



VOSS Insights Arbitrator Administration Guide

Release 23.2

Jul 31, 2023

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1. What's New

1.1. Arbitrator Administration Guide: Release 23.2

- EKB-14142: Support Arbitrator proxy access. See: [Configuration](#)
Added details for new Proxy Config setting.
- EKB-16276: VOSS Arbitrator is not sending alerts to Zenoss. See: [System Recovery](#)
Details added for the new System Recovery menu in CLI Administration.
- EKB-16510: Implement a Zoom OAuth token flow. See: [Configuration](#)
Added details on obtaining a Zoom OAuth token.
- VOSS-1235: Productize Phase 1 of Network Observability. See: [Network Observability](#)
Arbitrator and Dashboard documentation updated for the new Network Observability feature.

2. Getting Started

2.1. Introduction

Welcome to Insights Arbitrator, a powerful log analytics platform that allows multiple data sources and log formats to be consumed, extracted, analyzed, and correlated, for complete event, alarm and systems monitoring.

This guide describes how to use and administer the Arbitrator platform. You can use this guide for help with importing assets, importing scripts, configuring new correlation rules, searching logs, assigning scripts to assets to create probes, and for overall performance management of the systems monitored.

Note: This guide is aimed at system administrators and users responsible for configuring and monitoring the Correlation platform. Users should have a working knowledge of operating systems, software applications, and network elements.

The Arbitrator platform design allows it to be used in multiple workflows. While you won't need to follow any particular linear flow, some elements must be configured in a specific order. Those will be pointed out in each section.

This guide covers the following:

- Correlate - the main user interface, which allows you to visualize the monitored systems and to manage alerts for these systems. The views within this workspace are constantly updating with newly gathered data.
- Configuration - this is the workspace used to install and set up the platform.

2.2. Arbitrator Licensing

2.2.1. Overview

You can view the Arbitrator License remaining days in the user interface, once you log in.

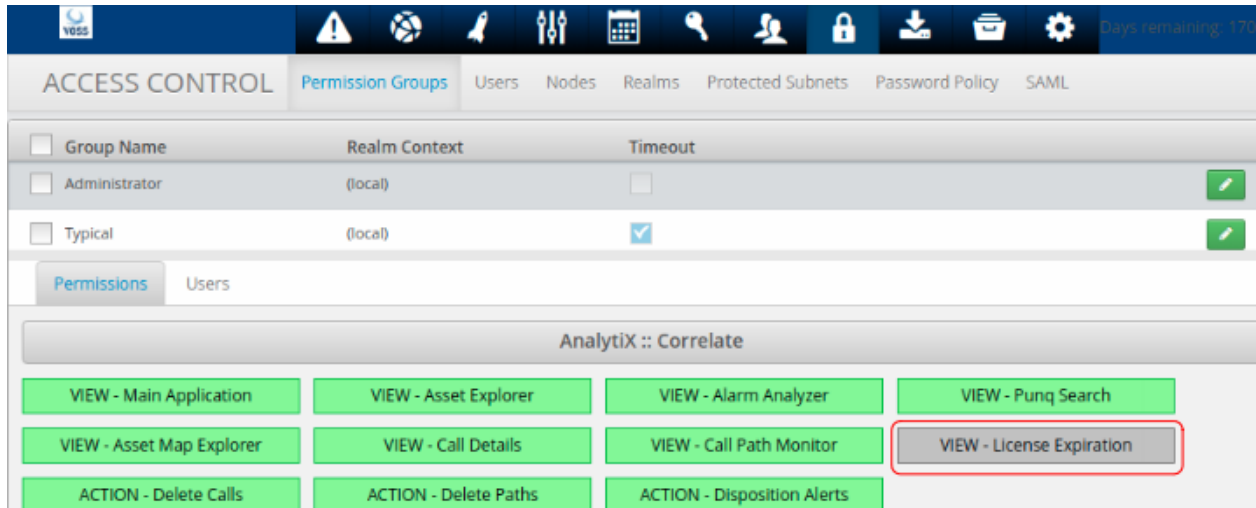
This setting can be enabled (display) or disabled (hide).



2.2.2. Show or Hide Days Remaining from the UI

You can choose to show or hide the license days remaining from the main user interface. To do this:

1. In **ACCESS CONTROL**, select **Permission Groups**.
2. Toggle the following setting: **VIEW - License Expiration**



2.2.3. View License Days Remaining

To see how many days left, from the main menu, for a logged in user:

1. Choose **About**
2. Check the **DAYS LICENSED** and **DAYS REMAINING** values.

2.2.4. Load a License File

To load a license file:

1. Obtain the license file
2. Choose **About**
3. Click **EDIT PRODUCT KEY** and replace it with the one from the license file.

Note: When updating a license file, any custom theme that is applied remains active.

3. Correlate

3.1. Correlate

3.1.1. Menu Bar

There are distinct functional 'Views' within the interface. Each will be covered in its own section of this guide.

- Policy Monitor
- Asset Explorer
- Alarm Analyzer
- Event Search
- Call Path Monitor
- Call Detail Monitor

This menu is located at the top of the browser page and allows you to navigate to each of the Arbitrator views. Each are shown below:



1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12.

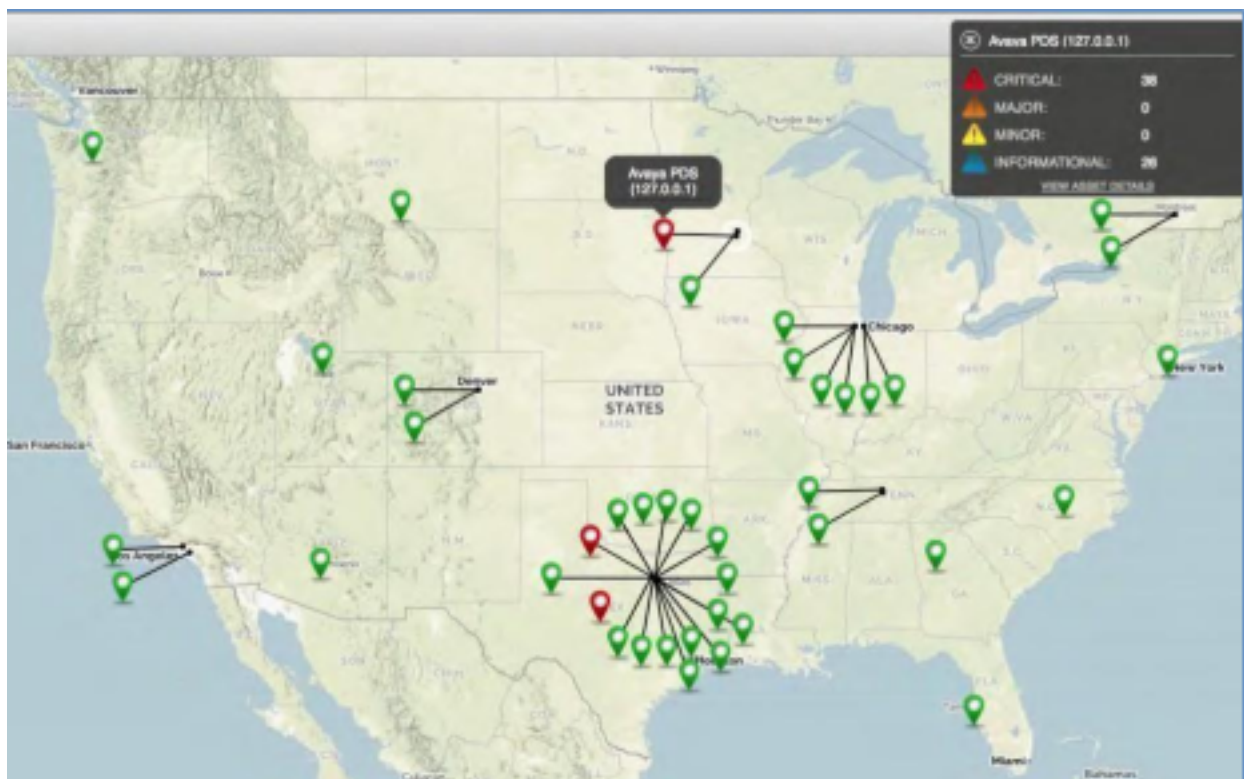
1. Policy Configuration
2. Asset Configuration
3. Probe Configuration
4. Controls
5. Response Procedures
6. Credentials
7. Customers
8. Access Control
9. Import / Export
10. Archive Management
11. Tools
12. Admin

3.1.2. Assets

Asset Overview

Each Asset is colored to reflect its current Alert Status. The status colors available and their meanings are below:

- Red (Critical)
- Orange (Major)
- Yellow (Minor)
- Blue (Informational / Notification)
- Green (Healthy)



You can click on any of the assets to display the summarized alarm statistics for that asset. A box will open in the upper right corner of the screen to show the details. To see greater detail about the status of the asset, click on the underlined [View Asset Details](#) in the bottom of the box. This will take you to the Asset Details view. (See Asset Details view under the Asset Explorer Section)

Asset Explorer

Asset Explorer gives a view into the current alarm state of the assets monitored by Arbitrator.

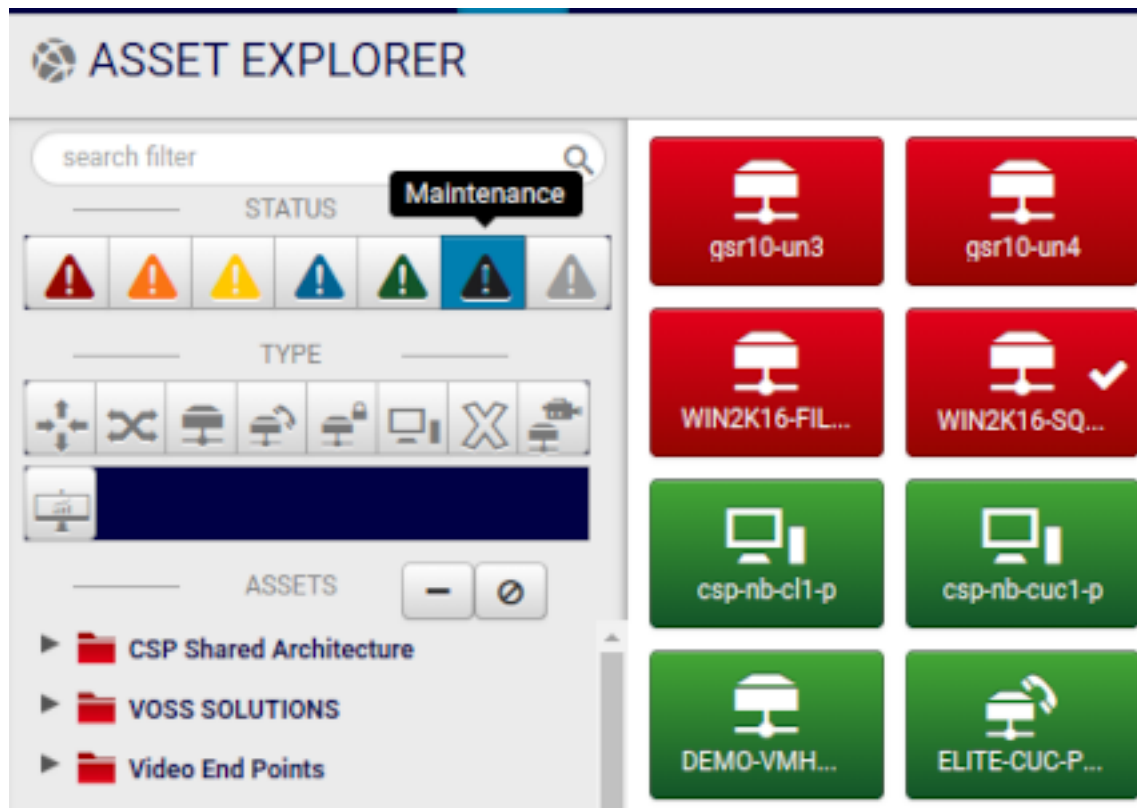
Only devices created as Assets in the Arbitrator system will be rendered in the view. Since Correlated events create alarms in the system, asset icon colors will change to reflect the severity level of the alert. Assets display the color of the current highest-level alert for that asset in the system.

Alert Severity Levels:

- Red (Critical)
- Orange (Major)
- Yellow (Minor)
- Blue (Informational / Notification)
- Green (Healthy)



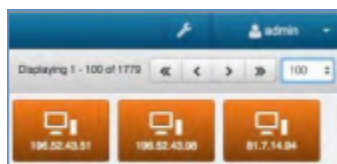
Asset Filtering



The Assets displayed can be filtered using the filtering pane on the left. This includes:

- Filtering by Alert Severity levels, including **Maintenance Mode**.
- Asset Type
- Defined Asset Groups
- Keyword

Asset Explorer Navigation



The Asset Explorer will display up to 100 assets per page. Use the navigation button in the top right to grab the next 100 assets or the specific increment you have set.

Asset Details View

The Asset Details View is opened when you double click on any of the assets in the Asset Explorer view. Once open the view contains 3 tabs:

- Alerts
- Probes
- Search

Click Close in the upper right corner of the screen to return to the Asset Explorer view.

Asset Details: Alerts Tab

The screenshot displays the 'ASSET DETAILS - 10.13.37.43' window. At the top, there are tabs for 'ALERTS', 'PROBES', and 'SEARCH'. Below the tabs is a table of alerts. The first alert is highlighted, and its details are shown below the table. The details include a 'REFERENCE ID', 'NODE', 'POLICY', 'RULE', 'OWNER', 'STATUS', 'START', 'LAST CHANGE', 'ELAPSED TIME', 'NEXT ESCALATION', 'EXPIRES IN', and 'RESPONSE PROCEDURE'. The description of the alert is also visible.

| DATE | NODE | POLICY | RULE | STATUS | OWNER |
|-------------------------|---------|--------------------------|----------------------|--------|------------|
| 07/08/18
11:57:06 AM | devpart | Cisco Alerts : Universal | Critical Cisco Error | OPEN | Unassigned |
| 07/08/18
11:08:21 AM | devpart | Cisco Alerts : Universal | Critical Cisco Error | OPEN | Unassigned |
| 07/08/18
09:25:15 AM | devpart | Cisco Alerts : Universal | Major Cisco Error | OPEN | Unassigned |
| 07/08/18
09:18:21 AM | devpart | Cisco Alerts : Universal | Critical Cisco Error | OPEN | Unassigned |

Alert Details:

- REFERENCE ID: 20000-01000005-00-01-36950-34843
- NODE: devpart
- POLICY: Cisco Alerts : Universal
- RULE: Major Cisco Error
- OWNER: Unassigned
- STATUS: OPEN
- START: 07/08/18 11:57:06 AM
- LAST CHANGE: -
- ELAPSED TIME: 0 Days 01:22:30
- NEXT ESCALATION: 07/08/18 01:29:16 PM
- EXPIRES IN: 00:08:40
- RESPONSE PROCEDURE: Default IRP

Description:

Major Cisco Error (c13-Jul 8 2018 16:57:06 10.13.37.43: <179>82378; : com: 52977; CUCM12.layertech.com Jul 08 2018 16:57:05 UTC : %UC_CALLMANAGER-3-EndPointUnregistered: %[DeviceName=SEP03048DEF81A][IPAddress=172.16.1.11][Protocol=SIP][DeviceType=336][Description=SEP03048DEF81A][Reason=10][IPAddrAttributes=0][CallState=402-call_delivered4][AppID=Cisco CallManager][ClusterID=StandAloneCluster][NodeID=CUCM12]: An endpoint has unregistered)

This tab displays all alerts associated with the asset and allows the user to disposition, add alert journal entries for the alert and see a report of the alert and events. (See Alert Disposition, Alert Journal and View Report within the Alert Analyzer Section)

Asset Details: Probes

ASSET DETAILS • 10.13.37.43

TYPE Unknown
IP 10.13.37.43
ALIAS Unknown
MAC Unknown

HOSTNAME 10.13.37.43
TIMEZONE Unknown
VENDOR Unknown
MODEL Unknown

VERSION Unknown
DESCRIPTION

ALERTS **PROBES**

CPU and Memory

RAW DETAILS

```

@date this took 0.061254 seconds to send a request to https://10.13.37.43/ast/ASTraop.d/GetPreCarvedInfoItems-getCpuAndMemoryRequest
Status: 200
<?xml version="1.0"?><PreCarvedReply ReturnCode="0" CollectingRate="30" AMQ="CUCM12" RaQ="CUCM12"><getCpuAndMemoryReply ReturnCode="0" ErrorMessage=""
Timestamp="153107141" NumOfProcessors="1"><Host Name="CUCM12" ReturnCode="0" ErrorMessage=""><Memory UsedKbytes="519368" FreeKbytes="118454" TotalKbytes="1028812"
SharedKbytes="62396" BufferKbytes="309680" CachedKbytes="451868" TotalSwapKbytes="4066496" UsedSwapKbytes="118552" FreeSwapKbytes="3977944" VmPercentageUsed="37"
MemPercentageUsed="51"/><Processor Name="0" Processor Name="0" PercentageUser="3" PercentageNice="0" PercentageSystem="4" PercentageIdle="91" PercentageIoq="0" PercentageIoq="0"
PercentageOWait="1" PercentageCPU="8"/><Processor Name="3" PercentageUser="3" PercentageNice="0" PercentageSystem="3" PercentageIdle="90" PercentageIoq="0"
PercentageIoq="0" PercentageOWait="4" PercentageCPU="11"/><Processor Name="4" PercentageUser="0" PercentageNice="0" PercentageSystem="1" PercentageIdle="99"
PercentageIoq="0" PercentageOWait="0" PercentageCPU="0" PercentageUser="0" PercentageNice="0" PercentageSystem="0" PercentageIdle="100" PercentageIoq="0"
PercentageOWait="0" PercentageCPU="13"/><Processor Name="2" PercentageUser="2" PercentageNice="0" PercentageSystem="1" PercentageIdle="96" PercentageIoq="0"
PercentageOWait="0" PercentageCPU="4"/><Processor Name="1" PercentageUser="2"

```

RANGE: 1 HOUR < > Displaying 1 - 24 of 24

This tab displays all probes associated with the asset. Clicking on each probe will display the probes output. If output is a numerical value, such as CPU usage, then a graph will be displayed of that value over time. If the probe output is non-numerical then just the last probe output will be displayed.

Asset Details: Search

This tab contains an event search bar tied to the data only associated with this asset. This allows the user to search all logs / events by this particular asset versus the entire index data store. (See Event Search for more details)

ASSET DETAILS • 10.13.37.43

TYPE Unknown
IP 10.13.37.43
ALIAS Unknown
MAC Unknown

HOSTNAME 10.13.37.43
TIMEZONE Unknown
VENDOR Unknown
MODEL Unknown

VERSION Unknown
DESCRIPTION

ALERTS **PROBES** **SEARCH**

1 Last 24 Hours

Displaying 1 - 10 of 221,614 events • first prev next last • 10

```

1
07/08/18
11:53:22 AM
<packageContext id="1" name="callData">
<timestamp key="2018-07-08 10:51:21">
<sessionId key="a9d40664bb8b6e-3481-e811-80d4-031040def81a">
<registrarIP key="10.13.37.44">
<translatIP key="">
<registrarDomain key="">
<source key="1028172.16.1.11">
<destination key="4098">
<letCallEndReason key="EndedBySecurityDenial">
<reason key="Layack">
<comments>
<latcbema corderId="callResponseCodes" version="1.2" method="">
<sessionOutput>
<PDU code="195" message="Trying received" local="172.16.1.11" remote="10.13.37.44"/>
<PDU code="481" message="Unauthenticated received" local="172.16.1.11" remote="10.13.37.44"/>
<PDU code="195" message="Trying received" local="172.16.1.11" remote="10.13.37.44"/>
<PDU code="200" message="OK received" local="172.16.1.11" remote="10.13.37.44"/>
<PDU code="481" message="Call Leg/Transaction Does Not Exist (329 bytes) to" local="172.16.1.11" remote="10.13.37.44"/>
<PDU code="195" message="Trying received" local="172.16.1.11" remote="10.13.37.43"/>
<PDU code="481" message="Forbidden received" local="172.16.1.11" remote="10.13.37.43"/>
</sessionOutput>
</latcbema>
</comments>
</packageContext>
<letCallError=>message=Could not find call_metrics_wml key tag=</Message></letCallError>
Host: 172.16.1.11 Port: 10.13.37.110:64005 Method: xml_message.xml

```

2

```

<!--241 8 2018 16:51:40 10.13.37.7: 494 <190> 2018-07-08T11:51:39-05:00 PA-500.layacktech.com - - - 1,2018/07/08 11:51:38,029401023698,TRAFFIC, end,2049,2018/07/08
11:51:38,10.13.37.43,216.239.35.12,71.41.183.98,216.239.35.12,Dev-External,,ntp,vyval,Dev-Trust,External-Untrust,ethernet1/2,ethernet1/1,Demo,2018/07/08
11:51:38,33729,1,35549,123,51835,123,8a402653,udp,allow,630,360,270,7,2018/07/08 11:51:08,1,any,0,2207257887,8x0,10.0.0.0-10.255.255.255,United States,0,4,3,aged-
out,0,0,0,0,PA-500,From-policy,,0,,0,,N/A,0,0,0,0
Host: 10.13.37.7 Port: 10.13.37.110:614 Method: tcp_spylog

```

3

```

<!--241 8 2018 16:51:40 10.13.37.7: 493 <190> 2018-07-08T11:51:39-05:00 PA-500.layacktech.com - - - 1,2018/07/08 11:51:37,029401023698,TRAFFIC, end,2049,2018/07/08
11:51:37,10.13.37.43,216.239.35.12,71.41.183.98,216.239.35.12,Dev-External,,ntp,vyval,Dev-Trust,External-Untrust,ethernet1/2,ethernet1/1,Demo,2018/07/08
11:51:37,38737,1,42132,123,45559,123,0a402653,udp,allow,630,360,270,7,2018/07/08 11:51:08,2,any,0,2207257887,8x0,10.0.0.0-10.255.255.255,United States,0,4,3,aged-
out,0,0,0,0,PA-500,From-policy,,0,,0,,N/A,0,0,0,0
Host: 10.13.37.7 Port: 10.13.37.110:614 Method: tcp_spylog

```

3.1.3. Alerts

Alert Analyzer

The Alert Analyzer screen displays all of the alerts coming into the system based on a first in / last out presentation. It allows the user to see the alerts as they are happening or ones that have been in existence for a period of time. It also provides the ability to disposition the alerts based on activity as well as view a report with specific details associated with the alert. There are also several filter and sort options available to apply to the view.

The screenshot shows the Alert Analyzer interface. At the top, it displays 'ALERT ANALYZER' and 'Displaying 1 - 10 of 3,702 Alerts'. Below this are controls for 'FILTERS', 'SORT', 'BULK DISPOSITION', and 'STATUS'. The main area shows a table of alerts with columns for DATE, NODE, POLICY, RULE, STATUS, and OWNER. One alert is expanded to show details:

REFERENCE ID: 20000-01000005-00-01-39900-4430
NODE: devpart
POLICY: Cisco Alerts : Universal
RULE: Critical Cisco Error
OWNER: Unassigned
STATUS: OPEN

START: 07/07/18 01:01:37 PM
LAST CHANGE: -
ELAPSED TIME: -
NEXT ESCALATION: 07/07/18 03:01:30 PM
EXPIRES IN: Expired
RESPONSE PROCEDURE: Default IP

DESCRIPTION: -

The table below shows a list of alerts:

| DATE | NODE | POLICY | RULE | STATUS | OWNER |
|----------------------|---------|--------------------------|----------------------|--------|------------|
| 07/07/18 01:01:17 PM | | | | | |
| 07/07/18 01:01:29 PM | devpart | Catch all test | Catch all test | OPEN | Unassigned |
| 07/07/18 01:01:36 PM | devpart | Cisco HCS PCA | RTMT_ALERT | OPEN | Unassigned |
| 07/07/18 01:02:21 PM | devpart | Cisco Alerts : Universal | Critical Cisco Error | OPEN | Unassigned |
| 07/07/18 01:02:38 PM | devpart | Cisco HCS PCA | RTMT_ALERT | OPEN | Unassigned |
| 07/07/18 01:02:40 PM | devpart | Catch all test | Catch all test | OPEN | Unassigned |

Alert Disposition

The drop-down box allows you to set the status of each alert. The can be set one at a time or by bulk. The available options are:

- Open: This is a new alert.
- Under Review: Moved out of the open state and the alert journal can still be edited.
- Acknowledge: Moved out of the open state and the alert journal can still be edited.
- Release: Moved out of the open state and the alert journal can still be edited.
- Close: Moved out of the open state and the alert journal can still be edited.
- Disregard: The alert is deleted from the system.
- Close and Locked: Moved to a closed state and the alert journal cannot be edited.

To disposition an alert simply open the alert by expanding it (click the up and down arrows to the far right of the alert). Once open select the drop-down box next to "Status" and select the disposition state.

The screenshot shows the ALERT ANALYZER interface with a list of alerts. A context menu is open over one alert, displaying options: UNDER REVIEW, ACKNOWLEDGE, RELEASE, CLOSE, and CLOSE + LOCK. The alert details show a 'Critical Cisco Error' with a status of 'OPEN' and an owner of 'Unassigned'.

The screenshot shows the ALERT ANALYZER interface with a list of alerts. A 'Bulk Disposition' menu is open, showing options: Mark as Closed, Mark as Under Review, Mark as Acknowledged, Mark as Released, Mark as Disregarded, and Mark as Closed + Locked. The alert details show a 'Critical Cisco Error' with a status of 'OPEN' and an owner of 'Unassigned'.

Bulk Disposition: This will allow the user to disposition a group of alerts at once. First apply the required filter to the alerts by using the Filter Manager (See Alert Filters). Once you have the group of alerts filtered then select the desired disposition state from the “Bulk Disposition” drop-down box.

Filtering by Disposition

By clicking the drop-down box “Status” you can choose to see only the alerts with a specific disposition status. Once open select your choice(s) by checking the boxes and click update. The screen will show only the ones you have selected.

The screenshot shows the ALERT ANALYZER interface with a list of alerts. The 'Status' dropdown menu is open, showing options: Open, Under Review, Acknowledged, Released, and Closed. The alert details show a 'Critical Cisco Error' with a status of 'OPEN' and an owner of 'Unassigned'.

Alert Filters

Alert Filters provide the ability to filter all of the alerts by Keywords, Severity and Date & Time. Open the “Filter Manager” by selecting the wrench icon in the top left of the screen next to the word Filters. Click the “Add” button to add a new filter.

- Keywords: Fill in the detail to filter by. Choose to enter one, many or all of the criteria fields.
 - Name: Sets the name of the filter for your reference
 - Description: Description of the filter
 - Policy: Filter by the name of the correlation policy
 - Rule: Filter by the name of the correlation rule
 - Group: Filter by the name of the group
 - Customer: Filter by the name of the customer
 - Site: Filter by the site
 - Node: Filter by the node
 - Message: Filter by the message
 - Owner: Filter by the owner

The screenshot shows the 'FILTER MANAGER' window with a 'KEYWORDS' tab selected. The form contains the following fields:

- NAME:** Test
- DESCRIPTION:** This is a test filter
- POLICY:** (empty)
- RULE:** Critical Cisco Error
- GROUP:** (empty)
- CUSTOMER:** (empty)
- SITE:** (empty)
- NODE:** (empty)
- MESSAGE:** (empty)
- OWNER:** (empty)

At the top right, there are 'SAVE' and 'CANCEL' buttons. On the left, there is a list of filters with a 'Test' filter selected, showing 'ALLOW' and 'DISREGARD' buttons.

- Severity: The filter can be set based on the chosen severity or severities. Additionally, the state or states can be chosen with each severity. Click the levels desired.
 - Active: Alert is currently in one of the active states
 - Escalated: Alert has been escalated based on the timer in the correlation rule
 - Acknowledged: Alert is in an acknowledged disposition state.
 - Expired: Alert has expired based on the timer set in the correlation rule

FILTER MANAGER [SAVE] [CANCEL]

+ ADD - REMOVE

KEYWORDS **SEVERITY** DATE & TIME

Test This is a test filter [ALLOW] [DISREGARD]

| | ACTIVE | ESCALATED | ACKNOWLEDGED | EXPIRED |
|---------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| CRITICAL | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| MAJOR | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| MINOR | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| INFORMATIONAL | <input checked="" type="checkbox"/> | | | |

- Date & Time: The filter can be set based on a date range, by “All Day”, by a specific start and end time, by the day of the week or any combination.

FILTER MANAGER [SAVE] [CANCEL]

+ ADD - REMOVE

KEYWORDS SEVERITY **DATE & TIME**

Test This is a test filter [ALLOW] [DISREGARD]

DATE

START DATE [] END DATE []

TIME

ALL DAY

START [0] [0] End [0] [0]

DAY OF WEEK

SUNDAY
 MONDAY
 TUESDAY
 WEDNESDAY
 THURSDAY
 FRIDAY
 SATURDAY

Alert Journal

The Alert Journal will show the history of the alert and the actions taken both by the system and by the user. Additionally, a user can add a journal entry to update status or actions taken.

To add an Alert Journal:

- Click the Pause button to stop the automatic refresh
- Expand the Alert you want to add an entry to by clicking the expand icon
- Click the Journals Button
- Type the journal entry into the text box where it says NEW JOURNAL ENTRY
- When done Click Add
- Click the Play button to stop the pause and allow to refresh

The screenshot shows the Alert Analyzer interface. At the top, it displays 'ALERT ANALYZER' and 'Displaying 1 - 10 of 3,898 Alerts'. Below this, there are controls for 'FILTERS', 'SORT', 'BULK DISPOSITION', and 'STATUS'. The main area shows a table of alerts with columns: DATE, NODE, POLICY, RULE, STATUS, and OWNER. The first alert is expanded, showing its details and a journal of actions.

| DATE | NODE | POLICY | RULE | STATUS | OWNER |
|-------------------------|---------|---------------|------------|--------|------------|
| 07/08/18
12:00:40 PM | devparb | Cisco HCS PCA | RTMT_ALERT | OPEN | Unassigned |

Alert Details:

Alert Name: Critical Cisco Error : Critical Cisco Error (<13>Jul 8 2018 17:00:40 169.254.5.16: <186>206881: ; ; 203794: astdc-v-ocm-pub.dimensiona.com: Jul 08 2018 05:00:37 PM.410 UTC ; 40C_RTMT-2-RTMT_ALERT: %[AlertName=CriticalServiceDown][AlertDetail=#012 Service operational status is DOWN.#012Cisco CallManager.#012The alert is generated on Sun Jul 08 12:00:37 CDT 2018 on node astdc-v-ocm-pub.dimensiona.com.][AppID=Cisco AMC Service][ClusterID=][NodeID=astdc-v-ocm-pub]: RTMT Alert)

Journal of Actions:

| TIMESTAMP | CREATOR | ACTION |
|----------------------|---------|---|
| 07/08/18 12:45:36 PM | system | Alert Created. Response: Default RIP Schedule: autogenerated_schedule_24x7 Node: devparb(127.0.0.1) - Critical Cisco Error : Critical Cisco Error (<13>Jul 8 2018 17:00:40 169.254.5.16: <186>206881: ; ; 203794: astdc-v-ocm-pub.dimensiona.com: Jul 08 2018 05:00:37 PM.410 UTC : %UC_RTMT-2-RTMT_ALERT: %[AlertName=CriticalServiceDown][AlertDetail=#012 Service operational status is DOWN.#012Cisco CallManager.#012The alert is generated on Sun Jul 08 12:00:37 CDT 2018 on node astdc-v-ocm-pub.dimensiona.com.][AppID=Cisco AMC Service][ClusterID=][NodeID=astdc-v-ocm-pub]: RTMT Alert) |
| 07/08/18 12:45:37 PM | system | Incident Response - Method: ALERT, Status: Success |
| 07/08/18 12:45:37 PM | system | Incident Response - Method: CONTROL, Description: New Vodafone Control, Status: Success |

Alert Sorting

The alerts shown on the Alert Analyzer can be sorted based on three categories:

- Time to Expire / Escalate
- Alert Severity
- Alert Date & Time

These three choices determine the sorting of the alerts on the Alert Analyzer screen. Each one can be toggled between ascending and descending order. Additionally, the order of each one will be the first to last in priority. This can be changed by clicking the down or up button next to each category.

The screenshot shows the ALERT ANALYZER interface. At the top, it displays 'Displaying 1 - 10 of 3,898 Alerts'. Below this, there are controls for FILTERS, SORT, BULK DISPOSITION, and STATUS. A dialog box is open for sorting, with options for 'TIME TO EXPIRE/ESCALATE', 'ALERT SEVERITY', and 'ALERT DATE & TIME', each with 'ASCENDING' and 'DESCENDING' buttons and up/down arrows. The main table shows a list of alerts with columns for STATUS and OWNER. The first alert is 'Error' with status 'OPEN' and owner 'Unassigned'. Below the table, there are several 'OUTPUT:' sections showing detailed log data for each alert, including timestamps and error messages.

3.1.4. Search

Event Search

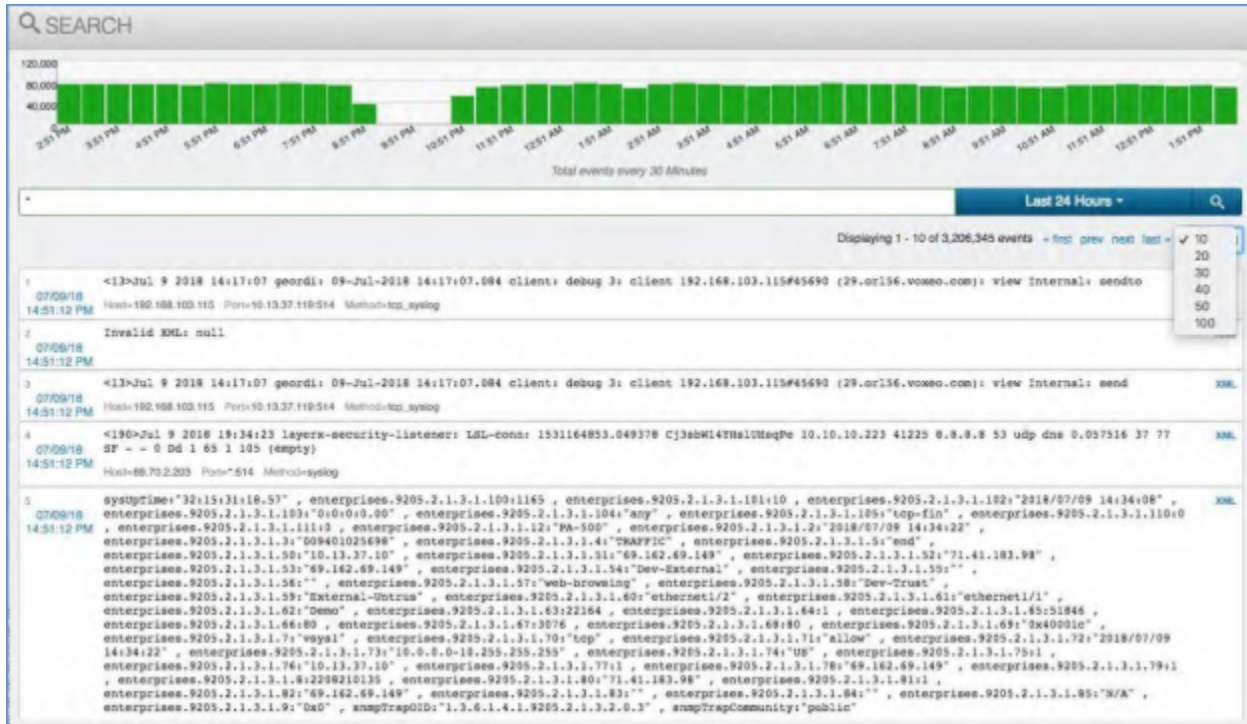
The Event search view provides access to all the raw data coming into Arbitrator Correlation and provides a simple interface to search and display it. The Arbitrator Correlation platform builds a dictionary of all of the words it has absorbed from all of the logs it has received and enables rapid search across large volumes of data. Essentially making an otherwise difficult amount of data quickly searchable and more useable.

Simple Searching

To perform a simple search across all of the logs based on the default time of “Last 24 Hours” use the “*” wildcard character.

- In the search text input field type *
- Press Enter or click the magnifying glass icon

All log data received in the last 24 hours will be returned. The default number of logs per page is 10 but can be expanded by opening the drop-down box under the time bar and selecting the number desired.



Keyword Searching

To perform a keyword search across all of the logs based on the default time of "Last 24 Hours" start by typing in the word that you know is present in your data, such as "Cisco". As you type the word the event search will begin to auto suggest your keyword based on the data the Correlation platform has collected. Once you have finished press enter, select the word in the drop-down list or click the magnifying glass icon.

All log data that contains the keyword in the last 24 hours will be returned. The default number of logs per page is 10 but can be expanded by opening the drop-down box under the time bar and selecting the number desired.



Utilizing Conjunctions with Searching

The Event Search allows the use of conjunctions to combine keywords which will assist you in being more specific in your search. The conjunctions available are AND, OR and NOT. To perform a search with conjunctions across all of the logs based on the default time of “Last 24 Hours” start by typing in the word that you know is present in your data, such as “Cisco”, followed by the conjunction then the next word. Once you have finished press enter, select the word in the drop-down list or click the magnifying glass icon.

All log data that contains the keywords in the last 24 hours will be returned. Note: when using a conjunction in the search the logic must match or no data will be returned. The default number of logs per page is 10 but can be expanded by opening the drop-down box under the time bar and selecting the number desired.



Date Range Searching

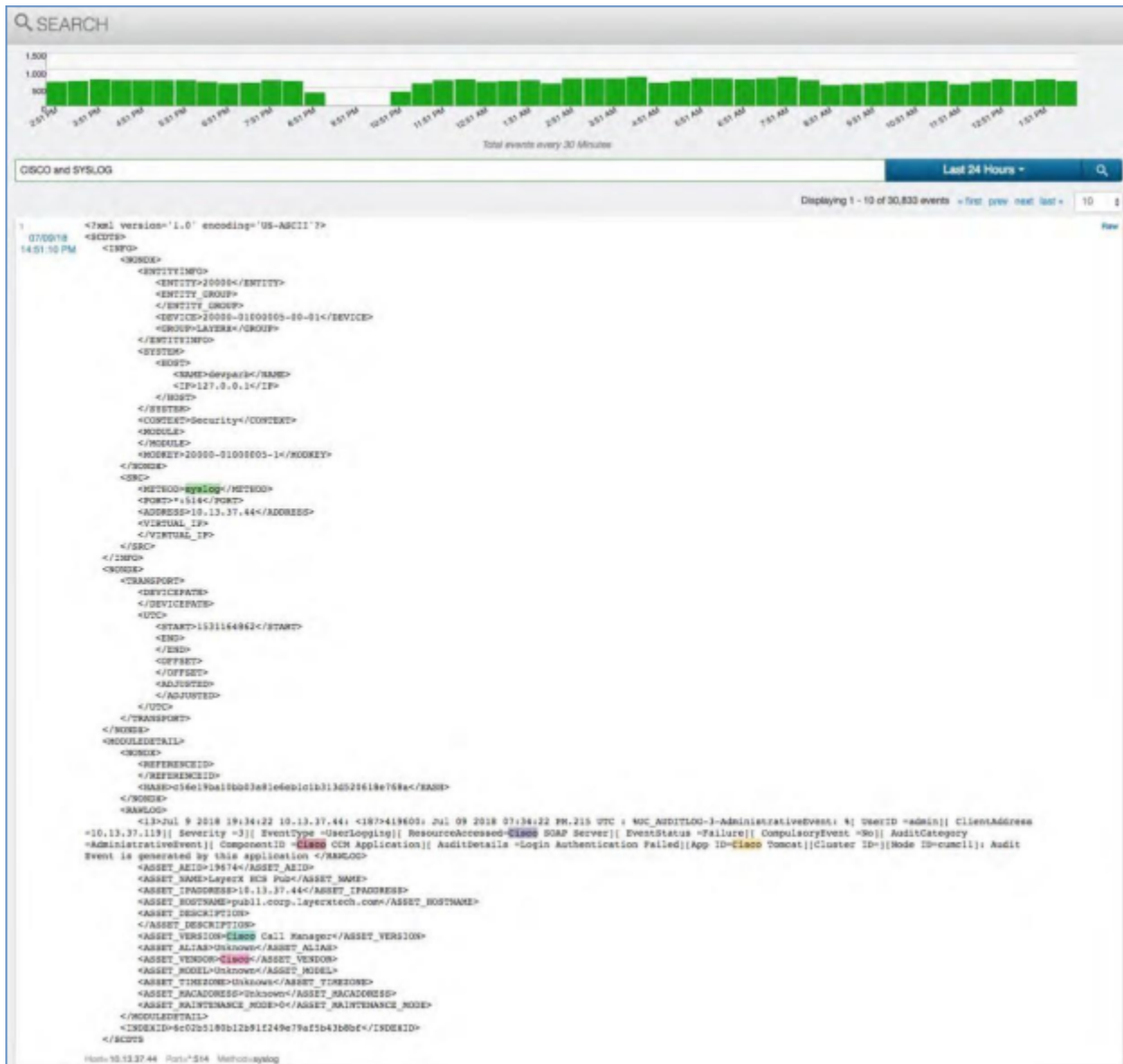
With any of the above methods the user can also select the specific date to search for the data. The default is the last 24 hours but by opening the drop-down bar several options are presented.

- Last 24 Hours: The default
- Last 1 Hour
- Last 30 Minutes
- Last 5 Minutes
- Custom date range showing from and to. Clicking in the “From” box opens up a calendar from where you can select the specific from date you desire. Clicking in the “To” box will do the same.



Search Result Meta-Data

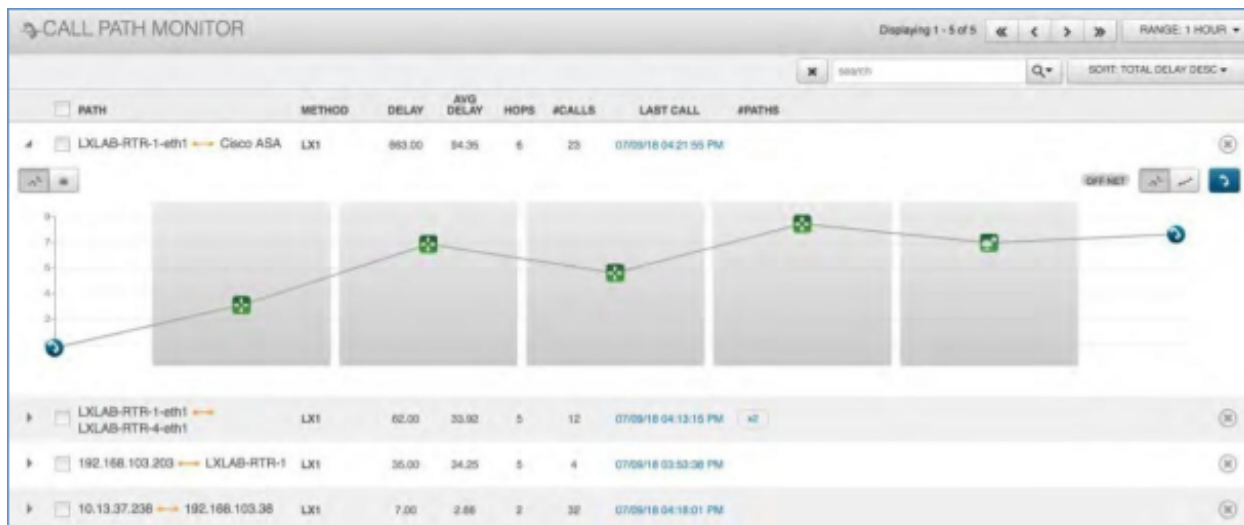
The Event Search engine utilizes the core processes of the Arbitrator Correlation platform to store, tag and manage the data. To the right of each log entry is a blue “XML”. Clicking on this will open up all of the XML representation of the data along with some very important added elements. In particular are the Entity ID’s which server as the basis for making every event unique and formulating the “Reference ID” seen in the Alert Analyzer screen. Additionally, if applicable, a hash of the raw log is available for compliance purposes. To go back to the main search screen simply click the blue “Raw”.



3.1.5. Call Path

Call Path Monitor

The Call Path Monitor serves as one of the base screens for managing Unified Communications and the particular call path that a Voice over IP call takes. It will display the paths or routes that a call took from the source to the destination. Each path contains the IP Addresses, number of hops, delay and latency during the call.



Sorting Call Paths

The screen and the represented call paths can be sorted by three variables:

- Total Delay: The total latency on the call.
- Average Delay: The average latency on the call.
- Total Hops: The total number of layer-3 hops the call took.

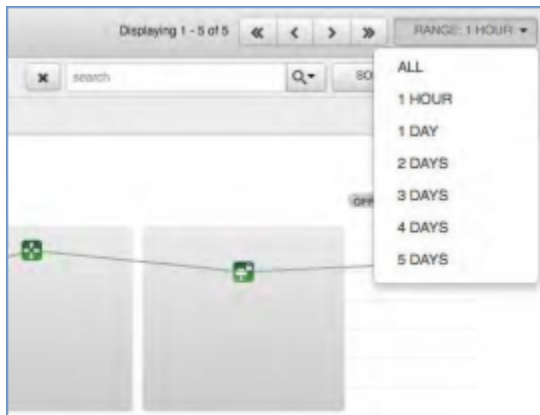
Each selection also has the choice of selecting ascending or descending order.



Time Range for Call Paths

This provides the option of selecting the time range in which to show the call paths collected. Click the “Range” drop-down button. The available options are:

- All
- 1 Day
- 2 Days
- 3 Days
- 4 Days
- 5 Days



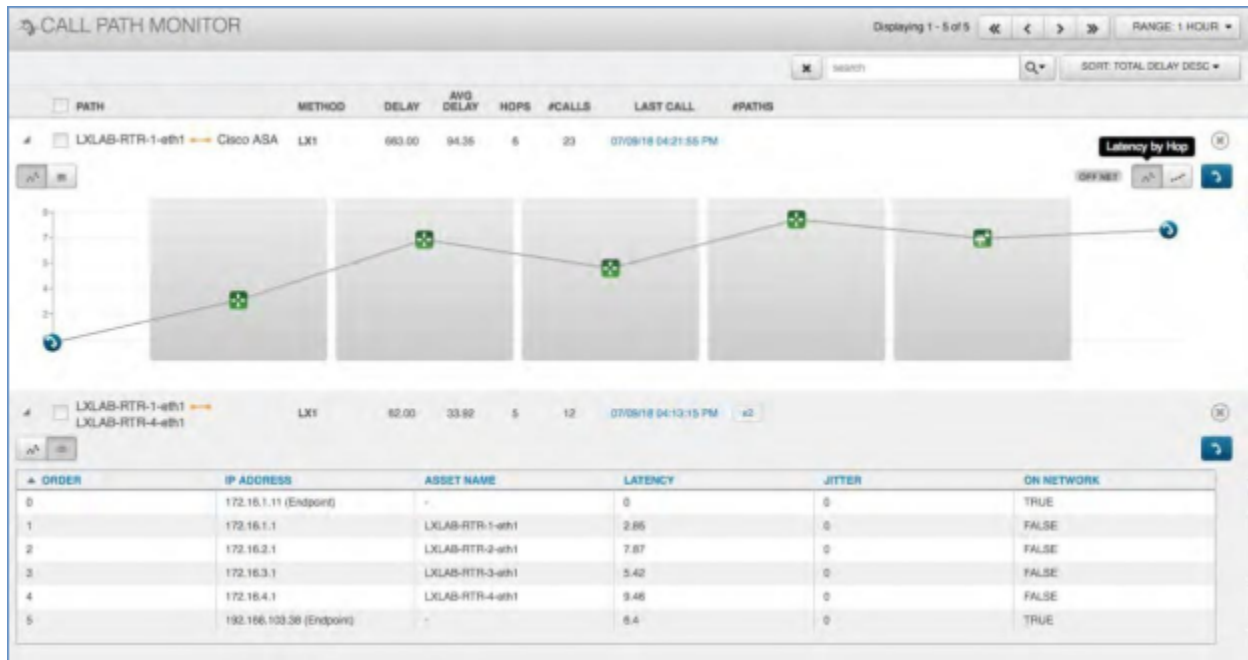
Expanding Call Paths

Expanding a call path allows you to see the path by hop or by IP Address. In addition, it provides an option to view it by the total per hop or cumulative delay, latency, and Jitter. The expanded view also shows you whether the call was ON Network or OFF Network. The expanded view can be toggled to show in graph or table views.

To expand a call path and toggle between graph and table views:

- Click arrow icon next to the call path you want to expand

By default, the view will be in graph mode. To switch to the table view, simply choose the table view icon in the upper left corner of the now expanded call path.



Searching Call Paths

Each Call Path has several fields you can utilize to search and filter for the call(s) that you are interested in. The fields available are:

- Source
- Destination
- Method
- Hops

The screenshot shows a search filter dialog box. At the top, there is a search bar with the text 'search' and a search icon. Below the search bar, there are four checkboxes, each with a corresponding input field:

- SOURCE
- DESTINATION
- METHOD
- HOPS

At the bottom of the dialog, there are two buttons: 'CLOSE' and 'SEARCH'.

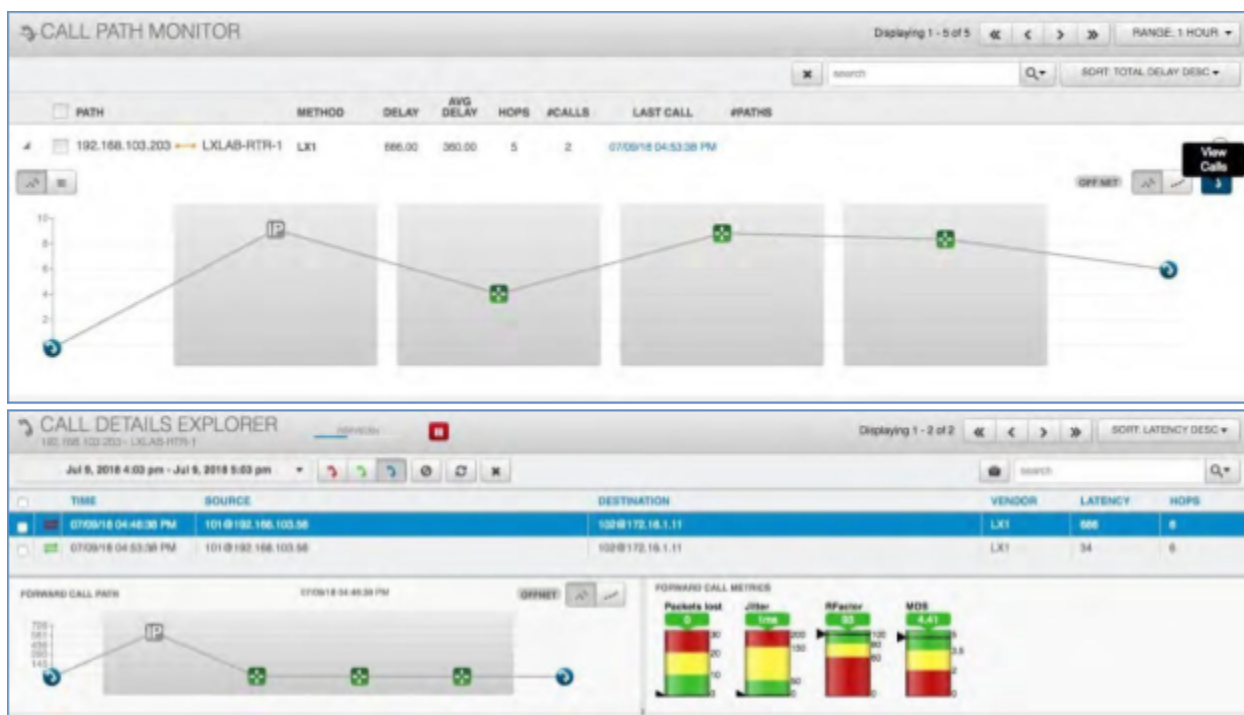
View Call Details from the Call Path

The Call Path screen allows you to drill into the specific call details right on the chart. Simply click the blue telephone icon at the end of the path and it will take you to the Call Details Explorer view for that call path.

3.1.6. Call Details

Call Details Explorer

The Call Details Explorer is the main screen for managing Unified Communications and the details of a particular call path that a Voice over IP call takes. It will display the time, source destination, vendor, latency and hops along the top screen. Below will show the Call path with each hop along with the call metrics (packets lost, jitter, R-Factor and MOS).

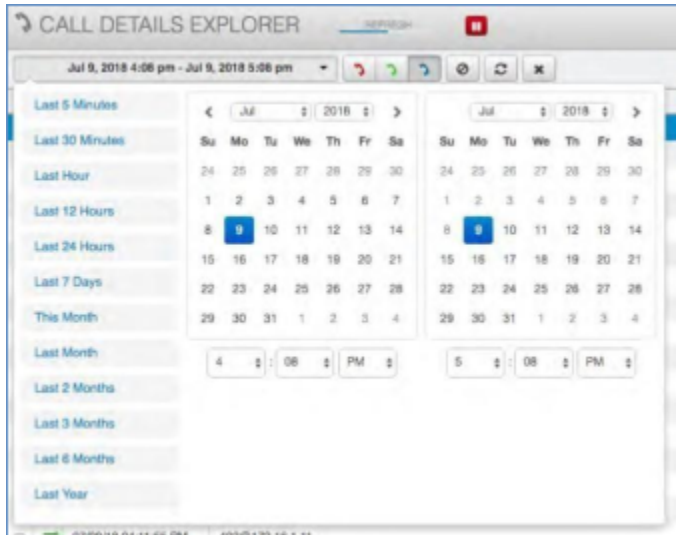


Filter by Date and Time

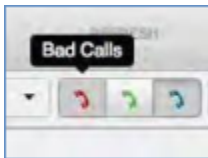
In the upper left corner there is a time bar. You can choose to search the call details by the various options presented. When you click inside the bar several options along with a calendar open up to select.

- Last 5 Minutes
- Last 30 Minutes
- Last Hour
- Last 12 Hours
- Last 24 Hours
- Last 7 Days * This Month
- Last Month

- Last 2 Months
- Last 3 Months
- Last 6 Months
- Last Year
- Specific Date and Time



Filter by Call Quality



Just next to the time bar are several icons that allow you to filter the call detail data by Call Quality. There are 3 options:

- Bad Calls (Red)
- Good Calls (Green)
- Bad and Good Calls (Blue)

Clear Filter, Update and Delete Call



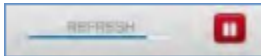
The three icons next to the call quality filters provide the functions below:

- Clear Filter: This will remove all filters set and the call details will show the default display.
- Update: The screen is pre-set with a refresh timer. Clicking this icon allows you to request new data on demand.

- Delete Call: If the check box is selected next to any call then by clicking this icon the system will delete that call.

Refresh Pause

Selecting the pause icon in the top left of the view will stop the refresh cycle. This comes in handy as you are reviewing a specific call.

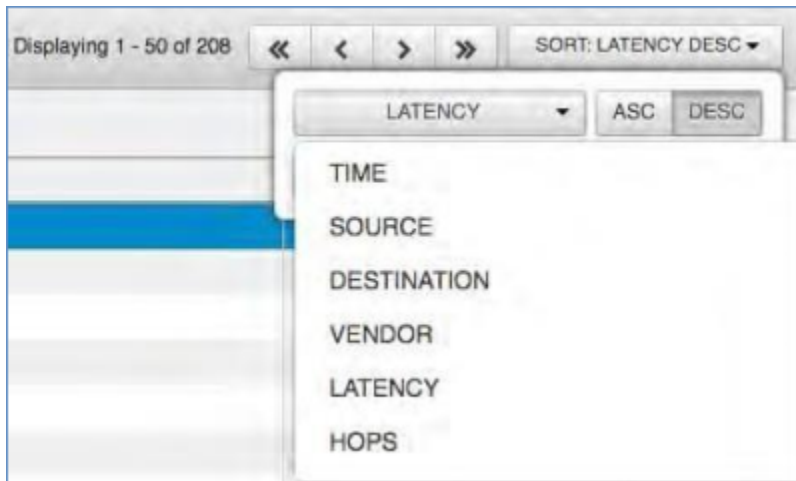


Sorting

At the top right of the screen is a drop-down button called "Sort". Clicking this button will open up several options for which the call details can be sorted.

- Time: The time the call was placed
- Source: The source that placed the call
- Destination: The destination of the call
- Vendor: Identifies the method that created the call. The only options are LX1 (the VOSS Raptor Call Path generator) and RTCP (Avaya specific RTCP and call path data)
- Latency: The aggregate latency recorded on the call
- Hops: The total number of hops the call took

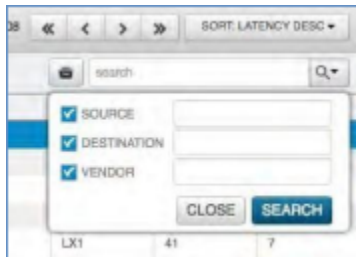
Each option allows for the choice of ascending or descending order.



Search Call Details

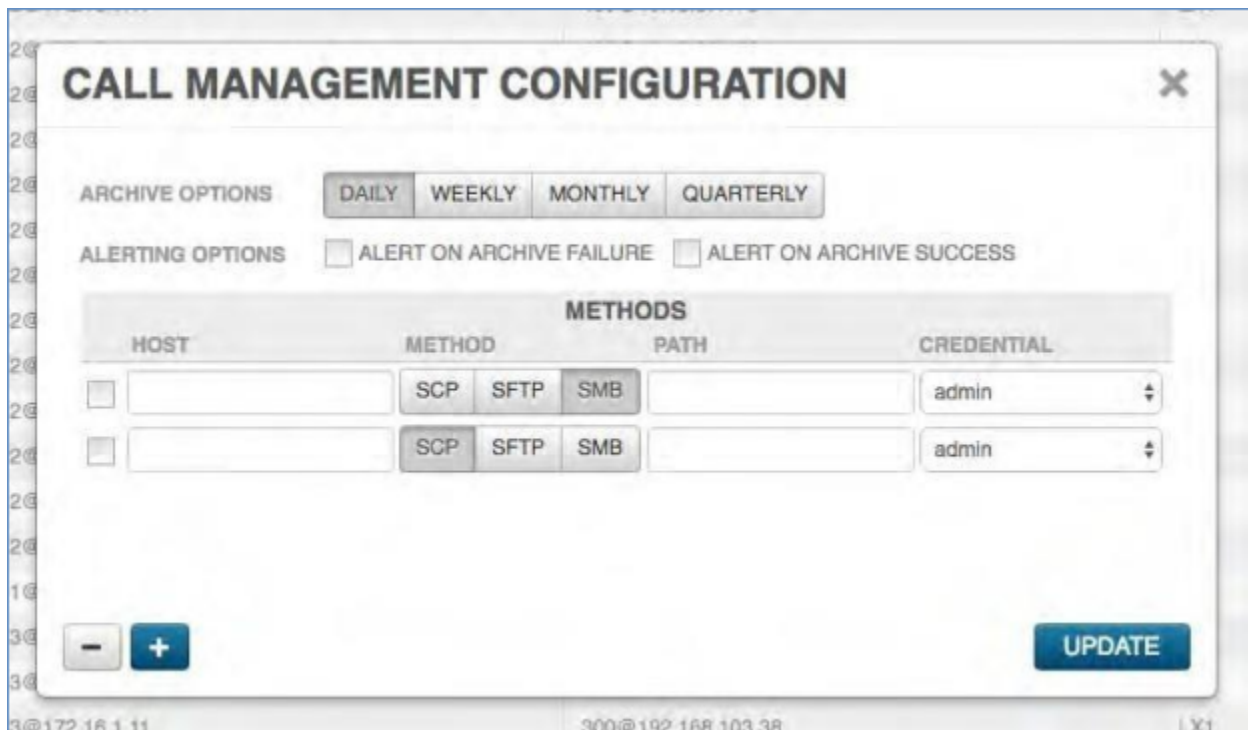
The search bar in the top right of the screen allows the user to search for specific call details. There are three options that can be utilized to search:

- Source: The source IP that made the call
- Destination: The destination IP that received the call
- Vendor: Identifies the method that created the call. The only options are LX1 (the VOSS Raptor Call Path generator) and RTCP (Avaya specific RTCP and call path data)



3.1.7. Call Management Configuration

In very busy or large environments it is imperative to manage the data that is being collected in the Call Detail Explorer. Have potentially 100's of thousands of calls can lead to the data becoming difficult to manage. As such there is the option to manage the configuration of the call table within the Call Detail Explorer screen. Click the file cabinet icon next to the search bar and a menu screen will pop up. This provides optional time and methods for which the call data can be archived. The choices are Daily, Weekly, Monthly or Quarterly. Be sure to toggle on "Alert on Archive Failure" and "Alert on Archive Success. The methods available for archival are SCP, SFTP or SMB. Each requires a host, path and credential. Multiple methods may be added.



4. Configuration

4.1. Configuration

The menu bar at the top of the screen provides options to navigate to each of the configuration sections. Each will be covered in its own section of this guide.

- *Policy Configuration*
- *Asset Configuration*
- *Probe Configuration*
- *Controls*
- *Response Procedure Configuration*
- *Credential Configuration*
- *Customer Configuration*
- *Access Control*
- *Import & Export*
- *Archive Management*
- *Log Management*
- *Tools*



1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12.

4.1.1. Policy Configuration

Policies are a modular groupings of correlation rules, actions and response procedures that define how to respond to certain situations that happen on the monitored systems. Policies are usually system and manufacturer specific but can contain custom scripts for actions and response procedures. Each policy will also contain several correlation rules that are designed to create Alerts based on the best practices of that particular system manufacturer. These alerts can apply to:

- Business Processes
- Infrastructure
- Security
- Applications
- Unified Communications
- Network behavior
- Metrics and Threshold Violations

The screenshot displays the 'POLICY CONFIGURATION' interface. On the left, there is a 'Policies' list with columns for Name, Fallover, and a count. The 'Rules' section on the right shows a table of rules with columns for Name, Threshold, Window, Severity, and Response Procedure. The 'Latency Value Exceeded' rule is selected, and its configuration details are shown in a form below the table. The form includes fields for Name, Description, Type (Simple), Action (Respond), Threshold (1), Window (1 minute), Severity (Critical), Response Procedure (Reboot Machine), Definition Output, Enabled (checked), Inherit Output (checked), and Halt Processing (checked). At the bottom, it indicates 'Displaying 1 - 4 of 4 events' with navigation buttons.

| Name | Fallover | Count |
|-------------------------------------|----------|-------|
| Avaya Call Monitor | 4 | 4 |
| Avaya PDS SNMP Alarms | 4 | 4 |
| Avaya PDS SYSLOG Alarms | 13 | 13 |
| Cisco Call Monitor | 4 | 4 |
| LXERX Agent Monitor | 3 | 3 |
| Log Monitor | 1 | 1 |
| LX1 Call Monitor v2 | 5 | 5 |
| LX1 SIP Call Errors v2 | 6 | 6 |
| Nortel Call Monitor | 3 | 3 |
| PING Monitor | 2 | 2 |
| Powerwave SNMP Alarms | 11 | 11 |
| SiLo training policy | 2 | 2 |
| Test Alarm v1 | 1 | 1 |
| AJ Exper/Mental | 3 | 3 |
| ALSTCIYBARN : Austin - Alert Exa... | 9 | 9 |
| ALSTCIYBARN : Dallas - Alert Exa... | 9 | 9 |
| ALSTCIYBARN : NYC - Alert Examp... | 9 | 9 |

| Name | Threshold | Window | Severity | Response Procedure |
|-----------------------------|-----------|----------|----------|--------------------|
| Jitter Value Exceeded | 1 time | 1 minute | Critical | LinkCallToAlert |
| Latency Value Exceeded | 1 | 1 minute | Critical | Reboot Machine |
| MOS Value LOW | 1 time | 1 minute | Critical | LinkCallToAlert |
| Packets Lost Value Exceeded | 1 time | 1 minute | Critical | LinkCallToAlert |

Rule Configuration Details:

- Name: Latency Value Exceeded
- Description: [Empty]
- Type: Simple
- Action: Respond
- Threshold: 1
- Window: 1 minute
- Severity: Critical
- Response Procedure: Reboot Machine
- Definition Output: [Empty]
- Enabled:
- Inherit Output:
- Halt Processing:

Displaying 1 - 4 of 4 events = first prev next last =

Correlation Rules

A Correlation rule extracts data from the various sources and then defines the parameters for Alert creation within a Policy. It may contain 1 or more Correlation Definitions along with specific actions and Response Procedures. Each correlation rule consists of the following parameters:

| Parameter | Description |
|-------------|---|
| Name | Descriptive name for the correlation rule which will be displayed within an Alert and viewed in Alert Analyzer. |
| Description | Enter a complete description of the problem that created the alert along with any specific remediation steps that should be taken to resolve the problem. |
| Type | Simple: Select if the rule is to analyze a single log and as a result of the rule, you want to execute an action.
Compound: Select if the rule is to correlate more than one log, the results of another correlated event or multi-tiered rules. A compound rule can be one or more simple rules that feed into one primary rule, or it can come directly from the source.
Unique: Same as Simple but as a definition will be the only one. |
| Threshold | Selects how many times this rule is to match before an action occurs. |
| Window | Select the time window for the rule to match before an action occurs. |

| Parameter | Description |
|-------------------------|--|
| Severity | Indicates what is to appear in the Status field on the Alert Viewer monitor.
Select the severity for this rule: <ul style="list-style-type: none"> • Informational • Minor • Major • Critical |
| Action | Choose the action that is to occur for this rule, based on the selection in the Severity field <ul style="list-style-type: none"> • Respond - If the condition is met, set a marker and send an alert. • Track - If the condition is met, track the event, but do not post it to the Alert Analyzer. • Track/Respond - If the condition is met, send an alert and continue to monitor. • Respond on Expire – If the condition is met, wait to send an alert until the window time has expired. If you want the policy/rule to only alert after an application does not respond, based on the setting (for example, to ping 9 times in 10 minutes), choose Track and Respond. For the example in this case, the alert triggers as soon as it sees 9 ping failures. This setting (Respond on Expire) does not track. • Submit - Submit the results of a correlation event back into the Correlation Engine so that the behavior can be analyzed and re- correlated. • Submit/Respond - Submit this alert back into the Correlation Engine so that the event can be analyzed and re-correlated. Then set a marker and send an alert. |
| Response Procedure | For any rule that is satisfied, an Incident Response Procedure occurs and an event is posted to the Alert Analyzer. Select the Response Procedure from the drop-down menu to execute when conditions have been met. |
| Definition Output | Selects a single Correlation Definition's extracted value to be displayed with the Alert. |
| Enabled | Toggle to enable/disable the rule |
| Inherit Output | Toggle to enable/disable whether the rule will include the results of the filter attached to the policy module. |
| Halt Processing | Toggle to halt processing of logs to any other rules within the policy if the rule matches. This will highlight the Policy in Green to indicate that this function is in use. |
| Correlation Definitions | Click the wrench icon where you can define one or more definitions match and or extract the required data from a log or event. See Correlation Definitions. |
| Output Order | Sets the preferred order to output the extracted data from the Correlation Definitions. |
| Done | Click the Done box when the rule is complete |
| Save | Be sure to click the Save button so your rule (or changes) are saved and committed. |

The screenshot displays the 'POLICY CONFIGURATION' interface. On the left, a list of policies is shown with checkboxes and fallover values. The 'Rules' tab is active, showing a configuration form for a rule named 'Jitter Value Exceeded'. The form includes fields for Name, Description, Type (Simple), Action (Respond), Threshold (1), Window (1 minute), Severity (Critical), Response Procedure (LinkCallToAlert), Definition Output, Enabled (checked), Inherit Output (checked), and Halt Processing (checked). A 'Save' button is visible in the top right corner.

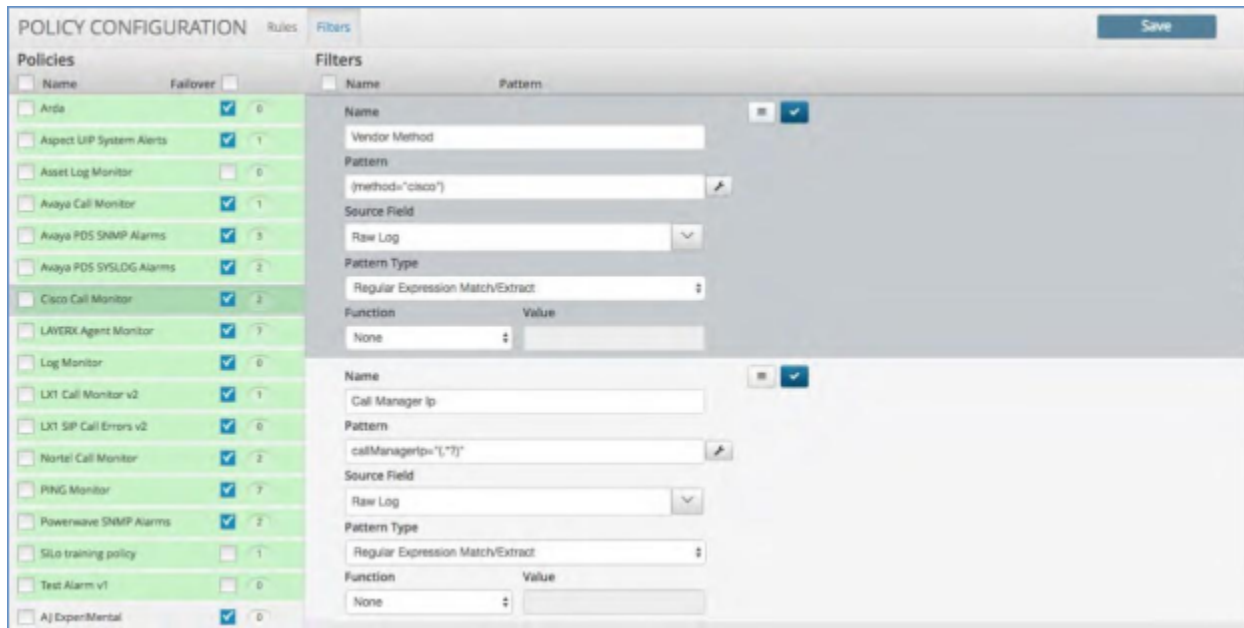
| Policies | Name | Fallover |
|--------------------------|--------------------------|----------|
| <input type="checkbox"/> | Aria | 1 |
| <input type="checkbox"/> | Aspect UFP System Alerts | 2 |
| <input type="checkbox"/> | Asset Log Monitor | 1 |
| <input type="checkbox"/> | Aways Call Monitor | 4 |
| <input type="checkbox"/> | Aways PDS SNMP Alarms | 4 |
| <input type="checkbox"/> | Aways PDS SYSLOG Alarms | 13 |
| <input type="checkbox"/> | Cisco Call Monitor | 4 |
| <input type="checkbox"/> | LAYERX Agent Monitor | 3 |
| <input type="checkbox"/> | Log Monitor | 1 |
| <input type="checkbox"/> | LXI Call Monitor v2 | 5 |
| <input type="checkbox"/> | LXI SIP Call Errors v2 | 4 |
| <input type="checkbox"/> | Nortel Call Monitor | 3 |
| <input type="checkbox"/> | SRG Monitor | 1 |

| Rules | Name | Threshold | Window | Severity | Response Procedure |
|--------------------------|-----------------------|-----------|----------|----------|--------------------|
| <input type="checkbox"/> | Jitter Value Exceeded | 1 | 1 minute | Critical | LinkCallToAlert |

Correlation Filters provide a simple way of ensuring that all of the correlation rules within the policy are firing on the correct set of data. The engine first looks at the filter criteria, then it selects only the data that matches the criteria, and then it applies the correlation rule. You can add as many of these as required.

Each filter has the following options:

| Filter Option | Description |
|---------------|--|
| Name | Provide a name as close as possible to the data elements you wish to filter. This allows the output to match the name once viewed in the alert text. |
| Pattern | <p>The extraction method used to pull a particular data point out. Click the Wrench icon adjacent to the box to launch the Regex Wizard, which helps you to find and extract the data.</p> <p>The Regex Wizard has two sections:</p> <ol style="list-style-type: none"> 1. Select a Log: In the top section you can search and select the log or data set you will be utilizing. That will then show up in the bottom portion under the phrase "Select log from the list above or paste log here:". You can copy and paste a log into this section as well. 2. Create Regex: Once you have your log then go to this section. Here you can use the wizard to create the Regular Expression required. Close the wizard and copy this pattern the Regex into the box under Pattern. |
| Source Field | From the drop-down, choose the source from which data is extracted. |
| Pattern Type | <p>From the drop-down, choose the type of expression you want to use:</p> <ul style="list-style-type: none"> • String Match • Regular Expression Match • Regular Expression Match/Extract (Most Often Used) • Regular Expression Multi-Valued Extract |
| Function | <p>If the extracted data is integer-based, you can apply the following functions for comparing data:</p> <ul style="list-style-type: none"> • None • Greater Than • Less Than • Same |
| Value | This field is available only if the data extracted is an integer. |



Example: Policies and Alerts

Let's say you have a Ping policy that you've set to alert after 10 failures in 20 minutes.

Depending on how you've set up your rules, the following may occur:

- The policy may run against all your assets and trigger an alarm if the cumulative Ping failure (across all assets) hits 10
- The policy may trigger an alarm for each asset that fails a ping 10 times in 20 minutes

Thus if it sees 10 failures (across all assets) in 20 minutes, an alert is triggered. However, if you want 10 failures per asset, you need a definition for the IP address, and set the filter function to **Same**, which defines that when you see 10 failures for the same IP address, trigger an alert.

You can configure this definition in two ways:

- As a filter on the policy
- As a specific rule definition.

Correlation Definitions

A Correlation Definition defines what criteria to match within the data. Each definition will consist of the following parameters:

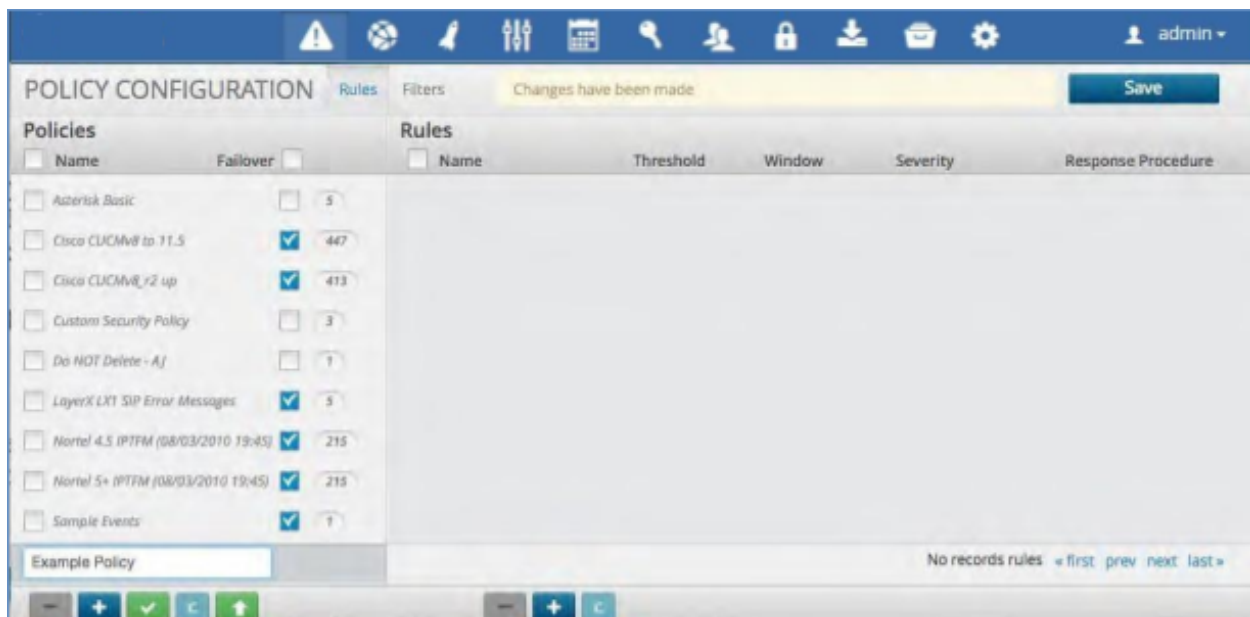
| Parameter | Description |
|-----------|---|
| Name | <p>Name this as close as possible to the data elements being extracted. That way the output matches the name once viewed in the alert text. It is also utilized in the key value pair within the alert text.</p> <p>This is the extraction methodology utilized to pull the particular data point(s) out. Simply find the log containing the data by utilizing the search bar above. Within that log you can highlight the text you want to extract. Once highlighted a box will pop up allowing you to name the field and extract it. This will automatically create the Regex to extract the data. The highlight method is about 95% accurate.</p> <p>If you have trouble with this method due to special characters in the data set, then you can utilize the “wrench” icon beside the Pattern box and it will bring up the “Regex Wizard” to assist in finding and extracting the data.</p> |
| Pattern | <p>Within the Regex Wizard there are 2 sections:</p> <ul style="list-style-type: none">• Select a Log: In the top section you can search and select the log or data set you will be utilizing. That will then show up in the bottom portion under the phrase “Select log from the list above or paste log here:”. As the phrase indicates you can copy and paste a log into this section as well.• Create Regex: Once you have your log then go to this section. Here you can utilize the wizard to create the Regular Expression required. Close the wizard and copy this pattern the Regex into the box under Pattern. |

| Parameter | Description |
|--------------|--|
| Source Field | In the drop-down box select the source from which the data is being extracted. |
| Pattern Type | <p>Select from the drop-down box the type of expression you want to utilize:</p> <ul style="list-style-type: none"> • String Match • Regular Expression Match • Regular Expression Match/Extract (Most Often Used) • Regular Expression Multi-Valued Extract <hr/> <p>Note: The “Extract” pattern types above will cause the correlation engine to include the definition name and the matched value in the Alert Message.</p> <hr/> |
| Function | <p>The functions below may be used to change what the correlation engine counts as a “match” in the log. Alerts are only triggered if the specific number of matches are found.</p> <ul style="list-style-type: none"> • None - Default. Only use Pattern type matching to trigger a match. • Greater Than - Should only be applied to integer values. If the extracted value is greater than the configured value, then a “match” is made. • Less Than - should on be applied to integer values. If the extracted value is less than the configured value, then a “match” is made. • Same - Can be applied to both Text or Integer. If the extracted value is the same as previous occurrences, a match triggered. For example, if multiple devices are sending an error message, only the first error will trigger an alert. If the desired goal is to trigger an alert for unique IP address, then the IP address definition should have the Same function applied. |
| Value | This field will only be available if the Function selected is either “Greater Than” or “Less Than”. |

Creating a Policy

To Create a Policy:

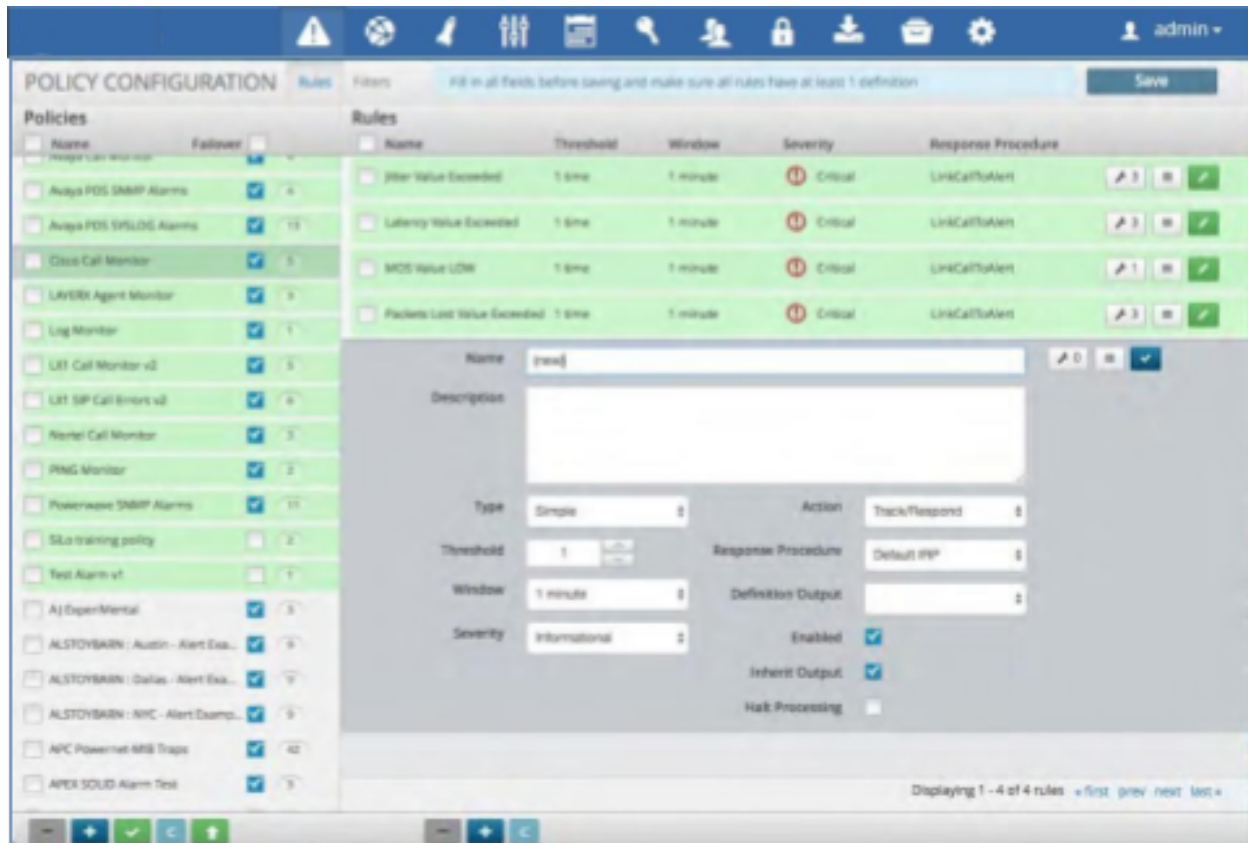
1. Click the Policy View from the Configuration Menu Bar at the top of the page.
2. Click the Plus Icon at the bottom left of the Policies panel
3. Fill in the Policy name and press enter.



Creating a Correlation Rule

To Create a new Correlation Rule:

1. Click the Policy to which you wish to add the rule.
2. Click the Plus icon at the bottom of the Rules panel.
3. Fill in the rule name and the parameters.



Creating a Definition

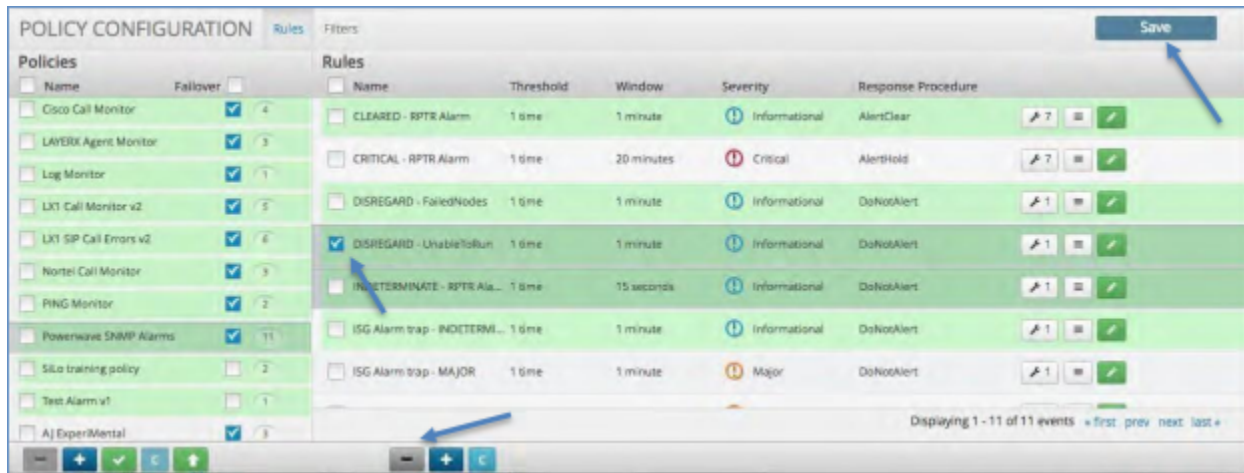
To create a new definition:

1. Click the wrench icon within any rule to bring up the search engine.
2. Enter a search term that is relevant or is in the log that you would like to match and press Enter. This will return the last 10 logs with this term in them.
3. Utilize the highlight and extract procedure or the Regex Wizard as described in the in “Correlation Definitions” section above.
4. Once finished click Update in the top right of the screen and be sure to save your Definition on the next page.

Deleting a Correlation Rule

To delete a Correlation Rule:

1. Click the policy name on the left side of the screen.
2. Click the check box on the Correlation rule you wish to delete.
3. Click the minus icon at the bottom of the correlation panel.
4. Click the Save icon in the upper right to save your change.



Deleting a Policy

To delete a Policy:

1. Click the check box next to the name of the Policy you wish to delete.
2. Click the minus icon in the bottom left of the policy panel.
3. Click the Save icon in the upper right to save your change.

The screenshot shows the 'POLICY CONFIGURATION' interface. On the left, there is a 'Policies' table with columns for Name, Fallover, and a checkbox. The 'Powerwave SNMP Alarms' policy is selected, and its name is italicized. On the right, there is a 'Rules' table with columns for Name, Threshold, Window, Severity, and Response Procedure. A 'Save' button is located in the top right corner, with a blue arrow pointing to it.

| Policies | | | Rules | | | | |
|---|-------------------------------------|----|--|-----------|------------|---------------|--------------------|
| Name | Fallover | | Name | Threshold | Window | Severity | Response Procedure |
| <input type="checkbox"/> Cisco Call Monitor | <input checked="" type="checkbox"/> | 4 | <input type="checkbox"/> CLEARED - RPTR Alarm | 1 time | 1 minute | Informational | AlertClear |
| <input type="checkbox"/> LAYERX Agent Monitor | <input checked="" type="checkbox"/> | 3 | <input type="checkbox"/> CRITICAL - RPTR Alarm | 1 time | 30 minutes | Critical | AlertHold |
| <input type="checkbox"/> Log Monitor | <input checked="" type="checkbox"/> | 1 | <input type="checkbox"/> DISREGARD - FailedNodes | 1 time | 1 minute | Informational | DoNotAlert |
| <input type="checkbox"/> LX1 Call Monitor v2 | <input checked="" type="checkbox"/> | 5 | <input type="checkbox"/> DISREGARD - UnableToRun | 1 time | 1 minute | Informational | DoNotAlert |
| <input type="checkbox"/> LX1 SIP Call Errors v2 | <input checked="" type="checkbox"/> | 6 | <input type="checkbox"/> INDETERMINATE - RPTR Ala... | 1 time | 15 seconds | Informational | DoNotAlert |
| <input type="checkbox"/> Nortel Call Monitor | <input checked="" type="checkbox"/> | 3 | <input type="checkbox"/> ISG Alarm trap - INDETERMI... | 1 time | 1 minute | Informational | DoNotAlert |
| <input type="checkbox"/> PING Monitor | <input checked="" type="checkbox"/> | 2 | <input type="checkbox"/> ISG Alarm trap - MAJOR | 1 time | 1 minute | Major | DoNotAlert |
| <input checked="" type="checkbox"/> Powerwave SNMP Alarms | <input checked="" type="checkbox"/> | 11 | <input type="checkbox"/> ISG Alarm trap - MAJOR | 1 time | 1 minute | Major | DoNotAlert |
| <input type="checkbox"/> Site training policy | <input type="checkbox"/> | 2 | | | | | |
| <input type="checkbox"/> Test Alarm v1 | <input type="checkbox"/> | 1 | | | | | |
| <input type="checkbox"/> AJ Exper/Mental | <input checked="" type="checkbox"/> | 3 | | | | | |
| <input type="checkbox"/> ALSTDYBARN : Alert Exa... | <input checked="" type="checkbox"/> | 9 | | | | | |

Disabling and Enabling a Policy

To Disable and Enable a Policy:

1. Select the Policy by clicking the check box next to the name of the policy.
2. Click the Green Check Box at the bottom of the Policies listing column.
3. The Name of the Policy will become italicized indicating that the Policy is Disabled
4. To Enable the Policy: Click the Green Check Box again. The name will turn back to a normal font indicating it is enabled.

The screenshot shows the 'POLICY CONFIGURATION' interface after a policy has been disabled. The 'Powerwave SNMP Alarms' policy is selected, and its name is italicized. A blue arrow points to the green check box at the bottom of the Policies listing column, indicating that the policy is disabled.

| Policies | | | Rules | | | | |
|---|-------------------------------------|----|--|-----------|------------|---------------|--------------------|
| Name | Fallover | | Name | Threshold | Window | Severity | Response Procedure |
| <input type="checkbox"/> Cisco Call Monitor | <input checked="" type="checkbox"/> | 4 | <input type="checkbox"/> CLEARED - RPTR Alarm | 1 time | 1 minute | Informational | AlertClear |
| <input type="checkbox"/> LAYERX Agent Monitor | <input checked="" type="checkbox"/> | 3 | <input type="checkbox"/> CRITICAL - RPTR Alarm | 1 time | 30 minutes | Critical | AlertHold |
| <input type="checkbox"/> Log Monitor | <input checked="" type="checkbox"/> | 1 | <input type="checkbox"/> DISREGARD - FailedNodes | 1 time | 1 minute | Informational | DoNotAlert |
| <input type="checkbox"/> LX1 Call Monitor v2 | <input checked="" type="checkbox"/> | 5 | <input type="checkbox"/> DISREGARD - UnableToRun | 1 time | 1 minute | Informational | DoNotAlert |
| <input type="checkbox"/> LX1 SIP Call Errors v2 | <input checked="" type="checkbox"/> | 6 | <input type="checkbox"/> INDETERMINATE - RPTR Ala... | 1 time | 15 seconds | Informational | DoNotAlert |
| <input type="checkbox"/> Nortel Call Monitor | <input checked="" type="checkbox"/> | 3 | <input type="checkbox"/> ISG Alarm trap - INDETERMI... | 1 time | 1 minute | Informational | DoNotAlert |
| <input type="checkbox"/> PING Monitor | <input checked="" type="checkbox"/> | 2 | <input type="checkbox"/> ISG Alarm trap - MAJOR | 1 time | 1 minute | Major | DoNotAlert |
| <input checked="" type="checkbox"/> Powerwave SNMP Alarms | <input checked="" type="checkbox"/> | 11 | <input type="checkbox"/> ISG Alarm trap - MAJOR | 1 time | 1 minute | Major | DoNotAlert |
| <input type="checkbox"/> Site training policy | <input type="checkbox"/> | 2 | | | | | |
| <input type="checkbox"/> Test Alarm v1 | <input type="checkbox"/> | 1 | | | | | |
| <input type="checkbox"/> AJ Exper/Mental | <input checked="" type="checkbox"/> | 3 | | | | | |
| <input type="checkbox"/> ALSTDYBARN : Alert Exa... | <input checked="" type="checkbox"/> | 9 | | | | | |

Cloning a Policy

Cloning a Policy allows the quick replication of all of the Correlation Policy rules and definitions. The user then can simply change only the required elements for the new policy.

To Clone a Policy:

1. Select the Policy by clicking the check box next to the name of the policy.
2. Click the Blue “C” Box at the bottom of the Policies listing column.
3. Rename the Policy and make your modifications.
4. Be sure to click Save to save the new policy.

The screenshot shows the 'POLICY CONFIGURATION' interface. It has a 'Policies' tab selected. The interface is divided into two main sections: 'Policies' on the left and 'Rules' on the right. The 'Policies' section has a table with columns for Name, Fallover, and a checkmark. The 'Rules' section has a table with columns for Name, Threshold, Window, Severity, and Response Procedure. At the bottom of the 'Policies' table, there is a blue 'C' button. At the top right of the interface, there is a 'Save' button. A blue arrow points to the 'Save' button, and another blue arrow points to the 'C' button. A status bar at the bottom right indicates 'Displaying 1 - 11 of 11 events'.

| Name | Fallover | Name | Threshold | Window | Severity | Response Procedure |
|---|---------------------------------------|--|-----------|------------|---------------|--------------------|
| <input type="checkbox"/> Cisco Call Monitor | <input checked="" type="checkbox"/> 4 | <input type="checkbox"/> CLEARED - RPTR Alarm | 1 time | 1 minute | Informational | AlertClear |
| <input type="checkbox"/> LAYERX Agent Monitor | <input checked="" type="checkbox"/> 3 | <input type="checkbox"/> CRITICAL - RPTR Alarm | 1 time | 20 minutes | Critical | AlertHold |
| <input type="checkbox"/> Log Monitor | <input checked="" type="checkbox"/> 1 | <input type="checkbox"/> DISREGARD - FailedNodes | 1 time | 1 minute | Informational | DoNotAlert |
| <input type="checkbox"/> LX1 Call Monitor v2 | <input checked="" type="checkbox"/> 5 | <input type="checkbox"/> DISREGARD - UnableToRun | 1 time | 1 minute | Informational | DoNotAlert |
| <input type="checkbox"/> LX1 SIP Call Errors v2 | <input checked="" type="checkbox"/> 6 | <input type="checkbox"/> INDETERMINATE - RPTR Ala... | 1 time | 15 seconds | Informational | DoNotAlert |
| <input type="checkbox"/> Nortel Call Monitor | <input checked="" type="checkbox"/> 3 | <input type="checkbox"/> ISG Alarm trap - INDETERMI... | 1 time | 1 minute | Informational | DoNotAlert |
| <input type="checkbox"/> PING Monitor | <input checked="" type="checkbox"/> 2 | <input type="checkbox"/> ISG Alarm trap - MAJOR | 1 time | 1 minute | Major | DoNotAlert |
| <input checked="" type="checkbox"/> Powerwise SMD Alarms | <input checked="" type="checkbox"/> 7 | <input type="checkbox"/> ISG Alarm trap - MAJOR | 1 time | 1 minute | Major | DoNotAlert |
| <input type="checkbox"/> No training policy | <input type="checkbox"/> 2 | | | | | |
| <input type="checkbox"/> TestAlarm v1 | <input type="checkbox"/> 1 | | | | | |
| <input type="checkbox"/> AJ Experimental | <input checked="" type="checkbox"/> 3 | | | | | |
| <input type="checkbox"/> ALSTORBARN - Austin - Int Exa... | <input checked="" type="checkbox"/> 9 | | | | | |

Export and Import a Policy

The Arbitrator platform allows for full export / import of all of its configuration. Within the Policy Configuration section, you can export and import the policy that you exported from another system.

A new system log table `insights_system_log` has also been added to log user actions and a user can create a dashboard to view these actions.

See the:

Log Search Section in the Dashboard and Reporting Administration Guide.

+ Global Filters (0 applied)

[Click to Refresh Data](#)

Mar 9, 2022 9:09 am - Mar 9, 2022 10:09 am

| System log | | | | | | | |
|------------|---------------------------------------|----------|--------|--------|---------|----------|--|
| Search | | | | | | | |
| | ixt timestamp epoch (America/Chicago) | username | action | area | status | duration | details |
| 7 | 03/09/22 9:24:49 am | admin | import | asset | SUMMARY | 19 | {"csvRows":1, "numInsert":0, "numUpdate":2, "numDelete":0} |
| 8 | 03/09/22 9:19:31 am | admin | import | asset | SUMMARY | 13 | {"csvRows":1, "numInsert":1, "numUpdate":0, "numDelete":0} |
| 9 | 03/09/22 9:18:06 am | admin | export | asset | SUMMARY | 0 | {"csvRows":2} |
| 4 | 03/09/22 9:27:56 am | admin | export | asset | SUMMARY | 0 | {"csvRows":3} |
| 1 | 03/09/22 10:07:28 am | admin | import | policy | SUMMARY | 1 | {"csvRows":4, "numGroup":1, "updateRows":"1,2,3,4", "numUpdate":4} |
| 5 | 03/09/22 9:26:24 am | admin | import | asset | SUMMARY | 14 | {"csvRows":6, "numInsert":0, "numUpdate":6, "numDelete":0} |
| 10 | 03/09/22 9:13:30 am | admin | import | asset | SUMMARY | 11 | {"csvRows":6, "numInsert":1, "numUpdate":4, "numDelete":0} |
| 6 | 03/09/22 9:25:13 am | admin | import | asset | SUMMARY | 43 | {"csvRows":6, "numInsert":1, "numUpdate":5, "numDelete":0} |
| 3 | 03/09/22 10:03:12 am | admin | export | policy | SUMMARY | 0 | {"numExportPolicyGroups":1, "csvRows":4} |
| 2 | 03/09/22 10:05:50 am | admin | export | policy | SUMMARY | 0 | {"numExportPolicyGroups":3, "csvRows":28} |

To Export a Policy:

1. Select the check boxes of the policies to export, or select the **Name** check box at the top of the **Policies** list to select *all* policies.
2. Click the green Down arrow button at the bottom of the **POLICY CONFIGURATION** panel.
3. The **Export CSV** dialog opens. Enter a **CSV file name** (You do not have to add the .csv file extension) and click **Export**.
4. The **Export finished** dialog shows when the export file has been created. Click **Download** to save the CSV file to your selected download location.

To Import a Policy:

1. Click the green Up arrow button at the bottom of the **POLICY CONFIGURATION** panel.
2. A pop-up box will appear asking you choose your file.
3. Click the **Choose file** button and select the exported CSV file that you have saved to your computer.
4. Click the **Import** button.

Policy CSV Format

The following columns are in an exported CSV file:

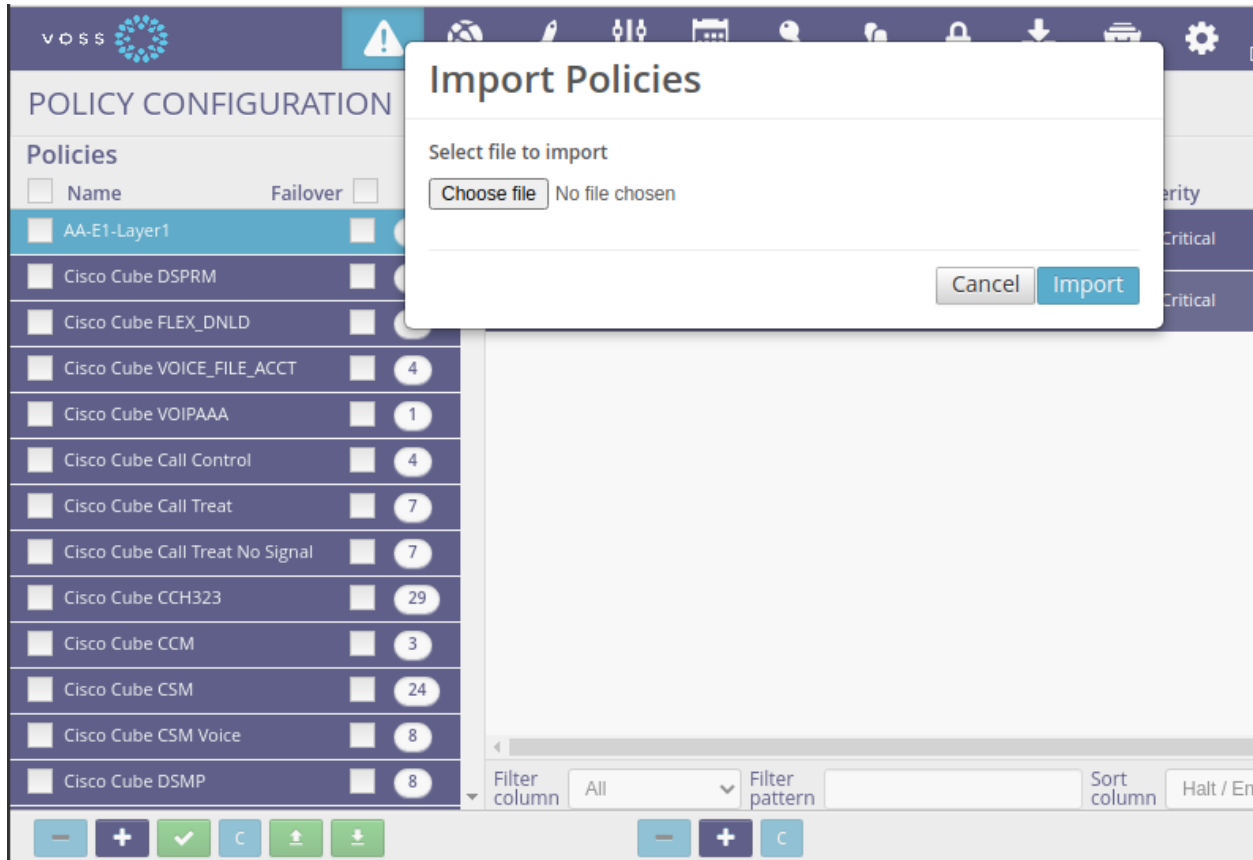
```
"row action", "policy group name", name, description, type, action, severity,
"respond procedure", "SubCategory (definition: regular expression match)",
"Message (definition: regular expression match/extract)"
```

Note:

- The "row action" column is used when importing and if it contains "delete", then the row will be deleted upon import.
- The "respond procedure" column can be used when importing and should then contain the Response Procedure name *exactly* as it exists on the system. If a procedure is found, then it will be assigned to the associated rule. If a new value is entered, a new Response Procedure is created. The default Response Procedure is used if no value is entered.

- The combination: “policy group name”, “name”, “respond procedure” should be unique in CSV row. If a policy found, its data will be updated. If not found, new policy will be inserted. The “name” has to be unique. If a rule is found, its data will be updated. If not found, new rule will be inserted to the policy indicated in “policy group name”.

See: [Response Procedure Configuration](#).



4.1.2. Asset Configuration

The Asset Configuration panel allows you to create Assets and Asset Groupings. Assets can be any devices that are either sending data or from which data is being retrieved. Each Asset can be assigned to a specific customer to create a multi-tenant environment.

A new system log table `insights_system_log` has also been added to log user actions and a user can create a dashboard to view these actions.

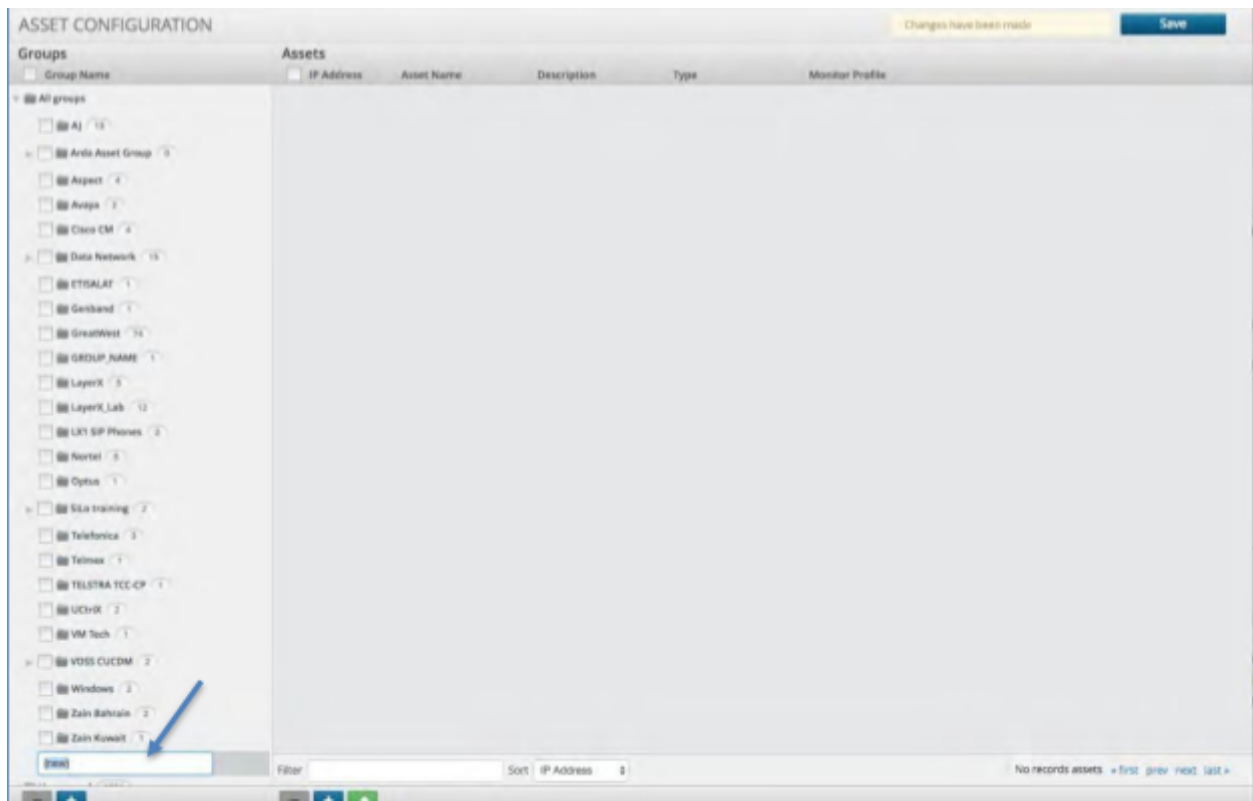
See the:

Log Search Section in the Dashboard and Reporting Administration Guide.

Creating an Asset Group

To create a new Asset Group:

1. Click the Asset icon from the Menu bar.
2. Click the Plus icon in the bottom left corner of the Asset Groups panel.
3. Enter the Group name and press Enter.
4. Click the Save icon in the upper right.



Adding an Asset to an Existing Group

To add a new Asset to a Group:

1. Click Asset Group to which you wish to add an asset.
2. Click the Plus icon at the bottom of the Asset panel.
3. An asset entry box will open up. Fill out all of the details for the asset under “Properties”.
4. Click the “Interface” tab and fill out the details, if applicable.
5. Click the check button to the right of the screen to add the asset.

ASSET CONFIGURATION Errors exist Save

Groups

Group Name

- All groups
- AJ 13
- Ardo Asset Group 0
- Aspect 4
- Avaya 2
- Cisco CM 4
- Data Network 15
- ETISALAT 1
- Genband 1
- GreatWest 74
- GROUP_NAME 1
- LayerX 5
- LayerX_Lab 12
- LXI SIP Phones 2
- Nortel 5
- Optus 1

Assets

| <input type="checkbox"/> IP Address | Asset Name | Description | Type | Monitor Profile |
|-------------------------------------|------------|-------------|---------|--|
| <input type="checkbox"/> 10.1.1.1 | AE_NAME | DESCD | Unknown | No profiles set ✎ ✓ |

Properties Interfaces ✓

Enabled

Maintenance Mode

IP Address

Asset Name

Description

Host Name

Type

Address

External URL

Model

Version

MAC Address

Alias

Manufacturer

Time Zone

Customer

Site

Filter Sort

Displaying 1 - 2 of 2 assets ✎ first prev next last ✎

ASSET CONFIGURATION Errors exist Save

Groups

Group Name

- All groups
- AJ 13
- Ardo Asset Group 0
- Aspect 4
- Avaya 2
- Cisco CM 4
- Data Network 15
- ETISALAT 1
- Genband 1
- GreatWest 74
- GROUP_NAME 1
- LayerX 5
- LayerX_Lab 12
- LXI SIP Phones 2
- Nortel 5
- Optus 1

Assets

| <input type="checkbox"/> IP Address | Asset Name | Description | Type | Monitor Profile |
|-------------------------------------|------------|-------------|---------|--|
| <input type="checkbox"/> 10.1.1.1 | AE_NAME | DESCD | Unknown | No profiles set ✎ ✓ |

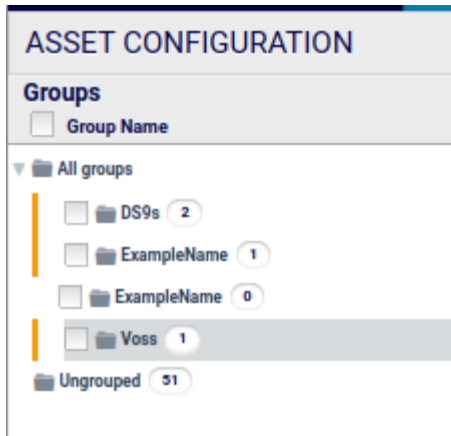
Interfaces ✓

| Name | IP Address | MAC Address | Vendor | Model | Version |
|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |

Filter Sort

Displaying 1 - 2 of 2 assets ✎ first prev next last ✎

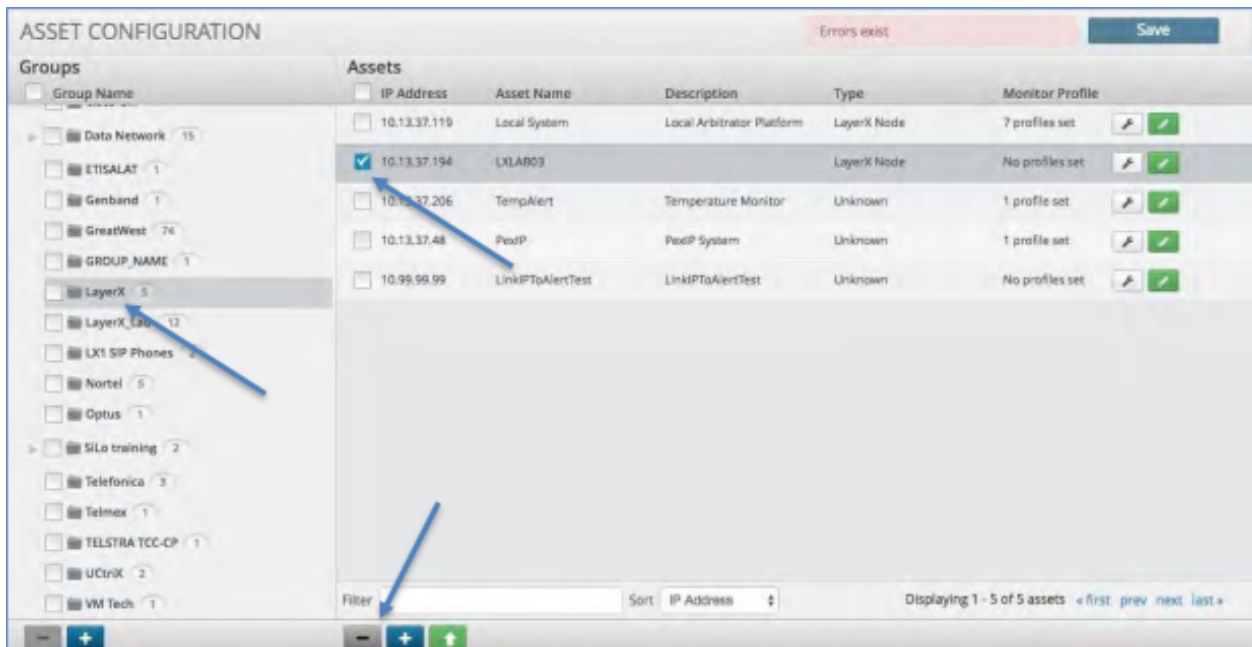
Note: Modification: If present, then more than one asset in more than one group can be modified when *modifying* assets. Change bars are displayed next to each asset and group when the assets or groups modified, for example:



Deleting an Asset

To delete an Asset:

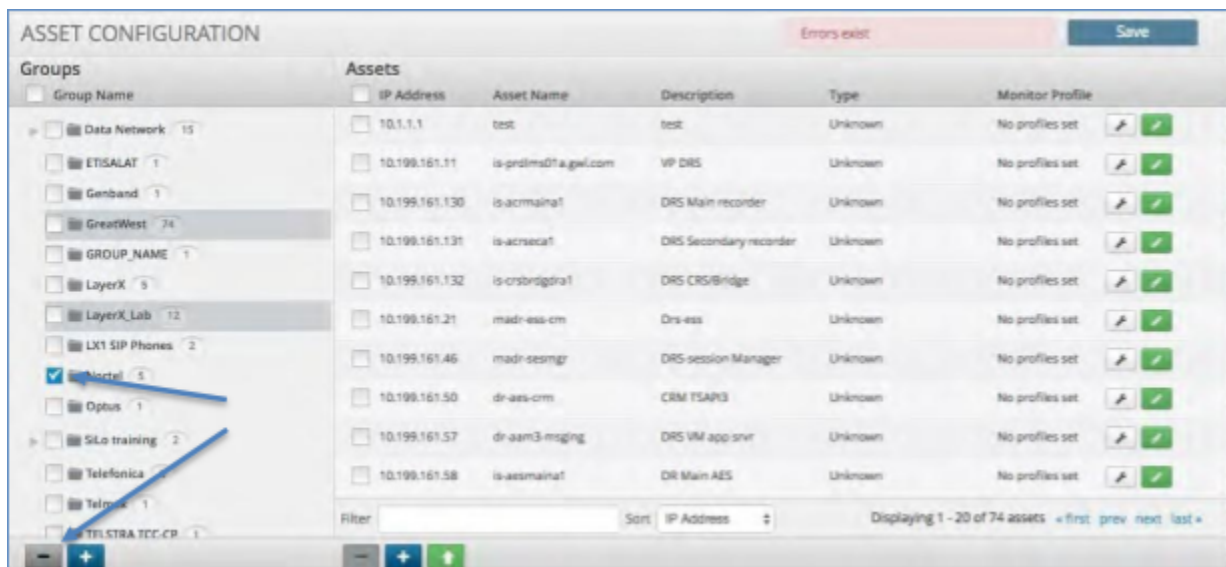
1. Click the Asset Group in which your Asset is located.
2. Click the “check” box next to the asset you wish to delete.
3. Click the “minus” icon within the Asset panel.
4. Click the “Save” icon in the upper right corner.



Deleting an Asset Group

To delete an Asset Group:

1. Click the “check” box next to the Asset Group you wish to delete.
2. Click the “minus” icon in the bottom left of the Asset Group panel.
3. Click the “Save” icon in the upper right corner.



Assigning a Probe to an Asset

A Probe is a script or set of commands that are saved in the system and can be utilized to gather data, issue commands to systems, auto repair or send data. Assigning a probe to an asset is typically done to retrieve data from that asset. Commands such as an SNMP GET or an API call are utilized to retrieve data from a particular asset.

To assign a Probe to an Asset:

1. Click the asset group and then click on the actual asset within that group that the Probe will run against.
2. Click the wrench icon, which will add a monitor profile to the asset.
3. The Probe Group (covered in the next section) screen is opened where you can select from all of the saved Probes in the system.
4. Select the desired Probe

- Next click the green pencil icon, which will open up a profile to define the frequency the probe runs, the credentials needed for the probe to run, the schedule for the Probe to run and the choice to start it immediately.

Note: For SP25, the frequency for Polycom devices is set at 5 minutes.

- Once complete click the check button to finalize the probe. This will take you back to the Asset screen and to the asset you had selected.

The image shows two screenshots from a web-based configuration tool. The top screenshot is titled "ASSET CONFIGURATION" and displays a table of assets. The bottom screenshot is titled "MONITOR PROFILE" and shows the configuration for a specific asset.

ASSET CONFIGURATION

| Groups | Assets |
|-------------------|--|
| Group Name | IP Address Asset Name Description Type Monitor Profile |
| Data Network (15) | 192.168.1.3 Nortel_CS1K_BM Nortel CS 1000 BM Server voice 1 profile set |
| ETISALAT (1) | 192.168.1.3 Nortel_CS1K_DAL Nortel CS 1000 Dallas Server voice 1 profile set |
| Genband (1) | 192.168.1.3 Nortel_CS1K_SF Nortel CS 1000 SF Server voice 1 profile set |
| GreatWest (74) | 192.168.1.3 Nortel_CS1K_SU Nortel CS 1000 SU Server voice 1 profile set |
| GROUP_NAME (1) | 192.168.1.3 Nortel_CS1K_SW Nortel CS 1000 SW Server voice 1 profile set |
| LayerX (5) | |
| LayerX_Lab (12) | |
| LXI Phones (2) | |
| Nortel (5) | |

MONITOR PROFILE » Nortel_CS1K_BM

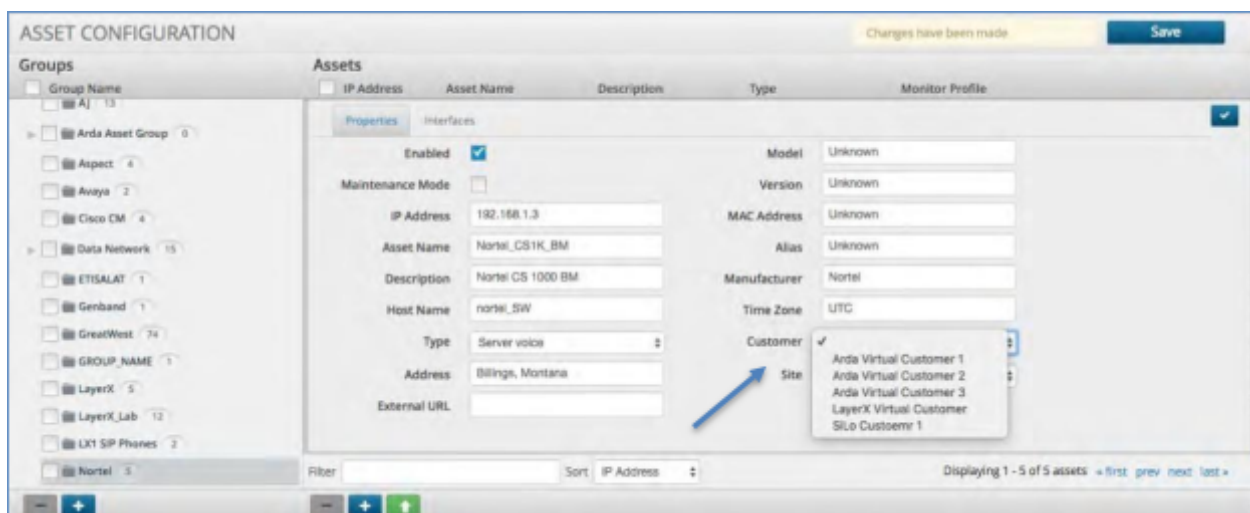
| Groups | Templates/Profiles |
|--------------------------------------|--|
| Probe Group | Name Frequency Credentials 1 & 2 Enabled |
| AA (5) | PING Probe 5 Minutes None & None <input checked="" type="checkbox"/> |
| Application ssh probe (1) | |
| Aspect alarm demo (1) | |
| Aspect CallCenter Service Probes (5) | |
| Asset Probe Test (1) | |
| Avaya CDR Demo (1) | |
| Avaya CM SNMP Tables (1) | |



Assigning a Customer to an Asset

The Correlation Platform has multi-tenancy built in that provides the ability for different customers to see correlated or collected results of only their data. Within the configuration of assets, you can assign each asset to a specific customer. To assign a Customer to an Asset:

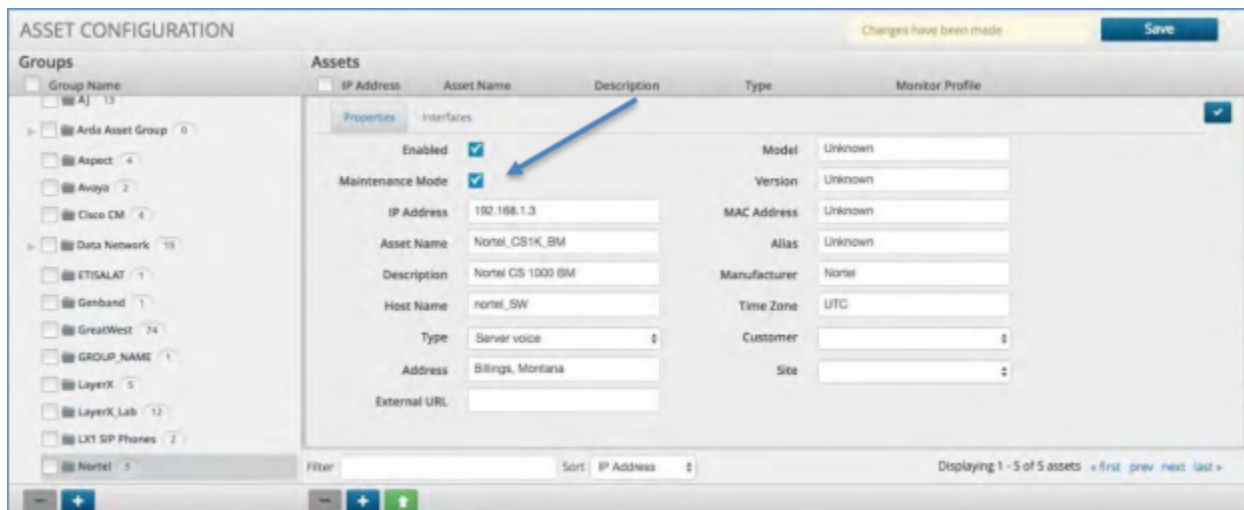
1. Click the asset group and then click on the actual asset within that group that is to be assigned to a Customer.
2. Click the pencil icon that will open up the details of that asset.
3. Click the field labeled Customer and a drop-down list of available Customers will appear.
4. Select the Customer that the asset belongs to and then click the blue check box in the top right.
5. Click the Save icon to save the changes.



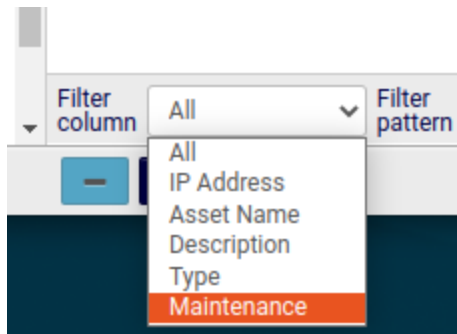
Placing an Asset in Maintenance Mode

The Correlation Platform allows any asset to be placed into Maintenance mode. Doing so will stop the platform from responding with alerts until it is removed from the mode. Data will still be collected but alerts will not be sent.

1. Click the asset group and then click on the actual asset within that group that is to be put into Maintenance mode.
2. Click the pencil icon that will open up the details of that asset.
3. Check the box next to the label Maintenance Mode and then click the blue check box in the top right.
4. Click the “plus” icon to return to the Asset Group and then click the “Save” icon to save the Maintenance Mode settings.



Assets in maintenance mode can be filtered by selecting **Maintenance** from the **Filter column** drop down list.



Export and Import an Asset

Within the **ASSET CONFIGURATION** section, you can export and import the asset that you exported from another system.

- When selecting asset groups, all assets belong to those groups will be selected (selecting individual assets will not take effect).
- If the **Group Name** checkbox is selected, all assets will be included - both **All groups** and **Ungrouped**.

To Export an Asset:

1. Select the check boxes of the assets to export, or select the **Group name** check box at the top of the **Groups** list to select *all* assets.
2. Click the green Down arrow button at the bottom of the **ASSET CONFIGURATION** panel.
3. The **Export CSV** dialog opens. Enter a **CSV file name** (You do not have to add the .csv file extension) and click **Export**.
4. The **Export finished** dialog shows when the export file has been created. Click **Download** to save the CSV file to your selected download location.

To Import an Asset:

1. Click the green Up arrow button at the bottom of the **ASSET CONFIGURATION** panel.
2. A pop-up box will appear asking you choose your file.
3. Click the **Choose file** button and select the exported CSV file that you have saved to your computer.
4. Click the **Import** button.

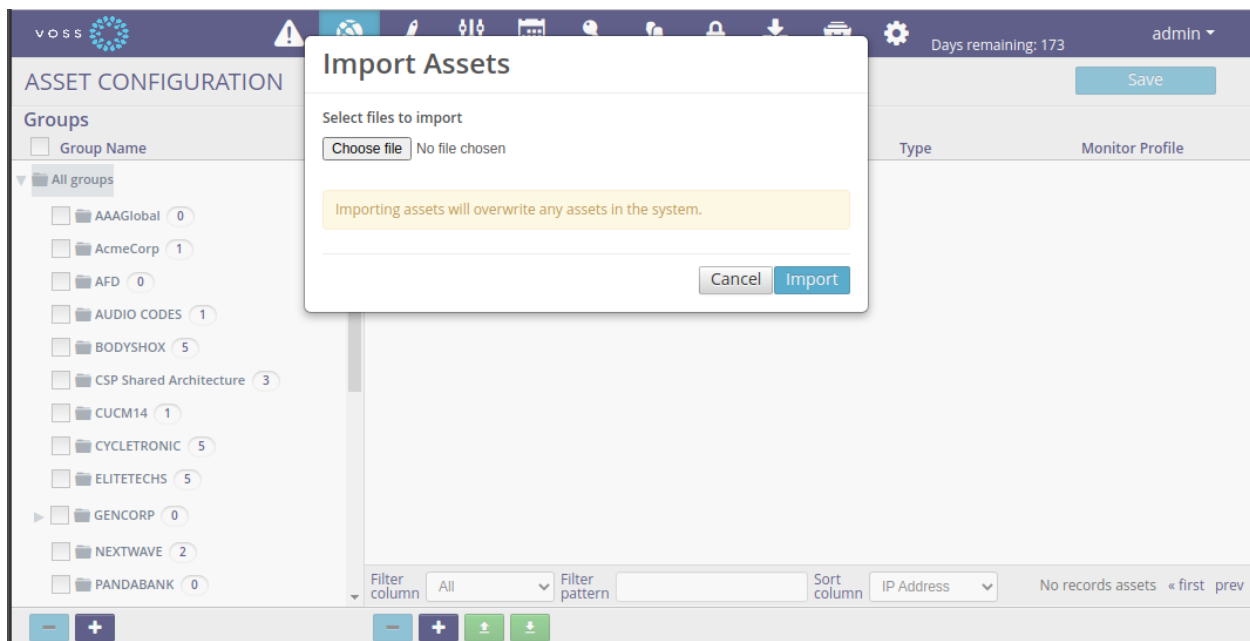
Asset CSV Format

The following columns are in an exported CSV file:

```
"Asset Name",Description,"IP Address","MAC Address",Vendor,
Model,Version,"Host Name",Alias,"Asset Group Name",
"Type of Device(see below)","Device's Timezone",Comments,
"Physical Address","Customer Name","Site Name","Row Action"
```

Note:

- The "Row Action" column is used when importing and if it contains "delete", then the row will be deleted upon import.
- Row uniqueness is the combination of: "IP Address", "Customer Name", "Site Name". If an asset found, its data will be updated. if not, new asset will be inserted under the asset group indicated in column "Asset Group Name".
- The column "Asset Group Name" has to be unique. if an asset group is found, its data will be updated. If not, a new asset group will be inserted.
- There are 2 entries in the import CSV:
 - An asset with data in all columns. Most important is the very first column "Asset Name".
 - An interface is a property of an asset. An interface only has data in from column "Description" to "Host Name". Most important is that it does not have data on the very first column "Asset Name". All CSV interface row(s) will be under an asset just right above it(them).



4.1.3. Probe Configuration

The Probes Configuration panel allows you to assign a group of scripts to an asset that can run on a set interval. These scripts will allow for data collection from many types of devices. The protocols can be API, SNMP or custom CLI scripts. SNMP v3 is also supported.

The return data from the Probes can then be injected into the system for correlation or can be stored in the database to allow for analysis on the Dashboard/Reporting server.

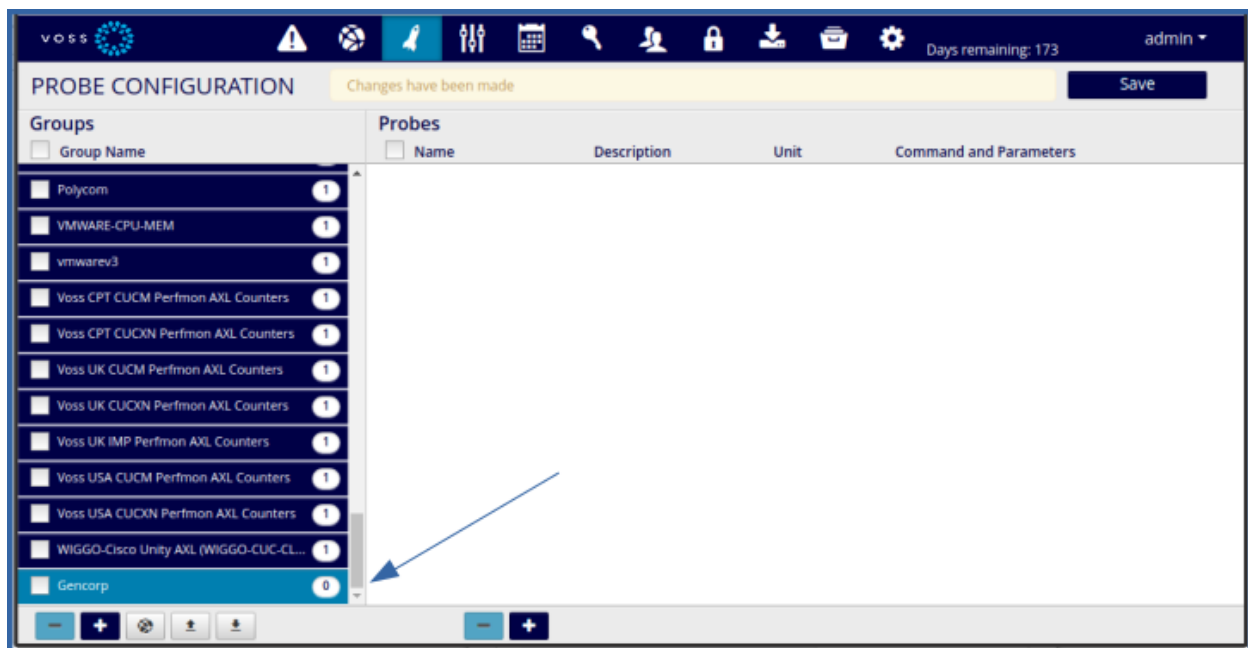
For PRI and SIP Trunk probes for Cisco Voice Gateways, reference:

Arbitrator Cisco PRI and SIP Probe Configuration

Creating a Probe Group

To create a new Probe Group:

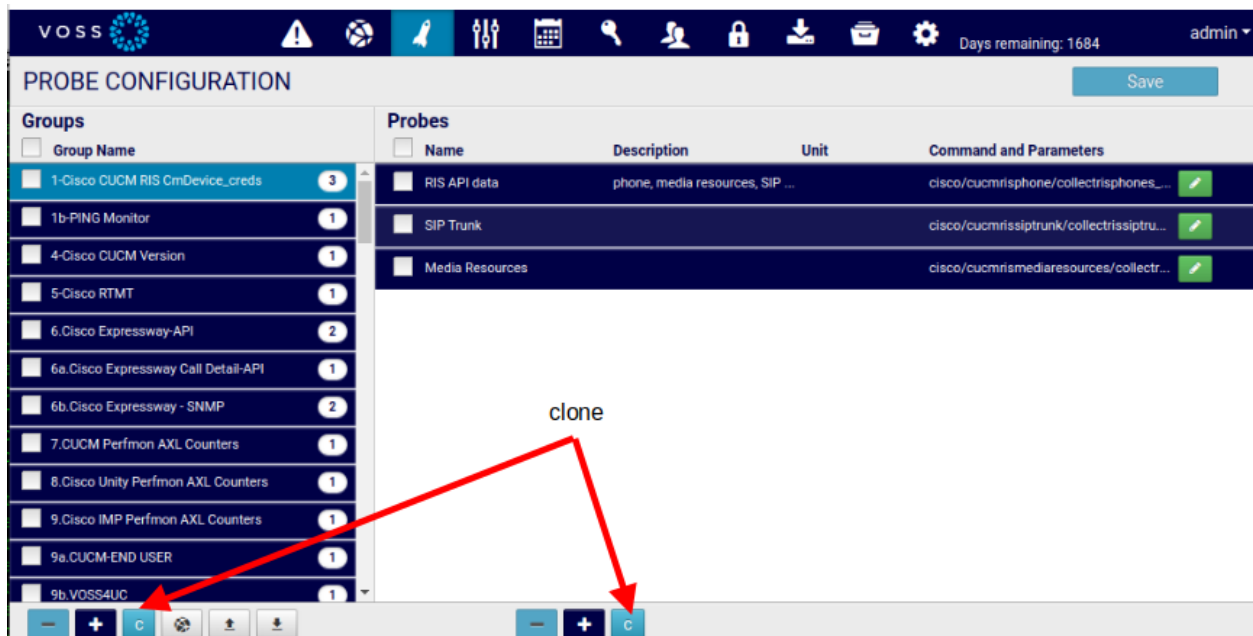
1. Click the Probe icon from the Menu bar.
2. Click the “Plus” icon within the Groups pane in the bottom left corner.
3. Enter the “Group” name and press Enter.
4. Click the “Save” icon in the upper right corner.



Cloning a Probe Group

To clone an existing Probe Group:

1. Click the Probe icon from the Menu bar.
2. Select a Probe group to clone from.
3. Click the “C” icon within the Groups pane in the bottom left corner.
4. The cloned “Group” name shows: *<source group name> clone*. Modify this name to the required name.
5. Click the “Save” icon to save the added Probe.
6. The probes contained in this new group can also be modified. Refer to the steps to add, clone and modify probes.

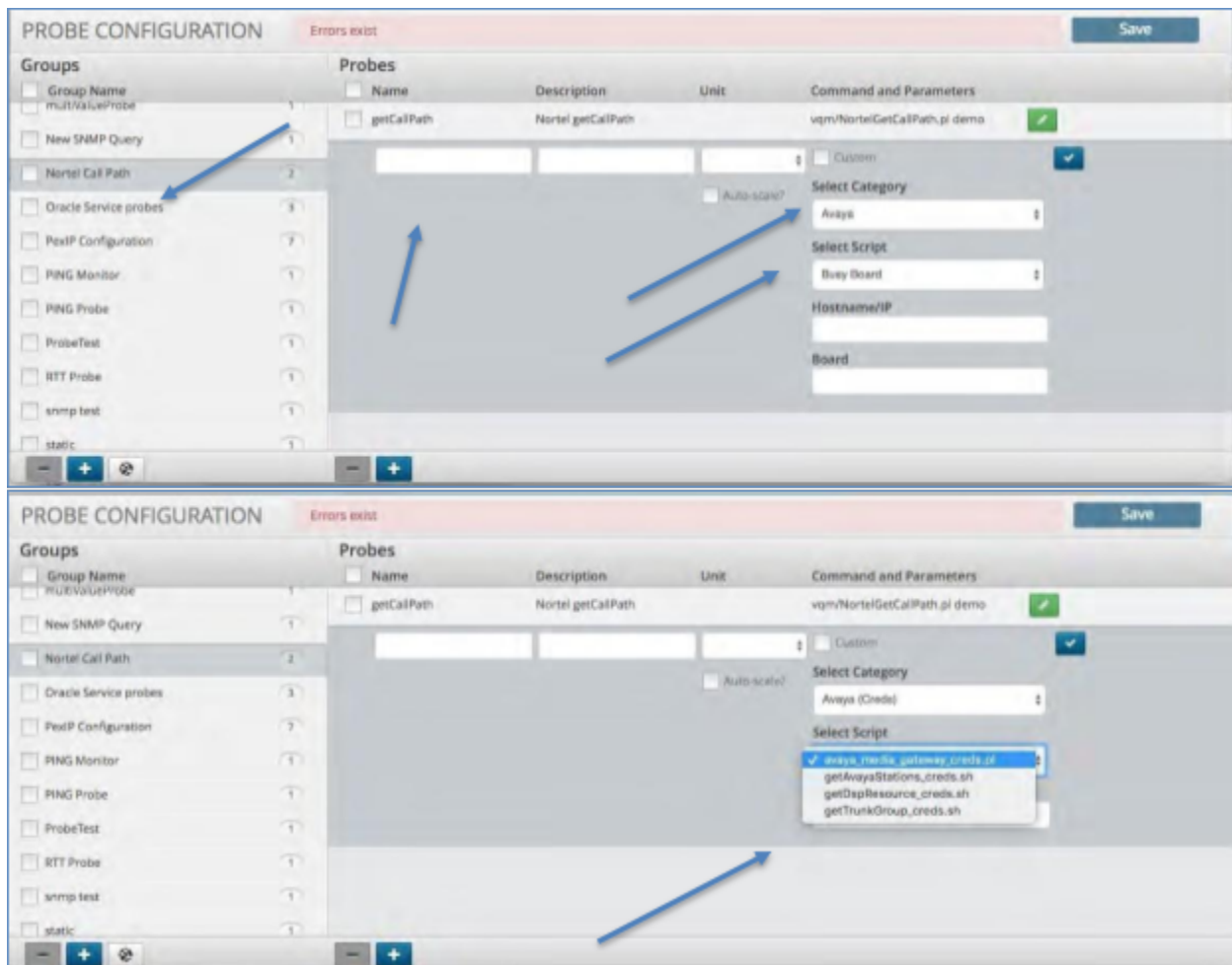


Creating a Probe

To create a new Probe:

1. Click the group in which you wish to create a new Probe.
2. Click the Plus icon within the Probes panel.
3. Enter the name and description of the Probe.
4. De-select the check icon from the field titled “Custom”. This field is utilized when putting a custom probe in place versus utilizing the ones within the system.

5. Select the Probe Category from the drop-down list. This will populate the scripts available in that category within the drop-down menu titled “Select Script”.
6. Select a script from the script drop-down list.
7. Enter any additional information required by the selected script, such as the hostname, IP, etc.
8. Click the “Check” icon to close the probe in the far right of the Probe panel.
9. Click the “Save” icon to save the added Probe.



Cloning a Probe

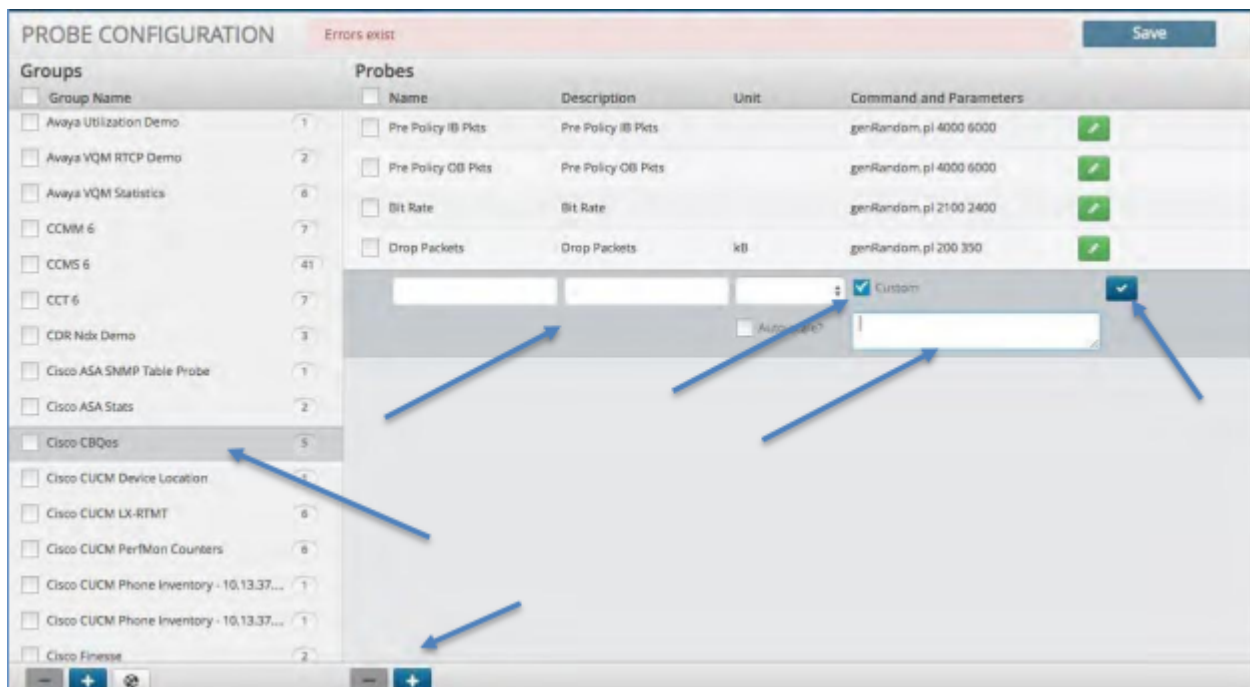
To clone a probe:

1. Click the probe which you wish to clone.
2. Click the “C” icon within the **Probes** panel.
3. The cloned “Probe” name shows: *<source probe name> clone*. Modify this name to the required name as well as any other properties you need to.
4. Select the **Done** checkbox before saving.
5. Click the “Save” icon to save the added probe.

Creating a Custom Probe

To create a new Probe:

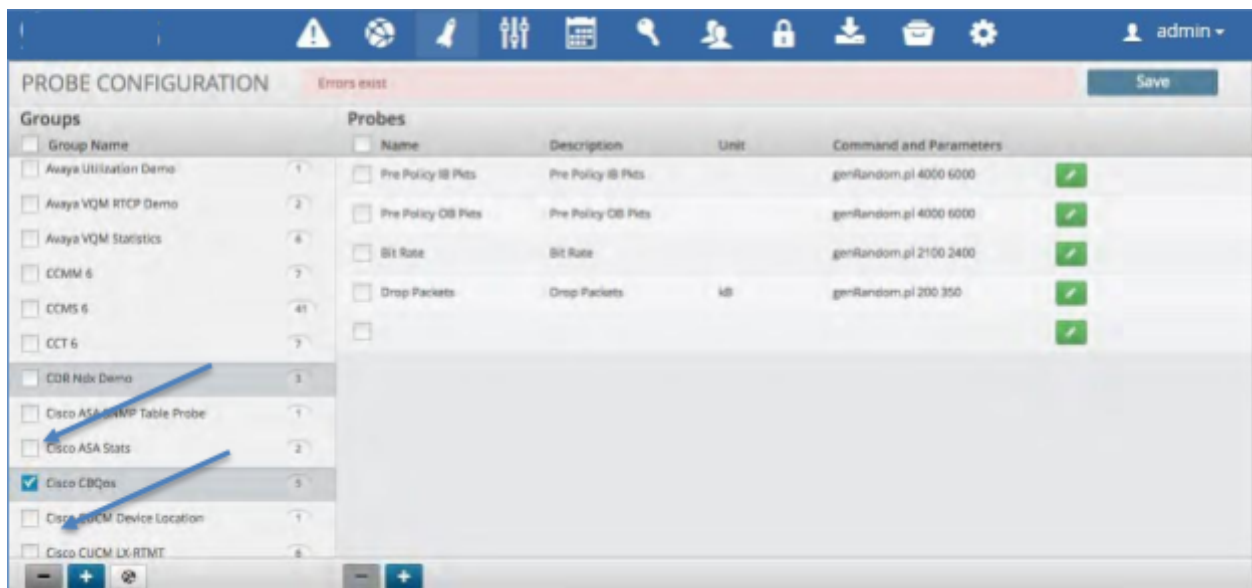
1. Click the group in which you wish to create a new Probe.
2. Click the Plus icon within the Probes panel.
3. Enter the name and description of the Probe.
4. Select and click the check icon from the field titled “Custom”. This field is utilized when putting a custom probe in place versus utilizing the ones within the system.
5. Enter the path and script that you wish to run.
6. Click the “Check” icon to close the probe in the far right of the Probe panel.
7. Click the “Save” icon to save the added Probe.



Deleting a Probe Group

To delete a Probe Group:

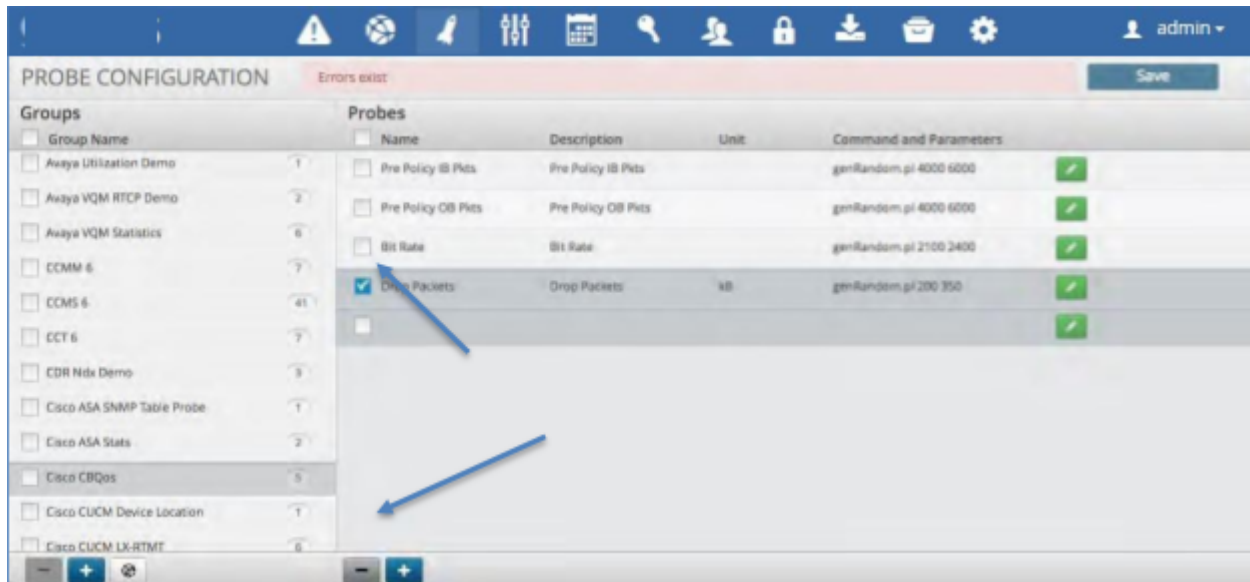
1. Click the check box next to the group name you wish to delete.
2. Click the Minus icon within the Probe Group panel in the bottom left.
3. Click the “Save” icon to save the changes.



Deleting a Probe

To delete a Probe:

1. Click the check box next to the Probe name you wish to delete.
2. Click the Minus icon within the Probe panel in the bottom right.
3. Click the “Save” icon to save the changes.



Export and Import a Profile (assignment of a probe to an asset)

Important: This import/export is special. Since we do not have a Profile main screen, the import/export profiles are in Probe Configuration; the same as the legacy push button (right next import/export buttons).

Within the **PROBE CONFIGURATION** section, you can export and import the profiles that you exported from another system.

A new system log table `insights_system_log` has also been added to log user actions and a user can create a dashboard to view these actions.

See the:

Log Search Section in the Dashboard and Reporting Administration Guide.

To Export a Profile:

1. Click the Down arrow button at the bottom of the **PROBE CONFIGURATION** panel.
Since this is a probe configuration, we cannot select individual profiles, so it will export all profiles in the system.
2. The **Export CSV** dialog opens. Enter a **CSV file name** (You do not have to add the `.csv` file extension) and click **Export**.
3. The **Export finished** dialog shows when the export file has been created. Click **Download** to save the CSV file to your selected download location.

To Import a Profile:

1. Click the Up arrow button at the bottom of the **PROBE CONFIGURATION** panel.
2. A pop-up box will appear asking you choose your file.
3. Click the **Choose file** button and select the exported CSV file that you have saved to your computer.

4. Click the **Import** button.

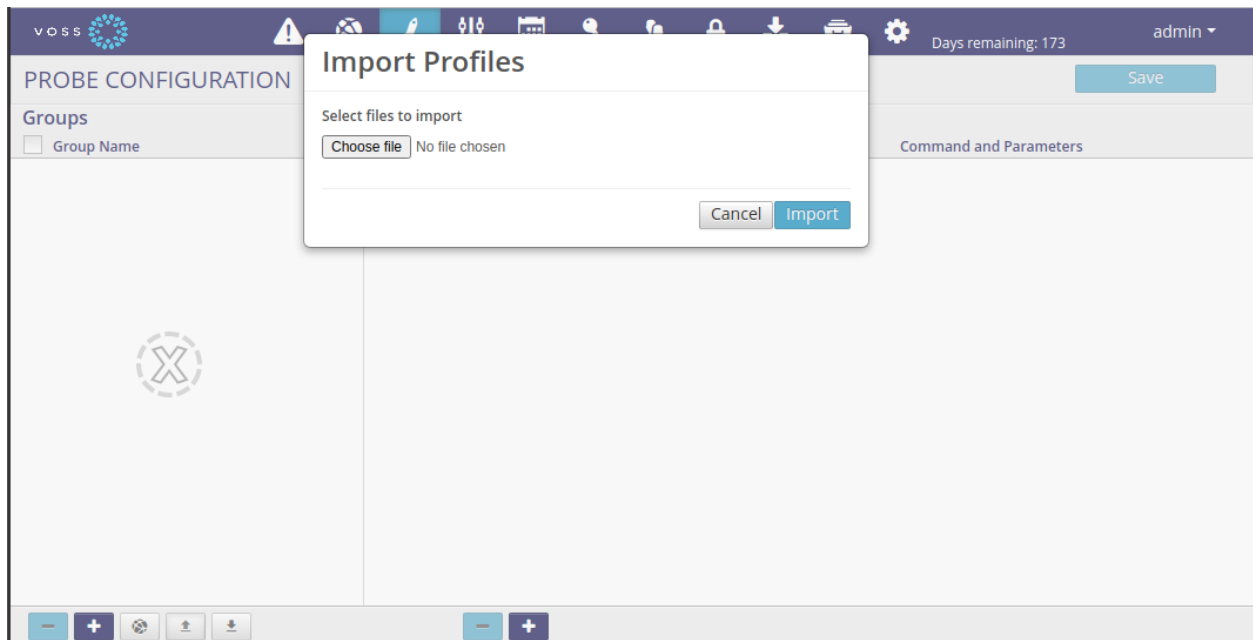
Profile CSV Format

The following columns are in an exported CSV file:

```
"Row Action","Asset Name","IP Address","Customer Name",  
"Site Name","Probe Group Name","Credential 1 Name",  
"Credential 2 Name","Frequency (s)","Enable"
```

Note:

- The "Row Action" column is used when importing and if it contains "delete", then the row will be deleted upon import.
- "Probe Group Name" must be unique.
- Combination: "IP Address","Customer Name","Site Name" must to be unique.
- "Asset Name" is used as a reference of the asset.
- When importing and if an asset and a probe group are found, then a profile will be updated/inserted. If not, nothing to import.



Assignment of a probe to an asset

A probe group assigned to an asset can be modified using a profile CSV file import by specifying the related “Asset Name” and “Probe Group Name” in the CSV file.

For example, consider an asset “Local System” that has 3 profiles:

MONITOR PROFILE » Local System

| Groups | | Templates/Profiles | | | |
|---|---|---|-----------|-------------------|-------------------------------------|
| Probe Group | | <input type="checkbox"/> Name | Frequency | Credentials 1 & 2 | Enabled |
| ▶ Cisco CUCM Version | 1 | <input type="checkbox"/> Local System Stats | 1 Minute | None & touy | <input checked="" type="checkbox"/> |
| ▶ Cisco Expressway | 3 | <input type="checkbox"/> Test Probe | 1 Minute | None & loc | <input checked="" type="checkbox"/> |
| ▶ Cisco Telepresence API - Call Details | 1 | <input type="checkbox"/> PING Monitor | 1 Minute | ray & loc | <input checked="" type="checkbox"/> |

We can assign probe “Cisco CUCM Version” to asset “Local System” as a CSV file import:

| Row Action | Asset Name | IP Address | Customer Name | Site Name | Probe Group Name | Credential 1 Name | Credential 2 Name | Frequency (s) | Enable |
|------------|--------------|--------------|---------------|-----------|--------------------|-------------------|-------------------|---------------|--------|
| | Local System | 10.13.37.149 | | | Cisco CUCM Version | ray | loc | 60 | TRUE |

After importing, the profile is added to the probe group.

MONITOR PROFILE » Local System

| Groups | | Templates/Profiles | | | |
|---|---|--|-----------|-------------------|-------------------------------------|
| Probe Group | | <input type="checkbox"/> Name | Frequency | Credentials 1 & 2 | Enabled |
| ▶ Cisco CUCM Version | 1 | <input checked="" type="checkbox"/> Local System Stats | 1 Minute | None & touy | <input checked="" type="checkbox"/> |
| ▶ Cisco Expressway | 3 | <input type="checkbox"/> Test Probe | 1 Minute | None & loc | <input checked="" type="checkbox"/> |
| ▶ Cisco Telepresence API - Call Details | 1 | <input type="checkbox"/> PING Monitor | 1 Minute | ray & loc | <input checked="" type="checkbox"/> |
| | | <input type="checkbox"/> Cisco CUCM Version | 1 Minute | ray & loc | <input checked="" type="checkbox"/> |

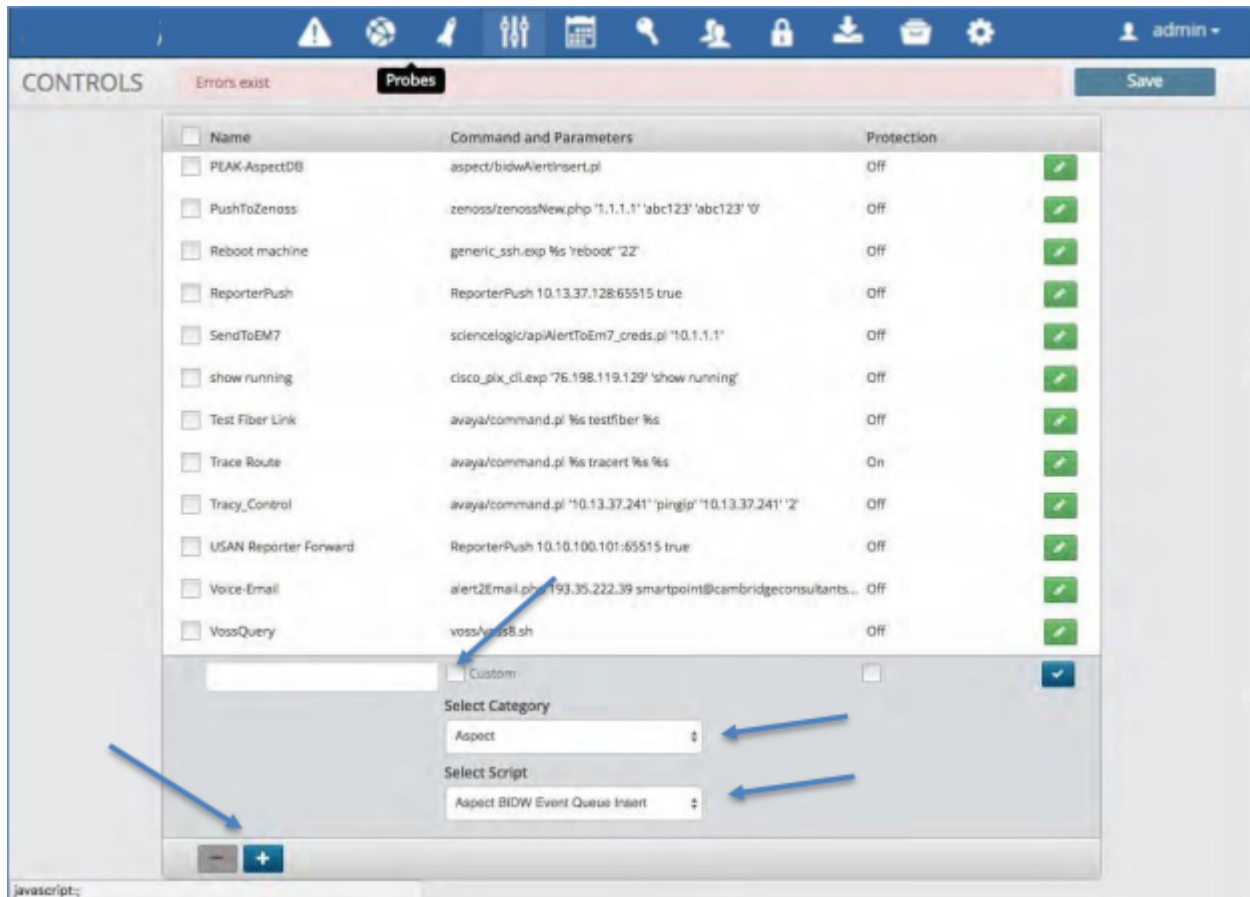
4.1.4. Controls

The Controls Configuration panel allows you to define a script or routine that can be executed by a response procedure or attached as a probe. These controls can be passed variables extracted from a correlation rule. The resulting return of the scripts execution can be mapped to the database, used as an action or can be injected back into the system to be correlated against another element.

Creating a Control

To create a new Control:

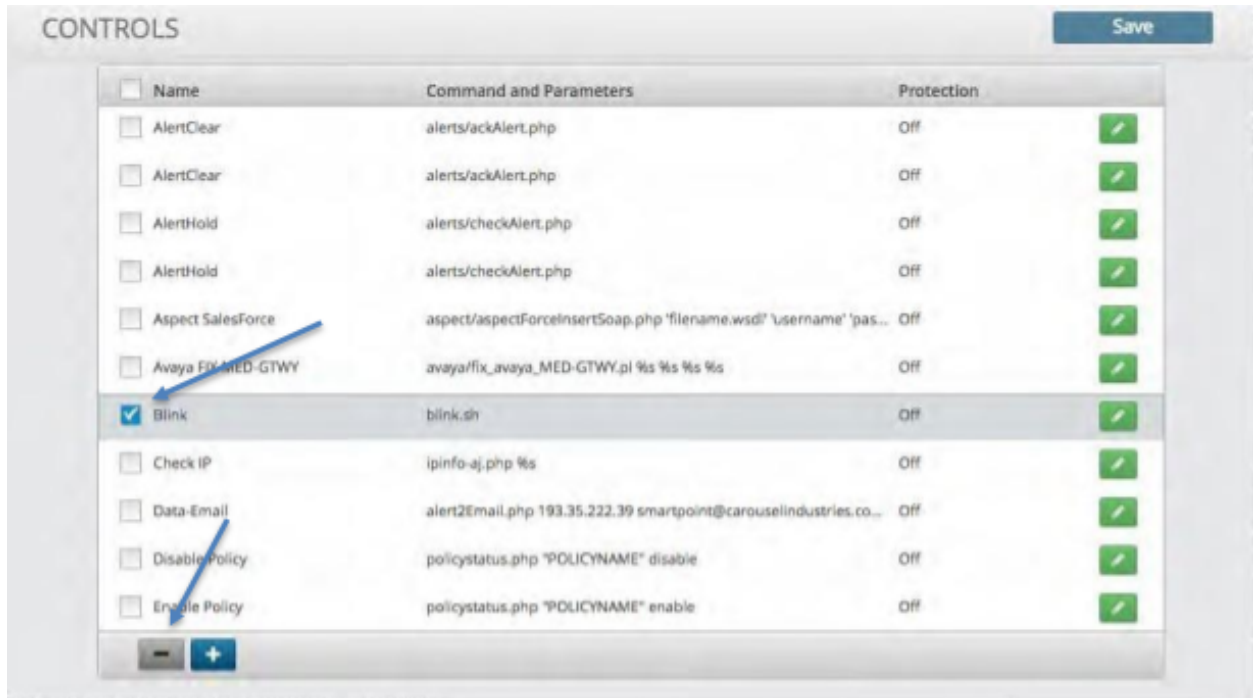
1. Click the Plus icon within the control panel.
2. Enter the name of the Control.
3. De-select the check icon from the field titled "Custom". This field is utilized when putting a custom Control in place versus utilizing the ones within the system.
4. Click and Select from the categories dropdown list to populate the scripts dropdown.
5. Select a script from the script dropdown list.
6. Enter any additional information required by the selected script.
7. Click the Check icon to close the control in the far right of the control panel
8. Click Save icon.



Deleting a Control

To delete a Control:

1. Click the check box next to the Control name you wish to delete.
2. Click the Minus icon within the Control panel at the bottom.
3. Click the "Save" icon to save the changes.



4.1.5. Response Procedure Configuration

The Response Procedure configuration panel allows you to define an automated response to a correlated event. Each Response Procedure can be assigned to one or more Correlation Rules while also containing and/or executing one or more of the following responses:

| Action | Description |
|---------|--|
| Alert | Visually show the alert in the alert views within the User Interface. |
| Email | An email will be sent to the recipients address and contain the Policy and Correlation Rule details that are triggered. Additionally, any data that is extracted from the correlated event will be included. |
| Control | Executes the selected Control Script as a result of the correlated event. Data from the correlated event will be passed to the script as well. These scripts can be utilized as run-book and/or automated remediation. |
| Forward | The forward allows the correlated event to be forwarded to another Arbitrator Correlation platform. |

Creating a Response Procedure

To create a response procedure:

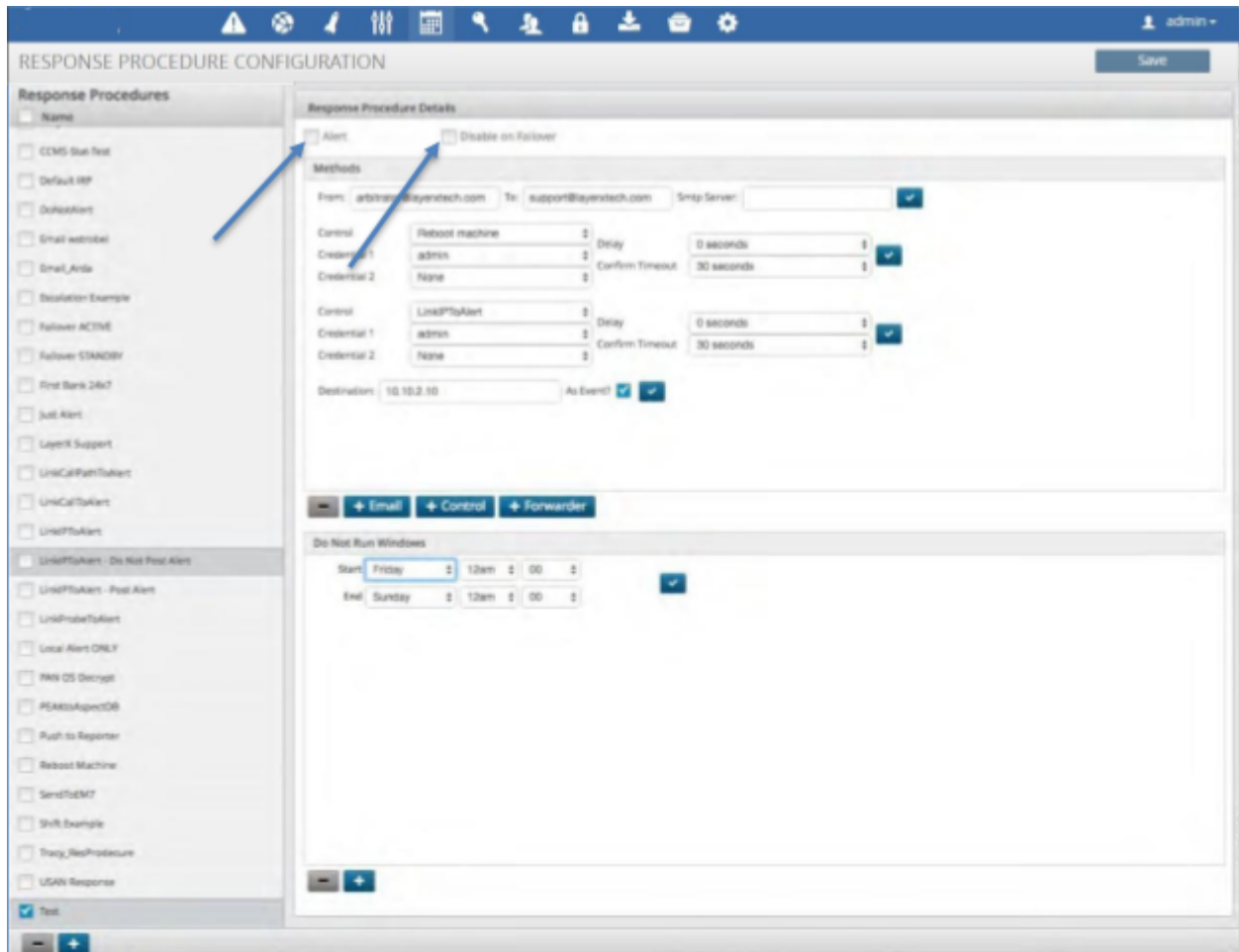
1. Click the “Calendar” icon at the top of the Configuration panel.
2. Click the plus icon in the bottom left of the Response Procedure name panel. A box will open up where you can fill in the name of your response procedure.
3. The panel to the right is broken into two sections:
 - a. Response Procedure Details – This is the section that you select to add the elements defined in the table above.
 - b. Do Not Run Windows – Allows you to define certain date and times that you don’t want the system to take the actions within the Response Procedure.

The screenshot displays the 'RESPONSE PROCEDURE CONFIGURATION' window. On the left, a list of 'Response Procedures' includes 'Test', which is selected. The main area is split into two sections. The top section, 'Response Procedure Details', contains an 'Alert' checkbox, a 'Methods' section with two rows of controls (Reboot machine and LinkIPtoAlert), and a 'Destination' field. The bottom section, 'Do Not Run Windows', contains 'Start' and 'End' date and time pickers. Red arrows point to the 'email', 'Controls', and 'Forward' buttons on the right side of the 'Methods' section. Blue arrows point to the 'Alert' checkbox, the 'Test' checkbox in the 'Response Procedures' list on the left, and the plus icon at the bottom left of the 'Response Procedure Details' section.

Assigning an Alert to a Response Procedure

To assign the Alert function to a response procedure:

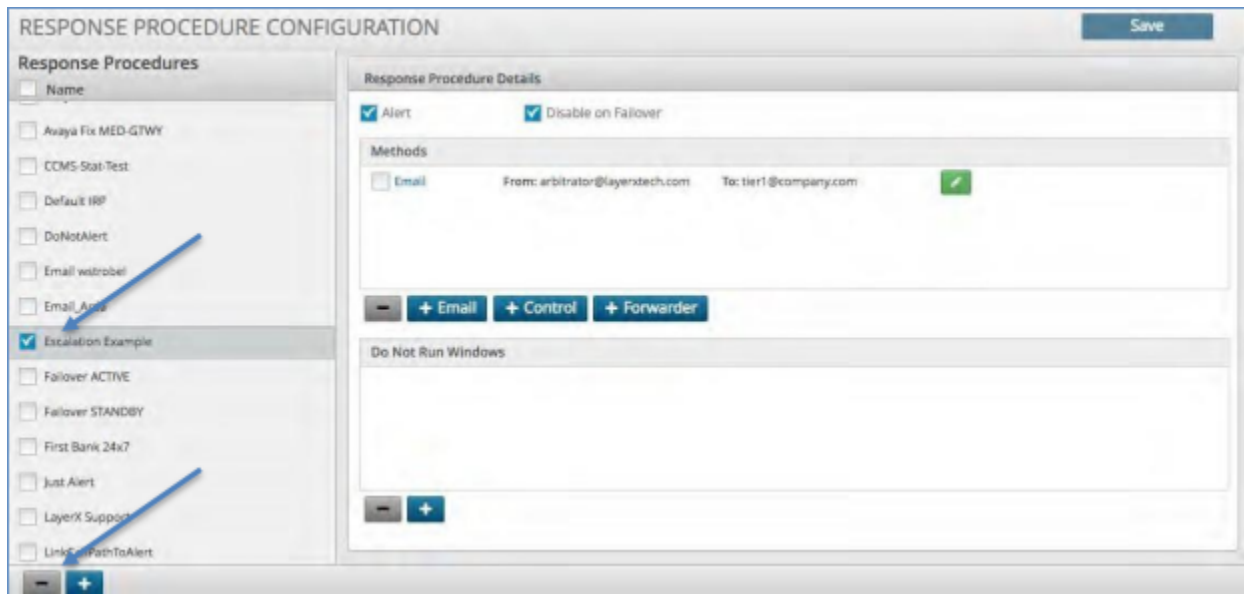
1. Click the Alert check box in the top left of the Response Procedure Details panel.
2. If this system you are configuring is intended to be the redundant platform then click the Disable on Failover box to allow all data to flow but no actions to take place.








Deleting a Response Procedure

To delete a Response Procedure:

1. Click the box next to the Response Procedure name.
2. Click the minus icon at the bottom of the Response Procedure name panel.
3. Click the Save icon to save your changes.



4.1.6. How to Enable ServiceNow Intergration

| <input type="checkbox"/> Name | Command and Parameters | Protection | |
|---|---------------------------------------|--------------------------|---|
| <input type="checkbox"/> LinkIPToAlert | LinkIPToAlert | Off |  |
| <input type="checkbox"/> ReporterPush Reading | ReporterPush 172.30.15.121:65515 true | Off |  |
| <input type="checkbox"/> ReporterPush-GC | ReporterPush 172.25.87.6:65515 true | Off |  |
| <input type="checkbox"/> VpnSyslog | vpnSyslogAlert.sh | Off |  |
| <input type="checkbox"/> | <input type="checkbox"/> Custom | <input type="checkbox"/> |  |

Custom

Select Category

Select Script

Service Now IP Address / Hostname

Service Now Username

Service Now Password

1. Navigate to Configuration (cog icon) on the arbitrator.
2. Navigate to Control and click + to enter a new control.
3. In the **Name** text box enter ServiceNow.
4. Untick **Custom**.
5. Fill in the following details:
 - **Select Category:** ServiceNow
 - **Select Script:** PushToServiceNow
 - **Service Now IP Address / Hostname:**
 - **Service Now Username:**
 - **Service Now Password:**
6. Tick the blue tick box.
7. Click the **Save**.
8. Navigate to the Response Procedure Configuration menu.
9. Apply the control to the required IRP, such as the default IRP.

4.1.7. ServiceNow One Way Incident Integration

As the Correlation Platform detects new incidents a response procedure is defined to send the event into ServiceNow utilizing their API. Incident Response Procedures (IRP) are defined on an incident basis. Thus you can choose which events need to be sent to ServiceNow based on severity, type, threshold, or others. When the IRP kicks off it will create an event, insert the following fields and send it to ServiceNow:

- short description: Arbitrator Policy, Rule and Reference_Id
- description: full message from arbitrator
- severity: severity
- urgency: based on severity
- impact: based on severity
- category: software
- comments: full message from Arbitrator

ServiceNow Requirements

- ServiceNow URL
- ServiceNow User with SOAP API rights to insert Incidents
- ServiceNow Password

Arbitrator Correlation Configuration

- Version Required: 4.0001-15b
- Script: servicenow/PushToServiceNow.pl
- parameters:
 - URL_TO_SERVICENOW_INSTANCE
 - USERNAME
 - PASSWORD

Screenshots From ServiceNow

Incident INC0010023

Configuration item:

Assignment group:

Assigned to:

* Short description: LXTALERT: ARB_REFERENCEID=20000-01009001-00-01-7134-14 ARB_POLICY_MODULE=MultiTest ARB_CORRELATION_RULE=Some Rule

Related Search Results

- Automatic Replies (Out Of Office)** on. Click the File tab. Click Automatic Replies. Click Rules, and then click Add Rule. Under... for the rule to be applied. If you want to specif... Preview Attach
- Firewall Rule Change** Cisco Firewall Appliance Preview Order
- About Windows 10** the microphone to talk with her instead. Rule the web with Microsoft Edge Microsoft Edge is the first browser Preview Attach

Notes | Related Records | Closure Information

Watch list Work notes list

Additional comments (Customer visible) Work notes Post

Activity

- System Administrator 2016-12-13 12:52:14
LXTALERT: ARB_REFERENCEID=20000-01009001-00-01-7134-14 ARB_POLICY_MODULE=MultiTest ARB_CORRELATION_RULE=Some Rule ARB_MESSAGE=Some Rule : Multitest (2)
- System Administrator 2016-12-13 12:52:14
Impact 1 - High
Incident state New
Opened by System Administrator
Priority 1 - Critical

| Incident | Number | Opened | Short description | Caller | Priority | State | Category | Assignment group | Assigned to |
|--------------------------|------------|---------------------|---|----------------------|--------------|-------|----------------|------------------|-------------|
| <input type="checkbox"/> | INC0020001 | 2016-08-10 09:14:29 | test | System Administrator | 3 - Moderate | New | Inquiry / Help | | |
| <input type="checkbox"/> | INC0010023 | 2016-12-13 12:52:14 | LXTALERT: ARB_REFERENCEID=20000-01009001-00-01-7134-14 ARB_POLICY_MODULE=MultiTest ARB_CORRELATION_RULE=Some Rule | | 1 - Critical | New | Software | | |
| <input type="checkbox"/> | INC0010022 | 2016-12-13 12:52:11 | LXTALERT: ARB_REFERENCEID=20000-01009001-00-01-7134-16 ARB_POLICY_MODULE=MultiTest ARB_CORRELATION_RULE=Some Rule Major | | 2 - High | New | Software | | |
| <input type="checkbox"/> | INC0010021 | 2016-12-13 12:52:08 | LXTALERT: ARB_REFERENCEID=20000-01009001-00-01-7134-19 ARB_POLICY_MODULE=MultiTest ARB_CORRELATION_RULE=Some Rule Info | | 5 - Planning | New | Software | | |
| <input type="checkbox"/> | INC0010020 | 2016-12-13 12:52:04 | LXTALERT: ARB_REFERENCEID=20000-01009001-00-01-7134-18 ARB_POLICY_MODULE=MultiTest ARB_CORRELATION_RULE=Some Rule Minor | | 4 - Low | New | Software | | |

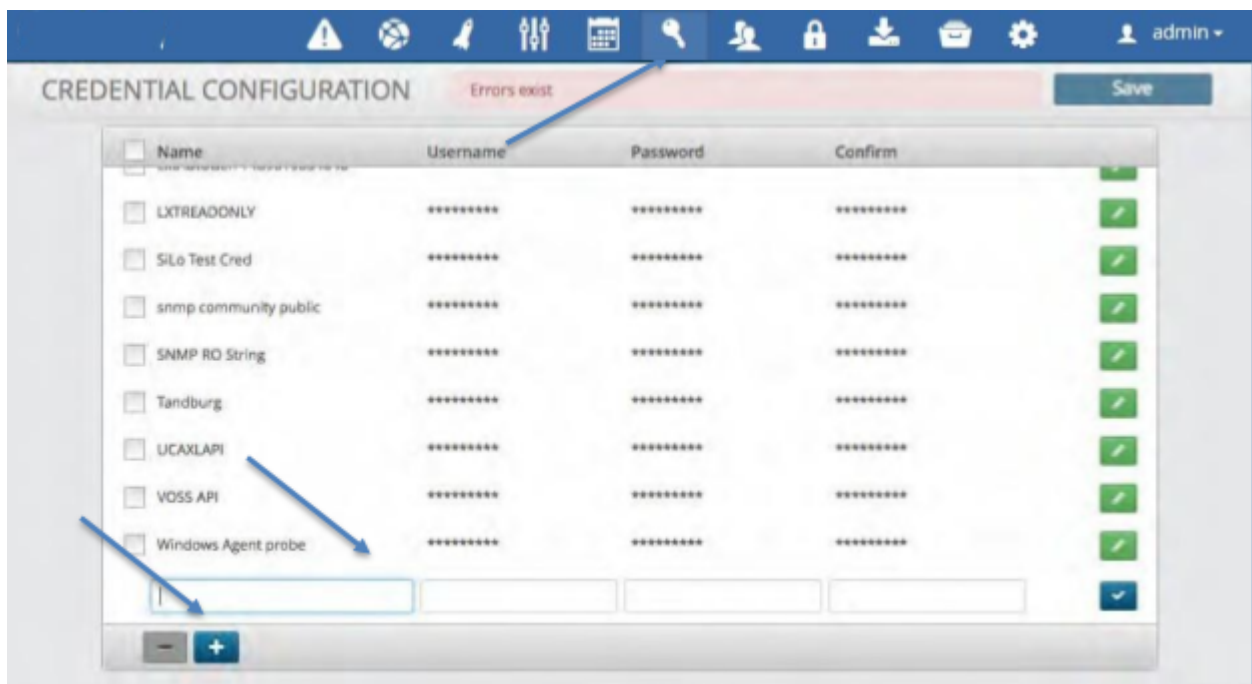
4.1.8. Credential Configuration

The Credentials configuration panel allows you to define and store credentials securely. These credentials can be assigned to a Probe or Control to allow for secure access to an asset, ticketing system or script. (See: Asset Configuration, Response Procedure Configuration)

Creating a Credential

To create a Credential:

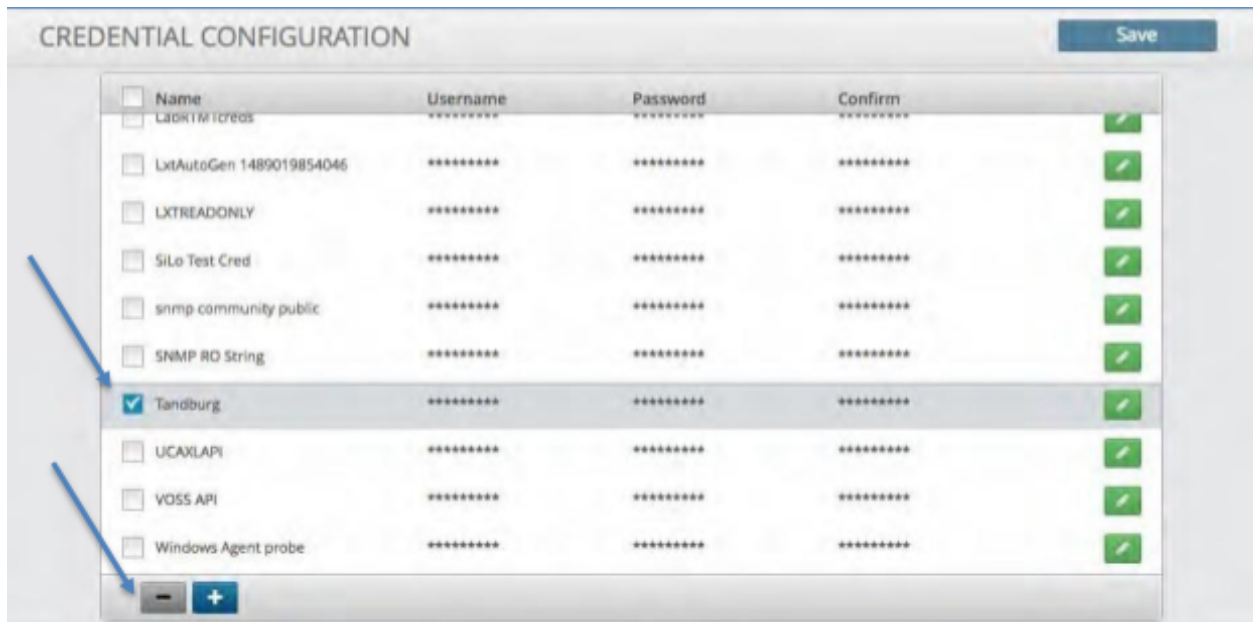
1. Click the “key” icon in the menu bar at the top.
2. Click the plus icon in the bottom left corner.
3. Enter the name to be assigned to the Credential.
4. Enter the Username and Password fields.
5. Click the blue check box.
6. Click the Save icon to save the credential.



Deleting a Credential

To delete a Credential:

1. Click the check box to the left of the credential name you wish to delete.
2. Click the minus icon in the bottom left of the screen.
3. Click the Save icon to save your changes.



4.1.9. Customer Configuration

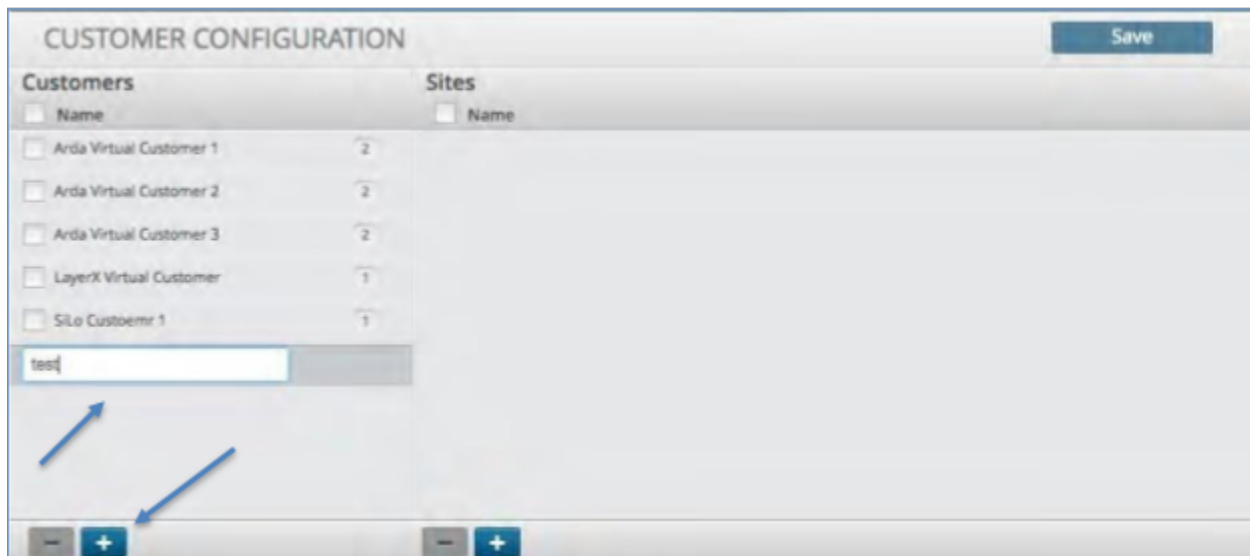
To enable multi-tenancy (assets, alerts and data) utilize the customer configuration panel to define a customer and their related locations (sites). Once defined, the Customer field can be applied to an asset and or a user to restrict access to other customers assets, alerts and data.

(See: Asset Configuration, Access Control Configuration).

Creating a Customer

To create a Customer:

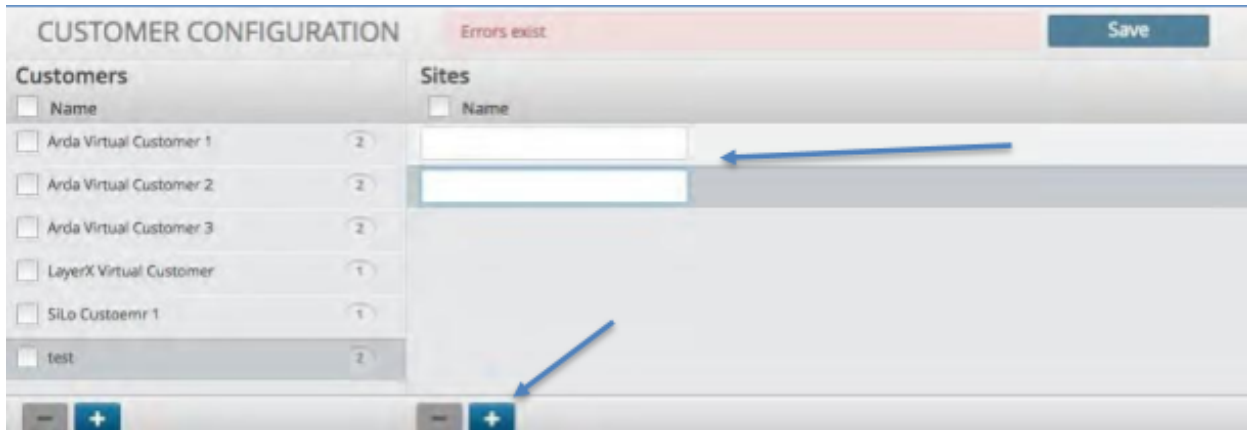
1. Click the “customer” icon in the menu bar at the top.
2. Click the plus icon in the bottom left corner of the customer panel.
3. Enter the name of the Customer to be added and press Enter.
4. Enter the Username and Password fields.
5. Click the Save icon to in the upper right corner.
6. Proceed to creating a Customer Site.



Creating a Customer Site

To create a site for a Customer:

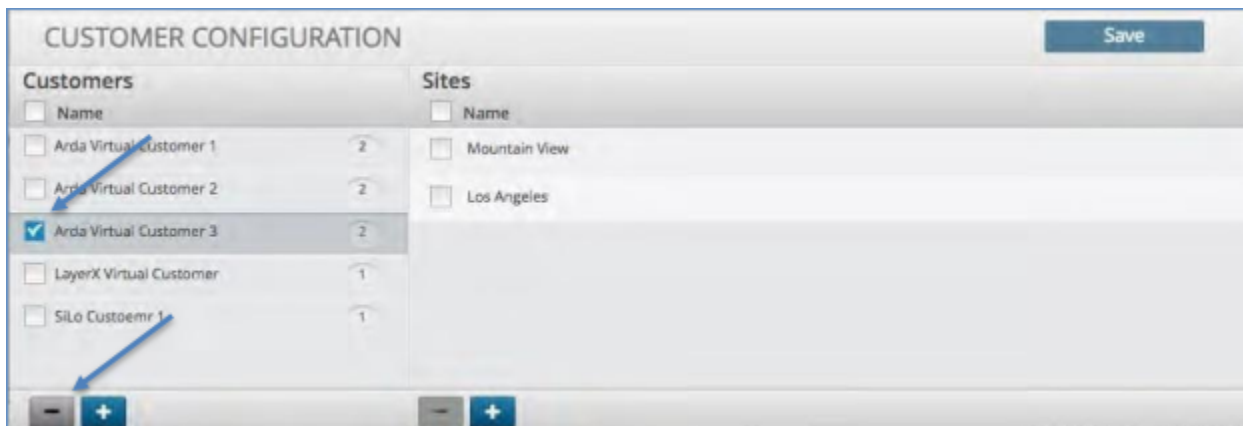
1. Click the customer to which you wish to add the site.
2. Click the plus icon in the bottom of the site panel.
3. Enter the site name and press Enter.
4. Add additional sites if applicable.
5. Click the Save icon to in the upper right corner.



Deleting a Customer

To delete a Customer:

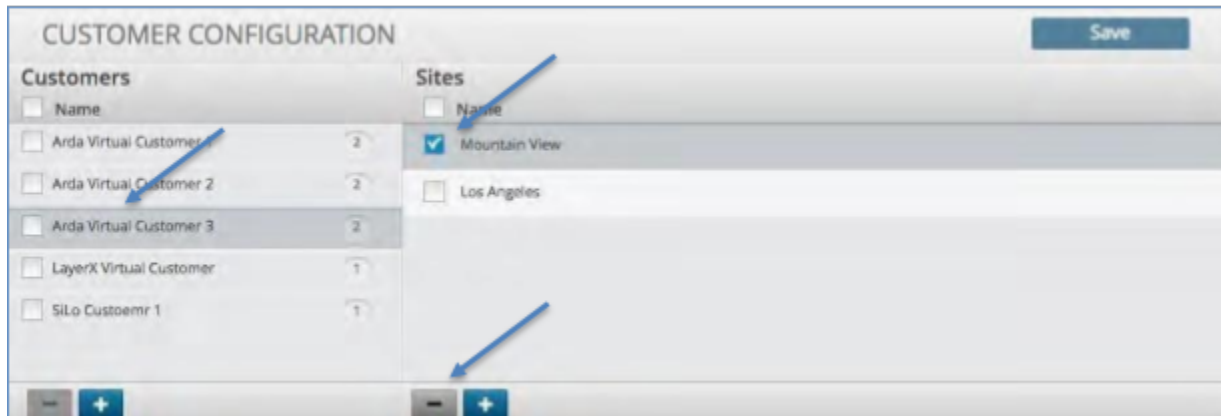
1. Click the check box of the customer you wish to delete.
2. Click the minus icon in the bottom of the site panel.
3. Click the Save icon in the upper right corner.



Deleting a Customer Site

To delete a site for a Customer:

1. Click the customer in which you wish to delete the site.
2. Click the minus icon in the bottom of the site panel.
3. Click the Save icon to in the upper right corner.



4.1.10. Access Control

The Access Controls Configuration panel allows for specific Role Based Access Controls to be enabled. These controls are based on the role of the user and the customer to which they belong.

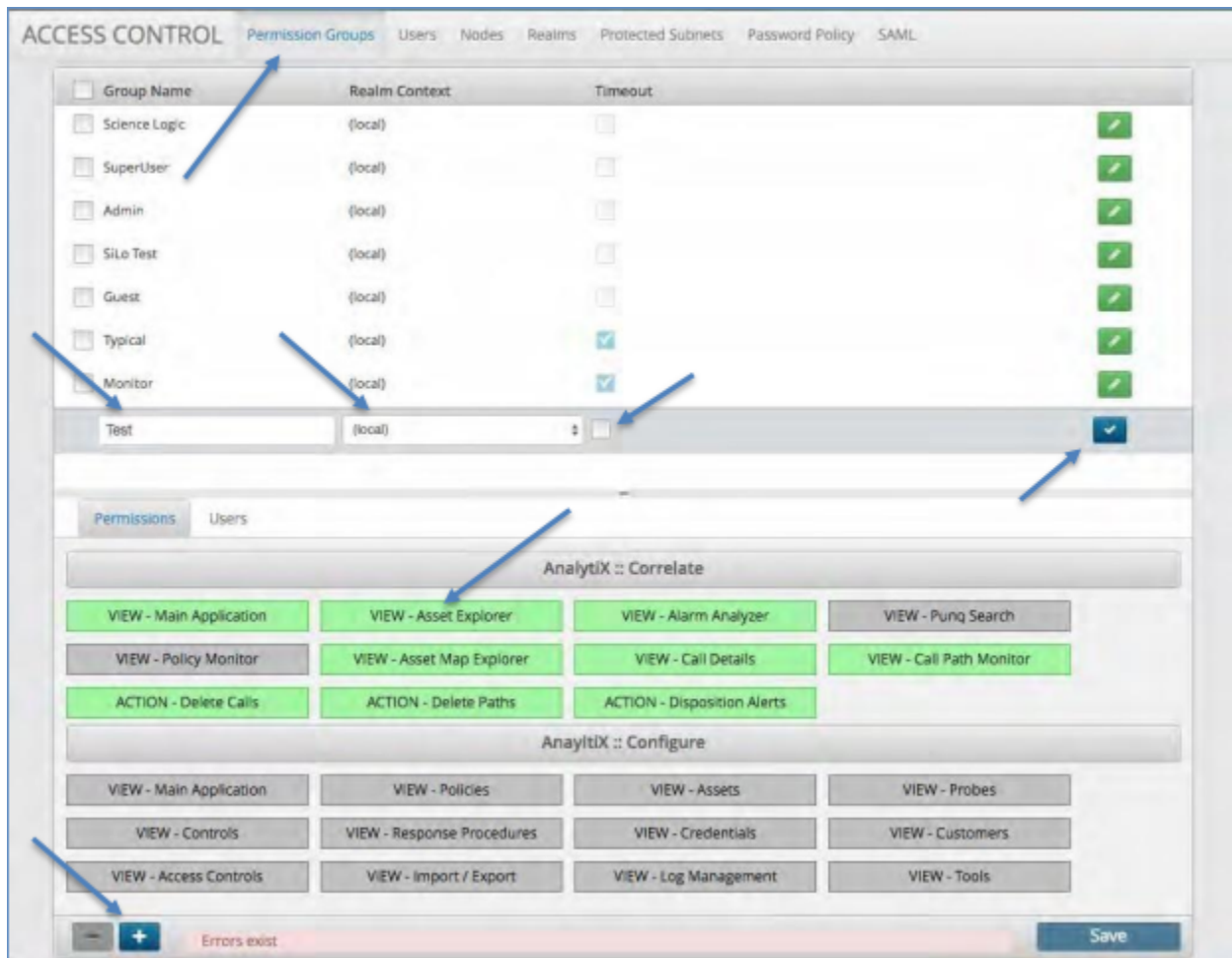
Permission Groups

The first tab under the Access Controls is the Permission Groups. This allows the admin to define a group that has specific capabilities/rights and subsequently add users to these groups.

Creating a Permission Group

To create a Permission Group:

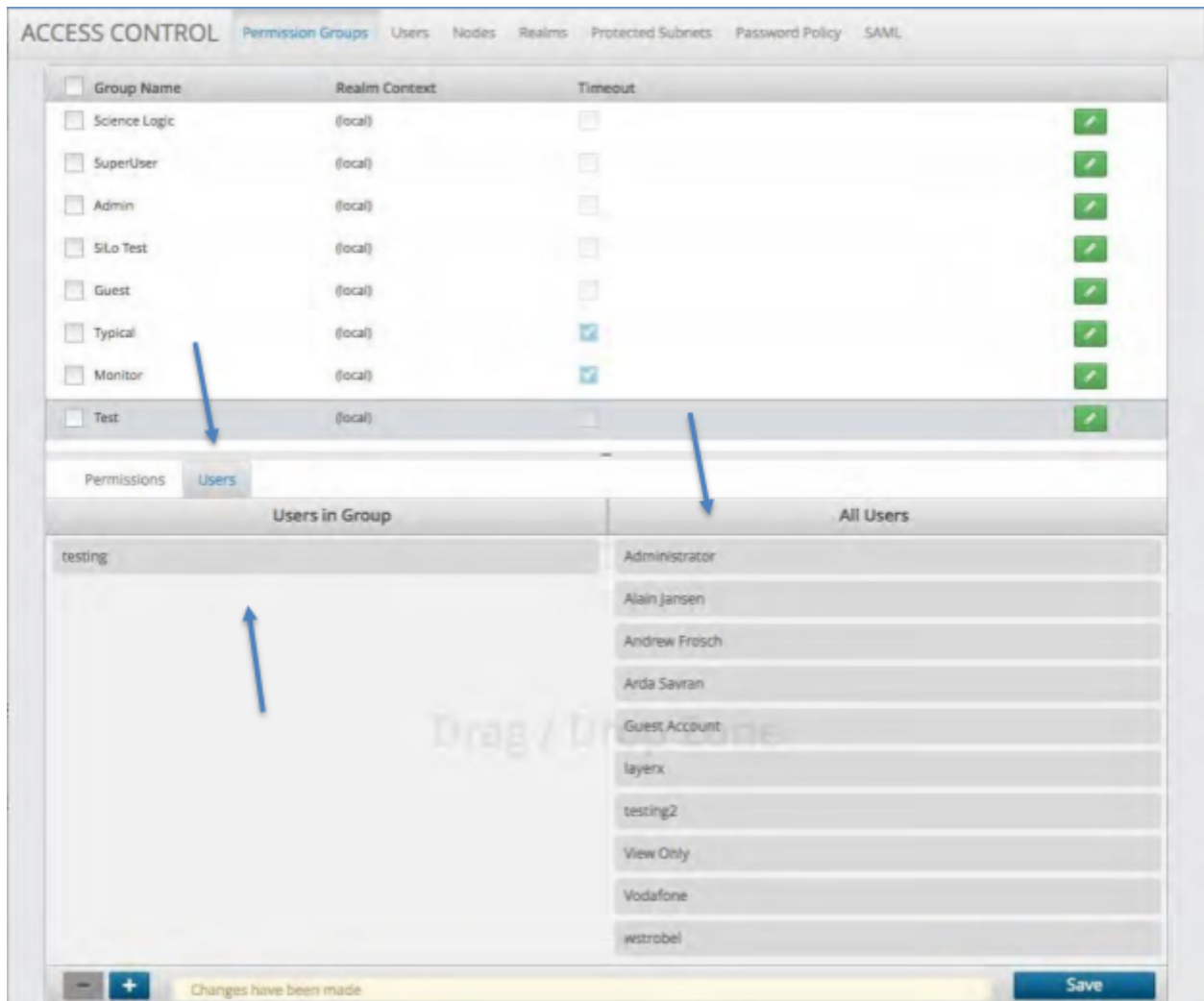
1. Click the Permission Group tab under the Access Control panel. A list of defined groups will be displayed.
2. Click the blue plus icon at the bottom of the panel.
3. Fill in the name of the group and select Realm Context drop-down button. This will always be local for a single Arbitrator deployment.
4. Click the Timeout box if you wish this user group to have their session timeout for non- use and require them to log back into the UI.
5. Select each system screen name tab that you wish to grant access to this group. As you select each tab it will turn green indicating that this system screen will be available to this group.
6. Click the blue check icon when complete.
7. Click Save to complete the addition of the group.



Assigning and Removing Users to and from a Permission Group

To Assign a User to a Permission Group:

1. Click User next to the Permission tab. A list of All Users and Users in Groups will be displayed.
2. Click the Group to which you wish to add a User.
3. Drag the desired user(s) from the “All Users” section to the drop zone under “Users in Group”.
4. To remove a User from a Permission Group simply drag the user from the “Users in Group” section over to the “All Users” section
5. Click Save to complete the action.



Users

The Users tab allows you to create a new user or modify an existing one. The users can be set up as “Super Users” or assigned roles in the permission groups. Once the user is added and saved then they will be available to add to the Permission Groups per the last section.

Creating a New User

To create a new User:

1. Click the User tab at the top of the screen next to Permission Groups.
2. Click the blue plus icon at the bottom of the screen.
3. Fill in the required fields. (Full Name, Username, Password, Confirm and Email).
4. Check the Super-User box if applicable.
5. Check the Force Password Change if you want this user to follow the Password Policy.
6. Click the Locked Out box if you want this user to time on inactivity on the UI.
7. Select the Customer drop-down box and assign the user to a customer.
8. Check the Disable multi-tenancy if this is a single customer and multi-tenancy does not apply.
9. Click the Blue check icon to set the user.
10. Click the Save button to save the user.

The screenshot displays the 'ACCESS CONTROL' interface, specifically the 'Users' tab. The interface includes a navigation bar with tabs for 'Permission Groups', 'Users', 'Nodes', 'Realms', 'Protected Subnets', 'Password Policy', and 'SAML'. Below the navigation bar, there is a 'Filter' and 'Sort' dropdown menu. The main area contains a table of users with the following columns: Full Name, Username, Password, Confirm, Email, Super-User, Force Password Change, and Locked Out. The table lists several users, including Administrator, Alain Jansen, Andrew Frosch, Arda Savran, Guest Account, layerx, testing, testing2, View Only, Vodafone, and wstrobei. At the bottom of the table, there are input fields for 'Customer' and a 'Disable multi tenancy' checkbox. A 'Save' button is located in the bottom right corner. A red bar at the bottom left indicates 'Errors exist'.

| Full Name | Username | Password | Confirm | Email | Super-User | Force Password Change | Locked Out |
|---------------|----------|----------|---------|-------------------------|-------------------------------------|--------------------------|--------------------------|
| Administrator | admin | ***** | ***** | afrosch@layerxtech.com | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Alain Jansen | ajansen | ***** | ***** | ajansen@layerxtech.com | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Andrew Frosch | afrosch | ***** | ***** | afrosch@layerxtech.com | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Arda Savran | asavran | ***** | ***** | asavran@layerxtech.com | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Guest Account | guest | ***** | ***** | support@layerxtech.com | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| layerx | layerx | ***** | ***** | support@layerxtech.com | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| testing | testing | ***** | ***** | support@layerxtech.com | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| testing2 | testing2 | ***** | ***** | support@layerxtech.com | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| View Only | viewonly | ***** | ***** | view@layerxtech.com | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Vodafone | voda | ***** | ***** | support@layerxtech.com | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| wstrobei | wstrobei | ***** | ***** | wstrobei@layerxtech.com | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Deleting a User

To delete a User:

1. Click the check box next to the User name that you wish to delete.
2. Click the minus icon at the bottom of the screen.
3. Click the Save button to save your changes.

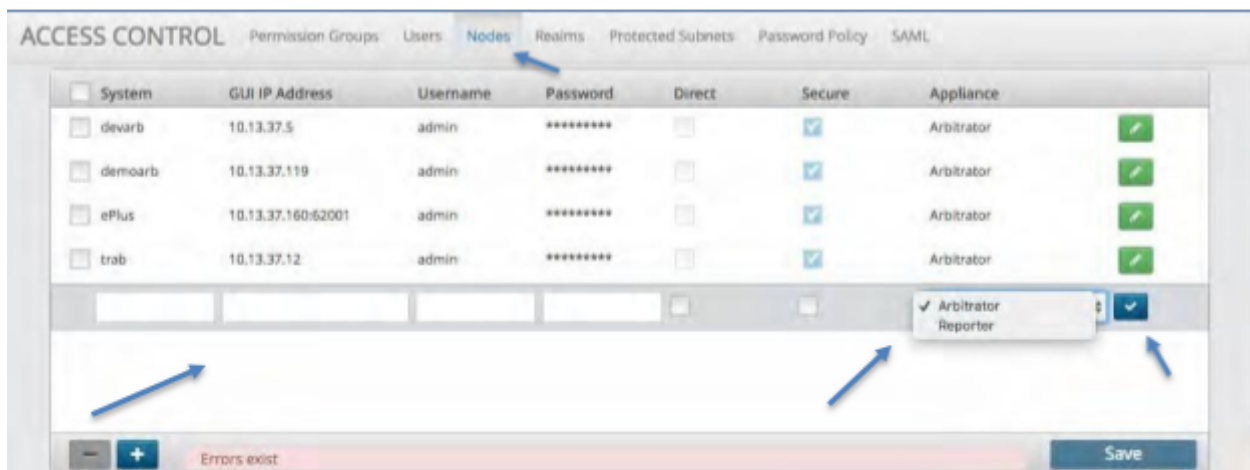
Nodes

The Nodes tab allows you to create a new Arbitrator Correlation or Dashboard/Reporting node. Once it is added and saved then the node can be added to a Realm with other nodes.

Creating a Node

To create a Node:

1. Click the Node tab at the top of the screen next to Users.
2. Click the blue plus icon at the bottom of the screen.
3. Fill in the required fields. (System, GUI IP Address, Username and Password).
4. Check the either the Direct box (http) or the Secure box (https) to select the communication method.
5. Select the Appliance drop-down box and choose the type of system you are adding.
6. Click the Blue check icon to set the Node.
7. Click the Save button to save the Node.



Deleting a Node

To delete a Node:

1. Click the check box next to the Node name that you wish to delete.
2. Click the minus icon at the bottom of the screen.
3. Click the Save button to save your changes.

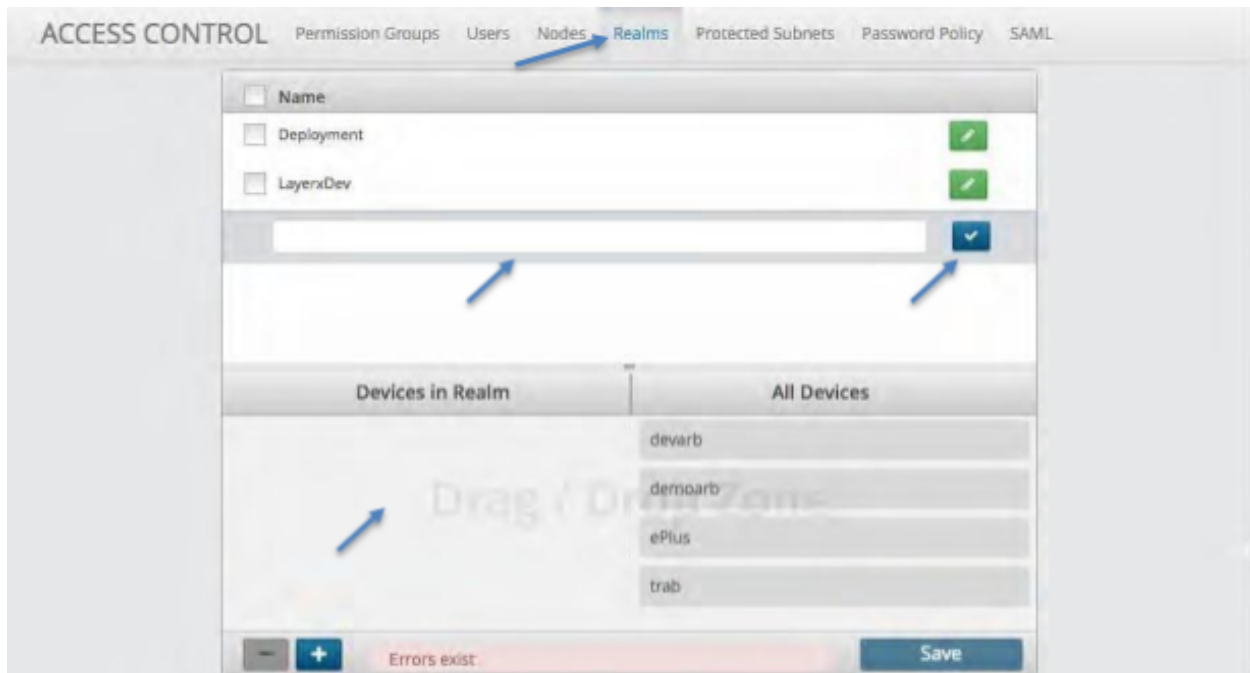
Realms

The Realm tab allows you to create a new Realm where VOSS Insights systems can be grouped to communicate with each other. Once it is added and saved then Nodes can be added to the Realm.

Creating a Realm

To create a Realm:

1. Click the Realm tab at the top of the screen next to Nodes.
2. Click the blue plus icon at the bottom of the screen.
3. Fill in the Realm name that you desire.
4. Click the Blue check icon to set the Realm.
5. Drag the systems that you want in the Realm into the drop zone.
6. Click the Save button to save the Realm.



Deleting a Realm

To delete a Realm:

1. Click the check box next to the Realm name that you wish to delete.
2. Click the minus icon at the bottom of the screen.
3. Click the Save button to save your changes.

Protected Subnets

The Protected Subnets tab allows you to input the IP addresses of subnets that will be protected from a control running against them. The Control will check this list prior to running and will not run a script against a device that is within a protected subnet.

Creating a Protected Subnet

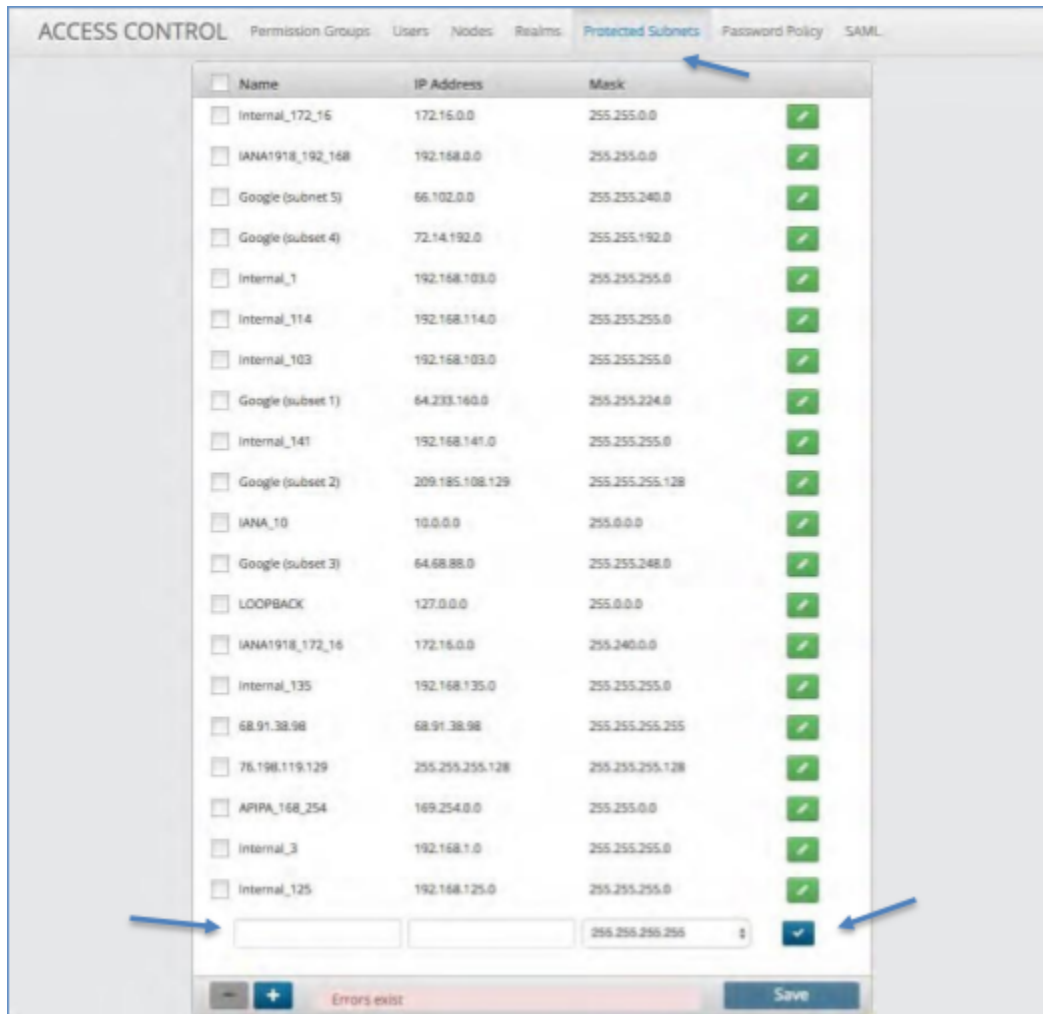
To create a Protected Subnet:

1. Click the Protected Subnet tab at the top of the screen next to Realms.
2. Click the blue plus icon at the bottom of the screen.
3. Fill in the Name, IP Address and Mask of the Protected Subnet.
4. Click the Blue check icon to set the Protected Subnet.
5. Click the Save button to save your changes.

Deleting a Protected Subnet

To delete a Protected Subnet:

1. Click the check box next to the Protected Subnet name that you wish to delete.
2. Click the minus icon at the bottom of the screen.
3. Click the Save button to save your changes.



Password Policy

The Password Policy tab allows you to set and enforce password rules to access the system. Each field is optional thus the user can choose the best policy to enforce.

Creating a Password Policy

To create a Password Policy:

1. Click the Password Policy tab at the top of the screen next to Protected Subnets.
2. Within the box you have an option of Minimum Length, Minimum Uppercase, Minimum Lowercase, Minimum Numeric, Minimum Special, Password Lifespan and Maximum Login Attempts.
3. Fill in the desired inputs into each of these fields.
4. Click the Save button to save your changes.

The screenshot shows a configuration window titled "ACCESS CONTROL" with a "Password Policy" tab selected. The window contains the following settings:

| Setting | Value | Character Set |
|------------------------|-------|---------------|
| Minimum Length | 7 | |
| Minimum Uppercase | 1 | A-Z |
| Minimum Lowercase | 1 | a-z |
| Minimum Numeric | 1 | 0-9 |
| Minimum Special | 1 | !@#%&*()[] |
| Password Lifespan | 0 | days |
| Maximum Login Attempts | 20 | |

A "Save" button is located at the bottom of the configuration window.

SAML

The SAML tab allows you to configure single sign-on to other user management platforms by utilizing the Security Assertion Markup Language (SAML). This is an open standard for exchanging authentication and authorization data between systems.

Creating single sign-on via SAML

To create single sign-on via SAML:

1. Click the SAML tab at the top of the screen next to Password Policy. The attributes on this page require you to interact with your administrator of allowed users.
2. Click the box next to Enable SAML.
3. If the system is supporting a single customer, then click the Disable Multi-Tenancy.
4. Fill in the optional principal attributes.
5. From your administrator obtain the Identity Provider Metadata XML and paste it into the box provided.
6. From the following boxes provide each of the following to your Identity Provider:
 - a. Audience URL (SP Entity ID)

- b. Single Login URL
 - c. Single Logout URL
 - d. Click to view or download the platform SAML Metadata
 - e. Click to view or download the platform X.509 Certificate (2048 Bit)
7. Click the Save button to commit the SAML configuration.
 8. (See Figures on the next few pages.)

ACCESS CONTROL [Permission Groups](#) [Users](#) [Nodes](#) [Realms](#) [Protected Subnets](#) [Password Policy](#) **SAML**

Enable SAML

Disable Multi Tenancy

SAML Signature Algorithm

Attribute Mappings

Email (Optional):

Username (Optional):

First or Display Name (Optional):

Last Name (Optional):

Identity Provider Metadata XML

* Required

Paste your metadata XML here

Service Provider Information

Provide this information to your Identity Provider

Audience URI (SP Entity ID):

Single Login URL:

Single Logout URL:

Metadata: [View Details](#) | [Download](#)

X.509 Certificate (2048 Bit): [View Details](#) | [Download](#)

[Save](#)

ACCESS CONTROL | Permission Groups | Users | Nodes | Realms | Protected Subnets | Password Policy | SAML

Enable SAML

Disable Multi Tenancy

SAML Signature Algorithm: sha1

Attribute Mappings

Email (Optional):

Username (Optional):

First or Display Name (Optional):

Last Name (Optional):

Identity Provider Metadata XML *** Required**

Paste your metadata XML here

SAML Metadata ✕

```
<?xml version="1.0"?>
<md:EntityDescriptor xmlns:md="urn:oasis:names:tc:SAML:2.0:metadata"
xmlns:ds="http://www.w3.org/2000/09/xmldsig#"
entityID="http://demoarb.layerxtech.com/saml2/module.php/saml/sp/metadata.php/default-sp">
<md:SPSSODescriptor protocolSupportEnumeration="urn:oasis:names:tc:SAML:1.1:protocol
urn:oasis:names:tc:SAML:2.0:protocol">
<md:KeyDescriptor use="signing">
<ds:KeyInfo xmlns:ds="http://www.w3.org/2000/09/xmldsig#">
<ds:X509Data>

<ds:X509Certificate>MIID5zCCAs+gAwIBAgLJAlyQ+0SPiFX0MA0GCSqGSIb3DQEBCwUAMIGJM0swC
QYDVQQGEwJVUzEOMAwGA1UECAwFVG4YXmxDzANBgNVBAMcMBklydmliuZzEPMA0GA1UECgwwbG9w
GF5ZkxJ4M08wDQYDVQQLEDAZsYXlcnngxEDAOBgNVBAMMB2RlbnBhcnRkLTAjBjBkqkhiG9w0BCQEW
n11cHBvcnRAbGF5ZkxJ4dGVjaCSjbt20wHhcNMTg0MTE3MjM1MzQ3WjCBIT
ELMAkGA1UEBhMCVVMxODQAMBgNVBAQMBVJleGFzZGFzMQ8wDQYDVQQHDAZJbnZpbmcxODQAMBgNV
AoMBMwheWVyeDEPMA0GA1UECwwGZGF5ZkxJ4MRAwDgYDVQQDDAdkZXZwYXJkZmliuZzEPMA0GA1
veNAQKBFFhZzdXBw3J0QXheWVyeHRIY2guY291MlBjANBgkqhkiG9w0BAQEFAAOCAQ8AMIIBCgK
CAQEA4ZgbuCEgq3E/RrHvoMyyjhYtcsGITvqvUkmbkmD9eP75vBS4QyIT55HY7DW72zGrjGqsprk5
DPBIMf6kBljMijUbK4V3L0TCoaCq5u0rD9YLSeVAmSm0aNF/X1diTA3Lc8VqMceh7PsvMn9CqCImJ++x
3U2BwAGS78OC6BUUhD4d8U4E5/WsJ+x1wEceYsRGN16c7A156O6Yr9BelU000pq6mk6xYXjC6XWV
LTK18G5ZcG5NAUJKKdnTep4yhgtckRJuXh2wVbD/rQJZfk+D7yQLSspfc41DbVmfJRCla7LgkGdV+R
hBOKVjOpVQ5Z6w2T5xlwbdwIDAQABo1AwTjAdBgNVHQ4EFgQUUvFDaBSaubH6fUtzgbEVEm8vBtlw
HwYDVROjBBgwFoAUUvFDaBSaubH6fUtzgbEVEm8vBtlwQAYDVROjBTAUwAwEB/zANBgkqhkiG9w0B
QsFAAOCAQEAAyK084TvcTgZxuoNhcX20f9T6v7IRzO1280Uih8ydBSwbNmP9vXP69IA9dzImi4TUHfDwJq
Elz+M4HKz07DzZn60LW+ZnWZDXnodFzuYATdsVkeZn+BXT+vD3w9fPNmxxPPFbK8e6X/8eJum63cil
8Kbd4yVS7750VDQPBT2JulV8JizjQSUr11MDir3R9Z+EtIKUjJlt4CLVsn9h40fzDYobr315XKoleDiSq7Vy9
WEYXP00IHm6nkEvUs85jyLxsXcjw3NtbtzQeMBppuVOByGValEWIgjFyg8++t/qGJuoCQR/LT06LzFek2r
Cg/t9wGzEnmjwHYpGw==</ds:X509Certificate>
</ds:X509Data>
```

Service Provider Information

Provide this information to your Identity Provider

Audience URI (SP Ent ID):

Single Login URL:

Single Logout URL:

Metadata: [View Details](#) [Download](#)

X.509 Certificate (2048 Bit): [View Details](#) [Download](#)

Save

ACCESS CONTROL [Permission Groups](#) [Users](#) [Nodes](#) [Realms](#) [Protected Subnets](#) [Password Policy](#) [SAML](#)

Enable SAML

Disable Multi Tenancy

SAML Signature Algorithm: sha1

Attribute Mappings

Email (Optional):

Username (Optional):

First or Display Name (Optional):

Last Name (Optional):

Identity Provider Metadata XML

* Required

-----BEGIN CERTIFICATE-----
 MIIID5zCCAs+gAwIBAgIJAlY0+05PIFXDMA0GCSqGSIb3DQEBCwUAMIGJMswCQYD
 VQQGEwJVUzEOMAwGA1UECAwVVG4YXmDzANBgNVBAcMBklydmluZzEPMA0GA1UE
 CgwGbGF5ZXJ4MQ8wDQYDVQQLEDAZsYXlcnGxEADAQBgNVBAMMB2RlbnBhcnkuTAJ
 BgkqhkiG9w0BCQEFN1cHBvcnRAbGF5ZXJ4dGVjaC5jb20wHhcNMTE3MjM1Mz
 MzQ3WWhcNMjM1MzQ3WjCBTELAAkGA1UEBhMCVWxkDjAMBGNVBAgMBVRl
 eGFzMQ8wDQYDVQQGEwVUzEOMAwGA1UECAwVVG4YXmDzANBgNVBAcMBklydmlu
 ZzEPMA0GA1UECgwGbGF5ZXJ4MQ8wDQYDVQQLEDAZsYXlcnGxEADAQBgNVBAM
 MB2RlbnBhcnkuTAJBgkqhkiG9w0BAQEEFAAOCAQ8AMIIBcGKCAQEA
 4ZgbuCEgq3E/RrHvoMyyjHYtcsGtVqvqKmbkmD9eP75vBS4fQyIT55HY7DW72z
 GrjGsqjpk5sDPBIM86kBUIMjUbkK4V3L0TCoaCq5u0rjD9YLSelVAMsm0aNF/X1
 dITab3Lc9VqMceh7PsvMn9CqCImJ+xx3J2BvAGS78OC6BUUhD4d8Uf4E5Wsj+X1w
 ECeYsRGN16c7Ai56O6Yr9BelU000pq6mk8xYXIC6XWVnLTK18G5zcG5NAUHKKn
 Tep4yhgtkRjUbXh2wWbD/rCJZFk+D7YDLSeptc41DbVmFJRCla7LgkGdqV+RhB0
 KVtjOpVQ5Z6w2T5xIwwbdwIDAQABo1AwTJAdBgNVHQ4EFgQUUvDaBSaubH6fUtz
 gbEVEm8v8tlwHwYDVR0jBBgwFoAUUvDaBSaubH6fUtzgbEVEm8v8tlwDAYDVR0T
 BAUwAwEB/zANBgkqhkiG9w0BAQsFAAOCAQEAAyK094TvcTgZxuoNhcX20f9T6vI7I
 RzOt280Uj8ydBSwbNimP9vXP69IA9dzlml4TUHDwJqEiz+M/4HKz07DzZrh60LW+Z
 NWZ0XnodxFzYATrdsVKEZn+BXT+vD3w9fPNmXPfPFbK8e6X/8eJum63cll8Kbd4
 yVS7750VDQPBT2JuuV8JzjJQSUR1MDlr3R9Z+EtIKUjlt4CLVsn9h40fzDYo
 br315XkoJeDisq7Yy9WEYXp00IHm6nkEvUs95jyLxsXcjw3NTbtzQeMBppuW0By
 GValEWfGfyg8++/qGJuoCQr/LT06LzFek2rCg/9wGzEnmjnwHYpGw==
 -----END CERTIFICATE-----

Service Provider Information

Provide this information to your Identity Provider

Audience URI (SP Entity ID):

Single Login URL:

Single Logout URL:

Metadata: [View Details](#) [Download](#)

X.509 Certificate (2048 Bit): [View Details](#) [Download](#)

[Save](#)

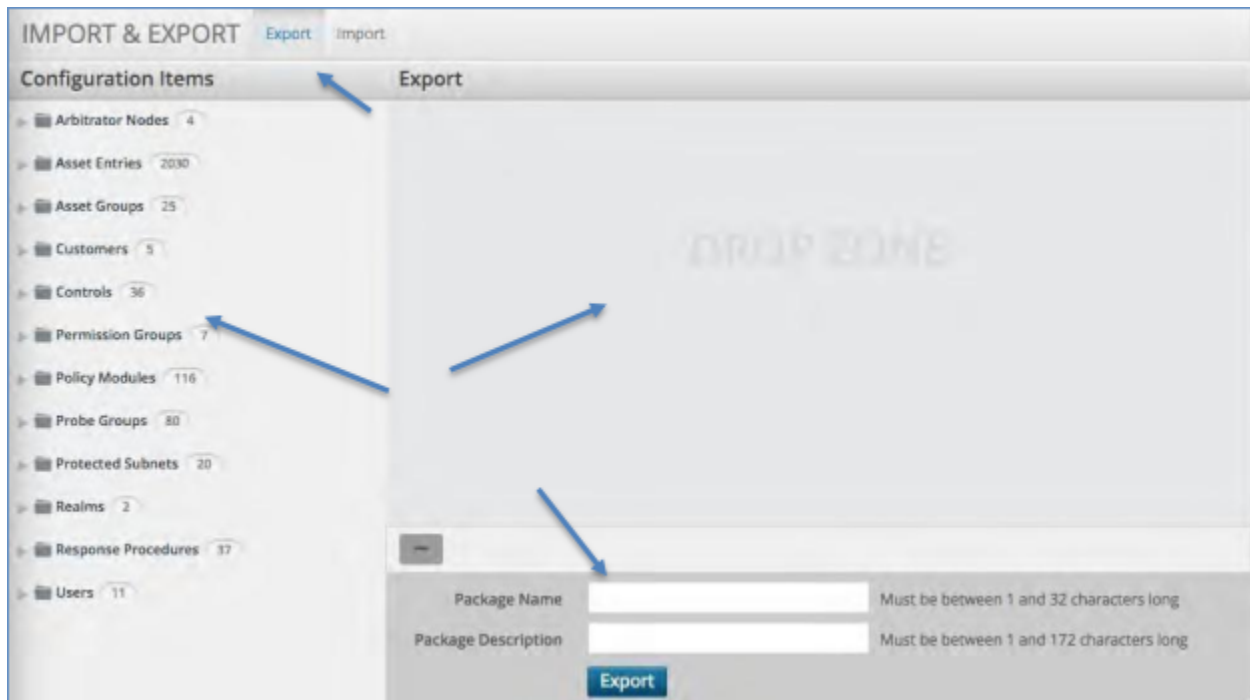
4.1.11. Import & Export

The Import & Export Configuration panel allows you to select all or parts of the system configuration to be exported to file or to import already exported files into the system.

Exporting

To export configuration items:

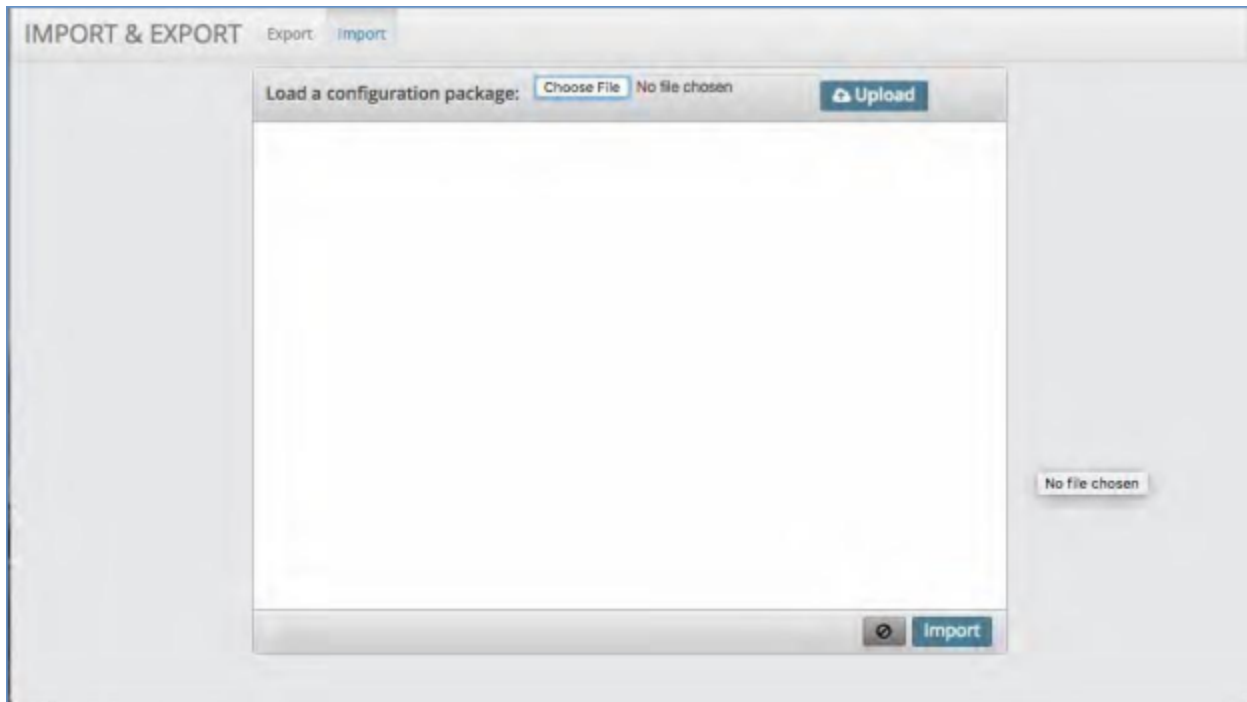
1. Click the Export tab at the top of the screen.
2. On the left-hand side will be folders containing all of the configuration items. Either drag whole folders over to the drop zone or open a folder and select a specific item to drag to the drop zone.
3. Once complete give the package a name in the box next to Package Name.
4. Then give the package a description in the box next to Package Description.
5. When complete click the Export button.
6. The package file will download to your local computer.



Importing

To import configuration items:

1. Click the Import tab at the top of the screen.
2. Select the file you wish to import by clicking the “choose file” button. This will open up your local file system to select the file from where you have it stored on your computer.
3. Double click the file or highlight it and click “Open”.
4. Click the Upload button. This will open up all of the configuration items you are importing.
5. Make any changes to the settings as required.
6. Click Import.
7. A progress screen will pop up. Once complete click OK.



4.1.12. Archive Management

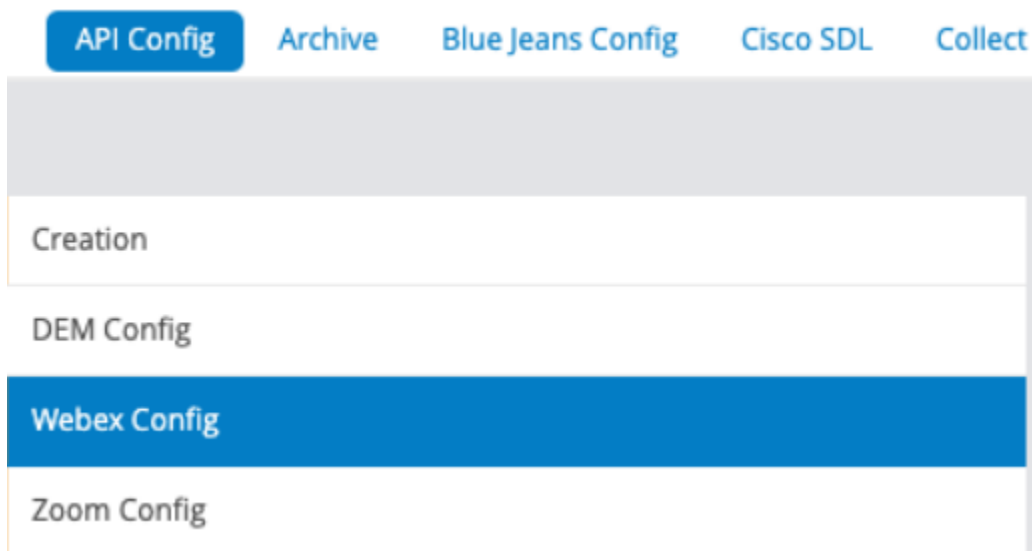
The Archive Management panel provides options on backing up and configuring the Arbitrator correlation platform.

API Config

A number of API configurations to enable monitoring can be configured.

Webex Config

From SP25, **Webex Config** is available to enable the configuration of Webex monitoring. (Requires Dashboard SP66 Release for visualization)



Note: For Webex API support, your network should be configured to access: <https://webexapis.com/v1>, port 443. (Admin menu > LayerX Network Configuration, **DNS Settings** may need to be configured to reach the external site.)

Webex API Configuration Steps

1. From the main landing page, select the **System Configuration** (wrench/spanner), which opens a new tab.
2. On the new tab, select **Archive Management** (file cabinet).
3. Go to **Configuration Management > API Config > Webex Config** to fill in the settings:
 - a. Click the **Create Access Token** button, enter your account credentials and copy the JSON string which performs OAuth handshake with Webex.
 - b. Set **Enabled** to enabled.
 - c. At **CUSTOMER** enter the Customer Name (if multi-tenancy is required)
 - d. At **AccessToken** paste the copied JSON token from step a.

The JSON format is as follows (line breaks here not in string):

```
{ "access_token": "xxxxxxxxxxxxxxxxxxxxxxxxxxxx",
  "expires_in": nnnnnnn,
  "refresh_token": "xxxxxxxxxxxxxxxxxxxxxxxxxxxx",
  "refresh_token_expires_in": nnnnnnn,
  "token_type": "Bearer" }
```

- e. Click **Verify Access Token** and to verify, inspect the output in **View Output**.
- f. Click **Save Access Token**, which will create a new Customer-specific "Webex Config - <XYZ>" entry. under the **API Config** list. (You need to click away and return to **Configuration Management** to reload with the new entry.)

VOSS

ARCHIVE MANAGEMENT Configuration Management Log Management

API Config Archive Blue Jeans Config Cisco SDL Collect Import LDAP Probe SNMP Syslog Tunnel

Creation

DEM Config

Webex Config

Zoom Config

Changes have been made to this configuration item

Webex Config

Allows the enable and configuration of Webex monitoring.

Create Access Token

[Create Access Token](#)

This step is required to allow the creation of an access token.

Enabled

enabled

Capture Webex's statistics using the Access Token provided from <https://marketplace.webex.us/> Recommendation: Manually overwrite the ExpirationTime to a much greater time.

CUSTOMER

ABC Telecom

Name of Customer.

AccessToken

`{"access_token": "ZjlyZjAyYmE1YTtyNS00YWZlLWlzOGEt"}`

AccessToken to be used for requests.

Command: Webex Config: Create Access Token

Status: Finished

Output: success

[Close](#) [View Output](#)

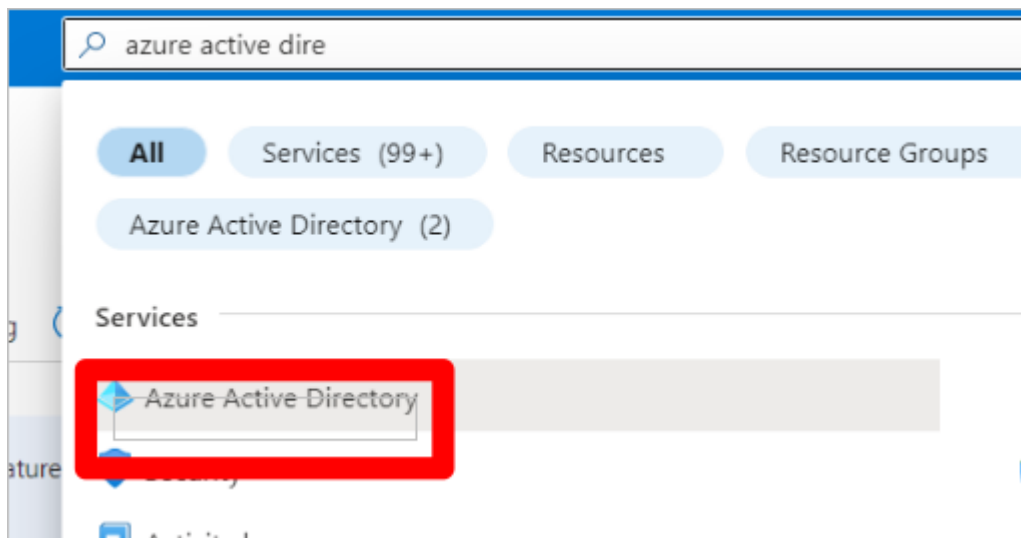
Created configurations can be deleted or modified. This will be needed for Access Tokens, as these contain an `expires_in` value.

MS Teams Config

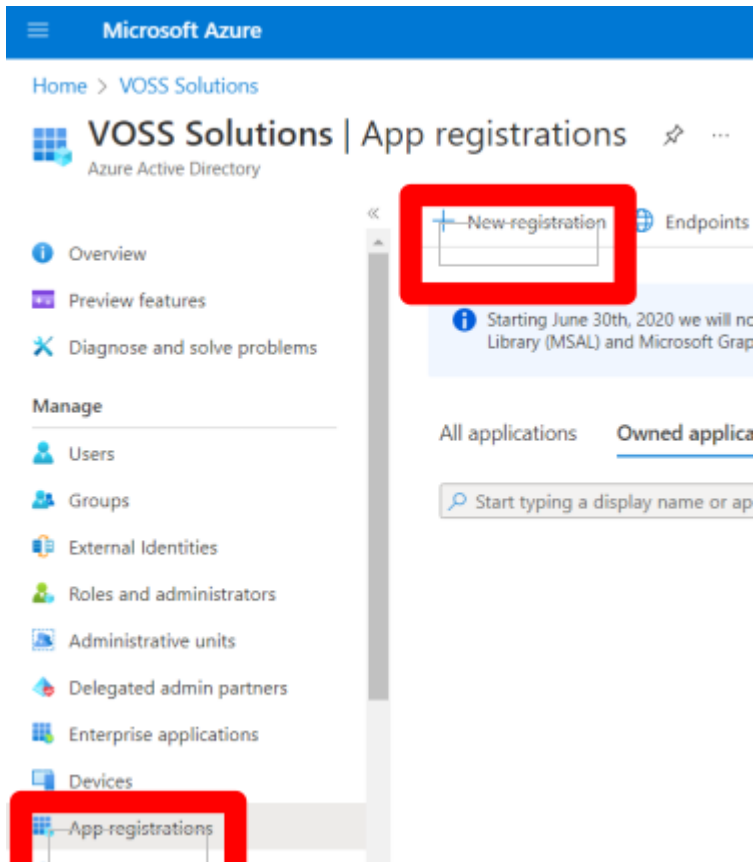
From release 23.1, **MS Teams Config** is available to enable the configuration of MS Teams monitoring. MS Teams API configuration requires an initial application registration on Microsoft Azure.

Application Registration in Azure

1. Search for Azure Active Directory:



2. Select **Manage > App registrations** and then select **New Registration**



3. Enter a meaningful application **Name** to display to users and under **Supported account types**, select **Accounts in this organization directory** and click **Register**.

Microsoft Azure

Home > VOSS Solutions | App registrations >

Register an application ...

*** Name**

The user-facing display name for this application (this can be changed later).

Voss-cloud-collector

Supported account types

Who can use this application or access this API?

Accounts in this organizational directory only (VOSS Solutions only - Single tenant)

Accounts in any organizational directory (Any Azure AD directory - Multitenant)

Accounts in any organizational directory (Any Azure AD directory - Multitenant) and personal Microsoft acc

Personal Microsoft accounts only

4. When the new application is registered, locate the **Application (client) ID** and **Directory (tenant) ID** on the next page and store these values in a secure location.

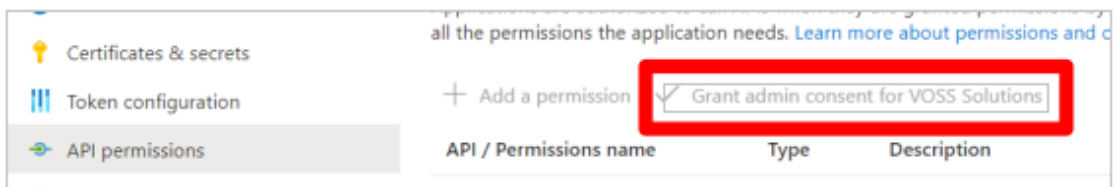
The screenshot displays the Microsoft Azure portal interface for an application named "VOSS MS Teams Collector". The left-hand navigation pane is visible, with the "API permissions" option under the "Manage" section highlighted with a red rectangular box. The main content area shows the "Essentials" section, where the "Application (client) ID" and "Directory (tenant) ID" fields are redacted with red boxes. Other visible details include the display name "VOSS MS Teams", the object ID, and supported account types set to "My organization". A search bar and various action buttons like "Delete", "Endpoints", and "Preview feat" are also present at the top of the main content area.

5. Select the **API permissions** menu under **Manage** and then select the following **Application permissions**:

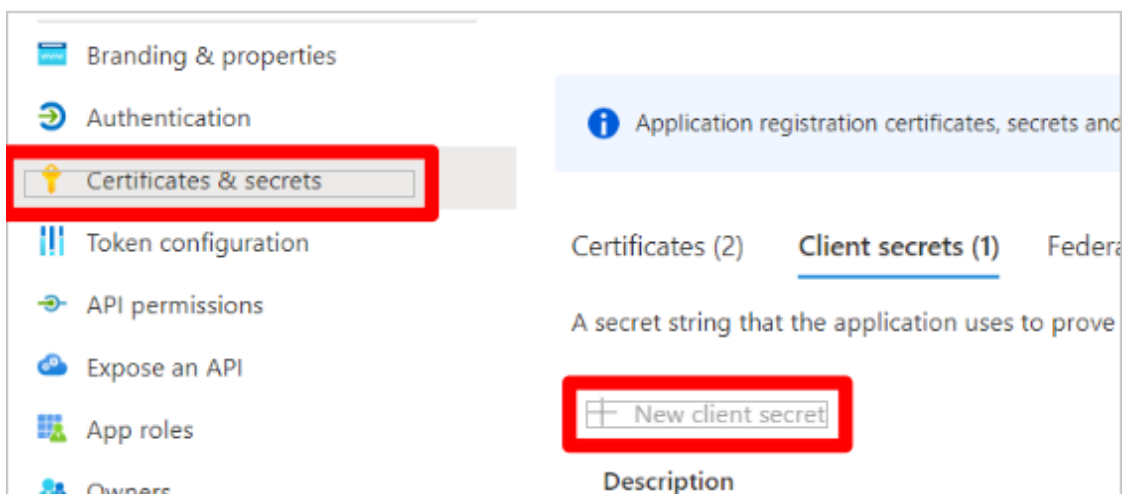
- CallRecords.Read.All
- Device.Read.All
- DeviceManagementApps.Read.All
- DeviceManagementApps.ReadWrite.All
- DeviceManagementConfiguration.Read.All
- DeviceManagementConfiguration.ReadWrite.All
- DeviceManagementServiceConfig.Read.All
- DeviceManagementServiceConfig.ReadWrite.All
- Directory.Read.All
- Directory.ReadWrite.All
- User.Read.All
- User.ReadBasic.All

- User.ReadWrite.All
- Group.Read.All
- Group.ReadWrite.All
- GroupMember.Read.All
- ServiceHealth.Read.All
- TeamworkDevice.Read.All
- TeamworkDevice.ReadWrite.All

6. Grant admin consent:



7. From **Certificates & secrets**, create authentication from **New client secret**:



8. Copy the value and store in a secure location.

| Description | Expires | Value ⓘ | Secret ID |
|--------------------------------|-----------|------------|------------|
| VOSS MS Teams Collector Secret | 6/22/2023 | [REDACTED] | [REDACTED] |

The stored:

- **Application (client) ID,**
- client secret **Value** and
- **Directory (tenant) ID**

will be used on the Arbitrator configuration dialogue screen.

Configuration of the tenant collection from the Arbitrator

Configuration is carried out on the Arbitrator **Settings** menu from **ARCHIVE MANAGEMENT > API Config > MS Teams Config**.

The screenshot displays the 'MS Teams Config' page in the Voss Archive Management system. The interface includes a top navigation bar with the Voss logo and various utility icons. Below this, a breadcrumb trail shows 'ARCHIVE MANAGEMENT' > 'Configuration Management' > 'Log Management'. A secondary navigation bar contains tabs for different configuration types: API Config, Archive, Blue Jeans Config, Cisco SDL, Collect, Import, LDAP, Probe, SNMP, Syslog, and Tunnel. On the left, a sidebar menu lists configuration categories: Creation, DEM Config, MS Teams Config (highlighted in blue), Webex Config, and Zoom Config. The main content area features a yellow notification banner stating 'Changes have been made to this configuration'. The 'MS Teams Config' section includes a description: 'Allows the enable and configuration of MS Teams'. It has an 'Enabled' checkbox currently checked with the value 'enabled'. Below this, there is a note about capturing MS Teams statistics using the Microsoft Graph API, with a URL 'https://graph.microsoft.com' and a recommendation to increase the 'ExpirationTime'. The 'CUSTOMER' field is empty, with a placeholder text 'Tenant id of Customer.'. To the right, a larger form area contains fields for 'Name' (with placeholder 'Friendly user name of Customer.'), 'ClientID' (with placeholder 'Client ID to be used for requests.'), and 'ClientSecret' (with placeholder 'Client Secret to be used for requests.'). At the bottom of this form area, there are two buttons: 'Save Data' (with a tooltip 'Create an entry for the supplied customer.') and 'Verify Access' (with a tooltip 'Tests the API access by trying to fetch the license info. Response should be JSON-formatted list of license values, or else MS Graph error codes.').

New Tenants can be created with **Enabled** either enabled or disabled. If disabled, no API requests will be made until it is enabled.

1. Enter stored values:

- Enter the tenant id (**Directory (tenant) ID**) in the **CUSTOMER** field
- Enter an easily identifiable account name in the **Name** field.
- Enter the client ID (**Application (client) ID**) in the **ClientID** field.
- Enter the client secret **Value** in the **ClientSecret** field.

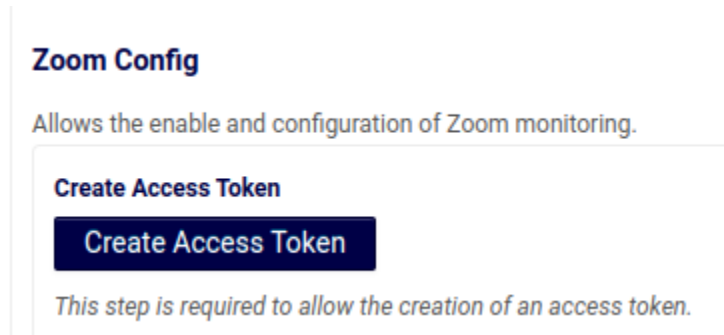
These values should be for a client that is dedicated to this use and should not be used to request a token from any other source while the API collector is enabled.

2. Click **Save Data** to save the configuration.

3. Refresh the screen (move away from the configuration screen to another and back) to see the new configuration.

Zoom Config

For the configuration of Zoom monitoring, an access token is required.



Click the **Create Access Token** button to be redirected to get an access token.

1. If Zoom statistics are to be captured, select **enabled** from the **Enabled** drop-down.
2. Enter a **Customer** name for the associated customer.
3. Enter the received access token in the **AccessToken** input box.
4. Enter a refresh token in the **RefreshToken** input box.
5. Click the **Verify Access Token** button to test the entered access token.

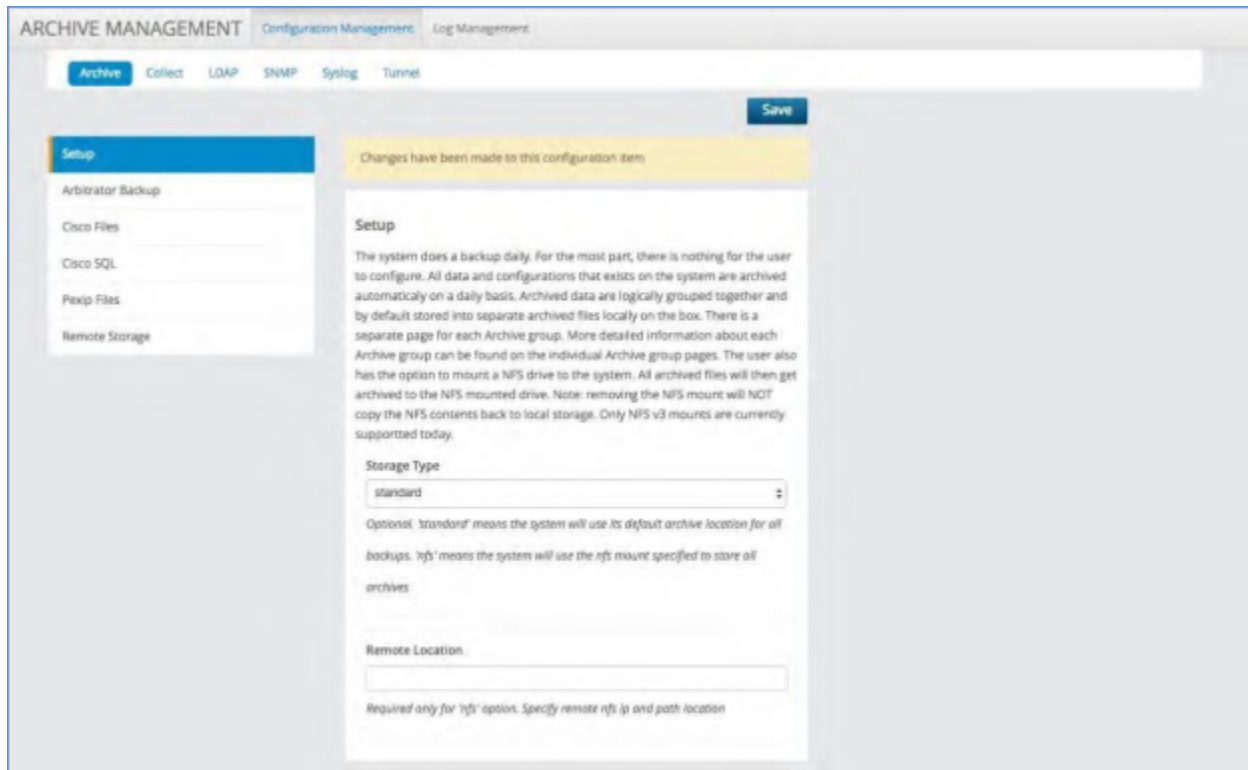
Archive

Under the Archive tab there are a few options based on the specific functions the user wants to backup.

Setup

The system does a backup daily. For the most part, there is nothing for the user to configure. All data and configurations that exists on the system are archived automatically on a daily basis.

Archived data are logically grouped together and by default stored into separate archived files locally on the box. There is a separate page for each Archive group. More detailed information about each Archive group can be found on the individual Archive group pages. The user also has the option to mount an NFS drive to the system. All archived files will then get archived to the NFS mounted drive. Note: removing the NFS mount will NOT copy the NFS contents back to local storage. Only NFS v3 mounts are currently supported today.



Arbitrator Backup

This page contains the settings for the backup of the Arbitrator. There is nothing to edit here. The settings are simply displayed for informational purposes only. This Archive group contains the following data: Arbitrator Configuration settings (Database: Assets, Alerts, Policies, Rules, Probe Groups, Response Procedures, Controls), User Permissions settings

(Idap), NDX files, Avaya data, Pexip data, and all other data currently being collected in the Arbitrator database.

The backup excludes data from the CALL table, Cisco Tables, and raw Cisco CDR/CMR files. Data in the CALL table can be very large and is expendable. Cisco Tables and raw Cisco CDR/CMR files are part of a separate Archive group.

The screenshot displays the ARCHIVE MANAGEMENT web interface. At the top, there are tabs for 'Configuration Management' and 'Log Management'. Below these, a navigation bar includes 'Archive', 'Collect', 'LDAP', 'SNMP', 'Syslog', and 'Tunnel'. A 'Save' button is visible in the top right corner. On the left side, a sidebar menu lists 'Setup', 'Arbitrator Backup' (which is highlighted), 'Cisco Files', 'Cisco SQL', 'Pexip Files', and 'Remote Storage'. The main content area features a yellow notification banner stating 'Changes have been made to this configuration item'. Below this, the 'Arbitrator Backup' section is titled and contains a descriptive paragraph: 'Arbitrator configuration and data backup. This page contains the settings for the backup of the Arbitrator. There is nothing to edit here. The settings are simply displayed for informational purposes only. This Archive group contains the following data: Arbitrator Configuration settings (Database: Assets, Alerts, Policies, Rules, Probe Groups, Response Procedures, Controls), User Permissions settings (ldap), NDK files, Awaya data, Pexip data, and all other data currently being collected in the Arbitrator database. The backup excludes data from the CALL table, Cisco Tables, and raw Cisco CDR/CMR files. Data in the CALL table can be very large and is expendable. Cisco Tables and raw Cisco CDR/CMR files are part of a separate Archive group.' Below the text are four input fields: 'archive_interval' with the value 'daily', 'method' with the value 'local', 'destination' with the value '/chroot/iscp/pub/txt_archive', and 'monthsKept' with the value 'notSupported'.

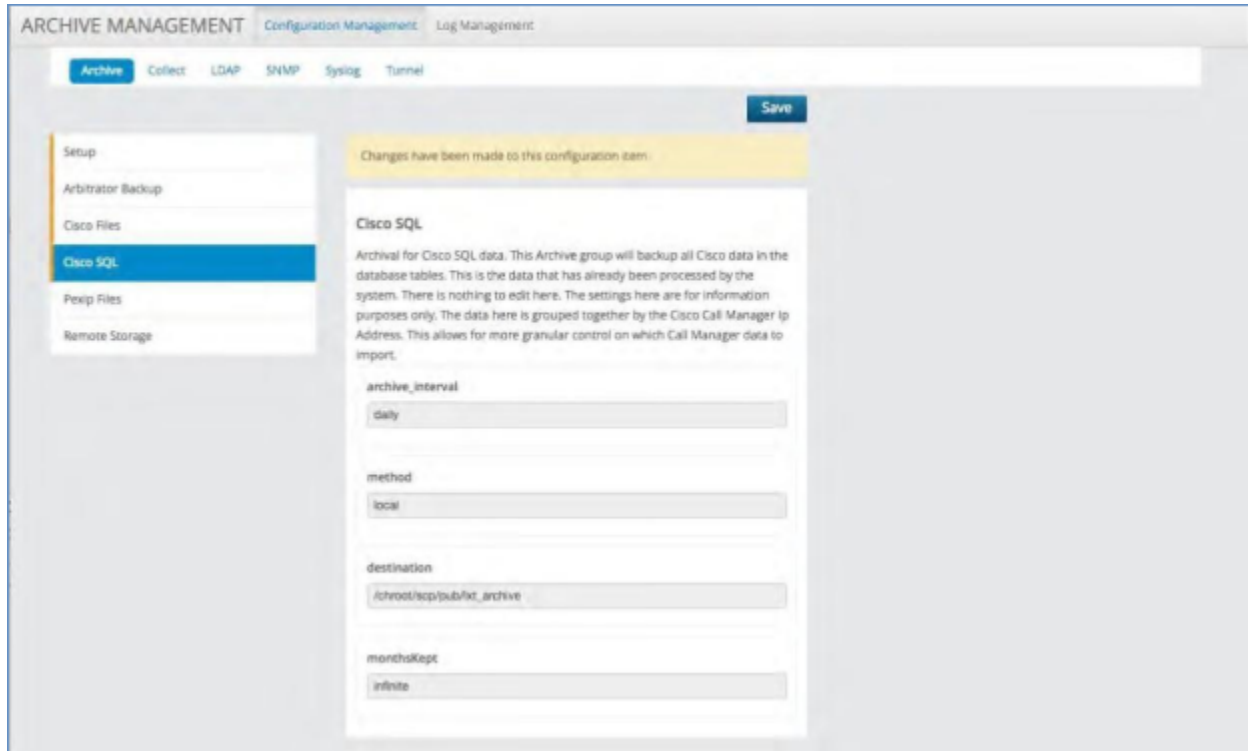
Cisco Files

Archival for Cisco files. This Archive group will back up all Cisco CDR and Cisco CMR raw files. These are the files that are SFTP'd to the system by the Cisco Call Manager. The settings here are for informational purposes only. However, the user may disable the storage of raw Cisco CDR and Cisco CMR raw files on the system. This option could be used to conserve disk space.

The screenshot shows the 'ARCHIVE MANAGEMENT' interface with a sidebar on the left containing menu items: Setup, Arbitrator Backup, Cisco Files (highlighted), Cisco SQL, Peip Files, and Remote Storage. The main content area is titled 'Cisco Files' and includes a 'Save' button in the top right. A yellow notification banner at the top of the main area states 'Changes have been made to this configuration item.' Below this, the 'Cisco Files' section contains a descriptive paragraph: 'Archival for Cisco files. This Archive group will backup all Cisco CDR and Cisco CMR raw files. These are the files that are shipped to the system by the Cisco Call Manager. The settings here are for informational purposes only. However, the user may disable the storage of raw Cisco CDR and Cisco CMR raw files on the system. This option could be used to conserve disk space.' The configuration fields are: 'status' (dropdown menu set to 'enabled'), 'archive_interval' (dropdown menu set to 'daily'), 'method' (dropdown menu set to 'local'), 'destination' (text input field containing '/chroot/scp/pub/rd_archive'), and 'monthsKept' (dropdown menu set to 'notSupported'). A small warning icon is visible next to the 'status' dropdown.

Cisco SQL

Archival for Cisco SQL data. This Archive group will back up all Cisco data in the database tables. This is the data that has already been processed by the system. There is nothing to edit here. The settings here are for information purposes only. The data here is grouped together by the Cisco Call Manager IP Address. This allows for more granular control on which Call Manager data to import.



Ndx

This Archive group will manage Ndx files on the system. Default **monthsKept** is 6 months.

Ndx

This screen can be used to manage Ndx files on the system.

max_ndx_file_size

1

The maximum size the ndx searchable file should be. Once the max size is hit, the ndx server will create a new ndx file.

max_searchable_days

1

The maximum number of days that should be searchable. Ndx files greater than this time will still live on the system but will not be searchable from the UI.

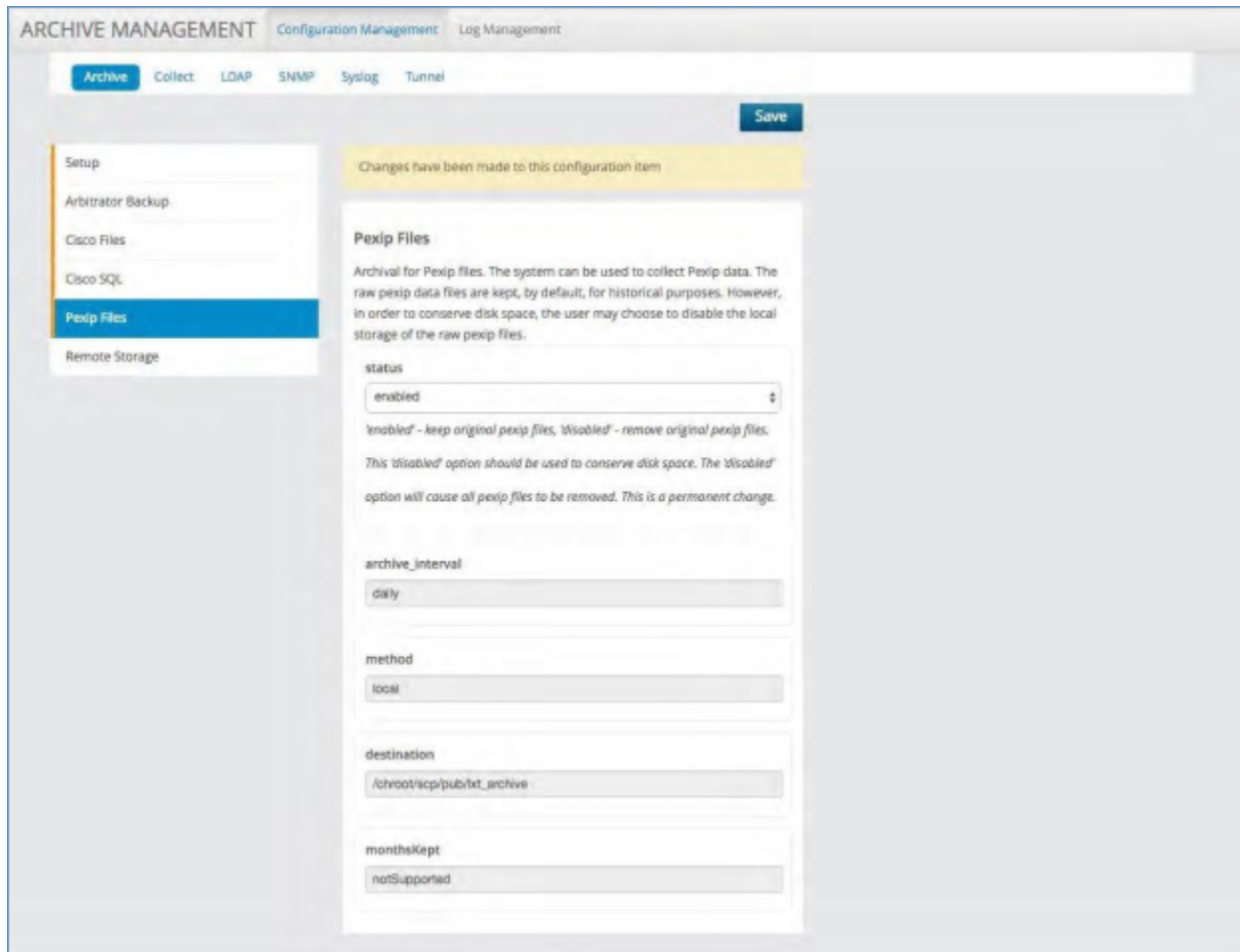
monthsKept

6

The maximum number of months to keep ndx archives around. Each archived ndx will take up disk space. Warning, increasing this number too large may require customer to also increase the hard disk size.

Pexip Files

Archival for Pexip files. The system can be used to collect PEXIP data. The raw PEXIP data files are kept, by default, for historical purposes. However, in order to conserve disk space, the user may choose to disable the local storage of the raw PEXIP files.



Remote Storage

If standard / local storage is chosen in the Archive Setup page, then this screen allows the user to configure remote archival of the Arbitrator backup files. Each Archive group produces one or many archive files. The system can be configured to SCP these archive files to a backup location or to another Arbitrator.

The archives can be sent to a separate backup location (NFS, SFTP-server, SCP or remote synced to another Arbitrator).

- **archive_interval**

This can be set on a schedule of:

- i. Daily
- ii. Weekly
- iii. Monthly

- **Method: Select an option**

- **disable** - System will reset storage options, e.g. archives locations are reset to the local system if these were previously on a remote host.
 - **nfs** - System will mount the filesystem as a local drive. The system drop/1xt_archive directory is linked with a symbolic link to /mnt/nfsshare on a host, thereby saving space on the system.
- Selecting this option enables additional controls:

Check NFS Host

Check NFS Host

Check NFS Mount

Check NFS Mount

- **Check NFS Host:** Click and use the **View Output** button to see verification output.
 - **Check NFS Mount:** Check the **destination** location (entered below) *after* saving the configuration. **View Output** shows disk usage on the destination of the NFS host.
 - **rsync** - System will sync the archive directory to remote system. The remote system must have rsync installed for this to work.
 - **rsyncToArb** - System will sync the archives directory to a remote Arbitrator. This utilizes the rsync protocol so both Arbitrators will always be in sync.
 - **scp** - System will copy archives to a remote location. Scp is not a sync. To reduce load on system and network, system only copies new / changing archives over to the scp location.
 - **sftp** - System will copy archives to a remote location. Sftp is not a sync. To reduce load on system and network, system only copies new / changing archives over to the sftp location.
- **IP location**
IP address. Also add **username** and **password**.
 - **destination**
The path on the remote server to the folder where backups are to be stored.

ARCHIVE MANAGEMENT
Configuration Management
Log Management

API Config
Archive
Blue Jeans Config
Cisco SDL
Collect
Import
LDAP
Probe
SNMP
Syslog
Tunnel

Save
Delete

Remote Storage

- Arbitrator Backup
- Avaya SQL
- Cisco Files
- Cisco SQL
- Cisco Expressway SQL
- Cisco RTMT SQL
- Ndx
- Pexip Files
- Pexip SQL
- Webex SQL
- UHE SQL
- Vdf Cisco
- Vdf Gspip

Changes have been made to this configuration item

Remote Storage

This page does not describe an Archive Group. If standard / local storage is chosen in the Archive Setup page, then this screen allows the user to configure remote archival of the Arbitrator backup files. Each Archive group produces one or many archive files. The system can be configured to scp these archive files to a backup location or to another Arbitrator.

archive_interval

Select an option

disabled

nfs

rsync

rsyncToArb

scp

sftp

'disabled' - keep archives locally, 'nfs' - Will mount a network file system as a local drive, which preserves local device disk space, 'scp' - System will copy archives to a remote location. Scp is not a sync. In order to reduce load on system and network, system only copies new / changing archives over to the scp location, 'sftp' - System will copy archives to a remote location. Sftp is not a sync. In order to reduce load on system and network, system only copies new / changing archives over to the sftp location, 'rsync' - System will sync archive directory to remote system. The remote system must have rsync installed for this to work, 'rsyncToArb' - System will sync archives directory to a remote Arbitrator. This utilizes the rsync protocol so both Arbitrators will always be in sync

IP location

username

password

destination

monthsKept

See also: [Backup and Restore the Arbitrator](#).

Collect

The Collect tab allows you to choose configuration options for collection.

Cisco Remote Copy

This option allows you to set up where to store Cisco CDR/CMR files. Use this section to configure where the collection of Cisco CDR/CMR files should be stored. “local” is the default location and will be the local Arbitrator Correlation platform. Choose “remote arbitrator” and the processed Cisco CDR/CMR files will be stored to the database of a remote arbitrator. This is useful if the data of multiple arbitrators needs to be stored to a centralized arbitrator. The “remote_ip” needs to be filled in with the ip address of the “remote arbitrator”, if configured.

The screenshot shows the Voss Archive Management web interface. The top navigation bar includes the Voss logo and various system icons. Below the navigation bar, the main menu is divided into 'ARCHIVE MANAGEMENT', 'Configuration Management', and 'Log Management'. Under 'Configuration Management', several tabs are visible: 'API Config', 'Archive', 'Blue Jeans Config', 'Cisco SDL', 'Collect' (which is active), 'Import', 'LDAP', 'Probe', and 'SNMP'. On the right side of the 'Collect' tab, there are 'Save' and 'Delete' buttons. The left sidebar contains a list of configuration categories: 'Avaya Datastore', 'Cisco', 'Cisco Remote Copy' (highlighted in blue), 'Oracle Microsoft Operator Connect', 'Vdf', and 'Voss Analytics'. The main content area displays a yellow notification banner: 'Changes have been made to this configuration item'. Below this, the 'Cisco Remote Copy' configuration form is shown. The form includes a title 'Cisco Remote Copy' and a description: 'Use this to configure CDR/CMR forwarding to a remote system.' The form contains four input fields: 'IP location' (with the value '10.13.37.8'), 'username' (with the value 'drop'), 'password' (with masked characters '*****'), and 'destination' (with the value '/chroot/scp/pub/cucm'). Each input field has a corresponding instruction below it: 'Specify the IP address of the remote location.', 'Specify the username to be used to access the remote location.', 'Specify the password to be used to access the remote location.', and 'Specify the path on the remote system.' At the bottom of the form, there is a 'Verify Config' button.

Oracle Microsoft Operator Connect

If customer CDR folders for Oracle Call Manager were set up during Arbitrator setup, then parsing CDRs and using API calls to create the call record in the MS Tenant via the Operator Connect API is configured from the setup up on the **Oracle Microsoft Operator Connect** screen.

The screenshot displays the Voss Configuration Management interface. The top navigation bar includes the Voss logo and several icons. Below the navigation bar, the main menu is divided into three sections: ARCHIVE MANAGEMENT, Configuration Management (which is the active section), and Log Management. Under Configuration Management, there are several sub-menus: API Config, Archive, Blue Jeans Config, Cisco SDL, Collect (which is highlighted), Import, LDAP, Probe, SNMP, Syslog, and Tun. On the left side, there is a sidebar with a list of configuration items: Avaya Datastore, Cisco, Cisco Remote Copy, Oracle Microsoft Operator Connect (which is highlighted in blue), Vdf, and Voss Analytics. The main content area shows a yellow notification banner stating "Changes have been made to this configuration item". Below this, the "Oracle Microsoft Operator Connect" configuration screen is displayed. It includes a description: "Use this to configure SBC forwarding to Microsoft Operator Connect." and four input fields: Client ID, Client Secret, Tenant, and Resource. Each input field has a corresponding label and a description: "Specify the client_id to be used to access the remote location.", "Specify the client_secret to be used to access the remote location.", "Specify the tenant to be used to access the remote location.", and "Specify the resource to be used to access the remote location.".

For CDR folder setup, see the "Add Customer CDR Folders" topic in the Arbitrator Install Guide.

LDAP External Config

The system uses a local LDAP server to store user information. The system also supports authenticating with an external Microsoft Active Directory server. If an external Microsoft AD is used, the system will automatically sync all users locally. Local user accounts are necessary to set specific system privileges. Please note that Microsoft AD passwords are never stored locally. Authentication always occurs with external Microsoft AD. Once authenticated, the system allows the user access based on the user's local system privileges. In order to properly configure this screen, the customer administrator must have an in-depth knowledge of the customer's Microsoft AD architecture. Improper configuration may cause too little or too many users in the system.

Proxy Config

To allow for cloud services access, proxy configuration (both authenticated and unauthenticated) is supported. You can configure the Proxy on the Arbitrator **Settings** menu from **ARCHIVE MANAGEMENT > Configuration Management > Proxy**.

The screenshot shows the Voss Configuration Management interface. The top navigation bar includes the Voss logo and various icons. Below it, the 'ARCHIVE MANAGEMENT' section is active, with 'Configuration Management' selected. The 'Proxy' button is highlighted with a red box. The main content area shows the 'Proxy Config' form, which includes fields for 'ipAddress' (10.0.0.1), 'proxyPort' (19001), 'userName' (UserX), and 'password' (masked). There are also 'Set Proxy' and 'Remove Proxy' buttons.

VOSS

ARCHIVE MANAGEMENT Configuration Management Log Management

API Config Archive Blue Jeans Config Cisco SDL Collect Import LDAP Probe Proxy SNMP Syslog Tunnel

Save Delete

Proxy Config

Changes have been made to this configuration item

Proxy Config

Adds configuration for Proxy use in external data creation.

ipAddress
10.0.0.1
IP Address of the proxy server.

proxyPort
19001
Port of the proxy server.

userName
UserX
User for the proxy account for external access.

password
.....
Password for the proxy user account for external access.

Set Proxy
Set Proxy
Set the proxy with the settings above. (Values must be saved first.)

Remove Proxy
Remove Proxy
Clear the proxy config removing any previously configured proxy.

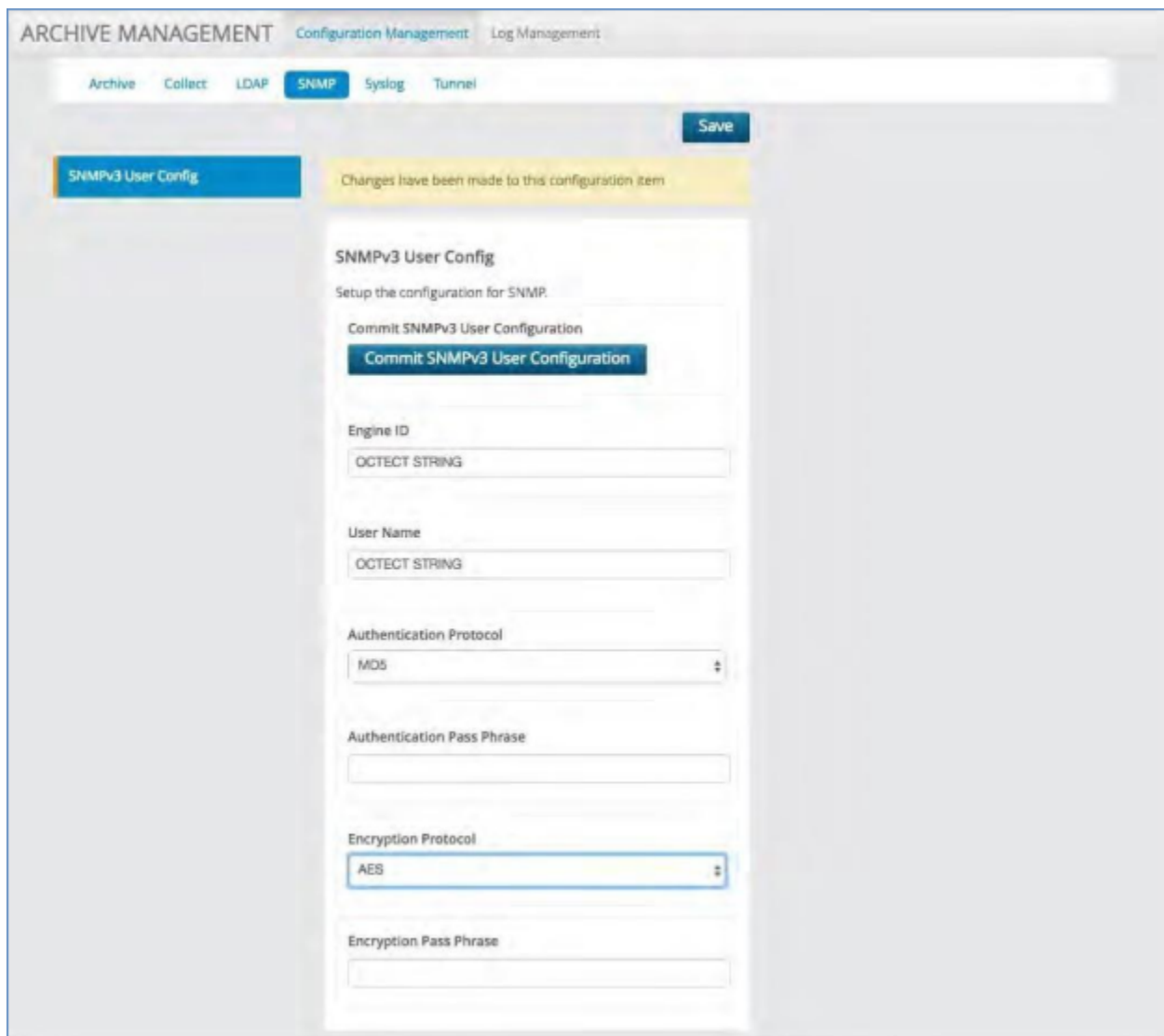
1. Fill out the required **Proxy Config** values: **ipAddress**, **proxyPort**, **userName** **password**.
2. Click **Save**.
3. To enable the saved values, click **Set Proxy**.

Important: The proxy is used only by services that use APIs for their data, and are set up in **Archive Management > Configuration Management > API Config**: Webex, Teams and Zoom.

If it is necessary to remove the proxy configuration, click **Remove Proxy**. This will reset the configuration to empty settings from the system. In order to clear the configuration screen, you will then need to click **Delete** at the top of the form. This will remove any confusion as to the proxy settings in the future.

SNMP V3 User Config

This allows the system to be configured to work with SNMP v3. It allows you to select the specific authentication and encryption methods to be utilized.

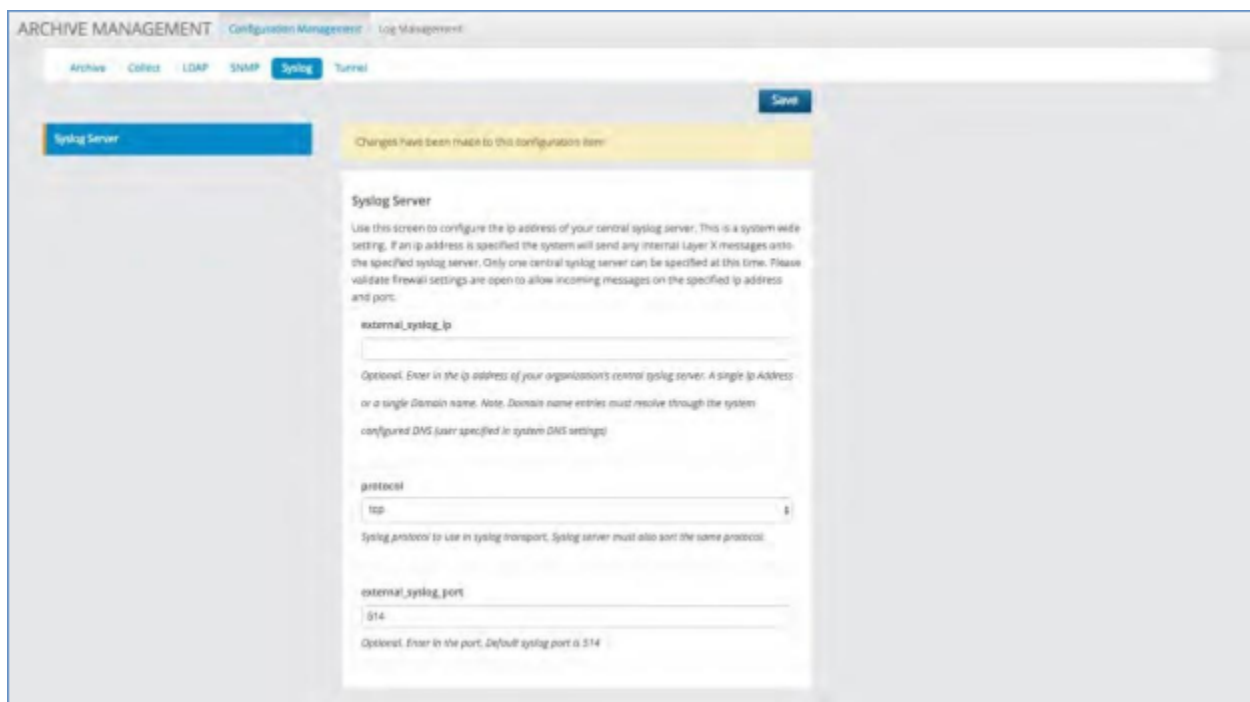


The screenshot displays the 'SNMPv3 User Config' form within the 'ARCHIVE MANAGEMENT' interface. The breadcrumb trail shows 'Configuration Management' > 'SNMP'. The form includes a 'Save' button at the top right and a 'Commit SNMPv3 User Configuration' button. A yellow notification banner states 'Changes have been made to this configuration item'. The form fields are as follows:

- Engine ID:** OCTECT STRING
- User Name:** OCTECT STRING
- Authentication Protocol:** MD5
- Authentication Pass Phrase:** (empty text field)
- Encryption Protocol:** AES
- Encryption Pass Phrase:** (empty text field)

Syslog Server

The system has the ability to send out syslog messages about several of the internal functions including backup and archival success. Use this screen to configure the IP address of your central syslog server. This is a system wide setting. If an IP address is specified, the system will send any internal VOSS Insights messages onto the specified syslog server. Only one central syslog server can be specified at this time. Please validate firewall settings are open to allow incoming messages on the specified IP address and port.



The screenshot shows the 'Syslog Server' configuration page within the 'ARCHIVE MANAGEMENT' system. The page is titled 'Syslog Server' and includes a 'Save' button in the top right corner. A yellow notification banner at the top states 'Changes have been made to this configuration item'. The main content area contains the following fields and instructions:

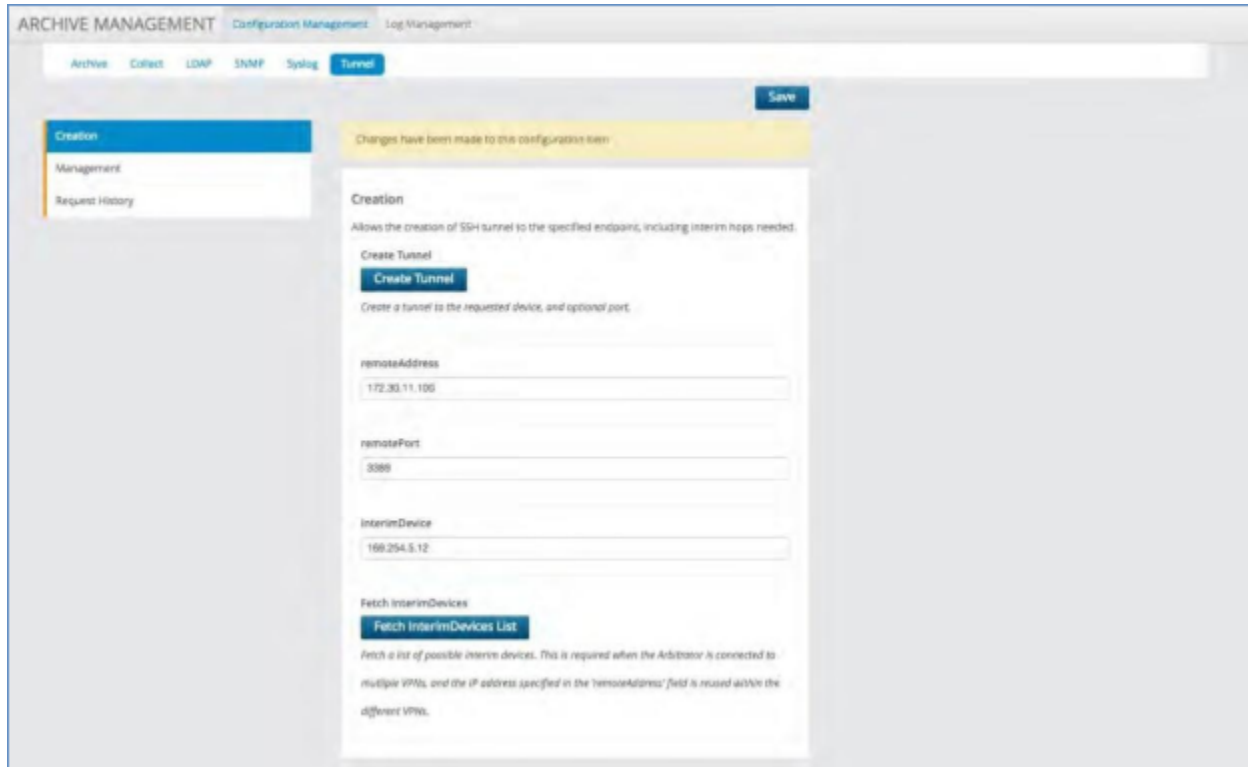
- external_syslog_ip**: A text input field. Below it, the text reads: 'Optional. Enter in the ip address of your organization's central syslog server. A single ip Address or a single Domain name. Note. Domain name entries must resolve through the system configured DNS (as specified in system DNS settings)'. There is a small 'x' icon to the right of the input field.
- protocol**: A dropdown menu with 'tcp' selected. Below it, the text reads: 'Syslog protocol to use in syslog transport. Syslog server must also support the same protocol.'.
- external_syslog_port**: A text input field with '514' entered. Below it, the text reads: 'Optional. Enter in the port. Default syslog port is 514'.

Tunnel

This tab allows you to go in and create VPN tunnels between Arbitrator Correlation platforms.

Creation

Allows the creation of SSH tunnel to the specified endpoint, including the interim hops needed.

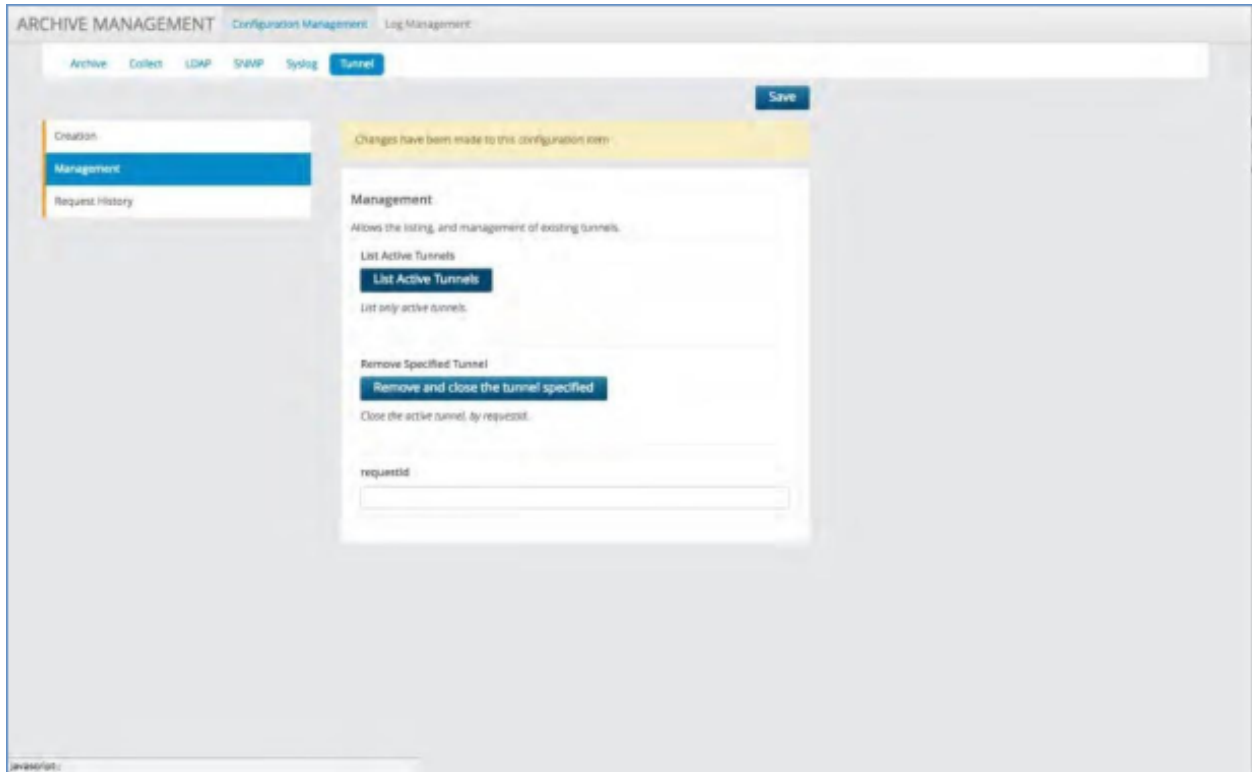


The screenshot shows a web interface for 'ARCHIVE MANAGEMENT' with a 'Tunnel' configuration page. The page has a navigation bar with 'Archive', 'Collect', 'LDAP', 'SNMP', 'Syslog', and 'Tunnel'. A 'Save' button is in the top right. A yellow notification bar states 'Changes have been made to this configuration item'. On the left, a sidebar contains 'Creation', 'Management', and 'Request History'. The main content area is titled 'Creation' and includes the following elements:

- A description: 'Allows the creation of SSH tunnel to the specified endpoint, including interim hops needed.'
- A 'Create Tunnel' button.
- A sub-header: 'Create a tunnel to the requested device, and optional port.'
- Input fields for 'remoteAddress' (172.30.11.100), 'remotePort' (3089), and 'InterimDevice' (199.254.5.12).
- A 'Fetch InterimDevices' section with a 'Fetch InterimDevices List' button.
- A note: 'Fetch a list of possible interim devices. This is required when the Arbitrator is connected to multiple VPNs, and the IP address specified in the 'remoteAddress' field is reused within the different VPNs.'

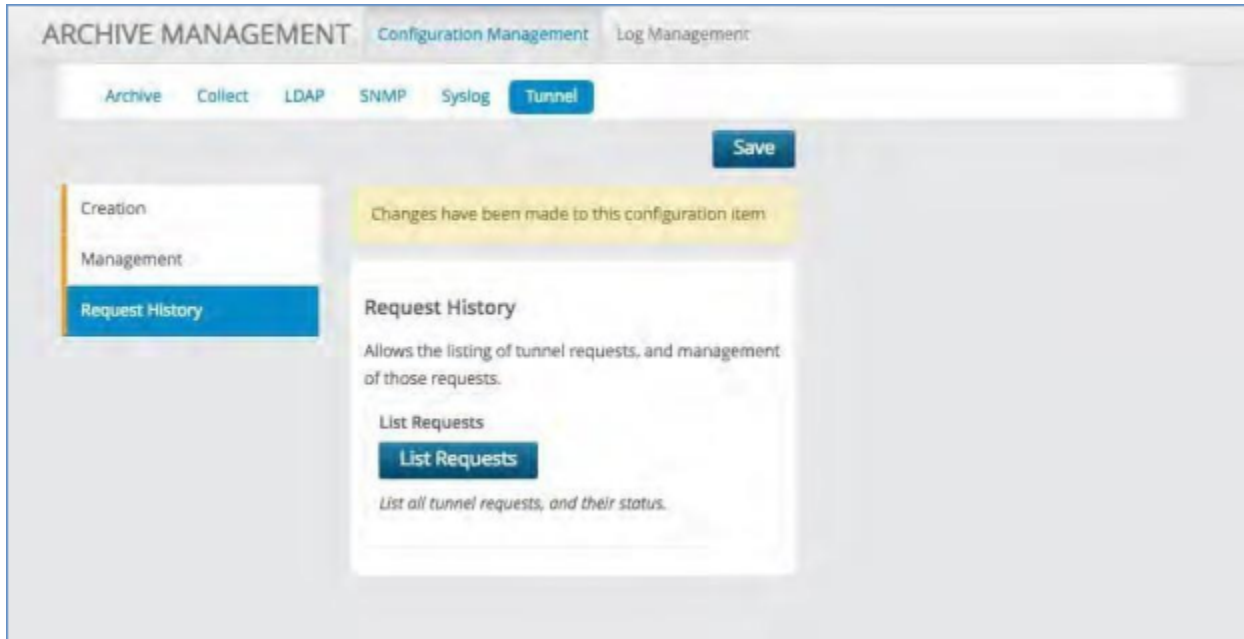
Management

Use this tab to list and manage all of the existing tunnels.



Request History

Allows the listing of tunnel requests and management of those requests.



4.1.13. Log Management

The Log Management panel allows you to customize the archival of the index data store. It can be performed based on Size, Time or a combination of both.

To set the archival process click on the Log Management tab:

1. Select the file size at which to start the archive.
2. Select the time interval at which to start the archive.
3. Add the location to where the archive file will be sent.
4. Set the **IP Address**, Choose the **Method** of transport (e.g. SFTP), give it a **Path** and input any **Credentials** required.

Archive Methods

| <input type="checkbox"/> IP Address | Method |
|-------------------------------------|--------|
| 0.0.0.0 | SCP |
| | SCP |
| | SFTP |
| | SMP |

ARCHIVE MANAGEMENT Configuration Management: Log Management

Errors exist Save

Archive Settings

● Used Space (570 GB) ● Free Space (375 GB)

Current Intervals

4 GB

10 Days

Last Archive Time

Aug 19, 2018 13:50

Archive Index Every

4 GB

10 Days

Alerting Options

Alert on archive success

Alert on archive failure

Archive Methods

| <input type="checkbox"/> IP Address | Method | Path | Credentials |
|-------------------------------------|--------|------|-------------|
| 0.0.0.0 | SCP | | None |

4.1.14. Tools

SNMP Tools

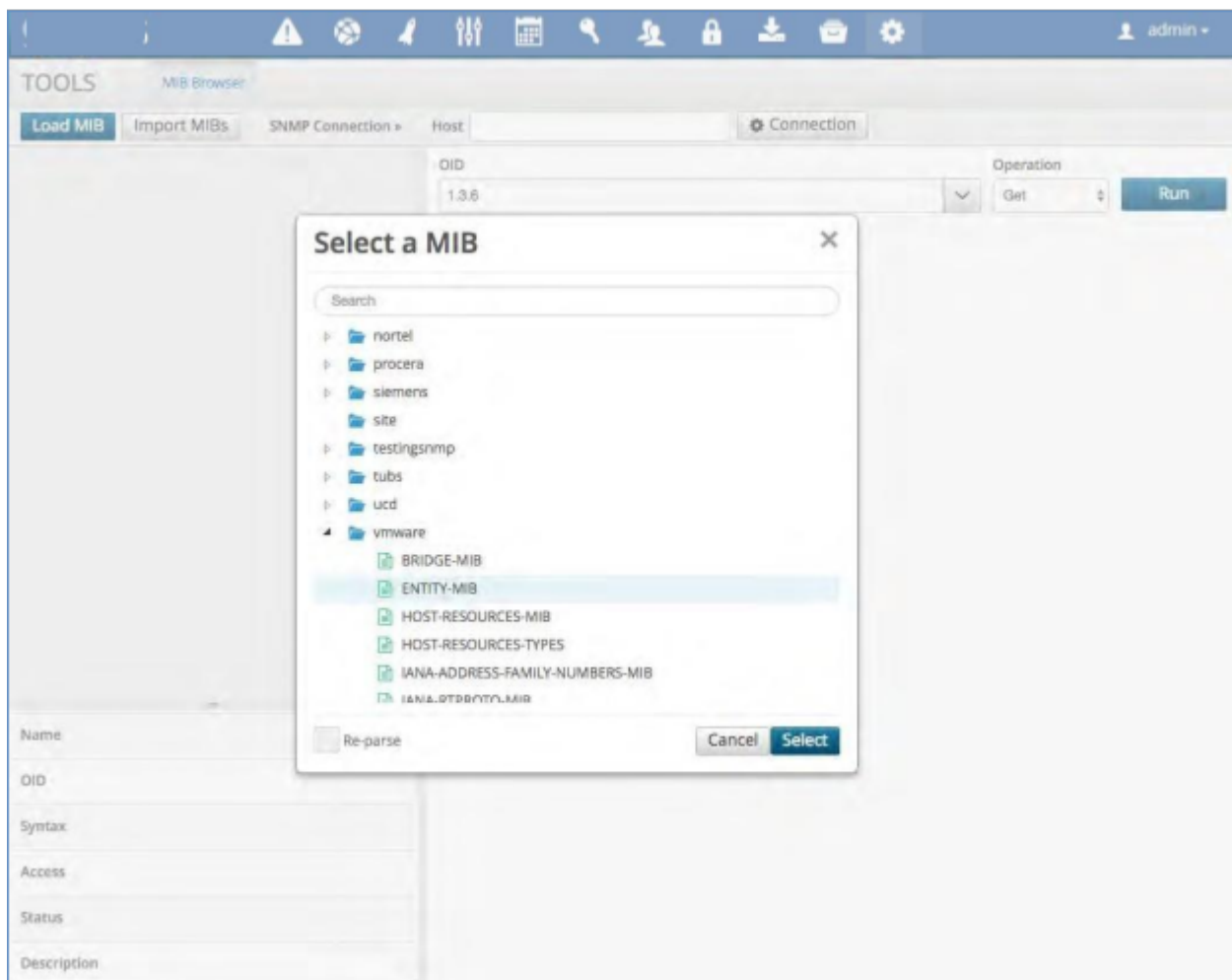
The SNMP Tools panel allows you to very easily load or import MIBs and then build SNMP actions/ scripts to be saved as Probes within the platform. The system comes with a library of MIBs that can be opened by selecting the Load button. If a new one is needed it can be imported by selecting the Import button.

The system comes with a library of MIBs that can be opened by selecting the Load button. Click the Tools Tab:

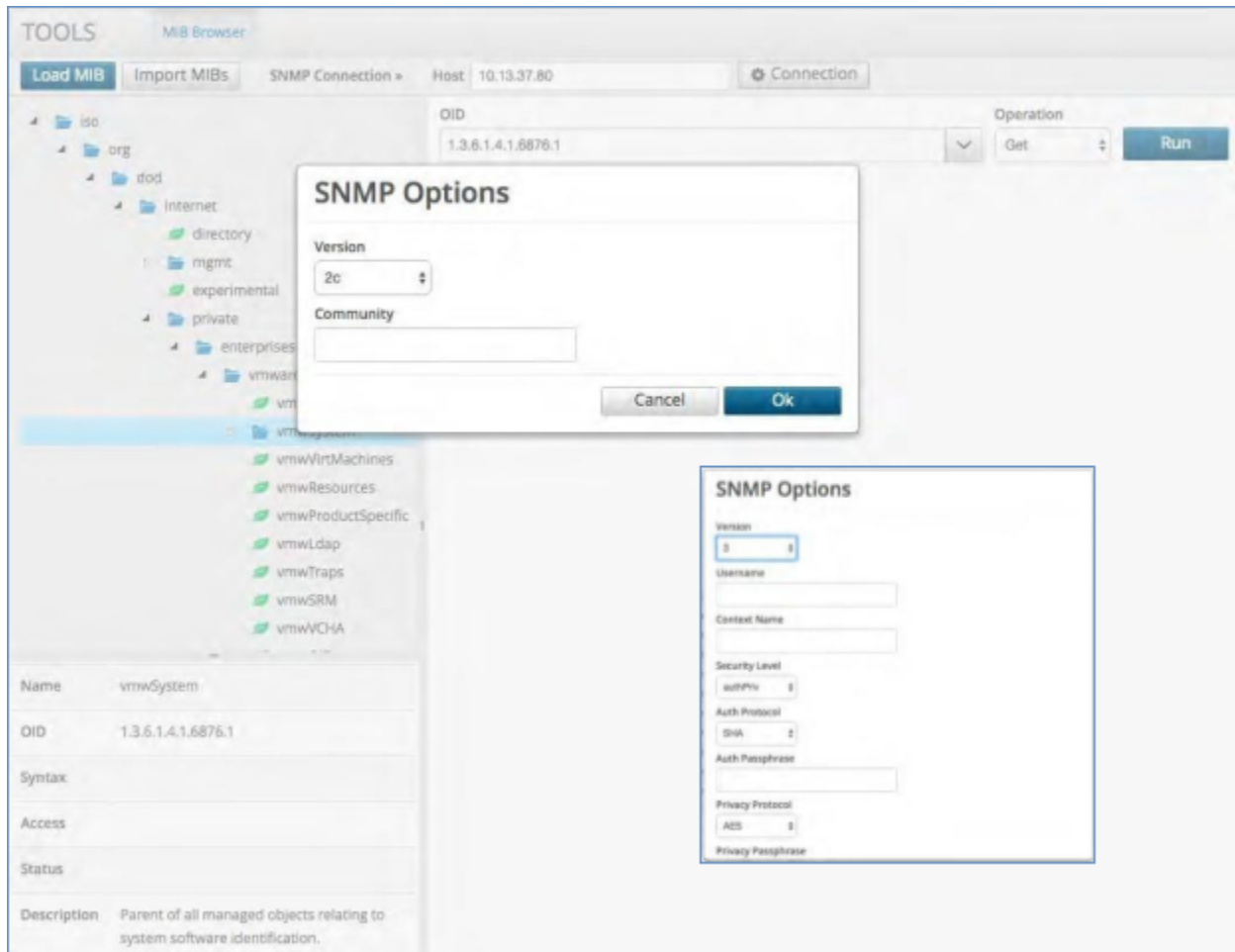
1. To load an existing MIB simply select the Load button

2. A window will open up with a choice of all the manufacturer MIBs available in the system.
3. Scroll through and select the desired MIB.

3. Scroll through and select the desired MIB.



4. Once selected you can open up all of the branches and leaves and view each associated OID.
5. Choose the folder you wish to utilize and input the connection settings for that system.
6. Select the Connection button, input the host name or IP and choose the SNMP version. If selecting V3 then a set of different parameters will pop up and you will need to fill these in.



7. Choose the operation to perform: GET, GET NEXT or WALK
8. The operation will return the values of the OID you query in the field below it. Checking any of the boxes beside the field will un-gray the "Create Probe" box.
9. Do this for each Probe you want to create.

The screenshot displays a configuration interface with two main sections. The top section, labeled 'OID', contains a text input field with the value '1.3.6.1.4.1.6876.1' and a dropdown menu for 'Operation' with options 'Get', 'Get Next', and 'Walk'. A 'Run' button is located to the right. Below this is the 'Results' section, which includes a search bar for 'Text OID', a 'Toggle Numeric/Text OID' button, and a 'Create Probe' button. A table lists the results of the SNMP query:

| Text OID | Value | Type |
|--|-------------|--------|
| <input checked="" type="checkbox"/> VMWARE-SYSTEM-MIB::vmwProdName.0 | VMware ESXi | STRING |
| <input type="checkbox"/> VMWARE-SYSTEM-MIB::vmwProdVersion.0 | 6.0.0 | STRING |
| <input type="checkbox"/> VMWARE-SYSTEM-MIB::vmwProdBuild.0 | 2494585 | STRING |
| <input type="checkbox"/> VMWARE-SYSTEM-MIB::vmwProdUpdate.0 | 0 | STRING |
| <input type="checkbox"/> VMWARE-SYSTEM-MIB::vmwProdPatch.0 | 0 | STRING |

The bottom section is a 'Create Probe' dialog box. It contains the following fields and options:

- OID: .1.3.6.1.4.1.6876.1.1.0
- Probe Name: (empty text field)
- Add to existing probe group
 - Application ssh probe (dropdown menu)
- Create a new probe group
 - Probe Group Name: (empty text field)
- Buttons: Cancel, Create

10. When you select "Create Probe" a new box will open that will allow you to give the Probe a name and either save it to an existing Probe Group or create a new one.
11. Now you have a new Probe that will run the particular SNMP command you requested.

5. Arbitrator Maintenance

5.1. Backup and Restore the Arbitrator

5.1.1. Step 1: Backup

To configure the Arbitrator backup, see [Archive](#).

Next steps

- Restore

5.1.2. Step 2: Restore

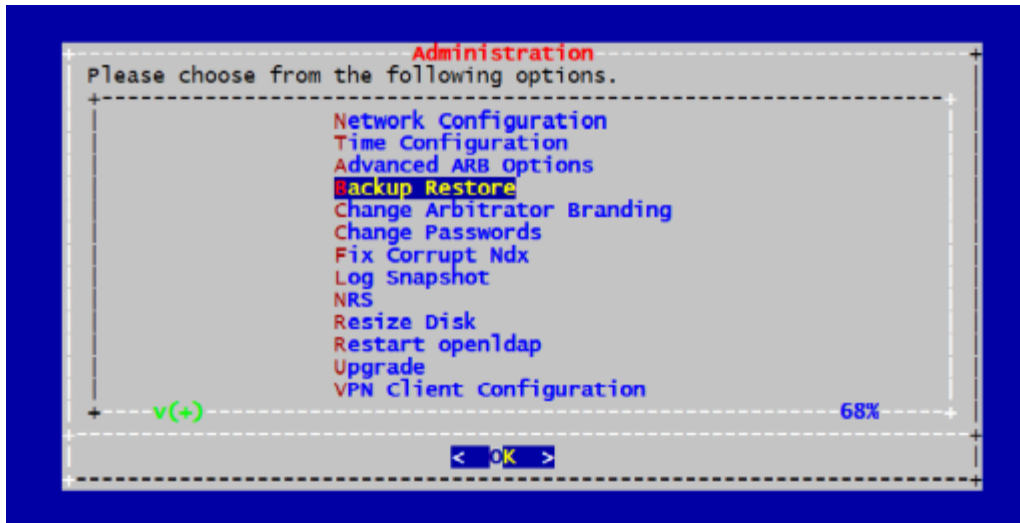
This procedure restores a backup of the Insights Arbitrator.

Pre-requisites:

- Backup (see see: [Archive](#))

To restore the Arbitrator application from a backup:

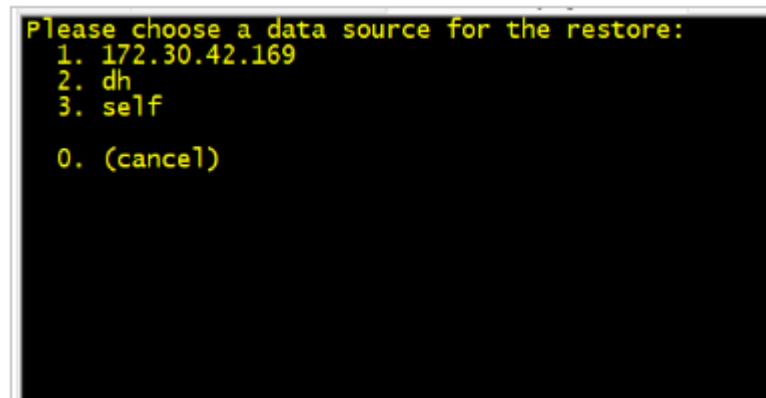
1. Log in to CLI as an admin
2. Go to **Backup Restore** and click **OK**.



3. Navigate to **Restore a backup**.



4. Select the data source of the backup. This will be either `self` - which is stored locally, or a remote location. The example below has `dh` as an sftp server.



5. Select the data types to restore.

```
self
Please choose a data type to restore:
 1. All
 2. Avaya
 3. CISCO
 4. Config
 5. DEM
 6. Identity
 7. NDX
 8. Pexip
 9. Polycom
10. Themes
11. UHE
12. VDF
13. Webex
14. Zoom
15. DBDATA_ONLY

 0. (cancel)
```

6. Select the number of months to restore (0 to 60 or all).

```
self All
self All
How many months of data to restore? (0..60, all)
 (no number means cancel)
█
```

7. Confirm the restore.

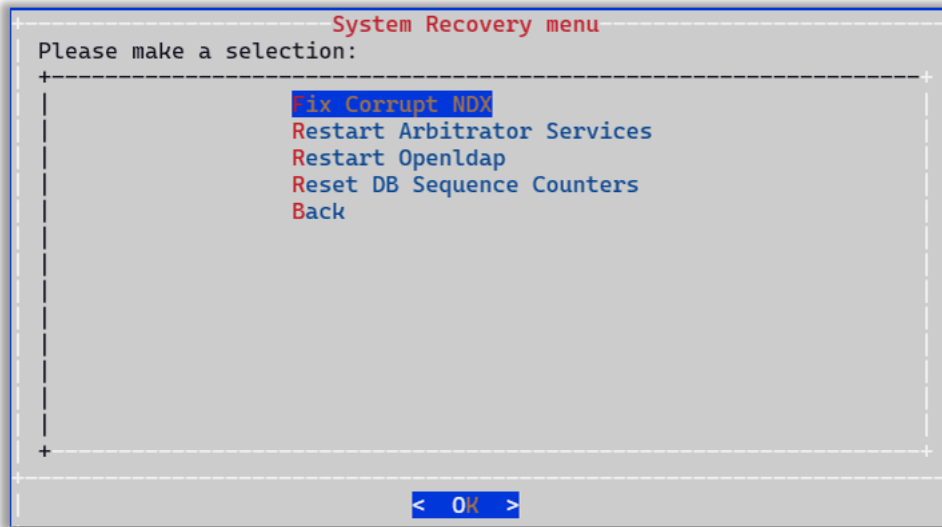
```
self All 0
Requested data and configurations will be restored.
Existing data and configurations may be replaced/overwritten.
Are you sure you wish to restore the data (y/n)?
```

8. View the system message that confirms the restore is complete.

5.2. System Recovery

This procedure provides access to options that allow you to troubleshoot and recover Arbitrator services in the event of system errors.

1. Log in to CLI as an admin.
2. On the **Administration** menu, select **System Recovery**.



5.3. Network Observability

5.3.1. Overview

Network observability is configured on the Arbitrator as a set of probe scripts that collect and analyze data from the customer's network devices.

Note: The probe scripts comprise a set of SNMP v2 scripts and a set of SNMP v3 scripts. Both v2 and v3 of the SNMP scripts perform the same function. The version you'll use depends on whether your device supports SNMP v2 or SNMP v3.

Data is presented for analysis via read-only network observability reference dashboards in the Insights Dashboard system. The dashboards have read access to the database tables on Arbitrator, and allow you to determine in greater detail why alerts have occurred.

Related Topics

- [Probe Configuration](#)
- [Asset Configuration](#)
- VOSS Reference Dashboards in the Dashboard Administration Guide

5.3.2. Configure Network Observability Probe Groups

This procedure configures network observability probe groups in Arbitrator.

1. Log in to the Arbitrator.
2. Click the toolbar Wrench icon to open the **System Configuration** interface.
3. Click the **Probes** icon to open the **Probe Configuration** page.
4. Click the Plus icon (+) at the bottom of the **Groups** panel to add the first probe group, then fill out a probe group name, and tab out of the field to add the probe group.

Important: We have provided a recommended configuration of the following four probe groups, including a recommended naming convention and probe configuration parameters, in [Network Observability](#):

- Network Observability 5 min
- Network Observability 10 min
- Network Observability SNMP 10 min
- Network Observability SNMP 5 min,

For example, for the first probe group you add, you can use *Network Observability 5 min* as the probe group name.

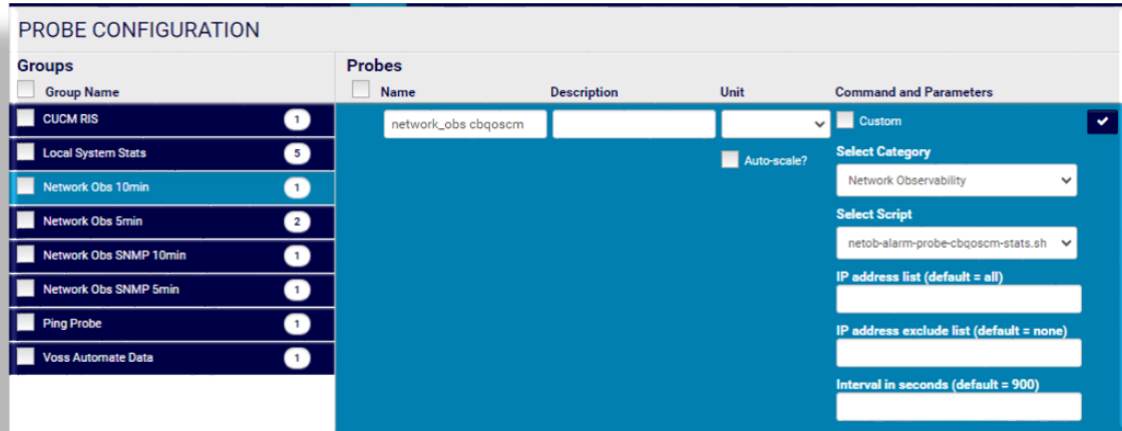
5. Add the probes for the probe group you added.

Note: It is recommended that you use the probe configuration parameters provided in the table, in [Network Observability](#).

- On the **Probes** panel, at **Select Category**, click the down-arrow, then select **Network Observability**.

Note: Clear the **Custom** checkbox to display the **Select Category** drop-down.

- Fill out the probe name.
- Select the relevant script, based on the recommended configuration in [Network Observability](#).
- If relevant for the probe you're configuring, you will need to provide SNMP credentials.
- Click the check icon to save the probe.



6. Repeat these steps to add the rest of the probe groups and probes required for network observability, based on the settings provided in *Network Observability*.
7. Click **Save**.

Next steps:

- Once you've set up the probe groups, the SNMP probe groups are applied to the device you're collecting data from.
- Assign customers to assets. For details, see *Asset Configuration*

In order for the network observability probe groups to return useful data, the corresponding assets should have “customer” and “site” assignment. This is done via the **Asset Configuration** menu in Arbitrator.

- In **Asset Configuration**, locate the Arbitrator (in the **Assets** panel).
 - Click on the wrench icon to configure the monitor profile.
 - Drag the relevant probe group into the **Templates/Profiles** panel, then click the wrench icon to set the frequency, as per the settings for the probe group in *Network Observability*.
- Repeat this step to add other probe groups, and to configure their frequency.
- Click **Update**.

5.3.3. Recommended Network Observability Probe Group Configuration

This topic describes a recommended setup for the four probe groups required for optimal network observability.

The table describes the recommended network observability probe group configuration:

| Probe Group | Configuration |
|--------------------------------------|---|
| 1. Network Observability 5 min | <p>There are two probes to set up for this probe group:</p> <ol style="list-style-type: none"> 1. Network Observability Asset Impact
This probe detects the impact of network observability alarms on locations. <ul style="list-style-type: none"> • Scripts to use with this probe: <ul style="list-style-type: none"> – <code>netob-asset-impact-assessment.sh</code> • Category: Network Observability • Parameters: N/A • Applied to: Arbitrator • Frequency: 5 minutes • Credentials: N/A 2. Network Observability Interface Event Detections
This probe detects the interface counter changes for discards and errors. <ul style="list-style-type: none"> • Script to use with this probe: <ul style="list-style-type: none"> – <code>netob-alarm-probe-interface-stats.sh</code> • Category: Network Observability • Parameters: Use defaults, unless customization is required. • Applied to: Arbitrator • Frequency: 5 minutes • Credentials: N/A |
| 2. Network Observability 10 min | <p>This probe group contains one probe. The probe detects the cbqoscm counter changes.</p> <ul style="list-style-type: none"> • Probe name: Network Observability CB QoS Event Detections • Script to use with this probe: <ul style="list-style-type: none"> – <code>netob-alarm-probe-cbqoscm-stats.sh</code> • Category: Network Observability • Parameters: Use defaults, unless customization is required. • Applied to: Arbitrator • Frequency: 10 minutes • Credentials: N/A |
| 3. Network Observability SNMP 10 min | <p>This probe group contains one probe. The probe is used for netob-cisco-cbq-mib-stats-snmpv3 collection for group01.</p> <ul style="list-style-type: none"> • Probe name: Network Observability CBQ • Script to use with this probe - either of the following: <ul style="list-style-type: none"> – <code>netob-cisco-cbq-mib-stats-snmpv3.sh</code> – <code>netob-cisco-cbq-mib-stats-snmpv2c.sh</code> • Category: Network Observability • Parameters: Supply appropriate credentials, where applicable. • Applied to: Asset • Frequency: 10 minutes • Credentials: SNMP |

| Probe Group | Configuration |
|-------------------------------------|--|
| 4. Network Observability SNMP 5 min | <p>This probe group contains one probe. The probe is used for netob-ifmib-interface-stats-snmpv3 collection for group01.</p> <ul style="list-style-type: none">• Probe name: Network Observability Interface• Script to use with this probe - either of the following:<ul style="list-style-type: none">– netob-ifmib-interface-stats-snmpv3.sh– netob-ifmib-interface-stats-snmpv2c.sh• Category: Network Observability• Parameters: Supply appropriate credentials, where applicable.• Applied to: Asset• Frequency: 5 minutes• Credentials: SNMP |