



## CHAPTER 61

# Configuring RMON

---

RMON is an Internet Engineering Task Force (IETF) standard monitoring specification that allows various network agents and console systems to exchange network monitoring data. You can use the RMON alarms and events to monitor Cisco MDS 9000 Family switches running the Cisco SAN-OS Release 2.0(1b) or later software.

This chapter includes the following sections:

- [About RMON, page 61-1](#)
- [Configuring RMON Using Threshold Manager, page 61-1](#)
- [Default Settings, page 61-16](#)

## About RMON

All switches in the Cisco MDS 9000 Family support the following RMON functions (defined in RFC 2819):

- **Alarm**—Monitors a specific management information base (MIB) object for a specified interval, triggers an alarm at a specified value (rising threshold), and resets the alarm at another value (falling threshold). Alarms can be used with events; the alarm triggers an event, which can generate a log entry or an SNMP trap.
- **Event**—Determines the action to take when an event is triggered by an alarm. The action can be to generate a log entry, an SNMP trap, or both.

Refer to the *Cisco MDS 9000 Family MIB Quick Reference* for agent and management information.

See the [“About SNMP Security” section on page 31-1](#) for SNMP security-related CLI configurations.

## Configuring RMON Using Threshold Manager

RMON is disabled by default and no events or alarms are configured in the switch. You can configure your RMON alarms and events by using the CLI or by using Threshold Manager in Device Manager.

The Threshold Monitor allows you to trigger an SNMP event or log a message when the selected statistic goes over a configured threshold value. RMON calls this a rising alarm threshold. The configurable settings are as follows:

- **Variable**—The statistic you want to set the threshold value on.

**Send documentation comments to [mdsfeedback-doc@cisco.com](mailto:mdsfeedback-doc@cisco.com)**

- **Value**—The value of the variable that you want the alarm to trigger at. This value is the difference (delta) between two consecutive polls of the variable by Device Manager.
- **Sample**—The sample period (in seconds) between two consecutive polls of the variable. Select your sample period such that the variable does not cross the threshold value you set under normal operating conditions.
- **Warning**—The warning level used by Device Manager to indicate the severity of the triggered alarm. This is a Fabric Manager and Device Manager enhancement to RMON.

**Note**

To configure any type of RMON alarm (absolute or delta, rising or falling threshold) click **More** on the Threshold Manager dialog box. You should be familiar with how RMON defines these concepts before configuring these advanced alarm types. Refer to the RMON-MIB (RFC 2819) for information on how to configure RMON alarms.

**Note**

You must also configure SNMP on the switch to access RMON MIB objects.

## RMON Alarm Configuration

Threshold Manager provides a list of common MIB objects to set an RMON threshold and alarm on. You can also set an alarm on any MIB object. The specified MIB must be an existing SNMP MIB object in standard dot notation (1.3.6.1.2.1.2.2.1.14.16 for ifInOctets.16).

Use one of the following options to specify the interval to monitor the MIB variable (ranges from 1 to 4294967295 seconds):

- Use the **delta** option to test the change between samples of a MIB variable.
- Use the **absolute** option to test each MIB variable directly.
- Use the **delta** option to test any MIB objects that are counters.

The range for the **rising threshold** and **falling threshold** values is -2147483647 to 2147483647.

**Caution**

The **falling threshold** must be less than the **rising threshold**.

You can optionally specify the following parameters:

- The event-number to trigger if the rising or falling threshold exceeds the specified limit.
- The owner of the alarm.

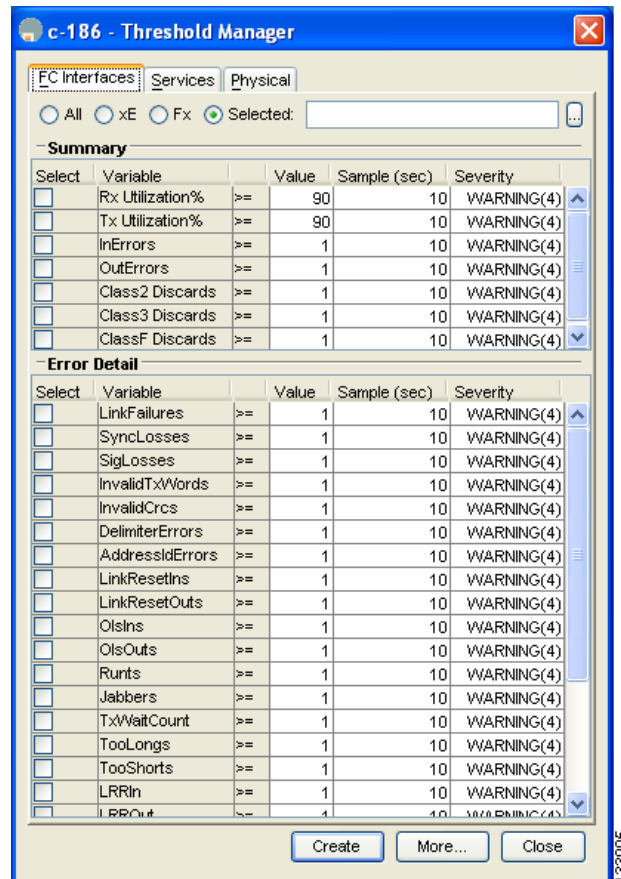
*Send documentation comments to [mdsfeedback-doc@cisco.com](mailto:mdsfeedback-doc@cisco.com)*

## Enabling RMON Alarms by Port

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

- Step 1** Choose **Admin > Events > Threshold Manager** and click the **FC Interfaces** tab. You see the Threshold Manager dialog box as shown in [Figure 61-1](#).

**Figure 61-1** Threshold Manager Dialog Box



- Step 2** Choose the **Select** radio button to select individual ports for this threshold alarm.
- Click the ... button to the right of the Selected field to display all ports.
  - Select the ports you want to monitor.
  - Click **OK** to accept the selection.

Alternatively, click the appropriate radio button to choose ports by type: **All** ports, **xE** ports, or **Fx** ports.

- Step 3** Check the check box for each variable to be monitored.
- Step 4** Enter the threshold value in the Value column.
- Step 5** Enter the sampling period in seconds. This is the time between each snapshot of the variable.
- Step 6** Choose one of the following severity levels to assign to the alarm: **Fatal**, **Warning**, **Critical**, **Error**, **Information**.

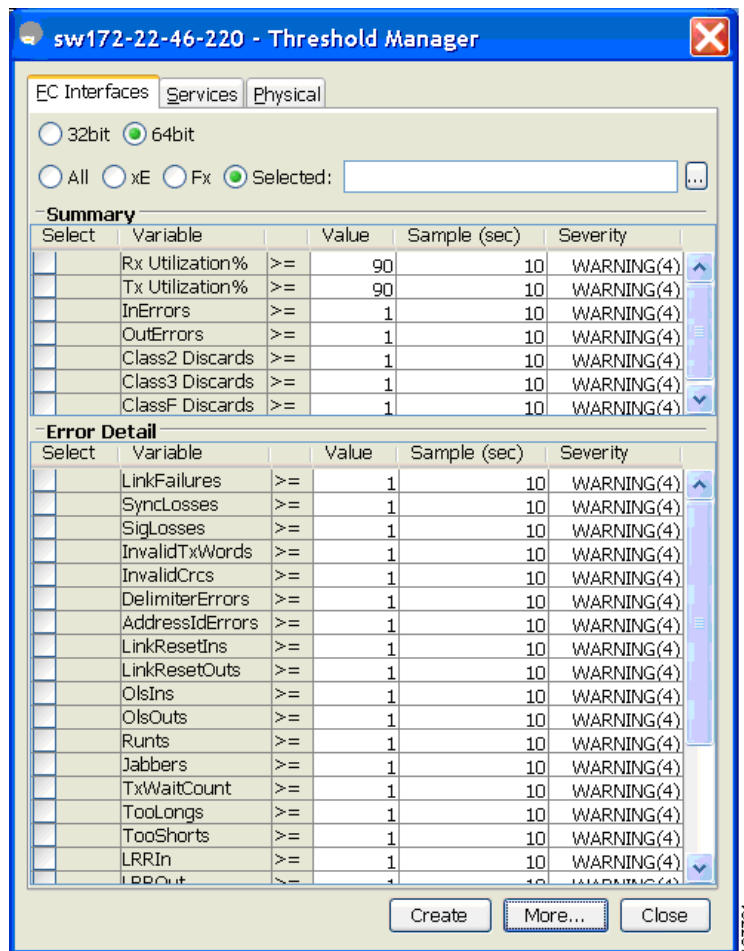
**Send documentation comments to [mdsfeedback-doc@cisco.com](mailto:mdsfeedback-doc@cisco.com)**

- Step 7** Click **Create**.
- Step 8** 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.
- Step 9** Click **More** then click the **Alarms** tab from the Threshold Manager dialog box to verify the alarm you created.
- Step 10** Close both dialog pop-ups.

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

- Step 1** Choose **Admin > Events > Threshold Manager** and click the **FC Interfaces > Create** tab. You see the create 32 and 64-bit alarm dialog box shown in [Figure 61-2](#).

**Figure 61-2 Create 32 and 64-Bit Dialog Box**



- Step 2** Choose the **Select** radio button to select individual ports for this threshold alarm.
- Click the **...** button to the right of the **Selected** field to display all ports.
  - Select the ports you want to monitor.
  - Click **OK** to accept the selection.

Alternatively, click the appropriate radio button to choose ports by type: **All** ports, **xE** ports, or **Fx** ports.

**Send documentation comments to [mdsfeedback-doc@cisco.com](mailto:mdsfeedback-doc@cisco.com)**

- Step 3** Check the check box for each variable to be monitored.
- Step 4** Enter the threshold value in the Value column.
- Step 5** Enter the sampling period in seconds. This is the time between each snapshot of the variable.
- Step 6** Choose one of the following severity levels to assign to the alarm: **Fatal**, **Warning**, **Critical**, **Error**, **Information**.
- Step 7** Click **Create**.
- Step 8** 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.
- Step 9** Click **More** then click the **Alarms** tab from the Threshold Manager dialog box to verify the alarm you created. The 32and 64-bit alarm show second as unit on the Interval column.

**Figure 61-3 RMON Threshold Dialog Box**

Id	Interval (sec)	Variable	SampleType	Value	StartupAlarm	Rising Threshold	Rising EventId	Falling Threshold	Falling EventId	FailedAttempts	Owner
1	10	ifcInOctets.fc3/2	deltaValue	2103019996	risingAlarm	9000000000		4890000000	4	0	0\ifcInOctets.fc3/2@mchinn-wxp03
4	10	cseSysCPUUtilization.0	absoluteValue	2	risingAlarm	90		489	4	0	0\cseSysCPUUtilization.0@mchinn-wxp03
5	10	cseSysMemoryUtilization.0	absoluteValue	82	risingAlarm	90		489	4	0	0\cseSysMemoryUtilization.0@mchinn-wxp03

- Step 10** Close both dialog box pop-ups.

To create 64-bit RMON alarms using Fabric Manager, follow these steps:

- Step 1** Choose **Physical Attributes > Events > RMON** tab.

You see the 64-bit alarm dialog box as shown in [Figure 61-4](#).

**Figure 61-4 64-Bit alarm Dialog Box**

Switch	Id	Interval (sec)	Variable	SampleType	Value	StartupAlarm	Rising Threshold	Rising EventId	Falling Threshold	Falling EventId	FailedAttempts	Owner
sw172-22-46-220	1	10	ifcInOctets.fc3/2	deltaValue	2104357700	risingAlarm	9000000000		4890000000	4	0	0

**Send documentation comments to [mdsfeedback-doc@cisco.com](mailto:mdsfeedback-doc@cisco.com)**

- Step 2** Choose the **64-bit alarms** tab.  
**Step 3** Click **Create Row** tab.

**Figure 61-5** 64-Bit Alarm Create Row Tab

- Step 4** Click on the drop-down menu in the **Variable** field.  
**Step 5** Choose from the list of **MIB Variables** provided by the Threshold Manager.

**Send documentation comments to [mdsfeedback-doc@cisco.com](mailto:mdsfeedback-doc@cisco.com)**

**Figure 61-6 MIB Variable Field Dialog Box for 64-Bit Alarms**

sw172-22-46-220 - Create RMON Thresholds 64bit Alarms

Index: 6 1.65535

Interval: sec

Variable:

SampleType:  absoluteValue  deltaValue

StartupAlarm:  risingAlarm  fallingAlarm  risingOrFallingAlarm

RisingThreshold:

RisingEventId: 0 0..65535 (0=no event)

FallingThreshold:

FallingEventId: 0 0..65535 (0=no event)

Owner:

Create Close

ifHCInOctets  
ifHCOutOctets  
ifInErrors  
ifOutErrors  
fcIfC2Discards  
fcIfC3Discards  
fcIfC4Discards  
cseSysCPUUtilization  
cseSysMemoryUtilization  
fcIfLinkFailures  
fcIfSyncLosses  
fcIfSigLosses  
fcIfInvalidTxWords  
fcIfInvalidCrcs  
fcIfDelimiterErrors  
fcIfAddressIdErrors  
fcIfLinkResetIns  
fcIfLinkResetOuts  
fcIfOlsIns  
fcIfOlsOuts  
fcIfRuntFramesIn  
fcIfJabberFramesIn  
fcIfTxWaitCount  
fcIfFramesTooLong  
fcIfFramesTooShort  
More

Rising Threshold	Falling EventId	Failed Attempts	Owner
00000000	4		0 ifHCInOctets.fc3/2@mchinn-wxp03
	4		0 cseSysCPUUtilization.0@mchinn-wxp03
	4		0 cseSysMemoryUtilization.0@mchinn-wxp03

Create... Delete Refresh Help Close

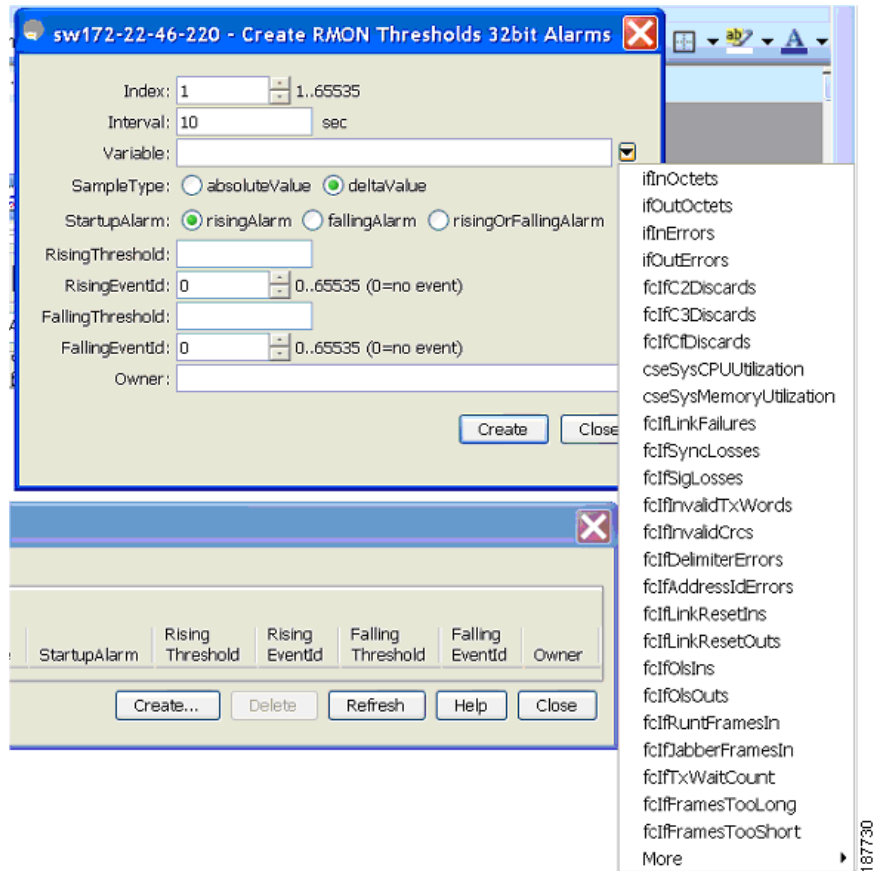


**Note** You need to supply the interface details along with variables selected from the drop-down list to complete the Variable field, for example, ifHCInOctets.

- Step 6** Choose the **32-bit alarms** tab.
- Step 7** Click **Create Row** tab.
- Step 8** Click on the drop-down menu in the **Variable** field.
- Step 9** Choose from the list of **MIB Variables** provided by the Threshold Manager.

**Send documentation comments to [mdsfeedback-doc@cisco.com](mailto:mdsfeedback-doc@cisco.com)**

**Figure 61-7 MIB Variable Field Dialog Box for 32-Bit Alarms**



**Step 10** Click the radio button to choose the RMON alarm to be created (32-bit or 64-bit HC Alarm).



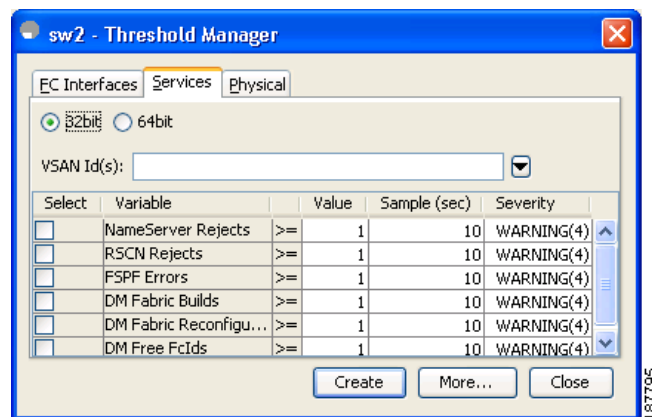
*Send documentation comments to [mdsfeedback-doc@cisco.com](mailto:mdsfeedback-doc@cisco.com)*

## Enabling 32 bit RMON Alarms for VSANs

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

- Step 1** Choose **Admin > Events > Threshold Manager** and click the **Services** tab.  
You see the Threshold Manager dialog box.
- Step 2** Click the **Services** tab.  
You see the Threshold Manager dialog box with the Services tab for 32-bit alarm selected as shown in [Figure 61-8](#).

Figure 61-8 Services Tab for 32-Bit Alarm Dialog Box



- Step 3** Click on the **32-bit** radio button.
- Step 4** Enter one or more VSANs (multiple VSANs separated by commas) to monitor in the VSAN ID(s) field. Use the down arrow to see a list of available VSANs to choose from.
- Step 5** Check the check box in the Select column for each variable to monitor.
- Step 6** Enter the threshold value in the Value column.
- Step 7** Enter the sampling period in seconds.
- Step 8** Choose a severity level to assign to the alarm **Fatal**, **Critical**, **Error**, **Warning**, **Information**.
- Step 9** Click **Create**.
- Step 10** 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.
- Step 11** Click **More**, then click the **Alarms** tab in the Threshold Manager dialog box to verify the alarm you created.

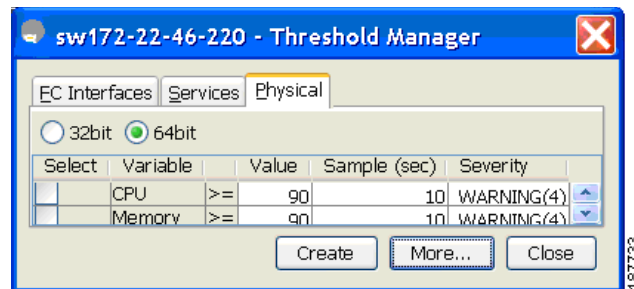
[Send documentation comments to mdsfeedback-doc@cisco.com](mailto:mdsfeedback-doc@cisco.com)

## Enabling 32 and 64-Bit RMON Alarms for Physical Components

To configure an RMON alarm for a physical component for a 64-bit alarm using Device Manager, follow these steps:

- Step 1** Choose **Admin > Events > Threshold Manager** and click the **Physical** tab. You see the Threshold Manager dialog box with the Physical tab for the 64-bit alarm selected as shown in [Figure 61-9](#).

**Figure 61-9** Physical Tab for the 64-Bit Alarm



- Step 2** Check the check box in the Select column for each variable to monitor.
- Step 3** Enter the threshold value in the Value column.
- Step 4** Enter the sampling period in seconds.
- Step 5** Choose one of the following severity levels to assign to the alarm: **Fatal(1)**, **Warning(2)**, **Critical(3)**, **Error(4)**, **Information(5)**.
- 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.
- Step 8** Click **More**, then click the **64-bit Alarms** tab in the Threshold Manager dialog box to verify the alarm you created (see [Figure 61-10](#))

Send documentation comments to [mdsfeedback-doc@cisco.com](mailto:mdsfeedback-doc@cisco.com)

Figure 61-10 64-Bit Alarm Tab

Id	Interval (sec)	Variable	SampleType	Value	StartupAlarm	Rising Threshold	Rising EventId	Falling Threshold	Falling EventId	FailedAttempts	Owner
1	10	ifnErrors.fc2/2	deltaValue	0	risingAlarm	1	4.0	4.0	4	0:ifnErrors.fc2/2@lnche-wsp01	
2	10	ifnErrors.fc2/3	deltaValue	0	risingAlarm	1	4.0	4.0	4	0:ifnErrors.fc2/3@lnche-wsp01	
3	10	ifnErrors.fc2/4	deltaValue	0	risingAlarm	1	4.0	4.0	4	0:ifnErrors.fc2/4@lnche-wsp01	
4	10	ifcErrors.fc2/2	deltaValue	0	risingAlarm	1	4.0	4.0	4	0:ifcErrors.fc2/2@lnche-wsp01	
5	10	ifcErrors.fc2/3	deltaValue	0	risingAlarm	1	4.0	4.0	4	0:ifcErrors.fc2/3@lnche-wsp01	
6	10	ifcErrors.fc2/4	deltaValue	0	risingAlarm	1	4.0	4.0	4	0:ifcErrors.fc2/4@lnche-wsp01	
7	10	fct2Discards.fc2/2	deltaValue	0	risingAlarm	1	4.0	4.0	4	0:fct2Discards.fc2/2@lnche-wsp01	
8	10	fct2Discards.fc2/3	deltaValue	0	risingAlarm	1	4.0	4.0	4	0:fct2Discards.fc2/3@lnche-wsp01	
9	10	fct2Discards.fc2/4	deltaValue	0	risingAlarm	1	4.0	4.0	4	0:fct2Discards.fc2/4@lnche-wsp01	
10	10	fct3Discards.fc2/2	deltaValue	0	risingAlarm	1	4.0	4.0	4	0:fct3Discards.fc2/2@lnche-wsp01	
11	10	fct3Discards.fc2/3	deltaValue	0	risingAlarm	1	4.0	4.0	4	0:fct3Discards.fc2/3@lnche-wsp01	
12	10	fct3Discards.fc2/4	deltaValue	0	risingAlarm	1	4.0	4.0	4	0:fct3Discards.fc2/4@lnche-wsp01	
13	10	fct3Discards.fc2/2	deltaValue	0	risingAlarm	1	4.0	4.0	4	0:fct3Discards.fc2/2@lnche-wsp01	
14	10	fct3Discards.fc2/3	deltaValue	0	risingAlarm	1	4.0	4.0	4	0:fct3Discards.fc2/3@lnche-wsp01	
15	10	fct3Discards.fc2/4	deltaValue	0	risingAlarm	1	4.0	4.0	4	0:fct3Discards.fc2/4@lnche-wsp01	
16	10	fctLinkFailures.fc2/2	deltaValue	0	risingAlarm	1	4.0	4.0	4	0:fctLinkFailures.fc2/2@lnche-wsp01	
17	10	fctLinkFailures.fc2/3	deltaValue	0	risingAlarm	1	4.0	4.0	4	0:fctLinkFailures.fc2/3@lnche-wsp01	
18	10	fctLinkFailures.fc2/4	deltaValue	0	risingAlarm	1	4.0	4.0	4	0:fctLinkFailures.fc2/4@lnche-wsp01	
19	10	fctSyncLosses.fc2/2	deltaValue	0	risingAlarm	1	4.0	4.0	4	0:fctSyncLosses.fc2/2@lnche-wsp01	
20	10	fctSyncLosses.fc2/3	deltaValue	0	risingAlarm	1	4.0	4.0	4	0:fctSyncLosses.fc2/3@lnche-wsp01	
21	10	fctSyncLosses.fc2/4	deltaValue	0	risingAlarm	1	4.0	4.0	4	0:fctSyncLosses.fc2/4@lnche-wsp01	
22	10	fctSyncLosses.fc2/2	deltaValue	0	risingAlarm	1	4.0	4.0	4	0:fctSyncLosses.fc2/2@lnche-wsp01	
23	10	fctSyncLosses.fc2/3	deltaValue	0	risingAlarm	1	4.0	4.0	4	0:fctSyncLosses.fc2/3@lnche-wsp01	
24	10	fctSyncLosses.fc2/4	deltaValue	0	risingAlarm	1	4.0	4.0	4	0:fctSyncLosses.fc2/4@lnche-wsp01	
25	10	fctInvalidWords.fc2/2	deltaValue	4	risingAlarm	1	4.0	4.0	4	0:fctInvalidWords.fc2/2@lnche-wsp01	
26	10	fctInvalidWords.fc2/3	deltaValue	4	risingAlarm	1	4.0	4.0	4	0:fctInvalidWords.fc2/3@lnche-wsp01	
27	10	fctInvalidTxWords.fc2/4	deltaValue	4	risingAlarm	1	4.0	4.0	4	0:fctInvalidTxWords.fc2/4@lnche-wsp01	
28	10	fctInvalidCrcls.fc2/2	deltaValue	0	risingAlarm	1	4.0	4.0	4	0:fctInvalidCrcls.fc2/2@lnche-wsp01	
29	10	fctInvalidCrcls.fc2/3	deltaValue	0	risingAlarm	1	4.0	4.0	4	0:fctInvalidCrcls.fc2/3@lnche-wsp01	
30	10	fctInvalidCrcls.fc2/4	deltaValue	0	risingAlarm	1	4.0	4.0	4	0:fctInvalidCrcls.fc2/4@lnche-wsp01	
31	10	fctInvalidCrcls.fc2/2	deltaValue	0	risingAlarm	1	4.0	4.0	4	0:fctInvalidCrcls.fc2/2@lnche-wsp01	
32	10	fctDelimiterErrors.fc2/3	deltaValue	0	risingAlarm	1	4.0	4.0	4	0:fctDelimiterErrors.fc2/3@lnche-wsp01	
33	10	fctDelimiterErrors.fc2/4	deltaValue	0	risingAlarm	1	4.0	4.0	4	0:fctDelimiterErrors.fc2/4@lnche-wsp01	
34	10	fctAddressErrors.fc2/2	deltaValue	0	risingAlarm	1	4.0	4.0	4	0:fctAddressErrors.fc2/2@lnche-wsp01	
35	10	fctAddressErrors.fc2/3	deltaValue	0	risingAlarm	1	4.0	4.0	4	0:fctAddressErrors.fc2/3@lnche-wsp01	
36	10	fctAddressErrors.fc2/4	deltaValue	0	risingAlarm	1	4.0	4.0	4	0:fctAddressErrors.fc2/4@lnche-wsp01	
37	10	fctLinkResets.fc2/2	deltaValue	0	risingAlarm	1	4.0	4.0	4	0:fctLinkResets.fc2/2@lnche-wsp01	
38	10	fctLinkResets.fc2/3	deltaValue	0	risingAlarm	1	4.0	4.0	4	0:fctLinkResets.fc2/3@lnche-wsp01	
39	10	fctLinkResets.fc2/4	deltaValue	0	risingAlarm	1	4.0	4.0	4	0:fctLinkResets.fc2/4@lnche-wsp01	
40	10	fctLinkResetOuts.fc2/2	deltaValue	0	risingAlarm	1	4.0	4.0	4	0:fctLinkResetOuts.fc2/2@lnche-wsp01	
41	10	fctLinkResetOuts.fc2/3	deltaValue	0	risingAlarm	1	4.0	4.0	4	0:fctLinkResetOuts.fc2/3@lnche-wsp01	
42	10	fctLinkResetOuts.fc2/4	deltaValue	0	risingAlarm	1	4.0	4.0	4	0:fctLinkResetOuts.fc2/4@lnche-wsp01	
43	10	fctOlIns.fc2/2	deltaValue	0	risingAlarm	1	4.0	4.0	4	0:fctOlIns.fc2/2@lnche-wsp01	
44	10	fctOlIns.fc2/3	deltaValue	0	risingAlarm	1	4.0	4.0	4	0:fctOlIns.fc2/3@lnche-wsp01	



**Note**

The MaxAlarm option is noneditable because of backend support. The max RMON alarms cannot be set using the CLI.

## Creating a New RMON from Device Manager Threshold Manager

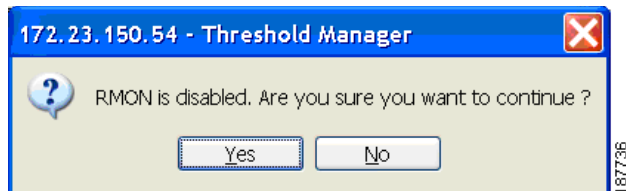
RMON does not check the RMON alarm configuration before configuring the switch.

To configure an RMON alarm from Device Manager Threshold Manager, follow these steps:

**Step 1** Choose **Physical Attributes > Events > RMON** and click the **Control** tab.

You see the create RMON alarm Threshold Manager dialog box as shown in [Figure 61-11](#).

Figure 61-11 Create RMON Alarm Threshold Manager



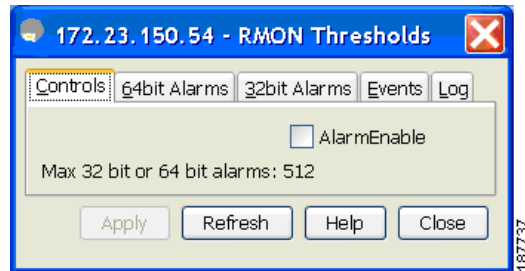
A user error is prompted if adding the new alarm exceeds the maximum alarm.

**Send documentation comments to [mdsfeedback-doc@cisco.com](mailto:mdsfeedback-doc@cisco.com)**

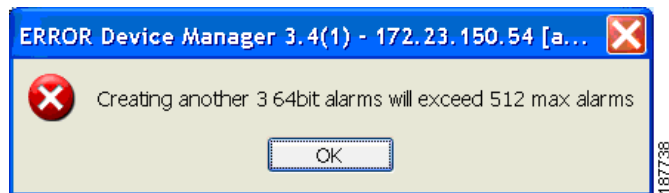
**Note**

This feature is applicable when managing switches 3.4(1) onwards. Device Manager can only treat the existing alarm number as 0 for the checking.

**Figure 61-12 RMON Control Threshold Tab**



**Figure 61-13 Device Manager Error Tab**



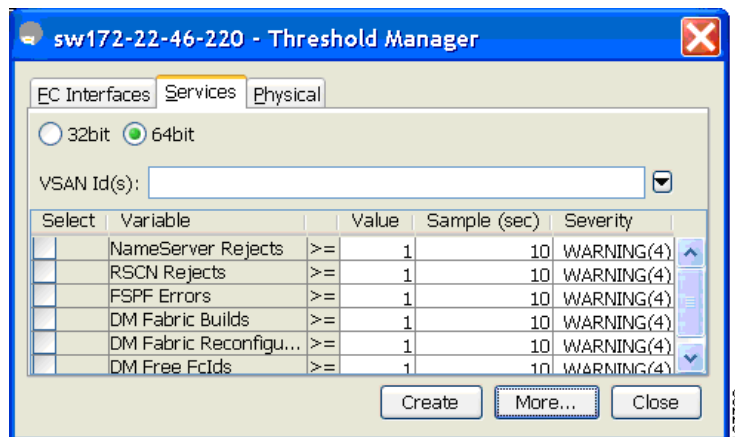
*Send documentation comments to [mdsfeedback-doc@cisco.com](mailto:mdsfeedback-doc@cisco.com)*

## Enabling RMON Alarms for VSANs

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

- Step 1** Choose **Admin > Events > Threshold Manager** and click the **Services** tab.  
You see the Threshold Manager dialog box.
- Step 2** Click the **Services** tab.  
You see the Threshold Manager dialog box with the Services tab selected as shown in [Figure 61-14](#).

**Figure 61-14** Threshold Manager Services Tab



- Step 3** Enter one or more VSANs (multiple VSANs separated by commas) to monitor in the VSAN ID(s) field. Use the down arrow to see a list of available VSANs to choose from.
- Step 4** Check the check box in the Select column for each variable to monitor.
- Step 5** Enter the threshold value in the Value column.
- Step 6** Enter the sampling period in seconds.
- Step 7** Choose a severity level to assign to the alarm (**Fatal**, **Critical**, **Error**, **Warning**, or **Information**).
- Step 8** Click **Create**.
- Step 9** 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.
- Step 10** Click **More**, then click the **Alarms** tab in the Threshold Manager dialog box to verify the alarm you created (see [Figure 61-15](#)).

*Send documentation comments to [mdsfeedback-doc@cisco.com](mailto:mdsfeedback-doc@cisco.com)*

**Figure 61-15** List of Threshold Alarms

Switch	Domain Mgr RCF	Zone Rejects	Zone Merge Failures	Zone Merge Successes	Zone Default Policy Change	Zone Unsuppd Mode	RSCN ILS	RSCN ILS Rx	RSCN ELS	FSPF Neighbor Changes	Name Server
sw172-22-46-224	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
sw172-22-46-220	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
sw172-22-46-225	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
sw172-22-46-223	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
sw172-22-46-221	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
sw172-22-46-222	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
sw172-22-46-174	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**Step 11** Close both pop-up windows.

## Managing RMON Events

To define customized RMON events using Device Manager, follow these steps:

- Step 1** Choose **Admin > Events > Threshold Manager** 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 Thresholds Events tab as shown in [Figure 61-16](#).

**Figure 61-16** RMON Thresholds Events Tab

Id	Description	Type	LastTimeSent	Community	Owner
1	FATAL(1)	logandtrap	n/a	public	idd-fm
2	CRITICAL(2)	logandtrap	n/a	public	idd-fm
3	ERROR(3)	logandtrap	n/a	public	idd-fm
4	WARNING(4)	logandtrap	n/a	public	idd-fm
5	INFORMATION(5)	logandtrap	n/a	public	idd-fm

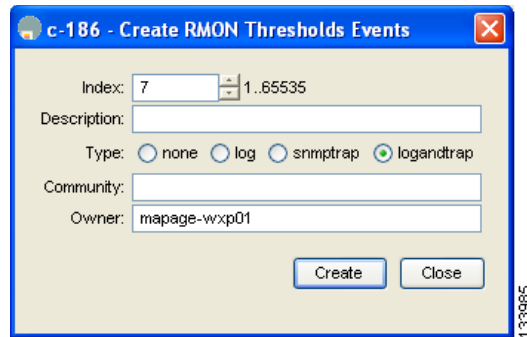
5 row(s)

**Step 3** Click **Create** to create an event entry.

You see the Create RMON Thresholds Events dialog box as shown in [Figure 61-17](#).

**Send documentation comments to [mdsfeedback-doc@cisco.com](mailto:mdsfeedback-doc@cisco.com)**

**Figure 61-17 Create RMON Thresholds Events Dialog Box**



- Step 4** Configure the RMON threshold event attributes by choosing the type of event (**log**, **snmptrap**, or **logandtrap**).
- Step 5** Increment the index. If you try to create an event with the existing index, you see a duplicate entry error message.
- Step 6** Optionally, provide a description and a community.
- Step 7** Click **Create**, then close this dialog box.
- Step 8** Verify that your event is listed in the remaining RMON Thresholds dialog box.
- Step 9** Click **Close** to close the RMON Thresholds dialog box.

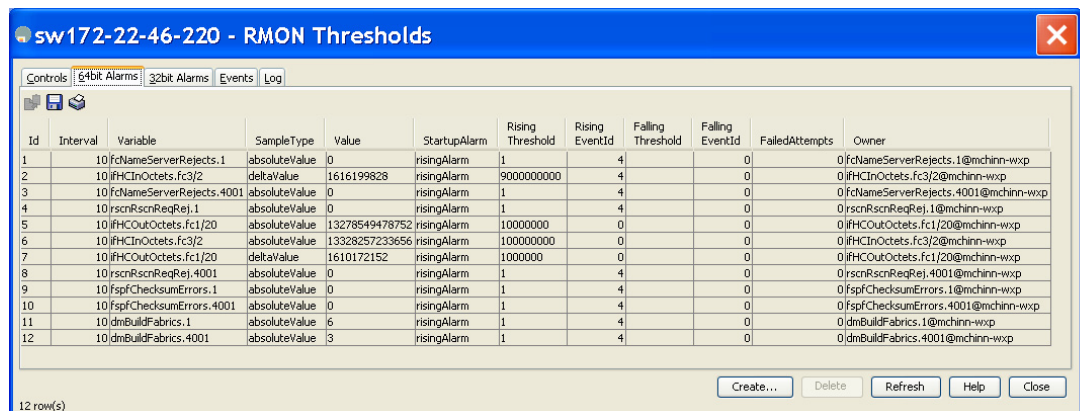
## Managing RMON Alarms

To view the alarms that have already been enabled using Device Manager, follow these steps:

- Step 1** Choose **Admin > Events > Threshold Manager** and click **More** in the Threshold Manager dialog box.
- Step 2** Click the **Alarms** tab.

You see the RMON Thresholds dialog box as shown in [Figure 61-18](#).

**Figure 61-18 RMON Thresholds Dialog Box**



**Send documentation comments to [mdsfeedback-doc@cisco.com](mailto:mdsfeedback-doc@cisco.com)**

**Step 3** Delete any alarm by selecting it, then click **Delete**.

## Viewing the RMON Log

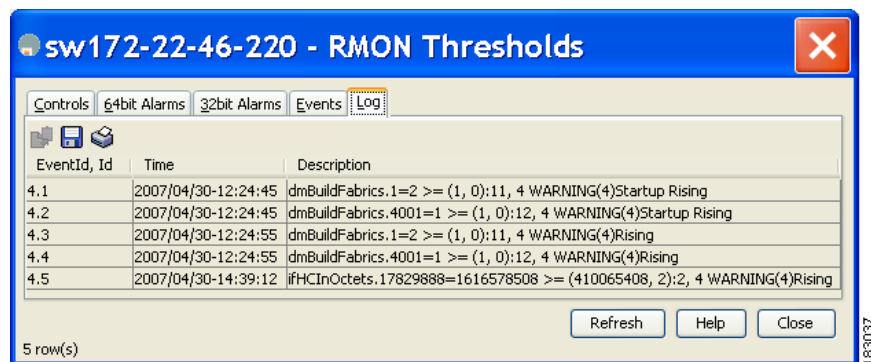
To view the RMON log using Device Manager, follow these steps:

**Step 1** Choose **Admin > Events > Threshold Manager** and click **More** on the Threshold Manager dialog box.

**Step 2** Click the **Log** tab in the RMON Thresholds dialog box.

You see the RMON Thresholds Log tab (see [Figure 61-19](#)). This is the log of RMON events that have been triggered by the Threshold Manager.

**Figure 61-19 RMON Thresholds Log Tab**



## Default Settings

[Table 61-1](#) lists the default settings for all RMON features in any switch.

**Table 61-1 Default RMON Settings**

Parameters	Default
RMON alarms	Disabled.
RMON events	Disabled.