Polling Configuration and Reports

This chapter contains the following sections:

- Event Viewer, page 5-1
- Trap Viewer, page 5-2
- Domain Trap/Email, page 5-3
- Traffic & Polling Reports, page 5-5
- Tree Polling & Reports, page 5-13
- Miscellaneous Polling & Reports, page 5-18
- CRM Polling, page 5-43

**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** Choose Polling Configuration & Reports > Event Viewer.

The Event Viewer appears, as shown in Figure 5-1.
The Event Viewer shown in Figure 5-1 is set up to show Latest Events (the default setting). The first field shown on the Event Viewers 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, select **Report Parameters**.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Event Type</td>
<td>Select an event type from the drop-down list.</td>
</tr>
<tr>
<td>From Date</td>
<td>Enter or select a start date.</td>
</tr>
<tr>
<td>To Date</td>
<td>Enter or select an end date.</td>
</tr>
<tr>
<td>Device</td>
<td>Select a device from the drop-down list.</td>
</tr>
<tr>
<td>Source</td>
<td>Select a source from the drop-down list.</td>
</tr>
<tr>
<td>Group</td>
<td>Select a group from the drop-down list.</td>
</tr>
<tr>
<td>Baseline Name</td>
<td>Enter the baseline name.</td>
</tr>
</tbody>
</table>

**Step 3**  
Click **Submit**.

The Event Viewer appears with the specified events shown.

---

**Trap Viewer**

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

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

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

The Trap Viewer page appears, as shown in Figure 5-2.
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, select **Report Parameters** to filter the trap views.

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

### Field Description

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>From Date</td>
<td>Enter or select a start date.</td>
</tr>
<tr>
<td>To Date</td>
<td>Enter or select an end date.</td>
</tr>
<tr>
<td>Submit</td>
<td>Sets the values that you enter.</td>
</tr>
</tbody>
</table>

**Domain Trap/Email**

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/Email Configuration page, then the values from the global polling configuration are used.

To configure Domain Trap/E-mail Settings:

**Step 1**
Select **Polling Configuration & Reports**.
**Step 2**  
Click **Domain Trap/Email**.  
The Domain Trap/Email page appears, as shown in **Figure 5-3**.

**Figure 5-3  Domain Trap/Email**

**Step 3**  
To add or remove trap receivers, enter information on the Configure Domain Specific SNMP Trap Receivers section.

**Note**  
The SNMP trap receivers specified here are only used if global SNMP trap receivers are not specified. Global trap receivers are specified from the Configure Global Default SNMP Trap Receivers page (see **Global Polling Configuration, page 4-5**).

**Step 4**  
Specify the following information to add a trap receiver.

**Table 5-1  Add Trap Receiver Settings**

<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>
<tr>
<td>Description 2</td>
<td>If desired, add additional text to describe the trap receiver</td>
</tr>
<tr>
<td><strong>Note</strong></td>
<td>Description 1 and Description 2 are configurable trap descriptors. If these fields are configured, then all traps sent northbound from CMM will contain the specified information. This information can help users to identify the traps.</td>
</tr>
<tr>
<td>Add</td>
<td>Adds the IP address of the trap receiver to the list of configured trap receivers.</td>
</tr>
<tr>
<td>Remove</td>
<td>Removes the IP address of the trap receiver from the list of configured trap receivers.</td>
</tr>
</tbody>
</table>
Step 5  To add or remove e-mail addresses, use the Configure Domain Specific Email Addresses for Event Notification section.

Note  E-mail addresses are notified of SSG exceptions and threshold-related events. The e-mail addresses specified here are only used if global e-mail addresses are not specified. Global e-mail addresses are specified from the Configure Global Default Email Addresses for Event Notification (see Global Polling Configuration, page 4-5).

Step 6  Specify the following information to add an e-mail address.

Table 5-2  Add Email Address Settings

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Add Email Address</td>
<td>Enter an e-mail address to use for SSG exceptions and threshold events.</td>
</tr>
<tr>
<td>Add</td>
<td>Adds the specified email address to the list of configured email addresses.</td>
</tr>
<tr>
<td>Remove</td>
<td>Removes the selected email address from the list of configured email addresses.</td>
</tr>
</tbody>
</table>

Step 7  To save the configuration, click the Save Domain Trap Email button.

Traffic & Polling Reports

S,G

Using Cisco Multicast Manager, you can poll sources and groups with high and low thresholds. You can select 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 selecting 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.

Tip  Pressing shift and control simultaneously allows you to select 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:
Traffic & Polling Reports

Chapter 5  Polling Configuration and Reports

Step 1  From the Multicast Manager menu, select **Polling Configuration & Reports**.
Step 2  Select **Traffic Polling & Reports**.
Step 3  Select **S,G**.
Step 4  Select **Report Parameters**.

### 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, select **Polling Configuration & Reports**.
**Step 2**  Select **Traffic Polling & Reports**.
**Step 3**  Select **S,G**.
**Step 4**  Select **Historical Graph**.
**Step 5**  In the Units field, select 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**  Select up to three multicast streams from the table.
**Step 10**  Click the **Show Report** button to charts a graph.

Individual streams will indicated will be color coded 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 is a list of all events pertaining to the stream.

To view a Group Gone report:

1. From the Multicast Manager menu, select **Polling Configuration & Reports**.
2. Select **Traffic Polling & Reports**.
3. Select **S,G**.
4. Select **Group Gone Report**.
5. Click **Report Parameters** and set the parameters for the report.
6. Click the **Submit** button.

**Config S,G Polling**

**By S,G**

1. From the Multicast Manager menu, select **Polling Configuration & Reports**.
2. Select **Traffic Polling & Reports**.
3. Select **S,G**.
4. Select **Config SG Polling**.
5. Click the **Add** button.
6. Select **By S,G**.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Source</td>
<td>Select a source from the drop-down list.</td>
</tr>
<tr>
<td>Group</td>
<td>Select 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>Select a router/routers to configure SG polling.</td>
</tr>
<tr>
<td>Units</td>
<td>Select 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 that if the value is exceeded, Cisco Multicast Manager generates a report.</td>
</tr>
</tbody>
</table>
By Device

You can select 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, select **Polling Configuration & Reports**.

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

**Step 3** Select **S,G**.

**Step 4** Select **Config SG Polling**.

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

**Step 6** Select **By Device**.

The Device SG Polling Configuration page contains the following fields and buttons:

<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>Select referees 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>Select the router name.</td>
</tr>
<tr>
<td>Units</td>
<td>Select 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 the value is exceeded, Cisco Multicast Manager generates a report.</td>
</tr>
</tbody>
</table>

**By Import**

To configure SG polling by importing a file:

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

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

**Step 3** Select **S,G**.

**Step 4** Select **Config SG Polling**.

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

**Step 6** Select **By Import**.

**Step 7** Click the **Browse** button to upload the file.
Step 8  Select **Merge** to unify an existing configuration with the new configuration or select **Replace** to overwrite the existing configuration.

Step 9  Click **Upload**.

### Config Time-Based SG Polling

To configure Time-Based SG Polling:

**Step 1**  On the SG Polling page, select **Config Time-Based SG Polling**.

**Step 2**  On the SG Time based Configurations page, click the **Add** button and from the drop-down list, select **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 select the IP address of the source to monitor.</td>
</tr>
<tr>
<td>Group</td>
<td>Enter or select 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>Select routers to add to the polling configuration</td>
</tr>
<tr>
<td>Units</td>
<td>Select 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 the date and time to run the polling.</td>
</tr>
</tbody>
</table>

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

### 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.

You can also configure up to 50 different time-of-day thresholds for each port.
To view an L2 PPS Threshold Report:

Step 1  From the Multicast Manager menu, select Polling Configuration & Reports.
Step 2  Select Traffic Polling & Reports.
Step 3  Select L2.
Step 4  Select Report Parameters.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>From Date</td>
<td>Enter or select a start date.</td>
</tr>
<tr>
<td>To Date</td>
<td>Enter or select an end date.</td>
</tr>
<tr>
<td>Device</td>
<td>Select a device from the drop-down list.</td>
</tr>
<tr>
<td>Source</td>
<td>Select a source from the drop-down list.</td>
</tr>
<tr>
<td>Group</td>
<td>Select 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:

Step 1  From the Multicast Manager menu, select Polling Configuration & Reports.
Step 2  Select Traffic Polling & Reports.
Step 3  Select L2.
Step 4  Select Historical Graph.
Step 5  In the From Date field, choose a date from the calendar.
Step 6  In the To Date field, choose a date from the calendar.
Step 7  Select one or more multicast streams from the table.
Step 8  Click the Show Report button to charts a graph.

Individual streams will indicated will be color coded with a unique color.

**Configuring L2 Polling**

To configure Layer 2 switch polling:
Step 1  From the Multicast Manager menu, select **Polling Configuration & Reports**.

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

Step 3  Select **L2**.

Step 4  Select **Config L2 Polling**.

Step 5  Click the **Add** button.

Step 6  Select **By L2**.

The L2 Polling Configuration page contains the following fields and buttons:

<table>
<thead>
<tr>
<th>Fields and Buttons</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Select Switch to Monitor</td>
<td>Select the name or IP address of the switch you want to monitor.</td>
</tr>
<tr>
<td>Select Port to Monitor</td>
<td>Select the port to monitor. Ports appear in the following format: ifIndex:module/port.</td>
</tr>
<tr>
<td>Direction</td>
<td>Select 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>

**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:
Traffic & Polling Reports

Chapter 5 Polling Configuration and Reports

Step 1   From the Multicast Manager menu, select **Polling Configuration & Reports**.
Step 2   Select **Traffic Polling & Reports**.
Step 3   Select **Interface**.

The Multicast Bandwidth Report page appears.

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

Step 4   Click **Report Parameters**.
Step 5   Click the calendar link (...) for the From Date and select a From Date.
Step 6   Click the calendar link (...) for the To Date and select a To Date.
Step 7   From the drop-down list in the Device field, select 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:

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

Individual streams will indicated will be color coded with a unique color.

**Configuring Interface Polling**

**By Interface**

Step 1   From the Multicast Manager menu, select **Polling Configuration & Reports**.
Step 2   Select **Traffic Polling & Reports**.
Step 3   Select **Interface**.
Chapter 5  Polling Configuration and Reports

Tree Polling & Reports

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 4  Select Config Interface Polling.
Step 5  Click the Add button.
Step 6  Select Interface Polling Configuration.
Step 7  Select the device to monitor.
Step 8  Select at least one interface.

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

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

If a box is checked, 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.

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.

This section describes:

- Setting Up Tree Polling, page 5-13
- Tree Reports, page 5-15

By Import

Step 1  From the Multicast Manager menu, select Polling Configuration & Reports.
Step 2  Select Traffic Polling & Reports.
Step 3  Select Interface.
Step 4  Select Config Interface Polling.
Step 5  Click Add.
Step 6  Select By Import.
Step 7  Click the Browse button to upload the file.
Step 8  Select Merge to unify an existing configuration with the new configuration or select Replace to overwrite the existing configuration.
Step 9  Click Upload.
Step 1 Complete these steps to create a trace baseline:
   a. From the Main Menu, select **Discovery and Trace**.
   b. Select **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 5-14, for instructions on how to select the trace baseline file and configure tree polling.

---

**Configuring Tree Polling**

To configure tree polling:

Step 1 From the Multicast Manager menu, select **Polling Configuration & Reports**.
Step 2 Select **Tree Polling & Reports**.
Step 3 Select **Tree**.
Step 4 Select **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 Select 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, select 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.
Tree Reports

Viewing a Tree Report

To view tree reports:

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

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

**Step 3** Select Tree.

**Step 4** Select Report Parameters.

**Step 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 select 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 select a date from a calendar.</td>
</tr>
<tr>
<td>Device</td>
<td>Select a device from the drop-down list.</td>
</tr>
<tr>
<td>Source</td>
<td>Select a source from the drop-down list.</td>
</tr>
<tr>
<td>Group</td>
<td>Select a group from the drop-down list.</td>
</tr>
<tr>
<td>Baseline</td>
<td>Enter the baseline name.</td>
</tr>
</tbody>
</table>

**Step 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:

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

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

**Step 3** Select Tree Polling & Reports.

**Step 4** Select Historical Graph.

**Step 5** In the From Date field, choose a date from the calendar.

**Step 6** In the To Date field, choose a date from the calendar.

**Step 7** Select one or more items from the table.

**Step 8** Click the Show Report button to chart a graph.
Individual streams will 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, select **Polling Configuration & Reports**.
2. Select **Tree Polling & Reports**.
3. Select **Tree**.
4. Select **S,G Delta Report**.
5. Select **Report Parameters**.

The Tree Polling Configuration page contains the following fields and buttons:

<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 select 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 select a date from a calendar.</td>
</tr>
<tr>
<td>Device</td>
<td>Select a device from the drop-down list.</td>
</tr>
<tr>
<td>Source</td>
<td>Select a source from the drop-down list.</td>
</tr>
<tr>
<td>Group</td>
<td>Select 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.

### Comparing Tree Baselines

1. From the Multicast Manager menu, select **Polling Configuration & Reports**.
2. Select **Tree Polling & Reports**.
3. Select **Tree**.
4. Select **Compare Baseline**.
5. From the drop-down list, select a saved baseline.
6. If there are saved baselines that you want to use for the report, select them from the list of saved baselines.
7. Click **Compare Baselines**.
Viewing a Tree Changed Report from the Dashboard.

To view a Tree Changed Report from the Dashboard:

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

**Step 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 5-4** shows a sample Trace Data page.

**Figure 5-4 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**

If you run a trace to understand a specific path, you can select a particular branch to poll.
To configure branch polling for a particular device:
Step 1  From the Multicast Manager menu, select **Polling Configuration & Reports**.
Step 2  Select **Tree Polling & Reports**.
Step 3  Select **SG by Branch**.
Step 4  Click Add.

### Miscellaneous Polling & Reports

#### 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.

<table>
<thead>
<tr>
<th>Fields and Buttons</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Source</td>
<td>Enter the source. You may either enter the source address or select it from the drop-down menu.</td>
</tr>
<tr>
<td>Group</td>
<td>Enter the group. You may either enter the group address or select it from the drop-down menu.</td>
</tr>
<tr>
<td>Service Type</td>
<td>Select the service type from the drop-down list.</td>
</tr>
<tr>
<td>FHR</td>
<td>Select the start destination for the first hop router.</td>
</tr>
<tr>
<td>LHR</td>
<td>Select the end destination for the last hop router.</td>
</tr>
<tr>
<td>Select Router</td>
<td>Select a single router or select multiple routers by pressing the <strong>Shift</strong> key and clicking on the desired routers.</td>
</tr>
<tr>
<td>Units</td>
<td>Select 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>Save</td>
<td>Sets the values that you have entered.</td>
</tr>
</tbody>
</table>
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, select **Polling Configuration & Reports**.

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

**Step 3**  Select **RP**.

The RP Report page opens, as shown in **Figure 5-5**.

**Figure 5-5  RP Report Page**

**Step 4**  Select **Report Parameters**.
The RP Polling Configuration page contains the following fields and buttons:

<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 select 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 select a date from a calendar.</td>
</tr>
<tr>
<td>Device</td>
<td>Select a device from the drop-down list.</td>
</tr>
<tr>
<td>Source</td>
<td>Select a source from the drop-down list.</td>
</tr>
<tr>
<td>Group</td>
<td>Select 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:

1. From the Multicast Manager menu, select **Polling Configuration & Reports**.
2. Select **Miscellaneous Polling & Reports**.
3. Select **RP**.
4. Select **RP Group Threshold Report**.
5. Select **Report Parameters**.
The RP Group Threshold Report page contains the following fields and buttons:

<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 select 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 select a date from a calendar.</td>
</tr>
<tr>
<td>Device</td>
<td>Select a device from the drop-down list.</td>
</tr>
<tr>
<td>Source</td>
<td>Select a source from the drop-down list.</td>
</tr>
<tr>
<td>Group</td>
<td>Select 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:

1. **Step 1** From the Multicast Manager menu, select **Polling Configuration & Reports**.
2. **Step 2** Select **Miscellaneous Polling & Reports**.
3. **Step 3** Select **RP**.
4. **Step 4** Select **SSG Report**.
5. **Step 5** Select **Report Parameters**.
Chapter 5      Polling Configuration and Reports

The SSG Report page contains the following fields and buttons:

<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 select 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 select a date from a calendar.</td>
</tr>
<tr>
<td>Device</td>
<td>Select a device from the drop-down list.</td>
</tr>
<tr>
<td>Source</td>
<td>Select a source from the drop-down list.</td>
</tr>
<tr>
<td>Group</td>
<td>Select 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:

1. From the Multicast Manager menu, select **Polling Configuration & Reports**.
2. Select **Miscellaneous Polling & Reports**.
3. Select **RP**.
4. Select **Config RP Polling**.
5. Click the **Add** button.
6. Select **By RP**.
The Configure RP Polling page contains the following fields and buttons:

<table>
<thead>
<tr>
<th>Fields and Buttons</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Select RP</td>
<td>Select 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>

**RP Global Configuration**

To configure RP Global Configuration:

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

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

**Step 3** Select **RP**.

**Step 4** Select **RP Global Configuration**

The RP Global Configuration page appears.

The RP Global Configuration page contains the following fields and buttons:

<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.

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, select **Polling Configuration & Reports**.
Step 2  Select **Miscellaneous Polling & Reports**.
Step 3  Select **RPF**.

The RPF Polling Report parameter page contains the following fields and buttons:

<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 select 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 select a date from a calendar.</td>
</tr>
<tr>
<td>Device</td>
<td>Select a device from the drop-down list.</td>
</tr>
<tr>
<td>Source</td>
<td>Select a source from the drop-down list.</td>
</tr>
<tr>
<td>Group</td>
<td>Select 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, select **Polling Configuration & Reports**.
Step 2  Select **Miscellaneous Polling & Reports**.
Step 3  Select **RPF**.
Step 4  Select **Config RPF Polling**.
Step 5  Click the **Add** button.
Step 6  Select **By RPF**.
Chapter 5  Polling Configuration and Reports

The RPF Polling Configuration page contains the following fields and buttons:

<table>
<thead>
<tr>
<th>Fields and Buttons</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Source</td>
<td>Select 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>Select 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 any 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 trigger a report.</td>
</tr>
<tr>
<td>Save</td>
<td>Applies the configuration and saves the changes.</td>
</tr>
</tbody>
</table>

Selective Source Monitoring

A source and group can be set up to monitor for a particular time and day.

**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, select Polling Configuration & Reports.
**Step 2**  Select Miscellaneous Polling & Reports.
**Step 3**  Select Selective Source Monitoring.

The Selective Source Monitoring Report page contains the following fields and buttons:

<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 select 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 select a date from a calendar.</td>
</tr>
<tr>
<td>Device</td>
<td>Select a device from the drop-down list.</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:

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

The Selective Source Monitoring Polling Configuration page contains the following fields and buttons:
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.

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, select Polling Configuration & Reports.
Step 2 Select Miscellaneous Polling & Reports.
Step 3 Select Health Check.
Step 4 Select Report Parameters.

The Health Check Failed Report page contains the following fields and buttons:

<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 select 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 select a date from a calendar.</td>
</tr>
<tr>
<td>Device</td>
<td>Select a device from the drop-down list.</td>
</tr>
<tr>
<td>Source</td>
<td>Select a source from the drop-down list.</td>
</tr>
<tr>
<td>Group</td>
<td>Select 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, select Polling Configuration & Reports.
Step 2 Select Miscellaneous Polling & Reports.
Step 3 Select Health Check.
Step 4 Select Config Health Check Polling.
Step 5 Click the Add button.

The Health Check Name Polling Configuration page appears. The Health Check Name Polling Configuration page contains the following fields and buttons:

<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>`

### Table 5-1  RPs Being Checked for `<health check name>` Table

<table>
<thead>
<tr>
<th>Fields and Buttons</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>RPs Being Checked for <code>&lt;health check name&gt;</code></td>
<td>Select the RP from the drop-down list.</td>
</tr>
<tr>
<td>Save</td>
<td>Adds the Health Check configuration for monitoring.</td>
</tr>
</tbody>
</table>

### Table 5-2  Current Source/Group Polling Configuration for `<health check name>`

<table>
<thead>
<tr>
<th>Fields and Buttons</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Source</td>
<td>Select a source from the drop-down list.</td>
</tr>
<tr>
<td>Group</td>
<td>Select a group from the drop-down list.</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>Select one or more routers from the list. You can also click the Select All button to select all routers.</td>
</tr>
<tr>
<td>Save</td>
<td>Adds the Health Check configuration for monitoring.</td>
</tr>
</tbody>
</table>

### Table 5-3  Forwarding Trees for `<health check name>` Table

<table>
<thead>
<tr>
<th>Fields and Buttons</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Saved Trees</td>
<td>Select the a tree to trace from the drop-down list.</td>
</tr>
<tr>
<td>Save</td>
<td>Adds the Health Check configuration for monitoring.</td>
</tr>
</tbody>
</table>
Chapter 5  
Polling Configuration and Reports

Step 6  
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 7  
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 8  
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.

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, select **Polling Configuration & Reports**.

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

Step 3  
Select **Video Probe**.

Step 4  
Select **Report Parameters**.

The Video Probe Report Parameters page contains the following fields and buttons:

<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 select 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 select a date from a calendar.</td>
</tr>
<tr>
<td>Device</td>
<td>Select a device from the drop-down list.</td>
</tr>
<tr>
<td>Source</td>
<td>Select a source from the drop-down list.</td>
</tr>
<tr>
<td>Group</td>
<td>Select 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, select **Polling Configuration & Reports**.

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

**Step 3** Select **Video Probe**.

**Step 4** Select **Historical Report**. The Historical Graphs page for video probe reports appears, as shown in Figure 5-6.

**Figure 5-6 Historical Graphs Page for Video Probes**

**Step 5** From the drop-down list in the **Units** field, select the units for the report:

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

**Step 6** Click the calendar item (...) for **From Date** and from the calendar that appears, select the From Date.

**Step 7** Click the calendar item (...) for **To Date** and from the calendar that appears, select 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 5-7.
Chapter 5  Polling Configuration and Reports

Figure 5-7  Historical Report Showing DF for Two Video Probes

Configuring Video Probe Polling

To configure video probe polling:

Step 1  From the Multicast Manager menu, select Polling Configuration & Reports.
Step 2  Select Miscellaneous Polling & Reports.
Step 3  Select Video Probe.
Step 4  Select Config Video Probe Polling.
Step 5  Click the Add button.
Step 6  From the drop-down list in the Add field, select By Video Probe.

The Configure Video Probe Polling page contains the following fields and buttons:

<table>
<thead>
<tr>
<th>Fields and Buttons</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Video Probe(s)</td>
<td>Select 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>

Vidmon Polling

Viewing a Vidmon Report

To view a Vidmon report:

Step 1  From the Multicast Manager menu, select Polling Configuration & Reports.
Step 2  Select Miscellaneous Polling & Reports.
Step 3  Select Vidmon.
The Vidmon Reports page opens.

**Step 4** Select **Report Parameters**.

The Vidmon Report Parameters page contains the following fields and buttons:

<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 select 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 select a date from a calendar.</td>
</tr>
<tr>
<td>Device</td>
<td>Select a device from the drop-down list.</td>
</tr>
<tr>
<td>Source</td>
<td>Select a source from the drop-down list.</td>
</tr>
<tr>
<td>Group</td>
<td>Select 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, select **Polling Configuration & Reports**.

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

**Step 3** Select **Vidmon**.

**Step 4** Select **Historical Report**. The Historical Graphs page for video probe reports appears.

**Step 5** From the drop-down list in the **Units** field, select the units for the report:

<table>
<thead>
<tr>
<th>Field</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 6** Click the calendar item (...) for **From Date** and from the calendar that appears, select the From Date.

**Step 7** Click the calendar item (...) for **To Date** and from the calendar that appears, select 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.
Configuring Vidmon Polling

To configure Vidmon Polling:

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

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

**Step 3**
Select **Vidmon**.

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

**Step 4**
Select **Config Vidmon Polling**.

The Config Vidmon Polling page appears, as shown in **Figure 5-8**.

**Figure 5-8 Config Vidmon Polling Page**

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, select **By Vidmon**.
- 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, select either **Delete** or **Export**.

If you select **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 select **Add**, the Vidmon Polling Configuration page appears, as shown in **Figure 5-9**.
Chapter 5  Polling Configuration and Reports

Miscellaneous Polling & Reports

Figure 5-9  Vidmon Polling Configuration Page with List of Vidmon Devices

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

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

As you select devices, a row of configuration options for the device appears. Figure 5-10 shows all of the devices that are shown in Figure 5-9 selected.

**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 select configuration fields, the field becomes active.

Figure 5-11 shows all configuration fields for all devices listed in Figure 5-10 selected.

**Step 9** Enter Vidmon polling configuration parameters as indicated in Table 5-3.
Table 5-3 Vidmon Polling Configuration Options

<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 is exceeded, CMM generates a delay factor event.</td>
</tr>
</tbody>
</table>
| MLR                  | For Cisco 76xx devices, enter a Media Loss Rate (MLR) threshold value (number of packets). When the MLR threshold is exceeded, CMM generates an alert.  
**Note** MLR monitoring is not available for Viking devices (Cisco ASR 9000 devices). |
| MRV max (milli %)    | 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 is exceeded, CMM generates a VIDMON MRV HIGH alert. |
| MRV min (milli %)    | 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. |

**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 5-11**.
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.

### Editing an Existing Vidmon Polling Configuration

To edit an existing VidMon polling configuration:

Step 1 On the Vidmon Configurations 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.

*Table 5-3 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, as shown in Figure 5-13.
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 Table 5-3 on page 5-36.

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 Multicast Virtual Private Network (MVPN).

**MDT Source Report**

To view MDT Source polling:
Chapter 5  Polling Configuration and Reports

Miscellaneous Polling & Reports

Step 1  From the Multicast Manager menu, select Polling Configuration & Reports.
Step 2  Select Miscellaneous Polling & Reports.
Step 3  Select MVPN Polling.
Step 4  Select Report Parameters.

The MDT Source Report page contains the following fields and buttons:

<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 select 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 select a date from a calendar.</td>
</tr>
<tr>
<td>Device</td>
<td>Select a device from the drop-down list.</td>
</tr>
<tr>
<td>Source</td>
<td>Select a source from the drop-down list.</td>
</tr>
<tr>
<td>Group</td>
<td>Select 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, select Polling Configuration & Reports.
Step 2  Select Miscellaneous Polling & Reports.
Step 3  Select MVPN Polling.
Step 4  Select MDT Default Report.
Step 5  Select Report Parameters.
The MDT Default Report page contains the following fields and buttons:

<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 select 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 select a date from a calendar.</td>
</tr>
<tr>
<td>Device</td>
<td>Select a device from the drop-down list.</td>
</tr>
<tr>
<td>Source</td>
<td>Select a source from the drop-down list.</td>
</tr>
<tr>
<td>Group</td>
<td>Select 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, select Polling Configuration & Reports.

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

**Step 3** Select MVPN Polling.

**Step 4** Select VRF Interface Count Report.

**Step 5** Select Report Parameters.
The VRF Interface Count Report page contains the following fields and buttons:

<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 select 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 select a date from a calendar.</td>
</tr>
<tr>
<td>Device</td>
<td>Select a device from the drop-down list.</td>
</tr>
<tr>
<td>Source</td>
<td>Select a source from the drop-down list.</td>
</tr>
<tr>
<td>Group</td>
<td>Select 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, select **Polling Configuration & Reports**.

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

**Step 3** Select **MVPN Polling**.

**Step 4** Select **VRF Count Report**.

**Step 5** Select **Report Parameters**.
The VRF Count Report page contains the following fields and buttons:

<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 select 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 select a date from a calendar.</td>
</tr>
<tr>
<td>Device</td>
<td>Select a device from the drop-down list.</td>
</tr>
<tr>
<td>Source</td>
<td>Select a source from the drop-down list.</td>
</tr>
<tr>
<td>Group</td>
<td>Select 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:

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

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

**Step 3** Select **MVPN Polling**.

**Step 4** Select **Config MVPN Polling**.

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

**Step 6** Select **By MVPN**.

The Configure MVPN Polling page contains the following fields and buttons:

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

Baseline Route Polling

Note: You must first create a baseline as described in Create Baseline, page 8-20.

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

Multicast Report

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

Historical Report

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

---

**Compare Baseline**

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

**Step 2** Select **CRM Polling**.

**Step 3** Select **Baseline Route Polling**

**Step 4** Click the **Add** button.

**Step 5** Select **By Baseline Route**.

The Configure Baseline Route page contains the following fields and buttons:

<table>
<thead>
<tr>
<th>Fields and Buttons</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Routing Table Type</td>
<td>Select either Unicast or Multicast.</td>
</tr>
<tr>
<td>Select Router</td>
<td>Select a router.</td>
</tr>
<tr>
<td>Baseline</td>
<td>Select a baseline.</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>
<tr>
<td>Add/Modify</td>
<td>Updates the baseline route for monitoring.</td>
</tr>
</tbody>
</table>

Specific Route Polling

Unicast Report

To view the Unicast Report:

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

**Step 2** Select **CRM Polling**.

**Step 3** Select **Specific Route Polling**.

**Step 4** Select **Report Parameters**.
The Unicast Report page contains the following fields and buttons:

<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 select 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 select a date from a calendar.</td>
</tr>
<tr>
<td>Device</td>
<td>Select a device from the drop-down list.</td>
</tr>
<tr>
<td>Source</td>
<td>Select a source from the drop-down list.</td>
</tr>
<tr>
<td>Group</td>
<td>Select 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, select **Polling Configuration & Reports**.

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

**Step 3** Select **CRM Polling**

**Step 4** Select **Specific Route Polling**.

**Step 5** Select **Multicast Report**.

**Step 6** Select **Report Parameters**.
The Multicast Report page contains the following fields and buttons:

<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 select 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 select a date from a calendar.</td>
</tr>
<tr>
<td>Device</td>
<td>Select a device from the drop-down list.</td>
</tr>
<tr>
<td>Source</td>
<td>Select a source from the drop-down list.</td>
</tr>
<tr>
<td>Group</td>
<td>Select 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:

1. From the Multicast Manager menu, select **Polling Configuration & Reports**.
2. Select **Miscellaneous Polling & Reports**.
3. Select **CRM Polling**.
4. Select **Specific Route Polling**.
5. Select **Config Unicast Polling**.
6. Click **Add**.
7. Select **By Unicast Route**.

**Note**

You can also select **By Import** to import the unicast route from a CSV file.

The Unicast Report page contains the following fields and buttons:

<table>
<thead>
<tr>
<th>Fields and Buttons</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Select Router</td>
<td>Select 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>
CRM Polling

Chapter 5      Polling Configuration and Reports

Step 8   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, select 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 9   Click the Add button.

Configuring Multicast Polling

To configure Multicast Polling:

Step 1   From the Multicast Manager menu, select Polling Configuration & Reports.
Step 2   Select Miscellaneous Polling & Reports.
Step 3   Select CRM Polling.
Step 4   Select Specific Route Polling.
Step 5   Select Config Multicast Polling.
Step 6   Click Add.
Step 7   Select By Multicast Route.

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

The Multicast Route Configuration page contains the following fields and buttons:

<table>
<thead>
<tr>
<th>Fields and Buttons</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>
<tr>
<td>Select Router</td>
<td>Select 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>
### Step 8
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, select **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 9
Click the **Add** button.

**Fields and Buttons** | **Description**
--- | ---
View Current Routes | Updates the baseline route for monitoring
Specific Multicast Routes List | To generate a specific multicast list, check the check box and click **Add Selected Routes to Polling Config**.