



Interface Performance

This chapter describes how to view performance information for each of the interfaces on the Cisco 12000 series internet router you are managing, using the Cisco 12000 Manager (C12kM) application.

There are two performance options in C12kM: the Interface Performance windows and the Cisco Element Management Framework (Cisco EMF) Performance Manager application. Performance Manager displays historical data as well as current data in the form of a line chart, bar chart, or table; Interface Performance windows display only current data in a raw numerical format.



Note

Refer to the [Chapter 16, “Performance Management and Historical Data”](#) chapter for information on viewing historical performance information for a selected chassis, module, or interface using the Performance Manager application.

This chapter contains the following information:

- [Interfaces and Related Technology-Specific Windows](#)
- [Launching the Interface Performance Windows](#)
- [Generic Interface Performance](#)
- [SONET Interface Performance](#)
- [DS3/E3 Interface Performance](#)
- [Ethernet Interface Performance](#)
- [SRP Side Performance](#)

Interfaces and Related Technology-Specific Windows

Interfaces on line cards can support multiple technologies. Performance windows are technology-specific. For example, an POS interface supports two technologies: Generic and SONET.

Therefore, to view the performance of a POS interface, you need to view two windows: the Generic Interface Performance window, and the SONET Interface Performance window.

This same process is applicable to all different types of interfaces: POS, DS-3, ATM, SRP or Ethernet.

Table 10-1 details which technology-specific performance windows apply to each interface type.

Table 10-1 Interface Types and Performance Windows

Interface Type	Technology-Specific Performance Window
DS-3	Generic, and DS-3
ATM	Generic, and SONET
Ethernet	Generic, and Ethernet
POS	Generic, and SONET
SRP Side	SRP Side

Launching the Interface Performance Windows

Table 10-2 displays the Interface Performance windows that can be launched from each object type. For example, the Generic Interface Performance window can be launched from a Site, Shelf, Chassis, Module, or Interface object.

Table 10-2 Launching the Interface Performance Windows

C12kM Window/Task	Objects (that can be selected) to Open the Window					Menu Options to Select to Open Window
	Site	Shelf	Chassis	Module	Interface	
Generic Interface Performance	Yes	Yes	Yes	Yes	Generic	C12kM Management>Physical>Interface>Generic>Performance
SONET Interface Performance	Yes	Yes	Yes	Yes	SONET	C12kM Management>Physical>Interface>SONET>Performance
DS3/E3 Interface Performance	Yes	Yes	Yes	Yes	DS3	C12kM Management>Physical,>Interface>DS3>Performance
Ethernet Interface Performance	Yes	Yes	Yes	Yes	Ethernet	C12kM Management>Physical>Interface>Ethernet>Performance
SRP Side Performance	Yes	Yes	Yes	No	SRP Side	C12kM Management>Physical>Interface>SRP>Side>Performance



Note

The Interface Performance windows cannot be opened when multiple objects are selected (the menu options to open the Cisco MDM windows are grayed out). Available menu options can be launched from a site object containing the required objects, when required.

Generic Interface Performance

The Generic Interface Performance section covers the following areas:

- [Viewing the Generic Interface Performance Window](#)
- [Starting Performance Logging for a Selected Interface](#)

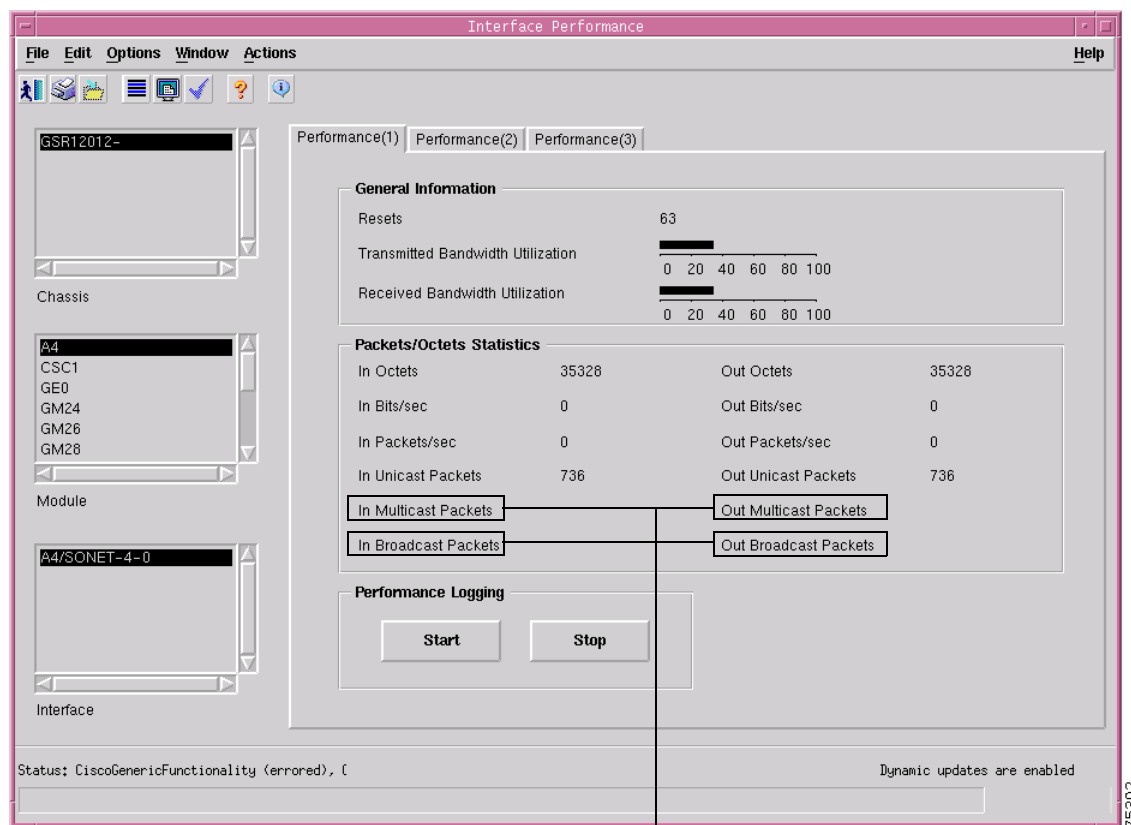
- [Stopping Performance Logging for a Selected Interface](#)
- [Generic Interface Performance Window—Detailed Description](#)

Viewing the Generic Interface Performance Window

To view the Interface Performance window, proceed as follows:

- Step 1** Right click (on a relevant object icon in the Map Viewer window or from an object pick list) and select the **C12kM Management>Physical>Interface>Generic>Performance** option. Refer to [Table 10-1 on page 10-2](#) for information on which objects allow you to launch the Interface Performance window. The Interface Performance window appears, with the Performance (1) tab displayed:

Figure 10-1 Interface Performance Window—Performance 1 Tab



Not applicable to C12kM

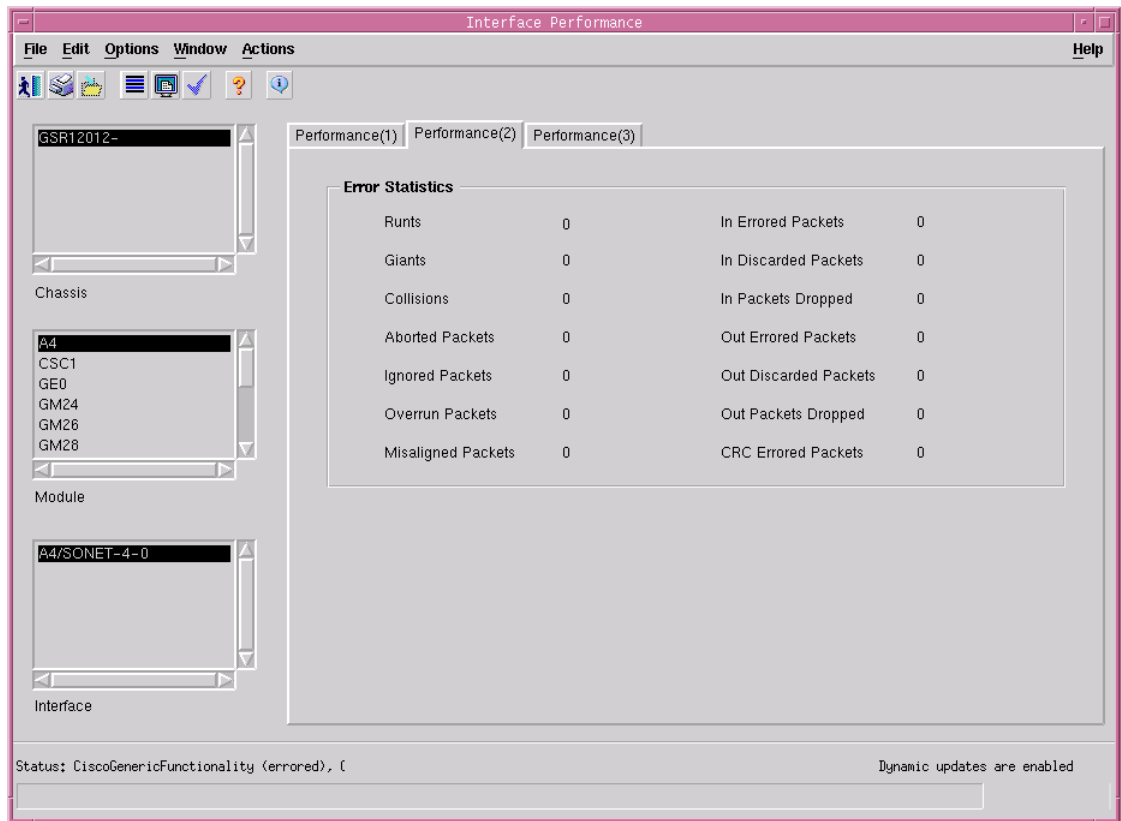
- Step 2** Choose a **Chassis**, **Module**, and **Interface** from the list boxes displayed at the left of the window. The interface performance information for the selected interface appears in the tabs at right.



Note Transmitted/Received Bandwidth Utilization will not be calculated and displayed until after a performance logging poll (15 minutes), and only if performance logging is active for the interface.

Step 3 Choose the **Performance(2)** tab, if required.

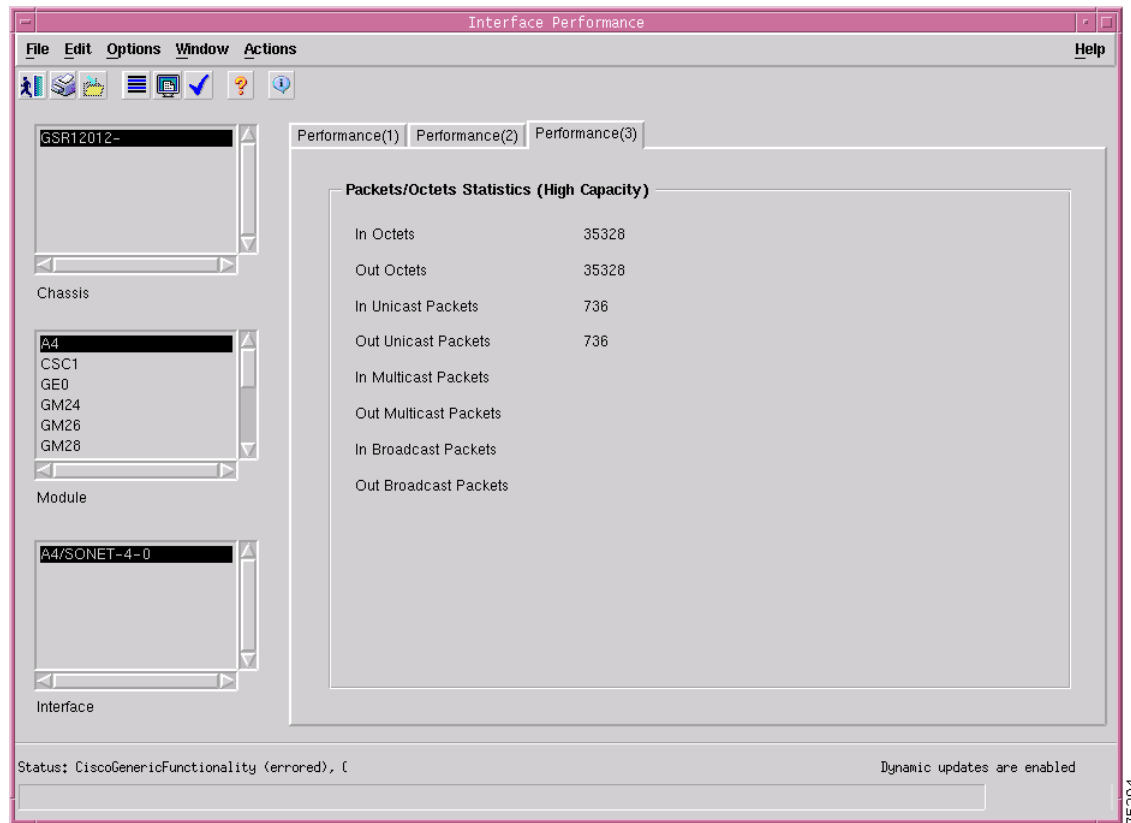
Figure 10-2 Interface Performance Window—Performance 2 Tab



The Error Statistics for the selected interface appear.

Step 4 Choose the Performance (3) tab, if required.

Figure 10-3 Interface Performance Window - Performance 3 Tab



The Packets/Octets statistics for the selected interface appears.

Starting Performance Logging for a Selected Interface



Note

Performance logging can also be started/stopped on a global basis for a selected chassis. Refer to the [“Starting Global Performance Logging”](#) section on page 4-9. Performance logging can also be started on a per module (GRP) basis. For details on how to start performance logging for a selected module (GRP), refer to the [“Module Performance”](#) section on page 5-8.

Starting performance logging allows performance data to be gathered for the selected interface. Performance polling occurs every polling period (15 minutes). Performance data is then gathered and stored for historical review. Current performance data can be viewed in the Interface Performance window, or you can view historical performance data in Performance Manager.



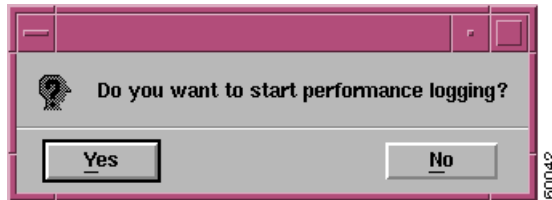
Note

You must start performance logging if you want to view historical data in the Performance Manager. You do not need to have performance logging enabled on an interface to view the current data in the Interface Performance window.

To start performance logging for a selected interface, proceed as follows:

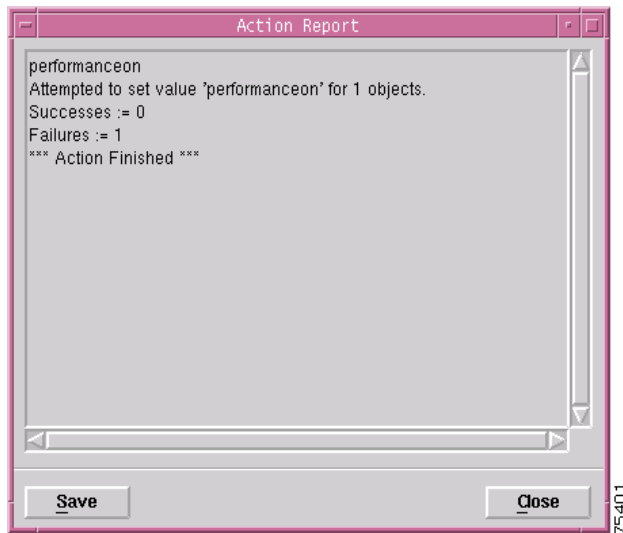
- Step 1** Open the Interface Performance window. Refer to the [“Viewing the Generic Interface Performance Window”](#) section on page 10-3 for further details.
- Step 2** Choose a **Chassis**, **Module**, and **Interface** from the lists displayed at the left of the window.
- Step 3** Click **Start** to begin performance logging for the selected interface. A window appears for you to confirm that you wish to start performance logging.

Figure 10-4 Start Performance Logging Confirmation Window



- Step 4** Choose **Yes** to begin performance logging for the selected interface. An Action Report window appears to confirm that performance logging has started.

Figure 10-5 Action Report Window



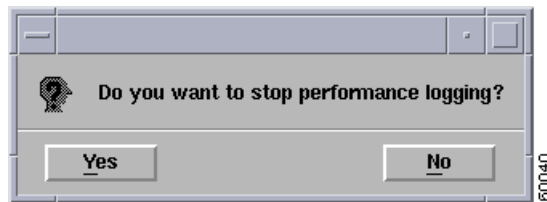
- Step 5** Choose **Close** to close the Action Report window.
- Step 6** Choose **Close** from the **File** menu to close the Interface Performance window.
- Refer to the [Chapter 16, “Performance Management and Historical Data”](#) chapter for information on viewing historical performance information for a selected interface.

Stopping Performance Logging for a Selected Interface

To stop performance logging for a selected interface, proceed as follows:

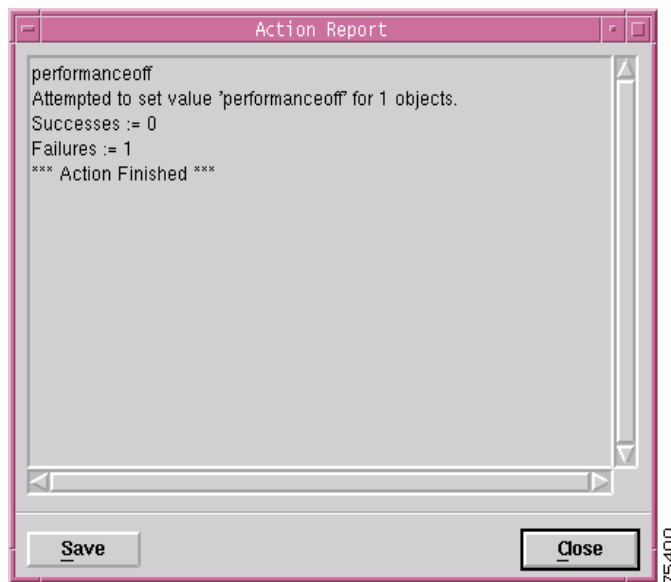
- Step 1** Open the Interface Performance window. Refer to the “[Viewing the Generic Interface Performance Window](#)” section on page 10-3 for further details. The Performance (1) tab appears.
- Step 2** Choose a **Chassis**, **Module**, and **Interface** from the lists displayed at the left of the window.
- Step 3** Choose **Stop** to stop performance logging for the selected interface. A window appears for you to confirm that you wish to stop performance logging.

Figure 10-6 Stop Performance Logging Confirmation Window



- Step 4** Choose **Yes** to stop performance logging for the selected interface. An Action Report window appears to confirm that performance logging has been stopped for the selected interface.

Figure 10-7 Action Report Window



- Step 5** Choose **Close** to close the Action Report window.
- Step 6** Choose **Close** from the **File** menu to close the Interface Performance window.

Generic Interface Performance Window—Detailed Description

The Interface Performance window contains two tabs: Performance (1) and Performance (2).

Performance (1) Tab

The Performance (1) tab (see [Figure 10-1](#)) contains three areas: General Information, Packets/Octets Statistics, and Performance Logging.

General Information

The General area contains the following fields:

Resets—Number of times the interface is internally reset.



Note

Transmitted/Received Bandwidth Utilization will not be calculated and displayed until after a performance logging poll (15 minutes), and only if performance logging is active for the interface.

Transmitted Bandwidth Utilization—Percentage of transmitted bandwidth utilization. The percentage is calculated as packets per second divided by the speed of interface, averaged over the polling period (if performance polling is active).

Received Bandwidth Utilization—Percentage of received bandwidth utilization. The percentage is calculated as packets per second divided by the speed of interface, averaged over the polling period (if performance polling is active).

Packets/Octets Statistics

The Packets/Octets Statistics area contains the following fields:

In Octets—Total number of packets received on the interface, including framing characters.

Out Octets—Total number of packets transmitted out of the interface, including framing characters.

In Bits/sec—Five-minute exponentially decayed moving average of input bits per second.

Out Bits/sec—Five-minute exponentially decayed moving average of output bits per second.

In Packets/sec—Five-minute exponentially decayed moving average of input packets per second.

Out Packets/sec—Five-minute exponentially decayed moving average of output packets per second.

In Unicast Packets—Total number of packets received by the layer which were not addressed as multicast or broadcast.

Out Unicast Packets—Total number of packets transmitted by the layer which were not addressed as multicast or broadcast.

In Multicast Packets—Not applicable to C12kM.

Out Multicast Packets—Not applicable to C12kM.

In Broadcast Packets—Not applicable to C12kM.

Out Broadcast Packets—Not applicable to C12kM.

Performance Logging

The performance Logging area displays Start and Stop buttons.

Start—Click Start to begin performance logging for the selected interface.

Stop—Click Stop to stop performance logging for the selected interface.

Performance (2) Tab

The Performance (2) tab (see [Figure 10-2](#)) displays a single Error Statistics area.

Error Statistics

The Error Statistics area displays the following fields:

Runts—Number of packets input which were smaller than the physical media permitted.

Giants—Number of input packets which were larger than the physical media permitted.

Collisions—Number of output collisions detected on this interface.

Aborted Packets—Number of input packets which were aborted.

Ignored Packets—Number of input packets which were ignored by the interface.

Overrun Packets—Displays the number of input packets that arrived too quickly for the hardware to receive.

Misaligned Packets—Number of input packets which were misaligned.

In Errored Packets—Number of inbound packets that contained errors.

In Discarded Packets—Number of inbound packets chosen to be discarded even though no errors were found.

In Packets Dropped—Number of packets dropped because the input queue was full.

Out Errored Packets—Number of outbound packets that could not be transmitted because of errors.

Out Discarded Packets—Number of outbound packets chosen to be discarded even though no errors were found.

Out Packets Dropped—Number of packets dropped because the output queue was full.

CRC Errored Packets—Number of input packets which had cyclic redundancy checksum errors.

Performance (3) Tab

In Octets—Number of high capacity input octets (64-bit counter)

Out Octets—Number of high capacity output octets (64-bit counter)

In Unicast Packets—Number of high capacity input unicast packets (64-bit counter)

OutUnicast Packets—Number of high capacity output Unicast packets (64-bit counter)

In Multicast Packets—not applicable to C12kM

Out Multicast Packets—not applicable to C12kM

In Broadcast Packets—not applicable to C12kM

OutBroadcast Packets—not applicable to C12kM

SONET Interface Performance

The SONET Interface Performance section covers the following areas:

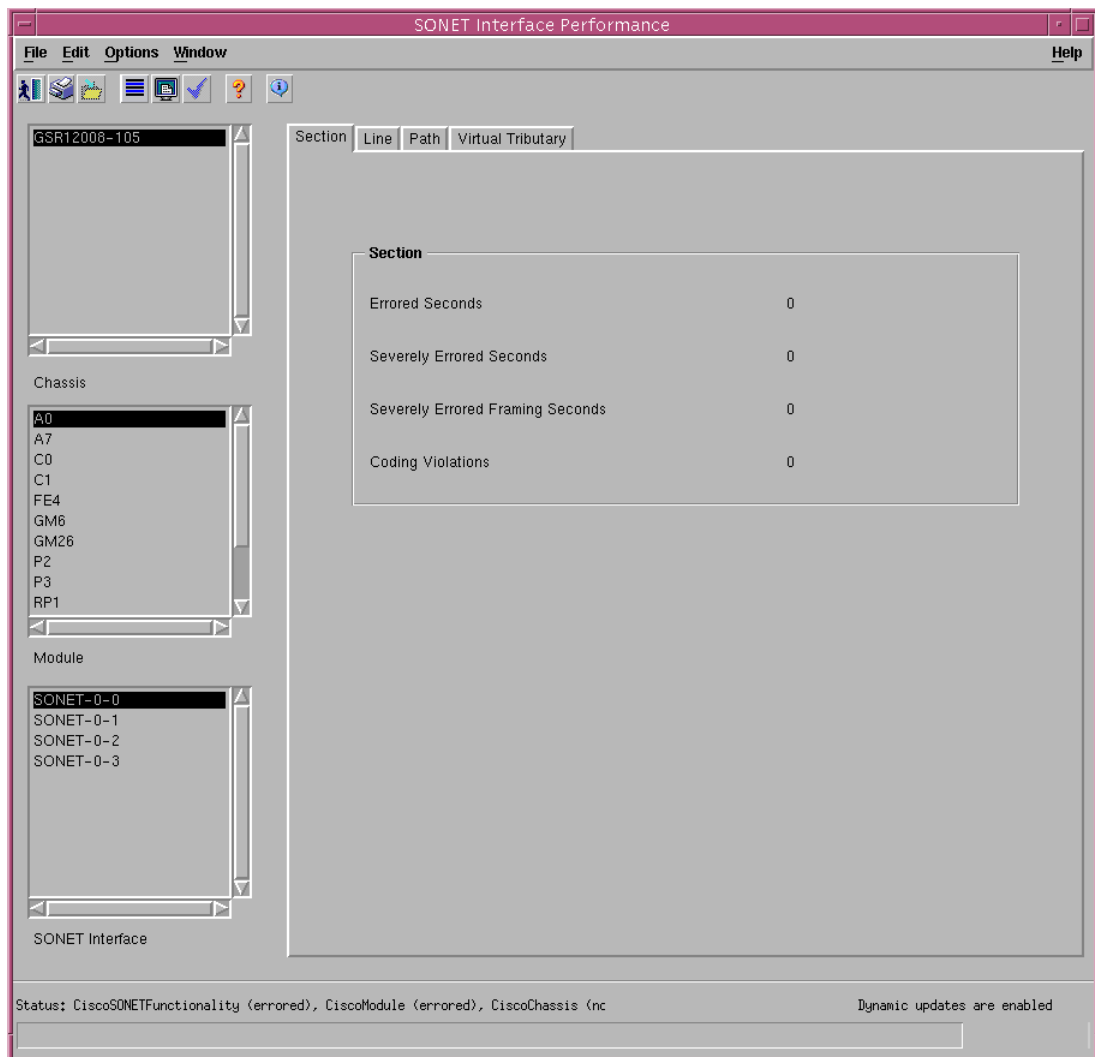
- [Viewing the SONET Interface Performance Window](#)
- [SONET Performance Window—Detailed Description](#)

Viewing the SONET Interface Performance Window

To view the SONET Interface Performance window, proceed as follows:

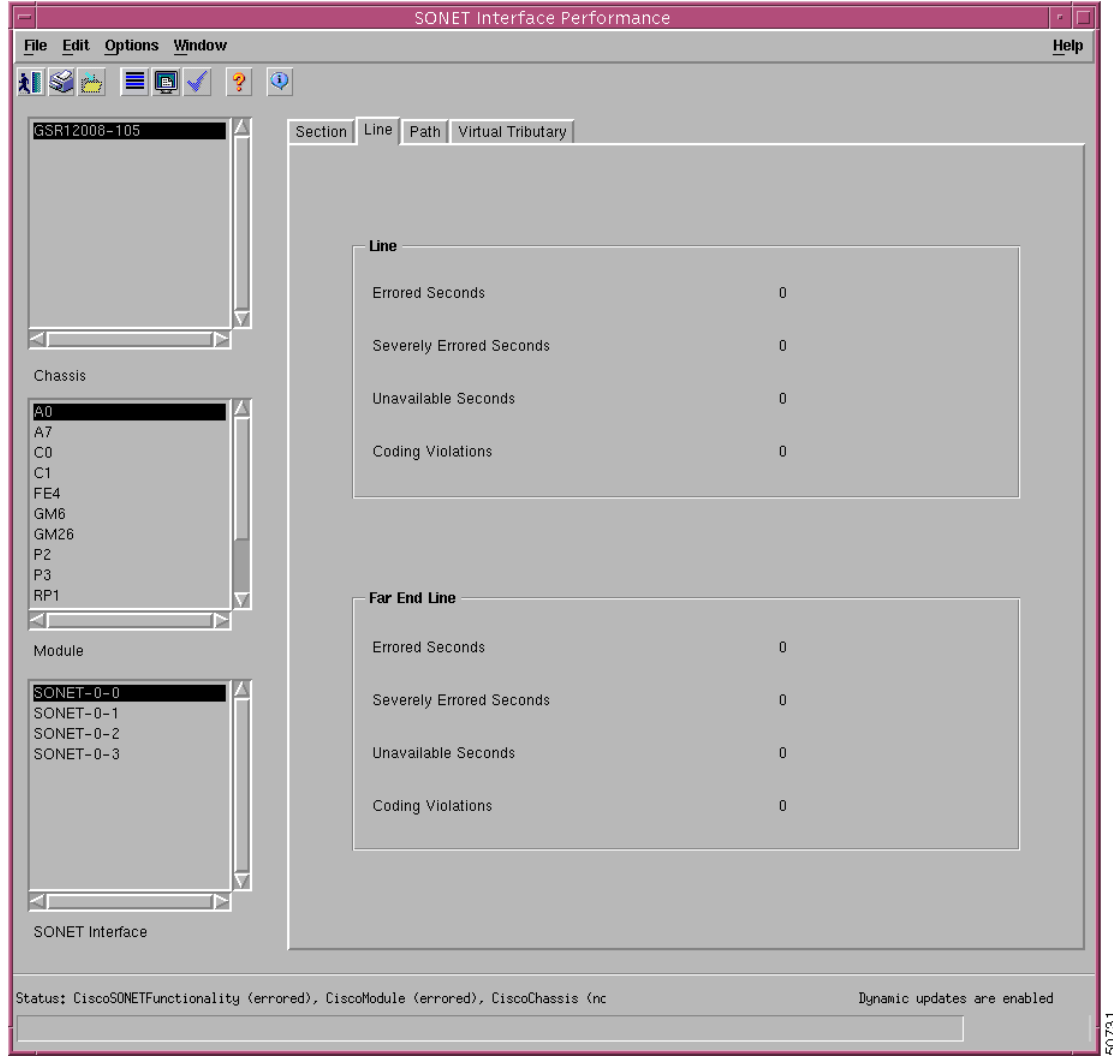
- Step 1** Right click (on a relevant object icon in the Map Viewer window or from an object pick list) and select the **C12kM Management>Physical>Interface>SONET>Performance** option. Refer to [Table 10-2 on page 10-2](#) for information on which objects allow you to launch the SONET Interface Performance window. The SONET Interface Performance window appears, with the Section tab displayed:

Figure 10-8 SONET Interface Performance—Section Tab



- Step 2** Choose a **Chassis**, **Module**, and **SONET Interface** from the list boxes at the left of the window. The performance information for the selected interface appears (see [Figure 10-8](#)).
- Step 3** Choose the **Line** tab, if required.

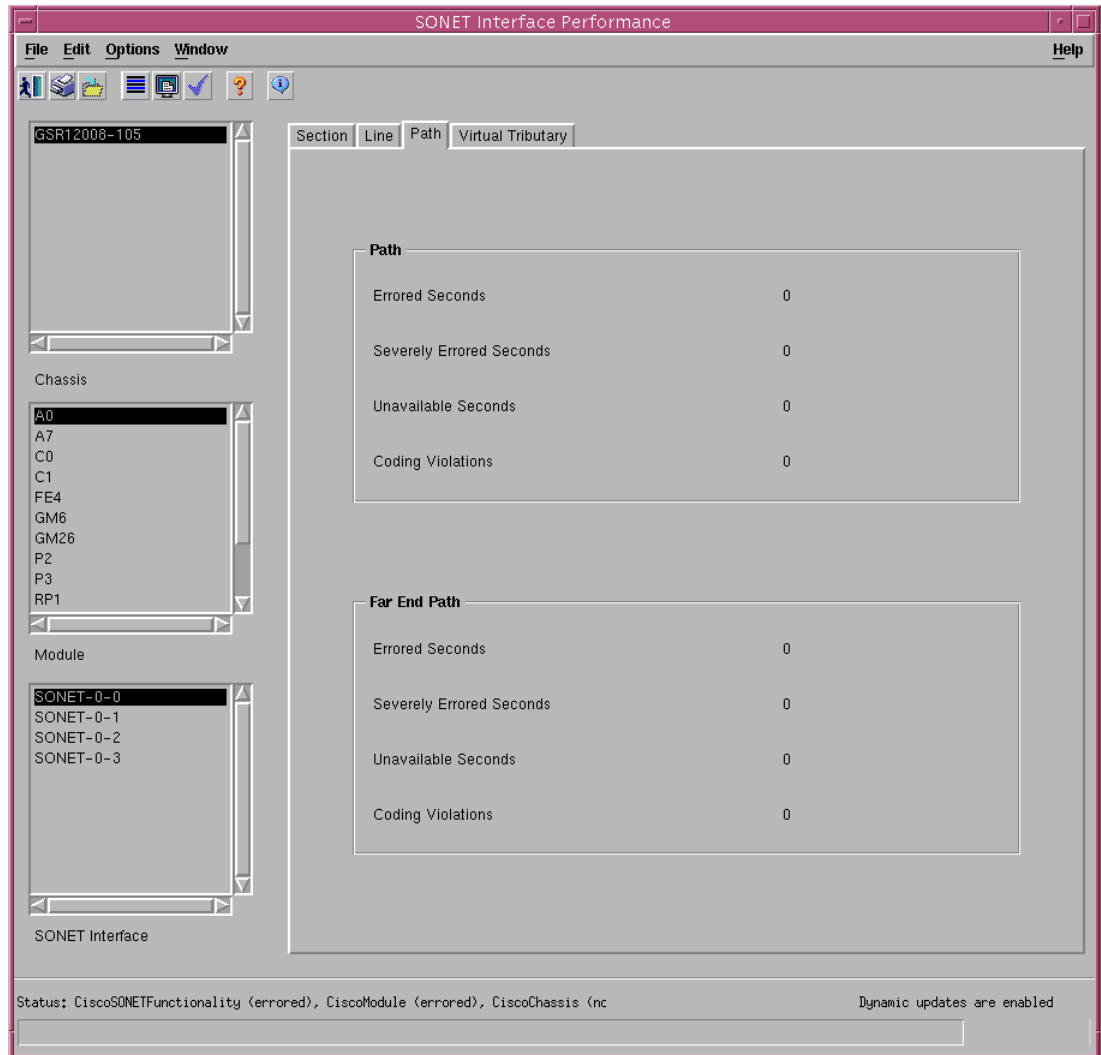
Figure 10-9 SONET Interface Performance—Line Tab



Step 4 Choose the **Path** tab, if required.

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Figure 10-10 SONET Interface Performance—Path Tab



Note The Virtual Tributary tab is not applicable to C12kM.

SONET Performance Window—Detailed Description

The SONET Performance window displays four tabs: Section, Line, Path, and Virtual Tributary (not applicable to C12kM).

Section Tab

The Section tab (see [Figure 10-8 on page 10-10](#)) displays a single Section area containing the following fields:

Errored Seconds—Total number of errored seconds encountered by the SONET interface in the current 15 minute interval.

Severely Errored Seconds—Number of severely errored seconds encountered by the SONET interface in the current 15 minute interval.

Severely Errored Framing Seconds—Number of severely errored framing seconds encountered by the SONET interface in the current 15 minute interval.

Coding Violations—Number of coding violations encountered by the SONET interface in the current 15 minute interval.

Line Tab

The Line tab (see [Figure 10-9 on page 10-11](#)) displays two areas: Line and Far End Line, as follows:

Line

The Line area displays the following fields:

Errored Seconds—Total number of errored seconds encountered by the SONET line.

Severely Errored Seconds—Number of severely errored seconds encountered by the SONET line.

Unavailable Seconds—Total number of unavailable seconds encountered by the SONET line.

Coding Violations—Number of coding violations encountered by the SONET line.

Far End Line

The Far End Line area displays the following fields:

Errored Seconds—Total number of far end errored seconds encountered by the SONET line.

Severely Errored Seconds—Number of far end severely errored seconds encountered by the SONET line.

Unavailable Seconds—Total number of far end unavailable seconds encountered by the SONET line.

Coding Violations—Number of far end coding violations encountered by the SONET line.

Path Tab

The Path tab (see [Figure 10-10 on page 10-12](#)) displays two areas: Path and Far End Path.

Path

The Path area displays the following fields:

Errored Seconds—Total number of errored seconds encountered by the SONET path.

Severely Errored Seconds—Number of severely errored seconds encountered by the SONET path.

Unavailable Seconds—Total number of unavailable seconds encountered by SONET path.

Coding Violations—Number of coding violations encountered by the SONET path.

Far End Path

The Far End Path area displays the following fields:

Errored Seconds—Total number of far end errored seconds encountered by the SONET path.

Severely Errored Seconds—Number of far end severely errored seconds encountered by the SONET path.

Unavailable Seconds—Total number of far end unavailable seconds encountered by the SONET path.

Coding Violations—Number of far end coding violations encountered by the SONET path.

Virtual Tributary Tab

The Virtual Tributary tab is not applicable to C12kM.

DS3/E3 Interface Performance

The DS3/E3 Interface Performance section covers the following areas:

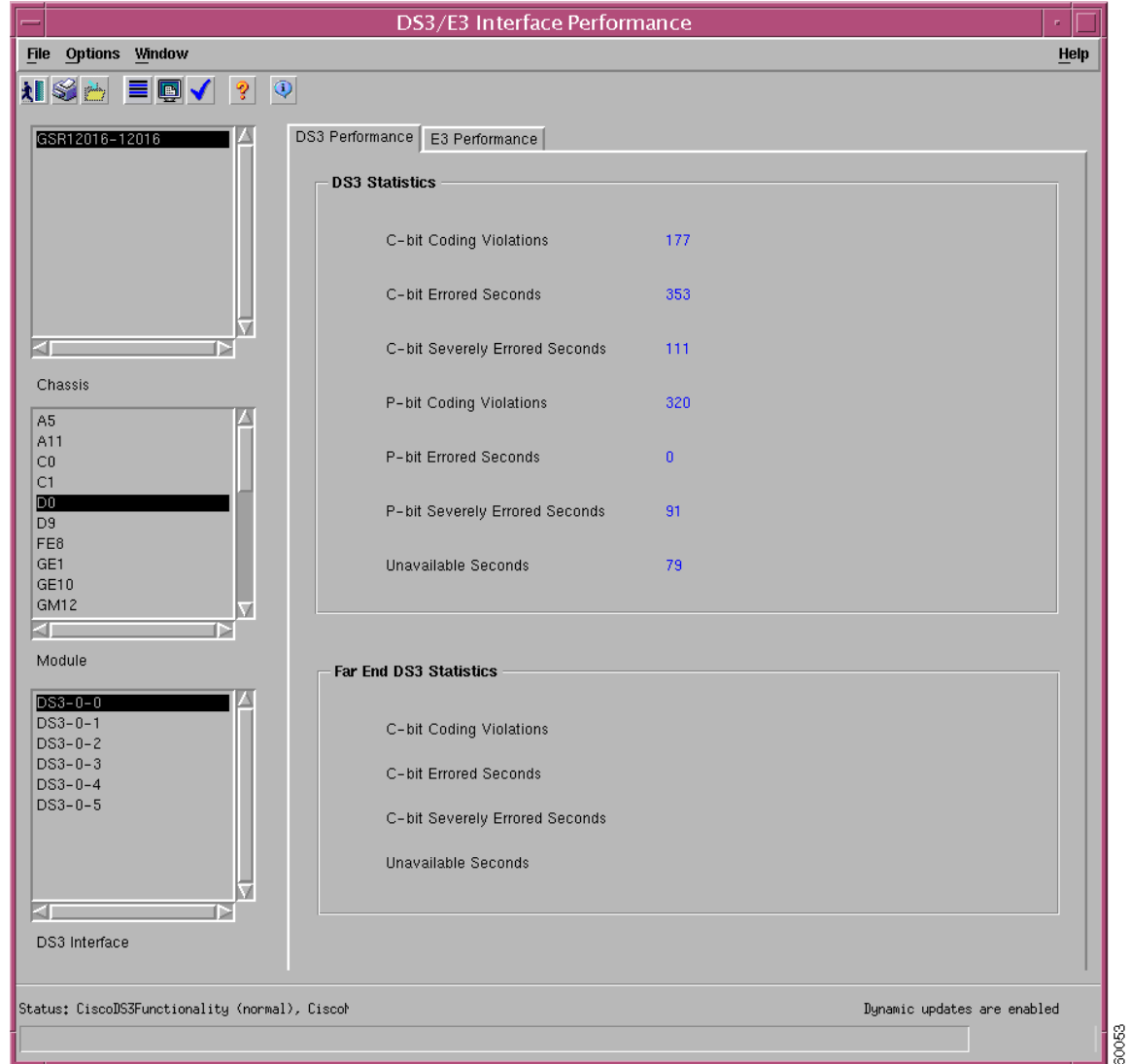
- [Viewing the DS3/E3 Interface Performance Window](#)
- [DS3/E3 Interface Performance Window — Detailed Description](#)

Viewing the DS3/E3 Interface Performance Window

To view the DS3/E3 Interface Performance window, proceed as follows:

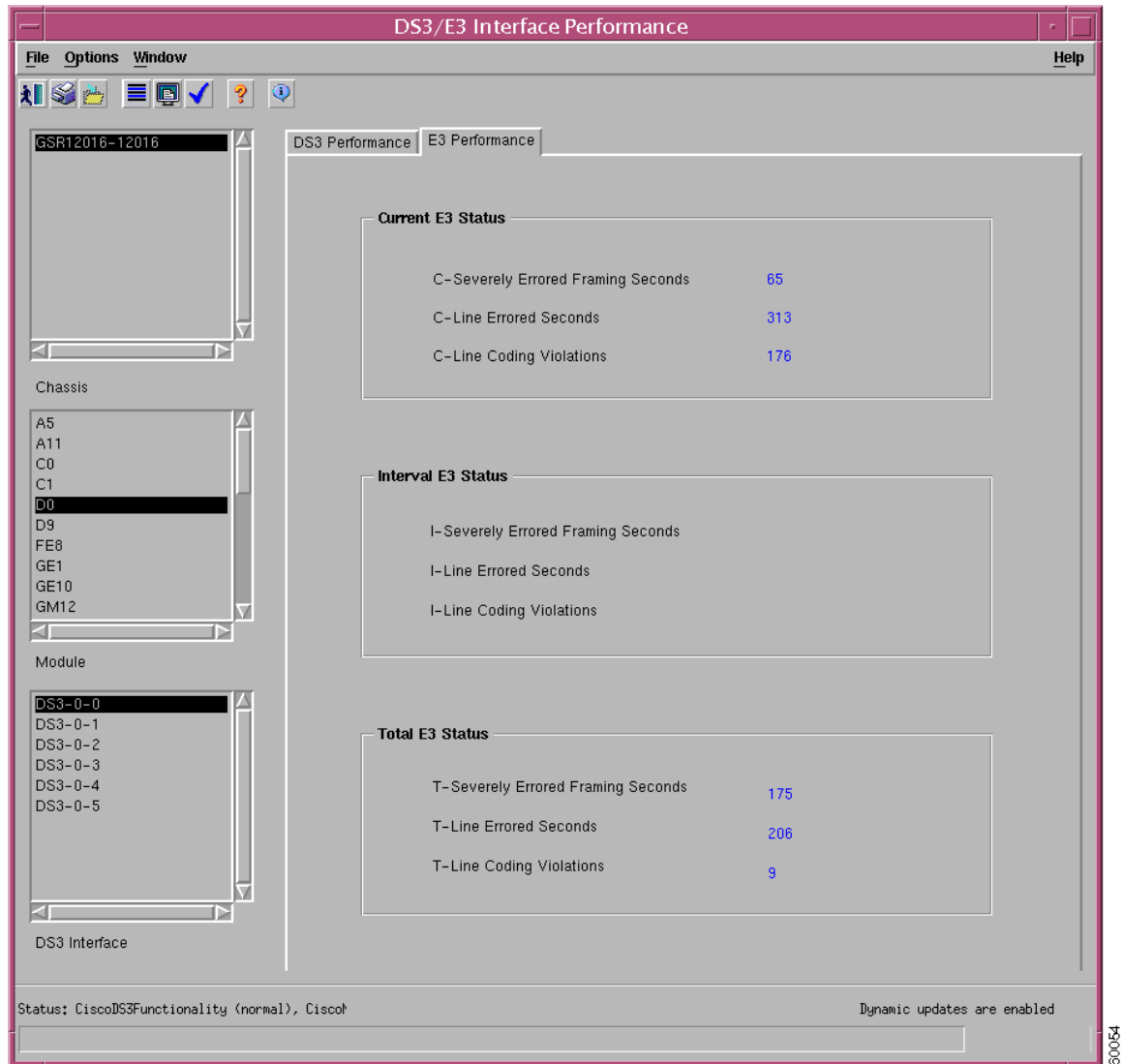
-
- Step 1** Right click (on a relevant object icon in the Map Viewer window or from an object pick list) and select the **C12kM Management>Physical>Interface>DS3>Performance** option. Refer to [Table 10-2 on page 10-2](#) for information on which objects allow you to launch the DS3/E3 Interface Performance window. The DS3/E3 Interface Performance window appears, with the DS3 Performance tab displayed:

Figure 10-11 DS3/E3 Interface Performance Window—DS3 Performance Tab



- Step 2** Choose a **Chassis**, **Module**, and **DS3 Interface** from the list boxes displayed at the left of the window. The DS3/E3 interface performance information for the selected interface appears.
- Step 3** Choose the **E3 Performance** tab, if required, to view the E3 Performance details (see [Figure 10-12](#)).

Figure 10-12 DS3/E3 Interface Performance Window—E3 Performance Tab



DS3/E3 Interface Performance Window — Detailed Description

The DS3/E3 Interface Performance window displays two tabs: DS3 Performance and E3 Performance.

DS3 Performance Tab

The DS3 Performance tab (see [Figure 10-11 on page 10-15](#)) displays two areas: DS3 Statistics and Far End DS3 Statistics.

DS3 Statistics

The DS3/E3 Statistics area displays the following information:

C-bit Coding Violations—Number of C-bit coding violations encountered by the interface.

C-bit Errored Seconds—Number of C-bit errored seconds detected by the interface.

C-bit Severely Errored Seconds—Number of times C-bit severely errored seconds detected by the interface.

P-bit Coding Violations—Number of P-bit coding violations detected by the interface.

P-bit Errored Seconds—Number of P-bit errored seconds detected by the interface.

P-bit Severely Errored Seconds—Number of P-bit severely errored seconds encountered by the interface.

Unavailable Seconds—Count of the unavailable seconds encountered by interface.

Far End DS3 Statistics

The Far End DS3 Statistics area displays the following information:

C-bit Coding Violations—Number of far end C-bit coding violations encountered by the interface.

C-bit Errored Seconds—Number of far end C-bit errored seconds detected by the interface.

C-bit Severely Errored Seconds—Number of times far end C-bit severely errored seconds detected by the interface.

Unavailable Seconds—Count of the far end unavailable seconds encountered by the interface.

E3 Performance Tab

The E3 Performance tab (see [Figure 10-12 on page 10-16](#)) displays three areas: Current E3 Status, Interval E3 Status, and Total E3 Status.

Current E3 Status

The Current E3 Status area displays the following information:

C-Severely Errored Framing Seconds—Number of C-bit severely errored seconds encountered by the interface in the current 15 minute interval.

C-Line Errored Seconds—Number of line errored seconds encountered by the interface in the current 15 minute interval.

C-Line Coding Violations—Number of line coding violations encountered by the interface in the current 15 minute interval.

Interval E3 Status

The Interval E3 Status area displays the following information:

I-Severely Errored Framing Seconds—Number of I-line severely errored seconds encountered by the interface in any 15 minute interval.

I-Line Errored Seconds—Number of I-line errored seconds encountered by the interface in any 15 minute interval.

I-Line Coding Violations—Number of I-line coding violations encountered by the interface in any 15 minute interval.

Total E3 Status

The Total E3 Statistics area displays the following information:

T-Severely Errored Framing Seconds—Number of T-line severely errored framing seconds encountered by the interface in the current 24 hour interval.

T-Line Errored Seconds—Number of errored seconds encountered by the interface in the current 24 hour interval.

T-Line Coding Violations—Number of coding violations encountered by the interface in the current 24 hour interval.

Ethernet Interface Performance

The Ethernet Interface Performance section covers the following areas:

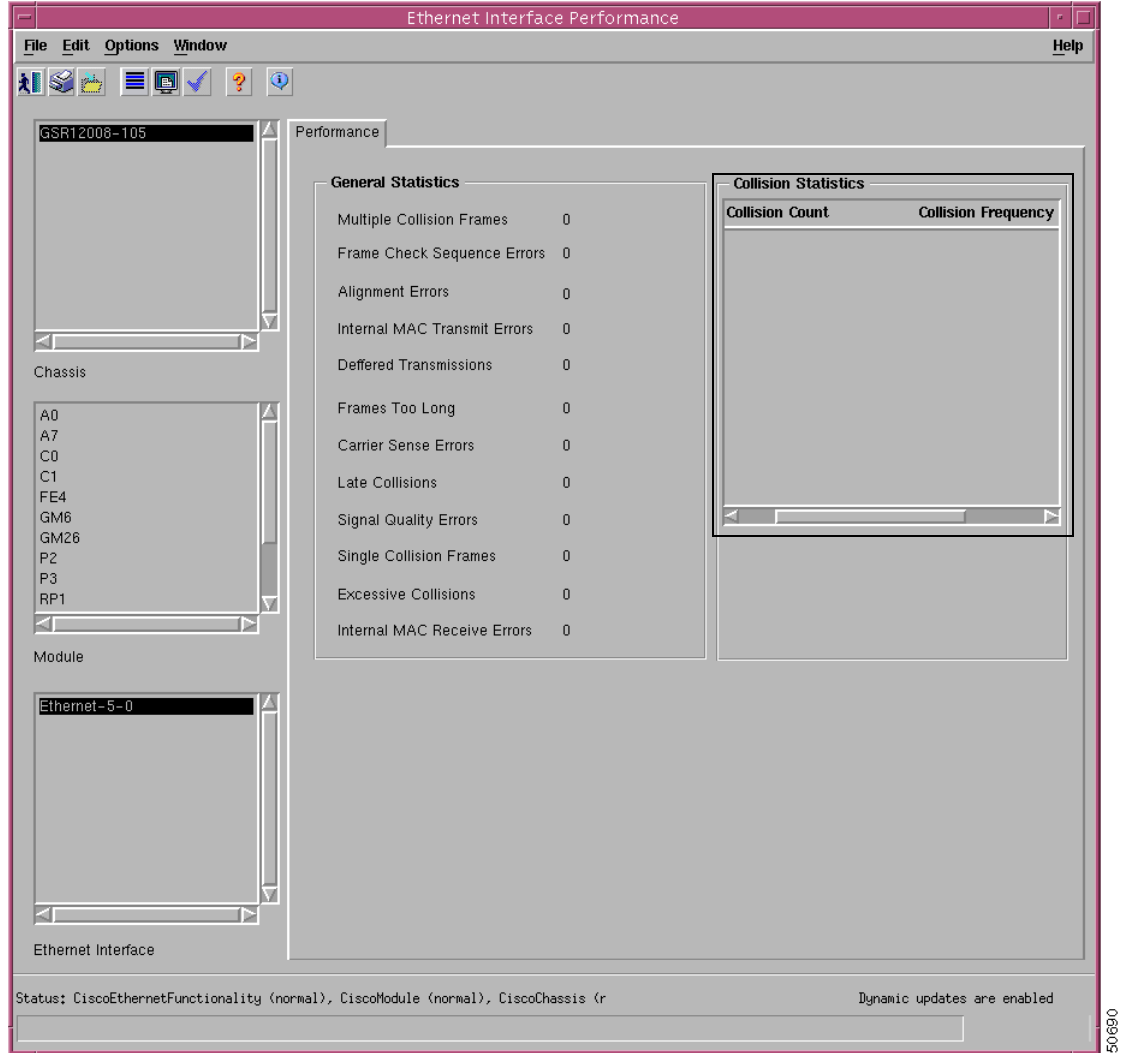
- [Viewing the Ethernet Interface Performance Window](#)
- [Ethernet Interface Performance Window—Detailed Description](#)

Viewing the Ethernet Interface Performance Window

To view the Ethernet Interface Performance window, proceed as follows:

-
- Step 1** Right click (on a relevant object icon in the Map Viewer window or from an object pick list) and select the **C12kM Management>Physical>Interface>Ethernet>Performance** option. Refer to [Table 10-2 on page 10-2](#) for information on which objects allow you to launch the Ethernet Interface Performance window. The Ethernet Interface Performance window appears, with the Performance tab displayed:

Figure 10-13 Ethernet Interface Performance Window—Performance Tab



- Step 2** Choose a **Chassis**, **Module**, and **Ethernet Interface** from the list boxes displayed at the left of the window. The performance information for the selected interface appears.

Ethernet Interface Performance Window—Detailed Description

The Ethernet Interface Performance tab (see [Figure 10-13 on page 10-19](#)) displays two areas: General Statistics and Collision Statistics.

General Statistics

The General Statistics area displays the following statistics:

Multiple Collision Frames—Count of frames transmitted across an interface where more than one collision exists.

Frame Check Sequence Errors—Count of Frames received with Frame Check Sequence Error status.

Alignment Error—Count of Frames received with alignment errors.

Internal MAC Transmit Errors—Count of frames transmitted that failed due to an external transmit error.

Deferred Transmissions—Number of first transmissions attempts delayed because the medium was busy.

Frames Too Long—Number of frames transmitted, where the size of the frames are larger than the permissible frame size.

Carrier Sense Errors—Number of times the carrier sense was lost while transferring frames.

Late Collisions—Number of collisions detected on the interface after the transmission of a packet.

Signal Quality Errors (SQE)—Count of SQE error messages generated by the interface.

Single Collision Frames—Count of frames transmitted across an interface with one collision.

Excessive Collisions—Number of times transmission failed due to excessive collision.

Internal MAC Receive Errors—Count of frames transmitted that failed due to an internal MAC receive error.

Collision Statistics

The Collision Statistics area displays the following statistics:

Collision Count—Number of collisions per frame on a particular interface

Collision Frequency—The corresponding count of frames for the specified number of collisions.

SRP Side Performance

The SRP Side Performance section covers the following areas:

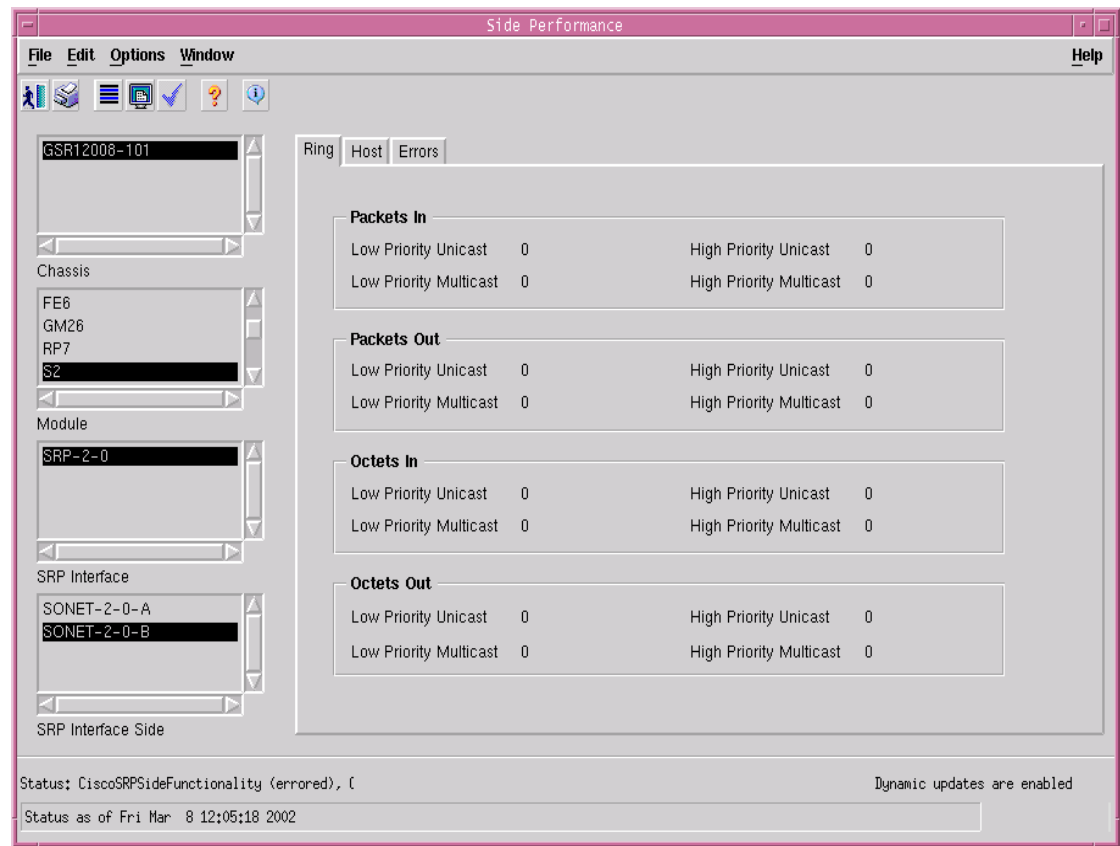
- Viewing the SRP Side Performance Window
- SRP Side Performance Window - Detailed Description

Viewing the SRP Side Performance Window

To view the SRP Side Performance window, proceed as follows:

- Step 1** Right click (on a relevant object icon in the Map Viewer window or from an object pick list) and select the **C12kM Management>Physical>Interface>SRP>Side>Performance** option. Refer to [Table 10-2 on page 10-2](#) for information on which objects allow you to launch the SRP Side Performance window. The SRP Side Performance window appears, with the Ring tab displayed:

Figure 10-14 SRP Side Performance Window



- Step 2** Choose a **Chassis**, **Module**, **SRP Interface** and **SRP Side** from the list boxes displayed at the left of the window. The performance information for the selected interface appears.

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Note The performance dialogs are not applicable to the OC-12 linecards

SRP Side Performance Window - Detailed Description

The SRP Side Performance window displays three tabs: Ring, Host and Errors



Note All the counters that are mentioned in this dialog are subjected to the current 15 minutes interval on the device.

Ring Tab

The Ring tab displays four panels: Packets In, Packets Out, Octets In and Octets Out

Packets In

Low Priority Unicast - Displays the number of low priority unicast packets received from the physical layer.

High Priority Unicast - Displays the number of high priority unicast packets received from the physical layer.

Low Priority Multicast - Displays the number of low priority multicast packets received from the physical layer.

High Priority Multicast - Displays the number of high priority multicast packets received from the physical layer.

Packets Out

Low Priority Unicast - Displays the number of low priority unicast packets going to the physical layer.

High Priority Unicast - Displays the number of high priority unicast packets going to the physical layer.

Low Priority Multicast - Displays the number of low priority multicast packets going to the physical layer.

High Priority Multicast - Displays the number of high priority multicast packets going to the physical layer.

Octets In

Low Priority Unicast - Displays the number of low priority unicast octets received from the physical layer.

High Priority Unicast - Displays the number of high priority unicast octets received from the physical layer.

Low Priority Multicast - Displays the number of low priority multicast octets received from the physical layer.

High Priority Multicast - Displays the number of high priority multicast octets received from the physical layer.

Octets Out

Low Priority Unicast - Displays the number of low priority unicast octets going to the physical layer.

High Priority Unicast - Displays the number of high priority unicast octets going to the physical layer.

Low Priority Multicast - Displays the number of low priority multicast octets going to the physical layer.

High Priority Multicast - Displays the number of high priority multicast octets going to the physical layer.

Host Tab

The Host tab displays four panels: Packets In, Packets Out, Octets In and Octets Out

Packets In

Low Priority Unicast - Displays the number of low priority unicast packets received from the higher layer.

High Priority Unicast - Displays the number of high priority unicast packets received from the higher layer.

Low Priority Multicast - Displays the number of low priority multicast packets received from the higher layer.

High Priority Multicast - Displays the number of high priority multicast packets received from the higher layer.

Packets Out

Low Priority Unicast - Displays the number of low priority unicast packets going to the higher layer.

High Priority Unicast - Displays the number of high priority unicast packets going to the higher layer.

Low Priority Multicast - Displays the number of low priority multicast packets going to the higher layer.

High Priority Multicast - Displays the number of high priority multicast packets going to the higher layer.

Octets In

Low Priority Unicast - Displays the number of low priority unicast octets received from the higher layer.

High Priority Unicast - Displays the number of high priority unicast octets received from the higher layer.

Low Priority Multicast - Displays the number of low priority multicast octets received from the higher layer.

High Priority Multicast - Displays the number of high priority multicast octets received from the higher layer.

Octets Out

Low Priority Unicast - Displays the number of low priority unicast octets going to the higher layer.

High Priority Unicast - Displays the number of high priority unicast octets going to the higher layer.

Low Priority Multicast - Displays the number of low priority multicast octets going to the higher layer.

High Priority Multicast - Displays the number of high priority multicast octets going to the higher layer.

Errors Tab

The Errors tab displays two panels: Ring and Host

Ring

Received TTL Expiry Packets - Displays the number of discarded packets received from the physical layer, due to TTL expiry

Received Aborted Packets - Displays the number of packets aborted from the physical layer by an abort sequence code.

Received Giant Packets - Displays the number of giant packets received from the physical layer.



Note A giant packet is larger than the maximum size packet, which is 9216 octets

Received Short Packets - Displays the number of short packets received from the physical layer.



Note A short packet is 16 octets or less

CRC Error Packets - Displays the number of packets with CRC errors.

Host

Received Discarded Packets - Displays the number of packets that are not delivered to a higher layer due to lack of resources.

Received Giant Packets - Displays the number of packets discarded due to packet size being too big for the higher layer.

Received Short Packets - Displays the number of packets discarded due to packet size being too small for the higher layer.