

SNMP Monitoring on C-series Controllers

You can create custom SNMP monitors to detect changes in MIB objects. Use custom monitors to generate an alarm and take action in response to an alarm.

To configure a monitor, you define a condition that when met generates an SNMP notification. You can define a monitor for any single MIB object (of type integer) supported on a C-series Controller. These MIBs include Juniper Networks enterprise-specific objects as well as standard MIB objects.

You can configure the following for custom monitors:

- **Alarms**—Define an alarm condition and an event to generate in response to the alarm.

An alarm identifies the object to be monitored, the frequency with which the monitor retrieves a sample value for the object, and a condition that triggers an event.

- **Events**—Define the type of action (SNMP set or notification) to be taken in response to an alarm condition. If you do not define an event for an alarm, SNMP sends the notifications based on the monitor type.

The SRC software supports the following types of alarm conditions for monitors:

- **Boolean test**—Compares a sample value with a specified value or range of values.
- **Existence test**—Monitors when an object appears, disappears, or changes value.
- **Threshold test**—Monitors when an object's value rises above or falls below specified values.

A monitor supports only one type of alarm condition, or test, at a time. Each alarm can use one of the following sampling methods:

- **Absolute value**—Uses the actual value of the object.

Existence tests support only absolute values.

- **Delta value**—Uses the difference between two sample values.

By using the delta value sampling method, you can configure SNMP to detect a discontinuity in values to prevent false alarms caused by the value of a MIB object being reset. At the end of a polling interval before the SNMP agent calculates a delta value, SNMP checks the value of a MIB object called a discontinuity marker. If the value of the discontinuity marker changes, SNMP does not perform the test for the associated condition until the next polling interval.

For alarms that do not have a configured event, SNMP sends the following notifications that are defined in RFC 2981—Event MIB (October 2000):

- **Boolean or existence test**—mteTriggerFired
- **Threshold test (rising value)**—mteTriggerRising
- **Threshold test (falling value)**—mteTriggerfalling

The default configuration for SNMP custom monitors assesses all objects in a MIB branch based on the object identifier specified for the monitor. For this type of monitor, you can configure SNMP notification MIB objects located in the same row as the object that generates the event, as well as for a single object. You can create sophisticated monitors by monitoring an entire branch, then creating notifications for multiple objects.

- Related Topics**
- Configuration Statements for Customized SRC SNMP Monitors
 - Configuring an SNMP Alarm on a C-series Controller (SRC CLI)
 - Example: SNMP Monitoring of Multiple MIB Objects
 - Configuring an SNMPv3 Security Name for SNMP Monitoring (SRC CLI)
 - Overview of SNMP Traps
 - Information about SRC MIBs on the Juniper Web site at <http://www.juniper.net/techpubs/software/management/src>
 - Also, see information about the disman event MIB in RFC 2981—Event MIB (October 2000)