

# CA Network Operations Analytics

## What's New in CA Performance Management 3.6

**Lutz Holzbecher**

Customer Success Solution Architect



# Disclaimer

Certain information in this presentation may outline CA's general product direction. This presentation shall not serve to (i) affect the rights and/or obligations of CA or its licensees under any existing or future license agreement or services agreement relating to any CA software product; or (ii) amend any product documentation or specifications for any CA software product. **The development, release and timing of any features or functionality described in this presentation remain at CA's sole discretion.**

Notwithstanding anything in this presentation to the contrary, upon the general availability of any future CA product release referenced in this presentation, CA may make such release available to new licensees in the form of a regularly scheduled major product release. Such release may be made available to licensees of the product who are active subscribers to CA maintenance and support, on a when and if-available basis. The information in this presentation is not deemed to be incorporated into any contract.

Copyright © 2018 CA. All rights reserved. All trademarks, trade names, service marks and logos referenced herein belong to their respective companies.

**THIS PRESENTATION IS FOR YOUR INFORMATIONAL PURPOSES ONLY.** CA assumes no responsibility for the accuracy or completeness of the information. TO THE EXTENT PERMITTED BY APPLICABLE LAW, CA PROVIDES THIS DOCUMENT "AS IS" WITHOUT WARRANTY OF ANY KIND, INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR NONINFRINGEMENT. **In no event will CA be liable for any loss or damage, direct or indirect, in connection with this presentation, including, without limitation, lost profits, lost investment, business interruption, goodwill, or lost data, even if CA is expressly advised in advance of the possibility of such damages.**

# Top 5 Release Feature Themes

- NetOps Alarm Console improved UX, filters, and events
- Extended PDF reporting options in CA Performance Center
- Automation and OpenAPI
- Baseline threshold enhancements to support % from baseline rules
- Workflow and UX improvements for Cisco ACI including VMM vSphere support

# NetOps Alarm Console

## Key use cases

- I need to be able to view Fault and Performance in a unified and easy to use web application with simple workflows to solve problems faster
- I don't want to worry about client side requirements such as Java or Flash
- I need the experience to be intuitive leveraging industry best practices while innovating using today's technologies
- I need smart defaults out of the box but smart views that adapt to what I need to see and do for my specific responsibility
- Me and my team need to take advantage of alarm filtering and sorting to ensure we have visibility to the items we need to monitor
- When evaluation and alarm, I need to be able to view related events to understand frequency and related issues which may be relevant

# NetOps Alarm View

## UX improvements

My Operations teams  
a simple and optimal  
experience to maxim  
their efficiency.

The capability for the UI to a  
various use cases while pro  
the right data  
essential.

Vertical re-design to  
maximize space

### Alarm Details

Impact: Management Lost

Impact: Symptoms

Neighbor Topology

Control which sections  
appear

Over 20 columns available as  
needed

The screenshot displays the NetOps Alarm View interface. At the top, a table lists alarms with columns for Severity, Date/Time, Last Occurrence, Item Name, Model Type, Address, Alarm Title, and Impact. A 'Columns' dropdown menu is open, showing a list of 20+ columns that can be selected or deselected. Below the table, there are buttons for 'Acknowledge', 'Unacknowledge', 'Clear', 'Troubleshooter', 'Poll', 'Ping', 'Traceroute', 'On Demand', and 'Create Ticket'. A 'No Filter' dropdown and a search bar are also present. The interface is overlaid with several callout boxes: 'Alarm Details' showing 'Impact: Management Lost' and 'Impact: Symptoms'; 'Neighbor Topology'; 'Control which sections appear'; 'Control height of alarm grid'; and 'Over 20 columns available as needed'.

| Severity | Date/Time           | Last Occurrence     | Item Name          | Model Type     | Address  | Alarm Title   | Impact |
|----------|---------------------|---------------------|--------------------|----------------|----------|---|--------|
| Major    | March 7, 2018 7:... | March 7, 2018 7:... | Stack              | Summit Ver2... | 138.4... | HIGH AGGREGATE CPU UTILIZATION  | 0      |
| Major    | March 6, 2018 2:... | March 6, 2018 2:... | Sim30214:w-de...   | SiemensDV      | 10.24... | Polling has been temporarily reduced due to prior timeouts. Check the PollSummary.log for more details. The device may be down or may be receiving more polls than it can respond to. | 0      |
| Major    | March 6, 2018 2:... | March 6, 2018 2:... | Sim30215:w-de...   | SiemensDV      | 10.24... | Polling has been temporarily reduced due to prior timeouts. Check the PollSummary.log for more details. The device may be down or may be receiving more polls than it can respond to. | 0      |
| Major    | March 6, 2018 2:... | March 6, 2018 2:... | Sim30214:w-de...   | SiemensDV      | 10.24... | MANAGEMENT AGENT LOST   | 0      |
| Major    | March 6, 2018 2:... | March 6, 2018 2:... | Sim30215:w-de...   | SiemensDV      | 10.24... | MANAGEMENT AGENT LOST   | 0      |
| Major    | March 5, 2018 9:... | March 5, 2018 9:... | Cisco7606-96.37... | Cisco 7606s    | 138.4... | MANAGEMENT AGENT LOST   | 0      |
| Major    | March 5, 2018 1:... | March 5, 2018 1:... | cis2524-blue-96... | Cisco2524      | 138.4... | HIGH AGGREGATE CPU UTILIZATION  | 0      |
| Major    | March 5, 2018 1:... | March 5, 2018 1:... | cis2524-blue-96... | Cisco2524      | 138.4... | HIGH AGGREGATE CPU UTILIZATION  | 0      |

Control height of alarm  
grid

# Simple workflows enable quick access between fault & performance

I need to be able to easily access performance in context for devices/interfaces in view

Being able to generate and view performance data from my screen is key to streamlining and improving

The screenshot displays a network management interface with several key components:

- Alarms Grid:** A table listing various alarms with columns for Severity, Date/Time, Last Occurrence, Item Name, and Model. A callout box highlights that contextual launches from this grid ensure details are only a click away.
- Action Buttons:** A row of buttons including 'Clear', 'Troubleshooter', 'Poll', 'Ping', 'Traceroute', 'On Demand', and 'Create Ticket'. The 'On Demand' button is highlighted with a callout box indicating it provides a quick launch of an On-Demand report with automatic context of selected items.
- Alarm Details:** A section showing details for a specific alarm, including the title 'Stack HIGH AGGREGATE CPU UTILIZATION'.
- IM On-Demand/Multi-Metric Trend Report:** A line chart showing performance metrics over time. The Y-axis represents 'Percent' (0.00 to 100.00) and the X-axis represents time (10:00 to 09:00). Two lines are plotted: 'CPU Utilization - Average' (blue) and 'Memory Utilization - Average' (yellow). A callout box points to this report, noting it is generated from the 'On Demand' button.
- Configuration Panel:** A panel for configuring the report, including 'View Type', 'Resolution', 'Baseline Metrics', and 'Metrics to Include'. A table lists available metrics like 'Availability', 'CPU', and 'Device Polling Statistics'.

# Easy to build and use alarm filters

I need to be able to filter my alarm view to ensure I don't miss important issues and can organize my alarm lists

Operations are evaluated on speed and efficiency and are held accountable when things are missed.

- Create/Edit/Save alarm filters
- Filter capability based on AND/OR conditions
- Filter support various attribute types
- Filter supports ability to Hide/Show attributes
- Viewing filter results on Alarm Console View

The screenshot shows an 'Alarms' console interface. At the top, it says 'Time Range: Last 30 Days'. Below is a table of alarms with columns for Severity, Date/Time, Item Name, Model Type, IP Address, Alarm Title, and Trouble Ticket ID. The table contains several rows of alarms, including Major and Critical severity events related to CPU utilization and WLC controller thresholds.

Overlaid on the bottom of the screenshot is a 'Create Filter' dialog box. It has a 'Conditions' section with a dropdown menu for 'Model Class' currently set to 'Hide'. A callout box with a black border and white background points to the dropdown menu with the text 'Create filter for specific attributes'. Below the dropdown is a text box containing 'Model Class' and 'Model class for item - Select items from the provided list'. To the right of the dialog box is a list of available attributes: Amplifier, Anti Virus Application, Application, Application Server, and Automatic Teller Machine. There are arrows indicating the flow of items between the 'Available' and 'Selected' lists, and search boxes are present at the bottom of both lists.

# Share and manage alarm filters

**Teams need alarm filters to ensure they don't miss anything and can easily track active alarms & tickets.**

**An operations team is only as effective as their visibility into situations on the network.**

- Leverage organization and team best practices through sophisticated alarm filters
- Specify who can see a rule during or after a filter is created
- Leverage Roles to automatically add rules for new users
- Granular Role controls ensure users have the right permissions

- Leverage roles and tenants to control and easily manage access to rules
- Allow users to maintain their own rules for job specific tasks

The image shows two overlapping screenshots from a network management system. The top screenshot is the 'Edit Filter' dialog, and the bottom is the 'Manage Filters' table. Callouts with arrows point to specific UI elements.

**Edit Filter**

Scope: \* For My Use

Name: \* For My Use

Last Modified By: For All Users With My Role

Last Modified: For All Tenant Roles

Tooltip: For Specific Users or Roles

**Manage Filters**

| Name  | Description   | Modified By | Modified Date                  | Shared |
|---|---|-------------|--------------------------------|--------|
| <input checked="" type="checkbox"/> Only Critical Port Threshold Profiles | Filter alarms to cause code related to CAPM Port (interface) Threshold Events (0x5c40011) and Critical Severity | admin       | April 10, 2018 10:56:38 AM EDT | No     |
| <input type="checkbox"/> Only Critical Threshold Profiles                 | Filter alarms to cause code related to CAPM Threshold Events (0x5c40011) and Critical Severity                  | admin       |                                | No     |
| <input type="checkbox"/> Only Threshold Profiles                          | Filter alarms to cause code related to CAPM Threshold Events (0x5c40011)  | admin       | April 10, 2018 10:48:07 AM EDT | No     |

Search: No Filter | Filter icon | + | S

Buttons: New, Edit, Copy, Delete, Users, Roles

Page: 1 of 1 | Displaying 1 - 3 of 3 | Max Per Page: 100

Callouts:

- Arrow from 'No Filter' dropdown to 'Manage Saved Filters...' button.
- Arrow from 'Manage Saved Filters...' button to a text box: 'Manage Saved Filters... - Manage saved alarm filters that can be used in any alarm view'.
- Arrow from 'Only Critical Port Threshold Profiles' row to 'Edit Filter' dialog.

# Expanded NetOps PDF/Reporting

By popular demand...

| Idea  | Votes |
|---|-------|
| <a href="#">An On-Demand Report Saves Current Page</a>                                      | 21    |
| <a href="#">Automatic report generation without E-mail by CAPC</a>                          | 53    |
| <a href="#">scheduled reports - want to send link instead of report.</a>                    | 13    |
| <a href="#">Migrate monthly PDF Reports from eH to CAPM</a>                                 | 7     |
| <a href="#">PDF Store</a>   | 34    |
| <a href="#">Print only saves current page</a>   | 32    |
| <a href="#">Save scheduled pdf/csv reports on CAPC server and choose a target directory</a> | 27    |

187

# PDF Rendering now supports multi-page views and report link distribution

- I need to be able to schedule PDF generation of CAPC Dashboards including all pages of multi-page views
- I need to be able to schedule PDF generation of CAPC context pages including all supported sections and pages of multi-page views
- I need to be able to provide a link to the scheduled report in an email
- I need to be able to continue to leverage existing functionality to send reports as attachments in email links
- I need my larger schedule report jobs to minimize impact to users leveraging ad-hoc Dashboards
- I need users to be able to access their reports from a Report list
- I need to be able to provide unauthenticated access to reports as needed
- I need to be able to store generated PDFs on a fileserver so users can access pre-generated reports quickly
- I need to be able to leverage CAPC as my PDF storage or chose a different filesystem (mount point in CAPC)
- I need to be able to control the number of report files retained to manage report storage requirements
- I need the Report scheduler to notify me when I am reaching capacity of my disk storage to avoid running out of space and/or crashing the system

# Expanded PDF Controls

Does recipient need to login?

Control scope of PDF export

**Email Dashboard** ✕

Dashboard: Infrastructure Overview

Send To: \* executive@acme.com

Subject: \* Infrastructure Overview

Message: Here's the weekly Infrastructure Overview Report. You don't need to login to download/view the generated PDF.

Also, you will notice the report is larger as we now have visibility into all of the data within all views of the Dashboard!

Security:  Require login to see reports

---

Output Options

Format: PDF

PDF Orientation:  Portrait  Landscape

PDF Information Scope: All Pages of multiple page views

---

Scheduling Options

Frequency: \* Run Weekly

On Day: \* Monday

Start Time: 08 : 00

Time Zone: \* (UTC-05:00) America: New York (Eastern Standard Time)

Time Range: \* Previous Week

Suggested Time Ranges: Last 7 Days, Last 14 Days, Last 30 Days, Last 3 Months, Last 12 Months, Previous Week, Current Week

OK Cancel

# My Reports UI improvements

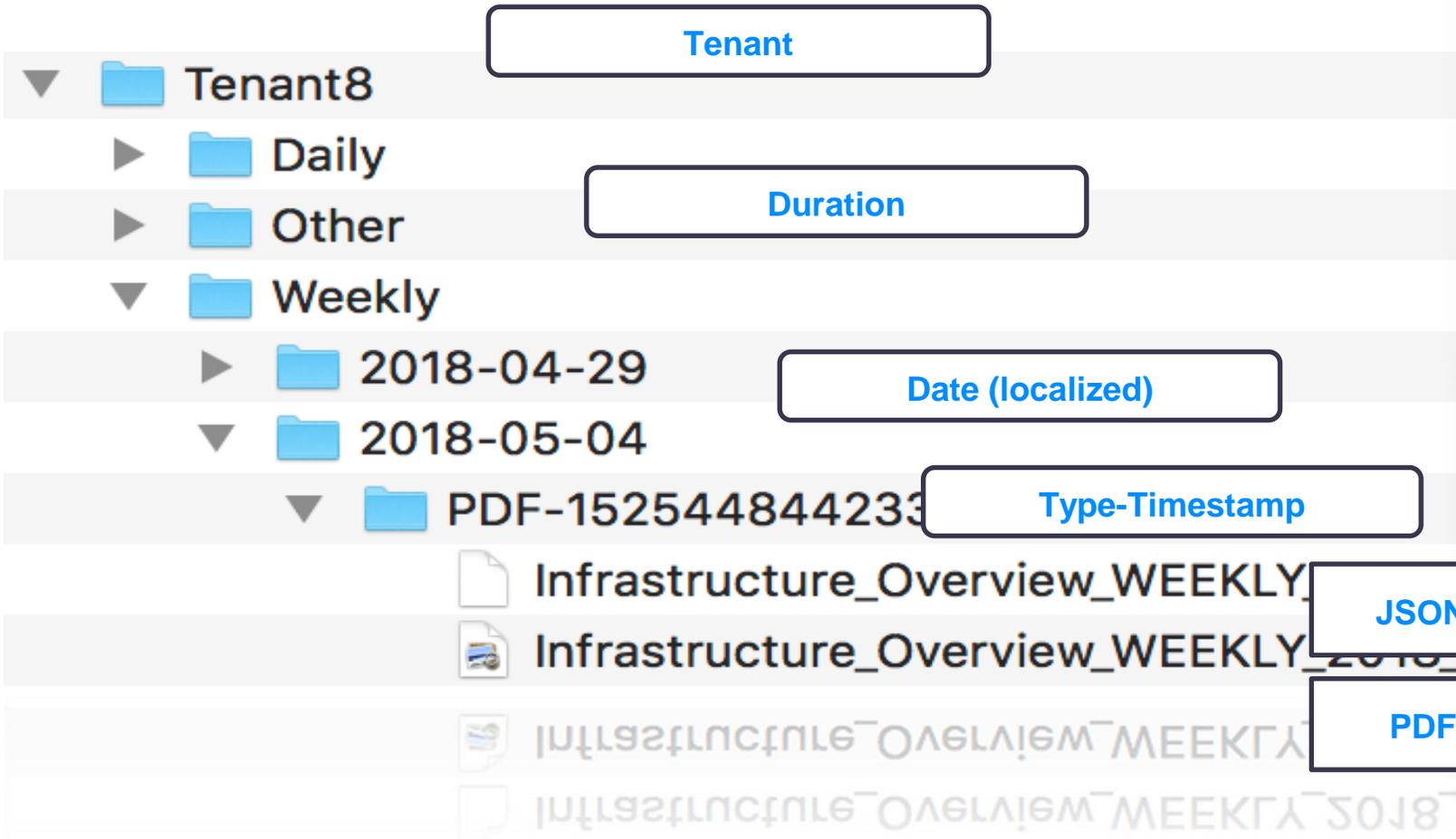
Scheduled Reports

| <input type="checkbox"/> Owner | Subject                         | Context               | Recipients         | Type     | Enabled | Size    | Report Name   | Tenant         | ↑ Delivery | Permission   |
|--------------------------------|---------------------------------|-----------------------|--------------------|----------|---------|---------|---|----------------|------------|--------------|
| <input type="checkbox"/> admin | Scorecards                      | All Groups            | Capacity@acme.com  | PDF Full | No      | 0 b     | N/A   | Default Tenant | Link       | Required     |
| <input type="checkbox"/> admin | Router AAG Report               | Cisco-3945_10.253.... | TeamCore@acme.com  | PDF      | Yes     | 15 b    | N/A   | Default Tenant | Attached   | N/A          |
| <input type="checkbox"/> admin | Interface Congestion Scorecards | My Assigned Groups    | opsTeam@acme.com   | PDF Full | Yes     | 46.9 Kb | <a href="#">Interface_Congestion_Scorecards_DAILY_2018_0622_0930_EDT...</a> | Default Tenant | Link       | Required     |
| <input type="checkbox"/> user  | Yesterday's Alarms              | All Groups            | opsTeam@acme.com   | PDF Full | Yes     | 15.7 Kb | <a href="#">Alarm_Console_DAILY_2018_0622_0945_EDT_id23.pdf</a>             | Default Tenant | Link       | Not Required |
| <input type="checkbox"/> user  | Interfaces Display              | All Groups            | Capacity@acme.com  | PDF Full | Yes     | 0 b     | N/A   | Default Tenant | Link       |              |
| <input type="checkbox"/> user2 | Weekly Core Overview            | All Groups            | executive@acme.com | PDF Full | Yes     | 0 b     | N/A   | Default Tenant | Link       |              |
| <input type="checkbox"/> user2 | Monthly Core Overview           | All Groups            | teamLead@acme.com  | PDF      | Yes     | 0 b     | N/A   | Default Tenant | Attac      |              |
| <input type="checkbox"/> user2 | Interface Trends                | All Groups            | opsTeam@acme.com   | CSV      | Yes     | 0 b     | N/A   | Default Tenant | Attac      |              |

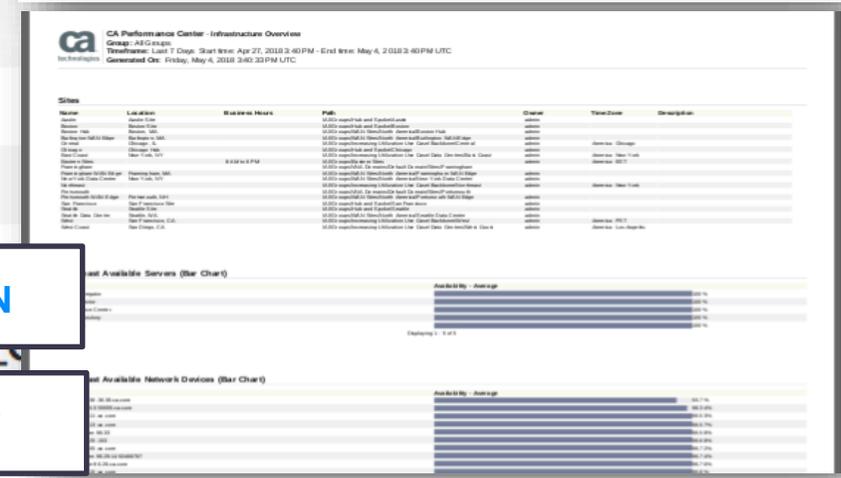
- Owner
- Subject
- Dashboard
- Context
- Recipients
- Schedule
- Type
- Enabled
- Next Run Time
- Last Run Time
- Size
- Report Name
- Tenant
- Next Run Time (Scheduled Time zone)
- Last Run Time (Scheduled Time zone)
- Delivery
- Permission

Expanded columns present significantly more information about your scheduled report jobs

# Folder/file hierarchy provides separation at tenant, user and other key aspects



```
{
  "version":1,
  "reportId":2,
  "tenantId":8,
  "userId":2,
  "emailId":17,
  "permissionType":"PrivateAccess",
  "reportDuration":"Weekly",
  "reportName":"Infrastructure_Overview_WEEKLY_2018_0504_1140_EDT_id17.pdf",
  "description":"",
  "reportType":"PDF",
  "createdOn":1525448442334,
  "updatedOn":1525448442334,
  "archive":false,
  "size":49810
}
```



# You can control how long to keep the files and we'll make sure you don't fill up the disk

|  |   |
|--|---|
| Repository.Free.Disk.Space.Limit.Pct         | 20                                      |
| Repository.Retain.Daily.Reports.Days         | 30                                      |
| Repository.Retain.Hourly.Reports.Hours       | 168                                     |
| Repository.Retain.Monthly.Reports.Months     | 12                                      |
| Repository.Retain.Other.Reports.Hours        | 168                                     |
| Repository.Retain.Quarterly.Reports.Quarters | 12                                      |
| Repository.Retain.Weekly.Reports.Weeks       | 12                                      |
| Repository.Retain.Yearly.Reports.Years       | 5                                       |
| Repository.Root.Directory                    | /opt/CA/PerformanceCenter/DM/repository |

- Reports “age” out to reclaim disk space
- Smart out of box defaults, but customizable as needed
- Monitor available disk space with configurable limit boundary
- Integrated System Health to raise visibility if space is running low

Scheduled Report Repository ✔ Normal

| Operational Status                      | Number of Reports | Path Name                               | Capacity Utilization | Free Capacity | Total Capacity | Version |
|---|-------------------|---|----------------------|---------------|----------------|---------|
| <span style="color: green;">●</span> Up | 1                 | /opt/CA/PerformanceCenter/DM/repository | 5 %                  | 181 GB        | 192 GB         | 1.0     |

Search  🔍 ⏪ Page  of 1 ⏩ 🔄 Displaying 1 - 1 of 1 Max Per Page  ▼

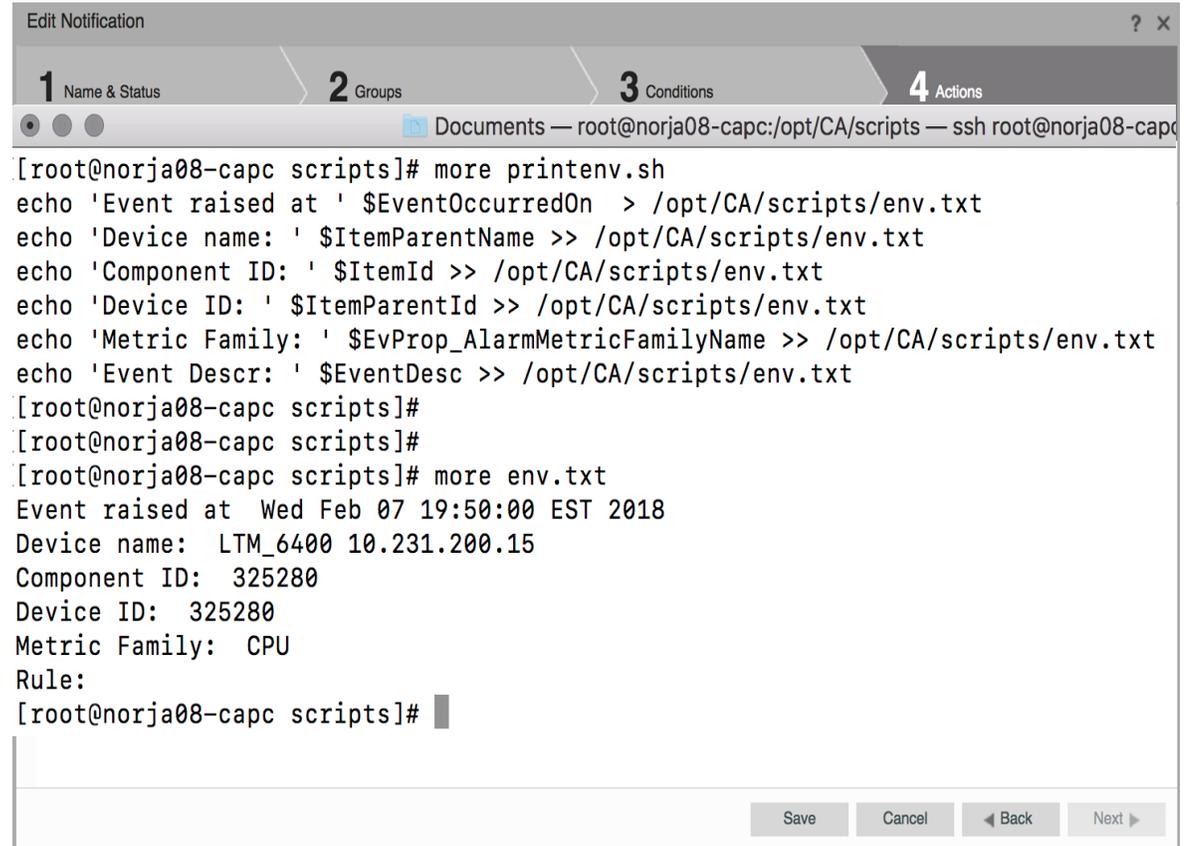
# Scripting from event notifications

## Key Use Cases:

- Enhance event data to streamline triage
- Send events to multiple trap destinations
- Drive automation & self-healing

## Highlights:

- Key attributes passed in environment of script shell
- Serial execution to ensure proper queue order
- Logging and timeout events



The screenshot shows a window titled "Edit Notification" with a progress bar at the top indicating four steps: 1 Name & Status, 2 Groups, 3 Conditions, and 4 Actions. The terminal window displays the following commands and output:

```
[root@norja08-capc scripts]# more printenv.sh
echo 'Event raised at ' $EventOccurredOn > /opt/CA/scripts/env.txt
echo 'Device name: ' $ItemParentName >> /opt/CA/scripts/env.txt
echo 'Component ID: ' $ItemId >> /opt/CA/scripts/env.txt
echo 'Device ID: ' $ItemParentId >> /opt/CA/scripts/env.txt
echo 'Metric Family: ' $EvProp_AlarmMetricFamilyName >> /opt/CA/scripts/env.txt
echo 'Event Descr: ' $EventDesc >> /opt/CA/scripts/env.txt
[root@norja08-capc scripts]#
[root@norja08-capc scripts]#
[root@norja08-capc scripts]# more env.txt
Event raised at Wed Feb 07 19:50:00 EST 2018
Device name: LTM_6400 10.231.200.15
Component ID: 325280
Device ID: 325280
Metric Family: CPU
Rule:
[root@norja08-capc scripts]#
```

At the bottom of the window, there are buttons for "Save", "Cancel", "Back", and "Next".

# Simplify Baseline Comparison Event Rules - % of Baseline

## Key Use Cases:

- Thresholds for metrics with very low standard deviation from baseline
- Normalized baseline threshold for groups with high variance in standard deviations from baseline
- Alert on DSL or VSDL re-training at a lower speed
  - Alert on bandwidth drop of 25% for an extended period and alert the NOC

## Highlights:

- New rule type built into the standard threshold rules

Create / Edit Event Rule

Name: \*  Duration (sec): \*

Description:

Metric Family: \*  Window (sec): \*

Severity: \*

A violation occurs when all of these conditions are met:

| Metric: *  | Operator: *                        | Value: *                          | Condition Type: *                                |
|--|------------------------------------|-----------------------------------|--|
| <input type="text" value="Temperature (Celsius)"/> | <input type="text" value="Above"/> | <input type="text" value="50.0"/> | <input type="text" value="Percent of Baseline"/> |

+ Add Condition

A violation is cleared when:

| Metric: *  | Operator: *                                    | Value: *                          | Condition Type: *                                |
|--|--|-----------------------------------|--|
| <input type="text" value="Temperature (Celsius)"/> | <input type="text" value="Equal To Or Below"/> | <input type="text" value="10.0"/> | <input type="text" value="Percent of Baseline"/> |

Save Cancel

Device Name:

| Property Name      | Event Property Value                  |
|--------------------|---------------------------------------|
| Metric Family Name | CPU                                   |
| Profile Folder ID  | 6694                                  |
| Profile ID         | 6696                                  |
| Profile Name       | Profile A                             |
| Rule Detail        | Utilization < -10.0 PercentOfBaseline |
| Rule ID            | 6720                                  |
| Rule Name          | Percent of Baseline CPU               |
| Severity           | 1                                     |
| Window             | 300                                   |

Search  Page 1 of 1 Displaying 1 - 13 of 13 Max Per Page 100

OK

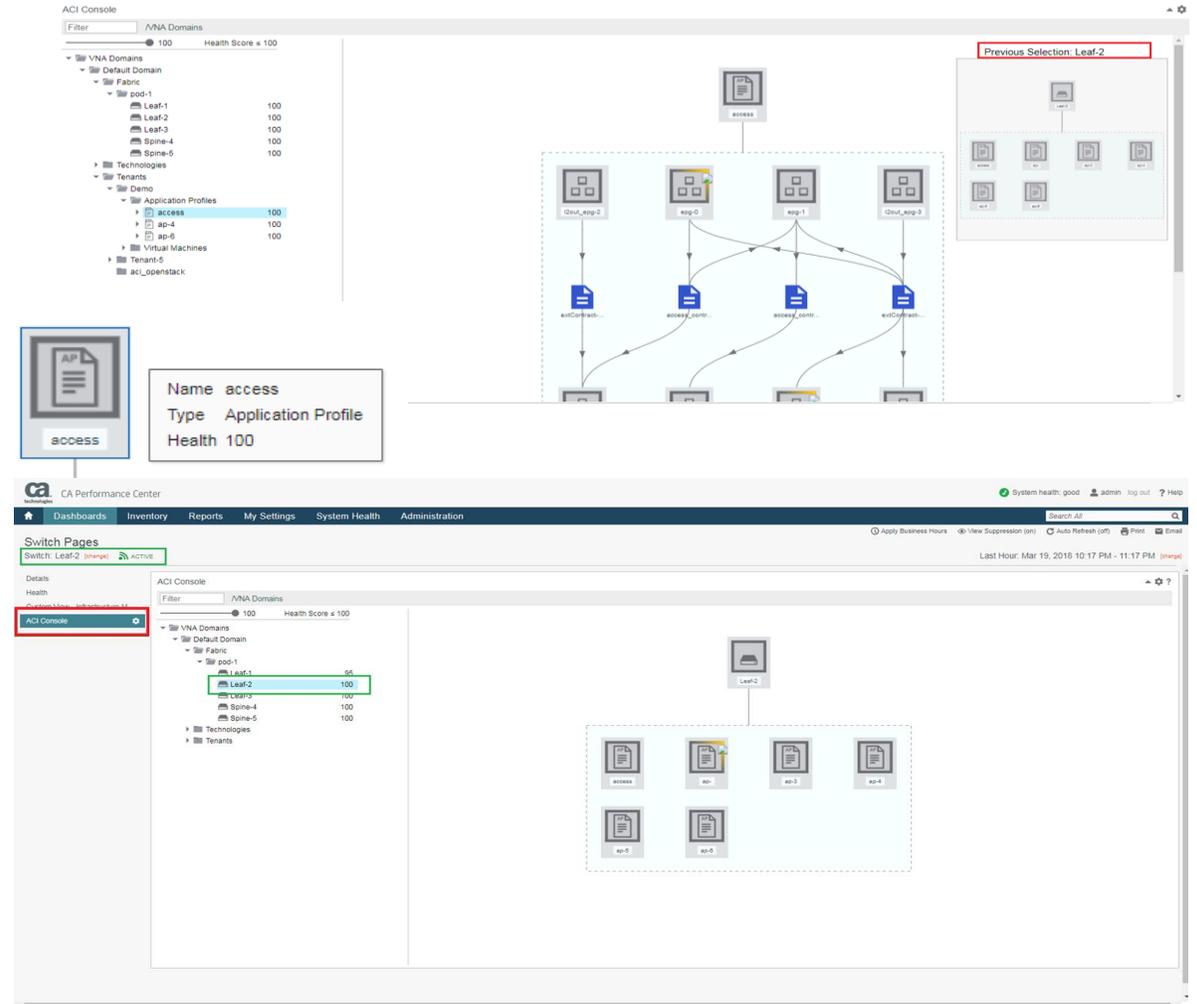
# Cisco ACI Workflow and Navigation Enhancements

## Key Use Cases:

- Zoom too small in history boxes and not sure what it is for
- Browser history is not kept when navigating back
- Would be great to show more details for nodes
- Why can't I see the ACI Console tab in Switch context page?

## Highlights:

- Enlarge the Zoom-in history boxes to make it more visible; Add title on top of box
- Properly maintain browser history using url rewriting
- Show details with Mouse over on topology icons and navigate to context page
- Embedded ACI Console Tab into Switch Context page



# OpenAPI Support for SD-WAN

## Key use cases:

- I need to be able to export SD-WAN overlay inventory, relationship, and performance data
- I need to be able to leverage the OpenAPI App platform to drive enhanced analytics and new visualizations

## Feature highlights:

- OpenAPI Support for key SD-WAN items: Devices, Interfaces, SLA Classes, Tunnels, & App Classes
- Key relationships to simplify data extraction and visualization
- Query Builder support for easy exploration and query URL generation

### Query Expression

× for sdnslapathmf

× group/aggregate groupby(groups/ID, aggregate(im\_JitterPercentOfThreshold with max as Value, im\_LatencyPercentOfThreshold with max as Value1, im\_PacketLossPercentagePercentOfThreshold with max as Value2))

× time range Last 24 Hours/As polled

× filter (groups/ID equal 22965) and (groups/ID equal 22967) and ((Value greater 100) or (Value1 greater 100) or (Value2 greater 100))

× select ID, Value × limit(top) top=500, skip=0, expand top=1000 × format Text/CSV

### ▼ OData URL

 Copy to clipboard

```
http://norja08-dev-da.bluesky.ca.com:8581/odata/api/sdnslapathmfs?$apply=groupby(groups/ID, aggregate(im_JitterPercentOfThreshold with max as Value, im_LatencyPercentOfThreshold with max as Value1, im_PacketLossPercentagePercentOfThreshold with max as Value2))&&resolution=RATE&period=1d&$top=500&$skip=0& top=1000&$format=text/csv&$select=ID,Value&$filter=((groups/ID eq 22965) and (groups/ID eq 22967) and ((Value gt 100) or (Value1 gt 100) or (Value2 gt 100)))
```

# Interface (max) 95th Percentile Group Scorecard

## Key Use Cases

1. Capacity planners need to easily understand circuits with capacity needs across multiple groups
1. Capacity planning needs to easily understand which interface is impacting a logical service or location

Child group entries show max for each group  
Easily drill-down to view individual details

Interface 95th Maximum Percentile Trend Scorecard - In

User Group: North America  
Timeframe: Last 24 Hours Metric Calculate Level: by Group

🔴 Critical Status (80.0)
🟡 Major Status (60.0)
🟠 Minor Status (40.0)
🟢 Normal Status

| Group/Sub-Group Name | Apr 11, 2018 11:00 AM | Apr 12, 2018 11:00 AM | Apr 13, 2018 11:00 AM | Apr 14, 2018 11:00 AM | Apr 15, 2018 11:00 AM | Apr 16, 2018 11:00 AM | Overall Average (%) |
|----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|---------------------|
| North America        | 🔴 87.96%              | 🟡 75.35%              | 🟡 78.36%              | 🔴 81.36%              | 🔴 84.36%              | 🔴 86.87%              | 🔴 81.34%            |
| Boston Hub           | 🔴 87.96%              | 🟡 75.35%              | 🟡 78.36%              | 🔴 81.36%              | 🔴 84.36%              | 🔴 86.87%              | 🔴 81.34%            |
| Burlington WAN Edge  | 🟡 62.41%              | 🟡 64.1%               | 🟡 65.75%              | 🟡 67.41%              | 🟡 69.09%              | 🟡 70.47%              | 🟡 65.71%            |
| Framingham WAN Edge  | 🟡 71.07%              | 🟢 30.71%              | 🟢 35.36%              | 🟡 42.49%              | 🟡 49.63%              | 🟡 55.65%              | 🟡 49.84%            |
| New York Data Center | 🟢 25%                 | 🟢 25%                 | 🟢 25%                 | 🟢 25%                 | 🟢 25%                 | 🟢 25%                 | 🟢 25%               |
| Portsmouth WAN Edge  | 🟡 62.42%              | 🟡 64.09%              | 🟡 65.76%              | 🟡 67.41%              | 🟡 69.09%              | 🟡 70.5%               | 🟡 65.72%            |
| Seattle Data Center  | 🟢 25%                 | 🟢 25%                 | 🟢 25%                 | 🟢 25%                 | 🟢 25%                 | 🟢 25%                 | 🟢 25%               |

Search [ ] Page 1 of 1 of 7 Displaying 1 - 7 of 7 Max Per Page 10

## Feature Highlights

1. New out of the box view leverages industry best practice 95<sup>th</sup> percentile with custom max aggregation
1. New group trend scorecard shows individual highest utilization value for each group

View In, Out, or In/Out  
Configurable historical and projection aggregates

Interface 95th Maximum Percentile Trend Scorecard - Settings

Title: \* Interface 95th Maximum Percentile Trend Scorecard

Sub Title: User Group: North America

Direction Settings: \* In

Number of Time Intervals: \* 6

Number of Projections: \* 0

Projection Calculation Method:  Approximation  Detailed Data

Critical Status: 80

Major Status: 60

Minor Status: 40

Results Limit (Max Rows): 500

# Questions?



Thank You





**BROADCOM**®

connecting everything®