



Network Operations and Analytics

# What's New in CA Performance Management 3.2 & CA Virtual Network Assurance 3.2

CA Performance Management Product Team

July 26, 2017

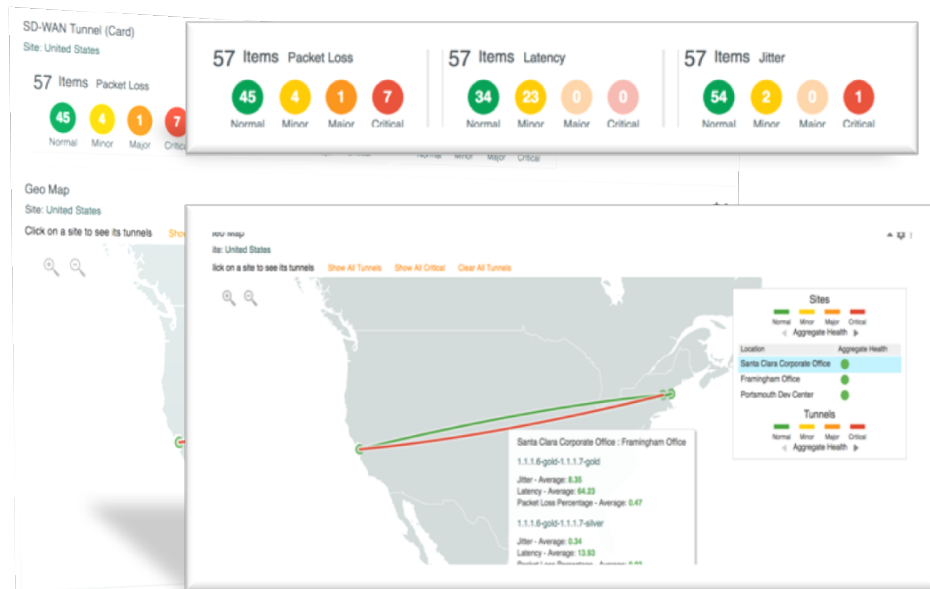


# Top Reasons to Upgrade to CA PM 3.2/CA VNA 3.2

- 1 SD-WAN ASSURANCE ENHANCEMENTS
- 2 CAPM SUPPORT FOR UNIFIED IM CABI REPORTING
- 3 OPERATIONAL UI ENHANCEMENTS
- 4 PLATFORM SUPPORT FOR RHEL7

# Feature Area #1: SD-WAN Assurance Enhancements

- Understand/Validate SD-WAN deployment
- Faster triage through innovative visualizations of problem identification and pattern isolation
- Easily view end user experience metrics driving route and path changes
- Single click to drill into underlay to understand impact of physical KPIs on software overlay



# Challenges: Why SD-WAN Monitoring

- **Expansion of Cloud based Applications and Infrastructures** coupled with non-guaranteed connectivity requires visibility and assurance across the WAN to ensure end-user experience of critical applications
- **Software Defined Overlay adds additional complexity** which requires understanding and correlation of the Control and Data plane infrastructure
- **SD-WAN introduces intelligence which needs to be validated** and refined as the maturity of the technology and your deployment increases
- **Rollout of SD-WAN requires the ability to plan and model** capacity needs across disparate providers and technology

# Automatic discovery and creation of SD-WAN Overlay

The screenshot displays the SD-WAN management interface with several key sections:

- Groups:** A sidebar on the left shows a tree view of groups. Under 'VNA Domains', the 'Default Domain' is expanded, and 'Sites' is selected. The 'Framingham Office' group is highlighted.
- Properties:** A central panel for the 'Framingham Office' group. It includes fields for Group Name, Description, Group Type (set to 'Site'), and Options (with 'Include the children of managed items' checked). It also has input fields for Latitude (42.295235), Longitude, Elevation, Location, Time Zone, and Business Hours, along with a 'Save' button.
- Devices:** A table listing devices for the 'Framingham Office' group. All devices are of type 'Router' and are in an 'Active' state.
- Tunnels:** A table listing tunnels for the 'Framingham Office' group. It shows source and destination devices, protocols (ipsec), and source/destination interfaces.
- Virtual Interfaces:** A table listing virtual interfaces for the 'Framingham Office' group. It shows the device, description, and life cycle state.

**Groups**

Select a group below:

- All Groups
  - Jason\_Test
  - Test Site
  - United States
    - Collections
    - Defined Tenants
    - Inventory
    - Service Provider Global Groups
  - VNA Domains
    - Default Domain
      - Sites
        - Framingham Office**
        - ITC Dev Center
        - Portsmouth Dev Center
        - Santa Clara Corporate Office

**Properties** | Rules | Items | Remove References

Group Name: Framingham Office

Description:

Group Type: Site

Options:  
☒ Include the children of managed items  
(For instance, when checked, adding a router to it add that router's interfaces to this group as well.)

Latitude: 42.295235 Longitude:

Elevation:

Location:

Time Zone: None Selected

Business Hours: None Selected

Save

Add Group Remove Group

**Devices**

Automatic Group: Sites

Name	Type	Address	Life Cycle State	Latitude	Longitude
vedge-sc	Router	1.1.1.10	Active	37.3858	-121.9754
vedgecloud.ca.com	Router	10.121.228.12	Active	17.4254	78.3371
vptela-vedge-f1-mgmt.ca.com	Router	138.42.104.131	Active	42.295235	-71.485819
vptela-vedge-p1-mgmt.ca.com	Router	138.42.93.33	Active	43.0715	-70.7938
vptela-vedge-p2-mgmt.ca.com	Router	138.42.93.34	Active	43.0715	-70.7938

Search

On Demand Manage Life Cycle

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**Tunnels**

Automatic Group: Sites

Source Device	Name	Destination Device	Protocol	Source Interface	Destination Interface
vptela-vedge-p1-mgmt.ca.com	1.1.1.5-gold-1.1.1.6-gold	vptela-vedge-p2-mgmt.ca.com	ipsec	ge0/0	ge0/0
vptela-vedge-p1-mgmt.ca.com	1.1.1.5-gold-1.1.1.6-silver	vptela-vedge-p2-mgmt.ca.com	ipsec	ge0/0	ge0/1
vptela-vedge-p1-mgmt.ca.com	1.1.1.5-gold-1.1.1.7-gold	vptela-vedge-f1-mgmt.ca.com	ipsec	ge0/0	ge0/0
vptela-vedge-p1-mgmt.ca.com	1.1.1.5-gold-1.1.1.7-mpls	vptela-vedge-f1-mgmt.ca.com	ipsec	ge0/0	ge0/2
vptela-vedge-p1-mgmt.ca.com	1.1.1.5-gold-1.1.1.7-silver	vptela-vedge-f1-mgmt.ca.com	ipsec	ge0/0	ge0/1
vptela-vedge-p1-mgmt.ca.com	1.1.1.5-gold-1.1.1.8-gold	vedgecloud.ca.com	ipsec	ge0/0	ge0/0
vptela-vedge-p1-mgmt.ca.com	1.1.1.5-gold-1.1.1.8-mpls	vedgecloud.ca.com	ipsec	ge0/0	ge0/2
vptela-vedge-p1-mgmt.ca.com	1.1.1.5-gold-1.1.1.8-silver	vedgecloud.ca.com	ipsec	ge0/0	ge0/1
vptela-vedge-p1-mgmt.ca.com	1.1.1.5-private-1.1.1.6-private1	vptela-vedge-p2-mgmt.ca.com	ipsec	ge0/2.300	ge0/2.300
vptela-vedge-p1-mgmt.ca.com	1.1.1.5-public-internet-1.1.1.6-public-internet	vptela-vedge-p2-mgmt.ca.com	ipsec	loopback0	loopback0

Search

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**Virtual Interfaces**

Automatic Group: Sites

Name	Description	Device	Life Cycle State
eth0	eth0	vptela-vedge-f1-mgmt.ca.com	Active
eth0	eth0	vptela-vedge-p1-mgmt.ca.com	Active
eth0	eth0	vedgecloud.ca.com	Active
eth0	eth0	vptela-vedge-p2-mgmt.ca.com	Active
ge0/0	ge0/0	vptela-vedge-p1-mgmt.ca.com	Active
ge0/0	ge0/0	vptela-vedge-f1-mgmt.ca.com	Active
ge0/0	ge0/0	vptela-vedge-p2-mgmt.ca.com	Active
ge0/0	ge0/0	vedgecloud.ca.com	Active
ge0/1	ge0/1	vptela-vedge-f1-mgmt.ca.com	Active
ge0/1	ge0/1	vptela-vedge-p2-mgmt.ca.com	Active

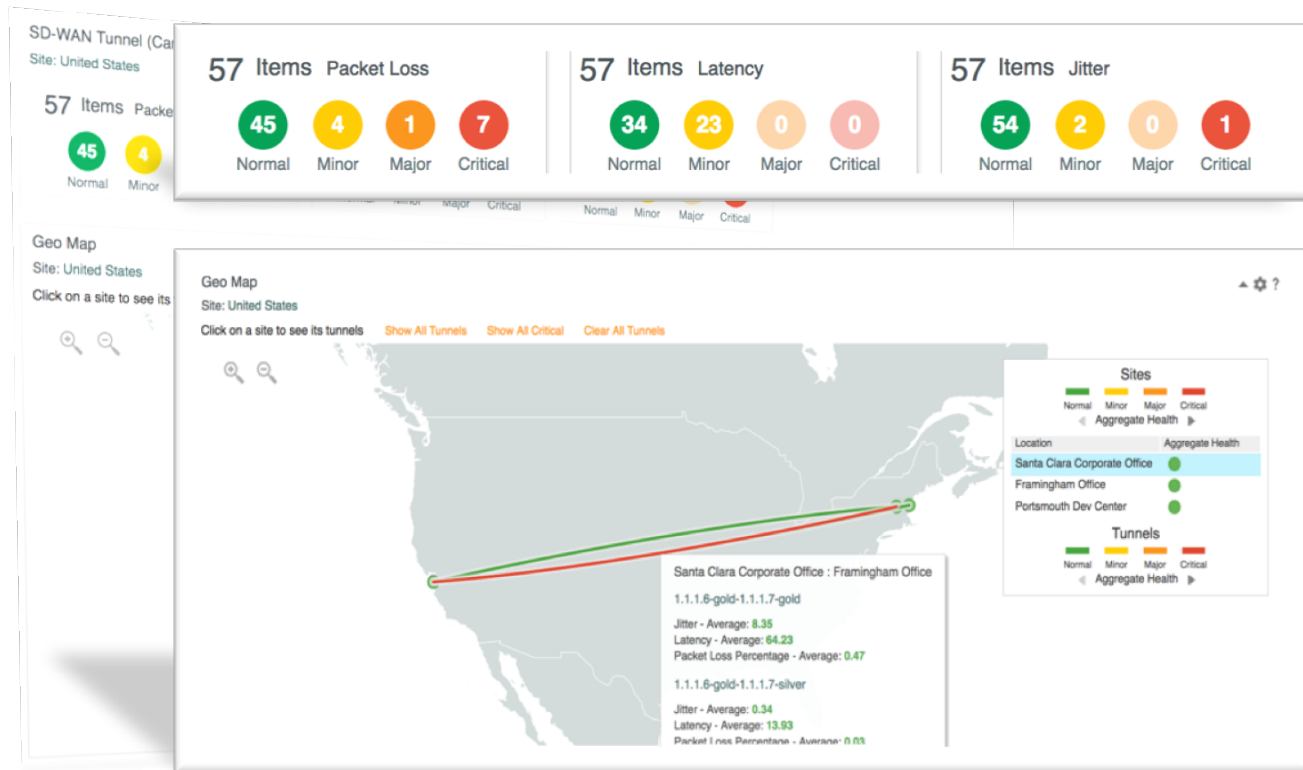
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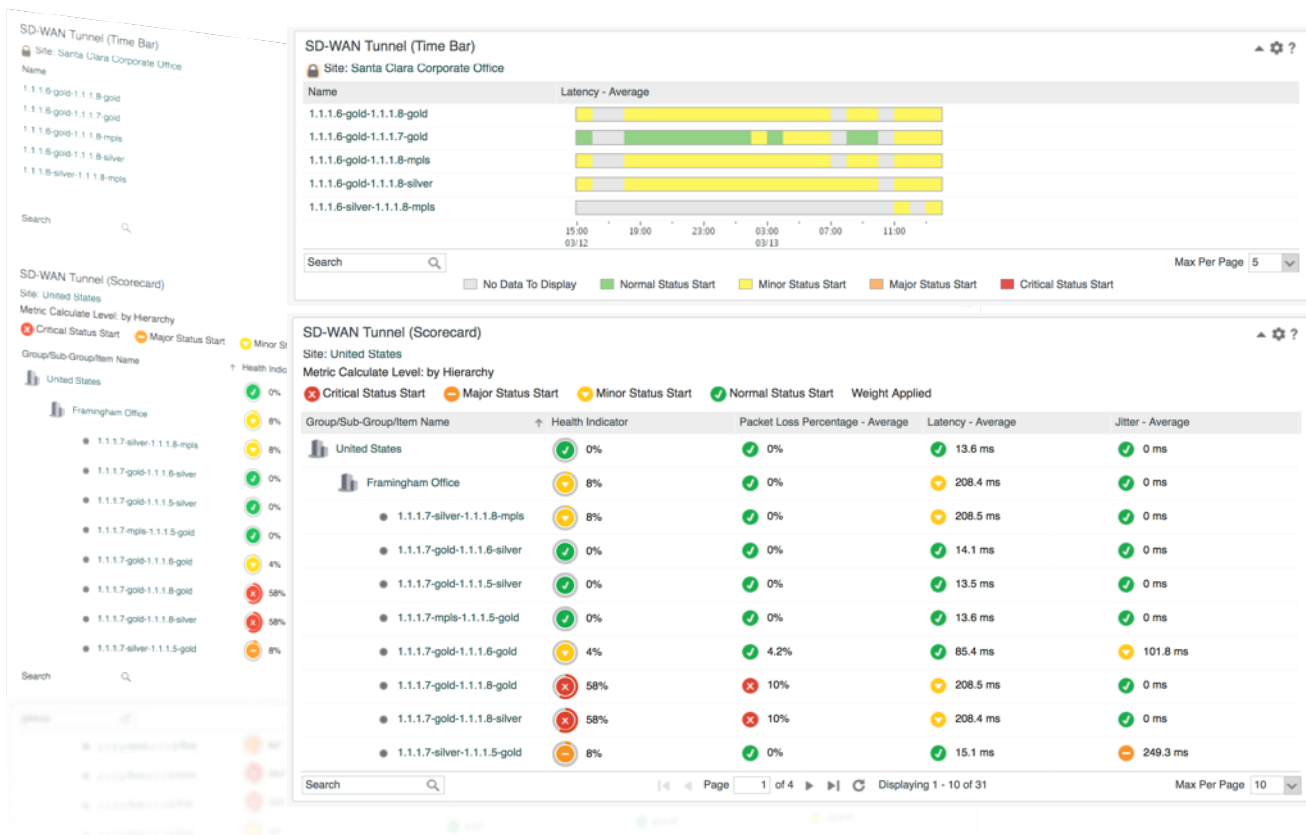
# Easily view the health of your WAN



The Geo-Map Health Views allow you to:

- Easily understand the health of your WAN
- View customer experience impacts at each site & each connection
- Rich hover-over ensures details are always at your fingertips
- Dynamic health indicators simplify the experience allowing users to focus on what matters

# Quickly isolate problems individually or across WAN



The Tunnel Time Bar lets you understand the current and previous health of key SD-WAN experience metrics

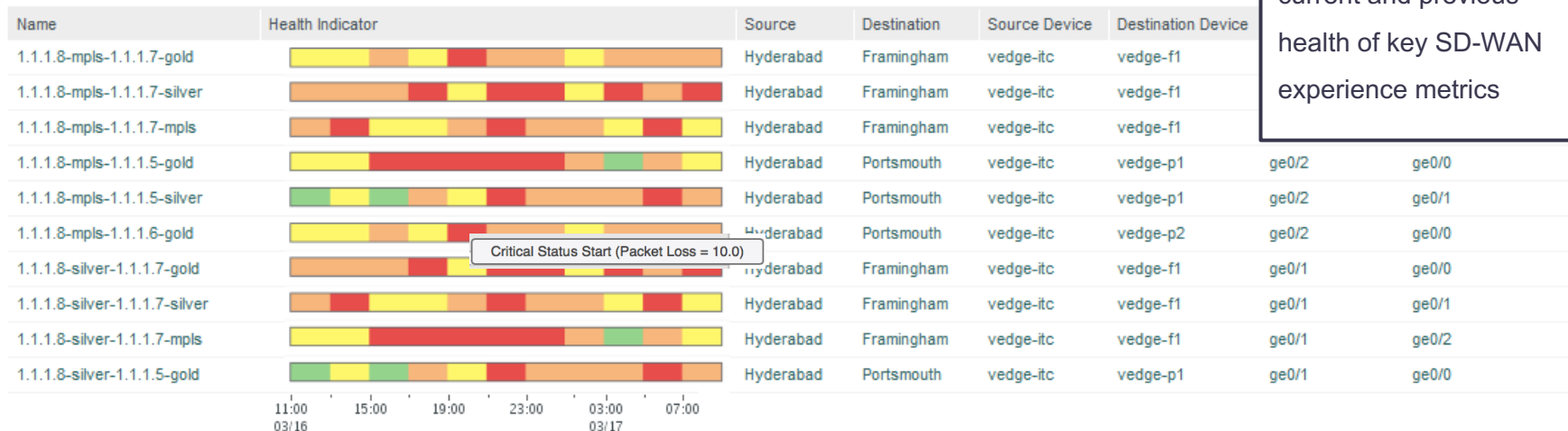
The Tunnel Scorecard provides a simple way to find connection performance problems across your entire WAN at the Site or IPsec layer

# Understand and troubleshoot site connectivity with the easy to use Time Bar chart

The Tunnel Time Bar lets you understand the current and previous health of key SD-WAN experience metrics

## SD-WAN Tunnel (Time Bar)

Site: Hyderabad



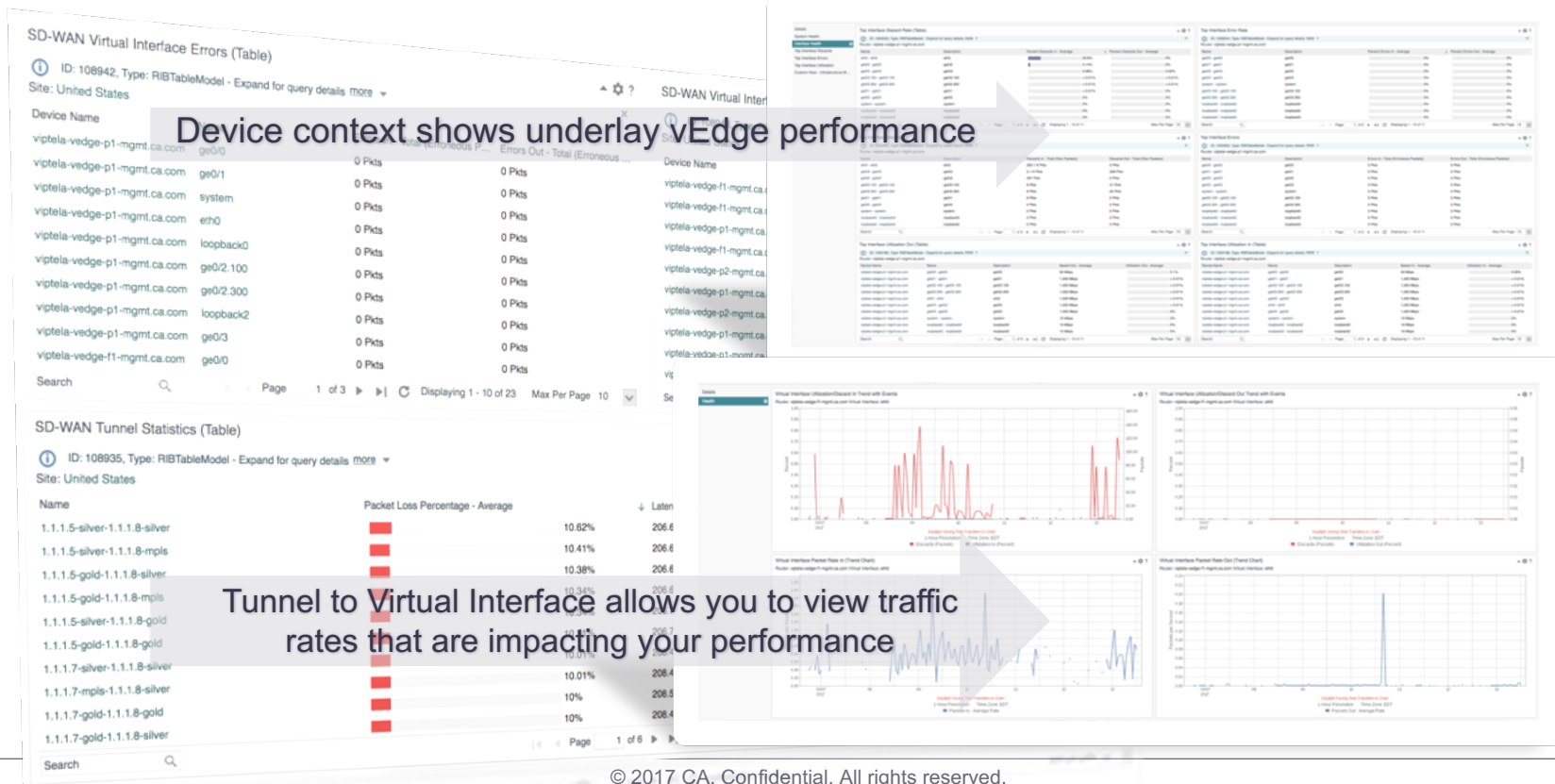
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No Data To Display Normal Status Start Minor Status Start Major Status Start Critical Status Start



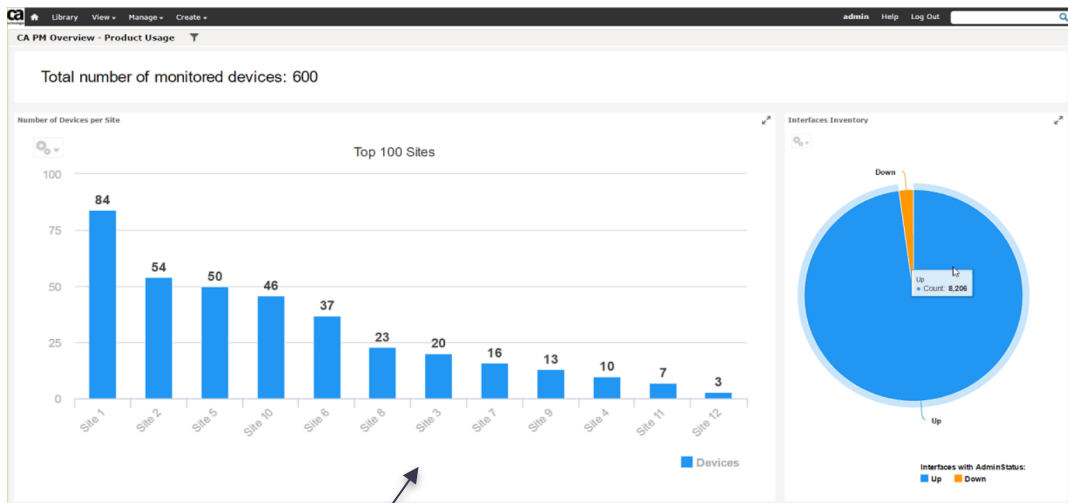
# View TopN best/worst performers & drill-down to underlay to quickly triage problems



# Feature Area #2: CAPM Support for Unified IM CABI Dashboards and Reports

- Key Benefits of Unified CABI for IM:
  - Ability to use a single CA Business Intelligence Jaspersoft server to reduce the total cost of ownership (hardware, maintenance, etc...)
  - Single user interface can pull information from multiple sources (CA PM, CA UIM, CA Spectrum and CA SOI) to target different personas
  - Ease of use to create Unified dashboards (drag/drop dashlets)
  - Schedule reports/dashboards via email-file share
- CA PM Content for Unified CABI:
  - Provide an executive dashboard to understand current product usage (monitored devices and interfaces)
  - Highly configurable and scalable TopN report targeted at network operators

# Example CABI Reports



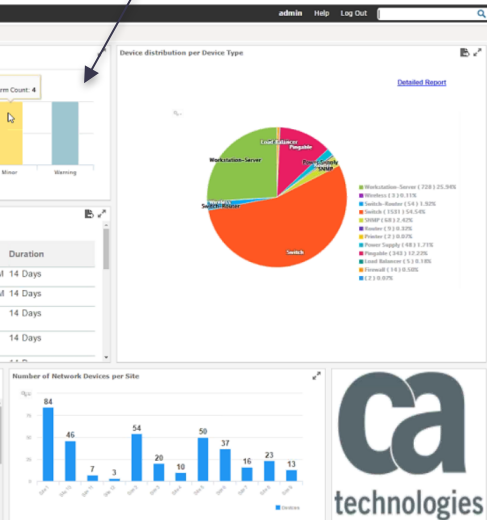
Single report pulling data from CA PM, CA UIM, CA Spectrum, and CA SOI

Executive report showing distribution of devices at different sites

Message	Device	Origin	Probe	Created	Duration
HUB License expired	schbr26-cent7-pepsi	schbr26-cent7-pepsi	hub	5/31/17 11:30 PM	14 Days
HUB License expired	schbr26-cent7-coke	schbr26-cent7-coke	hub	5/31/17 10:07 PM	14 Days
Robot schbr26-win10-base is inactive	schbr26-win10-base	schbr26-cent7-um851	hub	5/31/17 5:46 PM	14 Days
Average (5 samples) physical memory usage is now schbr26-cent7-ump851 59%, which is above the error threshold (20%)		cdm	schbr26-cent7-um851	5/31/17 2:00 PM	14 Days

Hosts view

Name	Primary Role	Operating System	IP Address	Total Alarms
schbr26-cent7-base	Host	Linux	10.239.20.14	2
schbr26-cent7-base	Host	Linux	10.239.20.176	2
schbr26-cent7-base	Host	Windows	10.239.20.88	1
schbr26-cent7-base	Host	Linux	10.239.20.124	9
schbr26-cent7-base	Host	Linux	10.239.20.187	2
schbr26-cent7-base	Host	Linux	10.242.32.179	1
schbr26-cent7-base	Firewall	Linux	10.39.250.105	0





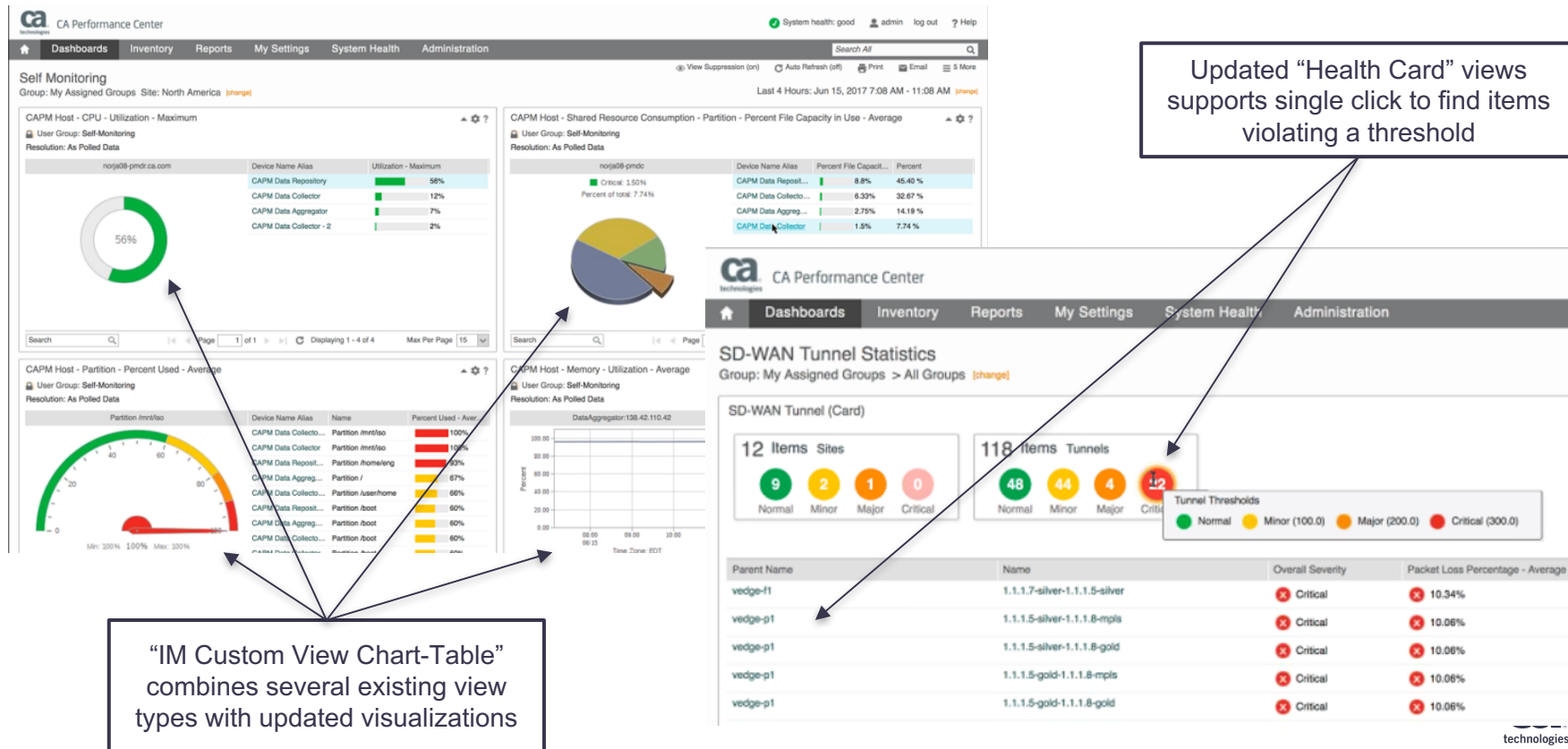
# Demo

# Feature Area #3: Operational UI Enhancements

*Continued efforts to enhance the operational workflow for network ops*

- New View Types
  - New IM Custom View Chart-Table view
  - Updated “Health Card” view
- OpenAPI now supports business hour filtering
  - Available on trend (time series) and aggregate queries
- Improved device reconciliation
  - Creates a single device item when a device is polled via both SNMP and CAMM

# New and updated view types



# OpenAPI business hour filtering

## Query Expression

for device select Name, PrimaryIPAddress, LocationDesc filter (groups/Name equal North America)  
group/aggregate groupby(cpumfs/DeviceID, aggregate(cpumfs(im\_Utilization with average as Value, im\_Utilization with projection as Value1, im\_Utilization with timetothreshold as Value2)))&prjoffset=259200&threshold=95  
time range Last 3 Days/As polled/Tue,Wed,Thu 8:00-12:00 13:00-17:00 filter metrics (cpumfs/Value1 greater 0)

## ▼ OData URL

http://norja08-pmda:8581/odata/api/devices?\$apply=groupby(cpumfs/DeviceID, aggregate(cpumfs(im\_Utilization with average as Value, im\_timetothreshold as Value2)))&prjoffset=259200&threshold=95&resolution=RATE&period=3d&bh=Tue-Thu 8:00-12:00 13:00-17:00&\$select=Name, America)) and ((cpumfs/Value1 gt 0))

## Run Table - Results

	Name	PrimaryIPAddress	LocationDesc	cpumfs		
				Value	Value1	Value2
	Cisco-3945_10.251.1.5	10.251.1.5	Seattle, WA	41.2543859649123	159.73391288791	59913.0
	Cisco-3945_10.251.18.1	10.251.18.1	San Diego, CA	46.6622807017544	96.3018682472241	249634.0

OpenAPI queries now support business hour filtering on trend and aggregate queries

## Define the time range and resolution applied to metrics

### - Time Interval

Duration: From Now Last 3 Days  
Start: 2017-06-12 11:03  
End: 2017-06-15 11:03  
Time Zone: Server Time Zone (Default)  
Time Granularity: As polled

### - Business Hours

Select one or more days of the week to score results to include only the specified days

☐ Sun ☐ Mon ☒ Tue ☒ Wed ☒ Thu ☐ Fri ☐ Sat

Enter one or more ranges to score results to include only the time range(s).

Start/End Time: 08:00 - 12:00  
Start/End Time: 13:00 - 17:00

OK

Cancel



# Demo



# Reconciliation of devices monitored via both SNMP and CAMM

CA Performance Center

Home Dashboards Inventory Reports My Settings System Health Administration

## Monitored Devices

Monitored Inventory

- Monitored Devices
- Discovery Profiles
- Monitoring Configuration
- System Status

Tree View Search

Device By Collection

- All Data Aggregators
- All Devices
- All ESX Hosts
- All Imported Devices
- All Manageable Devices (1)
  - Sim29255:des2-priv-20 ( 10.241.251.43 )
- All Routers
- All Servers
- All Switches
- All Virtual Machines
- All VMware vCenters

Both SNMP and CAMM Metric Families are supported on the same device model

Details Polled Metric Families Monitoring Profiles Threshold Profiles

Metric Family	Vendor Cert	Status
Availability	System Statistics	Supported
CAALU7750 ALU7750 STATS	CAALU7750 ALU7750 STATS	Supported
CPU	Timetra CPU	Supported
Device Polling Statistics	SNMP Device Polling Statistics	Supported
Memory	ALCATEL SGI Memory	Supported
Network Address	IP Address Table (RFC1213)	Supported
Reachability	ICMP	Supported

Search

Update Metric Family Update Metric Families

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Users expect devices monitored via SNMP and CAMM to be represented by a single device model

CA technologies


# Feature Area #4: Platform Support for RHEL 7

Administrators need to be able to install and run CA PM on RHEL 7, if that is their corporate standard OS

- Changes to supported OSs with CA PM 3.2
  - Added support for RHEL 7.3
  - Deprecated support for RHEL 5.x and RHEL 6.0 – 6.5

# Stay Tuned for 3.2 Product Release Videos

*To be announced in Communities*



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it helps to have a guide.


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### CA Performance Management 3.2

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# Questions?



# Thank You.