

## Chapter 16

# Summary of RMON Alarm and Event Configuration Statements

The following sections explain each of the remote monitoring (RMON) alarm and event configuration statements. The statements are organized alphabetically.

## alarm

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<b>Syntax</b>	<pre>alarm <i>index</i> {     description <i>description</i>;     falling-event-index <i>index</i>;     falling-threshold <i>integer</i>;     interval <i>seconds</i>;     rising-event-index <i>index</i>;     rising-threshold <i>integer</i>;     sample-type (absolute-value   delta-value);     startup-alarm (falling-alarm   rising-alarm   rising-or-falling alarm);     variable <i>oid-variable</i>; }</pre>
<b>Hierarchy Level</b>	[edit snmp rmon]
<b>Description</b>	Configure RMON alarm entries.
<b>Options</b>	<i>index</i> —Identifies this alarm entry as an integer.  The remaining statements are explained separately.
<b>Usage Guidelines</b>	See “Configuring an Alarm Entry and Its Attributes” on page 179.
<b>Required Privilege Level</b>	snmp—To view this statement in the configuration. snmp-control—To add this statement to the configuration.
<b>See Also</b>	event on page 199

## community

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<b>Syntax</b>	<code>community <i>community-name</i>;</code>
<b>Hierarchy Level</b>	[edit snmp rmon event <i>index</i> ]
<b>Description</b>	The trap group that is used when generating a trap (if <code>eventType</code> is configured to send traps). If that trap group has the <code>rmon-alarm</code> trap category configured, a trap is sent to all the targets configured for that trap group. The community string in the trap matches the name of the trap group (and hence, the value of <code>eventCommunity</code> ). If nothing is configured, traps are sent to each group with the <code>rmon-alarm</code> category set.
<b>Options</b>	<code>community-name</code> —Identifies the trap group that is used when generating a trap if the event is configured to send traps.
<b>Usage Guidelines</b>	See “Configuring an Event Entry and Its Attributes” on page 183.
<b>Required Privilege Level</b>	<code>snmp</code> —To view this statement in the configuration. <code>snmp-control</code> —To add this statement to the configuration.

## description

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<b>Syntax</b>	<code>description <i>description</i>;</code>
<b>Hierarchy Level</b>	[edit snmp rmon alarm <i>index</i> ], [edit snmp rmon event <i>index</i> ]
<b>Description</b>	Text description of alarm or event.
<b>Options</b>	<code>description</code> —Text description of an alarm or event entry. If the description includes spaces, enclose it in quotation marks (" ").
<b>Usage Guidelines</b>	See “Configuring the Description” on page 180 and “Configuring an Event Entry and Its Attributes” on page 183.
<b>Required Privilege Level</b>	<code>snmp</code> —To view this statement in the configuration. <code>snmp-control</code> —To add this statement to the configuration.

## event

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<b>Syntax</b>	event <i>index</i> { community <i>community-name</i> ; description <i>description</i> ; type <i>type</i> ; }
<b>Hierarchy Level</b>	[edit snmp rmon]
<b>Description</b>	Configure RMON event entries.
<b>Options</b>	<i>index</i> —Identifier for a specific event entry.  The remaining statements are explained separately.
<b>Usage Guidelines</b>	See “Configuring an Event Entry and Its Attributes” on page 183.
<b>Required Privilege Level</b>	snmp—To view this statement in the configuration. snmp-control—To add this statement to the configuration.
<b>See Also</b>	alarm on page 197

## falling-event-index

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<b>Syntax</b>	falling-event-index <i>index</i> ;
<b>Hierarchy Level</b>	[edit snmp rmon alarm <i>index</i> ]
<b>Description</b>	The index of the event entry that is used when a falling threshold is crossed. If this value is zero, no event is triggered.
<b>Options</b>	<i>index</i> —Index of the event entry that is used when a falling threshold is crossed. <b>Range:</b> 0 through 65,535 <b>Default:</b> 0 seconds
<b>Usage Guidelines</b>	See “Configuring the Falling Event Index or Rising Event Index” on page 180.
<b>Required Privilege Level</b>	snmp—To view this statement in the configuration. snmp-control—To add this statement to the configuration.
<b>See Also</b>	rising-event-index on page 201

## falling-threshold

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<b>Syntax</b>	<code>falling-threshold <i>integer</i>;</code>
<b>Hierarchy Level</b>	<code>[edit snmp rmon alarm <i>integer</i>]</code>
<b>Description</b>	The lower threshold for the sampled variable. When the current sampled value is less than or equal to this threshold, and the value at the last sampling interval is greater than this threshold, a single event is generated. A single event is also generated if the first sample after this entry becomes valid is less than or equal to this threshold, and the associated startup-alarm is equal to falling-alarm or rising-or-falling-alarm. After a falling event is generated, another falling event cannot be generated until the sampled value rises above this threshold and reaches the rising-threshold.
<b>Options</b>	<i>integer</i> —The lower threshold for the alarm entry. <b>Range:</b> -2,147,483,648 through 2,147,483,647 <b>Default:</b> 20 percent less than rising-threshold
<b>Usage Guidelines</b>	See “Configuring the Falling Threshold or Rising Threshold” on page 180.
<b>Required Privilege Level</b>	<code>snmp</code> —To view this statement in the configuration. <code>snmp-control</code> —To add this statement to the configuration.
<b>See Also</b>	<code>rising-threshold</code> on page 201.

## interval

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<b>Syntax</b>	<code>interval <i>seconds</i>;</code>
<b>Hierarchy Level</b>	<code>[edit snmp rmon alarm <i>index</i>]</code>
<b>Description</b>	Interval between samples.
<b>Options</b>	<i>interval</i> —Time between samples, in seconds. <b>Range:</b> 1 through 2,147,483,647 seconds <b>Default:</b> 60 seconds
<b>Usage Guidelines</b>	See “Configuring the Interval” on page 181.
<b>Required Privilege Level</b>	<code>snmp</code> —To view this statement in the configuration. <code>snmp-control</code> —To add this statement to the configuration.

## rising-event-index

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<b>Syntax</b>	rising-event-index <i>index</i> ;
<b>Hierarchy Level</b>	[edit snmp rmon alarm <i>index</i> ]
<b>Description</b>	The index of the event entry that is used when a rising threshold is crossed. If this value is zero, no event is triggered.
<b>Options</b>	<i>index</i> —Index of the event entry that is used when a rising threshold is crossed. <b>Range:</b> 0 through 65,535 <b>Default:</b> 0
<b>Usage Guidelines</b>	See “Configuring the Falling Event Index or Rising Event Index” on page 180.
<b>Required Privilege Level</b>	snmp—To view this statement in the configuration. snmp-control—To add this statement to the configuration.
<b>See Also</b>	falling-event-index on page 199

## rising-threshold

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<b>Syntax</b>	rising-threshold <i>integer</i> ;
<b>Hierarchy Level</b>	[edit snmp rmon alarm <i>index</i> ]
<b>Description</b>	The upper threshold for the sampled variable. When the current sampled value is greater than or equal to this threshold, and the value at the last sampling interval is less than this threshold, a single event is generated. A single event is also generated if the first sample after this entry becomes valid is greater than or equal to this threshold, and the associated startup-alarm is equal to falling-alarm or rising-or-falling-alarm. After a rising event is generated, another rising event cannot be generated until the sampled value falls below this threshold and reaches the falling-threshold.
<b>Options</b>	<i>integer</i> —The lower threshold for the alarm entry. <b>Range:</b> -2,147,483,648 through 2,147,483,647 <b>Default:</b> 0
<b>Usage Guidelines</b>	See “Configuring the Falling Threshold or Rising Threshold” on page 180.
<b>Required Privilege Level</b>	snmp—To view this statement in the configuration. snmp-control—To add this statement to the configuration.
<b>See Also</b>	falling-threshold on page 200

## rmon

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<b>Syntax</b>	rmon { ... }
<b>Hierarchy Level</b>	[edit snmp]
<b>Description</b>	Configure Remote Monitoring.
<b>Usage Guidelines</b>	See “Configuring RMON Alarms and Events” on page 177.
<b>Required Privilege Level</b>	snmp—To view this statement in the configuration. snmp-control—To add this statement to the configuration.

## sample-type

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<b>Syntax</b>	sample-type (absolute-value   delta-value);
<b>Hierarchy Level</b>	[edit snmp rmon alarm <i>index</i> ]
<b>Description</b>	Method of sampling the selected variable.
<b>Options</b>	absolute-value—Actual value of the selected variable is used when comparing against the thresholds.  delta-value—Difference between samples of the selected variable is used when comparing against the thresholds.
<b>Usage Guidelines</b>	See “Configuring the Sample Type” on page 181.
<b>Required Privilege Level</b>	snmp—To view this statement in the configuration. snmp-control—To add this statement to the configuration.

## startup-alarm

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<b>Syntax</b>	startup-alarm (falling-alarm   rising-alarm   rising-or-falling-alarm);
<b>Hierarchy Level</b>	[edit snmp rmon alarm <i>index</i> ]
<b>Description</b>	The alarm that can be sent upon entry startup.
<b>Options</b>	<p>falling-alarm—Generated if the first sample after the alarm entry becomes active is less than or equal to the falling threshold.</p> <p>rising-alarm—Generated if the first sample after the alarm entry becomes active is greater than or equal to the rising threshold.</p> <p>rising-or-falling-alarm—Generated if the first sample after the alarm entry becomes active satisfies either of the corresponding thresholds.</p> <p><b>Default:</b> rising-or-falling-alarm</p>
<b>Usage Guidelines</b>	See “Configuring the Startup Alarm” on page 182.
<b>Required Privilege Level</b>	<p>snmp—To view this statement in the configuration.</p> <p>snmp-control—To add this statement to the configuration.</p>

## type

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<b>Syntax</b>	type <i>type</i> ;
<b>Hierarchy Level</b>	[edit snmp rmon event <i>index</i> ]
<b>Description</b>	Type of notification generated when a threshold is crossed.
<b>Options</b>	<p><i>type</i>—Type of notification. It can be one of the following:</p> <p>log—Add an entry to logTable.</p> <p>log-and-trap—Send an SNMP trap and make a log entry.</p> <p>none—No notifications are sent.</p> <p>snmptrap—Send an SNMP trap.</p> <p><b>Default:</b> log-and-trap</p>
<b>Usage Guidelines</b>	See “Configuring an Event Entry and Its Attributes” on page 183.
<b>Required Privilege Level</b>	<p>snmp—To view this statement in the configuration.</p> <p>snmp-control—To add this statement to the configuration.</p>

## variable

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<b>Syntax</b>	<code>variable <i>oid-variable</i>;</code>
<b>Hierarchy Level</b>	[edit snmp rmon alarm <i>index</i> ]
<b>Description</b>	Object identifier (OID) of MIB variable to be monitored.
<b>Options</b>	<i>oid-variable</i> —OID of the MIB variable that is being monitored. The OID can be a dotted decimal (for example, 1.3.6.1.2.1.2.1.2.2.1.10.1) or use the MIB objects name (for example, ifInOctets.1.).
<b>Usage Guidelines</b>	See “Configuring the Variable” on page 182.
<b>Required Privilege Level</b>	snmp—To view this statement in the configuration. snmp-control—To add this statement to the configuration.