ManageEngine
Analytics Plus

DISCOVER HOW UNIFIED **ANALYTICS CAN REDUCE IT EXPENSES BY 50%**

Tired of increasing IT expenditure eating away your IT budgets? Discover how adopting unified IT analytics can reduce IT costs by up to 50%.

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Introduction

Given the changing business and economic landscape, IT expenditure is a significant area of concern for organizations. For small and medium enterprises that are operating on smaller budgets, increasing the IT budget year-on-year to accommodate for newer technology, increasing overheads, and increasing staff salaries can quickly make their overall budgets shoot up. For bigger organizations, ever-increasing IT operational costs force them to dip into the budget allocated for other activities such as digitization, modernization, and cloud migration to fund IT operational expenses.

With most organizations tightening their purse strings in anticipation of an economic downturn, IT is under tremendous pressure to cut costs strategically. That is, optimize expenses, trim excesses, achieve cost efficiency, and increase cost-effectiveness. One way to address this issue is by using unified IT analytics, which can help reduce IT expenditure by up to 50%.

Unified IT analytics is an integrated approach to manage IT, and it provides a comprehensive view of all IT operations under a single console. This enables organizations to identify and remedy inefficiencies across all verticals within IT, optimize resource utilization, manage infrastructure better, reduce downtime, and troubleshoot faster, thereby reducing costs with all these activities.

In this e-book, we bring you a bevy of real-life examples where unified IT analytics can help reduce excess. For easier understanding, we've categorized these examples into the following segments:

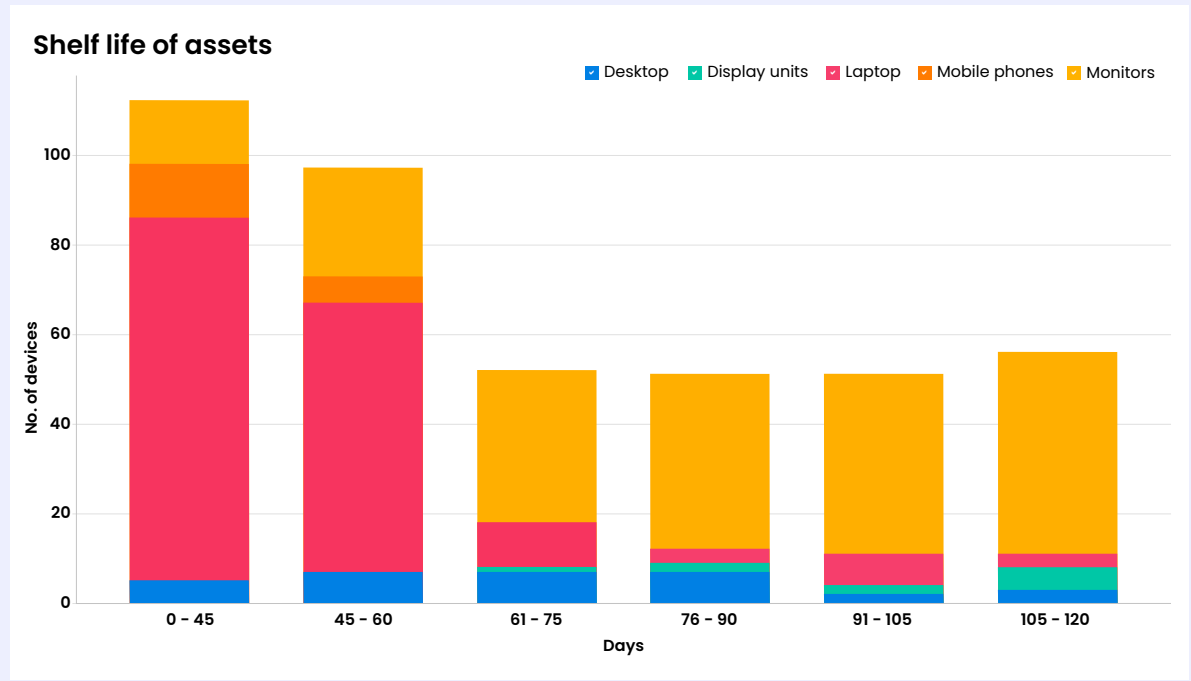
Asset management

Unified analytics can assist organizations in reducing asset expenditure by providing a comprehensive view of assets before and after they're purchased—right from the moment teams place an order for assets to the moment when assets are disposed of after use.

Reduce hardware and software wastage

Organizations order new assets in anticipation of expansion or growth. Quite often, these growth plans aren't made with data-backed predictions, resulting in over-procurement and prolonged periods of time spent on shelves.

The report below shows the number of assets that are on shelves for 45 days, 60 days, 75 days, and more. Obviously, assets that spend longer on shelves are the assets that contribute to greater wastage of the IT asset budget. Reducing or minimizing this wastage can instantly free up cash for better investment initiatives.



This graph is built on the assumption that assets can spend a maximum of 45 days on IT storage shelves before being assigned to owners. If your organization prefers a shorter shelf life for assets, the report can be modified accordingly.

A similar report can be used to identify and prevent wastage from unnecessary software purchases.

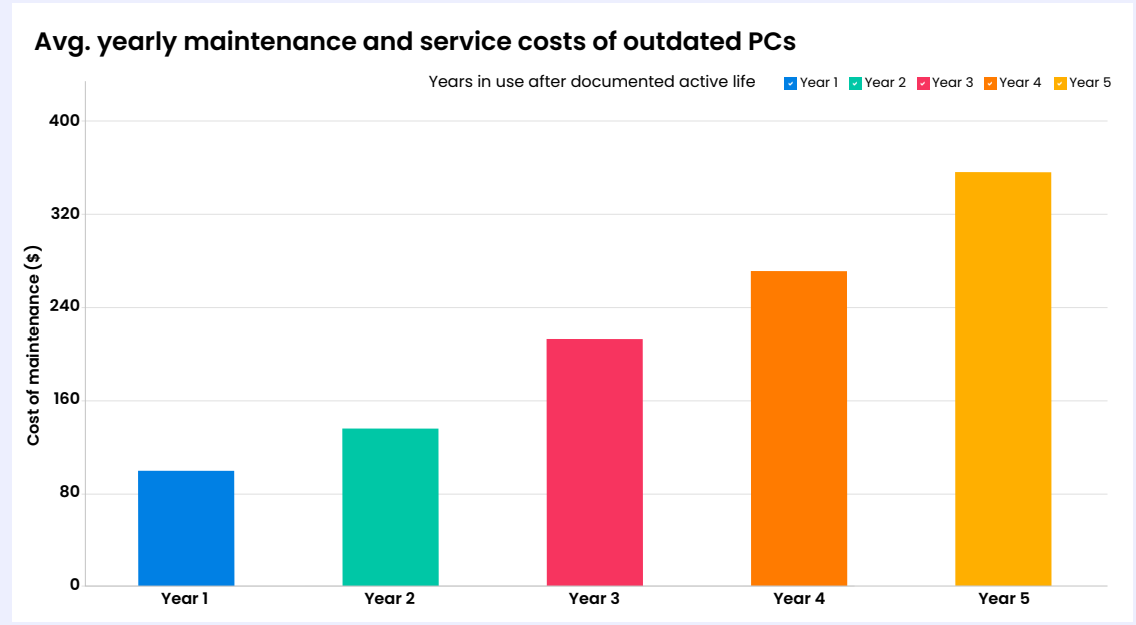
Improve IT asset life cycle management

Major infrastructure assets such as servers, virtual machines, shared systems, and network components follow the clearly laid-out life cycle management plan, and get replaced at the end of their useful life. Other assets such as printers, laptops, desktops, and hand-held devices continue to be in use even after their useful life, and only get replaced when they break down. The inherent security risks, inability to run the latest software, and repair and maintenance costs involved in using such older devices can cost an organization huge sums of money, and that comes right out of the IT budget—a cost that could have been avoided with timely replacement of assets.

Here are a few examples:

- In 2015, the US Navy had to pay Microsoft $31 million annually to develop security patches and fixes for its then-defunct WIndows XP operating systems.
- Research by Microsoft reveals that organizations using old (read: defunct) PCs lose up to seven days of productivity per calendar year per PC due to repair and maintenance required to keep these older devices functional.

The visualization below analyzes the average service and maintenance costs of PCs that are in use beyond their documented active life. Clearly, using older PCs costs the organizations a lot more than it would to purchase a new PC.



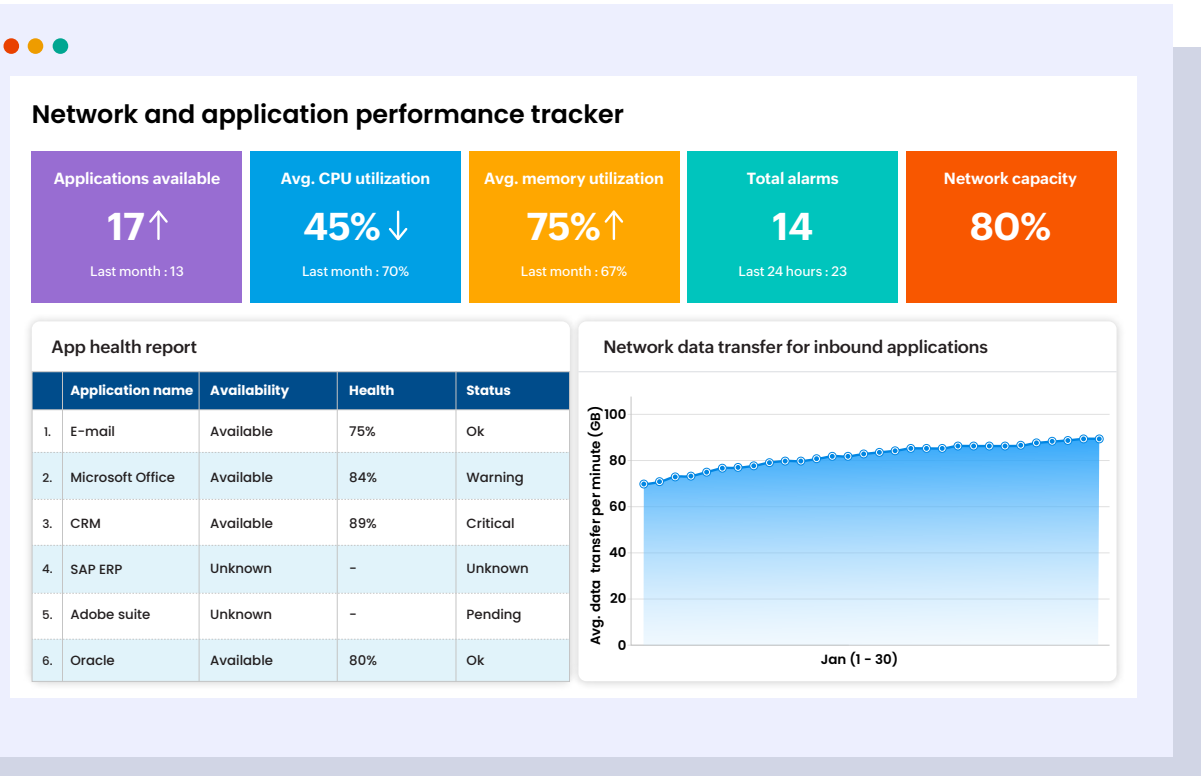
ITOps

By providing real-time visibility into the health, performance, and usage of IT infrastructure, unified analytics can help identify inefficiencies in usage, proactively plan maintenance, improve performance, and plan capacity efficiently. This not only saves the organization up to 50% of its IT operational budget but also improves efficiency and overall performance, earning them more cost savings.

Streamline IT operations

When applications and network management operate in silos, any issue or defect in either applications or networks can flood the service desk with incidents regarding applications and networks separately. Unified analytics combines application and network monitoring data and provides real-time visibility into network, server, and application performance. This means that any time the performance of an application declines, it can be quickly related to the concerned server or network, and troubleshooting can be done instantly. This helps cut down the service desk's workload, improves incident response time, and speeds up service restoration.

The dashboard below provides a combined view of the health, availability, performance, and alarms from applications, networks, servers, and databases.

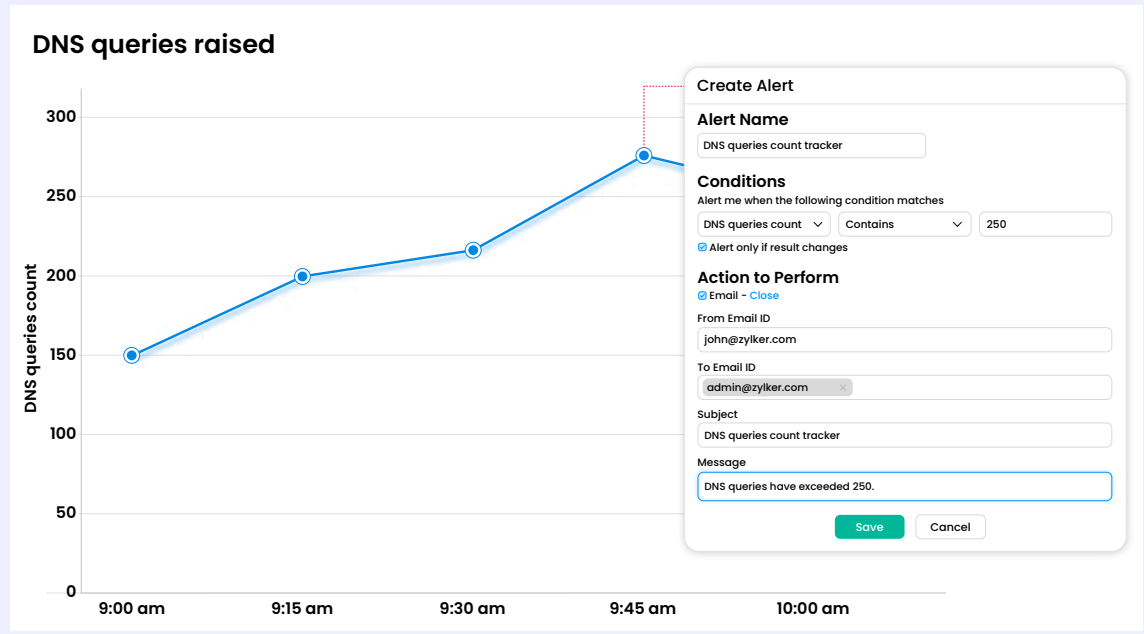


Reduce downtime and associated costs

With unified analytics, all monitoring data is consolidated into a single system, enabling easy monitoring and management. This makes it easy to identify potential issues, respond quickly, and reduce downtime. Considering webpage rendering and DNS queries raised, when the number of DNS queries raised crosses a threshold—typically during a traffic surge—it can render a webpage slow or, worse, unavailable.

Tracking the number of DNS queries raised every second can help you catch a plethora of issues such as slow servers, spikes in daily traffic, and issues in load balancing. This can alert webpage server administrators when the servers are likely to get congested so they can proactively shift the load to other servers or check if bot traffic is contributing to the traffic surge.

The report below shows the number of DNS queries raised hourly. For greater benefit, the sample report has an alert configured to notify network administrators when the number of DNS queries raised crosses a threshold.



Improve maintenance cycles

Unified analytics helps IT leaders analyze historical maintenance records of infrastructure downtime or issues side by side, enabling them to predict with utmost certainty when infrastructure assets are likely to fail, and proactively prevent downtime by servicing the infrastructure on time.

The pivot chart below provides a detailed analysis of the last few downtime events and the infrastructure component associated. The table also lists the intended maintenance date and the event date. Surprisingly, several infrastructure components have failed just a week or two before the planned maintenance cycle. This calls for reducing the time between maintenance cycles.

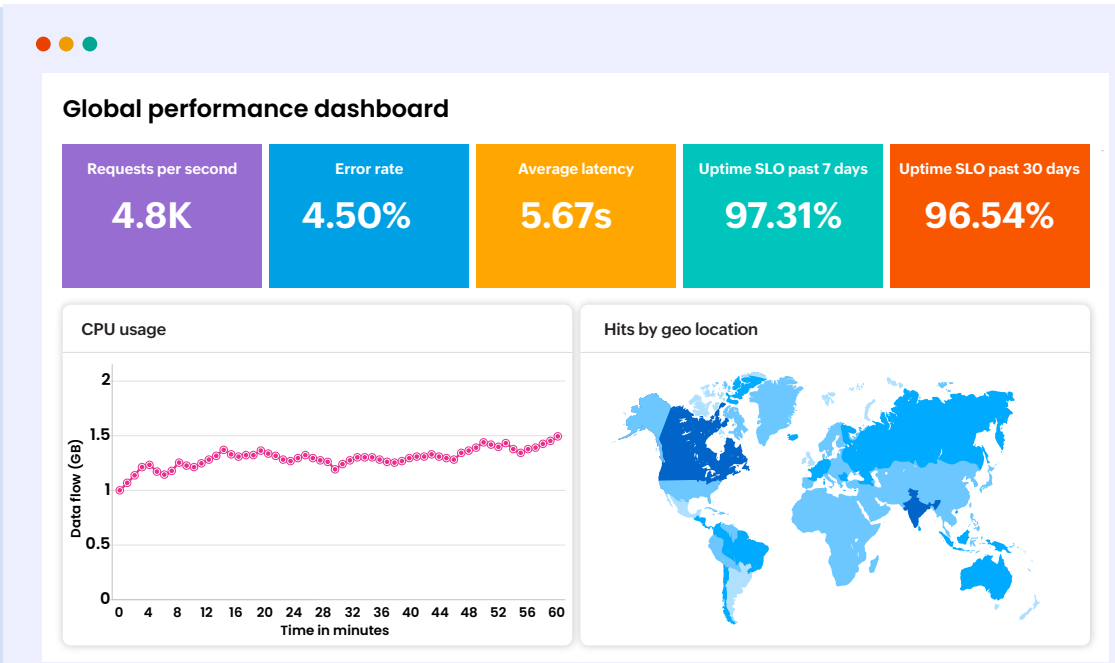
Downtime and maintenance cycle analysis

	Event name	Event date	Infrastructure component associated	Scheduled maintenance date	Reason	Time difference between downtime and scheduled maintenance date (days)
1.	Server overload	1 Jan, 2023	CNC 105	1 Feb, 2023	Machine degradation	31
2.	Network down	14 Jan, 2023	Port 80	1 Mar, 2023	Machine fault	45
3.	Network down	12 Feb, 2023	Nessus 40	1 Mar, 2023	Faulty parts	16
4.	Server inaccessible	15 Feb, 2023	OSSEC 56	1 Apr, 2023	Outdated configuration error	45
5.	Network down	1 Mar, 2023	Router 1593	1 May, 2023	Faulty parts	60
6.	Network slow	13 Mar, 2023	Port 43	1 May, 2023	Machine fault	47
7.	Database inaccessible	19 Mar, 2023	EC2 Apache	1 May, 2023	Machine failure	41
8.	Network unavailable	4 Apr, 2023	Port 443	1 May, 2023	Machine fault	26

Improve infrastructure performance

Unified analytics collates performance stats of multiple cloud, hybrid, multi-cloud, and virtual environments in a single console, enabling users to identify and remedy performance issues. This real-time monitoring also helps identify underperforming infrastructure assets, allowing admins to improve performance or surrender unused assets to save costs.

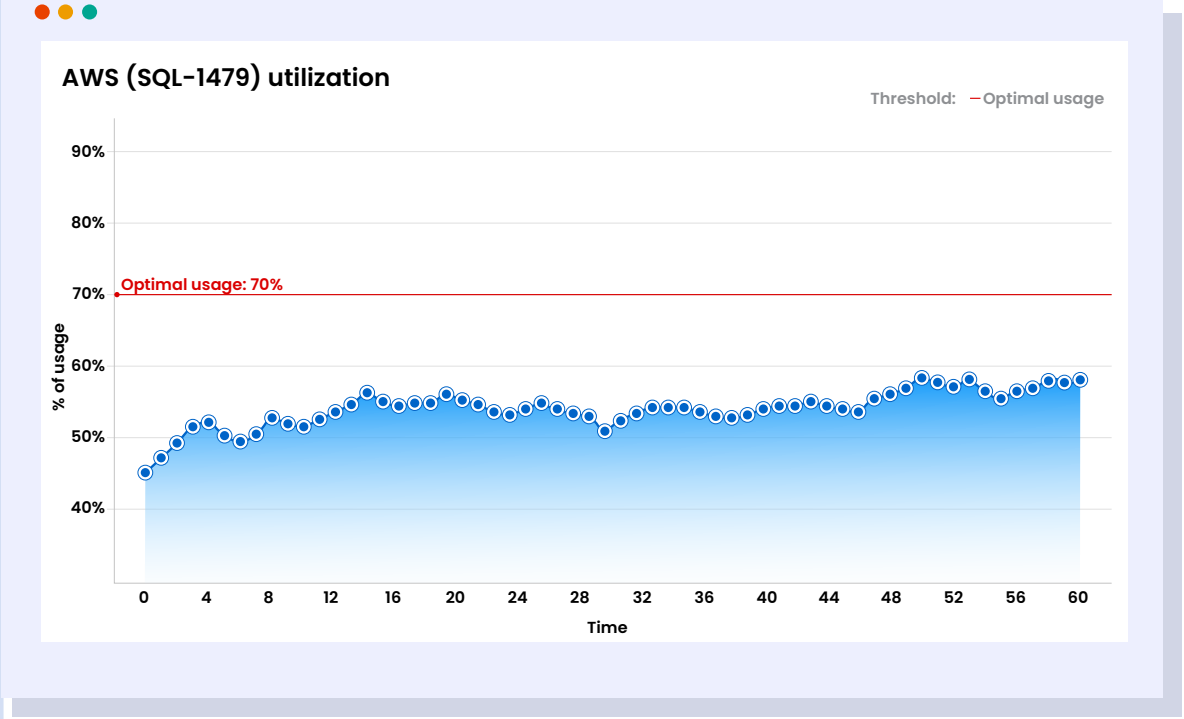
The dashboard below provides a global overview of a stack of software hosted on virtual platforms.



Capacity planning

Globally, organizations collectively have about **$30 billion** in data center investments that are sitting idle. Right-sizing capacity planning is a long and laborious process that involves predicting usage repeatedly and performing tests across multiple hypothetical infrastructure configurations. Inability to access current infrastructure performance data from multiple sources prevents organizations from understanding their actual capacity requirements. As a result, organizations simply invest in more cloud infrastructure to match perceived capacity requirements. This always results in wastage.

Unified IT analytics can bring in data from multiple sources and put together a collective picture of actual and optimal usage of infrastructure. The report below shows the percentage usage of one of the servers hosted on AWS, which can help plan capacity requirements for the future. As per the report, the utilization of AWS cloud servers has never been more than 60%. Scaling back on this infrastructure investment can provide considerable cost savings for the organization.



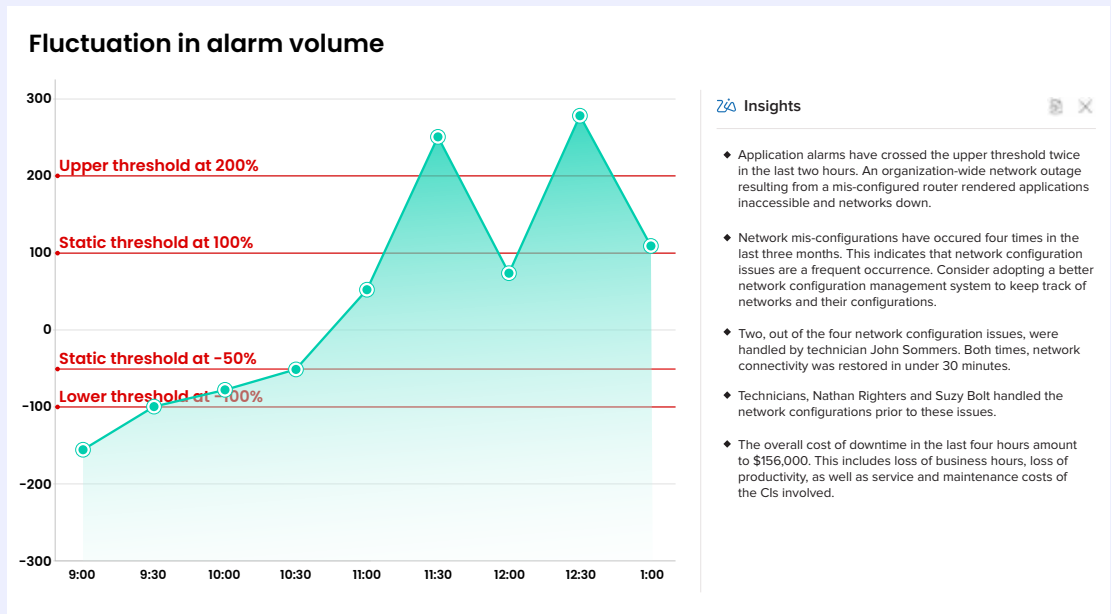
AIOps

AI in ITOps is nowhere near operating IT on its own. Human intervention is still a critical aspect of problem resolution. However, AIOps can execute the repetitive and recurring processes, thereby reducing costs, optimizing resources, and releasing the IT teams to focus on higher-level tasks.

Get real-time contextual visibility into application performance

Application performance monitoring has traditionally been a manual process that has worked really well for traditional architectures. However, with the advent of multi-cloud architectures, the explosion of microservices, and loosely coupled cloud servers, it's difficult to know about their interdependencies. AIOps-driven IT application performance monitoring follows three major approaches: automation, contextualized information generation, and intelligent suggestion of action plans.

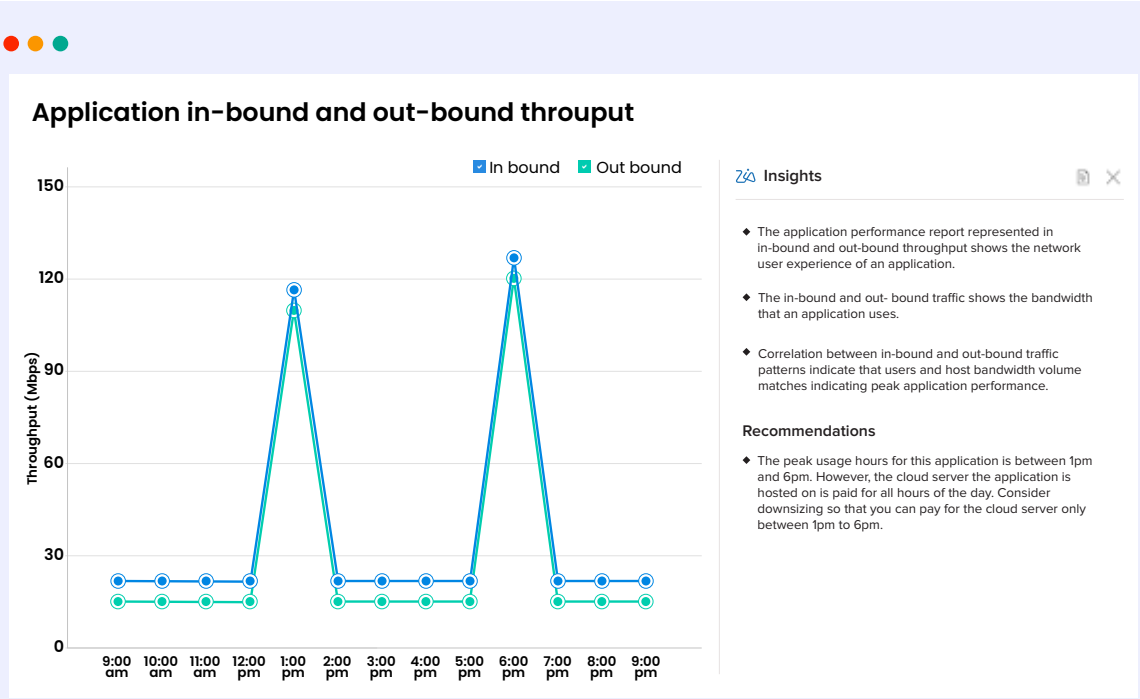
The report below shows the variation in alarm fluctuation in the past four hours. The window displaying AI-generated insights (on the right) provides a birds-eye view of application performance automatically. Implementing these automated insights can provide significant cost savings and productivity improvement for the organization.



Run applications on autopilot

Deploying AIOps for application monitoring and management assures reliable application performance, helps resolve incidents faster, and ensures software compliance, all the while ensuring that the organization is not overspending on the cloud.

The report below the result for AI-led analysis of application performance monitoring along with insights into application performance and measures to take to ensure reliable and continued performance.



Acting on the contextual insights provided by AI-driven analysis can help organizations ensure seamless performance of their applications regardless of load fluctuations, and reduce costs.

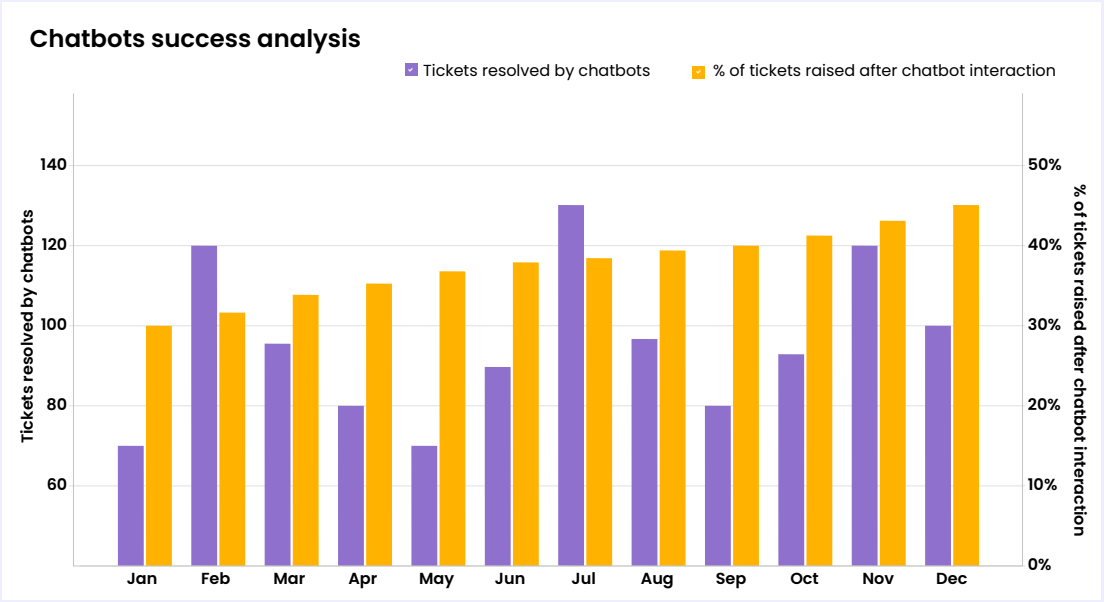
IT service management

Unified IT analytics provides IT service leaders with a holistic view of their service desk, enabling them to customize their services to meet and exceed customer expectations. Unified analytics helps identify the areas and activities in your service desk that contribute to customer unhappiness, and provides clues to fix it.

Evaluate chat bot success

Many help desks have implemented chat bots in an attempt to adopt automation and cut down their workload. Are these chat bots truly effective in reducing ticket volume?

The report below shows a trend of tickets that have been raised with the help desk after interacting with chat bots, hinting that the chat bot program is not nearly as successful as it seems.

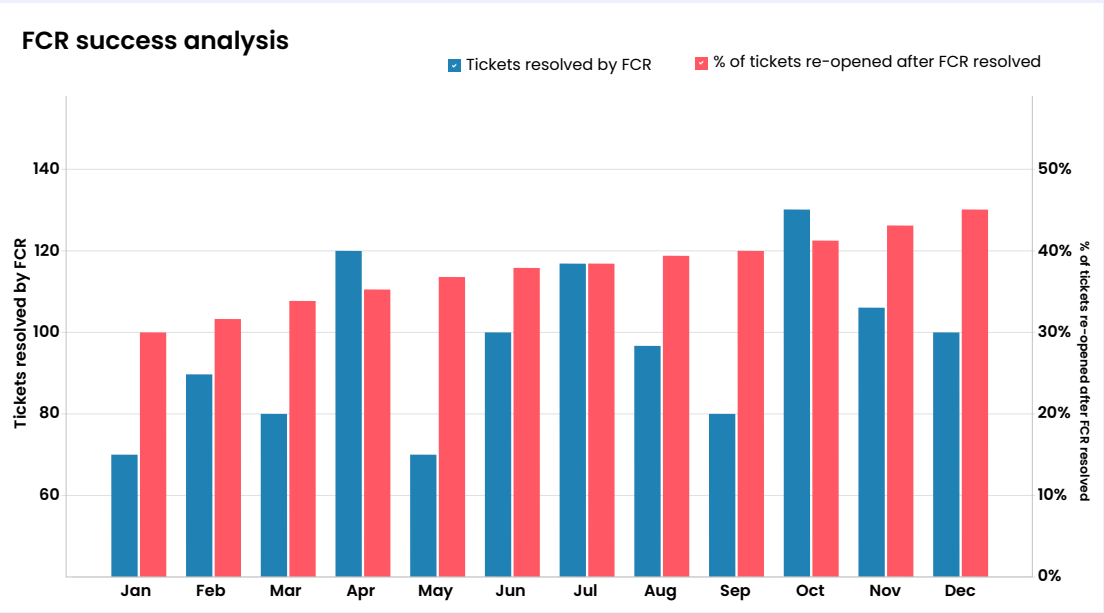


Handling all incoming tickets via chat bots, assigning even complex tickets to chat bots, poor implementation of chat bots, insufficient training of bots, and premature chat bot adoption could all be reasons for this failure. Addressing these underlying issues can help improve the success of chat bots and actually contribute to reducing overall ticket volume.

Evaluate FCR success

First call resolutions (FCRs) don't always mean effective resolutions. Issues that require in-depth assistance, issues that are part of a bigger problem, and issues that are just symptoms of other underlying problems cannot be resolved over first call. For instance, a hard reboot can restart a frozen PC temporarily, but a history of such occurrences calls for in-depth analysis of the user's machine and should not be subjected to FCR.

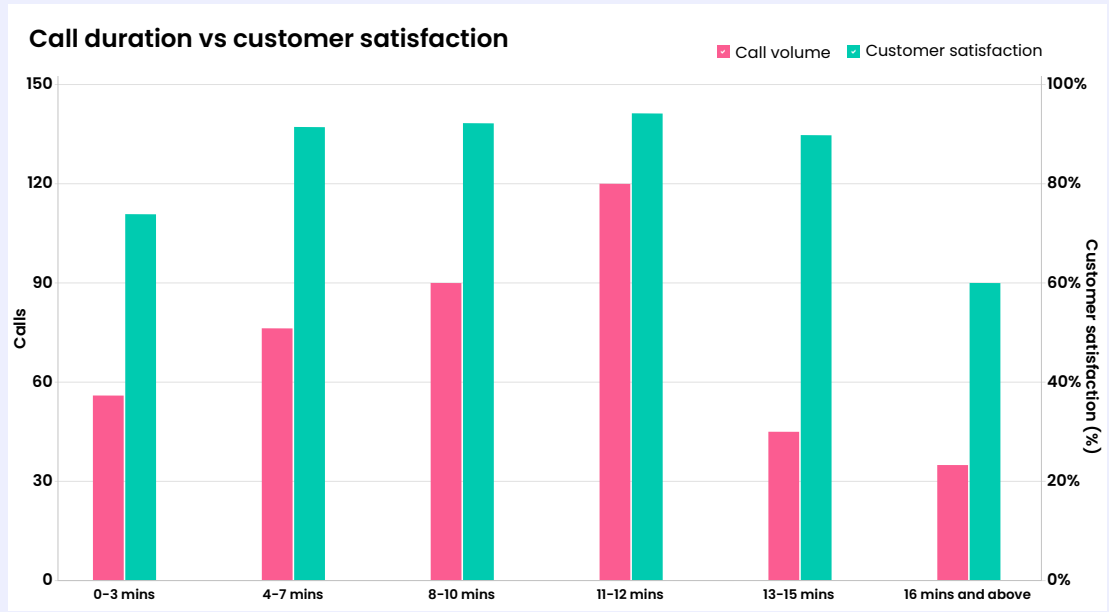
The report below shows the percentage of total incoming requests that were raised after being marked as FCR resolved.



Understanding why FCR-marked requests are reopened can help improve the way tickets are handled in the help desk, thereby saving the help desk time and money and improving end-user satisfaction.

Analyze the impact of call duration on satisfaction ratings

Telephony systems used to track conversations between service desk staff and end users can shed light on how successful telephonic conversations are in resolving end users' problems. The report below compares the duration of calls and the customer satisfaction rating.



The graph shows that an average call duration of 4-12 minutes seems to provide technicians sufficient time to understand end users' concerns and deliver a satisfactory solution, leading to greater customer satisfaction. Longer calls do not lead to greater satisfaction, and neither do shorter conversations. Shorter calls indicate that the agent quickly resolved the issue (usually these are requests for information) or redirected the caller to raise a help desk ticket. Longer calls indicate that the agent was unable to identify the root cause and resolve the issue despite the duration of the call, leading to unhappy end users.

This insight can be used to coach technicians on how to approach troubleshooting calls. If the call seems to exceed the sweet spot duration (4-12 minutes in our example), it's best to advise technicians to get back on calls with users after some research on how to fix their respective issues.

IT security

Unified analytics is the most critical asset to IT security heads. By collating data from multiple endpoints, users, systems, components, and servers, and correlating this data with data on external threats, unified analytics can proactively predict when an attack is likely to occur, which systems or users are likely to be compromised, and provide insight to leaders on how to secure their endpoints.

Unified analytics can also be used to compare end-user logon patterns from multiple touch points to identify compromised account credentials and secure privileged accounts.

Prioritize vulnerabilities

Unified analytics can be deployed to prioritize vulnerabilities that pose the highest risk to the organization's data. This can be achieved by integrating data from various sources such as vulnerability scanners, endpoint monitoring applications, and threat intelligence feeds that include threats such as zero-day threats and advanced persistent threats and exploits.

The pivot report below prioritizes endpoints by vulnerabilities by assigning them a vulnerability score based on the severity of the vulnerabilities present, the importance of the endpoints to the business, their access to critical databases or networks, and the likelihood of an attack.

Endpoint vulnerabilities by priority

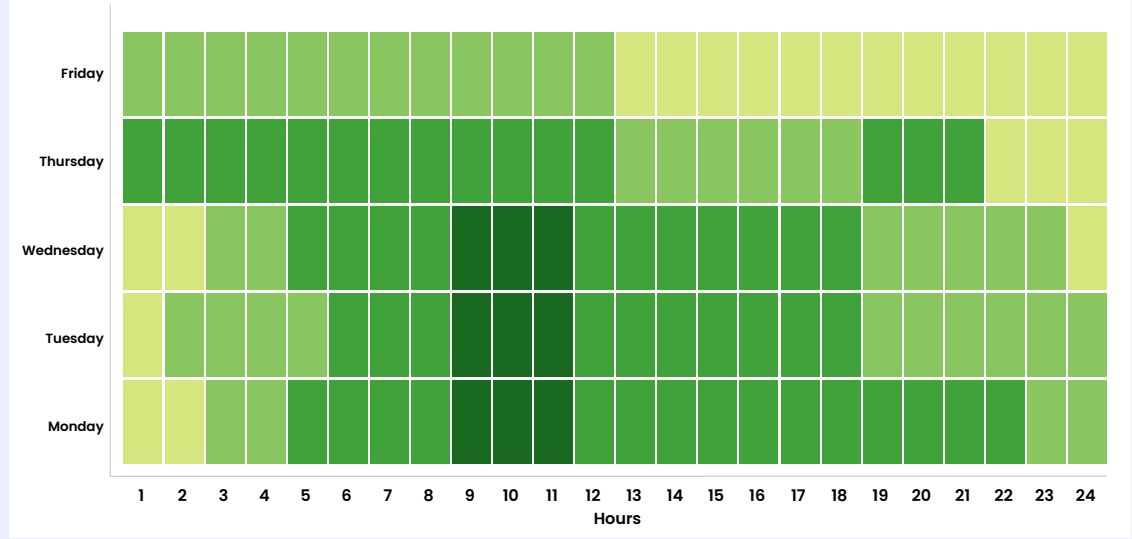
	Device name	Vulnerabilities score	Details of vulnerabilities present
1.	Mac-145	8	Passcode non-compliance, Netflix, Blue Me, Camera, Chrome, MS word, Missing OS patch, Missing DC agent
2.	iPhone-247	7	Jailbroken, Passcode non-compliance, Netflix, Door Dash, Amazon installed, Outdated OS, Missing security patch for iOS
3.	Samsung Galaxy-234	6	Passcode non-compliance, Netflix, Blue Me, Camera, Chrome, Missing DC agent
4.	iPad-312	5	Facebook, HDFC bank, Missing patches, Amazon, Jailbroken
5.	Samsung Tab-45	5	Facebook, HDFC bank, Missing patches, Amazon, Outdated OS
6.	Mac-155	4	Passcode non-compliance, Netflix, Blue Me, Camera
7.	Mac-179	4	Chrome, MS word, Missing OS patch, Missing DC agent

SecOps can make use of such prioritization reports to understand the susceptibility of each device and secure them systematically while reducing both threat exposure and the attack surface.

Systematize patch application

Automated patch application make for greater success in organizations as it is hassle-free and minimally disruptive to day-to-day operations. However, machine learning algorithms can be applied to analyze historical patching data and identify patterns in patch deployment success rate.

The heat map below shows that patch deployment for security patches is greatly successful when applied between 9am and 11am on Mondays through Wednesdays for end-user systems.

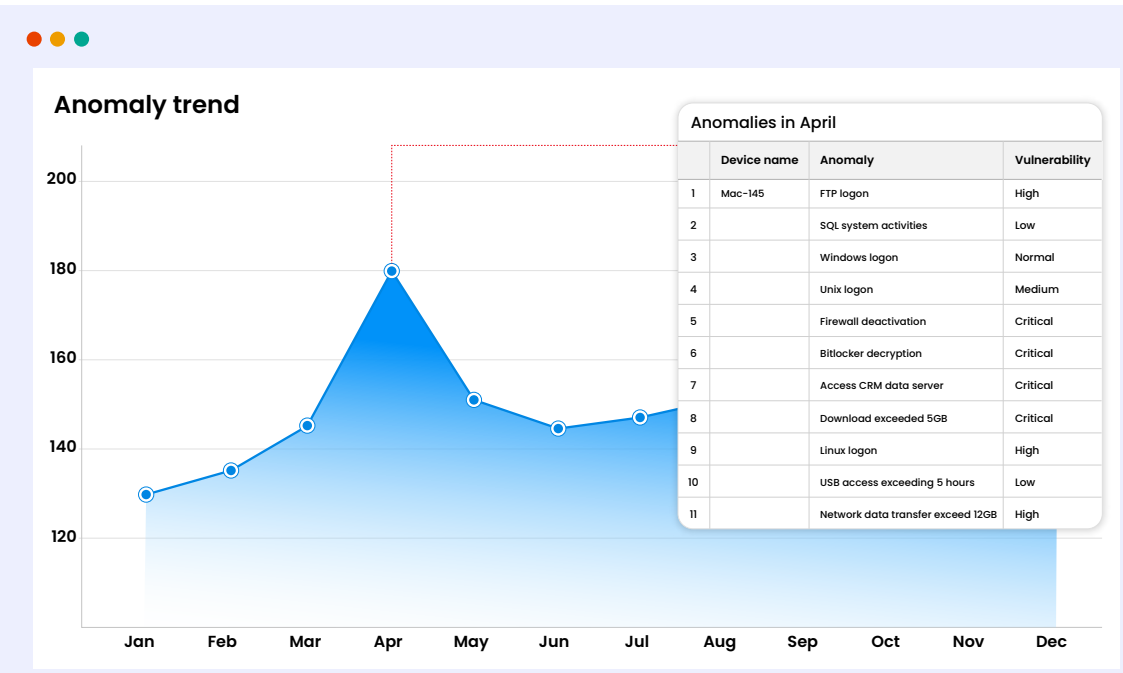


Unified analytics can be deployed to provide IT teams with a data-driven approach to vulnerability management and patch deployment, ensuring greater success while patching and reducing the risk of cyberattacks. Applying patches this way also ensures that patch failures are minimized and endpoints are secured seamlessly.

Analyze user behavior

Analyzing and profiling how users and endpoints behave in different environments is the key to detecting and responding to potential security threats. Unified analytics can collect data from various sources, such as logs, endpoints, network traffic, and cloud services, to establish baselines and flag any behavior outside of those norms as suspicious.

The report below shows the anomaly trend of all endpoints in the organization.



Conclusion

Reducing IT expenditure is a key goal for most organizations, as IT budgets are the largest expenses for organizations. However, reducing expenses significantly can be a daunting task. Fortunately, unified IT analytics can help organizations to achieve this goal.

Unified IT analytics involves combining data from various IT sources and analyzing it to gain insights into how IT budgets are being used, and how infrastructure, networks, assets, and resources are being used. It also helps them identify and troubleshoot inefficiencies where significant cost savings can be achieved. A move away from silos, unified analytics empowers organizations with the ability to correlate events, logs, changes, activities, problems, issues, and tickets with causative agents, thereby fast-tracking problem resolution and issue identification.

About

ManageEngine Analytics Plus is a self-service, AI-driven IT analytics solution that helps organizations implement complex initiatives that address requirements of expanding businesses. Available on-premises and on the cloud, Analytics Plus visualizes IT data from several applications and integrates out-of-the-box with several popular IT applications such as ManageEngine ServiceDesk Plus, Jira, Service Now, Zendesk, and ManageEngine Endpoint Central. Analytics Plus features an AI-powered analytics assistant that responds to voice and text prompts to provide meaningful visualizations. This eliminates the need for a data analyst to aid help desk managers and reduces report building time while enabling organizations to make faster, data-driven decisions.

Kickstart your IT analytics journey with a free trial of Analytics Plus. Want to learn more about the product before giving it a try?

Sign up for a free, virtual tour with one of our solution experts.

280K
customers
across the world

90+
products
and free tools

190+
countries
served

20+
years of IT
management experience

Reference

1. https://www.forbes.com/sites/benkepes/2015/06/03/30-of-servers-are-sitting-comatose-according-to-research/?sh=30b74f4459c7

Analytics Plus