Polling Configuration & Reports

This chapter contains the following sections:

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- Trap Viewer, page 5-2
- Domain Trap/E-mail, page 5-3
- Traffic & Polling Reports, page 5-4
- Tree Polling & Reports, page 5-17
- Miscellaneous Polling & Reports, page 5-23
- CRM Polling, page 5-48

**Note**
You must restart the polling daemon after making configuration changes in this section. Click the *Restart* button in the *Polling Actions* field to restart polling. Click the *Stop* button to stop polling.

Event Viewer

The Event Viewer displays the events per domain, in descending order by time.

To use the Event Viewer:

**Step 1**
From the Multicast Manager menu, choose *Polling Configuration & Reports > Event Viewer.*

The Event Viewer page opens.

The Event Viewer is set up to show Latest Events (the default setting). The first field shown on the Event Viewer is the Event ID field.

You can change the information that is shown in the other fields.

**Step 2**
To specify parameters for filtering event views, choose *Report Parameters.*

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Event Type</td>
<td>Choose an event type from the drop-down list.</td>
</tr>
<tr>
<td>From Date</td>
<td>Enter or choose a start date.</td>
</tr>
<tr>
<td>To Date</td>
<td>Enter or choose an end date.</td>
</tr>
</tbody>
</table>
Trap Viewer

To view the SNMP traps generated by the monitored network devices:

**Step 1**  On the CMM menu, choose **Polling Configuration & Reports**.

**Step 2**  Click **Trap Viewer**

The Trap Viewer page appears.

The Trap Viewer page displays the traps generated by the monitored network devices. The first field shown on the Trap Viewer is always the trap ID.

**Step 3**  To modify the specification for the data shown in the other fields, choose **Report Parameters**. This will filter the trap views.

**Note**  The Source, Group and Baseline Name fields are disabled by default.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Device</td>
<td>Choose a device from the drop-down list.</td>
</tr>
<tr>
<td>Source</td>
<td>Choose a source from the drop-down list.</td>
</tr>
<tr>
<td>Group</td>
<td>Choose a group from the drop-down list.</td>
</tr>
<tr>
<td>Baseline Name</td>
<td>Enter the baseline name.</td>
</tr>
</tbody>
</table>

**Step 4**  Click **Submit**.

The Trap Viewer appears with the specified traps shown.
Adding Trap OIDs

During installation, the system issues the prompt “Do you want to add some other Trap OIDs with the default list (y/n) (default - n)”: Enter y and add the MIB details to the default list.

**Note**

If CMM is already installed, then do the following:
- Add the OID to snmptrapd.conf file located under `<CMMROOT>/mmtsys/share/snmp` folder.
- Restart the CMM Server. The traps will be listed in trap viewer.
  
  For example:
  
  ```
  traphandle 1.3.6.1.4.1.9.10.119.0.* /opt/RMSMMT/perl/bin/perl
  opt/RMSMMT/httpd_perl/perl/trap.pl
  ```

To add text information to the newly added OID, do the following:

Go to `/<CMMROOT>/cmm WEB-INF` folder.

Where, CMMROOT is `/usr/local/netman/` for Linux and `/opt/RMSMMT/` for Solaris.

Add the OID Name in baseoid.properties file.

Add the OID Description in varbind.properties file and restart the CMM server.

Domain Trap/E-mail

You can configure CMM to use domain-specific SNMP trap receivers and to send e-mail to specified addresses when SSG exceptions or threshold-related events occur.

**Note**

The settings on this screen are domain specific. The values specified on this screen override any trap receivers or e-mail settings configured on the Global Polling Configuration screen. If trap receivers and/or e-mail addresses are not specified on the Domain Trap/E-mail Configuration page, then the values from the global polling configuration are used.

To configure **Domain Trap/E-mail** Settings:

**Step 1** Choose **Polling Configuration & Reports**.
**Step 2** Click **Domain Trap/E-mail**.
The Domain Trap/ E-mail page appears.
**Step 3** To add or remove trap receivers, enter information on the Configure Domain Specific SNMP Trap Receivers section.
**Step 4** Specify the following information to add a trap receiver:

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Add Trap Receiver</td>
<td>Enter the IP address of a trap receiver, for example a video probe.</td>
</tr>
<tr>
<td>Description 1</td>
<td>Enter a description of the trap receiver.</td>
</tr>
</tbody>
</table>
Chapter 5      Polling Configuration & Reports

Traffic & Polling Reports

S,G

S,G polling helps you to monitor the S,G traffic on the routers you specify. To implement S,G polling, you must configure high and low threshold values in PPS/BPS units. CMM will alert operators when thresholds are exceeded or not met.

You can choose a source and group from the list, or you can enter them manually. If there are many sources and groups to choose from, you can use the filter option to ensure that you are choosing an S,G that actually exists on the network. The filter option displays only the sources for a selected group, or only the groups for a selected source.

Using time-based SG polling, you can configure up to 50 times at which CMM will poll high and low thresholds for each Source and Group.
Email notification is sent to users.

**Tip**
Pressing shift and control simultaneously allows you to choose more than one item from a list.

---

**S,G Threshold Report**

Using the S,G Threshold Report, you can view information about PPS/BPS rate deviation on multicast routers that are configured for polling.

To view an S,G Threshold Report:

**Step 1**
From the Multicast Manager menu, choose **Polling Configuration & Reports**.

**Step 2**
Choose **Traffic Polling & Reports**.

**Step 3**
Choose **S,G**.

**Step 4**
Choose **Report Parameters**.

---

**Field** | **Description**
---|---
From Date | Enter or choose a start date.
To Date | Enter or choose an end date.
Device | Choose a device from the drop-down list.
Source | Choose a source from the drop-down list.
Group | Choose a group from the drop-down list.
Baseline Name | Enter the baseline name.
Submit | Sets the values that you enter.

---

**Note**
You can also view the Historical Graph and Group Gone Report.

---

**Historical Graph**

Using Historical Graphs, you can view historical data in a graph format. Historical data is collected when you start to monitor the network using a specific polling configuration.

To view a historical graph for S,G polling:

**Step 1**
From the Multicast Manager menu, choose **Polling Configuration & Reports**.

**Step 2**
Choose **Traffic Polling & Reports**.

**Step 3**
Choose **S,G**.

**Step 4**
Choose **Historical Graph**.

**Step 5**
In the Units field, choose either PPS or BPS from the drop-down menu.
Step 6 Click the **Get Report(s)** button to refresh the display of multicast streams being monitored.

Step 7 In the **From Date** field, choose a date from the calendar.

Step 8 In the **To Date** field, choose a date from the calendar.

Step 9 Choose up to three multicast streams from the table.

Step 10 Click the **Show Report** button to chart a graph.

Individual streams are indicated with a unique color.

---

**Group Gone Report**

Source and group make up a multicast stream monitor on a device. If a multicast stream that is being monitored on a device disappears from that device, then CMM generates a report called a Group Gone Report. The Group Gone Report lists all events pertaining to the stream.

To view a Group Gone report:

Step 1 From the Multicast Manager menu, choose **Polling Configuration & Reports**.

Step 2 Choose **Traffic Polling & Reports**.

Step 3 Choose **S,G**.

Step 4 Choose **Group Gone Report**.

Step 5 Click **Report Parameters** and set the parameters for the report.

Step 6 Click the **Submit** button.

---

**Config S,G Polling**

**By S,G**

Step 1 From the Multicast Manager menu, choose **Polling Configuration & Reports**.

Step 2 Choose **Traffic Polling & Reports**.

Step 3 Choose **SG**.

Step 4 Choose **Config SG Polling**.

Step 5 Click the **Add** button.

Step 6 Choose **By SG**.

**Note** You can also choose By Import to import the SG configuration from a CSV file.

Step 7 On the Configure SG Polling page, specify the following settings:
Chapter 5  Polling Configuration & Reports

Traffic & Polling Reports

By Device

You can choose a particular router using the Device SG Polling Configuration page, and you can configure which sources and routers to monitor on the specific device.

To configure SG polling for a particular device:

Step 1  From the Multicast Manager menu, choose Polling Configuration & Reports.
Step 2  Choose Traffic Polling & Reports.
Step 3  Choose S,G.
Step 4  Choose Config SG Polling.
Step 5  Click the Add button.
Step 6  Choose By Device.

On the SG Polling By Device configuration page, set the parameters for polling:

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Source</td>
<td>Choose a source from the drop-down list.</td>
</tr>
<tr>
<td>Group</td>
<td>Choose a group from the drop-down list.</td>
</tr>
<tr>
<td>Reset SG List</td>
<td>Refreshes the source and group lists.</td>
</tr>
<tr>
<td>Select Router</td>
<td>Choose a router/routers to configure SG polling.</td>
</tr>
<tr>
<td>Units</td>
<td>Choose either packets per sampling period or bytes per sampling period.</td>
</tr>
<tr>
<td>High Threshold</td>
<td>Enter the high threshold value. If the value is exceeded, Cisco Multicast Manager generates a report.</td>
</tr>
<tr>
<td>Low Threshold</td>
<td>Enter the low threshold value. If the value exceeds, CMM generates a report.</td>
</tr>
</tbody>
</table>
To configure SG polling by specifying a range of SG addresses:

**Step 1** From the Multicast Manager menu, choose **Polling Configuration & Reports**.

**Step 2** Choose **Traffic Polling & Reports**.

**Step 3** Choose **S,G**.

**Step 4** Choose **Config SG Polling**.

**Step 5** Choose **By SG Range** from the **Add** drop-down list.

The By SG Range Add/Modify page appears.

**Step 6** Set the following parameters on the SG Range Add/Modify page:

<table>
<thead>
<tr>
<th>Fields and Buttons</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group Filter Regexp</td>
<td>Enter any part of the multicast address. Only those that match appear.</td>
</tr>
<tr>
<td>Refresh</td>
<td>Choose <strong>Refresh</strong> to update the source and group displayed for the entered group filter regular expression and the selected router.</td>
</tr>
<tr>
<td>Select Routers</td>
<td>Choose the router name.</td>
</tr>
<tr>
<td>Units</td>
<td>Choose either packets per sampling period (pps) or bits per sampling period (bps).</td>
</tr>
<tr>
<td>High Threshold</td>
<td>Enter the high threshold value. If the value is exceeded, Cisco Multicast Manager generates a report.</td>
</tr>
<tr>
<td>Low Threshold</td>
<td>Enter the low threshold value. If that if the value is exceeded, Cisco Multicast Manager generates a report.</td>
</tr>
<tr>
<td>Source Range</td>
<td>Enter an IP address range for the source. You can specify the range in the third octet or the fourth octet of the IP address, or without a range; for example, 126.0.0-2.10-15, 126.0.10.1.10-15, or 126.0.1.11.</td>
</tr>
<tr>
<td>Group Range</td>
<td>Enter an IP address for the group range to monitor. You can specify the range in the third octet or the fourth octet of the IP address, or without a range; for example, 224.0.10-11.1-2, 224.0.1-2, or 224.0.1.40.</td>
</tr>
<tr>
<td>Reset</td>
<td>Clears the entries and refreshes the source and group lists.</td>
</tr>
<tr>
<td>Select Routers</td>
<td>Choose routers to add to the polling configuration</td>
</tr>
</tbody>
</table>
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Step 7  
Click the **Save** button to save the configuration.

---

**Note**  
CMM while configuring SG polling, using a range of SG addresses, checks if SG is in the device or not. If the SG is not present in the device, then the SG is marked with * to differentiate it from other SGs in the SG configuration page.

By VRF

To configure SG polling by VRF:

**Step 1**  
From the Multicast Manager menu, choose **Polling Configuration & Reports.**

**Step 2**  
Choose **Traffic Polling & Reports.**

**Step 3**  
Choose **S,G.**

**Step 4**  
Choose **Config SG Polling.**

**Step 5**  
Choose **By VRF** from the **Add** drop-down list.  
The VRF Add/Modify page appears.

**Step 6**  
Set the following parameters on the VRF Add/Modify page:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Units</td>
<td>Choose either packets per sampling period (PPS) or bits per sampling period (bps).</td>
</tr>
<tr>
<td>High Threshold</td>
<td>Enter the high threshold that, if exceeded, generates a report.</td>
</tr>
<tr>
<td>Low Threshold</td>
<td>Enter the low threshold that, if exceeded, generates a report.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Select VRF</td>
<td>Choose the VRF from the list of VRFs in the discovered devices.</td>
</tr>
<tr>
<td>Select Device</td>
<td>Choose the device populated from the selected VRF.</td>
</tr>
<tr>
<td>Source</td>
<td>Choose the source from the drop-down list.</td>
</tr>
<tr>
<td>Group</td>
<td>Choose the group from the drop-down list.</td>
</tr>
<tr>
<td>Units</td>
<td>Choose either packets per sampling period (PPS) or bytes per sampling period (bps).</td>
</tr>
<tr>
<td>High Threshold</td>
<td>Enter the high threshold that, if exceeded, generates a report.</td>
</tr>
<tr>
<td>Low Threshold</td>
<td>Enter the low threshold that, if exceeded, generates a report.</td>
</tr>
</tbody>
</table>
By Import

To configure SG polling by importing a file:

---

**Step 1**  From the Multicast Manager menu, choose **Polling Configuration & Reports**.
**Step 2**  Choose **Traffic Polling & Reports**.
**Step 3**  Choose **S,G**.
**Step 4**  Choose **Config SG Polling**.
**Step 5**  Click the **Add** button.
**Step 6**  Choose **By Import**.
**Step 7**  Click the **Browse** button to upload the file.
**Step 8**  Choose **Merge** to unify an existing configuration with the new configuration or choose **Replace** to overwrite the existing configuration.
**Step 9**  Click **Upload**.

---

**Import Format:**

SG,<Source>,<Group>,<Router>,<High Threshold value>,<Low Threshold value>,<RO Community String>,<BPS/PPS>,<sourceExist/notExist>,<groupExist/notExist>

Where bps=1; pps=0; sourceExist, groupExist=1; notExist=0.

**Example:**

SG,126.0.1.12,239.232.0.0,126.1.3.14,6,3,public,0,0,1

---

**Config Time-Based SG Polling**

To configure Time-Based SG Polling:

---

**Step 1**  On the SG Polling page, choose **Config Time-Based SG Polling**.
**Step 2**  On the SG Time based Configurations page, click the **Add** button and from the drop-down list, choose **By SG Time**.

**Note**  You can also choose **By Import** to import a CSV file with Time-Based SG polling parameters.

**Step 3**  Set the following parameters on the SG Time Based Configurations page:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Source</td>
<td>Enter or choose the IP address of the source to monitor.</td>
</tr>
<tr>
<td>Group</td>
<td>Enter or choose the IP address of the group to monitor.</td>
</tr>
<tr>
<td>Reset SG List</td>
<td>Clears any entries and refreshes the source and group lists.</td>
</tr>
<tr>
<td>Select Routers</td>
<td>Choose routers to add to the polling configuration</td>
</tr>
</tbody>
</table>
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Step 4  Click the **Save** button.

---

**Note**

The threshold polling interval should be set in the Global Polling Configuration Page.

---

**By Import**

To configure Time-based SG polling by importing a file:

Step 1  From the Multicast Manager menu, choose **Polling Configuration & Reports**.

Step 2  Choose **Traffic Polling & Reports**.

Step 3  Choose **SG**.

Step 4  Choose **Config Timebased SG Polling**.

Step 5  Click the **Add** button.

Step 6  Choose **By Import**.

Step 7  Click the **Browse** button to upload the file.

Step 8  Choose **Merge** to unify an existing configuration with the new configuration or choose **Replace** to overwrite the existing configuration.

Step 9  Click **Upload**.

---

**Import Format:**

```
SGTIME:<Source>,<Group>,<Router>,<Start Hr>,<Start Min>,<Stop Hr>,<Stop Min>,<Day>,<High Threshold value>,<Low Threshold value>,<BPS/PPS>
```

Where bps=1; pps=0;

Day: Sunday=0; Monday=1; Tuesday=2; Wednesday=3; Thursday=4; Friday=5; Saturday=6;

**Example:**

```
SGTIME:126.0.1.13,224.0.1.39,172.20.111.198,21,0,23,0,0,2,1,0
```
L2 Polling

You can add Layer 2 (L2) switches to Cisco Multicast Manager individually, or you can import a list. Cisco Multicast Manager can monitor the total number of multicast packets inbound and/or outbound from any Layer 2 port.

L2 polling monitors multicast traffic on Layer 2 switches with regard to port and direction. You can also configure up to 50 different time-of-day thresholds for each port. CMM generates events for high and low threshold violations.

To view an L2 PPS Threshold Report:

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 1</td>
<td>From the Multicast Manager menu, choose <strong>Polling Configuration &amp; Reports</strong>.</td>
</tr>
<tr>
<td>Step 2</td>
<td>Choose <strong>Traffic Polling &amp; Reports</strong>.</td>
</tr>
<tr>
<td>Step 3</td>
<td>Choose <strong>L2</strong>.</td>
</tr>
<tr>
<td>Step 4</td>
<td>Choose <strong>Report Parameters</strong>.</td>
</tr>
<tr>
<td>Step 5</td>
<td>On the L2 Polling Report Parameters page, set the parameters for the report:</td>
</tr>
<tr>
<td>Step 6</td>
<td>On the Configure L2 Polling page, specify the following settings:</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>From Date</td>
<td>Enter or choose a start date.</td>
</tr>
<tr>
<td>To Date</td>
<td>Enter or choose an end date.</td>
</tr>
<tr>
<td>Device</td>
<td>Choose a device from the drop-down list.</td>
</tr>
<tr>
<td>Source</td>
<td>Choose a source from the drop-down list.</td>
</tr>
<tr>
<td>Group</td>
<td>Choose a group from the drop-down list.</td>
</tr>
<tr>
<td>Baseline Name</td>
<td>Enter the baseline name.</td>
</tr>
<tr>
<td>Submit</td>
<td>Sets the values that you enter.</td>
</tr>
</tbody>
</table>

Historical Graph

Using historical graphs, you can view historical data in a graph format. Historical data is collected when you start to monitor the network using a specific polling configuration.

To view a historical graph for L2 polling:

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 1</td>
<td>From the Multicast Manager menu, choose <strong>Polling Configuration &amp; Reports</strong>.</td>
</tr>
<tr>
<td>Step 2</td>
<td>Choose <strong>Traffic Polling &amp; Reports</strong>.</td>
</tr>
<tr>
<td>Step 3</td>
<td>Choose <strong>L2</strong>.</td>
</tr>
<tr>
<td>Step 4</td>
<td>Choose <strong>Historical Graph</strong>.</td>
</tr>
<tr>
<td>Step 5</td>
<td>In the <strong>From Date</strong> field, choose a date from the calendar.</td>
</tr>
<tr>
<td>Step 6</td>
<td>In the <strong>To Date</strong> field, choose a date from the calendar.</td>
</tr>
<tr>
<td>Step 7</td>
<td>Choose one or more multicast streams from the table.</td>
</tr>
</tbody>
</table>
Step 8  Click the **Show Report** button to chart a graph.

Individual streams are indicated with a unique color.

---

## Configuring L2 Polling

To configure Layer 2 switch polling:

### Step 1
From the Multicast Manager menu, choose **Polling Configuration & Reports**.

### Step 2
Choose **Traffic Polling & Reports**.

### Step 3
Choose **L2**.

### Step 4
Choose **Config L2 Polling**.

### Step 5
Click the **Add** button.

### Step 6
Choose **By L2**.

**Note**
You can also choose **By Import** to import the L2 configuration from a CSV file.

### Step 7
On the L2 Polling Configuration page, set the parameters for the report:

<table>
<thead>
<tr>
<th>Fields and Buttons</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Select Switch to Monitor</td>
<td>Choose the name or IP address of the switch you want to monitor.</td>
</tr>
<tr>
<td>Select Port to Monitor</td>
<td>Choose the port to monitor. Ports appear in the following format: ifIndex:module/port.</td>
</tr>
<tr>
<td>Direction</td>
<td>Choose either inbound packets received at this port, or outbound packets sent from this port.</td>
</tr>
<tr>
<td>High PPS</td>
<td>Enter the high threshold that, if exceeded, generates a report.</td>
</tr>
<tr>
<td>Low PPS</td>
<td>Enter the low threshold that, if exceeded, generates a report.</td>
</tr>
</tbody>
</table>

### By Import

To configure L2 polling by importing a file:

### Step 1
From the Multicast Manager menu, choose **Polling Configuration & Reports**.

### Step 2
Choose **Traffic Polling & Reports**.

### Step 3
Choose **L2**.

### Step 4
Choose **Config L2 Polling**.

### Step 5
Click the **Add** button.
Step 6  Choose By Import.
Step 7  Click the Browse button to upload the file.
Step 8  Choose Merge to unify an existing configuration with the new configuration or choose Replace to overwrite the existing configuration.
Step 9  Click Upload.

Import Format:

<L2>,<DeviceIP>,<IfIndex>,<High Threshold>,<Low Threshold>,<RO Community String>

Example:

L2,126.2.129.23,1.3.6.1.2.1.31.1.1.1.2.130,4555,2,public
Adding Time-Based Threshold Polling

After you have set up an L2 polling configuration for a switch, you can add time-based threshold polling to the configuration.

To add time-based threshold polling:

Step 1
From the Polling and Reports Configuration menu, choose L2.

Step 2
Click Config L2 Polling.

Step 3
Add or edit a Layer 3 polling configuration.

Step 4
On the L2 Configurations page, click the Configure link in the Time-Based Threshold column. The Time-based Thresholds page appears.

Step 5
Enter time-based thresholds:

a. Enter a high and a low threshold value.

b. For each high and low value, use the drop-down lists to specify a start and end time for the threshold polling.

c. Click the Set Threshold button.

Interface Polling

Cisco Multicast Manager can poll any interface on a router and calculate the percentage of bandwidth used by multicast traffic. You can then configure a high and low threshold, and if these are exceeded, a report is generated. This information is also kept for historical purposes.

Multicast Bandwidth Report

Layer 3 devices on interface the user can set threshold for aggregate threshold traffic and any breach of the thresholds generate an event. This report is a listing of those events.

To configure multicast bandwidth interface polling:

Step 1
From the Multicast Manager menu, choose Polling Configuration & Reports.

Step 2
Choose Traffic Polling & Reports.

Step 3
Choose Interface.

The Multicast Bandwidth Report page appears.

Note
If the Multicast Bandwidth page is not active, from the Interface pages, choose Multicast Bandwidth Report.

Step 4
Click Report Parameters.

Step 5
Click the calendar link (...) for the From Date and choose a From Date.

Step 6
Click the calendar link (...) for the To Date and choose a To Date.

Step 7
From the drop-down list in the Device field, choose a device.
Step 8 Click the Submit button.

**Historical Graph**

Using historical graphs, you can view historical data in a graph format. Historical data is collected when you start to monitor the network using a specific polling configuration.

To view a historical graph for interface polling:

1. From the Multicast Manager menu, choose Polling Configuration & Reports.
2. Choose Traffic Polling & Reports.
3. Choose Interface.
4. Choose Historical Graph.
5. In the From Date field, choose a date from the calendar.
6. In the To Date field, choose a date from the calendar.
7. Choose one or more multicast streams from the table.
8. Click the Show Report button to charts a graph.

Individual streams are indicated with a unique color.

**Configuring Interface Polling**

**By Interface**

1. From the Multicast Manager menu, choose Polling Configuration & Reports.
2. Choose Traffic Polling & Reports.
3. Choose Interface.
4. Choose Config Interface Polling.
5. Click the Add button.
6. Choose By Interface.

**Note** You can also choose By Import to import the Interface configuration from a CSV file.

7. Choose the device to monitor.
8. Choose at least one interface.

A separate list of devices appears, displaying a list of the chosen interfaces.

9. Assign an inbound and outbound status by checking the box for each device.

   A field appears where you can assign values for Multicast Percentage Hi/Lo.

   Enter millisecond percentage values as required. For example, to specify a millisecond percentage of .001, enter 100.
Step 10  Click Save.

By Import

Step 1  From the Multicast Manager menu, choose Polling Configuration & Reports.
Step 2  Choose Traffic Polling & Reports.
Step 3  Choose Interface.
Step 4  Choose Config Interface Polling.
Step 5  Click Add.
Step 6  Choose By Import.
Step 7  Click the Browse button to upload the file.
Step 8  Choose Merge to unify an existing configuration with the new configuration or choose Replace to overwrite the existing configuration.
Step 9  Click Upload.

Import Format:
MPERCENT:<routerIp>,<ifindex>,<intDesc>,<direction>,<bandwidth * 100000>,<hThr>,<lThr>

Where direction is Inbound=0;Outbound=1.
Example:
MPERCENT:172.20.111.198,1,Serial1/0,0,154400000000,4,2

Tree Polling & Reports

The CMM tree polling feature notifies you of events that affect multicast trees, such as addition or removal of a router from a tree.

During tree polling, the most recent tree created by the polling daemon is compared with the baseline tree created in the polling cycle. If the tree changes or reverts to its former state, CMM notifies the user.

If you configure tree polling with the Compare Baseline option activated, then dynamic tree baseline functionality is used. With dynamic tree baseline functionality, if the multicast tree changes, then the changed tree is then used as the baseline for further tree polling. Starting with the next polling cycle, the polling daemon compares the most recent tree with the updated baseline (the last changed tree).

To enable dynamic tree polling, check the Compare Baseline check box on the Tree Polling Configuration page.

Depending on whether you configure dynamic baseline functionality, CMM will enable:

- **Normal Tree**—The tree changes and reverts, because it is always compared with the configured baseline.
- **Latest Tree Baseline**—If latest tree baseline polling is configured, the configured baseline is updated when the tree is changed. Therefore, only tree change notifications are enabled.

This section describes:
Setting Up Tree Polling

Before you can configure tree polling, you must create a trace baseline from the Multicast Trace page.

To set up tree polling:

**Step 1** Complete these steps to create a trace baseline:

a. From the Main Menu, choose **Discovery & Trace**.

b. Choose **Multicast Trace**.

c. On the Multicast Trace page, enter the parameters for the trace.

d. Click the **Trace** button.

   The Trace Data page appears with the trace entries and a trace topology diagram.

e. Scroll down to the Input file field.

f. If you want to change the name of the trace baseline file, modify the filename as shown in the Input file field.

g. Click the **Save As** button to save the trace baseline.

**Step 2** Go to the following section, **Configuring Tree Polling, page 5-18**, for instructions on how to choose the trace baseline file and configure tree polling.

Configuring Tree Polling

To configure tree polling:

**Step 1** From the Multicast Manager menu, choose **Polling Configuration & Reports**.

**Step 2** Choose **Tree Polling & Reports**.

**Step 3** Choose **Tree**.

**Step 4** Choose **Config Tree Polling**.

   The Tree Configurations page appears. Initially the list of tree configurations is empty.

**Step 5** Click the **Add** button.

   The Tree Polling Configuration page appears.

**Step 6** Choose a saved trace from the Saved Trees drop-down list.

**Step 7** Click **Save**.

   The saved trace appears in the Tree Configurations list.

**Step 8** Click the **Configure** link next to the saved tree that you want to use for tree reporting.

   A page appears for configuring the tree report parameters.

**Step 9** In the Select Routers on Tree list, choose the routers to include in the tree.
**Step 10**  In the Specify Max Delta Between PPS Samples field, enter the maximum change between PPS samples.

**Step 11**  Click the **Save** button.

**Step 12**  If you want to view a baseline trace that has been configured, click on the baseline file name on the Tree Configurations page.

---

**Editing a Tree Report Configuration**

To edit a Tree Polling configuration:

**Step 1**  On the Tree Configurations page, check the check box next to the configuration to edit, and then click the **Edit** button.

The Tree Polling Configuration page appears.

**Step 2**  Choose a Saved Tree from the list in the Select Trace field.

**Step 3**  Change the Compare Baseline setting as required.

**Step 4**  Click the **Save** button.
Tree Reports

Viewing a Tree Report

To view tree reports:

1. From the Multicast Manager menu, choose Polling Configuration & Reports.
2. Choose Tree Polling & Reports.
3. Choose Tree.
5. On the Tree Report Configuration page, set the parameters for the report:

<table>
<thead>
<tr>
<th>Fields and Buttons</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>From Date</td>
<td>Enter the start date of the Tree Report. Click the icon next to the data field to choose a date from a calendar.</td>
</tr>
<tr>
<td>To Date</td>
<td>Enter the end date of the Tree Report. Click the icon next to the data field to choose a date from a calendar.</td>
</tr>
<tr>
<td>Device</td>
<td>Choose a device from the drop-down list.</td>
</tr>
<tr>
<td>Source</td>
<td>Choose a source from the drop-down list.</td>
</tr>
<tr>
<td>Group</td>
<td>Choose a group from the drop-down list.</td>
</tr>
<tr>
<td>Baseline</td>
<td>Enter the baseline name.</td>
</tr>
</tbody>
</table>

6. Click the Submit button.

Viewing Historical Reports

Using Historical Graphs, you can view historical data in a graph format. Historical data is collected when you start to monitor the network using a specific polling configuration.

To view a historical graph for tree polling:

1. From the Multicast Manager menu, choose Polling Configuration & Reports.
2. Choose Traffic Polling & Reports.
3. Choose Tree Polling & Reports.
4. Choose Historical Graph.
5. In the From Date field, choose a date from the calendar.
6. In the To Date field, choose a date from the calendar.
7. Choose one or more items from the table.
8. Click the Show Report button to chart a graph.
Individual streams indicated will be color coded with a unique color.

**Viewing an S,G Delta Report**

To view the S,G Delta Report:

1. From the Multicast Manager menu, choose **Polling Configuration & Reports**.
2. Choose **Tree Polling & Reports**.
3. Choose **Tree**.
4. Click the **Configure** link next to the saved tree that you want to use for S,G delta reporting.
   
   A page appears for configuring the S,G delta report parameters. It allows you to specify the routers used for the report.

5. Choose the routers that you want to monitor for an S,G delta.
6. In the **Specify Max Delta Between PPS Samples** field, enter the maximum change between PPS samples.
   
   If the PPS on any router deviates from the others with respect to the Max Delta value, an SNMP trap is generated.

7. Click the **Save** button.

**Comparing Tree Baselines**

1. From the Multicast Manager menu, choose **Polling Configuration & Reports**.
2. Choose **Tree Polling & Reports**.
3. Choose **Tree**.
4. Choose **Compare Baseline**.
5. From the drop-down list, choose a saved baseline.
6. If you want to compare any of the saved Previous Baseline, select the baseline.
7. Click **Compare Baselines**.

**Viewing a Tree Changed Report from the Dashboard**

To view a Tree Changed Report from the Dashboard:

1. From the Dashboard, click the **Tree Events** tab.
   
   The Tree Events page appears.

2. Locate a Tree Changed event and click on the **Changed** link in the event entry.
A Tree Trace Data page for the Tree Changed events appears. Figure 5-1 shows a sample Trace Data page.

**Figure 5-1 Trace Data Page for a Tree Changed Event**

On the **Trace Data** page, the tree report for the event shows events indicating that a router has been removed from the tree in red, and routers that have been added in green.

In the tree topology diagram, routers removed from the tree are outlined in red, and routers that have been added are outlined in green.

---

**SG Polling By Branch**

SG polling by branch helps you to monitor a specific tree path by specifying a particular SG flow trace branch to poll.

To configure branch polling for a particular SG:

**Step 1** From the Multicast Manager menu, choose **Polling Configuration & Reports**.

**Step 2** Choose **Tree Polling & Reports**.

**Step 3** Choose **SG by Branch**.

**Step 4** Click **Add**.

**Step 5** On the **SG by Branch** Polling Configuration page, specify the following information:
Chapter 5  Polling Configuration & Reports

Miscellaneous Polling & Reports

**Step 6**  Click the **Save** button.

A trace is generated and appears on the **SG by Branch** Polling Configuration page.

**Step 7**  To view the trace table for a trace, click on a baseline link.

### Fields & Description

<table>
<thead>
<tr>
<th>Fields</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Source</td>
<td>Enter the source. You may either enter the source address or choose it from the drop-down menu.</td>
</tr>
<tr>
<td>Group</td>
<td>Enter the group. You may either enter the group address or choose it from the drop-down menu.</td>
</tr>
<tr>
<td>Service Type</td>
<td>Choose the service type from the drop-down list.</td>
</tr>
<tr>
<td>FHR</td>
<td>Choose the start destination for the first hop router.</td>
</tr>
<tr>
<td>LHR</td>
<td>Choose the end destination for the last hop router.</td>
</tr>
<tr>
<td>Select Router</td>
<td>Choose a single router or choose multiple routers by pressing the <strong>Shift</strong> key and clicking on the desired routers.</td>
</tr>
<tr>
<td>Units</td>
<td>Choose either packets per sampling period (pps) or bits per sampling period (bps).</td>
</tr>
<tr>
<td>High Threshold</td>
<td>Enter the high threshold value. If the value is exceeded, Cisco Multicast Manager generates a report.</td>
</tr>
<tr>
<td>Low Threshold</td>
<td>Enter the low threshold value. If that if the value is exceeded, Cisco Multicast Manager generates a report.</td>
</tr>
</tbody>
</table>

### RP

Using the RP Polling Configuration page, you can enable Cisco Multicast Manager to:

- Monitor and report all leaves and joins.
- Set a threshold on the number of groups that can join an RP. If this is exceeded, a trap is sent.
- Find out if a specific RP is available.
- Create a list of all sources and groups to be excluded from polling and send a trap if any rogue sources or groups appear on the RP.

During RP polling, the CMM poller queries the SG information (list of SGs) from the given RP. The queried information is stored in the CMM database. This data from the database is compared with the details obtained from the subsequent polling interval.
RP availability is configured from the Global Polling Configuration page. A trap is sent if an RP becomes unavailable, and a report is generated within the RP Polling Report page.

**RP Report**

To configure the RP Report:

**Step 1** From the Multicast Manager menu, choose **Polling Configuration & Reports**.
**Step 2** Choose **Miscellaneous Polling & Reports**.
**Step 3** Choose **RP**.
The RP Report page opens.
**Step 4** Choose **Report Parameters**.
**Step 5** On the Report Parameters page, specify the following settings:

<table>
<thead>
<tr>
<th>Fields and Buttons</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>From Date</td>
<td>Enter the start date of the RP Report. Click the icon next to the data field to choose a date from a calendar.</td>
</tr>
<tr>
<td>To Date</td>
<td>Enter the end date of the RP Report. Click the icon next to the data field to choose a date from a calendar.</td>
</tr>
<tr>
<td>Device</td>
<td>Choose a device from the drop-down list.</td>
</tr>
<tr>
<td>Source</td>
<td>Choose a source from the drop-down list.</td>
</tr>
<tr>
<td>Group</td>
<td>Choose a group from the drop-down list.</td>
</tr>
<tr>
<td>Baseline Name</td>
<td>Enter the baseline name.</td>
</tr>
<tr>
<td>Submit</td>
<td>Adds the selected RP for monitoring.</td>
</tr>
</tbody>
</table>

**RP Group Threshold Report**

To view the RP Group Threshold Report:

**Step 1** From the Multicast Manager menu, choose **Polling Configuration & Reports**.
**Step 2** Choose **Miscellaneous Polling & Reports**.
**Step 3** Choose **RP**.
**Step 4** Choose **RP Group Threshold Report**.
**Step 5** Choose **Report Parameters**.
Step 6 On the RP Group Threshold Report page specify the following parameters:

<table>
<thead>
<tr>
<th>Fields and Buttons</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>From Date</td>
<td>Enter the start date of the RP Report. Click the icon next to the data field to choose a date from a calendar.</td>
</tr>
<tr>
<td>To Date</td>
<td>Enter the end date of the RP Report. Click the icon next to the data field to choose a date from a calendar.</td>
</tr>
<tr>
<td>Device</td>
<td>Choose a device from the drop-down list.</td>
</tr>
<tr>
<td>Source</td>
<td>Choose a source from the drop-down list.</td>
</tr>
<tr>
<td>Group</td>
<td>Choose a group from the drop-down list.</td>
</tr>
<tr>
<td>Baseline</td>
<td>Enter the baseline name.</td>
</tr>
<tr>
<td>Submit</td>
<td>Adds the selected RP for monitoring.</td>
</tr>
</tbody>
</table>

SSG Report

To view the SSG Report:

Step 1 From the Multicast Manager menu, choose Polling Configuration & Reports.
Step 2 Choose Miscellaneous Polling & Reports.
Step 3 Choose RP.
Step 4 Choose SSG Report.
Step 5 Choose Report Parameters.
Step 6  On the SSG Report Parameters page, specify the following settings:

<table>
<thead>
<tr>
<th>Fields and Buttons</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>From Date</td>
<td>Enter the start date of the RP Report. Click the icon next to the data field to choose a date from a calendar.</td>
</tr>
<tr>
<td>To Date</td>
<td>Enter the end date of the RP Report. Click the icon next to the data field to choose a date from a calendar.</td>
</tr>
<tr>
<td>Device</td>
<td>Choose a device from the drop-down list.</td>
</tr>
<tr>
<td>Source</td>
<td>Choose a source from the drop-down list.</td>
</tr>
<tr>
<td>Group</td>
<td>Choose a group from the drop-down list.</td>
</tr>
<tr>
<td>Baseline</td>
<td>Enter the baseline name.</td>
</tr>
<tr>
<td>Submit</td>
<td>Adds the selected RP for monitoring.</td>
</tr>
</tbody>
</table>

Configuring RP Polling

To configure RP Polling:

Step 1  From the Multicast Manager menu, choose Polling Configuration & Reports.  
Step 2  Choose Miscellaneous Polling & Reports.  
Step 3  Choose RP.  
Step 4  Choose Config RP Polling.  
Step 5  Click the Add button.  
Step 6  Choose By RP.

Note  You can also choose By Import to import the RP configuration from a CSV file.
Step 7
On the Configure RP Polling page, specify the following settings:

<table>
<thead>
<tr>
<th>Fields and Buttons</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Select RP</td>
<td>Choose an RP to add to the RP Exclude list. Events from RPs on the RP Exclude list are ignored.</td>
</tr>
<tr>
<td>Group Limit</td>
<td>Set the parameter for the group limit. The default is -1.</td>
</tr>
<tr>
<td>Save</td>
<td>Click Save to retain the values set in the previous fields.</td>
</tr>
<tr>
<td>Enable RP Group Add Delete Traps</td>
<td>Check the check box to monitor all leaves and joins, which are then reported on the RP Polling Report page.</td>
</tr>
<tr>
<td>Single S,G Monitoring</td>
<td>Enter the group IP address. If more than one source becomes active for this group, a report is generated.</td>
</tr>
<tr>
<td>Save</td>
<td>Click Save to retain the values set in the previous fields.</td>
</tr>
</tbody>
</table>

By Import

To configure RP polling by importing a file:

Step 1 From the Multicast Manager menu, choose Polling Configuration & Reports.
Step 2 Choose Miscellaneous Polling & Reports.
Step 3 Choose RP.
Step 4 Choose Config RP Polling.
Step 5 Click the Add button.
Step 6 Choose By Import.
Step 7 Click the Browse button to upload the file.
Step 8 Choose Merge to unify an existing configuration with the new configuration or choose Replace to overwrite the existing configuration.
Step 9 Click Upload.

Import Format:
RP:<RpIp>,<Ro Community String>
RPGLIMIT:<RpIp>,<RpLimit>
RPACCEPT:<RpIp>,<Source>,<SourceMask>,<Group>,<GroupMask>

Example:
RP:172.20.111.198,public
RPGLIMIT:172.20.111.198,222
RPACCEPT:172.20.111.198,0.0.0.0,255.255.255.255,239.1.1.2,0.0.0.0
Chapter 5  Polling Configuration & Reports

RP Global Configuration

To configure RP Global Configuration:

**Step 1**  From the Multicast Manager menu, choose **Polling Configuration & Reports**.

**Step 2**  Choose **Miscellaneous Polling & Reports**.

**Step 3**  Choose **RP**.

**Step 4**  Choose **RP Global Configuration**

The RP Global Configuration page appears.

**Step 5**  On the RP Global Configuration page, specify the following settings:

<table>
<thead>
<tr>
<th>Fields and Buttons</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enable RP Add/Delete Traps</td>
<td>To enable RP Add and RP Delete Traps, check the enable RP Add/Delete Traps check box. To disable RP Add and RP Delete Traps, leave the check box unchecked.</td>
</tr>
<tr>
<td>Single SG Monitoring</td>
<td>To add the IP address of a single S, G for monitoring, enter the IP address of the S, G to monitor and then click the Add button to add it to the list of S, G to monitor.</td>
</tr>
<tr>
<td>Save</td>
<td>Click the Save button to save the RP global configuration.</td>
</tr>
</tbody>
</table>

RPF

Using Cisco Multicast Manager, you can monitor Reverse Path Forwarding (RPF) failures for a particular source and group on any selected router. During RPF polling, the poller performs an RPF check and reports RPF check failures.

If any monitored source or group begin to experience RPF failures that rise above the delta, then SNMP traps can be sent, and a report generated. You can view the report on the RPF Polling Report page.

RPF Polling Report

To view the RPF Polling Report:

**Step 1**  From the Multicast Manager menu, choose **Polling Configuration & Reports**.

**Step 2**  Choose **Miscellaneous Polling & Reports**.

**Step 3**  Choose **RPF**.
Step 4 On RPF Polling Report Parameters page, specify the following settings:

<table>
<thead>
<tr>
<th>Fields and Buttons</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>From Date</td>
<td>Enter the start date of the RPF Report. Click the icon next to the data field to choose a date from a calendar.</td>
</tr>
<tr>
<td>To Date</td>
<td>Enter the end date of the RPF Report. Click the icon next to the data field to choose a date from a calendar.</td>
</tr>
<tr>
<td>Device</td>
<td>Choose a device from the drop-down list.</td>
</tr>
<tr>
<td>Source</td>
<td>Choose a source from the drop-down list.</td>
</tr>
<tr>
<td>Group</td>
<td>Choose a group from the drop-down list.</td>
</tr>
<tr>
<td>Baseline</td>
<td>Enter the baseline name.</td>
</tr>
<tr>
<td>Submit</td>
<td>Add the selected RPF for monitoring.</td>
</tr>
</tbody>
</table>

**Configuring RPF Polling**

To configure RPF polling:

**Step 1** From the Multicast Manager menu, choose *Polling Configuration & Reports*.

**Step 2** Choose *Miscellaneous Polling & Reports*.

**Step 3** Choose *RPF*.

**Step 4** Choose *Config RPF Polling*.

**Step 5** Click the *Add* button.

**Step 6** Choose *By RPF*.

**Note** You can also choose *By Import* to import the RPF configuration from a CSV file.
Step 7 On the RPF Polling Configuration page, specify the following settings:

<table>
<thead>
<tr>
<th>Fields and Buttons</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Source</td>
<td>Choose a source from the drop-down list.</td>
</tr>
<tr>
<td>Filter Groups</td>
<td>Filters the output to contain only the relevant groups.</td>
</tr>
<tr>
<td>Group</td>
<td>Choose a group from the drop-down list.</td>
</tr>
<tr>
<td>Filter Sources</td>
<td>Filters the output to contain only the relevant sources.</td>
</tr>
<tr>
<td>Reset SG List</td>
<td>Clears the entries and refreshes the source and group lists.</td>
</tr>
<tr>
<td>Router</td>
<td>Enter the router name.</td>
</tr>
<tr>
<td>Delta</td>
<td>Number of RPF failures per sampling period that triggers a report.</td>
</tr>
<tr>
<td>Save</td>
<td>Applies the configuration and saves the changes.</td>
</tr>
</tbody>
</table>

By Import

To configure RPF polling by importing a file:

Step 1 From the Multicast Manager menu, choose Polling Configuration & Reports.
Step 2 Choose Miscellaneous Polling & Reports.
Step 3 Choose RPF.
Step 4 Choose Config RPF Polling.
Step 5 Click the Add button.
Step 6 Choose By Import.
Step 7 Click the Browse button to upload the file.
Step 8 Choose Merge to unify an existing configuration with the new configuration or choose Replace to overwrite the existing configuration.
Step 9 Click Upload.

Import Format:
RPFMON:<source>,<group>,<routerIp>,<delta>

Example:
RPFMON:126.0.1.13,224.0.1.39,126.1.3.14,8
Selective Source Monitoring

A source and group can be set up to monitor for a particular time and day. During selective source monitoring, the CMM poller monitors specified SG and generates events accordingly.

Note
The time interval configured should not be overlapping for the same source and group.

Selective Source Monitoring Report

To view the Selective Source Monitoring Report:

Step 1 From the Multicast Manager menu, choose Polling Configuration & Reports.
Step 2 Choose Miscellaneous Polling & Reports.
Step 3 Choose Selective Source Monitoring.
Step 4 On the Selective Source Monitoring Report page, specify the following settings:

<table>
<thead>
<tr>
<th>Fields and Buttons</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>From Date</td>
<td>Enter the start date of the Selective Source Monitoring Report. Click the icon next to the data field to choose a date from a calendar.</td>
</tr>
<tr>
<td>To Date</td>
<td>Enter the end date of the Selective Source Monitoring Report. Click the icon next to the data field to choose a date from a calendar.</td>
</tr>
<tr>
<td>Device</td>
<td>Choose a device from the drop-down list.</td>
</tr>
<tr>
<td>Source</td>
<td>Choose a source from the drop-down list.</td>
</tr>
<tr>
<td>Group</td>
<td>Choose a group from the drop-down list.</td>
</tr>
<tr>
<td>Baseline</td>
<td>Enter the baseline name.</td>
</tr>
<tr>
<td>Submit</td>
<td>Adds the selected Selective Source Monitoring for monitoring.</td>
</tr>
</tbody>
</table>

As part of the results generated, a Source Offline event is generated for the source and group (S,G) configured when the source goes offline.

A Source may be offline event will be generated for (S,G) configured under SG Polling Main, if the source is directly connected to the domain (FHR) and if there is no packet count increase for the monitoring period (typically 1 minute). This event also prevents the bogus trap occurring because of a source offline event.
Selective Source Monitoring Configuration

To configure Selective Source Monitoring Polling:

**Step 1** From the Multicast Manager menu, choose **Polling Configuration & Reports**.

**Step 2** Choose **Miscellaneous Polling & Reports**.

**Step 3** Choose **Selective Source Monitoring**.

**Step 4** Choose **Config Selective Source Monitoring Polling**.

**Step 5** Click the **Add** button.

**Step 6** Choose **By Selective Source Monitoring**.

**Note** You can also choose **By Import** to import the SSM configuration from a CSV file.

**Step 7** On the Selective Source Monitoring Polling Configuration page, specify the following settings:

<table>
<thead>
<tr>
<th>Fields and Buttons</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Source</td>
<td>Choose a source from the drop-down list.</td>
</tr>
<tr>
<td>Group</td>
<td>Choose a group from the drop-down list.</td>
</tr>
<tr>
<td>Reset SG Lists</td>
<td>Clears any entries and refreshes the source and group lists.</td>
</tr>
<tr>
<td>Configure threshold at ingress router</td>
<td>By default, CMM does not monitor the packet flow at ingress routers associated with the source device. If you want to monitor the packet flow at the ingress routers associated with the source, check the Configure threshold at ingress router check box and enter threshold values in the High Threshold and Low Threshold fields.</td>
</tr>
<tr>
<td>Units</td>
<td>Choose either packets per sampling period (pps) or bits per sampling period (bps).</td>
</tr>
<tr>
<td>High Threshold</td>
<td>Enter the high threshold that, if exceeded, generates a report.</td>
</tr>
<tr>
<td>Low Threshold</td>
<td>Enter the low threshold that, if exceeded, generates a report.</td>
</tr>
<tr>
<td>Run Time Intervals</td>
<td>Enter a range of time to designate when to monitor the branch. Alerts are only based on activity during a designated time frame. Enter the time based on the time zone for the location of the server.</td>
</tr>
<tr>
<td>Reload Cache</td>
<td>If you are using S,G caching, the cache contents appear. Click <strong>Reload Cache</strong> to refresh the table of sources and groups.</td>
</tr>
<tr>
<td>Save</td>
<td>Adds the selected Selective Source Monitoring polling configuration for monitoring.</td>
</tr>
</tbody>
</table>
By Import

To configure Selective Source Monitoring polling by importing a file:

---

**Step 1**  From the Multicast Manager menu, choose **Polling Configuration & Reports**.

**Step 2**  Choose **Miscellaneous Polling & Reports**.

**Step 3**  Choose **Selective Source Monitoring**.

**Step 4**  Choose **Config Selective Source Monitoring Polling**.

**Step 5**  Click the **Add** button.

**Step 6**  Choose **By Import**.

**Step 7**  Click the **Browse** button to upload the file.

**Step 8**  Choose **Merge** to unify an existing configuration with the new configuration or choose **Replace** to overwrite the existing configuration.

**Step 9**  Click **Upload**.

---

**Import Format:**

SSMON: <source>,<group>,<sHr>,<sMin>,<eMin>,<her>,<ere>,<hThr>,<lThr>,<unit>

Where days: Everyday–8; M-F–7; Sunday–0; Monday–1; Tuesday–2; Wednesday–3; Thursday–4; Friday–5; Saturday–6

Where unit: bps=1; pps=0.

**Example:**

SSMON:126.0.1.12,224.0.1.39,2,20,6,10,0,6,3,0

---

**Health Check**

Health check polling combines RP, SG, and tree polling. Health checks give you an immediate status update on several key multicast network indicators, including:

- Status of selected RPs.
- Multicast Source Discovery Protocol (MSDP) status.
- Existence of S,G entries on selected routers.
- Status of multicast forwarding trees.

When you configure a health check, you can specify e-mail addresses to which to send notification alerts. You can create several health checks. After you have created a health check, you can configure it to run at scheduled intervals, and add e-mail alerts that summarize the results of the health check.

**Health Check Failed Report**

To view the Health Check Failed Report:
**Step 1** From the Multicast Manager menu, choose **Polling Configuration & Reports**.

**Step 2** Choose **Miscellaneous Polling & Reports**.

**Step 3** Choose **Health Check**.

**Step 4** Choose **Report Parameters**.

**Step 5** On the Health Check Failed Report Parameters page, specify the following settings:

<table>
<thead>
<tr>
<th>Fields and Buttons</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>From Date</td>
<td>Enter the start date of the Health Check Report. Click the icon next to the data field to choose a date from a calendar.</td>
</tr>
<tr>
<td>To Date</td>
<td>Enter the end date of the Health Check Report. Click the icon next to the data field to choose a date from a calendar.</td>
</tr>
<tr>
<td>Device</td>
<td>Choose a device from the drop-down list.</td>
</tr>
<tr>
<td>Source</td>
<td>Choose a source from the drop-down list.</td>
</tr>
<tr>
<td>Group</td>
<td>Choose a group from the drop-down list.</td>
</tr>
<tr>
<td>Baseline Name</td>
<td>Enter the baseline name.</td>
</tr>
<tr>
<td>Submit</td>
<td>Adds the selected health check for monitoring.</td>
</tr>
</tbody>
</table>

**Configuring Health Check Polling**

To configure health check polling:

**Step 1** From the Multicast Manager menu, choose **Polling Configuration & Reports**.

**Step 2** Choose **Miscellaneous Polling & Reports**.

**Step 3** Choose **Health Check**.

**Step 4** Choose **Config Health Check Polling**.

**Step 5** Click the **Add** button.

The Health Check Name Polling Configuration page appears.

**Step 6** On the Health Check Name Polling Configuration page, specify the following settings:

<table>
<thead>
<tr>
<th>Fields and Buttons</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health Check Name</td>
<td>Enter a name for the health check.</td>
</tr>
<tr>
<td>Notify on Success</td>
<td>Check this box to generate an e-mail report if the health check completes successfully.</td>
</tr>
</tbody>
</table>
After you click the **Save** button, the Health Check Configuration is updated, and the following tables appear:

- RPs Being Checked for `<health check name>`
- Current Source/Group Polling Configuration for `<health check name>`
- Forwarding Trees for `<health check name>`

**Step 7**  
On the RPs Being Checked for `<health check name>` table, specify:

<table>
<thead>
<tr>
<th>Fields and Buttons</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Email Addresses</td>
</tr>
<tr>
<td></td>
<td>Enter an e-mail address to which to send a notification, and click <strong>Add</strong>. To remove an e-mail address, choose it from the list and click <strong>Remove</strong>.</td>
</tr>
<tr>
<td></td>
<td>Save</td>
</tr>
<tr>
<td></td>
<td>Click the <strong>Save</strong> button to save the Health Check configuration for monitoring.</td>
</tr>
</tbody>
</table>

**Step 8**  
On the Current Source/Group Polling Configuration for `<health check name>` table, specify:

<table>
<thead>
<tr>
<th>Fields and Buttons</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Source</td>
</tr>
<tr>
<td></td>
<td>Group</td>
</tr>
<tr>
<td></td>
<td>Reset SG List</td>
</tr>
<tr>
<td></td>
<td>Select Routers</td>
</tr>
<tr>
<td></td>
<td>Save</td>
</tr>
</tbody>
</table>

**Step 9**  
On the Forwarding Trees for `<health check name>`, specify:

<table>
<thead>
<tr>
<th>Fields and Buttons</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Saved Trees</td>
</tr>
<tr>
<td></td>
<td>Save</td>
</tr>
</tbody>
</table>

**Step 10**  
To add an item to the health check configuration:

a. Click the **Add** button in one of the tables.
b. On the configuration screen that appears, specify the configuration.

c. Click the Save button on the configuration screen.

The selected configuration now appears in the table.

Step 11 To check the status of the MSDP peers of an RP that has been added to the configuration, click the Continue link in the MSDP column for the RP.

The Select Peers to Check page for the selected RP appears.

Step 12 Click the Save button to save the Health Check Polling configuration.

---

**Video Probe**

You can configure the operation of each video probe to specify the probe’s delay factor (DF) threshold and the acceptable loss threshold.

With video probe polling, devices are manually associated with video probes and CMM generates reports by polling and monitoring the data.

You can configure one video probe or configure several video probes at the same time.

**Video Probe Report**

To view the Video Probe Report:

Step 1 From the Multicast Manager menu, choose Polling Configuration & Reports.

Step 2 Choose Miscellaneous Polling & Reports.

Step 3 Choose Video Probe.

Step 4 Choose Report Parameters.

Step 5 On the Video Probe Report Parameters page, specify the following settings:

<table>
<thead>
<tr>
<th>Fields and Buttons</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>From Date</td>
<td>Enter the start date of the Video Probe Report. Click the icon next to the data field to choose a date from a calendar.</td>
</tr>
<tr>
<td>To Date</td>
<td>Enter the end date of the Video Probe Report. Click the icon next to the data field to choose a date from a calendar.</td>
</tr>
<tr>
<td>Device</td>
<td>Choose a device from the drop-down list.</td>
</tr>
<tr>
<td>Source</td>
<td>Choose a source from the drop-down list.</td>
</tr>
<tr>
<td>Group</td>
<td>Choose a group from the drop-down list.</td>
</tr>
<tr>
<td>Baseline Name</td>
<td>Enter the baseline name.</td>
</tr>
<tr>
<td>Submit</td>
<td>Adds the selected Video Probe for monitoring.</td>
</tr>
</tbody>
</table>
Historical Report

Using historical graphs, you can view historical data in a graph format. Historical data is collected when you start to monitor the network using a specific polling configuration.

To display a graph showing historical statistics for up to three video probes:

Step 1 From the Multicast Manager menu, choose Polling Configuration & Reports.
Step 2 Choose Miscellaneous Polling & Reports.
Step 3 Choose Video Probe.
Step 4 Choose Historical Report. The Historical Graphs page for video probe report opens.
Step 5 From the drop-down list in the Units field, choose the units for the report:

- **DF** Display delay factor data.
- **MLR** Display Media Loss Rate data.

Step 6 Click the calendar item (...) for From Date and from the calendar that appears, choose the From Date.
Step 7 Click the calendar item (...) for To Date and from the calendar that appears, choose the To Date.
Step 8 On the list of Video Probes, check the check boxes for up to three video probes.
Step 9 Click the Show Report button.

A graph showing the statistics for the selected video probes appears, as shown in Figure 5-2.

**Figure 5-2 Historical Report Showing DF for Two Video Probes**

Configuring Video Probe Polling

To configure video probe polling:

Step 1 From the Multicast Manager menu, choose Polling Configuration & Reports.
Step 2 Choose Miscellaneous Polling & Reports.
Step 3 Choose Video Probe.
Step 4 Choose Config Video Probe Polling.
Step 5 Click the Add button.
From the drop-down list in the Add field, choose **By Video Probe**.

**Note**

You can also choose **By Import** to import the video probe polling configuration from a CSV file.

On the Configure Video Probe Polling page, specify the following settings:

<table>
<thead>
<tr>
<th>Fields and Buttons</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Video Probe(s)</td>
<td>Choose one or more probes from the list. Assign Delay Factor (DF) Threshold (mSec) and Loss Threshold (MLR) values to each probe.</td>
</tr>
<tr>
<td>Save</td>
<td>Adds the video probe configuration for monitoring.</td>
</tr>
</tbody>
</table>

**By Import**

To configure Video Probe polling by importing a file:

**Step 1** From the Multicast Manager menu, choose **Polling Configuration & Reports**.

**Step 2** Choose **Miscellaneous Polling & Reports**.

**Step 3** Choose **Video Probe**.

**Step 4** Choose **Config Video Probe Polling**.

**Step 5** Click the **Add** button.

**Step 6** Choose **By Import**.

**Step 7** Click the **Browse** button to upload the file.

**Step 8** Choose **Merge** to unify an existing configuration with the new configuration or choose **Replace** to overwrite the existing configuration.

**Step 9** Click **Upload**.

**Import Format:**

VOSPROBE:<ProbeIp>,<Df>,<Loss>

**Example:**

VOSPROBE:172.20.111.213,500,1a

**Vidmon Polling**

With Vidmon polling, CMM polls Vidmon capable devices and generates reports if there is any violation of a configured value.
Viewing a Vidmon Report

To view a Vidmon report:

**Step 1** From the Multicast Manager menu, choose **Polling Configuration & Reports**.
**Step 2** Choose **Miscellaneous Polling & Reports**.
**Step 3** Choose **Vidmon**.

The Vidmon Reports page opens.

**Step 4** Choose **Report Parameters**.

On Vidmon Report Parameters page, specify the following settings:

<table>
<thead>
<tr>
<th>Fields and Buttons</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>From Date</td>
<td>Enter the start date of the Vidmon Report. Click the icon next to the data field to choose a date from a calendar.</td>
</tr>
<tr>
<td>To Date</td>
<td>Enter the end date of the Vidmon Report. Click the icon next to the data field to choose a date from a calendar.</td>
</tr>
<tr>
<td>Device</td>
<td>Choose a device from the drop-down list.</td>
</tr>
<tr>
<td>Source</td>
<td>Choose a source from the drop-down list.</td>
</tr>
<tr>
<td>Group</td>
<td>Choose a group from the drop-down list.</td>
</tr>
<tr>
<td>Baseline Name</td>
<td>This field is not enabled for Vidmon reports.</td>
</tr>
<tr>
<td>Submit</td>
<td>Adds the selected Vidmon device for monitoring.</td>
</tr>
</tbody>
</table>

The Vidmon Reports page displays the Vidmon report.

Historical Report

Using historical graphs, you can view historical data in a graph format. Historical data is collected when you start to monitor the network using a specific polling configuration.

To display a graph showing historical statistics for up to three Vidmon devices:

**Step 1** From the Multicast Manager menu, choose **Polling Configuration & Reports**.
**Step 2** Choose **Miscellaneous Polling & Reports**.
**Step 3** Choose **Vidmon**.
**Step 4** Choose **Historical Report**. The Historical Graphs page for video probe reports appears.
**Step 5** From the drop-down list in the **Units** field, choose the units for the report:
Step 6  Click the calendar item (...) for From Date and from the calendar that appears, choose the From Date.

Step 7  Click the calendar item (...) for To Date and from the calendar that appears, choose the To Date.

Step 8  On the list of interfaces on Vidmon devices, check the check boxes for up to three interfaces.

Step 9  Click the Show Report button.

A graph showing the statistics for the selected Vidmon devices appears.

### Configuring Vidmon Polling

To configure Vidmon Polling:

Step 1  From the Multicast Manager menu, choose Polling Configuration & Reports.

Step 2  Choose Miscellaneous Polling & Reports.

Step 3  Choose Vidmon.

The Vidmon Report page appears, and shows a current Vidmon Polling report.

Step 4  Choose Config Vidmon Polling.

The Config Vidmon Polling page lists the current Vidmon polling configurations.

From the Config Vidmon Polling page, you can add a new Vidmon polling configuration, delete or export an existing Vidmon polling configuration, or edit an existing configuration.

Step 5  Do one of the following:

- To add a new configuration, click the Add button, and from the drop-down list, choose By Vidmon.

  **Note** You can also choose By Import to import the Vidmon configuration from a CSV file.

- To delete an existing configuration or export it to file to use on another device, check the check box next to a configuration, click the Actions button, and from the drop-down list, choose either Delete or Export.

  If you choose Export, you are prompted for the folder path and filename for a CSV file containing the exported configuration.

Step 6  If you selected Export, browse to the folder where you want to save the CSV file, enter a file name, and click the Save button to save the file.

  If you choose Add, the Vidmon Polling Configuration page appears.

  The Vidmon Polling Configuration page lists the Vidmon devices that have been discovered in the domain.

Step 7  To specify a Vidmon device to discover, click a device name in the list of Vidmon Devices.

  As you choose devices, a row of configuration options for the device appears.

### Table

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DF</td>
<td>Display delay factor data.</td>
</tr>
<tr>
<td>MLR</td>
<td>Display Media Loss Rate data.</td>
</tr>
<tr>
<td>MRV</td>
<td>Display Media Rate Variation data.</td>
</tr>
</tbody>
</table>

### Step 4 Notes

**Note** You can also choose By Import to import the Vidmon configuration from a CSV file.
Step 8 To configure polling for a device, check the check box next to the configuration option for the device. For example, to configure a delay factor for a device, click the DF field. As you choose configuration fields, the field becomes active.

Step 9 On the Vidmon Polling Configuration page, specify the following parameters:

<table>
<thead>
<tr>
<th>Configuration Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DF</td>
<td>Enter a delay factor (DF) in milliseconds. When the delay factor exceeds, CMM generates a delay factor event.</td>
</tr>
<tr>
<td>MLR</td>
<td>For Cisco 76xx devices, enter a Media Loss Rate (MLR) threshold value (number of packets). When the MLR threshold exceeds, CMM generates an alert. Note MLR monitoring is not available for Viking devices (Cisco ASR 9000 devices).</td>
</tr>
<tr>
<td>MRV max (milli %)</td>
<td>Enter a milli-percentage value to specify a MRV maximum threshold. You can show values to 3 decimal places. For example, if you want to generate an event when the MRV value goes above 0.100, then enter 100. When the specified threshold exceeds, CMM generates a VIDMON MRV HIGH alert.</td>
</tr>
<tr>
<td>MRV min (milli %)</td>
<td>Enter a milli-percentage value to specify a MRV minimum threshold. You can show values to 3 decimal places. For example, if you want to generate an event when the MRV value drops below -0.100, then enter 100. When the MRV for the device is less than the specified threshold, CMM generates a VIDMON MRV LOW alert.</td>
</tr>
</tbody>
</table>

Step 10 To save the Vidmon polling configuration, click the Save button.

Importing a Vidmon Configuration

If you have previously saved a CSV file containing a polling configuration for a Vidmon device, you can import the existing polling configuration.

To import a Vidmon polling configuration:

Step 1 On the Config Vidmon Polling page, click the Add button, and from the drop-down list, choose By Import.

The Vidmon Import page appears, as shown in Figure 5-3.
**Figure 5-3 Vidmon Import Page**

**Step 2**
Browse for the CSV file to import.

**Step 3**
Do one of the following:

- To merge the saved configuration with your existing configuration, click the **Merge** radio button.
- To replace the existing configuration, click the **Replace** radio button.

**Step 4**
Click the **Upload** button.

**Import Format:**

VIDMON :<VidmonIp>,<VidmonType>,<Df>,<Mrv_max>,<Mrv_min>,<MLR>
VIDMONOR :<DeviceIp>,<Source>,<Source Mask>,<Group>,<Group Mask>,<device Type>,<DF>,<Mrv max>,<Mrv min>,<MLR>

**Example:**

VIDMON:126.1.40.30,1,50,40,20,4
VIDMONOR:126.1.40.30,0.0.0.0,255.255.255.255,172.20.111.12,0.0.0.0,1,50,40,20,4

**Editing an Existing Vidmon Polling Configuration**

To edit an existing Vidmon polling configuration:

**Step 1**
On the Vidmon Configuration page, check the check box next to an existing Vidmon polling configuration.

**Step 2**
Click the **Edit** button.

The Vidmon Polling Configuration page appears and shows the existing configuration.

**Step 3**
Edit the values as required.

**Vidmon Polling, page 5-38** describes the Vidmon Polling Configuration options.

**Step 4**
Click the **Save** button to save the configuration.

**Step 5**
To begin using the new polling configuration, at the top of the page, click the **Restart** button.

**Specifying an Override Configuration for Vidmon Polling**

You can override the specified Vidmon polling configuration for specified devices, on a Source, Group basis.
To override the Vidmon polling configuration for specified devices:

**Step 1**
On the Vidmon Configuration page, in the SG-Based Threshold column, click the **Configure** link for a device.

The Vidmon Threshold Override Configuration page for the selected device appears.

**Step 2**
On the Vidmon Threshold Override Configuration page, specify a mask for the Source and Group to which the override configuration will apply, as follows:

a. In the Source field, specify an IP address for a Source or Source Range.

The value you enter in the Source field is modified by the value you enter in the Source Mask field.

b. To override the configuration for an exact IP address, enter the IP address of the device to which the override will apply in the Source field, and enter 0.0.0.0 in the Source Mask field. To specify a bit mask that applies the override to a range of source IP addresses, enter a value in the Source Mask field. For example, to match IP addresses 172.20.111.0 through 172.20.111.255, enter 172.20.111.242 in the Source field and 0.0.0.255 in the Source Mask field.

c. To specify the Destination override information, enter IP addresses in the Destination field and the Destination Mask field in the same manner as for the Source field and the Source Mask field.

**Step 3**
Enter override values for the Vidmon polling threshold configuration fields as required.

For a description of the Vidmon polling configuration options, see **Vidmon Polling, page 5-38**.

**Step 4**
Click the **Save** button to save the override configuration.

**Step 5**
To enable the new configuration, click the **Restart** button at the top of the page.

---

**MVPN Polling**

You can configure polling of multicast devices in a Multicast Virtual Private Network (MVPN). MVPN properties such as MDT default, VRF count, and VRF interface count are monitored on PE devices.

**MDT Source Report**

To view MDT Source polling:

**Step 1**
From the Multicast Manager menu, choose **Polling Configuration & Reports**.

**Step 2**
Choose **Miscellaneous Polling & Reports**.

**Step 3**
Choose **MVPN Polling**.

**Step 4**
Choose **Report Parameters**.
Step 5  On the MDT Source Report Parameters page, specify the following settings:

<table>
<thead>
<tr>
<th>Fields and Buttons</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>From Date</td>
<td>Enter the start date of the MDT Source Report. Click the icon next to the data field to choose a date from a calendar.</td>
</tr>
<tr>
<td>To Date</td>
<td>Enter the end date of the MDT Source Report. Click the icon next to the data field to choose a date from a calendar.</td>
</tr>
<tr>
<td>Device</td>
<td>Choose a device from the drop-down list.</td>
</tr>
<tr>
<td>Source</td>
<td>Choose a source from the drop-down list.</td>
</tr>
<tr>
<td>Group</td>
<td>Choose a group from the drop-down list.</td>
</tr>
<tr>
<td>Baseline</td>
<td>Enter the baseline name.</td>
</tr>
<tr>
<td>Submit</td>
<td>Adds the selected MDT source for monitoring.</td>
</tr>
</tbody>
</table>

**MDT Default Report**

To view MDT default polling:

**Step 1**  From the Multicast Manager menu, choose **Polling Configuration & Reports**.

**Step 2**  Choose **Miscellaneous Polling & Reports**.

**Step 3**  Choose **MVPN Polling**.

**Step 4**  Choose **MDT Default Report**.

**Step 5**  Choose **Report Parameters**.
Step 6  On the MDT Default Report page, specify the following settings:

<table>
<thead>
<tr>
<th>Fields and Buttons</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>From Date</td>
<td>Enter the start date of the MDT Default Report. Click the icon next to the data field to choose a date from a calendar.</td>
</tr>
<tr>
<td>To Date</td>
<td>Enter the end date of the MDT Default Report. Click the icon next to the data field to choose a date from a calendar.</td>
</tr>
<tr>
<td>Device</td>
<td>Choose a device from the drop-down list.</td>
</tr>
<tr>
<td>Source</td>
<td>Choose a source from the drop-down list.</td>
</tr>
<tr>
<td>Group</td>
<td>Choose a group from the drop-down list.</td>
</tr>
<tr>
<td>Baseline</td>
<td>Enter the baseline name.</td>
</tr>
<tr>
<td>Submit</td>
<td>Adds the selected MDT default for monitoring.</td>
</tr>
</tbody>
</table>

**VRF Interface Count Report**

To view the Virtual Routing and Forwarding (VRF) Interface Count Report:

Step 1  From the Multicast Manager menu, choose Polling Configuration & Reports.
Step 2  Choose Miscellaneous Polling & Reports.
Step 3  Choose MVPN Polling.
Step 4  Choose VRF Interface Count Report.
Step 5  Choose Report Parameters.
Step 6  On the VRF Interface Count Report page, specify the following settings:

<table>
<thead>
<tr>
<th>Fields and Buttons</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>From Date</td>
<td>Enter the start date of the VRF Interface Count Report. Click the icon next to the data field to choose a date from a calendar.</td>
</tr>
<tr>
<td>To Date</td>
<td>Enter the end date of the VRF Interface Count Report. Click the icon next to the data field to choose a date from a calendar.</td>
</tr>
<tr>
<td>Device</td>
<td>Choose a device from the drop-down list.</td>
</tr>
<tr>
<td>Source</td>
<td>Choose a source from the drop-down list.</td>
</tr>
<tr>
<td>Group</td>
<td>Choose a group from the drop-down list.</td>
</tr>
<tr>
<td>Baseline</td>
<td>Enter the baseline name.</td>
</tr>
<tr>
<td>Submit</td>
<td>Adds the selected VRF interface count for monitoring.</td>
</tr>
</tbody>
</table>

VRF Count Report

To view the VRF Count Report:

- **Step 1** From the Multicast Manager menu, choose **Polling Configuration & Reports**.
- **Step 2** Choose **Miscellaneous Polling & Reports**.
- **Step 3** Choose **MVPN Polling**.
- **Step 4** Choose **VRF Count Report**.
- **Step 5** Choose **Report Parameters**.
Step 6  On the VRF Count Report Parameters page, specify the following settings:

<table>
<thead>
<tr>
<th>Fields and Buttons</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>From Date</td>
<td>Enter the start date of the VRF Count Report. Click the icon next to the data field to choose a date from a calendar.</td>
</tr>
<tr>
<td>To Date</td>
<td>Enter the end date of the VRF Count Report. Click the icon next to the data field to choose a date from a calendar.</td>
</tr>
<tr>
<td>Device</td>
<td>Choose a device from the drop-down list.</td>
</tr>
<tr>
<td>Source</td>
<td>Choose a source from the drop-down list.</td>
</tr>
<tr>
<td>Group</td>
<td>Choose a group from the drop-down list.</td>
</tr>
<tr>
<td>Baseline</td>
<td>Enter the baseline name.</td>
</tr>
<tr>
<td>Submit</td>
<td>Adds the selected VRF count for monitoring.</td>
</tr>
</tbody>
</table>

### Configuring MVPN Polling

To configure MVPN polling:

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 1</td>
<td>From the Multicast Manager menu, choose <strong>Polling Configuration &amp; Reports</strong>.</td>
</tr>
<tr>
<td>Step 2</td>
<td>Choose <strong>Miscellaneous Polling &amp; Reports</strong>.</td>
</tr>
<tr>
<td>Step 3</td>
<td>Choose <strong>MVPN Polling</strong>.</td>
</tr>
<tr>
<td>Step 4</td>
<td>Choose <strong>Config MVPN Polling</strong>.</td>
</tr>
<tr>
<td>Step 5</td>
<td>Click the <strong>Add</strong> button.</td>
</tr>
<tr>
<td>Step 6</td>
<td>Choose <strong>By MVPN</strong>.</td>
</tr>
</tbody>
</table>

**Note**  You can also choose **By Import** to import the MVPN configuration from a CSV file.

Step 7  On the Configure MVPN Polling page, specify the following settings:

<table>
<thead>
<tr>
<th>Fields and Buttons</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PE Device</td>
<td>Choose one or more devices from the list.</td>
</tr>
<tr>
<td>Save</td>
<td>Adds the MVPN configuration for monitoring.</td>
</tr>
</tbody>
</table>
By Import

To configure MVPN polling by importing a file:

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 1</td>
<td>From the Multicast Manager menu, choose <strong>Polling Configuration &amp; Reports</strong>.</td>
</tr>
<tr>
<td>Step 2</td>
<td>Choose <strong>Miscellaneous Polling &amp; Reports</strong>.</td>
</tr>
<tr>
<td>Step 3</td>
<td>Choose <strong>MVPN</strong>.</td>
</tr>
<tr>
<td>Step 4</td>
<td>Choose <strong>Config MVPN Polling</strong>.</td>
</tr>
<tr>
<td>Step 5</td>
<td>Choose <strong>By Import</strong> from the <strong>Add</strong> drop-down list.</td>
</tr>
<tr>
<td>Step 6</td>
<td>Click the <strong>Browse</strong> button to upload the file.</td>
</tr>
<tr>
<td>Step 7</td>
<td>Choose <strong>Merge</strong> to unify an existing configuration with the new configuration or choose <strong>Replace</strong> to overwrite the existing configuration.</td>
</tr>
<tr>
<td>Step 8</td>
<td>Click <strong>Upload</strong>.</td>
</tr>
</tbody>
</table>

**Import Format:**

MVPNPE:<PEIP>

**Example:**

MVPNPE:172.20.111.198

**CRM Polling**

**Baseline Route Polling**

To set up baseline route polling, you must provide a routing table baseline that has been previously generated in the Diagnostics interface. Baseline route polling compares the current routing table with the configured baseline, and if the configuration changes, users are notified.

**Note**

You must first create a baseline by choosing **Diagnostics > CRM Diagnostics > Create Baseline** as described in **Create Baseline, page 8-18**.

**Note**

You must restart the polling daemon after making configuration changes in this section. Click the **Restart** button in the Polling Actions field to restart polling. Click the **Stop** button to stop polling.
Unicast Report

Step 1  From the Multicast Manager menu, choose Polling Configuration & Reports.
Step 2  Choose CRM Polling.
Step 3  Choose Baseline Route Polling.
Step 4  Choose Unicast Report.
Step 5  Click View Report.
Step 6  In the Select Route field, choose a date from the drop-down menu.
Step 7  Choose an object from the Filter MIB Objects field.
Step 8  Click View.

Multicast Report

Step 1  From the Multicast Manager menu, choose Polling Configuration & Reports.
Step 2  Choose CRM Polling.
Step 3  Choose Baseline Route Polling.
Step 4  Choose Multicast Report.
Step 5  In the Select Route field, choose a date from the drop-down menu.
Step 6  Choose an object from the Filter MIB Objects field.
Step 7  Click View.

Historical Report

Step 1  From the Multicast Manager menu, choose Polling Configuration & Reports.
Step 2  Choose CRM Polling.
Step 3  Choose Baseline Route Polling.
Step 4  Choose Historical Report.
Step 5  To set the Report Type, choose either Unicast or Multicast from the drop-down menu.
Step 6  Click the Get Report(s) button to refresh the display of the streams being monitored.
Step 7  In the From Date field, choose a date from the calendar.
Step 8  In the To Date field, choose a date from the calendar.
Step 9  Choose one or more stream from the table.
Step 10  Click the Show Report button to charts a graph.

Individual streams are color coded with a unique color.
View Baseline

Step 1 From the Multicast Manager menu, choose Polling Configuration & Reports.
Step 2 Choose CRM Polling.
Step 3 Choose Baseline Route Polling.
Step 4 Choose View Baseline.
Step 5 Choose either Unicast or Multicast in the Report Type field.
Step 6 Choose a router from the drop-down list.
Step 7 Choose a baseline.
Step 8 Click View.

Compare Baseline

Step 1 From the Multicast Manager menu, choose Polling Configuration & Reports.
Step 2 Choose CRM Polling.
Step 3 Choose Baseline Route Polling.
Step 4 Choose Compare Baseline.
Step 5 To specify the Report Type, click either the Unicast radio button or the Multicast radio button.
Step 6 Choose a router from the drop-down list.
Step 7 Choose the first baseline from the Baseline1 drop-down list.
Step 8 Choose the second baseline from the Baseline2 drop-down list.
Step 9 Click View.

Configuring Route Polling

To configure route polling:

Step 1 From the Multicast Manager menu, choose Polling Configuration & Reports.
Step 2 Choose CRM Polling.
Step 3 Choose Baseline Route Polling
Step 4 Choose Config Route Polling.
Step 5 Click the Add button.
Step 6 Choose By Baseline Route.
Step 7 On the Add Baseline Route page, specify the following settings:
Specific Route Polling

To configure specific route polling, you must select S,G routes from Specific Multicast Routes lists for specified routers and add them to the list of monitored routes. For configured routes, CMM notifies users of any changes to the S,G route.

Unicast Report

To view the Unicast Report:

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 1</td>
<td>From the Multicast Manager menu, choose Polling Configuration &amp; Reports.</td>
</tr>
<tr>
<td>Step 2</td>
<td>Choose CRM Polling.</td>
</tr>
<tr>
<td>Step 3</td>
<td>Choose Specific Route Polling.</td>
</tr>
<tr>
<td>Step 4</td>
<td>Choose Report Parameters.</td>
</tr>
</tbody>
</table>
Step 5  On the Unicast Report Parameters page, specify the following settings:

<table>
<thead>
<tr>
<th>Fields and Buttons</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>From Date</td>
<td>Enter the start date of the Unicast Report. Click the icon next to the data field to choose a date from a calendar.</td>
</tr>
<tr>
<td>To Date</td>
<td>Enter the end date of the Unicast Report. Click the icon next to the data field to choose a date from a calendar.</td>
</tr>
<tr>
<td>Device</td>
<td>Choose a device from the drop-down list.</td>
</tr>
<tr>
<td>Source</td>
<td>Choose a source from the drop-down list.</td>
</tr>
<tr>
<td>Group</td>
<td>Choose a group from the drop-down list.</td>
</tr>
<tr>
<td>Baseline</td>
<td>Enter the baseline name.</td>
</tr>
<tr>
<td>Submit</td>
<td>Adds the selected Unicast parameters for monitoring.</td>
</tr>
</tbody>
</table>

Multicast Report

To view the Multicast Report:

Step 1  From the Multicast Manager menu, choose Polling Configuration & Reports.
Step 2  Choose Miscellaneous Polling & Reports.
Step 3  Choose CRM Polling
Step 4  Choose Specific Route Polling.
Step 5  Choose Multicast Report.
Step 6  Choose Report Parameters.
Step 7  
On the Multicast Report Parameters page, specify the following settings:

<table>
<thead>
<tr>
<th>Fields and Buttons</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>From Date</td>
<td>Enter the start date of the Multicast Report. Click the icon next to the data field to choose a date from a calendar.</td>
</tr>
<tr>
<td>To Date</td>
<td>Enter the end date of the Multicast Report. Click the icon next to the data field to choose a date from a calendar.</td>
</tr>
<tr>
<td>Device</td>
<td>Choose a device from the drop-down list.</td>
</tr>
<tr>
<td>Source</td>
<td>Choose a source from the drop-down list.</td>
</tr>
<tr>
<td>Group</td>
<td>Choose a group from the drop-down list.</td>
</tr>
<tr>
<td>Baseline</td>
<td>Enter the baseline name.</td>
</tr>
<tr>
<td>Submit</td>
<td>Adds the selected Multicast report parameters for monitoring.</td>
</tr>
</tbody>
</table>

Configuring Unicast Polling

To configure Unicast Polling:

Step 1  
From the Multicast Manager menu, choose Polling Configuration & Reports.

Step 2  
Choose Miscellaneous Polling & Reports.

Step 3  
Choose CRM Polling.

Step 4  
Choose Specific Route Polling.

Step 5  
Choose Config Unicast Polling.

Step 6  
Click Add.

Step 7  
Choose By Unicast Route.

Note  
You can also choose By Import to import the unicast route from a CSV file.

Step 8  
On the Add Unicast Specific Route Config page, specify the following settings:

<table>
<thead>
<tr>
<th>Fields and Buttons</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Select Router</td>
<td>Choose a router.</td>
</tr>
<tr>
<td>CPU Threshold</td>
<td>The CPU utilization of the router will be checked first to determine if a query of the routing table is acceptable based upon the configured CPU threshold. A value of -1, indicates that the routing table should be queried without checking CPU utilization.</td>
</tr>
</tbody>
</table>
**Fields and Buttons**

<table>
<thead>
<tr>
<th>Field &amp; Button</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>View Current Routes</td>
<td>Updates the baseline route for monitoring</td>
</tr>
<tr>
<td>Specific Unicast Routes List</td>
<td>To generate a specific unicast list, check the box and click Add Selected Routes to Polling Config.</td>
</tr>
</tbody>
</table>

**Step 9**

If you want to search for multicast routes for specified Devices, Sources, or Groups:

a. Click the **Add Filter** button.

b. From the drop-down list in the Filter filed, choose **Device**, **Source**, or **Group**.

c. In the Containing Text field, enter a search string that contains part of the Device name, Source IP address, or Group IP address.

d. Click the **Search** button.

e. Check the check boxes next to any items that are found and which you want to add.

**Step 10**

Click the **Add** button.

---

**By Import**

To configure Unicast SG polling by importing a file:

**Step 1**

From the Multicast Manager menu, choose **Polling Configuration & Reports**.

**Step 2**

Choose **CRM Polling**.

**Step 3**

Choose **Specific Route Polling**.

**Step 4**

Choose **Config Unicast Polling**.

**Step 5**

Click the **Add** button.

**Step 6**

Choose **By Import**.

**Step 7**

Click the **Browse** button to upload the file.

**Step 8**

Choose **Merge** to unify an existing configuration with the new configuration or choose **Replace** to overwrite the existing configuration.

**Step 9**

Click **Upload**.

---

**Import Format:**

```
ROUTEMONSINGLE:<DeviceIp>,<CRM_UNICAST-0>,<Route>,<RouteMask>,<NextHop>
```

**Example:**

```
ROUTEMONSINGLE:172.20.111.198,0,126.1.1.0,255.255.255.0,126.1.1.11
```
Configuring Multicast Polling

To configure Multicast Polling:

**Step 1** From the Multicast Manager menu, choose **Polling Configuration & Reports**.

**Step 2** Choose **Miscellaneous Polling & Reports**.

**Step 3** Choose **CRM Polling**.

**Step 4** Choose **Specific Route Polling**.

**Step 5** Choose **Config Multicast Polling**.

**Step 6** Click **Add**.

**Step 7** Choose **By Multicast Route**.

**Note** You can also choose **By Import** to import the multicast route from a CSV file.

**Step 8** On the Add Multicast Specific Route Config page, specify the following settings:

<table>
<thead>
<tr>
<th>Fields and Buttons</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Select Router</td>
<td>Choose a router.</td>
</tr>
<tr>
<td>CPU Threshold</td>
<td>The CPU utilization of the router is checked first to determine if a query of the routing table is acceptable based upon the configured CPU threshold. A value of -1 indicates that the routing table should be queried without checking CPU utilization.</td>
</tr>
<tr>
<td>View Current Routes</td>
<td>Updates the baseline route for monitoring</td>
</tr>
<tr>
<td>Specific Multicast Routes List</td>
<td>To generate a specific multicast list, check the check box and click <strong>Add Selected Routes to Polling Config</strong>.</td>
</tr>
</tbody>
</table>

**Step 9** If you want to search for multicast routes for specified Devices, Sources, or Groups:

a. Click the **Add Filter** button.

b. From the drop-down list in the Filter field, choose **Device**, **Source**, or **Group**.

c. In the Containing Text field, enter a search string that contains part of the Device name, Source IP address, or Group IP address.

d. Click the **Search** button.

e. Check the check boxes next to any items that are found and which you want to add.

**Step 10** Click the **Add** button.
By Import

To configure Multicast polling by importing a file:

Step 1 From the Multicast Manager menu, choose **Polling Configuration & Reports**.

Step 2 Choose **CRM Polling**.

Step 3 Choose **Specific Route Polling**.

Step 4 Choose **Config Multicast Polling**.

Step 5 Click the **Add** button.

Step 6 Choose **By Import**.

Step 7 Click the **Browse** button to upload the file.

Step 8 Choose **Merge** to unify an existing configuration with the new configuration or choose **Replace** to overwrite the existing configuration.

Step 9 Click **Upload**.

**Import Format:**

ROUTEMONSINGLE: <DeviceIp>,<CRM_MULTICAST-1>,<Source>,<NetworkMask>,
<getUpstreamNeighbor>,<Group>

**Example:**

ROUTEMONSINGLE:126.1.13.18,1,0.0.0.0,255.255.255.255,126.1.13.15,239.254.1.1