



Monitor Performance

Performance monitoring (PM) parameters are used by service providers to gather, store, set thresholds, and report performance data for early detection of problems. For more PM information, details, and definitions refer to the *Cisco ONS 15454 Reference Manual*. This chapter explains how to enable and view performance monitoring statistics for the Cisco ONS 15454.

Before You Begin

Before performing any of the following procedures, investigate all alarms and clear any trouble conditions. Refer to the *Cisco ONS 15454 Troubleshooting Guide* as necessary.

This section lists the chapter procedures (NTPs). Turn to a procedure for applicable tasks (DLPs).

1. [NTP-A73 Enable Performance Monitoring, page 8-2](#)—Complete as needed.
2. [NTP-A197 Monitor Electrical or Optical Performance, page 8-7](#)—Complete this procedure as needed to monitor electrical or optical performance.
3. [NTP-A198 Monitor Ethernet Performance, page 8-19](#)—Complete this procedure as needed to monitor Ethernet performance.



Note

For additional information regarding PM parameters, refer to the Digital transmission surveillance section in Telcordia's GR-1230-CORE, GR-820-CORE, GR-499-CORE, and GR-253-CORE documents, and in the ANSI document entitled *Digital Hierarchy - Layer 1 In-Service Digital Transmission Performance Monitoring*.

NTP-A73 Enable Performance Monitoring

Purpose	This procedure describes how to enable performance monitoring.
Tools/Equipment	None
Prerequisite Procedures	None
Required/As Needed	As Needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher

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- Step 1** Log into CTC at the node that you want to monitor. See the “[DLP-A60 Log into CTC](#)” task on page 3-23 for instructions. If you are already logged in, proceed to [Step 2](#).
- Step 2** Complete the “[DLP-A121 Enable Pointer Justification Count Performance Monitoring](#)” task on page 8-2 if you need to monitor clock synchronization.
- Step 3** Complete the “[DLP-A122 Enable Intermediate Path Performance Monitoring](#)” task on page 8-5 if you need to monitor large amounts of STS traffic through intermediate nodes.

Stop. You have completed this procedure.

DLP-A121 Enable Pointer Justification Count Performance Monitoring

Purpose	This task enables pointer justification counts, which provide a way to align the phase variations in STS and VT payloads and to monitor the clock synchronization between nodes. A consistent, large pointer justification count indicates clock synchronization problems between nodes.
Tools/Equipment	None
Prerequisite Procedures	DLP-A60 Log into CTC , page 3-23
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher

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- Step 1** In node view, double-click the card where the line terminates (drops), called line terminating equipment (LTE) card. The card view appears.

See [Table 8-1](#) for a list of Cisco ONS 15454 LTE cards.

Table 8-1 *Traffic Cards that Terminate the Line, Called LTEs*

Line Terminating Equipment	
EC1-12	DS1N-14
DS1-14	DS3N-12
DS3-12	DS3N-12E
DS3-12E	OC3 IR4 1310

Table 8-1 Traffic Cards that Terminate the Line, Called LTEs (continued)

Line Terminating Equipment	
DS3XM-6	OC12 LR 1310
OC12 IR 1310	OC12 IR/STM4 SH 1310-4
OC12 LR 1550	OC48 LR 1550
OC48 IR 1310	OC48 LR/STM16 LH AS 1550
OC48 IR/STM16 SH AS 1310	OC48 ELR 200 Ghz ITU
OC192 LR 1550	E100T-12
OC48 ELR 100 Ghz ITU	E100T-G
E1000-2	G1000-4
E1000-2-G	ML100T-12
G1K-4	ML1000-2

Step 2 Click the **Provisioning > Line** tabs.

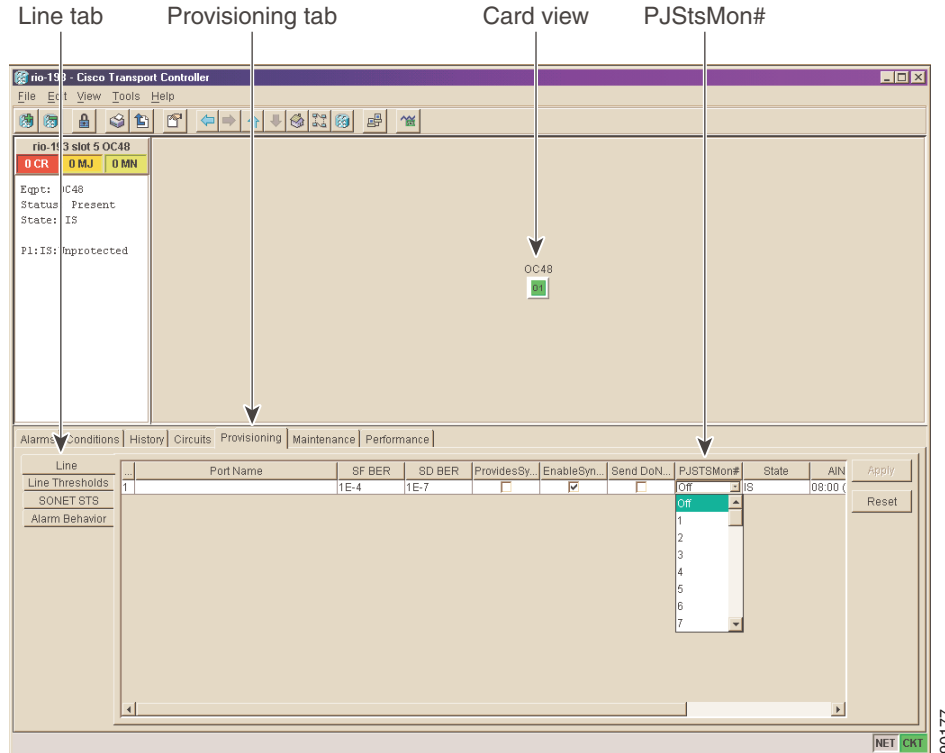
Step 3 Click the PJStsMon# menu and make a selection based on the following rules



Note [Figure 8-1 on page 8-4](#) shows the PJStsMon# menu on the Provisioning window.

- The default value Off means pointer justification monitoring is disabled.
- The values 1 to n are the number of STSs on the port. One STS per port can be enabled from the PJStsMon# card menu.

Figure 8-1 Line Tab for Enabling Pointer Justification Count Parameters



- Step 4** In the State field, confirm that the port is in service (IS).
- Step 5** If the port is IS, click **Apply** and go to [Step 7](#).
- Step 6** If the port is out of service (OOS, OOS_MT, OOS_AINS), Select **IS** in the State field and click Apply.
- Step 7** Click the **Performance** tab to view PM parameters. [Figure 8-2 on page 8-5](#) shows pointer justification count. Refer to the *Cisco ONS 15454 Reference Manual* for more PM information, details, and definitions.



Note On CTC, the count fields for PPJC and NPJC PM parameters appear white and blank unless they are enabled on the Provisioning > Line tabs.

Figure 8-2 Pointer Justification Counts

Pointer justification counts Performance tab Card view

Param	Curr	Prev	Prev-1	Prev-2	Prev-3	Prev-4	Prev-5	Prev-6	Prev-7	Prev-8	Prev-9	Prev-10
CV-S	0	0	0	0	0	0	0	0	0	0	0	0
ES-S	0	0	0	0	0	0	0	0	0	0	0	0
SES-S	0	0	0	0	0	0	0	0	0	0	0	0
SEFS-S	0	0	0	0	0	0	0	0	0	0	0	0
CV-L	0	0	0	0	0	0	0	0	0	0	0	0
ES-L	0	0	0	0	0	0	0	0	0	0	0	0
SES-L	0	0	0	0	0	0	0	0	0	0	0	0
UAS-L	0	0	0	0	0	0	0	0	0	0	0	0
FC-L	0	0	0	0	0	0	0	0	0	0	0	0
PPJC-Pdet												
NPJC-Pdet												
PPJC-Pgen												
NPJC-Pgen												

Directions: Near End Far End Intervals: 15 min 1 day Port: STS: Refresh Auto-refresh: Baseline Clear...

15-minute, near-end registers for Port #1, STS #1, at 1/4/1970 13:53:50

NET CKT 78648

Step 8 Return to your originating procedure (NTP).

DLP-A122 Enable Intermediate Path Performance Monitoring

Purpose	This task enables intermediate path performance monitoring, which allows you to monitor large amounts of STS traffic through intermediate nodes.
Tools/Equipment	None
Prerequisite Procedures	DLP-A60 Log into CTC, page 3-23
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher



Note The monitored IPPM parameters are STS CV-P, STS ES-P, STS SES-P, STS UAS-P, and STS FC-P. For more information about IPPM parameters, refer to the *Cisco ONS 15454 Reference Manual*.

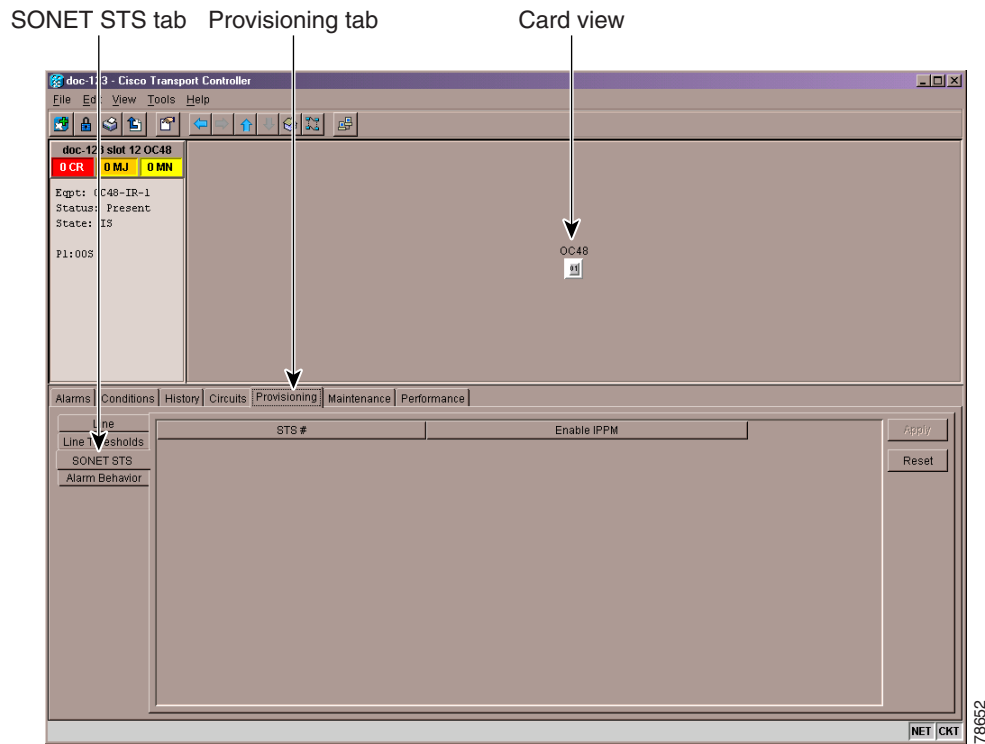
Step 1 In node view, double-click the LTE card you want to monitor. The card view appears.

See [Table 8-1 on page 8-2](#) for a list of Cisco ONS 15454 LTE cards.

Step 2 Click the **Provisioning** tab.

Step 3 Click the **SONET STS** tab. [Figure 8-3](#) shows the SONET STS tab on the Provisioning window.

Figure 8-3 SONET STS Tab for Enabling IPPM



Step 4 Click the check box in the Enable IPPM column for the STS you want to monitor.

Step 5 Click the **Apply** button.

Step 6 Click the **Performance** tab to view PM parameters. For IPPM parameter definitions, refer to the *Cisco ONS 15454 Reference Manual*.

Step 7 Return to your originating procedure (NTP).

NTP-A197 Monitor Electrical or Optical Performance

Purpose	The Performance tab window allows you to view node near-end or far-end performance on a selected card and port at selected time intervals to detect possible performance problems.
Tools/Equipment	None
Prerequisite Procedures	Before you monitor performance, be sure you have created the appropriate circuits and provisioned the card according to your specifications. For more information, see Chapter 6, “Create Circuits and VT Tunnels” and Chapter 11, “Change Card Settings.”
Required/As Needed	As needed
Onsite/Remote	Onsite
Security Level	Retrieve or higher

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- Step 1** Log into CTC at the node that you want to monitor. See the [“DLP-A60 Log into CTC”](#) task on page 3-23 for instructions. If you are already logged in, proceed to [Step 2](#)
- Step 2** Complete the [“DLP-A123 View Electrical or Optical OC-N PM Parameters”](#) task on page 8-8.
- Step 3** Complete the [“DLP-A317 View TXP_MR_10G or MXP_2.5G_10G Optics PM Parameters”](#) task on page 8-9.
- Step 4** Complete the [“DLP-A318 View TXP_MR_10G or MXP_2.5G_10G Payload PM Parameters”](#) task on page 8-10.
- Step 5** Complete the [“DLP-A319 View TXP_MR_10G or MXP_2.5G_10G OTN PM Parameters”](#) task on page 8-11.
- Step 6** As needed, use the following tasks to change the display of electrical, optical, and transponder or muxponder PM counts:
- [DLP-A261 Refresh PM Counts for a Different Port](#), page 8-12
 - [DLP-A124 Refresh Electrical or Optical PM Counts at 15-Minute Intervals](#), page 8-13
 - [DLP-A125 Refresh Electrical or Optical PM Counts at One-Day Intervals](#), page 8-14
 - [DLP-A126 Monitor Near-End PM Counts](#), page 8-14
 - [DLP-A127 Monitor Far-End PM Counts](#), page 8-15
 - [DLP-A128 Monitor PM Counts for Selected Signal Types](#), page 8-16
 - [DLP-A129 Reset Current PM Counts](#), page 8-17
 - [DLP-A130 Clear Selected PM Counts](#), page 8-18

Stop. You have completed this procedure.

DLP-A123 View Electrical or Optical OC-N PM Parameters

Purpose	This task enables you to view PM counts on a selected electrical or optical (OC-N) card and port to detect possible performance problems.
Tools/Equipment	None
Prerequisite Procedures	DLP-A60 Log into CTC, page 3-23
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Retrieve or higher

- Step 1** In node view, double-click the electrical or optical (OC-N) card of choice. The card view appears.
- Step 2** Click the **Performance** tab ([Figure 8-4](#)).

Figure 8-4 Viewing Performance Monitoring Information

The screenshot shows the Performance Monitoring (PM) interface for a selected OC48 card. The interface includes a table of PM parameters and various control buttons.

Param	Curr	Prev	Prev-1	Prev-2	Prev-3	Prev-4	Prev-5	Prev-6	Prev-7	Prev-8	Prev-9
CV-S	0	0	0	0	0	0	0	0	0	0	0
ES-S	0	0	0	0	0	0	0	0	0	0	0
SES-S	0	0	0	0	0	0	0	0	0	0	0
SEFS-S	0	0	0	0	0	0	0	0	0	0	0
CV-L	0	0	0	0	0	0	0	0	0	0	0
ES-L	0	0	0	0	0	0	0	0	0	0	0
SES-L	0	0	0	0	0	0	0	0	0	0	0
SEFS-L	0	0	0	0	0	0	0	0	0	0	0
FC-L	0	0	0	0	0	0	0	0	0	0	0
PPJC-Pdet	0	0	0	0	0	0	0	0	0	0	0
NPJC-Pdet	0	0	0	0	0	0	0	0	0	0	0
PPJC-Ppen	0	0	0	0	0	0	0	0	0	0	0
NPJC-Ppen	0	0	0	0	0	0	0	0	0	0	0

Labels in the image point to the following UI elements:

- Card View
- Performance
- Auto-refresh
- Refresh
- Port
- Intervals radio buttons
- Directions radio buttons
- Baseline
- Clear

- Step 3** View the PM parameter names that appear on the left portion of the window in the Param column. The PM values appear on the right portion of the window in the Curr (current), and Prev-*n* (previous) columns. For PM parameter definitions, refer to the *Cisco ONS 15454 Reference Manual*.
- Step 4** Return to your originating procedure (NTP).

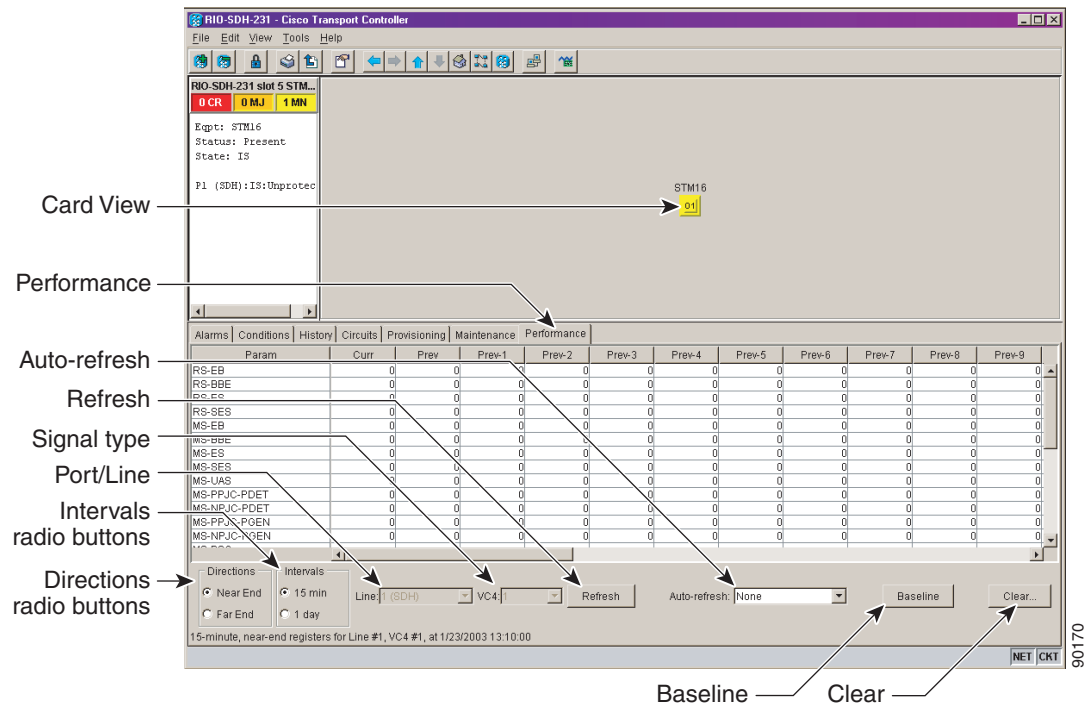
DLP-A317 View TXP_MR_10G or MXP_2.5G_10G Optics PM Parameters

Purpose	This task enables you to view the optics PM counts on a selected TXP_MR_10G (transponder) or MXP_2.5G_10G (muxponder) optical card and port to detect possible performance problems.
Tools/Equipment	None
Prerequisite Procedures	DLP-A60 Log into CTC , page 3-23
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Retrieve or higher

- Step 1** In node view, double-click the TXP_MR_10G or MXP_2.5G_10G optical card of choice. The card view appears.
- Step 2** Click the **Performance** tab.
- Step 3** Click the **Optics PM** tab (Figure 8-5).

View the PM parameter names that appear on the left portion of the window in the Param column. The PM values appear on the right portion of the window in the Curr (current), and Prev-n (previous) columns. For PM parameter definitions, refer to the *Cisco ONS 15454 Reference Manual*.

Figure 8-5 Viewing TXP_MR_10G or MXP_2.5G_10G Optics Performance Monitoring Information



- Step 4** Return to your originating procedure (NTP).

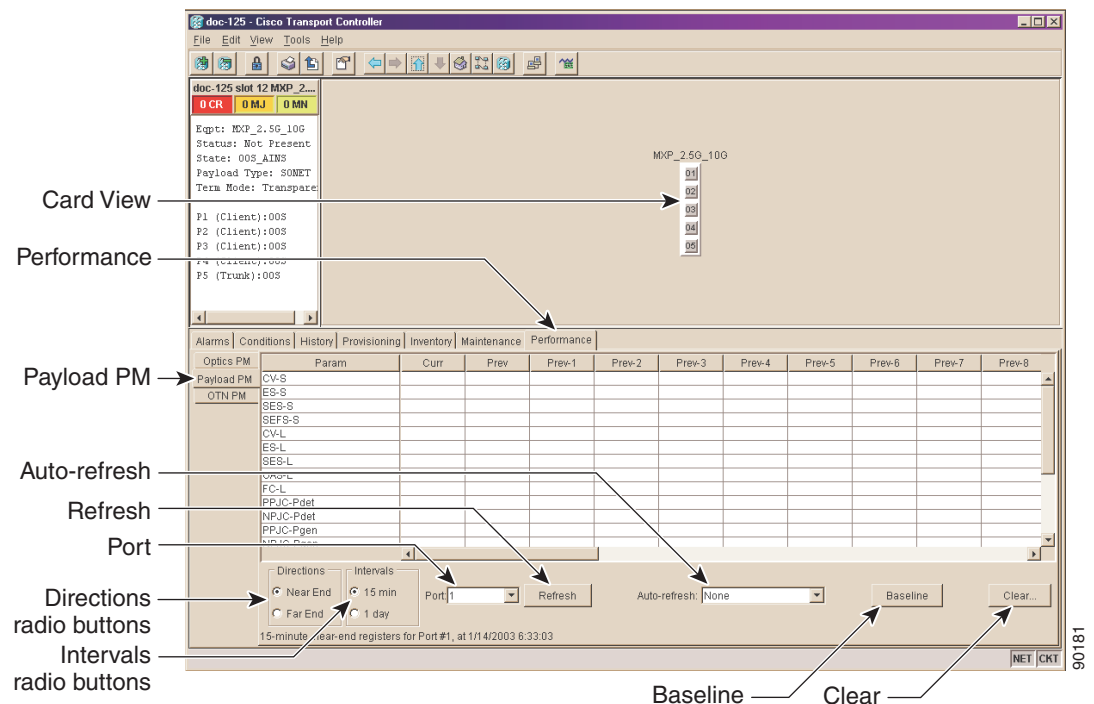
DLP-A318 View TXP_MR_10G or MXP_2.5G_10G Payload PM Parameters

Purpose	This task enables you to view the payload PM counts on a selected TXP_MR_10G or MXP_2.5G_10G optical card and port to detect possible performance problems.
Tools/Equipment	None
Prerequisite Procedures	DLP-A60 Log into CTC, page 3-23
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Retrieve or higher

- Step 1** In node view, double-click the TXP_MR_10G or MXP_2.5G_10G optical card of choice. The card view appears.
- Step 2** Click the **Performance** tab.
- Step 3** Click the **Payload PM** tab ([Figure 8-6](#)).

View the PM parameter names that appear on the left portion of the window in the Param column. The PM values appear on the right portion of the window in the Curr (current), and Prev-*n* (previous) columns. For PM parameter definitions, refer to the *Cisco ONS 15454 Reference Manual*.

Figure 8-6 Viewing TXP_MR_10G or MXP_2.5G_10G Payload Performance Monitoring Information



- Step 4** Return to your originating procedure (NTP).

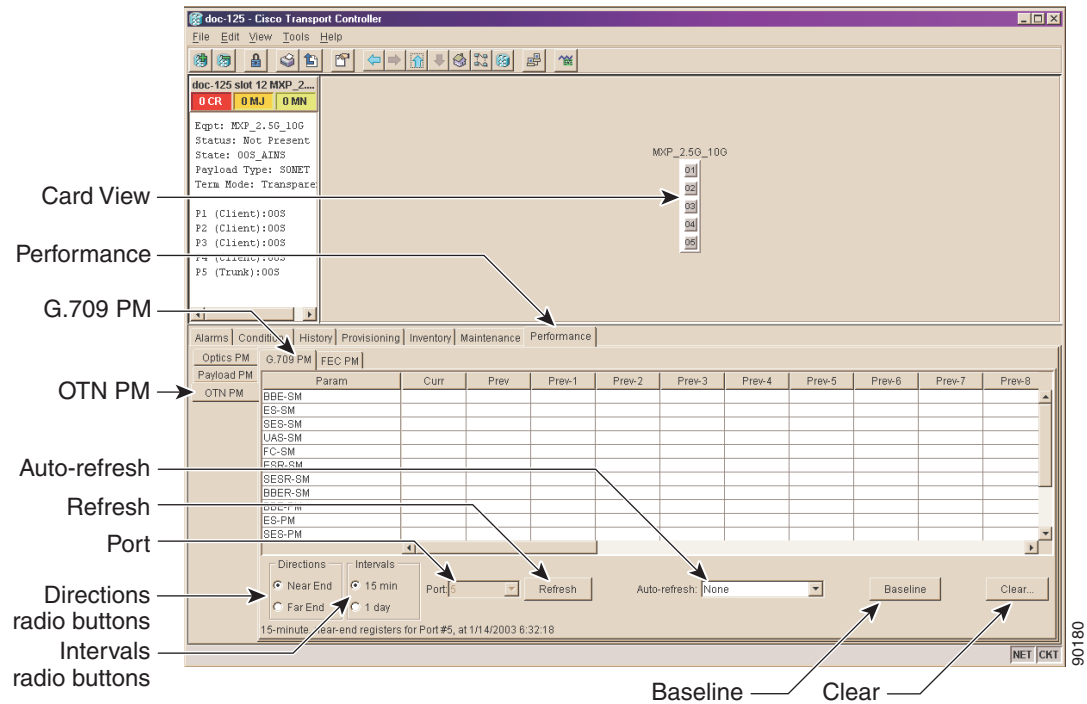
DLP-A319 View TXP_MR_10G or MXP_2.5G_10G OTN PM Parameters

Purpose	This task enables you to view the OTN PM counts on a selected TXP_MR_10G or MXP_2.5G_10G optical card and port to detect possible performance problems.
Tools/Equipment	None
Prerequisite Procedures	DLP-A60 Log into CTC , page 3-23
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Retrieve or higher

- Step 1** In node view, double-click the TXP_MR_10G or MXP_2.5G_10G optical card of choice. The card view appears.
- Step 2** Click the **Performance** tab.
- Step 3** Click the **OTN PM** tab.
- Step 4** Click the **G.709 PM** tab ([Figure 8-7](#)).

View the PM parameter names that appear on the left portion of the window in the Param column. The PM values appear on the right portion of the window in the Curr (current), and Prev-n (previous) columns. For PM parameter definitions, refer to the *Cisco ONS 15454 Reference Manual*.

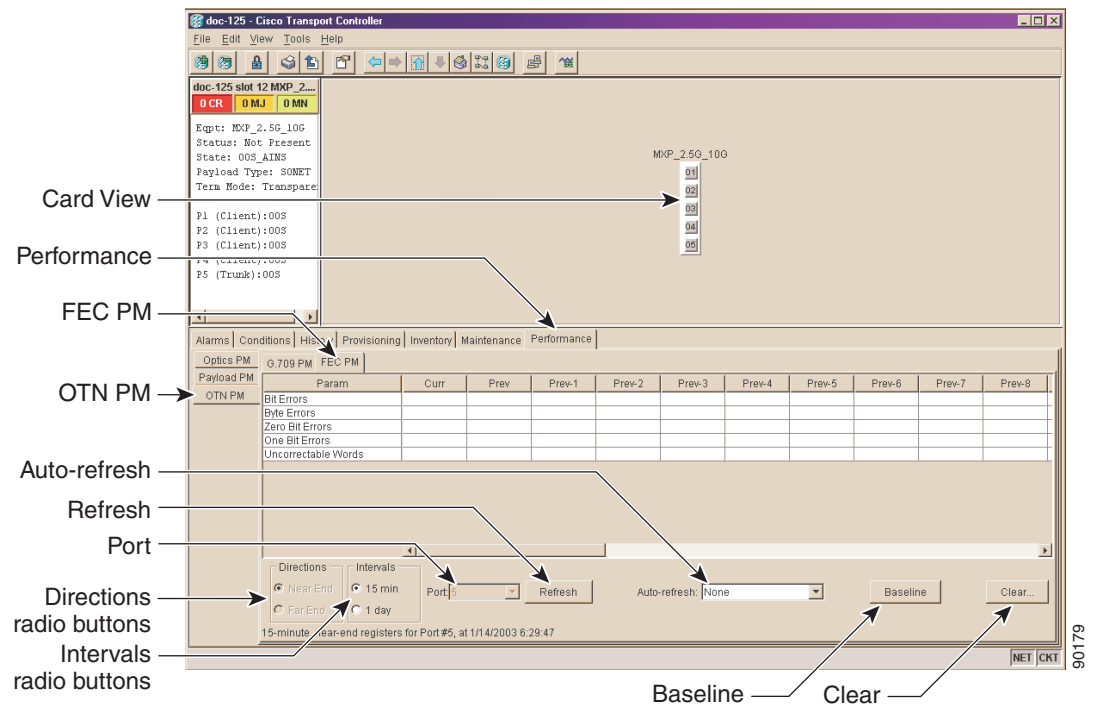
Figure 8-7 Viewing TXP_MR_10G or MXP_2.5G_10G OTN G.709 Performance Monitoring Information



- Step 5** Click the **FEC PM** tab ([Figure 8-8](#)).

View the PM parameter names that appear on the left portion of the window in the Param column. The PM values appear on the right portion of the window in the Curr (current), and Prev-*n* (previous) columns. For PM parameter definitions, refer to the *Cisco ONS 15454 Reference Manual*.

Figure 8-8 Viewing TXP_MR_10G or MXP_2.5G_10G OTN FEC Performance Monitoring Information



Step 6 Return to your originating procedure (NTP).

DLP-A261 Refresh PM Counts for a Different Port

Purpose	This task changes the window view to display PM counts for another port on a multi-port card.
Tools/Equipment	None
Prerequisite Procedures	DLP-A60 Log into CTC, page 3-23
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Retrieve or higher

- Step 1** In node view, double-click the electrical or optical (OC-N) card where you want to view PM counts. The card view appears.
- Step 2** Click the **Performance** tab.
- Step 3** For the E-Series or G-Series Ethernet cards, click the **History** tab.
- Step 4** Click the drop-down menu in the Port field to display the port menu.

- Step 5** Click the desired port to highlight your selection.
- Step 6** Click the **Refresh** button. The PM counts for the newly-selected port appear.
- Step 7** Return to your originating procedure (NTP).
-

DLP-A124 Refresh Electrical or Optical PM Counts at 15-Minute Intervals

Purpose	This task changes the window view to display PM counts in 15-minute intervals.
Tools/Equipment	None
Prerequisite Procedures	DLP-A60 Log into CTC, page 3-23
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Retrieve or higher

- Step 1** In node view, double-click the electrical or optical (OC-N) card of choices. The card view appears.
- Step 2** Click the **Performance** tab.
- Step 3** Click the **15 min** radio button.
- Step 4** Click the **Refresh** button. Performance monitoring parameters display in 15-minute intervals synchronized with the time of day.
- Step 5** View the Curr column to find PM counts for the current 15-minute interval.
- Each monitored performance parameter has corresponding threshold values for the current time period. If the value of the counter exceeds the threshold value for a particular 15-minute interval, a threshold crossing alert (TCA) is raised. The number represents the counter value for each specific performance monitoring parameter.
- Step 6** View the Prev-*n* columns to find PM counts for the previous 15-minute intervals.



Note If a complete 15-minute interval count is not possible, the value appears with a yellow background. An incomplete or incorrect count can be caused by monitoring for less than 15 minutes after the counter started, changing node timing settings, changing the time zone settings, replacing a card, resetting a card, or by changing port states. When the problem is corrected, the subsequent 15-minute interval appears with a white background.

- Step 7** Return to your originating procedure (NTP).
-

DLP-A125 Refresh Electrical or Optical PM Counts at One-Day Intervals

Purpose	This task changes the window view to display PM parameters in 1-day intervals.
Tools/Equipment	None
Prerequisite Procedures	DLP-A60 Log into CTC, page 3-23
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Retrieve or higher

-
- Step 1** In node view, double-click the electrical or optical (OC-N) card of choice. The card view appears.
- Step 2** Click the **Performance** tab.
- Step 3** Click the **1 day** radio button.
- Step 4** Click the **Refresh** button. Performance monitoring appears in 1-day intervals synchronized with the time of day.
- Step 5** View the Curr column to find PM counts for the current 1-day interval.

Each monitored performance parameter has corresponding threshold values for the current time period. If the value of the counter exceeds the threshold value for a particular 1-day interval, a threshold crossing alert (TCA) is raised. The number represents the counter value for each specific performance monitoring parameter.

- Step 6** View the Prev-*n* columns to find PM counts for the previous 1-day intervals.



Note If a complete count over a 1-day interval is not possible, the value appears with a yellow background. An incomplete or incorrect count can be caused by monitoring for less than 24 hours after the counter started, changing node timing settings, changing the time zone settings, replacing a card, resetting a card, or by changing port states. When the problem is corrected, the subsequent 1-day interval appears with a white background.

- Step 7** Return to your originating procedure (NTP).
-

DLP-A126 Monitor Near-End PM Counts

Purpose	Use this task to view near-end PM counts for the selected card and port.
Tools/Equipment	None
Prerequisite Procedures	DLP-A60 Log into CTC, page 3-23
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Retrieve or higher

-
- Step 1** In node view, double-click the electrical or optical (OC-N) card of choice. The card view appears.

- Step 2** Click the **Performance** tab.
 - Step 3** Click the **Near End** radio button.
 - Step 4** Click the **Refresh** button. All PM parameters occurring for the selected card on the incoming signal are displayed. For PM parameter definitions refer to the *Cisco ONS 15454 Reference Manual*.
 - Step 5** View the Curr column to find PM counts for the current time interval.
 - Step 6** View the Prev-*n* columns to find PM counts for the previous time intervals.
 - Step 7** Return to your originating procedure (NTP).
-

DLP-A127 Monitor Far-End PM Counts

Purpose	Use this task to view far-end PM parameters for the selected card and port. Only cards that allow far-end monitoring have the Far End button as an option.
Tools/Equipment	None
Prerequisite Procedures	DLP-A60 Log into CTC, page 3-23
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Retrieve or higher



Note Only cards that allow far-end monitoring have this radio button as an option.

- Step 1** In node view, double-click the electrical or optical (OC-N) card of choice. The card view appears.
 - Step 2** Click the **Performance** tab.
 - Step 3** Click the **Far End** radio button.
 - Step 4** Click the **Refresh** button. All PM parameters recorded by the far-end node for the selected card on the outgoing signal are displayed. For PM parameter definitions refer to the *Cisco ONS 15454 Reference Manual*.
 - Step 5** View the Curr column to find PM counts for the current time interval.
 - Step 6** View the Prev-*n* columns to find PM counts for the previous time intervals.
 - Step 7** Return to your originating procedure (NTP).
-

DLP-A128 Monitor PM Counts for Selected Signal Types

Purpose	Use the signal-type menus to monitor near-end or far-end PM counts for specific signals on a selected card and port.
Tools/Equipment	None
Prerequisite Procedures	DLP-A60 Log into CTC, page 3-23
Required/As Needed	As needed
Onsite/Remote	Remote
Security Level	Retrieve or higher

Step 1 In node view, double-click the electrical or optical (OC-N) card where you want to view PM counts. The card view appears.

Step 2 Click the **Performance** tab.

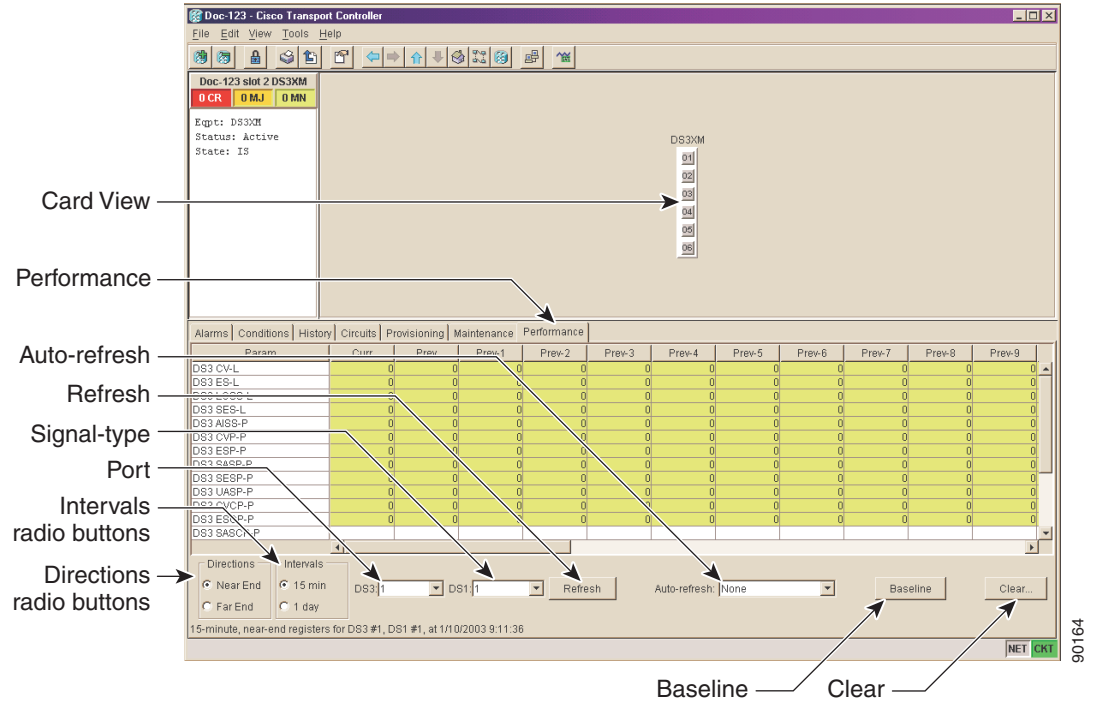


Note Different port and signal-type menus appear depending on the card type and the circuit type. The appropriate types (DS1, DS3, VT path, STS path, OC-N section, line) appear based on the card. For example, the DS3XM card lists DS3, DS1, VT path, and STS path PM parameters as signal-types. This enables selection of both the DS-3 port and the DS-1 within the specified DS-3.

Step 3 Choose **Port/Line** from the drop-down menu and highlight the desired port/line. The options vary depending on the card.

Step 4 Choose the signal type from the drop-down menu and highlight the desired signal. The options vary depending on the card. [Figure 8-9 on page 8-17](#) shows the Port and Signal-type menus on the Performance window for a DS3XM-6 card.

Figure 8-9 Signal-Type Menus for a DS3XM-6 Card



- Step 5** Click the **Refresh** button. All PM counts recorded by the near-end or far-end node for the specified outgoing signal type on the selected card and port are displayed. For PM parameter definitions, refer to the *Cisco ONS 15454 Reference Manual*.
- Step 6** View the Curr column to find PM counts for the current time interval.
- Step 7** View the Prev-*n* columns to find PM counts for the previous time intervals.
- Step 8** Return to your originating procedure (NTP).

DLP-A129 Reset Current PM Counts

Purpose	This task clears the PM count displayed in the current time interval, but it does not clear the cumulative PM count. This task allows you to see how quickly PM counts rise.
Tools/Equipment	None
Prerequisite Procedures	DLP-A60 Log into CTC, page 3-23
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Retrieve or higher

- Step 1** In node view, double-click the Ethernet, electrical, or optical (OC-N) card of choice. The card view appears.
- Step 2** Click the **Performance** tab.

Step 3 Click the **Baseline** button.



Note The Baseline button clears the PM counts displayed in the current time interval but does not clear the PM counts on the card. When the current time interval expires or the window view changes, the total number of PM counts on the card and on the window appear in the appropriate column. The baseline values are discarded if you change views to a different window and then return to the Performance window.

Step 4 View the current statistics column(s) to observe changes to PM counts for the current time interval.

Step 5 Return to your originating procedure (NTP).

DLP-A130 Clear Selected PM Counts

Purpose	This task uses the Clear button to clear specified PM counts depending on the option selected.
Tools/Equipment	None
Prerequisite Procedures	DLP-A60 Log into CTC, page 3-23
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Retrieve or higher



Caution

Pressing the Clear button can mask problems if used incorrectly. This button is commonly used for testing purposes.

Step 1 In node view, double-click the Ethernet, electrical, or optical (OC-N) card where you want to view PM counts. The card view appears.

Step 2 Click the **Performance** tab.

Step 3 Click the **Clear** button.

Step 4 From the Clear Statistics menu, choose one of three options:

- **Selected statistics:** Clearing selected statistics erases from the card and the window display all PM counts associated with the current combination of statistics on the selected port. This means the selected time interval, direction, and signal type counts are erased from the card and the window display.
- **All statistics on port x:** Clearing all statistics on port x erases from the card and the window display all PM counts associated with all combinations of the statistics on the selected port. This means all time intervals, directions, and signal type counts are erased from the card and the window display.
- **All statistics in current view:** Clearing all statistics in the current view erases from the card and the window display all PM counts for all ports.

Step 5 From the Clear Statistics menu, click **Yes** to clear the selected statistics.

- Step 6** View the displayed columns to verify that the selected PM counts have been cleared.
- Step 7** Return to your originating procedure (NTP).
-

NTP-A198 Monitor Ethernet Performance

Purpose	This procedure allows you to view node transmit and receive performance on a selected Ethernet card and port at selected time intervals to detect possible performance problems.
Tools/Equipment	None
Prerequisite Procedures	Before you monitor performance, be sure you have created the appropriate circuits and provisioned the card according to your specifications. For more information, see Chapter 6, “Create Circuits and VT Tunnels” and Chapter 11, “Change Card Settings.”
Required/As Needed	As needed
Onsite/Remote	Onsite
Security Level	Retrieve or higher

- Step 1** Log into CTC at the node that you want to monitor. See the [“DLP-A60 Log into CTC” task on page 3-23](#) for instructions. If you are already logged in, proceed to [Step 2](#).
- Step 2** Complete the [“DLP-A256 View Ethernet Statistics PM Parameters” task on page 8-20](#).
As needed, use the following tasks to change the display of Ethernet statistical PM counts:
- [DLP-A260 Set Auto-Refresh Interval for Displayed PM Counts, page 8-21](#)
 - [DLP-A129 Reset Current PM Counts, page 8-17](#)
 - [DLP-A130 Clear Selected PM Counts, page 8-18](#)
- Step 3** Complete the [“DLP-A257 View Ethernet Utilization PM Parameters” task on page 8-22](#).
As needed, use the [“DLP-A259 Refresh Ethernet PM Counts at a Different Time Interval” task on page 8-23](#) to change the display of Ethernet utilization PM counts:
- Step 4** Complete the [“DLP-A258 View Ethernet History PM Parameters” task on page 8-23](#).
As needed, use the following tasks to change the display of Ethernet history PM counts:
- [DLP-A261 Refresh PM Counts for a Different Port, page 8-12](#)
 - [DLP-A259 Refresh Ethernet PM Counts at a Different Time Interval, page 8-23](#)
- Step 5** Complete the [“DLP-A320 View ML-Series Ether Ports PM Parameters” task on page 8-24](#).
As needed, use the following tasks to change the display of Ether port PM counts:
- [DLP-A260 Set Auto-Refresh Interval for Displayed PM Counts, page 8-21](#)
 - [DLP-A129 Reset Current PM Counts, page 8-17](#)

Step 6 Complete the “DLP-A321 View ML-Series POS Ports PM Parameters” task on page 8-25.

As needed, use the following tasks to change the display of POS port PM counts:

- DLP-A260 Set Auto-Refresh Interval for Displayed PM Counts, page 8-21
- DLP-A129 Reset Current PM Counts, page 8-17

Stop. You have completed this procedure.

DLP-A256 View Ethernet Statistics PM Parameters

Purpose	This task enables you to view current statistical PM counts on an Ethernet card and port to detect possible performance problems.
Tools/Equipment	None
Prerequisite Procedures	DLP-A60 Log into CTC, page 3-23
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Retrieve or higher

Step 1 In node view, double-click the E-Series or G-Series Ethernet card of choice. The card view appears.

Step 2 Click the **Performance** tab.

Step 3 Click the **Statistics** subtab. Figure 8-10 shows the Statistics pane on the Performance tab.

Figure 8-10 G-Series Statistics Pane on the Card View Performance Tab

Card View

Performance

Statistics

Refresh

Auto-refresh

Baseline

Clear

Param	Port 1 12/23/02 16:54:21 PST	Port 2 12/23/02 16:54:21 PST	Port 3 12/23/02 16:54:21 PST	Port 4 12/23/02 16:54:21 PST
Link Status	Down	Down	Down	Down
Rx Packets	0	0	0	0
Rx Bytes	0	0	0	0
Tx Packets	0	0	0	0
Tx Bytes	0	0	0	0
Rx FCS	0	0	0	0
Rx Alignment	0	0	0	0
Rx Runts	0	0	0	0
Rx Jabbers	0	0	0	0
Rx Pause Frames	0	0	0	0
Tx Pause Frames	0	0	0	0
Rx Pkts Dropped Internal Congestion	0	0	0	0
Tx Pkts Dropped Internal Congestion	0	0	0	0
HDLC Errors	0	0	0	0

- Step 4** Click the **Refresh** button. Performance monitoring statistics for each port on the card are displayed.
- Step 5** View the PM parameter names that appear on the left portion of the window in the Param column. The parameter numbers appear on the right portion of the window in the Port # columns. For PM parameter definitions refer to the *Cisco ONS 15454 Reference Manual*.
- Step 6** View the Port # columns to view the current PM statistics for each port.
- Step 7** Return to your originating procedure (NTP).
-

DLP-A260 Set Auto-Refresh Interval for Displayed PM Counts

Purpose	This task changes the window auto-refresh intervals for updating the displayed PM counts.
Tools/Equipment	None
Prerequisite Procedures	DLP-A60 Log into CTC, page 3-23
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Retrieve or higher

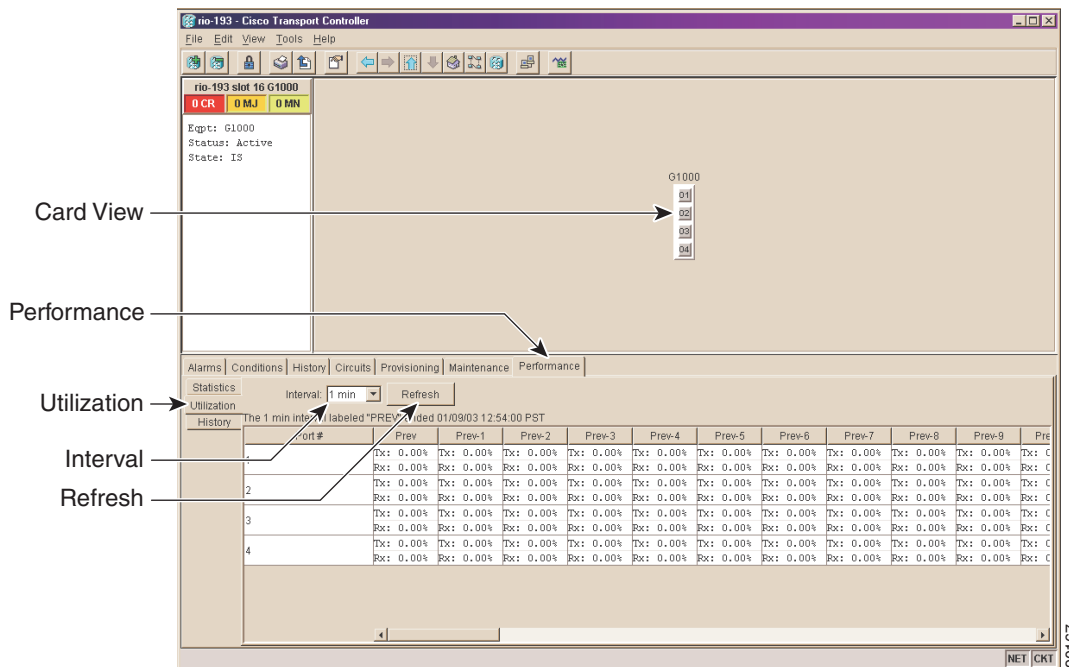
- Step 1** In node view, double-click the Ethernet, electrical, or optical (OC-N) card where you want to view PM counts. The card view appears.
- Step 2** Click the **Performance** tab.
- Step 3** Choose **Auto-refresh** from the drop-down menu.
- Step 4** From the Auto-refresh drop-down menu, choose one of six options:
- **None:** This option disables the auto-refresh feature.
 - **15 Seconds:** This option sets the window auto-refresh to 15-second time intervals.
 - **30 Seconds:** This option sets the window auto-refresh to 30-second time intervals.
 - **1 Minute:** This option sets the window auto-refresh to 1-minute time intervals.
 - **3 Minutes:** This option sets the window auto-refresh to 3-minute time intervals.
 - **5 Minutes:** This option sets the window auto-refresh to 5-minute time intervals.
- Step 5** Click the **Refresh** button. The PM counts for the newly-selected auto-refresh time interval appear. Depending on the selected auto-refresh interval, the displayed PM counts automatically update at completion of each refresh interval. If the auto-refresh interval is set to None, the displayed PM counts are not updated unless you click the **Refresh** button.
- Step 6** Return to your originating procedure (NTP).
-

DLP-A257 View Ethernet Utilization PM Parameters

Purpose	This task enables you to view line utilization PM counts on an Ethernet card and port to detect possible performance problems.
Tools/Equipment	None
Prerequisite Procedures	DLP-A60 Log into CTC, page 3-23
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Retrieve or higher

- Step 1** In node view, double-click the E-Series or G-Series Ethernet card of choice. The card view appears.
- Step 2** Click the **Performance** tab.
- Step 3** Click the **Utilization** subtab. [Figure 8-11](#) shows the Utilization pane on the Performance tab.

Figure 8-11 G-Series Utilization Pane on the Card View Performance Tab



- Step 4** Click the **Refresh** button. Performance monitoring utilization values for each port on the card are displayed.
- Step 5** View the Port # column to find the port you wish to monitor.
- Step 6** View the Prev-n columns to find transmit (Tx) and receive (Rx) bandwidth utilization values for the previous time intervals.
- Step 7** Return to your originating procedure (NTP).

DLP-A259 Refresh Ethernet PM Counts at a Different Time Interval

Purpose	This task changes the window view to display specified PM counts in time intervals depending on the interval option selected.
Tools/Equipment	None
Prerequisite Procedures	DLP-A60 Log into CTC, page 3-23
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Retrieve or higher

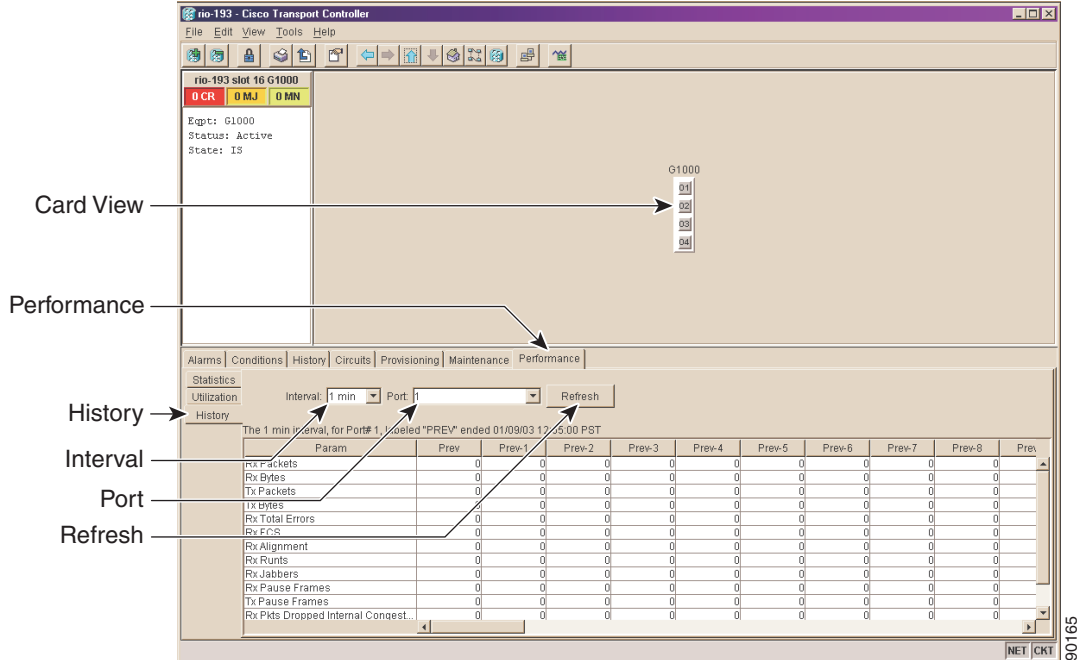
-
- Step 1** In node view, double-click the E-Series or G-Series Ethernet card of choice. The card view appears.
- Step 2** Click the **Performance** tab.
- Step 3** Click either the **Utilization** or **History** tab.
- Step 4** Choose the Interval from the drop-down menu.
- Step 5** From the Interval menu, choose one of four options:
- **1 min**: This option appears the specified PM counts in one-minute time intervals.
 - **15 min**: This option appears the specified PM counts in 15-minute time intervals.
 - **1 hour**: This option appears the specified PM counts in one-hour time intervals.
 - **1 day**: This option appears the specified PM counts in one-day (24 hours) time intervals.
- Step 6** Click the **Refresh** button. The PM counts refresh with values based on one-minute time intervals.
- Step 7** Return to your originating procedure (NTP).
-

DLP-A258 View Ethernet History PM Parameters

Purpose	This task enables you to view historical PM counts at selected time intervals on an Ethernet card and port to detect possible performance problems.
Tools/Equipment	None
Prerequisite Procedures	DLP-A60 Log into CTC, page 3-23
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Retrieve or higher

-
- Step 1** In node view, double-click the E-Series or G-Series Ethernet card where you want to view PM counts. The card view appears.
- Step 2** Click the **Performance** tab.
- Step 3** Click the **History** subtab. [Figure 8-12](#) shows the History pane on the Performance tab.

Figure 8-12 History Pane on the Card View Performance Tab



- Step 4** Click the **Refresh** button. Performance monitoring statistics for each port on the card are displayed.
- Step 5** View the PM parameter names that appear on the left portion of the window in the Param column. The parameter numbers appear on the right portion of the window in the Port # columns. For PM parameter definitions refer to the *Cisco ONS 15454 Reference Manual*.
- Step 6** View the Port # columns to view the current PM statistics for each port.
- Step 7** Return to your originating procedure (NTP).

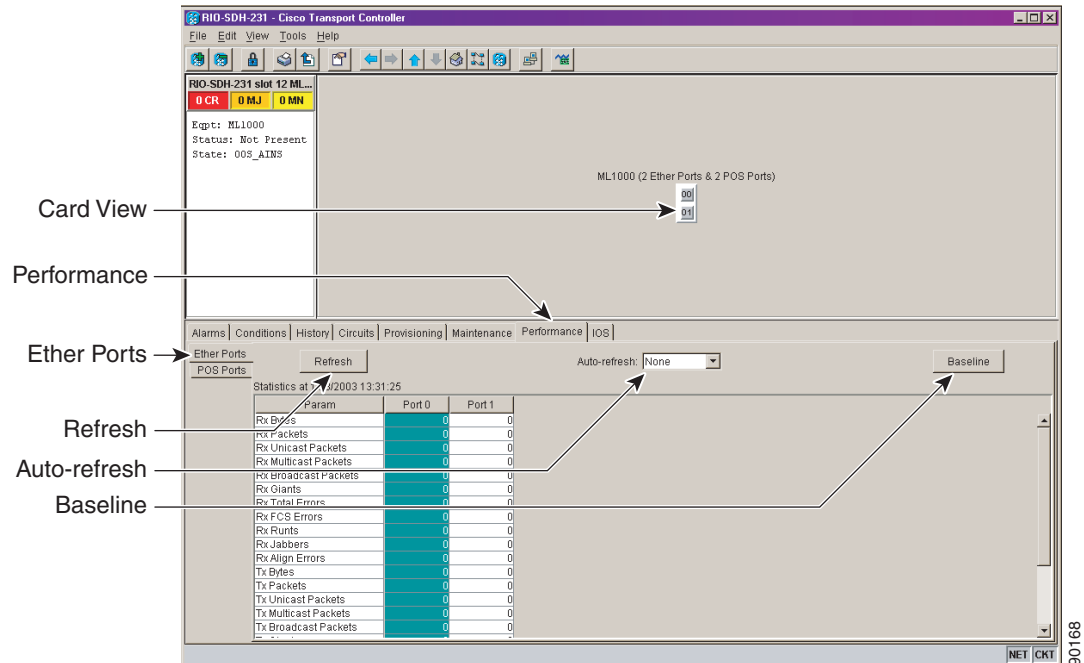
DLP-A320 View ML-Series Ether Ports PM Parameters

Purpose	This task enables you to view Ethernet port PM counts at selected time intervals on an Ethernet card and port to detect possible performance problems.
Tools/Equipment	None
Prerequisite Procedures	DLP-A60 Log into CTC, page 3-23
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Retrieve or higher

- Step 1** In node view, double-click the ML-series Ethernet card of choice. The card view appears.
- Step 2** Click the **Performance** tab.

- Step 3** Click the **Ether Ports** subtab. [Figure 8-13 on page 8-25](#) shows the Ether Ports pane on the Performance tab.

Figure 8-13 Ether Ports Pane on the Card View Performance Tab



- Step 4** Click the **Refresh** button. Performance monitoring statistics for each port on the card are displayed.
- Step 5** View the PM parameter names that appear on the left portion of the window in the Param column. The parameter numbers appear on the right portion of the window in the Port # columns. For PM parameter definitions refer to the *Cisco ONS 15454 Reference Manual*.
- Step 6** View the Port # columns to view the current PM counts for each port.
- Step 7** Return to your originating procedure (NTP).

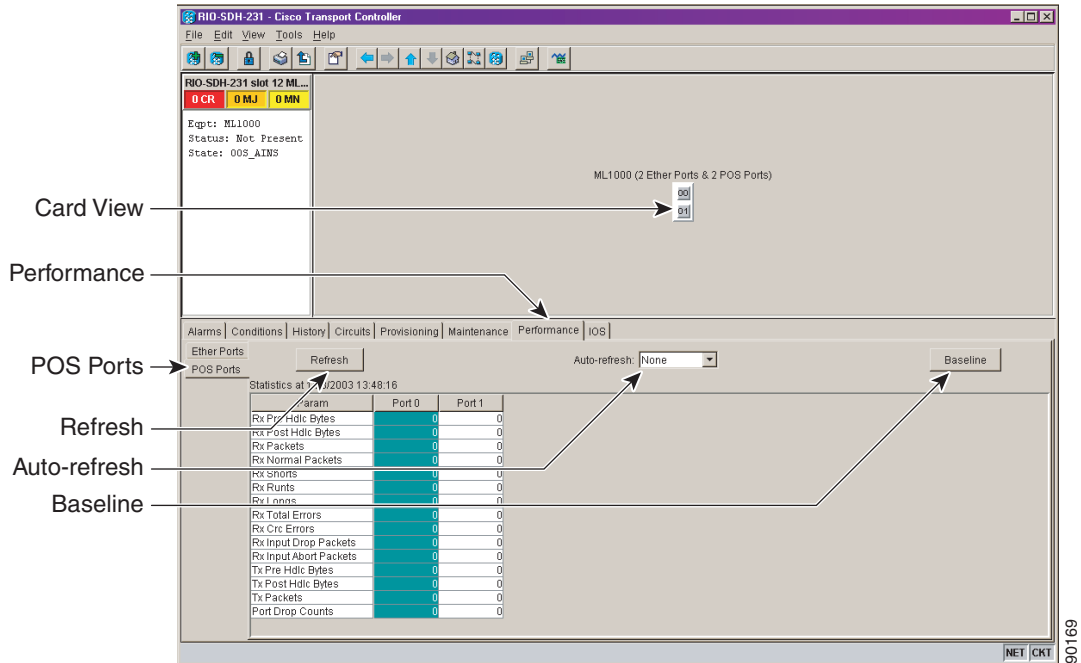
DLP-A321 View ML-Series POS Ports PM Parameters

Purpose	This task enables you to view Packet Over SONET (POS) port PM counts at selected time intervals on an Ethernet card and port to detect possible performance problems.
Tools/Equipment	None
Prerequisite Procedures	DLP-A60 Log into CTC, page 3-23
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Retrieve or higher

- Step 1** In node view, double-click the ML-series Ethernet card of choice. The card view appears.

- Step 2** Click the **Performance** tab.
- Step 3** Click the **POS Ports** subtab. [Figure 8-14](#) shows the POS Ports pane on the Performance tab.

Figure 8-14 POS Ports Pane on the Card View Performance Tab



- Step 4** Click the **Refresh** button. Performance monitoring statistics for each port on the card are displayed.
- Step 5** View the PM parameter names that appear on the left portion of the window in the Param column. The parameter numbers appear on the right portion of the window in the Port # columns. For PM parameter definitions refer to the *Cisco ONS 15454 Reference Manual*.
- Step 6** View the Port # columns to view the current PM counts for each port.
- Step 7** Return to your originating procedure (NTP).