SAM21 Shelf Controller Performance Management

What's new for SN07

When the SAM21 Shelf Controllers are equipped with ATM interfaces and the office has an Integrated EMS, the IP address of the Integrated EMS must be provisioned at the Subnet Level Configuration of the CS 2000 SAM21 Manager client. Refer to Configure access to GWC and Shelf Controller MIB data on page 4.

What's new for SN06

Shelf Controllers with ATM interfaces provide Operational Measurements (OM). These records are stored in comma separated value (CSV) format on the host that provides the CS 2000 Management Tools. Nortel Networks recommends viewing and analyzing these records with an OSS tool. Contact your Nortel Networks account representative for an OSS tool recommendation.

Strategy

With the exception of the ATM interface OMs, the Shelf Controllers do not generate performance data. However, software on the Shelf Controller monitors the status of itself and generates a log report or alarm to record trouble conditions.

The Shelf Controllers do not require periodic hardware exercise tests or SWACTs to reduce faults or improve reliability.

Review ATM interface operational measurements

If the SNMP Poller application is configured to retrieve ATM interface operation measurements (OM) from the Shelf Controller, the data is retrieved and stored in the `/data/oms` directory on the host that provides the CS 2000 Management Tools. These OMs are best viewed and analyzed with an OSS tool.

Operational measurement	Value and possible action
cellDropCount	This integer value indicates the cumulative number of dropped cells.
cellDropCountEvent Timestamp	This integer value indicates the timestamp for the most recently dropped ATM cell. This integer is expressed in seconds since January 1, 1970.
totalBytesSent	This integer value indicates the cumulative number of bytes sent over the interface during a 15 minute interval. If an ATM connection becomes unavailable during an interval, the statistics related to that connection are not recorded. For example, the reported value for an interval is 156739 bytes. One connection is lost, and the reported value for the next interval is 124398. The reported number of bytes sent in the second interval decreased because the statistics related to the dropped connection were not included in the total number of bytes sent.
bytesSentPerSec	This integer value represents the totalBytesSent value for the previous 15 minute interval subtracted from the totalBytesSent value for the current 15 minute interval, and then divided by 900. $\frac{\text{current totalBytesSent - previous totalBytesSent}}{\text{900 seconds}} = \text{bytesSentPerSec}$
totalBytesRxed	This integer value indicates the cumulative number of bytes received by the interface during a 15 minute interval. The behavior described for totalBytesSent also applies to this statistic.
bytesRxedPerSec	This integer value reports the same information as bytesSentPerSec, except that the statistics are for the receiving direction.

Operational measurement	Value and possible action
oversizedPDUCount	This integer value indicates the cumulative number of oversized protocol data units (PDU).
rxedTimeoutCount	This integer value indicates the cumulative number of timeouts received at the far end node.
omUpdateTime	This integer value indicates when the operational measurements were last updated. This integer is expressed in seconds since January 1, 1970.

Configure access to GWC and Shelf Controller MIB data

Purpose of this procedure

Use this procedure to configure the IP address of a device or application that can access gateway controller (GWC) and SAM21 Shelf Controller MIB information.

This allows GWCs and SAM21 Shelf Controllers to be polled for MIB data by an Integrated Element Management System (EMS) application deployed on a host other than the CS 2000 Management Tools server.

CAUTION

In release SN07, the Integrated Element Management System (EMS) cannot collect MIB data from the GWC and SAM21 Shelf Controller.

In SN07, MIB data for the GWC and SAM21 Shelf Controller is collected by the SNMP Poller application on the CS 2000 Management Tools server.

Performing this procedure does not interfere with the SNMP Poller application available at the CS 2000 Management Tools server. SNMP polling from the Integrated EMS can be configured in addition to the SNMP poller application residing on the CS 2000 Management Tools server.

Note 1: The Integrated EMS may reside on the CS 2000 Management Tools server. In this case, the Integrated EMS uses a virtual IP address for element management communications.

Note 2: You may also use this procedure to configure access to GWC and SAM21 Shelf Controller MIB data from an SNMP poller application that is not part of an Integrated EMS.

Note 3: Performance statistics for the SAM21 Shelf Controllers are only available if the SAM21 Shelf Controllers are configured with ATM interfaces.

When to use this procedure

Use this procedure if you are adding an Integrated EMS to your network.

You may also use this procedure to configure access to GWC and SAM21 Shelf Controller MIB data from an SNMP poller application that is not part of an Integrated EMS.

Prerequisites and guidelines

If no server is configured, the GWCs and SAM21 Shelf Controllers will continue to respond to SNMP requests from the SNMP Poller application deployed on the CS 2000 Management Tools.

Immediately after performing this procedure, a message is sent from the CS 2000 SAM21 Manager server application to the SAM21 Shelf Controllers to allow SNMP requests from the newly configured device or application. There is no requirement to reboot GWC or SC cards.

The following guidelines apply to SN07:

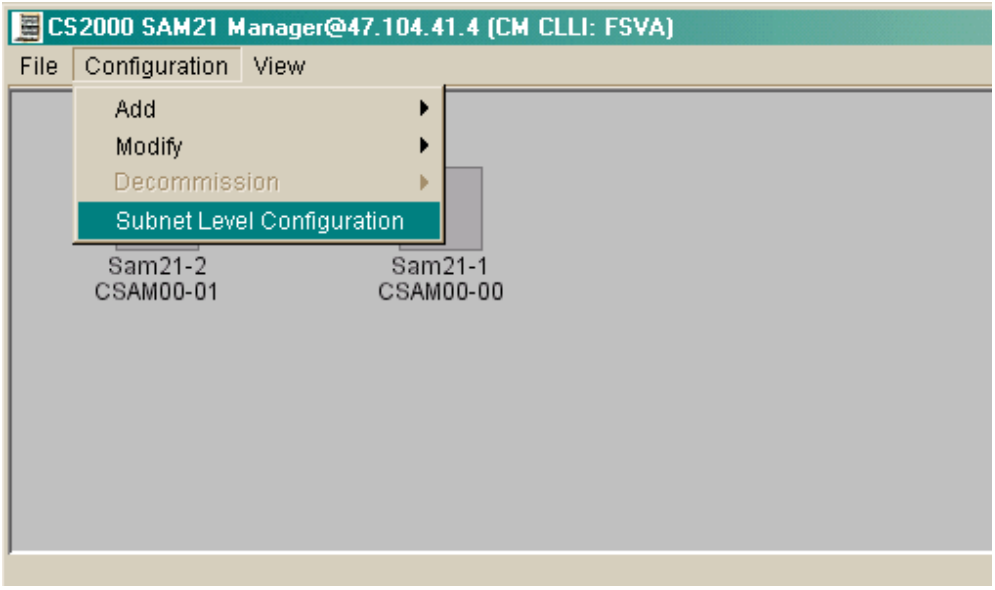
- The Integrated Element Management System (EMS) cannot collect MIB data from the GWC and SAM21 Shelf Controller.
- MIB data for the GWC and SAM21 Shelf Controller is collected by the SNMP Poller application on the CS 2000 Management Tools server.

Action

At the CS 2000 SAM21 Manager client

1 At the CS 2000 SAM21 Manager Subnet View, click on the **Configuration** menu and select **Subnet Level Configuration**.

The Subnet Configuration window opens.



2 Determine your next step using the following table:

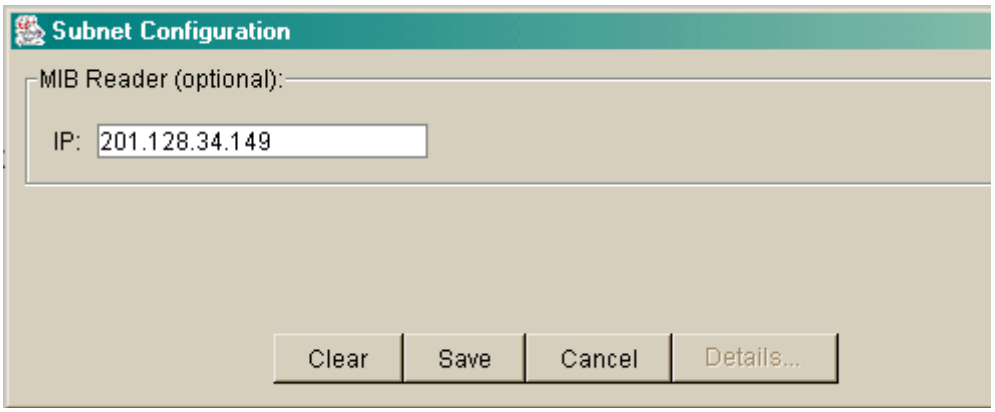
If	Do
you wish to configure a device or application to access MIB information (initial configuration)	step 3
you wish to remove the setting for a device or application that currently has access to MIB information	step 4
you wish to change the device or application that has access to MIB information	step 5

3 Perform the following steps to configure a device or application to access MIB data (initial configuration):

a Enter a valid IP address for the device or application in the IP field.

Use the format <0-255>.<0-255>.<0-255>.<0-255>.

If the IP address is not valid, the IP field will be outlined in red. Click the **Details** button for help on entering a valid address.



b Click the **Save** button to implement the change.

GWCs and the SAM21 Shelf Controllers will now respond to SNMP request from the IP address identified in the previous step.

c Go to step 6.

4 Perform the following steps to remove an existing subnet configuration setting from the system:

Note: The current IP address setting appears in the IP field.

a Click the **Clear** button to remove the entry in the IP field.

b Click the **Save** button to implement the change.

The existing setting is removed. Any SNMP requests from the IP address previously configured are now rejected.

c Go to step 6.

5 Perform the following steps to change an existing subnet configuration setting:

Note: The current IP address setting appears in the IP field.

a Click the **Clear** button to remove the entry in the IP field.

b At the Subnet Configuration window, enter a valid IP address for the Integrated EMS in the IP field.

Use the format <0-255>.<0-255>.<0-255>.<0-255>.

If the IP address is not valid, the IP field will be outlined in red. Click the **Details** button for help on entering a valid address.

c Click the **Save** button to implement the change.

The setting is changed. MIB data for the GWC and SAM21 Shelf Controller is now available to the IP address configured in the previous step. Any SNMP requests from the IP address previously configured are now rejected.

6 This procedure is complete.