



## CHAPTER 8

# Monitor Performance

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

## Before You Begin

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

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

1. [NTP-D257 Change the PM Display, page 8-2](#)—Complete as needed to change the displayed PM counts.
2. [NTP-D195 Monitor Electrical Performance, page 8-3](#)—Complete as needed to monitor electrical performance.
3. [NTP-D198 Monitor Ethernet Performance, page 8-4](#)—Complete as needed to monitor Ethernet performance.
4. [NTP-D289 Create and Delete Ethernet RMON Thresholds, page 8-5](#)—Complete as needed to monitor Ethernet performance.
5. [NTP-D254 Monitor STM-N Performance, page 8-5](#)—Complete as needed to monitor optical (STM-N) performance.
6. [NTP-D355 Monitor Multirate Performance, page 8-6](#)—Complete as needed to monitor multirate (MRC-N) performance.
7. [NTP-D301 Monitor FC\\_MR-4 Performance, page 8-7](#)—Complete as needed to monitor FC\_MR-4 performance.
8. [NTP-D302 Create or Delete FC\\_MR-4 RMON Thresholds, page 8-7](#)—Complete as needed to monitor FC\_MR-4 performance.
9. [NTP-D363 Enable or Disable AutoPM, page 8-8](#)—Complete as needed to enable or disable automatic autonomous performance monitoring (AutoPM) reports.



### Note

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For additional information regarding PM parameters, refer to ITU G.826, Telcordia GR-820-CORE, Telcordia GR-499-CORE, and Telcordia GR-253-CORE.

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## NTP-D257 Change the PM Display

|                                |   |
|--------------------------------|---|
| <b>Purpose</b>                 | This procedure changes the display of PM counts by selecting drop-down list or radio button options in the Performance window.  |
| <b>Tools/Equipment</b>         | None  |
| <b>Prerequisite Procedures</b> | Before you monitor performance, be sure you have created the appropriate circuits and provisioned the card according to your specifications. For more information, see <a href="#">Chapter 6, “Create Circuits and Low-Order Tunnels”</a> and <a href="#">Chapter 10, “Change Card Settings.”</a> |
| <b>Required/As Needed</b>      | As needed   |
| <b>Onsite/Remote</b>           | Onsite or remote  |
| <b>Security Level</b>          | Retrieve or higher  |

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- Step 1** Complete the “[DLP-D60 Log into CTC](#)” task on page 17-45 at the node that you want to monitor. If you are already logged in, continue with Step 2.
- Step 2** In node view, double-click the electrical, Ethernet, optical (STM-N), or multirate transport card where you want to view PM counts. The card view appears.
- Step 3** As needed, use the following tasks to change the display of PM counts:
- [DLP-D124 Refresh PM Counts at 15-Minute Intervals](#), page 18-23
  - [DLP-D125 Refresh PM Counts at One-Day Intervals](#), page 18-23
  - [DLP-D259 Refresh Ethernet PM Counts at a Different Time Interval](#), page 19-67
  - [DLP-D126 View Near-End PM Counts](#), page 18-24
  - [DLP-D127 View Far-End PM Counts](#), page 18-25
  - [DLP-D458 Monitor PM Counts for a Selected Signal](#), page 21-34
  - [DLP-D129 Reset Current PM Counts](#), page 18-25
  - [DLP-D459 Clear Selected PM Counts](#), page 21-35
  - [DLP-D286 Clear All PM Thresholds](#), page 19-82
  - [DLP-D457 Refresh E-Series and G-Series Ethernet PM Counts](#), page 21-33
  - [DLP-D260 Set Auto-Refresh Interval for Displayed PM Counts](#), page 19-68
  - [DLP-D261 Refresh PM Counts for a Different Port](#), page 19-69

**Stop. You have completed this procedure.**

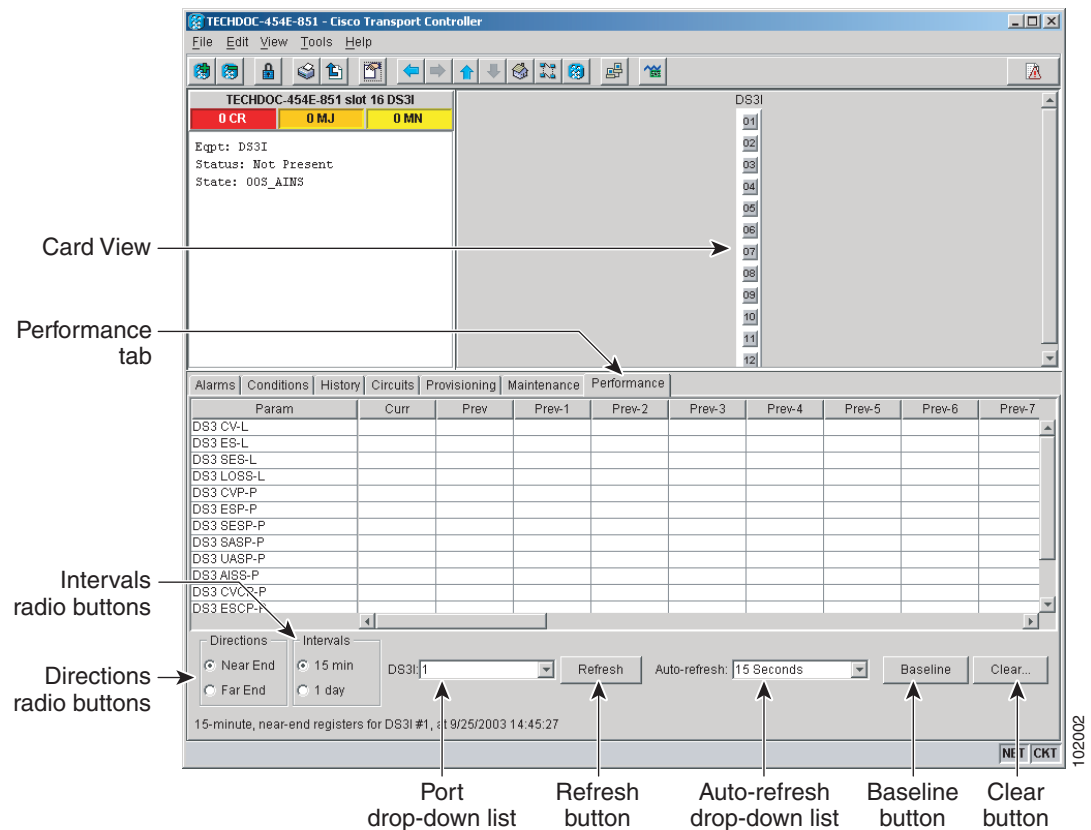
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# NTP-D195 Monitor Electrical Performance

|                                |   |
|--------------------------------|---|
| <b>Purpose</b>                 | This procedure enables you to view node near-end or far-end performance during selected time intervals on an electrical card and port to detect possible performance problems.  |
| <b>Tools/Equipment</b>         | None  |
| <b>Prerequisite Procedures</b> | Before you monitor performance, be sure you have created the appropriate circuits and provisioned the card according to your specifications. For more information, see <a href="#">Chapter 6, “Create Circuits and Low-Order Tunnels”</a> and <a href="#">Chapter 10, “Change Card Settings.”</a> |
| <b>Required/As Needed</b>      | As needed   |
| <b>Onsite/Remote</b>           | Onsite or remote  |
| <b>Security Level</b>          | Retrieve or higher  |

- Step 1** Complete the “[DLP-D60 Log into CTC](#)” task on page 17-45 at the node that you want to monitor. If you are already logged in, continue with [Step 2](#).
- Step 2** In node view, double-click the electrical card where you want to view PM counts. The card view appears.
- Step 3** Click the **Performance** tab ([Figure 8-1](#)).

**Figure 8-1 Viewing Performance Monitoring Information**



**Step 4** View the PM parameter names that appear on the left portion of the window in the Param column. The PM parameter 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 “Performance Monitoring” chapter in the *Cisco ONS 15454 SDH Reference Manual*.

To refresh, reset, or clear PM counts, see the “[NTP-D257 Change the PM Display](#)” procedure on [page 8-2](#).

**Stop. You have completed this procedure.**

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## NTP-D198 Monitor Ethernet Performance

|                                |   |
|--------------------------------|---|
| <b>Purpose</b>                 | This procedure enables you to view node transmit and receive performance during selected time intervals on an Ethernet card and port to detect possible performance problems.   |
| <b>Tools/Equipment</b>         | None  |
| <b>Prerequisite Procedures</b> | Before you monitor performance, be sure you have created the appropriate circuits and provisioned the card according to your specifications. For more information, see <a href="#">Chapter 6, “Create Circuits and Low-Order Tunnels”</a> and <a href="#">Chapter 10, “Change Card Settings.”</a> |
| <b>Required/As Needed</b>      | As needed   |
| <b>Onsite/Remote</b>           | Onsite or remote  |
| <b>Security Level</b>          | Retrieve or higher  |

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**Step 1** Complete the “[DLP-D60 Log into CTC](#)” task on [page 17-45](#) at the node that you want to monitor. If you are already logged in, continue with [Step 2](#).

**Step 2** Complete the “[DLP-D256 View Ethernet Statistics PM Parameters](#)” task on [page 19-65](#).

**Step 3** Complete the “[DLP-D257 View Ethernet Utilization PM Parameters](#)” task on [page 19-66](#).

**Step 4** Complete the “[DLP-D258 View Ethernet History PM Parameters](#)” task on [page 19-67](#).

**Step 5** Complete the “[DLP-D348 View ML-Series Ether Ports PM Parameters](#)” task on [page 20-53](#).

**Step 6** Complete the “[DLP-D349 View ML-Series POS Ports PM Parameters](#)” task on [page 20-54](#).

**Step 7** Complete the “[DLP-D228 View ML-Series RPR Span PM Parameters](#)” task on [page 19-27](#).

**Step 8** Complete the “[DLP-D188 View CE-Series Ethernet and POS Ports Statistics PM Parameters](#)” task on [page 18-74](#).

**Step 9** Complete the “[DLP-D190 View CE-Series Ethernet and POS Ports Utilization PM Parameters](#)” task on [page 18-76](#).

**Step 10** Complete the “[DLP-D192 View CE-Series Ethernet and POS Ports History PM Parameters](#)” task on [page 18-78](#).

**Stop. You have completed this procedure.**

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## NTP-D289 Create and Delete Ethernet RMON Thresholds

|                                |   |
|--------------------------------|---|
| <b>Purpose</b>                 | This procedure creates or deletes Ethernet remote monitoring (RMON) thresholds for the ONS 15454 SDH. |
| <b>Tools/Equipment</b>         | None  |
| <b>Prerequisite Procedures</b> | None  |
| <b>Required/As Needed</b>      | As needed   |
| <b>Onsite/Remote</b>           | Onsite or remote  |
| <b>Security Level</b>          | Provisioning or higher  |

**Step 1** Complete the “[DLP-D60 Log into CTC](#)” task on page 17-45. If you are already logged in, continue with Step 2.

**Step 2** Perform any of the following tasks as needed:

- [DLP-D441 Create Ethernet RMON Alarm Thresholds](#), page 21-28
- [DLP-D436 Delete Ethernet RMON Alarm Thresholds](#), page 21-24

**Stop. You have completed this procedure.**

## NTP-D254 Monitor STM-N Performance

|                                |   |
|--------------------------------|---|
| <b>Purpose</b>                 | This procedure enables you to view node near-end or far-end performance during selected time intervals on an STM-N card and port to detect possible performance problems.   |
| <b>Tools/Equipment</b>         | None  |
| <b>Prerequisite Procedures</b> | Before you monitor performance, be sure you have created the appropriate circuits and provisioned the card according to your specifications. For more information, see <a href="#">Chapter 6, “Create Circuits and Low-Order Tunnels”</a> and <a href="#">Chapter 10, “Change Card Settings.”</a> |
| <b>Required/As Needed</b>      | As needed   |
| <b>Onsite/Remote</b>           | Onsite or remote  |
| <b>Security Level</b>          | Retrieve or higher  |

**Step 1** Complete the “[DLP-D60 Log into CTC](#)” task on page 17-45 at the node that you want to monitor. If you are already logged in, continue with Step 2.

**Step 2** Complete the “[DLP-D121 Enable Pointer Justification Count Performance Monitoring](#)” task on page 18-19 as needed to enable or disable clock synchronization monitoring.

**Step 3** Complete the “[DLP-D122 Enable Intermediate Path Performance Monitoring](#)” task on page 18-21 as needed to enable or disable monitoring of VC4 traffic through intermediate nodes.

**Step 4** Complete the “[DLP-D421 View STM-N PM Parameters](#)” task on page 21-2.

**Note**

To refresh, reset, or clear PM counts, see the [“NTP-D257 Change the PM Display” procedure on page 8-2.](#)

**Stop. You have completed this procedure.**

## NTP-D355 Monitor Multirate Performance

|                                |   |
|--------------------------------|---|
| <b>Purpose</b>                 | This procedure enables you to view node near-end or far-end performance during selected time intervals on an MRC-N card and port to detect possible performance problems.   |
| <b>Tools/Equipment</b>         | None  |
| <b>Prerequisite Procedures</b> | Before you monitor performance, be sure you have created the appropriate circuits and provisioned the card according to your specifications. For more information, see <a href="#">Chapter 6, “Create Circuits and Low-Order Tunnels”</a> and <a href="#">Chapter 10, “Change Card Settings.”</a> |
| <b>Required/As Needed</b>      | As needed   |
| <b>Onsite/Remote</b>           | Onsite or remote  |
| <b>Security Level</b>          | Retrieve or higher  |

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- Step 1** Complete the [“DLP-D60 Log into CTC” task on page 17-45](#) at the node that you want to monitor. If you are already logged in, continue with Step 2.
- Step 2** In node view, double-click the multirate card where you want to view PM counts. The card view appears.
- Step 3** Click the **Performance** tab.
- Step 4** In the Port drop-down list, choose the port you want to monitor.
- Step 5** Click **Refresh**.
- Step 6** View the PM parameter names that appear in the Param column. The PM parameter values appear in the Curr (current), and Prev-*n* (previous) columns. For PM parameter definitions, refer to the “Performance Monitoring” chapter in the *Cisco ONS 15454 SDH Reference Manual*.
- Step 7** To monitor another port on a multiport card, choose another port from the Port drop-down list and click **Refresh**.

**Note**

To refresh, reset, or clear PM counts, see the [“NTP-D257 Change the PM Display” procedure on page 8-2.](#)

**Stop. You have completed this procedure.**

## NTP-D301 Monitor FC\_MR-4 Performance

|                                |   |
|--------------------------------|---|
| <b>Purpose</b>                 | This procedure enables you to view node transmit and receive performance during selected time intervals on an FC_MR-4 card and port to detect possible performance problems.  |
| <b>Tools/Equipment</b>         | None  |
| <b>Prerequisite Procedures</b> | Before you monitor performance, be sure you have created the appropriate circuits and provisioned the card according to your specifications. For more information, see <a href="#">Chapter 6, “Create Circuits and Low-Order Tunnels”</a> and <a href="#">Chapter 10, “Change Card Settings.”</a> |
| <b>Required/As Needed</b>      | As needed   |
| <b>Onsite/Remote</b>           | Onsite or remote  |
| <b>Security Level</b>          | Retrieve or higher  |

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- Step 1** Complete the [“DLP-D60 Log into CTC” task on page 17-45](#) at the node that you want to monitor. If you are already logged in, continue with Step 2.
- Step 2** Complete the [“DLP-D460 View FC\\_MR-4 Statistics PM Parameters” task on page 21-36](#).
- Step 3** Complete the [“DLP-D461 View FC\\_MR-4 Utilization PM Parameters” task on page 21-37](#).
- Step 4** Complete the [“DLP-D462 View FC\\_MR-4 History PM Parameters” task on page 21-38](#).
- Stop. You have completed this procedure.**
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## NTP-D302 Create or Delete FC\_MR-4 RMON Thresholds

|                                |  |
|--------------------------------|--|
| <b>Purpose</b>                 | This procedure creates or deletes FC_MR-4 RMON thresholds for the ONS 15454 SDH. |
| <b>Tools/Equipment</b>         | None   |
| <b>Prerequisite Procedures</b> | None   |
| <b>Required/As Needed</b>      | As needed  |
| <b>Onsite/Remote</b>           | Onsite or remote   |
| <b>Security Level</b>          | Provisioning or higher   |

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- Step 1** Complete the [“DLP-D60 Log into CTC” task on page 17-45](#). If you are already logged in, continue with Step 2.
- Step 2** Perform any of the following tasks as needed:
- [DLP-D465 Create FC\\_MR-4 RMON Alarm Thresholds, page 21-40](#)
  - [DLP-D466 Delete FC\\_MR-4 RMON Alarm Thresholds, page 21-44](#)
- Stop. You have completed this procedure.**

# NTP-D363 Enable or Disable AutoPM

|                                |  |
|--------------------------------|--|
| <b>Purpose</b>                 | This procedure allows you to enable or disable automatic autonomous performance monitoring (AutoPM) reports. |
| <b>Tools/Equipment</b>         | None   |
| <b>Prerequisite Procedures</b> | None   |
| <b>Required/As Needed</b>      | As needed  |
| <b>Onsite/Remote</b>           | Onsite or remote   |
| <b>Security Level</b>          | Provisioning or higher   |

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- Step 1** Complete the “[DLP-D60 Log into CTC](#)” task on page 17-45. If you are already logged in, continue with Step 2.
- Step 2** Click the **Provisioning > Defaults** tabs.
- Step 3** In the Defaults Selector area, click **NODE > General** and choose **NODE.general.AutoPM**.
- Step 4** In the Default Value field, select **True** to enable AutoPM.
- Step 5** Click **Apply**.

Follow Steps 1 through 5 to disable AutoPM. Select **False** in the Default Value field in Step 4 before proceeding to Step 5.

**Stop. You have completed this procedure.**

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