



# VOSS Insights Arbitrator Data Correlation Administration and User Guide

Jan 18, 2022

## Legal Information

Please take careful note of the following legal notices:

- Copyright © 2022 VisionOSS Limited.  
All rights reserved.
- VOSS, VisionOSS and VOSS Automate are trademarks of VisionOSS Limited.
- No part of this document may be reproduced or transmitted in any form without the prior written permission of VOSS.
- VOSS does not guarantee that this document is technically correct, complete, or that the product is free from minor flaws. VOSS endeavors to ensure that the information contained in this document is correct, whilst every effort is made to ensure the accuracy of such information, VOSS accepts no liability for any loss (however caused) sustained as a result of any error or omission in the same.
- This document is used entirely at the users own risk. VOSS cannot be held responsible or liable for any damage to property, loss of income, and or business disruption arising from the use of this document.
- The product capabilities described in this document and the actual capabilities of the product provided by VOSS are subject to change without notice.
- VOSS reserves the right to publish corrections to this document whenever VOSS deems it necessary.
- All vendor/product names mentioned in this document are registered trademarks and belong to their respective owners. VOSS does not own, nor is related to, these products and vendors. These terms have been included to showcase the potential of the VOSS solution and to simplify the deployment of these products with VOSS should you select to utilize them.

## Security Information

This product may contain cryptographic features that may be subject to state and local country laws that govern the import, export, transfer and use of such features. The provision of this software does not imply that third-party authorization to import, export, distribute or use encryption in your particular region has been obtained. By using this product, you agree to comply with all applicable laws and regulations within your region of operation. If you require further assistance, please contact your dedicated VOSS support person.

# Contents

- 1 What's New** **1**
  - 1.1 VOSS Insights Arbitrator Data Correlation Administration and User Guide: Release SP25 . . . 1
  
- 2 Introduction** **2**
  - 2.1 Purpose . . . . . 2
  - 2.2 Intended Audience . . . . . 2
  - 2.3 Organization . . . . . 2
  
- 3 Arbitrator Licensing** **3**
  
- 4 Correlate** **4**
  - 4.1 Menu Bar . . . . . 4
  - 4.2 Assets . . . . . 5
  - 4.3 Alerts . . . . . 10
  - 4.4 Search . . . . . 16
  - 4.5 Call Path . . . . . 21
  - 4.6 Call Details . . . . . 25
  - 4.7 Call Management Configuration . . . . . 29
  
- 5 Configuration** **31**
  - 5.1 Policy Configuration . . . . . 31
  - 5.2 Asset Configuration . . . . . 44
  - 5.3 Probe Configuration . . . . . 50
  - 5.4 Controls . . . . . 54
  - 5.5 Response Procedure Configuration . . . . . 56
  - 5.6 How to Enable ServiceNow Intergration . . . . . 59
  - 5.7 ServiceNow One Way Incident Integration . . . . . 60
  - 5.8 Credential Configuration . . . . . 62
  - 5.9 Customer Configuration . . . . . 63
  - 5.10 Access Control . . . . . 66
  - 5.11 Import & Export . . . . . 79
  - 5.12 Archive Management . . . . . 80
  - 5.13 Log Management . . . . . 95
  - 5.14 Tools . . . . . 96

# 1. What's New

## 1.1. VOSS Insights Arbitrator Data Correlation Administration and User Guide: Release SP25

- Support added to probe Polycom phones API (Requires Dashboard SP66 Release for visualization). See: [Configuration](#)
- Webex API support added (Requires Dashboard SP66 Release for visualization). See: [Configuration](#)



## 2. Introduction

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

### 2.1. Purpose

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

### 2.2. Intended Audience

The audience intended for this User's Guide includes 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.

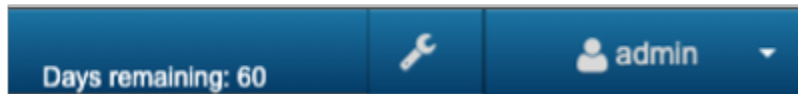
### 2.3. Organization

The Arbitrator platform design allows it to be used in multiple workflows. There isn't any linear flow that has to be followed. However, there are some elements that need to be configured in a specific order. Those will be pointed out in each section. This document is categorized as follows:

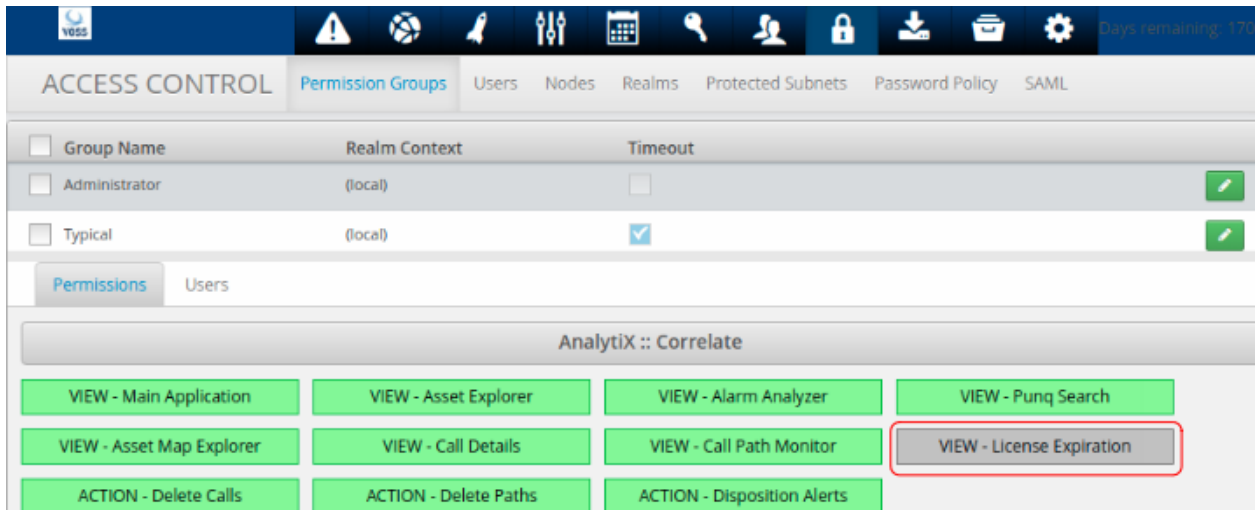
1. Correlate: This is the main UI screen to visualize the monitored systems and manage alerts for those systems. This is the primary view where the user spends the most time. The views within this workspace are constantly updating with the newly gathered data.
2. Configuration: This is the workspace utilized to perform configuration, setup and installation of the platform.

### 3. Arbitrator Licensing

The Arbitrator License remaining days is displayed in the UI upon login.



This **VIEW - License Expiration** setting can be enabled or hidden from the **Permission Groups** on the **ACCESS CONTROL**:



Alternatively, to see how many days left from the main menu for the logged in user:

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

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 licence file.

## 4. Correlate

### 4.1. Menu Bar

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

- Policy Monitor
- Asset Map Explorer
- 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:

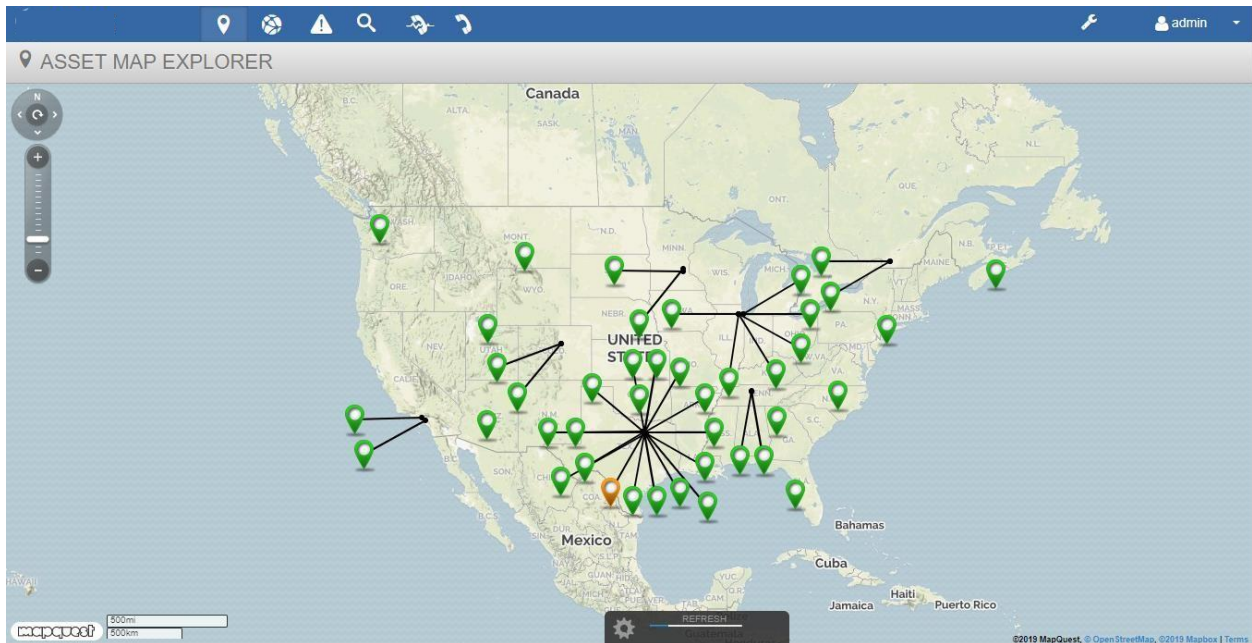


**1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12.**

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

## 4.2. Assets

### 4.2.1. Asset Map Explorer



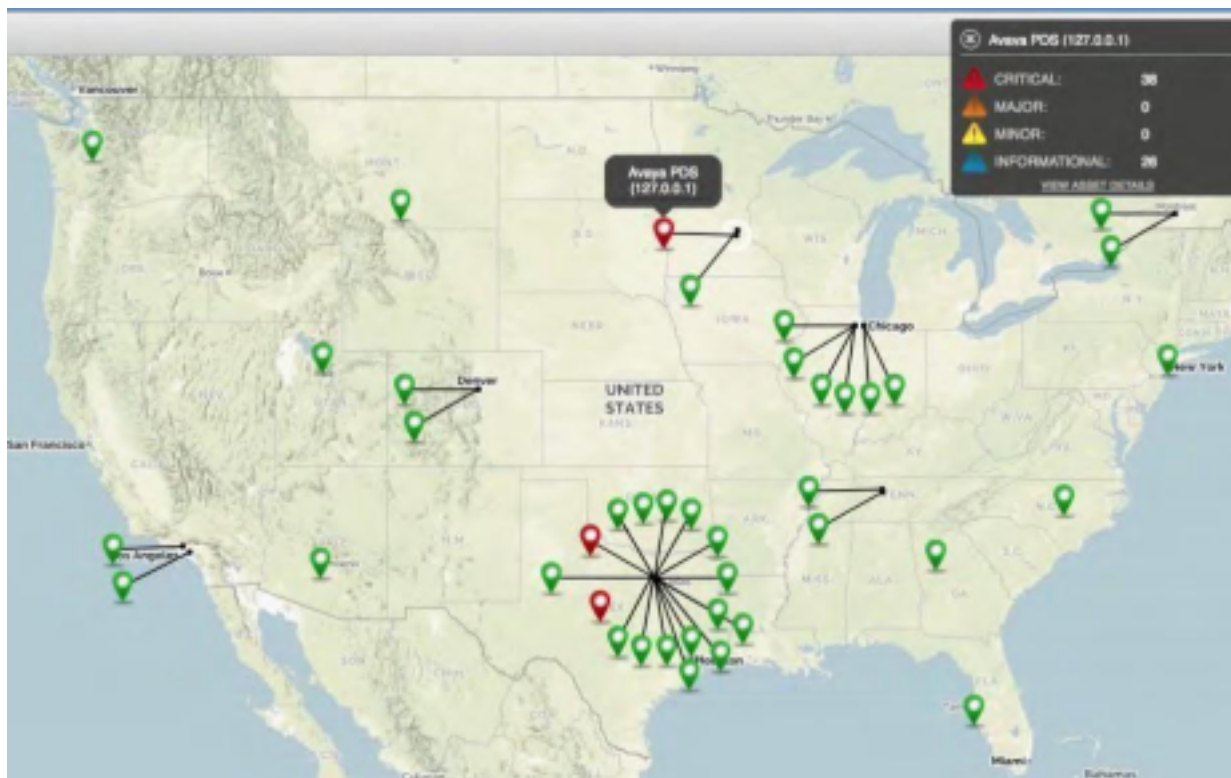
This view displays all of the defined assets in the system on a map for visual grouping according to their physical location. The location or address of the assets are input in the asset configuration section within the Configuration interface. This view is integrated with the MapQuest API (Internet access required to display the map).

Note: The system allows the ability to import a .csv file of assets and addresses.

### 4.2.2. 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)

### 4.2.3. Asset Explorer

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

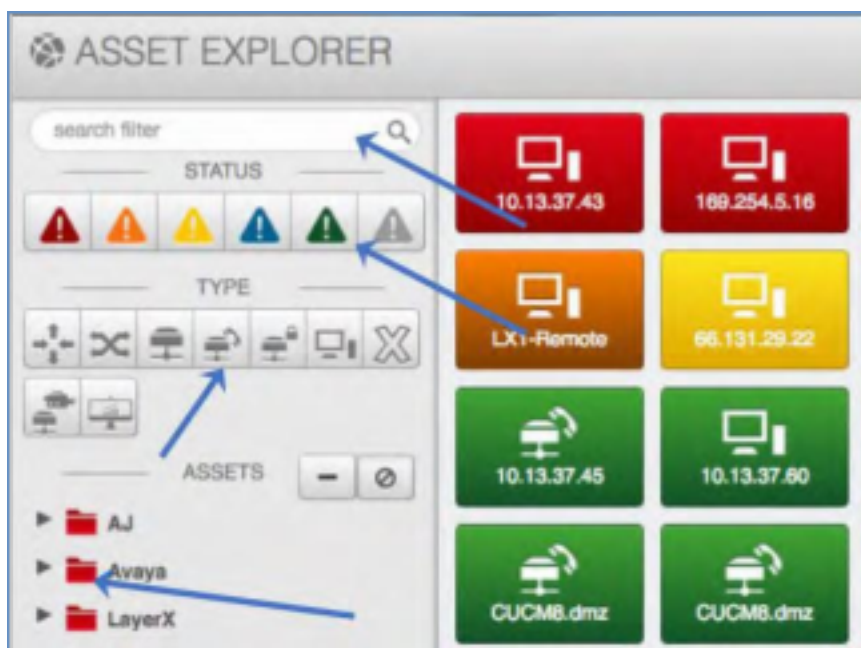
Only devices created as Assets in the Arbitrator system will be rendered in the view. Since Correlated events create alarms in the system, asset icon colors will change to reflect the severity level of the alert. Assets display the color of the current highest-level alert for that asset in the system.

Alert Severity Levels:

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



#### 4.2.4. Asset Filtering



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

- Filtering by Alert Severity levels
- Asset Type
- Defined Asset Groups
- Keyword



### 4.2.5. 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.

### 4.2.6. 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.

### 4.2.7. Asset Details: Alerts Tab

DATE	NODE	POLICY	RULE	STATUS	OWNER
07/08/18 11:57:06 AM	deparb	Cisco Alerts : Universal	Critical Cisco Error	OPEN	Unassigned
<p><b>OUTPUT:</b> Major Cisco Error (c13&gt;Jul 8 2018 16:57:06 10.13.37.43: &lt;179&gt;82378: : com: 52977: CUCM12.layeratech.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=492-call_delivered4][AppID=Cisco CallManager][ClusterID=StandAloneCluster][NodeID=CUCM12]: An endpoint has unregistered)</p>					
<p><b>DETAILS:</b> REFERENCE ID: 20000-01000005-00-01-06950-04843; START: 07/08/18 11:57:06 AM; NODE: deparb; LAST CHANGE: -; POLICY: Cisco Alerts : Universal; ELAPSED TIME: 0 Days 01:22:30; RULE: Major Cisco Error; NEXT ESCALATION: 07/08/18 01:29:16 PM; OWNER: Unassigned; EXPIRES IN: 00:09:40; STATUS: OPEN; RESPONSE PROCEDURE: Default IRP</p>					
07/08/18 11:08:21 AM	deparb	Cisco Alerts : Universal	Critical Cisco Error	OPEN	Unassigned
<p><b>OUTPUT:</b> Critical Cisco Error (c13&gt;Jul 8 2018 16:08:21 10.13.37.43: &lt;185&gt;82258: : 54123: CUCM12.layeratech.com Jul 08 2018 16:08:21.207 UTC : %LUC_RTMT-1-RTMT_ALERT: % [AlertName=RTMTSessionsExceedsThreshold][AlertDetail= On Sun Jul 08 11:08:21 CDT 2018, alert RTMTSessionsExceedsThreshold has occurred. Counter SessionsActive of Cisco Tomcat Web Application(as)</p>					
07/08/18 09:25:15 AM	deparb	Cisco Alerts : Universal	Major Cisco Error	OPEN	Unassigned
<p><b>OUTPUT:</b> Major Cisco Error (c13&gt;Jul 8 2018 14:25:15 10.13.37.43: &lt;179&gt;82058: : com: 52775: CUCM12.layeratech.com Jul 08 2018 14:25:14 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)</p>					
07/08/18 09:18:21 AM	deparb	Cisco Alerts : Universal	Critical Cisco Error	OPEN	Unassigned
<p><b>OUTPUT:</b> Critical Cisco Error (c13&gt;Jul 8 2018 14:18:21 10.13.37.43: &lt;185&gt;82036: : 53981: CUCM12.layeratech.com Jul 08 2018 14:18:21.114 UTC : %LUC_RTMT-1-RTMT_ALERT: % [AlertName=RTMTSessionsExceedsThreshold][AlertDetail= On Sun Jul 08 09:18:20 CDT 2018, alert RTMTSessionsExceedsThreshold has occurred. Counter SessionsActive of Cisco Tomcat Web Application(as)</p>					

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)

### 4.2.8. Asset Details: Probes

The screenshot shows the 'ASSET DETAILS' window for IP 10.13.37.43. The 'PROBES' tab is active, displaying a list of probes on the left and the 'CPU and Memory' probe details on the right. The 'RAW DETAILS' section shows the following output:

```

Q: make this took 0.061254 seconds to send a request to https://10.13.37.43/ast/astapi.svc/GetProcAndMemInfoItems-getCpuAndMemoryRequest
Status: 200
<?xml version="1.0"?><PreCarried/Reply ReturnCode="0" Collecting/Ret="20" AMO="CLCM12" RaD="CLCM12"><getCpuAndMemoryReply ReturnCode="0" ErrorMessage=""
Timestamp="1531071141" NumOfHosts="1"><Host Name="CLCM12" ReturnCode="0" ErrorMessage=""><Memory UsedKbytes="518195" FreeKbytes="198454" TotalKbytes="1029649"
SharedKbytes="62386" BuffersKbytes="30968" CachedKbytes="451868" TotalSwapKbytes="406686" UsedSwapKbytes="118352" FreeSwapKbytes="387344" VtPercentageUsed="23"
MemPercentageUsed="51"/><Processor Name="0" PercentageUser="3" PercentageNice="0" PercentageSystem="4" PercentageIdle="91" PercentageIrix="0" PercentageSoftirq="0"
PercentageOwait="1" PercentageCPU="8"/><Processor Name="3" PercentageUser="3" PercentageNice="0" PercentageSystem="2" PercentageIdle="90" PercentageIrix="0"
PercentageSoftirq="0" PercentageOwait="4" PercentageCPU="11"/><Processor Name="4" PercentageUser="1" PercentageNice="0" PercentageSystem="1" PercentageIdle="98"
PercentageIrix="0" PercentageSoftirq="0" PercentageOwait="0" PercentageCPU="1"/><Processor Name="3" PercentageUser="6" PercentageNice="0" PercentageSystem="1"
PercentageIdle="89" PercentageSoftirq="0" PercentageOwait="0" PercentageCPU="13"/><Processor Name="2" PercentageUser="2" PercentageNice="0"
PercentageSystem="1" PercentageIdle="96" PercentageSoftirq="0" PercentageOwait="0" PercentageCPU="4"/><Processor Name="1" PercentageUser="2"
  
```

At the bottom, there is a 'RANGE: 1 HOUR' dropdown and navigation arrows, with the text '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.

### 4.2.9. 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)





The screenshot shows the ALERT ANALYZER interface. At the top, it displays 'Displaying 1 - 10 of 3,702 Alerts'. Below this is a table with columns: DATE, NODE, POLICY, RULE, STATUS, and OWNER. The first row is expanded to show details for an alert with the following information:

- REFERENCE ID:** 20000-01000008-00-01-38920-4420
- NODE:** devpart
- POLICY:** Cisco Alerts : Universal
- RULE:** Critical Cisco Error
- OWNER:** Unassigned
- STATUS:** OPEN (with a dropdown menu)
- START:** 07/07/18 01:01:17 PM
- LAST CHANGE:** -
- ELAPSED TIME:** -
- NEXT ESCALATION:** 07/07/18 03:01:30 PM
- EXPIRES IN:** Expiry
- RESPONSE PROCEDURE:** Default IPF

The description of the alert is: "Critical Cisco Error : Critical Cisco Error (source:'control engine' message:Attempting Control Method (LinkToAlert) Parameters (, <13>Jul 7 2018 17:16:48 10.13.37.44: <185>161906: : : 112181: cumcl1.layer1tech.com: Jul 07 2018 09:16:44 PM:372 UTC : %UC\_RMT-1-RTMT\_ALERT: %AlertName=RTMTSessionsExceedsThreshold)AlertDetail= On Sat Jul 07 12:16:44 CDT 2018, alert RTMTSessionsExceedsThreshold has occurred. Counter SessionsActive of Cisco Tomcat Web Application(jst) on node 10.13.37.44 has value of 2749612 which is over high threshold 250[AppID=Cisco AMC Service][ClusterID=][NodeID=cumcl1]: RTMT Alert", <13>Jul 7 2018 17:16:48 10.13.37.44: <185>161906: : : 112181: cumcl1.layer1tech.com: Jul 07 2018 09:16:44 PM:372 UTC : %UC\_RMT-1-RTMT\_ALERT: %AlertName=RTMTSessionsExceedsThreshold)AlertDetail= On Sat Jul 07 12:16:44 CDT 2018, alert RTMTSessionsExceedsThreshold has occurred. Counter SessionsActive of Cisco Tomcat Web Application(jst) on node 10.13.37.44 has value of 2749612 which is over high threshold 250[AppID=Cisco AMC Service][ClusterID=][NodeID=cumcl1]: RTMT Alert) code:90810)

Below the details, there is a table of alerts:

DATE	NODE	POLICY	RULE	STATUS	OWNER
07/07/18 01:01:17 PM	devpart	Catch all test	Catch all test	OPEN	Unassigned
OUTPUT:					
07/07/18 01:01:38 PM	devpart	Cisco HCS PCA	RTMT_ALERT	OPEN	Unassigned
OUTPUT:					
07/07/18 01:02:21 PM	devpart	Cisco Alerts : Universal	Critical Cisco Error	OPEN	Unassigned
OUTPUT: Critical Cisco Error (<13>Jul 7 2018 18:02:21 10.13.37.43: <185>79373: : : 52072: CLICM12.layer1tech.com: Jul 07 2018 18:02:20.641 UTC : %UC_RMT-1-RTMT_ALERT: %AlertName=RTMTSessionsExceedsThreshold)AlertDetail= On Sat Jul 07 13:02:20 CDT 2018, alert RTMTSessionsExceedsThreshold has occurred. Counter SessionsActive of Cisco Tomcat Web Application(jst)					
07/07/18 01:02:38 PM	devpart	Cisco HCS PCA	RTMT_ALERT	OPEN	Unassigned
OUTPUT:					
07/07/18 01:02:40 PM	devpart	Catch all test	Catch all test	OPEN	Unassigned
OUTPUT:					

### 4.3.2. 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 the first alert, displaying options: UNDER REVIEW, ACKNOWLEDGE, RELEASE, CLOSE, and CLOSE + LOCK. The alert details show it is a 'Critical Cisco Error' with status 'OPEN' and owner 'Unassigned'.

DATE	NODE	POLICY	RULE	STATUS	OWNER
07/08/18 07:01:37 AM	devpart	Cisco Alerts : Universal	Critical Cisco Error	OPEN	Unassigned
07/08/18 07:02:25 AM	devpart	Cisco Alerts : Universal	Critical Cisco Error	OPEN	Unassigned
07/08/18 07:02:38 AM	devpart	Cisco Alerts : Universal	Critical Cisco Error	OPEN	Unassigned
07/08/18 07:02:39 AM	devpart	Cisco HCS PCA	RTMT_ALERT	OPEN	Unassigned

The screenshot shows the ALERT ANALYZER interface with a list of alerts. A context menu is open over the first alert, displaying 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 it is a 'Critical Cisco Error' with status 'OPEN' and owner 'Unassigned'.

DATE	NODE	POLICY	RULE	STATUS	OWNER
07/08/18 06:10:08 AM	devpart	Cisco Alerts : Universal	Critical Cisco Error	OPEN	Unassigned
07/08/18 06:11:36 AM	devpart	Cisco Alerts : Universal	Critical Cisco Error	OPEN	Unassigned
07/08/18 06:11:37 AM	devpart	Cisco Alerts : Universal	Critical Cisco Error	OPEN	Unassigned
07/08/18 06:11:38 AM	devpart	Cisco Alerts : Universal	Critical Cisco Error	OPEN	Unassigned
07/08/18 06:11:39 AM	devpart	Cisco Alerts : Universal	Critical Cisco Error	OPEN	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.

### 4.3.3. 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. A context menu is open over the first alert, displaying options: Open, Under Review, Acknowledged, Released, and Closed. The alert details show it is a 'Critical Cisco Error' with status 'OPEN' and owner 'Unassigned'.

DATE	NODE	POLICY	RULE	STATUS	OWNER
07/08/18 06:13:36 AM	devpart	Cisco Alerts : U	Critical Cisco Error	OPEN	Unassigned
07/08/18 06:14:44 AM	devpart	Cisco Alerts : U	Critical Cisco Error	OPEN	Unassigned

### 4.3.4. 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' interface. At the top right, there are 'SAVE' and 'CANCEL' buttons. Below the title, there are '+ ADD' and '- REMOVE' buttons. The main area is divided into two sections. On the left, there is a list of filters, with one filter named 'Test' selected, showing its description 'This is a test filter' and 'ALLOW' and 'DISREGARD' buttons. On the right, there is a form for creating a new filter, with tabs for 'KEYWORDS', 'SEVERITY', and 'DATE & TIME'. The 'KEYWORDS' tab is active, and the form fields are filled with: NAME: Test, DESCRIPTION: This is a test filter, POLICY: (empty), RULE: Critical Cisco Error, GROUP: (empty), CUSTOMER: (empty), SITE: (empty), NODE: (empty), MESSAGE: (empty), and OWNER: (empty).

- 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

The screenshot shows the 'FILTER MANAGER' interface with the 'SEVERITY' tab selected. On the left, there is a sidebar with a test filter 'Test' and buttons for '+ ADD' and '- REMOVE'. The main area contains a table with columns for 'KEYWORDS', 'SEVERITY', 'DATE & TIME', and a right sidebar with filter options: 'ACTIVE', 'ESCALATED', 'ACKNOWLEDGED', and 'EXPIRED'. The 'SEVERITY' column is selected, showing checkboxes for 'CRITICAL', 'MAJOR', 'MINOR', and 'INFORMATIONAL'.

- 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.

The screenshot shows the 'FILTER MANAGER' interface with the 'DATE & TIME' tab selected. On the left, there is a sidebar with a test filter 'Test' and buttons for '+ ADD' and '- REMOVE'. The main area contains fields for 'DATE' (START DATE, END DATE), 'TIME' (ALL DAY, START, END), and 'DAY OF WEEK' (SUNDAY through SATURDAY).

### 4.3.5. 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 3,698 Alerts'. Below this, there are controls for 'FILTERS', 'SORT', 'BULK DISPOSITION', and 'STATUS'. A table lists alerts with columns for DATE, NODE, POLICY, RULE, STATUS, and OWNER. One alert is expanded to show details and a journal.

**Alert Details:**

**DATE:** 07/08/18 12:00:40 PM  
**Node:** devparb(197.0.0.1)  
**Policy:** 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:**

TIMESTAMP	CREATOR	ACTION
07/08/18 12:45:36 PM	system	Alert Created - Response: Default IFP Schedule: autogenerated_schedule_24x7 Node: devparb(197.0.0.1) - 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 Summary Table:**

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

### 4.3.6. 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 3,698 Alerts'. A 'SORT' dialog box is open, allowing selection of sorting criteria: TIME TO EXPIRE/ESCALATE, ALERT SEVERITY, and ALERT DATE & TIME, each with 'ASCENDING' and 'DESCENDING' options. The main table lists alerts with columns for STATUS and OWNER. The first alert is 'Error' with status 'OPEN' and owner 'Unassigned'. Below the table, several alert details are shown, including timestamps, severity (red triangle), and output text. For example, one alert from 07/08/18 at 12:02:03 PM is a 'Critical Cisco Error' with a detailed message about a certificate validation failure.

## 4.4. Search

### 4.4.1. Event Search

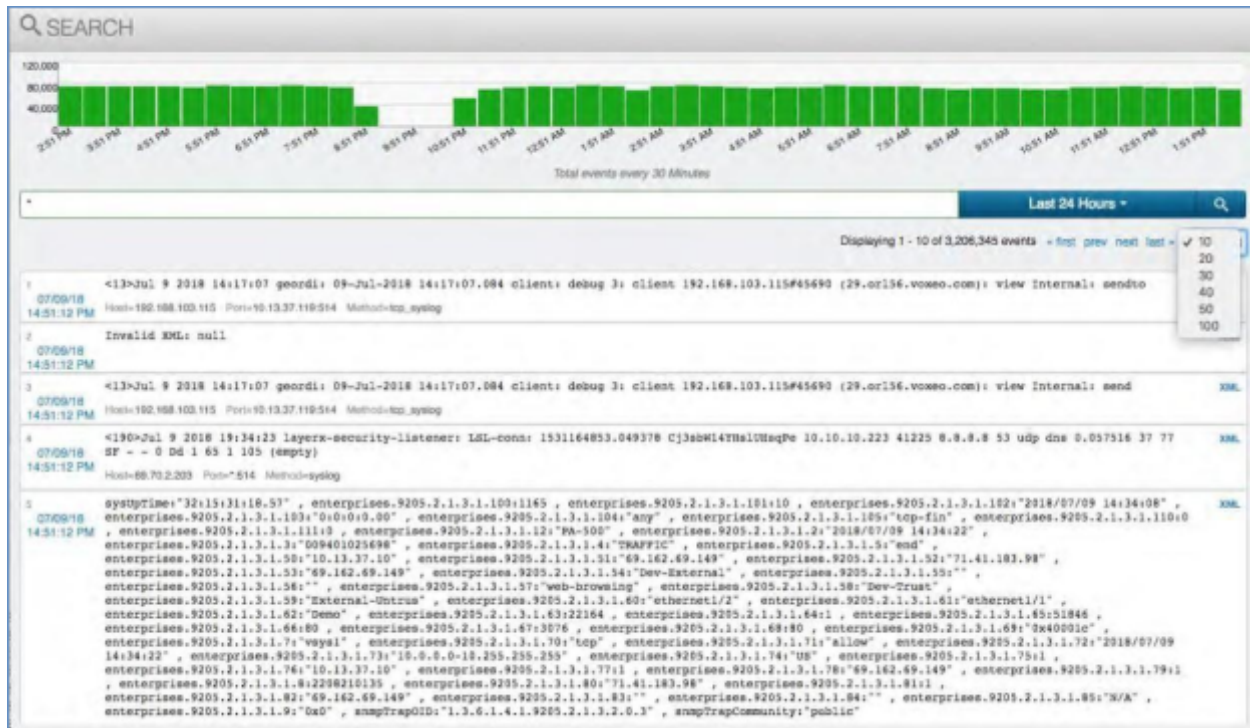
The Event search view provides access to all the raw data coming into Arbitrator Correlation and provides a simple interface to search and display it. The Arbitrator Correlation platform builds a dictionary of all of the words it has absorbed from all of the logs it has received and enables rapid search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

### 4.4.2. 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.



#### 4.4.3. 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.





#### 4.4.4. 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.

**SEARCH**

Total events every 30 Minutes

CISCO and SYSLOG Last 24 Hours

Displaying 1 - 10 of 30,833 events - first prev next last 10

- 07/09/18 14:51:10 PM <13>Jul 9 2018 19:34:22 10.13.37.44: <187>419600: Jul 09 2018 07:34:22 PM.215 UTC : WDC\_ADDITLOG-3-AdministrativeEvent: % [UserID =admin] ClientAddress =16.13.37.119] Severity =3] [ EventType =UserLogging] ResourceAccessed=CISCO SOAP Server] EventStatus =Failure] CompulsoryEvent =No] AuditCategory =AdministrativeEvent] ComponentID =CISCO CCM Application] AuditDetails =Login Authentication Failed[App ID=CISCO Tomcat][Cluster ID=][Node ID=cumc11]; Audit Event is generated by this application

Host: 10.13.37.44 Port: \*514 Method: syslog
- 07/09/18 14:51:10 PM <13>Jul 9 2018 19:34:22 10.13.37.44: <188>419599: Jul 09 2018 07:34:22 PM.215 UTC : WDC\_LOGIN-4-AuthenticationFailed: % [Login Date/Time=07/09/2018 At 14:34:22] [Login IP Address/HostName=10.13.37.119][Login Interface=CISCO SOAP Server][Login UserID=admin][App ID=CISCO Tomcat][Cluster ID=][Node ID=cumc11]; Login Authentication failed.

Host: 10.13.37.44 Port: \*514 Method: syslog
- 07/09/18 14:51:10 PM <13>Jul 9 2018 19:34:22 10.13.37.43: <185>85235: : : 56044: CUCM12.layerxtech.com: Jul 09 2018 19:34:21.781 UTC : WDC\_RTMW-1-RTMW\_ALERT: % [AlertName=RTMWSessionsExceedsThreshold][AlertDetail= On Mon Jul 09 14:34:21 CDT 2018, alert RTMWSessionsExceedsThreshold has occurred. Counter SessionsActive of CISCO Tomcat Web Application(ast) on node CUCM12 has value of 260912 which is over high threshold 250][AppID=CISCO AMC Service][ClusterID=][NodeID=CUCM12]; RTMW Alert

Host: 10.13.37.43 Port: \*514 Method: syslog
- Invalid XML: null

07/09/18 14:51:08 PM
- 07/09/18 14:51:02 PM <13>Jul 9 2018 19:34:17 10.13.37.44: <186>173671: : : 126607: cumc11.layerxtech.com: Jul 09 2018 07:34:15 PM.403 UTC : WDC\_RTMW-2-RTMW\_ALERT: % [AlertName=SeverityMatchFound][AlertDetail= At Mon Jul 09 14:34:15 CDT 2018 on node 10.13.37.44, the following SeverityMatchFound events generated: #12SeverityMatch : Alert#12MatchedEvent : Jul 9 14:34:01 cumc11 authpriv 1 unix @hapi: could not obtain user info [Proc#12AppID : CISCO Syslog Agent#12ClusterID : #12NodeID : cumc11#12 Timestamp : Mon Jul 09 14:34:01 CDT 2018][AppID=CISCO AMC Service][ClusterID=][NodeID=cumc11]; RTMW Alert

Host: 10.13.37.44 Port: \*514 Method: syslog
- 07/09/18 14:51:02 PM <13>Jul 9 2018 19:34:17 10.13.37.44: <186>173670: : : 126606: cumc11.layerxtech.com: Jul 09 2018 07:34:15 PM.399 UTC : WDC\_RTMW-2-RTMW\_ALERT: % [AlertName=AuthenticationFailed][AlertDetail= Number of AuthenticationFailed events (up to 30) received during the monitoring interval of time 1 within 3 Minutes#12 on cluster StandAloneCluster.#12#12There are 2 AuthenticationFailed events (up to 30) received during the monitoring interval of time 1 within 3 Minutes#12 on Mon Jul 09 14:34:15 CDT 2018: #012#12Timestamp : 07/09/2018 at 14:34:06#12LoginFrom : 10.13.37.119#12Interface : CISCO SOAP Server#12UserID : admin#12AppID : CISCO Tomcat#12ClusterID : #12NodeID : cumc11#12 Timestamp : Mon Jul 09 14:34:06 CDT 2018#12#12Timestamp : 07/09/2018 at 14:33:26#12LoginFrom : 10.13.37.119#12Interface : CISCO SOAP Server#12UserID : admin#12AppID : CISCO Tomcat#12ClusterID : #12NodeID : cumc11#12 Timestamp : Mon Jul 09 14:33:26 CDT 2018#12#12Timestamp : 07/09/2018 at 14:33:26#12AppID=CISCO AMC Service][ClusterID=][NodeID=cumc11]; RTMW Alert

Host: 10.13.37.44 Port: \*514 Method: syslog
- 07/09/18 14:50:56 PM <13>Jul 9 2018 19:34:12 10.13.37.44: <188>419597: Jul 09 2018 07:34:06 PM.413 UTC : WDC\_LOGIN-4-AuthenticationFailed: % [Login Date/Time=07/09/2018 At 14:34:06] [Login IP Address/HostName=10.13.37.119][Login Interface=CISCO SOAP Server][Login UserID=admin][App ID=CISCO Tomcat][Cluster ID=][Node ID=cumc11]; Login Authentication failed.

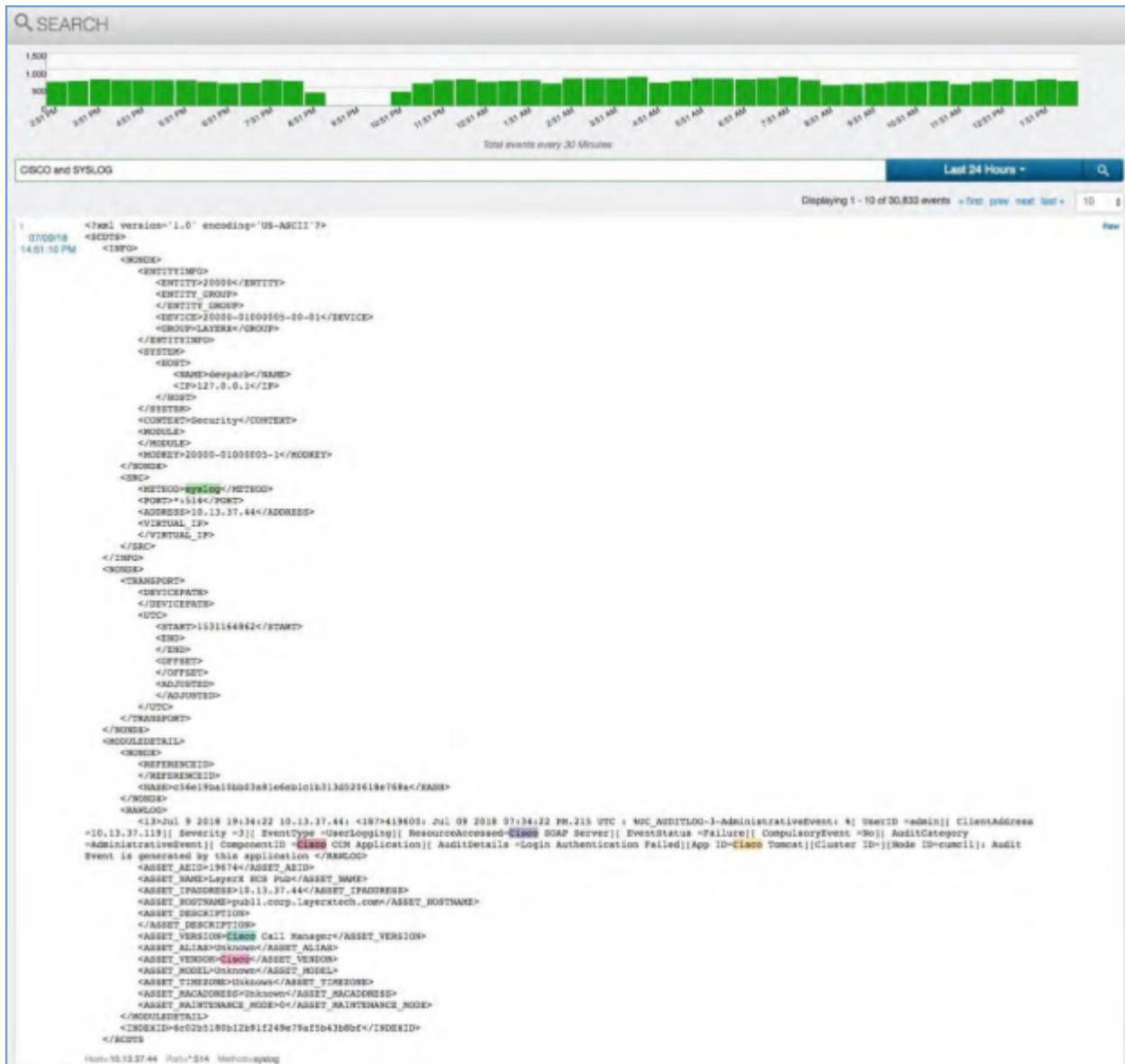
Host: 10.13.37.44 Port: \*514 Method: syslog

#### 4.4.5. 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.





## 4.5. Call Path

### 4.5.1. 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.

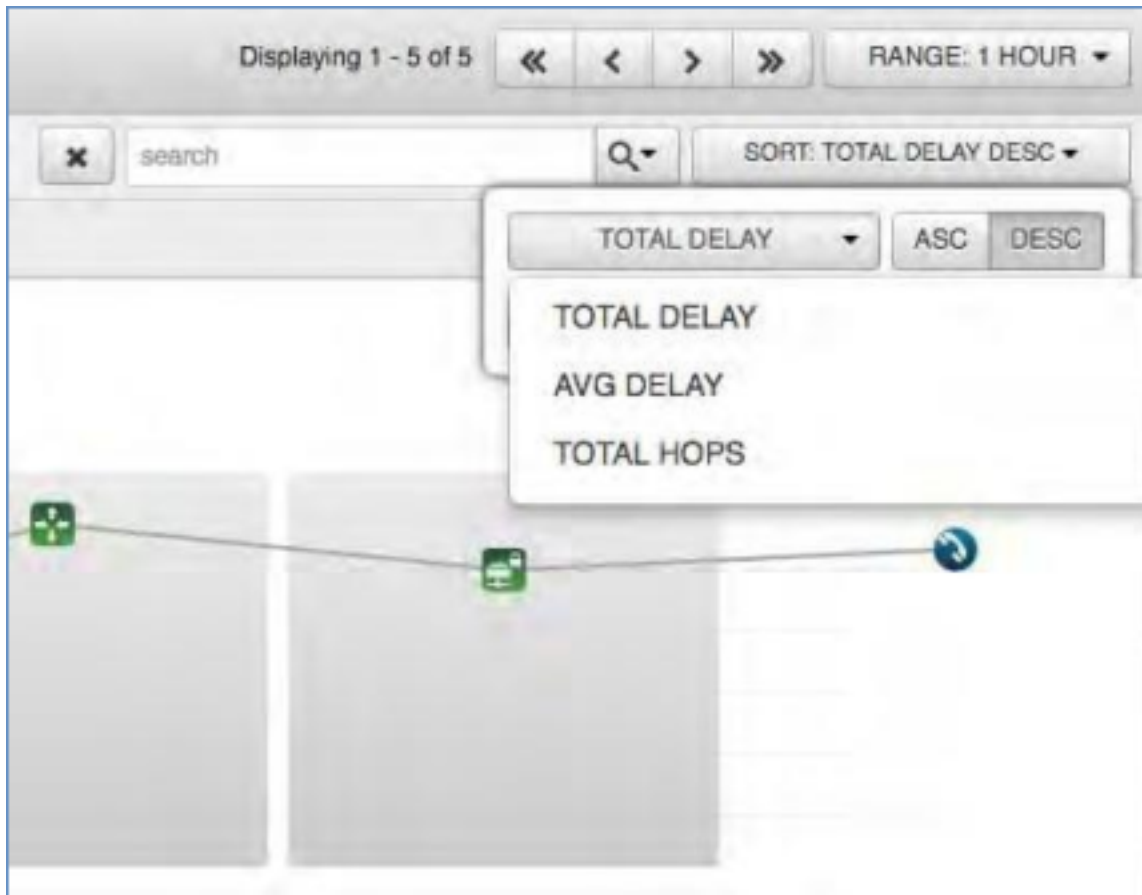


### 4.5.2. Sorting Call Paths

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.

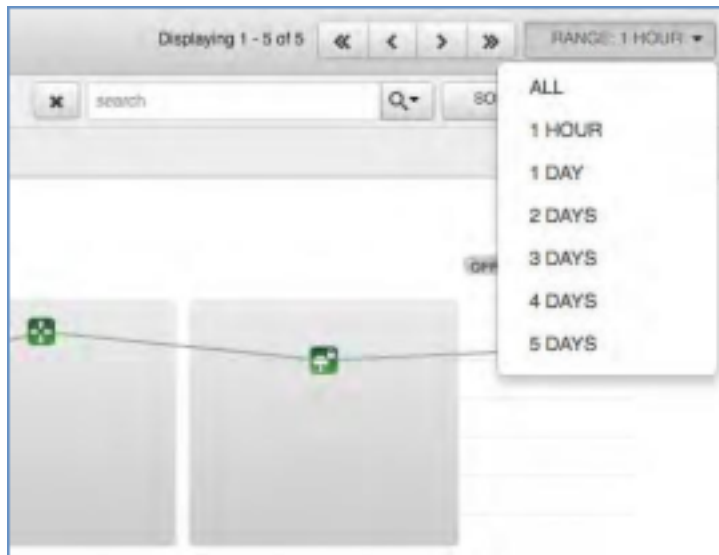


### 4.5.3. Time Range for Call Paths

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





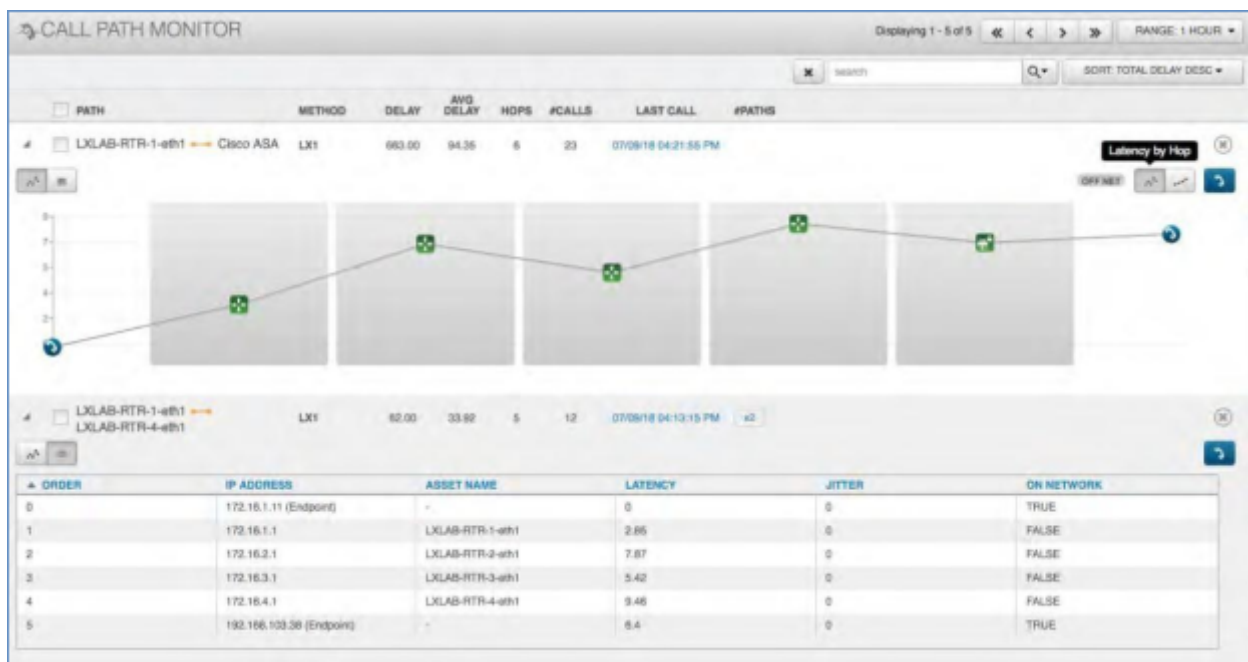
#### 4.5.4. Expanding Call Paths

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.



### 4.5.5. 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 image shows a search dialog box with a search bar at the top containing the word 'search' and a magnifying glass icon. Below the search bar, there are four rows, each with a checked checkbox and a text input field. The rows are labeled SOURCE, DESTINATION, METHOD, and HOPS. At the bottom of the dialog, there are two buttons: a grey 'CLOSE' button and a blue 'SEARCH' button.

### 4.5.6. View Call Details from the Call Path

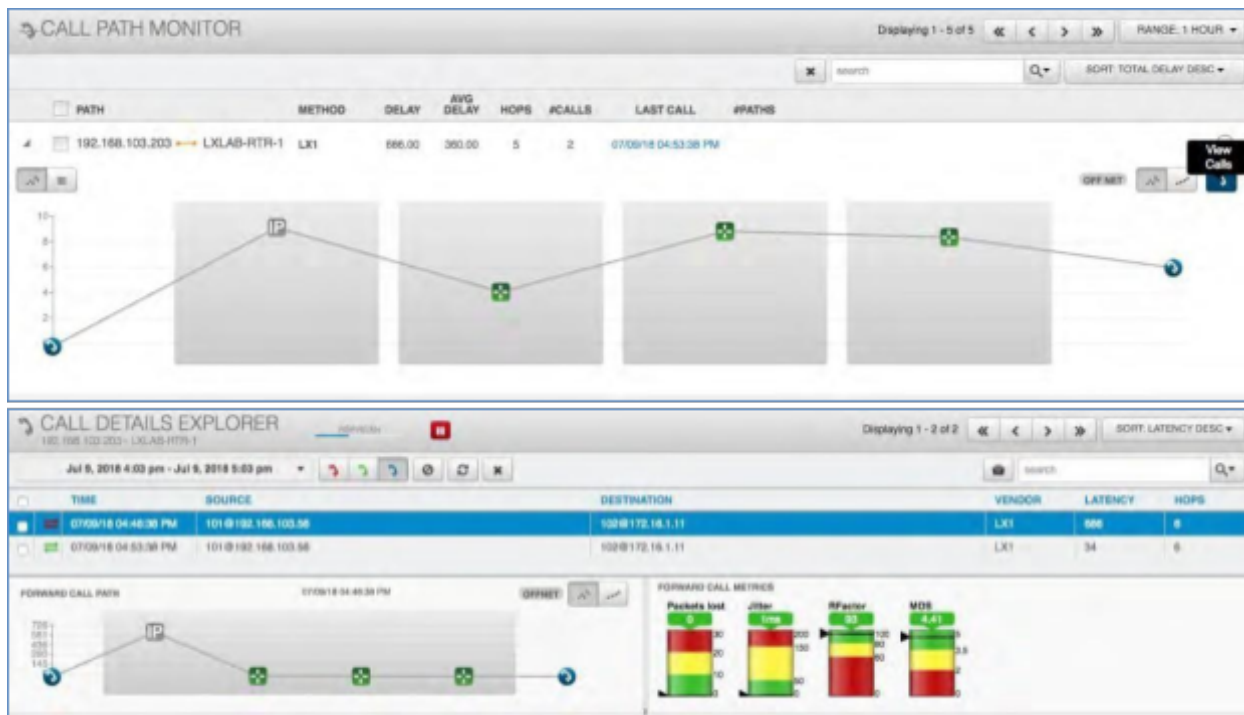
The Call Path screen allows you to drill into the specific call details right on the chart. Simply click the blue telephone icon at the end of the path and it will take you to the Call Details Explorer view for that call path.

## 4.6. Call Details

### 4.6.1. 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).

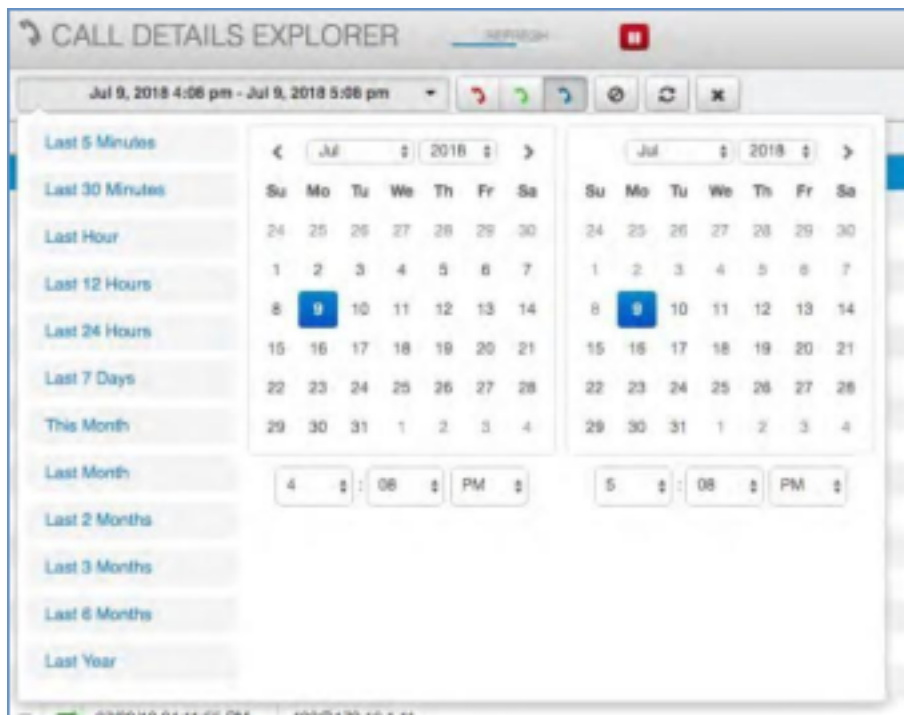




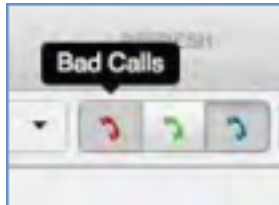
### 4.6.2. Filter by Date and Time

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



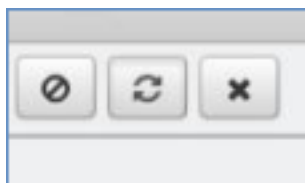
### 4.6.3. Filter by Call Quality



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)

### 4.6.4. 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.

#### 4.6.5. 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.

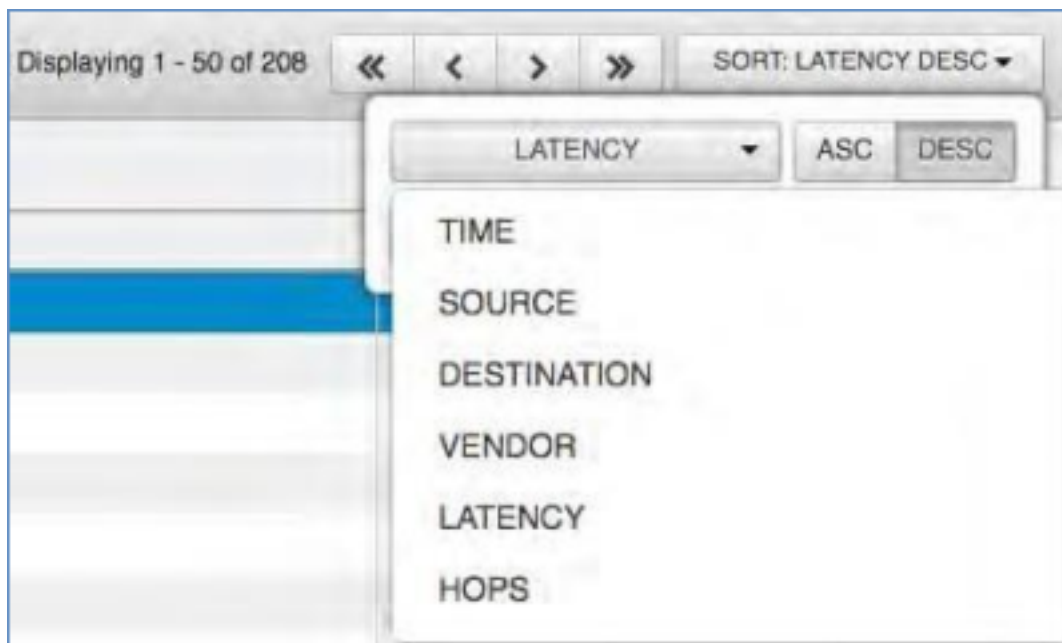


#### 4.6.6. Sorting

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

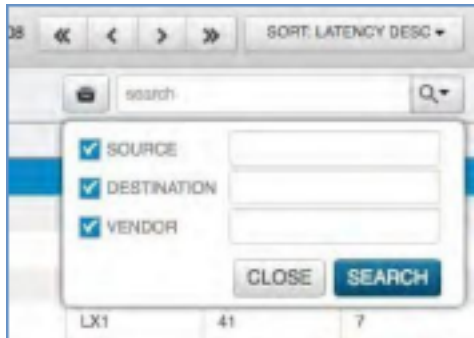
Each option allows for the choice of ascending or descending order.



### 4.6.7. 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)



## 4.7. 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.

### CALL MANAGEMENT CONFIGURATION

ARCHIVE OPTIONS: **DAILY** WEEKLY MONTHLY QUARTERLY

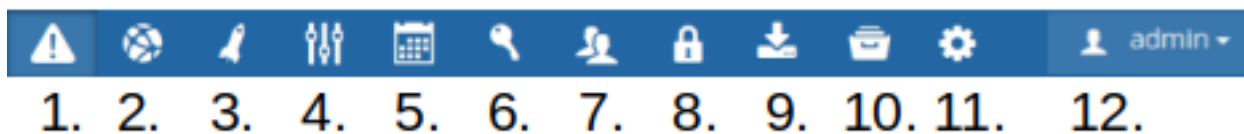
ALERTING OPTIONS:  ALERT ON ARCHIVE FAILURE  ALERT ON ARCHIVE SUCCESS

METHODS						
HOST	METHOD			PATH	CREDENTIAL	
<input type="checkbox"/>		SCP	SFTP	SMB		admin
<input type="checkbox"/>		SCP	SFTP	SMB		admin

## 5. 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*



### 5.1. 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 shows the 'POLICY CONFIGURATION' interface. On the left, there is a 'Policies' list with various monitoring rules like 'Avaya Call Monitor', 'Cisco Call Monitor', etc. The main area is titled 'Rules' and contains a table of active rules. One rule, 'Latency Value Exceeded', is selected, and its configuration is displayed in a form. The form fields include: Name (Latency Value Exceeded), Description (empty), Type (Simple), Action (Respond), Response Procedure (Reboot Machine), Threshold (1), Window (1 minute), Severity (Critical), and checkboxes for Enabled, Inherit Output, and Halt Processing.

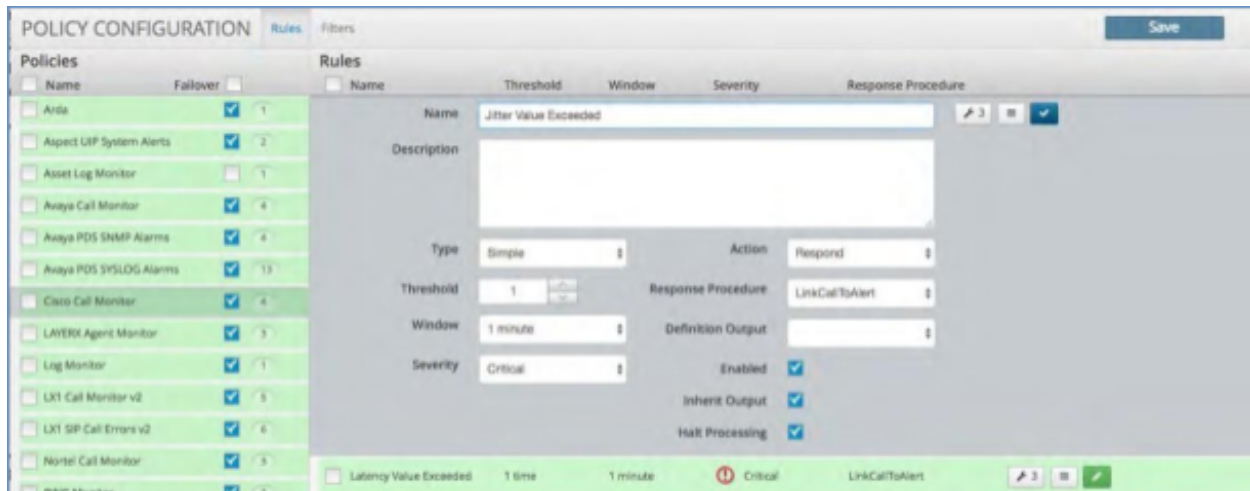
### 5.1.1. Correlation Rules

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"> <li>• Informational</li> <li>• Minor</li> <li>• Major</li> <li>• Critical</li> </ul>
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"> <li>• Respond - If the condition is met, set a marker and send an alert.</li> <li>• Track - If the condition is met, track the event, but do not post it to the Alert Analyzer.</li> <li>• Track/Respond - If the condition is met, send an alert and continue to monitor.</li> <li>• Respond on Expire – If the condition is met, wait to send an alert until the window time has expired.</li> <li>• Submit - Submit the results of a correlation event back into the Correlation Engine so that the behavior can be analyzed and re- correlated.</li> <li>• 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.</li> </ul>
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.





Correlation Filters are a very quick and easy way to ensure that all of the correlation rules within the policy are firing on the correct set of data. The engine will look at the filter criteria first, select only the data that matches the criteria and then look to apply the correlation rule. The user can add as many of these that are required or desired. The options in each filter are:

- Name: Name this as close as possible to the data elements being filtered. That way the output matches the name once viewed in the alert text.
- Pattern: This is the extraction methodology utilized to pull the particular data point out. Click the “wrench” icon beside this box and it will bring up the “Regex Wizard” to assist in finding and extracting the data.

Within the Regex Wizard there are 2 sections:

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:”. As the phrase indicates 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 utilize the wizard to create the Regular Expression required. Close the wizard and copy this pattern the Regex into the box under Pattern.
- Source Field: In the drop-down box select the source from which the data is being extracted.
  - Pattern Type: Select from the drop-down box the type of expression you want to utilize:
    - String Match
    - Regular Expression Match
    - Regular Expression Match/Extract (Most Often Used)
    - Regular Expression Multi-Valued Extract
  - Function: If the extracted data is integer based then you can apply the following functions that will allow you to compare the data:
    - None
    - Greater Than
    - Less Than
    - Same
  - Value: This field will only be available if the data extracted is an integer.

The screenshot displays the 'POLICY CONFIGURATION' interface. On the left, there is a 'Policies' list with columns for Name, Failover, and a status indicator. Policies include Arda, Aspect LIP System Alerts, Asset Log Monitor, Avaya Call Monitor, Avaya PDS SNMP Alarms, Avaya PDS SYSLOG Alarms, Cisco Call Monitor, LAYERX Agent Monitor, Log Monitor, LXI Call Monitor v2, LXI SIP Call Errors v2, Nortel Call Monitor, PING Monitor, Powerwave SNMP Alarms, Silo training policy, Test Alarm v1, and AJ ExperMental. On the right, the 'Filters' configuration is shown for two filters. The first filter has a Name field, a Vendor Method field, a Pattern field containing '(method="cisco")', a Source Field set to 'Raw Log', and a Pattern Type set to 'Regular Expression Match/Extract'. The second filter has a Name field, a Call Manager ip field, a Pattern field containing 'callManagerIp="1,1"', a Source Field set to 'Raw Log', and a Pattern Type set to 'Regular Expression Match/Extract'. A 'Save' button is located in the top right corner.

### 5.1.2. 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"> <li>• <b>Select a Log:</b> 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.</li> <li>• <b>Create Regex:</b> 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.</li> </ul>

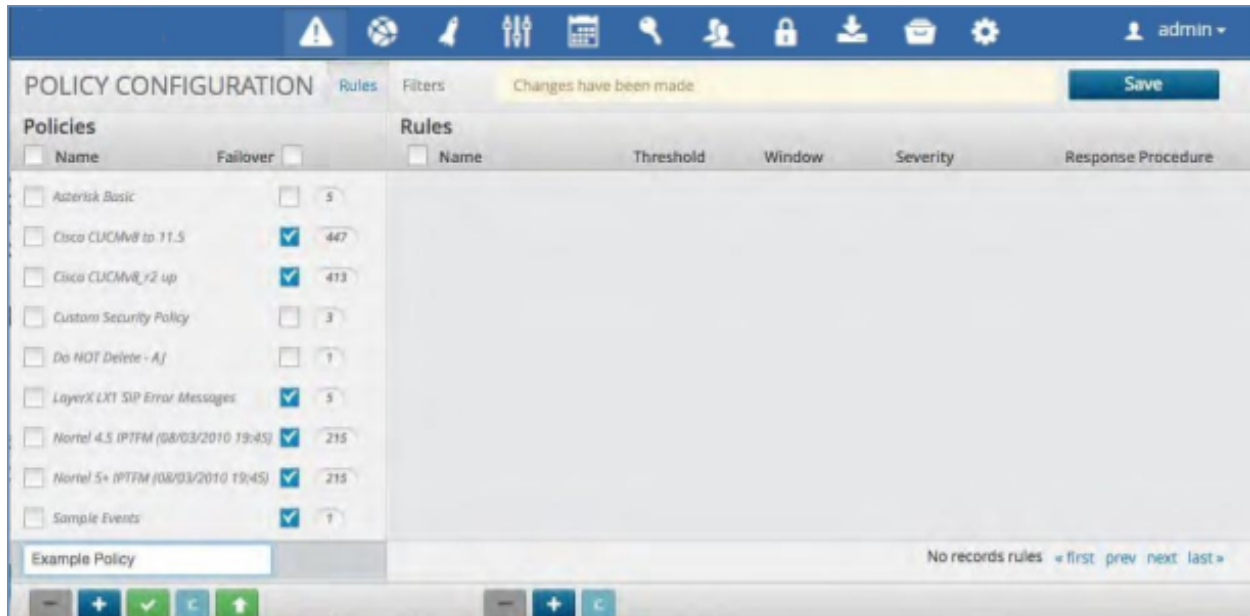
<b>Parameter</b>	<b>Description</b>
Source Field	In the drop-down box select the source from which the data is being extracted.
Pattern Type	Select from the drop-down box the type of expression you want to utilize: <ul style="list-style-type: none"><li>• String Match</li><li>• Regular Expression Match</li><li>• Regular Expression Match/Extract (Most Often Used)</li><li>• Regular Expression Multi-Valued Extract</li></ul>
Function	If the extracted data is integer based, then you can apply the following functions that will allow you to compare the data: <ul style="list-style-type: none"><li>• None</li><li>• Greater Than</li><li>• Less Than</li><li>• Same</li></ul>
Value	This field will only be available if the data extracted is an integer.



### 5.1.3. 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.



### 5.1.4. 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.

The screenshot displays the 'POLICY CONFIGURATION' interface. On the left, there is a 'Policies' list with columns for Name, Followed, and a count. Policies include 'Avaya POS SMDP Alarms', 'Avaya POS SPSLOG Alarms', 'Cisco Call Monitor', 'LIVERT Agent Monitor', 'Log Monitor', 'LIT Call Monitor v2', 'LIT SP Call Errors v2', 'Namel Call Monitor', 'PING Monitor', 'Powerware SMDP Alarms', 'Silo training policy', 'Test Alarm v1', 'A) Experimental', and several 'ALSTONBARN' alert definitions. The main area shows a 'Rules' table with columns for Name, Threshold, Window, Severity, and Response Procedure. Four rules are listed: 'Jitter Value Exceeded', 'Latency Value Exceeded', 'MOS Value LDR', and 'Packets Lost Value Exceeded'. A detailed configuration panel for a rule is shown below the table, with fields for Name (jitter), Description, Type (Simple), Action (Track/Respond), Threshold (1), Window (1 minute), Severity (Informational), Response Procedure (Default PEP), Definition Output, Enabled (checked), Inherit Output (checked), and Halt Processing (unchecked).

### 5.1.5. 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.







### 5.1.6. 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.

The screenshot shows the 'POLICY CONFIGURATION' interface with the 'Rules' tab selected. The 'Policies' list on the left includes 'Cisco Call Monitor', 'LAYERIX Agent Monitor', 'Log Monitor', 'LXI Call Monitor v2', 'LXI SIP Call Errors v2', 'Nortel Call Monitor', 'PING Monitor', 'Powerwave SNMP Alarms', 'Silo training policy', 'Test Alarm v1', and 'AJ Experimental'. The 'Rules' list on the right includes 'CLEARED - RPTR Alarm', 'CRITICAL - RPTR Alarm', 'DISREGARD - FailedNodes', 'DISREGARD - UnableToRun', 'INDETERMINATE - RPTR Ala...', 'ISG Alarm trap - INDETERMI...', and 'ISG Alarm trap - MAJOR'. A blue arrow points to the 'Save' button in the top right corner. Another blue arrow points to the minus icon at the bottom of the Rules panel. A third blue arrow points to the 'DISREGARD - UnableToRun' rule in the Rules list.

### 5.1.7. 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 with the 'Policies' tab selected. The 'Policies' list on the left includes 'Cisco Call Monitor', 'LAYERIX Agent Monitor', 'Log Monitor', 'LXI Call Monitor v2', 'LXI SIP Call Errors v2', 'Nortel Call Monitor', 'PING Monitor', 'Powerwave SNMP Alarms', 'Silo training policy', 'Test Alarm v1', 'AJ Experimental', and 'ALSTOYH... Alert Exa...'. The 'Rules' list on the right is the same as in the previous screenshot. A blue arrow points to the 'Save' button in the top right corner. Another blue arrow points to the minus icon at the bottom left of the Policies panel. A third blue arrow points to the 'Powerwave SNMP Alarms' policy in the Policies list.

### 5.1.8. 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 displays the 'POLICY CONFIGURATION' interface. It features two main tables: 'Policies' and 'Rules'. The 'Policies' table has columns for Name, Fallover, and a green checkmark icon at the bottom. The 'Rules' table has columns for Name, Threshold, Window, Severity, and Response Procedure. A blue arrow points to the green checkmark icon in the Policies table, indicating the action to enable or disable a policy.

### 5.1.9. 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 displays the 'POLICY CONFIGURATION' interface. It features a 'Policies' table on the left and a 'Rules' table on the right. The 'Policies' table lists various monitoring policies with their respective fallover counts. The 'Rules' table lists specific rules with their thresholds, windows, severities, and response procedures. A blue arrow points to the 'Save' button in the top right corner of the interface.

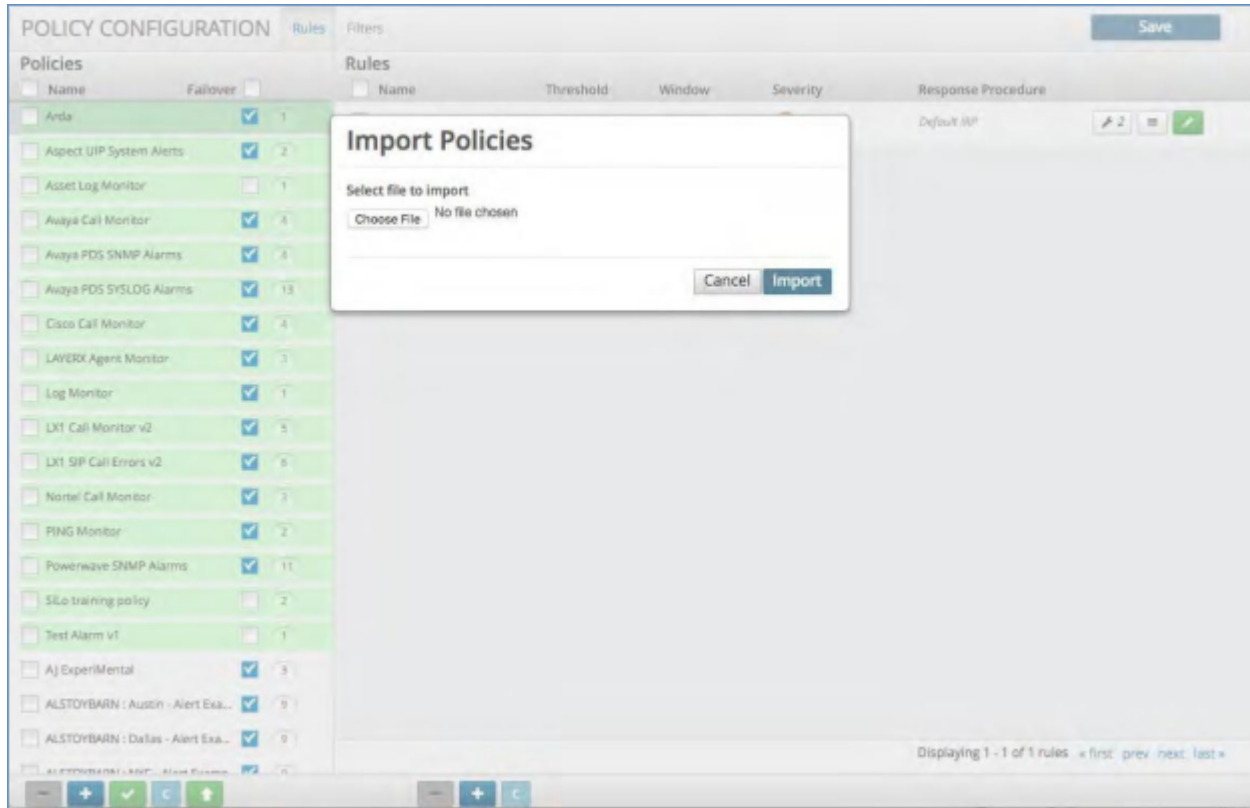
Policies		Rules					
Name	Fallover	Name	Threshold	Window	Severity	Response Procedure	
<input type="checkbox"/> Cisco Call Monitor	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> CLEARED - RPTR Alarm	1 time	1 minute	Informational	AlertClear	<input type="checkbox"/> 7 <input type="checkbox"/> <input checked="" type="checkbox"/>
<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"/> 7 <input type="checkbox"/> <input checked="" type="checkbox"/>
<input type="checkbox"/> Log Monitor	<input checked="" type="checkbox"/> 1	<input type="checkbox"/> DISREGARD - FailedNodes	1 time	1 minute	Informational	DoNotAlert	<input type="checkbox"/> 1 <input type="checkbox"/> <input checked="" type="checkbox"/>
<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"/> 1 <input type="checkbox"/> <input checked="" type="checkbox"/>
<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"/> 1 <input type="checkbox"/> <input checked="" type="checkbox"/>
<input type="checkbox"/> Norbel Call Monitor	<input checked="" type="checkbox"/> 3	<input type="checkbox"/> ISG Alarm trap - INDETERMI...	1 time	1 minute	Informational	DoNotAlert	<input type="checkbox"/> 1 <input type="checkbox"/> <input checked="" type="checkbox"/>
<input type="checkbox"/> PING Monitor	<input checked="" type="checkbox"/> 2	<input type="checkbox"/> ISG Alarm trap - MAJOR	1 time	1 minute	Major	DoNotAlert	<input type="checkbox"/> 1 <input type="checkbox"/> <input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> Powerwatch SWMP Alarms	<input checked="" type="checkbox"/> 11	<input type="checkbox"/> ISG Alarm trap - MAJOR	1 time	1 minute	Major	DoNotAlert	<input type="checkbox"/> 1 <input type="checkbox"/> <input checked="" type="checkbox"/>
<input type="checkbox"/> Lo training policy	<input type="checkbox"/> 2						
<input type="checkbox"/> TestAlarm v1	<input type="checkbox"/> 1						
<input type="checkbox"/> AJ ExperMental	<input checked="" type="checkbox"/> 3						
<input type="checkbox"/> ALSTONBARN : Austin - Port Exa...	<input checked="" type="checkbox"/> 9						

Displaying 1 - 11 of 11 events < first prev next last >

### 5.1.10. Import a Policy

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

1. Click the green Up Arrow button at the bottom of the policy panel.
2. A pop-up box will appear asking you choose your file.
3. Click the "Choose File" button and select the exported file that you have saved to your computer.
4. Click the "Import" button.
5. Check that the policy has been imported and click Save.



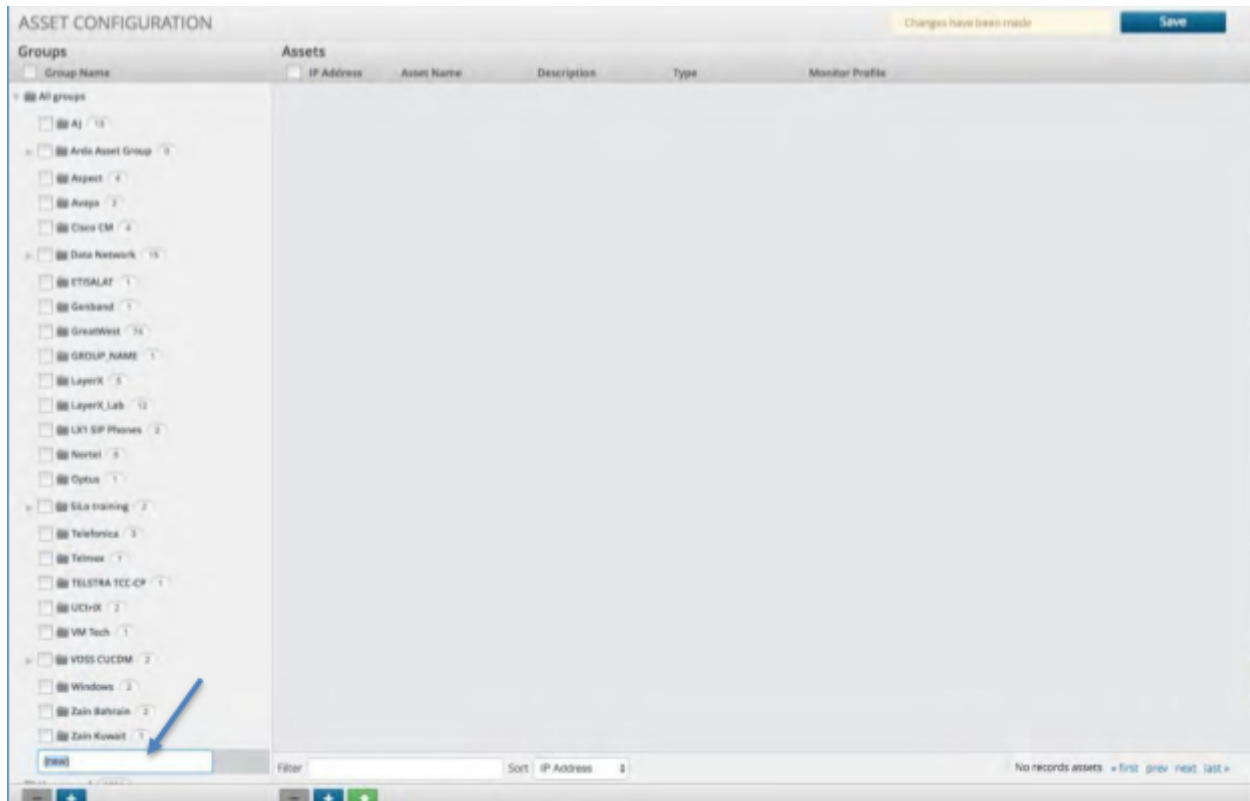
## 5.2. Asset Configuration

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.

### 5.2.1. 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.



### 5.2.2. 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.

The top screenshot shows the 'ASSET CONFIGURATION' interface. On the left, there is a 'Groups' sidebar with a tree view of asset groups. The main area is divided into 'Assets' and 'Properties' sections. The 'Assets' section shows a table with columns: IP Address, Asset Name, Description, Type, and Monitor Profile. The 'Properties' section has two tabs: 'Properties' and 'Interfaces'. The 'Properties' tab is active, showing fields for: Enabled (checked), Maintenance Mode (unchecked), IP Address, Asset Name, Description, Host Name, Type (Unknown), Address, and External URL. There are also fields for Model, Version, MAC Address, Alias, Manufacturer, Time Zone (UTC), Customer, and Site. A 'Filter' box and 'Sort' dropdown (set to IP Address) are at the bottom. A 'Save' button is in the top right.

The bottom screenshot shows the same interface, but the 'Interfaces' tab is active. It displays a table with columns: Name, IP Address, MAC Address, Vendor, Model, and Version. There is a '+' button at the bottom left of the table to add a new interface. The 'Save' button remains in the top right.

### 5.2.3. 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.



ASSET CONFIGURATION

Errors exist Save

Groups

- Group Name
- Data Network 15
- ETISALAT 1
- Genband 1
- GreatWest 74
- GROUP\_NAME 1
- LayerX 5
- LayerX\_Lab 12
- LX1 SIP Phones 2
- Nortel 5
- Optus 1
- Silo training 2
- Telefonica 3
- Telmex 1
- TELSTRA TCC-CP 1
- UCtrix 2
- VM Tech 1

Assets

IP Address	Asset Name	Description	Type	Monitor Profile
<input type="checkbox"/> 10.13.37.119	Local System	Local Arbitrator Platform	LayerX Node	7 profiles set
<input checked="" type="checkbox"/> 10.13.37.194	LXLAB03		LayerX Node	No profiles set
<input type="checkbox"/> 10.13.37.206	TempAlert	Temperature Monitor	Unknown	1 profile set
<input type="checkbox"/> 10.13.37.48	PsstP	PsstP System	Unknown	1 profile set
<input type="checkbox"/> 10.99.99.99	LinkIPToAlertTest	LinkIPToAlertTest	Unknown	No profiles set

Filter Sort: IP Address

Displaying 1 - 5 of 5 assets < first prev next last >

### 5.2.4. 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.

ASSET CONFIGURATION

Errors exist Save

Groups

- Group Name
- Data Network 15
- ETISALAT 1
- Genband 1
- GreatWest 74
- GROUP\_NAME 1
- LayerX 5
- LayerX\_Lab 12
- LX1 SIP Phones 2
- Nortel 5
- Optus 1
- Silo training 2
- Telefonica 3
- Telmex 1
- TELSTRA TCC-CP 1

Assets

IP Address	Asset Name	Description	Type	Monitor Profile
<input type="checkbox"/> 10.1.1.1	test	test	Unknown	No profiles set
<input type="checkbox"/> 10.199.161.11	is-prdms01a.gw.com	VP DRS	Unknown	No profiles set
<input type="checkbox"/> 10.199.161.130	is-acrmaina1	DRS Main recorder	Unknown	No profiles set
<input type="checkbox"/> 10.199.161.131	is-acrseca1	DRS Secondary recorder	Unknown	No profiles set
<input type="checkbox"/> 10.199.161.132	is-crstbrdgra1	DRS CRS/Bridge	Unknown	No profiles set
<input type="checkbox"/> 10.199.161.21	madr-ess-cm	DRS-ess	Unknown	No profiles set
<input type="checkbox"/> 10.199.161.46	madr-essmgr	DRS-session Manager	Unknown	No profiles set
<input checked="" type="checkbox"/> 10.199.161.50	dr-aes-cm	CRM TSAP3	Unknown	No profiles set
<input type="checkbox"/> 10.199.161.57	dr-aam3-mging	DRS VM app svr	Unknown	No profiles set
<input type="checkbox"/> 10.199.161.58	is-aesmaina1	DR Main AES	Unknown	No profiles set

Filter Sort: IP Address

Displaying 1 - 20 of 74 assets < first prev next last >



### 5.2.5. 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
5. 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.

6. 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 top screenshot, titled 'ASSET CONFIGURATION', shows a table of assets. The table has columns for IP Address, Asset Name, Description, Type, and Monitor Profile. The assets listed are:

IP Address	Asset Name	Description	Type	Monitor Profile
192.168.1.3	Nortel_CS1K_BM	Nortel CS 1000 BM	Server voice	1 profile set
192.168.1.3	Nortel_CS1K_DAL	Nortel CS 1000 Dallas	Server voice	1 profile set
192.168.1.3	Nortel_CS1K_SF	Nortel CS 1000 SF	Server voice	1 profile set
192.168.1.3	Nortel_CS1K_SU	Nortel CS 1000 SU	Server voice	1 profile set
192.168.1.3	Nortel_CS1K_SW	Nortel CS 1000 SW	Server voice	1 profile set

The bottom screenshot, titled 'MONITOR PROFILE - Nortel\_CS1K\_BM', shows a table of templates/profiles. The table has columns for Name, Frequency, Credentials 1 & 2, and Enabled. The profile listed is:

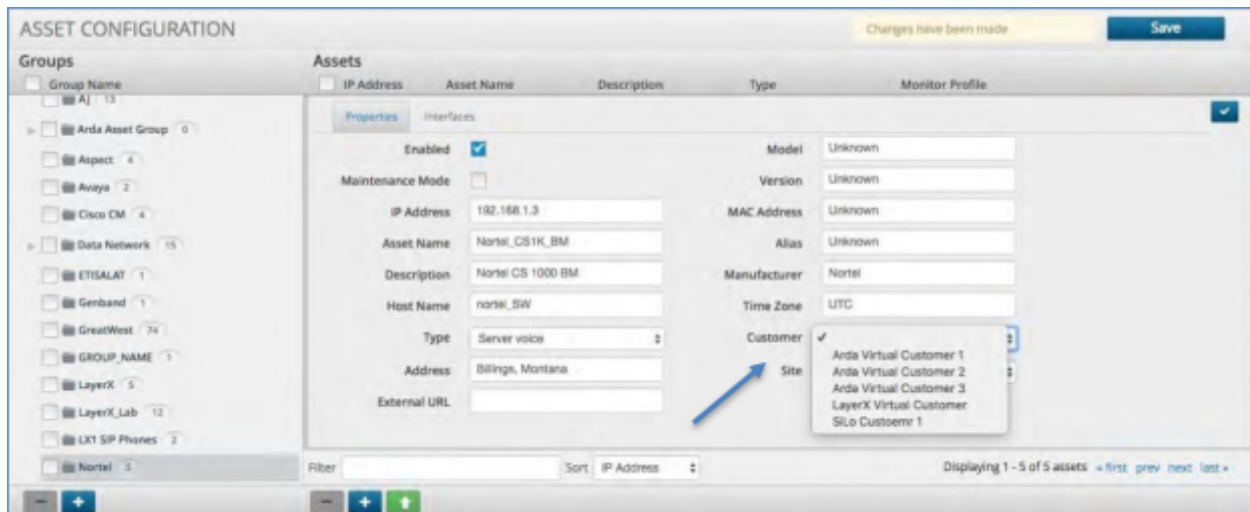
Name	Frequency	Credentials 1 & 2	Enabled
PING Probe	5 Minutes	None & None	<input checked="" type="checkbox"/>



### 5.2.6. 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:

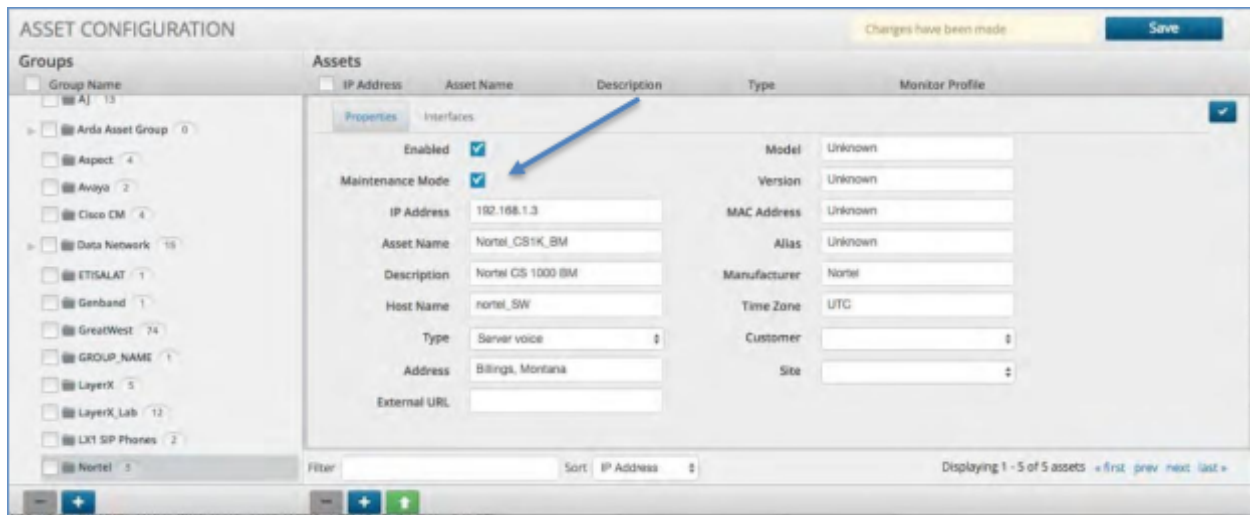
1. Click the asset group and then click on the actual asset within that group that is to be assigned to a Customer.
2. Click the pencil icon that will open up the details of that asset.
3. Click the field labeled Customer and a drop-down list of available Customers will appear.
4. Select the Customer 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.



### 5.2.7. 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.



## 5.3. 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. 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.

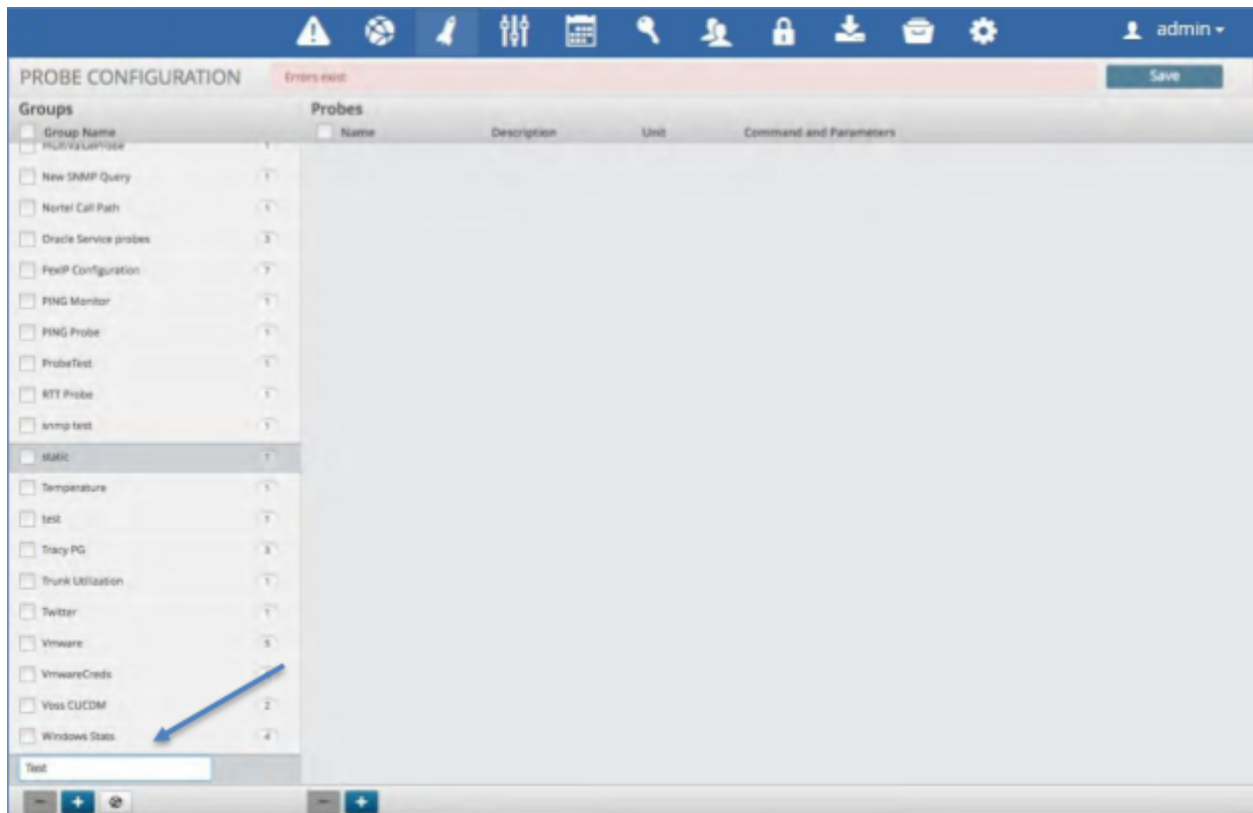
For PRI and SIP Trunk probes for Cisco Voice Gateways, reference:

Arbitrator Cisco PRI and SIP Probe Configuration

### 5.3.1. 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.



### 5.3.2. Creating a Probe

To create a new Probe:

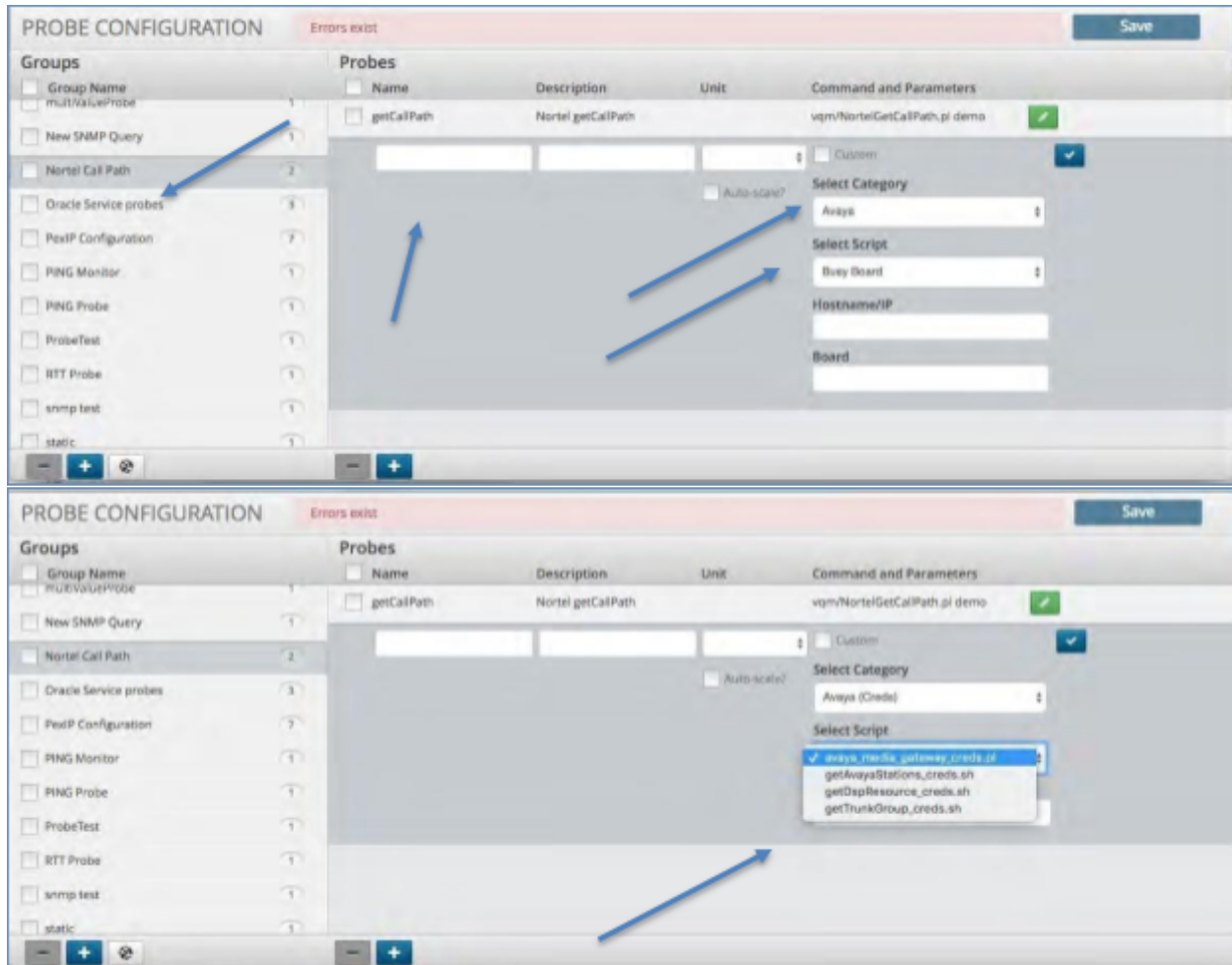
1. Click the group in which you wish to create a new Probe.
2. Click the Plus icon within the Probes panel.
3. Enter the name and description of the Probe.
4. De-select the check icon from the field titled “Custom”. This field is utilized when putting a custom probe in place versus utilizing the ones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

---

**Note:** For SP25, Polycom support requires **Custom** to be checked and the **Command and Parameters** field be entered as `polycom.sh`.

---

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.

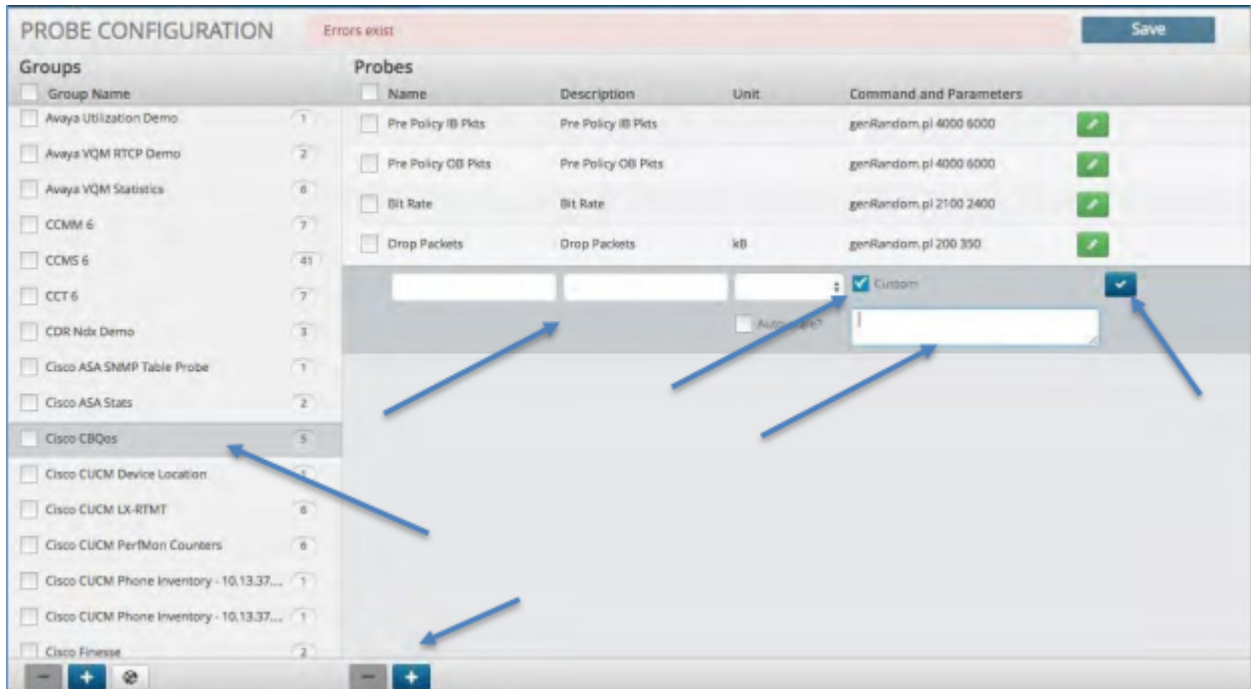


### 5.3.3. Creating a Custom Probe

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.

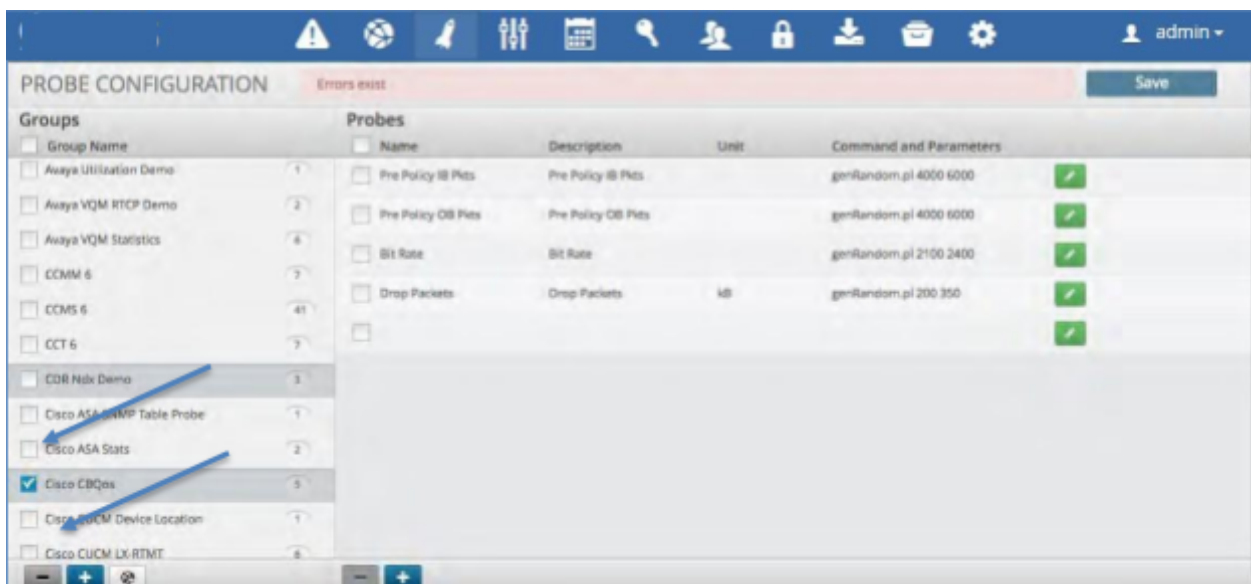
6. Click the “Check” icon to close the probe in the far right of the Probe panel.
7. Click the “Save” icon to save the added Probe.



### 5.3.4. 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.

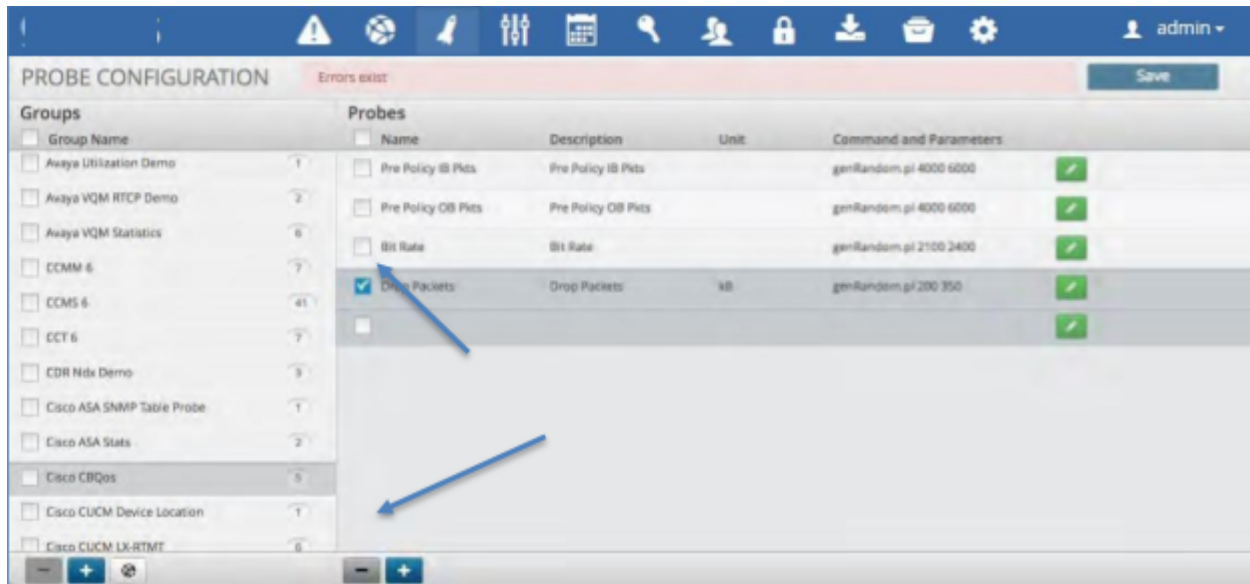




### 5.3.5. Deleting a Probe

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.



## 5.4. 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.

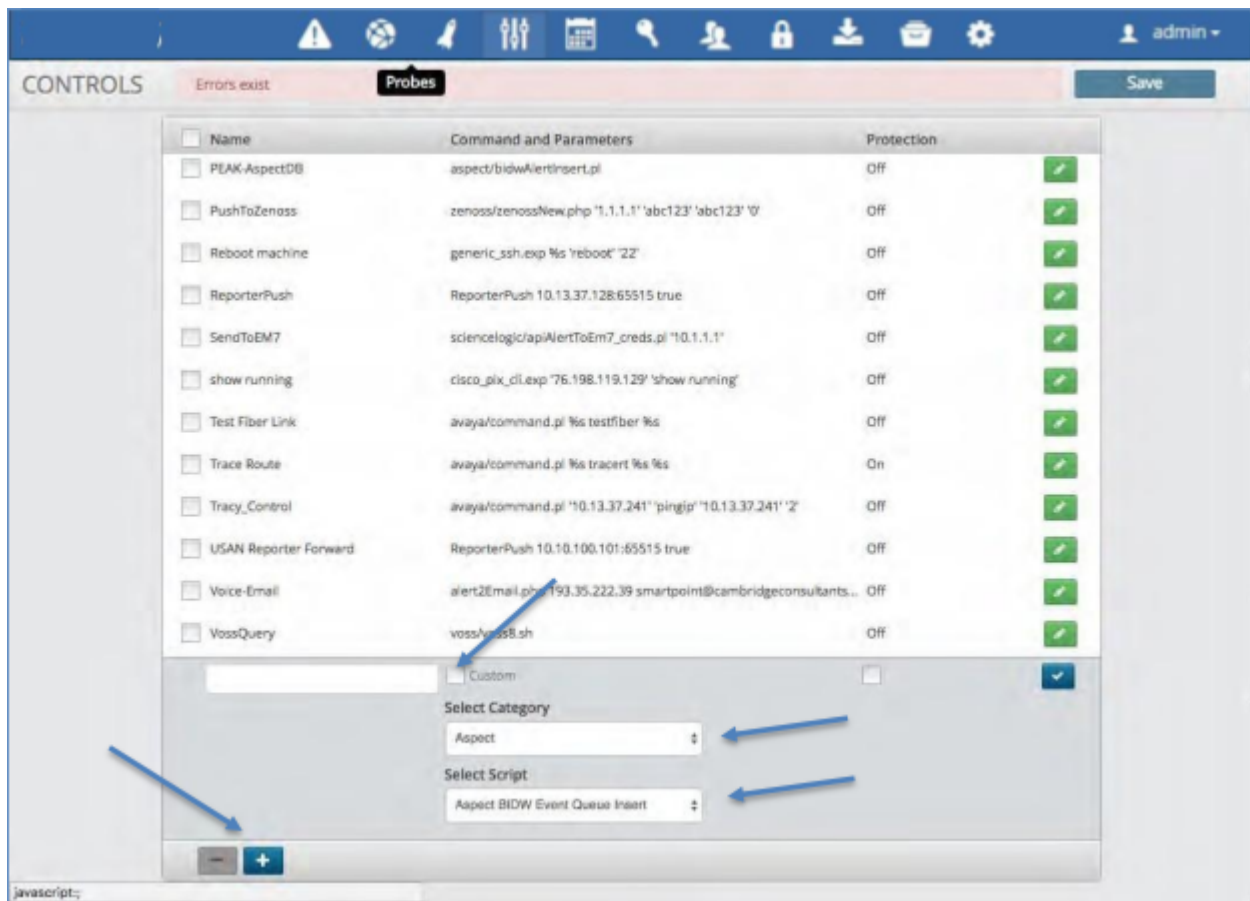
### 5.4.1. Creating a Control

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



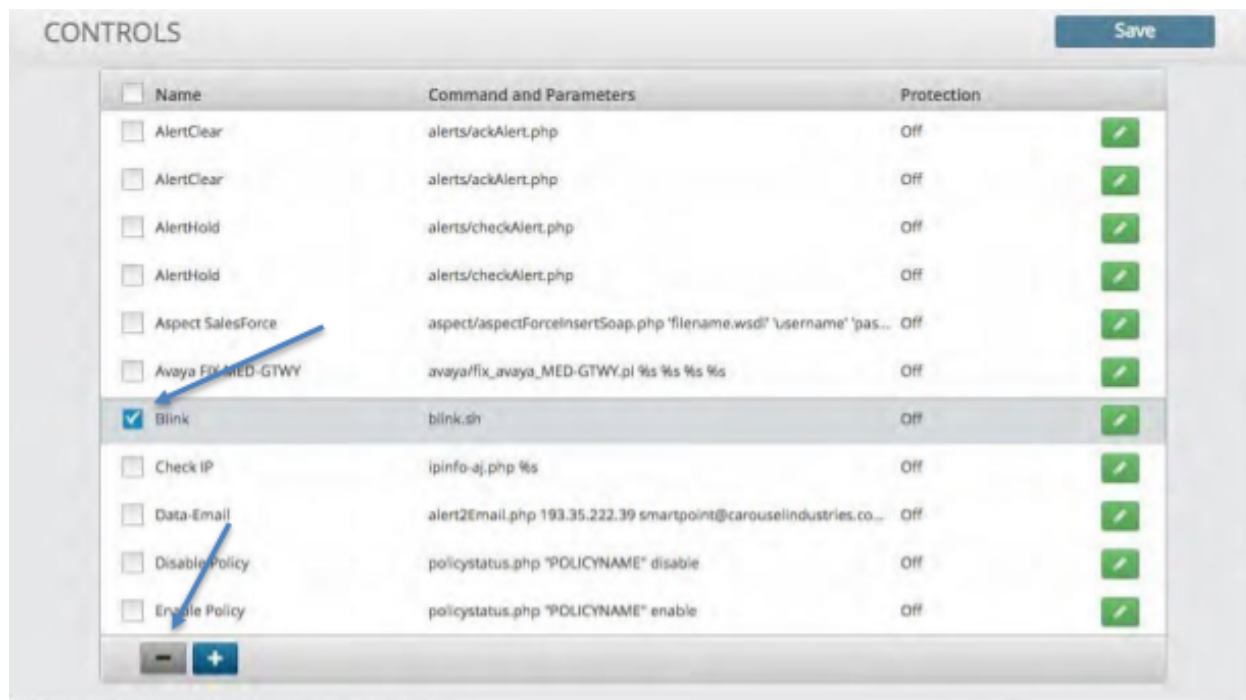
8. Click Save icon.



### 5.4.2. 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.



## 5.5. 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.

### 5.5.1. 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.

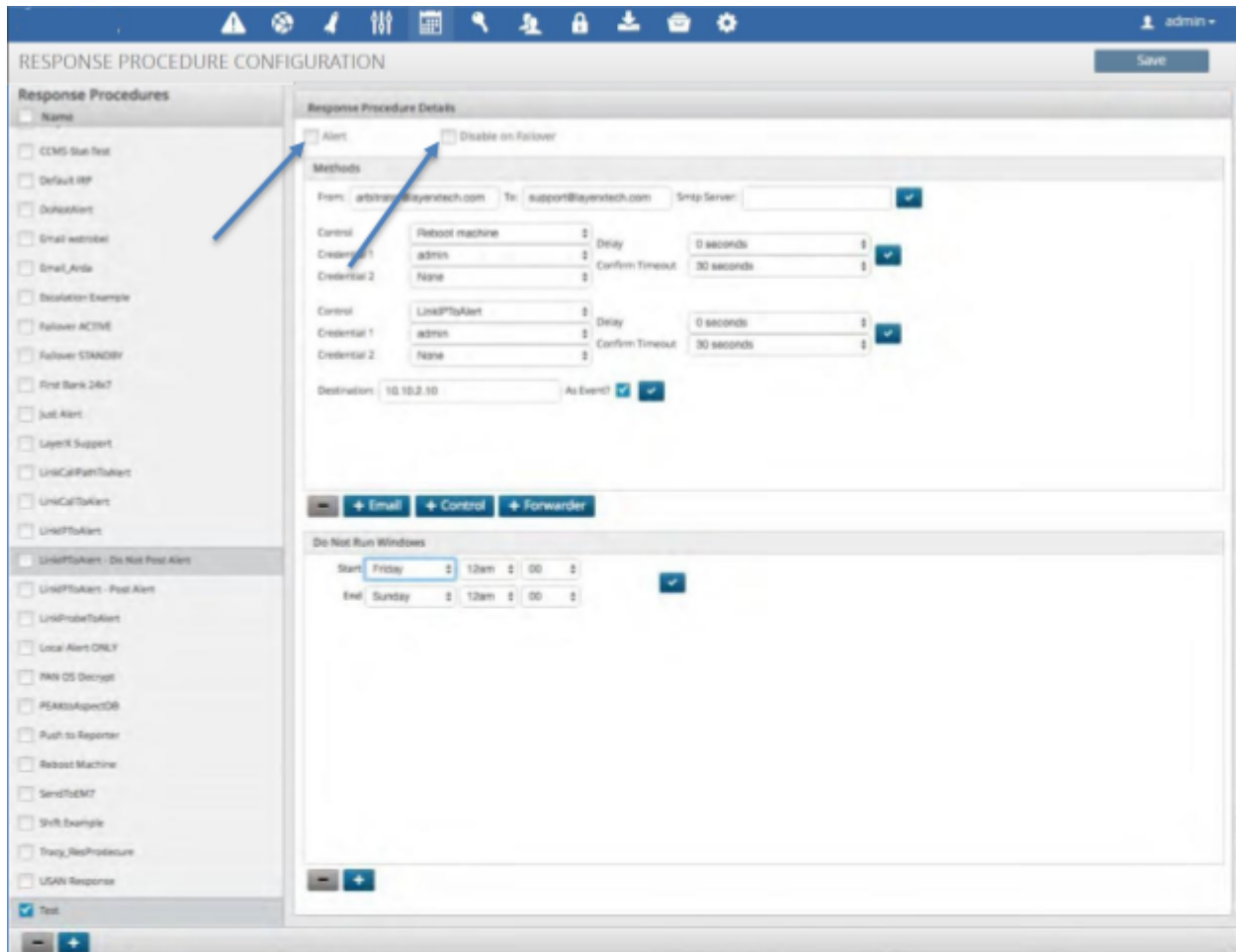
The screenshot shows the 'RESPONSE PROCEDURE CONFIGURATION' interface. On the left, there is a list of 'Response Procedures' with checkboxes. The 'Test' checkbox is selected. The main area is titled 'Response Procedure Details' and contains several sections:

- Alert:** A checkbox labeled 'Alert' is checked. A blue arrow points to it.
- Methods:** This section contains several rows of configuration:
  - From: arbtzaron@bayentech.com To: support@bayentech.com SMTP Server: [dropdown] [checkbox]
  - Control: Reboot machine Delay: 0 seconds [checkbox]
  - Credential 1: admin Confirm Timeout: 30 seconds [checkbox]
  - Credential 2: None
  - Control: LinkPTToken Delay: 0 seconds [checkbox]
  - Credential 1: admin Confirm Timeout: 30 seconds [checkbox]
  - Credential 2: None
  - Destination: 10.10.2.10 As Event? [checkbox] [checkbox]
- Buttons:** On the right side, there are three buttons: 'email', 'Controls', and 'Forward'. Red arrows point to each of these buttons.
- Do Not Run Windows:** This section has a 'Start' field set to 'Friday 12am 00' and an 'End' field set to 'Sunday 12am 00'. A blue arrow points to the 'Start' field.
- Bottom Section:** There are buttons for '+ Email', '+ Control', and '+ Forwarder'. Below this is another 'Do Not Run Windows' section with a '+' button.

### 5.5.2. Assigning an Alert to a Response Procedure

To assign the Alert function to a response procedure:

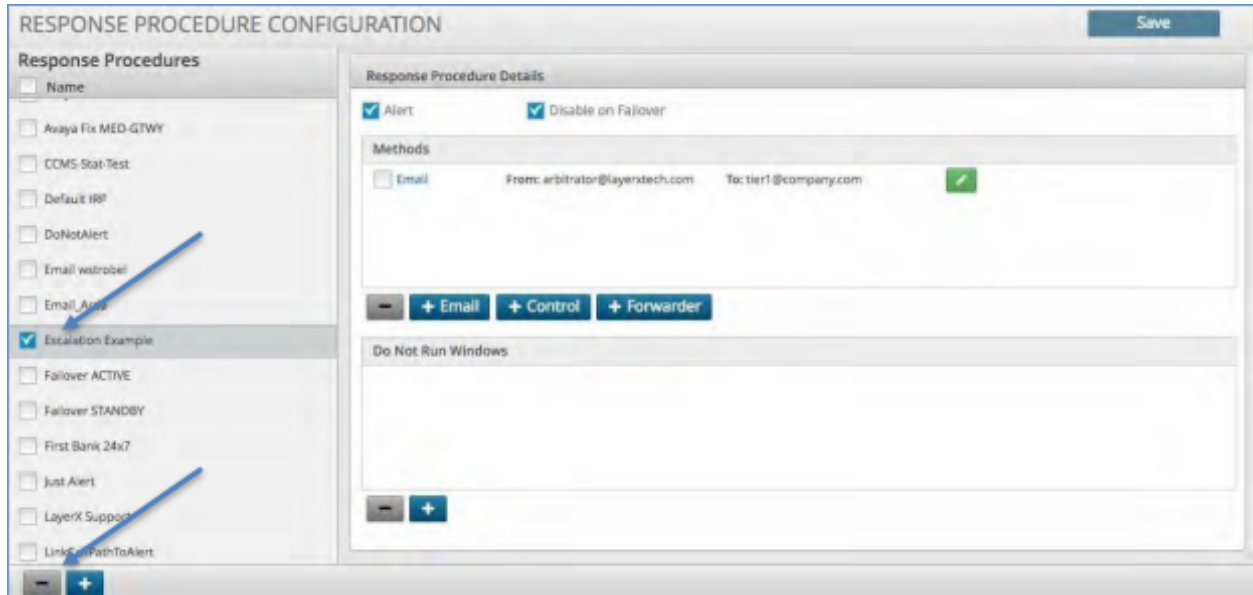
1. Click the Alert check box in the top left of the Response Procedure Details panel.
2. If this system you are configuring is intended to be the redundant platform then click the Disable on Failover box to allow all data to flow but no actions to take place.



### 5.5.3. 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.



## 5.6. How to Enable ServiceNow Intergration

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"/> Custom		<input type="checkbox"/>	
Select Category			
ServiceNow			
Select Script			
PushToServiceNow			
Service Now IP Address / Hostname			
<input type="text"/>			
Service Now Username			
<input type="text"/>			
Service Now Password			
<input type="text"/>			

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.

## 5.7. 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

### 5.7.1. ServiceNow Requirements

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

### 5.7.2. Arbitrator Correlation Configuration

- Version Required: 4.0001-15b
- Script: `servicenow/PushToServiceNow.pl`
- parameters:
  - URL\_TO\_SERVICENOW\_INSTANCE
  - USERNAME

- PASSWORD

### 5.7.3. Screenshots From ServiceNow

Service Management | System Administrator

Incident INC0010023

Configuration item: [Search] | Assignment group: [Search] | Assigned to: [Search]

\* 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

Service Management | System Administrator

Incidents | New | Go to: Number | Search

Number	Opened	Short description	Caller	Priority	State	Category	Assignment group	Assigned to
INC0020001	2016-08-10 09:14:29	test	System Administrator	3 - Moderate	New	Inquiry / Help		
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		
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		
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		
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		



## 5.8. 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)

### 5.8.1. 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.

The screenshot shows the 'CREDENTIAL CONFIGURATION' interface. At the top, there is a blue navigation bar with various icons, including a key icon. Below the navigation bar, there is a red banner that says 'Errors exist' and a 'Save' button. The main content area contains a table with the following columns: Name, Username, Password, Confirm, and a green checkmark icon. The table lists several credentials, including 'LXTREADONLY', 'SILo Test Cred', 'snmp community public', 'SNMP RO String', 'Tandburg', 'UCAXLAPI', 'VOSS API', and 'Windows Agent probe'. Below the table, there is a form to add a new credential, with a blue arrow pointing to the 'Name' input field. At the bottom left of the form, there is a minus and plus icon, with a blue arrow pointing to the plus icon.

<input type="checkbox"/>	Name	Username	Password	Confirm	
<input type="checkbox"/>	LXTREADONLY	*****	*****	*****	<input checked="" type="checkbox"/>
<input type="checkbox"/>	SILo Test Cred	*****	*****	*****	<input checked="" type="checkbox"/>
<input type="checkbox"/>	snmp community public	*****	*****	*****	<input checked="" type="checkbox"/>
<input type="checkbox"/>	SNMP RO String	*****	*****	*****	<input checked="" type="checkbox"/>
<input type="checkbox"/>	Tandburg	*****	*****	*****	<input checked="" type="checkbox"/>
<input type="checkbox"/>	UCAXLAPI	*****	*****	*****	<input checked="" type="checkbox"/>
<input type="checkbox"/>	VOSS API	*****	*****	*****	<input checked="" type="checkbox"/>
<input type="checkbox"/>	Windows Agent probe	*****	*****	*****	<input checked="" type="checkbox"/>
<input type="checkbox"/>					<input checked="" type="checkbox"/>

### 5.8.2. 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.



## 5.9. Customer Configuration

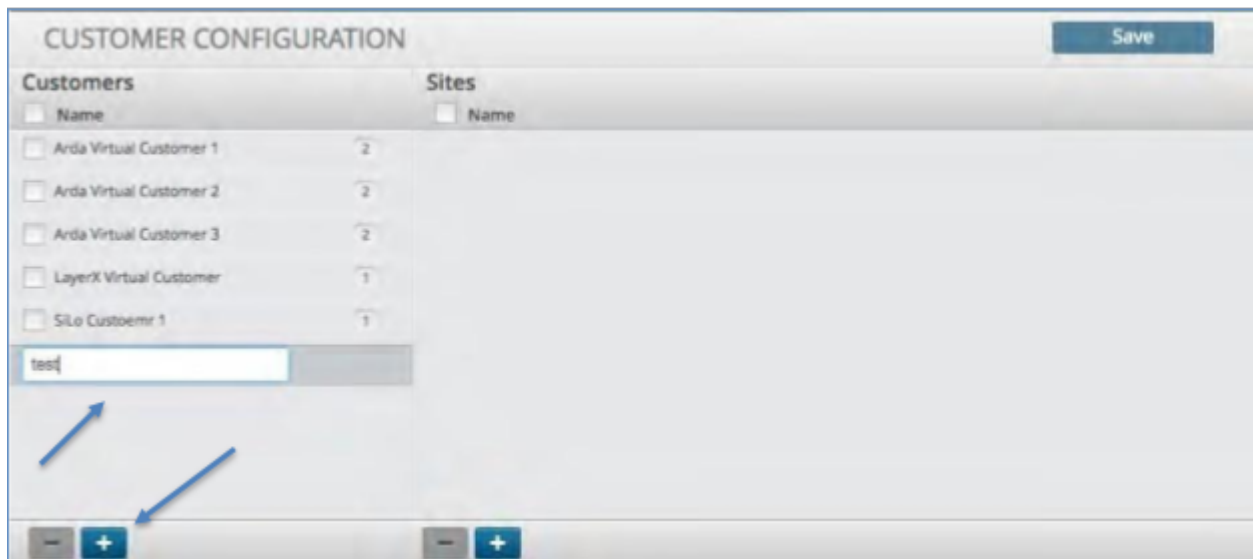
To enable multi-tenancy (assets, alerts and data) utilize the customer configuration panel to define a customer and their related locations (sites). Once defined, the Customer field can be applied to an asset and or a user to restrict access to other customers assets, alerts and data.

(See: Asset Configuration, Access Control Configuration).

### 5.9.1. Creating a Customer

To create a Customer:

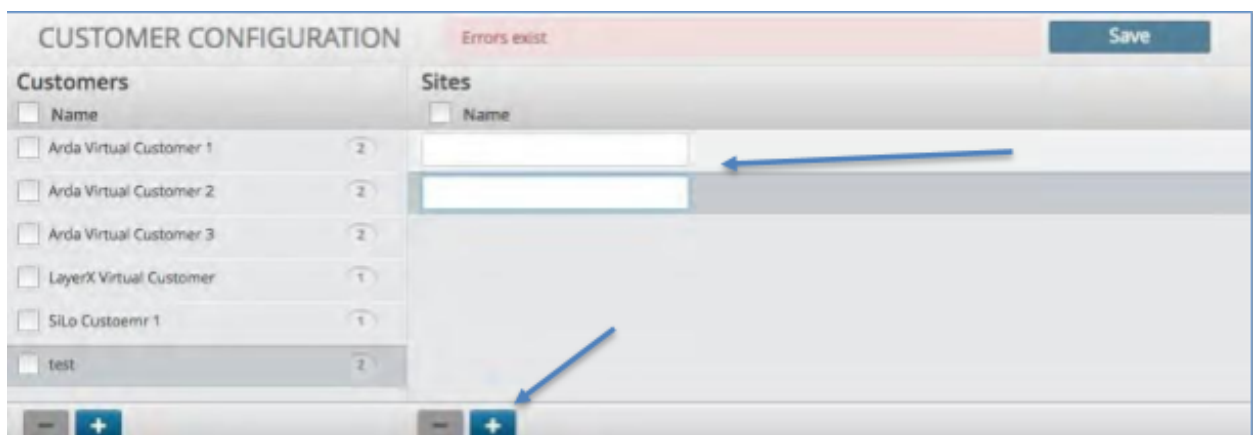
1. Click the "customer" icon in the menu bar at the top.
2. Click the plus icon in the bottom left corner of the customer panel.
3. Enter the name of the Customer to be added and press Enter.
4. Enter the Username and Password fields.
5. Click the Save icon to in the upper right corner.
6. Proceed to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



### 5.9.2. Creating a Customer Site

To create a site for a Customer:

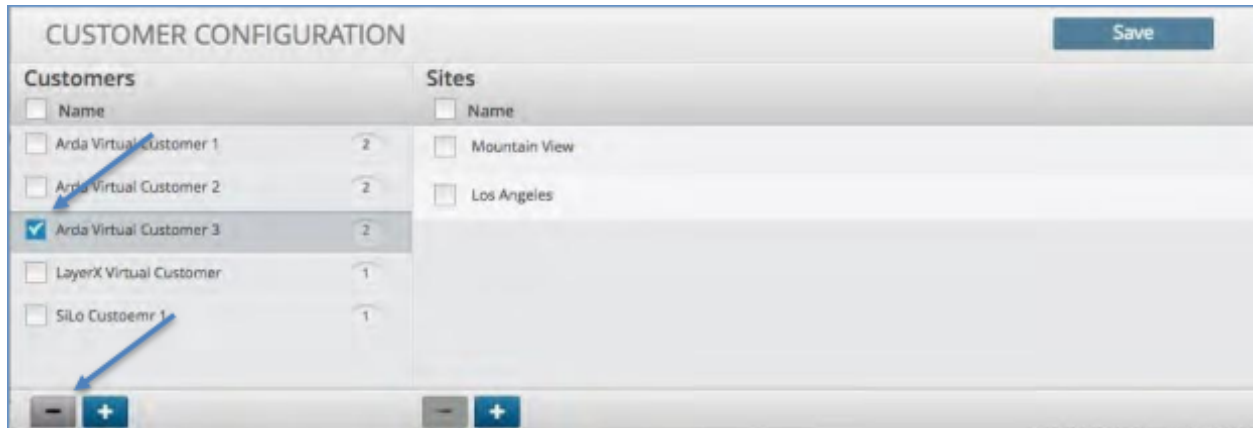
1. Click the customer to which you wish to add the site.
2. Click the plus icon in the bottom of the site panel.
3. Enter the site name and press Enter.
4. Add additional sites if applicable.
5. Click the Save icon in the upper right corner.



### 5.9.3. Deleting a Customer

To delete a Customer:

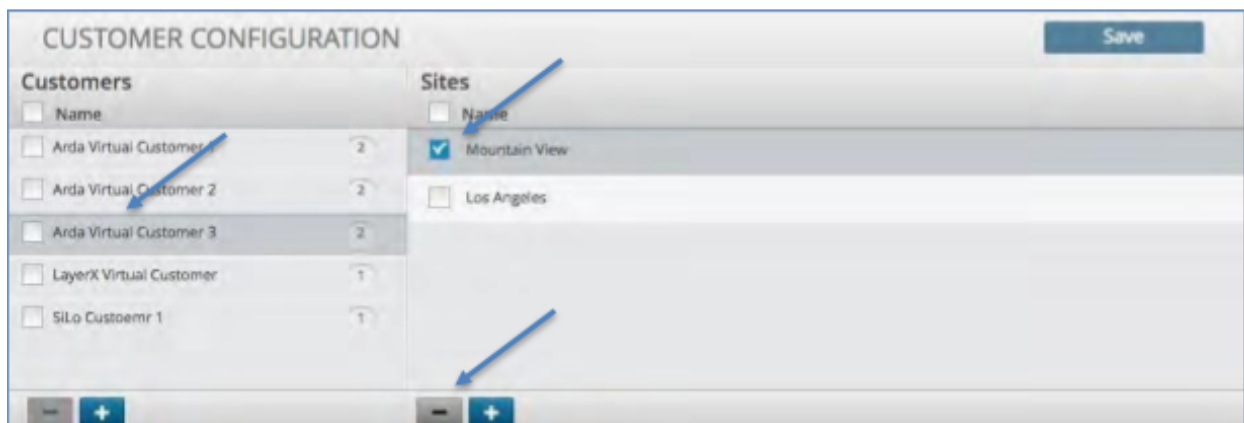
1. Click the check box of the customer you wish to delete.
2. Click the minus icon in the bottom of the site panel.
3. Click the Save icon to in the upper right corner.



### 5.9.4. 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.



## 5.10. 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.

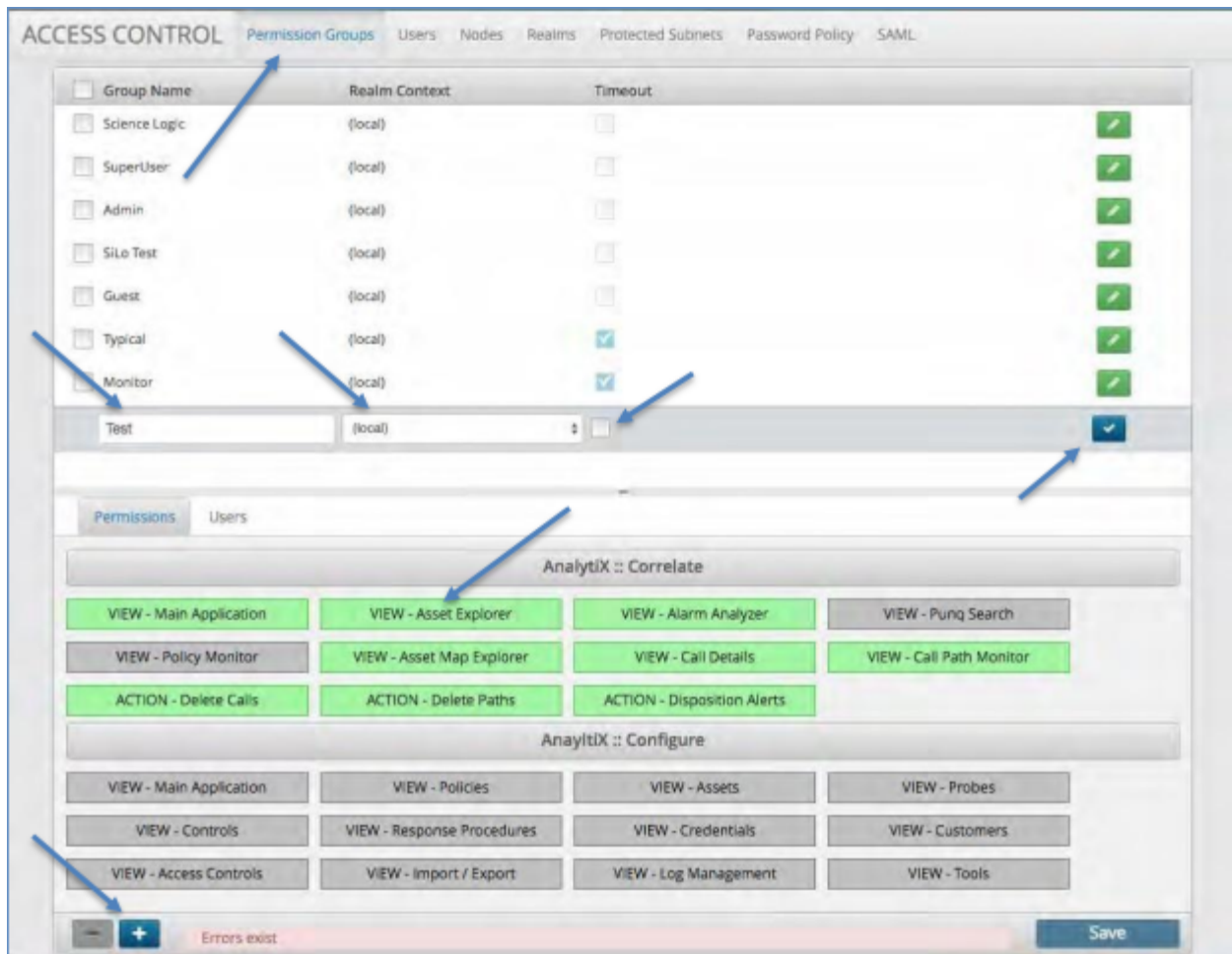
### 5.10.1. Permission Groups

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:

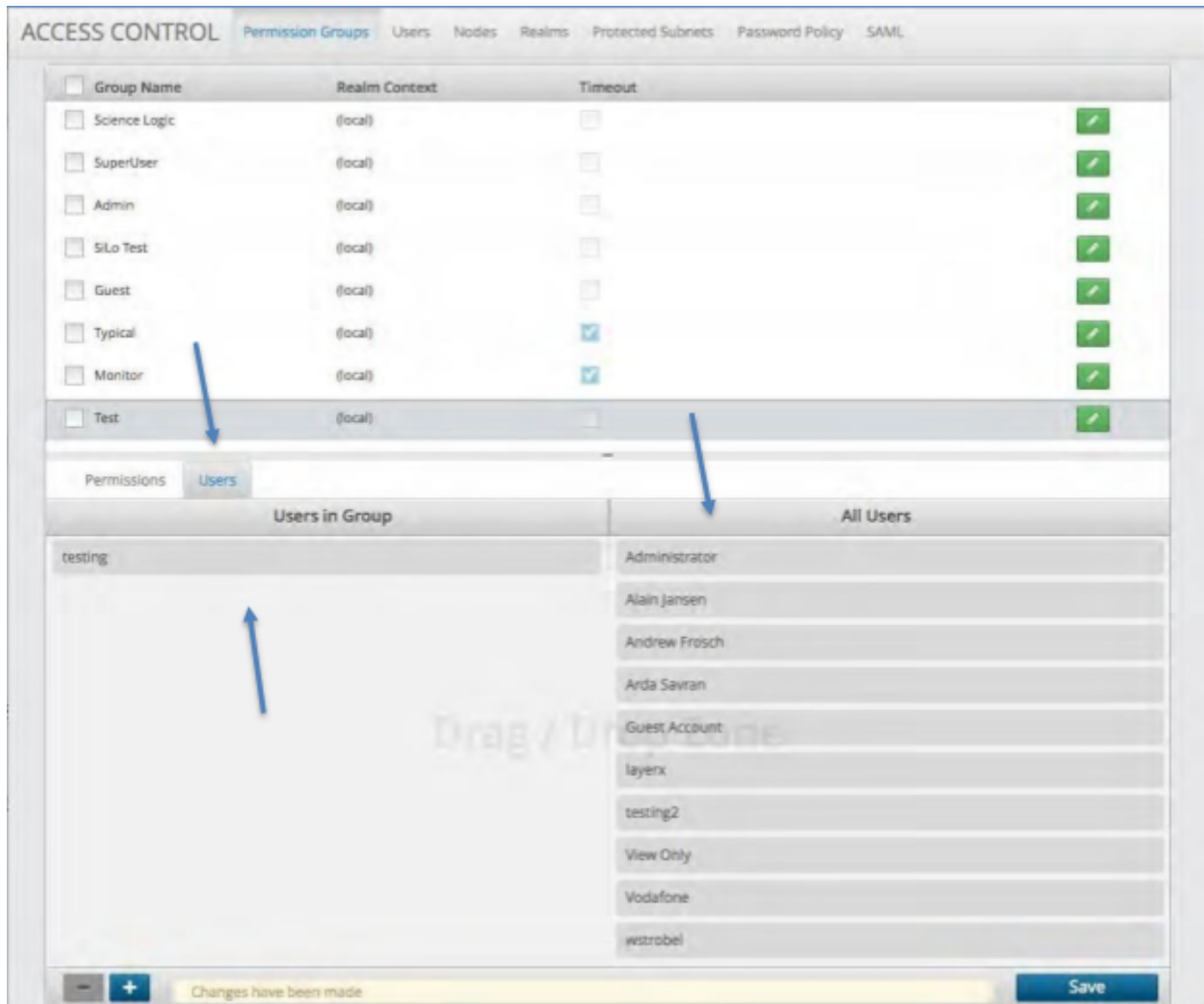
1. Click the Permission Group tab under the Access Control panel. A list of defined groups will be displayed.
2. Click the blue plus icon at the bottom of the panel.
3. Fill in the name of the group and select Realm Context drop-down button. This will always be local for a single Arbitrator deployment.
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.



### 5.10.2. 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 for managing users. The 'Users' tab is active, showing a list of users with the following columns: Full Name, Username, Password, Confirm, Email, Super-User, Force Password Change, and Locked Out. A blue checkmark icon is visible in the bottom right corner of the table. Below the table, there is a Customer dropdown menu and a Disable multi-tenancy checkbox. A blue arrow points to the Save button at the bottom right.

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

Customer:  Disable multi-tenancy:

Super-Users can do anything in any context.

Errors exist Save

## 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.

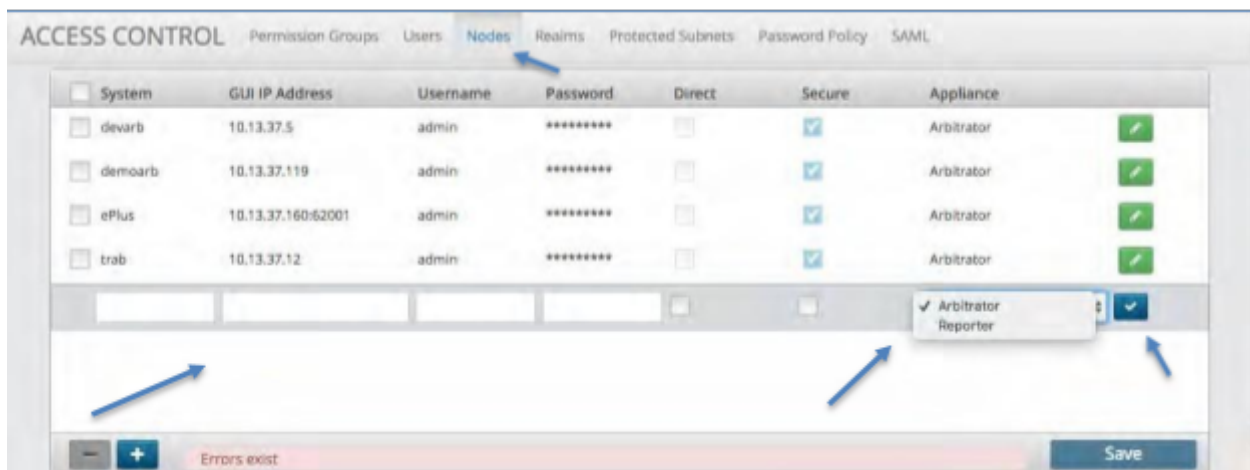
### 5.10.3. Nodes

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.

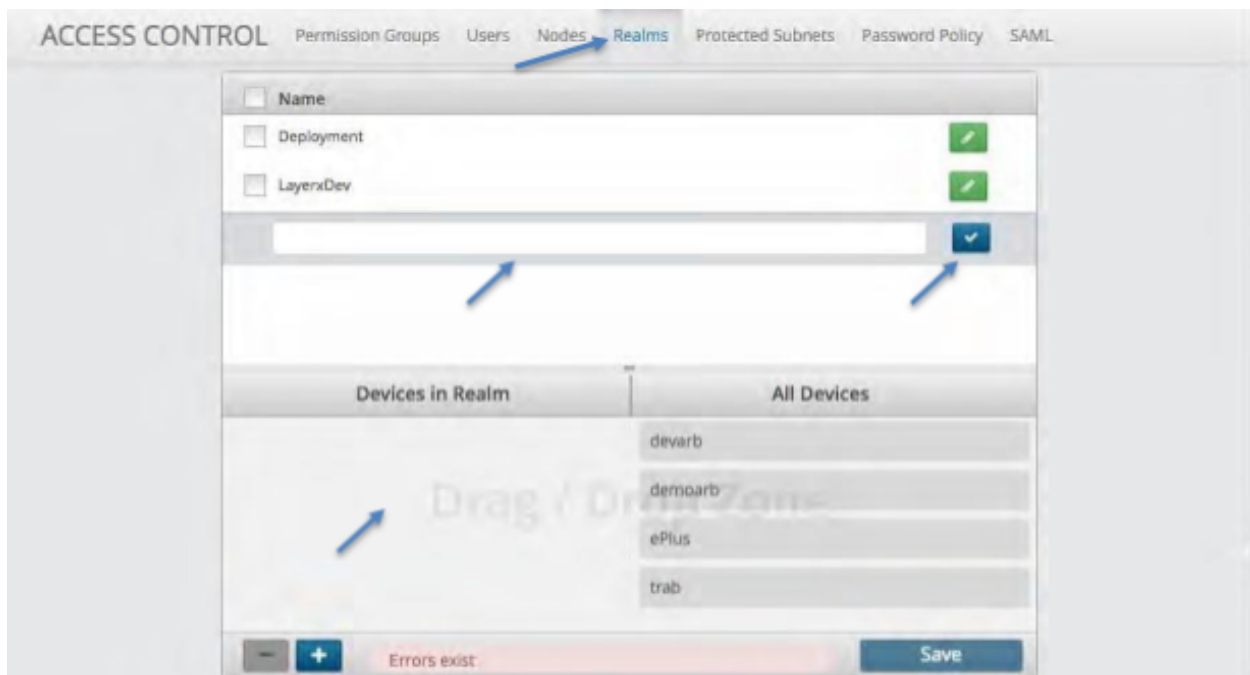
### 5.10.4. Realms

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.

### 5.10.5. 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.

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

<input type="checkbox"/>	Name	IP Address	Mask	
<input type="checkbox"/>	Internal_172_16	172.16.0.0	255.255.0.0	<input checked="" type="checkbox"/>
<input type="checkbox"/>	IANA1918_192_168	192.168.0.0	255.255.0.0	<input checked="" type="checkbox"/>
<input type="checkbox"/>	Google (subnet 5)	66.102.0.0	255.255.240.0	<input checked="" type="checkbox"/>
<input type="checkbox"/>	Google (subnet 4)	72.14.192.0	255.255.192.0	<input checked="" type="checkbox"/>
<input type="checkbox"/>	Internal_1	192.168.103.0	255.255.255.0	<input checked="" type="checkbox"/>
<input type="checkbox"/>	Internal_114	192.168.114.0	255.255.255.0	<input checked="" type="checkbox"/>
<input type="checkbox"/>	Internal_103	192.168.103.0	255.255.255.0	<input checked="" type="checkbox"/>
<input type="checkbox"/>	Google (subnet 1)	64.233.160.0	255.255.224.0	<input checked="" type="checkbox"/>
<input type="checkbox"/>	Internal_141	192.168.141.0	255.255.255.0	<input checked="" type="checkbox"/>
<input type="checkbox"/>	Google (subnet 2)	209.185.108.129	255.255.255.128	<input checked="" type="checkbox"/>
<input type="checkbox"/>	IANA_10	10.0.0.0	255.0.0.0	<input checked="" type="checkbox"/>
<input type="checkbox"/>	Google (subnet 3)	64.68.88.0	255.255.248.0	<input checked="" type="checkbox"/>
<input type="checkbox"/>	LOOPBACK	127.0.0.0	255.0.0.0	<input checked="" type="checkbox"/>
<input type="checkbox"/>	IANA1918_172_16	172.16.0.0	255.240.0.0	<input checked="" type="checkbox"/>
<input type="checkbox"/>	Internal_135	192.168.135.0	255.255.255.0	<input checked="" type="checkbox"/>
<input type="checkbox"/>	68.91.38.98	68.91.38.98	255.255.255.255	<input checked="" type="checkbox"/>
<input type="checkbox"/>	76.198.119.129	255.255.255.128	255.255.255.128	<input checked="" type="checkbox"/>
<input type="checkbox"/>	APIPA_168_254	169.254.0.0	255.255.0.0	<input checked="" type="checkbox"/>
<input type="checkbox"/>	Internal_3	192.168.1.0	255.255.255.0	<input checked="" type="checkbox"/>
<input type="checkbox"/>	Internal_125	192.168.125.0	255.255.255.0	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text" value="255.255.255.255"/>	<input checked="" type="checkbox"/>

Errors exist    Save

### 5.10.6. 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 the 'ACCESS CONTROL' interface with the 'Password Policy' tab selected. The configuration fields are as follows:

Field	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 box.

### 5.10.7. 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>MIIDzCCAs+gAwIBAgLJAly0+0SPiFX0MA0GCSqGSIb3DQEBCwUAMIGJM0swC
QYDVQQGEwJVUzEOMAwGA1UECAwFVG4YXmxDzANBgNVBAMcMBklydmliuZzEPMA0GA1UECgwwbG9wZzEw
GF5ZjU4M08wDQYDVQQLDAZsYXlcnGxEDAOBgNVBAMMB2RlbnBhcnRlJTAjBgkqhkiG9w0BCQEFWF
nN1cHBycnRAbGF5ZjU4M08wDQYDVQQLDAZsYXlcnGxEDAOBgNVBAMMB2RlbnBhcnRlJTAjBgkqhkiG9w0BCQEFWF
ELMAkGA1UEBhMCVGVhbnRlJTAjBgkqhkiG9w0BCQEFWFELMAkGA1UEBhMCVGVhbnRlJTAjBgkqhkiG9w0BCQEFWF
AoMBmweWVyeDEPMA0GA1UECAwFVG4YXmxDzANBgNVBAMcMBklydmliuZzEPMA0GA1UECgwwbG9wZzEw
vcNAQKBFFhZzdXBw3J0QGXheWVyeHRIY2guY291MlIjANBgkqhkiG9w0BAQEFAAOCAQ8AMIIBCgK
CAQEA4ZgbcuCEgq3E/RrHvoMyyjhYtcsGITvqvUkmbkmD9eP75vBS4QyIT55HY7DW72zGrjGqsjrk5s
DPBIMf6kBljIMjUbK4V3L0TCoaCq5u0rD9YLSeVAmSm0aNF/X1diTA3Lc8VqMceh7PsvMn9CqCImJ++x
3U2BwAGS78OC6BUUhD4d8U4E5/WsJ+x1wEceYsRGN16c7A156O6Yr9BeU000pq6mk6xYXjC6XWV
LTK18G5ZcG5NAUJKKdnTep4yhgtckRJuXh2wVbD/rQJZFk+D7yQLSspfc41DbVmfJRCla7LgkGdqv+R
hBOKVjOpVQ5Z6w2T5xlwbdwIDAQABo1AwTjAdBgNVHQ4EFgQUUvFDaBSaubH6fUtzgbEVEm8vBtlw
HwYDVR0tBBgwFoAUUvFDaBSaubH6fUtzgbEVEm8vBtlwQAYDVR0TBAlwAwEB/zANBgkqhkiG9w0BA
QsFAAOCAQEAYk084TvcTgZxuoNhcX20f9T6v7IRzO1280Uih8ydBSwbNmP9vXP69IA9dzImi4TUHfDwJq
Elz+M4HKz07DzZn60LW+ZnWZDXnodFzuYAThdsVkeZn+BXT+vD3w9fPNmxpPPFbK8e6X/8eJum63cil
8Kbd4yVS7750VDQPBT2JulV8JizjQSUr11MDir3R9Z+EtIKUjJlt4CLVsn9h40fzDYobr315XKoleDiSq7Vy9
WEYXP00IHm6nkEvUs85jyLxsXcjw3NtbtzQeMBppuVOByGValEWlGjFyg8++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**



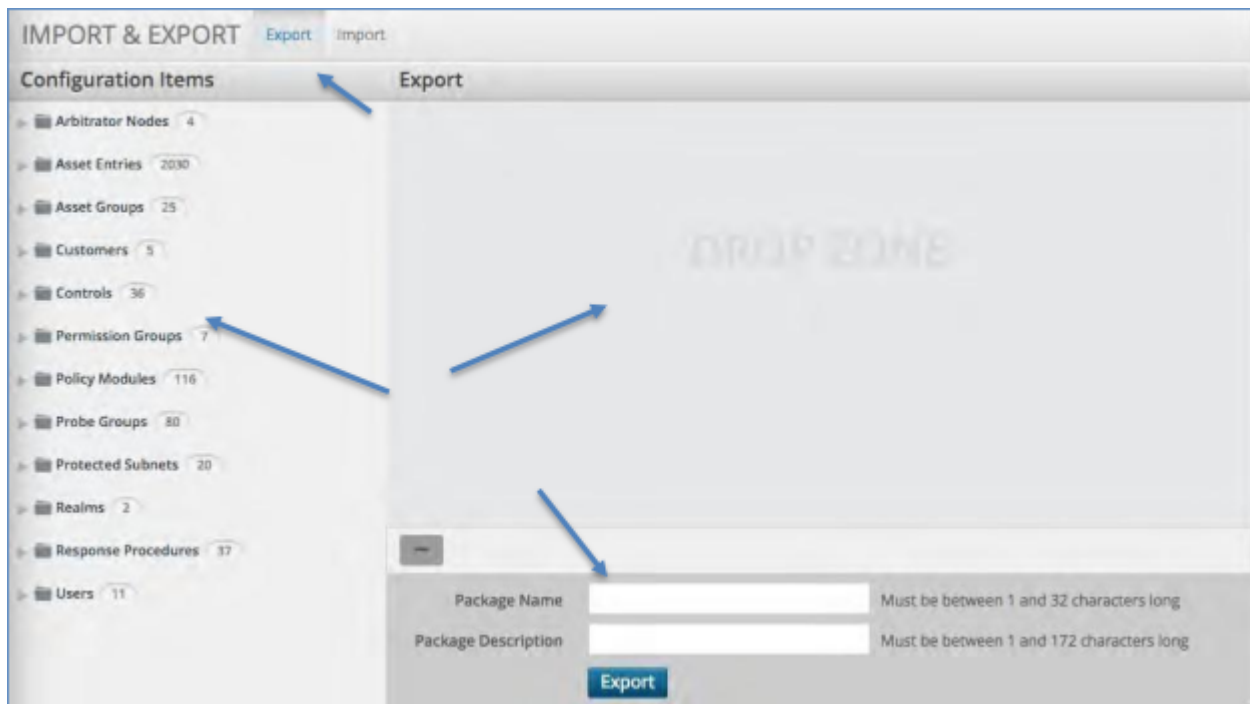
## 5.11. Import & Export

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.

### 5.11.1. Exporting

To export configuration items:

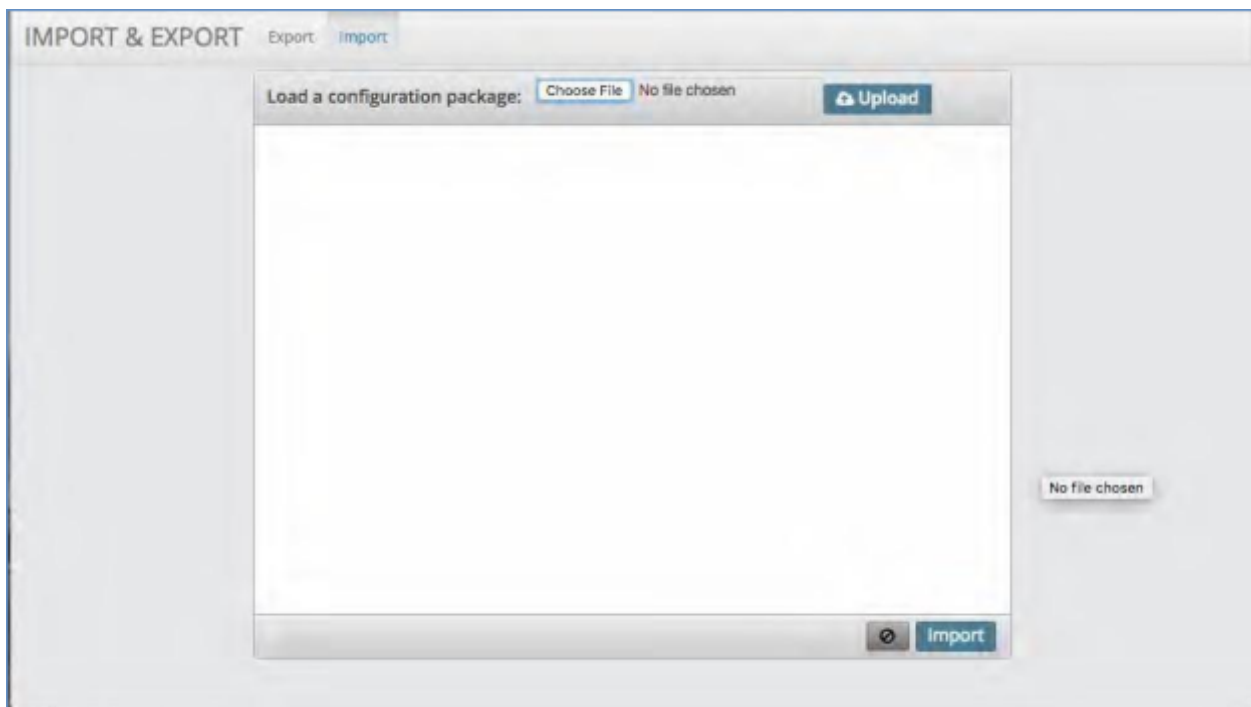
1. Click the Export tab at the top of the screen.
2. On the left-hand side will be folders containing all of the configuration items. Either drag whole folders over to the drop zone or open a folder and select a specific item to drag to the drop zone.
3. Once complete give the package a name in the box 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.



### 5.11.2. 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.



## 5.12. Archive Management

The Archive Management panel provides options on backing up the Arbitrator Correlation platform.

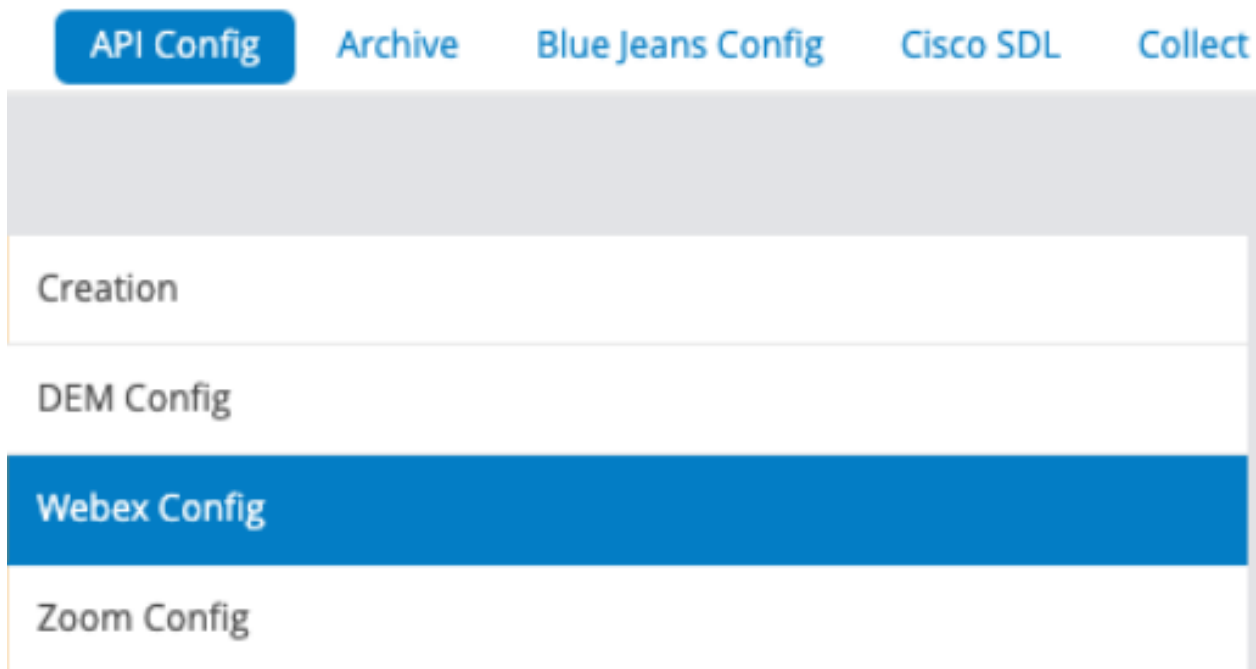
### 5.12.1. Archive

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

#### API Config

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

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.
- 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.)

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": "ZjlyZjAyYmEiYTYyNS00YWZlLWlzOGEt"}  
AccessToken to be used for requests.

**Command:** Webex Config: Create Access Token  
**Status:** Finished  
**Output:** SUCCESS

Close View Output

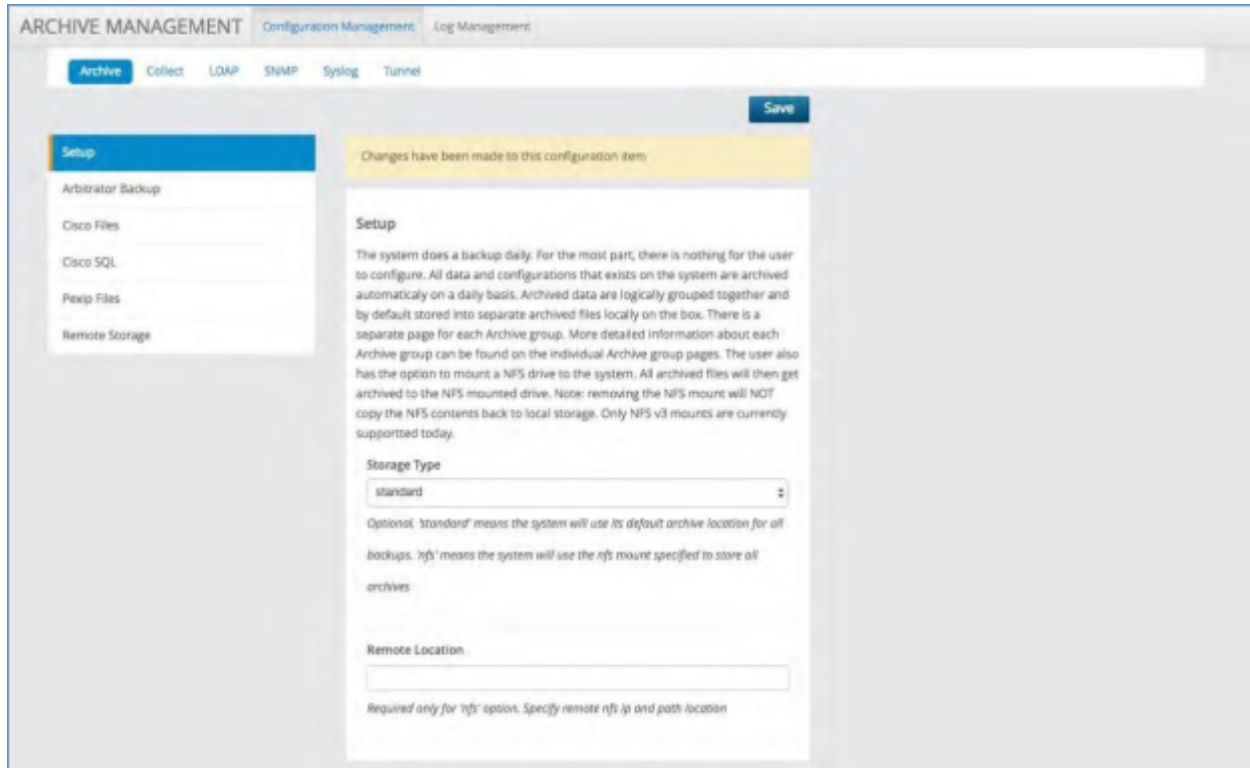
Created configurations can be deleted or modified. This will be needed for Access Tokens, as these contain an `expires_in` value.



## 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 contains a descriptive paragraph and four configuration fields: 'archive\_interval' (set to 'daily'), 'method' (set to 'local'), 'destination' (set to '/chroot/iscp/pub/xt\_archive'), and 'monthsKept' (set to 'notSupported').

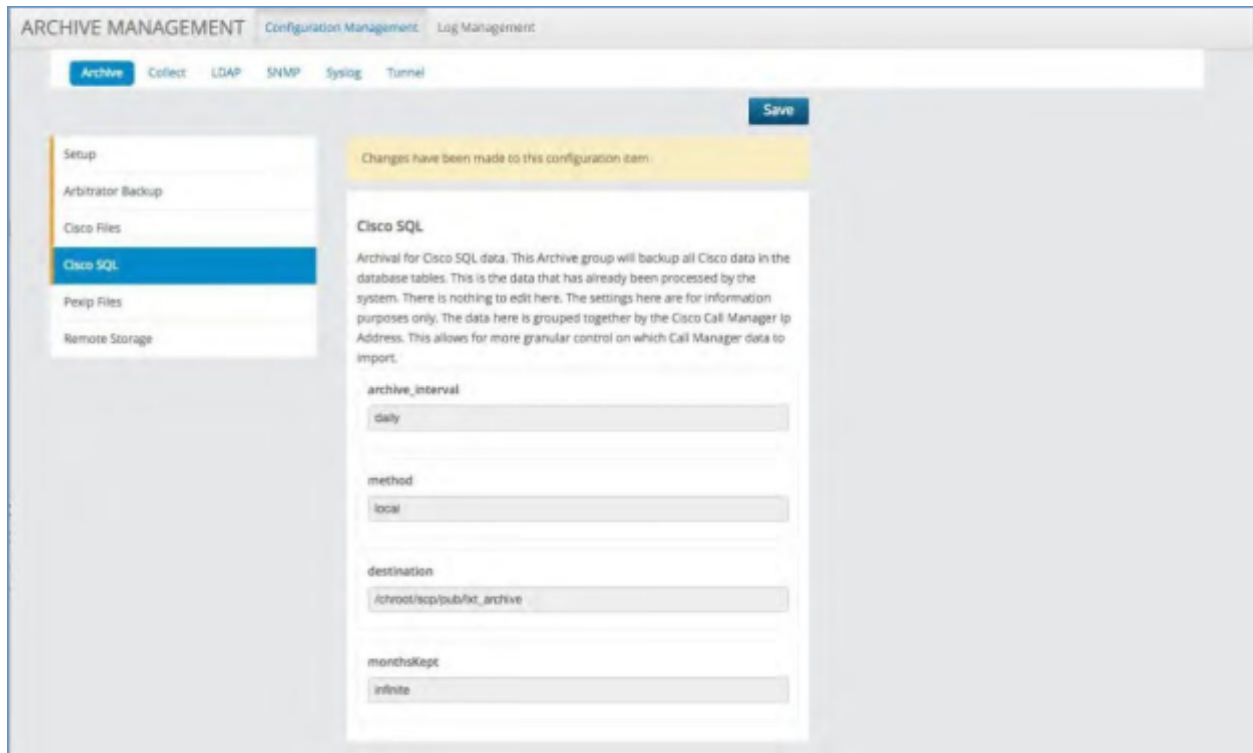
### Cisco Files

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 navigation menu including 'Archive', 'Collect', 'LDAP', 'SNMP', 'Syslog', and 'Tunnel'. The 'Archive' tab is active. A sidebar on the left lists configuration categories: 'Setup', 'Arbitrator Backup', 'Cisco Files' (highlighted), 'Cisco SQL', 'Pexip Files', and 'Remote Storage'. A 'Save' button is located at the top right. A yellow notification banner states 'Changes have been made to this configuration item'. The main content area is titled 'Cisco Files' and contains the following text: '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.' Below this text are several configuration fields: '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/ncp/pub/rd\_archive'), and 'monthsKept' (text input field containing 'notsupported'). A note below the 'status' field explains the options: 'enabled' - keep original cisco cdr/cmr files, 'disabled' - remove original cisco cdr/cmr files. The 'disabled' option will cause all cdr/cmr files to be deleted from the system. This is a permanent deletion.

### 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.

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 located in the top right corner. On the left side, a sidebar menu lists 'Setup', 'Arbitrator Backup', 'Cisco Files', 'Cisco SQL', 'Pexip Files' (which is highlighted in blue), and 'Remote Storage'. The main content area features a yellow notification banner stating 'Changes have been made to this configuration item'. Below this is the 'Pexip Files' configuration section. It includes a descriptive paragraph: '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.' The configuration fields are: 'status' (a dropdown menu set to 'enabled'), 'archive\_interval' (a dropdown menu set to 'daily'), 'method' (a dropdown menu set to 'local'), 'destination' (a text input field containing '/chroot/scp/pub/txt\_archive'), and 'monthsKept' (a dropdown menu set to 'notSupported').

## 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.

The screenshot shows the 'ARCHIVE MANAGEMENT' configuration interface. The 'Archive' tab is selected, and the 'Remote Storage' sub-tab is active. A 'Save' button is visible in the top right. A notification banner at the top states 'Changes have been made to this configuration item'. On the left, a sidebar lists configuration categories: Setup, Arbitrator Backup, Cisco Files, Cisco SQL, Peisp Files, and Remote Storage (highlighted). The main content area is titled 'Remote Storage' and includes a descriptive paragraph: '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.' Below this are several form fields: 'archive\_interval' (dropdown set to 'daily'), 'method' (dropdown set to 'scp'), 'IP location' (text input with '192.168.123.123'), 'username' (text input with 'admin'), 'password' (masked text input), 'destination' (text input with '/sdstsdst'), and 'monthsKept' (dropdown set to 'infinite').

### 5.12.2. Collect

The Collect tab allows you to choose 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.



ARCHIVE MANAGEMENT Configuration Management Log Management

Active Collect LDAP SNMP Syslog Tunnel

Save

Cisco CDR

Changes have been made to this configuration item

**Cisco CDR**

Use this to configure where the collection of cisco cdr / cmr files should be stored. "local" is the default location. Cisco CDR / CMR files will be processed and stored on local arbitrator. 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.

method  
local

remote\_ip  
Arbitrator IP

### 5.12.3. 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.



The screenshot displays the 'ARCHIVE MANAGEMENT' web interface. At the top, there are navigation tabs for 'Archive', 'Collect', 'LDAP', 'SNMP', 'Syslog', and 'Tunnel'. The 'SNMP' tab is currently selected. Below the navigation, there is a 'Save' button. A yellow notification banner states 'Changes have been made to this configuration item'. The main content area is titled 'SNMPv3 User Config' and includes the following fields and options:

- Commit SNMPv3 User Configuration**: A blue button to save the configuration.
- Engine ID**: A text input field containing 'OCTECT STRING'.
- User Name**: A text input field containing 'OCTECT STRING'.
- Authentication Protocol**: A dropdown menu with 'MD5' selected.
- Authentication Pass Phrase**: An empty text input field.
- Encryption Protocol**: A dropdown menu with 'AES' selected.
- Encryption Pass Phrase**: An empty text input field.

### 5.12.5. 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.

ARCHIVE MANAGEMENT Configuration Manager Log Management

Archive Collect LDAP SNMP **Syslog** Tunnel

Save

Changes have been made to this configuration item

### Syslog Server

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 Layer X 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.

external\_syslog\_ip

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)

protocol

tcp

Syslog protocol to use in syslog transport. Syslog server must also support the same protocol.

external\_syslog\_port

514

Optional. Enter in the port. Default syslog port is 514

### 5.12.6. 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.

ARCHIVE MANAGEMENT Configuration Management Log Management

Archive Collect LDAP SNMP Syslog **Tunnel**

Save

Creation  
Management  
Request History

Changes have been made to this configuration item

**Creation**

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

Create Tunnel

**Create Tunnel**

Create a tunnel to the requested device, and optional port.

remoteAddress  
172.30.11.100

remotePort  
3080

InterimDevice  
169.254.5.12

Fetch InterimDevices

**Fetch InterimDevices List**

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.

ARCHIVE MANAGEMENT Configuration Management Log Management

Archive Collect LDAP SNMP Syslog **Tunnel**

Save

Creation  
**Management**  
Request History

Changes have been made to this configuration item

**Management**

Allows the listing, and management of existing tunnels.

List Active Tunnels

**List Active Tunnels**

List only active tunnels.

Remove Specified Tunnel

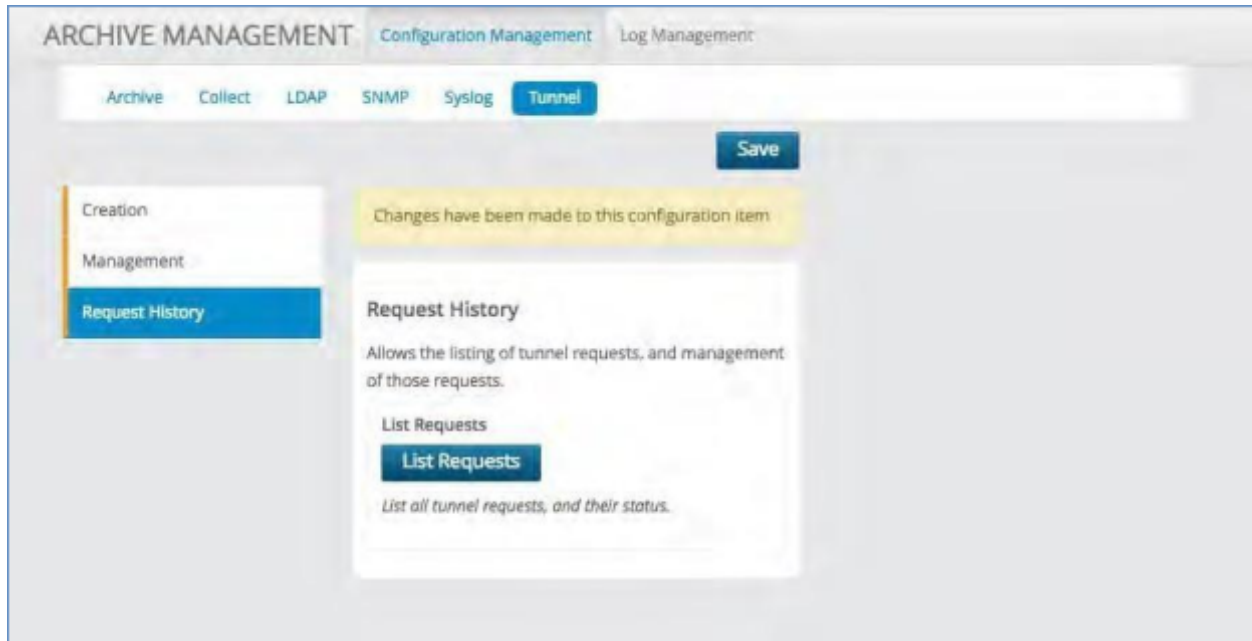
**Remove and close the tunnel specified**

Close the active tunnel, by requestid.

requestid

## Request History

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

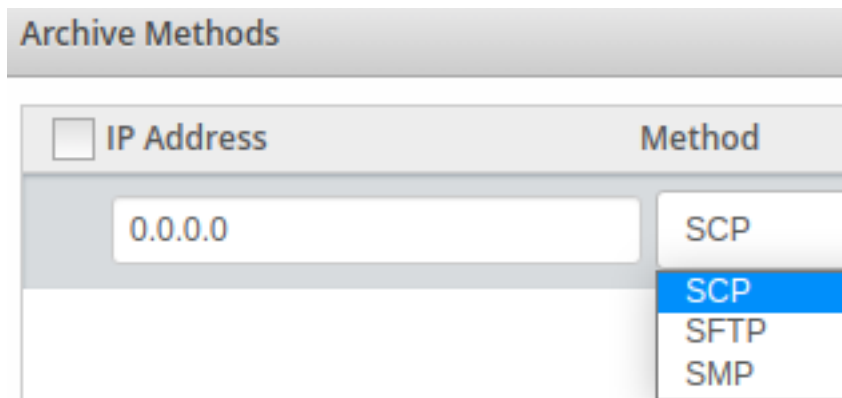


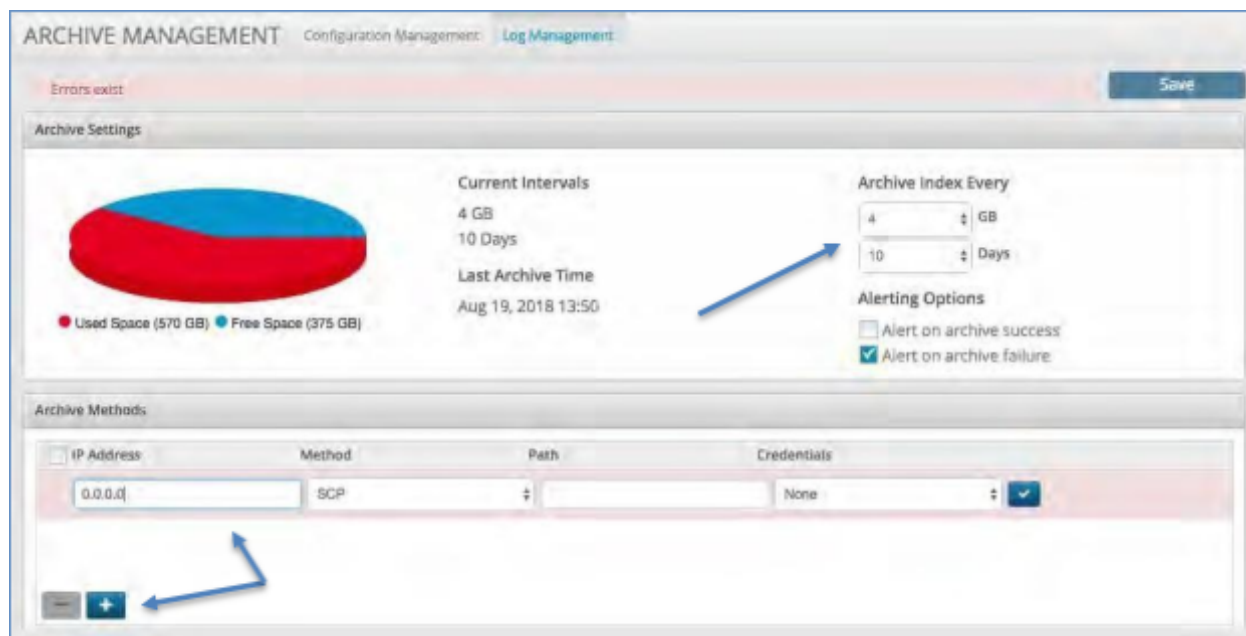
## 5.13. Log Management

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.





## 5.14. Tools

### 5.14.1. SNMP Tools

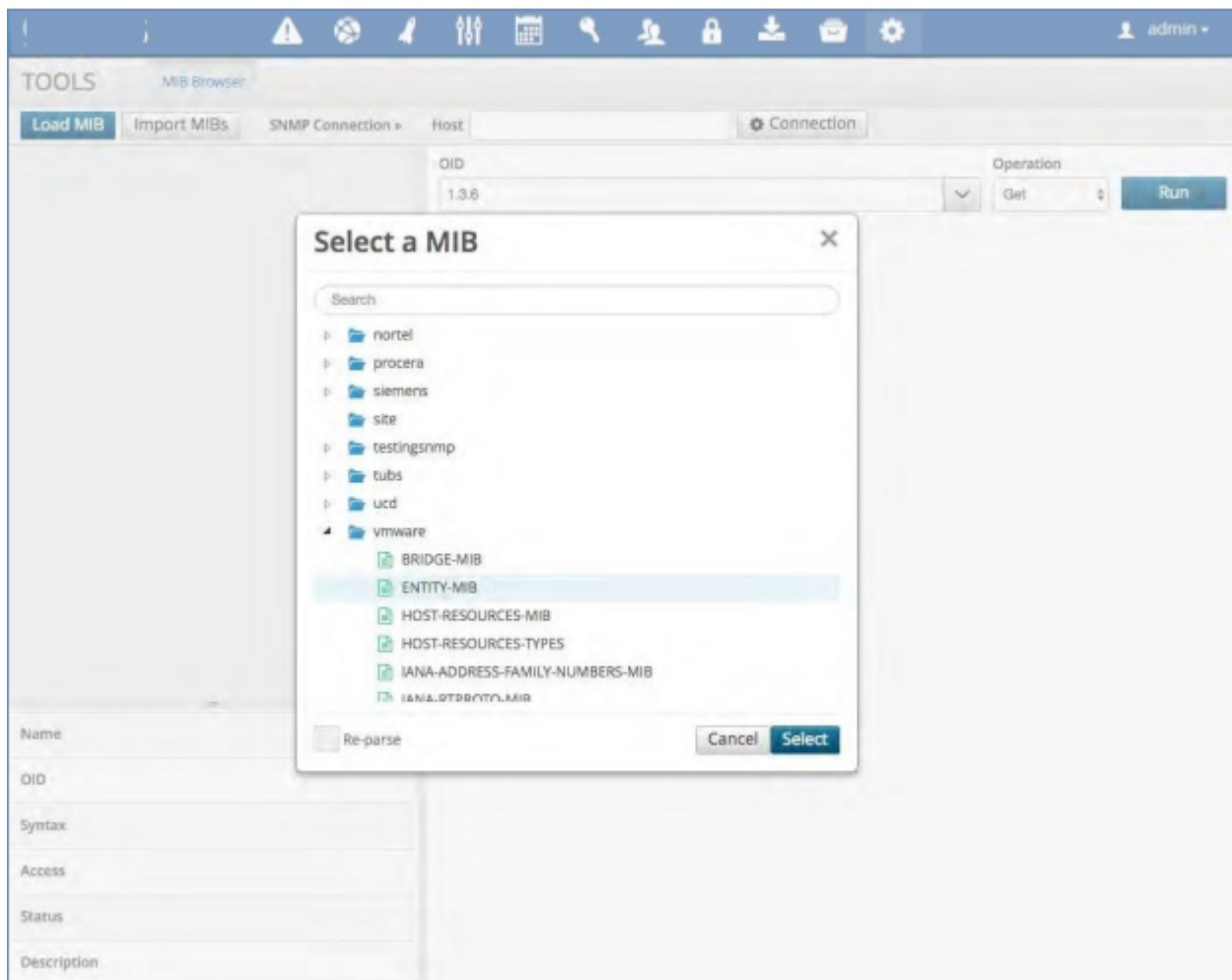
The SNMP Tools panel allows you to very easily load or import MIBs and then build SNMP actions/ scripts to be saved as Probes within the platform. The system comes with a library of MIBs that can be opened by selecting the Load button. If a new one is needed it can be imported by selecting the Import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

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

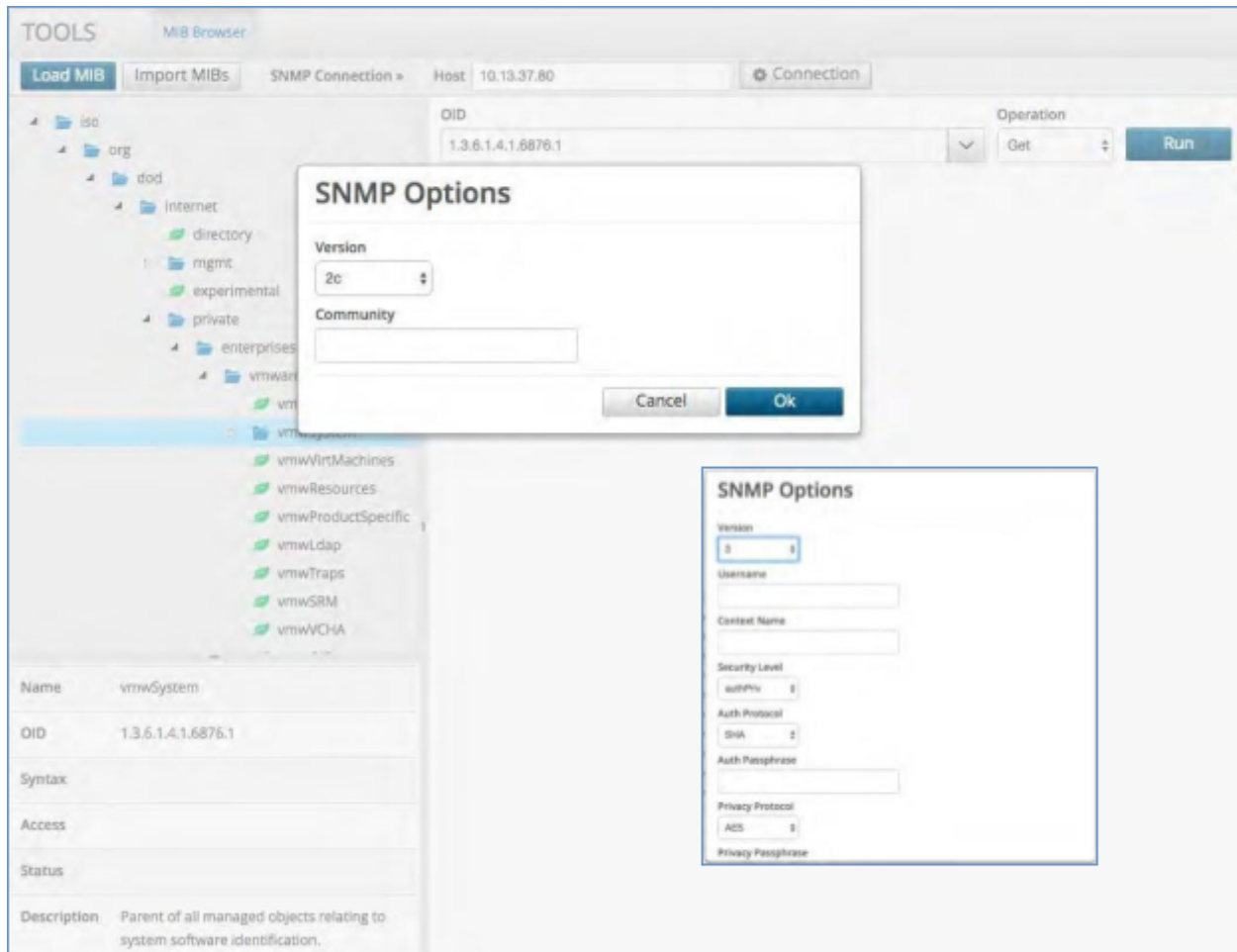
1. To load an existing MIB simply select the Load button
2. A window will open up with a choice of all the manufacturer MIBs available in the system.
3. Scroll through and select the desired MIB.



### 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 shows a network management tool interface. At the top, there is an 'OID' field containing '1.3.6.1.4.1.6876.1'. To its right is an 'Operation' dropdown menu with options: 'Get' (checked), 'Get Next', and 'Walk'. A 'Run' button is located to the right of the dropdown.

Below the OID field is a 'Results' section. It contains a search bar with 'Text OID', a 'Toggle Numeric/Text OID' button, and a 'Create Probe' button. A table displays 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

Below the table 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.