



DEVOPS – AGILE OPERATIONS

Explore What's New in CA Performance Management 3.0 and CA Virtual Network Assurance 2.0

Matt Stormann, Sr Principal Product Manager
Jeremy Rossbach, Sr Principal Product Marketing Manager
Bernie Clairmont, Sr Principal Consultant

Agenda

1

CISCO ACI SDDC MONITORING

2

MSP ADVANTAGE

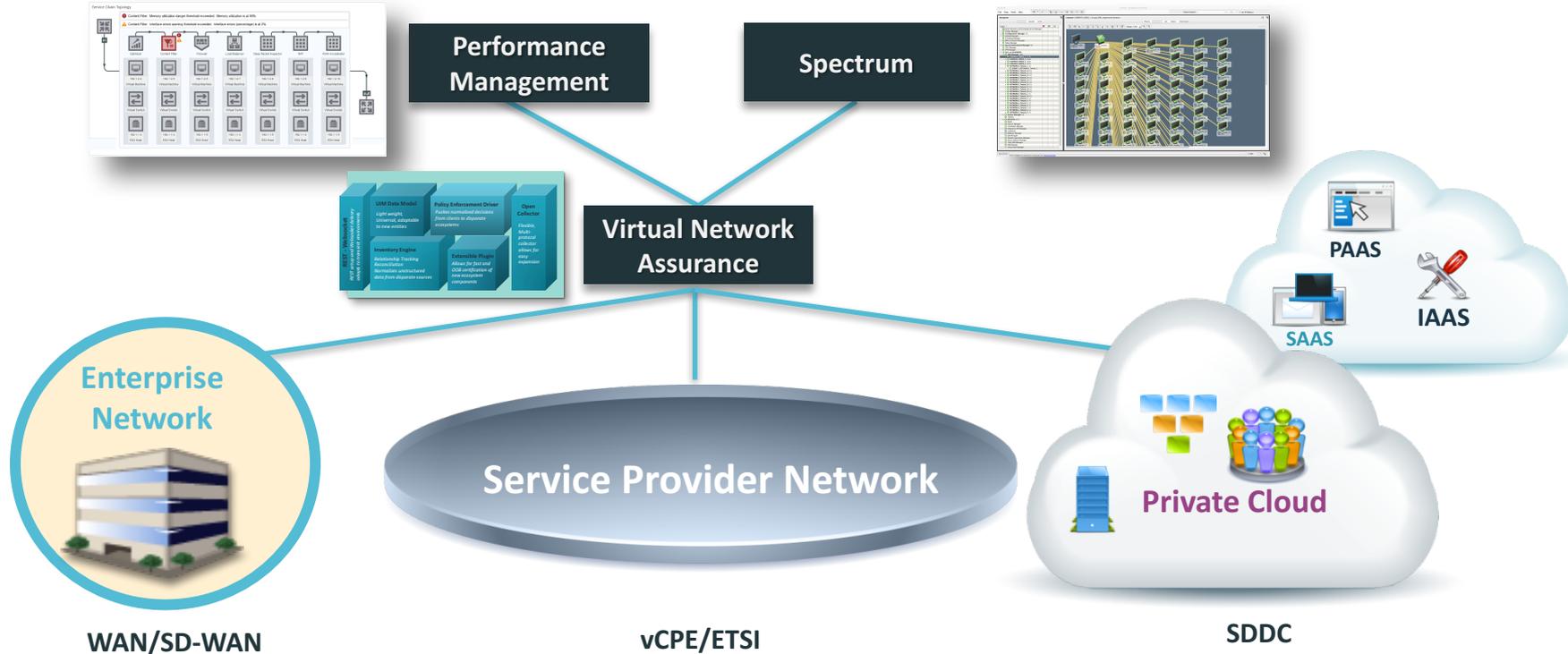
3

OPERATIONAL UI ENHANCEMENTS

5

CA PM LITE, MEGA-SCALE AND CPE MONITORING

Network Performance Monitoring - Path to the Cloud



Feature Area - Cisco ACI/SDDC Monitoring

SDDC = Software Defined Data Center

What is **Cisco ACI**

- Cisco ACI is an SDN/NFV architecture designed for the cloud data center
- Automates cloud network based on application modeling
- As of July 2016, there currently 7200 ACI ready customers out there
- ACI is a key component of our CA World Launch for Software Defined Data Centers

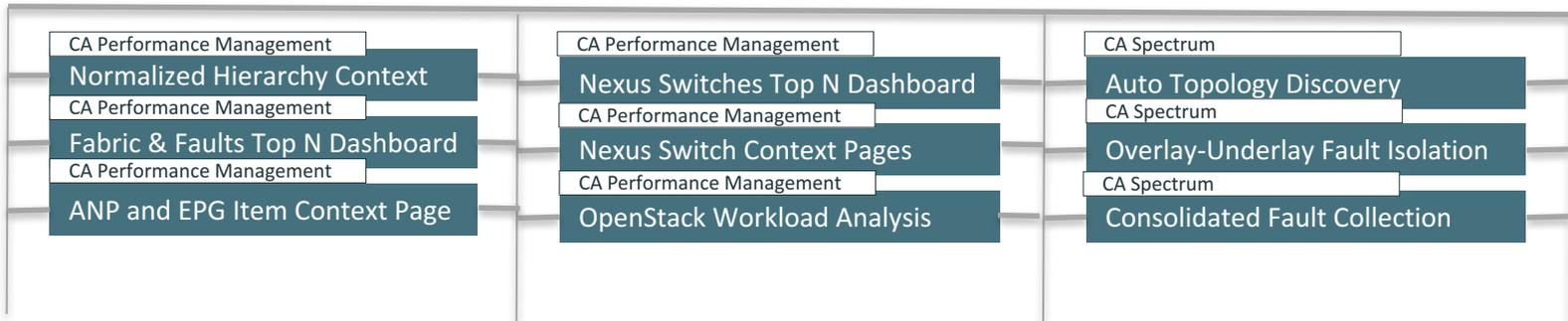
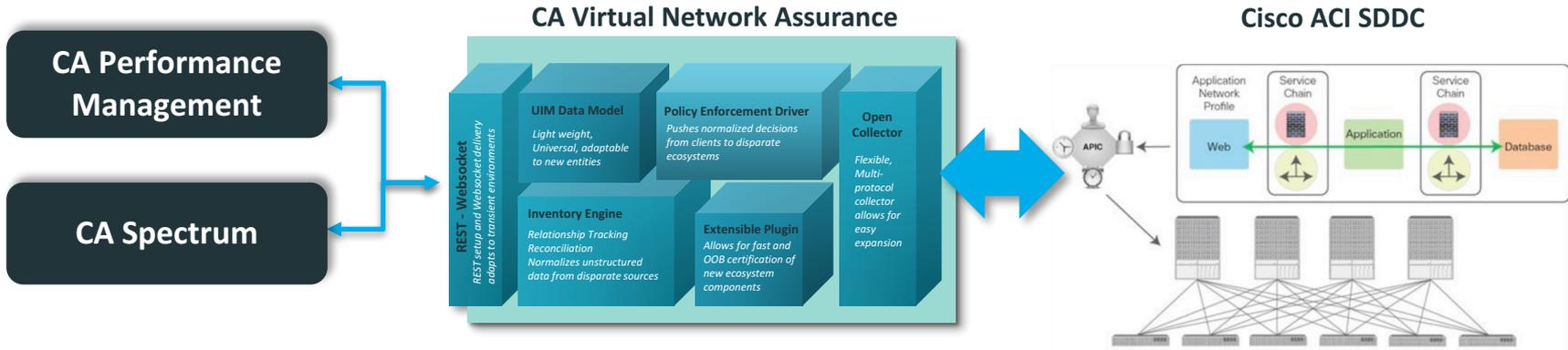
What is the **Problem**

- SDDC is based on ACI and is abstract and very complex to visualize and monitor
- Application model automation introduces many more items to monitor
- ACI components are tightly inter-dependent and sensitive to neighboring issues

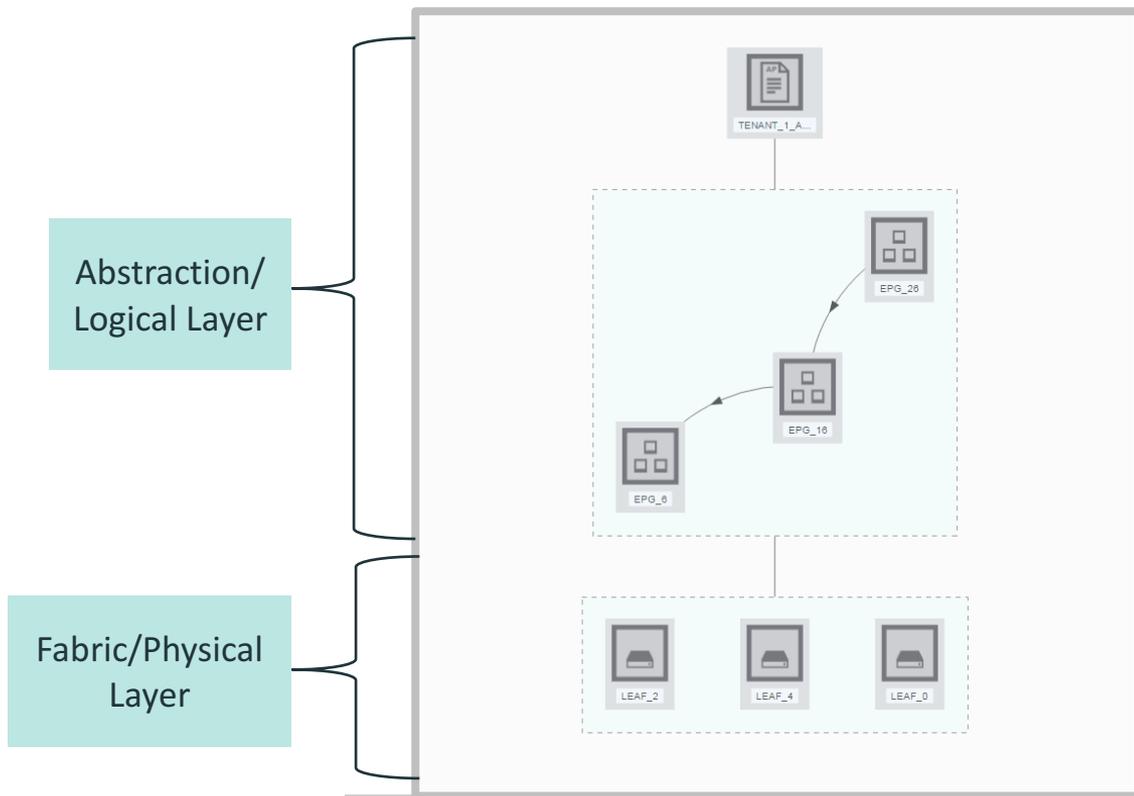
What is the **Benefit**

- Global health views of Cisco ACI ecosystem
- End-point relationship mapping for confidence in provisioning
- Application profiles for fast troubleshooting of ACI supported business services
- CA's ACI Monitoring solution is unique and endorsed by Cisco

High-Level Feature Summary



New Relationship Map View



Quickly determine how each item is related to neighboring items

Validate a configuration is provisioned correctly

Visually root cause or isolate an event or issue

Displays relationship between fabric layer, logical layer, virtualization layer, and compute layer

ACI Console

ACI Console is a launch pad to get a global view of all ACI objects and from here, drill into specific ones of interest

Filter /VNA Domains/User Domain/Tenants

Health Score

- Tenants
 - admin 99
 - Application Profiles 98
 - web profile 98
 - appServer 96
 - EP 7 98
 - EP 8 95
 - dbServer 99
 - EP 1 100
 - EP 2 99
 - EP 3 100
 - EP 4 98
 - webServer 100
 - EP 5 100
 - EP 6 100
 - VRFs
 - VRF 1
 - Virtual Machines 100
 - VM 1
 - VM 2
 - VM 3
 - VM 4
 - tenant 2
 - Application Profiles
 - VRFs
 - VRF 2
 - Virtual Machines



End point relationship map shows relationship to logical configuration as well as to virtual & physical components. User can quickly assess the right relationship has been provisioned



Performance Center

Nexus 9000 Switches

Group: All Switches

Last 24 Hours: May 25, 2016 10:50 AM - May 25, 2016 10:50 AM

IP	Device	Model	Description	Link Color	Link State
174.160.1.221.28.10	Switch	Leaf9000-01	FCI-Leaf9000-01-28.10	Active	Up
174.160.1.221.28.11	Switch	Leaf9000-01	Leaf9000-01-28.11	Active	Up
174.160.1.221.28.12	Switch	Leaf9000-01	Leaf9000-01-28.12	Active	Up
174.160.1.221.28.13	Switch	Leaf9000-01	Leaf9000-01-28.13	Active	Up
174.160.1.221.28.14	Switch	Leaf9000-01	Leaf9000-01-28.14	Active	Up
174.160.1.221.28.15	Switch	Leaf9000-01	Leaf9000-01-28.15	Active	Up
174.160.1.221.28.16	Switch	Leaf9000-01	Leaf9000-01-28.16	Active	Up
174.160.1.221.28.17	Switch	Leaf9000-01	Leaf9000-01-28.17	Active	Up
174.160.1.221.28.18	Switch	Leaf9000-01	Leaf9000-01-28.18	Active	Up
174.160.1.221.28.19	Switch	Leaf9000-01	Leaf9000-01-28.19	Active	Up
174.160.1.221.28.20	Switch	Leaf9000-01	Leaf9000-01-28.20	Active	Up
174.160.1.221.28.21	Switch	Leaf9000-01	Leaf9000-01-28.21	Active	Up
174.160.1.221.28.22	Switch	Leaf9000-01	Leaf9000-01-28.22	Active	Up
174.160.1.221.28.23	Switch	Leaf9000-01	Leaf9000-01-28.23	Active	Up
174.160.1.221.28.24	Switch	Leaf9000-01	Leaf9000-01-28.24	Active	Up
174.160.1.221.28.25	Switch	Leaf9000-01	Leaf9000-01-28.25	Active	Up
174.160.1.221.28.26	Switch	Leaf9000-01	Leaf9000-01-28.26	Active	Up
174.160.1.221.28.27	Switch	Leaf9000-01	Leaf9000-01-28.27	Active	Up
174.160.1.221.28.28	Switch	Leaf9000-01	Leaf9000-01-28.28	Active	Up
174.160.1.221.28.29	Switch	Leaf9000-01	Leaf9000-01-28.29	Active	Up
174.160.1.221.28.30	Switch	Leaf9000-01	Leaf9000-01-28.30	Active	Up

System Health Administration

Libraries With Highest CPU Utilization - Trend/Tables

Resilience Health Roll-up

Switches With Highest CPU Utilization - Trend/Tables

Resilience Health Roll-up

Switches With Highest I/OAM Utilization - Trend/Tables

Resilience Health Roll-up

Switches With Highest Interface Utilization - Trend/Tables

Resilience Health Roll-up

Switches With Most Critical Faults - Trend/Tables

Resilience Health Roll-up

Group: All Switches

Last 24 Hours: May 25, 2016 10:50 AM - May 25, 2016 10:50 AM

ACI Health

Group: All Groups > VNA Domains > DefaultConfiguration > Tenants > admin > Application Profiles

Last Hour: Aug 5, 2016 3:32 PM - 4:32 PM

Current Counts

Critical Faults: 17

Lowest Health Scores (Trend Table)

Automatic Group: Application Profiles

Resolution: As Polled Data

EPG_ID	Name	Type	Health Score
EPG_3		0	9
EPG_17		9	14
EPG_16		10	10
EPG_2		31	31
WVRM_AC1_AP_3		31	31
EPG_15		31	31

Faults (Trend Chart)

Automatic Group: Application Profiles

Application Profile Pages

Group: All Groups > VNA Domains > DefaultConfiguration > Tenants > admin > Application Profiles > admin_AC1_AP_3

Last Hour: Aug 5, 2016 3:20 PM - 4:20 PM

admin_AC1_AP_3

ENTITY

Name: admin_AC1_AP_3

Name Alias:

Description:

Application Profile context page shows per-item data as well as application profile configuration

Faults

Minor Faults: 3

Warning Faults: 2

18

Faults (Trend Chart)

Application Profile: admin_AC1_AP_3

Time Zone: UTC

Legend: Critical (Red), Major (Orange), Minor (Yellow), Warning (Green)

Category	Critical Faults	Major Faults	Minor Faults	Warning Faults
0	0	0	2	10
1	0	1	4	5
2	0	2	2	0

DEMO

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Feature Area – MSP Advantage

What is **MSP Advantage**

- MSP Advantage is a collection of capabilities that allow MSPs to cost effectively offer differentiated network monitoring services to many end customers in a multi-tenant environment

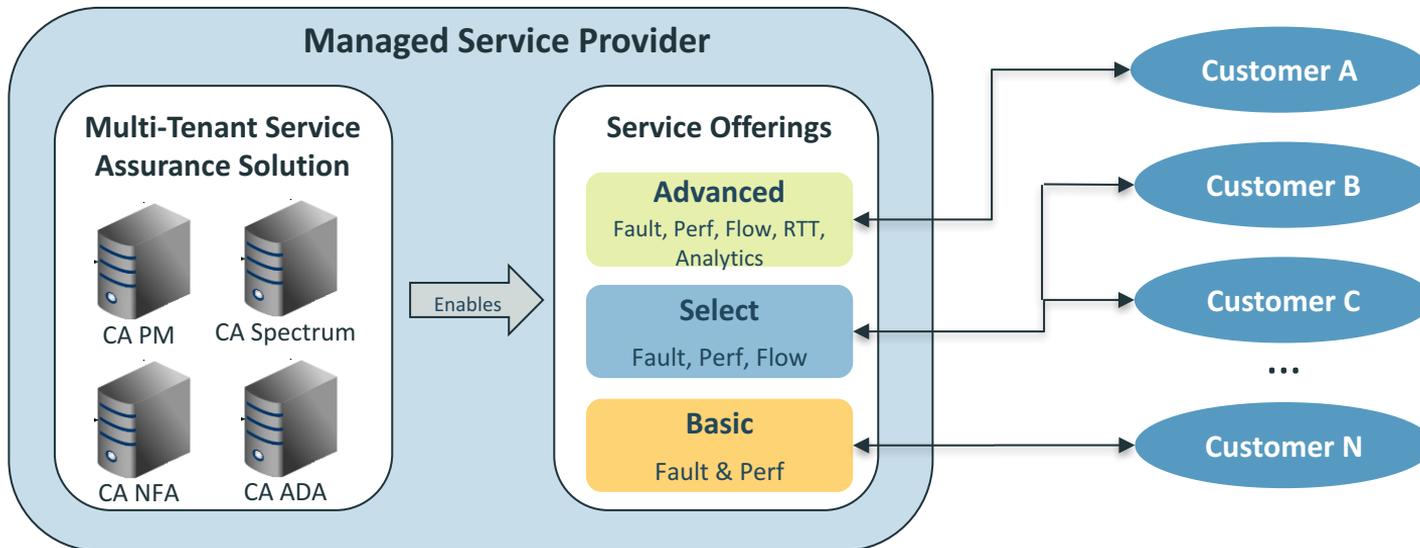
What is the **Problem**

- Minimize the costs of hosting many tenants in a secure manner
- Seek to maximize revenue opportunities by offering tiered classes of monitoring capabilities

What is the **Benefit**

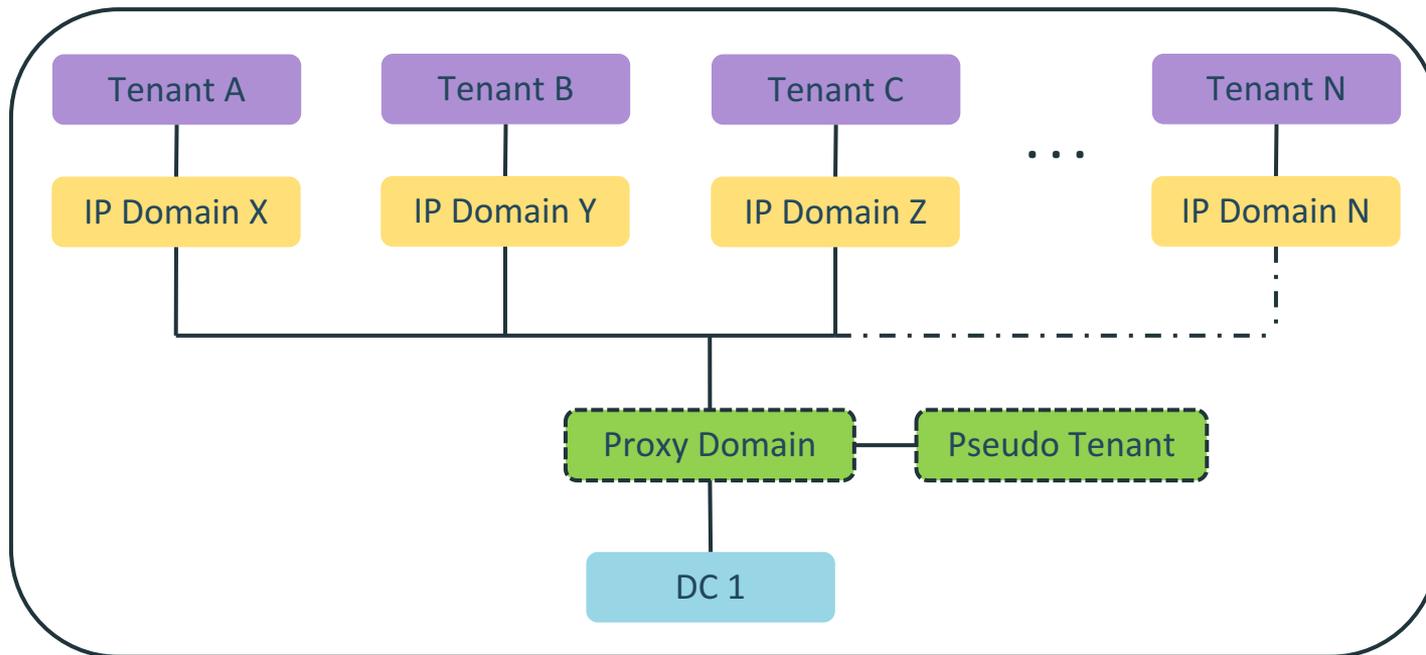
- Reduced footprint for improved TCO
- Reduced administrative overhead
- Enhanced per-tenant security
- Custom data modeling for the right data to the right people, fast!

High-Level Feature Summary



Multi Tenant Data Collector

Multiple small tenants sharing a DC



Multiple NFA Data Sources

The screenshot shows the CA Performance Center Administration interface. The top navigation bar includes 'Dashboards', 'Inventory', 'Reports', 'My Settings', 'System Health', and 'Administration'. The main heading is 'Manage Data Sources'. Below this, there is a section for 'Global Synchronization Status' with the following details:

- Last Run Status: Success
- Last Start Time: Sep 16, 2016 8:54:10 AM EDT
- Last End Time: Sep 16, 2016 8:54:15 AM EDT
- Last Success Time: Sep 16, 2016 8:54:15 AM EDT
- Last Failure Time:

Below the status section is a table titled 'Data Sources' with the following columns: Source Name, Status, Last Polled On, and Source Type. A callout box with the text 'Multiple CA Network Flow Analysis data sources allows flow monitoring to scale as needed' points to the three 'Network Flow Analysis' entries in the table.

Source Name	Status	Last Polled On	Source Type
Data Aggregator@samurai-reg-da2	Available	September 16, 2016 8:54:20 AM EDT	Data Aggregator
EventManager@samurai-reg-pc2.ca.com	Available	September 16, 2016 8:54:19 AM EDT	Event Manager
Network Flow Analysis@10.242.22.177	Available	September 16, 2016 8:54:50 AM EDT	Network Flow Analysis
Network Flow Analysis@10.242.23.209	Synchronizing	September 16, 2016 8:53:56 AM EDT	Network Flow Analysis
Network Flow Analysis@10.242.23.227	Available	September 16, 2016 8:54:45 AM EDT	Network Flow Analysis

Data Source Role Rights for Tenants

Performance Center

Dashboards Inventory Reports My Settings System Health Administration

Edit Role

Edit Role

Name: * IT Director

Description: Directs IT strategy, manages IT staff, and reviews high-level performance reports.

Role Status: Enabled

	View Inventory and Search	Lets users access the Inventory tab and S...
	View Protocols	Lets users see protocol information where ...
	View ToS	Lets users see the Type of Service informa...
Network Flow Analysis@10.242.23.161	Run Reports	User can execute defined reports
	View Hosts	User can view host data
	View Protocols	User can view protocol data
	View ToS	User can view ToS data
Network Flow Analysis@10.242.23.185	Run Reports	User can execute defined reports
	View Protocols	User can view protocol data

Edit

Save Cancel

Data source (e.g. CA Network Flow Analysis) role rights can be configured for tenants

Leverage custom attributes in group definitions

Edit Rule

Rule Name:

Add **Devices** *Any device connected to the network with an address*

+ Add Condition

Device Item is a member of **All Groups** [delete]

Device Customer Service Tier is equal to [delete]

- Device Contact
- Device Customer Service Tier**
- Device Description
- Device Item
- Device Last State Change
- Device Life Cycle State
- Device Location
- Device Model
- Device Name
- Device Name Alias
- Device SubType
- Device sysObjectID

[show advanced]

OK Cancel

Leverage custom attributes in group definitions

Display custom attributes in inventory & table views

Display custom attributes in
inventory or table views

ca Performance Center

System health: good admin log out ? Help

Dashboards

Inventory

Reports

My Settings

System Health

Administration

Search All



Devices

Group: My Assigned Groups > All Groups > Managed Customer Tiers [\[change\]](#)

Devices

User Group: Managed Customer Tiers

<input type="checkbox"/>	Name	Model	Type	Address	Life Cycle State	Customer Service Tier
<input type="checkbox"/>	Cisco-3945_10.251.15.1	Cisco 3945 SPE250	Router	10.251.15.1	Active	Bronze
<input type="checkbox"/>	Cisco-3945_10.251.16.1	Cisco 3945 SPE250	Router	10.251.16.1	Active	Bronze
<input type="checkbox"/>	Cisco-3945_10.251.17.1	Cisco 3945 SPE250	Router	10.251.17.1	Active	Silver
<input type="checkbox"/>	Cisco-3945_10.251.18.1	Cisco 3945 SPE250	Router	10.251.18.1	Active	Silver
<input type="checkbox"/>	Cisco-3945_10.251.19.1	Cisco 3945 SPE250	Router	10.251.19.1	Active	Gold
<input type="checkbox"/>	Cisco-3945_10.251.20.1	Cisco 3945 SPE250	Router	10.251.20.1	Active	Gold

Search

Page 1 of 1

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Max Per Page 50

On Demand

Manage Life Cycle

Metric Filtering

The screenshot shows the Performance Center Administration interface. The main page is titled "Monitoring Profiles" and has a sidebar with navigation options like "Monitoring Profiles", "Threshold Profiles", "Metric Families", "Vendor Certifications", "Collections", and "System Status". The "Add / Edit Collected Metrics" dialog box is open, showing a list of available metrics and a list of selected metrics. The "Edit Collected Metrics" button is circled in red.

Performance Center Administration

System health: good | admin | log out | ? Help

Dashboards | Inventory | Reports | My Settings | System Health | Administration | Search All

Monitoring Profiles

Monitored Inventory | Monitoring Configuration | Monitoring Profiles | Threshold Profiles | Metric Families | Vendor Certifications | Collections | System Status

Monitoring Profile

- Availability
- DA Health (Fast)
- DA Health (Normal)
- DA Health (Slow)
- Device Polling Statistics
- F5 Networks Systems
- Inter-Networking Functions
- Microsoft Cluster Services
- Mobile Wireless
- MPLS
- Network Interface
- Network Interface - Configuration
- Network Interface - Performance**
- Physical Server
- QoS
- Reachability
- Response Path
- Router
- Switch

Search | New | Copy

Add / Edit Collected Metrics

Select metrics to be collected for 'Interface':

Available (not collected)	Selected (collected)
Availability	Bits Per Second In
Bits	Bits Per Second Out
Bits In	Discards In
Bits Out	Discards Out
Bits Per Second	Errors In
Bytes	Errors Out
Bytes In	Speed In
Bytes Out	Speed Out
Carrier Signal Transitions	Utilization In
Collisions Out	Utilization Out
Discards	
Errors	
Frame Size	
Frame Size In	
Frame Size Out	
Frames	
Frames In	
Frames Out	
Historical Interface Speed (bps)	
Inbound Octet Rate for Interface	
Inbound Packet Rate for Interface	
Interface Current Administrative Status	
Interface Current Operational Status	

Search | Save | Cancel

Collections

Component Filter	Collected Metrics
Administrative Status does not equal down(2)	10 of 76 metrics collected Bits Per Second In; Bits Per Second Out; Discards In; Discards Out; Errors In; ...

Page 1 of 1 | Displaying 1 - 1 of 1 | Max Per Page 50

Edit Collected Metrics

DEMO

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Feature Area – Enhanced User Experience

What is **Operational UI**

- Network Performance Management tools are used by a wide range of roles with a wide range of knowledge and experience
- Easy has become the table-stakes in the App Economy

What is the **Problem**

- Flexibility and simplicity is critical for MSP and enterprise end-users
- Advanced controls and sophisticated use cases are required for power-users/admins
- Complex technologies elevates administrative burden
- Need out of the box and abundant customization opportunities
- Need to isolate problems fast

What is the **Benefit**

- Operational simplicity powered by easy to understand visualizations of complex technologies
- Easier for users out of the box with abundant customization opportunities
- Less clicks to find problems

Dynamic Context Pages that Suppress the Display of Unrelated Data

- To ensure efficiency and clarity of information, context pages should only contain information relevant to the specific item being views
 - Applicable to all device and component pages
 - Suppression of tabs and individual views based on support of the specific data source
 - Suppression of tabs and individual views based on support of the specific metric family within that tab or view

Smarter and Easier Workflows

Less Clicks to the Data that Matters

Switches
Permission Group: My Assigned Groups

Name Alias	Address	Description
bname2test	138.42.94.66	Cisco Systems WS-C2900
cis5000-94.82.ca.com	138.42.94.82	Cisco Systems WS-C5000 Cisco Catalyst Operating System Software, Version 6.4(17) Copyright (c) 1995-2005 by Cisco Systems
F5 10.231.20	138.42.94.82	Enterasys Networks, Inc. 1HS82-25 Rev 03.02.08.1 05/06/2004-16.04 o/c
F5 10.231.20		G-IP bipmkofw16e.yourbusiness.com BIG-IP 4.5.13 BIG-IP Kernel 4.398
FES2402-95		Foundry Networks, Inc. FES2402, IronWare Version 04.0.00Tc1 Compiled on Dec 18 2007 at 10:46:14 labeled as FES04000
FES2402-95		Foundry Networks, Inc. FES2402, IronWare Version 03.2.00aTc1 Compiled on Oct 15 2004 at 20:13:44 labeled as FES03200a
HP4000M		HP J4121A ProCurve Switch 4000M, revision C.08.22, ROM C.06.01 (jsw/code/build/vpro/c08)
LTM_6400 10		F5 LTM-6400 10.231.200.11
LTM_6400 10		F5 LTM-6400 10.231.200.15
name	138.42.190	Cisco Systems WS-C5000 Cisco Catalyst Operating System Software, Version 5.5(21) Copyright (c) 1995-2005 by Cisco Systems

Search [] Page [1] of 2 | Displaying 1 - 10 of 13

On Demand Manage Life Cycle

environment
View Suppression (on) Auto Refresh (off) Print Email
Last Hour: Sep 19, 2016 1:52 PM - 2:52 PM

Active

Reports My Settings System Health Administration

Virtual Info

Description	Bits In - Total	Bits Out - Total	Bytes In - Total	Bytes Out - Total
F5 Virtual Server Session	10.7 Tb	4.8 Tb	6.1 Tb	1.2 Tb

Bytes Trend Chart

Max Per Page 10

... only show F5 context info for F5 devices

Switches
Permission Group: My Assigned Groups

Name Alias	Address	Description
bname2test	138.42.94.66	Cisco Systems WS-C2900
cis5000-94.82.ca.com	138.42.94.82	Cisco Systems WS-C5000 Cisco Catalyst Operating System Software, Version 6.4(17) Copyright (c) 1995-2005 by Cisco Systems
EnterasysE1	138.42.95	Enterasys Networks, Inc. 1HS82-25 Rev 03.02.08.1 05/06/2004-16.04 o/c
F5 10.231.20	138.42.95	BIG-IP bipmkofw16e.yourbusiness.com BIG-IP 4.5.13 BIG-IP Kernel 4.398
F5 10.231.20		Foundry Networks, Inc. FES2402, IronWare Version 04.0.00Tc1 Compiled on Dec 18 2007 at 10:46:14 labeled as FES04000
FES2402-95.19		Foundry Networks, Inc. FES2402, IronWare Version 03.2.00aTc1 Compiled on Oct 15 2004 at 20:13:44 labeled as FES03200a
HP4000M		HP J4121A ProCurve Switch 4000M, revision C.08.22, ROM C.06.01 (jsw/code/build/vpro/c08)
LTM_6400 10.231		F5 LTM-6400 10.231.200.11
LTM_6400 10.231		F5 LTM-6400 10.231.200.15
name		Cisco Systems WS-C5000 Cisco Catalyst Operating System Software, Version 5.5(21) Copyright (c) 1995-2005 by Cisco Systems

Search [] Page [1] of 2 | Displaying 1 - 10 of 13

On Demand Manage Life Cycle

F5 Virtual Info

Description	Bytes In - Total	Bytes Out - Total	Frames In - Total	Frames Out - Total	Current Connections - Average	Total Connections - Total	Maximum Connections - Average
F5 Virtual Server (4-5) 155.199...	1,001 B	1.4 K Pkts	0	1,481 Thousand	0	1,481 Thousand	0
F5 Virtual Server (4-5) 155.199...	1 KB	1.2 K Pkts	0	1,204 Thousand	0	1,204 Thousand	0
F5 Virtual Server (4-5) 155.199...	1.3 KB	1.2 K Pkts	0	1,356 Thousand	0	1,356 Thousand	0
F5 Virtual Server (4-5) 155.199...	1.4 KB	1.3 K Pkts	0	1,057 Thousand	0	1,057 Thousand	0
F5 Virtual Server (4-5) 192.223...	1 KB	1.2 K Pkts	0	1,208 Thousand	0	1,208 Thousand	0
F5 Virtual Server (4-5) 192.223...	970 B	1.1 K Pkts	0	1,056 Thousand	0	1,056 Thousand	0
F5 Virtual Server (4-5) 192.223...	1 KB	1.3 K Pkts	0	1,458 Thousand	0	1,458 Thousand	0
F5 Virtual Server (4-5) 192.223...	1.010 B	1.4 K Pkts	0	1,211 Thousand	0	1,211 Thousand	0
F5 Virtual Server (4-5) 192.223...	1.2 KB	1.1 K Pkts	0	0	0	0	0
F5 Virtual Server (4-5) 192.223...	1 KB	1.2 K Pkts	0	0	0	0	0
F5 Virtual Server (4-5) 192.223...	1.1 KB	1.3 K Pkts	0	0	0	0	0

Dynamic context pages provide a custom experience focusing on the technology you want to see

Multi-Metric Scorecards can Reflect Aggregate Health Based on Multiple Metrics

- CA Performance Management scorecards provide a great overview of the health of individual or grouped items based on user defined thresholds
 - Users can select up to 5 metrics for including in our new multi-metric scorecard
 - Users can define individual thresholds on a per metric basis
 - Limited to a single metric-family in CA Performance Management 3.0

Multi-Metric Scorecards

Performance Center

Firewall Health
Group: My Assigned Groups > All Groups > Firewalls [change]

IM Custom View Scorecard Table - Firewall

User Group: Firewalls
Timeframe: Last Hour Metric Calculate Level: by Device

Critical Status Start Major Status Start Minor Status Start Normal Status Start

Group/Device Name	Accepted packets rate. - Average	Dropped packets rate. - Average	Active Connections Peak - Average	Total Connections - Average
Firewalls	2.4 G Pkts	404.1 M Pkts	93.7596 Thousand	64.7811 Thousand
• Sim11971-PF-US203	3.8 G Pkts	5.5 M Pkts	178.862 Thousand	
• Sim7420.mynznf000300088	959.8 M Pkts	842.5 M Pkts	147	1.37

Scorecards allow multiple-metrics with independent threshold values!

Accepted packets rate. - Average: * 2500000000 (minor) 3000000000 (major) 4000000000 (critical)

Active Connections Peak - Average: * 100000 (minor) 150000 (major) 200000 (critical)

Dropped packets rate. - Average: * 10000000 (minor) 50000000 (major) 100000000 (critical)

Total Connections - Average: * 120000 (minor) 250000 (major) 300000 (critical)

IM Custom View Scorecard Table - Interface

User Group: Firewalls
Timeframe: Last Hour Metric Calculate Level: by Component

Critical Status Start Major Status Start Minor Status Start Normal Status Start

Group/Item Name	Device Name	Bits - Average Rate	Bits In - Total	Bits Out - Total	Errors - Total	Discards - Total
Firewalls	Firewalls	5.7 bps	176.2 Kb	178 Kb	42.1 K Pkts	41.9 K Pkts
• eth4 - eth4	Sim7420.mynznf000300088	9.2 bps	16.4 Kb	16.7 Kb	3.5 K Pkts	4.1 K Pkts
• eth1 - eth1	Sim7420.mynznf000300088	8.8 bps	17.1 Kb	14.7 Kb	3.5 K Pkts	3.8 K Pkts
• eth0 - eth0	Sim7420.mynznf000300088	8.7 bps	15.4 Kb	15.8 Kb	3.4 K Pkts	3.8 K Pkts
• eth3 - eth3	Sim7420.mynznf000300088	8.7 bps	16.3 Kb	14.8 Kb	3.8 K Pkts	3.3 K Pkts

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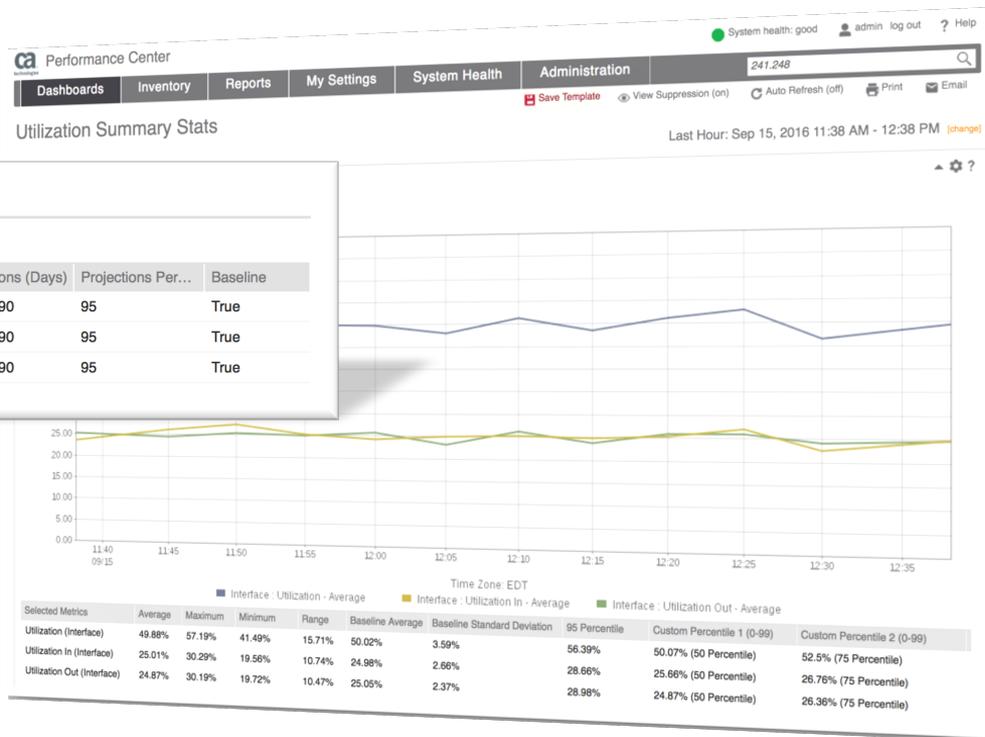
Enhanced Summary Statistics Table Provides Greater Reporting Flexibility

- CA Performance Management summary statistics views provide a powerful analytical view into key performance metrics; the analytics provided within those views are driven off of the analytic options for each metric
 - Summary statistics views will now include the configured percentile metrics for all of the selected metrics
 - Users can choose to hide/show percentiles by selecting the columns to view in the rendered report

Summary Statistic Views

Summary Statistics will now automatically display configured Percentiles per metric!

Metrics		Vendor Certification Priorities		Monitoring Profiles				
Metrics								
Name	↑	Polled	Min	Max	Percentiles	Projections (Days)	Projections Per...	Baseline
Utilization		True	True	True	95, 50, 75	30, 60, 90	95	True
Utilization In		True	True	True	95, 50, 75	30, 60, 90	95	True
Utilization Out		True	True	True	95, 50, 75	30, 60, 90	95	True



Visualize Maintenance Windows on Trend Views

- Users need the ability to add additional annotations to site views related to outage or maintenance periods
 - Users can now configure new maintenance indicators for site groups which provide shading with annotation for configured periods of time
 - Can be added retroactively or proactively
 - Can be used in conjunction with business hours

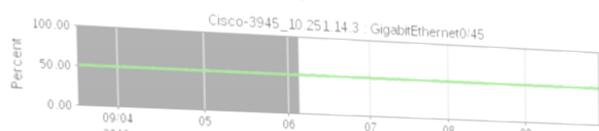
Site Maintenance Indicators

Group: My Assigned Groups Site: North America [\[change\]](#)

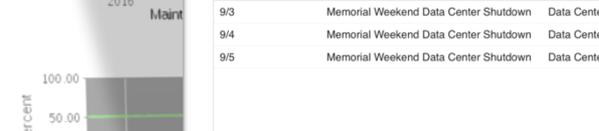
Phoenix Data Center - WAN Utilization - Interface - Utilization - Average... Page 1 of 16

Site: Phoenix Business Hours Filter: Banking Hours

Utilization - Average [Time Zone: EDT]



Maintenance Indicator - Memorial Weekend Data Center Shutdown
155 Samples (1-Hour Resolution)



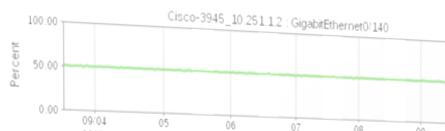
Maintenance Date	Name	Description
9/3	Memorial Weekend Data Center Shutdown	Data Center shutdown scheduled over Memorial Day week...
9/4	Memorial Weekend Data Center Shutdown	Data Center shutdown scheduled over Memorial Day week...
9/5	Memorial Weekend Data Center Shutdown	Data Center shutdown scheduled over Memorial Day week...

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Austin Data Center - WAN Utilization - Interface - Utilization - Average... Page 1 of 16

Site: Austin Business Hours Filter: Corporate Hours

Utilization - Average [Time Zone: EDT]



Maintenance Indicator - Memorial Weekend Data Center Shutdown
155 Samples (1-Hour Resolution)



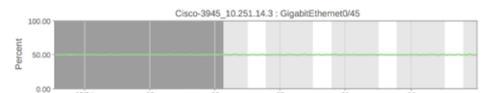
The all new maintenance indicators provide simple yet informative annotation

ca technologies CA Performance Center - Site Maintenance Indicators
Site: North America
Timeframe: Custom Time Range Start time: Sep 3, 2016
Generated On: Thursday, September 15, 2016 1:15:42

Phoenix Data Center - WAN Utilization - Interface - Utilization - Average - Descending

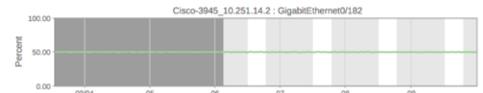
Site: Phoenix Business Hours Filter: Banking Hours

Utilization - Average [Time Zone: EDT]



Maintenance Indicator - Memorial Weekend Data Center Shutdown
155 Samples (1-Hour Resolution)

Maintenance Date	Name	Description
9/8	New York FEMA Emergency Outage	NY Data center issues due to coastal flooding



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DEMO

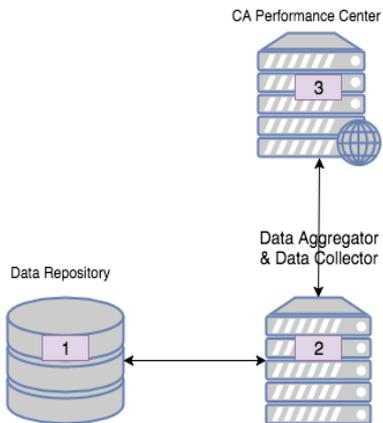
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Additional Feature Areas

- CA Performance Management “Lite”
- Monitoring the last mile
- Doubling of scale to 4M monitored items
- Monitoring Nuage Network-as-a-Service

CA Performance Management “Lite”

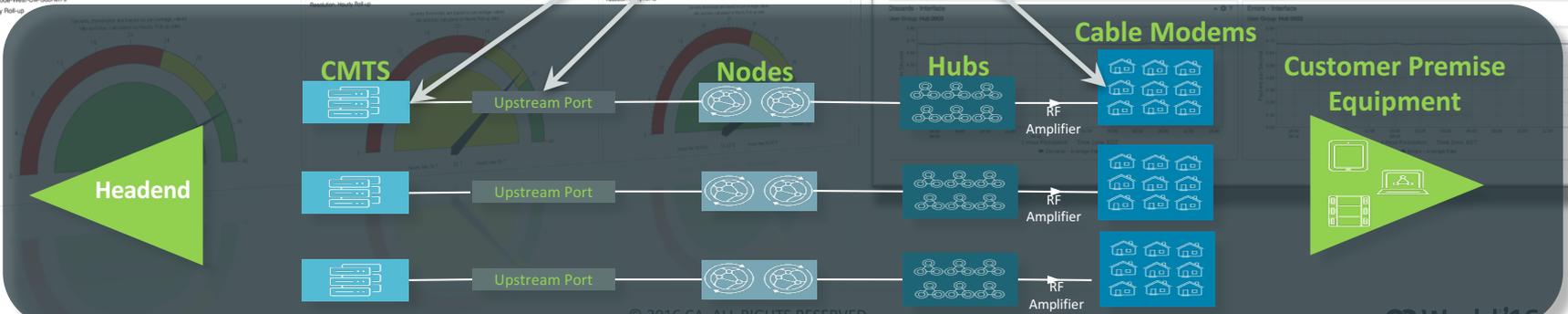
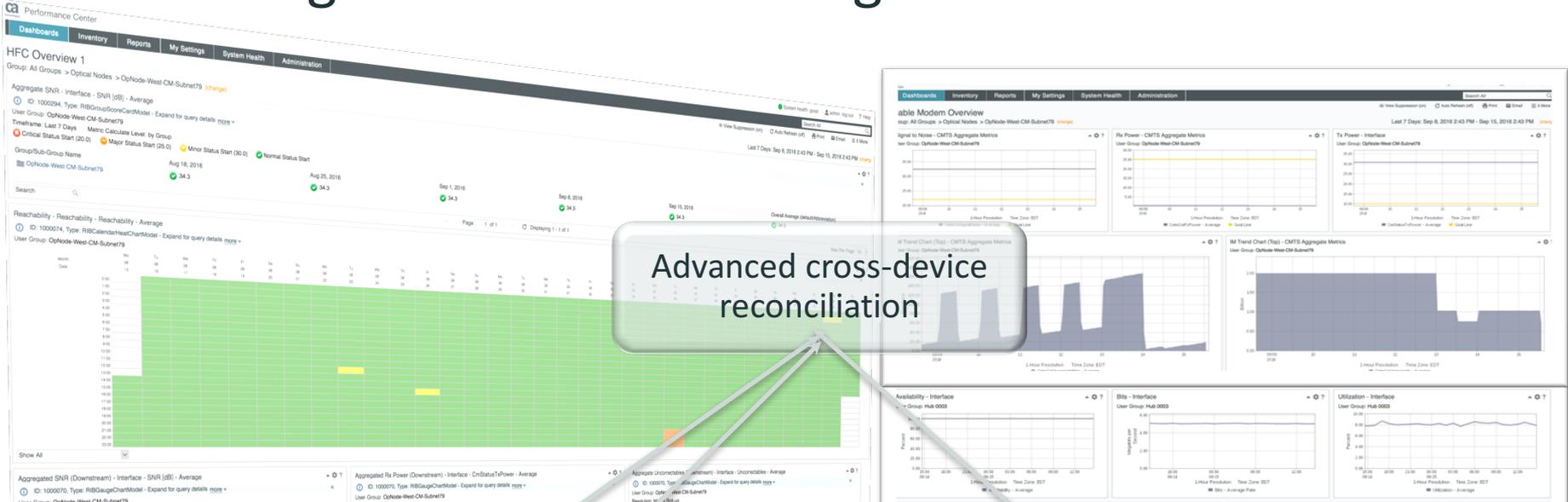
CA Performance Management-Light Deployment



Component	vCPUs	Memory	Disk Space	IO Speed
DR	8	60 GB	2.5TB	240 MB/s
DA & DC	4	10 GB	500GB	
PC	4	16 GB	600GB	

- Same software used in a smaller compute & storage environment
- Limited to 150K monitored items or ~4000 devices
- All features are available in “lite” environment

Monitoring to the Customer Edge



4 Million Monitored Items at 500,000 Metrics per Second

- Comprehensive across all core services
 - Data ingestion, Thresholding, Concurrent Users, OpenAPI, CAMM/Multiple Metric Family
- Total # of Items: 4M
- Concurrent Users: 100 L1, 2 CP
- OpenAPI: 4 concurrent queries
- CAMM: 1K metric families

Let Your Voice Be Heard!

The CA Performance Management Product Feedback Survey – ca.com/productfeedback



- A 2-3 minute questionnaire to obtain your feedback
- Your partnership in the future of CA Performance Management is important to us
- Your feedback will be key in helping us innovate
- We will prioritize and build out action plans based on your feedback to further improve your overall satisfaction and loyalty
- *ca.com/productfeedback*

CA Network Performance Management Comic and Blog Series

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Successful Network Operations in a Cloud-Centric, Software-Defined World with CA Performance Management

An ENTERPRISE MANAGEMENT ASSOCIATES® (EMA)™ White Paper Prepared by CA October 2016

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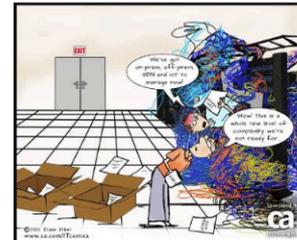
EMA IT & DATA MANAGEMENT RESEARCH INDUSTRY ANALYSIS & CONSULTING



Network Funnies: LOL with the daily challenges of monitoring modern networks

Blog Post created by [Jeremy_Rossbach](#) on Dec 12, 2016

Like • 0 Comment • 0



#2 - Modern Network Performance Monitoring Doesn't Have to Be as Complex as You Think

Every holiday season, we decorate our tree from top to bottom with ornaments we've collected over the years. And every holiday season, the decorations get a bit more intricate as we layer them on top of each other.

Organizations around the world are building similarly complicated stacks in their data centers as they invest in new modern network technologies that support their IoT, Cloud or software-defined networking (SDN) initiatives.

Multiple layers breed complexity and complexity breeds

bottlenecks. Just one bottleneck in any part of the new modern network stack can have a rapid impact on application performance and the customer experience. To decrease this complexity, organizations need to be able to not only see but also assure every layer in the new network stack. They need to know when a new network function is spun up, its utilization and relationships and when it is decommissioned.



What
Questions
Do You
Have?

THANK YOU.

Stay connected at communities.ca.com