM</created-date>
         <field-names>
            <name type="String">Attribute Name</name>
            <name type="String">Data Type</name>
         </field-names>
         <field-values totalRecords="10">
            <record>
               <value>Availability Target(%)</value>
               <value>String</value>
            </record>
            <record>
               <value>Service Support Hours</value>
               <value>String</value>
            </record>
            <record>
               <value>Cost</value>
               <value>String</value>
            </record>
```

```
            <record>
               <value>Incident restoration target</value>
               <value>String</value>
            </record>
            <record>
               <value>Site</value>
               <value>String</value>
            </record>
            <record>
               <value>Description</value>
               <value>String</value>
            </record>
         </field-values>
      </result>
   </response>
</API>
```


Sample JSON Output


```
{
   "API": {
      "response": {
         "result": {
            "created-date": "Sep 2, 2013 01:02 PM",
            "field-names": {
               "name": [
                  {
                     "type": "String",
                     "content": "Attribute Name"
                  },
                  {
                     "type": "String",
                     "content": "Data Type"
                  }
               ]
            },
            "message": "Successfully fetched.",
            "field-values": {
               "record": [
                  {
                     "value": [
                        "Availability Target(%)",
                        "String"
                     ]
                  },
                  {
                     "value": [
                        "Service Support Hours",
                        "String"
                     ]
                  },
                  {
```

```
                    "value": [
                        "Cost",
                        "String"
                    ]
                },
                {
                    "value": [
                        "Incident restoration target",
                        "String"
                    ]
                },
                {
                    "value": [
                        "Owned By",
                        "String"
                    ]
                },
                {
                    "value": [
                        "Business Impact",
                        "String"
                    ]
                },
                {
                    "value": [
                        "CI Name",
                        "String"
                    ]
                },
                {
                    "value": [
                        "Site",
                        "String"
                    ]
                },
                {
                    "value": [
                        "Description",
                        "String"
                    ]
                }
            ],
            "totalRecords": "10"
        },
        "status": "Success",
        "statuscode": "200"
    }
  },
  "version": "1.0"
}
}
```

Get CI Relationship

To read relationship between CIs use the following URL format:

http://<servername>:<portnumber>/api/cmdb/cirelationships/CI Name/

Assuming you are fetching relationship between two CIs available in the local server with port number 8080, the URL should be given as:

http://localhost:8080/api/cmdb/cirelatiionships/CI Name/

Keypoints:

1. The operation name "read" should be sent as a "POST attribute" with key "OPERATION_NAME". The operation name "read" should be sent as a "POST attribute" with key "OPERATION_NAME".
2. The technician key should be sent as a "POST attribute" with key "TECHNICIAN_KEY

To know more about fetching CI relationships, visit the following pages:

- Read CI Relationship Details
- Read Specific Relationship for a CI
- Read Relationship between two CIs

Get CI Relationship Details

Sample XML Output


```xml
<?xml version="1.0" encoding="UTF-8"?>
<API version="1.0">
   <response>
     <result>
      <statuscode>200</statuscode>
       <status>Success</status>
        <message>Successfully fetched.</message>
        <created-date>Mar 22, 2013 12:10 PM</created-date>
         <relationships for="sdpvm-w2k8.zohocorpin.com.">
        <relationship>
         <name>Managed by</name>
          <ci>
                <type>Technician</type>
                <name>Charles</name>
                 <relattributes/>
           </ci>
         </relationship>
         <relationship>
         <name>Runs</name>
          <ci>
                 <type>Operating System</type>
                 <name>Microsoft® Windows Server® 2008 Standard (sdpvm-w2k8.zohocorpin.com.)</name>
            </ci>
          </relationship>
           <relationship>
            <name>Uses</name>
             <ci>
                  <type>Storage Device</type>
                   <name>san-1</name>
              </ci>
            </relationship>
             <relationship>
              <name>Hosts</name>
                <ci>
                      <type>IT Service</type>
                      <name>E-mail</name>
                      <relattributes/>
                 </ci>
              </relationship>
             </relationships>
           </result>
   </response>
</API>
```

Sample JSON Output


```
{
   "API": {
      "response": {
         "result": {
            "created-date": "Sep 2, 2013 01:09 PM",
            "message": "Successfully fetched.",
            "status": "Success",
            "statuscode": "200",
            "relationships": {
               "relationship": {
                  "ci": {
                     "type": "Operating System",
                     "relattributes": {
                        "attribute": [
                           {
                              "value": "-",
                              "name": "Installed On"
                           },
                           {
                              "value": "-",
                              "name": "Version"
                           },
                           {
                              "value": "-",
                              "name": "Installation Location"
                           }
                        ]
                     },
                     "name": "Microsoft® Windows Server® 2008 Standard (sdpvm-w2k8.zohocorpin.com.)"
                  },
                  "name": "Runs"
               },
               "for": "sdpvm-w2k8.zohocorpin.com."
            }
         }
      },
      "operation": {
         "name": "read"
      },
      "version": "1.0"
   }
}
```

Get Specific CI Relationship for CI Type

To read specific relationships of a CI use th following url:

http://<servername>:<portnumber>/api/cmdb/cirelationships/CI Name/<Relationship Type>

Assuming you are to fetch a specific relationship of a CI - example: server being used by a technician - available in the local server with port number 8080, the URL should be given as:

http://localhost:8080/api/cmdb/cirelationships/CI Name/Charles/Uses

Keypoints:

1. The operation name "read" should be sent as a "POST attribute" with key "OPERATION_NAME".
2. The technician key should be sent as a "POST attribute" with key "TECHNICIAN_KEY

Note	
	1 Parameter **Result Format - Optional**. specifies the return format (XML or JSON) 2 If no result format specified then API will return output in JSON format.

Mandatory Parameters:

- CI Name - Mandatory. CI Name can be case insensitive
- Relationship Type - Mandatory. Relationship type name can be case insensitive.

Sample XML Output for Get Specific Relationship for CI


```
<?xml version="1.0" encoding="UTF-8"?>
<API version="1.0">
   <response>
         <result>
            <statuscode>200</statuscode>
            <status>Success</status>
            <message>Successfully fetched.</message>
            <created-date>Mar 22, 2013 12:57 PM</created-date>
                     <relationships for="Charles">
                      <relationship>
                      <name>Uses</name>
                              <ci>
                                 <type>Server</type>
                                <name>opman-solaris1.csez.zohocorpin.com</name>
                                <relattributes/>
                              </ci>
                      <relationship>
                     </relationships>
          </result>
   </response>
</API>
```


Sample JSON Output for Get Specific Relationship for CI


```
{
   "API": {
      "response": {
         "result": {
            "created-date": "Sep 2, 2013 02:59 PM",
            "message": "Successfully fetched.",
            "status": "Success",
            "statuscode": "200",
            "relationships": {
               "relationship": {
                  "ci": {
                     "type": "Mac Workstation",
                     "relattributes": {},
                     "name": "sdp-imac.csez.zohocorpin.com"
                  },
                  "name": "Uses"
               },
               "for": "Charles"
            }
         }
      },
      "operation": {
         "name": "read"
      },
      "version": "1.0"
   }
}
```

Get Relationship between two CIs

To read specific relationships of a CI use th following url:

http://<servername>:<portnumber>/api/cmdb/cirelationships/CI Name 1<->CI Name 2/

Assuming you are to read a specific relationship of a CI - example: server being used by a technician - available in the local server with port number 8080, the URL should be given as:

http://localhost:8080/api/cmdb/cirelationships/connector.iad8.amazon.com<->dlf-1w.printer-1/

Keypoints:

1. The operation name "read" should be sent as a "POST attribute" with key "OPERATION_NAME".
2. The technician key should be sent as a "POST attribute" with key "TECHNICIAN_KEY

Note	
	1 Parameter **Result Format - Optional**. specifies the return format (XML or JSON) 2 If no result format specified then API will return output in JSON format.

Mandatory Parameters:

- Symbol <-> between the two CIs is mandatory
- CI Name 1 – Mandatory. CI Name can be case insensitive

Sample XML Output for Relationship between two CIs:


```xml
<?xml version="1.0" encoding="UTF-8"?>
<API version="1.0">
   <response>
         <result>
            <statuscode>200</statuscode>
            <status>Success</status>
            <message>Successfully fetched.</message>
            <created-date>Mar 22, 2013 12:51 PM</created-date>
                  <relationships for="connector.iad8.amazon.com">
                        <relationship>
                         <name>Connected to</name>
                            <ci>
                                 <type>Printer</type>
                                  <name>dlf-1w.printer-1</name>
                                  <relattributes/>
                             </ci>
                        </relationship>
                  </relationships>
          </result>
   </response>
</API>
```

Sample JSON Output for Relationship between two CIs:


```
{
   "API": {
      "response": {
         "result": {
            "created-date": "Sep 2, 2013 03:05 PM",
            "message": "Successfully fetched.",
            "status": "Success",
            "statuscode": "200",
            "relationships": {
               "relationship": {
                  "ci": {
                     "type": "Switch Ports",
                     "name": "connector.iad8.amazon.com"
                  },
                  "name": "Connected to"
               },
               "for": "DLF11thFloor-I.csez.zohocorpin.com"
            }
         }
      },
      "operation": {
         "name": "read"
      },
      "version": "1.0"
   }
}
```

Delete CI

To delete a CI use the following URL format:

http://<servername>:<portnumber>/api/change/cmdb/ci/CI Type:CI Name/delete/

Assuming you deleting a requester CI in the local server with port number 8080, the URL should be given as:

http://localhost:8080/api/cmdb/ci/Requester:Mukul/delete/

Keypoints:

1. The operation name "delete" should be sent as a "POST attribute" with key "OPERATION_NAME".
2. The technician key should be sent as a "POST attribute" with key "TECHNICIAN_KEY".

Note	
	1 It is **mandatory** to give **colon** between **CI Type and CI Name**, so as to delete the CI uniquely. 2 Parameter **Result Format - Optional**. specifies the return format (XML or JSON)

Sample XML Output & JSON Output

```
<?xml version="1.0" encoding="UTF-8"?>
<API version="1.0">
   <response>
         <result>
            <statuscode>200</statuscode>
            <status>Success</status>
            <message>1 records removed successfully.</message>
            <created-date>Mar 22, 2013 10:58 AM</created-date>
         </result>
   </response>
</API>
```

```
{
   "API": {
      "response": {
         "result": {
            "created-date": "Sep 2, 2013 03:10 PM",
            "message": "1 records removed successfully.",
            "status": "Success",
            "statuscode": "200"
         }
      },
      "version": "1.0"
   }
} </API>
```

Delete CI using Criteria

To delete CI using a filter use the following URL format:

http://<servername>:<portnumber>/api/cmdb/ci

Assuming you are deleting a CI in the local server with port number 8080, the URL should be given as:

http://localhost:8080/api/cmdb/ci

Keypoints:

1. The operation name "delete" should be sent as "POST attribute" with key "OPERATION_NAME"
2. The technician key should be sent as a "POST attribute" with key "TECHNICIAN_KEY".

Sample XML Input

```
<?xml version="1.0" encoding="UTF-8"?>
<API version="1.0">
      <citype>
         <name>Switch Ports</name>
         <criterias>
            <criteria>
               <parameter>  <name compOperator="CONTAINS">CI Name</name><value>1
(hp2650.csez.zohocorpin.com)</value></parameter>
            </criteria>
         </criterias>
      </citype>
</API>
```

Sample XML to delete a workstation CI using CI Type

```
<?xml version="1.0" encoding="UTF-8"?>
<API locale="en" version="1.0">
<response>
<result>
         <statuscode>200</statuscode>
         <status>Success</status>
         <message>Relationship added successfully.</message>
         <created-date>Mon Jul 05 18:18:39 GMT+05:30 2010</created-date>
</result>
</response>
</API>
```

Sample Response: Success


```
<?xml version="1.0" encoding="UTF-8"?>
<API version="1.0">
      <response>
         <result>
                  <statuscode>200</statuscode>
                  <status>Success</status>
                  <message>Deleted successfully.</message>
                  <created-date>May 10, 2013 03:31 PM</created-date>
                  <records deleted="5">
                      <ci id="6919">1 (hp2650.csez.zohocorpin.com)</ci>
                      <ci id="6929">11 (hp2650.csez.zohocorpin.com)</ci>
                      <ci id="6939">21 (hp2650.csez.zohocorpin.com)</ci>
                      <ci id="6939">31 (hp2650.csez.zohocorpin.com)</ci>
                      <ci id="6939">41 (hp2650.csez.zohocorpin.com)</ci>
                  </records>

         </result>
      </response>
```


Sample Response: Failure


```
<?xml version="1.0" encoding="UTF-8"?>
<API version="1.0">
      <response>
         <result>
                  <statuscode>3018</statuscode>
                  <status> No row matched to delete</status>
                  <message> No row matched to delete</message>
         </result>
      </response>
</API>
```

JSON Response for deleting Printer CIs


```
{
   "API": {
      "response": {
         "result": {
            "created-date": "May 10, 2013 03:41 PM",
            "records": {
               "deleted": "6",
               "ci": [
                  {
                     "content": "192.168.11.2",
                     "id": "1224"
                  },
                  {
                     "content": "192.168.11.23",
                     "id": "1220"
                  },
                  {
                     "content": "192.168.11.24",
                     "id": "1221"
                  },
                  {
                     "content": "192.168.11.25",
                     "id": "1222"
                  },
                  {
                     "content": "192.168.11.26",
                     "id": "1223"
                  },
                  {
                     "content": "192.168.11.29",
                     "id": "2401"
                  }
               ]
            },
            "message": "Deleted successfully.",
            "status": "Success",
            "statuscode": "200"
         },
         "name": "delete"
      }
   },
   "version": "1.0"
}
```

Delete CI Type

To delete a CI Type use the following URL format:

http://<servername>:<portnumber>/api/cmdb/citype/CITypeName/delete

Assuming you are adding a change in the local server with port number 8080, the URL should be given as:

http://localhost:8080/api/cmdb/citype/MyServer/delete/

Keypoints:

1. The operation name "delete" should be sent as a "POST attribute" with key "OPERATION_NAME".
2. The technician key should be sent as a "POST attribute" with key "TECHNICIAN_KEY".

Note	
	1 It is **mandatory** to give **colon** between **CI Type and CI Name**, so as to delete the CI uniquely. 2 Parameter **Result Format - Optional**. specifies the return format (XML or JSON)

Mandatory Parameters: Use * to delete all relationships with a CI, but this can be used by specifying the relationship.

Sample XML Output Format

```
<?xml version="1.0" encoding="UTF-8"?>
<API version="1.0">
   <response>
         <result>
            <statuscode>200</statuscode>
            <status>Success</status>
            <message>1 records removed successfully.</message>
            <created-date>Mar 22, 2013 10:58 AM</created-date>
         </result>
  </response>
</API>
```

Sample JSON Output Format


```
{
   "API": {
      "response": {
         "result": {
            "created-date": "Sep 2, 2013 03:10 PM",
            "message": "1 records removed successfully.",
            "status": "Success",
            "statuscode": "200"
         }
      },
      "version": "1.0"
   }
}
```

Delete CI Relationship

To delete a CI Relationship use the following URL format:

http://<servername>:<portnumber>/api/cmdb/cirelationships

Assuming you are adding a change in the local server with port number 8080, the URL should be given as:

http://localhost:8080/api/cmdb/cirelationships

Keypoints:

3. The operation name "delete" should be sent as a "POST attribute" with key "OPERATION_NAME".
4. The technician key should be sent as a "POST attribute" with key "TECHNICIAN_KEY".
5. Sample Input XML

Sample XML Input

```
<API version="1.0" locale="en">
   <relationships>
         <deleterelationship>
            <fromci>sd-test5.zohocorpin.com</fromci>
            <relationshiptype>runs</relationshiptype>
            <relatedcis>
                  <ci>SSL_Reports_sd-test5.zohocorpin.com</ci>
                  <!--Syntax to delete all ci <ci>*</ci> -->
            </relatedcis>
         </deleterelationship>
    </relationships>
</API>
```

Sample XML Output (for Success)

```
<API version="1.0" locale="en">
   <relationships>
         <deleterelationship>
            <fromci>sd-test5.zohocorpin.com</fromci>
            <relationshiptype>runs</relationship type>
            <relatedcis>
                  <ci>SSL_Reports_sd-test5.zohocorpin.com</ci>
                  <!--Syntax to delete all ci <ci>*</ci> -->
            </relatedcis>
         </deleterelationship>
    </relationships>
</API>
```

Sample XML Output (for Failure)

```
<API version="1.0" locale="en">
   <relationships>
         <deleterelationship>
            <fromci>sd-test5.zohocorpin.com</fromci>
            <relationshiptype>runs</relationshiptype>
            <relatedcis>
                  <ci>SSL_Reports_sd-test5.zohocorpin.com</ci>
                  <!--Syntax to delete all ci <ci>*</ci> -->
            </relatedcis>
         </deleterelationship>
    </relationships>
</API>
```

API Status Codes

Status Code	Status Message
200	Success
3000	No rows found for the specified criteria.
3001	Unknown error.
3002	Partially added.
3003	No XML data specified.
3004	Invalid XML/request Format.
3005	API key is not found in XML/request.
3006	Invalid operation name.
3007	Unable to authenticate, invalid user key is specified in the XML/request.
3008	Key received from the XML/request is expired. Cannot use the key for further API requests.
3009	API key received is not associated to any technician. Authentication failed.
3010	Invalid URL for the requested operation.
3011	Maximum rows limit exceeded.
3012	Input xml cannot be empty or null.
3013	Delete operation cannot be performed
3014	Invalid output format.
3015	Access is denied.
3016	Unable to perform the requested operation.
3017	API is disabled. Operation not performed.
3018	No rows matched to delete.
3019	No rows matched to update.
3020	Invalid data provided for the input.
3021	Mandatory input is empty or not found.
3022	Data cannot be altered or deleted.
3023	SQL Syntax error.
3024	Duplicate record found.
3025	Invalid column(s) specified.
3026	Syntax error.
3027	Operation not supported.

Using Third Party Tools

Java using Apache Client

```
/*  Other URL
        * ciURL = "http://localhost:8080/api/cmdb/ci/";
        * ciTypeURL = "http://localhost:8080/api/cmdb/citype/";
        * ciRelationshipsURL  =  "http://localhost:8080/api/cmdb/cirelationships/"
        *
        *
        * OPERATION_NAME : [ "add", "update" , "read" , "delete" ]
        * format : ["json","xml"] If format not specified, json is the default.
        *
        * Dependency jars : httpcore-4.0.1.jar , httpclient-4.0.1.jar : This can be
available http://hc.apache.org/downloads.cgi
        * @author: nprasanna
*/


package api;
import java.io.BufferedReader;
import java.io.FileInputStream;
import java.io.IOException;
import java.io.InputStreamReader;
import java.util.ArrayList;
import java.util.List;
import org.apache.http.HttpResponse;
import org.apache.http.NameValuePair;
import org.apache.http.client.HttpClient;
import org.apache.http.client.entity.UrlEncodedFormEntity;
import org.apache.http.client.methods.HttpPost;
import org.apache.http.impl.client.DefaultHttpClient;
import org.apache.http.message.BasicNameValuePair;

public class PostAPIRequest
{
    public static void main(String[] args) throws Exception {
        HttpClient client = new DefaultHttpClient();


        String postURL = "http://localhost:8080/api/cmdb/citypeattributes/";

        HttpPost post = new HttpPost(postURL);
        String fileName = "D:\\Downloads\\API-INPUT-XML\\ADD_ATTRIBUTE\\pick-list.xml";
        BufferedReader in = new BufferedReader(new InputStreamReader(new
FileInputStream(fileName), "UTF8"));
        String str;

        StringBuilder strContent = new StringBuilder();
        while ((str = in.readLine()) != null) {
            strContent.append(str);
        }
```

```
        String fileContents = strContent.toString();
        try {
            List<NameValuePair> nameValuePairs = new ArrayList<NameValuePair>(1);
            nameValuePairs.add(new BasicNameValuePair("TECHNICIAN_KEY", "31F022AE-4AAC-
4F53-A519-193727C8B2BB"));
            nameValuePairs.add(new BasicNameValuePair("format", "xml"));
            nameValuePairs.add(new BasicNameValuePair("OPERATION_NAME", "add"));
            nameValuePairs.add(new BasicNameValuePair("INPUT_DATA", fileContents));
            post.setEntity(new UrlEncodedFormEntity(nameValuePairs));
            HttpResponse response = client.execute(post);
            BufferedReader rd = new BufferedReader(new
InputStreamReader(response.getEntity().getContent()));
            String line = "";
            while ((line = rd.readLine()) != null) {
                System.out.println(line);
            }
        } catch (IOException e) {
            e.printStackTrace();
        }
    }
}
```

Python using HTTP for request

```
#This needs the below packages to be installed.
import requests,codecs,sys,pprint


url = 'http://localhost:8080/api/cmdb/citypeattributes/'
args = {'OPERATION_NAME':'add','TECHNICIAN_KEY':'3ED8AEC2-A7D1-42F6-9A90-
8B848E70D077','format':'xml'}
fileName = sys.argv[1]
#files = {'file': open('Fetch-Workstation-bool.xml')}
files = {'file': open(fileName)}
r = requests.post(url,files=files,params=args)
print r.text
#Uncomment the below lines to write the output response in out.xml file
#outfile = codecs.open("out.xml","w","utf-8")
#outfile.write(r.text)
# outfile.close()
```

Browser Plugins:

- Firefox: https://addons.mozilla.org/en-us/firefox/addon/restclient/
- Chrome: Postman: http://bit.ly/MuID5O

Technician Operations

To get technician related information regarding all Technicians, use the following URL pattern:

http://<servername>:<port number>/sdpapi/technician/

Example:

http://localhost:8080/sdpapi/techician/

Contents:

- Get All Technician

Get All Technician

Keypoints:

1. The operation name "GET_ALL" should be sent as a "POST attribute" with key "OPERATION_NAME".
2. The technician key should be sent as a "POST attribute" with key "TECHNICIAN_KEY".

Note: Please note that the **Input** and **Output XML** formats have been changed. But for compatibility reasons, the Input operation will support both the formats.

Input Format:

```
<?xml version="1.0" encoding="UTF-8"?>
<Details>
        <siteName></siteName>
        <groupid></groupid>
</Details>
</operation>
```

Output Format :

```
<?xml version="1.0" encoding="UTF-8" ?>
<operation name="GET_ALL">
    <result>
        <statuscode>200</statuscode>
        <status>Success</status>
        <message>Details fetched successfully for Technician in
```

```
            group: nullof site:null</message>
        </result>
        <Details type="technician">
            <record URI=="http://localhost:8080/sdpapi/technician/4/">
                <parameter>
                    <name>technician id<name>
                    <value>4<value>
                </parameter>
                <parameter>
                    <name>techniciannamе<name>
                    <value>administrator<value>
                </parameter>
            </record>
            <record URI=="http://localhost:8080/sdpapi/technician/5/">
                <parameter>
                    <name>technician id<name>
                    <value>5<value>
                </parameter>
                <parameter>
                    <name>techniciannamе<name>
                    <value>Shawn Adams<value>
                </parameter>
            </record>
        </Details>
    </Operation>
```

Requester Operations

To get requester related information regarding all requesters, use the following URL pattern:

http://<servername>:<port number>/sdpapi/requester/

Example:

http://localhost:8080/sdpapi/requester/

Get All Requesters

Keypoints:

1. The operation name "GET_ALL" should be sent as a "POST attribute" with key "OPERATION_NAME".
2. The input values are case sensitive
3. AND Operation is applied incase you give more than parameter.
4. For contact number parameter, all the numbers associated with the requester (office/mobile) will be fetched.
5. Values fetched (the result) would be based on the exact value provided; for example, you are searching for requester John, and there exists a requester by name Johnathan, then he would not be fetched; if you desire to fetch the requester Johnthan as well, you have to append "*" as suffix to John. Eg: <value>john*</value>. The same rule applies for prefix as well.

Note: Please note that the **Input** and **Output XML** formats have been changed. But for compatibility reasons, the Input operation will support both the formats.

Input Format

```
<Details>
    <parameter>
            <name>loginname</name>
            <value>guest</value>
    </parameter>
    <parameter>
            <name>domainname</name>
            <value></value>
    </parameter>
    <parameter>
```

```
            <name>department</name>
            <value>administration</value>
        </parameter>
        <parameter>
            <name>sitename</name>
            <value>asd</value>
        </parameter>
        <parameter>
            <name>contactnumber</name>
            <value>1234567890</value>
        </parameter>
        <parameter>
            <name>employeeid</name>
            <value>888</value>
        </parameter>
        <parameter>
            <name>employeeid</name>
            <value>888</value>
        </parameter>
        <parameter>
            <name>employeeid</name>
            <value>888</value>
        </parameter>
        <parameter>
            <name>employeeid</name>
            <value>888</value>
        </parameter>
        <parameter>
            <name>employeeid</name>
            <value>888</value>
        </parameter>
        <parameter>
            <name>name</name>
            <value>guest</value>
        </parameter>
        <parameter>
            <name>email</name>
            <value>sd@asd.com</value>
```

```
        </parameter>
        <parameter>
                <name>jobtitle</name>
                <value>job title</value>
        </parameter>
        <parameter>
                <name>noofrows</name>
                <value>10</value>
        </parameter>
    </Details>
    </Operation>
```

Note: Please note that the **Input** and **Output XML** formats have been changed. But for compatibility reasons, the Input operation will support both the formats.

Output Format

```
    <Details type="Requester" >
        <record URI="http://vivin-0415:8080/sdpapi/requester/3/">
        <parameter>
                <name>userid</name>
                <value>3</value>
        </parameter>
        <parameter>
                <name>username</name>
                <value>guest</value>
        </parameter>
        <parameter>
                <name>emailid</name>
                <value>asd@asd.com</value>
        </parameter>
        <parameter>
                <name>department</name>
                <value>Administration</value>
        </parameter>
        <parameter>
                <name>sitename</name>
```

```
                <value>asd</value>
        </parameter>
        <parameter>
                <name>domainname</name>
                <value>-</value>
        </parameter>
        <parameter>
                <name>employeeid</name>
                <value>888</value>
        </parameter>
        <parameter>
                <name>jobtitle</name>
                <value>job title</value>
        </parameter>
        <parameter>
                <name>landline</name>
                <value>8888</value>
        </parameter>
        <parameter>
                <name>mobile</name>
                <value>1234567890</value>
        </parameter>
    </Details>

</Operation>
```

Admin Operations

To fetch information pertaining to Requests based on entities like Category, Status, Impact, Priority, Request Template etc., use the following URL pattern:

http://<servername>:<port number>/sdpapi/admin/attribute/<respective-id>/

Example:

http://localhost:8080/sdpapi/admin/category/<Category-ID>

Contents:

- Category
- Subcategory
- Item
- Status
- Level
- Mode
- Impact
- Urgency
- Priority
- Request_Template
- Support Group

Category Operations

GET Category

http://<servername>:<portnumber>/admin/category/<Category ID>

Example:

http://localhost:8080/sdpapi/admin/category/25

Keypoints:

1. The operation name "GET" should be sent as a "POST attribute" with key "OPERATION_NAME".
2. The technician key should be sent as a "POST attribute" with key "TECHNICIAN_KEY".
3. Input is not required for "GET" category operation.

Output Format: (for "GET" category)

<?xml version="1.0" encoding="UTF-8" ?>

```
<operation name="GET">
        <result>
                <statuscode>200</statuscode>
                <status>Success</status>
                <message>Details fetched successfully for Category ID:
                1</message>
        </result>
        <Details type="category">
            <record>
                <parameter>
                    <name>id<name>
                    <value>1<value>
                </parameter>
                <parameter>
                    <name>name<name>
                    <value>General<value>
                </parameter>
                <parameter>
                    <name>isdeleted<name>
                    <value>false<value>
                </parameter>
                <parameter>
                    <name>description<name>
                    <value>General Problems<value>
                </parameter>
            </record>
        </Details>
    </Operation>
```

GET_ALL Category

http://<servername>:<portnumber>/admin/category/

Example:

http://localhost:8080/sdpapi/admin/category/

Keypoints:

1. The operation name "GET_ALL" should be sent as a "POST attribute" with key "OPERATION_NAME".
2. The technician key should be sent as a "POST attribute" with key "TECHNICIAN_KEY".
3. Input is not required for "GET_ALL" category operation.

Output Format: (for "GET_ALL" category)

```
<?xml version="1.0" encoding="UTF-8" ?>
<operation name="GET_ALL">
        <result>
                <statuscode>200</statuscode>
                <status>Success</status>
                <message>Category details fetched successfully</message>
        </result>
        <Details type="category">
            <record URI="http://localhost:8080/sdpapi/admin/category/2/">
                <parameter>
                    <name>id<name>
                    <value>2<value>
                </parameter>
                <parameter>
                    <name>name<name>
                    <value>Desktop Hardware<value>
                </parameter>
                <parameter>
                    <name>isdeleted<name>
                    <value>false<value>
                </parameter>
            </record>
            <record URI="http://localhost:8080/sdpapi/admin/category/1/">
                <parameter>
                    <name>id<name>
                    <value>1<value>
                </parameter>
                <parameter>
                    <name>name<name>
                    <value>General<value>
                </parameter>
                <parameter>
                    <name>isdeleted<name>
                    <value>false<value>
                </parameter>
            </record>
        </Details>
    </Operation>
```

Sub-Category Operations

GET SubCategory

http://<servername>:<portnumber>/sdpapi/admin/subcategory/<subcategory ID>

Example:

http://localhost:8080/sdpapi/admin/subcategory/25

Keypoints:

1. The operation name "GET" should be sent as a "POST attribute" with key "OPERATION_NAME".
2. The technician key should be sent as a "POST attribute" with key "TECHNICIAN_KEY".
3. Input is not required for "GET" subcategory operation.

Output Format: (for "GET" subcategory)

```
 <xml version="1.0" encoding="UTF-8" ?>
<operation name="GET">
        <result>
                <statuscode>200</statuscode>
                <status>Success</status>
                <message>Details fetched successfully for SubCategoryID:
                1</message>
        </result>
        <Details type="subcategory">
            <record>
                <parameter>
                    <name>id<name>
                    <value>1<value>
                </parameter>
                <parameter>
                    <name>name<name>
                    <value>New Joinee<value>
                </parameter>
                <parameter>
                    <name>isdeleted<name>
                    <value>false<value>
                </parameter>
                <parameter>
                    <name>description<name>
                    <value>A New employee joining to the company<value>
                </parameter>
            </record>
        </Details>
    </Operation>
```

GET_ALL SubCategory

http://localhost:8080/sdpapi/admin//subcategory/category/<category-id>

Example:

http://localhost:8080/sdpapi/admin/subcategory/category/25

Keypoints:

1. The operation name "GET_ALL" should be sent as a "POST attribute" with key "OPERATION_NAME".
2. The technician key should be sent as a "POST attribute" with key "TECHNICIAN_KEY".
3. Input is not required for "GET_ALL" subcategory operation.

Output Format: (for "GET_ALL" subcategory)

```
<?xml version="1.0" encoding="UTF-8" ?>
<operation name="GET_ALL">
        <result>
                <statuscode>200</statuscode>
                <status>Success</status>
                <message>SubCategory details fetched
                successfully</message>
        </result>
        <Details type="subcategory">
            <record
            URI="http://localhost:8080/sdpapi/admin/subcategory/2/">
                <parameter>
                    <name>id<name>
                    <value>2<value>
                </parameter>
                <parameter>
                    <name>name<name>
                    <value>Employee Leaving<value>
                </parameter>
                <parameter>
                    <name>isdeleted<name>
                    <value>false<value>
                </parameter>
            </record>
            <record
            URI="http://localhost:8080/sdpapi/admin/subcategory/4/">
                <parameter>
                    <name>id<name>
                    <value>4<value>
                </parameter>
```

```
            <parameter>
                <name>name<name>
                <value>Move Employee<value>
            </parameter>
            <parameter>
                <name>isdeleted<name>
                <value>false<value>
            </parameter>
        </record>
        <record
        URI="http://localhost:8080/sdpapi/admin/subcategory/1/">
            <parameter>
                <name>id<name>
                <value>1<value>
            </parameter>
            <parameter>
                <name>name<name>
                <value>New Joinee<value>
            </parameter>
            <parameter>
                <name>isdeleted<name>
                <value>false<value>
            </parameter>
        </record>
        <record
        URI="http://localhost:8080/sdpapi/admin/subcategory/3/">
            <parameter>
                <name>id<name>
                <value>3<value>
            </parameter>
            <parameter>
                <name>name<name>
                <value>Password Reset<value>
            </parameter>
            <parameter>
                <name>isdeleted<name>
                <value>false<value>
            </parameter>
        </record>
    </Details>
</Operation>
```

Item Operations

GET Item

http://<servername>:<portnumber>/sdpapi/admin/item/<item ID>

Example:

http://localhost:8080/sdpapi/admin/item/25

Keypoints:

1. The operation name "GET" should be sent as a "POST attribute" with key "OPERATION_NAME".
2. The technician key should be sent as a "POST attribute" with key "TECHNICIAN_KEY".
3. Input is not required for "GET" item operation.

Output Format: (for "GET" item)

```
<?xml version="1.0" encoding="UTF-8" ?>
<operation name="GET">
        <result>
                <statuscode>200</statuscode>
                <status>Success</status>
                <message>Details fetched successfully for ItemID:
                1</message>
        </result>
        <Details type="item">
            <record>
                <parameter>
                    <name>id<name>
                    <value>1<value>
                </parameter>
                <parameter>
                    <name>name<name>
                    <value>Install<value>
                </parameter>
                <parameter>
                    <name>isdeleted<name>
                    <value>false<value>
                </parameter>
                <parameter>
                    <name>description<name>
                    <value>MS Office install<value>
                </parameter>
            </record>
        </Details>
    </Operation>
```

GET_ALL Item

http://<servername>:<portnumber>/sdpapi/admin/item/subcategory/subcategory ID/

Example:

http://localhost:8080/sdpapi/admin/item/subcategory/25/

Keypoints:

1. The operation name "GET_ALL" should be sent as a "POST attribute" with key "OPERATION_NAME".
2. The technician key should be sent as a "POST attribute" with key "TECHNICIAN_KEY".
3. Input is not required for "GET_ALL" Item operation.

Output Format: (for "GET_ALL" Item)

```
<?xml version="1.0" encoding="UTF-8" ?>
<operation name="GET_ALL">
        <result>
                <statuscode>200</statuscode>
                <status>Success</status>
                <message>Item details fetched successfully</message>
        </result>
        <Details type="item">
            <record URI="http://localhost:8080/sdpapi/admin//item/6/">
                <parameter>
                    <name>id<name>
                    <value>6<value>
                </parameter>
                <parameter>
                    <name>name<name>
                    <value>Install<value>
                </parameter>
                <parameter>
                    <name>isdeleted<name>
                    <value>false<value>
                </parameter>
            </record>
            <record URI="http://localhost:8080/sdpapi/admin/item/7/">
                <parameter>
                    <name>id<name>
                    <value>7<value>
                </parameter>
                <parameter>
                    <name>name<name>
                    <value>Uninstall<value>
                </parameter>
                <parameter>
                    <name>isdeleted<name>
                    <value>false<value>
                </parameter>
            </record>
        </Details>
    </Operation>
```

Status Operations

GET Status

http://<servername>:<portnumber>/sdpapi/admin/status/<status ID>

Example:

http://localhost:8080/sdpapi/admin/status/25/

Keypoints:

1. The operation name "GET" should be sent as a "POST attribute" with key "OPERATION_NAME".
2. The technician key should be sent as a "POST attribute" with key "TECHNICIAN_KEY".
3. Input is not required for "GET" Status operation.

Output Format: (for "GET" status)

```
<xml version="1.0" encoding="UTF-8" ?>
<operation name="GET">
        <result>
                <statuscode>200</statuscode>
                <status>Success</status>
                <message>Details fetched successfully for StatusID:
                1</message>
        </result>
        <Details type="status">
            <record>
                <parameter>
                    <name>id<name>
                    <value>1<value>
                </parameter>
                <parameter>
                    <name>name<name>
                    <value>Open<value>
                </parameter>
                <parameter>
                    <name>description<name>
                    <value>Request Pending<value>
                </parameter>
                <parameter>
                    <name>is pending<name>
                    <value>true<value>
                </parameter>
                <parameter>
                    <name>stopclock<name>
                    <value>false<value>
                </parameter>
                <parameter>
                    <name>isdeleted<name>
                    <value>false<value>
                </parameter>
            </record>
        </Details>
    </Operation>
```

GET_ALL Status

http://<servername>:<portnumber>/sdpapi/admin/status/

Example:

http://localhost:8080/sdpapi/admin/status/

Keypoints:

1. The operation name "GET_ALL" should be sent as a "POST attribute" with key "OPERATION_NAME".
2. The technician key should be sent as a "POST attribute" with key "TECHNICIAN_KEY".
3. Input is not required for "GET_ALL" Status operation.

Output Format: (for "GET_ALL" Status)

```
<?xml version="1.0" encoding="UTF-8" ?>
<operation name="GET_ALL">
        <result>
                <statuscode>200</statuscode>
                <status>Success</status>
                <message>Status details fetched successfully</message>
        </result>
        <Details type="status">
            <record URI="http://localhost:8080/sdpapi/admin/status/301/">
                <parameter>
                    <name>id<name>
                    <value>301<value>
                </parameter>
                <parameter>
                    <name>name<name>
                    <value>asd,asd<value>
                </parameter>
                <parameter>
                    <name>isdeleted<name>
                    <value>false<value>
                </parameter>
            </record>
            <record URI="http://localhost:8080/sdpapi/admin/status/3/">
                <parameter>
                    <name>id<name>
                    <value>3<value>
                </parameter>
                <parameter>
                    <name>name<name>
                    <value>closed<value>
                </parameter>
                <parameter>
                    <name>isdeleted<name>
                    <value>false<value>
                </parameter>
              </record>
            </Details>
        </Operation>
```

Level Operations

GET Level

http://<servername>:<portnumber>/sdpapi/admin/level/<level ID>

Example:

http://localhost:8080/sdpapi/admin/level/25/

Keypoints:

1. The operation name "GET" should be sent as a "POST attribute" with key "OPERATION_NAME".
2. The technician key should be sent as a "POST attribute" with key "TECHNICIAN_KEY".
3. Input is not required for "GET" Status operation.

Output Format: (for "GET" level)

```
<xml version="1.0" encoding="UTF-8" ?>
<operation name="GET">
        <result>
                <statuscode>200</statuscode>
                <status>Success</status>
                <message>Details fetched successfully for Level ID:
                1</message>
        </result>
        <Details type="level">
            <record>
                <parameter>
                    <name>id<name>
                    <value>1<value>
                </parameter>
                <parameter>
                    <name>name<name>
                    <value>Tier 1<value>
                </parameter>
                <parameter>
                    <name>isdeleted<name>
                    <value>false<value>
                </parameter>
                <parameter>
                    <name>description<name>
                    <value>info<value>
                </parameter>
              </record>
        </Details>
    </Operation>
```

GET_ALL Level

http://<servername>:<portnumber>/sdpapi/admin/level/

Example:

http://localhost:8080/sdpapi/admin/level/

Keypoints:

1. The operation name "GET_ALL" should be sent as a "POST attribute" with key "OPERATION_NAME".
2. The technician key should be sent as a "POST attribute" with key "TECHNICIAN_KEY".
3. Input is not required for "GET_ALL" Level operation.

Output Format: (for "GET_ALL" level)

```
<?xml version="1.0" encoding="UTF-8" ?>
<operation name="GET_ALL">
        <result>
                <statuscode>200</statuscode>
                <status>Success</status>
                <message>Level details fetched successfully</message>
        </result>
        <Details type="level">
            <record URI="http://localhost:8080/sdpapi/admin/level/1/">
                <parameter>
                    <name>id<name>
                    <value>1<value>
                </parameter>
                <parameter>
                    <name>name<name>
                    <value>Tier 1<value>
                </parameter>
                <parameter>
                    <name>isdeleted<name>
                    <value>false<value>
                </parameter>
            </record>
            <record URI="http://localhost:8080/sdpapi/admin/level/2/">
                <parameter>
                    <name>id<name>
                    <value>2<value>
                </parameter>
                <parameter>
                    <name>name<name>
                    <value>Tier 2<value>
                </parameter>
                <parameter>
                    <name>isdeleted<name>
                    <value>false<value>
                </parameter>
            </record>
        </Details>
    </Operation>
```

Mode Operations

GET Mode

http://<servername>:<portnumber>/sdpapi/admin/mode/<mode ID>

Example:

http://localhost:8080/sdpapi/admin/mode/25/

Keypoints:

1. The operation name "GET" should be sent as a "POST attribute" with key "OPERATION_NAME".
2. The technician key should be sent as a "POST attribute" with key "TECHNICIAN_KEY".
3. Input is not required for "GET" Mode operation.

Output Format: (for "GET" mode)

```
<?xml version="1.0" encoding="UTF-8" ?>
<operation name="GET">
        <result>
                <statuscode>200</statuscode>
                <status>Success</status>
                <message>Details fetched successfully for ModeID:
                1</message>
        </result>
        <Details type="mode">
            <record>
                <parameter>
                    <name>id<name>
                    <value>1<value>
                </parameter>
                <parameter>
                    <name>name<name>
                    <value>E-Mail<value>
                </parameter>
                <parameter>
                    <name>isdeleted<name>
                    <value>false<value>
                </parameter>
                <parameter>
                    <name>description<name>
                    <value>Request through mail<value>
                </parameter>
            </record>
        </Details>
    </Operation>
```

GET_ALL Mode

http://<servername>:<portnumber>/sdpapi/admin/mode/

Example:

http://localhost:8080/sdpapi/admin/mode/

Keypoints:

1. The operation name "GET_ALL" should be sent as a "POST attribute" with key "OPERATION_NAME".
2. The technician key should be sent as a "POST attribute" with key "TECHNICIAN_KEY".
3. Input is not required for "GET_ALL" Mode operation.

Output Format: (for "GET_ALL" Mode)

```
<?xml version="1.0" encoding="UTF-8" ?>
<operation name="GET_ALL">
        <result>
                <statuscode>200</statuscode>
                <status>Success</status>
                <message>Mode details fetched successfully</message>
        </result>
        <Details type="mode">
            <record URI="http://localhost:8080/sdpapi/admin/mode/1/">
                <parameter>
                    <name>id<name>
                    <value>1<value>
                </parameter>
                <parameter>
                    <name>name<name>
                    <value>E-Mail<value>
                </parameter>
                <parameter>
                    <name>isdeleted<name>
                    <value>false<value>
                </parameter>
            </record>
            <record URI="http://localhost:8080/sdpapi/admin/mode/3/">
                <parameter>
                    <name>id<name>
                    <value>3<value>
                </parameter>
                <parameter>
                    <name>name<name>
                    <value>Phone Call<value>
                </parameter>
                <parameter>
                    <name>isdeleted<name>
                    <value>false<value>
                </parameter>
            </record>
        </Details>
    </Operation>
```

Impact Operations

GET Impact

http://<servername>:<portnumber>/sdpapi/admin/impact/<impact ID>

Example:

http://localhost:8080/sdpapi/admin/impact/25

Keypoints:

1. The operation name "GET" should be sent as a "POST attribute" with key "OPERATION_NAME".
2. The technician key should be sent as a "POST attribute" with key "TECHNICIAN_KEY".
3. Input is not required for "GET" Impact operation.

Output Format: (for "GET" impact)

```
<?xml version="1.0" encoding="UTF-8" ?>
<operation name="GET">
        <result>
                <statuscode>200</statuscode>
                <status>Success</status>
                <message>Details fetched successfully for Impact ID:
                1</message>
        </result>
        <Details type="impact">
            <record>
                <parameter>
                    <name>id<name>
                    <value>1<value>
                </parameter>
                <parameter>
                    <name>name<name>
                    <value>High<value>
                </parameter>
                <parameter>
                    <name>isdeleted<name>
                    <value>false<value>
                </parameter>
                <parameter>
                    <name>description<name>
                    <value>The impact is high so that it could affect the
                    business<value>
                </parameter>
            </record>
        </Details>
    </Operation>
```

GET_ALL Impact

http://<servername>:<portnumber>/sdpapi/admin/impact/

Example:

http://localhost:8080/sdpapi/admin/impact/

Keypoints:

1. The operation name "GET_ALL" should be sent as a "POST attribute" with key "OPERATION_NAME".
2. The technician key should be sent as a "POST attribute" with key "TECHNICIAN_KEY".
3. Input is not required for "GET_ALL" Impact operation.

Output Format: (for "GET_ALL" Impact)

```
<?xml version="1.0" encoding="UTF-8" ?>
<operation name="GET_ALL">
        <result>
                <statuscode>200</statuscode>
                <status>Success</status>
                <message>Impact details fetched successfully</message>
        </result>
        <Details type="impact">
            <record URI="http://localhost:8080/sdpapi/admin/impact/1/">
                <parameter>
                    <name>id<name>
                    <value>1<value>
                </parameter>
                <parameter>
                    <name>name<name>
                    <value>High<value>
                </parameter>
                <parameter>
                    <name>isdeleted<name>
                    <value>false<value>
                </parameter>
            </record>
            <record URI="http://localhost:8080/sdpapi/admin/impact/3/">
                <parameter>
                    <name>id<name>
                    <value>3<value>
                </parameter>
                <parameter>
                    <name>name<name>
                    <value>Low<value>
                </parameter>
                <parameter>
                    <name>isdeleted<name>
                    <value>false<value>
                </parameter>
            </record>
        </Details>
    </Operation>
```

Urgency Operations

GET Urgency

http://<servername>:<portnumber>/sdpapi/admin/urgency/<urgency ID>

Example:

http://localhost:8080/sdpapi/admin/urgency/25/

Keypoints:

1. The operation name "GET" should be sent as a "POST attribute" with key "OPERATION_NAME".
2. The technician key should be sent as a "POST attribute" with key "TECHNICIAN_KEY".
3. Input is not required for "GET" Urgency operation.

Output Format: (for "GET"urgency)

```
<?xml version="1.0" encoding="UTF-8" ?>
<operation name="GET">
        <result>
                <statuscode>200</statuscode>
                <status>Success</status>
                <message>Details fetched successfully for Level ID:
                1</message>
        </result>
        <Details type="urgency">
            <record>
                <parameter>
                    <name>id<name>
                    <value>URGENCYID<value>
                </parameter>
                <parameter>
                    <name>name<name>
                    <value>NAME<value>
                </parameter>
                <parameter>
                    <name>isdeleted<name>
                    <value>ISDELETED<value>
                </parameter>
                <parameter>
                    <name>description<name>
                    <value>DESCRIPTION<value>
                </parameter>
            </record>
        </Details>
    </Operation>
```

GET_ALL Urgency

http://localhost:8080/sdpapi/admin/urgency/

Example:

http://localhost:8080/sdpapi/admin/urgency/

Keypoints:

1. The operation name "GET_ALL" should be sent as a "POST attribute" with key "OPERATION_NAME".
2. The technician key should be sent as a "POST attribute" with key "TECHNICIAN_KEY".
3. Input is not required for "GET_ALL" Urgency operation.

Output Format: (for "GET_ALL" Impact)

```
<?xml version="1.0" encoding="UTF-8" ?>
<operation name="GET_ALL">
        <result>
                <statuscode>200</statuscode>
                <status>Success</status>
                <message>Urgency details fetched successfully</message>
        </result>
        <Details type="urgency">
            <record URI="http://localhost:8080/sdpapi/admin/urgency/2/">
                <parameter>
                    <name>id<name>
                    <value>2<value>
                </parameter>
                <parameter>
                    <name>name<name>
                    <value>High<value>
                </parameter>
                <parameter>
                    <name>isdeleted<name>
                    <value>false<value>
                </parameter>
            </record>
            <record URI="http://localhost:8080/sdpapi/admin/urgency/4/">
                <parameter>
                    <name>id<name>
                    <value>4<value>
                </parameter>
                <parameter>
                    <name>name<name>
                    <value>Low<value>
                </parameter>
                <parameter>
                    <name>isdeleted<name>
                    <value>false<value>
                </parameter>
            </record>
        </Details>
    </Operation>
```

Priority Operations

GET Priority

http://<servername>:<portnumber>/sdpapi/admin/priority/<priority ID>

Example:

http://localhost:8080/sdpapi/admin/priority/25/

Keypoints:

1. The operation name "GET" should be sent as a "POST attribute" with key "OPERATION_NAME".
2. The technician key should be sent as a "POST attribute" with key "TECHNICIAN_KEY".
3. Input is not required for "GET" Priority operation.

Output Format: (for "GET" priority)

```
<?xml version="1.0" encoding="UTF-8" ?>
<operation name="GET">
        <result>
                <statuscode>200</statuscode>
                <status>Success</status>
                <message>Details fetched successfully for Priority ID:
                1</message>
        </result>
        <Details type="priority">
            <record>
                <parameter>
                    <name>id<name>
                    <value>PRIORITYID<value>
                </parameter>
                <parameter>
                    <name>name<name>
                    <value>PRIORIYNAME<value>
                </parameter>
                <parameter>
                    <name>isdeleted<name>
                    <value>ISDELETED<value>
                </parameter>
                <parameter>
                    <name>description<name>
                    <value>PRIORITYDESCRIPTION<value>
                </parameter>
            </record>
        </Details>
    </Operation>
```

GET_ALL Priority

http://<servername>:<portnumber>/sdpapi/admin/priority/

Example:

http://localhost:8080/sdpapi/admin/priority/

Keypoints:

1. The operation name "GET_ALL" should be sent as a "POST attribute" with key "OPERATION_NAME".
2. The technician key should be sent as a "POST attribute" with key "TECHNICIAN_KEY".
3. Input is not required for "GET_ALL" Priority operation.

Output Format: (for "GET_ALL" Priority)

```
<?xml version="1.0" encoding="UTF-8" ?>
<operation name="GET_ALL">
        <result>
                <statuscode>200</statuscode>
                <status>Success</status>
                <message>Priority details fetched successfully</message>
        </result>
        <Details type="priority">
            <record URI="http://localhost:8080/sdpapi/admin/priority/4/">
                <parameter>
                    <name>id<name>
                    <value>4<value>
                </parameter>
                <parameter>
                    <name>name<name>
                    <value>High<value>
                </parameter>
                <parameter>
                    <name>isdeleted<name>
                    <value>false<value>
                </parameter>
                <parameter>
                    <name>color<name>
                    <value>#ff0000<value>
                </parameter>
            </record>
            <record URI="http://localhost:8080/sdpapi/admin/priority/1/">
```

```
            <parameter>
                <name>id<name>
                <value>1<value>
            </parameter>
            <parameter>
                <name>name<name>
                <value>Low<value>
            </parameter>
            <parameter>
                <name>isdeleted<name>
                <value>false<value>
            </parameter>
            <parameter>
                <name>color<name>
                <value>#666666<value>
            </parameter>
        </record>
    </Details>
</Operation>
```

Request Template Operations

http://<servername>:<portnumber>/sdpapi/admin/request_template/<templateID>

Example:

http://localhost:8080/sdpapi/admin/request_template/25/

Keypoints:

1. The operation name "GET" should be sent as a "POST attribute" with key "OPERATION_NAME".
2. The technician key should be sent as a "POST attribute" with key "TECHNICIAN_KEY".
3. Input is not required for "GET" Request Template Details operation.

Output Format: (for "GET" Request Template Details)

```
<?xml version="1.0" encoding="UTF-8" ?>
<operation name="GET">
    <result>
        <statuscode>200</statuscode>
```

```
        <status>Success</status>
        <message>Details fetched successfully for Request
        Templates</message>
    </result>
    <Details type="request_template">
      <record>
        <parameter>
          <name>Templateid<name>
          <value>1<value>
        </parameter>
        <parameter>
          <name>Templatename<name>
          <value>Mail fetching<value>
        </parameter>
        <parameter>
          <name>Status<name>
          <value>Open<value>
        <parameter>
          <name>Mode<name>
          <value>Phone Call<value>
        </parameter>
        <parameter>
          <name>Level<name>
          <value>Tier 1<value>
        </parameter>
        <parameter>
          <name>Priority<name>
          <value>Normal<value>
        </parameter>
        <parameter>
          <name>Technician<name>
          <value>Shawn Adams<value>
        </parameter>
        <parameter>
          <name>Group<name>
          <value>Printer Problems<value>
        </parameter>
        <parameter>
```

```
    <name>Category<name>
    <value>General<value>
</parameter>
<parameter>
    <name>Subcategory<name>
    <value/>
</parameter>
<parameter>
    <name>Item<name>
    <value/>
</parameter>
<parameter>
    <name>Subject<name>
    <value>Unable to fetch mails<value>
</parameter>
<parameter>
    <name>Description<name>
    <value>I am unable to fetch mails from the mail
    server<value>
</parameter>
<parameter>
    <name>Requester Details<name>
    <value/>
</parameter>
<parameter>
    <name>E-mail Id(s) To Notify<name>
    <value/>
</parameter>
<parameter>
    <name>Service Category<name>
    <value>User Management<value>
</parameter>
<parameter>
    <name>Requester Type<name>
    <value>Request for Information</value>
</parameter>
<parameter>
    <name>Impact<name>
```

```
                <value>Medium</value>
            </parameter>
            <parameter>
                <name>Impact Details<name>
                <value/>
            </parameter>
            <parameter>
                <name>Urgency<name>
                <value>Urgent</value>
            </parameter>
        </record>
    </Details>
</Operation>
```

GET_ALL Request Template Details

http://<servername>:<portnumber>/sdpapi/admin/request_template/

Example:

http://localhost:8080/sdpapi/admin/request_template/

Keypoints:

1. The operation name "GET_ALL" should be sent as a "POST attribute" with key "OPERATION_NAME".
2. The technician key should be sent as a "POST attribute" with key "TECHNICIAN_KEY".
3. Input is not required for "GET_ALL" Request Template Details operation.

Output Format: (for "GET_ALL" Request Templatet)

```
<?xml version="1.0" encoding="UTF-8" ?>
<operation name="GET_ALL">
    <result>
        <statuscode>200</statuscode>
        <status>Success</status>
        <message>Details fetched successfully for Request
        Templates</message>
    </result>
    <Details type="request_template">
        <record
        URI="http://localhost:8080/sdpapi/admin/request_template/1">
            <parameter>
                <name>TEMPLATEID<name>
                <value>1<value>
```

```
            </parameter>
            <parameter>
                <name>TEMPLATENAME<name>
                <value>Mail fetching<value>
            </parameter>
            <parameter>
                <name>comments<name>
                <value>This template is used to create request when
                there is problem in mail fetching<value>
            </parameter>
            <parameter>
                <name>ISDELETED<name>
                <value>false<value>
            </parameter>
        </record>
        <record
        URI="http://localhost:8080/sdpapi/admin/request_template/2">
            <parameter>
                <name>TEMPLATEID<name>
                <value>2<value>
            </parameter>
            <parameter>
                <name>TEMPLATENAME<name>
                <value>Unable to browse<value>
            </parameter>
            <parameter>
                <name>COMMENTS<name>
                <value>This template is used to create request when user
                is not able to browse internet<value>
            </parameter>
            <parameter>
                <name>ISDELETED<name>
                <value>false<value>
            </parameter>
        </record>
    </Details>
</Operation>
```

Support Group Operations

GET_ALL Support Group Details

http://<servername>:<portnumber>/sdpapi/admin/supportgroup/

Example:

http://localhost:8080/sdpapi/admin/supportgroup/

Keypoints:

1. The operation name "GET_ALL" should be sent as a "POST attribute" with key "OPERATION_NAME".
2. The technician key should be sent as a "POST attribute" with key "TECHNICIAN_KEY".
3. Input is not required for "GET_ALL" Request Template Details operation.

Note: Please note that the **Input** and **Output XML** formats have been changed. But for compatibility reasons, the Input operation will support both the formats.

Input:

```
<?xml version="1.0" encoding="UTF-8"?>
<Details>
        <siteName></siteName>
</Details>
</operation>
```

Output Format: (for "GET_ALL" SupportGroup)

```
<?xml version="1.0" encoding="UTF-8" ?>
<operation name="GET_ALL">
    <result>
        <statuscode>200</statuscode>
        <status>Success</status>
        <message>Details fetched successfully for Technician groups
        in site:null</message>
    </result>
    <Details type="supportgroup">
      <record
      URI="http://localhost:8080/sdpapi/admin/supportgoup/1/">
        <parameter>
          <name>group id<name>
          <value>1<value>
        </parameter>
        <parameter>
```

```
                <name>group name<name>
                <value>Hardware Problems<value>
            </parameter>
        </record>
        <record
        URI="http://localhost:8080/sdpapi/admin/supportgroup/2/">
            <parameter>
                <name>group id<name>
                <value>2<value>
            </parameter>
            <parameter>
                <name>group name<name>
                <value>Network<value>
            </parameter>
        </record>
        <record
        URI="http://localhost:8080/sdpapi/admin/supportgroup/3/">
            <parameter>
                <name>group id<name>
                <value>3<value>
            </parameter>
            <parameter>
                <name>groupname<name>
                <value>Shawn Adams<value>
            </parameter>
        </record>
    </Details>
</Operation>
```

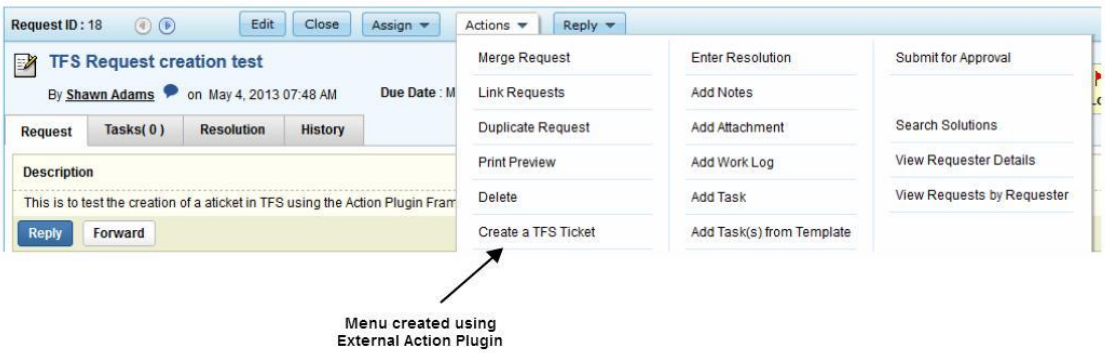
External Action Plugin

- About External Action Plugin
- Integration with Third Party Applications
- Configuring your Integration
- Request Operations Supported By Default
- Default Integration (Integration with JIRA)

About External Action Plugin

Requests usually contain tasks that need several third party apps for their completion. Example: Active Directory account creation, issue tracker integration, new mail account creation and so on. To work on such requests the technician has to accomplish these tasks by accessing the concerned third party apps, perform the necessary operations and then populate the request template with the details obtained. This has been the procedure so far. Since this process might seem tedious to some, a feature - by name **External Action Plugin** - enabling technicians to perform various third-party related actions **right from the request template** at the click of a button has been introduced.The objective of External Action Plugin is to connect to any third party app - needed for processing requests - **via XML codes** that contain the code needed for integration with third party apps.

External Action Plugin



Integration with Third Party Applications

To integrate ServiceDesk Plus with third party apps you have to modify the file Request_ActionMenu.xml situated in the location: [SDP Home]/server/default/conf to suit your requirements.

Note	1. You can connect to **third party apps** from **Actions menu** of the respective **Request's Details Page.** 2. **Actions Menu** can be **customized** as per your requirement **via External Action Plugin**

Skeleton Code (along with dummy attributes) for Integrating SDP with Third Party Apps:

```
<menus>
    <menu name="Add Jira Ticket" refresh="true">
        <displaytext>Create a JIRA ticket</displaytext>
            <roles>
                <role>SDAdmin</role>
            </roles>
            <template>
                <template>Default Request</template>
            </templates>
            <invoke>
                <class>com.manageengine.servicedesk.actionplugin.sample.JIRAIntegration</class>
            </invoke>
    </menu>
</menus>
```

The above stated code **integrates issue tracking software JIRA with ServiceDesk Plus** via **'Add Jira Ticket'** menu option that is added to the Actions menu. The statement***com.manageengine.servicedesk.actionplugin.sample.JIRAIntegration*** (which calls for **class JIRAIntegration**) does this operation.

Note	1. In the above code **JIRA Integration Class** - part of ServiceDesk Plus by default - **is invoked** to bring about integration withServiceDesk Plus. 2.Since we are dealing with **tickets (requests)** it becomes necessary to decide '**who gets access to it'** and also the **'template to be used**' while generating it. These are done using **<roles>** and **<template>** tags respectively.

Table illustrating various tags used in the code (along with their purpose):

Tags	Description	Example
menus	contains all menus you create under Actions menu; serves as root to all the menus.	**<menus></menus>**
menu	created individual menus - under Actions menu - each of which is identified using a unique 'name' attribute	**<menu>**JIRA Integration**</menu>** **<menu>**SDP Integration**</menu>**
display text	configures Text to be displayed in User Interface (UI); can be in i18N format (like "sdp.action.createticket") but should have the corrosponding key in '*.properties' file under 'custom/i18n/*	**<displaytext>**SCP to Jira Integration**</displaytext>** **<displaytext>**SCP to SDP Integration**</displaytext>**

Tags	Description	Example
roles	contains all roles (access permission) for accessing/viewing Actions Menu configured via External Action Plugin	**<roles></roles>**
role	creates roles (access permission) for accessing/viewing Actions Menu configured via External Action Plugin	**<role>**SDADMIN**</role>** **<role>**SDGUEST**</role>**
templates	Refers to various templates associated with Requests; optional tag that won't be required when all templates are taken into consideration	**<templates></templates>**
template	Refers to an unique template to be associated with Requests (like Incident Template, Reply Template etc.,)	**<template>**default template**</template>** **<template>**system defined template**</template>**
invoke	Tag responsible for invoking the necessary action (like tagging a request with ID etc.,)	**<invoke></invoke>**
class	Refers to Class with which the needed action is scripted	**<class>**JiraActionImplementation**</class>**

Configuring your Integration

Customize SDP (Actions Menu) to integrate with third party apps for performing request related operations by extending the **DefaultActionInterface** based on your requirements.

Note	
	1. **DefaultActionInterface** is the interface that allows external actions to be performed on an entity (in this case, the **Actions** Menu) 2. An **implementation of the ActionInterface Class** should be specified in the **.xml file.**

Extending the DefaultActionInterface:

```
package com.manageengine.servicedesk.actionplugin.sample;
import com.manageengine.servicedesk.actionplugin.executor.ActionInterface
import com.manageengine.servicedesk.actionplugin.executor.ExecutorData
public class JIRAIntegration extends DefaultActionInterface
    {
        public JSONObject execute(ExecutorData executorData) throws Exception {
    }
}
```

Methods available in ExecutorData are:

Package: com.manageengine.servicedesk.actionplugin.executor.**ExecutorData**

a. getActionMenuData( )

Parameter	Return Value	Action
getMenuName	String	gets the name of the action menu
getDisplayText	String	gets the display name for the action menu
getExecutorClass	String	gets the configured implementation class
getRefresh	Boolean	gets info related to whether the page should be refreshed or not)
getAllowedRoles	Array	gets info about list of allowed roles; is empty when not configured
getAllowedTemplates	Array	gets info about list of allowed templates; remains empty when not configured

b.getDataJSON( )

Will return JSONObject of the request from where the menu is invoked. Sample data would be like:


```
{
    "WORKORDERID":"4",
    "REQUESTER":"Guest",
    "CREATEDBY":"administrator",
    "DUEBYTIME":"-1",
    "RESPONSEDUEBYTIME":"-1",
    "CREATEDBY":"administrator",
    "FR_DUETIME":"-1",
    "RESPONDEDTIME":"0",
    "RESOLVEDTIME":"0",
    "COMPLETEDTIME":"0",
    "SHORTDESCRIPTION":"The printer is not working from the machines that are in the 10th floort",
    "TIMESPENTONREQ":"0hrs 0min",
    "SUBJECT":"Printer not working",
    "REQUESTTEMPLATE":"Default Request",
```

```
            "MODE":" ",
            "SLA":" ",
            "ASSET":" ",
            "DEPARTMENT":" ",
            "SITE":" ",
            "CATEGORY":" ",
            "SUBCATEGORY":" ",
            "ITEM":" ",
            "TECHNICIAN":" ",
            STATUS":"Open",
            "PRIORITY":" ",
            "LEVEL":" ",
            "IMPACT":" ",
            "URGENCY":" ",
            "IMPACTDETAILS":" ",
            "REQUESTYPE":" ",
            "CLOSURECODE":" ",
            "CLOSURECOMMENTS":" ",
            "GROUP":" ",
        }
```

Request Operations Supported By Default

With this information customers can write their own implementation code for perform the necessary operation. Now, there are two ways to update a ticket. The first option is to use the REST API support available in SDP and update the request or perform operations like adding a worklog, notes, resolution etc., The second is to use the **default return functionality supported by action plugin framework.**

The execute method returns a JSON Object. By default, **adding of notes** and **updating a request** is supported if the returned JSON complies with the supported format.

a. Adding Notes to a Request

```
{
        "message":"Request Added Successfully",
        "result":"success",
        "operation":[
        {
                "INPUT_DATA": [
```

```
                    {
                        "notes": {
                                "notesText":"Tickethas been created in JIRA
                                and information populated in SDP"
                                 }
                    }],
                "OPERATIONNAME":"ADD_NOTE"
            }],
}
```

b. Updating a Request

```
{
        "message":"Request Added Successfully",
        "result":"success",
        "operation":[
        {
            "INPUT_DATA": [
                {
                        "Jira ID":"35",
                        "Jira Key":"SDP-3",
                        "self":"http://jira-server/rest/api/2/issue/35"
                }],
            "OPERATIONNAME":"UPDATE_REQUEST"
        }],
}
```

Default Integration (integration with JIRA)

For configuring Request Actions Menu

```
<?xml version="1.0" encoding="UTF-8"?>
<menus>
    <menu name=""JiraIntegration"" refresh="true">
        <displaytext>SCP to Jira Integration</displaytext>
            <roles>
```

```
                <role>ModifyRequests</role>
            </roles>
            <template>
                <template>System Defined Template</template>
            </templates>
            <invoke>
                <class>com.manageengine.supportcenter.integrations.jira.action.
                JiraActionImplementation</class>
            </invoke>
    </menu>
    <menu name=""SDP Integration"" refresh="true">
        <displaytext>SCP to SDP Integration</displaytext>
            <roles>
                <role>ModifyRequests</role>
            </roles>
            <templates>
                <template>System Defined Template</template>
                <template>testing</template>
            </templates>
            <invoke>
                <class>com.manageengine.supportcenter.integrations.jira.action.
                SDPActionImplementation</class>
            </invoke>
    </menu>
</menus>
```

For JIRA Integration

Note: We will be providing a **default implementation for JIRA**. For this customers needs to define **another xml** which will have the **JIRA specific implementations.**

```
<?xml version="1.0" encoding="UTF-8"?>
    <menus>
    <!-- The menu name should match the one specified in the ActionMenu xml -->
        <menu name="JiraIntegration">
        <--Specifies the input parameters that should be passed to JIRA-->
            <request>
                <!-- Credentials need to login to JIRA -->
                <username>administrator</username>
```

```
<password>administrator</password>
<!-- URL to invoke to perform the operation -->
<url>http://seshadri-0040:8080/rest/api/2/issue/</url>
<!-- Params to be passed to the URL -->
    <param>
        <name>project</name>
        <type>projectpicker</type>
        <value>SCP</value>
    </param>
    <param>
        <name>Issuetype</name>
        <type>select</type>
        <value>Bug</value>
        <!-- Dynamic parameters can be specified by a $ prefix. In this
        case, the value for the variable will be taken from SDP and passed.
        -->

    </param>
    <param>
        <name>summary</name>
        <type>textfield</type>
        <value>$subject</value>
    <param>
        <name>priority</name>
        <type>select</type>
        <value>$priority</value>
    </param>
    <param>
        <name>description</name>
        <type>textarea</type>
        <value>$description</value>
    </param>
    <param>
        <name>labels</name>
        <type>labels</type>
        <value>$JIRA_ISSUE_ID</value>
    </param>
    <param>
        <name>environment</name>
```

```
            <type>textarea</type>
            <value>$description</value>
        </param>
        <param>
            <name>duedate</name>
            <type>datepicker</type>
            <value>$dueByTime</value>
        </param>
        <param>
            <name>customfield_10002</name>
            <type>url</type>
            <value>$Company Website</value>
        </param>
        <param>
            <name>customfield_10100</name>
            <type>url</type>
            <value>$JIRA_SelectList</value>
        </param>
        <param>
            <name>customfield_10200</name>
            <type>float</type>
            <value>$Jira Numeric Field</value>
        <param>
            <name>customfield_10300</name>
            <type>textfield</type>
            <value>$Jira_Text Field</value>
        </param>
        <param>
            <name>customfield_10301</name>
            <type>datetime</type>
            <value>$Jira_Date Time</value>
        </param>
        <param>
            <name>customfield_10302</name>
            <type>datepicker</type>
            <value>$Jira_Date Picker</value>
        </param>
        <param>
```

```
                <name>customfield_10303</name>
                <type>userpicker</type>
                <value>$Jira_User Picker</value>
        </param>
        <param>
                <name>customfield_10304</name>
                <type>grouppicker</type>
                <value>$Jira_Group Picker</value>
        <param>
                <name>customfield_10306</name>
                <type>textarea</type>
                <value>$Jira_Free Text Field</value>
        </param>
</request>
<success>Successfully Integrated with Jira and the Jira id is : $id</success>
<failure>Failed to Integrate to jira</failure>
<!-- Specifies the fields that are to be updated after the action is executed -->
<response>
        <param>
                <!-- name indicates the attribute in the return JSON object received
                from JIRA API -->
                <name>JIRA_ISSUE_ID</name>
                <!-- value indicates the SDP field that should be updated with the
                JIRA value -->
                <value>$ id</value>
        </param>
        <param>
                <!-- name indicates the attribute in the return JSON object received
                from JIRA API -->
                <name>JIRA_ISSUE_URL</name>
                <!-- value indicates the SDP field that should be updated with the
                JIRA value -->
                <value>$ self</value>
        </param>
                <!-- In any note needs to be added at the end of the operation, then
                it needs to be specified here. $message will take the value from the
                json object returned by JIRA. Hardcoded messages can also be
                given -->
        <notes>
        <note>Ticket is created in jira with key : $key And with Id: $id</note>
```

```
                    <note>Ticket is created in jira with issueID : $id</note>
                    </notes>
            </response>
    </menu>
<menus>
```

Reports

ManageEngine ServiceDesk Plus gives you a set of preset help desk, problem/change and asset reports and so on generated from the data available in the application.

To view the various reports available in application

1. Log in to the ServiceDesk Plus application using the user name and password of an admin user.
2. Click the **Reports** tab in the header pane. The next page lists the various reports grouped under different heads. Along with the default reports you also create New Custom Reports, New Query Reports, New Scheduled Report.

   The following sections explain the various reports and the kind of data that each of these reports represents.

   - About ServiceDesk Plus
   - New Custom Report
   - New Query Report
   - Flash Report
   - New Scheduled Report
   - Custom Settings

Pre-defined ServiceDesk Plus Reports

ServiceDesk Plus provides you with pre-defined reports that can be classified as Helpdesk, Problem/Change, Request Timespent, Survey, Asset, Audit, Resources, Purchase, Contracts reports. Technicians with administrator privilege and Full access permission over Reports module can edit these pre-defined reports to suit their needs.

Helpdesk Reports

Helpdesk Reports includes all request related reports such as, Reports on Incident Requests, Reports on Service Requests, Reports by All Requests, Reports by Completed Requests, Reports by Pending Requests and Summary Requests.

Reports on Incident Requests

These reports consists of all the open, closed and SLA violated Incident Requests based on parameters such as, category, priority, request date, due date, technician and group.

Reports on Service Requests

These reports consists of all the open, closed and SLA violated Service Requests based on parameters such as, category, priority, request date, due date, technician and group.

Reports by all requests

These reports provide you with graphical view of all open and closed requests by category, group, created date, department, due date, level, priority, status, technician, status by category, status by level, status by priority, status by technician.

Reports by completed requests

These reports show the distribution of completed and closed requests. Similar to Report by all request, these reports are also generated based on various parameters such as category, group, department, due date, level, mode, priority and request date.

Reports by SLA Violated requests

These reports display the distribution of the requests that have violated the SLA that was applicable on them. You can view these violations based on the request category, group, the department from which the request was generated, and the technician who handled the request and so on.

Reports by pending requests

This shows the distribution of all pending requests for a specific period of time, based on different parameters, such as priority, department, technician, category, due date, request date and so on.

Request Summary Reports

These reports provide you with a high level view of the requests received and closed during a particular period, date-wise. The summary reports available are the received request summary reports by date and closed request summary reports by date. These reports are generated on the parameters of request received or closed by technicians, request received or closed in a specific category, priority, and mode.

Problem/Change Reports

Problem/Change Reports includes all problem and change related reports such as, Reports by All Problem, Reports on Pending Problems, Reports on Completed Problems, Reports by All Changes, Reports on Pending Changes and Reports on Completed Changes.

Reports by All Problems

You get a graphical view as well as tabular view of all open, closed, on-hold and resolved problems based on different parameters such as category, status, priority, impact, technician and urgency.

Reports on Pending Problems

You get a graphical view as well as tabular view of all open and on-hold problems based on different parameters such as, category, priority, urgency and incidents counts.

Reports on Completed Problems

You get a graphical view as well as tabular view of all closed problems based on different parameters such as, category, priority, urgency, cost and incident counts.

Reports by All Changes

You get a graphical view as well as tabular view of all approval, approved, completed, implementation, planning, rejected, release, requested, review and testing changes based on different parameters such as, category, impact, status, change type, technician, time spent on change and priority.

Reports on Pending Changes

You get a graphical view as well as tabular view of all pending changes such as approval, approved, implementation, planning, release, requested, review and testing changes based on different parameters such as, category, priority, change type, urgency, incident counts and problem counts.

Reports on Completed Changes

You get a graphical view as well as tabular view of all completed changes based on different parameters such as, category, change type, priority, urgency, cost, incident counts and problem counts.

Request Timespent Reports

These reports provide information on the technician's time spent on requests and the cost per technician based on the time spent. You can group the report information based on category, department, requester and technician attending to the request. The time spent report by requester, gives you an idea on the cost per requester and the number of request.

By default, the help desk reports will be created for the current week. You can choose any custom period of your choice or choose to create reports for last week, or this month, or for just this day. All these reports can be used for analysis purposes. For example, the reports mapped against the parameter technician can be used to measure the technician responsiveness and load handling capability.

Survey Reports

These reports provide you with the summary details on the survey results based on various parameters. All these reports help in measuring the efficiency and effectiveness of the support team and take respective corrective actions.

Under Survey reports you have,

- **Survey Overview Report** which gives you the overall ratings of each of the questions in the survey based on the feedback of the users who took the survey. The ratings give you an idea about the value that is associated with the corresponding question. This report provides both tabular and a graphic representation of the results.
- **Survey Results by Category** report has the survey information grouped based on the category. Against each category, the points gained by each of the survey questions will be tabulated. Depending on the kind of survey questions, this report will provide valuable information based on individual request categories.
- **Survey Results by Department** has the survey information grouped based on the department from which the requests originated. The points for each question of the survey is mapped against the department name from where the request originated.
- **Survey Results by Level** has the survey information grouped based on the level of the requests. The points for each question of the survey is mapped against the level of the request for which the survey was sent.
- **Survey Results by Mode** has the survey information grouped based on the mode of the requests. The points for each question of the survey is mapped against the mode of the request for which the survey was sent. This also gives you an idea on the mode of request that is most frequently used to create a new request.
- **Survey Results by Priority** has the survey information grouped based on the priority of the requests. The points for each question of the survey is mapped against the priority of the request for which the survey was sent.
- **Survey Results by Requester** has the survey information grouped based on individual requester. This helps you in finding out which requester has sent the maximum number of requests and any other information based on your survey questions. This will give you an idea of the users perspective and help you in

deciding about the corrective actions that need to be taken to make the support team more efficient and effective.

- **Survey Results by Technicians** has the survey information grouped based on individual technicians. Each of the survey questions will carry some value and based on this value, the average value for the questions will be marked against the technicians. These points will enable you to objectively measure the technicians efficiency and effectiveness from the users perspective and take any corrective measures, if required.

Asset Reports

All Computers (Workstation and Servers)

The workstation reports give you information about the various workstation-related metrics.

- **Computers by Domain** report tells you the computers grouping based on domains. Thus you get to know the number of computers in each of the domains in your organization network.
- **Computers by Manufacturer** report gives you a high-level distribution view of the computers used from different manufacturers.
- **Computers by OS** report gives you an overview on the percentage of computers belonging to each type of operating system. Thus you will also know the different types of Operating Systems in use in your organization.
- **Computers by Processor Manufacturer** report gives you the graphical view as well as the tabular view of the computers by processor manufacturer. Thus it gives a count of all computers with processor vendor name used in your organization.
- **Computers by Processor Type** report will give a tabular view of all processor type in each computers used in your organization.
- **Computers by Vendor** report gives a graphical as well as the tabular view of all vendors for each the computers in your organization.
- **Computers with less than 256MB RAM** and **more than 256MB RAM** gives the report of all computers in your organization with more than 256MB RAM and less than 256MB RAM.
- **Operating System by Region** gives you the list of workstations that are grouped under a particular region but are not yet assigned to any user or department. The list of computers is also displayed in the tabular form just below the graph.
- **Unassigned workstations by Domain** gives you the number of computers that are connected to the domains but are not assigned to any user or department or computer. The list of computers is also displayed in the tabular form just below the graph.

Server

- **Server with less than 10% Free Disk space** gives the report of all the servers in your organization with less than 10% free Disk space.
- **Servers with less than 512MB RAM** gives the report of all the servers in your organization with less than 512MB RAM.

Software

Under software reports you have, Software Reports - Purchased Vs Installed software, Software by Category and Software by Manufacturer**.** Under **software reports - purchased Vs Installed** software you can view the list of all software purchased vs installed in each of the workstation in your organization. Under **software by category** you can view the list of all software classified under default software category. Under **Software by Manufacturer** you can have the tabular view of all software used in your organization listed based on the manufacturer of the software.

Workstation Summary Reports

Under workstation summary reports you have, Software Summary Report and Hardware Summary Report**. Software summary report** provides you with the tabular view of all the software installed in each workstation. This includes all managed, unmanaged software. **Hardware summary report** provides you with all the hardware details of an workstation such as, memory details, drive information, hard disk information, physical drive information, network adapters and so on. Thus it gives a complete overview of all the software installed and hardware details of an workstation.

Audit Reports

Under audit reports you have audit history by workstation, audit history by time line, audit history by changes. The updated audit reports are available only by scanning the workstation. **Audit history by workstation** gives a complete report on the account of all actions taken place in a workstation. This provides detail report on both hardware and software details. **Audit history by time line** gives a detail overview of all actions taken place in a workstation for a specific time period. By default you can get only the current week report. **Audit history by changes** gives a complete report on all changes taken place in a workstation for the current week.

To get the audit report for previous weeks,

1. Click the **Edit** button. This opens the Custom Reports.
2. From the Date Filter block-> select the **Scan Date** option from the combo box -> select the duration by clicking **During** combo box which provides you with the last week, last month, this month, this quarter, last quarter or yesterday options to generate reports. **(OR)** if you wish to generate reports for a specific time period then select the **From and To** radio button and select the dates from the calendar button.
3. Click **Run Report** button. You can get report for the specified time period.

Resources Reports

Under resources reports you have, resources by product type, resources by vendor, resources types by site. **Resources by product types** gives the graphical view as well as the tabular view of all the resources (assets) available for all default and newly added product types. **Resources by Vendor** gives the graphical and tabular view of all the resources in the organization based on the vendor name. The name of the vendor will be in X-axis and the resource count will be in Y-axis. **Resource Types by Site** lists all the available resources in your organization distributed across each sites of your company.

Contract Reports

Under contracts reports you have reports based on Active contracts, Contracts by Max value, Contracts by status, Contracts by vendor and Expired contracts. **Active Contracts** shows all the open contracts in your organization in a graphical and tabular view. Contracts by **Max Value** shows all the contracts which costs above 1000$ will be displayed in both graphical and tabular view. **Contracts by Status** shows the list of all contracts with its status level such as, open contracts, expired, expired in the last 30 days, expiring in next 7 days and expiring in next 30 days in a graphical and tabular view. **Contracts by Vendor** shows all the contracts with all status level but classified based on the vendor. **Expired Contracts** shows the list of all the expired contracts in your organization.

Purchase Reports

Under purchases you have reports based on PO Vendors, PO by Ordered Date, PO by Required Date, PO by Status. **Purchase orders by vendors** gives the graphical view and tabular view of all the approved, pending for approval, partially approved, closed, overdue, POs due in next 7 days, POs due in next 30 days purchase orders classified based on the vendor name. **Purchase orders by ordered date** gives the graphical view and tabular view of all the approved, pending for approval, partially approved, closed, overdue, POs due in next 7 days, POs due in next 30 days purchase orders classified based on the ordered date. **Purchase orders by required date** gives the graphical view and tabular view of all the approved, pending for approval, partially approved, closed, overdue, POs due in next 7 days, POs due in next 30 days purchase orders classified based on the required date.

Custom Reports

ServiceDesk Plus enables you to create reports that meet your need if you are unable to find them from the list of out-of-the-box reports already available. To create your custom reports,

1. Login to ServiceDesk Plus application with your **user name** and **password**.
2. Click **Reports** tab in the header pane.
3. Click **New Custom Report** button in the reports home page. This opens the Custom Report page that will help you navigate through the various steps involved in the creation of a custom report.
4. Specify the relevant **Report Title** in the given text field. This is a mandatory field.
5. Choose the **Report Type** by selecting the radio buttons. You can create **Tabular Reports, Matrix Reports, Summary Reports, Audit Reports.**
6. Choose the module (Request, TimeSpent, Problem, Change and so on) for which you wish to create the report. The audit History module will be enabled only for audit reports. This is applicable only for the tabular and matrix reports. For summary reports, audit reports default modules will be selected.
7. Click **Proceed to Report Wizard >>** button. This opens the Display Columns page. This page differs for each report type. Each report type has to go through various steps before generating it as a customized report.

To generate Tabular Reports

Tabular reports are simple reports that allow you to list your data based on certain criteria. If you had selected the **Tabular Reports** option then you have five steps to create a complete customized tabular report. If you wish to skip a particular option then click the next tab and move to the next step.

Display Columns

The first step to create tabular reports is to select the display columns which need to be displayed in the tabular report. Select the columns from the **Available Columns** list box and click **>>** button to move them to **Display Columns** list box. Click the **<<** button if you want to remove any column from the **Display Columns** list box.

Click **Next** button. This leads you to the grouping of columns, where you can choose two levels of grouping.

Filter Options

1. If you are using the date/time filter criteria, select the date column name from the **Select Column** combo box.
2. Select the period for which you want to generate the report. If you would like to generate report during this week, last week, this month, last month, this quarter, last quarter or today, yesterday then select the **During** radio button and select the time period from the combo box. **(OR)** If you wish to provide a custom period, then select the **From** and **To** date using the calendar button.

3. To use **Advanced Filtering**, select the column name such as, Requester name, region site and so on from the combo box. Select the criteria (is, is not, contains and so on) from the combo box. You can pick a value by invoking the icon. Select **AND** or **OR** option from the combo box to add more than one criteria. You can delete a criteria by clicking the delete icon.
4. Click the **Choose** button and select the value for the column to add as a filter condition.
5. Click as **Add to Filter** button to add the filter condition to the filter set which gets listed under the **Filter Set** title.
6. Click **Next** button to go to the grouping of data.

Grouping Data

From the **Group by** combo box, select the column based on which you wish to group the data.

Select the **Order by** from the combo box.

Click the **Next** button to go to the next stage.

Column Summary

You can get the column summary for all the columns in the report. If you wish to have the column summary displayed in the report, select the column summary options available for each column. The summary options differs for each column you have selected.

Click the Next button to go the next option.

Charts

In addition to the tabular chart, if you wish to have a chart displayed for a particular column then, or you can skip this option and directly run the report.

1. Select the chart type to be displayed from the combo box.
2. Select the **Axis column** from the combo box to be displayed in the chart . This is a mandatory field. The data will be grouped in the chart based on the column selected.
3. Select the **Display Format** from the combo box. For ex: in numbers or in percentage.
4. Click **Run Report** button.

On running the report you get a tabular report as well as the graphical view for the selected column data.

To generate Matrix Reports

Matrix reports provides the data in a grid manner (m x n format). It allows you to study different scenarios based on the chosen criteria. If you have selected matrix reports you have two steps to generate a complete matrix report. Click the **Proceed to Report Wizard** button to go to next page.

Grouping Data

You have simple grouping and advanced grouping option for matrix reports.

Simple Grouping

1. Click the **Simple** grouping tab. You have two options **Top column** information and **left column** information. Select the top column information from the combo box. This is a mandatory field.
2. Select the left column information from the combo box. This is a mandatory field.
3. Select the **summarize column count** from the combo box to get the column summary.

Normal Grouping

1. Click the **Advanced** grouping tab. You have two options **Column grouping** and **Group by**.
2. Select the **Columns** and **Date format** to be displayed from the combo box. Select the group by from the combo box. You have three options for group by to be displayed in the report. This is a mandatory field.
3. Select the **summarize column** from the combo box.
4. Select the period for which you want to generate the report. If needed you can also provide a custom period by choosing the from and to date manually.
5. Click **Next**.
6. To use **Advanced Filtering**, you first need to select the radio button for matching all the selected criteria or any one of them. Then from the column listing, select the various columns and set the match operator and mention the values for matching.

Filter Options

1. If you are using the date/time filter criteria, select the date column name from the **Select Column** combo box.
2. Select the period for which you want to generate the report. If you would like to generate report during this week, last week, this month, last month, this quarter, last quarter or today, yesterday then select the **During** radio button and select the time period from the combo box. **(OR)** If you wish to provide a custom period, then select the **From** and **To** date using the calendar button.
3. To use **Advanced Filtering**, you first need to select the radio button for **matching all the selected criteria** or a**ny one of them**. Then from the column listing, select the various columns from the list and set the

match operator and mention the values for matching the column as (is, is not, contains and so on) from the combo box.
4. Click the **Choose** button and select the value for the column to add as a filter condition.
5. Click as **Add to Filter** button to add the filter condition to the filter set which gets listed under the **Filter Set** title.
6. Click **Run Report** button. You get a matrix report

Request Summary Reports

Summary reports are detailed reports that allow you to list your data based on certain criteria. To create a request summary report, select the corresponding radio button from the custom reports page and click the **Proceed to Report Wizard** button to go to next page. You have two steps to generate a complete request summary reports.

Display Columns

The first step to create request summary reports is to select the display columns which need to be displayed in the request summary report. Select the columns from the **Available Columns** list box and click **>>** button to move them to **Display Columns** list box. Click the **<<** button if you want to remove any column from the **Display Columns** list box.

Click **Next** button. This leads you to the grouping of columns, where you can choose two levels of grouping.

Filter Options

1. If you are using the date/time filter criteria, select the date column name from the **Select Column** combo box.
2. Select the period for which you want to generate the report. If you would like to generate report during this week, last week, this month, last month, this quarter, last quarter or today, yesterday then select the **During** radio button and select the time period from the combo box. **(OR)** If you wish to provide a custom period, then select the **From** and **To** date using the calendar button.
3. To use **Advanced Filtering**, you first need to select the radio button for **matching all the selected criteria** or a**ny one of them**. Then from the column listing, select the various columns from the list and set the match operator and mention the values for matching the column as (is, is not, contains and so on) from the combo box.
4. Click the **Choose** button and select the value for the column to add as a filter condition.
5. Click as **Add to Filter** button to add the filter condition to the filter set which gets listed under the **Filter Set** title.
6. Click **Next** button to go to the grouping of data.

Audit Reports

Audit reports are detailed history report that allow you to list your inventory history data based on scan time criteria. Click **Proceed to Report Wizard** button to go to the next page. This opens the **Audit History Report** page.

You have three audit history reports options, on scanning the workstation you get the updated version of all the audit reports.

- **Audit history by workstation.**

  Audit history by workstation gives a complete audit reports of the hardware and software details of the workstation.

- **Audit history by time line.**

  Audit history by time line gives a detail overview of all the actions taken place in a workstation for a specific time period.

- **Audit history by changes.**

  Audit history gives a complete report on all changes taken place in a workstation.

Select any of the three audit history report options. Specify the scan date from the combo box.

Click **Run Report** button. You get the audit history report.

Creating New Query Reports

1. Click on the **Reports** tab. This opens the All Reports page.
2. Click **New Query Report** button. This opens the Query Editor page.
3. Select the **Table Schema** from the combo box say, requests, timespent and so on. Click **Get** to view the table schema for the selected option.
4. Specify the title of the report in the **Report Title** field. This is a mandatory field.
5. Specify the query to be executed for getting reports in the **Query** field. This is a mandatory field.
6. The logs will display all error messages on providing any wrong query.
7. Click **Run Report** to run query report.

Tips

1. Date Formulae: DATE_FORMAT (FROM_UNIXTIME (COLUMN_NAME/1000),'%d-%m-%Y %k: %i') 'Column Alias'.
2. Minutes Formulae: ROUND ((((COLUMN_NAME/1000)/60)) % 60) 'Minutes'.
3. Hours Formulae: ROUND (((COLUMN_NAME/1000)/3600)) 'Hours'.
4. Compare Date: COLUMN_NAME >= (UNIX_TIMESTAMP (DATE ('2006-07-24 00:00:00')) * 1000).
5. Convert Memory in GB: ((((MEMORY_COLUMN)/1024)/1024)/1024)
6. Default Value For Null Data: COALESCE (COLUMN_NAME, 'Unassigned')
7. Group by: Query statement will be ends with order by <column_index>

Additional Field tables

1. Request Additional Fields - WorkOrder_Fields
2. Requester Additional Fields - Requester_Fields
3. Technician Additional Fields - Technician_Fields
4. Asset Additional Fields - Asset_Fields
5. Workstation Additional Fields - Workstation_Fields
6. Problem Additional Fields - Problem_Fields
7. Change Additional Fields - Change_Fields

Flash Report

Flash Reports help to get a quick and customizable overview of reports. Using Flash Reports we can generate a high level picture on the status of the requests based on the selected criteria. It tells us the number of requests that are present for a given condition.

To configure and view flash reports,

1. Login to ServiceDesk Plus application with your user name and password.
2. Click **Reports** tab in the header pane.
3. Click **Flash Reports** button in the reports home page. This opens the Flash Reports page.
4. Select the filter parameters:

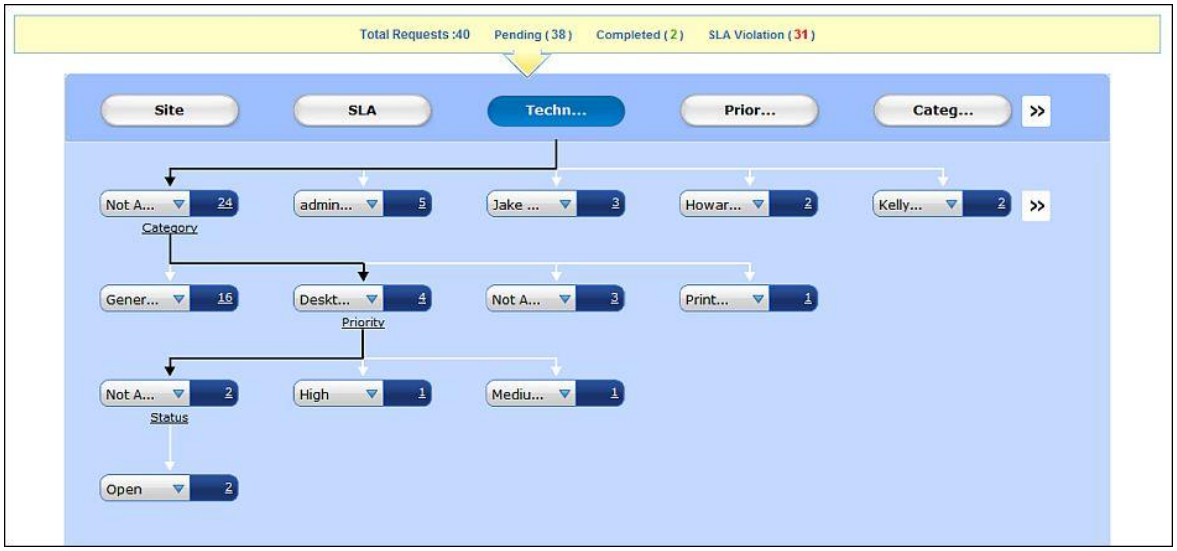
    - Select Created/Responded/Due-by/Completed time from the drop down box.
    - Select pre-defined time period from the drop down box by choosing **During** option or customize the time period by selecting the **From** and **To** dates from the calendar.

5. Click **OK**.
6. The report is loaded in the same page.

The report shows information pertaining to requests in the mentioned time period under conditions such as Total requests, Pending Requests, Completed Requests and SLA Violated Requests. Based on parameters such as SLA, Technicians, Priority, Category, Site, Level, Type, Urgency, Impact, Mode and Status, the reports can be further scrutinized. These parameters can be viewed by clicking on the button.

For example,

If you need to know the number of requests that have violated the SLA, then click on "SLA" option. This shows number of violated/non-violated requests. For further information on the requests, click on the downward arrow and choose from one of the given parameters. Say, you need to know technicians handling the SLA violated requests, and then click on downward arrow and choose "Technician" from the drop down list. The technicians along with the number of requests handled by them are displayed in the next branch. Further if you want to know the priority of requests handled by a particular technician, then click on downward arrow next to the technician name and select "Priority". This displays the number of requests that have normal, high and low priorities.



If you click on the number that is displayed along with the report, the list of requests will be displayed in a new window. By clicking on the title of the request, you can view the request details in the space below. The request details cannot be edited/modified in this screen.

Scheduling Report Settings

1. Click **Reports** tab. This opens the All Reports page.
2. Click **New Scheduled Report** button. This opens Schedule Report Settings page.
3. To generate report once click **Generate Once** radio button. Specify the date using the calendar button and Time from the combo box on which the report has to be generated.
4. Select the **report to schedule** from the combo box. The list will display all the available reports such as, Reports by All requests, Reports by Completed requests, Reports by SLA Violated reports and so on. This is a mandatory field.
5. Specify the **E-mail ID** of the person to whom the generated report has to be sent.
6. Save the details. Scheduled reports gets displayed in the **Schedule Reports** page.
7. To generate reports on a daily basis click **Daily Report** radio button and specify the **From Date, Time**, **report to be scheduled** and the **e-mail address** of the person to whom the report has to be sent. Save the details.
8. To generate weekly report click **Weekly Report** radio button. Specify the days of the week on which you want to generate reports by selecting the check box. Or select **Everyday** check box to generate reports on daily basis. Also specify the time, report to schedule, and E-mail ID of the person to whom the generated report has to be sent. Save the details.
9. To generate reports on a monthly basis click **Monthly Report** radio button. Specify the month on which the report has to be generated by enabling the check box. Or select **Every Month** check box to generate reports on monthly basis. Also specify the time, report to schedule, and E-mail ID of the person to whom the generated report has to be sent. Save the details.

> **NOTE:** If a technician is deleted or the login credentials are removed from the application, then the ownership of the scheduled reports created by that technician is transferred to the technician who has performed the delete/unassigned login credentials action.

Custom Settings

The custom settings wizard helps you to customize the report column size. This helps to increase or decrease the tabular column size, matrix column size and modify the date and time format of your custom reports.

1. Click **Reports** tab. This opens the All Reports page.
2. Click the **Custom Settings** button. The Report Settings dialog pops up.
3. If you wish to customize the **Tabular column size**, specify the size of the small text, large text, number size and date and time text. And update the changes.
4. If you wish to customize the **Matrix column size**, specify the size of the cell width and cell height and update the changes.
5. To disable the links in reports enable the check box beside **Disable links in report** under General Settings block. To view **one Group per page**, enable the check box beside the same.
6. For empty values, enter the value to be shown in the report, such as Not Assigned, Null and so on.
7. Click the **Update** button to update the changes.

Appendix

This topic explains the various features that are not grouped under any of the modules but can be used from the application.

- System Log Viewer
- Backup Process
- Restore Process
- Change Web Server Port
- Feedback
- Troubleshooting

System Log Viewer

You can view the error logs generated by the ServiceDesk Plus application online.

To view the error logs,

1. Log in to the ServiceDesk Plus application using your user name and password. If you have the permissions to view the support information, you will see a **Support** tab in the header.
2. Click the **Support** tab in the header pane.
3. Click the **System Log Viewer** link available in the Support page.

To view the individual error details,

1. In the **Error Log** list view page, click the hyper linked **Error Message**. An error log window with the details of the error is opened.
2. The **Error Message** field contains the complete error message.
3. The **Module** field indicates the module in which the error occurred.
4. The **Occurred At** field indicates the date and time when the error occurred.
5. If the probable cause of the error is known, then the cause is displayed in the **Probable Cause** field.
6. The **Performed By** field indicates the origin of the error. For example, if it is a system-generated error, then the Performed By field contains System as its value.
7. Click **Close** after viewing the details of the error message.

None of these fields are editable. You can also search for a specific error log details with the help of the **Search in** feature.

To search for error logs,

1. In the left menu, the search block is found at the bottom. If you are in the Error Log list view page, then by default, the **System Log** option is chosen in the **Search in** combo box. If not, then choose **System Log**.
2. In the **Enter Keyword** text field, enter the search string.
3. Press **Enter** on your keyboard or click **Go**. The search results will display all the error logs that match the search string.
4. Click the error log of your choice to view the same.

You can delete these error logs.

To delete individual error logs

1. In the **Error Log** list view, select check boxes beside the **Error Messages** that you wish to delete.
2. Click **Delete**.

If you want to delete all the existing error messages, then click the **Delete All** button.

Performance Monitoring Tool

Monitor ServiceDesk Plus software metrics and scale the application's capacity (based on memory utilization and cpu usage) using the performance monitoring tool. This tool through regular monitoring (as per the configured schedule) checks for performance issues and finds out their rootcause. It presents "a clear picture of performance issues" which enable the application user to provide administrators with the exact log details required for effectively tackling application slowdowns..

Notes:

- Performance Monitoring Tool is an **url-based tool** which can be enabled/disabled only **through urls.**
- **Technicians with SDAdmin role** alone have the rights to **operate performance monitoring tool**

Contents

- Performance Monitoring Tool
- When will the performance monitoring tool alarm you?
- URLs for operating Performance Monitoring Tool
- Details generated during Performance Monitoring
- Notes

Performance Monitoring Tool

- Is an url-based thread dump generation tool
- Provides you with the following parameters: **'cpu usage', 'free memory' & 'time interval'** using which application performance can be monitored
- Allows you to change performance monitoring schedule to suit your requirements
- Can be enabled/disabled

When will the performance monitoring tool alarm you?

- When the parameter **'cpu usage' exceeds threshold value** for the specified time interval (OR)
- When the parameter **'free memory' goes below threshold value** for the specified time interval

URLs for enabling, modifying & disabling Performance Monitoring Tool

PURPOSE	URL
Enable	http://servername:portnumber/PerformanceSchedule.do?performancemonitoring=true
Modify	http://servername:portnumber/PerformanceSchedule.do?performancemonitoring=true&timeinterval=5&cpulimit=90&freememorylimit=120
Disable	http://servername:portnumber/PerformanceSchedule.do?performancemonitoring=false

Details generated during Performance Monitoring

To view details obtained during Performance Monitoring:

- Click **'System Log Viewer'** under **'Support Tab'**
- **Logs generated during performance monitoring** will be appended with the **threaddump0.txt file** (under the location **SDP_home/server/default/log/ Directory**) and the**reason for the performance degradation** will also be available in the same.

Notes:

- **Modify URL parameters** (time interval=5; cpulimit=90; freememory=120;) provided here **are example values**. This can be modified as per requirement.
- **Default parameter values** (generated when invoking Enable URL) **are : time interval=2;cpu limit=80; freememory=100**

Back up Process

- Back up Process in Windows
  - Back up Process in Windows without file attachments
- Back up Process in Linux
  - Back up Process in Linux without file attachments

Back up Process in Windows

1. Shut down ManageEngine ServiceDesk Plus server before you perform a back up of your data.
2. Click **Start -> Programs -> ManageEngine ServiceDesk Plus -> Backup Data**. [OR]

   From command prompt, go to <*ServiceDesk*>*bin* directory and execute the **backUpData.bat** as shown below,

   C:\ManageEngine\ServiceDesk\bin\backUpData.bat

2. A backup of the data in the database and the file attachments that have been added in the application is created in <*ServiceDesk*>*backup* directory. The backup file has to be a .data file.
3. The file name for the backup file will be of the pattern backup_servicedesk_[build number]_fullbackup_month_date_year_hr_min.data. For example, a back up taken in Version 8.0 of ServiceDesk Plus looks like this,

   backup_servicedesk_8000_fullbackup_01_18_2011_15_28.data

ServiceDesk Plus is designed in such a way that the file attachments are not stored in the database. The attachments are stored in the file attachments folder of the installation directory (C:\ManageEngine\ServiceDesk). If you are upgrading the server, then you can save time by performing a back up without file attachments i.e., back up of the database alone.

Back up Process in Windows without file attachments

1. From command prompt, go to <*ServiceDesk Plus*>*bin* directory and execute **backUpData.bat --trimmed** command to start the database back up.

   C:\ManageEngine\ServiceDesk\bin\backUpData.bat --trimmed

2. Once the back up is complete, a backup file with .data extension is placed in the **Trimmed Backup** folder under ServiceDesk Plus Home directory.

3. The backup file contains information such as, the Build number of ServiceDesk Plus, and date and time when the back up was performed. Here is the format of the backup file.
   backup_ servicedesk_ [build number] _database_month _date _ year _ hour _minutes.

   For example, a trimmed backup taken in Version 8.0 of ServiceDesk Plus looks like this, **backup_servicedesk_8000_database_01_18_2011_15_28.data**

Back up Process in Linux

Follow the steps given below to take a back up of the ManageEngine ServiceDesk Plus data:

1. Shut down ManageEngine ServiceDesk Plus server before you perform a back up of your data.
2. Go to *<ServiceDesk>/bin* directory from the command prompt.
3. Execute the **backUpData.sh** file as given below:

   $ sh backUpData.sh

   The backup file is created in the *<ServiceDesk>/backup* directory. The backup file has to be a .data file

3. The file name for the backup file is of the pattern backUp_servicedesk_[build number]_fullbackup_month_date_year_hr_min.data.

   For example, a back up taken in Version 8.0 of ServiceDesk Plus looks like this, **backup_servicedesk_8000_fullbackup_01_18_2011_15_28.data**

Back up Process in Linux without file attachments

1. From command prompt, go to *<ServiceDesk Plus>\bin* directory and execute **backUpData.sh --trimmed** command to start the database back up.

$ sh backUpData.sh --trimmed

2. Once the back up is complete, a backup file with .data extension is placed in the **Trimmed Backup** folder under ServiceDesk Plus Home directory.
3. The backup file contains information such as, the Build number of ServiceDesk Plus, and date and time when the back up was performed. Here is the format of the backup file.
   backup_ servicedesk_ [build number] _database_month _date _ year _ hour _minutes.

   For example, a trimmed backup taken in Version 8.0 of ServiceDesk Plus looks like this, **backup_servicedesk_8000_database_01_18_2011_15_28.data**

Restore Process

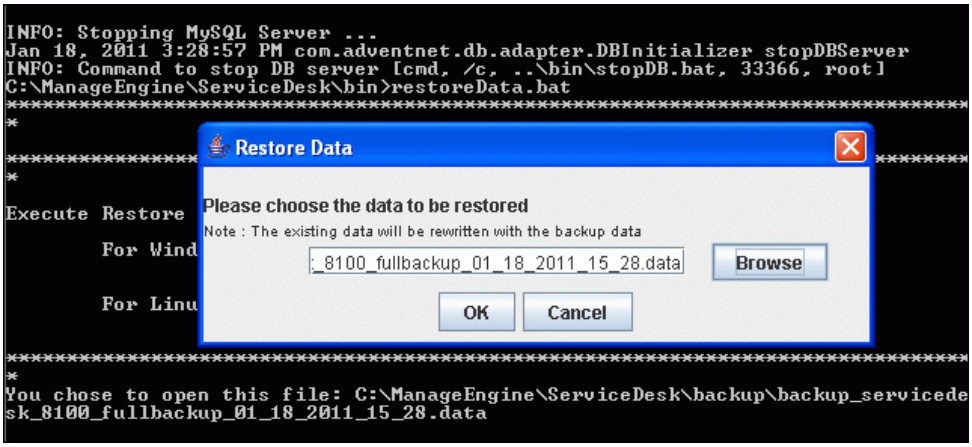
- Restore Process in Windows
- Restore Process in Linux

Restore Process in Windows

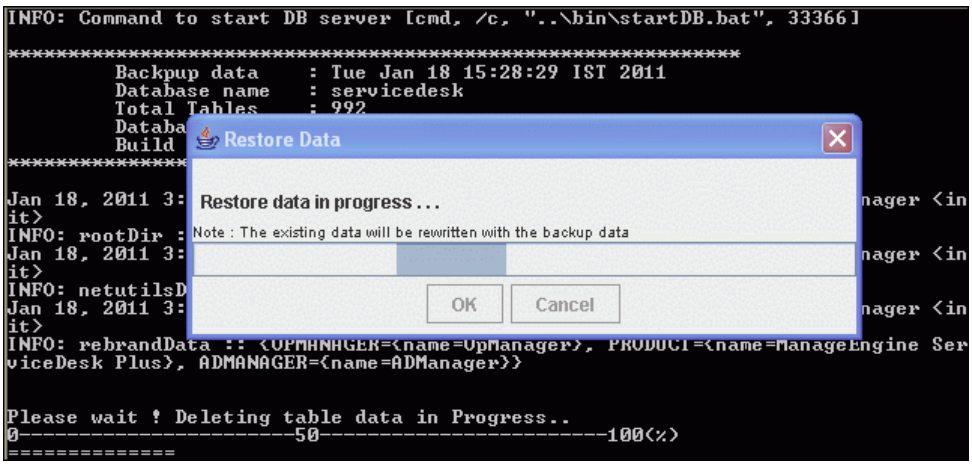
1. Shut down ManageEngine ServiceDesk Plus Server before you restore the data.
2. From the command prompt, go to *<ServiceDesk>\bin* directory.
3. Execute the file **restoreData.bat** as shown below:

   C:\ManageEngine\ServiceDesk\bin\backUpData.bat

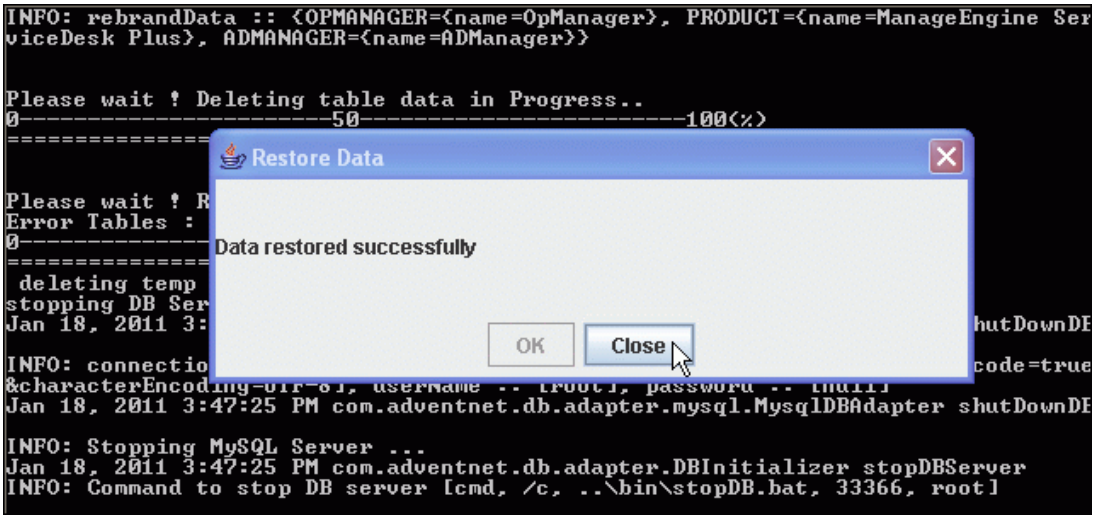
4. The **Restore Data** dialog pops-up. Browse the backed up file and click **OK**.



4. The data begins to restore. While restoring the existing data is rewritten with the backed up file.



5. **Close** on successful installation.



Restore Process in Linux

1. Shut down ManageEngine ServiceDesk Plus Server before you restore the data.
2. Go to *<ServiceDesk>/bin* directory from the command prompt.
3. Execute the file **restoreData.sh** as shown below:

   $ sh restoreData.sh <backup file name>

The back up file name has to be the .data file from which you wish to restore the data. This will restore the data from the back up file.

Change Web Server Port

- Change Web Server Port on Windows
- Change Web Server Port on Linux

Change Web Server Port on Windows

Follow the steps given below to change the web server port where the ServiceDesk Plus server will be running:

1. Go to <*ServiceDesk*>*bin* directory.
2. Execute the file **changeWebServerPort.bat** at command prompt as shown below:

C:\[ServiceDesk Plus Home]\bin>changeWebServerPort.bat <new port number> <http or https>

3. The web server port will be reset to the new port number that you have specified.
   - HTTPS - To start the ServiceDesk Plus server in HTTPS mode.
   - HTTP - To start the ServiceDesk Plus server in HTTP mode. By default, executing the file as **changeWebServerPort.bat <new port number>** will start the server in HTTP mode.
4. f the port number is occupied, you will be prompted to enter a different port number. If you do not wish to enter a different port number then press **N** on your keyboard to exit the application. Else press **Y** and enter a different port number that is unoccupied.

This change will be effected only when you restart the server. To connect to the ServiceDesk Plus server after restarting, the new port number must be used.

Change Web Server Port on Linux

Follow the steps given below to change the web server port where the ServiceDesk Plus server will be running:

1. Go to <*ServiceDesk*>/*bin* directory.
2. Execute the file **changeWebServerPort.sh** at command prompt as shown below,

$ sh changeWebServerPort.sh <new port number> <http or https>

3. The web server port will be reset to the new port number that you have specified.
   - HTTPS - To start ServiceDesk Plus server in HTTPS mode.

- HTTP - To start ServiceDesk Plus server in HTTP mode. By default, executing the file as **changeWebServerPort.bat <new port number>** will start the server in HTTP mode.

4. If the port number is occupied, you will be prompted to enter a different port number. If you do not wish to enter a different port number then press **N** on your keyboard to exit the application. Else press **Y** and enter a different port number that is unoccupied.

This change will be effected only when you restart the server. To connect to the ServiceDesk Plus server after restarting, the new port number must be used.

Activating Self Monitoring Service

ServiceDesk Plus lets users monitor its server performance by activating a cloud-based self-monitoring service right from the application. Site 24 * 7, the cloud based monitoring service, when activated monitors ServiceDesk Plus server to ensure it is being used effectively and thereby boosts productivity.

Site 24*7 is an agent based monitoring solution which uses WMI (Windows Management Instrumentation) protocol for scanning purposes. Do the following to proceed with the agent installation.

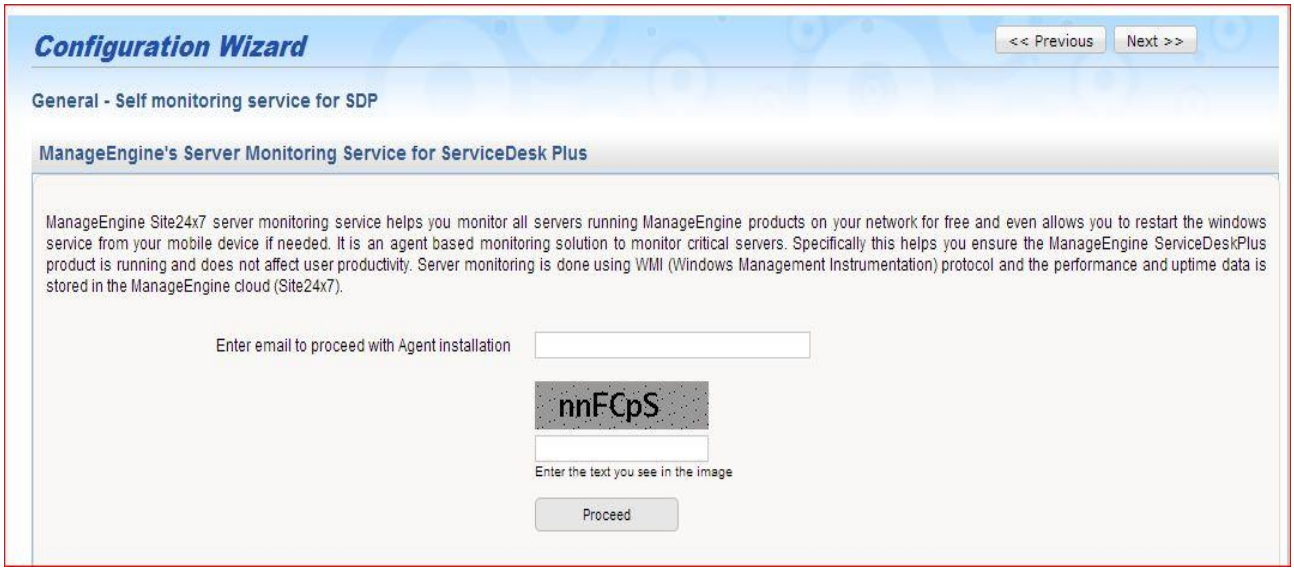
Activating Site 24*7 for monitoring ServiceDesk Plus Server

1. Provide your **Email ID** to proceed with the **Agent Installation**
2. Type in the **verification text** provided
3. Click **Proceed**

Navigating to **Configure Self-Monitoring Service for ServiceDesk Plus**: **Admin → General → Self Monitoring Service for SDP.**

Once activated, Site 24*7 will begin monitoring the ServiceDesk Plus server and provides you with critical information like server uptime/downtime, CPU usage, memory usage, disk usage etc., which is essential to keep your server up and running.

To know more about Site 24 * 7 and to configure additional alerts that will help monitor ServiceDesk Plus effectively, please visit: http://site24x7.com/.



Feedback

If you are connected to the network you can send your feedback about ServiceDesk Plus immediately to our support team.

To send your feedback,

1. Log in to the ServiceDesk Plus application using your user name and password.
2. Click **Help** drop-down link at the top left corner of the page.
3. Click **Feedback** option. The Feedback form opens in a pop up window.
4. The **To** address will be in non-editable format to our support team . Specify Your **Name, Your email ID, Subject** of the mail **and Message** mail content in their corresponding fields.
5. Click **Submit** button to send the mail.

Lucene Search

ServiceDesk Plus uses Lucene Search for implementing its search mechanism and allowing application users to perform all kinds of searches.

Table below lists the fields which can be searched (along with sections under which they appear in the application):

	Request ID	Status	Category	Group	Incident Text Field	Priority
Request Module	Subject	Mode	Sub Category	Technician	Single Line	Urgency
Search Fields	Description	Level	Item	Impact Details	Multi Line	Impact
	Request Type	Department	Requester	Pick List		
Solution Module	Solution ID	Solution Title	Solution Topic	Solution Keyword	Solution Comments	Solution Content

Points to Remember:

1. **Special characters** cannot be searched
2. Request(s) whose **description exceeds/or is equal to 64k** cannot be searched
3. Search performed by **Technicians with SDAdmin role** will fetch 500 results
4. Search performed by **Technicians with roles other than SDAdmin role** will fetch **2500 results**
5. Newly added/updated records can be searched only after an **interval of 2 mins**

NOTE	In case, the lucene folder gets corrupted, execute the file **reIndex.bat** available under:*servicedesk/bin* to sort out the records.

Performance Guide

Your help desk application may have the facility to store large amount of data but this can also hinder the performance of your help desk tool. This guide provides certain queries to improve the performance of ManageEngine ServiceDesk Plus.

To execute the query, you need to access the MySQL database. Click the respective OS link (Windows or Linux) to know how to access the MySQL database.

NOTE: Please restart ServiceDesk Plus after executing the query for the changes to get applied.

The list of performance tips discussed in this guide are,

- Data Archiving
- Distributed Asset Scan
- Disable Request Count
- Disable Request Refresh Timer
- Disable All Requests filter
- Disable Recent Items
- Disable Short Description Search
- Cleanup Recent Item Limit
- Cleanup Error Log Limit
- Cleanup ACC Session
- Delete System Generated Notifications
- Increase User Cache Count
- Increase Technician Cache Count
- Increase Message IDs Cache Count
- Increase E-mail IDs / User IDs Cache Count
- Java Tuning
- MySQL Tuning

Data Archiving

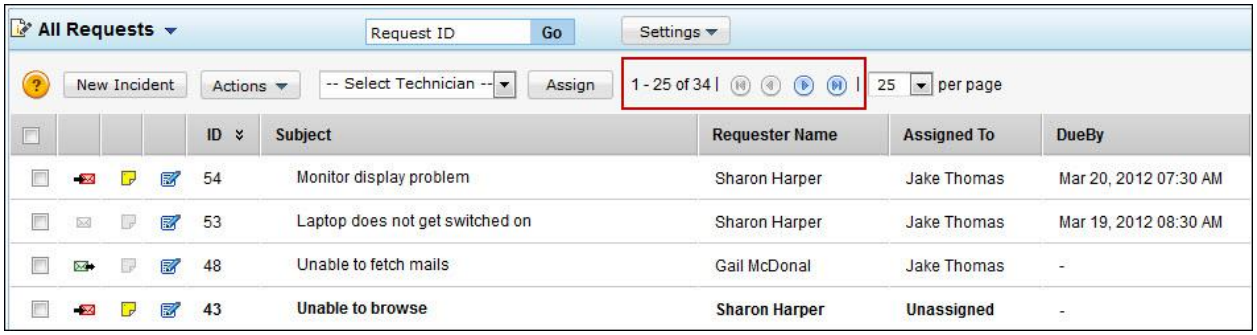
You can schedule data archiving of closed and resolved requests at regular intervals to improve the performance of ServiceDesk Plus. Refer Data Archiving to learn more on archiving requests.

Distributed Asset Scan

If you have many nodes say, more than 1000, then scanning these nodes at regular intervals would hinder the performance of ServiceDesk Plus. To reduce the load on the server, you could scan these nodes using Distributed Asset Scan. All you need to do is install remote ServiceDesk Plus servers across departments. These remote servers scan the nodes at regular intervals and export the data to the central ServiceDesk Plus server.

Disable Request Count

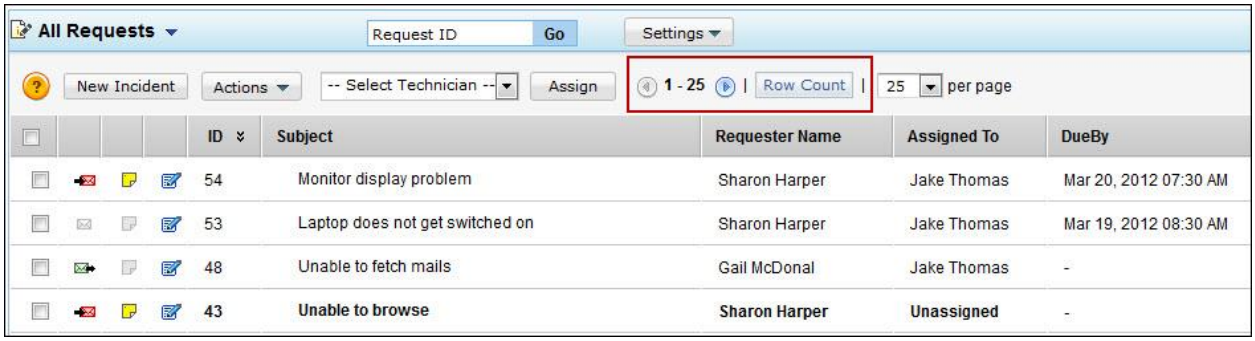
The Request Count displays the total number of requests in the request list view page. Larger the request count value, the longer it takes to display the requests in the list view page.



The request count value cannot be removed. Instead you can choose to view the request count, by clicking a **Row Count** button in the request list view page.

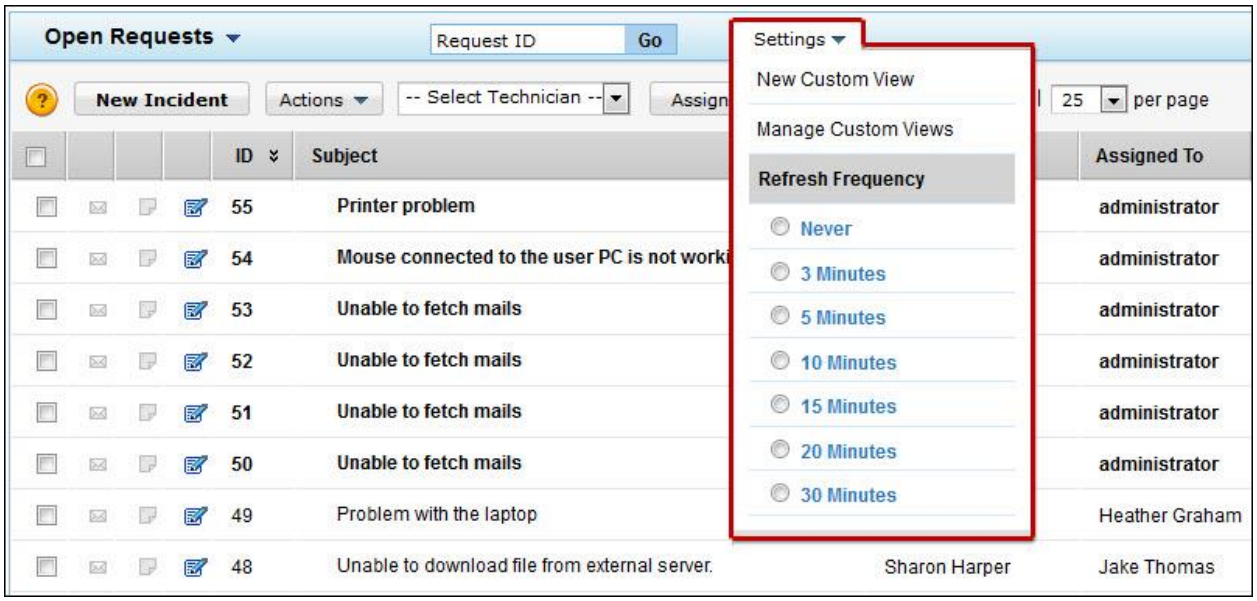
To show the Row Count button, use the query,

update GlobalConfig set PARAMVALUE='FALSE' where CATEGORY='PERFORMANCE' and PARAMETER='SHOW_REQUEST_COUNT';



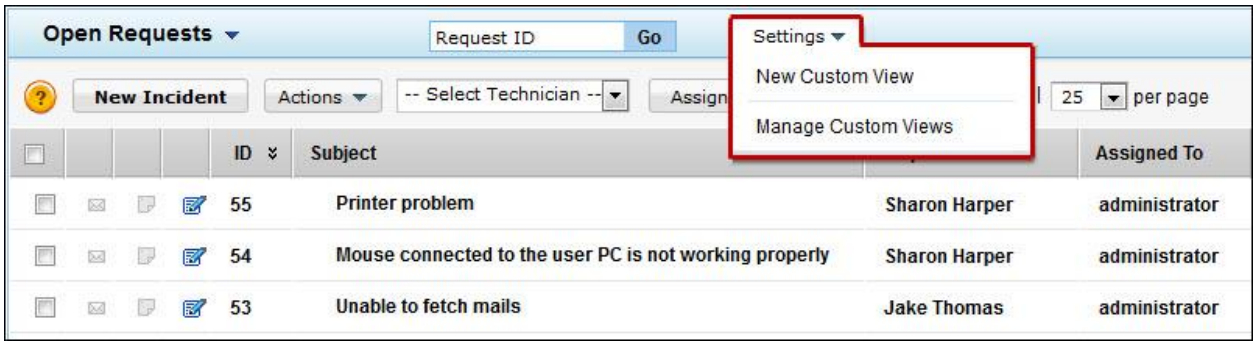
Disable Request Refresh Timer

The Refresh Timer refreshes the request list view page at regular intervals. But this can slow down the performance of ServiceDesk Plus.



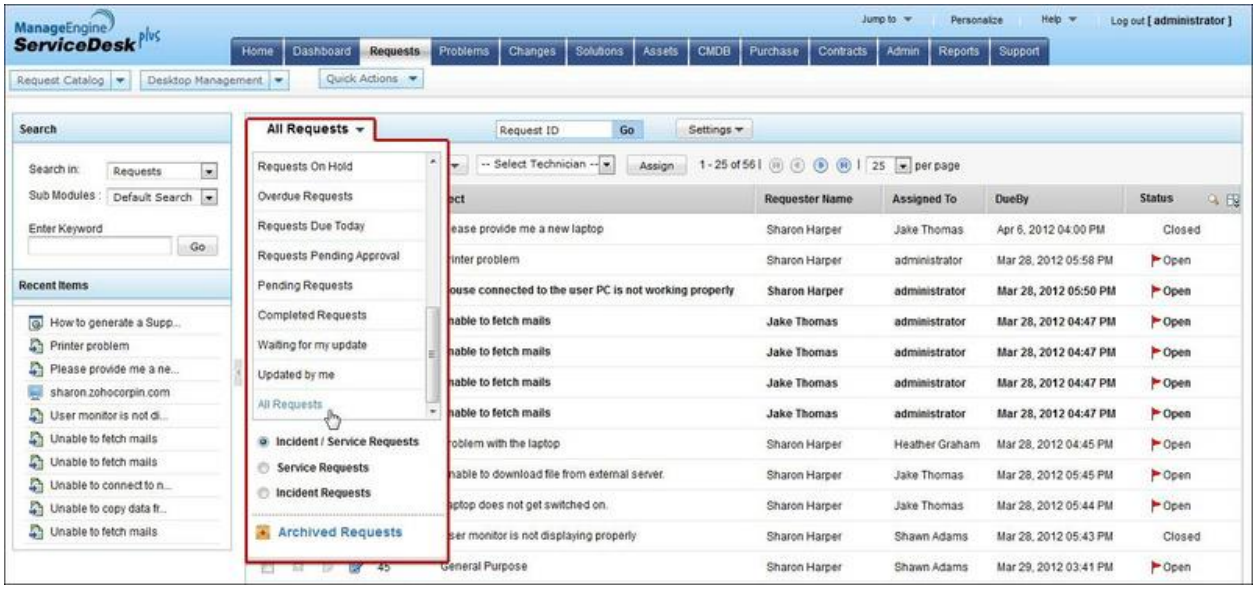
You can disable the Refresh Timer option by using the query,

update GlobalConfig set PARAMVALUE='FALSE' where CATEGORY='PERFORMANCE' and PARAMETER='SHOW_WO_REFRESH_TIME';



Disable All Requests filter

The 'All Requests' filter in the request list view displays all the requests that have been created so far, irrespective of the status. But as the number of requests increases, the performance of ServiceDesk Plus gradually slows down.

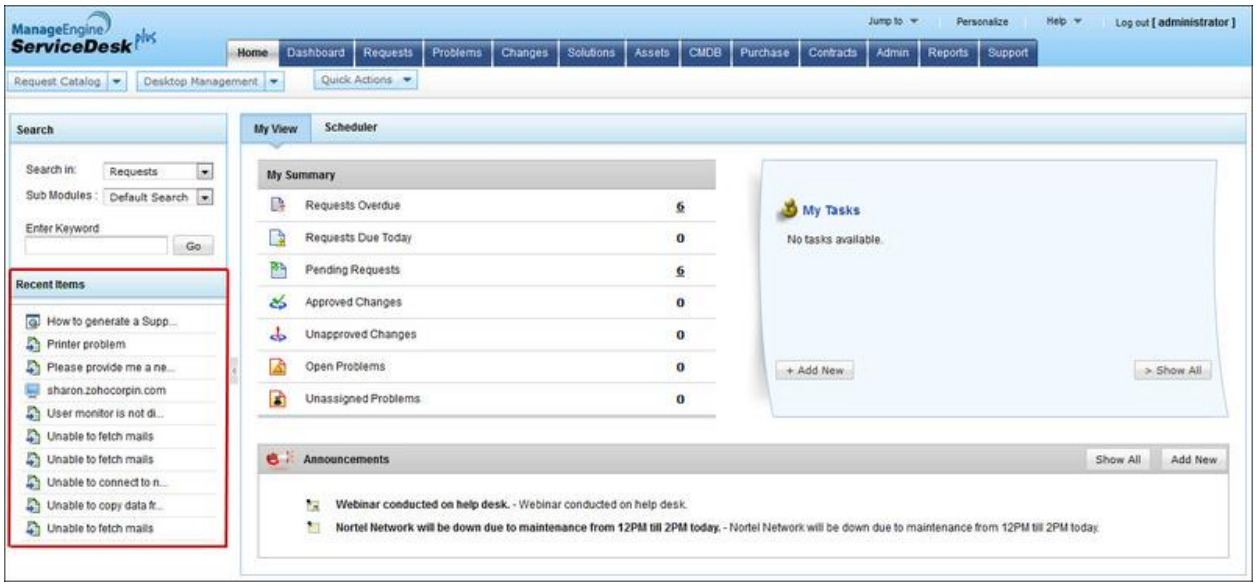


In this case, you can remove the 'All Requests' option from the filter drop-down using the query,

update GlobalConfig set PARAMVALUE='FALSE' where CATEGORY='PERFORMANCE' and PARAMETER='SHOW_ALL_REQUEST_VIEW';

Disable Recent Items

Recent Items displays the list items that were recently accessed by the user. But as the number of users increase, displaying and managing the list of recently accessed items for each user can hinder the performance of ServiceDesk Plus.



You can hide the recent items widget by using the query,

update GlobalConfig set PARAMVALUE='FALSE' where CATEGORY='PERFORMANCE' and PARAMETER='SHOW_RECENT_ITEM';

Disable Short Description Search

Short Description refers to the description which appears when you hover over the subject link of the request in the request list view. By default, while performing a search operation, the short description of a request would be searched. But when you have large amount of data, the performance of ServiceDesk Plus eventually decreases.

You can disable this feature by using the query,

update GlobalConfig set PARAMVALUE='false' where CATEGORY='SearchShortDescription' and PARAMETER='Status';

Cleanup Recent Item Limit

By default, the recent items list is deleted once in every 15 days. But you can improve ServiceDesk Plus's performance by increasing the cleanup frequency.

Example: If you want to cleanup the Recent Item list every 5 days, then use the query,

update GlobalConfig set PARAMVALUE=5 where CATEGORY='CLEANUP_TASK' and PARAMETER='CLEANUP_RI_LIMIT';

The maximum limit for cleaning up recent item list is 90. If you want to disable the cleanup, then set the parameter value as -1.

Cleanup Error Log Limit

By default, the error log list is deleted once in every 180 days. But you can increase the cleanup frequency to accelerate the backup process.

Example: If you want to cleanup the Error Log list every 30 days, then use the query,

update GlobalConfig set PARAMVALUE=30 where CATEGORY='CLEANUP_TASK' and PARAMETER='CLEANUP_ERROR_LOG_LIMIT';

The maximum limit for cleaning up error log list is 365. If you want to disable the cleanup, then set the parameter value to -1.

Cleanup ACC Session

It is a table containing the session details i.e., the logged in and logged out information. These entries are not used by the application and can be removed periodically for better database performance. By default, the session details are deleted once in every 90 days but for better performance, you can increase the cleanup frequency.

Example: If you want to cleanup the ACC Session every 30 days then use the query,

update GlobalConfig set PARAMVALUE=30 where CATEGORY='CLEANUP_TASK' and PARAMETER='CLEANUP_ACC_SESSION_LIMIT';

The maximum limit for cleaning up the ACC session details is 365. If you want to disable the cleanup, then set the parameter as -1.

Delete System Generated Notifications

System Generated Notifications are notifications generated and sent by the system. You can either delete all the system notifications or manually check the notifications to delete.

If you want to delete all the system notifications then execute the query,

delete from notification where senderid=1;

To get the list of notification titles to delete unwanted notifications, execute the query,

select notificationtitle from notification limit 100;

Example: If the notificationtitle is 'has been added to the group', then use the query to delete notifications under this title,

delete from notification where notificationtitle like '%has been added to the group%';

Increase User Cache Count

By default, the number of user data objects that would be cached is **500**. But in case of high-end machines with better RAM configurations, this value can be increased to cache more data for quick response.

Example: If you want to increase the cache count to 1000, then use the query,

update GlobalConfig set PARAMVALUE='1000' where PARAMETER='USER_CACHECOUNT';

Increase Technician Cache Count

By default, the number of technician data objects that would be cached is **300**. But in case of high-end machines with better RAM configurations, this value can be increased to cache more data for quick response.

Example: If you want to increase the cache to 1000, then use the query,

update GlobalConfig set PARAMVALUE='1000' where PARAMETER='TECHNICIAN_CACHECOUNT';

Increase Message IDs Cache Count

By default, the number of Message IDs that would be cached is **1000**. But in case of high-end machines with better RAM configurations, this value can be increased to cache more data for quick response.

Example: If you want to increase the cache count to 2000, then use the query,

update GlobalConfig set PARAMVALUE='2000' where PARAMETER='MESSAGEID_CACHECOUNT';

Increase E-mail IDs / User IDs Cache Count

By default, the number of E-mail IDs / User IDs that would be cached is **1000**. But in case of high-end machines with better RAM configurations, this value can be increased to cache more data for quick response.

Example: If you want to increase the cache count to 2000, then use the query,

update GlobalConfig set PARAMVALUE='2000' where PARAMETER='EMAIL_USERID_CACHECOUNT';

Java Tuning

We recommend at least 2GB of RAM on the server machine if its dedicated to ServiceDesk Plus. In cases where you have enough RAM but still have performance issues, then follow the instructions given below,

1. Go to ManageEngine\ServiceDesk\server\default\conf folder
2. Edit the **wrapper.conf** file on a wordpad and change the parameters according to the RAM size on the server machine:

   By default, the maximum java heap size is 512 MB.

If you have 3GB of RAM, then change 512 to 768,

 # Maximum Java Heap Size (in MB)

wrapper.java.maxmemory=512

to

 # Maximum Java Heap Size (in MB)

wrapper.java.maxmemory=768

If you have 4 GB of RAM, then change 512 to 1024

If the RAM is 3GB or 4GB, then along with the maximum memory configuration, you could also change the following,

wrapper.java.additional.19=-XX:PermSize=64m

can be changed to,

wrapper.java.additional.19=-XX:PermSize=128m

And,

wrapper.java.additional.20=-XX:MaxPermSize=128m

can be changed to,

wrapper.java.additional.20=-XX:MaxPermSize=256m

MySQL Tuning

You could also perform a tuning of the MySQL database. The instructions are given below,

1. Go to ManageEngine\ServiceDesk\bin folder
2. Edit **startdb.bat** file on a wordpad and append the following parameters to the last line of the file based on the RAM size.

For 1GB RAM:

--set-variable=query-cache-type=2 --read_buffer_size=128K --read_rnd_buffer_size=1M --sort_buffer_size=1M --myisam_sort_buffer_size=4M --tmp_table_size=32M --max_heap_table_size=32M --key_buffer_size=32M --innodb_buffer_pool_size=128M --bulk_insert_buffer_size=16M --table_cache=512 --thread_cache=32 --innodb_flush_log_at_trx_commit=0 --low-priority-updates

For 2GB of RAM:

--set-variable=query-cache-type=2 --read_buffer_size=128K --read_rnd_buffer_size=1M --sort_buffer_size=2M --myisam_sort_buffer_size=4M --tmp_table_size=32M --max_heap_table_size=32M --key_buffer_size=32M --innodb_buffer_pool_size=256M --bulk_insert_buffer_size=16M --table_cache=512 --thread_cache=32 --innodb_flush_log_at_trx_commit=0 --low-priority-updates

For 3GB of RAM:

--set-variable=query-cache-type=2 --read_buffer_size=128k --read_rnd_buffer_size=1M --sort_buffer_size=2M --myisam_sort_buffer_size=8M --tmp_table_size=32M --max_heap_table_size=32M --key_buffer_size=64M --innodb_buffer_pool_size=750M --bulk_insert_buffer_size=16M --table_cache=750 --innodb_flush_log_at_trx_commit=0 --low-priority-updates

For 4GB of RAM:

--set-variable=query-cache-type=2 --read_buffer_size=128K --read_rnd_buffer_size=2M --sort_buffer_size=2M --myisam_sort_buffer_size=8M --tmp_table_size=32M --max_heap_table_size=32M --key_buffer_size=64M --innodb_buffer_pool_size=1024M --bulk_insert_buffer_size=16M --table_cache=900 --innodb_flush_log_at_trx_commit=0 --low-priority-updates

If you have followed the above instructions but still have an issue with the performance, then send the below stated log files to our Support Team for further analysis.

1. wrapper.log from ManageEngine\ ServiceDesk\bin

2. serverout0.txt,.....,serverout5.txt from ManageEngine\ServiceDesk\server\default\log

Troubleshooting

This section gives you solutions for the problems faced while scanning for workstations in ServiceDesk Plus Inventory module.

1. Either access denied for the user or the remote DCOM option might be disabled in the workstation.
2. User does not have the access privileges to perform this operation.
3. Remote DCOM option is disabled in the Server machine.
4. Connection to RPC server in the workstation failed.
5. One of the WMI components is not registered properly.
6. Execution failure in the WMI Service of workstation.
7. WMI Service is disabled in the workstation.
8. Request for scan operation rejected by the workstation.
9. Connection to Telnet Service in the workstation failed.
10. Either Username or Password is incorrect in the workstation.
11. Scan operation Timed out.
12. The operation invoked is not supported in the current platform.
13. General failure while performing the operation.

Error Message	Either access denied for the user or the remote DCOM option might be disabled in the workstation
Cause	This error message is shown when scanning of a Windows workstation fails due to any of the following reasons: 1. The login name and password provided for scanning might be invalid in the workstation. 2. Remote DCOM option might be disabled in the remote workstation.
Resolution	1. Check if the login name and password are entered correctly. 2. Check if Remote DCOM is enabled in the remote workstation. If not enabled, then enable the same. To enable DCOM in Windows 2000 Computers: 1. Select Start > Run 2. Type DCOMCNFG in the text field 3. Click OK. 4. Select Default Properties tab 5. Check the box "Enable Distributed COM in this machine"

	6. Press OK To enable DCOM in Windows XP Computers: 7. Select Start > Run 8. Type DCOMCNFG in the text field 9. Click OK 10. Right Click on Component Services > Computers > My Computer 11. Click Properties 12. Select Default Properties tab in the frame that pops 13. Check the box "Enable Distributed COM in this machine" 14. Press OK 3. Check if the user account is valid in the target workstation. For this execute the following commands in the command prompt (of the server machine). net use \\<RemoteComputerName>\C$ /u:<DomainName\UserName> "<password>" net use \\<RemoteComputerName>\ADMIN$ /u:<DomainName\UserName> "<password>" Replace the relevant value within <>. Supply password within the quotes. If these commands show any error message, then the provided user account is not valid in that remote computer.

Error Message	User does not have the access privileges to perform this operation
Cause	Such error messages are shown, if the User ID provided for scanning does not have sufficient access privileges to perform the scanning operation. Probably, this user does not belong to the Administrator group of the workstation.
Resolution	Move the user to the Administrator Group of the workstation (or) Scan with an administrator (preferably a Domain Administrator) account.

Error Message	Remote DCOM option is disabled in the Server machine
Cause	Remote DCOM option might be disabled in the machine running ServiceDesk Plus Server.
Resolution	ServiceDesk uses Windows Management Instrumentation (WMI) to scan the remote workstations. WMI works over Remote DCOM and hence this option must be enabled for scanning the remote machines. To know how to enable DCOM in Windows system refer to resolution of the error message Either access denied for the user or the remote DCOM option might be disabled in the workstation.

Error Message	Connection to RPC server in the workstation failed
Cause	This message is shown when a firewall is configured on the remote computer. Such exceptions mostly occur in Windows XP (SP-2), when the default Windows Firewall is enabled.
Resolution	Disable the default Firewall in the workstation. To disable the Firewall in Windows XP (SP2) 1. Select Start->Run 2. Type Firewall.cpl 3. Click OK. 4. In the General tab, click Off. 5. Click OK. If Firewall cannot be disabled then, we can lauch Remote Administration feature for administrators in the remote computer. The following command when executed in the target computer, can enable the feature: netsh friewall set service RemoteAdmin After scanning the computer, if required, the Remote Administration feature can also be disabled. The following command disables the feature: netsh friewall set service RemoteAdmin disable

Error Message	One of the WMI components is not registered properly
Cause	This message is shown if WMI is not available in the remote windows workstation. This happens in the Windows 9x, Windows NT and Windows ME. Such error codes might also occur in higher versions of Windows if the WMI Components are not registered properly.
Resolution	Install WMI core in the remote workstation. This can be downloaded from the Microsoft web site. If the problem is due to WMI Components registration, then register the WMI dlls by executing the following command at command prompt: winmgmt /RegServer

Error Message	Execution failure in the WMI Service of workstation
Cause	Such error messages are shown, when there are some internal execution failures in the WMI Service (winmgmt.exe) running in the remote workstation. Probably the last update of the WMI Repository in that workstation could have failed.
Resolution	Restart the WMI Service in the remote workstation. To restart the WMI service in the workstation 1. Click Start -> Run. 2. Type Services.msc 3. Click OK. 4. In the Services window that pops-up, select "Windows Management Instrumentation" service and right-click on that. 5. Click Restart.

Error Message	WMI Service is disabled in the workstation
Cause	This error message is shown when the WMI Service (winmgmt.exe) is not enabled in the remote workstation.
Resolution	Modify the property of WMI Service to Manual or Automatic from Disabled. 1. Click Start -> Run. 2. Type Services.msc 3. Click OK. 4. In the Services window that pops-up, select "Windows Management Instrumentation" service and right-click on that. 5. Click Properties. 6. If the Startup type is "Disabled", change it to "Automatic/Manual" and start the service. 7. Restart the service.

Error Message	Request for scan operation rejected by the workstation
Cause	DCOM settings in Registry of the target workstation reject the scan request.
Resolution	Edit the Registry key value, as described below: 1. Use Regedit to navigate to: HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\OLE. 2. Double-click the EnableDCOM value Name, a string (REG_SZ) data type. Set its data value to Y, even if it is already SET to Y. 3. Click OK 4. Shutdown and restart the computer.

Error Message	Connection to Telnet Service in the workstation failed
Cause	Telnet Service might not be running in the target computer (or) Telnet Service is not running in default port 23.
Resolution	Discovering remote Linux Machines by ServiceDesk is done using Telnet. Ensure that Telnet is running in the remote workstations in the default port 23.

Error Message	Either Username or Password is incorrect in the workstation
Cause	The username and password provided to scan the remote workstation is incorrect.
Resolution	Discovering Linux Workstations, in ServiceDesk Plus is done using the Telnet. Provide a valid username and password that can successfully establish a telnet session with the target workstation.

Error Message	Scan operation Timed out
Cause	Target workstation did not respond within the default time limit. This might be due to some delay in the network.
Resolution	Try scanning the workstation, sometime later. If the same error message repeats, contact ServiceDesk Plus Support Team at servicedeskplus-support@manageengine.com.

Error Message	The operation invoked is not supported in the current platform
Cause	Such error codes are shown if the workstation has an Operating System other than Windows or Linux.
Resolution	Currently, Network Discovery in ServiceDesk Plus supports Windows or Linux machines, only.

Error Message	General failure while performing the operation
Cause	Some unexpected exception occurred while, scanning the workstation.
Resolution	Contact the ServiceDesk support team at servicedeskplus-support@manageengine.com with the Error log files. You can obtain the error log files from **Support** tab by clicking on the **Support File** link in the ServiceDesk Plus application.