

Configure Remote Network Monitoring (RMON) Alarms on a Switch

Objective

Remote Network Monitoring (RMON) was developed by the Internet Engineering Task Force (IETF) to support monitoring and protocol analysis of Local Area Networks (LANs). It is a standard monitoring specification which enables different network monitors and console systems to exchange their network-monitoring data with each other. RMON facilitates network administrators to choose among the network-monitoring probes and consoles with features that meet their particular networking needs. RMON specifically defines the information that any network monitoring system should be able to provide. Statistics, events, history, alarms, hosts, hosts top N, matrix, filter, capture, and token ring are the ten groups in RMON.

RMON alarms provide a mechanism for setting thresholds and sampling intervals to generate exception events on counters or any other Simple Network Management Protocol (SNMP) object counter maintained by the agent. Both the rising and falling thresholds must be configured in the alarm. After a rising threshold is crossed, no rising events are generated until the companion falling threshold is crossed. After a falling alarm is issued, the next alarm is issued when a rising threshold is crossed.

Note: To know how to configure SNMP settings on your switch, click [here](#) for instructions.

One or more alarms are bound to an event, which indicates the action to be taken when the alarm occurs. Before you configure the RMON alarms on your switch, make sure the RMON event control settings have been configured. To learn how, click [here](#).

This article provides instructions on how to configure RMON alarms on your switch.

Applicable Devices

- Sx250 Series
- Sx300 Series
- Sx350 Series
- SG350X Series
- Sx500 Series
- Sx550X Series

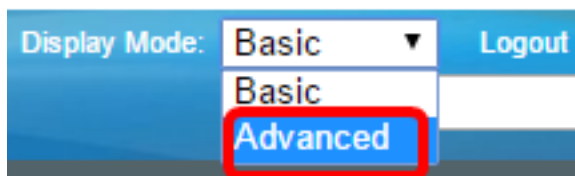
Software Version

- 1.4.7.05 — Sx300, Sx500
- 2.2.8.04 — Sx250, Sx350, SG350X, Sx550X

Configure RMON Alarms on your Switch

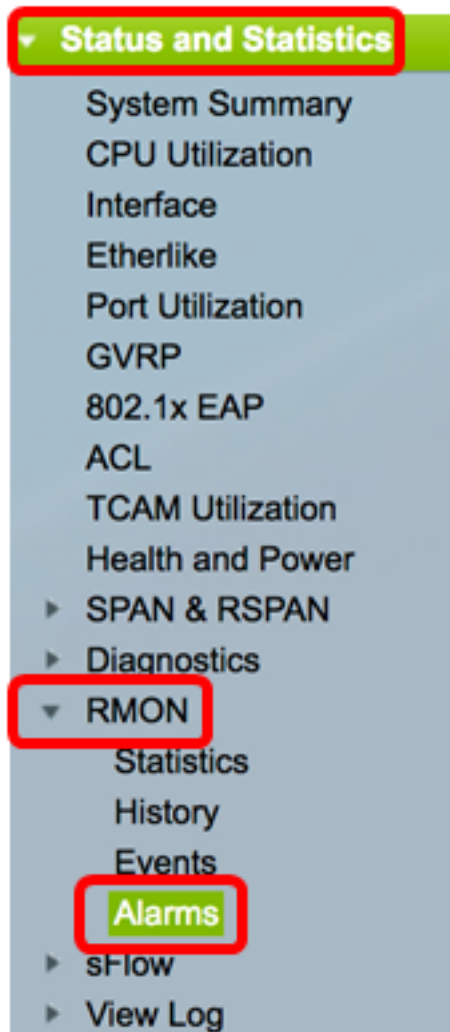
Step 1. Log in to the web-based utility of your switch then choose **Advanced** in the Display Mode drop-down list.

Note: In this example, SG350X-48MP switch is used.

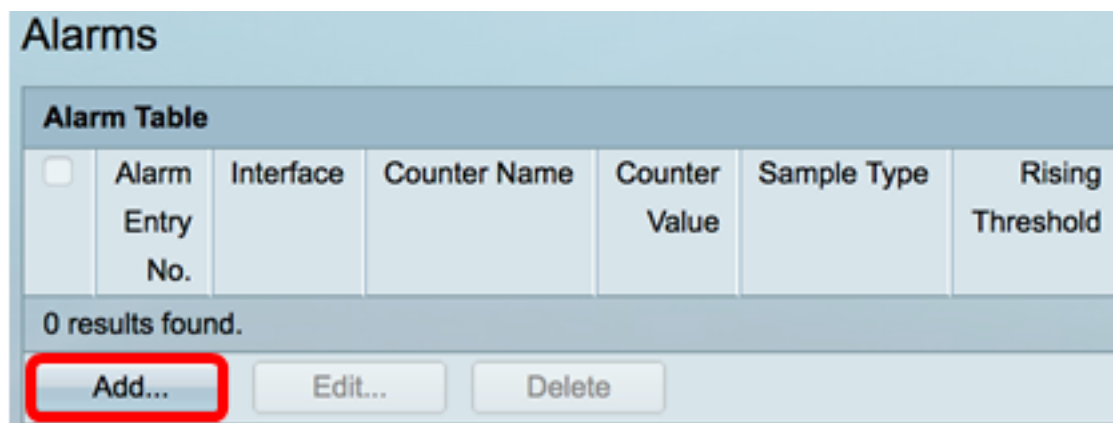


Note: If you have an Sx300 or Sx500 Series switch, skip to [Step 2](#).

Step 2. Choose **Status and Statistics > RMON > Alarms**.



Step 3. Click **Add** to add a new entry to the Alarm Table.



The Alarm Entry area displays the alarm entry number.

Step 4. Choose the type of interface for which RMON statistics are displayed.

Note: In this example, Port GE2 of Unit 1 is chosen.

Alarm Entry: 1

Interface: Unit 1 Port GE2 LAG 1

Note: If you have a non-stackable switch such as Sx250 or Sx300 Series switch, the options are Port and LAG only.

Alarm Entry: 1

Interface: Port GE2 LAG 2

Step 5. Choose the counter name from the Counter Name drop-down list. The Counter Name has a list of Management Information Base (MIB) variables that indicate the type of occurrence measured.

Interface: 1

Counter Name: Multicast Packets - Receive

Sample Type: Total Bytes (Octets)-Transmit

Note: In this example, Multicast Packets – Receive 1 is chosen.

Step 6. Choose the sampling method to generate an alarm. The options are:

- Absolute — If the threshold is crossed, an alarm is generated.
- Delta — Subtracts the last sampled value from the current value. The difference in the values is compared to the threshold. If the threshold was crossed, an alarm is generated.

Sample Type: Absolute Delta

Note: In this example, Absolute is chosen.

Step 7. Enter the rising threshold value in the *Rising Threshold* field. This is the value which is used to set off the rising threshold alarm.

Rising Threshold: 150 (Range: 0 - 2147483647, Default: 100)

Note: In this example, 150 is used.

Step 8. Choose an event to be carried out from the Rising Event drop-down list. This event starts when the rising event is triggered.

Rising Event: 1 - Log and Trap
 2 - Trap

Falling Threshold: ...

Note: In this example, 1 – Log and Trap is chosen.

Step 9. Enter the falling threshold value in the Falling Threshold field. This is the value which is used to set off the falling threshold alarm.

Falling Threshold: (Range: 0 - 2147483647, Default: 20)

Note: In this example, 25 is used.

Step 10. Choose an event to be carried out from the Falling Event drop-down list. This event starts when the falling event is triggered.

Falling Event: 1 - Log and Trap
 2 - Trap

Startup Alarm: ...

Note: In this example, 2 – Trap is used.

Step 11. Click the desired alarm which you want to be active at startup in the Startup Alarm area. Once this is crossed, all other alarms apply as normal.

The options are:

- Rising Alarm — This alarm is triggered by the rising value.
- Falling Alarm — This alarm is triggered by the falling value.
- Rising and Falling — This alarm is triggered by rising and falling values.

Note: When the threshold is crossed from a lower value to a higher value then it is called rising.

Startup Alarm: Rising Alarm
 Falling Alarm
 Rising and Falling

Note: In this example, Rising and Falling is chosen.

Step 12. In the *Interval* field, enter the alarm interval time in seconds.

Interval: sec (Range: 1 - 2147483647, Default: 100)

Note: In this example, 120 seconds is used.

Step 13. Enter the name of the user or network management system that receives the alarm in the *Owner* field.

Owner: (5/160 characters used)

Note: In this example, cisco is used.

Step 14. Click **Apply** then click **Close**. The RMON alarm is saved to the running configuration file.

Alarm Entry: 1

Interface: Unit 1 Port GE2 LAG 1

Counter Name: Multicast Packets - Receive Counter Value: 40233979

Sample Type: Absolute Delta

Rising Threshold: 150 (Range: 0 - 2147483647, Default: 100)

Rising Event: 1 - Log and Trap

Falling Threshold: 25 (Range: 0 - 2147483647, Default: 20)

Falling Event: 2 - Trap

Startup Alarm: Rising Alarm Falling Alarm Rising and Falling

Interval: 120 sec (Range: 1 - 2147483647, Default: 100)

Owner: cisco (5/160 characters used)

Step 15. (Optional) Click **Save** to save settings to the startup configuration file.

MP 48-Port Gigabit PoE Stackable Managed Switch

Language: English Display Mode: Advanced

Alarms

Alarm Table									
<input type="checkbox"/>	Alarm Entry No.	Interface	Counter Name	Counter Value	Sample Type	Rising Threshold	Rising Event	Falling Threshold	Falling Event
<input type="checkbox"/>	1	GE1/2	Multicast Packets - Receive	40233979	Absolute	150	Log and Trap	25	Trap

You should now have successfully added a new entry in the Alarm Table.

Edit RMON Alarms

Step 1. In the Alarm Table, check the box next to the Alarm Entry that you would like to edit.

Alarms

Alarm Table						
<input checked="" type="checkbox"/>	Alarm Entry No.	Interface	Counter Name	Counter Value	Sample Type	Rising Threshold
<input checked="" type="checkbox"/>	1	GE1/2	Multicast Packets - Receive	40233979	Absolute	150

Step 2. Click the **Edit** button to edit the RMON alarm entry.

Alarms

Alarm Table						
<input checked="" type="checkbox"/>	Alarm Entry No.	Interface	Counter Name	Counter Value	Sample Type	Rising Threshold
<input checked="" type="checkbox"/>	1	GE1/2	Multicast Packets - Receive	40233979	Absolute	150

Step 3. (Optional) Edit the alarm details accordingly.

Alarm Entry:

Interface: Unit Port LAG

Counter Name: Counter Value: 40233979

Sample Type: Absolute Delta

Rising Threshold: (Range: 0 - 2147483647, Default: 100)

Rising Event:

Falling Threshold: (Range: 0 - 2147483647, Default: 20)

Falling Event:

Startup Alarm: Rising Alarm Falling Alarm Rising and Falling

Interval: sec (Range: 1 - 2147483647, Default: 100)

Owner: (5/160 characters used)

Note: In this example, the Falling Threshold value has been changed from 25 to 30.

Step 4. Click **Apply** then click **Close**.

Alarm Entry:

Interface: Unit Port LAG

Counter Name: Counter Value: 40233979

Sample Type: Absolute
 Delta

Rising Threshold: (Range: 0 - 2147483647, Default: 100)

Rising Event:

Falling Threshold: (Range: 0 - 2147483647, Default: 20)

Falling Event:

Startup Alarm: Rising Alarm
 Falling Alarm
 Rising and Falling

Interval: sec (Range: 1 - 2147483647, Default: 100)

Owner: (5/160 characters used)

Step 5. (Optional) Click **Save** to save settings to the startup configuration file.

cisco Language: Display Mode:

MP 48-Port Gigabit PoE Stackable Managed Switch

Alarms

Alarm Table								
<input type="checkbox"/>	Alarm Entry No.	Interface	Counter Name	Counter Value	Sample Type	Rising Threshold	Rising Event	Falling Threshold
<input type="checkbox"/>	1	GE1/2	Multicast Packets - Receive	6453	Absolute	150	Log and Trap	30

You should now have successfully edited the alarm in the Alarm Table.

Delete RMON Alarms

Step 1. In the Alarm Table, check the box next to the Alarm Entry that you would like to delete.

Alarms

Alarm Table						
<input checked="" type="checkbox"/>	Alarm Entry No.	Interface	Counter Name	Counter Value	Sample Type	Rising Threshold
<input checked="" type="checkbox"/>	1	GE1/2	Multicast Packets - Receive	40233979	Absolute	150

Step 2. Click the **Delete** button to edit the RMON alarm entry.

Alarms

Alarm Table						
<input checked="" type="checkbox"/>	Alarm Entry No.	Interface	Counter Name	Counter Value	Sample Type	Rising Threshold
<input checked="" type="checkbox"/>	1	GE1/2	Multicast Packets - Receive	40233979	Absolute	150

Step 3. (Optional) Click **Save** to save settings to the startup configuration file.

cisco Language: English

MP 48-Port Gigabit PoE Stackable Managed Switch

Alarms

Success. To permanently save the configuration, go to the [File Operations](#) page or

Alarm Table							
<input type="checkbox"/>	Alarm Entry No.	Interface	Counter Name	Counter Value	Sample Type	Rising Threshold	Rising Event
0 results found.							

You should now have successfully deleted an alarm from the Alarm Table.