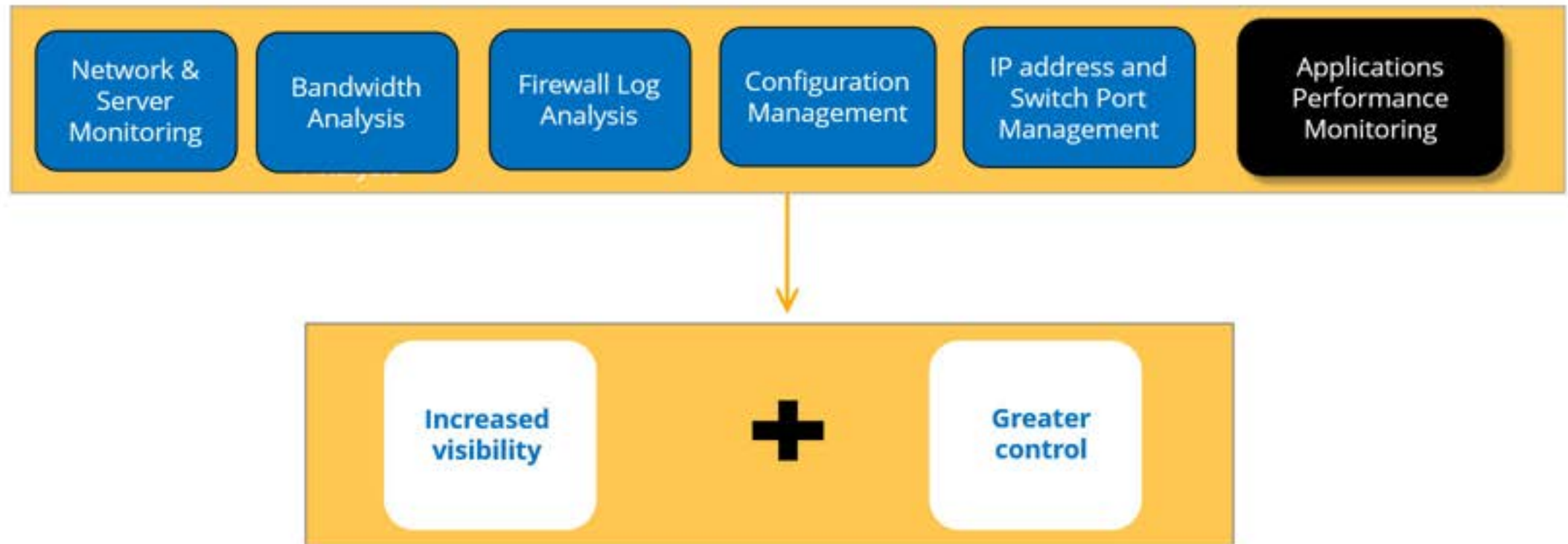


**An integrated  
solution  
for full stack  
IT Operations  
Management.**

- **Infrastructure Monitoring**
- **Server Monitoring**
- **Storage Management**
- **Bandwidth Management**
- **Network Configuration Management**
- **Firewall log Analysis**
- **IP Address and Switch Port Management**
- **Application Performance Monitoring**

# What is OpManager Plus?

OpManager Plus is an integrated IT infrastructure management solution that eliminates the need for multiple monitoring tools and provides greater visibility across your entire network.



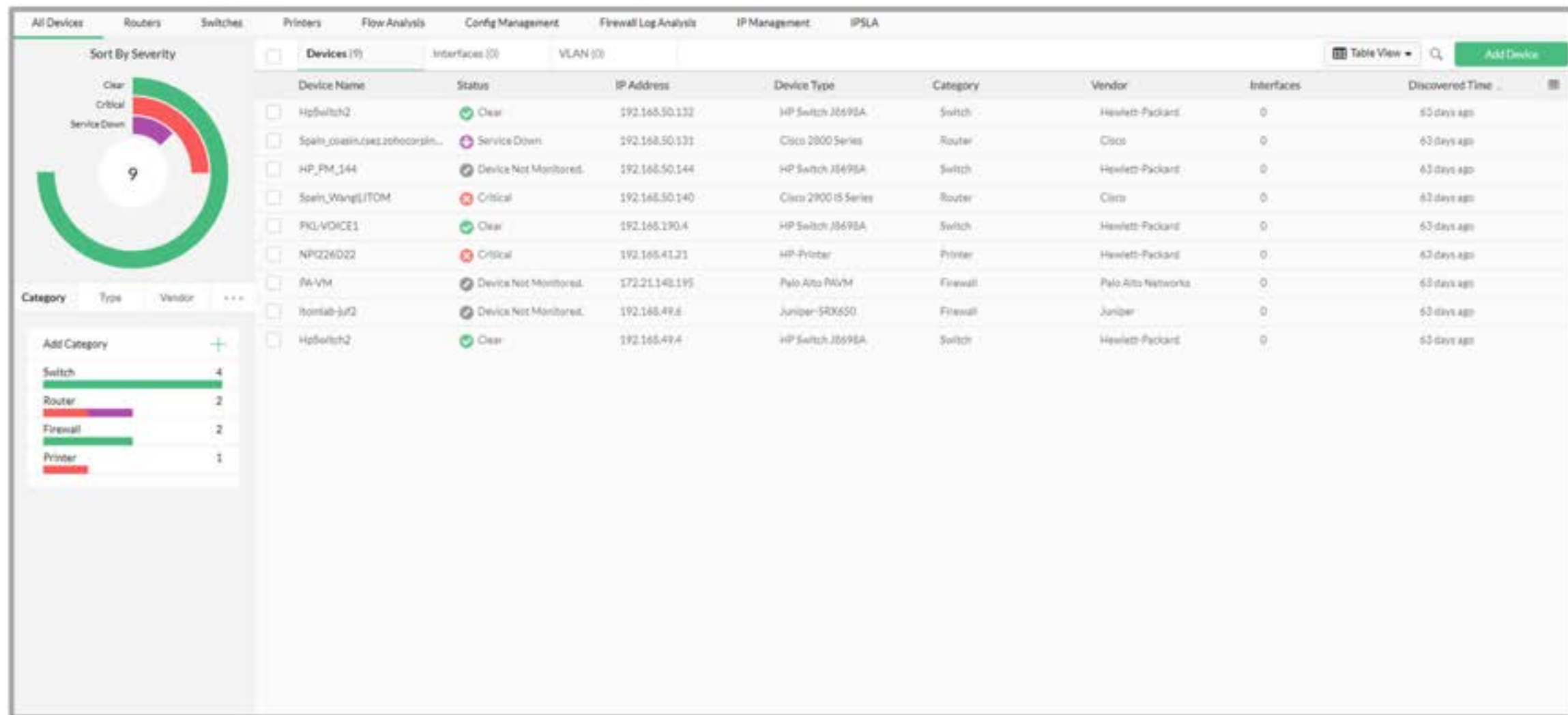
# Why OpManager Plus?

- OpManager Plus is packed with critical IT operations management capabilities for managing performance, servers, IP addresses, switch ports, bandwidth, configuration, infrastructure compliance and firewall log analysis - all from a single console.
- Rid your IT infrastructure of blind spots by deploying this powerful, integrated solution that provides a unified approach to IT infrastructure management.
- Simple, single licensing model for multiple critical IT operations management processes including performance management, server, IP addresses, switch ports, bandwidth, configuration, infrastructure compliance and firewall management.

# Easy Installation

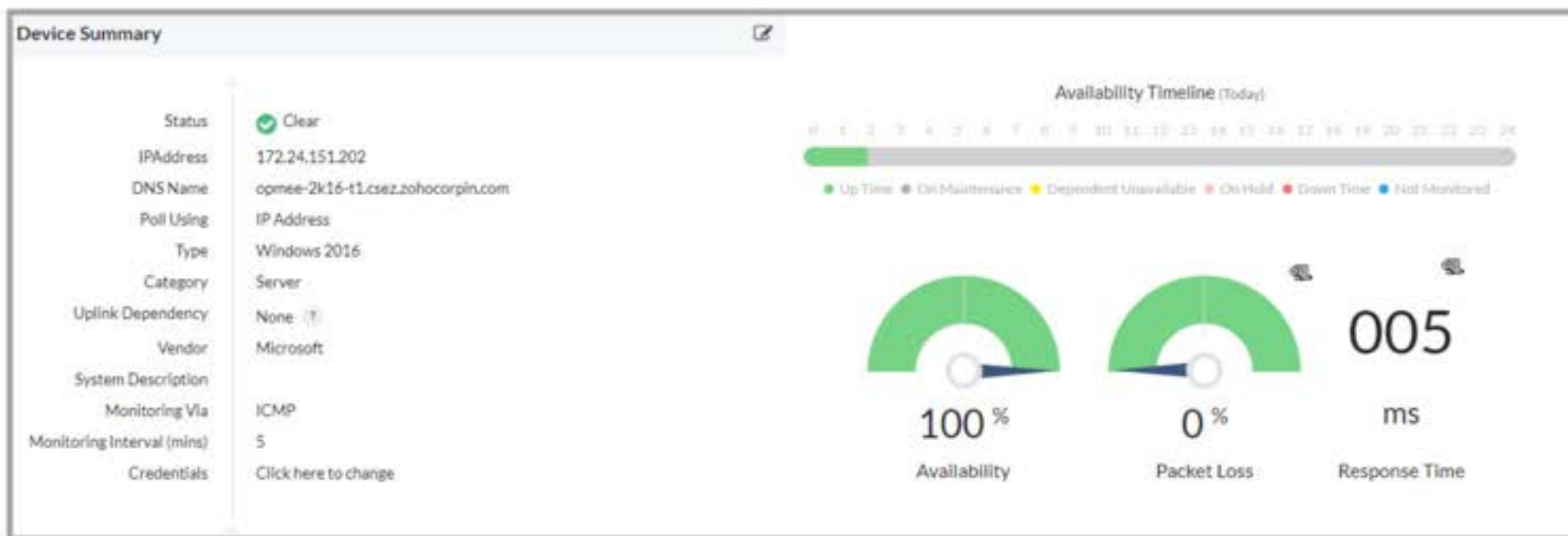
- Install OpManager Plus in less than 10 minutes.
- Simple and efficient discovery process.
- Support for thousand plus devices across 200+ metrics.
- Bundled framework.
- Automatic association of monitors for preset set of rules during discovery, using the Discovery Rule Engine.

# Infrastructure Performance Management



# Performance Monitoring

- OpManager Plus monitors the performance of your IT infrastructure in real time. With both proactive and reactive management techniques, OpManager Plus helps you optimize performance and move towards a downtime-free infrastructure.



# Performance Monitoring

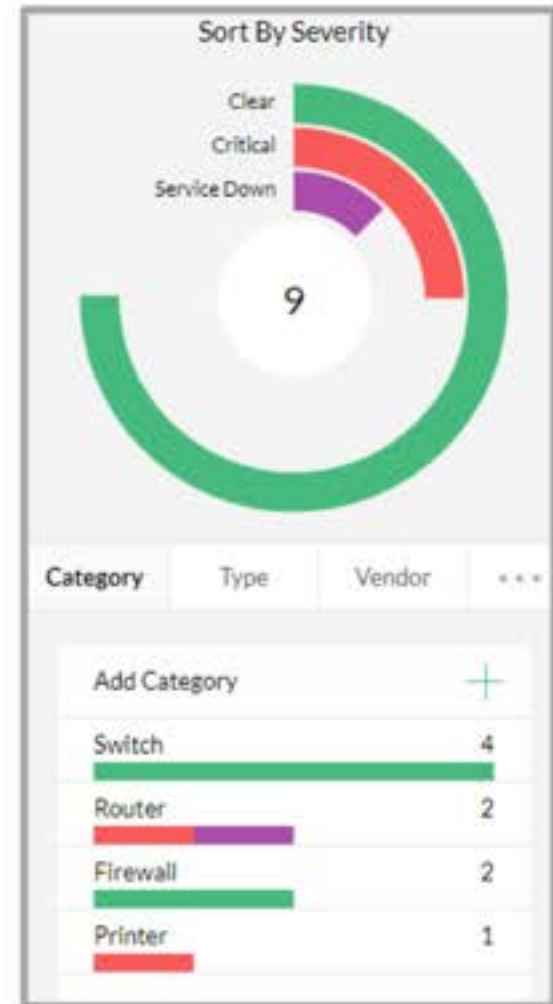
Monitor critical metrics pertaining to the health, availability, and status of your devices, including:

- Device availability
- Response time
- CPU, memory, and disk space utilization
- Errors and discards
- Network traffic via SNMP

# Hardware Monitoring

Track the health of your hardware including servers, routers, switches, and firewalls to:

- Identify performance issues caused by hardware errors.
- Monitor critical metrics like power, temperature, and voltage.
- Optimize resource allocation and capacity planning.





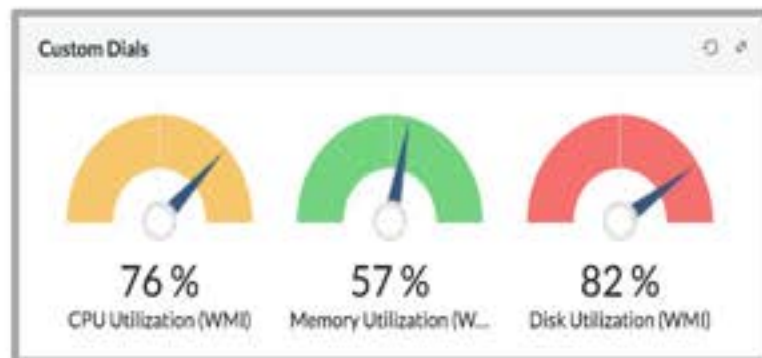
# WAN and VoIP monitoring

OpManager Plus leverages Cisco IPSLA to monitor WAN and VoIP links. It visualizes WAN and VoIP paths, resolves outages, and diagnoses poor performance. With OpManager Plus's WAN RTT monitor, you can:

- Visualize WAN links and identify poor connections.
- Measure round trip time and reduce MTTR with link availability and detailed statistic reports.
- Monitor jitter, latency, MOS, and packet loss for VoIP links.
- Analyze historical trend reports for improved capacity planning.

# Server Monitoring

- Monitor CPU, Memory & Disk Utilization of Windows and Linux servers via WMI and SNMP/CLI.
- Monitor Windows processes and services, and TCP services.
- Monitor Windows events with the event ID.
- Monitor Files and Folders for size, existence, count, and modification.
- Out-of-the-box includes templates with monitors for all leading server operating systems.



# Virtual Infrastructure Monitoring

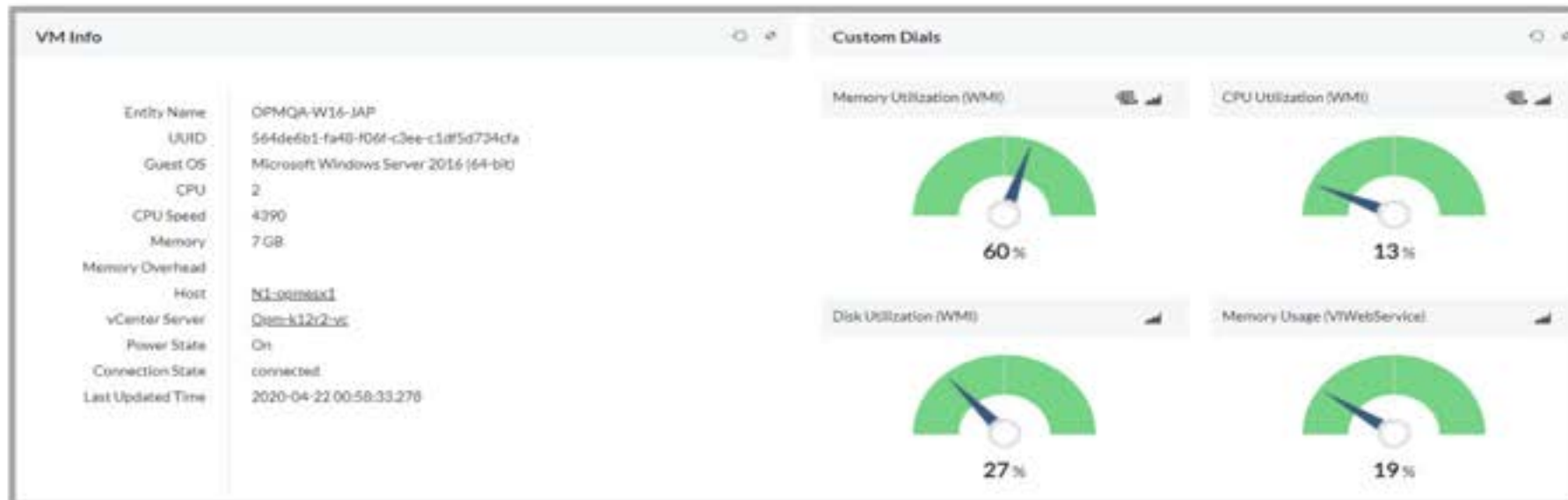
- Monitor VMware, Hyper-V, Nutanix and Xen Devices.
- Monitor performance metrics such as CPU ready, Memory Swap, Disk I/O Usage, Disk Read Requests, Datastore Write Requests, and 50 more.
- Discover and classify Hyper-V devices automatically with exclusive device templates.
- Monitor critical performances, get notified via SMS/email, and generate exhaustive reports on Host/Guest activities.

Entity Name	8.1.8-37119(EMC VNX8000,VNX7600,VNX5800,VNX5600,VNX5400)
UUID	423debafe-d49-d9ab-9564-5f8f5cceb7ec
Guest OS	Other 2.6.x Linux (64-bit)
CPU	4
CPU Speed	8780
Memory	4 GB
Memory Overhead	
Host	<a href="#">N2-gomess2</a>
vCenter Server	<a href="#">Qom-k12r2-vs</a>
Power State	On
Connection State	connected
Last Updated Time	2020-04-14 15:45:33.882



# VMware Monitoring

- OpManager Plus monitors your VMware servers for availability and performance using native APIs.
- Monitors effective utilization of critical resources like CPU, Hardware Health, Memory, Network and Disk.
- Out-of-the-box 70 plus reports on Host and VMs.
- Get instant notifications on via text/email about critical performance issues and faults.



# Hyper V Monitoring

- OpManager Plus uses WMI to discover, classify and monitor the Microsoft Hyper-V devices.
- Actively track your Hyper-V Inventory and resources allocated with active inventory probing.
- Comprehensive performance monitoring with over 40 performance monitors to ensure efficiency of critical resources.
- Real-time notifications over sms/email and over 70+ types of reports out-of-the-box.



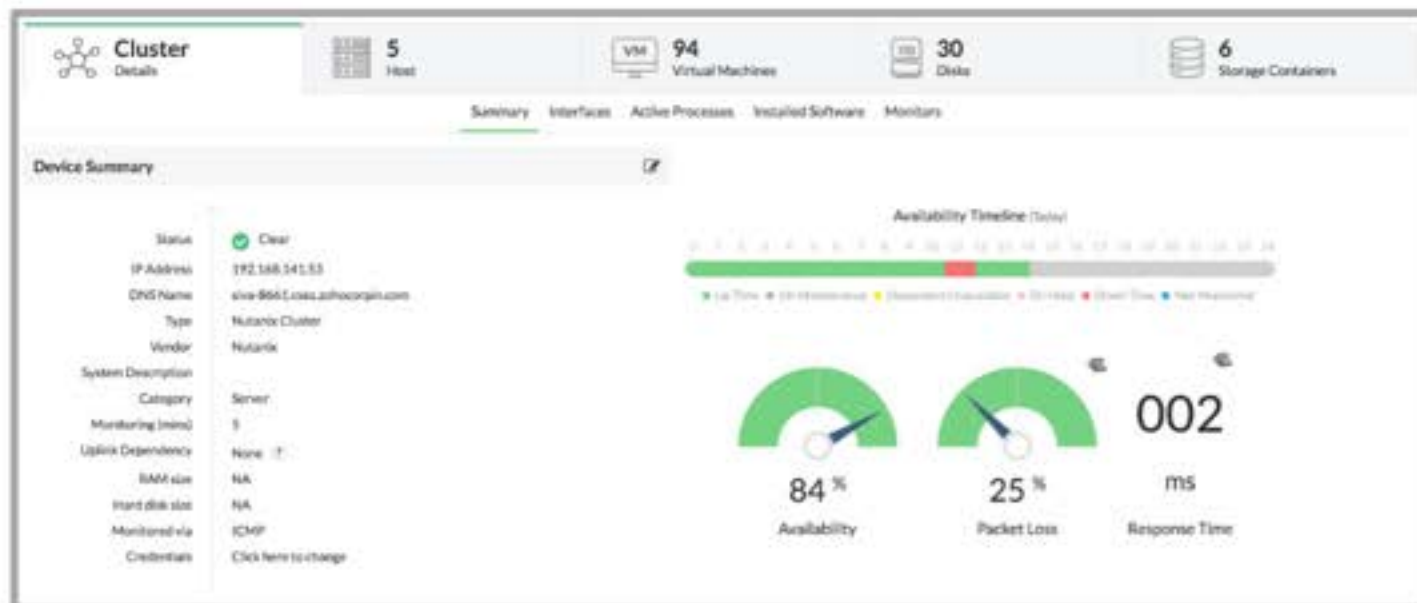
# XenServer Monitoring

- With OpManager Plus, discover and classify XenServers with just the details of the host and automatically associate performance monitors with the help of the numerous device templates available.
- Actively track inventory and resources allocated to avoid VM sprawl.
- In-depth, out-of-the-box reports and real time notifications via SMS/e-mail.



# Nutanix Monitoring

- Simple Nutanix cluster discovery: Discover only the cluster with IP, credentials and all other entities like host, VM, storage will be automatically discovered.
- Monitor important performance metrics like CPU wait & ready time, memory balloon, disk, datastore etc.
- View your entire Nutanix environment with clusters, hosts and VMs in a single place.
- Out-of-the-box detailed reports with summary, inventory, latency, etc., and real time alerts.



# Simple Discovery process

### Discovery - Input

IP Range

CIDR

CSV File Import

Existing Devices

v4  v6

Start IP

End IP

NetMask

255.255.255.0

### Edit Credential

Credential Category

Monitor  Backup

Credential Type

SNMP v1/v2

Name

Public

Description

Default 'public' read community.

SNMP Read

\*\*\*\*\*

SNMP Write

\*\*\*\*\*

SNMP Port

161

SNMP Time Out

5

SNMP Retries

0

### Discovery - Schedule

Profile Name

Profile\_2016\_1\_11\_12\_35

Once

Daily

Weekly

Monthly

Yearly

Execute On

2016-01-11

Execute At

12:00

Hours

### Discovery - Interface

Search

Select all

Other

Regular1022

Hdh1822

DDN-x25

X25

Admin Status

Up

Down

Testing

Oper Status

Up







Down

- Discover devices through Device Name/IP, CIDR, CSV file import, IP range.
- Discover all devices in your network via SNMP, CLI and WMI protocols following a simple process.
- Discover interfaces along with devices, if needed.
- Schedule discovery to add or remove devices.



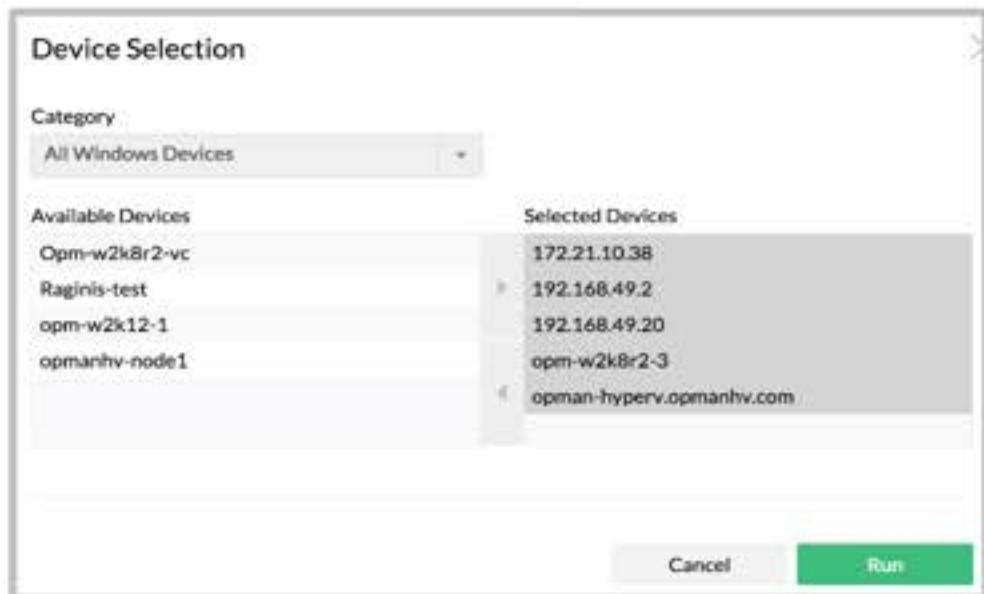
# Device & Interface Templates

- Monitor devices efficiently with templates by automatically mapping the devices into their respective categories upon discovery.
- Out-of-the-box, OpManager Plus offers 9500+ device templates and 200+ interface templates.
- Add or remove monitors to templates and apply on the devices, in bulk.
- Create custom templates using MIBs.

Device Templates		Show:	All	Custom	Shared Templates	Import	Associate	Add Template
Name	Category	Devices	Actions					
Aruba AP 61	Wireless	0	  					
Aruba AP 65	Wireless	0	  					
AS400	Server	0	  					
AT-8000S	Switch	0	  					

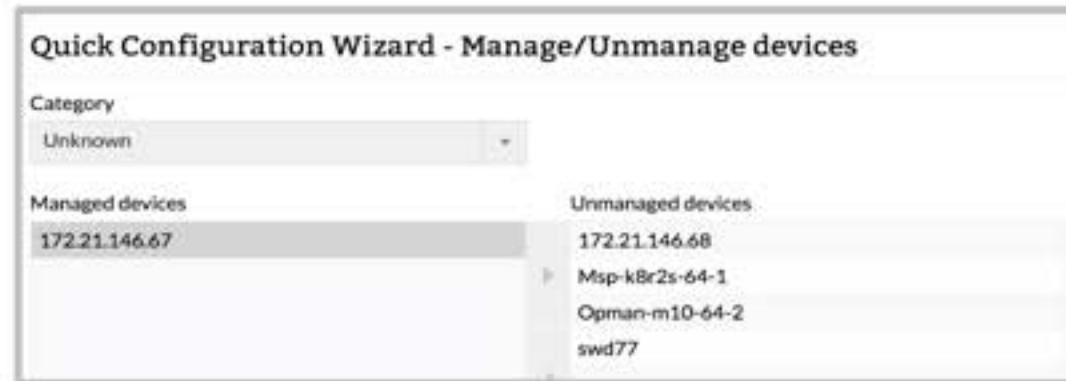
# Discovery Rule Engine

- Automatically configure monitors, notification profiles to devices upon discovering devices.
- Rule Engine assigns monitors and notification profiles on discovery if a preset rule is satisfied.
- Schedule rule engine or run on-demand.



# Quick Configuration Wizard

- Apply, edit and remove configurations, in bulk in a simple process through the Quick Configuration Wizard.
- Helps addition of devices, new device discovery, and to setup OpManager Plus.



# Bandwidth Management

## Wireless Controller

Hourly Report



Zoho -- 9.145 KB	Zoho-corp -- 5.388 KB
CLIENT -- 4.833 KB	OPM12 -- 4.470 KB
GUEST -- 3.762 KB	Zoho-Guest -- 3.753 KB
ZoHo123 -- 3.672 KB	STAFF -- 3.424 KB
Operator -- 2.670 KB	Zoho-ME -- 2.592 KB

## Protocol

Hourly Report



Unknown -- 1.505 MB	TCP -- 1.402 MB
BR-SAT-MON -- 152...	TRUNK-1 -- 144.02...
VRRP -- 143.495 KB	WB-MON -- 143.26...
IPComp -- 143.032 KB	IRTP -- 142.446 KB
MICP -- 138.988 KB	HMP -- 138.276 KB

## Destination

MultiGigabitEthernet0/1[DataCentreV9Multicast] | Hourly Report | IN



168.24.167.104 -- ...	168.24.194.211 -- ...
168.21.56.67 -- 10...	168.23.173.75 -- 1...
168.16.39.79 -- 10...	168.2.241.149 -- 1...
168.12.42.155 -- 1...	168.19.204.142 -- ...
168.22.253.226 -- ...	168.28.213.225 -- ...
Others -- 457.096 KB	

# Flow Management

- OpManager Plus helps you leverage flow technologies such as Netflow, sflow, J-flow, IP fix, NetStream, Appflow, to provide real time visibility into the bandwidth performance.
- NetFlow in OpManager Plus collects and analyzes flows from major devices like Cisco, 3COM, Juniper, Foundry Networks, Hewlett-Packard, Extreme and other leading vendors in the market.



# Detailed Network Traffic tracking



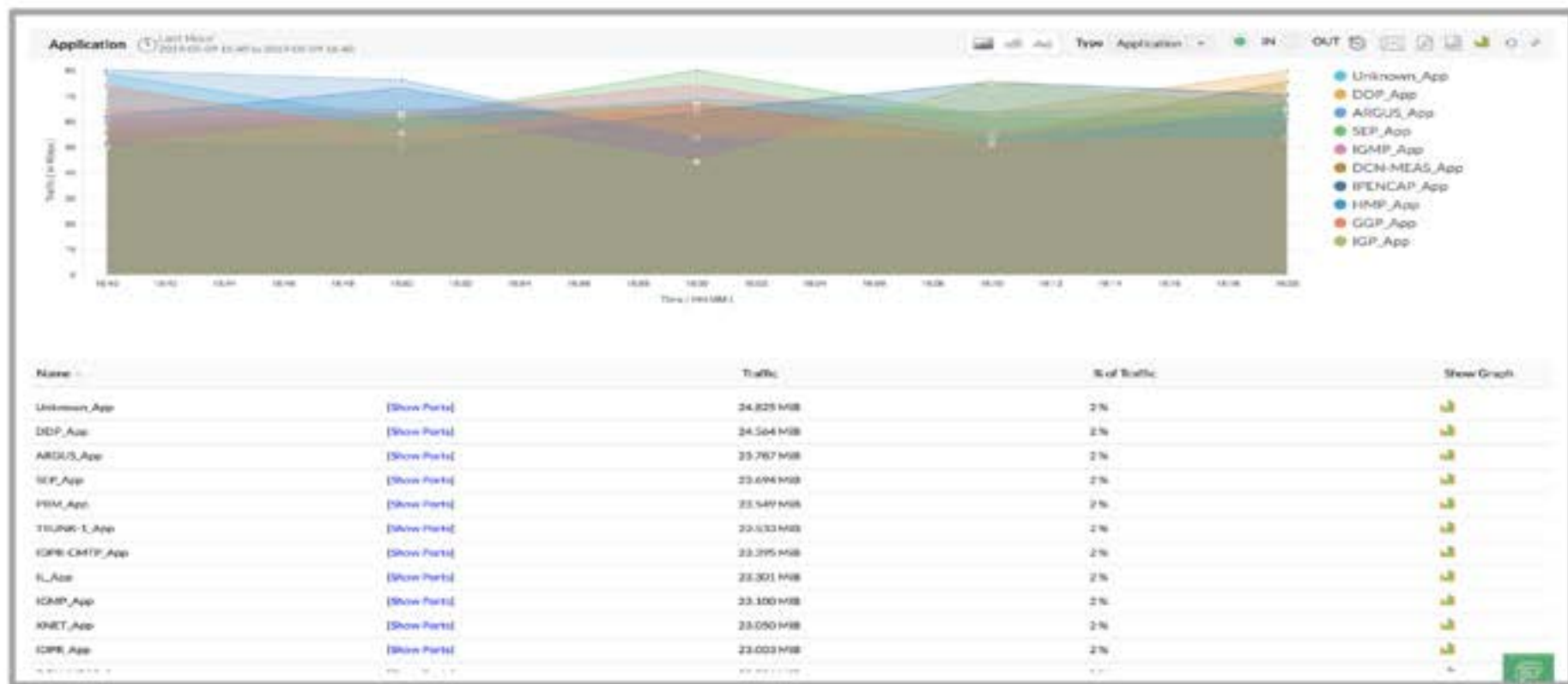
# Visibility into device, interface traffic

- Get detailed view of router/switch traffic to know the total bandwidth consumption by the selected device and view its interface traffic, applications, top source/destinations, QoS, conversations and AS view.
- Get detailed view of traffic information for interface with IN/OUT traffic chart.



# Visibility into application traffic

- Get detailed view of traffic information for each of the interfaces and the applications associated with them.





# Visibility into top conversations

- Get detailed view of traffic information for the interfaces in your IT infrastructure with top source/ destination & conversation.

The screenshot displays a network monitoring interface titled "Top Conversation" for the period 2024-09-02 00:00:00 to 2024-09-02 00:00:00. The table lists the top 20 conversations based on traffic volume. Each row includes source and destination IP addresses, the application name, source port, protocol, DSCP value, traffic volume, and a "Show Graph" link.

Source	Destination	Application	Source Port	Protocol	DSCP	Traffic	Show Graph
192.0.2.91	192.0.2.28	ip-s	208	UDP	000011	17,654 KB	📈
192.0.2.98	192.0.2.23	GP_App	-	ICP	000011	17,654 KB	📈
192.0.2.75	192.0.2.228	PMI_App	-	PMI	C32	17,654 KB	📈
192.0.2.175	192.0.2.252	MS-TM_App	-	MS-TM	011011	17,654 KB	📈
192.0.2.181	192.0.2.184	MS-TM2_App	-	MS-TM2	A111	17,654 KB	📈
192.0.2.190	192.0.2.201	Unknown_App	-	Unknown	A111	17,654 KB	📈
192.0.2.57	192.0.2.196	MS-TM3_App	-	MS-TM3	010101	17,654 KB	📈
192.0.2.198	192.0.2.140	ICP_App	-	ICP	001111	17,654 KB	📈
192.0.2.207	192.0.2.185	ICMP_App	-	ICMP	A111	17,654 KB	📈
192.0.2.222	192.0.2.194	MS-TM4_App	-	MS-TM4	011101	17,654 KB	📈
192.0.2.174	192.0.2.203	FTP_App	-	FTP	A111	17,654 KB	📈
192.0.2.187	192.0.2.77	CHN2_App	-	CHN2	010111	17,654 KB	📈
192.0.2.182	192.0.2.80	MS-TM5_App	-	MS-TM5	A111	17,654 KB	📈
192.0.2.42	192.0.2.247	MS-TM6_App	-	MS-TM6	A111	17,654 KB	📈
192.0.2.130	192.0.2.21	MS-TM7_App	-	MS-TM7	011011	17,654 KB	📈
192.0.2.124	192.0.2.125	Unknown_App	-	Unknown	000000	17,654 KB	📈
192.0.2.11	192.0.2.16	FTP_App	-	FTP	A111	17,654 KB	📈
192.0.2.214	192.0.2.111	MS-TM8_App	-	MS-TM8	000011	17,654 KB	📈
192.0.2.89	192.0.2.179	ICMP_App	-	ICMP	010111	17,654 KB	📈
192.0.2.158	192.0.2.17	ICMP_App	-	ICMP	Default	17,654 KB	📈
192.0.2.32	192.0.2.26	MS-TM9_App	-	MS-TM9	010001	17,654 KB	📈
192.0.2.121	192.0.2.221	PMI_App	-	PMI	011011	17,654 KB	📈
192.0.2.141	192.0.2.171	IP_App	-	IP	000000	17,654 KB	📈

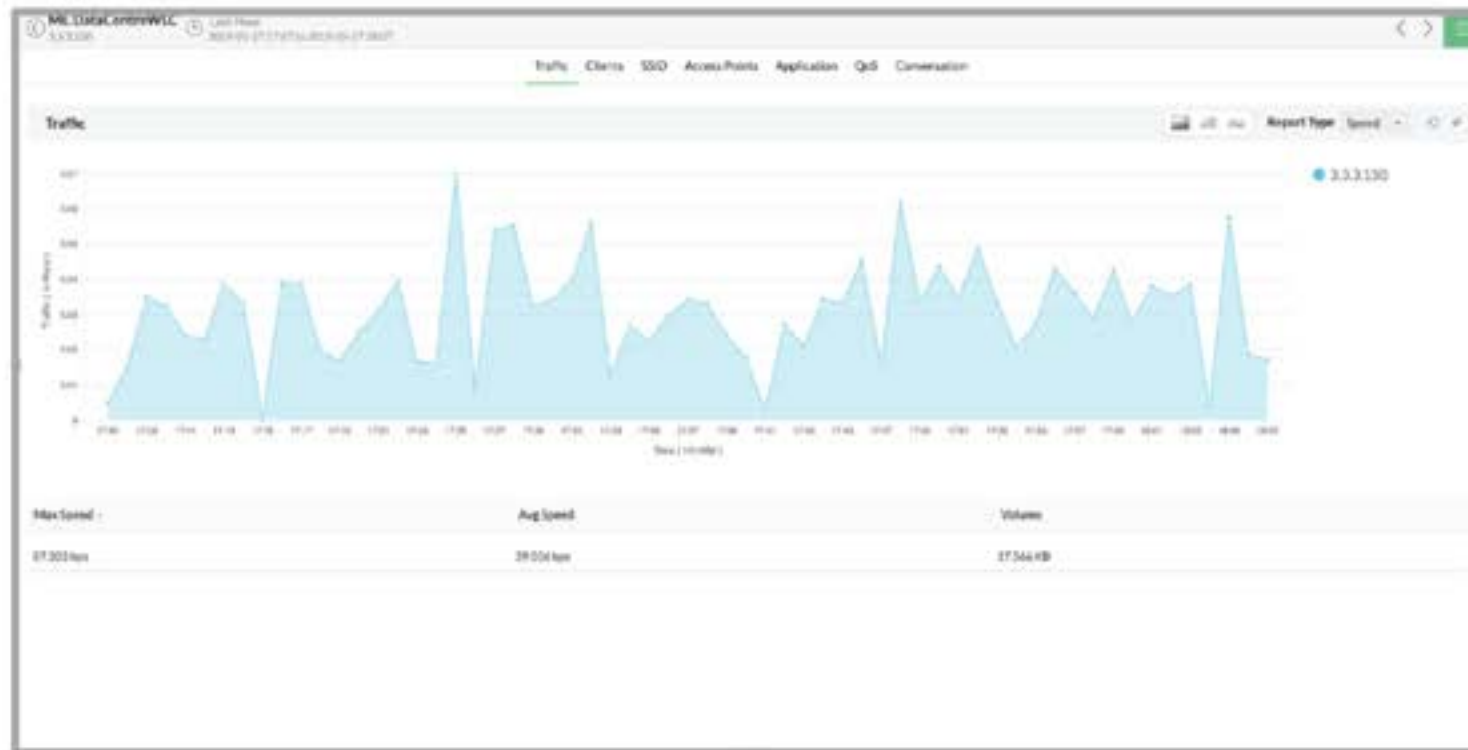
# Visibility into QoS traffic

- Control bandwidth usage with QoS monitoring and set different priorities based on bandwidth consumption. View QoS traffic in this tab.



# WLC Monitoring

- Monitor WLAN Controllers for bandwidth related statistics and drill down further to view reports on WLAN controllers, SSIDs, APs and QoS.



# Flow Reports

- Flow reports in OpManager plus help you drill down to any specific details with criteria-based search. Automate and schedule reports at any specific time; receive notifications about reports and save reports and export them to PDF or CSV files to share them with upper management.

## Types of Flow Reports

Custom search

Compare

Forensics

Consolidated

Forecast

Capacity planning

# Types of Flow Reports

- **Search report** and custom search reports helps troubleshooting and helps the user to search your network traffic for a particular sort of traffic, which can be defined by the user.
- **Compare reports** facilitate comparing multiple devices at a given point of time. This enables measuring how different devices perform for the same amount of time.
- Diagnose network slowdowns and outages with **forensic reports**. It gives you the flexibility to select how far you want to be able to go back to the past and get the required actionable information, which ultimately helps you achieve efficient use of your network bandwidth.
- In **forecast reports**, predict bandwidth usage trends accurately to prevent bandwidth bottlenecks and traffic outages. OpManager Plus employs techniques like auto-correlation, seasonality trend loss decomposition and regression to forecast usage trend.

# Types of Flow Reports

## Save and schedule reports:

- **Report profile:** Create and save your criteria based reports and view them at any time.
- **Schedule report:** Add a schedule - daily, weekly or monthly to get it notified via email.

## Capacity Planning Report:

- Highlights trends in network traffic, enabling you to plan bandwidth capacity needs, analyze traffic patterns with capacity planning reporting.

# IP Address and Switch port Management

## Top 10 Subnets with Occupied IPs

192.168.211.0/24		60
192.168.215.0/24		18
192.168.210.0/24		18
192.168.218.0/24		16
192.168.214.0/24		15
192.168.219.0/24		14
192.168.212.0/24		13
192.168.49.0/24		9

## IP Availability Summary

2537

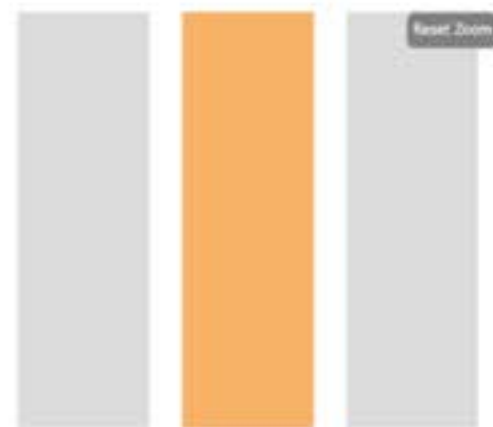
Transient

0

Available

511

Used



# IP Address Management

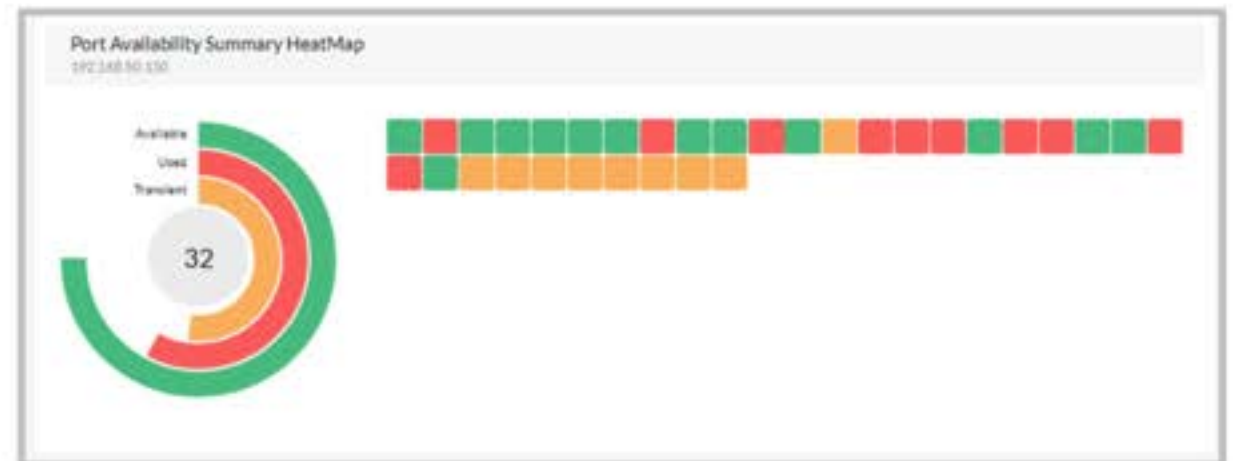
- Discover, monitor and manage all your IPv4 and IPv6 addresses.
- Define a hierarchy to add all your subnets based on their usage/location.
- Scan subnets to get the current status of each of the IP addresses.





# Switch Port Management

- Eliminate the need of manually tracing cables for switch port management.
- Discover the devices plugged into each port of a specified switch.
- System and network engineers can gain visibility into the IP, MAC, status and port speed of each port
- The connected IPs are made visible using a switch port mapper.



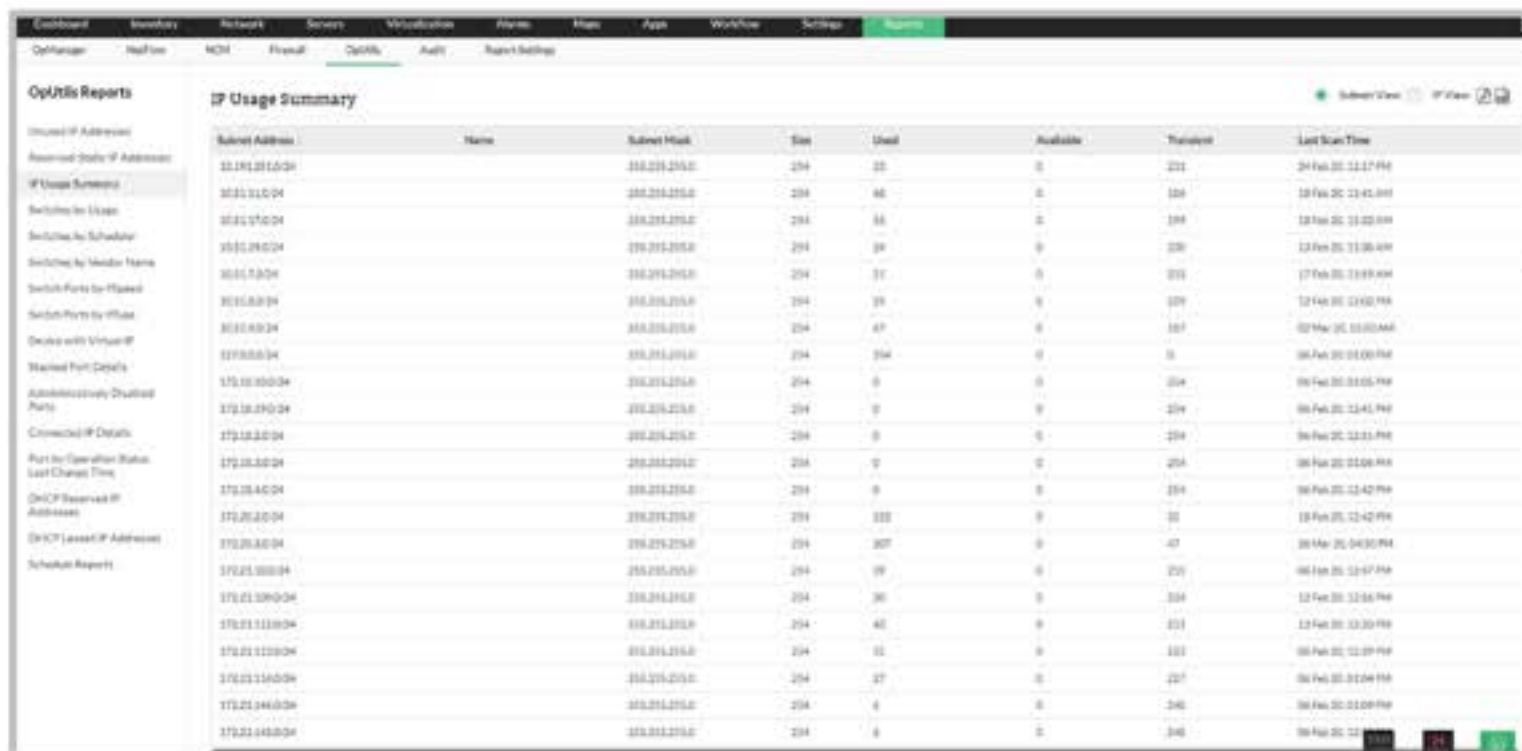
# Rogue Device Detection

- Periodically scan the routers and subnets.
- List all the systems/devices discovered in the network.
- Block unauthorized rogue devices.
- Verify all the known devices.

Recently Discovered				
MAC Address	IP Address	DNS Name	Connected Switch Port	Discovered At
C8:1F:66:D D:2F:B4	192.168.102 .134			16 Jun 18, 08:44 PM
01:00:5E:6F: 70:0C	229.111.112 .12			16 Jun 18, 08:44 PM
C2:1A:4F:D C:36:6C				16 Jun 18, 08:44 PM
C8:1F:66:D D:50:1C	192.168.102 .108			16 Jun 18, 08:44 PM
52:54:00:63: 83:69	192.168.102 .245			16 Jun 18, 08:44 PM
52:54:00:81: 79:98	192.168.102 .42			16 Jun 18, 08:44 PM
D2:17:7D:B 8:00:D1				16 Jun 18, 08:44 PM
00:15:5D:66 :86:02	192.168.102 .247			16 Jun 18, 08:44 PM
C8:1F:66:DE :8F:02	192.168.102 .150			16 Jun 18, 08:44 PM
01:00:5E:00: 01:8C	224.0.1.140			16 Jun 18, 08:44 PM

# IPAM & SPM Reports

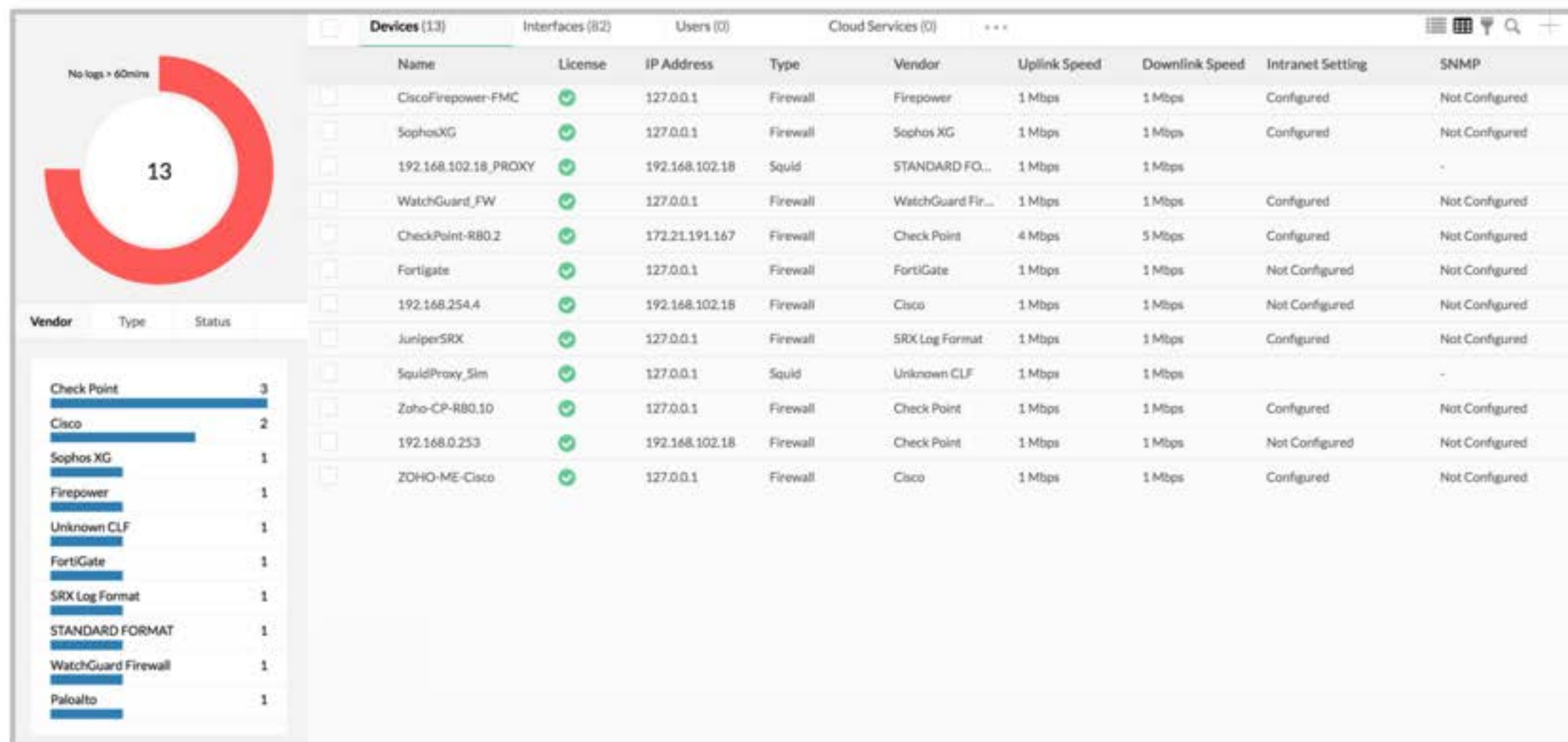
- Generate wide variety of reports depending on your need.
- Get a record of all processes



The screenshot displays a software interface with a navigation menu on the left and a main content area. The navigation menu includes options like Dashboard, Inventory, Network, Servers, Virtualization, Plans, Maps, Apps, Workflow, Settings, and Reports. The Reports section is active, showing a list of report categories under 'OptiUs Reports'. The 'IP Usage Summary' report is selected, displaying a table with the following data:

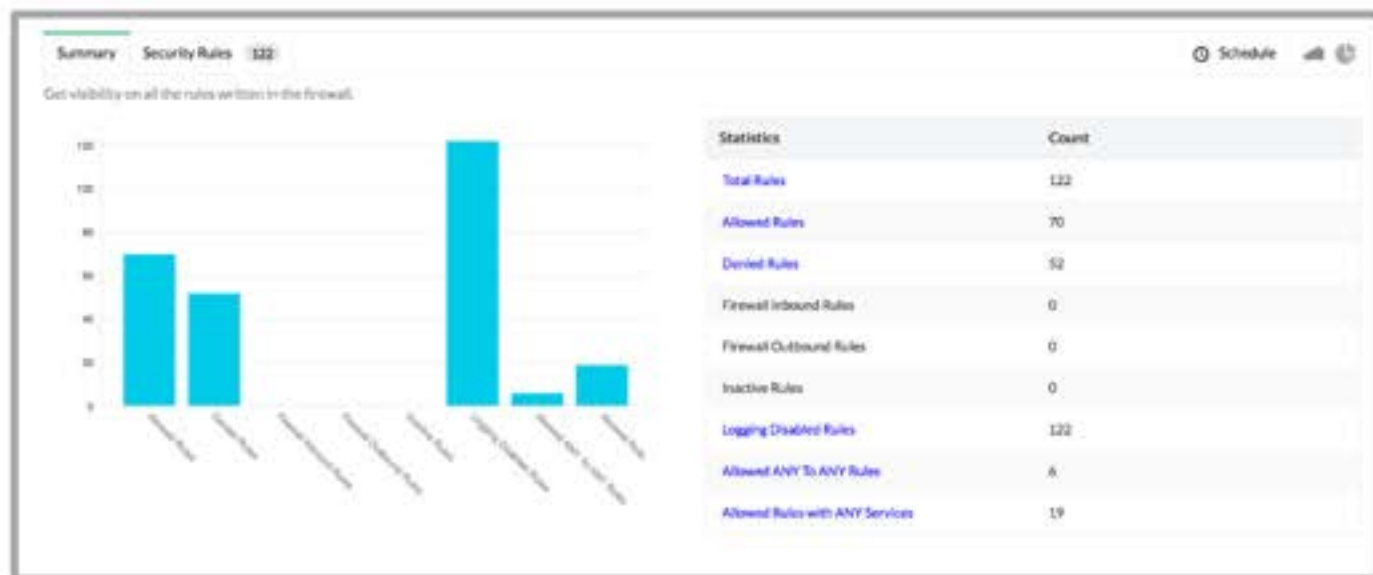
Subnet Address	Name	Subnet Mask	Size	Used	Available	Threshold	Last Scan Time
10.10.10.0/24		255.255.255.0	254	22	0	231	24 Feb 20 12:17 PM
10.10.11.0/24		255.255.255.0	254	46	0	208	18 Feb 20 12:41 PM
10.10.12.0/24		255.255.255.0	254	16	0	238	18 Feb 20 12:42 PM
10.10.13.0/24		255.255.255.0	254	24	0	230	12 Feb 20 11:38 AM
10.10.14.0/24		255.255.255.0	254	31	0	223	17 Feb 20 12:41 PM
10.10.15.0/24		255.255.255.0	254	28	0	226	12 Feb 20 12:42 PM
10.10.16.0/24		255.255.255.0	254	47	0	207	02 Mar 20 03:03 AM
172.16.0.0/16		255.255.0.0	65534	254	0	0	04 Feb 20 01:00 PM
172.16.100.0/24		255.255.255.0	254	0	0	254	04 Feb 20 03:03 PM
172.16.200.0/24		255.255.255.0	254	0	0	254	04 Feb 20 12:41 PM
172.16.300.0/24		255.255.255.0	254	0	0	254	04 Feb 20 12:41 PM
172.16.400.0/24		255.255.255.0	254	0	0	254	04 Feb 20 12:42 PM
172.16.500.0/24		255.255.255.0	254	0	0	254	04 Feb 20 12:42 PM
172.16.600.0/24		255.255.255.0	254	222	0	31	18 Feb 20 12:42 PM
172.16.700.0/24		255.255.255.0	254	207	0	47	26 Mar 20 04:30 PM
172.21.100.0/24		255.255.255.0	254	19	0	235	04 Feb 20 12:47 PM
172.21.200.0/24		255.255.255.0	254	30	0	224	12 Feb 20 12:46 PM
172.21.300.0/24		255.255.255.0	254	40	0	214	12 Feb 20 12:30 PM
172.21.400.0/24		255.255.255.0	254	11	0	243	04 Feb 20 12:39 PM
172.21.500.0/24		255.255.255.0	254	27	0	227	04 Feb 20 02:04 PM
172.21.600.0/24		255.255.255.0	254	1	0	253	04 Feb 20 12:09 PM
172.21.700.0/24		255.255.255.0	254	6	0	248	04 Feb 20 12:11 PM

# Network security management



# Firewall policy Management

- Gain complete visibility into the rules written in your firewall.
- Improve firewall performance by identifying and removing rule anomalies.
- Optimize rule performance by placing the rules in the correct order.
- Identify unused rules and clear them on a regular basis.
- Determine the impact of one rule over another and redundancy.
- Automate firewall rule administration and also determine if a new rule can impact the existing rule set negatively.



# Firewall configuration monitoring

- Automate configuration change tracking in all your firewall devices.
- Track “what”, “who” & “when” of config changes.
- Receive change notifications directly to you mail.
- Compare configuration changes between any two configurations , side by side using Diff View.
- Easily identify changes between configuration files using color-coded change depiction.
- View added lines in green, deleted lines in red and modified lines in blue.



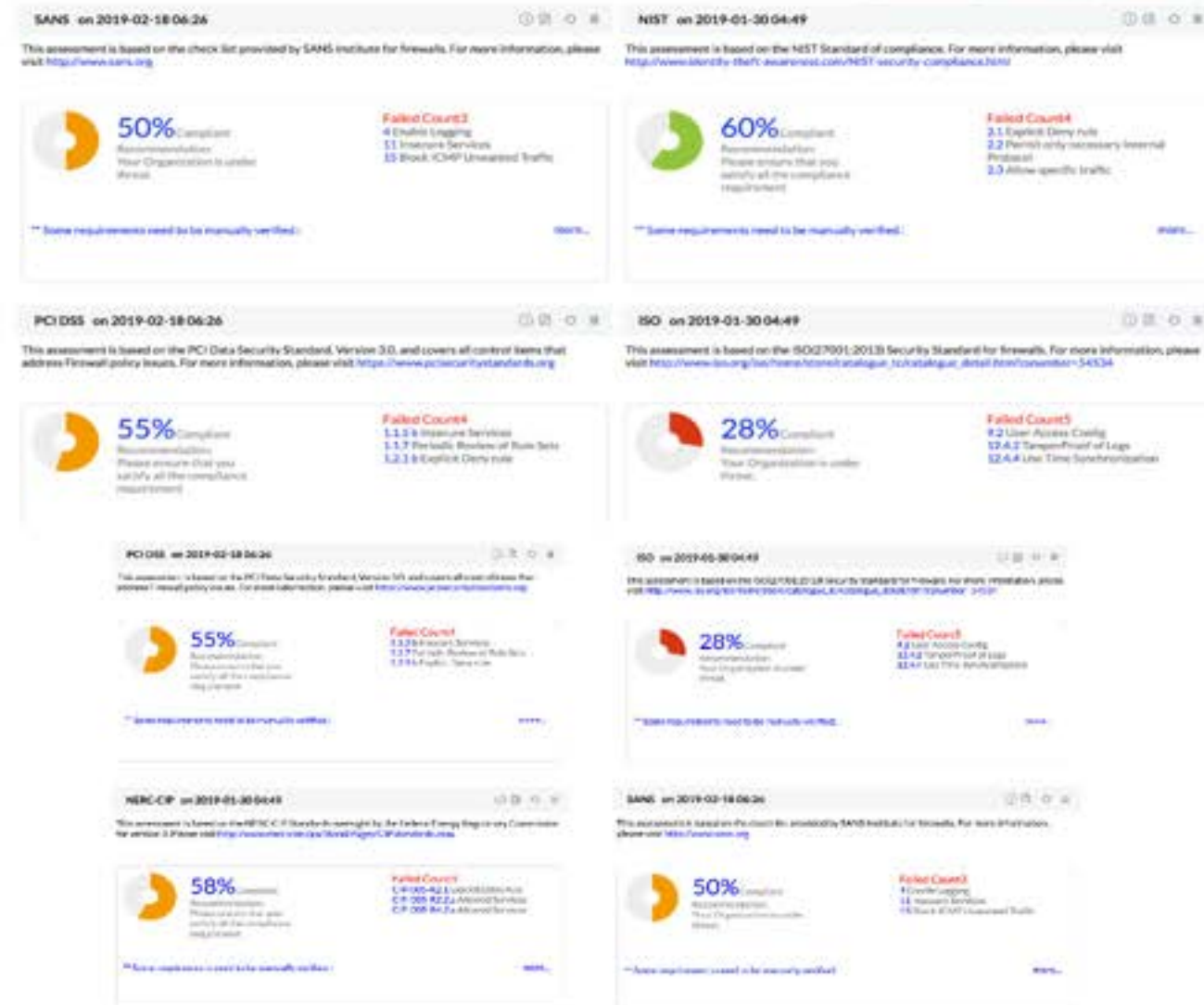
The 'Diff View' interface for Fortigate1 configuration shows a side-by-side comparison of two configuration files. The left pane shows the 'LHS' configuration, and the right pane shows the 'RHS' configuration. The changes are color-coded: green for added lines, red for deleted lines, and blue for modified lines. The configuration includes various system settings, user accounts, and network configurations.

Line	LHS	RHS
1	config system global	config system global
2	set access-ban-time 30	set access-ban-time 30
3	set admin-httpd get-request-checker	set admin-httpd get-request-checker
4	set admin-httpd duration 60	set admin-httpd duration 42
5	set admin-httpd threshold 2	set admin-httpd threshold 4
6	set admin-mailbox enable	set admin-mailbox enable
7	set admin-port 8080	set admin-port 8080
8	set admin-ssl enable	set admin-ssl enable
9	set admin-ssl-cert "self-sign"	set admin-ssl-cert "self-sign"
10	set admin-ssl-port 443	set admin-ssl-port 443
11	set admin-ssl-port 23	set admin-ssl-port 23
12	set admin-ssl-ssl enable	set admin-ssl-ssl enable
13	set admin-ssl-ssl-port 23	set admin-ssl-ssl-port 23
14	set admin-ssl-ssl-port 2	set admin-ssl-ssl-port 2
15	set admin-ssl-ssl-port 1000	set admin-ssl-ssl-port 1000
16	set admin-ssl-ssl-port 1000	set admin-ssl-ssl-port 1000
17	set admin-ssl-ssl-port 1000	set admin-ssl-ssl-port 1000
18	set admin-ssl-ssl-port 1000	set admin-ssl-ssl-port 1000
19	set admin-ssl-ssl-port 1000	set admin-ssl-ssl-port 1000
20	set admin-ssl-ssl-port 1000	set admin-ssl-ssl-port 1000
21	set admin-ssl-ssl-port 1000	set admin-ssl-ssl-port 1000
22	set admin-ssl-ssl-port 1000	set admin-ssl-ssl-port 1000
23	set admin-ssl-ssl-port 1000	set admin-ssl-ssl-port 1000

# Firewall compliance and audit

- Avoid legal issues with proper compliance management.
- Stay compliant to PCI-DSS, ISO 27001, NIST, NERC-CIP, SANS regulatory mandates.
- Perform security audits on the configuration setup of your firewall and get detailed reports on any security loopholes.
- Identify the criticality of the configuration loopholes and also get the ease of attack.
- Get recommendation on industry best practices.

## Compliance Standards



# Firewall log management

- Gain insight into security threats and traffic behavior through detailed log reports.
- Troubleshoot links and identify security risks by analyzing the security reports.
- Get detailed VPN and proxy reports to identify users connected by your VPN, usage and proxy server logs.
- Gain complete visibility into individual firewalls and interfaces connected through inventory report.
- Get custom reports and forensic log analysis for deeper and customized insights into logs.



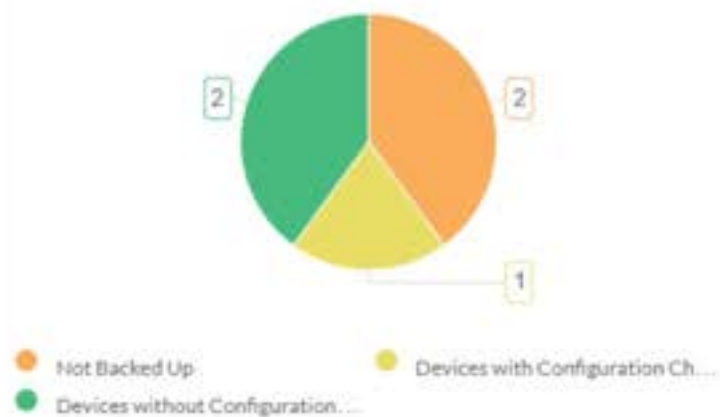


# Network Configuration Management

## Recent NCM Alarms



## Configuration Changes Summary



## Pending Request

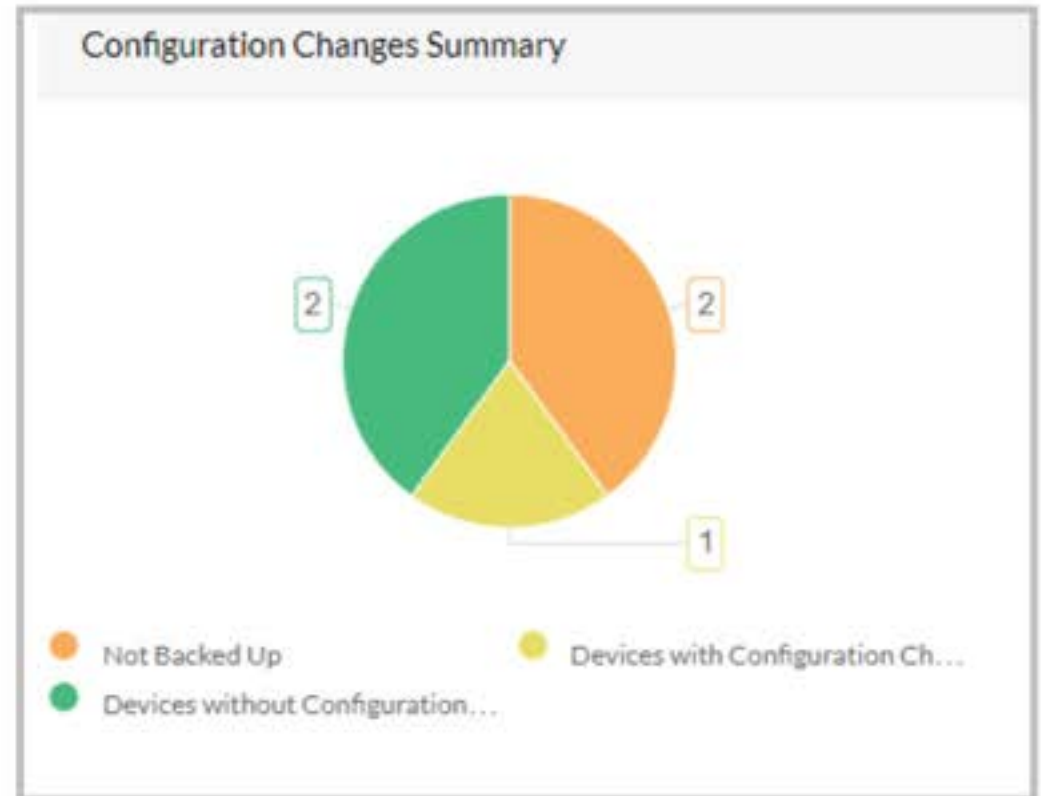
No Data Available

## Network Policy Violation

Host Name	Critical	Major	Warning	Compliance	Last Checked At
192.168.50.140	7	7	5	9	Jun 13 2018 12:45:44 PM

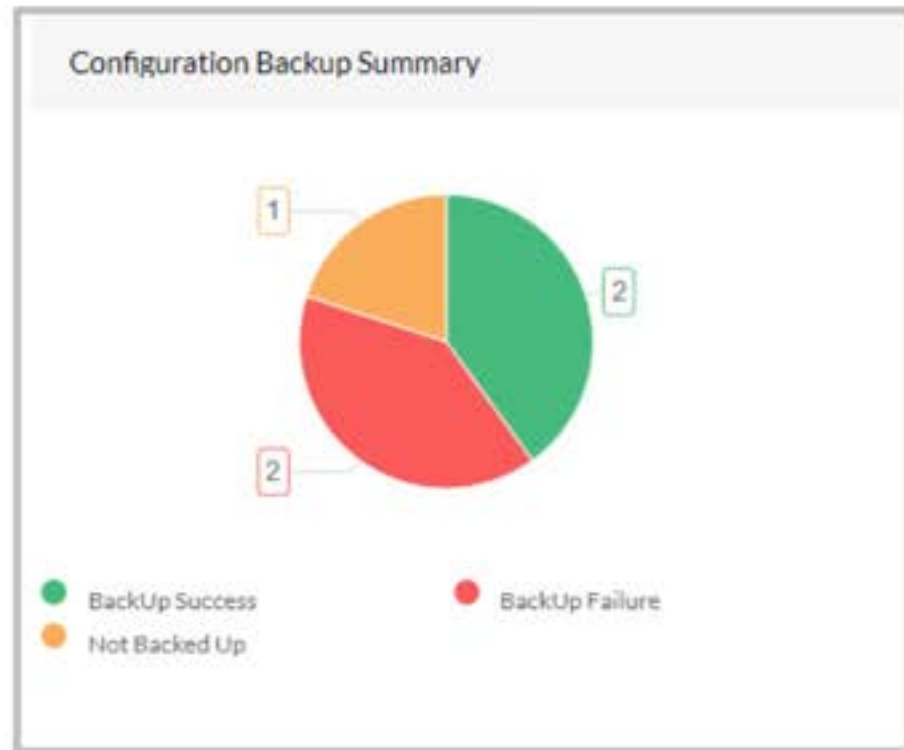
# Network Configuration Management

- OpManager Plus provides configuration and compliance management solution for switches, routers, firewalls and other network devices as an integrated feature.
- It helps automate and take total control of the entire lifecycle of device configuration management.
- It helps streamline the processes of automation, backing up, compliance and change management.
- Avoid network disruptions due to accidental and malicious network device configuration changes.



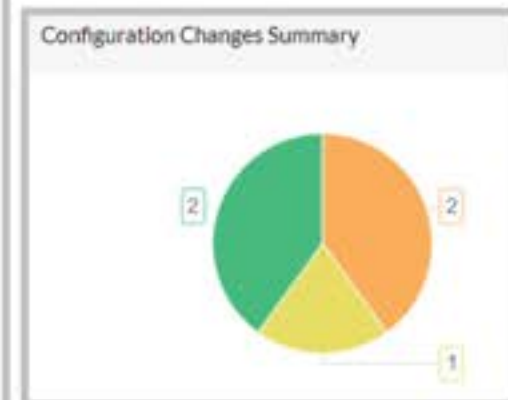
# Configuration Back-up & Restore

- Back-up and upload network configurations in a single click during outages.
- Automatically back up configurations when a change is made.
- Get the updated status of network configurations instantly and track their status.
- Schedule configuration back-ups in which routine back-ups are required.
























# Configuration Change Management




- Automate change tracking to gain better visibility.
- Receive and track details of changes made through real time notifications and restrict access using role based access control.
- Prevent unauthorized users from making any configuration changes.
- Identify faulty changes and fix them quickly.
- Automatically revert changes in critical devices.
- Use Diff View for side by side colour-coded comparisons.



# Compliance Management


- Comply with industry standards and your organization's internal policies.
- Out-of-the-box network compliance policies for SOX, HIPAA, PCI & Cisco IOS standards.
- Create customized policies to meet internal compliance requirements.
- Receive real time notifications on violations and efficiently remediate them.
- Generate reports on compliance status and become audit ready.

Compliance Status Details				
Host Name	Policy Name	Compliance Status	Rules	Last Check At
192.168.50.140	 CiscoIOS Policy	false	 3  5  5  3  5	Jun 13, 2018 12:45 PM
192.168.50.140	 P1	false	 7  7  7  5  9	Jun 13, 2018 12:45 PM
192.168.50.140	 Debugging Policy	false	 1  0  0  0  0	Jun 13, 2018 12:45 PM
192.168.50.131	 CiscoIOS Policy	false	 4  6  1  3  3	Jun 12, 2018 19:22 PM

Q   |< << Page 1 of 1 >> >| 50 |  View 1 - 4 of 4

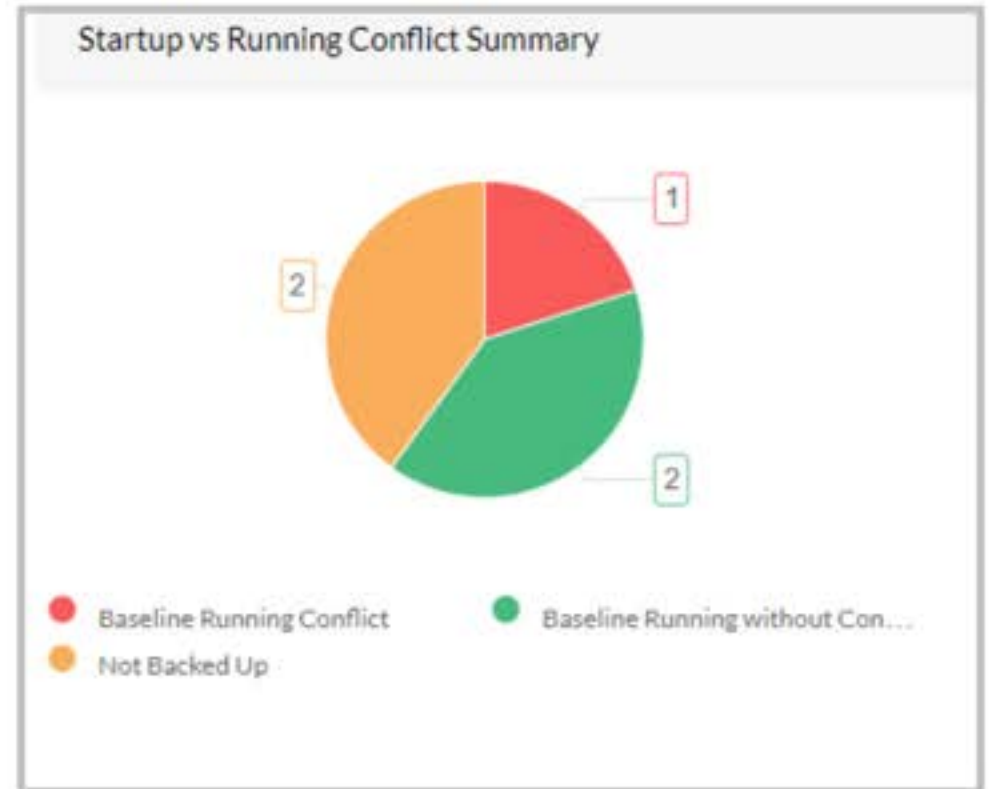
# Firmware Vulnerability Management

- View all the devices in your infrastructure that are running on vulnerable firmware versions.
- View CVE ID details of vulnerabilities, the severity and take immediate remediation measures.
- Vulnerability data from NIST can be synced with the DB of OpManager Plus. This sync can be scheduled.

Firmware Vulnerability			
CVE ID	Base Score	Severity	No. of Affected Devices
CVE-2017-12240	10	 Critical	3
CVE-2018-0172	7.8	 Important	3
CVE-2017-12228	4.3	 Moderate	1
CVE-2017-12232	6.1	 Moderate	1
CVE-2014-3309	5	 Moderate	3
CVE-2007-5549	2.1	 Low	3
CVE-2017-6744	9	 Critical	1
CVE-2013-1241	6.3	 Moderate	3
CVE-1999-0524	0	 Low	3
CVE-2013-5548	4.3	 Moderate	3
CVE-2017-6737	9	 Critical	1

# Disaster Management

- A network disaster often leads to lost opportunity, shaken customer loyalty & lowered employee morale.
- Prevent loss of configuration changes by syncing startup-running configurations.
- Maintain a configurations repository in incremental versions when a change is made.
- Label the most stable version as Baseline Configuration.
- During outages, upload the baseline version instantly & restore your network.



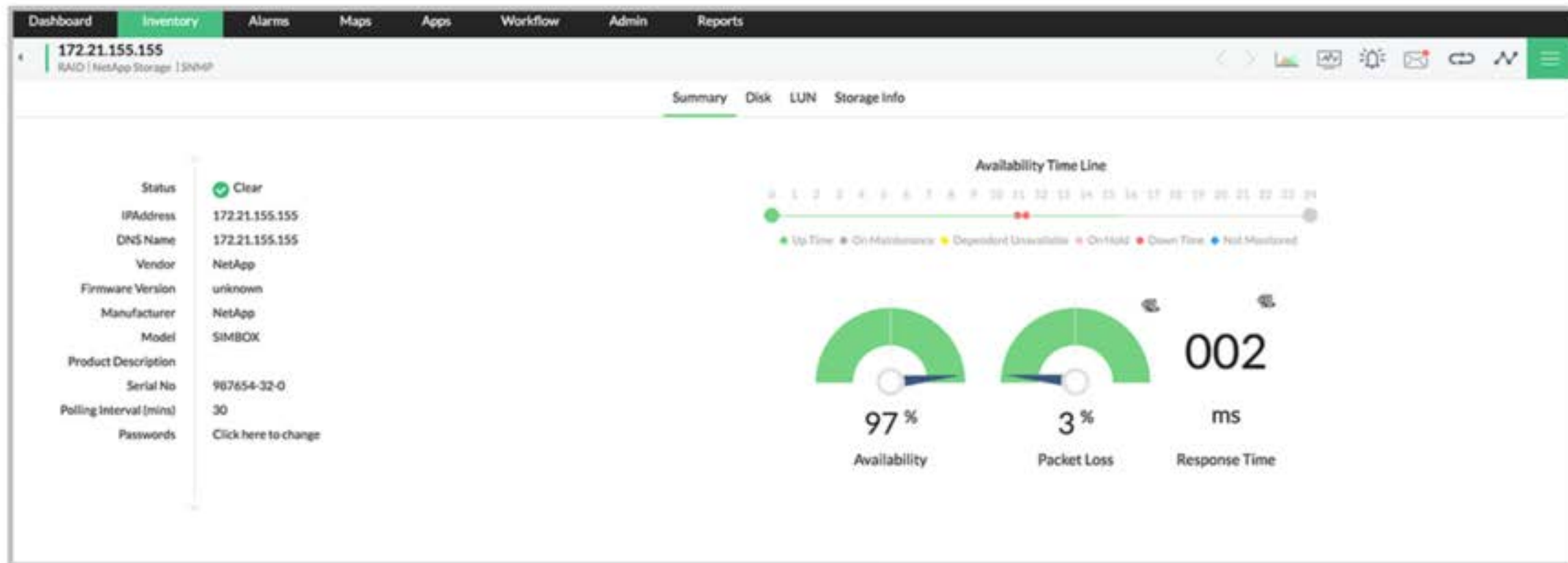
# Reports

- Get detailed reports about configuration changes, hardware inventory, user activity, compliance status and end of service devices.
- View reports on firmware vulnerability
- Generate configuration conflict reports between startup and running configurations.
- View the compliance status of your infrastructure with compliance reports.
- Create custom reports based on your requirements.

Device Audit	
Host Name	Operation Performed
192.168.50.140	✔ Compliance Check
192.168.50.131	✔ Compliance Check
192.168.50.140	✔ Compliance Check
192.168.50.131	✔ Compliance Check
192.168.50.140	✔ Compliance Check
192.168.50.131	✔ Compliance Check
192.168.50.140	✔ Compliance Check
192.168.50.131	✔ Compliance Check
192.168.50.140	✔ Compliance Check
192.168.50.131	✔ Compliance Check
192.168.50.140	✔ Compliance Check
192.168.50.131	✔ Compliance Check
192.168.50.140	✘ SSH Access
192.168.50.131	✘ TELNET Access
192.168.50.131	✘ TELNET Access



# Storage Management



# Storage Management in OpManager Plus

- OpManager Plus's inbuilt storage monitoring solution gives you the freedom of managing all your network storage devices from a single pane.
- It enables you to monitor Fiber channel switches, Storage Arrays and Tape Libraries.
- With advanced performance monitoring and extensive reporting, OpManager Plus packs a ton of features such as 'Disk Read/Write' stats, capacity utilization monitors and storage growth trend graphs.



# Storage Management in OpManager Plus

- OpManager Plus utilizes SNMP / CLI / SMI-S/ vendor-specific APIs to discover and monitor the RAIDs in your network.
- You can view the health, availability and utilization of storage RAIDs and get alerted in real-time on hardware and software problems, drive failures and sensor faults.
- OpManager Plus can automatically discover tape libraries in SAS / NAS networking vendor specific MIBs or APIs.



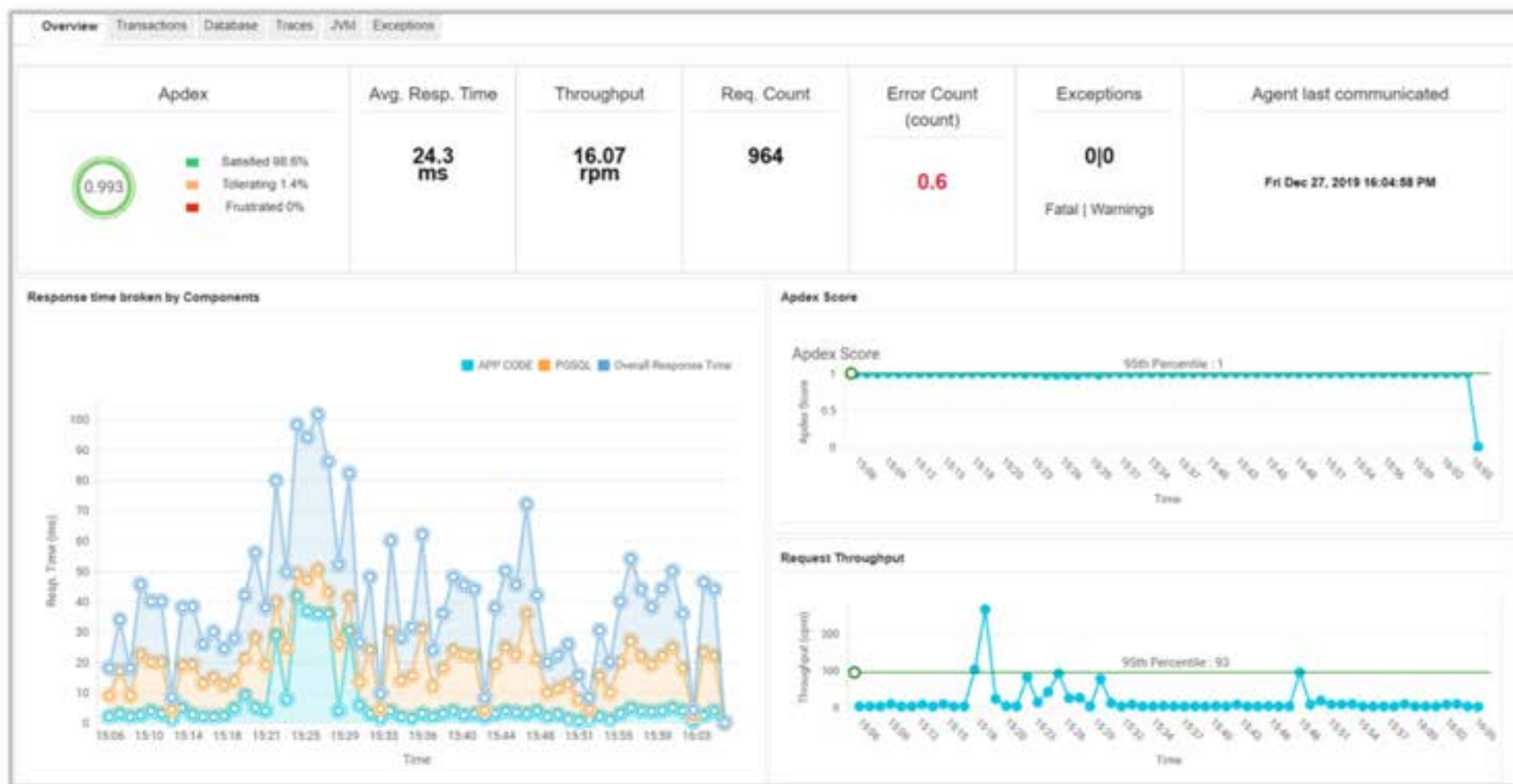
# Storage Management in OpManager Plus

- OpManager Plus offers advanced storage forecasting and capacity planning which helps you predict the storage requirements for your organization.
- OpManager Plus manages and monitors Fabric switches based on SNIA's standard Fabric switch management MIBs and offers advanced insights by utilizing vendor specific MIBs and APIs.
- Schedule detailed and real time reports, and get instant notifications and alarms through text/email.

The screenshot shows the 'Schedule Report' configuration window. It contains the following fields and options:

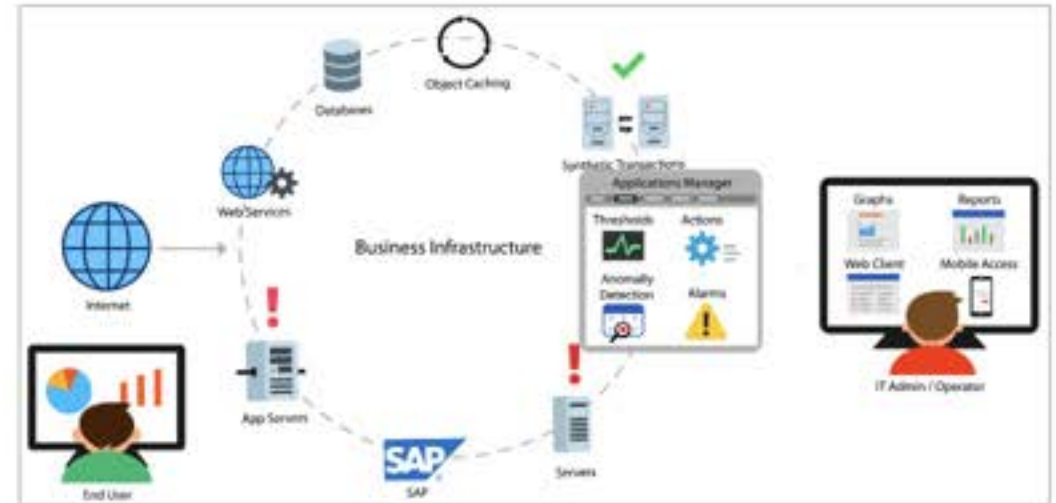
- Schedule Name:** Text input field.
- Email ID:** Text input field.
- Category:** Dropdown menu with 'All Devices' selected.
- Business View:** Dropdown menu with 'All Devices' selected.
- Period:** Dropdown menu with 'Last 12 Hours' selected.
- Time Window:** Dropdown menu with 'Full 24 hours' selected.
- Showing:** Dropdown menu with 'Only Top' selected.
- Count:** Text input field with '10' entered.
- Report Format Type:** Dropdown menu with 'PDF' selected.
- Report Delivery Type:** Dropdown menu with 'Send as Attachment' selected.
- Schedule:** Radio button group with 'Daily' selected.
- Starts From:** Date input field with '05-03-2018' entered.
- Execute At:** Time input fields for 'Hours' (0.00) and 'Minutes' (00).

# Application Performance Monitoring



# Applications Manager

- Applications Manager is a server and application performance monitoring solution that can be availed as an integration to OpManager Plus.
- The solution helps uncover and fix performance issues - from URL to the line of code - thereby ensuring optimal end user experience.
- The solution provides out-of-the-box monitoring support for 130+ applications including servers, databases, cloud, virtualization, ERP, middleware and messaging components, web apps, containers, and hyperconverged infrastructure.



# Application Monitoring

- Obtain code-level diagnostics for Java, .Net, Ruby on rails, Node.js, .Net core and PHP applications.
- Track background transactions with in-depth business application monitoring.
- Track and inspect slow database calls, long running queries, slow transactions and the overall performance of the database.
- Measure end-user satisfaction levels with the help of Apdex scores.

# Container infrastructure monitoring

Provides out-of-the-box support for



openstack.

ORACLE®

CLOUD



Google Cloud Platform



kubernetes



docker.



# Synthetic transaction monitoring

- Monitor your website from multiple geographical locations and load the website the way user sees it.
- Measure complete multi-page workflows simulating an entire usage journey.
- Analyze individual website components and identify which element of your page caused slowdown.
- Ensure that your website is working correctly 24X7 and meeting business goals and SLA's.

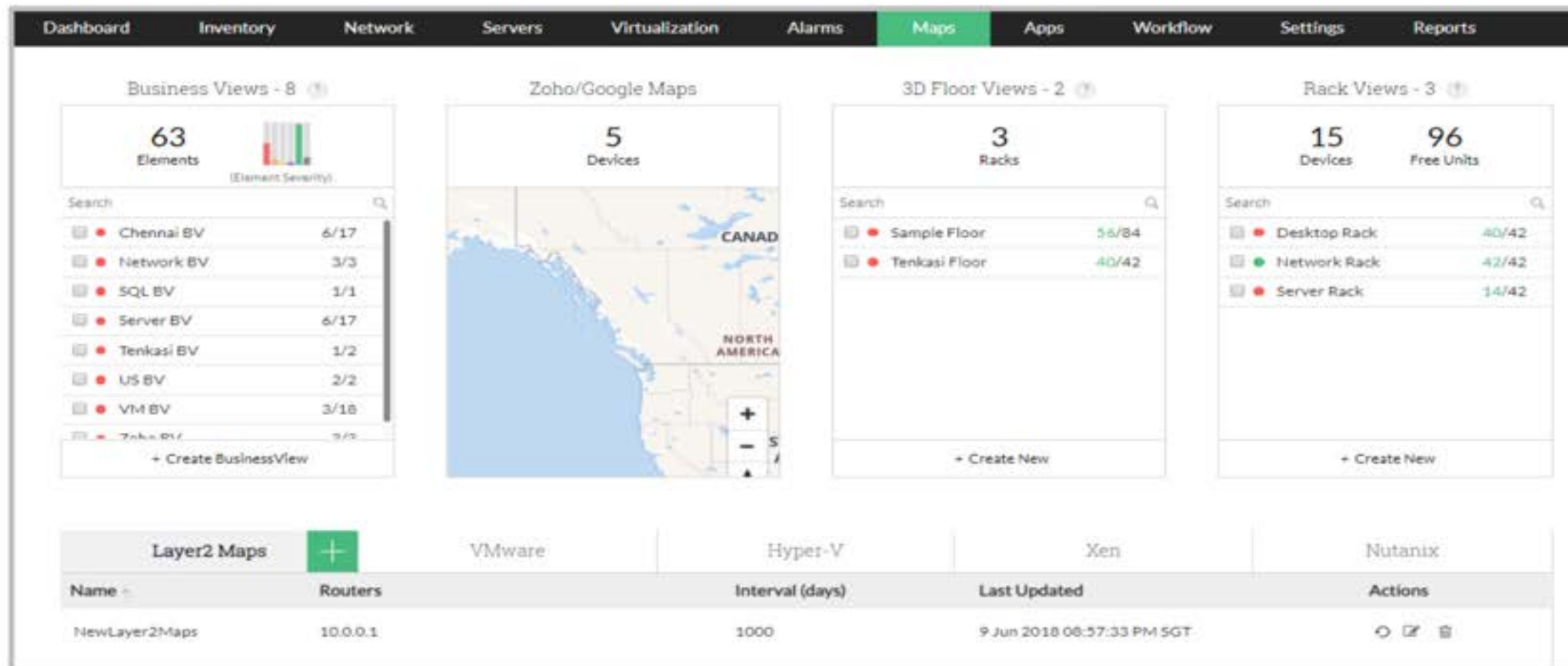


# Key Highlights

- Single console to monitor your hybrid IT infrastructure - servers and applications hosted in physical, virtual or cloud setups.
- Automated application discovery and dependency mapping.
- Pinpoint slow transactions with the help of code level diagnostics.
- Monitor end user experience of your application with synthetic transaction monitoring from various geographies.
- Robust fault management with dynamic baselining and automated remedial actions.
- Plan capacity and envision growth trends with Machine Learning enabled performance analytics.

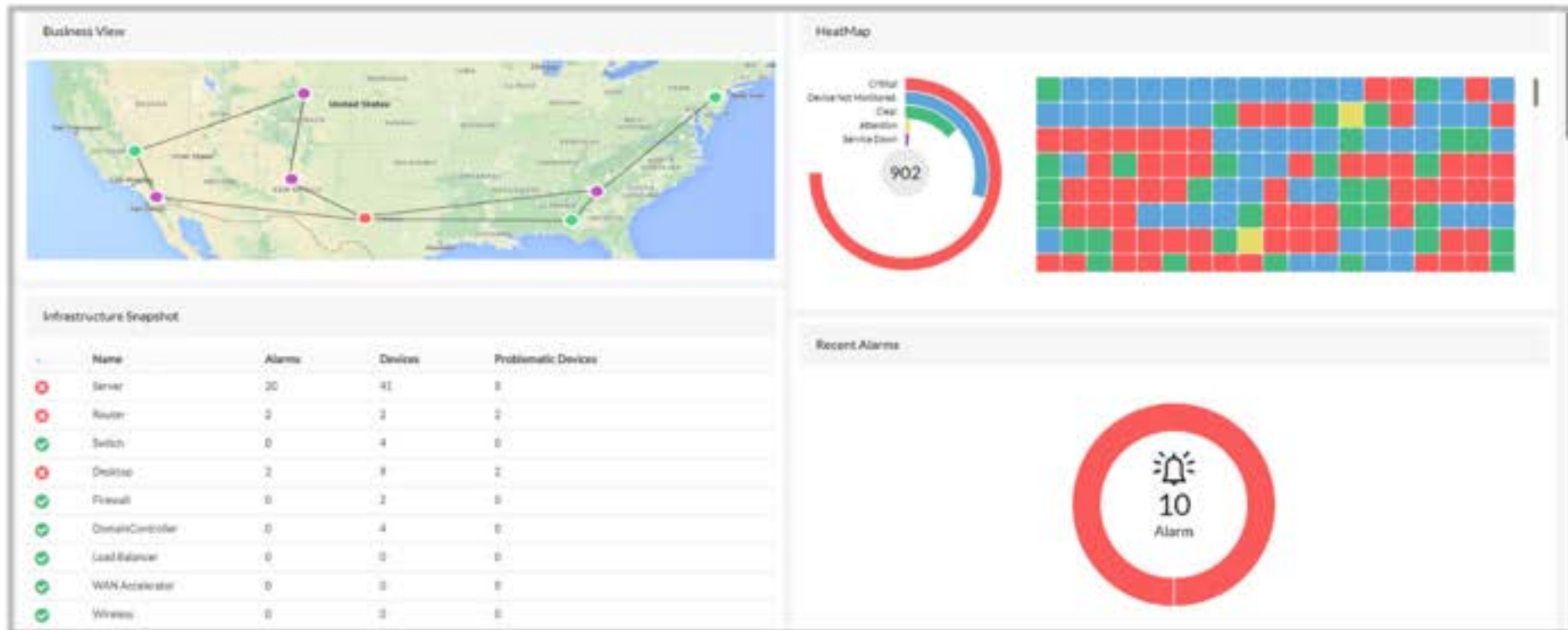
# Simplify IT Operations Management with OpManager Plus

# In-Depth Visualization



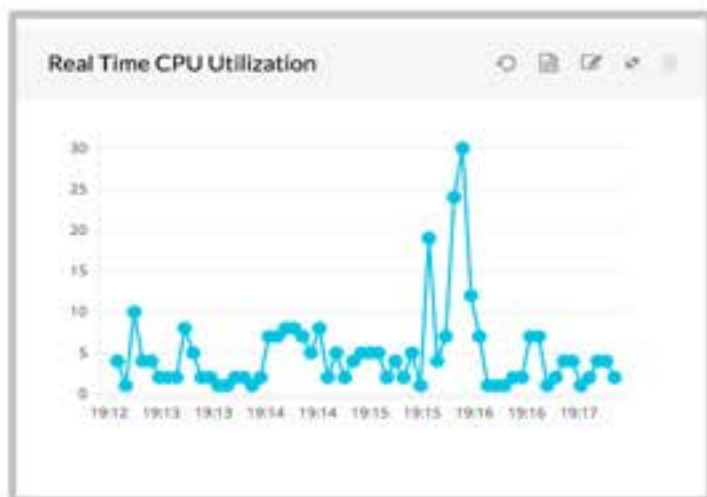
# Interactive Dashboard

The Dashboard provides a single consolidated pane of view for multiple IT operations management processes including network performance management, bandwidth management, network configuration management, firewall analysis, IPAM, SPM and Storage management. Critical widgets from each of these processes can be embedded in the dashboard, thus paving way for an in-depth IT infrastructure visibility.



# Customizable Widgets

- Follow the operational changes of your IT infrastructure with 230+ inbuilt widgets.
- Customize your dashboards to include widgets of your choice.
- Get the top 10 data on CPU, Memory utilization, traffic, availability, configurations and more.
- Direct navigation from widget to snapshot page for detailed analysis.



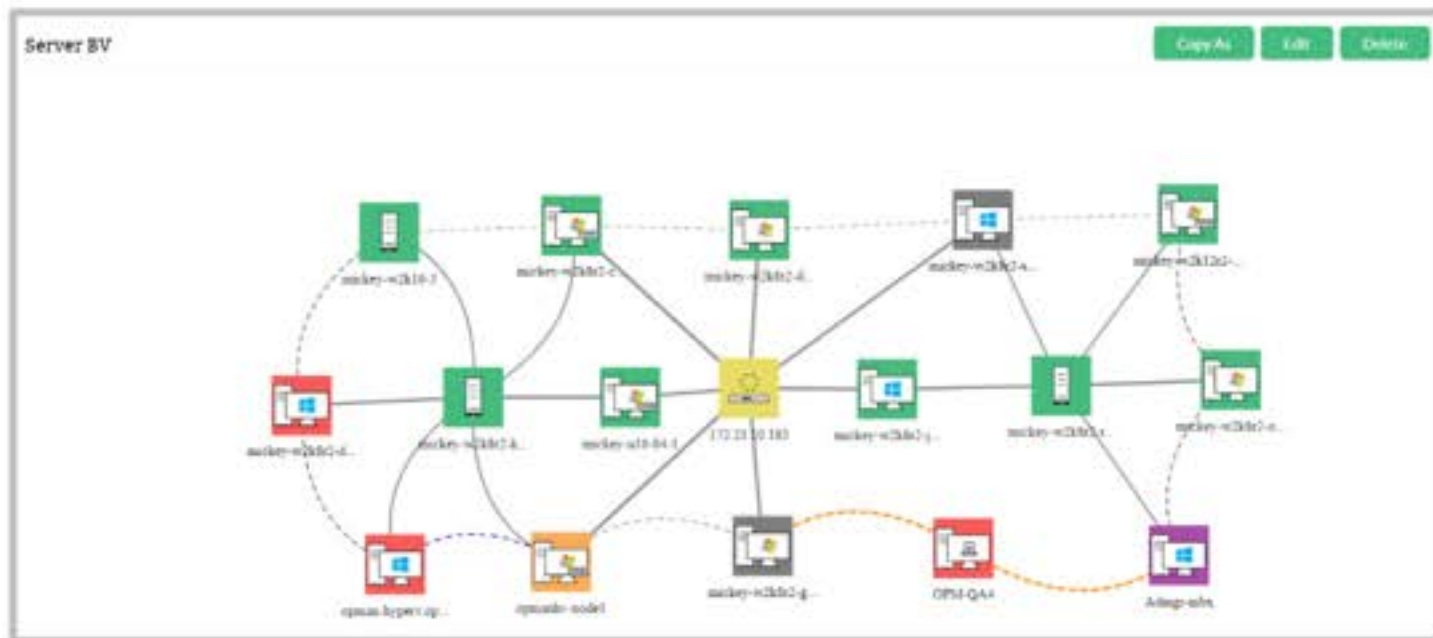
Devices by CPU Utilization

Device Name	Min	Max	Avg
MSP-KBS-64-1	99	100	99%
nithya-2130.csez.zohoc...	20	82	62%
oem-w2k12-1	33	99	53%
Opmanhv-node2	9	73	51%
oem-u12-1	11	84	45%
oem-u12-3	15	98	43%
oem-u12-4	14	95	41%
Karthik-hvtest	6	98	36%
vasanth-0458.csez.zoho...	15	58	33%
laxadesh-0457.csez.zoh...	26	49	32%



# Logical visualization by Business Views

- Create logical and logistical views of your infrastructure and view its performance collectively.
- Identify the performance of the devices and links using color codes.
- Embed on NOC screens for the viewing of performance at-a-glance.



# Geographical visualization by Maps

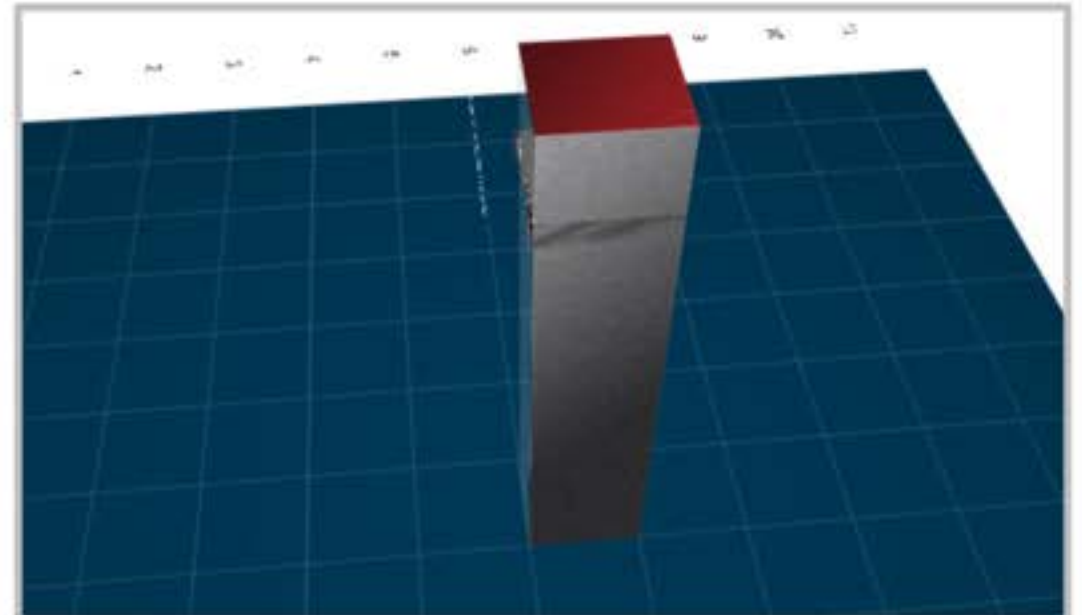
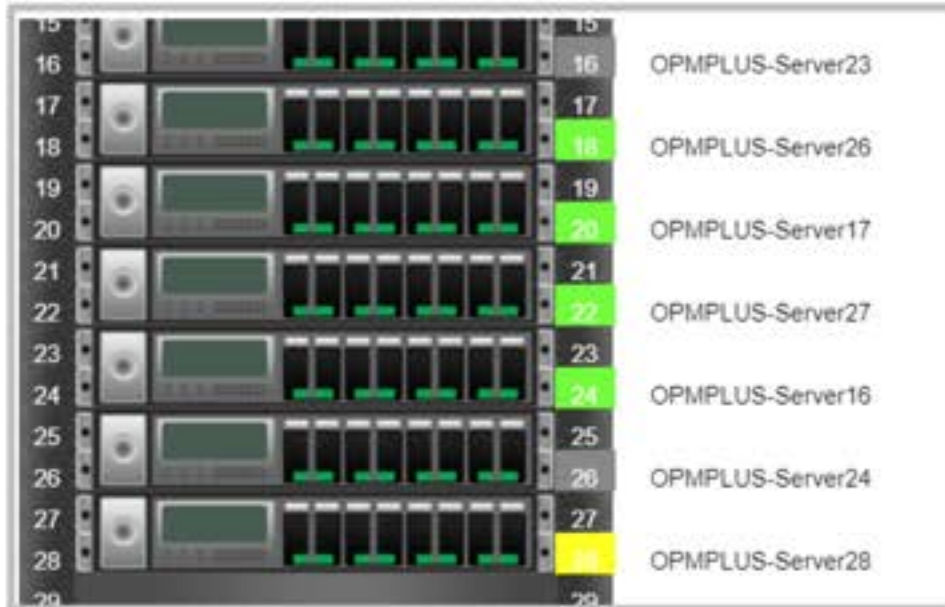
- Through OpManager Plus, visualize your IT infrastructure geographically through Google and Zoho maps.
- Provide latitude and longitudes to keep the devices in the same location.





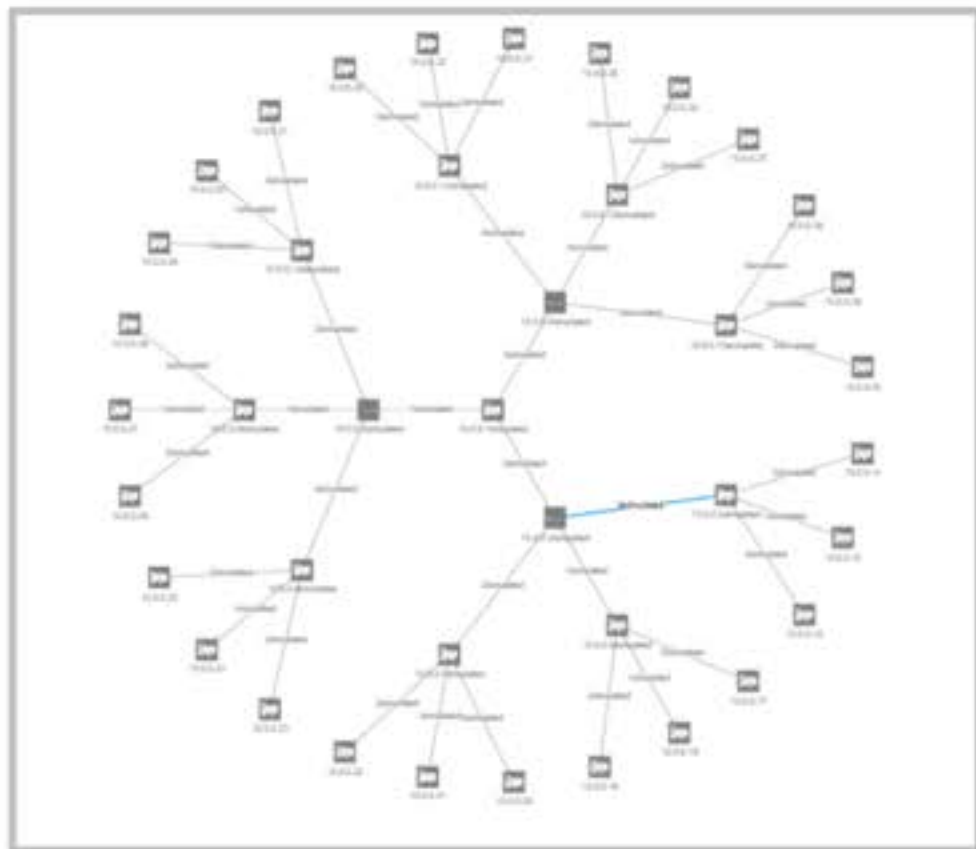
# 3D rack views in Data Center Builder

- Create mock view of racks in your data center with the devices mounted on them.
- Create 3D data center floor views.
- Monitor the health of the rack and data center floors.
- View the performance of your infrastructure using color codes.

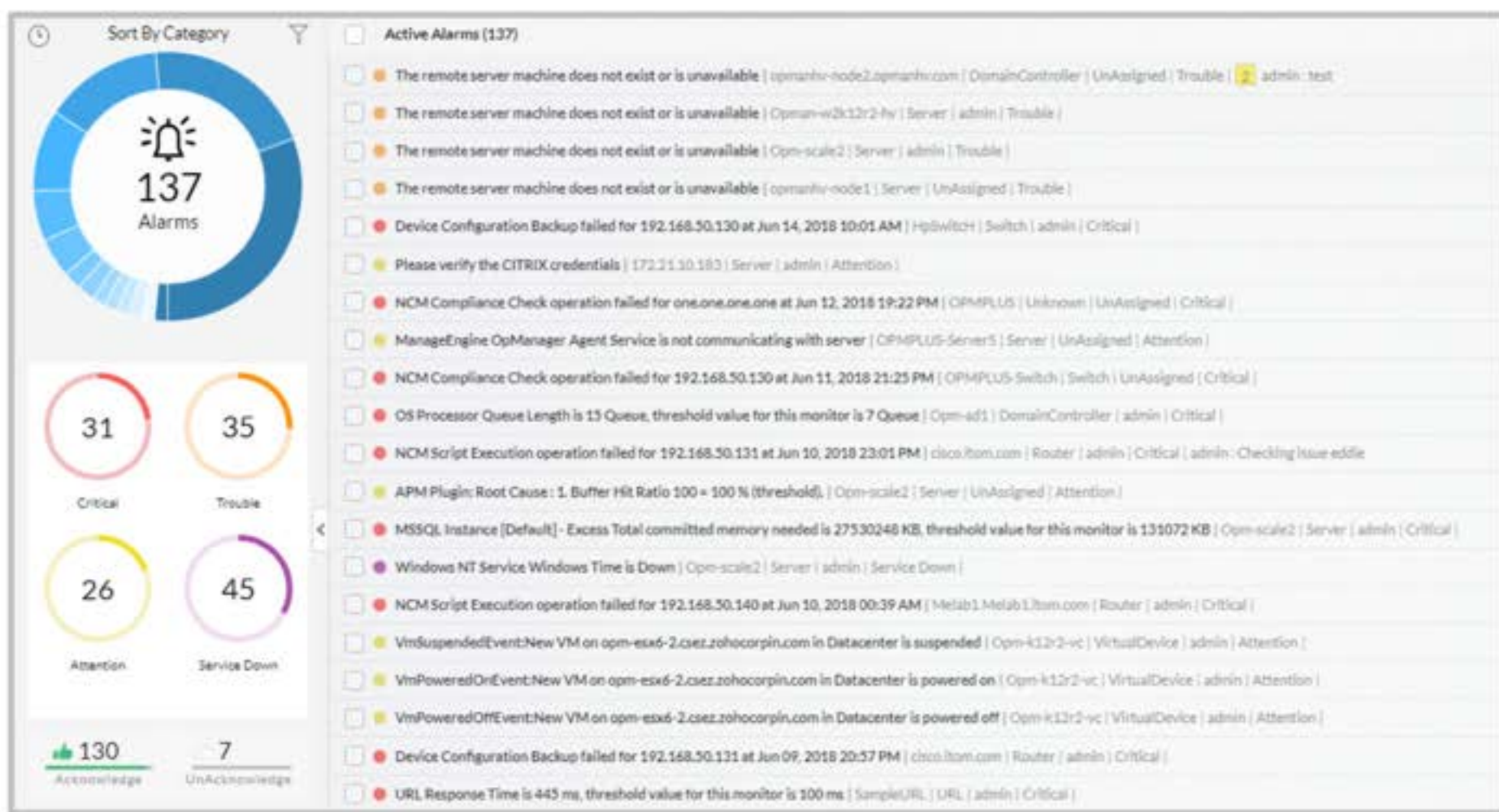


# L2 Topology by Layer 2 Maps

- Visualize your L2 Topology.
- Discover devices via seed device or core router.
- Rediscover infrastructure to automatically add or remove devices from the map.
- Export map to Visio and PDF.



# Fault Identification & Management



# Alarms & Notifications

- OpManager Plus creates alarms and events to indicate the faults identified.
- View all alarms and events by severity, colour coded accordingly.
- Get real time notifications for faults and events pertaining to Network performance management, flow management, firewall analysis, Network configuration management, IPAM & SPM, Storage management and Applications management.
- Get notified via Email, SMS for alarms across your IT infrastructure.
- Add notes to alarms for more information.
- Escalate alarms if not resolved in time.



# Colour Coded, Multi-Level Thresholds

- Multi-level, colour coded thresholds help identify faults at various levels of your IT operations management, that are distinguished based on severity for events and alarms.
- Alarms are also classified accordingly when they get generated.
- Notification profiles can be set based on severity and the most urgent alarm can be dealt with immediately.



- 
- The screenshot displays a list of system events, each with a colored dot indicating its severity level. The events include device status, CPU readiness, and service availability.
- | Event Description   | Severity  |
|---|-----------|
| Device not responding: Probably down or busy   172.24.155.141   Server   UnAssigned   Attention   | Attention |
| Device Down: No response from device for last 5 polls   192.168.222.25   Unknown   UnAssigned   Critical  | Critical  |
| Device Down: No response from device for last 5 polls   Spain_Wang ITOM   Router   UnAssigned   Critical  | Critical  |
| CPU Ready for VMware-vmCpuReadySummation is 410 Milliseconds, threshold value for this monitor is 2 Milliseco...   Opmee-2k16-t2   Server   UnAssigned   Critical | Critical  |
| CPU Ready for CPU0 is 237 Milliseconds, threshold value for this monitor is 2 Milliseconds   Opmee-2k16-t2   Server   UnAssigned   Critical                       | Critical  |
| CPU Ready for CPU1 is 173 Milliseconds, threshold value for this monitor is 2 Milliseconds   Opmee-2k16-t2   Server   UnAssigned   Critical                       | Critical  |
| Device Down: No response from device for last 5 polls   Manoj-1678   Unknown   UnAssigned   Critical  | Critical  |

# Notification Profiles

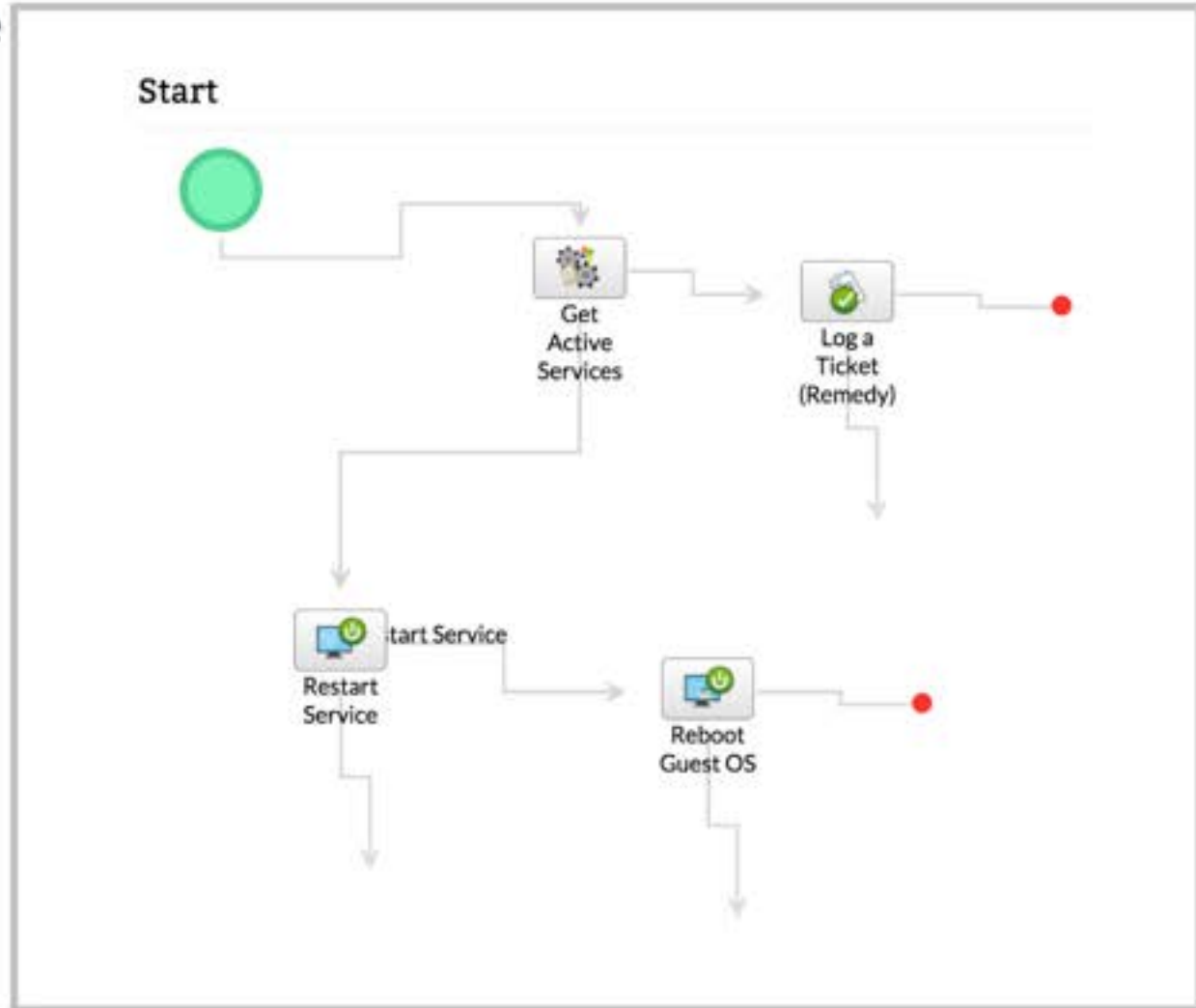


The screenshot shows a 'Mail Composition' form. It includes fields for 'From Email Address' (tharun.cv@zohocorp.com) and 'To Email Address' (tharun.cv@zohocorp.com). There is an 'Add Cc' link. The 'Mail Format' section has radio buttons for 'Plain Text', 'HTML', and 'Both', with 'Both' selected. The 'Subject' field contains '\$stringseverity - \$displayName'. The 'Subject Variable' dropdown is set to 'Select Subject Variables'. The 'Message' field contains a template: 'Message: \$message', 'Device: \$displayName', 'Category: \$category', 'Error Condition: \$stringseverity', and 'Generated at: \$strModTime'. The 'Message Variables' dropdown is set to 'Select Message Variables'.

- Create notification profiles to alert the respective teams/admins.
- Out-of-the-box offers alert profiles such as Email, SMS, Log a Ticket, & more.
- Create escalation rules to escalate alarms that are not cleared or acknowledged in specified time interval.

# WorkFlow Automation

- If-else condition based workflows to automate L1 & L2 troubleshooting activities and all repeated tasks
- Allows you to revert configurations, power off/on a VM, start & stop a process or service, and more.
- Out-of-the-box, offers over 70 actions.
- Allows you to execute scripts.
- OpManager Plus helps you automate critical tasks across all processes of IT Operations Management.



# Expand the scope of IT Management with Powerful Integrations





# Easy Integration

- Seamless integration with Servicedesk Plus, Slack, ServiceNow, AlarmsOne.
- Increases efficiency at the ITSM level with ServiceNow and Servicedesk Plus.
- Easy communication with Slack.
- Integrated alarm management with AlarmsOne.



# Failover Support

- OpManager Plus's failover and failback functionality ensures an always-monitored network environment, with the database having a secondary copy, that is ready to be switched to primary mode anytime.
- The standby server recognizes and continuously checks the availability of the primary server and during abnormal terminations, automatically switches to the secondary server.

# Other Key Highlights

- **High Scalability.**
- **Cost Effective and affordable.**
- **24x5 technical support.**

# Thank You

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*[www.manageengine.com/it-operations-management](http://www.manageengine.com/it-operations-management)*