

Smart AI-powered IT and business management solutions

Revolutionize operations within your organization

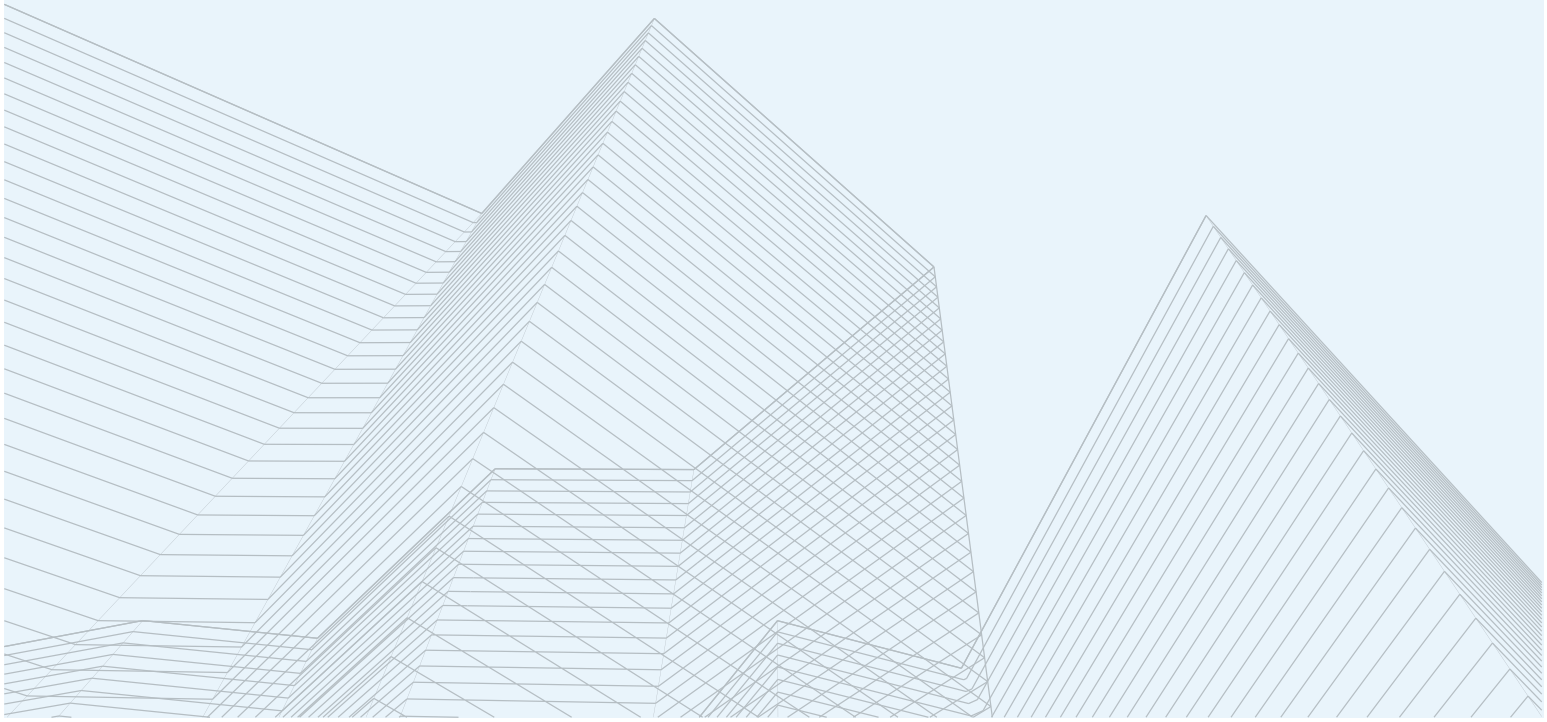
ManageEngine

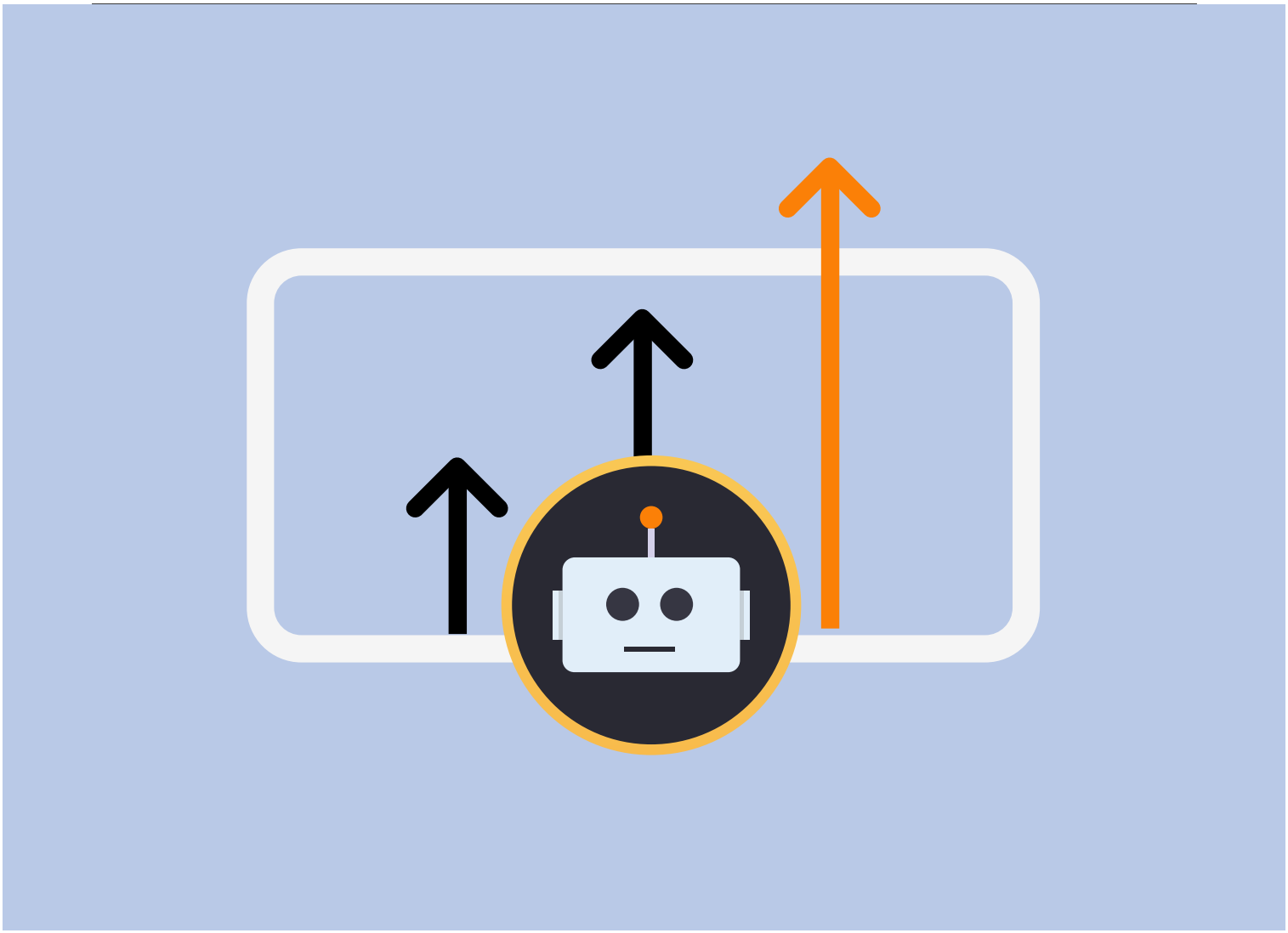
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The IT landscape is ever-evolving and technologies have paved the way for exponential business developments and competitive advantages. With artificial intelligence (AI) proving to be pivotal, organizations are shifting towards an AI-driven future.

At ManageEngine, a division of Zoho Corporation, we believe that AI has the power to revolutionize processes and help uncover business value. So, we are adding AI capabilities to IT and business management solutions to enable organizations to embrace the technology for smoother functioning. We believe it will be crucial to streamline workflows and operations and ultimately, achieve business goals in the current IT ecosystem.



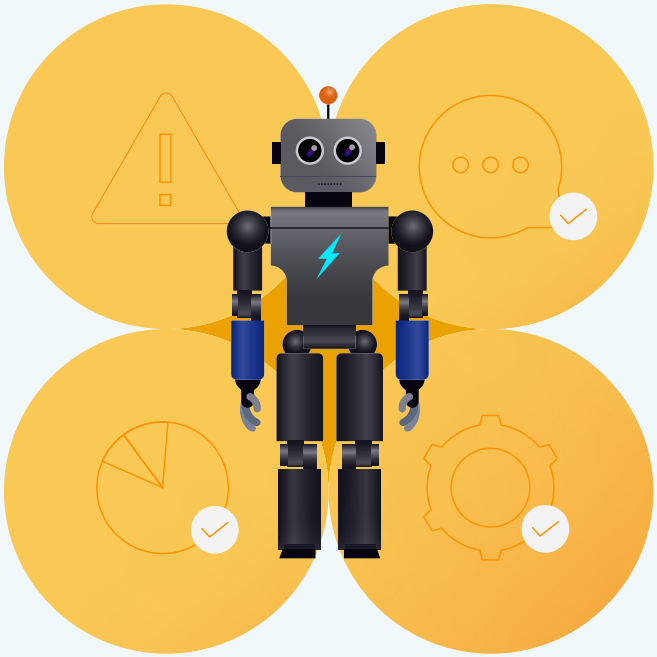


The rising demand of AI in IT

While customers' expectations continue to increase, the case is no different when it comes to the number of competitors, too. To cater to these dynamics, various business executives are, now, seeking to implement AI technology's leading-edge capabilities in their IT infrastructure to expedite business growth and goals. AI in IT has taken precedence as it can help:

- **Improve the efficiency and productivity of the teams**
- **Drive enhanced decision-making processes across departments**
- **Create advancements in the value chain to deliver quality products and services**
- **Scale and meet diversifying customer needs**

And more.



AI-based innovations in ManageEngine's IT management solutions

With the aim to make your enterprise AI-powered, we are incorporating various AI techniques into our solutions that can help boost your organization's IT operations. Our AI capabilities have consistently solved a plethora of IT challenges encountered by IT teams on a daily basis.

At ManageEngine, this innovation is possible owing to the **breadth, depth** and more than **10 years** of experience and knowledge we've accumulated while conducting our research and development process.

- **Breadth of AI capabilities:** This is the entire list of tasks and operations that AI can perform.

- **Depth of AI capabilities:** This is the extent to which each task and operation is explored and executed.

By **breadth**, here's the partial list of the AI capabilities we have incorporated into our offerings:



Trend detection



Natural language processing



Log analysis



Anomalous behavior detection



Voice assistance



Malicious file detection



Forecasting



Seasonality detection



Resource allocation



Risk analysis



Optical character recognition (OCR)



Impact minimization



Phishing detection



Root cause analysis

The above AI capabilities have been achieved due to our technology's **depth** from:



Statistical machine learning



Computer vision



Natural language processing

Statistical Machine learning

Statistical machine learning helps in univariate and multivariate anomaly detection in security processes, like user and entity behavior analytics (UEBA) and website monitoring. It also predicts outages and helps in root cause analysis-based on past anomalies.

Computer vision

Computer vision is being used for features like receipt scanning in online expense reporting software. It is also used for object detection and handwriting recognition.

Natural language processing (NLP)

Zoho Corporation's AI-based conversational assistant, Zia, built using NLP, acts as a potential first point of contact for self-service, helps determine sentiments, provides deep insights into data sets, and much more.

Our AI capabilities are leveraged by our software engineers, and tremendous value is being added to our IT infrastructure management solutions.

As a result, we are essentially moving from:

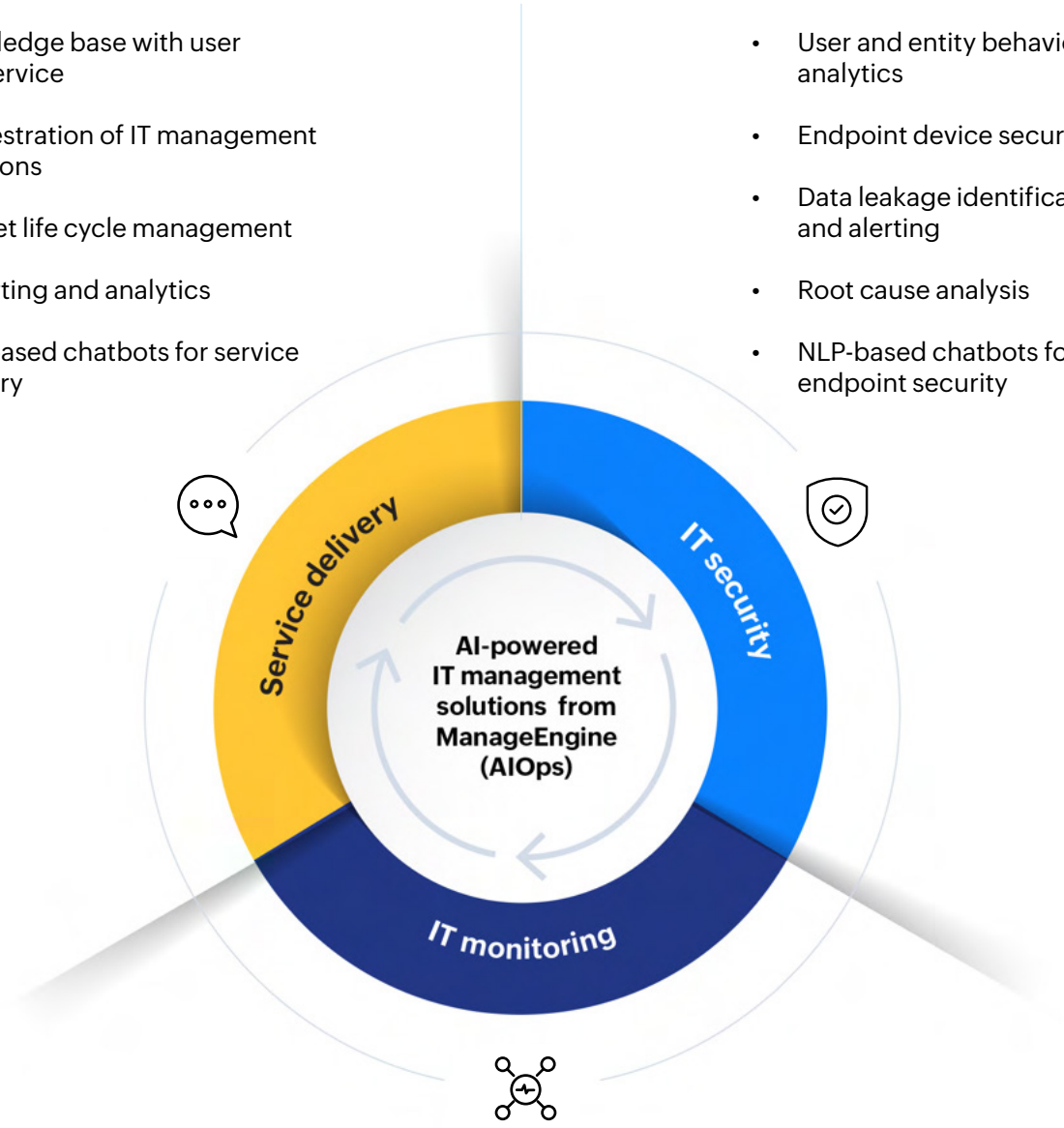
- **Process automation to decision automation**, with an aim to outsource decision-making tasks to AI.
- **Deterministic notions to probabilistic notions**, with an aim to incorporate randomness in same or similar events to perceive different results and stay on-guard.

ManageEngine's AI capabilities for bringing IT together

AI is incorporated into our IT management solutions to drive all data-related decision making and improve the operational efficiency of your IT team.

- Knowledge base with user self-service
- Orchestration of IT management functions
- IT asset life cycle management
- Reporting and analytics
- NLP-based chatbots for service delivery

- User and entity behavior analytics
- Endpoint device security
- Data leakage identification and alerting
- Root cause analysis
- NLP-based chatbots for endpoint security



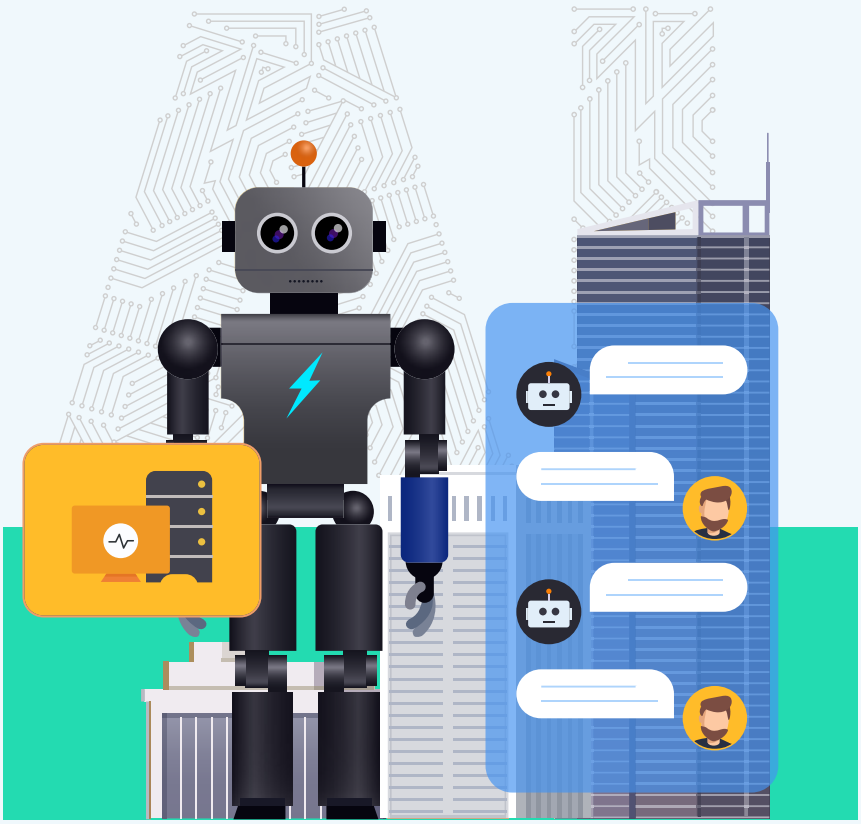
Network, server and application performance monitoring

Real end user monitoring | Anomaly detection and proactive alerting

Data visualizations and business intelligence for IT

Historical analysis and contextualizations

NLP-based chatbots for IT operations



AI-powered IT management solutions for your organization

AI-edge is bundled into our IT management solutions in various processes including:

Service delivery

IT security

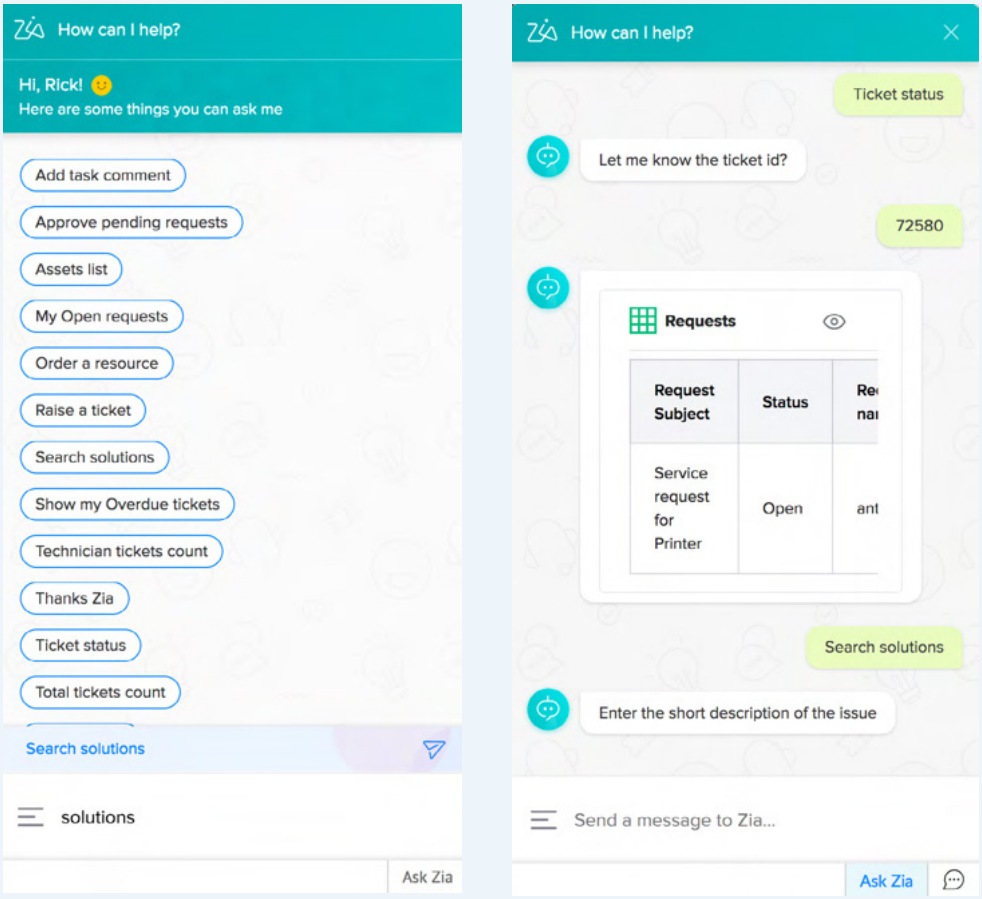
IT monitoring

AI in service delivery

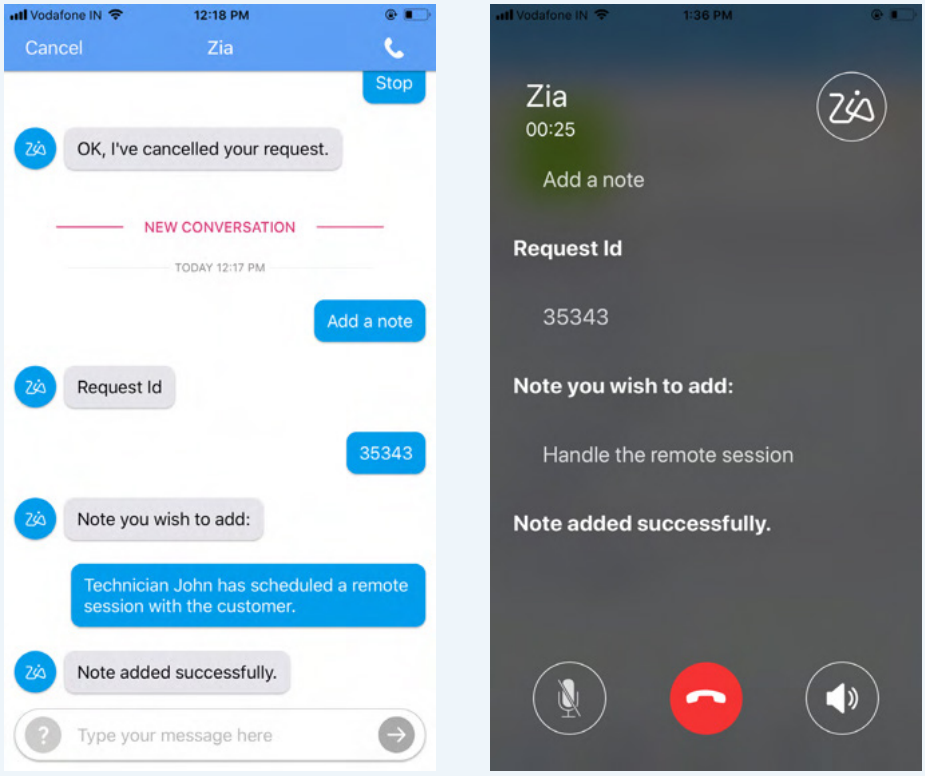
Service teams will be able to strike the right balance between business-critical projects and worry less about daily firefighting or handling customers' basic questions. This will also help counter end-user frustration from a lack of quick-response solutions.

With our AI-enabled service management solutions, your team can:

- Use NLP-enabled chatbots for IT service management operations.

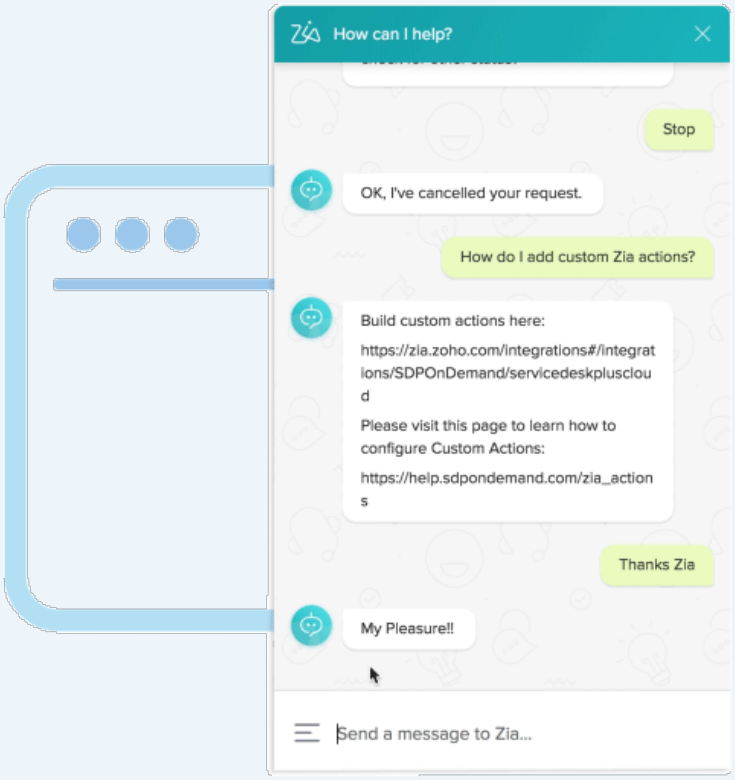


Conversational assistance in ServiceDesk Plus, our enterprise service management (ESM) solution



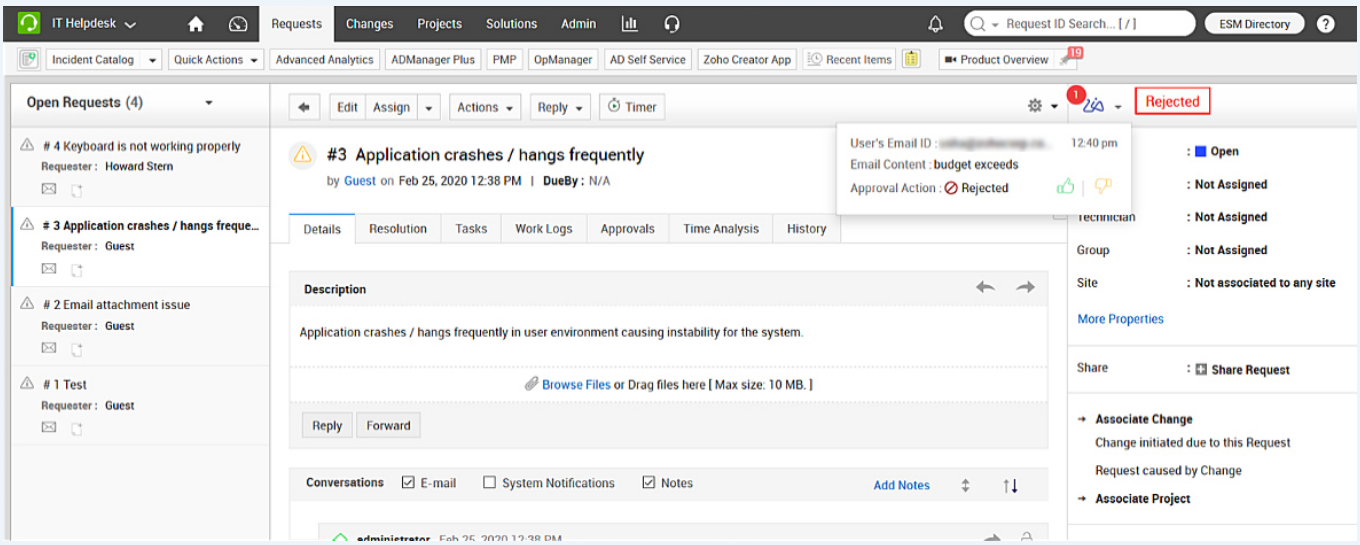
Conversational service delivery in ServiceDesk Plus, our enterprise service management (ESM) solution

- Facilitate better engagement between users and IT systems.
- Improve search capabilities and knowledge management.
- Perform impact analysis and risk minimization during change planning, implementation and review.
- Identify potential IT problems and change failure patterns.
- Enable self-service to allow technicians to focus on higher value work.



Conversational AI for self-service in ServiceDesk Plus

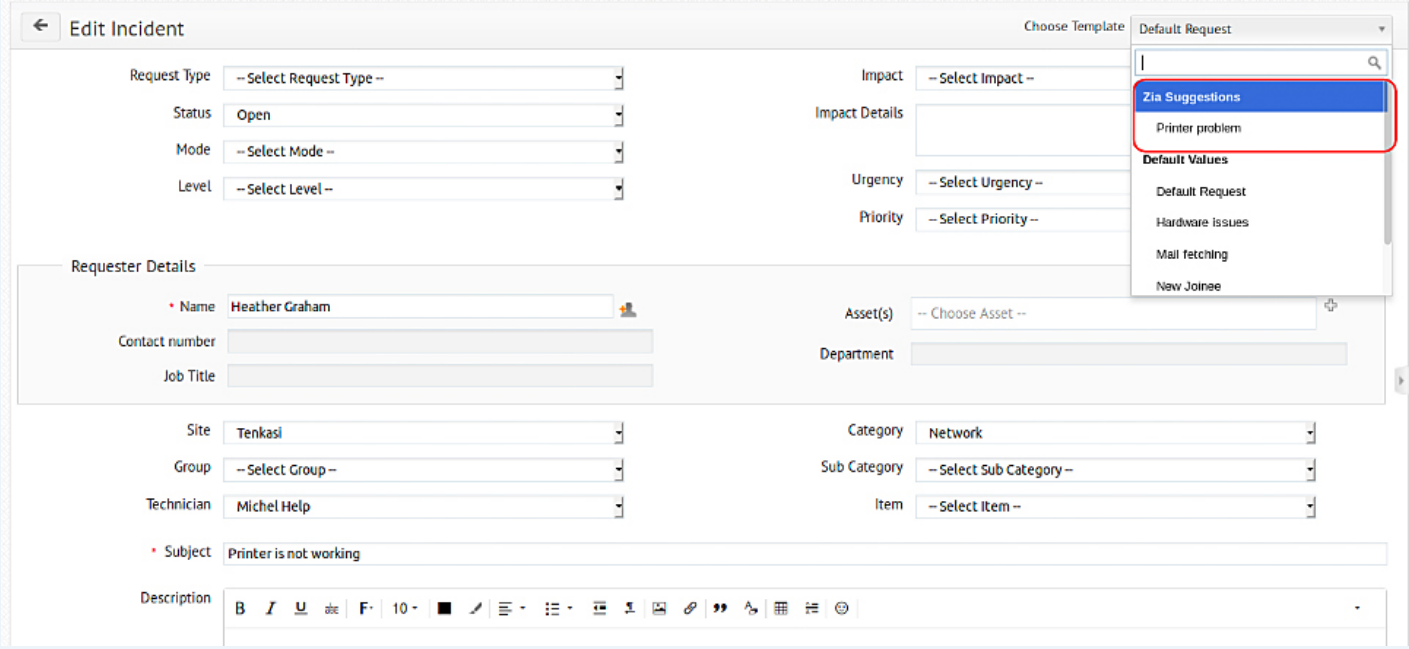
- Automate the handling of Level 1 incidents, which includes the applicable documentation, to reduce the resolution time and increase the efficiency of the help desk team.



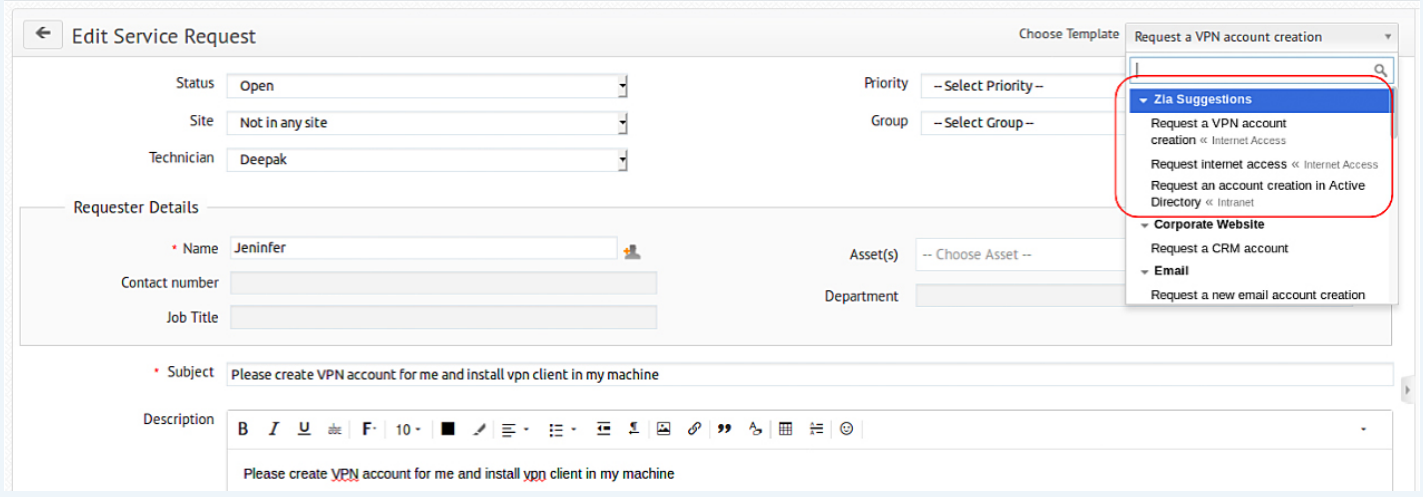
Approval prediction which suggests if the email should be processed further in ServiceDesk Plus

- Foresee daily, weekly, and monthly ticket volumes, flag requests, and reorganize workforce to avoid SLA violations.
    -
- Automate categorizing, prioritizing, and assigning tickets to technicians.

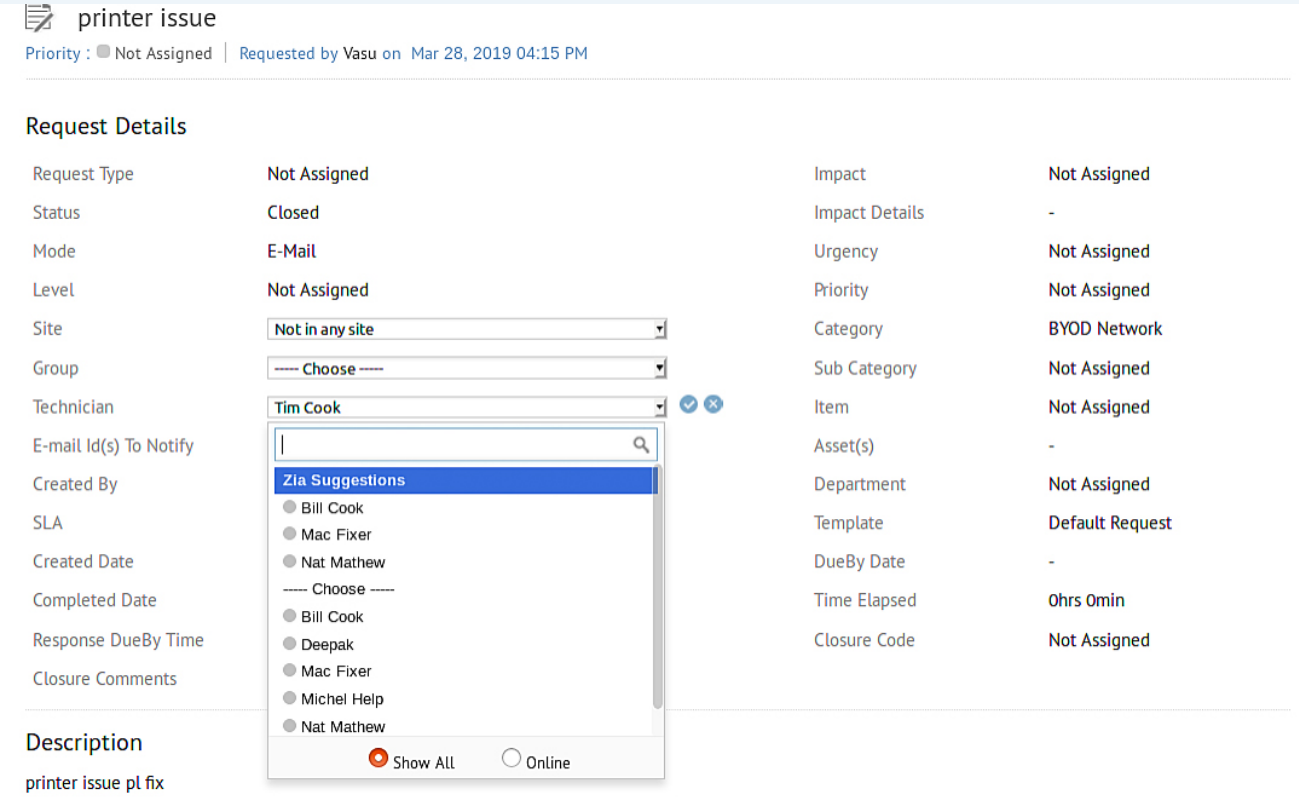
Category and template prediction for support tickets and its classification-



Incident reporting template prediction based on emails received in ServiceDesk Plus



Service request template prediction based on the contents of the emails received in ServiceDesk Plus



Agent prediction to assign suitable agents to handle the incoming support tickets in ServiceDesk Plus

- Auto-approve service requests based on the employee's role, department, work site, and other parameters.
- Predict the probability of service outages and volume of incident tickets, monitor technician and asset utilization in real time, and allocate resources when needed.
- Make sure inventory is well-stocked based on the past consumption history and purchase lead items.
- Perform intelligent asset life cycle management based on factors like the asset's performance levels, and the incidents associated with the asset.
- Predict the asset and configuration item breakdowns based on different factors.
- Manage license distribution, compliance levels, and vendor audits for software asset management.

AI in IT security

With the number of cyberattacks increasing on a daily basis, utmost importance must be given to the security of IT infrastructure and endpoints to keep attacks at bay.

Using our AI-powered IT security solutions, your team can:

- Detect insider access abuse.
- Enable intelligent detection of data exfiltration.
- Identify and alert IT admins and users about data leaks, data theft, or attack attempts on smart devices due to compromised accounts.
- Identify the root cause of repeated account lockouts and user logon failures.
- Detect unusual traffic surges by evaluating event logs.
- Detect seasonal anomalies through user and entity behavior analytics (UEBA) using a score-based assessment which recognizes subtle shifts in user activity as a key input.

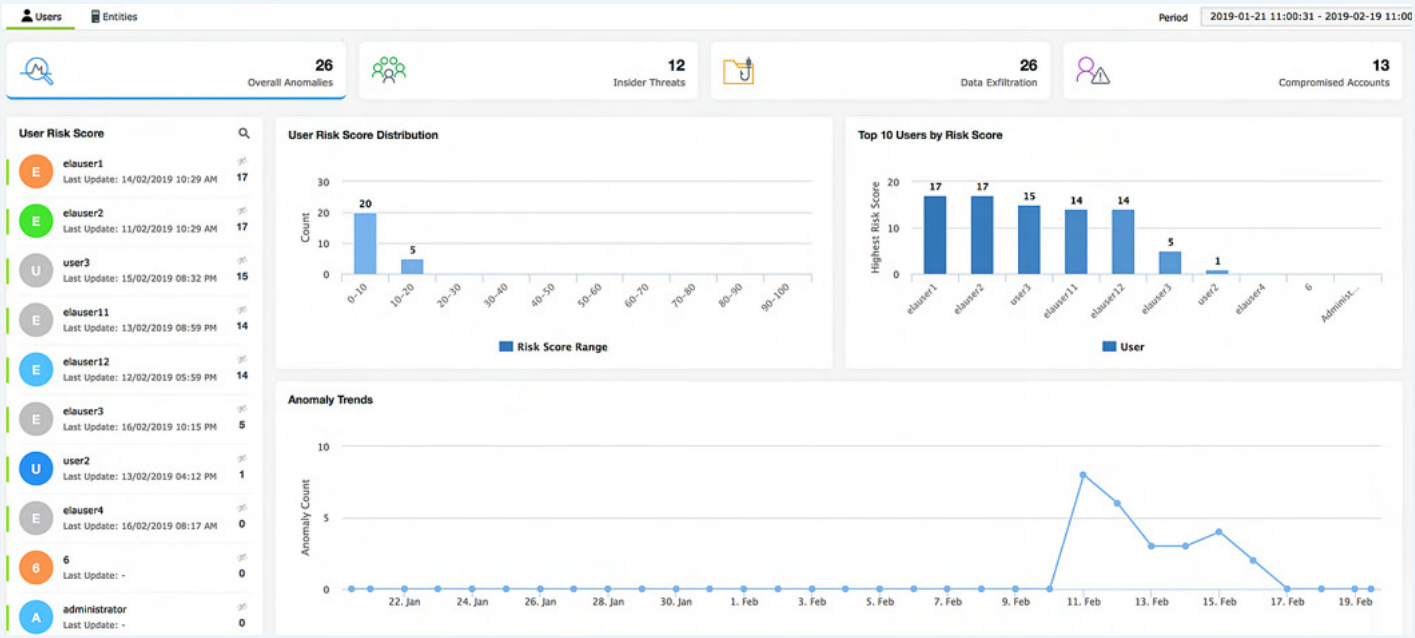
User and entity behavior analysis-

UEBA captures anomalies in the behavior of users or other network entities. These captured anomalies can be of three types:

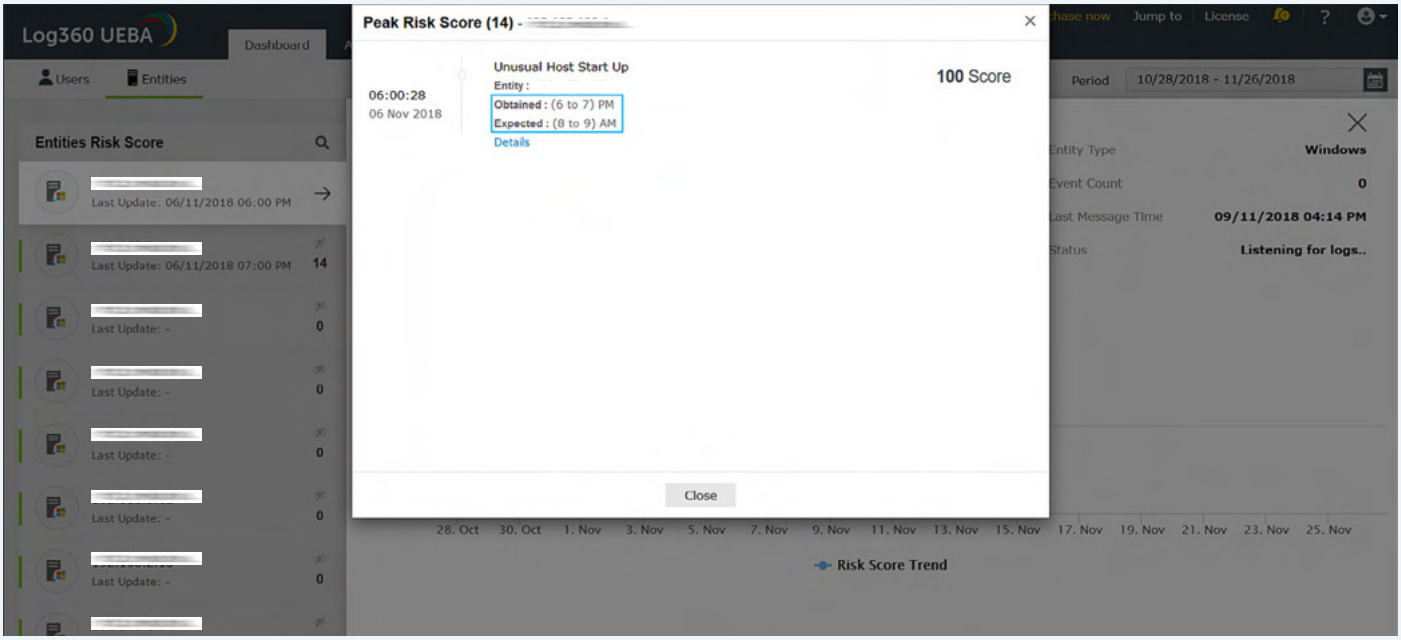
1 **Time**

2 **Count**

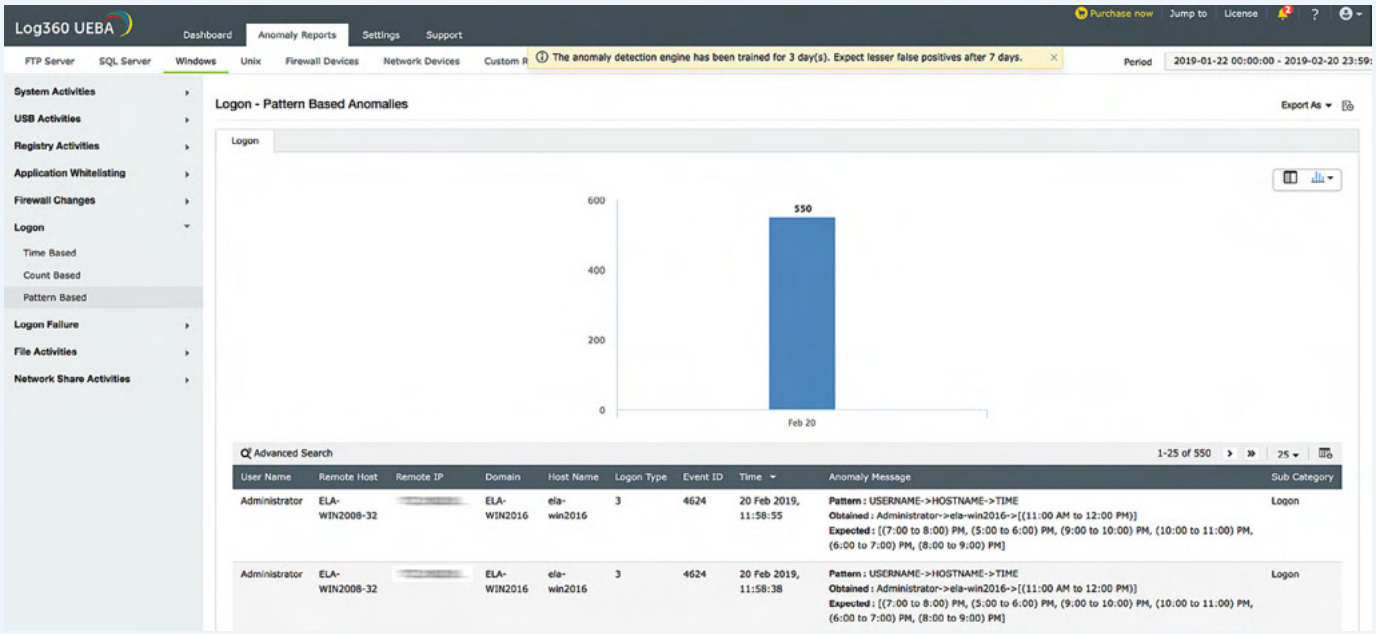
3 **Pattern-based**



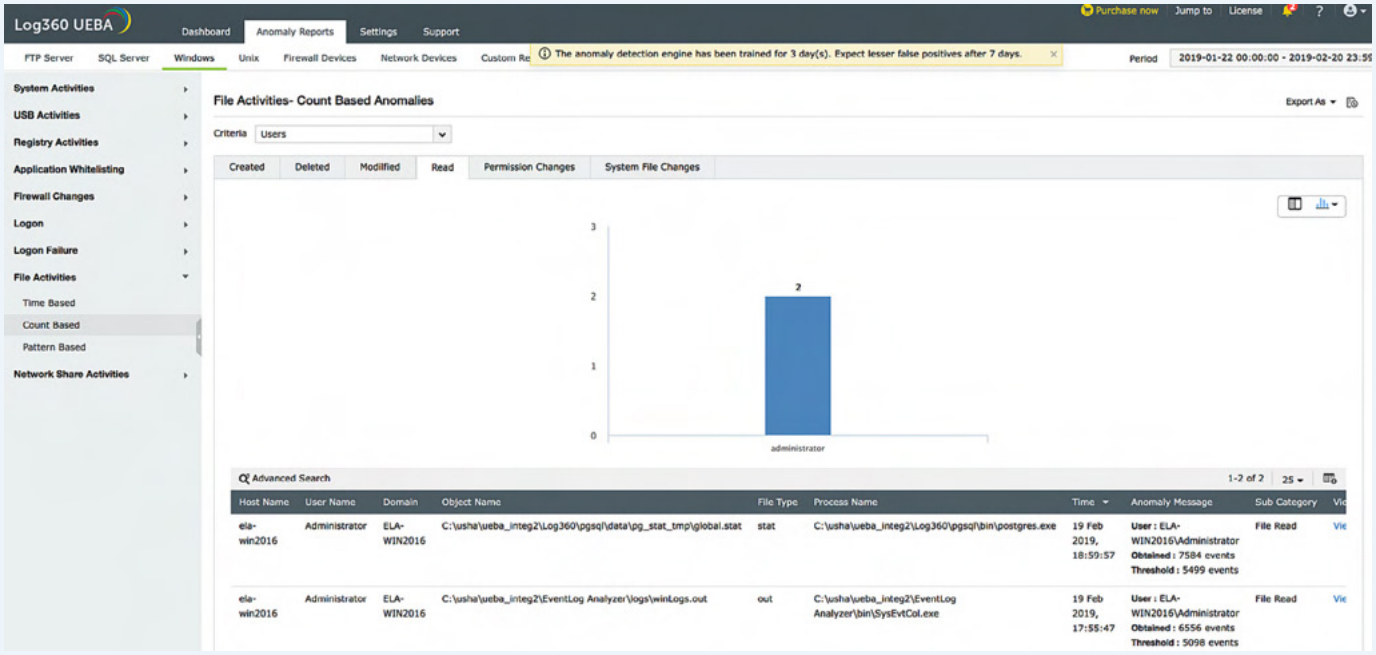
Dashboard for user and entity behavior analysis in Log360, our security information and event management (SIEM) solution



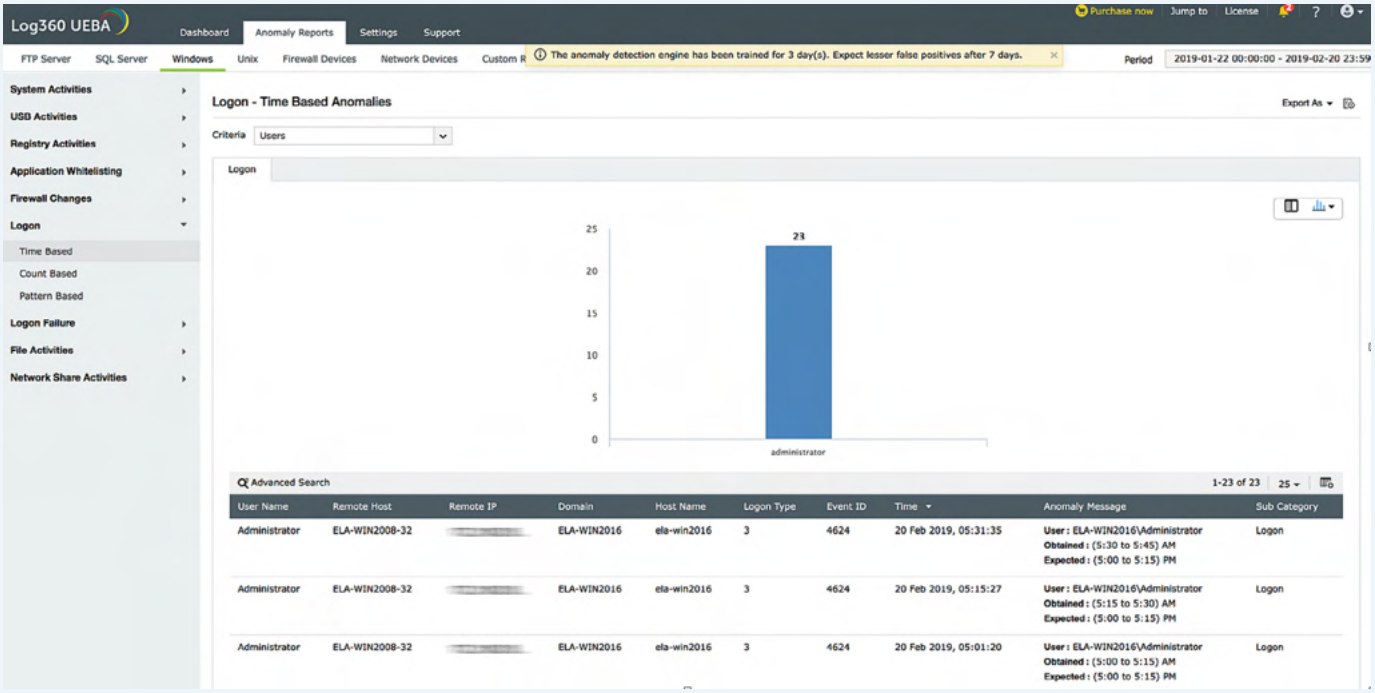
UEBA with an explanation in Log360



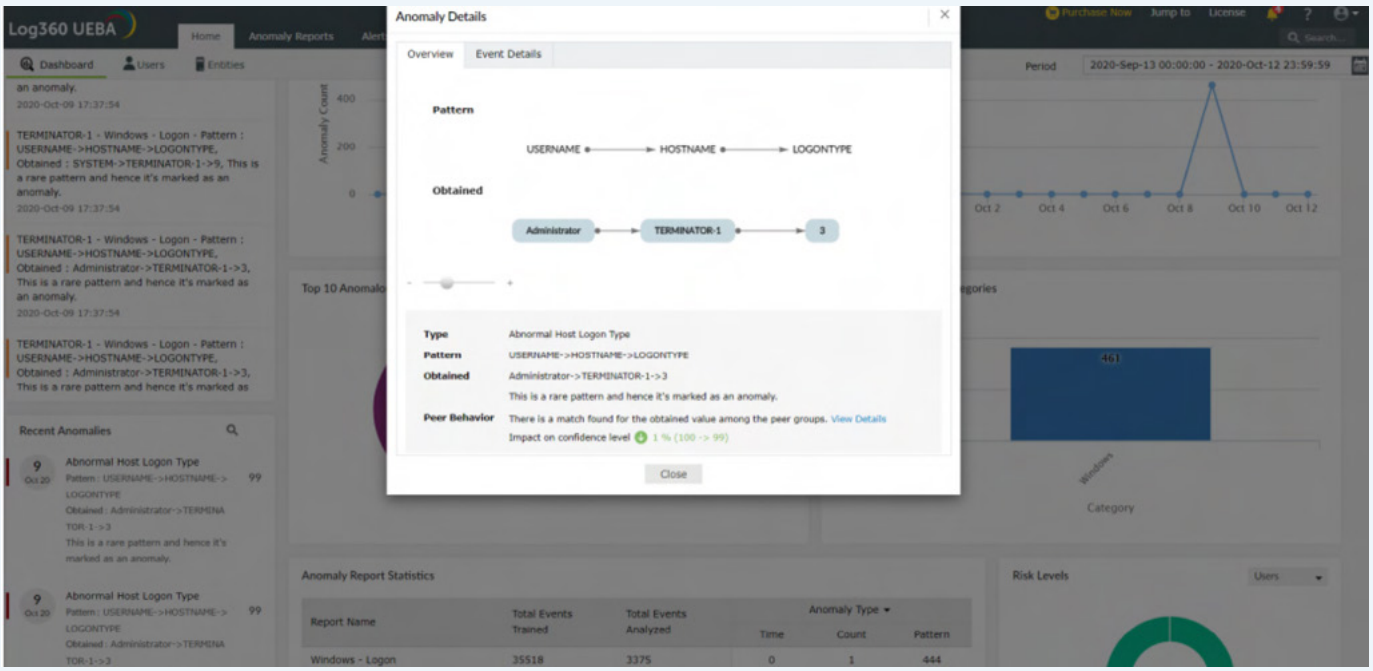
Logon time-based anomalies in Log360



Count-based anomalies in Log360

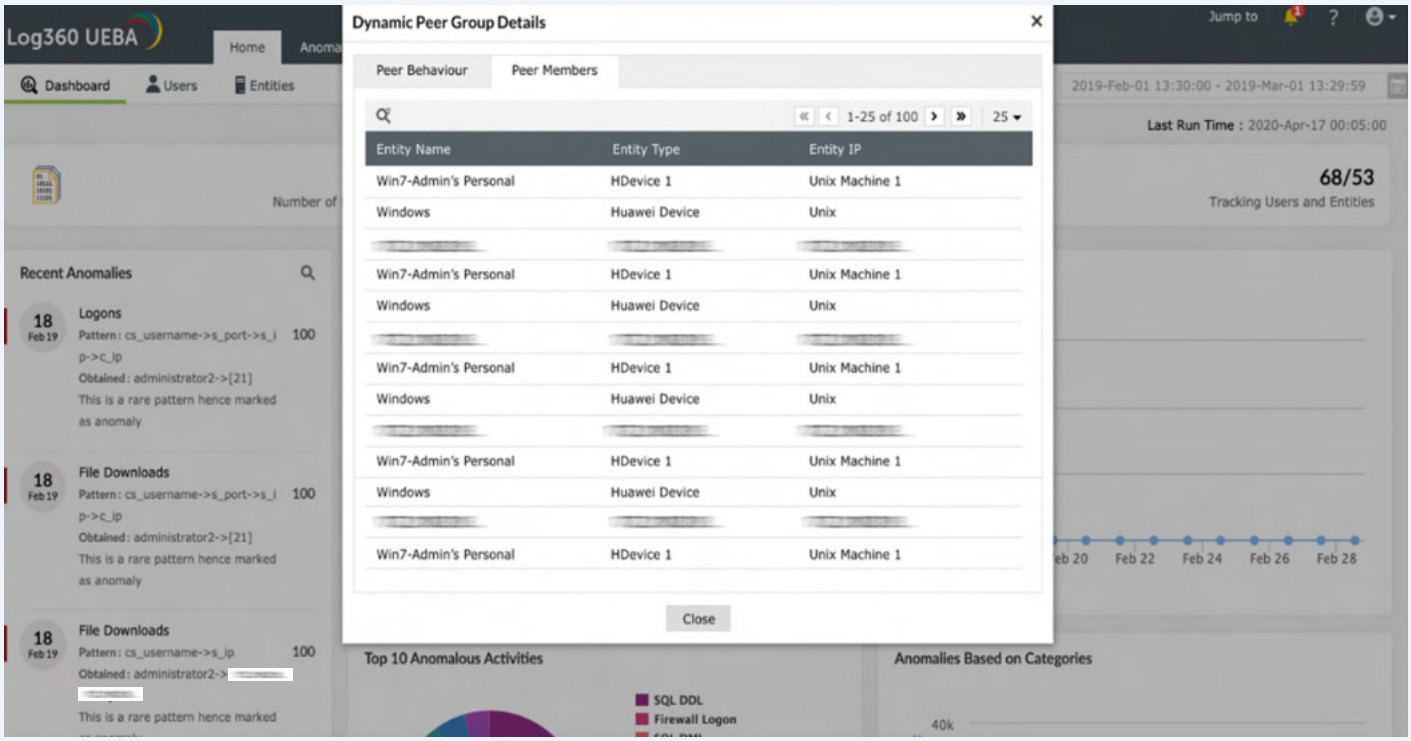


Pattern-based anomalies in Log360



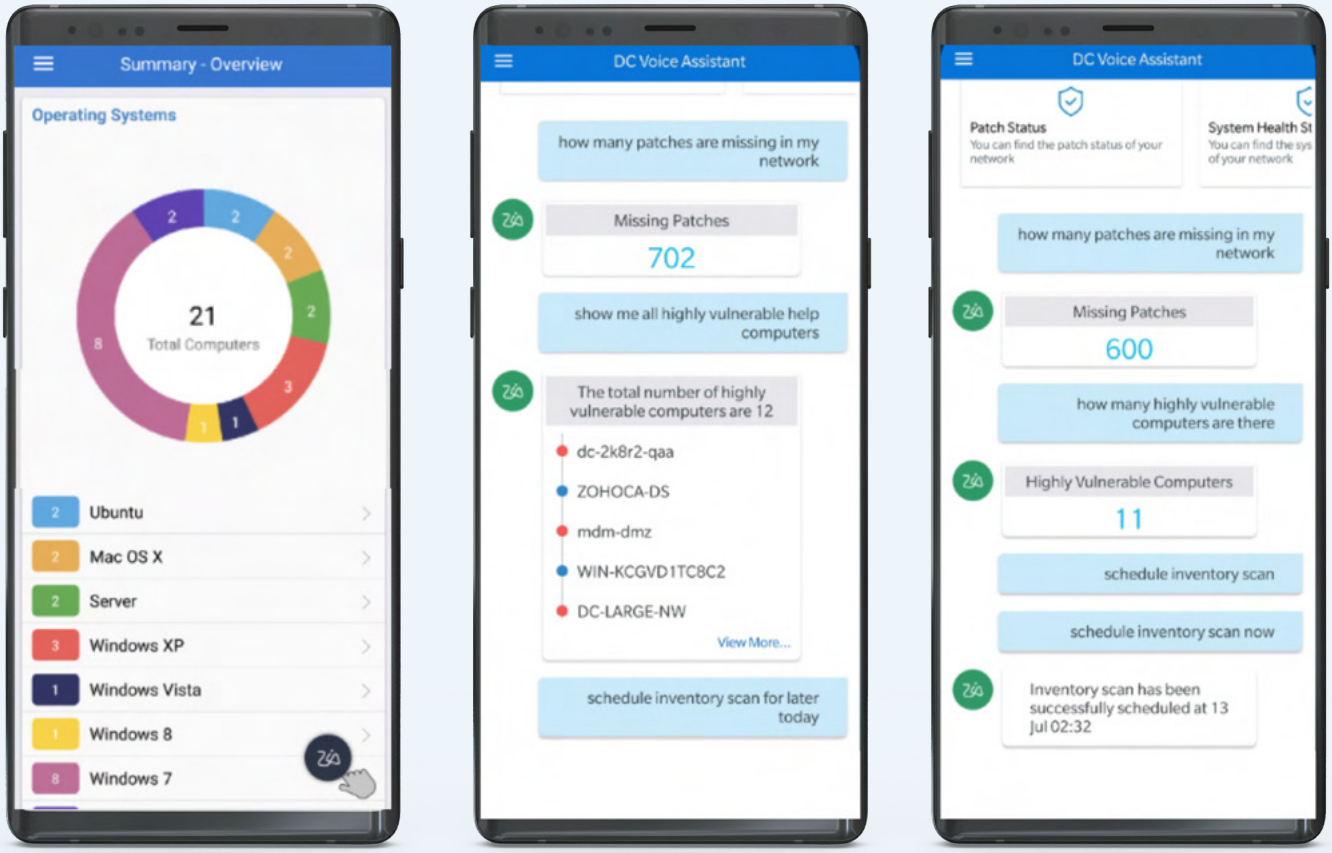
Seasonal anomalies in Log360

- Identify and visualize dynamic peer group behavior using risk scores.



Dynamic peer grouping in Log360

- Identify the right window to push patches to hundreds of machines to reduce failures.
- Anticipate security threats to better plan patch deployment across the enterprise.
- Employ each day capabilities like processing online search requests and filtering spam automatically out of our email inboxes.
- Use NLP-enabled chatbots for endpoint security.



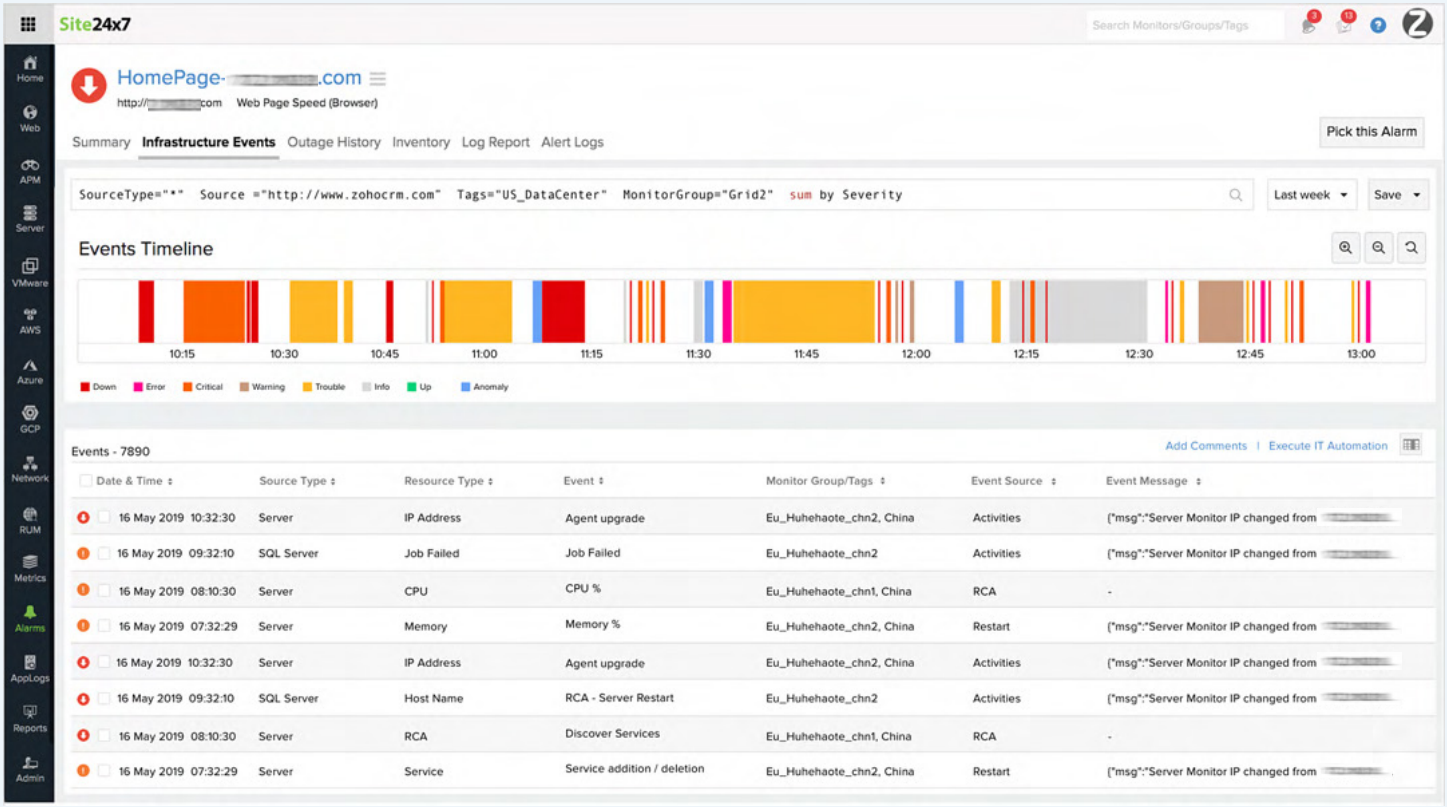
A mobile app with an NLP bot for queries related to the systems connected in Endpoint Central, our unified endpoint management and security solution

AI in IT monitoring

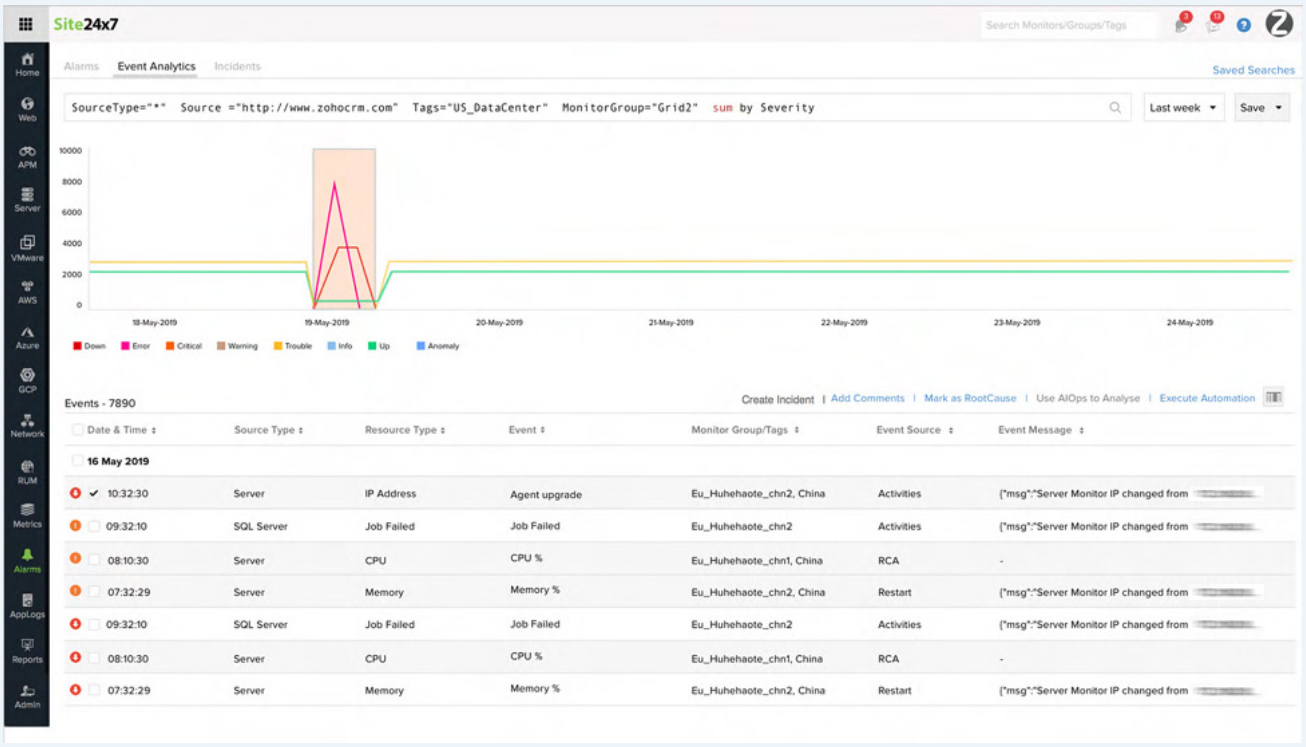
As more devices and IT components are added to your IT network, your monitoring capabilities must be enhanced to minimize application downtime. Moreover, once you've added forecasting capabilities to your monitoring systems, planning for resources and capacity will be that much easier.

For monitoring purposes, our AI-enabled solutions can help your team:

- Resolve incidents faster.
- Identify security events swiftly.

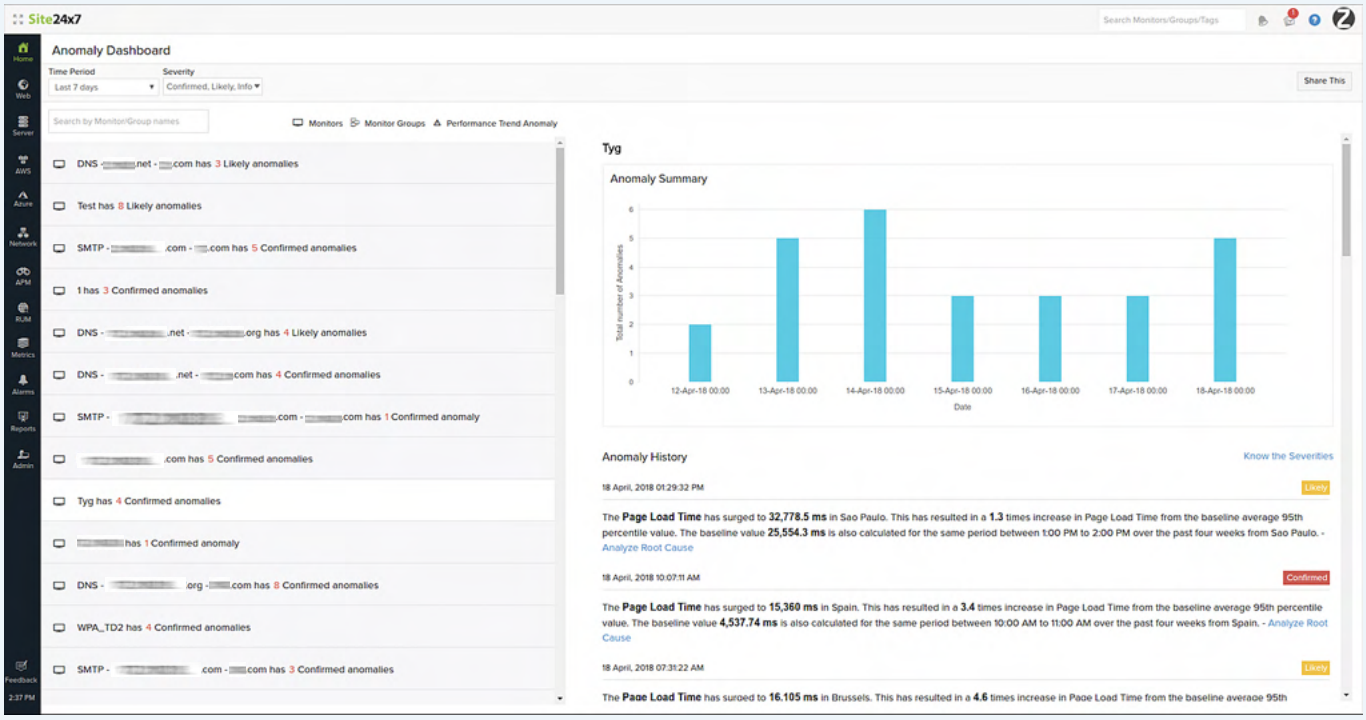


Live incident timeline in Site24x7, our cloud-based website, server and application monitoring solution



Event analysis in Site24x7

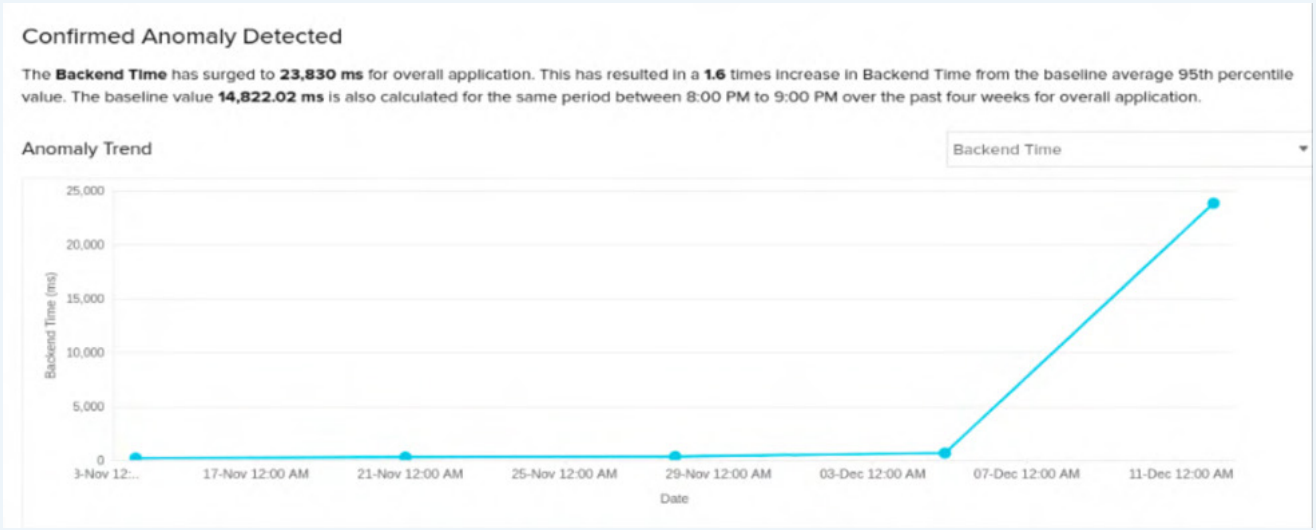
- Identify anomalies and predict outages based on similar past episodes and suggest a root cause.



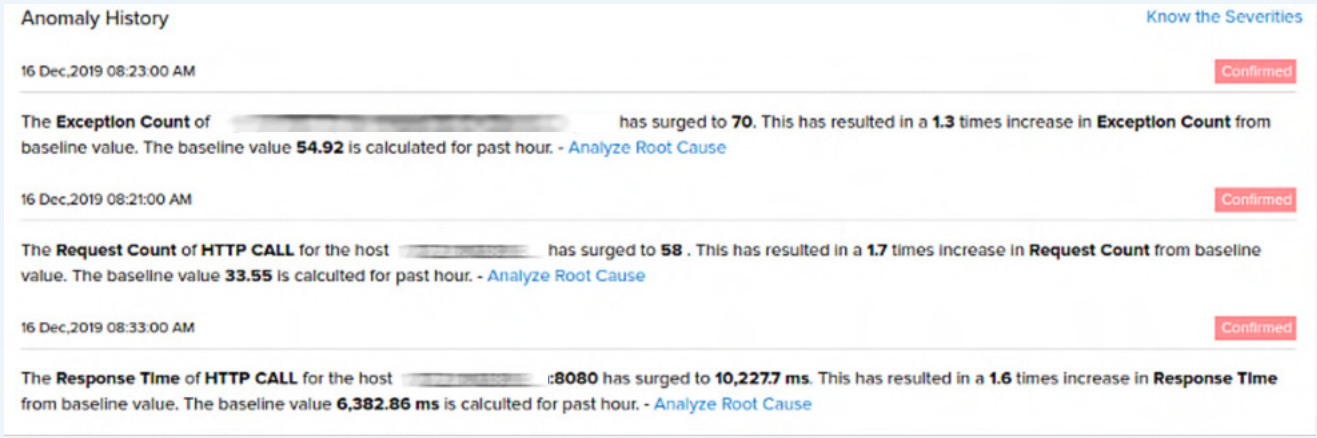
Anomaly detection through stream-ready method in server, URL, real user, application performance monitoring, and plugins in Site24x7



Real user monitoring (RUM) for anomaly history and detection in Site24x7



Real user monitoring (RUM) for anomaly detection and root cause analysis in Site24x7



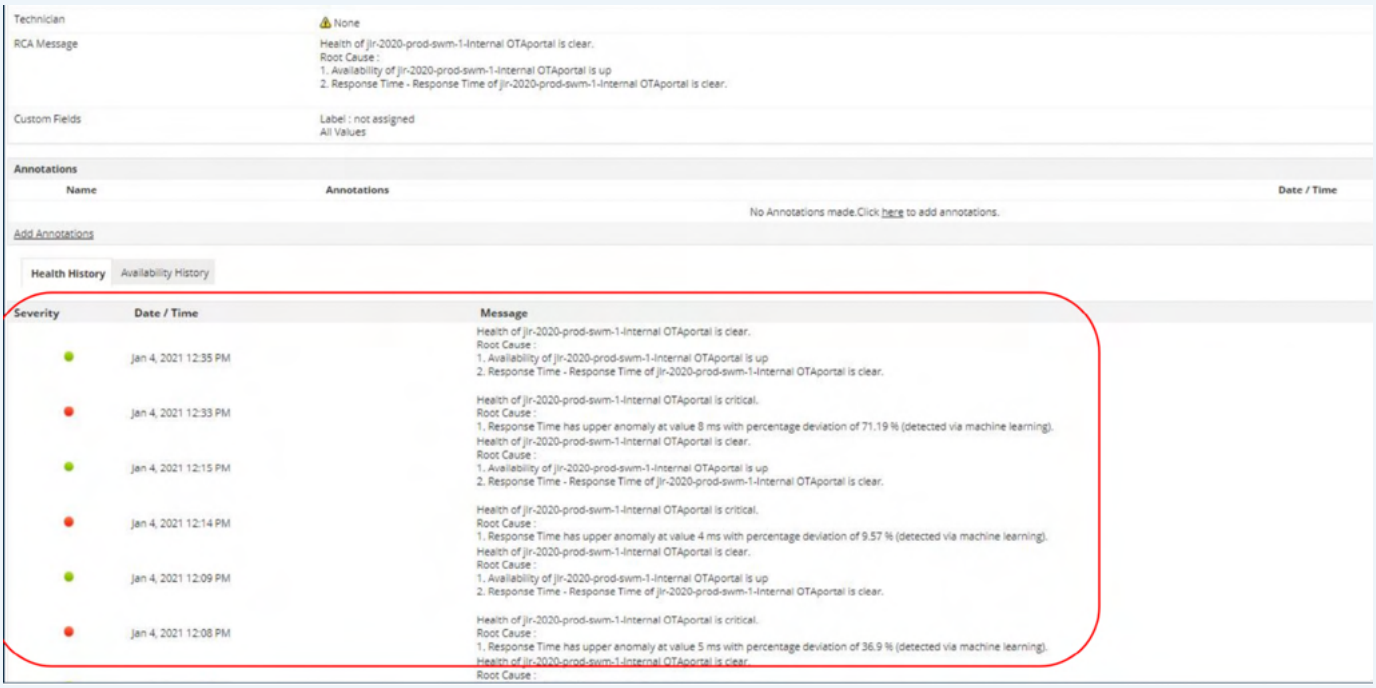
Real user monitoring (RUM) for anomaly history in Site24x7



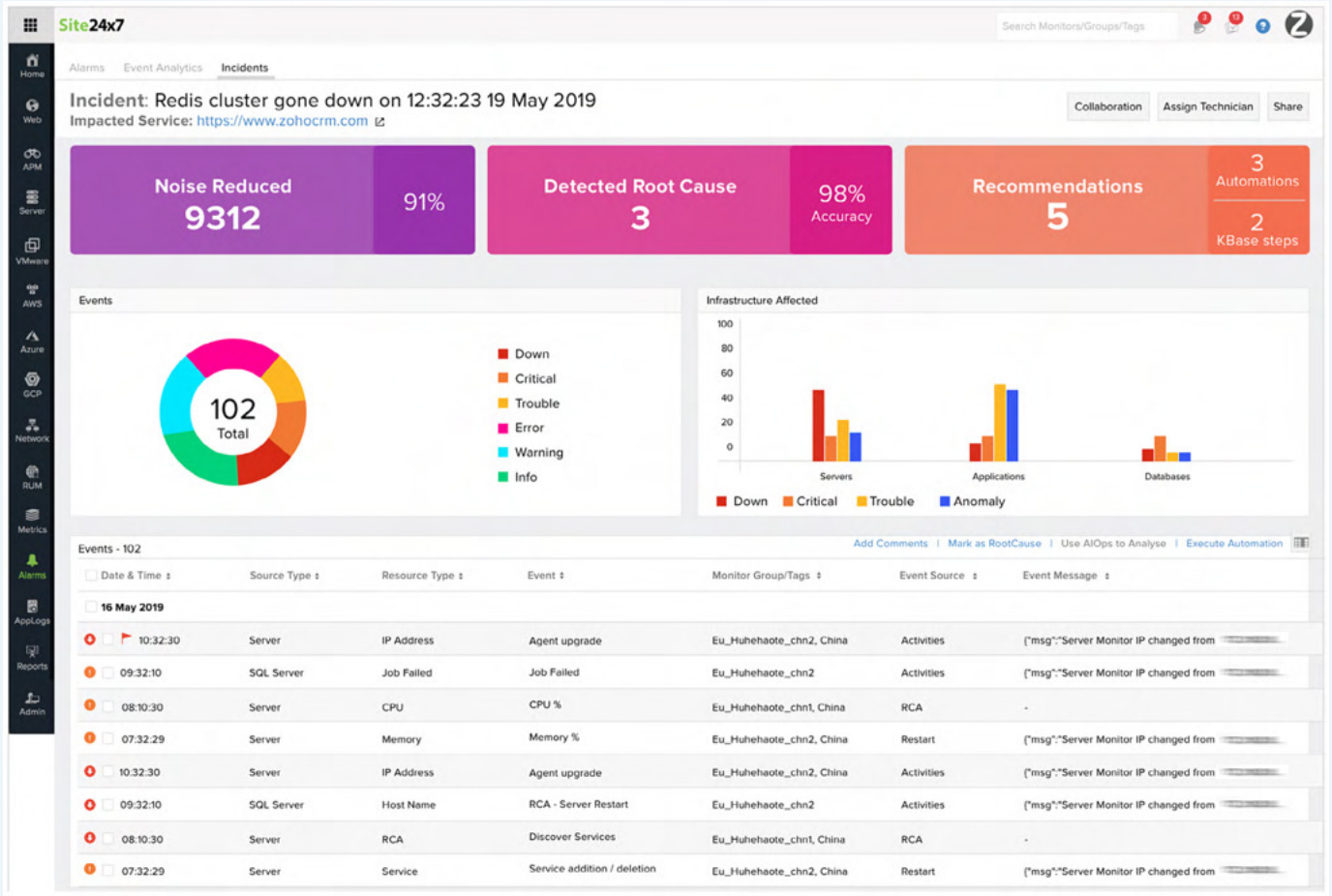
App performance monitoring (APM) for anomaly history in Site24x7

Severity	Date / Time	Message
	Mar 25, 2020 12:02 PM	Response Time - Critical. Response Time of google is critical because anomaly detected at value 21,500 ms. Anomaly Details: Type : Upper Percentage of Deviation : 40.15 % Expected : 15340.36 Actual : 21500 Value Difference : 6159.64
	Mar 25, 2020 11:42 AM	Response Time - Clear. Response Time of google is clear because its value 10300 ms

Anomaly alert in in Site24x7

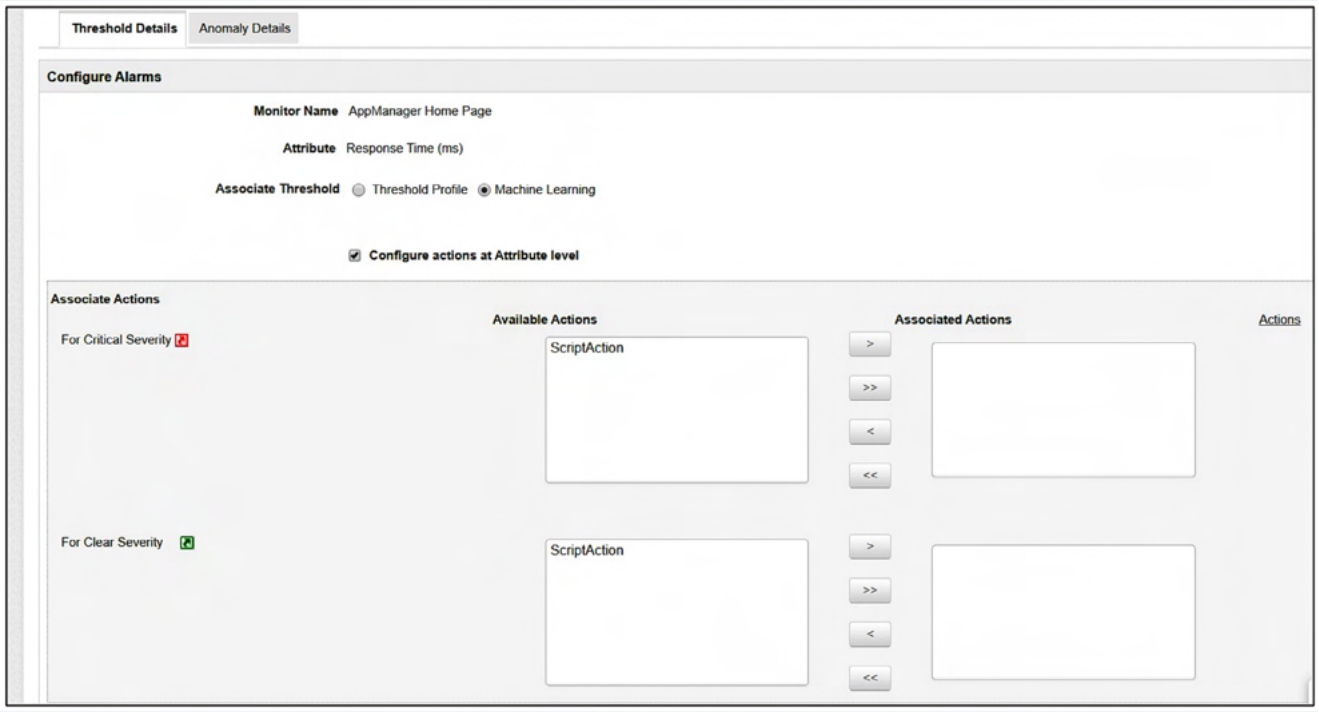


Detection of anomalies and identification of root cause analysis with severity rating in [Applications Manager,](#) our application performance monitoring solution



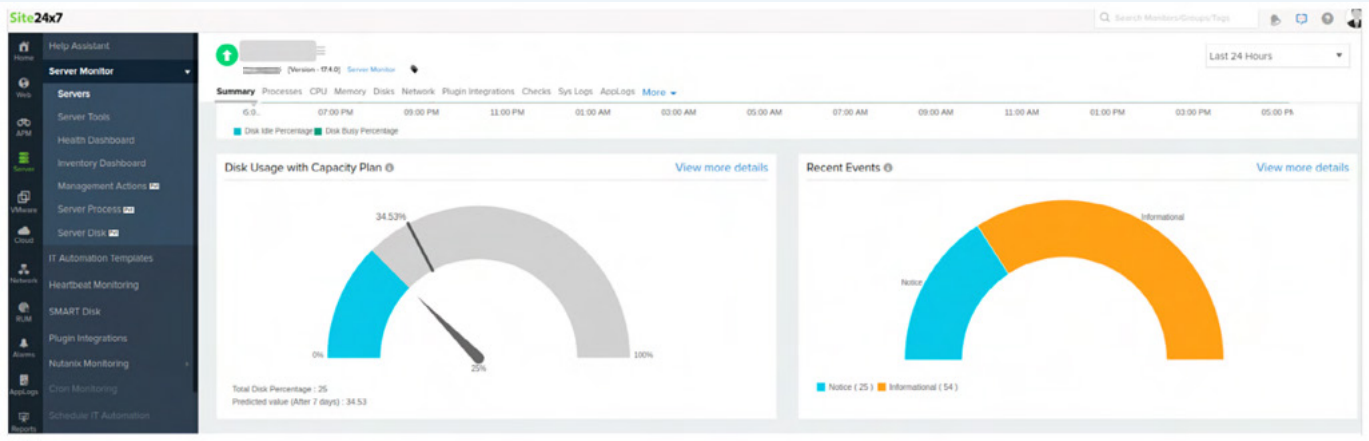
Root cause analysis of an incident in Site24x7, our cloud-based website, server and application monitoring solution

- Get smart operational and narrative insights narrative insights into their IT data with zero human interactions through augmented analytical capabilities.
- Push system data to a help desk and assign the issue to the right person.
- Preset adaptive warning threshold configurations for all devices and get alerts.

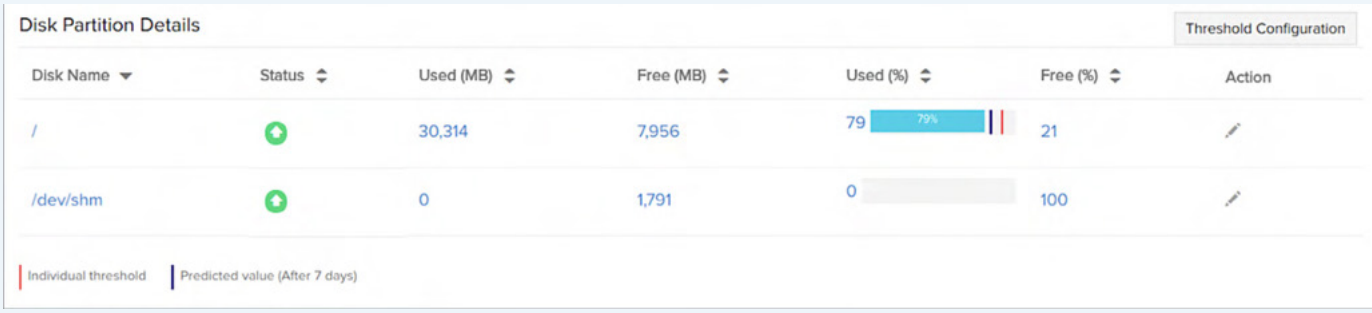


Establishing dynamic thresholds by assigning machine learning (ML) for attributes in Site24x7

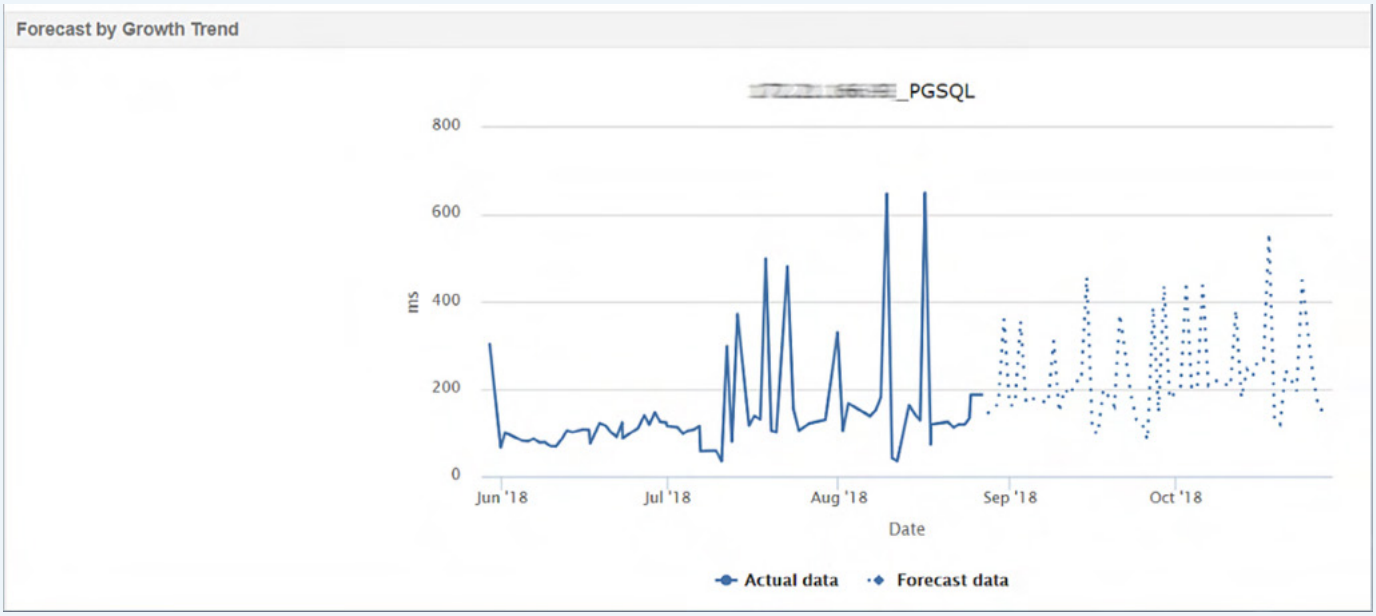
- Receive and publish performance reports automatically.
- Remediate issues through contextual integrations from all the layers in the stack which can suggest solutions like adding more servers to the production.
- Plan utilization and allocation of resources based on past patterns.



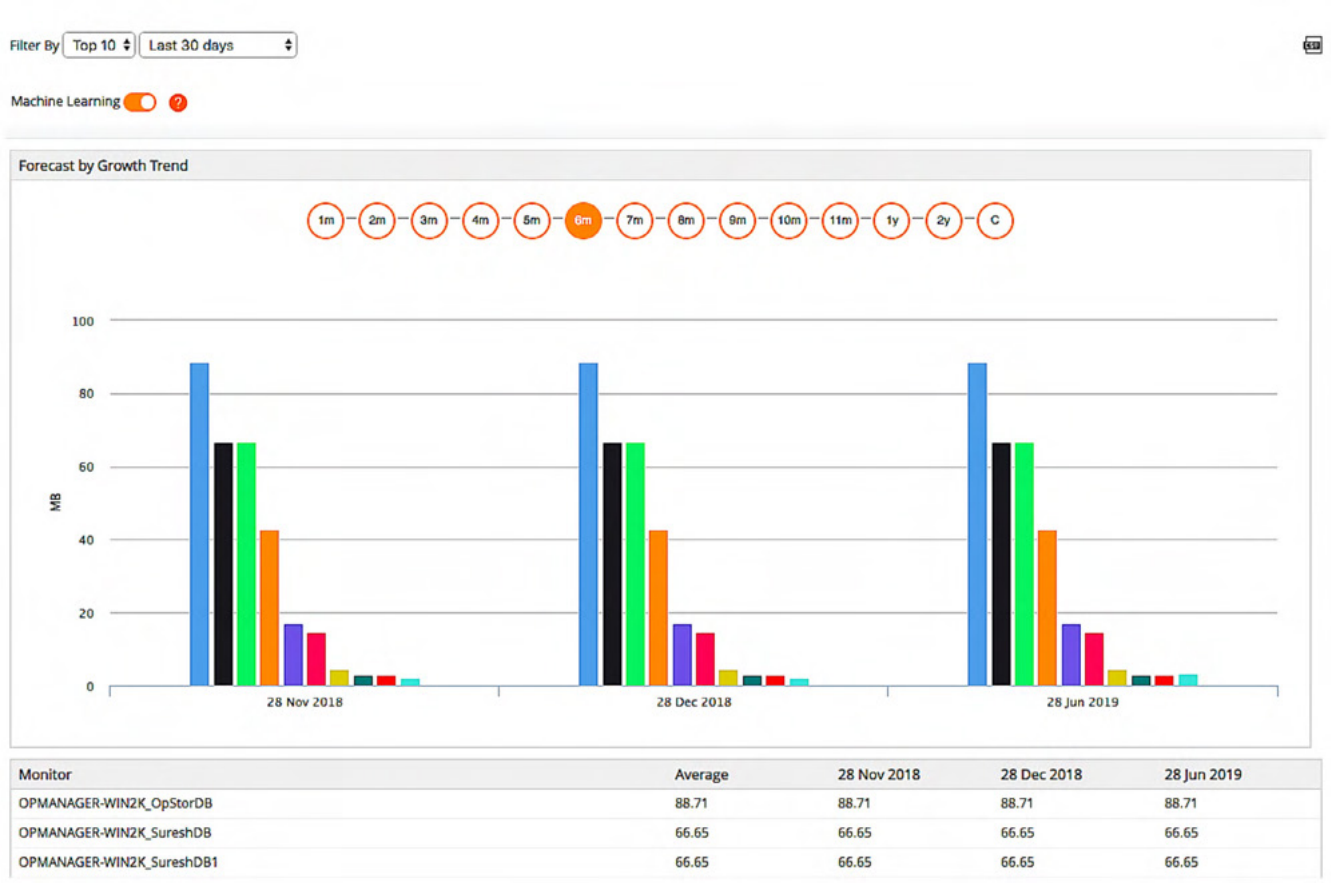
Forecasting of disk usage with capacity plan in Site24x7



Forecast engine to predict the forthcoming values with knowledge on the current and historic data in Site24x7

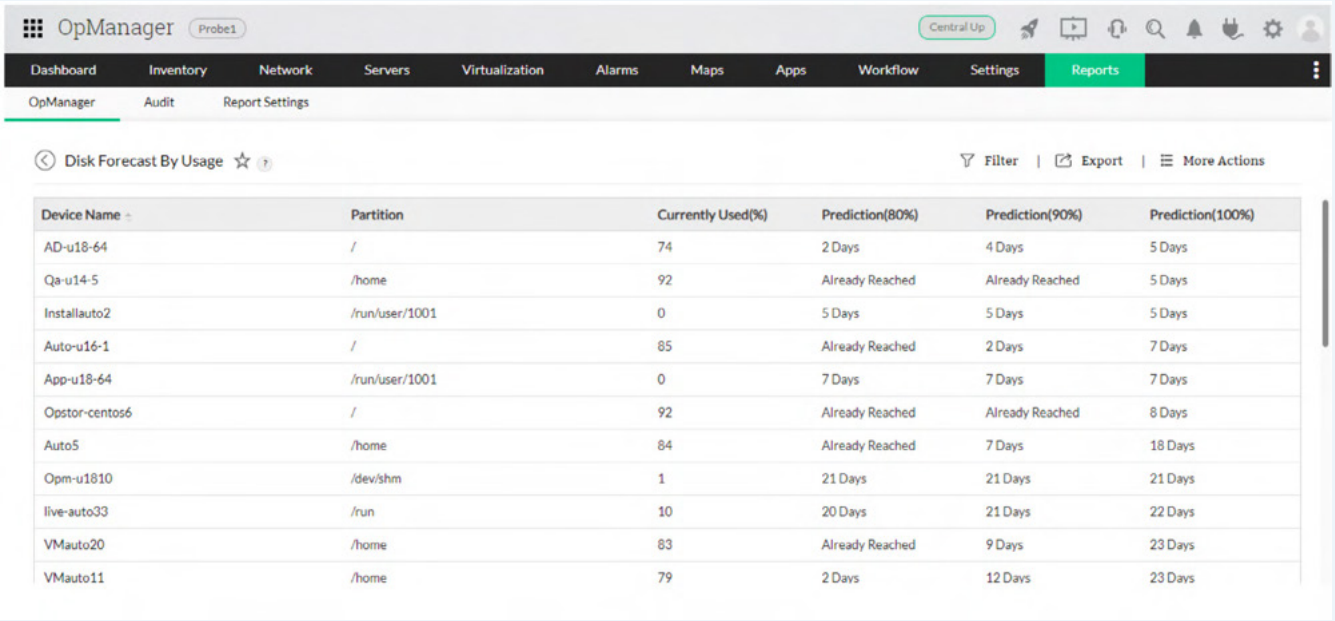


Forecasts the timeframe to fill up the disks' capacity using previous utilization patterns in Applications Manager, our application performance monitoring solution



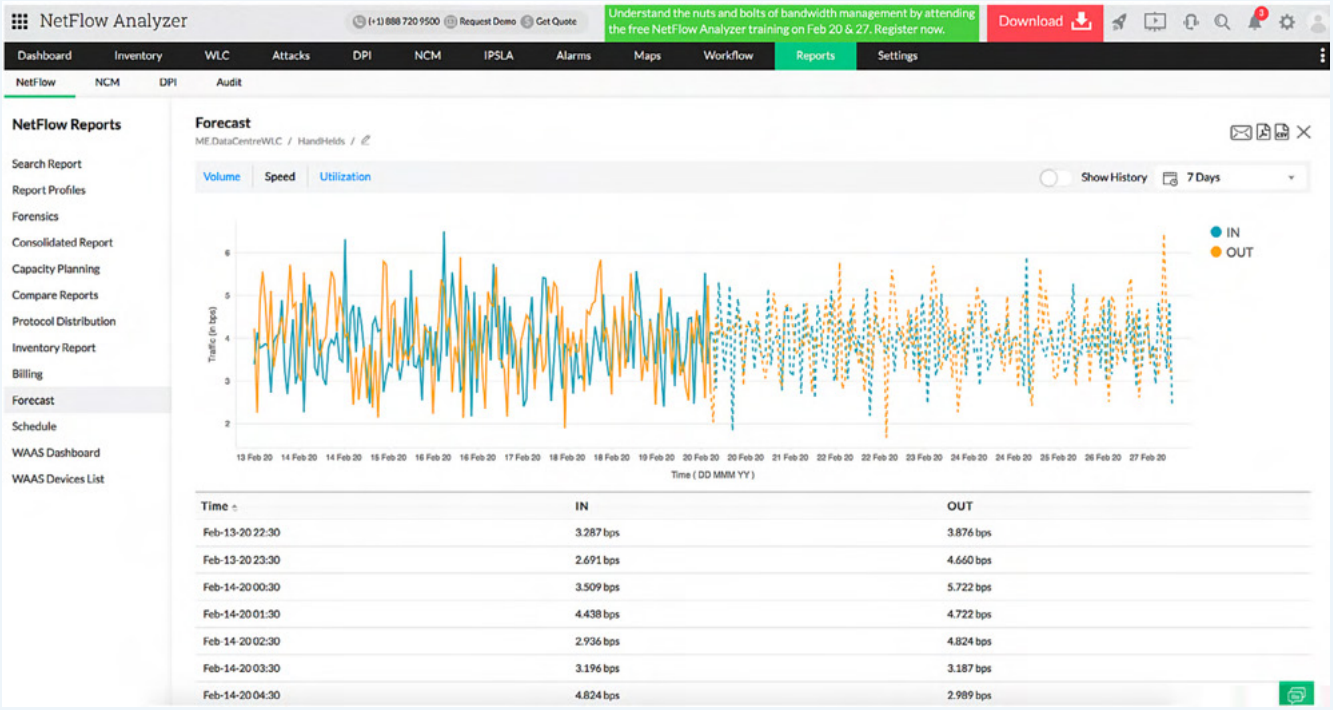
Monitor	Average	28 Nov 2018	28 Dec 2018	28 Jun 2019
OPMANAGER-WIN2K_OpStorDB	88.71	88.71	88.71	88.71
OPMANAGER-WIN2K_SureshDB	66.65	66.65	66.65	66.65
OPMANAGER-WIN2K_SureshDB1	66.65	66.65	66.65	66.65

Forecast of growth trends in Applications Manager

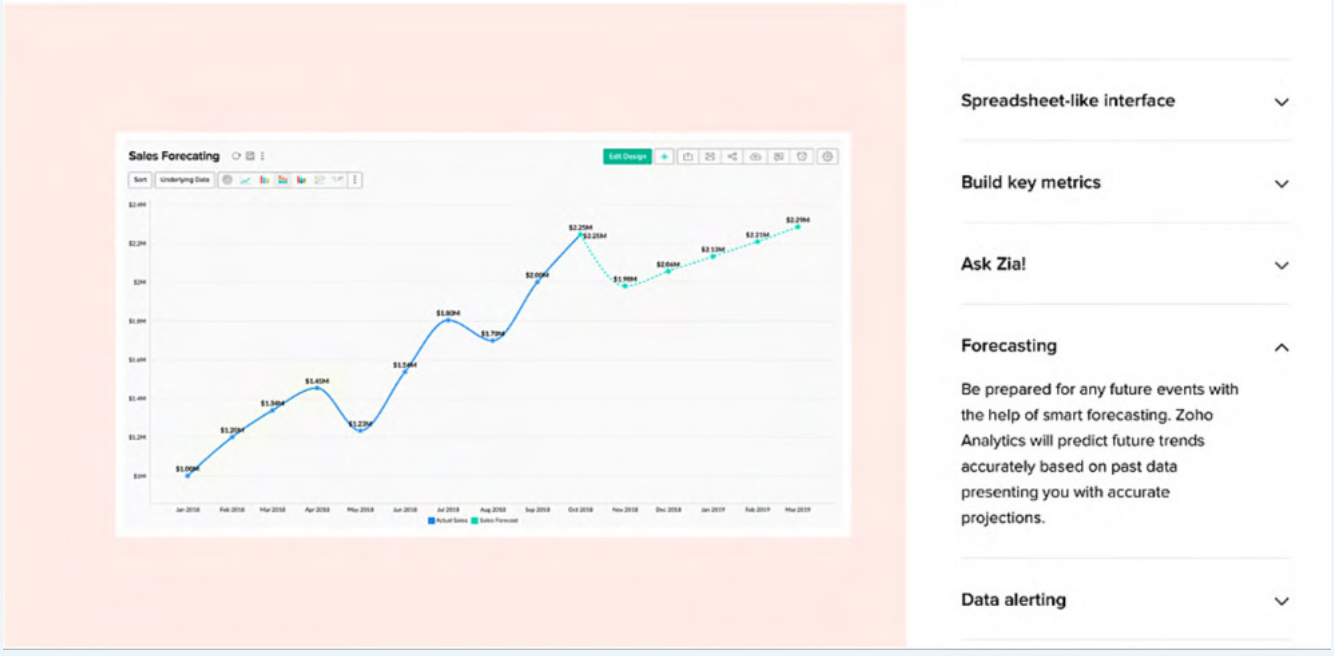


Device Name	Partition	Currently Used(%)	Prediction(80%)	Prediction(90%)	Prediction(100%)
AD-u18-64	/	74	2 Days	4 Days	5 Days
Qa-u14-5	/home	92	Already Reached	Already Reached	5 Days
Installauto2	/run/user/1001	0	5 Days	5 Days	5 Days
Auto-u16-1	/	85	Already Reached	2 Days	7 Days
App-u18-64	/run/user/1001	0	7 Days	7 Days	7 Days
Opstor-centos6	/	92	Already Reached	Already Reached	8 Days
Auto5	/home	84	Already Reached	7 Days	18 Days
Opm-u1810	/dev/shm	1	21 Days	21 Days	21 Days
live-auto33	/run	10	20 Days	21 Days	22 Days
VMauto20	/home	83	Already Reached	9 Days	23 Days
VMauto11	/home	79	2 Days	12 Days	23 Days

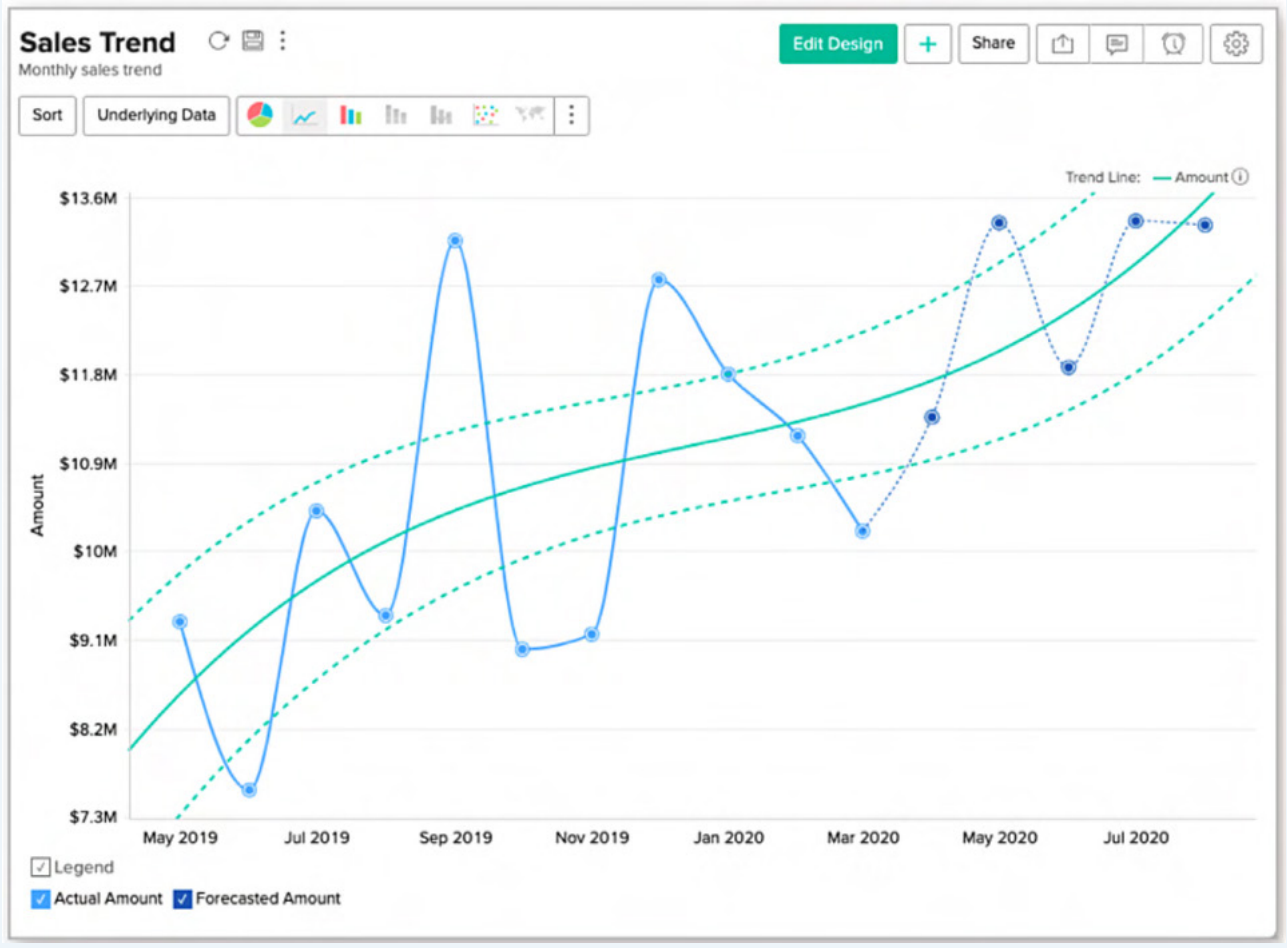
Forecast when disk space will run out using OpManager, our network monitoring solution



Forecasting the In and Out Netflow packets in NetFlow Analyzer, our real-time network traffic analysis solution



On-premises forecast engine to predict the forthcoming values with knowledge on the current and historic data in Analytics Plus, our IT analytics solution



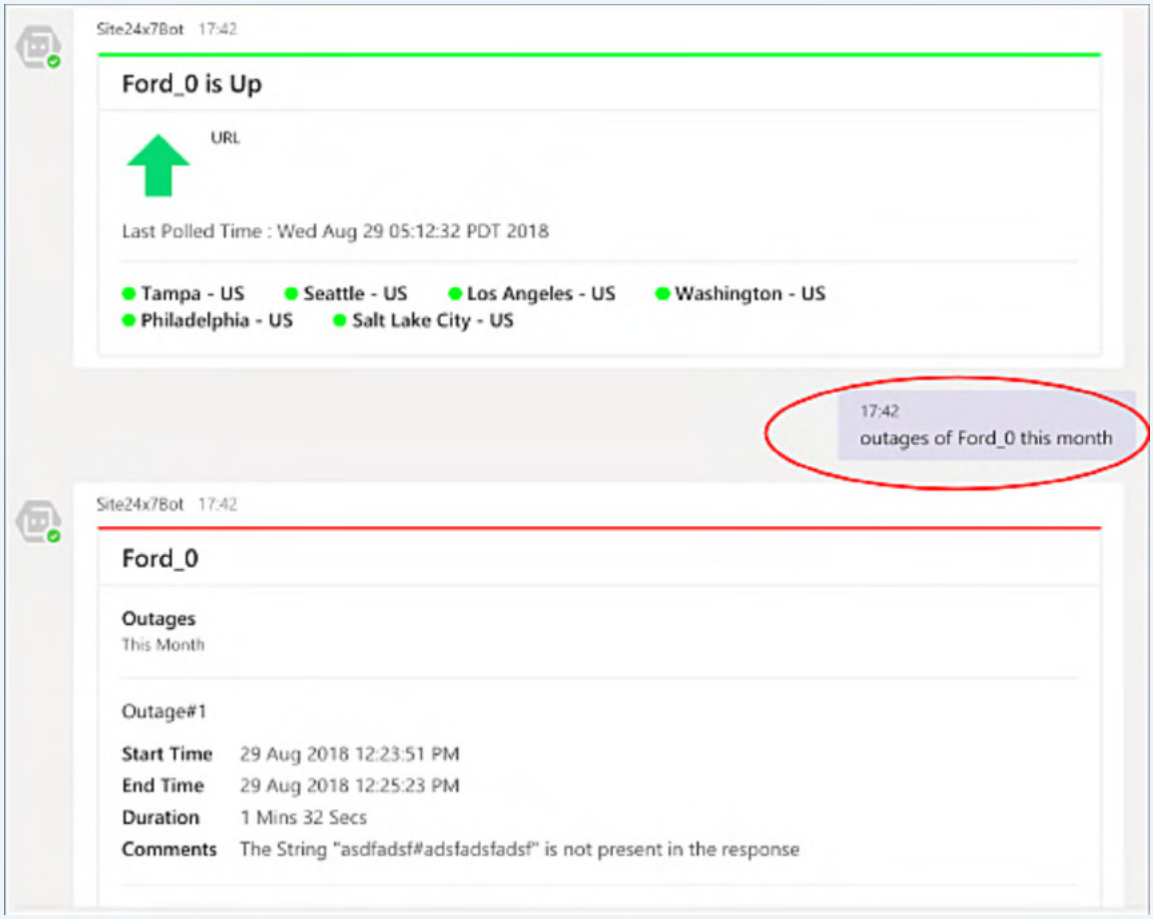
Frame trend lines for any relevant selected data using regression variants, which is completely customizable in Analytics Plus



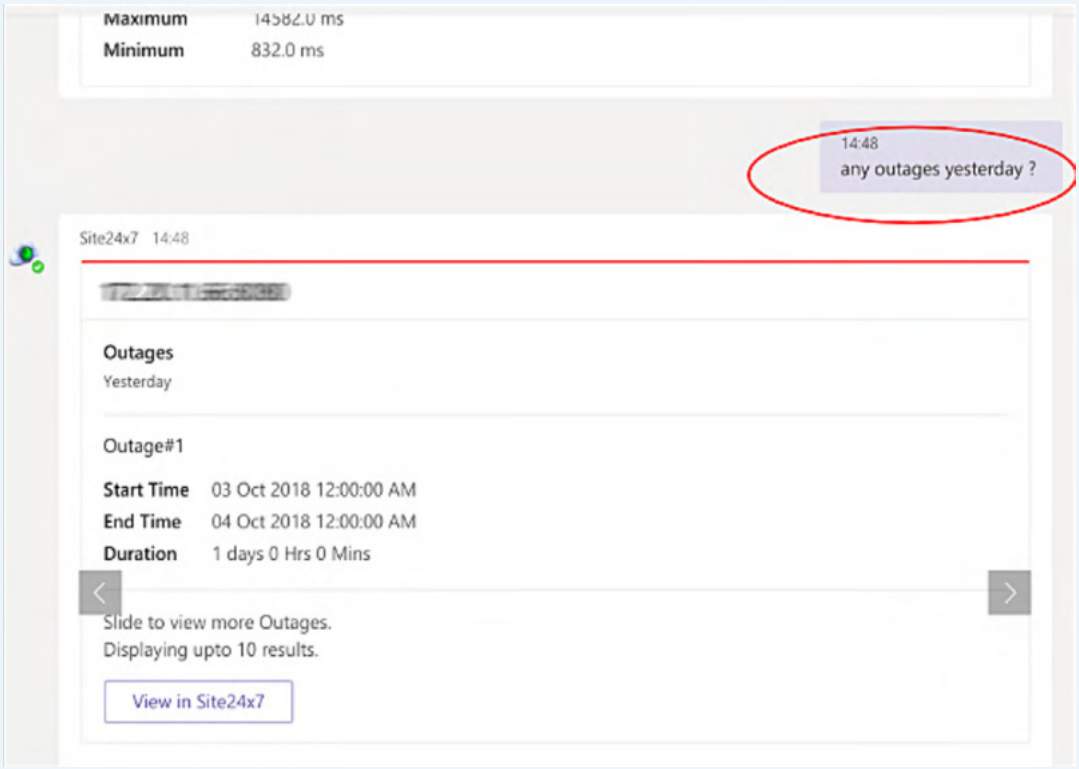
Trend lines framed for forecasted data in Analytics Plus

- Use predictive analytics for precise decision-making.
- Plan and prepare to achieve desired targets through “what if” scenario planning.
- Automate corrective actions.
- Receive intelligent recommendations for the best times to perform firmware upgrades.
- Prevent downtime by controlling errors in configuration changes.
- Integrate with various chat applications and provide meaningful conversational insights about key metrics and KPIs by asking further questions, using NLP-enabled chatbots for IT operations management.

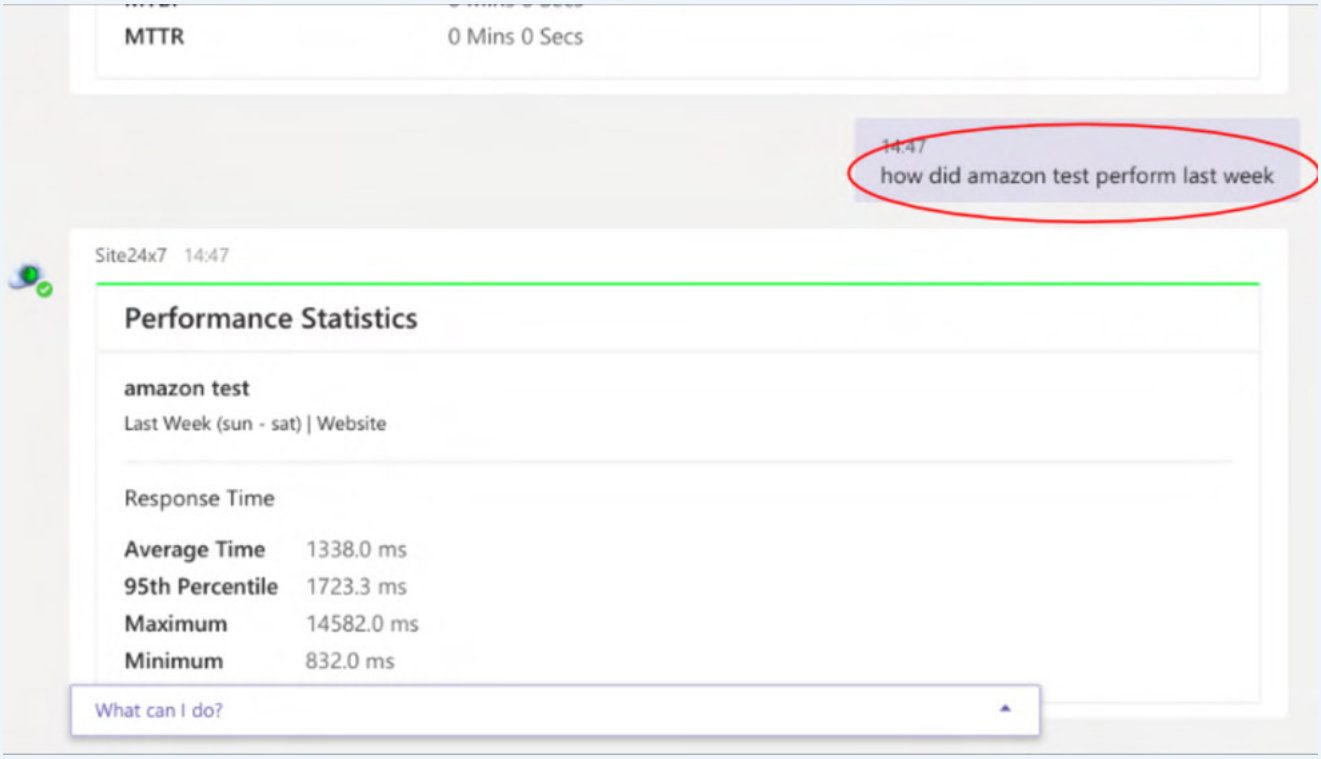
Natural language bot for answering queries in Site24x7, our cloud-based website, server and application monitoring solution-



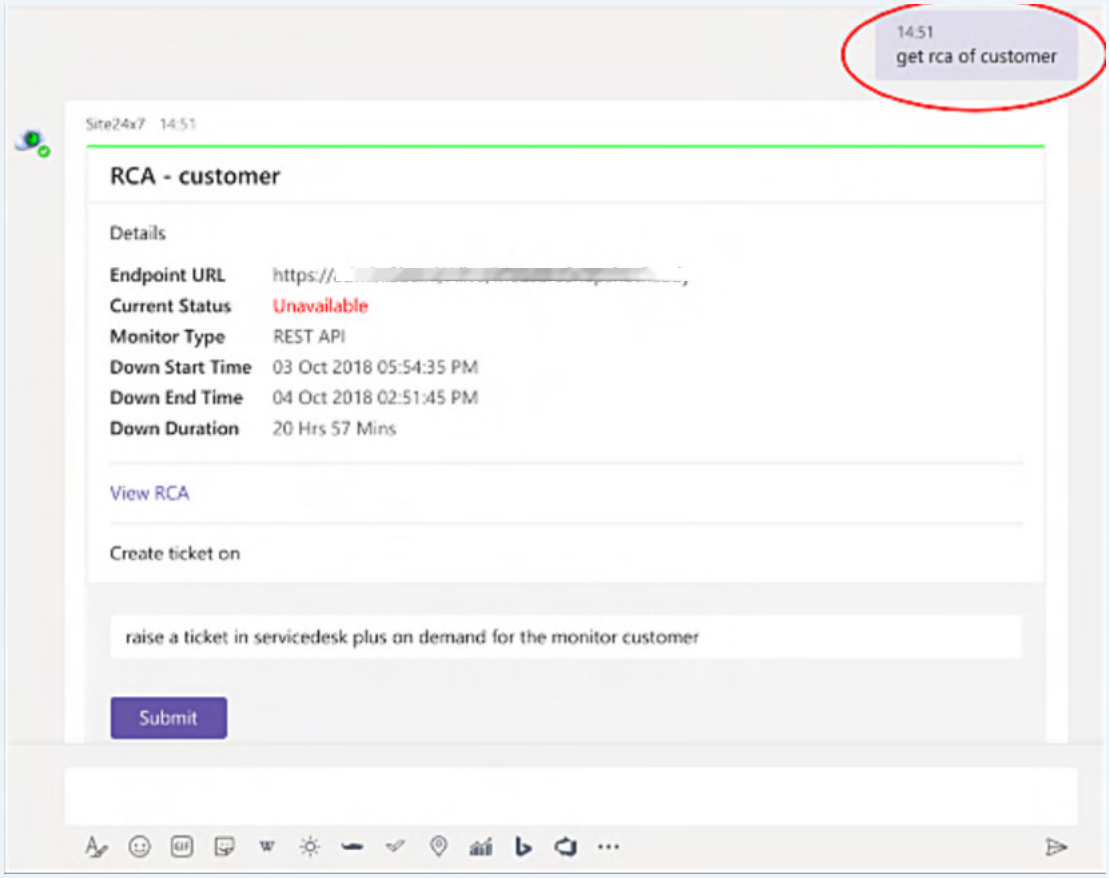
On outages



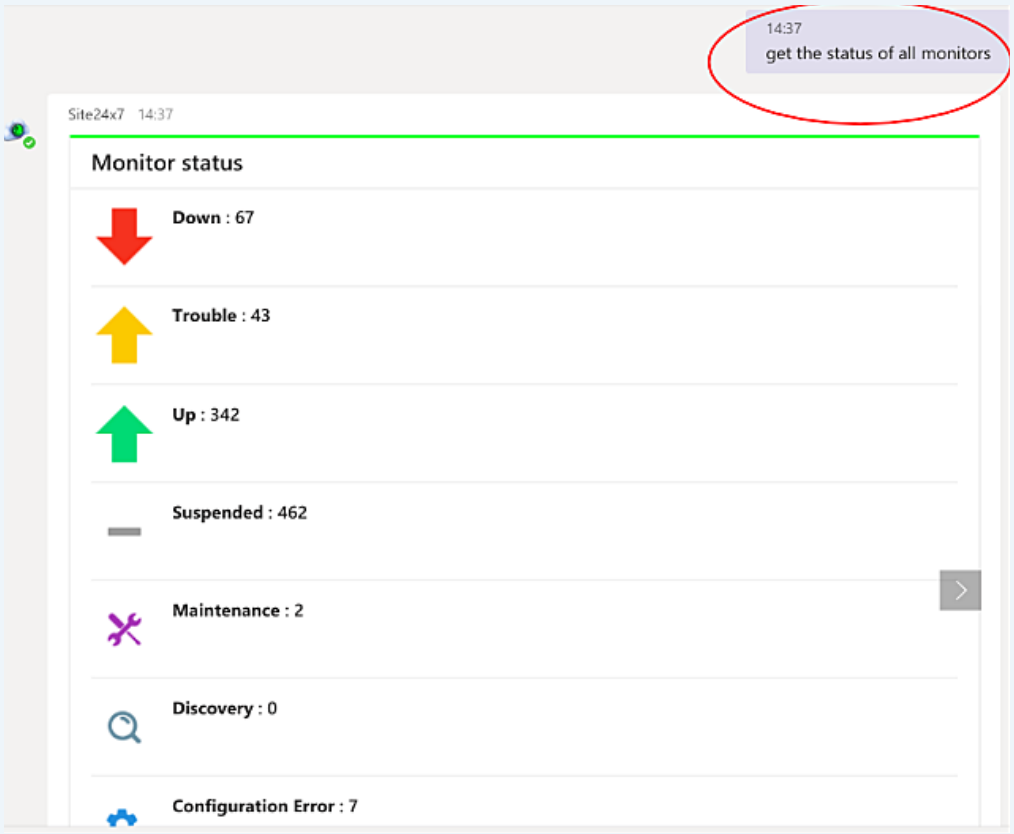
On recent outages



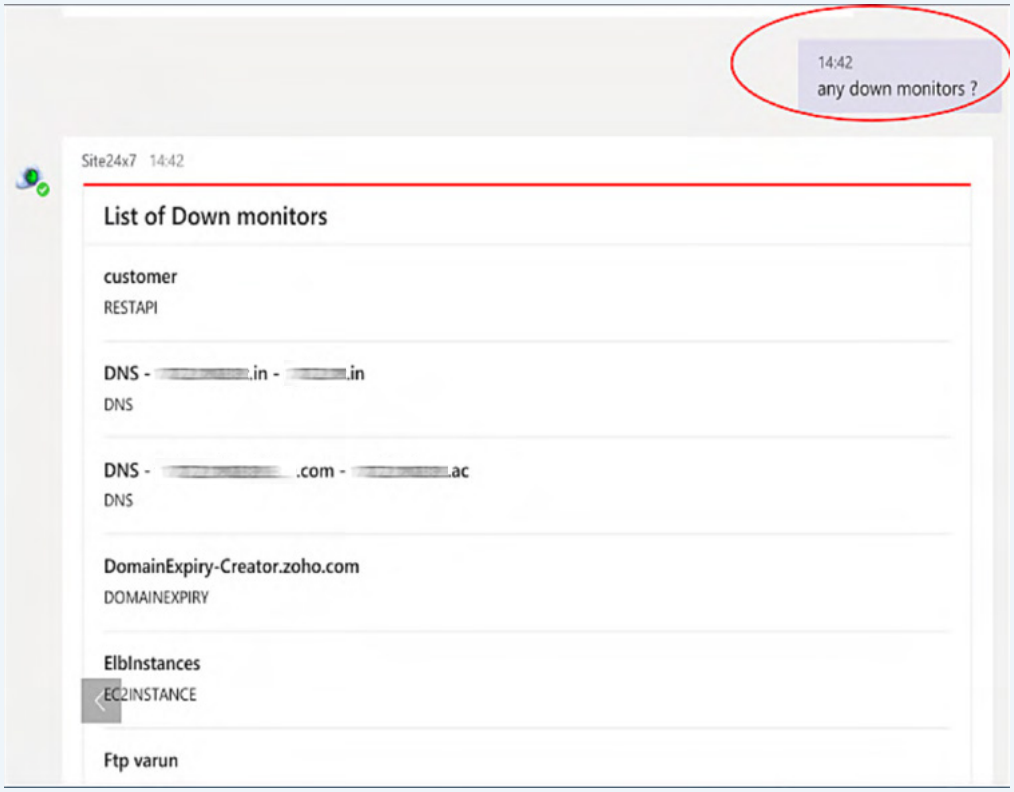
About performance



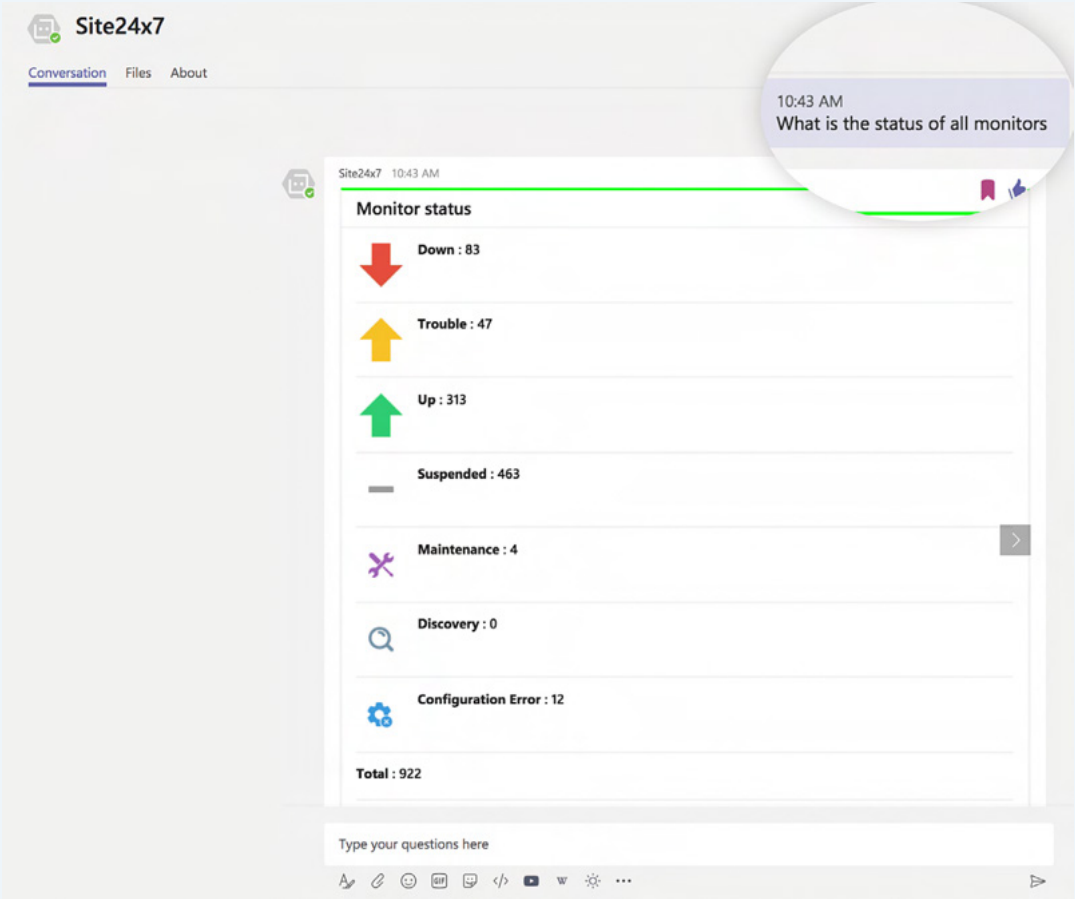
On root cause analysis (RCA)



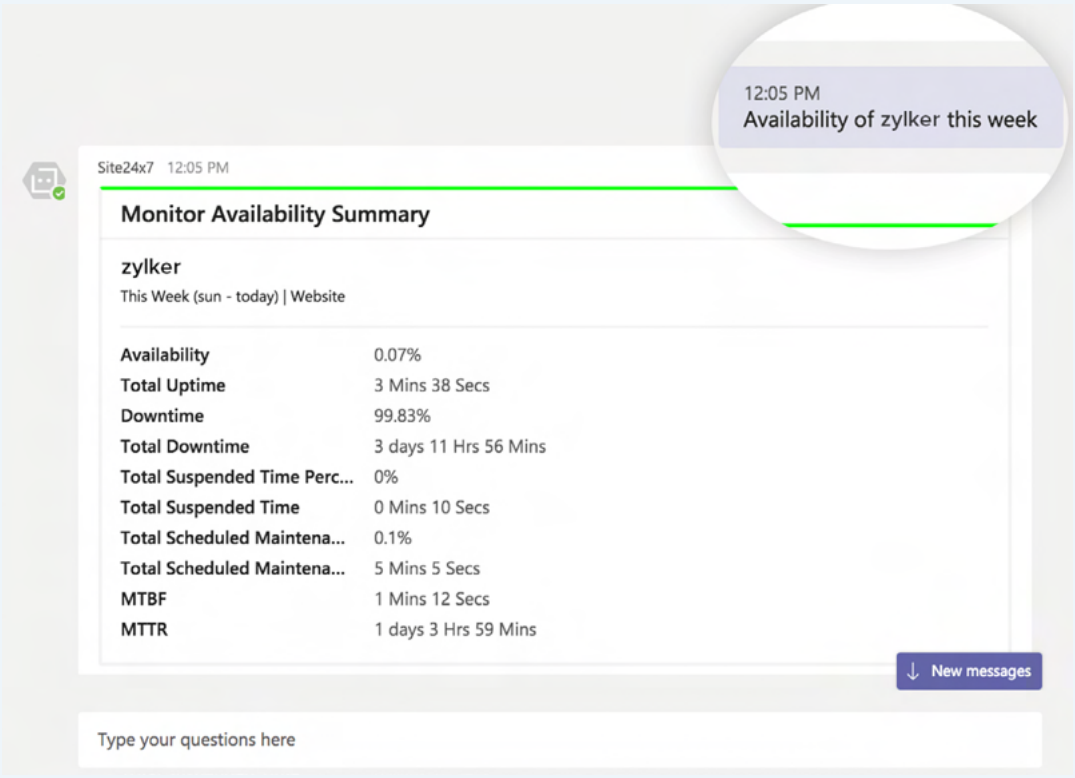
Regarding status updates



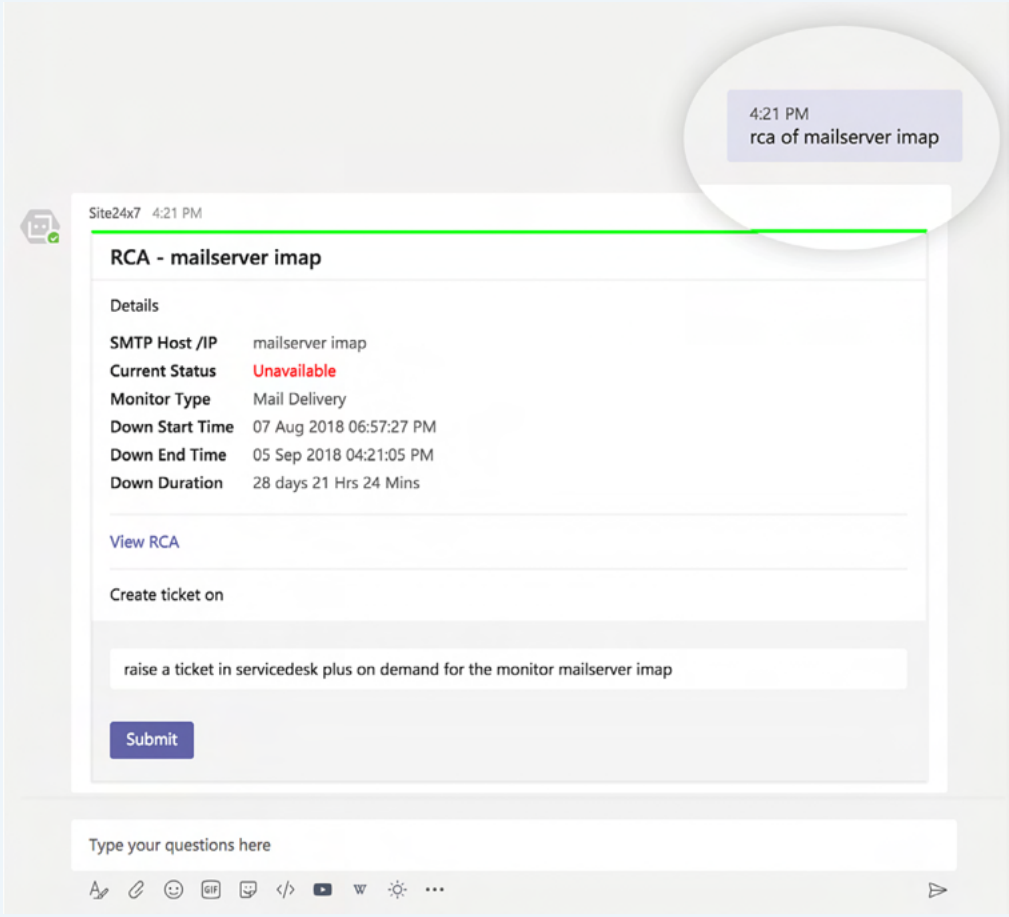
On monitor status updates



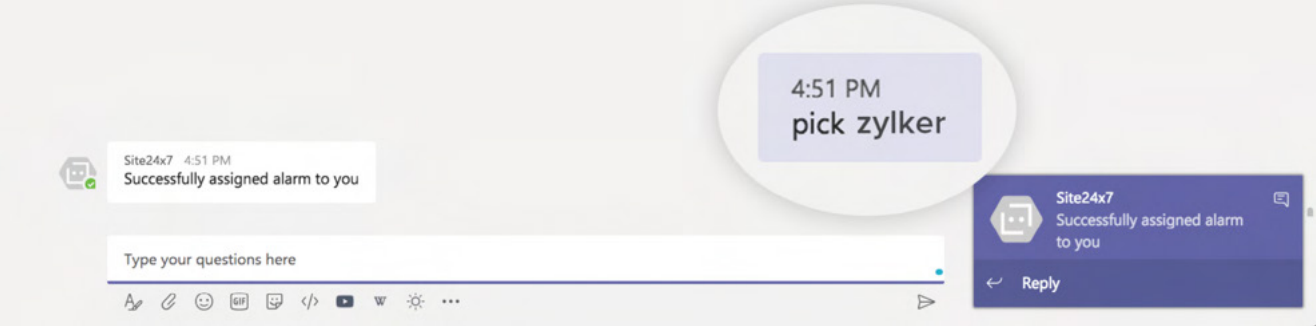
Integration with Microsoft Teams for status updates



Integration with Microsoft Teams for monitor availabilities



Integration with Microsoft Teams for root cause analysis (RCA)



Integration with Microsoft Teams

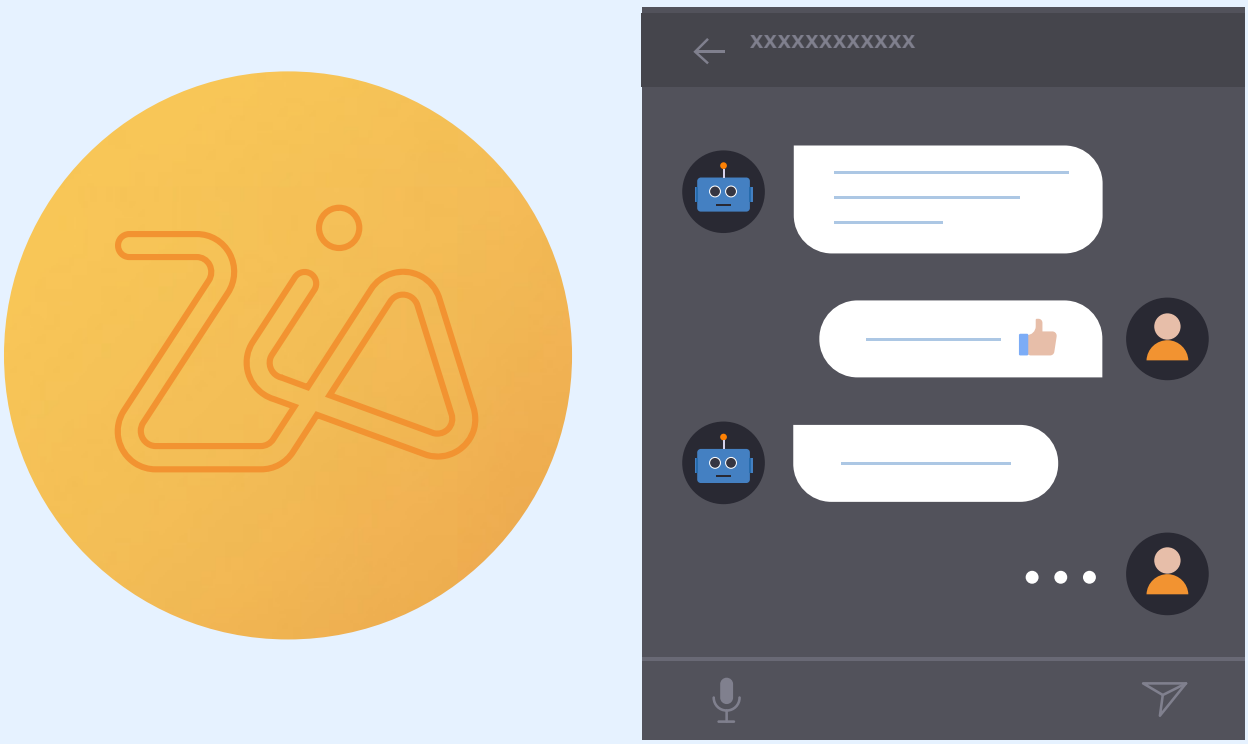
AIOps

In your organization, through AI in service delivery, IT security and IT monitoring, your IT team can now bring these three elements under one umbrella. AIOps helps transform the process of managing your IT infrastructure and ultimately, adopt digital transformation.

With an AIOps strategy, it'll be easier to:

1. Replace traditional IT management tools and methods with sophisticated AI-based tools, translating to efficient utilization of your IT team's time and effort.
2. Generate continuous insights for better operational efficiency.
3. Improve the quality of data and apply data-driven recommendations.
4. Improve communication, performance and end-user experience.

Our AI-enabled solutions will help you employ the AIOps methodology in your organization to embrace faster decision-making processes and achieve business goals.



Zia as an AI assistant

Meet Zia, Zoho Corporation's AI-powered conversational assistant. She helps you achieve real business impact. Zia works hard to make your job easy.

Zia plays a supporting role in several of our products, redefining the ways IT teams go about their tasks. She integrates with multiple ManageEngine products and provides actionable insights based on the data generated by your entire IT system. Some of Zia's key AI functionalities include:

1. Voice assistance

2. Seasonality detection

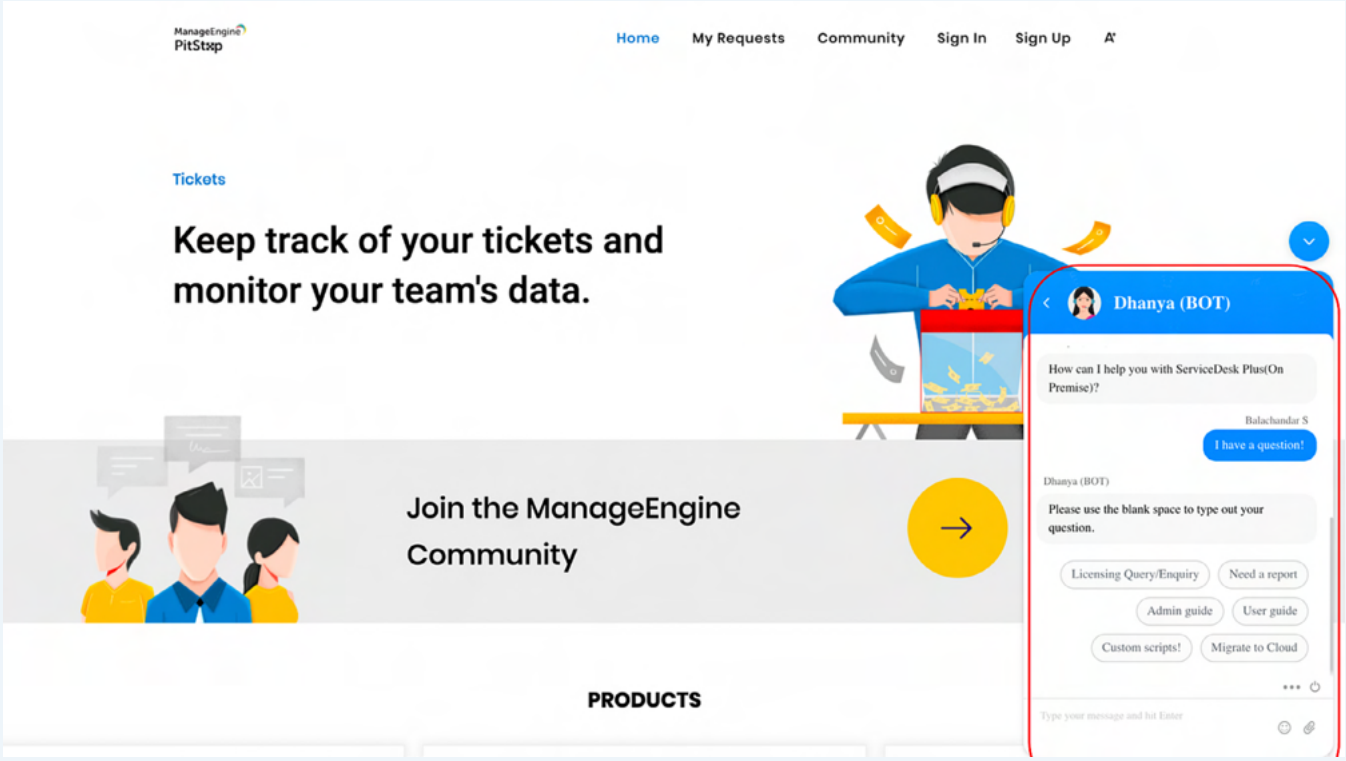
3. NLP

4. Forecasting

5. Anomalous behavior detection

6. Trend detection

All of these are implemented even as relevant privacy regulations are strictly in place.



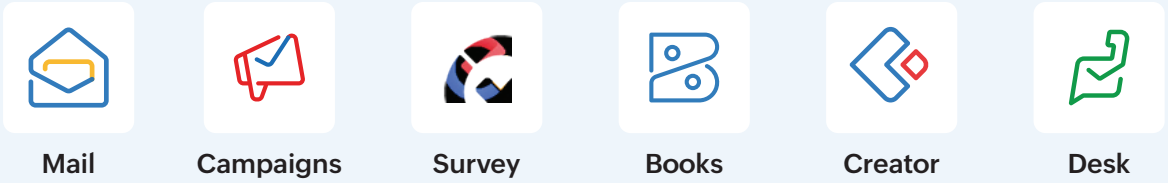
Bot to assist users in ME PitStop

AI-powered business management solutions for your organization

With our AI capabilities, business management is now easier and smarter. Apart from IT management solutions from ManageEngine, our AI innovation also adds value in various business management operations developed by Zoho Corporation.

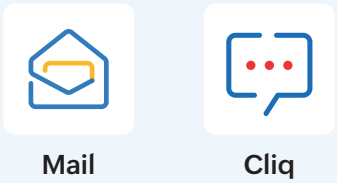
Detect fine-grained emotions and sentiments

Detect the sentiment of messages received from stakeholders, including emails and survey responses. Perform emotion analysis on tickets submitted to the help desk.



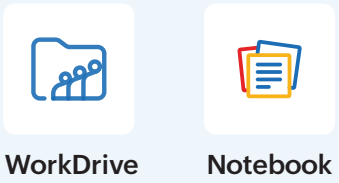
Leverage translations

Translate text in emails and chats to various languages.



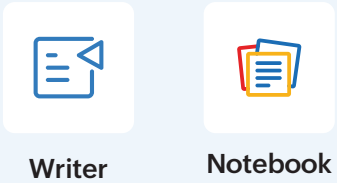
Annotate and explore images and objects

Detect relevant image files by searching for keywords.



Correct grammar errors

Identify incorrect verb forms and pronouns, missing prepositions, informal phrasal verbs, and other grammar errors and replace them with suggested revisions.



Recognize and extract optical characters, text, and objects

Detect and extract classes of objects from images and other documents during searches. Perform search indexing based on the notes attached to images during deep-learning-driven OCR.



Creator



Expense



Catalyst



Notebook

Extract keywords and labels

Identify important keywords and get suggestions for user-defined tags to cleanse your data. Determine the main topic of documents and notes.



DataPrep



Survey



Writer



Notebook

Clean data and perform computations

Cluster similar words and clean spreadsheet data. Query for results and perform calculations in spreadsheets via a bot.



Sheet

Deliver product recommendations

Offer recommendations for relevant or frequently purchased products based on customer searches.



Sites

Optimize search engine results

Extract keywords from your webpages to optimize your site's organic search ranking and achieve better reach.



Sites

Forecast trends and patterns

Make decisions based on trends predicted for conversion rates, number of visits, engagement level, and more when a lead lands on a webpage. Predict upcoming values based on historic and current data, and establish trend lines.



PageSense



Analytics

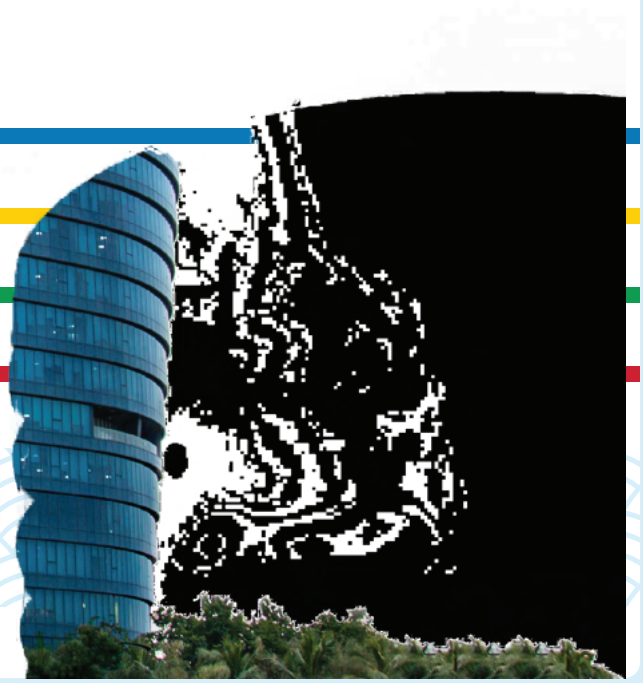
Our breadth and depth in AI innovation lets us create more powerful AI, faster. By deploying ManageEngine solutions powered by machine learning and data analytics capabilities, your organization will also be able to embrace the AI revolution swiftly. To learn more, write to us at tech-expert@manageengine.com

About ManageEngine

ManageEngine crafts the industry's broadest suite of IT management software. We have everything you need — more than 90 products and free tools — to manage all of your IT operations, from networks and servers to applications, service desk, Active Directory, security, desktops, and mobile devices.

Since 2002, IT teams like yours have turned to us for affordable, feature-rich software that's easy to use. You can find our on-premises and cloud solutions powering the IT of over 280,000 companies around the world, including nine of every ten Fortune 100 companies.

As you prepare for the IT management challenges ahead, we'll lead the way with new solutions, contextual integrations, and other advances that can only come from a company singularly dedicated to its customers. And as a division of Zoho Corporation, we'll continue pushing for the tight business-IT alignment you'll need to seize opportunities in the future.



ManageEngine

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