



Managing Events and Alarms

By configuring how events are reported, you can monitor those events more effectively and take corrective action, if necessary. Cisco Fabric Manager provides the following features for reporting and responding to network events.

SNMP events

These are preconfigured notifications, including SNMPv2 traps and SNMPv3 informs. Procedures for managing SNMP events include:

- [Viewing the Events Log, page 8-3](#)
- [Configuring Event Destinations, page 8-3](#)
- [Configuring Event Security, page 8-4](#)
- [Configuring Event Filters, page 8-4](#)

RMON alarms

These are configurable notifications that you can set based on thresholds for various network events. Procedures for managing and viewing RMON alarms include:

- [Enabling RMON Alarms by Port, page 8-4](#)
- [Enabling RMON Alarms for VSANs, page 8-5](#)
- [Enabling RMON Alarms for Physical Components, page 8-6](#)
- [Configuring RMON Controls, page 8-6](#)
- [Managing RMON Alarms, page 8-7](#)
- [Managing RMON Event Severity Levels, page 8-7](#)
- [Viewing the RMON Log, page 8-7](#)

Call Home

This is a feature that lets you configure automatically generated e-mail messages or other responses to specific events. You can use Call Home for direct paging of a network support engineer, E-mail notification to a Network Operations Center, and utilization of Cisco AutoNotify services for direct case generation with the Technical Assistance Center. Call Home provides the following features:

- Fixed set of predefined alerts and trigger events on the switch.

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- Automatic execution and attachment of relevant command output.
- Multiple message format options:
 - Short Text — Suitable for pagers or printed reports.
 - Plain Text — Full formatted message information suitable for human reading.
 - XML — Matching readable format using Extensible Markup Language (XML) and Document Type Definitions (DTDs) named Messaging Markup Language (MML). The MML DTD is published on the Cisco Connection Online (CCO) website at <http://www.cisco.com/>. The XML format enables communication with the Cisco Systems TAC group.
- Multiple concurrent message destinations. Up to 50 e-mail destination addresses are allowed for each format type.
- Message categories include system, environment, switching module hardware, services module hardware, supervisor module, hardware, inventory, and test.

Procedures for configuring Call Home include:

- [Call Home Configuration Overview, page 8-8](#)
- [Configuring Call Home Attributes, page 8-9](#)
- [Configuring Call Home Destination Attributes, page 8-9](#)
- [Configuring Call Home E-Mail Addresses, page 8-10](#)
- [Configuring Call Home Alerts, page 8-10](#)
- [Configuring Call Home Profiles, page 8-10](#)

Syslog

This is a standard message log that records various network and system events. Procedures for configuring the Syslog include:

- [Configuring Syslog Attributes, page 8-11](#)
- [Configuring Syslog Servers, page 8-11](#)
- [Configuring Syslog Priorities, page 8-12](#)



Note

The Fabric Manager allows you to manage events on multiple Cisco MDS 9000 Family switches. The Device Manager allows you to manage events on a single Cisco MDS 9000 Family switch.

For information about events and configuring them using the command-line interface (CLI), refer to the *Cisco 9000 Family Configuration Guide*.

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Viewing the Events Log

To view the events log from the Device Manager, choose **SNMP Log** from the Events menu. The Events Log dialog box displays a log of events for a single switch.

To manage the SNMP log, choose **SNMP Log** from the Events menu and click the **Controls** tab. The Controls tab provides summary statistics about the SNMP log and allows you to change the default settings for the log.



Caution

Changing these values from different Fabric Manager workstations at the same time may cause unpredictable results.



Note

You can access the field descriptions for the windows or dialog boxes in this procedure in the Reference section of the Fabric Manager or Device Manager help systems.

Configuring Event Destinations

Cisco MDS 9000 Family switches, like other SNMP-enabled devices, send events (traps and informs) to configurable destinations, called trap receivers in SNMPv2.

To configure event destinations from the Fabric Manager, choose **Events > Notifications/Traps** on the menu tree and click the **Destinations** tab. To configure event destinations from the Device Manager, choose **Destinations** from the Events menu.

The Information pane from the Fabric Manager displays event destination information for multiple switches. The dialog box for the Device Manager displays event destinations for a single switch.

To create an event destination, click **Create** on the Device Manager dialog box or click the **Create Row** button on the Fabric Manager toolbar.

The Create Event Destinations dialog box is displayed. The dialog box from the Fabric Manager lets you select a switch.

Complete the fields and click **Apply** to create the event destination or click **OK** to create the destination and close the window.



Note

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Configuring Event Security



Caution

This is an advanced function that should only be used by administrators having experience with SNMPv3.

To configure event security from the Fabric Manager, choose **Events > Notifications/Traps** on the menu tree, and click the **Security** tab.

To configure event security from the Device Manager, choose **Destinations** from the Events menu and click the **Security** tab.

The Information pane from the Fabric Manager displays event security information for multiple switches. The dialog box from Device Manager displays event security for a single switch.



Note

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Configuring Event Filters

To configure event filters from the Fabric Manager, choose **Events > Filters** on the menu tree, and click the **FC** or **Other** tab.

To configure event filters from the Device Manager, choose **Filters** from the Events menu.

The Event Filters dialog box displays event filters for a single switch. The Information pane in Fabric Manager displays two different views, which list the same event filters for multiple switches, in different order.

To configure event filters, check the check box next to the appropriate filter name.



Note

You can access the field descriptions for the windows or dialog boxes in this procedure in the Reference section of the Fabric Manager or Device Manager help systems.

Enabling RMON Alarms by Port

To enable alarm notifications by port from the Device Manager, choose **Threshold Manager** from the **Events** menu and click the **Ports** tab.

To configure an RMON alarm for one or more ports, follow these steps:

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- Step 1** Select the ports to monitor.
- a. Click the **Selected** radio button.
 - b. Click the button to the right of the Selected field to display all ports.
 - c. Select the ports you want to monitor.
 - d. Click OK to accept the selection.

Alternatively, click the appropriate radio button to select ports by type:

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- All ports
- xE ports
- Fx ports

Step 2 Click the check box for each variable that you want to monitor.

Step 3 Enter the threshold value in the Value column.

Step 4 Enter the sampling period in seconds.

Step 5 Select one of the following severity levels to assign to the alarm:

- Fatal
- Warning
- Critical
- Error
- Information

Step 6 Click **Create**.

Step 7 Confirm the operation to define an alarm and a log event when the system prompts you to define a severity event.

If you do not confirm the operation, the system only defines a log event.



Note

You can access the field descriptions for the windows or dialog boxes in this procedure in the Reference section of the Fabric Manager or Device Manager help systems.

Enabling RMON Alarms for VSANs

To manage RMON alarm service attributes for selected VSANs from the Device Manager, choose **Threshold Manager** from the Events menu and click the **Services** tab. The Threshold Manager dialog box with the Services tab selected is displayed.

To enable an RMON alarm for one or more VSANs, follow these steps:

Step 1 Enter one or more VSANs to monitor in the VSAN Id(s) field.

Step 2 Click the check box for each variable that you want to monitor.

Step 3 Enter the threshold value in the Value column.

Step 4 Enter the sampling period in seconds.

Step 5 Select a severity level to assign to the alarm:

Step 6 Click **Create**.

Step 7 Confirm the operation to define an alarm and a log event when the system prompts you to define a severity event.

If you do not confirm the operation, the system only defines a log event.

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**Note**

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Enabling RMON Alarms for Physical Components

To configure RMON alarm physical attributes from the Device Manager, choose **Threshold Manager** from the Events menu and click the **Physical** tab. The **Create RMON Alarms** dialog box with the Physical tab selected is displayed.

To configure an RMON alarm for a physical component, follow these steps:

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- Step 1** Click the check box for each variable that you want to monitor.
 - Step 2** Enter the threshold value in the Value column.
 - Step 3** Enter the sampling period in seconds.
 - Step 4** Select one of the following severity levels to assign to the alarm:
 - Fatal
 - Warning
 - Critical
 - Error
 - Information
 - Step 5** Click **Create**.
 - Step 6** Confirm the operation to define an alarm and a log event when the system prompts you to define a severity event.

If you do not confirm the operation, the system only defines a log event.

**Note**

You can access the field descriptions for the windows or dialog boxes in this procedure in the Reference section of the Fabric Manager or Device Manager help systems.

Configuring RMON Controls

To change the default controls for RMON alarms, choose **Threshold Manager** from the Device Manager menu. You see the Threshold Manager window.

Click **More** on the Threshold Manager window. You see the second Threshold Manager dialog box.

**Note**

You can access the field descriptions for the windows or dialog boxes in this procedure in the Reference section of the Fabric Manager or Device Manager help systems.

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Managing RMON Alarms

To view the alarms that have already been enabled, do the following:

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- Step 1** Choose **Threshold Manager** from the Events menu and click the **More** button on the Threshold Manager dialog box.
 - Step 2** Click the **Alarms** tab.
You see the RMON Alarms dialog box.
 - Step 3** To create a customized threshold entry, click the **Create** button.
You see the Create RMON Alarms dialog box.



Note You can access the field descriptions for the windows or dialog boxes in this procedure in the Reference section of the Fabric Manager or Device Manager help systems.

Managing RMON Event Severity Levels

To define customized RMON event severity levels, do the following:

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- Step 1** Select **Threshold Manager** from the Events menu and click **More** on the Threshold Manager dialog box.
 - Step 2** Click the **Events** tab on the RMON Thresholds dialog box.
You see the RMON Events dialog box.
 - Step 3** To create a new threshold entry, click the **Create** button.
You see the Create Threshold Entry dialog box.
 - Step 4** Configure the RMON event threshold attributes.



Note You can access the field descriptions for the windows or dialog boxes in this procedure in the Reference section of the Fabric Manager or Device Manager help systems.

Viewing the RMON Log

To view the RMON log from the Device Manager, do the following:

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- Step 1** Select **Threshold Manager** from the Events menu and click **More** on the Threshold Manager dialog box.
 - Step 2** Click the **Log** tab on the RMON Thresholds dialog box.
You see the RMON Log dialog box.
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**Note**

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Call Home Configuration Overview

When configuring Call Home, keep the following points in mind:

- You must configure at least one E-mail server and at least one destination profile. The destination profile(s) used depends on whether the notification is sent to a pager, e-mail, or automated service such as Cisco AutoNotify.
- You must configure the contact name (SNMP server contact), phone, and street address information before enabling Call Home.
- The Cisco MDS 9000 switch must have IP connectivity to an E-mail server.
- To use Cisco AutoNotify you must obtain an active service contract for the device.

To configure Call Home, use the different tabs on the Call Home dialog box, as summarized below:

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- Step 1** Assign contact information and enable the Call Home feature using the General tab (see the [“Configuring Call Home Attributes” section on page 8-9](#)). The Call Home feature is not enabled by default, and you must enter an e-mail address that identifies the source of Call Home notifications.
- Step 2** Configure the destination e-mail addresses for Call Home notifications using the Destinations tab (see the [“Configuring Call Home Destination Attributes” section on page 8-9](#)). You can identify one more e-mail addresses that will receive Call Home notifications.
- Step 3** Identify your SMTP server using the E-mail Setup tab (see the [“Configuring Call Home E-Mail Addresses” section on page 8-10](#)). You need to identify a message server to which your switch has access. This message server will forward the Call Home notifications to the destinations.
- Step 4** Test Call Home by sending a test message using the Alerts tab (see the [“Configuring Call Home Alerts” section on page 8-10](#)). You should test the Call Home feature to make sure it works.
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**Note**

You can access the field descriptions for the windows or dialog boxes in this procedure in the Reference section of the Fabric Manager or Device Manager help systems.

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Configuring Call Home Attributes

To assign contact information and enable the Call Home feature from the Fabric Manager, choose **Events** > **Call Home** on the menu tree and click the **General** tab. The Information pane from the Fabric Manager displays Call Home information for multiple switches.

To assign contact information and enable the Call Home feature from the Device Manager, choose **Call Home** from the Events menu and click the **General** tab. The Call Home Events dialog box with the General tab selected from the Device Manager displays Call Home attributes for a single switch.



Note

You can access the field descriptions for the windows or dialog boxes in this procedure in the Reference section of the Fabric Manager or Device Manager help systems.

Configuring Call Home Destination Attributes

To configure the destination e-mail addresses for Call Home notifications from the Fabric Manager, choose **Events** > **Call Home** on the menu tree and click the **Destination** tab. The Information pane from the Fabric Manager displays Call Home information for multiple switches.

To configure the destination e-mail addresses from the Device Manager, choose **Call Home** from the Events menu and click the **Destination** tab. The dialog box from the Device Manager displays Call Home attributes for a single switch.

To create a new Call Home destination, follow these steps:

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- Step 1** Click **Create** on the Device Manager dialog box, or click the **Create Row** button on the Fabric Manager toolbar.
From the Device Manager, you see the Create Call Home Destination dialog box.
From the Fabric Manager, you can select one or more switches to which the configuration applies.
 - Step 2** Select the profile name from the pull-down list.
 - Step 3** Enter a number identifier for the destination.
 - Step 4** Enter the e-mail address for the destination.
 - Step 5** Click **Create**.
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Note

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Configuring Call Home E-Mail Addresses

To identify your SMTP server from the Fabric Manager, choose **Events > Call Home** on the menu tree and click the **Email Setup** tab. The Information pane from the Fabric Manager displays Call Home information for multiple switches.

To identify your SMTP server from the Device Manager, choose **Call Home** from the Events menu and click the **Email Setup** tab. The Call Home dialog box from the Device Manager displays Call Home attributes for a single switch.

Configure the e-mail setup attributes for the Call Home features.



Note

You can access the field descriptions for the windows or dialog boxes in this procedure in the Reference section of the Fabric Manager or Device Manager help systems.

Configuring Call Home Alerts

To test Call Home from the Fabric Manager, choose **Events > Call Home** the menu tree and click the **Alerts** tab. The Information pane from the Fabric Manager displays Call Home information for multiple switches.

To test Call Home from the Device Manager, choose **Call Home** from the Events menu and click the **Alerts** tab. The dialog box with the Alerts tab selected from the Device Manager displays Call Home attributes for a single switch.

Configure the alert attributes for the Call Home feature.



Note

You can access the field descriptions for the windows or dialog boxes in this procedure in the Reference section of the Fabric Manager or Device Manager help systems.

Configuring Call Home Profiles

To configure Call Home attributes from the Fabric Manager, choose **Events > Call Home** on the menu tree and click the **Profiles** tab. The Information pane from the Fabric Manager displays Call Home information for multiple switches.

To configure Call Home attributes from the Device Manager, choose **Call Home** from the Events menu and click the **Profiles** tab. The dialog box with the Alerts tab selected from the Device Manager displays Call Home attributes for a single switch.

Configure the profile attributes for the Call Home feature.



Note

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Configuring Syslog Attributes

To configure syslog attributes, do the following:

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- Step 1** From the Fabric Manager, choose **Events > Syslog** on the menu tree and click the **General** tab. The Information pane from the Fabric Manager displays syslog information for multiple switches.

From the Device Manager, choose **Syslog** from the Events menu and click the **General** tab. The Syslog dialog box with the General tab selected from the Device Manager displays syslog information for a single switch.

- Step 2** Configure the general attributes for the syslog.



Note

You can access the field descriptions for the windows or dialog boxes in this procedure in the Reference section of the Fabric Manager or Device Manager help systems.

Configuring Syslog Servers

To configure syslog servers, do the following:

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- Step 1** From the Fabric Manager, choose **Events > Syslog** on the menu tree and click the **Servers** tab. The Information pane from the Fabric Manager displays syslog information for multiple switches.

From the Device Manager, choose **Syslog** from the Events menu and click the **Servers** tab. The Syslog dialog box with the Servers tab selected from the Device Manager displays syslog information for a single switch.

- Step 2** Configure the server attributes for the syslog.

- Step 3** To add a syslog server, click **Create**.

You see the Create Syslog Server dialog box.

- Step 4** Complete the fields on this dialog box and click **OK**.



Note

You can access the field descriptions for the windows or dialog boxes in this procedure in the Reference section of the Fabric Manager or Device Manager help systems.

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Configuring Syslog Priorities

To configure syslog priorities, do the following:

Step 1 From the Fabric Manager, choose **Events > Syslog** on the menu tree and click the **Priorities** tab. The Information pane from the Fabric Manager displays syslog information for multiple switches.

From the Device Manager, choose **Syslog** from the Events menu and click the **Priorities** tab. To configure syslog attributes The Syslog dialog box with the Servers tab selected from the Device Manager displays syslog information for a single switch.

Step 2 Configure the priorities for the syslog.



Note You can access the field descriptions for the windows or dialog boxes in this procedure in the Reference section of the Fabric Manager or Device Manager help systems.
