Community Webcast: CA Spectrum 10.3

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Agenda

1. OVERVIEW

2. MARQUEE FEATURES AND VALUE PROPOSITION

3. Q&A

CA Spectrum Release 10.3

- Integrations

- CSP Enhancements

- Container Support

- Reporting Enhancements

- Device Certifications

- Additional New Capabilities

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Integrations

CA Spectrum-CA DOI (Digital Operational Intelligence) Integration Spectrum Data Publisher Enhancements

Along with Inventory and Alarms, Spectrum is now sending the following data to Analytics Platform.

- Spectrum Groups [Global Collections, Containers]

- Spectrum Metrics - Device count and Availability

- Spectrum Services

➢ Alarms link for in-context launches from Digital OI

➢ Remove elastic search dependency for fetching existing data and reconciliation
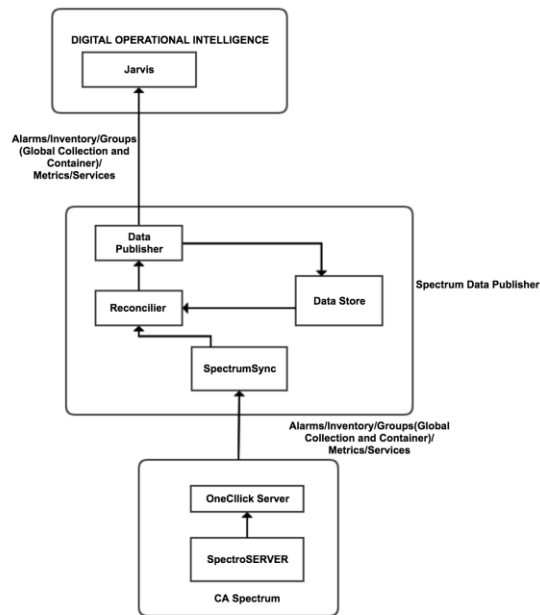
Co-existence of VNA and UIM Integration for VMWare Entities

Problem Statement: In cases where Customer has both Spectrum, UIM and VNA integration in-place, where both products models and monitors VMWare entities in their environment for getting different/common metrics. There are cases where duplicates entities are getting created into Spectrum for VMWare environment

➤ CA Spectrum reconciles VMware entities coming from both UIM and VNA Host Servers

➤ Fault Correlation between UIM and VNA alarms

➤ OneClick Views for reconciled Events & Alarms

➤ VNA would be single source of truth as it has granular, consistent and robust data than UIM

Reconciles VMware entities based on the precedence
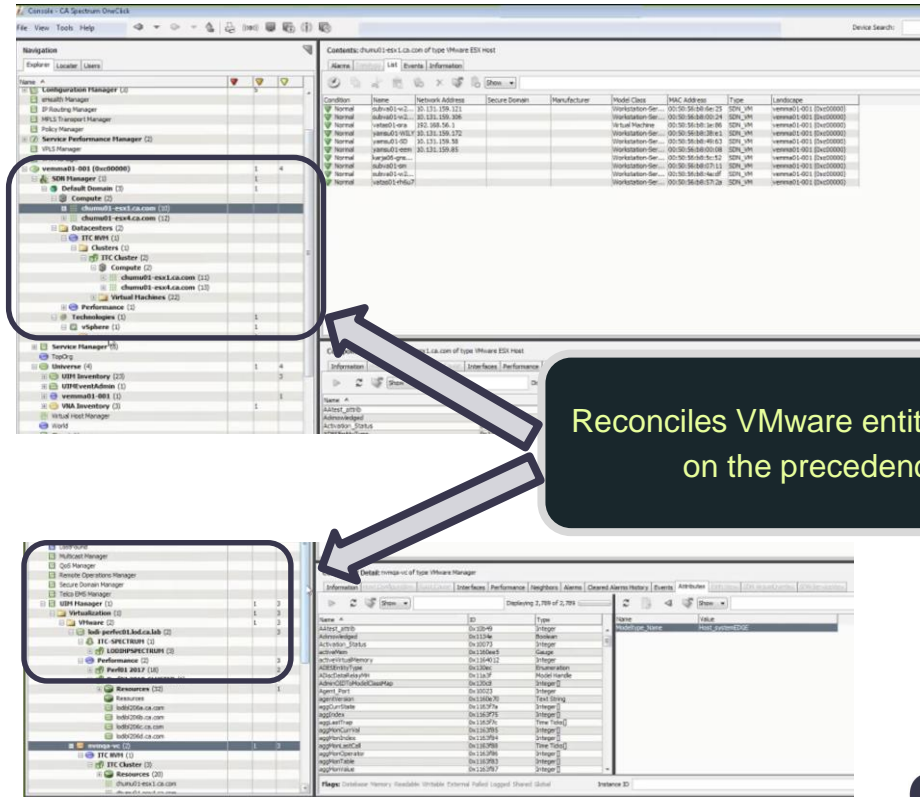
Spectrum-UIM Integration

- Synchronize OS details of UIM models [hosts and virtual machines] to Spectrum

- Webserver logs captures list of servers failed to synchronized from UIM to Spectrum

OS details of UIM models in Spectrum

Logs specifying list of servers failed to synchronized

```
Aug 02, 2018 11:07:07.084 (pool-44-thread-1) (NimsoftIntegrationServlet) - Nimsoft Virtualization manager,  delete Spectrum relationships started 0
Aug 02, 2018 11:07:07.084 (pool-44-thread-1) (NimsoftIntegrationServlet) - Nimsoft Virtualization manager,  delete Spectrum relationships end
Aug 02, 2018 11:07:07.084 (pool-44-thread-1) (NimsoftIntegrationServlet) - Nimsoft Virtualization manager, processing completed
Aug 02, 2018 11:07:07.084 (pool-44-thread-1) (NimsoftIntegrationServlet) - Virtualization Sync time 0 min, 0 sec
Aug 02, 2018 11:33:20.432 (pool-46-thread-1) (NimsoftIntegrationServlet) - Processing Host entities.
Aug 02, 2018 11:33:20.463 (pool-46-thread-1) (NimsoftIntegrationServlet) - ----Failed Server models list Start-----
Number of models failed : 1
CS ID : , CS NAME : ITCSIMREPO3, IP Address : 10.131.159.148 --> Reason : Model Creation failed
----Failed Server models list End-----
```

Modelling Gateway Enhancements

- ➤ Export and Import for World and Top Org Views

Export for World and Top Org Views

Import for World and Top Org Views

API Performance enhancement

Along with High performance API, Spectrum is enhanced to improve:

- ➢ Uptime
- ➢ Availability
- ➢ Reliability
- ➢ Functional correctness
- ➢ Responsiveness
- ➢ Reduce Cost

SCOM 2016 Support

➢ Extracting alerts from System Center Operations Manager and creating alarms on the appropriate system models in CA Spectrum.

➢ Supporting drilldown from CA Spectrum alarms. You can configure CA Spectrum alarms to display a URL that calls up the appropriate alert in the SCOM web console.

➢ Bidirectional alert/alarm clearing.

➢ Bidirectional alert/alarm acknowledgment.

CSP Enhancements
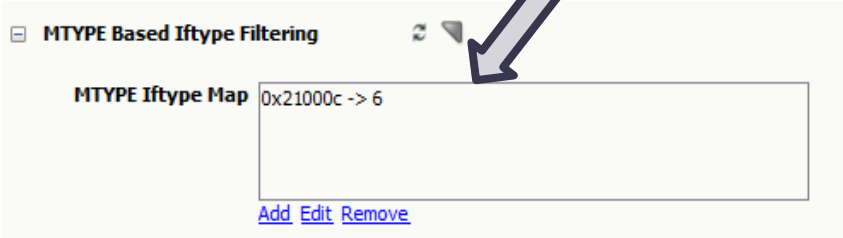
Extreme High Port Count Support/Filtering Interfaces

Filter interfaces of a device model which are not required to model and monitor in CA Spectrum by specifying the Mtype Value and IfType values

Example:
Specify the model type (MType) of the device model.
For example: Rtr_Cisco Mtype value is 0x21000c

Option to MType of the device model which you want to filter

MTYPE Based Iftype Filtering

MTYPE Iftype Map   0x21000c -> 6

Add Edit Remove

DHCP Support in CA Spectrum

Problem Statement:
Earlier If device was assigned with an Incorrect/Changed IP address due to DHCP lease.
Spectrum was not capable of detecting the changes and raise an alarm to inform the administrator for discrepancies

➤ CA Spectrum is now capable of monitoring devices when their IP address is getting changed dynamically (due to expiration of there DHCP lease)

➤ CA Spectrum runs DNS Lookup to resolve the original IP address of the devices in DHCP environment and helps in resolving IP address in the following three situations:
  - Device Contact Lost
  - Device IP swap (Schedule DNS Lookup)
  - Management Agent Lost

Container Support
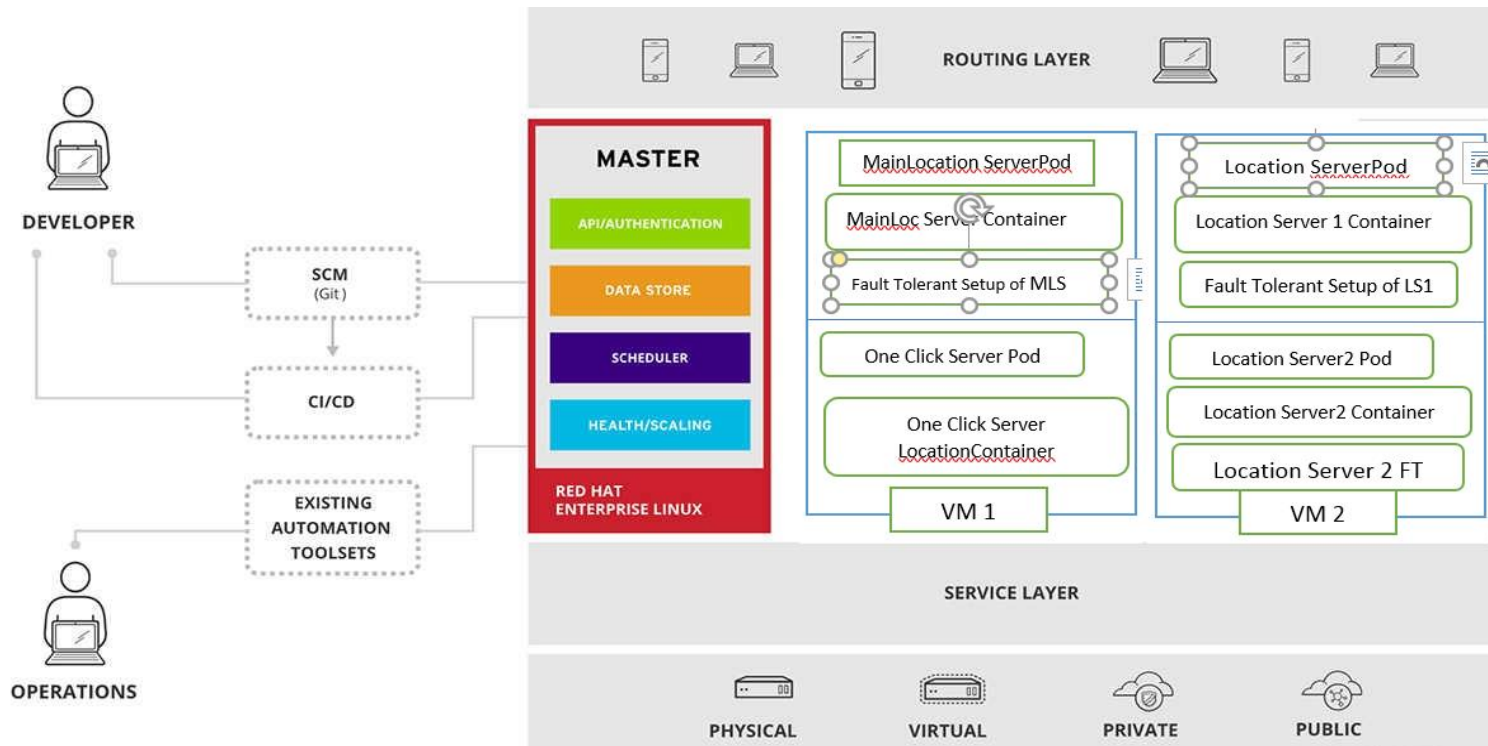
Spectrum Dockerization & Orchestration using OpenShift: Value proposition

- ✓ Self Healing on failure.

- ✓ Auto scaling up/down of Spectrum Instances.

- ✓ Load balancing of OneClick Servers.

- ✓ Fault Tolerant Spectrum Setup.

- ✓ Version Controlling.

- ✓ Continuous Deployment.

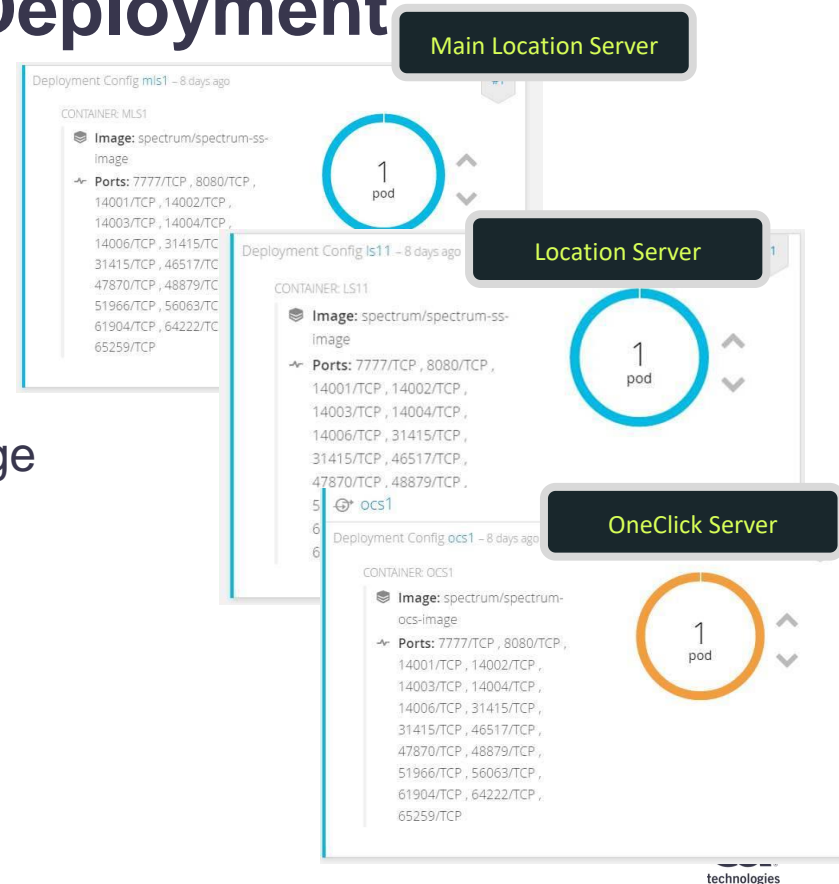- ✓ Easy to install takes 5-7 min per Image

Spectrum Dockerization Architecture Diagram

Spectrum Dockerization Deployment

- Setup OpenShift Environment and Pull SS/OCS/SDC Images onto OpenShift Registry.

- Deploy new pods using deployment config by selecting the appropriate Image and environment variables.

- Once the MainLocationServer, Location Server and OneClickServer are up, access the Distributed Spectrum Environment, using OneClick Console.

Main Location Server

Deployment Config mls1 – 8 days ago

CONTAINER: MLS1

Image: spectrum/spectrum-ss-image

Ports: 7777/TCP , 8080/TCP , 14001/TCP , 14002/TCP , 14003/TCP , 14004/TCP , 14006/TCP , 31415/TC, 31415/TCP , 46517/TC 47870/TCP , 48879/TC 51966/TCP , 56063/TC 61904/TCP , 64222/TC 65259/TCP

1 pod

Location Server

Deployment Config ls11 – 8 days ago

CONTAINER: LS11

Image: spectrum/spectrum-ss-image

Ports: 7777/TCP , 8080/TCP , 14001/TCP , 14002/TCP , 14003/TCP , 14004/TCP , 14006/TCP , 31415/TCP , 31415/TCP , 46517/TCP , 47870/TCP , 48879/TCP ,

ocs1

1 pod

OneClick Server

Deployment Config ocs1 – 8 days ago

CONTAINER: OCS1

Image: spectrum/spectrum-ocs-image

Ports: 7777/TCP , 8080/TCP , 14001/TCP , 14002/TCP , 14003/TCP , 14004/TCP , 14006/TCP , 31415/TCP , 31415/TCP , 46517/TCP , 47870/TCP , 48879/TCP , 51966/TCP , 56063/TCP , 61904/TCP , 64222/TCP , 65259/TCP

1 pod

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Reporting Enhancements

Multi-Tenant/SRM with JasperSoft

Problem Statement: Steve is a network engineer with XYZ Corp, which is large MSP and been using Spectrum for monitoring and managing their huge network systems. They have multiple Spectro-Server to monitor different sites and have Multiple SRMs for reporting. One of the biggest challenge Steve facing is to create create Tenant specific reports and share it with all the user's from different Organizations.

❖**Spectrum 10.3 has been enhanced to provide the following capabilities:**

➢ Multi-Tenant JasperSoft helps in reduces the number of CABI (JasperSoft) Servers to accommodate reporting needs of multiple OneClick Server. One CABI server can integrate with multiple OneClick server without impacting others.

➢ Reports/Content data is shared and available across all the Organization's users and placed at the common /root/Public/ca/Spectrum/ folder.
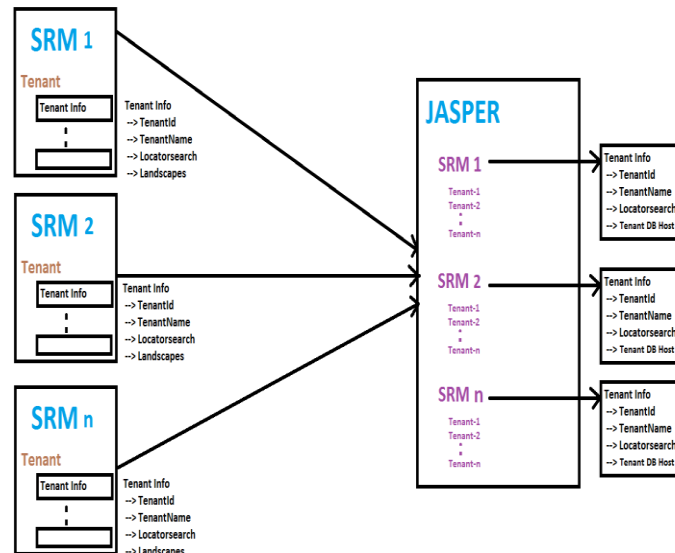
Syslog Monitoring

- **Problem Statement:** When hostname is received as part of syslog trap, CA Spectrum uses DNS look to resolve hostname to IP or uses /etc/host to get the IP address, functionality is not working when customer is NOT having DNSlookup or don't want to use DNS for resolution.

➢ CA Spectrum uses DNSlookup to resolve hostname to an IP address

➢ In situations where DNSlookup is not enabled, a new 'PreventDNSlookup' Boolean attribute (id 0x13396) is introduced to search directly from the database for model names that match with the host names of syslog trap.
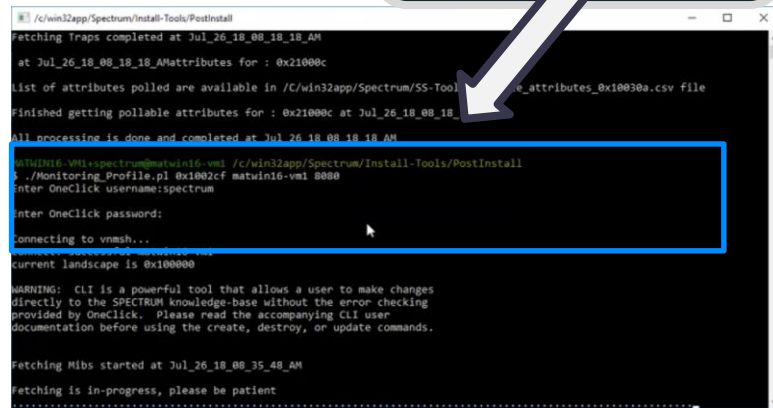
Monitoring profile

Problem Statement: As new and new devices are coming into the market, it's a challenge for the customers to know what all MIBs are needed for a device to populate all the information in Spectrum.

CA Spectrum introduces a new "Monitoring_Profile.pl" Script which will enables customer to fetch the following information of a selected device:

➢ List of MIBs

➢ Trap details

➢ Pollable Attributes

OOOB script helps to fetch MIBS, Trap and Pollable attributes of a device

DDMDB Performance Improvements

Problem Statement:

In Spectrum, DDMDB database uses MyISAM engine for data storage and some cases due to landscape data consolidation with Spectrum 10.x, DDMDB database is getting HUGE resulting slow data retrieval in event tab and some time hangs OneClick console /Archive manager

➢ CA Spectrum added a new capability to convert all the DB tables from MyISAM to InnoDB Engine to improve the performance

➢ CA Spectrum supports partitioning the events table to improve the performance for event retrieval.

Device Certifications

Support for Cisco IOS v15.X

Problem Statement:
Earlier Spectrum was not able to discover 'Cisco IP Routing Table's information if devices are running running on version IOS 15.X.

➢ Certified Cisco IOS v15.X and their related MIBs

➢ Populate 'Cisco IP Routing Table's information using ipRouteTable or ipCidrRouteTable.

Populating 'Cisco IP Routing Table's information

Enhanced CDP & LLDPv2 Discoveries

Ability to discover connection between Cisco and Non-Cisco devices using

- CDP (Cisco Discovery Protocol) & LLDPv2 MIB Information

Connectivity formed between Cisco and Non Cisco devices using CDP/LLDPv2 MIB
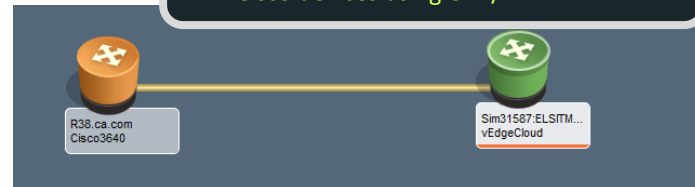
Configuration Option to Delete Juniper Chassis Modules

- Option to not model chassis modules in juniper devices
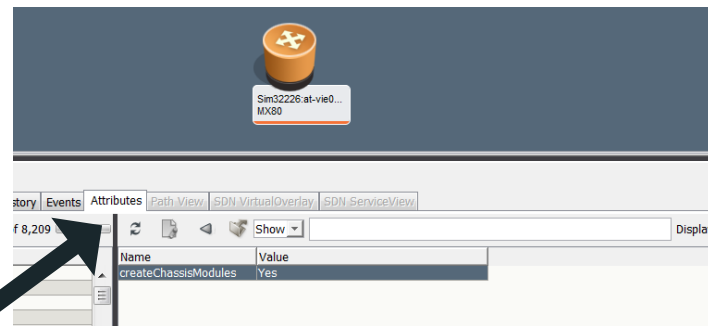
'createChassisModule' attribute to model chassis modules (By default: Yes)

HP-IRF Support

HP-Intelligent Resilient Framework (IRF) is
a proprietary software virtualization technology which
helps to connect multiple network devices through
physical IRF ports and perform necessary
configurations, and then these devices are virtualized
into a distributed device.

✓ Spectrum Identifies IRF stack and its neighbor
  device

✓ Discovers Master and Slave IRF devices within the
  IRF Stack

✓ Interfaces Naming Convention to identify Master
  and Slave
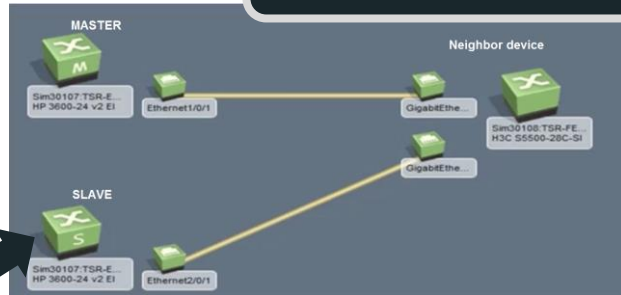
Connectivity between Master and neighbor devices

Easy identification of Master and Slave (via Serial number)

Additional New Capabilities

"Communication Link Down" Alarm View Enhancements

➢ New OC view for Communication Link Down Alarms, showing all the interfaces that are affected due to the alarm.

➢ Capability to add or remove un-wanted interfaces from the discovered devices.

Communication link down alarms

List down all the link down interfaces

Platform/Third Party Software/Localization Updates

Third Party Software

- MySQL - 5.7.22
- Tomcat - 9.0.8
- JDK\JRE – 1.8.0_172
- CXF - 3.2.4
- Cygwin - 2.10
- Support for CABI Jaspersoft 6.4.2 and 6.4.3
- Stopped shipping SNMP plugin, use the native APM SNMP action.

Localization

- All the EventFormat, Pcause and properties have been localized for supported version of CA Spectrum 10.3

Platforms

- Added Windows 2016 Support
- Added SCOM 2016 Support
- Dropped Windows 2008 and Solaris Support

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Thank You.