Performance Data

This appendix describes the performance management (PM) tables that are available in Cisco Prime Optical. This appendix includes the following sections:

Note PM data collection is not available for the ONS 15216.

E.1 ONS 15305-Specific PM Tables

This section describes the PM tables that are specific to ONS 15305 NEs.

E.1.1 Overview of Supported PM Parameters

ONS 15305 PM parameters are available on any of the following cards:

- S1.1-2-LC
- S1.1-8-LC
- S4.1-2-LC
- S4.1-4-LC
- S16.1-1-LC
- GE-1-LC
- GE-2-LC
- E100-8
- E3T3-6
- E1-8
- E1-21
- E1-63

- L4.2-2-LC
- L16.2-1LC
- S1.1-2-LC/E1-21
- 2xGE+MAP
- 8xFE+MAP

E.1.1.1 Edge SDH

Table E-1 to Table E-7 list all the ONS 15305 Edge SDH PM parameters with the corresponding description and a list of cards supported.

Table E-1 Regenerator Section PM Parameters—Near End

Parameter	Description	ONS 15305 Cards Supported
RS-SES	Regenerator section—severely errored seconds (near end)	S1.1-2-LC, S1.1-8-LC, S4.1-2-LC, S4.1-4-LC, S16.1-1-LC, L4.2-2-LC, L16.2-1LC, S1.1-2-LC/E1-21
RS-BBE	Regenerator section—background block errors (near end)	
RS-ES	Regenerator section—errored seconds (near end)	
RS-UAS	Regenerator section—unavailable seconds (near end)	

Table E-2 Multiplex Section PM Parameters—Near End

Parameter	Description	ONS 15305 Cards Supported
MS-BBE	Multiplex section—background block errors (near end)	S1.1-2-LC, S1.1-8-LC, S4.1-2-LC, S4.1-4-LC, S16.1-1-LC, L4.2-2-LC, L16.2-1LC, S1.1-2-LC/E1-21
MS-ES	Multiplex section—errored seconds (near end)	
MS-SES	Multiplex section—severely errored seconds (near end)	
MS-UAS	Multiplex section—unavailable seconds (near end)	

Table E-3 Multiplex Section PM Parameters—Far End

Parameter	Description	ONS 15305 Cards Supported
MS-BBE	Multiplex section—background block errors (far end)	S1.1-2-LC, S1.1-8-LC, S4.1-2-LC, S4.1-4-LC, S16.1-1-LC, L4.2-2-LC, L16.2-1LC, S1.1-2-LC/E1-21
MS-ES	Multiplex section—errored seconds (far end)	
MS-SES	Multiplex section—severely errored seconds (far end)	
MS-UAS	Multiplex section—unavailable seconds (far end)	

Table E-4 Higher-Order Virtual Container PM Parameters—Near End

Parameter	Description	ONS 15305 Cards Supported
HP-BBE	High-order path—background block errors (near end)	S1.1-2-LC,S1.1-8-LC, S4.1-2-LC, S4.1-4-LC, S16.1-1-LC, L4.2-2-LC, L16.2-1LC, S1.1-2-LC/E1-21
HP-ES	High-order path—errored seconds (near end)	
HP-SES	High-order path—severely errored seconds (near end)	
HP-UAS	High-order path—unavailable seconds (near end)	

Table E-5 Higher-Order Virtual Container PM Parameters—Far End

Parameter	Description	ONS 15305 Cards Supported
HP-BBE	High-order path—background block errors (far end)	S1.1-2-LC,S1.1-8-LC, S4.1-2-LC, S4.1-4-LC, S16.1-1-LC, L4.2-2-LC, L16.2-1LC, S1.1-2-LC/E1-21
HP-ES	High-order path—errored seconds (far end)	
HP-SES	High-order path—severely errored seconds (far end)	
HP-UAS	High-order path—unavailable seconds (far end)	

Table E-6 Lower-Order Virtual Container PM Parameters—Near End

Parameter	Description	ONS 15305 Cards Supported
LP-BBE	Low-order path—background block errors (near end)	S1.1-8-LC, E3T3-6(3), E1-8(1), E1-21(1), E1-63(1), S1.1-2-LC/E1-21(1)
LP-ES	Low-order path—errored seconds (near end)	
LP-SES	Low-order path—severely errored seconds (near end)	
LP-UAS	Low-order path—unavailable seconds (near end)	

Table E-7 Lower-Order Virtual Container PM Parameters—Far End

Parameter	Description	ONS 15305 Cards Supported
LP-BBE	Low-order path—background block errors (far end)	S1.1-8-LC, E3T3-6(3), E1-8(1), E1-21(1), E1-63(1), S1.1-2-LC/E1-21(1)
LP-ES	Low-order path—errored seconds (far end)	
LP-SES	Low-order path—severely errored seconds (far end)	
LP-UAS	Low-order path—unavailable seconds (far end)	

E.1.1.2 Edge Statistics

The following table lists all the ONS 15305 PM parameters with the corresponding description and a list of cards supported.

Table E-8 Statistics PM Parameters—DCC/WAN/LAN

Parameter	Description	ONS 15305 Cards Supported
RxUnicPkt	Number of inbound subnetwork/unicast packets.	S1.1-2-LC, S1.1-8-LC, S4.1-2-LC, S4.1-4-LC, S16.1-1-LC, L4.2-2-LC, L16.2-1LC, S1.1-2-LC/E1-21, GE-1-LC(2), GE-2-LC(2), E100-8(2), 2xGE+MAP(2), 8xFE+MAP(2)
RxDiscards	Number of inbound discarded packets.	
RxErr	Number of erroneous inbound packets.	
RxBytes	Number of received bytes.	
TxBytes	Number of transmitted bytes.	
RxNotUnicPkt	Number of inbound not unicast packets.	
IfInUnknownProtos	Number of discarded packets because of unknown protocol.	
TxUnicPkt	Number of requested subnetwork/unicast packets.	
TxNotUnicPkt	Number of requested not unicast packets.	
TxDiscards	Number of discarded packets—free buffer space.	
TxErr	Number of erroneous outbound packets.	
RxMultPkt	Number of inbound multicast packets.	
RxBroadPkt	Number of inbound broadcast packets.	
TxMultPkt	Number of outbound multicast packets.	
TxBroadPkt	Number of outbound broadcast packets.	

E.1.2 Edge Statistics DCC PM Table

The Edge Statistics DCC PM table shows 15-minute and 1-day data communications channel (DCC) edge statistics performance data for the ONS 15305. You can use the Plot tab to plot the data in a graphical view that is stored in the Prime Optical database. See 10.4.6 Using PM Data Graphs, page 10-28.

The following table describes the fields in the Edge Statistics DCC PM table.

Table E-9 Field Descriptions for the Edge Statistics DCC PM Table

Field	Description
Alias ID	Alias name of the selected NE.
Module Name	Module for which PM data is displayed.
Physical Location	Slot and port number for which PM data is displayed.
Interface	Interface name of the selected NE.

Table E-9 Field Descriptions for the Edge Statistics DCC PM Table (continued)

Field	Description
Time Stamp (*time zone*)	When the data was collected. You can select GMT, Local, or User-Defined time for the Time Stamp display. Use the User Preferences dialog box to make your time zone selection.
Rx Unic Pkt	Number of inbound subnetwork/unicast packets.
Rx Discards	Number of inbound discarded packets.
Rx Err	Number of inbound errored packets.
Rx Bytes	Number of received bytes.
Tx Bytes	Number of bytes transmitted since the last counter reset.
Rx Not Unic Pkt	Number of inbound not unicast packets.
Rx Unknown	Number of discarded packets due to unknown protocol.
Tx Unic Pkt	Number of requested subnetwork/unicast packets.
Tx Not Unic Pkt	Number of requested not unicast packets.
Tx Discards	Number of discarded packets with free buffer space.
Tx Err	Number of outbound errored packets.
Rx Mult Pkt	Number of inbound multicast packets.
Rx Broad Pkt	Number of inbound broadcast packets.
Tx Mult Pkt	Number of multicast frames transmitted error free.
Tx Broad Pkt	Total number of packets that higher-level protocols requested be transmitted, and which were addressed to a broadcast address at this sublayer, including those that were discarded or not sent.
NE ID	Name of the selected NE.

E.1.3 Edge Statistics LAN PM Table

The Edge Statistics LAN PM table shows 15-minute and 1-day LAN edge statistics performance data for the ONS 15305. You can use the Plot tab to plot the data in a graphical view that is stored in the Prime Optical database. See 10.4.6 Using PM Data Graphs, page 10-28.

The following table describes the fields in the Edge Statistics LAN PM table.

Table E-10 Field Descriptions for the Edge Statistics LAN PM Table

Field	Description
Alias ID	Alias name of the selected NE.
Module Name	Module for which PM data is displayed.
Physical Location	Slot and port number for which PM data is displayed.
Interface	Interface name of the selected NE.
Time Stamp (*time zone*)	When the data was collected. You can select GMT, Local, or User-Defined time for the Time Stamp display. Use the User Preferences dialog box to make your time zone selection.

Table E-10 Field Descriptions for the Edge Statistics LAN PM Table (continued)

Field	Description
Rx Unic Pkt	Number of inbound subnetwork/unicast packets.
Rx Discards	Number of inbound discarded packets.
Rx Err	Number of inbound errored packets.
Rx Bytes	Number of received bytes.
Tx Bytes	Number of bytes transmitted since the last counter reset.
Rx Not Unic Pkt	Number of inbound not unicast packets.
Rx Unknown	Number of discarded packets due to unknown protocol.
Tx Unic Pkt	Number of requested subnetwork/unicast packets.
Tx Not Unic Pkt	Number of requested not unicast packets.
Tx Discards	Number of discarded packets with free buffer space.
Tx Err	Number of outbound errored packets.
Rx Mult Pkt	Number of inbound multicast packets.
Rx Broad Pkt	Number of inbound broadcast packets.
Tx Mult Pkt	Number of multicast frames transmitted error free.
Tx Broad Pkt	Total number of packets that higher-level protocols requested be transmitted, and which were addressed to a broadcast address at this sublayer, including those that were discarded or not sent.
NE ID	Name of the selected NE.

E.1.4 Edge Statistics WAN PM Table

The Edge Statistics WAN PM table shows 15-minute and 1-day WAN edge statistics performance data for the ONS 15305. You can use the Plot tab to plot the data in a graphical view that is stored in the Prime Optical database. See 10.4.6 Using PM Data Graphs, page 10-28.

The following table describes the fields in the Edge Statistics WAN PM table.

Table E-11 Field Descriptions for the Edge Statistics WAN PM Table

Field	Description
Alias ID	Alias name of the selected NE.
Module Name	Module for which PM data is displayed.
Physical Location	Slot and port number for which PM data is displayed.
Interface	Interface name of the selected NE.
Time Stamp (*time zone*)	When the data was collected. You can select GMT, Local, or User-Defined time for the Time Stamp display. Use the User Preferences dialog box to make your time zone selection.
Rx Unic Pkt	Number of inbound subnetwork/unicast packets.
Rx Discards	Number of inbound discarded packets.
Rx Err	Number of inbound errored packets.

Table E-11 Field Descriptions for the Edge Statistics WAN PM Table (continued)

Field	Description
Rx Bytes	Number of received bytes.
Tx Bytes	Number of bytes transmitted since the last counter reset.
Rx Not Unic Pkt	Number of inbound not unicast packets.
Rx Unknown	Number of discarded packets due to unknown protocol.
Tx Unic Pkt	Number of requested subnetwork/unicast packets.
Tx Not Unic Pkt	Number of requested not unicast packets.
Tx Discards	Number of discarded packets with free buffer space.
Tx Err	Number of outbound errored packets.
Rx Mult Pkt	Number of inbound multicast packets.
Rx Broad Pkt	Number of inbound broadcast packets.
Tx Mult Pkt	Number of multicast frames transmitted error free.
Tx Broad Pkt	Total number of packets that higher-level protocols requested be transmitted, and which were addressed to a broadcast address at this sublayer, including those that were discarded or not sent.
NE ID	Name of the selected NE.

E.1.5 Edge SDH High Order VC PM Table

The Edge SDH High Order VC PM table shows near- and far-end 15-minute and 1-day SDH high-order Virtual Container (VC) performance data for the ONS 15305. You can use the Plot tab to plot the data in a graphical view that is stored in the Prime Optical database. See 10.4.6 Using PM Data Graphs, page 10-28.

The following table describes the fields in the Edge SDH High Order VC PM table.

Table E-12 Field Descriptions for the Edge SDH High Order VC PM Table

Field	Description
Alias ID	Alias name of the selected NE.
Module Name	Module for which PM data is displayed.
Physical Location	Slot and port number for which PM data is displayed.
Interface	Interface name of the selected NE.
Time Stamp (*time zone*)	When the data was collected. You can select GMT, Local, or User-Defined time for the Time Stamp display. Use the User Preferences dialog box to make your time zone selection.
HP BBE	High path section background block errors.
HP ES	High path section errored seconds.
HP SES	High path section severely errored seconds.
HP UAS	High path section unavailable seconds.
NE ID	Name of the selected NE.

E.1.6 Edge SDH Low Order VC PM Table

The Edge SDH Low Order VC PM table shows near- and far-end 15-minute and 1-day SDH low-order VC performance data for the ONS 15305. You can use the Plot tab to plot the data in a graphical view that is stored in the Prime Optical database. See 10.4.6 Using PM Data Graphs, page 10-28.

The following table describes the fields in the Edge SDH Low Order VC PM table.

Table E-13 Field Descriptions for the Edge SDH Low Order VC PM Table

Field	Description
Alias ID	Alias name of the selected NE.
Module Name	Module for which PM data is displayed.
Physical Location	Slot and port number for which PM data is displayed.
Interface	Interface name of the selected NE.
Time Stamp (*time zone*)	When the data was collected. You can select GMT, Local, or User-Defined time for the Time Stamp display. Use the User Preferences dialog box to make your time zone selection.
LP BBE	Low path background block errors.
LP ES	Low path errored seconds.
LP SES	Low path severely errored seconds.
LP UAS	Low path unavailable seconds.
NE ID	Name of the selected NE.

E.1.7 Edge SDH Multiplex Section PM Table

The Edge SDH Multiplex Section PM table shows near- and far-end 15-minute and 1-day SDH multiplex section performance data for the ONS 15305. You can use the Plot tab to plot the data in a graphical view that is stored in the Prime Optical database. See 10.4.6 Using PM Data Graphs, page 10-28.

The following table describes the fields in the Edge SDH Multiplex Section PM table.

Table E-14 Field Descriptions for the Edge SDH Multiplex Section PM Table

Field	Description
Alias ID	Alias name of the selected NE.
Module Name	Module for which PM data is displayed.
Physical Location	Slot and port number for which PM data is displayed.
Interface	Interface name of the selected NE.
Time Stamp (*time zone*)	When the data was collected. You can select GMT, Local, or User-Defined time for the Time Stamp display. Use the User Preferences dialog box to make your time zone selection.
MS BBE	Multiplex section background block errors.

Table E-14 Field Descriptions for the Edge SDH Multiplex Section PM Table (continued)

Field	Description
MS ES	Multiplex section errored seconds.
MS SES	Multiplex section severely errored seconds.
MS UAS	Multiplex section unavailable seconds.
NE ID	Name of the selected NE.

E.1.8 Edge SDH Regenerator Section PM Table

The Edge SDH Regenerator Section PM table shows 15-minute and 1-day SDH regenerator section performance data for the ONS 15305. You can use the Plot tab to plot the data in a graphical view that is stored in the Prime Optical database. See 10.4.6 Using PM Data Graphs, page 10-28.

The following table describes the fields in the Edge SDH Regenerator Section PM table.

Table E-15 Field Descriptions for the Edge SDH Regenerator Section PM Table

Field	Description
Alias ID	Alias name of the selected NE.
Module Name	Module for which PM data is displayed.
Physical Location	Slot and port number for which PM data is displayed.
Interface	Interface name of the selected NE.
Time Stamp (*time zone*)	When the data was collected. You can select GMT, Local, or User-Defined time for the Time Stamp display. Use the User Preferences dialog box to make your time zone selection.
RS BBE	Regenerator section background block errors.
RS ES	Regenerator section errored seconds.
RS SES	Regenerator section severely errored seconds.
RS UAS	Regenerator section unavailable seconds.
NE ID	Name of the selected NE.

E.2 PM Tables for CTC-Based NEs

This section describes the PM tables that are specific to the CTC-based NEs: ONS 15310 CL, ONS 15310 MA SONET, ONS 15310 MS SDH, ONS 15327, ONS 15454 SONET, ONS 15454 SDH, ONS 15600 SONET, and ONS 15600 SDH.

Note Performance management for the CTC-based ONS 15305 R3.0 is similar to the performance management for the non-CTC-based ONS 15305. See E.1 ONS 15305-Specific PM Tables, page E-1.

For CTC-based NEs, each 15-minute or 1-day PM table has a corresponding real-time PM table that allows you to examine the current value of a PM parameter in granularities finer than 15 minutes or 1 day. Not all of the fields in the historical PM tables are shown in the real-time PM tables. The first fields in real-time PM tables are NE ID, Module Name, Physical Location, Interface, Time Stamp, and Validity; the remaining fields are the actual real-time attributes being polled. The Validity column indicates whether the data in the entry is valid: "true" indicates that the entry is valid; "false" indicates that the entry is invalid.

The following conventions apply to PM tables for CTC-based NEs:

- Invalidity in the historical PM table is shown with the corresponding table cell rendered gray and marked with an asterisk (*).

  Note Real-time PM tables do not support invalidity coloring.

- Threshold crossing alerts (TCAs) for a specific statistic in a particular row in the historical PM table are indicated with a purple rendering for the corresponding cell.

  Note Real-time PM tables do not support TCAs.

- Fields that are not applicable for a particular module in a given PM table are indicated by displaying *N/A* (not applicable) in the corresponding table cell.
- 1-day PM data is collected at 00:00 hours Greenwich Mean Time (GMT) (time on the Prime Optical server host).
- For release 4.0 and later NEs, PM data collected for cards that are preprovisioned and not physically present on a slot are indicated by the symbol *ENEQ* displayed for the corresponding table cell.

Note For an RTPM query for remote NEs, select the slot number and port number required for a PM query (do not select slot *All* and port *All*).

Note The PM parameters that Prime Optical supports for CTC-based NEs are also supported by Prime Optical GateWay/CORBA.

E.2.1 8B10B PM Table—ONS 15454 SONET, ONS 15454 SDH

The 8B10B PM table shows performance data for ONS 15454 SONET and ONS 15454 SDH DWDM cards that support Fibre Channel (FC) or Gigabit Ethernet payloads. You can display performance data for 15-minute, 1-day, or real-time increments:

- 15-minute—Data is collected at the quarter-hour (for example, at 10:00, 10:15, and so on). The data shown represents the difference in counter values between successive 15-minute intervals.
- 1-day—Data is collected at midnight GMT. The data shown represents the difference between the counter values read at successive midnights.

- Real-time—When a real-time PM session is running, it polls the NE for *x* number of attributes every 10 to 900 seconds. This feature allows you to examine the current value of a PM parameter in granularities finer than the standard 15-minute or 1-day interval. For more information, see 10.4.4 Managing Real-Time PM Data, page 10-26.

Performance monitoring can be done either on selected modules, or on specific locations in the NE. You can use the Plot tab to plot the data in a graphical view that is stored in the Prime Optical database. See 10.4.6 Using PM Data Graphs, page 10-28.

The following table describes the fields in the 8B10B PM table.

Table E-16 Field Descriptions for the 8B10B PM Table

Field	Description	Cards Supported
Alias ID	Alias name of the selected NE.	—
Module Name	Module for which PM data is displayed.	—
Physical Location	Slot and port number for which PM data is displayed.	—
Interface	Interface name of the selected NE.	—
Time Stamp (*time zone*)	When the data was collected. You can select GMT, Local, or User-Defined time for the Time Stamp display. Use the User Preferences dialog box to make your time zone selection.	—
Maintenance	Whether the NE was under maintenance when the performance data was collected.	—
Data Payload	The payload provisioned on the client port of the card.	• ONS 15454 SONET: TXP_MR_2.5G, TXPP_MR_2.5G, MXP_MR_10DME • ONS 15454 SDH: TXP_MR_2.5G, TXPP_MR_2.5G, MXP_MR_10DME
Valid Packets	Number of received packets that contain nonerrored data code groups that have start and end delimiters. This parameter applies to the FC and Gigabit Ethernet payload configured on the TXPP_MR_2.5G and TXP_MR_2.5G cards.	• ONS 15454 SONET: TXP_MR_2.5G, TXPP_MR_2.5G, MXP_MR_10DME • ONS 15454 SDH: TXP_MR_2.5G, TXPP_MR_2.5G, MXP_MR_10DME
Invalid Packets	Number of received packets that contain errored data code groups that have start and end delimiters. This parameter applies to the FC and Gigabit Ethernet payload configured on the TXPP_MR_2.5G and TXP_MR_2.5G cards.	• ONS 15454 SONET: TXP_MR_2.5G, TXPP_MR_2.5G, MXP_MR_10DME • ONS 15454 SDH: TXP_MR_2.5G, TXPP_MR_2.5G, MXP_MR_10DME
Code Group Violations	Number of received code groups that do not contain a start or end delimiter. This parameter applies to the FC and Gigabit Ethernet payload configured on the TXPP_MR_2.5G and TXP_MR_2.5G cards.	• ONS 15454 SONET: TXP_MR_2.5G, TXPP_MR_2.5G, MXP_MR_10DME • ONS 15454 SDH: TXP_MR_2.5G, TXPP_MR_2.5G, MXP_MR_10DME
Idle Ordered Sets	Number of received packets containing idle ordered sets. This parameter applies to the FC and Gigabit Ethernet payload configured on the TXPP_MR_2.5G and TXP_MR_2.5G cards.	• ONS 15454 SONET: TXP_MR_2.5G, TXPP_MR_2.5G, MXP_MR_10DME • ONS 15454 SDH: TXP_MR_2.5G, TXPP_MR_2.5G, MXP_MR_10DME

Table E-16 Field Descriptions for the 8B10B PM Table (continued)

Field	Description	Cards Supported
Non-idle Ordered Sets	Number of received packets containing nonidle ordered sets. This parameter applies to the FC and Gigabit Ethernet payload configured on the TXPP_MR_2.5G and TXP_MR_2.5G cards.	• ONS 15454 SONET: TXP_MR_2.5G, TXPP_MR_2.5G, MXP_MR_10DME • ONS 15454 SDH: TXP_MR_2.5G, TXPP_MR_2.5G, MXP_MR_10DME
Data Code Groups	Number of received data code groups that do not contain ordered sets. This parameter applies to the FC and Gigabit Ethernet payload configured on the TXPP_MR_2.5G and TXP_MR_2.5G cards.	• ONS 15454 SONET: TXP_MR_2.5G, TXPP_MR_2.5G, MXP_MR_10DME • ONS 15454 SDH: TXP_MR_2.5G, TXPP_MR_2.5G, MXP_MR_10DME
Stats Encoding DispErrors	Number of encoding disparity errors received at the port.	• ONS 15454 SONET: TXP_MR_2.5G, TXPP_MR_2.5G, MXP_MR_10DME • ONS 15454 SDH: TXP_MR_2.5G, TXPP_MR_2.5G, MXP_MR_10DME
Data Ordered Sets	Number of received packets containing data ordered sets.	• ONS 15454 SONET: TXP_MR_2.5G, TXPP_MR_2.5G, MXP_MR_10DME • ONS 15454 SDH: TXP_MR_2.5G, TXPP_MR_2.5G, MXP_MR_10DME
rxTotalPackets	Total number of packets received.	• ONS 15454 SONET: TXP_MR_2.5G, TXPP_MR_2.5G, MXP_MR_10DME • ONS 15454 SDH: TXP_MR_2.5G, TXPP_MR_2.5G, MXP_MR_10DME
ifInErrors	Total number of errors received.	• ONS 15454 SONET: TXP_MR_2.5G, TXPP_MR_2.5G, MXP_MR_10DME • ONS 15454 SDH: TXP_MR_2.5G, TXPP_MR_2.5G, MXP_MR_10DME
Invalid Ordered Sets	Number of invalid ordered sets received at this port.	• ONS 15454 SONET: TXP_MR_2.5G, TXPP_MR_2.5G, MXP_MR_10DME • ONS 15454 SDH: TXP_MR_2.5G, TXPP_MR_2.5G, MXP_MR_10DME
Invalid Ordered Sets Disp Errors Sum	Sum of invalid ordered sets of encoding disparity errors received at this port.	• ONS 15454 SONET: MXP_MR_10DME • ONS 15454 SDH: MXP_MR_10DME
rx8b10bWords	Number of code violations/running disparity errors in the 8b/10b encoded characters received.	• ONS 15454 SONET: AR_MXP, AR_XP, AR_XPE • ONS 15454 SDH: AR_MXP, AR_XP, AR_XPE
tx8b10bWords	Number of code violations/running disparity errors in the 8b/10b encoded characters transmitted.	• ONS 15454 SONET: AR_MXP, AR_XP, AR_XPE • ONS 15454 SDH: AR_MXP, AR_XP, AR_XPE
NE ID	Name of the selected NE.	—

E.2.2 ESCON PM Table—ONS 15454 SONET, ONS 15454 SDH

The ESCON PM table shows performance data for ONS 15454 SONET and ONS 15454 SDH DWDM cards that support ESCON payload. You can display performance data for 15-minute, 1-day, or real-time increments:

- 15-minute—Data is collected at the quarter-hour (for example, at 10:00, 10:15, and so on). The data shown represents the difference in counter values between successive 15-minute intervals.
- 1-day—Data is collected at midnight GMT. The data shown represents the difference between the counter values read at successive midnights.
- Real-time—When a real-time PM session is running, it polls the NE for *x* number of attributes every 10 to 900 seconds. This feature allows you to examine the current value of a PM parameter in granularities finer than the standard 15-minute or 1-day interval. For more information, see 10.4.4 Managing Real-Time PM Data, page 10-26.

Performance monitoring can be done either on selected modules, or on specific locations in the NE. You can use the Plot tab to plot the data in a graphical view that is stored in the Prime Optical database. See 10.4.6 Using PM Data Graphs, page 10-28.

The following table describes the fields in the ESCON PM table.

Table E-17 Field Descriptions for the ESCON PM Table

Field	Description	Cards Supported
Alias ID	Alias name of the selected NE.	—
Module Name	Module for which PM data is displayed.	—
Physical Location	Slot and port number for which PM data is displayed.	—
Interface	Interface name of the selected NE.	—
Time Stamp (*time zone*)	When the data was collected. You can select GMT, Local, or User-Defined time for the Time Stamp display. Use the User Preferences dialog box to make your time zone selection.	—
Maintenance	Whether the NE was under maintenance when the performance data was collected.	—
Stats Last Cleared Time	When the statistics were last reset.	ONS 15454 SONET and ONS 15454 SDH: 2.5G_DM, 2.5G_DMP
ifInOctets	Number of bytes received since the last counter reset.	ONS 15454 SONET and ONS 15454 SDH: 2.5G_DM, 2.5G_DMP
rxTotalPkts	Number of packets received since the last counter reset.	ONS 15454 SONET and ONS 15454 SDH: 2.5G_DM, 2.5G_DMP
ifInDiscards	Number of inbound packets that were chosen to be discarded even though no errors had been detected to prevent their being deliverable to a higher-layer protocol.	ONS 15454 SONET and ONS 15454 SDH: 2.5G_DM, 2.5G_DMP
ifInErrors	Total number of received errors.	ONS 15454 SONET and ONS 15454 SDH: 2.5G_DM, 2.5G_DMP
ifOutOctets	Number of bytes transmitted since the last counter reset.	ONS 15454 SONET and ONS 15454 SDH: 2.5G_DM, 2.5G_DMP

Table E-17 Field Descriptions for the ESCON PM Table (continued)

Field	Description	Cards Supported
txTotalPkts	Number of packets transmitted since the last counter reset.	ONS 15454 SONET and ONS 15454 SDH: 2.5G_DM, 2.5G_DMP
ifOutDiscards	Number of outbound packets that were chosen to be discarded even though no errors had been detected to prevent their being transmitted.	ONS 15454 SONET and ONS 15454 SDH: 2.5G_DM, 2.5G_DMP
mediaIndStatsRxFrameBadCRC	Number of received data frames with payload CRC errors when HDLC framing is used.	ONS 15454 SONET and ONS 15454 SDH: 2.5G_DM, 2.5G_DMP
mediaIndStatsRxLcvErrors	Number of L1 line code violations received for constant bit rate protocols that equate to invalid 8b10b ordered sets.	• ONS 15454 SONET: AR_MXP, AR_XP • ONS 15454 SDH: AR_MXP, AR_XP
mediaIndStatsTxLcvErrors	Number of L1 line code violations transmitted for constant bit rate protocols that equate to invalid 8b10b ordered sets.	• ONS 15454 SONET: AR_MXP, AR_XP • ONS 15454 SDH: AR_MXP, AR_XP
Rx Utilization (%)	Received utilization, which is a percentage of utilization of the Ethernet segment on a scale of 0 to 100 percent.	ONS 15454 SONET and ONS 15454 SDH: 2.5G_DM, 2.5G_DMP
Tx Utilization (%)	Transmitted utilization, which is a percentage of utilization of the Ethernet segment on a scale of 0 to 100 percent.	ONS 15454 SONET and ONS 15454 SDH: 2.5G_DM, 2.5G_DMP
NE ID	Name of the selected NE.	—

E.2.3 CoS PM Table—ONS 15310 CL, ONS 15310 MA SONET, ONS 15310 MA SDH, ONS 15454 SONET, and ONS 15454 SDH

The CoS PM table shows Class of Service (CoS) performance data for the ONS 15310 CL, ONS 15310 MA SONET, ONS 15310 MA SDH, ONS 15454 SONET, and ONS 15454 SDH ML-series cards. You can display performance data for 15-minute, 1-day, or real-time increments:

- 15-minute—Data is collected at the quarter-hour (for example, at 10:00, 10:15, and so on). The data shown represents the difference in counter values between successive 15-minute intervals.
- 1-day—Data is collected at midnight GMT. The data shown represents the difference between the counter values read at successive midnights.
- Real-time—When a real-time PM session is running, it polls the NE for *x* number of attributes every 10 to 900 seconds. This feature allows you to examine the current value of a PM parameter in granularities finer than the standard 15-minute or 1-day interval. For more information, see 10.4.4 Managing Real-Time PM Data, page 10-26.

Performance monitoring can be done either on selected modules, or on specific locations in the NE. You can use the Plot tab to plot the data in a graphical view that is stored in the Prime Optical database. See 10.4.6 Using PM Data Graphs, page 10-28.

The following table describes the fields in the CoS PM table.

Table E-18 Field Descriptions for the CoS PM Table

Field	Description	Cards Supported
Alias ID	Alias name of the selected NE.	—
Module Name	Module for which PM data is displayed.	—
Physical Location	Slot and port number for which PM data is displayed.	—
Interface	Interface name of the selected NE.	—
Time Stamp (*time zone*)	When the data was collected. You can select GMT, Local, or User-Defined time for the Time Stamp display. Use the User Preferences dialog box to make your time zone selection.	—
Maintenance	Whether the NE was under maintenance when the performance data was collected.	—
Interface Name	Name of the interface.	• ONS 15310 CL: ML-100T-8 • ONS 15310 MA SONET: ML-100T-8 • ONS 15310 MA SDH: ML-100T-8 • ONS 15454 SONET: ML100T, ML100X-8, ML1000 • ONS 15454 SDH: ML100T, ML1000
Interface Direction	Input or output direction of the interface.	• ONS 15310 CL: ML-100T-8 • ONS 15310 MA SONET: ML-100T-8 • ONS 15310 MA SDH: ML-100T-8 • ONS 15454 SONET: ML100T, ML100X-8, ML1000 • ONS 15454 SDH: ML100T, ML1000
Class of Service Level	CoS level. The level ranges from 0 to 7.	• ONS 15310 CL: ML-100T-8 • ONS 15310 MA SONET: ML-100T-8 • ONS 15310 MA SDH: ML-100T-8 • ONS 15454 SONET: ML100T, ML100X-8, ML1000 • ONS 15454 SDH: ML100T, ML1000

Table E-18 Field Descriptions for the CoS PM Table (continued)

Field	Description	Cards Supported
Post Policy Packets	Packet count after executing QoS policies.	• ONS 15310 CL: ML-100T-8 • ONS 15310 MA SONET: ML-100T-8 • ONS 15310 MA SDH: ML-100T-8 • ONS 15454 SONET: ML100T, ML100X-8, ML1000 • ONS 15454 SDH: ML100T, ML1000
Post Policy Bytes	Octet count after executing QoS policies.	• ONS 15310 CL: ML-100T-8 • ONS 15310 MA SONET: ML-100T-8 • ONS 15310 MA SDH: ML-100T-8 • ONS 15454 SONET: ML100T, ML100X-8, ML1000 • ONS 15454 SDH: ML100T, ML1000
Drop Packets	Dropped packet count as the result of all QoS features that can produce drops.	• ONS 15310 CL: ML-100T-8 • ONS 15310 MA SONET: ML-100T-8 • ONS 15310 MA SDH: ML-100T-8 • ONS 15454 SONET: ML100T, ML100X-8, ML1000 • ONS 15454 SDH: ML100T, ML1000
Drop Bytes	Dropped octet count as the result of all QoS features that can produce drops.	• ONS 15310 CL: ML-100T-8 • ONS 15310 MA SONET: ML-100T-8 • ONS 15310 MA SDH: ML-100T-8 • ONS 15454 SONET: ML100T, ML100X-8, ML1000 • ONS 15454 SDH: ML100T, ML1000
NE ID	Name of the selected NE.	—

E.2.4 DS1 PM Table (Far End)

The DS1 PM table shows far-end DS-1 performance data. You can display performance data for 15-minute, 1-day, or real-time increments:

- 15-minute—Data is collected at the quarter-hour (for example, at 10:00, 10:15, and so on). The data shown represents the difference in counter values between successive 15-minute intervals.
- 1-day—Data is collected at midnight GMT. The data shown represents the difference between the counter values read at successive midnights.
- Real-time—When a real-time PM session is running, it polls the NE for *x* number of attributes every 10 to 900 seconds. This feature allows you to examine the current value of a PM parameter in granularities finer than the standard 15-minute or 1-day interval. For more information, see 10.4.4 Managing Real-Time PM Data, page 10-26.

Performance monitoring can be done either on selected modules, or on specific locations in the NE. You can use the Plot tab to plot the data in a graphical view that is stored in the Prime Optical database. See 10.4.6 Using PM Data Graphs, page 10-28.

The following table describes the fields in the DS1 PM table.

Table E-19 Field Descriptions for the DS1 PM Table (Far End)

Field	Description	Cards Supported
Alias ID	Alias name of the selected NE.	—
Module Name	Module for which PM data is displayed.	—
Physical Location	Slot and port number for which PM data is displayed.	—
Interface	Interface name of the selected NE.	—
Time Stamp (*time zone*)	When the data was collected. You can select GMT, Local, or User-Defined time for the Time Stamp display. Use the User Preferences dialog box to make your time zone selection.	—
Maintenance	Whether the NE was under maintenance when the performance data was collected.	—
CV-P (Rx)	Coding violations–path.	• ONS 15310 CL: CTX • ONS 15310 MA SONET: DS1_28_DS3_EC1_3, DS1_84_DS3_EC1_3 • ONS 15327: XTC • ONS 15454 SONET: DS-1, DS1N, DS1_E1_56, DS3XM_12
ES-P (Rx)	Errored seconds–path.	• ONS 15310 CL: CTX • ONS 15310 MA SONET: DS1_28_DS3_EC1_3, DS1_84_DS3_EC1_3 • ONS 15327: XTC • ONS 15454 SONET: DS-1, DS1N, DS1_E1_56, DS3XM_12

Table E-19 Field Descriptions for the DS1 PM Table (Far End) (continued)

Field	Description	Cards Supported
ESA-P (Rx)	Errored seconds type A–path.	• ONS 15310 CL: CTX • ONS 15310 MA SONET: DS1_28_DS3_EC1_3, DS1_84_DS3_EC1_3 • ONS 15327: XTC • ONS 15454 SONET: DS-1, DS1N, DS1_E1_56, DS3XM_12
ESB-P (Rx)	Errored seconds type B–path.	• ONS 15310 CL: CTX • ONS 15310 MA SONET: DS1_28_DS3_EC1_3, DS1_84_DS3_EC1_3 • ONS 15327: XTC • ONS 15454 SONET: DS-1, DS1N, DS1_E1_56, DS3XM_12
SES-P (Rx)	Severely errored seconds–path.	• ONS 15310 CL: CTX • ONS 15310 MA SONET: DS1_28_DS3_EC1_3, DS1_84_DS3_EC1_3 • ONS 15327: XTC • ONS 15454 SONET: DS-1, DS1N, DS1_E1_56, DS3XM_12
SEFS-P (Rx)	Severely errored frame seconds–path.	• ONS 15310 CL: CTX • ONS 15310 MA SONET: DS1_28_DS3_EC1_3, DS1_84_DS3_EC1_3 • ONS 15327: XTC • ONS 15454 SONET: DS-1, DS1N, DS1_E1_56, DS3XM_12
CSS-P (Rx)	Controlled slip seconds–path.	• ONS 15310 CL: CTX • ONS 15310 MA SONET: DS1_28_DS3_EC1_3, DS1_84_DS3_EC1_3 • ONS 15327: XTC • ONS 15454 SONET: DS-1, DS1N, DS1_E1_56, DS3XM_12

Table E-19 Field Descriptions for the DS1 PM Table (Far End) (continued)

Field	Description	Cards Supported
UAS-P (Rx)	Unavailable seconds–path.	• ONS 15310 CL: CTX • ONS 15310 MA SONET: DS1_28_DS3_EC1_3, DS1_84_DS3_EC1_3 • ONS 15327: XTC • ONS 15454 SONET: DS-1, DS1N, DS1_E1_56, DS3XM_12
FC-P (Rx)	Failure count–path.	• ONS 15310 MA SONET: DS1_28_DS3_EC1_3, DS1_84_DS3_EC1_3 • ONS 15454 SONET: DS1_E1_56
ES-L (Rx)	Errored seconds–line.	• ONS 15310 CL: CTX • ONS 15310 MA SONET: DS1_28_DS3_EC1_3, DS1_84_DS3_EC1_3 • ONS 15327: XTC • ONS 15454 SONET: DS-1, DS1N, DS1_E1_56
ESR-P	Received path errored seconds ratio is the ratio of errored seconds to total seconds in available time during a fixed measurement interval.	—
SESR-P	Received path severely errored seconds ratio is the ratio of SES to total seconds in available time during a fixed measurement interval.	—
ESNE-NP	Network performance errored seconds during a fixed measurement interval for near end.	• ONS 15310 MA SONET: DS1_28_DS3_EC1_3, DS1_84_DS3_EC1_3 • ONS 15454 SONET: DS1_E1_56, DS3XM_12
SESNE-NP	Network performance severely errored seconds during a fixed measurement interval for near end.	• ONS 15310 MA SONET: DS1_28_DS3_EC1_3, DS1_84_DS3_EC1_3 • ONS 15454 SONET: DS1_E1_56, DS3XM_12
UASNE-NP	Network performance unavailable seconds during a fixed measurement interval for near end.	• ONS 15310 MA SONET: DS1_28_DS3_EC1_3, DS1_84_DS3_EC1_3 • ONS 15454 SONET: DS1_E1_56, DS3XM_12

Table E-19 Field Descriptions for the DS1 PM Table (Far End) (continued)

Field	Description	Cards Supported
ESFE-NP	Network performance errored seconds during a fixed measurement interval for far end.	• ONS 15310 MA SONET: DS1_28_DS3_EC1_3, DS1_84_DS3_EC1_3 • ONS 15454 SONET: DS1_E1_56, DS3XM_12
SESFE-NP	Network performance severely errored seconds during a fixed measurement interval for far end.	• ONS 15310 MA SONET: DS1_28_DS3_EC1_3, DS1_84_DS3_EC1_3 • ONS 15454 SONET: DS1_E1_56, DS3XM_12
UASFE-NP	Network performance unavailable seconds during a fixed measurement interval for far end.	• ONS 15310 MA SONET: DS1_28_DS3_EC1_3, DS1_84_DS3_EC1_3 • ONS 15454 SONET: DS1_E1_56, DS3XM_12
NE ID	Name of the selected NE.	—

E.2.5 DS1 PM Table

The DS1 PM table contains PM information at the line layer. You can display performance data for 15-minute, 1-day, or real-time increments:

- 15-minute—Data is collected at the quarter-hour (for example, at 10:00, 10:15, and so on). The data shown represents the difference in counter values between successive 15-minute intervals.
- 1-day—Data is collected at midnight GMT. The data shown represents the difference between the counter values read at successive midnights.
- Real-time—When a real-time PM session is running, it polls the NE for *x* number of attributes every 10 to 900 seconds. This feature allows you to examine the current value of a PM parameter in granularities finer than the standard 15-minute or 1-day interval. For more information, see 10.4.4 Managing Real-Time PM Data, page 10-26.

You can use the Plot tab to plot the data in a graphical view that is stored in the Prime Optical database. See 10.4.6 Using PM Data Graphs, page 10-28.

The following table describes the fields in the DS1 PM table.

Table E-20 Field Descriptions for the DS1 PM Table

Field	Description	Cards Supported
Alias ID	Alias name of the selected NE.	—
Module Name	Module for which PM data is displayed.	—
Physical Location	Slot and port number for which PM data is displayed.	—
Interface	Interface name of the selected NE.	—

Table E-20 Field Descriptions for the DS1 PM Table (continued)

Field	Description	Cards Supported
Time Stamp	When the data was collected. You can select GMT, Local, or User-Defined time for the Time Stamp display. Use the User Preferences dialog box to make your time zone selection.	—
Maintenance	Whether the NE was under maintenance when the performance data was collected.	—
CV-L	CV-L indicates the number of coding violations occurring on the line. This parameter is a count of BPVs and EXZs occurring over the accumulation period.	• ONS 15310 CL: CTX • ONS 15310 MA SONET: DS1_28_DS3_EC1_3, DS1_84_DS3_EC1_3 • ONS 15327: XTC • ONS 15454 SONET: DS-1, DS1N, DS1_E1_56
ES-L	ES-L is a count of the seconds containing one or more anomalies (BPV + EXZ) and/or defects (loss of signal) on the line.	• ONS 15310 CL: CTX • ONS 15310 MA SONET: DS1_28_DS3_EC1_3, DS1_84_DS3_EC1_3 • ONS 15327: XTC • ONS 15454 SONET: DS-1, DS1N, DS1_E1_56
SES-L	SES-L is a count of the seconds containing more than a particular quantity of anomalies (BPV + EXZ > 1544) and/or defects on the line.	• ONS 15310 CL: CTX • ONS 15310 MA SONET: DS1_28_DS3_EC1_3, DS1_84_DS3_EC1_3 • ONS 15327: XTC • ONS 15454 SONET: DS-1, DS1N, DS1_E1_56
LOSS-L	LOSS-L is a count of one-second intervals containing one or more LOS defects.	• ONS 15310 CL: CTX • ONS 15310 MA SONET: DS1_28_DS3_EC1_3, DS1_84_DS3_EC1_3 • ONS 15327: XTC • ONS 15454 SONET: DS-1, DS1N, DS1_E1_56
CV-P (Rx)	Received path coding violation (Rx CV-P) means that a coding violation occurred on the received end of the path.	• ONS 15310 CL: CTX • ONS 15310 MA SONET: DS1_28_DS3_EC1_3, DS1_84_DS3_EC1_3 • ONS 15327: XTC • ONS 15454 SONET: DS-1, DS1N, DS1_E1_56

Table E-20 Field Descriptions for the DS1 PM Table (continued)

Field	Description	Cards Supported
ES-P (Rx)	Received path errored seconds (Rx ES-P) is a count of the seconds containing one or more anomalies and/or defects for paths on the received end of the signal.	• ONS 15310 CL: CTX • ONS 15310 MA SONET: DS1_28_DS3_EC1_3, DS1_84_DS3_EC1_3 • ONS 15327: XTC • ONS 15454 SONET: DS-1, DS1N, DS1_E1_56, DS3XM, DS3XM_12
SES-P (Rx)	Received path severely errored seconds (Rx SES-P) is a count of the seconds containing more than a particular quantity of anomalies and/or defects for paths on the received end of the signal.	• ONS 15310 CL: CTX • ONS 15310 MA SONET: DS1_28_DS3_EC1_3, DS1_84_DS3_EC1_3 • ONS 15327: XTC • ONS 15454 SONET: DS-1, DS1N, DS1_E1_56, DS3XM, DS3XM_12
SAS-P (Rx)	Received path severely errored seconds frame/alarm indication signal (Rx SAS-P) is a count of one-second intervals containing one or more SEFs or one or more AIS defects on the received end of the signal.	• ONS 15310 CL: CTX • ONS 15310 MA SONET: DS1_28_DS3_EC1_3, DS1_84_DS3_EC1_3 • ONS 15327: XTC • ONS 15454 SONET: DS-1, DS1N, DS1_E1_56, DS3XM, DS3XM_12
UAS-P (Rx)	Received path unavailable seconds (Rx UAS-P) is a count of one-second intervals when the DS-1 path is unavailable on the received end of the signal. The DS-1 path is unavailable when ten consecutive SESs occur. The ten SESs are included in unavailable time. Once unavailable, the DS-1 path becomes available when ten consecutive seconds occur with no SESs. The ten seconds with no SESs are excluded from unavailable time.	• ONS 15310 CL: CTX • ONS 15310 MA SONET: DS1_28_DS3_EC1_3, DS1_84_DS3_EC1_3 • ONS 15327: XTC • ONS 15454 SONET: DS-1, DS1N, DS1_E1_56, DS3XM, DS3XM_12
AISS-P (Rx)	Received path alarm indication signal seconds (Rx AISS-P) means an alarm indication signal occurred on the received end of the path. This parameter is a count of seconds containing one or more AIS defects.	• ONS 15310 CL: CTX • ONS 15310 MA SONET: DS1_28_DS3_EC1_3, DS1_84_DS3_EC1_3 • ONS 15327: XTC • ONS 15454 SONET: DS-1, DS1N, DS1_E1_56, DS3XM, DS3XM_12

Table E-20 Field Descriptions for the DS1 PM Table (continued)

Field	Description	Cards Supported
FC-P (Rx)	Failure count–near-end path.	• ONS 15310 MA SONET: DS1_28_DS3_EC1_3, DS1_84_DS3_EC1_3 • ONS 15454 SONET: DS-1, DS1N, DS1_E1_56, DS3XM_12
CV-P (Tx)	Transmitted path coding violation (Tx CV-P) means that a coding violation occurred on the transmitted end of the path. For DS-1 ESF paths, this parameter is a count of detected CRC-6 errors.	• ONS 15310 CL: CTX • ONS 15310 MA SONET: DS1_28_DS3_EC1_3, DS1_84_DS3_EC1_3 • ONS 15327: XTC • ONS 15454 SONET: DS-1, DS1N, DS1_E1_56
ES-P (Tx)	Transmitted path errored seconds (Tx ES-P) is a count of the seconds containing one or more anomalies and/or defects for paths on the transmitted end of the signal.	• ONS 15310 CL: CTX • ONS 15310 MA SONET: DS1_28_DS3_EC1_3, DS1_84_DS3_EC1_3 • ONS 15327: XTC • ONS 15454 SONET: DS-1, DS1N, DS1_E1_56
SES-P (Tx)	Transmitted path severely errored seconds (Tx SES-P) is a count of the seconds containing more than a particular quantity of anomalies and/or defects for paths on the transmitted end of the signal.	• ONS 15310 CL: CTX • ONS 15310 MA SONET: DS1_28_DS3_EC1_3, DS1_84_DS3_EC1_3 • ONS 15327: XTC • ONS 15454 SONET: DS-1, DS1N, DS1_E1_56
SAS-P (Tx)	Transmitted path severely errored seconds frame/alarm indication signal (Tx SAS-P) is a count of one-second intervals containing one or more severely errored framing seconds (SEFS) or one or more AIS defects on the transmitted end of the signal.	• ONS 15310 CL: CTX • ONS 15310 MA SONET: DS1_28_DS3_EC1_3, DS1_84_DS3_EC1_3 • ONS 15327: XTC • ONS 15454 SONET: DS-1, DS1N, DS1_E1_56
UAS-P (Tx)	Transmitted path unavailable seconds (Tx UAS-P) is a count of one-second intervals when the DS-1 path is unavailable on the transmitted end of the signal. The DS-1 path is unavailable when ten consecutive SESs occur. The ten SESs are included in unavailable time. Once unavailable, the DS-1 path becomes available when ten consecutive seconds occur with no SESs. The ten seconds with no SESs are excluded from unavailable time.	• ONS 15310 CL: CTX • ONS 15310 MA SONET: DS1_28_DS3_EC1_3, DS1_84_DS3_EC1_3 • ONS 15327: XTC • ONS 15454 SONET: DS-1, DS1N, DS1_E1_56

Table E-20 Field Descriptions for the DS1 PM Table (continued)

Field	Description	Cards Supported
AISS-P (Tx)	Transmitted path alarm indication signal seconds (Tx AISS-P) means that an alarm indication signal occurred on the transmitted end of the path. This parameter is a count of seconds containing one or more AIS defects.	• ONS 15310 CL: CTX • ONS 15310 MA SONET: DS1_28_DS3_EC1_3, DS1_84_DS3_EC1_3 • ONS 15327: XTC • ONS 15454 SONET: DS-1, DS1N, DS1_E1_56
FC-P (Tx)	Failure count–near-end path.	• ONS 15310 MA SONET: DS1_28_DS3_EC1_3, DS1_84_DS3_EC1_3 • ONS 15454 SONET: DS-1, DS1N, DS1_E1_56, DS3XM_12
NE ID	Name of the selected NE.	—

E.2.6 DS3 PM Table

The DS3 PM table contains PM information at the DS-3 layer. You can display performance data for 15-minute, 1-day, or real-time increments:

- 15-minute—Data is collected at the quarter-hour (for example, at 10:00, 10:15, and so on). The data shown represents the difference in counter values between successive 15-minute intervals.
- 1-day—Data is collected at midnight GMT. The data shown represents the difference between the counter values read at successive midnights.
- Real-time—When a real-time PM session is running, it polls the NE for *x* number of attributes every 10 to 900 seconds. This feature allows you to examine the current value of a PM parameter in granularities finer than the standard 15-minute or 1-day interval. For more information, see 10.4.4 Managing Real-Time PM Data, page 10-26.

You can use the Plot tab to plot the data in a graphical view that is stored in the Prime Optical database. See 10.4.6 Using PM Data Graphs, page 10-28.

The following table describes the fields in the DS3 PM table.

Table E-21 Field Descriptions for the DS3 PM Table

Field	Description	Cards Supported
Alias ID	Alias name of the selected NE.	—
Module Name	Module for which PM data is displayed.	—
Physical Location	Slot and port number for which PM data is displayed.	—
Interface	Interface name of the selected NE.	—

Table E-21 Field Descriptions for the DS3 PM Table (continued)

Field	Description	Cards Supported
Time Stamp	When the data was collected. You can select GMT, Local, or User-Defined time for the Time Stamp display. Use the User Preferences dialog box to make your time zone selection.	—
Maintenance	Whether the NE was under maintenance when the performance data was collected.	—
CV-L	Number of coding violations (CVs) occurring on the line. This parameter is a count of BPVs and EXZs occurring over the accumulation period.	• ONS 15310 CL: CTX • ONS 15310 MA SONET: DS1_28_DS3_EC1_3, DS1_84_DS3_EC1_3 • ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15327: XTC • ONS 15454 SONET: DS-3, DS3E, DS3_EC1_48, DS3I, DS3N, DS3NE, DS3XM, DS3XM_12 • ONS 15454 SDH: DS3I, DS3IN
ES-L	Number of seconds containing one or more anomalies (BPVs + EXZs) and/or defects (loss of signal [LOS]) on the line.	• ONS 15310 CL: CTX • ONS 15310 MA SONET: DS1_28_DS3_EC1_3, DS1_84_DS3_EC1_3 • ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15327: XTC • ONS 15454 SONET: DS-3, DS3E, DS3_EC1_48, DS3I, DS3IN, DS3N, DS3NE, DS3XM, DS3XM_12 • ONS 15454 SDH: DS3I, DS3IN
SES-L	Number of seconds containing more than a particular quantity of anomalies (BPV + EXZ > 1544) and/or defects on the line.	• ONS 15310 CL: CTX • ONS 15310 MA SONET: DS1_28_DS3_EC1_3, DS1_84_DS3_EC1_3 • ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15327: XTC • ONS 15454 SONET: DS-3, DS3E, DS3_EC1_48, DS3I, DS3IN, DS3N, DS3NE, DS3XM, DS3XM_12 • ONS 15454 SDH: DS3I, DS3IN

Table E-21 Field Descriptions for the DS3 PM Table (continued)

Field	Description	Cards Supported
LOSS-L	Number of one-second intervals containing one or more LOS defects.	• ONS 15310 CL: CTX • ONS 15310 MA SONET: DS1_28_DS3_EC1_3, DS1_84_DS3_EC1_3 • ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15327: XTC • ONS 15454 SONET: DS-3, DS3E, DS3_EC1_48, DS3I, DS3IN, DS3N, DS3NE, DS3XM, DS3XM_12 • ONS 15454 SDH: DS3I, DS3IN
AISSP-PBIT	Number of alarm indication signal seconds (AISS) encountered by a DS-3 interface in the parity bit (PBIT) of the interface in the interval. The PBIT is the bit position at the beginning of the third and fourth subframes, which contains parity information. This is a path variable.	• ONS 15310 CL: CTX • ONS 15310 MA SONET: DS1_28_DS3_EC1_3, DS1_84_DS3_EC1_3 • ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SONET: DS3E, DS3_EC1_48, DS3I, DS3IN, DS3NE, DS3XM, DS3XM_12 • ONS 15454 SDH: DS3I, DS3IN
CVP-PBIT	Number of coding violations encountered by a DS-3 interface in the PBIT of the interface in the interval. This is a path variable.	• ONS 15310 CL: CTX • ONS 15310 MA SONET: DS1_28_DS3_EC1_3, DS1_84_DS3_EC1_3 • ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SONET: DS3E, DS3_EC1_48, DS3I, DS3IN, DS3XM, DS3XM_12 • ONS 15454 SDH: DS3I, DS3IN
ESP-PBIT	Number of errored seconds encountered by a DS-3 interface in the PBIT of the interface in the interval. This is a path variable.	• ONS 15310 CL: CTX • ONS 15310 MA SONET: DS1_28_DS3_EC1_3, DS1_84_DS3_EC1_3 • ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SONET: DS3E, DS3_EC1_48, DS3I, DS3IN, DS3NE, DS3XM, DS3XM_12 • ONS 15454 SDH: DS3I, DS3IN

Table E-21 Field Descriptions for the DS3 PM Table (continued)

Field	Description	Cards Supported
SESP-PBIT	Number of severely errored seconds (SES) encountered by a DS-3 interface in the PBIT of the interface in the interval. This is a path variable.	• ONS 15310 CL: CTX • ONS 15310 MA SONET: DS1_28_DS3_EC1_3, DS1_84_DS3_EC1_3 • ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SONET: DS3E, DS3_EC1_48, DS3I, DS3IN, DS3NE, DS3XM, DS3XM_12 • ONS 15454 SDH: DS3I, DS3IN
SASP-PBIT	Number of severely alarmed seconds (SAS) encountered by a DS-3 interface in the PBIT of the interface in the interval. This is a path variable.	• ONS 15310 CL: CTX • ONS 15310 MA SONET: DS1_28_DS3_EC1_3, DS1_84_DS3_EC1_3 • ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SONET: DS3E, DS3_EC1_48, DS3I, DS3IN, DS3XM, DS3XM_12 • ONS 15454 SDH: DS3I, DS3IN
UASP-PBIT	Number of unavailable seconds (UAS) encountered by a DS-3 interface in the PBIT of the interface in the interval. This is a path variable.	• ONS 15310 CL: CTX • ONS 15310 MA SONET: DS1_28_DS3_EC1_3, DS1_84_DS3_EC1_3 • ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SONET: DS3E, DS3_EC1_48, DS3I, DS3IN, DS3NE, DS3XM, DS3XM_12 • ONS 15454 SDH: DS3I, DS3IN
CVP (C-bit)	Number of coding violations encountered by a DS-3 interface in the C-bit of the interface in the interval. This is a path variable.	• ONS 15310 CL: CTX • ONS 15310 MA SONET: DS1_28_DS3_EC1_3, DS1_84_DS3_EC1_3 • ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SONET: DS3E, DS3_EC1_48, DS3I, DS3IN, DS3NE, DS3XM, DS3XM_12 • ONS 15454 SDH: DS3I, DS3IN

Table E-21 Field Descriptions for the DS3 PM Table (continued)

Field	Description	Cards Supported
ESP (C-bit)	Number of errored seconds encountered by a DS-3 interface in the C-bit of the interface in the interval. This is a path variable.	• ONS 15310 CL: CTX • ONS 15310 MA SONET: DS1_28_DS3_EC1_3, DS1_84_DS3_EC1_3 • ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SONET: DS3E, DS3_EC1_48, DS3I, DS3IN, DS3NE, DS3XM, DS3XM_12 • ONS 15454 SDH: DS3I, DS3IN
SESP (C-bit)	Number of SESs encountered by a DS-3 interface in the C-bit of the interface in the interval. This is a path variable.	• ONS 15310 CL: CTX • ONS 15310 MA SONET: DS1_28_DS3_EC1_3, DS1_84_DS3_EC1_3 • ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SONET: DS3E, DS3_EC1_48, DS3I, DS3IN, DS3NE, DS3XM, DS3XM_12 • ONS 15454 SDH: DS3I, DS3IN
SASP (C-bit)	Number of severely alarmed seconds encountered by a DS-3 interface in the C-bit of the interface in the interval. This is a path variable.	• ONS 15310 MA SONET: DS1_28_DS3_EC1_3, DS1_84_DS3_EC1_3 • ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SONET: DS3_EC1_48
UASP (C-bit)	Number of unavailable seconds encountered by a DS-3 interface in the C-bit of the interface in the interval. This is a path variable.	• ONS 15310 CL: CTX • ONS 15310 MA SONET: DS1_28_DS3_EC1_3, DS1_84_DS3_EC1_3 • ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SONET: DS3E, DS3_EC1_48, DS3I, DS3IN, DS3NE, DS3XM, DS3XM_12 • ONS 15454 SDH: DS3I, DS3IN
NE ID	Name of the selected NE.	—

E.2.7 DS3 and DS3I PM Table (Far End)—ONS 15310 CL, ONS 15310 MA SONET, ONS 15310 MA SDH, ONS 15454 SONET, and ONS 15454 SDH

The DS3 and DS3I PM table shows far-end performance data for the DS-3 and DS3I cards. You can display performance data for 15-minute, 1-day, or real-time increments:

- 15-minute—Data is collected at the quarter-hour (for example, at 10:00, 10:15, and so on). The data shown represents the difference in counter values between successive 15-minute intervals.
- 1-day—Data is collected at midnight GMT. The data shown represents the difference between the counter values read at successive midnights.
- Real-time—When a real-time PM session is running, it polls the NE for *x* number of attributes every 10 to 900 seconds. This feature allows you to examine the current value of a PM parameter in granularities finer than the standard 15-minute or 1-day interval. For more information, see 10.4.4 Managing Real-Time PM Data, page 10-26.

Performance monitoring can be done either on selected modules, or on specific locations in the NE. You can use the Plot tab to plot the data in a graphical view that is stored in the Prime Optical database. See 10.4.6 Using PM Data Graphs, page 10-28.

The following table describes the fields in the DS3 and DS3I PM table.

Table E-22 Field Descriptions for the DS3 and DS3I PM Table (Far End)

Field	Description	Cards Supported
Alias ID	Alias name of the selected NE.	—
Module Name	Module for which PM data is displayed.	—
Physical Location	Slot and port number for which PM data is displayed.	—
Interface	Interface name of the selected NE.	—
Time Stamp (*time zone*)	When the data was collected. You can select GMT, Local, or User-Defined time for the Time Stamp display. Use the User Preferences dialog box to make your time zone selection.	—
Maintenance	Whether the NE was under maintenance when the performance data was collected.	—
Coding Violations – Path (C-Bit)	Number of coding violations encountered by a DS-3 interface in the C-bit of the interface in the interval. The C-bit is a bit format used to increase far-end performance monitoring. This is a path variable.	• ONS 15310 CL: CTX • ONS 15310 MA SONET: DS1_28_DS3_EC1_3, DS1_84_DS3_EC1_3 • ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SONET: DS3E, DS3_EC1_48, DS3I, DS3IN, DS3NE, DS3XM, DS3XM_12 • ONS 15454 SDH: DS3I, DS3IN

Table E-22 Field Descriptions for the DS3 and DS3I PM Table (Far End) (continued)

Field	Description	Cards Supported
Errored Seconds – Path (C-Bit)	Number of errored seconds encountered by a DS-3 interface in the C-bit of the interface in the interval. This is a path variable.	• ONS 15310 CL: CTX • ONS 15310 MA SONET: DS1_28_DS3_EC1_3, DS1_84_DS3_EC1_3 • ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SONET: DS3E, DS3_EC1_48, DS3I, DS3IN, DS3NE, DS3XM, DS3XM_12 • ONS 15454 SDH: DS3I, DS3IN
Severely Alarmed Seconds – Path (C-Bit)	Number of severely alarmed seconds encountered by a DS-3 interface in the C-bit of the interface in the interval. This is a path variable.	• ONS 15310 CL: CTX • ONS 15310 MA SONET: DS1_28_DS3_EC1_3, DS1_84_DS3_EC1_3 • ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SONET: DS3E, DS3_EC1_48, DS3I, DS3IN, DS3NE, DS3XM, DS3XM_12 • ONS 15454 SDH: DS3I, DS3IN
Severely Errored Seconds – Path (C-Bit)	Number of severely errored seconds encountered by a DS-3 interface in the C-bit of the interface in the interval. This is a path variable.	• ONS 15310 CL: CTX • ONS 15310 MA SONET: DS1_28_DS3_EC1_3, DS1_84_DS3_EC1_3 • ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SONET: DS3E, DS3_EC1_48, DS3I, DS3IN, DS3NE, DS3XM, DS3XM_12 • ONS 15454 SDH: DS3I, DS3IN
Unavailable Seconds – Path (C-Bit)	Number of unavailable seconds encountered by a DS-3 interface in the C-bit of the interface in the interval. This is a path variable.	• ONS 15310 CL: CTX • ONS 15310 MA SONET: DS1_28_DS3_EC1_3, DS1_84_DS3_EC1_3 • ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SONET: DS3E, DS3_EC1_48, DS3I, DS3IN, DS3NE, DS3XM, DS3XM_12 • ONS 15454 SDH: DS3I, DS3IN
NE ID	Name of the selected NE.	—

E.2.8 E1 PM Table—ONS 15310 MA SDH, ONS 15454 SONET, and ONS 15454 SDH

The E1 PM table shows performance data for the following cards:

- ONS 15310 MA SDH: E1_21_E3_DS3_3 and E1_63_E3_DS3_3
- ONS 15454 SONET: DS1_E1_56
- ONS 15454 SDH: E1

You can display performance data for 15-minute, 1-day, or real-time increments:

- 15-minute—Data is collected at the quarter-hour (for example, at 10:00, 10:15, and so on). The data shown represents the difference in counter values between successive 15-minute intervals.
- 1-day—Data is collected at midnight GMT. The data shown represents the difference between the counter values read at successive midnights.
- Real-time—When a real-time PM session is running, it polls the NE for *x* number of attributes every 10 to 900 seconds. This feature allows you to examine the current value of a PM parameter in granularities finer than the standard 15-minute or 1-day interval. For more information, see 10.4.4 Managing Real-Time PM Data, page 10-26.

Performance monitoring can be done either on selected modules, or on specific locations in the NE. You can use the Plot tab to plot the data in a graphical view that is stored in the Prime Optical database. See 10.4.6 Using PM Data Graphs, page 10-28.

The following table describes the fields in the E1 PM table.

Table E-23 Field Descriptions for the E1 PM Table

Field	Description	Cards Supported
Alias ID	Alias name of the selected NE.	—
Module Name	Module for which PM data is displayed.	—
Physical Location	Slot and port number for which PM data is displayed.	—
Time Stamp (*time zone*)	When the data was collected. You can select GMT, Local, or User-Defined time for the Time Stamp display. Use the User Preferences dialog box to make your time zone selection.	—
Interface	Interface name of the selected NE.	—
Maintenance	Whether the NE was under maintenance when the performance data was collected.	—
CV-L	CV-L indicates the number of coding violations occurring on the line. This parameter is a count of BPVs and EXZs occurring over the accumulation period.	• ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SONET: DS1_E1_56 • ONS 15454 SDH: E1N, E1, E1_42

Table E-23 Field Descriptions for the E1 PM Table (continued)

Field	Description	Cards Supported
ES-L	ES-L is a count of the seconds containing one or more anomalies (BPV + EXZ) and/or defects (loss of signal) on the line.	• ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SONET: DS1_E1_56 • ONS 15454 SDH: E1N, E1, E1_42
SES-L	SES-L is a count of the seconds containing more than a particular quantity of anomalies (BPV + EXZ > 1544) and/or defects on the line.	• ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SONET: DS1_E1_56 • ONS 15454 SDH: E1N, E1, E1_42
LOSS-L	LOSS-L is a count of one-second intervals containing one or more LOS defects.	• ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SONET: DS1_E1_56 • ONS 15454 SDH: E1N, E1, E1_42
EB-P (Rx)	Received path errored block (EB-P) is a count of the number of bits in error within a block.	• ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SONET: DS1_E1_56 • ONS 15454 SDH: E1N, E1, E1_42
ES-P (Rx)	Received path errored seconds (ES-P) is a count of the seconds containing one or more anomalies and/or defects for paths on the received end of the signal.	• ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SONET: DS1_E1_56 • ONS 15454 SDH: E1N, E1, E1_42
SES-P (Rx)	Received path severely errored seconds (SES-P) is a count of the seconds containing more than a particular quantity of anomalies and/or defects for paths on the received end of the signal.	• ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SONET: DS1_E1_56 • ONS 15454 SDH: E1N, E1, E1_42

Table E-23 Field Descriptions for the E1 PM Table (continued)

Field	Description	Cards Supported
BBE-P (Rx)	Received path background block errors (BBE-P) is an errored block not occurring as part of an SES.	• ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SONET: DS1_E1_56 • ONS 15454 SDH: E1N, E1, E1_42
UAS-P (Rx)	Received path unavailable seconds (UAS-P) is a count of one-second intervals when the DS-1 path is unavailable on the received end of the signal. The DS-1 path is unavailable when ten consecutive SESs occur. The ten SESs are included in unavailable time. Once unavailable, the DS-1 path becomes available when ten consecutive seconds occur with no SESs. The ten seconds with no SESs are excluded from unavailable time.	• ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SONET: DS1_E1_56 • ONS 15454 SDH: E1N, E1, E1_42
ESR-P (Rx)	Received path errored second ratio (ESR-P) is the ratio of errored seconds to total seconds in available time during a fixed measurement interval.	• ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SONET: DS1_E1_56 • ONS 15454 SDH: E1N, E1, E1_42
SESR-P (Rx)	Received path severely errored seconds ratio (SESR-P) is the ratio of SES to total seconds in available time during a fixed measurement interval.	• ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SONET: DS1_E1_56 • ONS 15454 SDH: E1N, E1, E1_42
BBER-P (Rx)	Received path background block error ratio (BBER-P) is a ratio of BBE to total blocks in available time during a fixed measurement interval. The count of total blocks excludes all blocks during SESs.	• ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SONET: DS1_E1_56 • ONS 15454 SDH: E1N, E1, E1_42
AISS-P (Rx)	Received path AISS-P is a count of seconds containing one or more AIS defects.	• ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SONET: DS1_E1_56 • ONS 15454 SDH: E1N, E1, E1_42

Table E-23 Field Descriptions for the E1 PM Table (continued)

Field	Description	Cards Supported
EB-P (Tx)	Transmitted path errored block (EB-P) indicates that one or more bits are in error within a block.	• ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SONET: DS1_E1_56 • ONS 15454 SDH: E1N, E1, E1_42
ES-P (Tx)	Transmitted path errored seconds (ES-P) is a count of the seconds containing one or more anomalies and/or defects for paths on the transmitted end of the signal.	• ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SONET: DS1_E1_56 • ONS 15454 SDH: E1N, E1, E1_42
SES-P (Tx)	Transmitted path severely errored seconds (SES-P) is a count of the seconds containing more than a particular quantity of anomalies and/or defects for paths on the transmitted end of the signal.	• ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SONET: DS1_E1_56 • ONS 15454 SDH: E1N, E1, E1_42
BBE-P (Tx)	Transmitted path background block error (BBE-P) is an errored block not occurring as part of an SES.	• ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SONET: DS1_E1_56 • ONS 15454 SDH: E1N, E1, E1_42
UAS-P (Tx)	Transmitted path unavailable seconds (UAS-P) is a count of one-second intervals when the DS-1 path is unavailable on the transmitted end of the signal. The DS-1 path is unavailable when ten consecutive SESs occur. The ten SESs are included in unavailable time. Once unavailable, the DS-1 path becomes available when ten consecutive seconds occur with no SESs. The ten seconds with no SESs are excluded from unavailable time.	• ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SONET: DS1_E1_56 • ONS 15454 SDH: E1N, E1, E1_42
ESR-P (Tx)	Transmitted path errored second ratio (ESR-P) is the ratio of errored seconds to total seconds in available time during a fixed measurement interval.	• ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SONET: DS1_E1_56 • ONS 15454 SDH: E1N, E1, E1_42

Table E-23 Field Descriptions for the E1 PM Table (continued)

Field	Description	Cards Supported
SESR-P (Tx)	Transmitted path severely errored second ratio (SESR-P) is the ratio of SES to total seconds in available time during a fixed measurement interval.	• ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SONET: DS1_E1_56 • ONS 15454 SDH: E1N, E1, E1_42
BBER-P (Tx)	Transmitted path background block error ratio (BBER-P) is a ratio of BBE to total blocks in available time during a fixed measurement interval. The count of total blocks excludes all blocks during SESs.	• ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SONET: DS1_E1_56 • ONS 15454 SDH: E1N, E1, E1_42
AISS-P (Tx)	Transmitted path AISS-P is a count of seconds containing one or more AIS defects.	• ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SONET: DS1_E1_56 • ONS 15454 SDH: E1N, E1, E1_42
NE ID	Name of the selected NE.	—

E.2.9 E1 PM Table (Far End)—ONS 15310 MA SDH, ONS 15454 SONET, and ONS 15454 SDH

The E1 PM table shows far-end performance data for the following cards:

- ONS 15310 MA SDH: E1_21_E3_DS3_3 and E1_63_E3_DS3_3
- ONS 15454 SONET: DS1_E1_56
- ONS 15454 SDH: E1, E1N, and E1_42 cards.

You can display performance data for 15-minute, 1-day, or real-time increments:

- 15-minute—Data is collected at the quarter-hour (for example, at 10:00, 10:15, and so on). The data shown represents the difference in counter values between successive 15-minute intervals.
- 1-day—Data is collected at midnight GMT. The data shown represents the difference between the counter values read at successive midnights.
- Real-time—When a real-time PM session is running, it polls the NE for *x* number of attributes every 10 to 900 seconds. This feature allows you to examine the current value of a PM parameter in granularities finer than the standard 15-minute or 1-day interval. For more information, see 10.4.4 Managing Real-Time PM Data, page 10-26.

Performance monitoring can be done either on selected modules, or on specific locations in the NE. You can use the Plot tab to plot the data in a graphical view that is stored in the Prime Optical database. See 10.4.6 Using PM Data Graphs, page 10-28.

The following table describes the fields in the E1 PM table.

Table E-24 Field Descriptions for the E1 PM Table (Far End)

Field	Description	Cards Supported
Alias ID	Alias name of the selected NE.	—
Module Name	Module for which PM data is displayed.	—
Physical Location	Slot and port number for which PM data is displayed.	—
Time Stamp (*time zone*)	When the data was collected. You can select GMT, Local, or User-Defined time for the Time Stamp display. Use the User Preferences dialog box to make your time zone selection.	—
Interface	Interface name of the selected NE.	—
Maintenance	Whether the NE was under maintenance when the performance data was collected.	—
RXP-EB	Received path errored blocks (RXP-EB) indicates that one or more bits are in error within a block.	• ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SONET: DS1_E1_56 • ONS 15454 SDH: E1N, E1, E1_42
RXP-ES	Received path errored seconds (RXP-ES) is a one-second period with one or more errored blocks or at least one defect.	• ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SONET: DS1_E1_56 • ONS 15454 SDH: E1N, E1, E1_42
RXPS-ES	Received path severely errored seconds (RXP-SES) is a one-second period containing 30 percent or more errored blocks or at least one defect; SES is a subset of ES.	• ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SONET: DS1_E1_56 • ONS 15454 SDH: E1N, E1, E1_42

Table E-24 Field Descriptions for the E1 PM Table (Far End) (continued)

Field	Description	Cards Supported
RXP-BBE	Received path background block errors (RXP-BBE) is an errored block not occurring as part of an SES.	• ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SONET: DS1_E1_56 • ONS 15454 SDH: E1N, E1, E1_42
RXP-UAS	Received path unavailable seconds (RXP-UAS) is a count of one-second intervals when the E1 path is unavailable on the signal received end. The E1 path is unavailable when ten consecutive SESs occur. The ten SESs are included in unavailable time. After it has become unavailable, the E1 path becomes available when ten consecutive seconds occur with no SESs. The ten seconds with no SESs are excluded from the unavailable time.	• ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SONET: DS1_E1_56 • ONS 15454 SDH: E1N, E1, E1_42
RXP-ESR	Received path errored second ratio (RXP-ESR) is the ratio of SESs to total seconds in available time during a fixed measurement interval.	• ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SONET: DS1_E1_56 • ONS 15454 SDH: E1N, E1, E1_42
RXP-SESR	Received path severely errored second ratio (RXP-SESR) is the ratio of SESs to total seconds in available time during a fixed measurement interval.	• ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SONET: DS1_E1_56 • ONS 15454 SDH: E1N, E1, E1_42
RXP-BBER	Received path background block error ratio (RXP-BBER) is a ratio of BBEs to total blocks in available time during a fixed measurement interval. The count of total blocks excludes all blocks during SESs.	• ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SONET: DS1_E1_56 • ONS 15454 SDH: E1N, E1, E1_42
TXP-EB	Transmitted path errored blocks (TXP-EB) is a count of bits that are in error within a block.	• ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SONET: DS1_E1_56 • ONS 15454 SDH: E1N, E1, E1_42

Table E-24 Field Descriptions for the E1 PM Table (Far End) (continued)

Field	Description	Cards Supported
TXP-ES	Transmitted path errored seconds (TXP-ES) is a one-second period with one or more errored blocks or at least one defect.	• ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SONET: DS1_E1_56 • ONS 15454 SDH: E1N, E1, E1_42
TXP-SES	Transmitted path severely errored seconds (TXP-SES) is a one-second period containing 30 percent or more errored blocks or at least one defect; SES is a subset of ES.	• ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SONET: DS1_E1_56 • ONS 15454 SDH: E1N, E1, E1_42
TXP-BBE	Transmitted path background block errors (TXP-BBE) is an errored block not occurring as part of an SES.	• ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SONET: DS1_E1_56 • ONS 15454 SDH: E1N, E1, E1_42
TXP-UAS	Transmitted path unavailable seconds (TXP-UAS) is a count of one-second intervals when the E1 path is unavailable on the signal transmitted. The E1 path is unavailable when ten consecutive SESs occur. The ten SESs are included in unavailable time. After it has become unavailable, the E1 path becomes available when ten consecutive seconds occur with no SESs. The ten seconds with no SESs are excluded from the unavailable time.	• ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SONET: DS1_E1_56 • ONS 15454 SDH: E1N, E1, E1_42
TXP-ESR	Transmitted path errored second ratio (TXP-ESR) is the ratio of SESs to total seconds in available time during a fixed measurement interval.	• ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SONET: DS1_E1_56 • ONS 15454 SDH: E1N, E1, E1_42
TXP-SESR	Transmitted path severely errored second ratio (TXP-SESR) is the ratio of SESs to total seconds in available time during a fixed measurement interval.	• ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SONET: DS1_E1_56 • ONS 15454 SDH: E1N, E1, E1_42

Table E-24 Field Descriptions for the E1 PM Table (Far End) (continued)

Field	Description	Cards Supported
TXP-BBER	Transmitted path background block error ratio (TXP-BBER) is a ratio of BBEs to total blocks in available time during a fixed measurement interval. The count of total blocks excludes all blocks during SESs.	• ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SONET: DS1_E1_56 • ONS 15454 SDH: E1N, E1, E1_42
NE ID	Name of the selected NE.	—

E.2.10 E3 PM Table—ONS 15310 MA SDH, ONS 15454 SDH

The E3 PM table shows performance data for the ONS 15310 MA SDH E1_21_E3_DS3_3 and E1_63_E3_DS3_3 cards and the ONS 15454 SDH E3 card. You can display performance data for 15-minute, 1-day, or real-time increments:

- 15-minute—Data is collected at the quarter-hour (for example, at 10:00, 10:15, and so on). The data shown represents the difference in counter values between successive 15-minute intervals.
- 1-day—Data is collected at midnight GMT. The data shown represents the difference between the counter values read at successive midnights.
- Real-time—When a real-time PM session is running, it polls the NE for *x* number of attributes every 10 to 900 seconds. This feature allows you to examine the current value of a PM parameter in granularities finer than the standard 15-minute or 1-day interval. For more information, see 10.4.4 Managing Real-Time PM Data, page 10-26.

Performance monitoring can be done either on selected modules, or on specific locations in the NE. You can use the Plot tab to plot the data in a graphical view that is stored in the Prime Optical database. See 10.4.6 Using PM Data Graphs, page 10-28.

The following table describes the fields in the E3 PM table.

Table E-25 Field Descriptions for the E3 PM Table

Field	Description	Cards Supported
Alias ID	Alias name of the selected NE.	—
Module Name	Module for which PM data is displayed.	—
Physical Location	Slot and port number for which PM data is displayed.	—
Time Stamp (*time zone*)	When the data was collected. You can select GMT, Local, or User-Defined time for the Time Stamp display. Use the User Preferences dialog box to make your time zone selection.	—
Interface	Interface name of the selected NE.	—
Maintenance	Whether the NE was under maintenance when the performance data was collected.	—

Table E-25 Field Descriptions for the E3 PM Table (continued)

Field	Description	Cards Supported
CV-L	CV-L indicates the number of coding violations occurring on the line. This parameter is a count of BPVs and EXZs occurring over the accumulation period.	• ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SDH: E3
ES-L	ES-L is a count of the seconds containing one or more anomalies (BPV + EXZ) and/or defects (loss of signal) on the line.	• ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SDH: E3
SES-L	SES-L is a count of the seconds containing more than a particular quantity of anomalies (BPV + EXZ > 1544) and/or defects on the line.	• ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SDH: E3
LOSS-L	LOSS-L is a count of one-second intervals containing one or more LOS defects.	• ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SDH: E3
P-ES	Received path errored seconds (Rx ES-P) is a count of the seconds containing one or more anomalies and/or defects for paths on the received end of the signal.	• ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SDH: E3
P-SES	Received path severely errored seconds (Rx SES-P) is a count of the seconds containing more than a particular quantity of anomalies and/or defects for paths on the received end of the signal.	• ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SDH: E3
P-UAS	Received path unavailable seconds (Rx UAS-P) is a count of one-second intervals when the DS-1 path is unavailable on the received end of the signal. The DS-1 path is unavailable when ten consecutive SESs occur. The ten SESs are included in unavailable time. Once unavailable, the DS-1 path becomes available when ten consecutive seconds occur with no SESs. The ten seconds with no SESs are excluded from unavailable time.	• ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SDH: E3
P-ESR	Received path errored second ratio (RX P-ESR) is the ratio of errored seconds to total seconds in available time during a fixed measurement interval.	• ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SDH: E3
P-SESR	Received path severely errored second ratio (RX P-SESR) is the ratio of SES to total seconds in available time during a fixed measurement interval.	• ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SDH: E3
NE ID	Name of the selected NE.	—

E.2.11 CE-Series Ethernet PM Table—ONS 15310 CL, ONS 15310 MA SONET, ONS 15310 MA SDH, ONS 15454 SONET, and ONS 15454 SDH

The CE-Series Ethernet PM table shows performance data for the ONS 15310 CL, ONS 15310 MA SONET, ONS 15310 MA SDH, ONS 15454 SONET, and ONS 15454 SDH CE-series Ethernet cards. You can display performance data for 15-minute, 1-day, or real-time increments:

- 15-minute—Data is collected at the quarter-hour (for example, at 10:00, 10:15, and so on). The data shown represents the difference in counter values between successive 15-minute intervals.
- 1-day—Data is collected at midnight GMT. The data shown represents the difference between the counter values read at successive midnights.
- Real-time—When a real-time PM session is running, it polls the NE for *x* number of attributes every 10 to 900 seconds. This feature allows you to examine the current value of a PM parameter in granularities finer than the standard 15-minute or 1-day interval. For more information, see 10.4.4 Managing Real-Time PM Data, page 10-26.

Performance monitoring can be done either on selected modules, or on specific locations in the NE. You can use the Plot tab to plot the data in a graphical view that is stored in the Prime Optical database. See 10.4.6 Using PM Data Graphs, page 10-28.

The following table describes the fields in the CE-Series Ethernet PM table.

Note Real-time PM data is not available for Ethernet cards on NE releases earlier than release 5.0.

Table E-26 Field Descriptions for the CE-Series Ethernet PM Table

Field	Description	Cards Supported
Alias ID	Alias name of the selected NE.	—
Module Name	Module for which PM data is displayed.	—
Physical Location	Slot and port number for which PM data is displayed.	—
Interface	Interface name of the selected NE.	—
Time Stamp (*time zone*)	When the data was collected. You can select GMT, Local, or User-Defined time for the Time Stamp display. Use the User Preferences dialog box to make your time zone selection.	—
Maintenance	Whether the NE was under maintenance when the performance data was collected.	—
Time Last Cleared	When the statistics were last reset.	• ONS 15454 SONET: CE-MR-10 • ONS 15454 SDH: CE-MR-10

Table E-26 Field Descriptions for the CE-Series Ethernet PM Table (continued)

Field	Description	Cards Supported
ifInOctets	Number of bytes received since the last counter reset.	• ONS 15310 CL: CE-100T-8 • ONS 15310 MA SONET: CE-100T-8, CE-MR-6 • ONS 15310 MA SDH: CE-100T-8, CE-MR-6 • ONS 15454 SONET: CE-1000-4, CE-100T-8, CE-MR-10 • ONS 15454 SDH: CE-1000-4, CE-100T-8, CE-MR-10
ifInUCastPkts	Number of unicast packets received.	• ONS 15310 CL: CE-100T-8 • ONS 15310 MA SONET: CE-100T-8, CE-MR-6 • ONS 15310 MA SDH: CE-100T-8, CE-MR-6 • ONS 15454 SONET: CE-1000-4, CE-100T-8, CE-MR-10 • ONS 15454 SDH: CE-1000-4, CE-100T-8, CE-MR-10
ifInMulticastPkts	Number of multicast packets received.	• ONS 15310 CL: CE-100T-8 • ONS 15310 MA SONET: CE-100T-8, CE-MR-6 • ONS 15310 MA SDH: CE-100T-8, CE-MR-6 • ONS 15454 SONET: CE-1000-4, CE-100T-8, CE-MR-10 • ONS 15454 SDH: CE-1000-4, CE-100T-8, CE-MR-10
ifInBroadcastPkts	Number of broadcast packets received.	• ONS 15310 CL: CE-100T-8 • ONS 15310 MA SONET: CE-100T-8, CE-MR-6 • ONS 15310 MA SDH: CE-100T-8, CE-MR-6 • ONS 15454 SONET: CE-1000-4, CE-100T-8, CE-MR-10 • ONS 15454 SDH: CE-1000-4, CE-100T-8, CE-MR-10

Table E-26 Field Descriptions for the CE-Series Ethernet PM Table (continued)

Field	Description	Cards Supported
ifInDiscards	Number of inbound packets that were chosen to be discarded even though no errors had been detected to prevent their being deliverable to a higher-layer protocol.	• ONS 15310 CL: CE-100T-8 • ONS 15310 MA SONET: CE-100T-8, CE-MR-6 • ONS 15310 MA SDH: CE-100T-8, CE-MR-6 • ONS 15454 SONET: CE-1000-4, CE-100T-8, CE-MR-10 • ONS 15454 SDH: CE-1000-4, CE-100T-8, CE-MR-10
ifInErrors	Total number of received errors.	• ONS 15310 CL: CE-100T-8 • ONS 15310 MA SONET: CE-100T-8, CE-MR-6 • ONS 15310 MA SDH: CE-100T-8, CE-MR-6 • ONS 15454 SONET: CE-1000-4, CE-100T-8, CE-MR-10 • ONS 15454 SDH: CE-1000-4, CE-100T-8, CE-MR-10
ifOutOctets	Number of bytes transmitted since the last counter reset.	• ONS 15310 CL: CE-100T-8 • ONS 15310 MA SONET: CE-100T-8, CE-MR-6 • ONS 15310 MA SDH: CE-100T-8, CE-MR-6 • ONS 15454 SONET: CE-1000-4, CE-100T-8, CE-MR-10 • ONS 15454 SDH: CE-1000-4, CE-100T-8, CE-MR-10
ifOutUCastPkts	Number of unicast packets transmitted.	• ONS 15310 CL: CE-100T-8 • ONS 15310 MA SONET: CE-100T-8, CE-MR-6 • ONS 15310 MA SDH: CE-100T-8, CE-MR-6 • ONS 15454 SONET: CE-1000-4, CE-100T-8, CE-MR-10 • ONS 15454 SDH: CE-1000-4, CE-100T-8, CE-MR-10

Table E-26 Field Descriptions for the CE-Series Ethernet PM Table (continued)

Field	Description	Cards Supported
ifOutMulticastPkts	Number of multicast packets transmitted.	• ONS 15310 CL: CE-100T-8 • ONS 15310 MA SONET: CE-100T-8, CE-MR-6 • ONS 15310 MA SDH: CE-100T-8, CE-MR-6 • ONS 15454 SONET: CE-1000-4, CE-100T-8, CE-MR-10 • ONS 15454 SDH: CE-1000-4, CE-100T-8, CE-MR-10
ifOutBroadcastPkts	Number of broadcast packets transmitted.	• ONS 15310 CL: CE-100T-8 • ONS 15310 MA SONET: CE-100T-8, CE-MR-6 • ONS 15310 MA SDH: CE-100T-8, CE-MR-6 • ONS 15454 SONET: CE-1000-4, CE-100T-8, CE-MR-10 • ONS 15454 SDH: CE-1000-4, CE-100T-8, CE-MR-10
dot3StatsAlignmentErrors	Number of received packets with alignment errors (incomplete frames).	• ONS 15310 CL: CE-100T-8 • ONS 15310 MA SONET: CE-100T-8, CE-MR-6 • ONS 15310 MA SDH: CE-100T-8, CE-MR-6 • ONS 15454 SONET: CE-1000-4, CE-100T-8, CE-MR-10 • ONS 15454 SDH: CE-1000-4, CE-100T-8, CE-MR-10
dot3StatsFCSErrors	Number of packets with an FCS error. FCS errors indicate frame corruption during transmission.	• ONS 15310 CL: CE-100T-8 • ONS 15310 MA SONET: CE-100T-8, CE-MR-6 • ONS 15310 MA SDH: CE-100T-8, CE-MR-6 • ONS 15454 SONET: CE-1000-4, CE-100T-8, CE-MR-10 • ONS 15454 SDH: CE-1000-4, CE-100T-8, CE-MR-10

Table E-26 Field Descriptions for the CE-Series Ethernet PM Table (continued)

Field	Description	Cards Supported
dot3StatsSingleCollisionFrames	Number of successfully transmitted frames that had exactly one collision.	• ONS 15310 CL: CE-100T-8 • ONS 15310 MA SONET: CE-100T-8, CE-MR-6 • ONS 15310 MA SDH: CE-100T-8, CE-MR-6 • ONS 15454 SONET: CE-1000-4, CE-100T-8, CE-MR-10 • ONS 15454 SDH: CE-1000-4, CE-100T-8, CE-MR-10
dot3StatsFrameTooLong	Number of received frames that were larger than the maximum size permitted.	• ONS 15310 CL: CE-100T-8 • ONS 15310 MA SONET: CE-100T-8, CE-MR-6 • ONS 15310 MA SDH: CE-100T-8, CE-MR-6 • ONS 15454 SONET: CE-1000-4, CE-100T-8, CE-MR-10 • ONS 15454 SDH: CE-1000-4, CE-100T-8, CE-MR-10
etherStatsUndersizePkts	Number of packets below the minimum packet size received.	• ONS 15310 CL: CE-100T-8 • ONS 15310 MA SONET: CE-100T-8, CE-MR-6 • ONS 15310 MA SDH: CE-100T-8, CE-MR-6 • ONS 15454 SONET: CE-1000-4, CE-100T-8, CE-MR-10 • ONS 15454 SDH: CE-1000-4, CE-100T-8, CE-MR-10
etherStatsFragments	Total number of frames received that are less than 64 bytes in length and have a CRC error.	• ONS 15310 CL: CE-100T-8 • ONS 15310 MA SONET: CE-100T-8, CE-MR-6 • ONS 15310 MA SDH: CE-100T-8, CE-MR-6 • ONS 15454 SONET: CE-1000-4, CE-100T-8, CE-MR-10 • ONS 15454 SDH: CE-1000-4, CE-100T-8, CE-MR-10

Table E-26 Field Descriptions for the CE-Series Ethernet PM Table (continued)

Field	Description	Cards Supported
etherStatsPkts64Octets	Number of packets received with a length less than or equal to 64 octets.	• ONS 15310 CL: CE-100T-8 • ONS 15310 MA SONET: CE-100T-8, CE-MR-6 • ONS 15310 MA SDH: CE-100T-8, CE-MR-6 • ONS 15454 SONET: CE-1000-4, CE-100T-8, CE-MR-10 • ONS 15454 SDH: CE-1000-4, CE-100T-8, CE-MR-10
etherStatsPkts65to127Octets	Number of packets received with a length from 65 to 127 octets.	• ONS 15310 CL: CE-100T-8 • ONS 15310 MA SONET: CE-100T-8, CE-MR-6 • ONS 15310 MA SDH: CE-100T-8, CE-MR-6 • ONS 15454 SONET: CE-1000-4, CE-100T-8, CE-MR-10 • ONS 15454 SDH: CE-1000-4, CE-100T-8, CE-MR-10
etherStatsPkts128to255Octets	Number of packets received with a length from 128 to 255 octets.	• ONS 15310 CL: CE-100T-8 • ONS 15310 MA SONET: CE-100T-8, CE-MR-6 • ONS 15310 MA SDH: CE-100T-8, CE-MR-6 • ONS 15454 SONET: CE-1000-4, CE-100T-8, CE-MR-10 • ONS 15454 SDH: CE-1000-4, CE-100T-8, CE-MR-10
etherStatsPkts256to511Octets	Number of packets received with a length from 256 to 511 octets.	• ONS 15310 CL: CE-100T-8 • ONS 15310 MA SONET: CE-100T-8, CE-MR-6 • ONS 15310 MA SDH: CE-100T-8, CE-MR-6 • ONS 15454 SONET: CE-1000-4, CE-100T-8, CE-MR-10 • ONS 15454 SDH: CE-1000-4, CE-100T-8, CE-MR-10

Table E-26 Field Descriptions for the CE-Series Ethernet PM Table (continued)

Field	Description	Cards Supported
etherStatsPkts512to1023Octets	Number of packets received with a length from 512 to 1023 octets.	• ONS 15310 CL: CE-100T-8 • ONS 15310 MA SONET: CE-100T-8, CE-MR-6 • ONS 15310 MA SDH: CE-100T-8, CE-MR-6 • ONS 15454 SONET: CE-1000-4, CE-100T-8, CE-MR-10 • ONS 15454 SDH: CE-1000-4, CE-100T-8, CE-MR-10
etherStatsPkts1024to1518Octets	Number of packets received with a length from 1024 to 1518 octets.	• ONS 15310 CL: CE-100T-8 • ONS 15310 MA SONET: CE-100T-8, CE-MR-6 • ONS 15310 MA SDH: CE-100T-8, CE-MR-6 • ONS 15454 SONET: CE-1000-4, CE-100T-8, CE-MR-10 • ONS 15454 SDH: CE-1000-4, CE-100T-8, CE-MR-10
etherStatsBroadcastPkts	Total number of good broadcast packets received.	• ONS 15310 CL: CE-100T-8 • ONS 15310 MA SONET: CE-100T-8, CE-MR-6 • ONS 15310 MA SDH: CE-100T-8, CE-MR-6 • ONS 15454 SONET: CE-1000-4, CE-100T-8, CE-MR-10 • ONS 15454 SDH: CE-1000-4, CE-100T-8, CE-MR-10
etherStatsMulticastPkts	Total number of good multicast (nonbroadcast) packets received.	• ONS 15310 CL: CE-100T-8 • ONS 15310 MA SONET: CE-100T-8, CE-MR-6 • ONS 15310 MA SDH: CE-100T-8, CE-MR-6 • ONS 15454 SONET: CE-1000-4, CE-100T-8, CE-MR-10 • ONS 15454 SDH: CE-1000-4, CE-100T-8, CE-MR-10

Table E-26 Field Descriptions for the CE-Series Ethernet PM Table (continued)

Field	Description	Cards Supported
etherStatsOversizePkts	Total number of packets received that were longer than 1518 octets (excluding framing bits, but including FCS octets) and were otherwise well formed.	• ONS 15310 CL: CE-100T-8 • ONS 15310 MA SONET: CE-100T-8, CE-MR-6 • ONS 15310 MA SDH: CE-100T-8, CE-MR-6 • ONS 15454 SONET: CE-1000-4, CE-100T-8, CE-MR-10 • ONS 15454 SDH: CE-1000-4, CE-100T-8, CE-MR-10
etherStatsJabbers	Total number of frames received that exceed the maximum 1548 bytes and contain CRC errors.	• ONS 15310 CL: CE-100T-8 • ONS 15310 MA SONET: CE-100T-8, CE-MR-6 • ONS 15310 MA SDH: CE-100T-8, CE-MR-6 • ONS 15454 SONET: CE-1000-4, CE-100T-8, CE-MR-10 • ONS 15454 SDH: CE-1000-4, CE-100T-8, CE-MR-10
etherStatsOctets	Total number of octets of data (including those in bad packets) received on the network (excluding framing bits but including FCS octets).	• ONS 15310 CL: CE-100T-8 • ONS 15310 MA SONET: CE-100T-8, CE-MR-6 • ONS 15310 MA SDH: CE-100T-8, CE-MR-6 • ONS 15454 SONET: CE-1000-4, CE-100T-8, CE-MR-10 • ONS 15454 SDH: CE-1000-4, CE-100T-8, CE-MR-10
etherStatsCollisions	Best estimate of the total number of collisions on the Ethernet segment.	• ONS 15310 CL: CE-100T-8 • ONS 15310 MA SONET: CE-100T-8, CE-MR-6 • ONS 15310 MA SDH: CE-100T-8, CE-MR-6 • ONS 15454 SONET: CE-1000-4, CE-100T-8, CE-MR-10 • ONS 15454 SDH: CE-1000-4, CE-100T-8, CE-MR-10
etherStatsCollisionFrames	Best estimate of the total number of collision frames on the Ethernet segment.	• ONS 15454 SONET: CE-MR-10 • ONS 15454 SDH: CE-MR-10

Table E-26 Field Descriptions for the CE-Series Ethernet PM Table (continued)

Field	Description	Cards Supported
etherStatsCRCAlignErrors	Total number of packets received that had a length (excluding framing bits, but including FCS octets) from 64 to 1518 octets, inclusive, but had either a bad FCS with an integral number of octets (FCS error) or a bad FCS with a nonintegral number of octets (alignment error).	• ONS 15310 CL: CE-100T-8 • ONS 15310 MA SONET: CE-100T-8, CE-MR-6 • ONS 15310 MA SDH: CE-100T-8, CE-MR-6 • ONS 15454 SONET: CE-1000-4, CE-100T-8, CE-MR-10 • ONS 15454 SDH: CE-1000-4, CE-100T-8, CE-MR-10
etherStatsDropEvents	Total number of events in which packets were dropped by the probe due to lack of resources. The value indicates the number of times this condition has been detected.	• ONS 15310 CL: CE-100T-8 • ONS 15310 MA SONET: CE-100T-8, CE-MR-6 • ONS 15310 MA SDH: CE-100T-8, CE-MR-6 • ONS 15454 SONET: CE-1000-4, CE-100T-8, CE-MR-10
txTotalPkts	Number of packets transmitted since the last counter reset.	• ONS 15310 CL: CE-100T-8 • ONS 15310 MA SONET: CE-100T-8, CE-MR-6 • ONS 15310 MA SDH: CE-100T-8, CE-MR-6 • ONS 15454 SONET: CE-1000-4, CE-100T-8, CE-MR-10 • ONS 15454 SDH: CE-1000-4, CE-100T-8, CE-MR-10
rxTotalPkts	Number of packets received since the last counter reset.	• ONS 15310 CL: CE-100T-8 • ONS 15310 MA SONET: CE-100T-8, CE-MR-6 • ONS 15310 MA SDH: CE-100T-8, CE-MR-6 • ONS 15454 SONET: CE-1000-4, CE-100T-8, CE-MR-10 • ONS 15454 SDH: CE-1000-4, CE-100T-8, CE-MR-10
ifOutDiscards	Number of outbound packets that were chosen to be discarded even though no errors had been detected to prevent their being transmitted.	• ONS 15310 CL: CE-100T-8 • ONS 15454 SONET: CE-1000-4, CE-100T-8
ifOutErrors	Total number of transmitted errors.	—
txPauseFrames	Number of transmitted pause frames.	—
rxPauseFrames	Number of received pause frames.	—

Table E-26 Field Descriptions for the CE-Series Ethernet PM Table (continued)

Field	Description	Cards Supported
rxPktsDroppedInternalCongestion	Number of received packets dropped due to overflow in G1000-4 frame buffer.	—
txPktsDroppedInternalCongestion	Number of transmitted queue drops due to drops in the G1000-4 frame buffer.	—
rxControlFrames	Number of MAC control frames passed by the MAC sublayer to the MAC control sublayer.	—
mediaIndStatsRxFramesTruncated	Total number of frames received that are less than 5 bytes. This value is a part of HDLC and GFP port statistics.	—
mediaIndStatsRxFramesTooLong	Number of received frames that exceed the maximum transmission unit (MTU). This value is part of HDLC and generic framing procedure (GFP) port statistics.	—
mediaIndStatsRxFramesBadCRC	Number of received data frames with payload CRC errors when HDLC framing is used.	—
mediaIndStatsTxFramesBadCRC	Number of transmitted data frames with payload CRC errors when HDLC framing is used.	—
mediaIndStatsRxShortPkts	Number of packets below the minimum packet size received.	—
txEtherUtilizationStats (%)	Transmitted utilization, which is a percentage of utilization of the Ethernet segment on a scale of 0 to 100 percent.	—
rxEtherUtilizationStats (%)	Received utilization, which is a percentage of utilization of the Ethernet segment on a scale of 0 to 100 percent.	—
NE ID	Name of the selected NE.	—

E.2.12 E-Series Ethernet PM Table—ONS 15327, ONS 15454 SONET, ONS 15454 SDH

The E-Series Ethernet PM table shows performance data for the ONS 15327, ONS 15454 SONET, and ONS 15454 SDH E-series Ethernet cards. You can display performance data for 15-minute, 1-day, or real-time increments:

- 15-minute—Data is collected at the quarter-hour (for example, at 10:00, 10:15, and so on). The data shown represents the difference in counter values between successive 15-minute intervals.
- 1-day—Data is collected at midnight GMT. The data shown represents the difference between the counter values read at successive midnights.

- Real-time—When a real-time PM session is running, it polls the NE for *x* number of attributes every 10 to 900 seconds. This feature allows you to examine the current value of a PM parameter in granularities finer than the standard 15-minute or 1-day interval. For more information, see 10.4.4 Managing Real-Time PM Data, page 10-26.

Performance monitoring can be done either on selected modules, or on specific locations in the NE. You can use the Plot tab to plot the data in a graphical view that is stored in the Prime Optical database. See 10.4.6 Using PM Data Graphs, page 10-28.

The following table describes the fields in the E-Series Ethernet PM table.

Note Real-time PM data is not available for Ethernet cards on NE releases earlier than release 5.0.

Table E-27 Field Descriptions for the E-Series Ethernet PM Table

Field	Description	Cards Supported
Alias ID	Alias name of the selected NE.	—
Module Name	Module for which PM data is displayed.	—
Physical Location	Slot and port number for which PM data is displayed.	—
Interface	Interface name of the selected NE.	—
Time Stamp (*time zone*)	When the data was collected. You can select GMT, Local, or User-Defined time for the Time Stamp display. Use the User Preferences dialog box to make your time zone selection.	—
Maintenance	Whether the NE was under maintenance when the performance data was collected.	—
ifInOctets	Number of bytes received since the last counter reset.	• ONS 15327: ETH100 • ONS 15454 SONET: ETH100, ETH1000 • ONS 15454 SDH: ETH100, ETH1000
ifInUCastPkts	Number of unicast packets received.	• ONS 15327: ETH100 • ONS 15454 SDH: ETH100, ETH1000
ifInErrors	Total number of received errors.	• ONS 15327: ETH100 • ONS 15454 SONET: ETH100, ETH1000 • ONS 15454 SDH: ETH100, ETH1000
ifOutOctets	Number of bytes transmitted since the last counter reset.	• ONS 15327: ETH100 • ONS 15454 SONET: ETH100, ETH1000 • ONS 15454 SDH: ETH100, ETH1000
ifOutUCastPkts	Number of unicast packets transmitted.	• ONS 15327: ETH100 • ONS 15454 SDH: ETH100, ETH1000
dot3StatsAlignmentErrors	Number of received packets with alignment errors (incomplete frames).	• ONS 15327: ETH100 • ONS 15454 SDH: ETH100, ETH1000

Table E-27 Field Descriptions for the E-Series Ethernet PM Table (continued)

Field	Description	Cards Supported
dot3StatsFCSErrors	Number of packets with an FCS error. FCS errors indicate frame corruption during transmission.	• ONS 15327: ETH100 • ONS 15454 SONET: ETH100, ETH1000 • ONS 15454 SDH: ETH100, ETH1000
dot3StatsSingleCollisionFrames	Number of successfully transmitted frames that had exactly one collision.	• ONS 15327: ETH100 • ONS 15454 SDH: ETH100, ETH1000
dot3StatsMultipleCollisionFrames	Number of successfully transmitted frames that had multiple collisions.	• ONS 15327: ETH100 • ONS 15454 SONET: ETH100 • ONS 15454 SDH: ETH100
dot3StatsDeferredTransmissions	Number of packets deferred.	• ONS 15327: ETH100 • ONS 15454 SONET: ETH100 • ONS 15454 SDH: ETH100
dot3StatsLateCollisions	Number of times that a collision was detected later than 64 octets into the transmission (also added into the collision count).	• ONS 15327: ETH100 • ONS 15454 SONET: ETH100 • ONS 15454 SDH: ETH100
dot3StatsExcessiveCollisions	Number of consecutive collisions.	• ONS 15327: ETH100 • ONS 15454 SONET: ETH100 • ONS 15454 SDH: ETH100
dot3StatsFrameTooLong	Number of received frames that were larger than the maximum size permitted.	• ONS 15327: ETH100 • ONS 15454 SONET: ETH100, ETH1000 • ONS 15454 SDH: ETH100, ETH1000
etherStatsUndersizePkts	Number of packets below the minimum packet size received.	• ONS 15327: ETH100 • ONS 15454 SONET: ETH100, ETH1000 • ONS 15454 SDH: ETH100, ETH1000
etherStatsFragments	Total number of frames received that are less than 64 bytes in length and have a CRC error.	• ONS 15327: ETH100 • ONS 15454 SONET: ETH100, ETH1000 • ONS 15454 SDH: ETH100, ETH1000
etherStatsPkts64Octets	Number of packets received with a length less than or equal to 64 octets.	• ONS 15327: ETH100 • ONS 15454 SONET: ETH100, ETH1000 • ONS 15454 SDH: ETH100, ETH1000
etherStatsPkts65to127Octets	Number of packets received with a length from 65 to 127 octets.	• ONS 15327: ETH100 • ONS 15454 SONET: ETH100, ETH1000 • ONS 15454 SDH: ETH100, ETH1000
etherStatsPkts128to255Octets	Number of packets received with a length from 128 to 255 octets.	• ONS 15327: ETH100 • ONS 15454 SONET: ETH100, ETH1000 • ONS 15454 SDH: ETH100, ETH1000

Table E-27 Field Descriptions for the E-Series Ethernet PM Table (continued)

Field	Description	Cards Supported
etherStatsPkts256to511Octets	Number of packets received with a length from 256 to 511 octets.	• ONS 15327: ETH100 • ONS 15454 SONET: ETH100, ETH1000 • ONS 15454 SDH: ETH100, ETH1000
etherStatsPkts512to1023Octets	Number of packets received with a length from 512 to 1023 octets.	• ONS 15327: ETH100 • ONS 15454 SONET: ETH100, ETH1000 • ONS 15454 SDH: ETH100, ETH1000
etherStatsPkts1024to1518Octets	Number of packets received with a length from 1024 to 1518 octets.	• ONS 15327: ETH100 • ONS 15454 SONET: ETH100, ETH1000 • ONS 15454 SDH: ETH100, ETH1000
etherStatsOversizePkts	Total number of packets received that were longer than 1518 octets (excluding framing bits, but including FCS octets) and were otherwise well formed.	• ONS 15327: ETH100 • ONS 15454 SONET: ETH100, ETH1000 • ONS 15454 SDH: ETH100, ETH1000
etherStatsJabbers	Total number of frames received that exceed the maximum 1548 bytes and contain CRC errors.	• ONS 15327: ETH100 • ONS 15454 SONET: ETH100, ETH1000 • ONS 15454 SDH: ETH100, ETH1000
etherStatsOctets	Total number of octets of data (including those in bad packets) received on the network (excluding framing bits but including FCS octets).	• ONS 15327: ETH100 • ONS 15454 SONET: ETH100, ETH1000 • ONS 15454 SDH: ETH100, ETH1000
etherStatsCollisions	Best estimate of the total number of collisions on the Ethernet segment.	• ONS 15327: ETH100 • ONS 15454 SDH: ETH100
etherStatsCollisionFrames	Best estimate of the total number of frame collisions on the segment.	• ONS 15327: ETH100 • ONS 15454 SONET: ETH100, ETH1000 • ONS 15454 SDH: ETH100, ETH1000
etherStatsCRCAlignErrors	Total number of packets received that had a length (excluding framing bits, but including FCS octets) from 64 to 1518 octets, inclusive, but had either a bad FCS with an integral number of octets (FCS error) or a bad FCS with a nonintegral number of octets (alignment error).	• ONS 15327: ETH100 • ONS 15454 SONET: ETH100, ETH1000 • ONS 15454 SDH: ETH100
rxTotalPkts	Number of packets received since the last counter reset.	• ONS 15327: ETH100 • ONS 15454 SONET: ETH100, ETH1000 • ONS 15454 SDH: ETH100, ETH1000
txTotalPkts	Number of packets transmitted since the last counter reset. **Note** This column is no longer supported for R 4.y and later NEs. For those NEs, this column displays *N/A*.	• ONS 15327: ETH100 • ONS 15454 SONET: ETH100, ETH1000 • ONS 15454 SDH: ETH100, ETH1000

Table E-27 Field Descriptions for the E-Series Ethernet PM Table (continued)

Field	Description	Cards Supported
txCollision	Number of transmitted collisions since the last counter reset. **Note** This column is no longer supported for NE R4.7 and later. For NE R4.7 and later this column displays *N/A*.	• ONS 15327: ETH100 • ONS 15454 SONET: ETH100, ETH1000 • ONS 15454 SDH: ETH100, ETH1000
rxEtherUtilizationStats (%)	Received utilization, which is a percentage of utilization of the Ethernet segment on a scale of 0 to 100 percent.	• ONS 15327: ETH100 • ONS 15454 SONET: ETH100, ETH1000 • ONS 15454 SDH: ETH100, ETH1000
txEtherUtilizationStats (%)	Transmitted utilization, which is a percentage of utilization of the Ethernet segment on a scale of 0 to 100 percent.	• ONS 15327: ETH100 • ONS 15454 SONET: ETH100, ETH1000 • ONS 15454 SDH: ETH100, ETH1000
etherUtilizationStats (%)	Average Ethernet utilization statistics (release 3.4 and earlier).	• ONS 15454 SONET R3.3 and R3.4: ETH100, ETH1000
NE ID	Name of the selected NE.	—

E.2.13 G-Series Ethernet PM Table—ONS 15327, ONS 15454 SONET, ONS 15454 SDH

The G-Series Ethernet PM table shows performance data for the ONS 15327, ONS 15454 SONET, and ONS 15454 SDH G-series Ethernet cards. You can display performance data for 15-minute, 1-day, or real-time increments:

- 15-minute—Data is collected at the quarter-hour (for example, at 10:00, 10:15, and so on). The data shown represents the difference in counter values between successive 15-minute intervals.
- 1-day—Data is collected at midnight GMT. The data shown represents the difference between the counter values read at successive midnights.
- Real-time—When a real-time PM session is running, it polls the NE for *x* number of attributes every 10 to 900 seconds. This feature allows you to examine the current value of a PM parameter in granularities finer than the standard 15-minute or 1-day interval. For more information, see 10.4.4 Managing Real-Time PM Data, page 10-26.

Performance monitoring can be done either on selected modules, or on specific locations in the NE. You can use the Plot tab to plot the data in a graphical view that is stored in the Prime Optical database. See 10.4.6 Using PM Data Graphs, page 10-28.

The following table describes the fields in the G-Series Ethernet PM table.

Note Real-time PM data is not available for Ethernet cards on NE releases earlier than release 5.0.

Table E-28 Field Descriptions for the G-Series Ethernet PM Table

Field	Description	Cards Supported
Alias ID	Alias name of the selected NE.	—
Module Name	Module for which PM data is displayed.	—
Physical Location	Slot and port number for which PM data is displayed.	—
Interface	Interface name of the selected NE.	—
Time Stamp (*time zone*)	When the data was collected. You can select GMT, Local, or User-Defined time for the Time Stamp display. Use the User Preferences dialog box to make your time zone selection.	—
Maintenance	Whether the NE was under maintenance when the performance data was collected.	—
Time Last Cleared	When the statistics were last reset.	—
ifInOctets	Number of bytes received since the last counter reset.	• ONS 15327: G1000_2 • ONS 15454 SONET: G1000_4, GE_XP, 10GE_XP • ONS 15454 SDH: G1000_4, GE_XP, 10GE_XP
ifInUcastPkts	Number of unicast packets received.	• ONS 15327: G1000_2 • ONS 15454 SONET: GE_XP, 10GE_XP • ONS 15454 SDH: G1000_4, GE_XP, 10GE_XP
ifInMulticastPkts	Number of multicast packets received.	• ONS 15327: G1000_2 • ONS 15454 SONET: G1000_4, GE_XP, 10GE_XP • ONS 15454 SDH: G1000_4, GE_XP, 10GE_XP
ifInBroadcastPkts	Number of broadcast packets received.	• ONS 15327: G1000_2 • ONS 15454 SONET: G1000_4, GE_XP, 10GE_XP • ONS 15454 SDH: G1000_4, GE_XP, 10GE_XP
ifInDiscards	Number of inbound packets that were chosen to be discarded even though no errors had been detected to prevent their being deliverable to a higher-layer protocol.	• ONS 15327: G1000_2 • ONS 15454 SONET: G1000_4, GE_XP, 10GE_XP • ONS 15454 SDH: G1000_4, GE_XP, 10GE_XP

Table E-28 Field Descriptions for the G-Series Ethernet PM Table (continued)

Field	Description	Cards Supported
ifInErrors	Total number of received errors.	• ONS 15327: G1000_2 • ONS 15454 SONET: G1000_4, GE_XP, 10GE_XP • ONS 15454 SDH: G1000_4
ifOutOctets	Number of bytes transmitted since the last counter reset.	• ONS 15327: G1000_2 • ONS 15454 SONET: G1000_4, GE_XP, 10GE_XP • ONS 15454 SDH: G1000_4, GE_XP, 10GE_XP
ifOutUcastPkts	Number of unicast packets transmitted.	• ONS 15327: G1000_2 • ONS 15454 SONET: GE_XP, 10GE_XP • ONS 15454 SDH: G1000_4, GE_XP, 10GE_XP
ifOutMulticastPkts	Number of multicast packets transmitted.	• ONS 15327: G1000_2 • ONS 15454 SONET: G1000_4, GE_XP, 10GE_XP • ONS 15454 SDH: G1000_4, GE_XP, 10GE_XP
ifOutBroadcastPkts	Number of broadcast packets transmitted.	• ONS 15327: G1000_2 • ONS 15454 SONET: G1000_4, GE_XP, 10GE_XP • ONS 15454 SDH: G1000_4, GE_XP, 10GE_XP
ifOutDiscards	Number of outbound packets that were chosen to be discarded even though no errors had been detected to prevent their being transmitted.	• ONS 15327: G1000_2 • ONS 15454 SONET: G1000_4 • ONS 15454 SDH: G1000_4
dot3StatsAlignmentErrors	Number of received packets with alignment errors (incomplete frames).	• ONS 15327: G1000_2 • ONS 15454 SONET: GE_XP, 10GE_XP • ONS 15454 SDH: G1000_4, GE_XP, 10GE_XP
dot3StatsFCSErrors	Number of packets with an FCS error. FCS errors indicate frame corruption during transmission.	• ONS 15327: G1000_2 • ONS 15454 SONET: G1000_4, GE_XP, 10GE_XP • ONS 15454 SDH: G1000_4, GE_XP, 10GE_XP

Table E-28 Field Descriptions for the G-Series Ethernet PM Table (continued)

Field	Description	Cards Supported
dot3StatsFrameTooLong	Number of received frames that were larger than the maximum size permitted.	• ONS 15327: G1000_2 • ONS 15454 SONET: G1000_4, GE_XP, 10GE_XP • ONS 15454 SDH: G1000_4, GE_XP, 10GE_XP
dot3StatsCarrierSenseErrors	Number of transmission errors on a particular interface that are not otherwise counted.	• ONS 15327: G1000_2 • ONS 15454 SONET: G1000_4 • ONS 15454 SDH: G1000_4
dot3StatsSQETestErrors	Number of times that the SQE test error message is generated by the PLS sublayer for a particular interface.	• ONS 15327: G1000_2 • ONS 15454 SONET: G1000_4 • ONS 15454 SDH: G1000_4
etherStatsUndersizePkts	Number of packets below the minimum packet size received.	• ONS 15327: G1000_2 • ONS 15454 SONET: G1000_4, ONS 15454 SDH: GE_XP, 10GE_XP • ONS 15454 SDH: G1000_4, GE_XP, 10GE_XP
etherStatsFragments	Total number of frames received that are less than 64 bytes in length and have a CRC error.	• ONS 15327: G1000_2 • ONS 15454 SONET: G1000_4, GE_XP, 10GE_XP • ONS 15454 SDH: G1000_4, GE_XP, 10GE_XP
etherStatsPkts64Octets	Number of packets received with a length less than or equal to 64 octets.	• ONS 15327: G1000_2 • ONS 15454 SONET: G1000_4, GE_XP, 10GE_XP • ONS 15454 SDH: G1000_4, GE_XP, 10GE_XP
etherStatsPkts65to127Octets	Number of packets received with a length from 65 to 127 octets.	• ONS 15327: G1000_2 • ONS 15454 SONET: G1000_4, GE_XP, 10GE_XP • ONS 15454 SDH: G1000_4, GE_XP, 10GE_XP
etherStatsPkts128to255Octets	Number of packets received with a length from 128 to 255 octets.	• ONS 15327: G1000_2 • ONS 15454 SONET: G1000_4, GE_XP, 10GE_XP • ONS 15454 SDH: G1000_4, GE_XP, 10GE_XP

Table E-28 Field Descriptions for the G-Series Ethernet PM Table (continued)

Field	Description	Cards Supported
etherStatsPkts256to511Octets	Number of packets received with a length from 256 to 511 octets.	• ONS 15327: G1000_2 • ONS 15454 SONET: G1000_4, GE_XP, 10GE_XP • ONS 15454 SDH: G1000_4, GE_XP, 10GE_XP
etherStatsPkts512to1023Octets	Number of packets received with a length from 512 to 1023 octets.	• ONS 15327: G1000_2 • ONS 15454 SONET: G1000_4, GE_XP, 10GE_XP • ONS 15454 SDH: G1000_4, GE_XP, 10GE_XP
etherStatsPkts1024to1518Octets	Number of packets received with a length from 1024 to 1518 octets.	• ONS 15327: G1000_2 • ONS 15454 SONET: G1000_4, GE_XP, 10GE_XP • ONS 15454 SDH: G1000_4, GE_XP, 10GE_XP
etherStatsOversizePkts	Total number of packets received that were longer than 1518 octets (excluding framing bits, but including FCS octets) and were otherwise well formed.	• ONS 15327: G1000_2 • ONS 15454 SONET: G1000_4, GE_XP, 10GE_XP • ONS 15454 SDH: G1000_4, GE_XP, 10GE_XP
etherStatsJabbers	Total number of frames received that exceed the maximum 1548 bytes and contain CRC errors.	• ONS 15327: G1000_2 • ONS 15454 SONET: G1000_4, GE_XP, 10GE_XP • ONS 15454 SDH: G1000_4, GE_XP, 10GE_XP
etherStatsOctets	Total number of octets of data (including those in bad packets) received on the network (excluding framing bits but including FCS octets).	• ONS 15327: G1000_2 • ONS 15454 SONET: G1000_4, GE_XP, 10GE_XP • ONS 15454 SDH: G1000_4, GE_XP, 10GE_XP
etherStatsCRCAlignErrors	Total number of packets received that had a length (excluding framing bits, but including FCS octets) from 64 to 1518 octets, inclusive, but had either a bad FCS with an integral number of octets (FCS error) or a bad FCS with a nonintegral number of octets (alignment error).	• ONS 15327: G1000_2 • ONS 15454 SONET: G1000_4, GE_XP, 10GE_XP • ONS 15454 SDH: G1000_4, GE_XP, 10GE_XP
rxPauseFrames	Number of received pause frames.	• ONS 15327: G1000_2 • ONS 15454 SONET: G1000_4 • ONS 15454 SDH: G1000_4

Table E-28 Field Descriptions for the G-Series Ethernet PM Table (continued)

Field	Description	Cards Supported
txPauseFrames	Number of transmitted pause frames.	• ONS 15327: G1000_2 • ONS 15454 SONET: G1000_4 • ONS 15454 SDH: G1000_4
rxPktsDroppedInternalCongestion	Number of received packets dropped due to overflow in G1000-4 frame buffer.	• ONS 15327: G1000_2 • ONS 15454 SONET: G1000_4 • ONS 15454 SDH: G1000_4
txPktsDroppedInternalCongestion	Number of transmitted queue drops due to drops in the G1000-4 frame buffer.	• ONS 15327: G1000_2 • ONS 15454 SONET: G1000_4 • ONS 15454 SDH: G1000_4
rxTotalPkts	Number of packets received since the last counter reset.	• ONS 15327: G1000_2 • ONS 15454 SONET: G1000_4, GE_XP, 10GE_XP • ONS 15454 SDH: GE_XP, 10GE_XP
txTotalPkts	Number of packets transmitted since the last counter reset.	• ONS 15327: G1000_2 • ONS 15454 SONET: G1000_4, GE_XP, 10GE_XP • ONS 15454 SDH: GE_XP, 10GE_XP
rxGiants	Number of packets received that are greater than 1530 bytes in length.	—
hdlcPktDrops	Total number of packets that are dropped when the card is in HDLC mode and traffic is oversubscribed.	• ONS 15327: G1000_2 • ONS 15454 SONET: G1000_4 • ONS 15454 SDH: G1000_4
etherStatsBroadCastPkts	Total number of good broadcast packets received.	• ONS 15454 SONET: GE_XP, 10GE_XP • ONS 15454 SDH: GE_XP, 10GE_XP
etherStatsMultiCastPkts	Total number of good multicast (nonbroadcast) packets received.	• ONS 15454 SONET: GE_XP, 10GE_XP • ONS 15454 SDH: GE_XP, 10GE_XP
rxEtherUtilizationStats (%)	Received utilization, which is a percentage of utilization of the Ethernet segment on a scale of 0 to 100 percent.	• ONS 15327: G1000_2 • ONS 15454 SONET: G1000_4 • ONS 15454 SDH: G1000_4
txEtherUtilizationStats (%)	Transmitted utilization, which is a percentage of utilization of the Ethernet segment on a scale of 0 to 100 percent.	• ONS 15327: G1000_2 • ONS 15454 SONET: G1000_4 • ONS 15454 SDH: G1000_4

Table E-28 Field Descriptions for the G-Series Ethernet PM Table (continued)

Field	Description	Cards Supported
etherUtilizationStats (%)	Average Ethernet utilization statistics (release 3.4 and earlier).	• ONS 15454 SONET R3.3 and R3.4: G-series cards
NE ID	Name of the selected NE.	—

E.2.14 ML-Series Ethernet PM Table—ONS 15310 CL, ONS 15310 MA SONET, ONS 15310 MA SDH, ONS 15454 SONET, and ONS 15454 SDH

The ML-Series Ethernet PM table shows performance data for the ONS 15310 CL, ONS 15310 MA SONET, ONS 15310 MA SDH, ONS 15454 SONET, and ONS 15454 SDH ML-series Ethernet cards. You can display performance data for 15-minute, 1-day, or real-time increments:

- 15-minute—Data is collected at the quarter-hour (for example, at 10:00, 10:15, and so on). The data shown represents the difference in counter values between successive 15-minute intervals.
- 1-day—Data is collected at midnight GMT. The data shown represents the difference between the counter values read at successive midnights.
- Real-time—When a real-time PM session is running, it polls the NE for *x* number of attributes every 10 to 900 seconds. This feature allows you to examine the current value of a PM parameter in granularities finer than the standard 15-minute or 1-day interval. For more information, see 10.4.4 Managing Real-Time PM Data, page 10-26.

Performance monitoring can be done either on selected modules, or on specific locations in the NE. You can use the Plot tab to plot the data in a graphical view that is stored in the Prime Optical database. See 10.4.6 Using PM Data Graphs, page 10-28.

The following table describes the fields in the ML-Series Ethernet PM table.

Note Real-time PM data is not available for Ethernet cards on NE releases earlier than release 5.0.

Table E-29 Field Descriptions for the ML-Series Ethernet PM Table

Field	Description	Cards Supported
Alias ID	Alias name of the selected NE.	—
Module Name	Module for which PM data is displayed.	—
Physical Location	Slot and port number for which PM data is displayed.	—
Interface	Interface name of the selected NE.	—
Time Stamp (*time zone*)	When the data was collected. You can select GMT, Local, or User-Defined time for the Time Stamp display. Use the User Preferences dialog box to make your time zone selection.	—
Maintenance	Whether the NE was under maintenance when the performance data was collected.	—

Table E-29 Field Descriptions for the ML-Series Ethernet PM Table (continued)

Field	Description	Cards Supported
Time Last Cleared	When the statistics were last reset.	• ONS 15454 SONET: ML-MR-10 • ONS 15454 SDH: ML-MR-10
ifInErrors	Total number of received errors.	• ONS 15310 CL: ML-100T-8 • ONS 15310 MA SONET: ML-100T-8 • ONS 15310 MA SDH: ML-100T-8 • ONS 15454 SONET: ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15454 SDH: ML100T, ML1000, ML-MR-10
ifInOctets	Number of bytes received since the last counter reset.	• ONS 15310 CL: ML-100T-8 • ONS 15310 MA SONET: ML-100T-8 • ONS 15310 MA SDH: ML-100T-8 • ONS 15454 SONET: ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15454 SDH: ML100T, ML1000, ML-MR-10
ifInUCastPkts	Number of unicast packets received.	• ONS 15310 CL: ML-100T-8 • ONS 15310 MA SONET: ML-100T-8 • ONS 15310 MA SDH: ML-100T-8 • ONS 15454 SONET: ML100T, ML100X-8, ML-MR-10 • ONS 15454 SDH: ML100T, ML1000, ML-MR-10

Table E-29 Field Descriptions for the ML-Series Ethernet PM Table (continued)

Field	Description	Cards Supported
ifInMulticastPkts	Number of multicast packets received.	• ONS 15310 CL: ML-100T-8 • ONS 15310 MA SONET: ML-100T-8 • ONS 15310 MA SDH: ML-100T-8 • ONS 15454 SONET: ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15454 SDH: ML100T, ML1000, ML-MR-10
ifInBroadcastPkts	Number of broadcast packets received.	• ONS 15310 CL: ML-100T-8 • ONS 15310 MA SONET: ML-100T-8 • ONS 15310 MA SDH: ML-100T-8 • ONS 15454 SONET: ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15454 SDH: ML100T, ML1000, ML-MR-10
ifInDiscards	Number of inbound packets that were chosen to be discarded even though no errors had been detected to prevent their being deliverable to a higher-layer protocol.	• ONS 15310 CL: ML-100T-8 • ONS 15310 MA SONET: ML-100T-8 • ONS 15310 MA SDH: ML-100T-8 • ONS 15454 SONET: ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15454 SDH: ML100T, ML1000, ML-MR-10
Port Drop Counts	Number of received frames dropped at the port level.	• ONS 15310 CL: ML-100T-8 • ONS 15454 SONET: ML1000

Table E-29 Field Descriptions for the ML-Series Ethernet PM Table (continued)

Field	Description	Cards Supported
Rx Runts	Total number of frames received that are less than 64 bytes in length and have a CRC error.	• ONS 15310 CL: ML-100T-8 • ONS 15310 MA SONET: ML-100T-8 • ONS 15310 MA SDH: ML-100T-8 • ONS 15454 SONET: ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15454 SDH: ML100T, ML1000, ML-MR-10
Rx Giants	Number of packets received that are greater than 1530 bytes in length.	• ONS 15454 SONET: ML1000
Tx Giants	Number of packets transmitted that are greater than 1548 bytes in length.	• ONS 15454 SONET: ML1000
Tx Collisions	Number of collisions transmitted.	• ONS 15454 SONET: ML1000
Rx Total Errors	Total number of received errors.	• ONS 15310 CL: ML-100T-8 • ONS 15310 MA SONET: ML-100T-8 • ONS 15310 MA SDH: ML-100T-8 • ONS 15454 SONET: ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15454 SDH: ML100T, ML1000, ML-MR-10
RxGMACDropCounts	Number of received frames dropped by MAC module.	• ONS 15454 SONET: ML1000
RxThresholdOversizes	Number of received packets with a length longer than 1518 octets.	• ONS 15454 SONET: ML1000
ifOutOctets	Number of bytes transmitted since the last counter reset.	• ONS 15310 CL: ML-100T-8 • ONS 15310 MA SONET: ML-100T-8 • ONS 15310 MA SDH: ML-100T-8 • ONS 15454 SONET: ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15454 SDH: ML100T, ML1000, ML-MR-10

Table E-29 Field Descriptions for the ML-Series Ethernet PM Table (continued)

Field	Description	Cards Supported
ifOutUCastPkts	Number of unicast packets transmitted.	• ONS 15310 CL: ML-100T-8 • ONS 15310 MA SONET: ML-100T-8 • ONS 15310 MA SDH: ML-100T-8 • ONS 15454 SONET: ML100T, ML100X-8, ML-MR-10 • ONS 15454 SDH: ML100T, ML1000, ML-MR-10
ifOutMulticastPkts	Number of multicast packets transmitted.	• ONS 15310 CL: ML-100T-8 • ONS 15310 MA SONET: ML-100T-8 • ONS 15310 MA SDH: ML-100T-8 • ONS 15454 SONET: ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15454 SDH: ML100T, ML1000, ML-MR-10
ifOutBroadcastPkts	Number of broadcast packets transmitted.	• ONS 15310 CL: ML-100T-8 • ONS 15310 MA SONET: ML-100T-8 • ONS 15310 MA SDH: ML-100T-8 • ONS 15454 SONET: ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15454 SDH: ML100T, ML1000, ML-MR-10
ifOutDiscards	Number of outbound packets that were chosen to be discarded even though no errors had been detected to prevent their being transmitted.	• ONS 15310 CL: ML-100T-8 • ONS 15454 SONET: ML100T, ML1000 • ONS 15454 SDH: ML100T, ML1000

Table E-29 Field Descriptions for the ML-Series Ethernet PM Table (continued)

Field	Description	Cards Supported
dot3StatsAlignmentErrors	Number of received packets with alignment errors (incomplete frames).	• ONS 15310 CL: ML-100T-8 • ONS 15310 MA SONET: ML-100T-8 • ONS 15310 MA SDH: ML-100T-8 • ONS 15454 SONET: ML100T, ML100X-8, ML-MR-10 • ONS 15454 SDH: ML100T, ML1000, ML-MR-10
dot3StatsFCSErrors	Number of packets with an FCS error. FCS errors indicate frame corruption during transmission.	• ONS 15310 CL: ML-100T-8 • ONS 15310 MA SONET: ML-100T-8 • ONS 15310 MA SDH: ML-100T-8 • ONS 15454 SONET: ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15454 SDH: ML100T, ML1000, ML-MR-10
dot3StatsSingleCollisionFrames	Number of successfully transmitted frames that had exactly one collision.	• ONS 15310 CL: ML-100T-8 • ONS 15310 MA SONET: ML-100T-8 • ONS 15310 MA SDH: ML-100T-8 • ONS 15454 SONET: ML100T, ML100X-8, ML-MR-10 • ONS 15454 SDH: ML100T, ML1000, ML-MR-10
dot3StatsFrameTooLong	Number of received frames that were larger than the maximum size permitted.	• ONS 15310 CL: ML-100T-8 • ONS 15310 MA SONET: ML-100T-8 • ONS 15310 MA SDH: ML-100T-8 • ONS 15454 SONET: ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15454 SDH: ML100T, ML1000, ML-MR-10

Table E-29 Field Descriptions for the ML-Series Ethernet PM Table (continued)

Field	Description	Cards Supported
etherStatsUndersizePkts	Number of packets below the minimum packet size received.	• ONS 15310 CL: ML-100T-8 • ONS 15310 MA SONET: ML-100T-8 • ONS 15310 MA SDH: ML-100T-8 • ONS 15454 SONET: ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15454 SDH: ML100T, ML1000, ML-MR-10
etherStatsPkts64Octets	Number of packets received with a length less than or equal to 64 octets.	• ONS 15310 CL: ML-100T-8 • ONS 15310 MA SONET: ML-100T-8 • ONS 15310 MA SDH: ML-100T-8 • ONS 15454 SONET: ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15454 SDH: ML100T, ML1000, ML-MR-10
etherStatsPkts65to127Octets	Number of packets received with a length from 65 to 127 octets.	• ONS 15310 CL: ML-100T-8 • ONS 15310 MA SONET: ML-100T-8 • ONS 15310 MA SDH: ML-100T-8 • ONS 15454 SONET: ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15454 SDH: ML100T, ML1000, ML-MR-10
etherStatsPkts128to255Octets	Number of packets received with a length from 128 to 255 octets.	• ONS 15310 CL: ML-100T-8 • ONS 15310 MA SONET: ML-100T-8 • ONS 15310 MA SDH: ML-100T-8 • ONS 15454 SONET: ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15454 SDH: ML100T, ML1000, ML-MR-10

Table E-29 Field Descriptions for the ML-Series Ethernet PM Table (continued)

Field	Description	Cards Supported
etherStatsPkts256to511Octets	Number of packets received with a length from 256 to 511 octets.	• ONS 15310 CL: ML-100T-8 • ONS 15310 MA SONET: ML-100T-8 • ONS 15310 MA SDH: ML-100T-8 • ONS 15454 SONET: ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15454 SDH: ML100T, ML1000
etherStatsPkts512to1023Octets	Number of packets received with a length from 512 to 1023 octets.	• ONS 15310 CL: ML-100T-8 • ONS 15310 MA SONET: ML-100T-8 • ONS 15310 MA SDH: ML-100T-8 • ONS 15454 SONET: ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15454 SDH: ML100T, ML1000, ML-MR-10
etherStatsPkts1024to1518Octets	Number of packets received with a length from 1024 to 1518 octets.	• ONS 15310 CL: ML-100T-8 • ONS 15310 MA SONET: ML-100T-8 • ONS 15310 MA SDH: ML-100T-8 • ONS 15454 SONET: ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15454 SDH: ML100T, ML1000, ML-MR-10
etherStatsBroadcastPkts	Total number of good broadcast packets received.	• ONS 15310 CL: ML-100T-8 • ONS 15310 MA SONET: ML-100T-8 • ONS 15310 MA SDH: ML-100T-8 • ONS 15454 SONET: ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15454 SDH: ML100T, ML1000, ML-MR-10

Table E-29 Field Descriptions for the ML-Series Ethernet PM Table (continued)

Field	Description	Cards Supported
etherStatsMulticastPkts	Total number of good multicast (nonbroadcast) packets received.	• ONS 15310 CL: ML-100T-8 • ONS 15310 MA SONET: ML-100T-8 • ONS 15310 MA SDH: ML-100T-8 • ONS 15454 SONET: ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15454 SDH: ML100T, ML1000, ML-MR-10
etherStatsFragments	Total number of frames received that are less than 64 bytes in length and have a CRC error.	• ONS 15310 CL: ML-100T-8 • ONS 15310 MA SONET: ML-100T-8 • ONS 15310 MA SDH: ML-100T-8 • ONS 15454 SONET: ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15454 SDH: ML100T, ML1000, ML-MR-10
etherStatsOversizePkts	Total number of packets received that were longer than 1518 octets (excluding framing bits, but including FCS octets) and were otherwise well formed.	• ONS 15310 CL: ML-100T-8 • ONS 15310 MA SONET: ML-100T-8 • ONS 15310 MA SDH: ML-100T-8 • ONS 15454 SONET: ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15454 SDH: ML100T, ML1000, ML-MR-10
etherStatsJabbers	Total number of octets of data (including bad packets) received on the network.	• ONS 15310 CL: ML-100T-8 • ONS 15310 MA SONET: ML-100T-8 • ONS 15310 MA SDH: ML-100T-8 • ONS 15454 SONET: ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15454 SDH: ML100T, ML1000, ML-MR-10

Table E-29 Field Descriptions for the ML-Series Ethernet PM Table (continued)

Field	Description	Cards Supported
etherStatsOctets	Total number of octets of data (including those in bad packets) received on the network (excluding framing bits but including FCS octets).	• ONS 15310 CL: ML-100T-8 • ONS 15310 MA SONET: ML-100T-8 • ONS 15310 MA SDH: ML-100T-8 • ONS 15454 SONET: ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15454 SDH: ML100T, ML1000, ML-MR-10
etherStatsCollisions	Best estimate of the total number of collisions on the Ethernet segment.	• ONS 15310 CL: ML-100T-8 • ONS 15310 MA SONET: ML-100T-8 • ONS 15310 MA SDH: ML-100T-8 • ONS 15454 SONET: ML100T, ML100X-8, ML-MR-10 • ONS 15454 SDH: ML100T, ML1000, ML-MR-10
etherStatsCollisionFrames	Best estimate of the total number of frame collisions on the segment.	• ONS 15310 CL: ML-100T-8 • ONS 15454 SONET: ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15454 SDH: ML100T, ML1000, ML-MR-10
etherStatsCRCAlignErrors	Total number of packets received that had a length (excluding framing bits, but including FCS octets) from 64 to 1518 octets, inclusive, but had either a bad FCS with an integral number of octets (FCS error) or a bad FCS with a nonintegral number of octets (alignment error).	• ONS 15310 CL: ML-100T-8 • ONS 15310 MA SONET: ML-100T-8 • ONS 15310 MA SDH: ML-100T-8 • ONS 15454 SONET: ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15454 SDH: ML100T, ML1000, ML-MR-10

Table E-29 Field Descriptions for the ML-Series Ethernet PM Table (continued)

Field	Description	Cards Supported
etherStatsDropEvents	Total number of events in which packets were dropped by the probe due to lack of resources. The value indicates the number of times this condition has been detected.	• ONS 15310 CL: ML-100T-8 • ONS 15310 MA SONET: ML-100T-8 • ONS 15310 MA SDH: ML-100T-8 • ONS 15454 SONET: ML-MR-10 • ONS 15454 SDH: ML-MR-10
txTotalPkts	Number of packets transmitted since the last counter reset.	• ONS 15310 CL: ML-100T-8 • ONS 15310 MA SONET: ML-100T-8 • ONS 15310 MA SDH: ML-100T-8 • ONS 15454 SONET: ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15454 SDH: ML100T, ML1000, ML-MR-10
rxTotalPkts	Number of packets received since the last counter reset.	• ONS 15310 CL: ML-100T-8 • ONS 15310 MA SONET: ML-100T-8 • ONS 15310 MA SDH: ML-100T-8 • ONS 15454 SONET: ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15454 SDH: ML100T, ML1000, ML-MR-10
mediaIndStatsRxFramesBad CRC	Number of received data frames with payload CRC errors when HDLC framing is used.	• ONS 15310 CL: ML-100T-8 • ONS 15454 SONET: ML100T, ML1000 • ONS 15454 SDH: ML100T, ML1000
mediaIndStatsRxFramesToo Long	Number of received frames that exceed the maximum transmission unit (MTU). This value is part of HDLC and generic framing procedure (GFP) port statistics.	• ONS 15454 SONET: ML100T, ML1000 • ONS 15454 SDH: ML100T, ML1000

Table E-29 Field Descriptions for the ML-Series Ethernet PM Table (continued)

Field	Description	Cards Supported
mediaIndStatsOversizeDropped	Number of received packets larger than the ML-series remote monitoring (RMON) threshold.	• ONS 15310 CL: ML-100T-8 • ONS 15454 SONET: ML100T, ML1000 • ONS 15454 SDH: ML100T, ML1000
txPauseFrames	Number of transmitted pause frames.	• ONS 15454 SONET: ML100T, ML1000 • ONS 15454 SDH: ML100T, ML1000
rxPauseFrames	Number of received pause frames.	• ONS 15454 SONET: ML100T, ML1000 • ONS 15454 SDH: ML100T, ML1000
txEtherUtilizationStats (%)	Transmitted utilization, which is a percentage of utilization of the Ethernet segment on a scale of 0 to 100 percent.	• ONS 15454 SONET: ML100T, ML1000 • ONS 15454 SDH: ML100T, ML1000
rxEtherUtilizationStats (%)	Received utilization, which is a percentage of utilization of the Ethernet segment on a scale of 0 to 100 percent.	• ONS 15454 SONET: ML100T, ML1000 • ONS 15454 SDH: ML100T, ML1000
dot3adAggPortStatsLACPDUsRx	Number of valid LAC PDUs received on this aggregation port.	• ONS 15310 CL: ML-100T-8 • ONS 15310 MA SONET: ML-100T-8 • ONS 15310 MA SDH: ML-100T-8 • ONS 15454 SONET: ML1000, ML100T, ML100X-8 • ONS 15454 SDH: ML1000, ML100T, ML100X-8
dot3adAggPortStatsMarkerPDUsRx	Number of valid marker PDUs received on this aggregation port.	• ONS 15310 CL: ML-100T-8 • ONS 15310 MA SONET: ML-100T-8 • ONS 15310 MA SDH: ML-100T-8 • ONS 15454 SONET: ML1000, ML100T, ML100X-8 • ONS 15454 SDH: ML1000, ML100T, ML100X-8

Table E-29 Field Descriptions for the ML-Series Ethernet PM Table (continued)

Field	Description	Cards Supported
dot3adAggPortStatsMarkerResponsePDUsRx	Number of valid marker response PDUs received on this aggregation port.	• ONS 15310 CL: ML-100T-8 • ONS 15310 MA SONET: ML-100T-8 • ONS 15310 MA SDH: ML-100T-8 • ONS 15454 SONET: ML1000, ML100T, ML100X-8 • ONS 15454 SDH: ML1000, ML100T, ML100X-8
dot3adAggPortStatsUnknownRx	Number of frames received that either carry the slow protocols Ethernet type value (43B.4), but contain an unknown PDU, or are addressed to the slow protocols group MAC address (43B.3), but do not carry the slow protocols Ethernet type.	• ONS 15310 CL: ML-100T-8 • ONS 15310 MA SONET: ML-100T-8 • ONS 15310 MA SDH: ML-100T-8 • ONS 15454 SONET: ML1000, ML100T, ML100X-8 • ONS 15454 SDH: ML1000, ML100T, ML100X-8
dot3adAggPortStatsIllegalRx	Number of frames received that carry the slow protocols Ethernet type value (43B.4), but contain a badly formed PDU or an illegal value of protocol subtype (43B.4).	• ONS 15310 CL: ML-100T-8 • ONS 15310 MA SONET: ML-100T-8 • ONS 15310 MA SDH: ML-100T-8 • ONS 15454 SONET: ML1000, ML100T, ML100X-8 • ONS 15454 SDH: ML1000, ML100T, ML100X-8
dot3adAggPortStatsLACPDUsTx	Number of LAC PDUs transmitted on this aggregation port.	• ONS 15310 CL: ML-100T-8 • ONS 15310 MA SONET: ML-100T-8 • ONS 15310 MA SDH: ML-100T-8 • ONS 15454 SONET: ML1000, ML100T, ML100X-8 • ONS 15454 SDH: ML1000, ML100T, ML100X-8

Table E-29 Field Descriptions for the ML-Series Ethernet PM Table (continued)

Field	Description	Cards Supported
dot3adAggPortStatsMarkerPDUsTx	Number of marker PDUs transmitted on this aggregation port.	• ONS 15310 CL: ML-100T-8 • ONS 15310 MA SONET: ML-100T-8 • ONS 15310 MA SDH: ML-100T-8 • ONS 15454 SONET: ML1000, ML100T, ML100X-8 • ONS 15454 SDH: ML1000, ML100T, ML100X-8
dot3adAggPortStatsMarkerResponsePDUsTx	Number of marker response PDUs transmitted on this aggregation port.	• ONS 15310 CL: ML-100T-8 • ONS 15310 MA SONET: ML-100T-8 • ONS 15310 MA SDH: ML-100T-8 • ONS 15454 SONET: ML1000, ML100T, ML100X-8 • ONS 15454 SDH: ML1000, ML100T, ML100X-8
NE ID	Name of the selected NE.	—

E.2.15 ASAP-Series Ethernet PM Table—ONS 15600 SONET, ONS 15600 SDH

The ASAP-Series Ethernet PM table shows performance data for the ONS 15600 SONET and ONS 15600 SDH ASAP-series Ethernet cards. You can display performance data for 15-minute, 1-day, or real-time increments:

- 15-minute—Data is collected at the quarter-hour (for example, at 10:00, 10:15, and so on). The data shown represents the difference in counter values between successive 15-minute intervals.
- 1-day—Data is collected at midnight GMT. The data shown represents the difference between the counter values read at successive midnights.
- Real-time—When a real-time PM session is running, it polls the NE for *x* number of attributes every 10 to 900 seconds. This feature allows you to examine the current value of a PM parameter in granularities finer than the standard 15-minute or 1-day interval. For more information, see 10.4.4 Managing Real-Time PM Data, page 10-26.

Performance monitoring can be done either on selected modules, or on specific locations in the NE. You can use the Plot tab to plot the data in a graphical view that is stored in the Prime Optical database. See 10.4.6 Using PM Data Graphs, page 10-28.

The following table describes the fields in the ASAP-Series Ethernet PM table.

Note Real-time PM data is not available for Ethernet cards on NE releases earlier than release 5.0.

Table E-30 Field Descriptions for the ASAP-Series Ethernet PM Table

Field	Description	Cards Supported
Alias ID	Alias name of the selected NE.	—
Module Name	Module for which PM data is displayed.	—
Physical Location	Slot and port number for which PM data is displayed.	—
Interface	Interface name of the selected NE.	—
Time Stamp (*time zone*)	When the data was collected. You can select GMT, Local, or User-Defined time for the Time Stamp display. Use the User Preferences dialog box to make your time zone selection.	—
Maintenance	Whether the NE was under maintenance when the performance data was collected.	—
ifInOctets	Number of bytes received since the last counter reset.	ONS 15600 SONET: ASAP_4 ONS 15600 SDH: ASAP_4
ifInUcastPkts	Number of unicast packets received.	ONS 15600 SONET: ASAP_4 ONS 15600 SDH: ASAP_4
ifInMulticastPkts	Number of multicast packets received.	ONS 15600 SONET: ASAP_4 ONS 15600 SDH: ASAP_4
ifInBroadcastPkts	Number of broadcast packets received.	ONS 15600 SONET: ASAP_4 ONS 15600 SDH: ASAP_4
etherStatsOversizePkts	Total number of packets received that were longer than 1518 octets (excluding framing bits, but including FCS octets) and were otherwise well formed.	ONS 15600 SONET: ASAP_4 ONS 15600 SDH: ASAP_4
dot3StatsFCSErrors	Number of packets with an FCS error. FCS errors indicate frame corruption during transmission.	ONS 15600 SONET: ASAP_4 ONS 15600 SDH: ASAP_4
etherStatsUndersizePkts	Number of packets below the minimum packet size received.	ONS 15600 SONET: ASAP_4 ONS 15600 SDH: ASAP_4

Table E-30 Field Descriptions for the ASAP-Series Ethernet PM Table (continued)

Field	Description	Cards Supported
etherStatsJabbers	Total number of octets of data (including bad packets) received on the network.	ONS 15600 SONET: ASAP_4 ONS 15600 SDH: ASAP_4
dot3StatsAlignmentErrors	Number of received packets with alignment errors (incomplete frames).	ONS 15600 SONET: ASAP_4 ONS 15600 SDH: ASAP_4
ifOutOctets	Number of bytes transmitted since the last counter reset.	ONS 15600 SONET: ASAP_4 ONS 15600 SDH: ASAP_4
ifOutUcastPkts	Number of unicast packets transmitted.	ONS 15600 SONET: ASAP_4 ONS 15600 SDH: ASAP_4
ifOutMulticastPkts	Number of multicast packets transmitted.	ONS 15600 SONET: ASAP_4 ONS 15600 SDH: ASAP_4
ifOutBroadcastPkts	Number of broadcast packets transmitted.	ONS 15600 SONET: ASAP_4 ONS 15600 SDH: ASAP_4
etherStatsDropEvents	Total number of events in which packets were dropped by the probe due to lack of resources. The value indicates the number of times this condition has been detected.	ONS 15600 SONET: ASAP_4 ONS 15600 SDH: ASAP_4
ifInDiscards	Number of inbound packets that were chosen to be discarded even though no errors had been detected to prevent their being deliverable to a higher-layer protocol.	ONS 15600 SONET: ASAP_4 ONS 15600 SDH: ASAP_4
etherStatsOctets	Total number of octets of data (including those in bad packets) received on the network (excluding framing bits but including FCS octets).	ONS 15600 SONET: ASAP_4 ONS 15600 SDH: ASAP_4
etherStatsPkts	Number of packets received with a length from 1024 to 1518 octets.	ONS 15600 SONET: ASAP_4 ONS 15600 SDH: ASAP_4

Table E-30 Field Descriptions for the ASAP-Series Ethernet PM Table (continued)

Field	Description	Cards Supported
etherStatsBroadcastPkts	Total number of good broadcast packets received.	ONS 15600 SONET: ASAP_4 ONS 15600 SDH: ASAP_4
etherStatsMulticastPkts	Total number of good multicast (nonbroadcast) packets received.	ONS 15600 SONET: ASAP_4 ONS 15600 SDH: ASAP_4
etherStatsFragments	Total number of frames received that are less than 64 bytes in length and have a CRC error.	ONS 15600 SONET: ASAP_4 ONS 15600 SDH: ASAP_4
etherStatsPkts64Octets	Number of packets received with a length less than or equal to 64 octets.	ONS 15600 SONET: ASAP_4 ONS 15600 SDH: ASAP_4
etherStatsPkts65to127Octets	Number of packets received with a length from 65 to 127 octets.	ONS 15600 SONET: ASAP_4 ONS 15600 SDH: ASAP_4
etherStatsPkts128to255Octets	Number of packets received with a length from 128 to 255 octets.	ONS 15600 SONET: ASAP_4 ONS 15600 SDH: ASAP_4
etherStatsPkts256to511Octets	Number of packets received with a length from 256 to 511 octets.	ONS 15600 SONET: ASAP_4 ONS 15600 SDH: ASAP_4
etherStatsPkts512to1023Octets	Number of packets received with a length from 512 to 1023 octets.	ONS 15600 SONET: ASAP_4 ONS 15600 SDH: ASAP_4
etherStatsPkts1024to1518Octets	Number of packets received with a length from 1024 to 1518 octets.	ONS 15600 SONET: ASAP_4 ONS 15600 SDH: ASAP_4
ifOutDiscards	Number of outbound packets that were chosen to be discarded even though no errors had been detected to prevent their being transmitted.	ONS 15600 SONET: ASAP_4 ONS 15600 SDH: ASAP_4

Table E-30 Field Descriptions for the ASAP-Series Ethernet PM Table (continued)

Field	Description	Cards Supported
ifInErrors	Total number of received errors.	ONS 15600 SONET: ASAP_4 ONS 15600 SDH: ASAP_4
ifOutErrors	Total number of transmitted errors.	ONS 15600 SONET: ASAP_4 ONS 15600 SDH: ASAP_4
dot3StatsInternalMacTxErrors	A count of frames for which transmission on a particular interface fails due to an internal MAC sublayer transmission error.	ONS 15600 SONET: ASAP_4 ONS 15600 SDH: ASAP_4
dot3StatsFrameTooLong	Number of received frames that were larger than the maximum size permitted.	ONS 15600 SONET: ASAP_4 ONS 15600 SDH: ASAP_4
dot3StatsInternalMacRxErrors	A count of frames for which reception on a particular interface fails due to an internal MAC sublayer received error.	ONS 15600 SONET: ASAP_4 ONS 15600 SDH: ASAP_4
dot3StatsSymbolErrors	Number of times there was an invalid data symbol when a valid carrier was present on a particular interface.	ONS 15600 SONET: ASAP_4 ONS 15600 SDH: ASAP_4
rxPauseFrames	Number of received pause frames.	ONS 15600 SONET: ASAP_4 ONS 15600 SDH: ASAP_4
txPauseFrames	Number of transmitted pause frames.	ONS 15600 SONET: ASAP_4 ONS 15600 SDH: ASAP_4
Tx Utilization (%)	Transmitted utilization, which is a percentage of utilization of the Ethernet segment on a scale of 0 to 100 percent.	ONS 15600 SONET: ASAP_4
Rx Utilization (%)	Received utilization, which is a percentage of utilization of the Ethernet segment on a scale of 0 to 100 percent.	ONS 15600 SONET: ASAP_4
NE ID	Name of the selected NE.	—

E.2.16 DWDM-Series Ethernet PM Table—ONS 15454 SONET, ONS 15454 SDH

The DWDM-Series Ethernet PM table shows performance data for the ONS 15454 SONET and ONS 15454 SDH DWDM-series Ethernet cards. You can display performance data for 15-minute, 1-day, or real-time increments:

- 15-minute—Data is collected at the quarter-hour (for example, at 10:00, 10:15, and so on). The data shown represents the difference in counter values between successive 15-minute intervals.
- 1-day—Data is collected at midnight GMT. The data shown represents the difference between the counter values read at successive midnights.
- Real-time—When a real-time PM session is running, it polls the NE for *x* number of attributes every 10 to 900 seconds. This feature allows you to examine the current value of a PM parameter in granularities finer than the standard 15-minute or 1-day interval. For more information, see 10.4.4 Managing Real-Time PM Data, page 10-26.

Performance monitoring can be done either on selected modules, or on specific locations in the NE. You can use the Plot tab to plot the data in a graphical view that is stored in the Prime Optical database. See 10.4.6 Using PM Data Graphs, page 10-28.

The following table describes the fields in the DWDM-Series Ethernet PM table.

Note Real-time PM data is not available for Ethernet cards on NE releases earlier than release 5.0.

Table E-31 Field Descriptions for the DWDM-Series Ethernet PM Table

Field	Description	Cards Supported
Alias ID	Alias name of the selected NE.	—
Module Name	Module for which PM data is displayed.	—
Physical Location	Slot and port number for which PM data is displayed.	—
Interface	Interface name of the selected NE.	—
Time Stamp (*time zone*)	When the data was collected. You can select GMT, Local, or User-Defined time for the Time Stamp display. Use the User Preferences dialog box to make your time zone selection.	—
Maintenance	Whether the NE was under maintenance when the performance data was collected.	—
Time Last Cleared	When the statistics were last reset.	—
ifInOctets	Number of bytes received since the last counter reset.	• ONS 15454 SONET: 10GE_XP, 2.5G_DM, 2.5G_DMP, ADM_10G, GE_XP MXP_MR_10DME, TXP_MR_10E, TXP_MR_10G • ONS 15454 SDH: 10GE_XP, 2.5G_DM, 2.5G_DMP, ADM_10G, GE_XP, MXP_MR_10DME, TXP_MR_10E, TXP_MR_10G

Table E-31 Field Descriptions for the DWDM-Series Ethernet PM Table (continued)

Field	Description	Cards Supported
ifInMulticastPkts	Number of multicast packets received.	• ONS 15454 SONET: 10GE_XP, ADM_10G, GE_XP, MXP_MR_10DME, TXP_MR_10E, TXP_MR_10G • ONS 15454 SDH: 10GE_XP, ADM_10G, GE_XP, MXP_MR_10DME, TXP_MR_10E, TXP_MR_10G
ifInBroadcastPkts	Number of broadcast packets received.	• ONS 15454 SONET: 10GE_XP, ADM_10G, GE_XP, MXP_MR_10DME, TXP_MR_10E, TXP_MR_10G • ONS 15454 SDH: 10GE_XP, ADM_10G, GE_XP, MXP_MR_10DME, TXP_MR_10E, TXP_MR_10G
ifInDiscards	Number of inbound packets that were chosen to be discarded even though no errors had been detected to prevent their being deliverable to a higher-layer protocol.	• ONS 15454 SONET: 10GE_XP, 2.5G_DM, 2.5G_DMP, ADM_10G, GE_XP, MXP_MR_10DME, TXP_MR_10E, TXP_MR_10G • ONS 15454 SDH: 10GE_XP, 2.5G_DM, 2.5G_DMP, ADM_10G, GE_XP, MXP_MR_10DME, TXP_MR_10E, TXP_MR_10G
ifInErrors	Total number of received errors.	• ONS 15454 SONET: 2.5G_DM, 2.5G_DMP, ADM_10G, MXP_MR_10DME, TXP_MR_10E, TXP_MR_10G • ONS 15454 SDH: 2.5G_DM, 2.5G_DMP, ADM_10G, MXP_MR_10DME, TXP_MR_10E, TXP_MR_10G
ifOutOctets	Number of bytes transmitted since the last counter reset.	• ONS 15454 SONET: 10GE_XP, 2.5G_DM, 2.5G_DMP, ADM_10G, GE_XP, MXP_MR_10DME, TXP_MR_10E, TXP_MR_10G • ONS 15454 SDH: 10GE_XP, 2.5G_DM, 2.5G_DMP, ADM_10G, GE_XP, MXP_MR_10DME, TXP_MR_10E, TXP_MR_10G

Table E-31 Field Descriptions for the DWDM-Series Ethernet PM Table (continued)

Field	Description	Cards Supported
ifOutMulticastPkts	Number of multicast packets transmitted.	• ONS 15454 SONET: 10GE_XP, ADM_10G, GE_XP, MXP_MR_10DME, TXP_MR_10G • ONS 15454 SDH: 10GE_XP, ADM_10G, GE_XP, MXP_MR_10DME, TXP_MR_10G
ifOutBroadcastPkts	Number of broadcast packets transmitted.	• ONS 15454 SONET: 10GE_XP, ADM_10G, GE_XP, MXP_MR_10DME, TXP_MR_10G • ONS 15454 SDH: 10GE_XP, ADM_10G, GE_XP, MXP_MR_10DME, TXP_MR_10G
ifOutDiscards	Number of outbound packets that were chosen to be discarded even though no errors had been detected to prevent their being transmitted.	• ONS 15454 SONET: 10GE_XP, 2.5G_DM, 2.5G_DMP, ADM_10G, GE_XP, MXP_MR_10DME, TXP_MR_10E, TXP_MR_10G • ONS 15454 SDH: 10GE_XP, 2.5G_DM, 2.5G_DMP, ADM_10G, GE_XP, MXP_MR_10DME, TXP_MR_10E, TXP_MR_10G
dot3StatsFCSErrors	Number of packets with an FCS error. FCS errors indicate frame corruption during transmission.	• ONS 15454 SONET: 10GE_XP, 2.5G_DM, 2.5G_DMP, GE_XP, MXP_MR_10DME, TXP_MR_10E, TXP_MR_10G • ONS 15454 SDH: 10GE_XP, 2.5G_DM, 2.5G_DMP, ADM_10G, GE_XP, MXP_MR_10DME, TXP_MR_10E, TXP_MR_10G
dot3StatsFrameTooLong	Number of received frames that were larger than the maximum size permitted.	• ONS 15454 SDH: 10GE_XP, ADM_10G, GE_XP
etherStatsUndersizePkts	Number of packets below the minimum packet size received.	• ONS 15454 SONET: 10GE_XP, 2.5G_DM, 2.5G_DMP, ADM_10G, GE_XP, MXP_MR_10DME, TXP_MR_10E, TXP_MR_10G • ONS 15454 SDH: 10GE_XP, 2.5G_DM, 2.5G_DMP, ADM_10G, GE_XP, MXP_MR_10DME, TXP_MR_10E, TXP_MR_10G

Table E-31 Field Descriptions for the DWDM-Series Ethernet PM Table (continued)

Field	Description	Cards Supported
etherStatsFragments	Total number of frames received that are less than 64 bytes in length and have a CRC error.	• ONS 15454 SONET: 10GE_XP, 2.5G_DM, 2.5G_DMP, ADM_10G, GE_XP, MXP_MR_10DME, TXP_MR_10E, TXP_MR_10G • ONS 15454 SDH: 10GE_XP, 2.5G_DM, 2.5G_DMP, ADM_10G, GE_XP, MXP_MR_10DME, TXP_MR_10E, TXP_MR_10G
etherStatsPkts64Octets	Number of packets received with a length less than or equal to 64 octets.	• ONS 15454 SONET: 10GE_XP, 2.5G_DM, 2.5G_DMP, ADM_10G, GE_XP, MXP_MR_10DME, TXP_MR_10E, TXP_MR_10G • ONS 15454 SDH: 10GE_XP, 2.5G_DM, 2.5G_DMP, ADM_10G, GE_XP, MXP_MR_10DME, TXP_MR_10E, TXP_MR_10G
etherStatsPkts65to127Octets	Number of packets received with a length from 65 to 127 octets.	• ONS 15454 SONET: 10GE_XP, 2.5G_DM, 2.5G_DMP, ADM_10G, GE_XP, MXP_MR_10DME, TXP_MR_10E, TXP_MR_10G • ONS 15454 SDH: 10GE_XP, 2.5G_DM, 2.5G_DMP, ADM_10G, GE_XP, MXP_MR_10DME, TXP_MR_10E, TXP_MR_10G
etherStatsPkts128to255Octets	Number of packets received with a length from 128 to 255 octets.	• ONS 15454 SONET: 10GE_XP, 2.5G_DM, 2.5G_DMP, ADM_10G, GE_XP, MXP_MR_10DME, TXP_MR_10E, TXP_MR_10G • ONS 15454 SDH: 10GE_XP, 2.5G_DM, 2.5G_DMP, ADM_10G, GE_XP, MXP_MR_10DME, TXP_MR_10E, TXP_MR_10G
etherStatsPkts256to511Octets	Number of packets received with a length from 256 to 511 octets.	• ONS 15454 SONET: 10GE_XP, 2.5G_DM, 2.5G_DMP, ADM_10G, GE_XP, MXP_MR_10DME, TXP_MR_10E, TXP_MR_10G • ONS 15454 SDH: 10GE_XP, 2.5G_DM, 2.5G_DMP, ADM_10G, GE_XP, MXP_MR_10DME, TXP_MR_10E, TXP_MR_10G

Table E-31 Field Descriptions for the DWDM-Series Ethernet PM Table (continued)

Field	Description	Cards Supported
etherStatsPkts512to1023Octets	Number of packets received with a length from 512 to 1023 octets.	• ONS 15454 SONET: 10GE_XP, 2.5G_DM, 2.5G_DMP, ADM_10G, GE_XP, MXP_MR_10DME, TXP_MR_10E, TXP_MR_10G • ONS 15454 SDH: 10GE_XP, 2.5G_DM, 2.5G_DMP, ADM_10G, GE_XP, MXP_MR_10DME, TXP_MR_10E, TXP_MR_10G
etherStatsPkts1024to1518Octets	Number of packets received with a length from 1024 to 1518 octets.	• ONS 15454 SONET: 10GE_XP, 2.5G_DM, 2.5G_DMP, ADM_10G, GE_XP, MXP_MR_10DME, TXP_MR_10E, TXP_MR_10G • ONS 15454 SDH: 10GE_XP, 2.5G_DM, 2.5G_DMP, ADM_10G, GE_XP, MXP_MR_10DME, TXP_MR_10E, TXP_MR_10G
etherStatsBroadcastPkts	Total number of good broadcast packets received.	• ONS 15454 SONET: 10GE_XP, 2.5G_DM, 2.5G_DMP, ADM_10G, GE_XP, MXP_MR_10DME, TXP_MR_10E, TXP_MR_10G • ONS 15454 SDH: 10GE_XP, 2.5G_DM, 2.5G_DMP, ADM_10G, GE_XP, MXP_MR_10DME, TXP_MR_10E, TXP_MR_10G
etherStatsMulticastPkts	Total number of good multicast (nonbroadcast) packets received.	• ONS 15454 SONET: 10GE_XP, 2.5G_DM, 2.5G_DMP, ADM_10G, GE_XP, MXP_MR_10DME, TXP_MR_10E, TXP_MR_10G • ONS 15454 SDH: 10GE_XP, 2.5G_DM, 2.5G_DMP, ADM_10G, GE_XP, MXP_MR_10DME, TXP_MR_10E, TXP_MR_10G
etherStatsOversizePkts	Total number of packets received that were longer than 1518 octets (excluding framing bits, but including FCS octets) and were otherwise well formed.	• ONS 15454 SONET: 10GE_XP, 2.5G_DM, 2.5G_DMP, ADM_10G, GE_XP, MXP_MR_10DME, TXP_MR_10E, TXP_MR_10G • ONS 15454 SDH: 10GE_XP, 2.5G_DM, 2.5G_DMP, ADM_10G, GE_XP, MXP_MR_10DME, TXP_MR_10E, TXP_MR_10G

Table E-31 Field Descriptions for the DWDM-Series Ethernet PM Table (continued)

Field	Description	Cards Supported
etherStatsJabbers	Total number of frames received that exceed the maximum 1548 bytes and contain CRC errors.	• ONS 15454 SONET: 10GE_XP, 2.5G_DM, 2.5G_DMP, ADM_10G, GE_XP, MXP_MR_10DME, TXP_MR_10E, TXP_MR_10G • ONS 15454 SDH: 10GE_XP, 2.5G_DM, 2.5G_DMP, ADM_10G, GE_XP, MXP_MR_10DME, TXP_MR_10E, TXP_MR_10G
etherStatsOctets	Total number of octets of data (including those in bad packets) received on the network (excluding framing bits but including FCS octets).	• ONS 15454 SONET: 10GE_XP, 2.5G_DM, 2.5G_DMP, ADM_10G, GE_XP, MXP_MR_10DME, TXP_MR_10E, TXP_MR_10G • ONS 15454 SDH: 10GE_XP, 2.5G_DM, 2.5G_DMP, ADM_10G, GE_XP, MXP_MR_10DME, TXP_MR_10E, TXP_MR_10G
etherStatsCRCAlignErrors	Total number of packets received that had a length (excluding framing bits, but including FCS octets) from 64 to 1518 octets, inclusive, but had either a bad FCS with an integral number of octets (FCS error) or a bad FCS with a nonintegral number of octets (alignment error).	• ONS 15454 SONET: 10GE_XP, ADM_10G, GE_XP • ONS 15454 SDH: 10GE_XP, ADM_10G, GE_XP
etherStatsPkts1519tomaxOctets	Total number of packets (including bad packets) received that were 1591 octets in length (excluding framing bits, but including FCS octets).	• ONS 15454 SONET: AR_MXP, AR_XP • ONS 15454 SDH: AR_MXP, AR_XP
mediaIndStatsTXShortPkts	Number of transmitted frames containing less than the minimum permitted frame size as programmed with the transmit MAC Min Frame Length Configuration Register.	• ONS 15454 SONET: AR_MXP, AR_XP • ONS 15454 SDH: AR_MXP, AR_XP
rxPauseFrames	Number of received pause frames.	• ONS 15454 SONET: MXP_MR_10DME, TXP_MR_10E, TXP_MR_10G • ONS 15454 SDH: MXP_MR_10DME, TXP_MR_10E, TXP_MR_10G
rxTotalPkts	Number of packets received since the last counter reset.	• ONS 15454 SONET: 10GE_XP, 2.5G_DM, 2.5G_DMP, GE_XP, MXP_MR_10DME, TXP_MR_10E, TXP_MR_10G, AR_XP, AR_XPE • ONS 15454 SDH: 10GE_XP, 2.5G_DM, 2.5G_DMP, ADM_10G, GE_XP, MXP_MR_10DME, TXP_MR_10E, TXP_MR_10G, AR_XP, AR_XPE

Table E-31 Field Descriptions for the DWDM-Series Ethernet PM Table (continued)

Field	Description	Cards Supported
txTotalPkts	Number of packets transmitted since the last counter reset.	• ONS 15454 SONET: 10GE_XP, 2.5G_DM, 2.5G_DMP, GE_XP, MXP_MR_10DME, TXP_MR_10E, TXP_MR_10G, AR_XP, AR_XPE • ONS 15454 SDH: 10GE_XP, 2.5G_DM, 2.5G_DMP, ADM_10G, GE_XP, MXP_MR_10DME, TXP_MR_10E, TXP_MR_10G, AR_XP, AR_XPE
mediaIndStatsRxFramesTruncated	Total number of frames received that are less than 5 bytes. This value is a part of HDLC and GFP port statistics.	• ONS 15454 SONET: 2.5G_DM, 2.5G_DMP, MXP_MR_10DME, TXP_MR_10E, TXP_MR_10G • ONS 15454 SDH: 2.5G_DM, 2.5G_DMP, MXP_MR_10DME, TXP_MR_10E, TXP_MR_10G
mediaIndStatsRxFramesTooLong	Number of received frames that exceed the MTU. This value is part of HDLC and GFP port statistics.	• ONS 15454 SONET: 2.5G_DM, 2.5G_DMP, MXP_MR_10DME, TXP_MR_10E, TXP_MR_10G • ONS 15454 SDH: 2.5G_DM, 2.5G_DMP, MXP_MR_10DME, TXP_MR_10E, TXP_MR_10G,
mediaIndStatsRxFramesBadCRC	Number of received data frames with payload CRC errors when HDLC framing is used.	• ONS 15454 SONET: 2.5G_DM, 2.5G_DMP, MXP_MR_10DME, TXP_MR_10E, TXP_MR_10G, AR_XP, AR_XPE • ONS 15454 SDH: 2.5G_DM, 2.5G_DMP, MXP_MR_10DME, TXP_MR_10E, TXP_MR_10G, AR_XP, AR_XPE
mediaIndStatsTxLcvErrorSG	Number of transmitted line code violations at the PCS layer for GE/FC payload.	• ONS 15454 SONET: AR_XP, AR_XPE • ONS 15454 SDH: AR_XP, AR_XPE
mediaIndStatsLxLcvErrorSG	Number of received line code violations at the PCS layer for GE/FC payload.	• ONS 15454 SONET: AR_XP, AR_XPE • ONS 15454 SDH: AR_XP, AR_XPE
mediaIndStatsTxFramesBadCRC	Number of transmitted data frames with payload CRC errors when HDLC framing is used.	• ONS 15454 SONET: 2.5G_DM, 2.5G_DMP, MXP_MR_10DME, TXP_MR_10E, TXP_MR_10G, AR_XP, AR_XPE • ONS 15454 SDH: 2.5G_DM, 2.5G_DMP, MXP_MR_10DME, TXP_MR_10E, TXP_MR_10G, AR_XP, AR_XPE

Table E-31 Field Descriptions for the DWDM-Series Ethernet PM Table (continued)

Field	Description	Cards Supported
rxControlFrames	Number of MAC control frames passed by the MAC sublayer to the MAC control sublayer.	• ONS 15454 SONET: MXP_MR_10DME, TXP_MR_10E, TXP_MR_10G • ONS 15454 SDH: MXP_MR_10DME, TXP_MR_10E, TXP_MR_10G
rxUnknownOpcodeFrames	Number of MAC control frames received that contain an opcode that is not supported by the device.	• ONS 15454 SONET: MXP_MR_10DME, TXP_MR_10E, TXP_MR_10G • ONS 15454 SDH: MXP_MR_10DME, TXP_MR_10E, TXP_MR_10G
ifInErrorBytePkts	Number of received bytes with errors.	• ONS 15454 SDH: ADM_10G
ifInFramingErrorPkts	Number of received framing error counters.	• ONS 15454 SONET: MXP_MR_10DME, TXP_MR_10E, TXP_MR_10G • ONS 15454 SDH: ADM_10G, MXP_MR_10DME, TXP_MR_10E, TXP_MR_10G
ifInJunkInterPkts	Number of received interpacket junk counters.	• ONS 15454 SONET: MXP_MR_10DME, TXP_MR_10G • ONS 15454 SDH: ADM_10G, MXP_MR_10DME, TXP_MR_10G
etherStatsPkts	Number of packets received.	• ONS 15454 SONET: 10GE_XP, ADM_10G, GE_XP • ONS 15454 SDH: 10GE_XP, ADM_10G, GE_XP
Dot3StatsControlInUnknown OpCodes	Number of MAC control frames received on the interface that contain an opcode that is not supported by the device.	• ONS 15454 SONET: 10GE_XP, GE_XP, MXP_MR_10DME, TXP_MR_10E, TXP_MR_10G • ONS 15454 SDH: 10GE_XP, GE_XP, MXP_MR_10DME, TXP_MR_10E, TXP_MR_10G
ifOutUCastPtks	Number of unicast packets transmitted.	• ONS 15454 SONET: ADM_10G MXP_MR_10DME, TXP_MR_10E • ONS 15454 SDH: ADM_10G, MXP_MR_10DME, TXP_MR_10E
Dot3StatsInPauseFrames	Number of received pause frames.	• ONS 15454 SONET: 10GE_XP, GE_XP • ONS 15454 SDH: 10GE_XP, GE_XP
Dot3StatsOutPauseFrames	Number of transmitted pause frames.	• ONS 15454 SONET: 10GE_XP, GE_XP • ONS 15454 SDH: 10GE_XP, GE_XP

Table E-31 Field Descriptions for the DWDM-Series Ethernet PM Table (continued)

Field	Description	Cards Supported
Dot3StatsLcvErrors	A count of transmitted frames that are an integral number of octets in length and do not pass the FCS check.	• ONS 15454 SONET: AR_MXP, AR_XP • ONS 15454 SDH: AR_MXP, AR_XP
dot3StatsLayer1Errors	Number of Layer 1 errors as defined within the following conditions: • During Packet Reception—Layer 1 errors are counted only one time per packet. The error is indicated as a direct result of a line side protocol violation in which RX_DV is asserted. This is an uncommon event that could the reason why a device loses synchronization. • During Interpacket Reception—The Layer 1 error is indicated as a direct result of a line side protocol violation in which RX_DV is deasserted. This is an uncommon event. The Layer 1 error is also asserted on detection of a False Carrier indication and an errored byte (interpacket) signal encoding. When the error is asserted during interpacket reception, it is statistically asserted only in the vector.	• ONS 15454 SONET: AR_MXP, AR_XP • ONS 15454 SDH: AR_MXP, AR_XP
EtherStatsPkts1519to1522Octets	Number of packets received with a length from 1519 to 1522 octets.	• ONS 15454 SONET: 10GE_XP, ADM_10G, GE_XP
ifInUCastPkts	Number of unicast packets received.	• ONS 15454 SONET: 10GE_XP, ADM_10G, GE_XP, MXP_MR_10DME, TXP_MR_10E • ONS 15454 SDH: 10GE_XP, ADM_10G, GE_XP, MXP_MR_10DME, TXP_MR_10E
ifOutErrors	Total number of transmitted errors.	• ONS 15454 SONET: 10GE_XP, ADM_10G, GE_XP • ONS 15454 SDH: 10GE_XP, ADM_10G, GE_XP
dot3StatsAlignmentErrors	Number of received packets with alignment errors (incomplete frames).	• ONS 15454 SONET: 10GE_XP, GE_XP, MXP_MR_10DME, TXP_MR_10E • ONS 15454 SDH: 10GE_XP, ADM_10G, GE_XP, MXP_MR_10DME, TXP_MR_10E
ifHCInOctets	Number of bytes received since the last counter reset—high capacity.	• ONS 15454 SONET: 10GE_XP, GE_XP • ONS 15454 SDH: 10GE_XP, GE_XP

Table E-31 Field Descriptions for the DWDM-Series Ethernet PM Table (continued)

Field	Description	Cards Supported
ifHCInUcastPkts	Number of unicast packets received—high capacity.	• ONS 15454 SONET: 10GE_XP, GE_XP • ONS 15454 SDH: 10GE_XP, GE_XP
ifHCInMulticastPkts	Number of multicast packets received—high capacity.	• ONS 15454 SONET: 10GE_XP, GE_XP • ONS 15454 SDH: 10GE_XP, GE_XP
ifHCInBroadcastPkts	Number of broadcast packets received—high capacity.	• ONS 15454 SONET: 10GE_XP, GE_XP • ONS 15454 SDH: 10GE_XP, GE_XP
ifHCOutOctets	Number of bytes transmitted since the last counter reset—high capacity.	• ONS 15454 SONET: 10GE_XP, GE_XP • ONS 15454 SDH: 10GE_XP, GE_XP
ifHCOutMulticastPkts	Number of multicast packets transmitted—high capacity.	• ONS 15454 SONET: 10GE_XP, GE_XP • ONS 15454 SDH: 10GE_XP, GE_XP
ifHCOutBroadcastPkts	Number of broadcast packets transmitted—high capacity.	• ONS 15454 SONET: 10GE_XP, GE_XP • ONS 15454 SDH: 10GE_XP, GE_XP
etherStatsHighCapacityPkts	Number of packets received—high capacity.	• ONS 15454 SONET: 10GE_XP, GE_XP • ONS 15454 SDH: 10GE_XP, GE_XP
etherStatsHighCapacityOctets	Total number of octets of data (including those in bad packets) received on the network (excluding framing bits but including FCS octets)—high capacity.	• ONS 15454 SONET: 10GE_XP, GE_XP • ONS 15454 SDH: 10GE_XP, GE_XP
etherStatsHighCapacityPkts64Octets	Number of packets received with a length less than or equal to 64 octets—high capacity.	• ONS 15454 SONET: 10GE_XP, GE_XP • ONS 15454 SDH: 10GE_XP, GE_XP
etherStatsHighCapacityPkts65to127Octets	Number of packets received with a length from 65 to 127 octets—high capacity.	• ONS 15454 SONET: 10GE_XP, GE_XP • ONS 15454 SDH: 10GE_XP, GE_XP
etherStatsHighCapacityPkts128to255Octets	Number of packets received with a length from 128 to 255 octets—high capacity.	• ONS 15454 SONET: 10GE_XP, GE_XP • ONS 15454 SDH: 10GE_XP, GE_XP
etherStatsHighCapacityPkts256to511Octets	Number of packets received with a length from 256 to 511 octets—high capacity.	• ONS 15454 SONET: 10GE_XP, GE_XP • ONS 15454 SDH: 10GE_XP, GE_XP
etherStatsHighCapacityPkts512to1023Octets	Number of packets received with a length from 512 to 1023 octets—high capacity.	• ONS 15454 SONET: 10GE_XP, GE_XP • ONS 15454 SDH: 10GE_XP, GE_XP

Table E-31 Field Descriptions for the DWDM-Series Ethernet PM Table (continued)

Field	Description	Cards Supported
etherStatsHighCapacityPkts1024to1518Octets	Number of packets received with a length from 1024 to 1518 octets—high capacity.	• ONS 15454 SONET: 10GE_XP, GE_XP • ONS 15454 SDH: 10GE_XP, GE_XP
cisRxReports	Total Internet Group Management Protocol (IGMP) membership reports received at an interface.	• ONS 15454 SONET: 10GE_XP, GE_XP • ONS 15454 SDH: 10GE_XP, GE_XP
cisRxLeaves	Total IGMP leave messages received at an interface.	• ONS 15454 SONET: 10GE_XP, GE_XP • ONS 15454 SDH: 10GE_XP, GE_XP
cisTxReports	Total IGMP membership reports transmitted through an interface.	• ONS 15454 SONET: 10GE_XP, GE_XP • ONS 15454 SDH: 10GE_XP, GE_XP
cisTxLeaves	Total IGMP leave messages transmitted through an interface.	• ONS 15454 SONET: 10GE_XP, GE_XP • ONS 15454 SDH: 10GE_XP, GE_XP
cisTxGeneralQueries	Total IGMP general queries transmitted through an interface.	• ONS 15454 SONET: 10GE_XP, GE_XP • ONS 15454 SDH: 10GE_XP, GE_XP
cisTxGroupSpecificQueries	Total IGMP group-specific queries transmitted through an interface.	• ONS 15454 SONET: 10GE_XP, GE_XP • ONS 15454 SDH: 10GE_XP, GE_XP
cisRxGeneralQueries	Total IGMP general queries received at an interface.	• ONS 15454 SONET: 10GE_XP, GE_XP • ONS 15454 SDH: 10GE_XP, GE_XP
cisRxGroupSpecificQueries	Total IGMP group-specific queries received at an interface.	• ONS 15454 SONET: 10GE_XP, GE_XP • ONS 15454 SDH: 10GE_XP, GE_XP
cisRxValidPackets	Total valid IGMP packets received at an interface.	• ONS 15454 SONET: 10GE_XP, GE_XP • ONS 15454 SDH: 10GE_XP, GE_XP
cisRxInvalidPackets	Total invalid IGMP packets received at an interface.	• ONS 15454 SONET: 10GE_XP, GE_XP • ONS 15454 SDH: 10GE_XP, GE_XP
crepHflRxPdus	Number of hardware flood layer PDUs received on the port.	• ONS 15454 SONET: 10GE_XP, GE_XP • ONS 15454 SDH: 10GE_XP, GE_XP
crepHflTxPdus	Number of hardware flood layer PDUs transmitted on the port.	• ONS 15454 SONET: 10GE_XP, GE_XP • ONS 15454 SDH: 10GE_XP, GE_XP

Table E-31 Field Descriptions for the DWDM-Series Ethernet PM Table (continued)

Field	Description	Cards Supported
crepLslRxPdus	Number of link status layer PDUs received on the port.	• ONS 15454 SONET: 10GE_XP, GE_XP • ONS 15454 SDH: 10GE_XP, GE_XP
crepLslTxPdus	Number of link status layer PDUs transmitted on the port.	• ONS 15454 SONET: 10GE_XP, GE_XP • ONS 15454 SDH: 10GE_XP, GE_XP
dot3adAggPortStatsLACPDUsRx	Number of valid LACPDUs received on this Aggregation Port.	• ONS 15454 SONET: 10GE_XP, GE_XP • ONS 15454 SDH: 10GE_XP, GE_XP
dot3adAggPortStatsLACPDUsTx	Number of LACPDUs transmitted on this Aggregation Port.	• ONS 15454 SONET: 10GE_XP, GE_XP • ONS 15454 SDH: 10GE_XP, GE_XP
rxEtherUtilizationStats (%)	Received utilization, which is a percentage of utilization of the Ethernet segment on a scale of 0 to 100 percent.	• ONS 15454 SONET: 2.5G_DM, 2.5G_DMP, MXP_MR_10DME, TXP_MR_10E • ONS 15454 SDH: 2.5G_DM, 2.5G_DMP, MXP_MR_10DME, TXP_MR_10E
txEtherUtilizationStats (%)	Transmitted utilization, which is a percentage of utilization of the Ethernet segment on a scale of 0 to 100 percent.	• ONS 15454 SONET: 2.5G_DM, 2.5G_DMP, MXP_MR_10DME, TXP_MR_10E • ONS 15454 SDH: 2.5G_DM, 2.5G_DMP, MXP_MR_10DME, TXP_MR_10E
NE ID	Name of the selected NE.	—

E.2.17 CPT-Series Ethernet PM Table—ONS 15454 SONET, ONS 15454 SDH

The CPT-Series Ethernet PM table shows performance data for the ONS 15454 SONET and ONS 15454 SDH CPT-series Ethernet cards. You can display performance data for 15-minute, 1-day, or real-time increments:

- 15-minute—Data is collected at the quarter-hour (for example, at 10:00, 10:15, and so on). The data shown represents the difference in counter values between successive 15-minute intervals.
- 1-day—Data is collected at midnight GMT. The data shown represents the difference between the counter values read at successive midnights.
- Real-time—When a real-time PM session is running, it polls the NE for *x* number of attributes every 10 to 900 seconds. This feature allows you to examine the current value of a PM parameter in granularities finer than the standard 15-minute or 1-day interval. For more information, see 10.4.4 Managing Real-Time PM Data, page 10-26.

Performance monitoring can be done either on selected modules, or on specific locations in the NE. You can use the Plot tab to plot the data in a graphical view that is stored in the Prime Optical database. See 10.4.6 Using PM Data Graphs, page 10-28.

The following table describes the fields in the CPT-Series Ethernet PM table.

Note Real-time PM data is not available for Ethernet cards on NE releases earlier than release 5.0.

Table E-32 Field Descriptions for the CPT-Series Ethernet PM Table

Field	Description	Cards Supported
Alias ID	Alias name of the selected NE.	—
Module Name	Module for which PM data is displayed.	—
Physical Location	Slot and port number for which PM data is displayed.	—
Interface	Interface name of the selected NE.	—
Time Stamp (*time zone*)	When the data was collected. You can select GMT, Local, or User-Defined time for the Time Stamp display. Use the User Preferences dialog box to make your time zone selection.	—
Maintenance	Whether the NE was under maintenance when the performance data was collected.	—
ifInOctets	Number of bytes received since the last counter reset.	• ONS 15454 SONET: PTSA_GE, PTF_10GE_4, PT_10GE_4 • ONS 15454 SDH: PTSA_GE, PTF_10GE_4, PT_10GE_4
rxTotalPackets	Total number of packets received.	• ONS 15454 SONET: PTSA_GE, PTF_10GE_4, PT_10GE_4 • ONS 15454 SDH: PTSA_GE, PTF_10GE_4, PT_10GE_4
ifInUCastPkts	Number of unicast packets received.	• ONS 15454 SONET: PTSA_GE, PTF_10GE_4, PT_10GE_4 • ONS 15454 SDH: PTSA_GE, PTF_10GE_4, PT_10GE_4
ifInMulticastPkts	Number of multicast packets received.	• ONS 15454 SONET: PTSA_GE, PTF_10GE_4, PT_10GE_4 • ONS 15454 SDH: PTSA_GE, PTF_10GE_4, PT_10GE_4
ifInDiscards	Number of inbound packets that were chosen to be discarded even though no errors had been detected to prevent their being deliverable to a higher-layer protocol.	• ONS 15454 SONET: PTSA_GE, PTF_10GE_4, PT_10GE_4 • ONS 15454 SDH: PTSA_GE, PTF_10GE_4, PT_10GE_4

Table E-32 Field Descriptions for the CPT-Series Ethernet PM Table (continued)

Field	Description	Cards Supported
ifInErrors	Total number of received errors.	• ONS 15454 SONET: PTSA_GE, PTF_10GE_4, PT_10GE_4 • ONS 15454 SDH: PTSA_GE, PTF_10GE_4, PT_10GE_4
ifOutOctets	Number of bytes transmitted since the last counter reset.	• ONS 15454 SONET: PTSA_GE, PTF_10GE_4, PT_10GE_4 • ONS 15454 SDH: PTSA_GE, PTF_10GE_4, PT_10GE_4
txTotalPkts	Number of packets transmitted since the last counter reset.	• ONS 15454 SONET: PTSA_GE, PTF_10GE_4, PT_10GE_4 • ONS 15454 SDH: PTSA_GE, PTF_10GE_4, PT_10GE_4
ifOutUCastPkts	Number of unicast packets transmitted.	• ONS 15454 SONET: PTSA_GE, PTF_10GE_4, PT_10GE_4 • ONS 15454 SDH: PTSA_GE, PTF_10GE_4, PT_10GE_4
ifOutMulticastPkts	Number of multicast packets transmitted.	• ONS 15454 SONET: PTSA_GE, PTF_10GE_4, PT_10GE_4 • ONS 15454 SDH: PTSA_GE, PTF_10GE_4, PT_10GE_4
ifOutDiscards	Number of outbound packets that were chosen to be discarded even though no errors had been detected to prevent their being transmitted.	• ONS 15454 SONET: PTSA_GE, PTF_10GE_4, PT_10GE_4 • ONS 15454 SDH: PTSA_GE, PTF_10GE_4, PT_10GE_4
ifOutErrors	Total number of transmitted errors.	• ONS 15454 SONET: PTSA_GE, PTF_10GE_4, PT_10GE_4 • ONS 15454 SDH: PTSA_GE, PTF_10GE_4, PT_10GE_4
rxEtherUtilizationStats (%)	Received utilization, which is a percentage of utilization of the Ethernet segment on a scale of 0 to 100 percent.	• ONS 15454 SONET: PTSA_GE, PTF_10GE_4, PT_10GE_4 • ONS 15454 SDH: PTSA_GE, PTF_10GE_4, PT_10GE_4
txEtherUtilizationStats (%)	Transmitted utilization, which is a percentage of utilization of the Ethernet segment on a scale of 0 to 100 percent.	• ONS 15454 SONET: PTSA_GE, PTF_10GE_4, PT_10GE_4 • ONS 15454 SDH: PTSA_GE, PTF_10GE_4, PT_10GE_4
NE ID	Name of the selected NE.	—

E.2.18 GFP PM Table—ONS 15310 CL, ONS 15310 MA SONET, ONS 15310 MA SDH, ONS 15454 SONET, ONS 15454 SDH, and ONS 15600 SDH

The GFP PM table provides monitoring capability to allow operators to identify performance degradation in the generic framing procedure (GFP) multiplexing and framing. GFP describes a framing and encapsulation format for transporting L2/L3 data over SONET, SDH, or OTN transport networks.

You can display performance data for 15-minute, 1-day, or real-time increments:

- 15-minute—Data is collected at the quarter-hour (for example, at 10:00, 10:15, and so on). The data shown represents the difference in counter values between successive 15-minute intervals.
- 1-day—Data is collected at midnight GMT. The data shown represents the difference between the counter values read at successive midnights.
- Real-time—When a real-time PM session is running, it polls the NE for *x* number of attributes every 10 to 900 seconds. This feature allows you to examine the current value of a PM parameter in granularities finer than the standard 15-minute or 1-day interval. For more information, see 10.4.4 Managing Real-Time PM Data, page 10-26.

Performance monitoring can be done either on selected modules, or on specific locations in the NE. You can use the Plot tab to plot the data in a graphical view that is stored in the Prime Optical database. See 10.4.6 Using PM Data Graphs, page 10-28.

The following table describes the fields in the GFP PM table.

Table E-33 Field Descriptions for the GFP PM Table

Field	Description	Cards Supported
Alias ID	Alias name of the selected NE.	—
Module Name	Module for which PM data is displayed.	—
Physical Location	Slot and port number for which PM data is displayed.	—
Interface	Interface name of the selected NE.	—
Time Stamp (*time zone*)	When the data was collected. You can select GMT, Local, or User-Defined time for the Time Stamp display. Use the User Preferences dialog box to make your time zone selection.	—
Maintenance	Whether the NE was under maintenance when the performance data was collected.	—
GfpStatsRxSBitErrors	Number of GFP single-bit errors in the CHEC.	• ONS 15310 MA SONET: CE-100T-8, CE-MR-6, ML-100T-8 • ONS 15310 MA SDH: CE-100T-8, CE-MR-6, ML-100T-8 • ONS 15454 SONET: CE-1000-4, CE-MR-10, ML100X-8, ML-MR-10, MXP_MR_10DME • ONS 15454 SDH: CE-1000-4, CE-100T-8, CE-MR-10, ML-MR-10, MXP_MR_10DME • ONS 15600 SDH: ASAP_4

Table E-33 Field Descriptions for the GFP PM Table (continued)

Field	Description	Cards Supported
GfpStatsRxMBitErrors	Number of GFP multibit errors in the CHEC.	• ONS 15310 MA SONET: CE-100T-8, CE-MR-6, ML-100T-8 • ONS 15310 MA SDH: CE-100T-8, CE-MR-6, ML-100T-8 • ONS 15454 SONET: CE-1000-4, CE-MR-10, ML100X-8, ML-MR-10, MXP_MR_10DME • ONS 15454 SDH: CE-1000-4, CE-100T-8, CE-MR-10, ML-MR-10, MXP_MR_10DME • ONS 15600 SDH: ASAP_4
GfpStatsRxTypeInvalid	Number of GFP invalid UPI fields in the type field.	• ONS 15310 MA SONET: CE-100T-8, CE-MR-6, ML-100T-8 • ONS 15310 MA SDH: CE-100T-8, CE-MR-6, ML-100T-8 • ONS 15454 SONET: CE-1000-4, CE-MR-10, ML100X-8, ML-MR-10, MXP_MR_10DME • ONS 15454 SDH: CE-1000-4, CE-100T-8, CE-MR-10, ML-MR-10, MXP_MR_10DME • ONS 15600 SDH: ASAP_4
GfpStatsRxCRCErrors	Number of superblock CRC errors in the transparent GFP frame.	• ONS 15310 MA SONET: CE-100T-8, CE-MR-6, ML-100T-8 • ONS 15310 MA SDH: CE-100T-8, CE-MR-6, ML-100T-8 • ONS 15454 SONET: CE-1000-4, CE-MR-10, ML100X-8, ML-MR-10, MXP_MR_10DME • ONS 15454 SDH: CE-1000-4, CE-100T-8, CE-MR-10, ML-MR-10, MXP_MR_10DME • ONS 15600 SDH: ASAP_4

Table E-33 Field Descriptions for the GFP PM Table (continued)

Field	Description	Cards Supported
GfpStatsRxCIDInvalid	Number of received frames with an invalid channel ID (CID).	• ONS 15310 MA SONET: CE-100T-8, CE-MR-6, ML-100T-8 • ONS 15310 MA SDH: CE-100T-8, CE-MR-6, ML-100T-8 • ONS 15454 SONET: CE-1000-4, CE-MR-10, ML100X-8, ML-MR-10, MXP_MR_10DME • ONS 15454 SDH: CE-1000-4, CE-100T-8, CE-MR-10, ML-MR-10, MXP_MR_10DME
GfpStatsCSFRaised	Number of GFP client signal fail frames.	• ONS 15310 MA SONET: CE-100T-8, CE-MR-6, ML-100T-8 • ONS 15310 MA SDH: CE-100T-8, CE-MR-6, ML-100T-8 • ONS 15454 SONET: CE-1000-4, CE-MR-10, ML100X-8, ML-MR-10, MXP_MR_10DME • ONS 15454 SDH: CE-1000-4, CE-100T-8, CE-MR-10, ML-MR-10, MXP_MR_10DME
GfpStatsRxFrame	Number of received data frames.	ONS 15600 SDH: ASAP_4
GfpStatsTxFrame	Number of transmitted data frames.	ONS 15600 SDH: ASAP_4
GfpStatsRxOctets	Number of received data octets.	ONS 15600 SDH: ASAP_4
GfpStatsTxOctets	Number of transmitted data octets.	ONS 15600 SDH: ASAP_4
GfpStatsLFDRaised	Number of GFP LFD frames.	—
GfpStatsRoundTripLatency	Round-trip delay (in milliseconds [ms]) for the end-to-end FC transport.	—
GfpStatsRxSBlkCRCErrors	Number of super block CRC errors detected in the received GFP-T frames.	—
GfpStatsRxDistanceExtBuffers	Number of received buffer credits for GFP-T (valid only if distance extension is enabled).	—
GfpStatsTxDistanceExtBuffers	Number of transmitted buffer credits for GFP-T (valid only if distance extension is enabled).	—
gfpStatscHecRxMBitErrors	Number of received GFP frames with single bit errors in the core header (these errors are uncorrectable).	• ONS 15454 SONET: AR_MXP, AR_XP • ONS 15454 SDH: AR_MXP, AR_XP
gfpStatstHecRxMBitErrors	Number of received GFP frames with single bit errors in the tHec (these errors are uncorrectable).	• ONS 15454 SONET: AR_MXP, AR_XP • ONS 15454 SDH: AR_MXP, AR_XP
NE ID	Name of the selected NE.	—

E.2.19 LEX PM Table—ONS 15454 SONET, ONS 15454 SDH

The LEX PM table provides monitoring of performance parameters related to HDLC particular framing (LEX) on optical interfaces. You can display performance data for 15-minute, 1-day, or real-time increments:

- 15-minute—Data is collected at the quarter-hour (for example, at 10:00, 10:15, and so on). The data shown represents the difference in counter values between successive 15-minute intervals.
- 1-day—Data is collected at midnight GMT. The data shown represents the difference between the counter values read at successive midnights.
- Real-time—When a real-time PM session is running, it polls the NE for *x* number of attributes every 10 to 900 seconds. This feature allows you to examine the current value of a PM parameter in granularities finer than the standard 15-minute or 1-day interval. For more information, see 10.4.4 Managing Real-Time PM Data, page 10-26.

Performance monitoring can be done either on selected modules, or on specific locations in the NE. You can use the Plot tab to plot the data in a graphical view that is stored in the Prime Optical database. See 10.4.6 Using PM Data Graphs, page 10-28.

Note LEX monitors performance parameters only on ADM-10G cards.

The following table describes the fields in the LEX PM table.

Table E-34 Field Descriptions for the LEX PM Table

Field	Description	Cards Supported
Alias ID	Alias name of the selected NE.	—
Module Name	Module for which PM data is displayed.	—
Physical Location	Slot and port number for which PM data is displayed.	—
Interface	Interface name of the selected NE.	—
Time Stamp (*time zone*)	When the data was collected. You can select GMT, Local, or User-Defined time for the Time Stamp display. Use the User Preferences dialog box to make your time zone selection.	—
Maintenance	Whether the NE was under maintenance when the performance data was collected.	—
Rx Total Packets	Number of bytes received since the last counter reset.	• ONS 15454 SONET: ADM-10G • ONS 15454 SDH: ADM-10G
ifInErrors	Total number of received errors.	• ONS 15454 SONET: ADM-10G • ONS 15454 SDH: ADM-10G
Tx Total Packets	Number of packets transmitted since the last counter reset.	• ONS 15454 SONET: ADM-10G • ONS 15454 SDH: ADM-10G

Table E-34 Field Descriptions for the LEX PM Table

Field	Description	Cards Supported
ifInOctets	Number of bytes received since the last counter reset.	• ONS 15454 SONET: ADM-10G • ONS 15454 SDH: ADM-10G
ifOutOctets	Number of bytes transmitted since the last counter reset.	• ONS 15454 SONET: ADM-10G • ONS 15454 SDH: ADM-10G
mediaIndStatsRxFramesBadCRC	Number of received data frames with payload CRC errors when HDLC framing is used.	• ONS 15454 SONET: ADM-10G • ONS 15454 SDH: ADM-10G
hdlcInOctets	Number of bytes received (from the SONET/SDH path) prior to the bytes undergoing HLDC decapsulation by the policy engine.	• ONS 15454 SONET: ADM-10G • ONS 15454 SDH: ADM-10G
hdlcRxAborts	Number of received packets aborted on input.	• ONS 15454 SONET: ADM-10G • ONS 15454 SDH: ADM-10G
hdlcOutOctets	Number of bytes transmitted (to the SONET/SDH path) after the bytes undergoing HLDC encapsulation by the policy engine.	• ONS 15454 SONET: ADM-10G • ONS 15454 SDH: ADM-10G
IfInPayloadCrcErrors	Number of payload CRC errors received since the last counter reset.	• ONS 15454 SONET: ADM-10G • ONS 15454 SDH: ADM-10G

E.2.20 High Order PM Table (Far End)—ONS 15310 MA SDH, ONS 15454 SDH

The SDH High Order PM table shows far-end performance data for the far-end ONS 15310 MA SDH and ONS 15454 SDH high-order sections. You can display performance data for 15-minute, 1-day, or real-time increments:

- 15-minute—Data is collected at the quarter-hour (for example, at 10:00, 10:15, and so on). The data shown represents the difference in counter values between successive 15-minute intervals.
- 1-day—Data is collected at midnight GMT. The data shown represents the difference between the counter values read at successive midnights.
- Real-time—When a real-time PM session is running, it polls the NE for *x* number of attributes every 10 to 900 seconds. This feature allows you to examine the current value of a PM parameter in granularities finer than the standard 15-minute or 1-day interval. For more information, see 10.4.4 Managing Real-Time PM Data, page 10-26.

Performance monitoring can be done either on selected modules, or on specific locations in the NE. You can use the Plot tab to plot the data in a graphical view that is stored in the Prime Optical database. See 10.4.6 Using PM Data Graphs, page 10-28.

The following table describes the fields in the High Order PM table.

Table E-35 Field Descriptions for the High Order PM Table (Far End)

Field	Description	Cards Supported
Alias ID	Alias name of the selected NE.	—
Module Name	Module for which PM data is displayed.	—
Physical Location	Slot and port number for which PM data is displayed.	—
Time Stamp (*time zone*)	When the data was collected. You can select GMT, Local, or User-Defined time for the Time Stamp display. Use the User Preferences dialog box to make your time zone selection.	—
Interface	Interface name of the selected NE.	—
Maintenance	Whether the NE was under maintenance when the performance data was collected.	—
HP-EB	High-order path errored block. HP-EB indicates that one or more bits are in error within a block.	• ONS 15310 MA SDH: CTX, E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SDH: 2.5G_DM, 2.5G_DMP, DS3I, DS3IN, E1N, E1, E1_42, E3, FCMR, MRC_4, MRC_12, MRC_12_2.5G, MXP_2.5G_10E, OC192_XFP, STM1, STM1_8, STM1E_12, STM4, STM4_4, STM16, STM64, TXP_MR_10E
HP-BBE	High-order path background block errors. HP-BBE is an errored block not occurring as part of an SES.	• ONS 15310 MA SDH: CTX, E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SDH: 2.5G_DM, 2.5G_DMP, DS3I, DS3IN, E1N, E1, E1_42, E3, FCMR, MRC_4, MRC_12, MRC_12_2.5G, MXP_2.5G_10E, OC192_XFP, STM1, STM1_8, STM1E_12, STM4, STM4_4, STM16, STM64, TXP_MR_10E
HP-ES	High-order path errored seconds. HP-ES is a one-second period with one or more errored blocks or at least one defect.	• ONS 15310 MA SDH: CTX, E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SDH: 2.5G_DM, 2.5G_DMP, DS3I, DS3IN, E1N, E1, E1_42, E3, FCMR, MRC_4, MRC_12, MRC_12_2.5G, MXP_2.5G_10E, OC192_XFP, STM1, STM1_8, STM1E_12, STM4, STM4_4, STM16, STM64, TXP_MR_10E

Table E-35 Field Descriptions for the High Order PM Table (Far End) (continued)

Field	Description	Cards Supported
HP-SES	High-order path severely errored seconds. HP-SES is a one-second period containing 30 percent or more errored blocks or at least one defect. SES is a subset of ES.	• ONS 15310 MA SDH: CTX, E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SDH: 2.5G_DM, 2.5G_DMP, DS3I, DS3IN, E1N, E1, E1_42, E3, FCMR, MRC_4, MRC_12, MRC_12_2.5G, MXP_2.5G_10E, OC192_XFP, STM1, STM1_8, STM1E_12, STM4, STM4_4, STM16, STM64, TXP_MR_10E
HP-UAS	High-order path unavailable seconds. HP-UAS is a count of the seconds when the VC path was unavailable. A high-order path becomes unavailable when ten consecutive seconds occur that qualify as HP-SESs, and it continues to be unavailable until ten consecutive seconds occur that do not qualify as HP-SESs.	• ONS 15310 MA SDH: CTX, E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SDH: 2.5G_DM, 2.5G_DMP, DS3I, DS3IN, E1N, E1, E1_42, E3, FCMR, MRC_4, MRC_12, MRC_12_2.5G, MXP_2.5G_10E, OC192_XFP, STM1, STM1_8, STM1E_12, STM4, STM4_4, STM16, STM64, TXP_MR_10E
HP-ESR	High-order path errored seconds ratio. HP-ESR is the ratio of errored seconds to total seconds in available time during a fixed measurement interval.	• ONS 15310 MA SDH: CTX, E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SDH: 2.5G_DM, 2.5G_DMP, DS3I, DS3IN, E1N, E1, E1_42, E3, FCMR, MRC_4, MRC_12, MRC_12_2.5G, MXP_2.5G_10E, OC192_XFP, STM1, STM1_8, STM1E_12, STM4, STM4_4, STM16, STM64, TXP_MR_10E
HP-SESR	High-order path severely errored seconds ratio. HP-SESR is the ratio of SES to total seconds in available time during a fixed measurement interval.	• ONS 15310 MA SDH: CTX, E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SDH: 2.5G_DM, 2.5G_DMP, DS3I, DS3IN, E1N, E1, E1_42, E3, FCMR, MRC_4, MRC_12, MRC_12_2.5G, MXP_2.5G_10E, OC192_XFP, STM1, STM1_8, STM1E_12, STM4, STM4_4, STM16, STM64, TXP_MR_10E
HP-BBER	High-order path background block error ratio. HP-BBER is the ratio of BBE to total blocks in available time during a fixed measurement interval. The count of total blocks excludes all blocks during SESs.	• ONS 15310 MA SDH: CTX, E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SDH: 2.5G_DM, 2.5G_DMP, DS3I, DS3IN, E1N, E1, E1_42, E3, FCMR, MRC_4, MRC_12, MRC_12_2.5G, MXP_2.5G_10E, OC192_XFP, STM1, STM1_8, STM1E_12, STM4, STM4_4, STM16, STM64, TXP_MR_10E

Table E-35 Field Descriptions for the High Order PM Table (Far End) (continued)

Field	Description	Cards Supported
HP-FC	High-order path failure count. HP-FC is a count of the number of failed events.	• ONS 15310 MA SDH: CTX, E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SDH: MRC_4, MRC_12_2.5G
NE ID	Name of the selected NE.	—

E.2.21 High Order PM Table (Far End)—ONS 15600 SDH

The High Order PM table shows far-end performance data for the ONS 15600 SDH high-order section. You can display performance data for 15-minute, 1-day, or real-time increments:

- 15-minute—Data is collected at the quarter-hour (for example, at 10:00, 10:15, and so on). The data shown represents the difference in counter values between successive 15-minute intervals.
- 1-day—Data is collected at midnight GMT. The data shown represents the difference between the counter values read at successive midnights.
- Real-time—When a real-time PM session is running, it polls the NE for *x* number of attributes every 10 to 900 seconds. This feature allows you to examine the current value of a PM parameter in granularities finer than the standard 15-minute or 1-day interval. For more information, see 10.4.4 Managing Real-Time PM Data, page 10-26.

Performance monitoring can be done either on selected modules, or on specific locations in the NE. You can use the Plot tab to plot the data in a graphical view that is stored in the Prime Optical database. See 10.4.6 Using PM Data Graphs, page 10-28.

The following table describes the fields in the High Order PM table.

Table E-36 Field Descriptions for the High Order PM Table (Far End)

Field	Description	Cards Supported
Alias ID	Alias name of the selected NE.	—
Module Name	Module for which PM data is displayed.	—
Physical Location	Slot and port number for which PM data is displayed.	—
Time Stamp (*time zone*)	When the data was collected. You can select GMT, Local, or User-Defined time for the Time Stamp display. Use the User Preferences dialog box to make your time zone selection.	—
Interface	Interface name of the selected NE.	—
Maintenance	Whether the NE was under maintenance when the performance data was collected.	—
HP-EB	High-order path errored blocks (HP-EB) indicates that bits are in error within a block.	ASAP_4, STM16_16, STM64_4
HP-ES	High-order path errored seconds (HP-ES) is a one-second period with one or more errored blocks or at least one defect.	ASAP_4, STM16_16, STM64_4

Table E-36 Field Descriptions for the High Order PM Table (Far End) (continued)

Field	Description	Cards Supported
HP-SES	High-order path severely errored seconds (HP-SES) is a one-second period containing more than 30 percent errored blocks or at least one defect. SES is a subset of ES.	ASAP_4, STM16_16, STM64_4
HP-UAS	High-order path unavailable seconds (HP-UAS) is a count of the seconds when the VC path was unavailable. A low-order path becomes unavailable when ten consecutive seconds occur that qualify as HP-SESs, and it continues to be unavailable until ten consecutive seconds occur that do not qualify as HP-SESs.	ASAP_4, STM16_16, STM64_4
HP-FC	High-order path failure count (HP-FC) is a count of the number of failed events.	ASAP_4, STM16_16, STM64_4
HP-BBE	High-order path background block errors (HP-BBE) is an errored block not occurring as part of a severely errored second (SES).	ASAP_4, STM16_16, STM64_4
HP-ESR	High-order path errored seconds ratio (HP-ESR) is the ratio of errored seconds to total seconds in available time during a fixed measurement interval.	ASAP_4, STM16_16, STM64_4
HP-SESR	High-order path severely errored seconds ratio (HP-SESR) is the ratio of SESs to total seconds in available time during a fixed measurement interval.	ASAP_4, STM16_16, STM64_4
HP-BBER	High-order path background block error ratio (HP-BBER) is the ratio of background block errors (BBEs) to total blocks in available time during a fixed measurement interval. The count of total blocks excludes all blocks during SESs.	ASAP_4, STM16_16, STM64_4
NE ID	Name of the selected NE.	—

E.2.22 High Order PM Table—ONS 15310 MA SDH, ONS 15454 SDH

The High Order PM table shows performance data for the ONS 15310 MA SDH and ONS 15454 SDH physical sections. You can display performance data for 15-minute, 1-day, or real-time increments:

- 15-minute—Data is collected at the quarter-hour (for example, at 10:00, 10:15, and so on). The data shown represents the difference in counter values between successive 15-minute intervals.
- 1-day—Data is collected at midnight GMT. The data shown represents the difference between the counter values read at successive midnights.
- Real-time—When a real-time PM session is running, it polls the NE for *x* number of attributes every 10 to 900 seconds. This feature allows you to examine the current value of a PM parameter in granularities finer than the standard 15-minute or 1-day interval. For more information, see 10.4.4 Managing Real-Time PM Data, page 10-26.

Performance monitoring can be done either on selected modules, or on specific locations in the NE. You can use the Plot tab to plot the data in a graphical view that is stored in the Prime Optical database. See 10.4.6 Using PM Data Graphs, page 10-28.

The following table describes the fields in the High Order PM table.

Table E-37 Field Descriptions for the High Order PM Table

Field	Description	Cards Supported
Alias ID	Alias name of the selected NE.	—
Module Name	Module for which PM data is displayed.	—
Physical Location	Slot and port number for which PM data is displayed.	—
Interface	Interface name of the selected NE.	—
Time Stamp (*time zone*)	When the data was collected. You can select GMT, Local, or User-Defined time for the Time Stamp display. Use the User Preferences dialog box to make your time zone selection.	—
Maintenance	Whether the NE was under maintenance when the performance data was collected.	—
HP-EB	High-order path errored blocks (HP-EB) indicates that one or more bits are in error within a block.	• ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SDH: 2.5G_DM, 2.5G_DMP, DS3I, DS3IN, E1N, E1, E1_42, E3, FCMR, MRC_4, MRC_12, MRC_12_2.5G, MXP_2.5G_10E, OC192_XFP, STM1, STM1_8, STM1E_12, STM4, STM4_4, STM16, STM64, TXP_MR_10E
HP-ES	High-order path errored seconds (HP-ES) is a one-second period with one or more errored blocks or at least one defect.	• ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SDH: 2.5G_DM, 2.5G_DMP, DS3I, DS3IN, E1N, E1, E1_42, E3, FCMR, MRC_4, MRC_12, MRC_12_2.5G, MXP_2.5G_10E, OC192_XFP, STM1, STM1_8, STM1E_12, STM4, STM4_4, STM16, STM64, TXP_MR_10E
HP-SES	High-order path severely errored seconds (HP-SES) is a one-second period containing greater than 30% errored blocks or at least one defect. SES is a subset of ES.	• ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SDH: 2.5G_DM, 2.5G_DMP, DS3I, DS3IN, E1N, E1, E1_42, E3, FCMR, MRC_4, MRC_12, MRC_12_2.5G, MXP_2.5G_10E, OC192_XFP, STM1, STM1_8, STM1E_12, STM4, STM4_4, STM16, STM64, TXP_MR_10E

Table E-37 Field Descriptions for the High Order PM Table (continued)

Field	Description	Cards Supported
HP-UAS	High-order path unavailable seconds (HP-UAS) is a count of the seconds when the VC path was unavailable. A low-order path becomes unavailable when ten consecutive seconds occur that qualify as HP-SESs, and it continues to be unavailable until ten consecutive seconds occur that do not qualify as HP-SESs.	• ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SDH: 2.5G_DM, 2.5G_DMP, DS3I, DS3IN, E1N, E1, E1_42, E3, FCMR, MRC_4, MRC_12, MRC_12_2.5G, MXP_2.5G_10E, OC192_XFP, STM1, STM1_8, STM1E_12, STM4, STM4_4, STM16, STM64, TXP_MR_10E
HP-FC	Number of failed events.	• ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SDH: MRC_4, MRC_12_2.5G
HP-BBE	High-order path background block errors (HP-BBE) is an errored block not occurring as part of an SES.	• ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SDH: 2.5G_DM, 2.5G_DMP, DS3I, DS3IN, E1N, E1, E1_42, E3, FCMR, MRC_4, MRC_12, MRC_12_2.5G, MXP_2.5G_10E, OC192_XFP, STM1, STM1_8, STM1E_12, STM4, STM4_4, STM16, STM64, TXP_MR_10E
HP-ESR	High-order path errored seconds ratio (HP-ESR) is the ratio of errored seconds to total seconds in available time during a fixed measurement interval.	• ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SDH: 2.5G_DM, 2.5G_DMP, DS3I, DS3IN, E1N, E1, E1_42, E3, FCMR, MRC_4, MRC_12, MRC_12_2.5G, MXP_2.5G_10E, OC192_XFP, STM1, STM1_8, STM1E_12, STM4, STM4_4, STM16, STM64, TXP_MR_10E

Table E-37 Field Descriptions for the High Order PM Table (continued)

Field	Description	Cards Supported
HP-SESR	High-order path severely errored seconds ratio (HP-SESR) is the ratio of SES to total seconds in available time during a fixed measurement interval.	• ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SDH: 2.5G_DM, 2.5G_DMP, DS3I, DS3IN, E1N, E1, E1_42, E3, FCMR, MRC_4, MRC_12, MRC_12_2.5G, MXP_2.5G_10E, OC192_XFP, STM1, STM1_8, STM1E_12, STM4, STM4_4, STM16, STM64, TXP_MR_10E
HP-BBER	High-order path background block error ratio (HP-BBER) is the ratio of background block errors (BBEs) to total blocks in available time during a fixed measurement interval. The count of total blocks excludes all blocks during SESs.	• ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SDH: 2.5G_DM, 2.5G_DMP, DS3I, DS3IN, E1N, E1, E1_42, E3, FCMR, MRC_4, MRC_12, MRC_12_2.5G, MXP_2.5G_10E, OC192_XFP, STM1, STM1_8, STM1E_12, STM4, STM4_4, STM16, STM64, TXP_MR_10E
Positive Pointer Justification Count Path Detected	Positive pointer justification count, path detected is a count of the positive pointer justifications detected on a particular path on an incoming SDH signal.	• ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SDH: 2.5G_DM, 2.5G_DMP, FCMR, MRC_4, MRC_12, MRC_12_2.5G, MXP_2.5G_10E, OC192_XFP, STM1, STM1_8, STM1E_12, STM4, STM4_4, STM16, STM64, TXP_MR_10E
HP-NPJC-Pdet	HP-NPJC-Pdet multiplex section, negative pointer justification count, path detected (MS-NPJC-Pdet) is a count of the negative pointer justifications detected on a particular path on an incoming SDH signal.	• ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SDH: 2.5G_DM, 2.5G_DMP, FCMR, MRC_4, MRC_12, MRC_12_2.5G, MXP_2.5G_10E, OC192_XFP, STM1, STM1_8, STM1E_12, STM4, STM4_4, STM16, STM64, TXP_MR_10E

Table E-37 Field Descriptions for the High Order PM Table (continued)

Field	Description	Cards Supported
HP-PPJC-Pgen	HP-PPJC-Pgen multiplex section, positive pointer justification count, path generated (MS-PPJC-Pgen) is a count of the positive pointer justifications generated for a particular path.	• ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SDH: 2.5G_DM, 2.5G_DMP, FCMR, MRC_4, MRC_12, MRC_12_2.5G, MXP_2.5G_10E, OC192_XFP, STM1, STM1_8, STM1E_12, STM4, STM4_4, STM16, STM64, TXP_MR_10E
HP-NPJC-Pgen	HP-NPJC-Pgen multiplex section, negative pointer justification count, path generated (MS-NPJC-Pgen) is a count of the negative pointer justifications generated for a particular path.	• ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SDH: 2.5G_DM, 2.5G_DMP, FCMR, MRC_4, MRC_12, MRC_12_2.5G, MXP_2.5G_10E, OC192_XFP, STM1, STM1_8, STM1E_12, STM4, STM4_4, STM16, STM64, TXP_MR_10E
HP-PJ-DIFF	Sum of the absolute values of differences between positive transmitted and received, and negative transmitted and received. The important metric on pointer justification is not the exact counts, but how many were absorbed.	• ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SDH: 2.5G_DM, 2.5G_DMP, FCMR, MRC_4, MRC_12, MRC_12_2.5G, MXP_2.5G_10E, OC192_XFP, STM1, STM1_8, STM1E_12, STM4, STM4_4, STM16, STM64, TXP_MR_10E
HP-PJCS-Pdet	Number of high-order path pointer justification count seconds detected on a particular path.	• ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SDH: 2.5G_DM, 2.5G_DMP, FCMR, MRC_4, MRC_12, MRC_12_2.5G, MXP_2.5G_10E, OC192_XFP, STM1, STM1_8, STM1E_12, STM4, STM4_4, STM16, STM64, TXP_MR_10E

Table E-37 Field Descriptions for the High Order PM Table (continued)

Field	Description	Cards Supported
HP-PJCS-Pgen	Number of high-order path pointer justification count seconds generated for a particular path.	• ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SDH: 2.5G_DM, 2.5G_DMP, FCMR, MRC_4, MRC_12, MRC_12_2.5G, MXP_2.5G_10E, OC192_XFP, STM1, STM1_8, STM1E_12, STM4, STM4_4, STM16, STM64, TXP_MR_10E
NE ID	Name of the selected NE.	—

E.2.23 High Order PM Table—ONS 15600 SDH

The High Order PM table shows performance data for the ONS 15600 SDH physical section. You can display performance data for 15-minute, 1-day, or real-time increments:

- 15-minute—Data is collected at the quarter-hour (for example, at 10:00, 10:15, and so on). The data shown represents the difference in counter values between successive 15-minute intervals.
- 1-day—Data is collected at midnight GMT. The data shown represents the difference between the counter values read at successive midnights.
- Real-time—When a real-time PM session is running, it polls the NE for *x* number of attributes every 10 to 900 seconds. This feature allows you to examine the current value of a PM parameter in granularities finer than the standard 15-minute or 1-day interval. For more information, see 10.4.4 Managing Real-Time PM Data, page 10-26.

Performance monitoring can be done either on selected modules, or on specific locations in the NE. You can use the Plot tab to plot the data in a graphical view that is stored in the Prime Optical database. See 10.4.6 Using PM Data Graphs, page 10-28.

The following table describes the fields in the High Order PM table.

Table E-38 Field Descriptions for the High Order PM Table

Field	Description	Cards Supported
Alias ID	Alias name of the selected NE.	—
Module Name	Module for which PM data is displayed.	—
Physical Location	Slot and port number for which PM data is displayed.	—
Interface	Interface name of the selected NE.	—
Time Stamp *(time zone)*	When the data was collected. You can select GMT, Local, or User-Defined time for the Time Stamp display. Use the User Preferences dialog box to make your time zone selection.	—
Maintenance	Whether the NE was under maintenance when the performance data was collected.	—

Table E-38 Field Descriptions for the High Order PM Table (continued)

Field	Description	Cards Supported
HP-EB	High-order path errored blocks (HP-EB) indicates that one or more bits are in error within a block.	ASAP_4, STM16_16, STM64_4
HP-ES	High-order path errored seconds (HP-ES) is a one-second period with one or more errored blocks or at least one defect.	ASAP_4, STM16_16, STM64_4
HP-SES	High-order path severely errored seconds (HP-SES) is a one-second period containing greater than 30% errored blocks or at least one defect. SES is a subset of ES.	ASAP_4, STM16_16, STM64_4
HP-UAS	High-order path unavailable seconds (HP-UAS) is a count of the seconds when the VC path was unavailable. A low-order path becomes unavailable when ten consecutive seconds occur that qualify as HP-SESs, and it continues to be unavailable until ten consecutive seconds occur that do not qualify as HP-SESs.	ASAP_4, STM16_16, STM64_4
HP-FC	High-order path failure count (HP-FC) is a count of the number of failed events.	ASAP_4, STM16_16, STM64_4
HP-BBE	High-order path background block errors (HP-BBE) is an errored block not occurring as part of an SES.	ASAP_4, STM16_16, STM64_4
HP-ESR	High-order path errored seconds ratio (HP-ESR) is the ratio of errored seconds to total seconds in available time during a fixed measurement interval.	ASAP_4, STM16_16, STM64_4
HP-SESR	High-order path severely errored seconds ratio (HP-SESR) is the ratio of SES to total seconds in available time during a fixed measurement interval.	ASAP_4, STM16_16, STM64_4
HP-BBER	High-order path background block error ratio (HP-BBER) is the ratio of BBEs to total blocks in available time during a fixed measurement interval. The count of total blocks excludes all blocks during SESs.	ASAP_4, STM64_4, STM16_16
HP-PPJC-Pdet	HP-PPJC-Pdet multiplex section, positive pointer justification count, path detected (MS-PPJC-Pdet) is a count of the positive pointer justifications detected on a particular path on an incoming SDH signal.	STM64_4, STM16_16
HP-NPJC-Pdet	HP-NPJC-Pdet multiplex section, negative pointer justification count, path detected (MS-NPJC-Pdet) is a count of the negative pointer justifications detected on a particular path on an incoming SDH signal.	STM64_4, STM16_16
HP-PPJC-Pgen	HP-PPJC-Pgen multiplex section, positive pointer justification count, path generated (MS-PPJC-Pgen) is a count of the positive pointer justifications generated for a particular path.	STM64_4, STM16_16
HP-NPJC-Pgen	HP-NPJC-Pgen multiplex section, negative pointer justification count, path generated (MS-NPJC-Pgen) is a count of the negative pointer justifications generated for a particular path.	STM64_4, STM16_16
NE ID	Name of the selected NE.	—

E.2.24 IP SLA PM Table—ONS 15310 CL, ONS 15310 MA SONET, ONS 15310 MA SDH, ONS 15454 SONET, and ONS 15454 SDH

The IP SLA PM table allows you to monitor service-level agreements (SLAs) for IP networks. Service levels are measured by downtime, bandwidth, latency, jitter, packet loss, and so on. These measurements are controllable and do not depend on network traffic.

You can display IP SLA performance data in real time. When a real-time PM session is running, it polls the NE for *x* number of attributes every 10 to 900 seconds. This feature allows you to examine the current value of a PM parameter in granularities finer than the standard 15-minute or 1-day interval. For more information, see 10.4.4 Managing Real-Time PM Data, page 10-26.

You can use the Plot tab to plot the data in a graphical view that is stored in the Prime Optical database. See 10.4.6 Using PM Data Graphs, page 10-28.

Note

- You can launch the IP SLA PM table only from the IP SLA table, not from the Domain Explorer or the NE Explorer.
- Performance monitoring is disabled for the IP SLA echo operation. If you select an echo row in the IP SLA PM table, the Performance menu is disabled.

The following table describes the fields in the IP SLA PM table.

Table E-39 Field Descriptions for the IP SLA PM Table

Field	Description	Cards Supported
Alias NE ID	Alias name of the selected NE.	—
Module Name	Module for which PM data is displayed.	—
Physical Location	Slot and port number for which PM data is displayed.	—
Interface	Interface name of the selected NE.	—
Time Stamp (*time zone*)	When the data was collected. You can select GMT, Local, or User-Defined time for the Time Stamp display. Use the User Preferences dialog box to make your time zone selection.	—
NE ID	Name of the selected NE.	—
Validity	Whether the data in the entry is valid.	—
rttMonJitterStatsCompletions	Number of jitter operations that have completed successfully.	• ONS 15310 CL—ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15310 MA SONET—ML-100T-8 • ONS 15310 MA SDH—ML-100T-8 • ONS 15454 SONET—ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15454 SDH—ML100T, ML100X-8, ML1000, ML-MR-10

Table E-39 Field Descriptions for the IP SLA PM Table (continued)

Field	Description	Cards Supported
rttMonJitterStatsOverThresholds	Number of jitter operations that violate the threshold.	• ONS 15310 CL—ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15310 MA SONET—ML-100T-8 • ONS 15310 MA SDH—ML-100T-8 • ONS 15454 SONET—ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15454 SDH—ML100T, ML100X-8, ML1000, ML-MR-10
rttMonJitterStatsNumOfRTT	Number of successful round trips.	• ONS 15310 CL—ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15310 MA SONET—ML-100T-8 • ONS 15310 MA SDH—ML-100T-8 • ONS 15454 SONET—ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15454 SDH—ML100T, ML100X-8, ML1000, ML-MR-10
rttMonJitterStatsRTTSum	Sum of the round-trip values, in milliseconds (ms).	• ONS 15310 CL—ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15310 MA SONET—ML-100T-8 • ONS 15310 MA SDH—ML-100T-8 • ONS 15454 SONET—ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15454 SDH—ML100T, ML100X-8, ML1000, ML-MR-10
rttMonJitterStatsRTTSum2Low	Sum of the squares of the low round-trip values, in ms.	• ONS 15310 CL—ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15310 MA SONET—ML-100T-8 • ONS 15310 MA SDH—ML-100T-8 • ONS 15454 SONET—ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15454 SDH—ML100T, ML100X-8, ML1000, ML-MR-10
rttMonJitterStatsRTTSum2High	Sum of the squares of the high round-trip values, in ms.	• ONS 15310 CL—ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15310 MA SONET—ML-100T-8 • ONS 15310 MA SDH—ML-100T-8 • ONS 15454 SONET—ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15454 SDH—ML100T, ML100X-8, ML1000, ML-MR-10

Table E-39 Field Descriptions for the IP SLA PM Table (continued)

Field	Description	Cards Supported
rttMonJitterStatsRTTMin	Minimum number of round-trip times (RTTs) that were measured successfully.	• ONS 15310 CL—ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15310 MA SONET—ML-100T-8 • ONS 15310 MA SDH—ML-100T-8 • ONS 15454 SONET—ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15454 SDH—ML100T, ML100X-8, ML1000, ML-MR-10
rttMonJitterStatsRTTMax	Maximum number of RTTs that were measured successfully.	• ONS 15310 CL—ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15310 MA SONET—ML-100T-8 • ONS 15310 MA SDH—ML-100T-8 • ONS 15454 SONET—ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15454 SDH—ML100T, ML100X-8, ML1000, ML-MR-10
rttMonJitterStatsMinOfPositivesSD	Minimum positive jitter values from the source to the destination, in ms. Positive jitter values indicate delays in receiving time from one packet to another.	• ONS 15310 CL—ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15310 MA SONET—ML-100T-8 • ONS 15310 MA SDH—ML-100T-8 • ONS 15454 SONET—ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15454 SDH—ML100T, ML100X-8, ML1000, ML-MR-10
rttMonJitterStatsMaxOfPositivesSD	Maximum positive jitter values from the source to the destination, in ms. Positive jitter values indicate delays in receiving time from one packet to another.	• ONS 15310 CL—ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15310 MA SONET—ML-100T-8 • ONS 15310 MA SDH—ML-100T-8 • ONS 15454 SONET—ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15454 SDH—ML100T, ML100X-8, ML1000, ML-MR-10
rttMonJitterStatsNumOfPositivesSD	Number of jitter values from the source to the destination that are positive (that is, network latency increases for two consecutive test packets).	• ONS 15310 CL—ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15310 MA SONET—ML-100T-8 • ONS 15310 MA SDH—ML-100T-8 • ONS 15454 SONET—ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15454 SDH—ML100T, ML100X-8, ML1000, ML-MR-10

Table E-39 Field Descriptions for the IP SLA PM Table (continued)

Field	Description	Cards Supported
rttMonJitterStatsSumOfPositivesSD	Sum of the positive values, in ms.	• ONS 15310 CL—ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15310 MA SONET—ML-100T-8 • ONS 15310 MA SDH—ML-100T-8 • ONS 15454 SONET—ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15454 SDH—ML100T, ML100X-8, ML1000, ML-MR-10
rttMonJitterStatsSum2PositivesSDLow	Sum of the squares of the low positive values.	• ONS 15310 CL—ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15310 MA SONET—ML-100T-8 • ONS 15310 MA SDH—ML-100T-8 • ONS 15454 SONET—ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15454 SDH—ML100T, ML100X-8, ML1000, ML-MR-10
rttMonJitterStatsSum2PositivesSDHigh	Sum of the squares of the high positive values.	• ONS 15310 CL—ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15310 MA SONET—ML-100T-8 • ONS 15310 MA SDH—ML-100T-8 • ONS 15454 SONET—ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15454 SDH—ML100T, ML100X-8, ML1000, ML-MR-10
rttMonJitterStatsMinOfNegativesSD	Minimum negative jitter values from the source to the destination. The absolute value is given.	• ONS 15310 CL—ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15310 MA SONET—ML-100T-8 • ONS 15310 MA SDH—ML-100T-8 • ONS 15454 SONET—ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15454 SDH—ML100T, ML100X-8, ML1000, ML-MR-10
rttMonJitterStatsMaxOfNegativesSD	Maximum negative jitter values from the source to the destination. The absolute value is given.	• ONS 15310 CL—ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15310 MA SONET—ML-100T-8 • ONS 15310 MA SDH—ML-100T-8 • ONS 15454 SONET—ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15454 SDH—ML100T, ML100X-8, ML1000, ML-MR-10

Table E-39 Field Descriptions for the IP SLA PM Table (continued)

Field	Description	Cards Supported
rttMonJitterStatsNumOfNegativesSD	Number of jitter values from the source to the destination that are negative (that is, network latency decreases for two consecutive test packets).	• ONS 15310 CL—ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15310 MA SONET—ML-100T-8 • ONS 15310 MA SDH—ML-100T-8 • ONS 15454 SONET—ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15454 SDH—ML100T, ML100X-8, ML1000, ML-MR-10
rttMonJitterStatsSumOfNegativesSD	Sum of the negative values.	• ONS 15310 CL—ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15310 MA SONET—ML-100T-8 • ONS 15310 MA SDH—ML-100T-8 • ONS 15454 SONET—ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15454 SDH—ML100T, ML100X-8, ML1000, ML-MR-10
rttMonJitterStatsSum2NegativesSDLow	Sum of the squares of the negative low values.	• ONS 15310 CL—ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15310 MA SONET—ML-100T-8 • ONS 15310 MA SDH—ML-100T-8 • ONS 15454 SONET—ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15454 SDH—ML100T, ML100X-8, ML1000, ML-MR-10
rttMonJitterStatsSum2NegativesSDHigh	Sum of the squares of the negative high values.	• ONS 15310 CL—ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15310 MA SONET—ML-100T-8 • ONS 15310 MA SDH—ML-100T-8 • ONS 15454 SONET—ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15454 SDH—ML100T, ML100X-8, ML1000, ML-MR-10
rttMonJitterStatsMinOfPositivesDS	Minimum of all positive jitter values from packets sent from the destination to the source.	• ONS 15310 CL—ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15310 MA SONET—ML-100T-8 • ONS 15310 MA SDH—ML-100T-8 • ONS 15454 SONET—ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15454 SDH—ML100T, ML100X-8, ML1000, ML-MR-10

Table E-39 Field Descriptions for the IP SLA PM Table (continued)

Field	Description	Cards Supported
rttMonJitterStatsMaxOfPositivesDS	Maximum of all positive jitter values from packets sent from the destination to the source.	• ONS 15310 CL—ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15310 MA SONET—ML-100T-8 • ONS 15310 MA SDH—ML-100T-8 • ONS 15454 SONET—ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15454 SDH—ML100T, ML100X-8, ML1000, ML-MR-10
rttMonJitterStatsNumOfPositivesDS	Sum of numbers of all positive jitter values from packets sent from the destination to the source.	• ONS 15310 CL—ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15310 MA SONET—ML-100T-8 • ONS 15310 MA SDH—ML-100T-8 • ONS 15454 SONET—ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15454 SDH—ML100T, ML100X-8, ML1000, ML-MR-10
rttMonJitterStatsSumOfPositivesDS	Sum of RTTs of all positive jitter values from packets sent from the destination to the source.	• ONS 15310 CL—ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15310 MA SONET—ML-100T-8 • ONS 15310 MA SDH—ML-100T-8 • ONS 15454 SONET—ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15454 SDH—ML100T, ML100X-8, ML1000, ML-MR-10
rttMonJitterStatsSum2PositivesDSLow	Sum of squares of RTTs of all positive jitter values from packets sent from the destination to the source (low-order 32 bits).	• ONS 15310 CL—ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15310 MA SONET—ML-100T-8 • ONS 15310 MA SDH—ML-100T-8 • ONS 15454 SONET—ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15454 SDH—ML100T, ML100X-8, ML1000, ML-MR-10
rttMonJitterStatsSum2PositivesDSHigh	Sum of the squares of RTTs of all positive jitter values from packets sent from the destination to the source (high-order 32 bits).	• ONS 15310 CL—ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15310 MA SONET—ML-100T-8 • ONS 15310 MA SDH—ML-100T-8 • ONS 15454 SONET—ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15454 SDH—ML100T, ML100X-8, ML1000, ML-MR-10

Table E-39 Field Descriptions for the IP SLA PM Table (continued)

Field	Description	Cards Supported
rttMonJitterStatsMinOfNegativesDS	Minimum of all negative jitter values from packets sent from the destination to the source.	• ONS 15310 CL—ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15310 MA SONET—ML-100T-8 • ONS 15310 MA SDH—ML-100T-8 • ONS 15454 SONET—ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15454 SDH—ML100T, ML100X-8, ML1000, ML-MR-10
rttMonJitterStatsMaxOfNegativesDS	Maximum of all negative jitter values from packets sent from the destination to the source.	• ONS 15310 CL—ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15310 MA SONET—ML-100T-8 • ONS 15310 MA SDH—ML-100T-8 • ONS 15454 SONET—ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15454 SDH—ML100T, ML100X-8, ML1000, ML-MR-10
rttMonJitterStatsNumOfNegativesDS	Sum of numbers of all negative jitter values from packets sent from the destination to the source.	• ONS 15310 CL—ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15310 MA SONET—ML-100T-8 • ONS 15310 MA SDH—ML-100T-8 • ONS 15454 SONET—ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15454 SDH—ML100T, ML100X-8, ML1000, ML-MR-10
rttMonJitterStatsSumOfNegativesDS	Sum of RTTs of all negative jitter values from packets sent from the destination to the source.	• ONS 15310 CL—ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15310 MA SONET—ML-100T-8 • ONS 15310 MA SDH—ML-100T-8 • ONS 15454 SONET—ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15454 SDH—ML100T, ML100X-8, ML1000, ML-MR-10
rttMonJitterStatsSum2NegativesDSLow	Sum of the squares of RTTs of all negative jitter values from packets sent from the destination to the source (low-order 32 bits).	• ONS 15310 CL—ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15310 MA SONET—ML-100T-8 • ONS 15310 MA SDH—ML-100T-8 • ONS 15454 SONET—ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15454 SDH—ML100T, ML100X-8, ML1000, ML-MR-10

Table E-39 Field Descriptions for the IP SLA PM Table (continued)

Field	Description	Cards Supported
rttMonJitterStatsSum2NegativesDSHigh	Sum of the squares of RTTs of all negative jitter values from packets sent from the destination to the source (high-order 32 bits).	• ONS 15310 CL—ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15310 MA SONET—ML-100T-8 • ONS 15310 MA SDH—ML-100T-8 • ONS 15454 SONET—ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15454 SDH—ML100T, ML100X-8, ML1000, ML-MR-10
rttMonJitterStatsPacketLossSD	Number of packets lost from the source to the destination.	• ONS 15310 CL—ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15310 MA SONET—ML-100T-8 • ONS 15310 MA SDH—ML-100T-8 • ONS 15454 SONET—ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15454 SDH—ML100T, ML100X-8, ML1000, ML-MR-10
rttMonJitterStatsPacketLossDS	Number of packets lost from the destination to the source.	• ONS 15310 CL—ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15310 MA SONET—ML-100T-8 • ONS 15310 MA SDH—ML-100T-8 • ONS 15454 SONET—ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15454 SDH—ML100T, ML100X-8, ML1000, ML-MR-10
rttMonJitterStatsPacketOutOfSequence	Number of packets that were returned out of order.	• ONS 15310 CL—ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15310 MA SONET—ML-100T-8 • ONS 15310 MA SDH—ML-100T-8 • ONS 15454 SONET—ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15454 SDH—ML100T, ML100X-8, ML1000, ML-MR-10
rttMonJitterStatsPacketMIA	Number of packets lost where the direction (source-to-destination or destination-to-source) cannot be determined.	• ONS 15310 CL—ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15310 MA SONET—ML-100T-8 • ONS 15310 MA SDH—ML-100T-8 • ONS 15454 SONET—ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15454 SDH—ML100T, ML100X-8, ML1000, ML-MR-10

Table E-39 Field Descriptions for the IP SLA PM Table (continued)

Field	Description	Cards Supported
rttMonJitterStatsPacketLateArrival	Number of packets that arrived after the timeout.	• ONS 15310 CL—ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15310 MA SONET—ML-100T-8 • ONS 15310 MA SDH—ML-100T-8 • ONS 15454 SONET—ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15454 SDH—ML100T, ML100X-8, ML1000, ML-MR-10
rttMonJitterStatsError	Number of times an operation could not be started due to other internal failures.	• ONS 15310 CL—ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15310 MA SONET—ML-100T-8 • ONS 15310 MA SDH—ML-100T-8 • ONS 15454 SONET—ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15454 SDH—ML100T, ML100X-8, ML1000, ML-MR-10
rttMonJitterStatsBusies	Number of times the operation could not be started because the previously scheduled run was not finished.	• ONS 15310 CL—ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15310 MA SONET—ML-100T-8 • ONS 15310 MA SDH—ML-100T-8 • ONS 15454 SONET—ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15454 SDH—ML100T, ML100X-8, ML1000, ML-MR-10
rttMonJitterStatsOWSumSD	Sum of one-way times from the source to the destination.	• ONS 15310 CL—ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15310 MA SONET—ML-100T-8 • ONS 15310 MA SDH—ML-100T-8 • ONS 15454 SONET—ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15454 SDH—ML100T, ML100X-8, ML1000, ML-MR-10
rttMonJitterStatsOWSum2SDLow	Sum of the squares of one-way times from the source to the destination (low-order 32 bits).	• ONS 15310 CL—ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15310 MA SONET—ML-100T-8 • ONS 15310 MA SDH—ML-100T-8 • ONS 15454 SONET—ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15454 SDH—ML100T, ML100X-8, ML1000, ML-MR-10

Table E-39 Field Descriptions for the IP SLA PM Table (continued)

Field	Description	Cards Supported
rttMonJitterStatsOWSum2SDHigh	Sum of the squares of one-way times from the source to the destination (high-order 32 bits).	• ONS 15310 CL—ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15310 MA SONET—ML-100T-8 • ONS 15310 MA SDH—ML-100T-8 • ONS 15454 SONET—ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15454 SDH—ML100T, ML100X-8, ML1000, ML-MR-10
rttMonJitterStatsOWMinSD	Minimum of all one-way times from the source to the destination.	• ONS 15310 CL—ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15310 MA SONET—ML-100T-8 • ONS 15310 MA SDH—ML-100T-8 • ONS 15454 SONET—ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15454 SDH—ML100T, ML100X-8, ML1000, ML-MR-10
rttMonJitterStatsOWMaxSD	Maximum of all one-way times from the source to the destination.	• ONS 15310 CL—ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15310 MA SONET—ML-100T-8 • ONS 15310 MA SDH—ML-100T-8 • ONS 15454 SONET—ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15454 SDH—ML100T, ML100X-8, ML1000, ML-MR-10
rttMonJitterStatsOWSumDS	Sum of one-way times from the destination to the source.	• ONS 15310 CL—ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15310 MA SONET—ML-100T-8 • ONS 15310 MA SDH—ML-100T-8 • ONS 15454 SONET—ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15454 SDH—ML100T, ML100X-8, ML1000, ML-MR-10
rttMonJitterStatsOWSum2DSLow	Sum of the squares of one-way times from the destination to the source (low-order 32 bits).	• ONS 15310 CL—ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15310 MA SONET—ML-100T-8 • ONS 15310 MA SDH—ML-100T-8 • ONS 15454 SONET—ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15454 SDH—ML100T, ML100X-8, ML1000, ML-MR-10

Table E-39 Field Descriptions for the IP SLA PM Table (continued)

Field	Description	Cards Supported
rttMonJitterStatsOWSum2DSHigh	Sum of the squares of one-way times from the destination to the source (high-order 32 bits).	• ONS 15310 CL—ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15310 MA SONET—ML-100T-8 • ONS 15310 MA SDH—ML-100T-8 • ONS 15454 SONET—ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15454 SDH—ML100T, ML100X-8, ML1000, ML-MR-10
rttMonJitterStatsOWMinDS	Minimum of all one-way times from the destination to the source.	• ONS 15310 CL—ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15310 MA SONET—ML-100T-8 • ONS 15310 MA SDH—ML-100T-8 • ONS 15454 SONET—ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15454 SDH—ML100T, ML100X-8, ML1000, ML-MR-10
rttMonJitterStatsOWMaxDS	Maximum of all one-way times from the destination to the source.	• ONS 15310 CL—ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15310 MA SONET—ML-100T-8 • ONS 15310 MA SDH—ML-100T-8 • ONS 15454 SONET—ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15454 SDH—ML100T, ML100X-8, ML1000, ML-MR-10
rttMonJitterStatsNumOfOW	Number of one-way times that were measured successfully.	• ONS 15310 CL—ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15310 MA SONET—ML-100T-8 • ONS 15310 MA SDH—ML-100T-8 • ONS 15454 SONET—ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15454 SDH—ML100T, ML100X-8, ML1000, ML-MR-10
rttMonJitterStatsOWMinSDNew	Minimum of all one-way times from the source to the destination. Replaces deprecated rttMonJitterStatsOWMinSD.	• ONS 15310 CL—ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15310 MA SONET—ML-100T-8 • ONS 15310 MA SDH—ML-100T-8 • ONS 15454 SONET—ML100T, ML100X-8, ML1000, ML-MR-10 • ONS 15454 SDH—ML100T, ML100X-8, ML1000, ML-MR-10

E.2.25 Low Order VC11 PM Table—ONS 15454 SDH

The Low Order VC11 PM table shows performance data for the ONS 15454 SDH low-order VC11. You can display performance data for 15-minute, 1-day, or real-time increments:

- 15-minute—Data is collected at the quarter-hour (for example, at 10:00, 10:15, and so on). The data shown represents the difference in counter values between successive 15-minute intervals.
- 1-day—Data is collected at midnight GMT. The data shown represents the difference between the counter values read at successive midnights.
- Real-time—When a real-time PM session is running, it polls the NE for *x* number of attributes every 10 to 900 seconds. This feature allows you to examine the current value of a PM parameter in granularities finer than the standard 15-minute or 1-day interval. For more information, see 10.4.4 Managing Real-Time PM Data, page 10-26.

Performance monitoring can be done either on selected modules, or on specific locations in the NE. You can use the Plot tab to plot the data in a graphical view that is stored in the Prime Optical database. See 10.4.6 Using PM Data Graphs, page 10-28.

The following table describes the fields in the Low Order VC11 PM table.

Table E-40 Field Descriptions for the Low Order VC11 PM Table

Field	Description	Cards Supported
Alias ID	Alias name of the selected NE.	—
Module Name	Module for which PM data is displayed.	—
Physical Location	Slot and port number for which PM data is displayed.	—
Time Stamp (*time zone*)	When the data was collected. You can select GMT, Local, or User-Defined time for the Time Stamp display. Use the User Preferences dialog box to make your time zone selection.	—
Interface	Interface name of the selected NE.	—
Maintenance	Whether the NE was under maintenance when the performance data was collected.	—
VC11-LP-EB	Low-order path errored block (LP-EB) indicates that one or more bits are in error within a block.	—
VC11-LP-BBE	Low-order path background block error (LP-BBE) is an errored block not occurring as part of an SES.	—
VC11-LP-ES	Low-order path errored seconds (LP-ES) is a one-second period with one or more errored blocks or at least one defect.	—
VC11-LP-SES	Low-order path severely errored seconds (LP-SES) is a one-second period containing greater than 30% errored blocks or at least one defect. SES is a subset of ES.	—
VC11-LP-UAS	Low-order path unavailable seconds (LP-UAS) is a count of the seconds when the VC path was unavailable. A low-order path becomes unavailable when ten consecutive seconds occur that qualify as LP-SESs, and it continues to be unavailable until ten consecutive seconds occur that do not qualify as LP-SESs.	—

Table E-40 Field Descriptions for the Low Order VC11 PM Table (continued)

Field	Description	Cards Supported
VC11-LP-ESR	Low-order path errored second ratio (LP-ESR) is the ratio of errored seconds to total seconds in available time during a fixed measurement interval.	—
VC11-LP-SESR	Low-order path severely errored second ratio (LP-SESR) is the ratio of SES to total seconds in available time during a fixed measurement interval.	—
VC11-LP-BBER	Low-order path background block error ratio (LP-BBER) is the ratio of BBEs to total blocks in available time during a fixed measurement interval. The count of total blocks excludes all blocks during SESs.	—
NE ID	Name of the selected NE.	—

E.2.26 Low Order VC12 PM Table—ONS 15310 MA SDH, ONS 15454 SDH

The Low Order VC12 PM table shows performance data for the ONS 15310 MA SDH and ONS 15454 SDH low-order VC12. You can display performance data for 15-minute, 1-day, or real-time increments:

- 15-minute—Data is collected at the quarter-hour (for example, at 10:00, 10:15, and so on). The data shown represents the difference in counter values between successive 15-minute intervals.
- 1-day—Data is collected at midnight GMT. The data shown represents the difference between the counter values read at successive midnights.
- Real-time—When a real-time PM session is running, it polls the NE for *x* number of attributes every 10 to 900 seconds. This feature allows you to examine the current value of a PM parameter in granularities finer than the standard 15-minute or 1-day interval. For more information, see 10.4.4 Managing Real-Time PM Data, page 10-26.

Performance monitoring can be done either on selected modules, or on specific locations in the NE. You can use the Plot tab to plot the data in a graphical view that is stored in the Prime Optical database. See 10.4.6 Using PM Data Graphs, page 10-28.

The following table describes the fields in the Low Order VC12 PM table.

Table E-41 Field Descriptions for the Low Order VC12 PM Table

Field	Description	Cards Supported
Alias ID	Alias name of the selected NE.	—
Module Name	Module for which PM data is displayed.	—
Physical Location	Slot and port number for which PM data is displayed.	—
Time Stamp (*time zone*)	When the data was collected. You can select GMT, Local, or User-Defined time for the Time Stamp display. Use the User Preferences dialog box to make your time zone selection.	—
Interface	Interface name of the selected NE.	—
Maintenance	Whether the NE was under maintenance when the performance data was collected.	—

Table E-41 Field Descriptions for the Low Order VC12 PM Table (continued)

Field	Description	Cards Supported
VC12-LP-EB	Low-order path errored block (LP-EB) indicates that one or more bits are in error within a block.	• ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SDH: E1, E1N, E1_42
VC12-LP-BBE	Low-order path background block error (LP-BBE) is an errored block not occurring as part of an SES.	• ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SDH: E1, E1N, E1_42
VC12-LP-ES	Low-order path errored seconds (LP-ES) is a one-second period with one or more errored blocks or at least one defect.	• ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SDH: E1, E1N, E1_42
VC12-LP-SES	Low-order path severely errored seconds (LP-SES) is a one-second period containing greater than 30% errored blocks or at least one defect. SES is a subset of ES.	• ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SDH: E1, E1N, E1_42
VC12-LP-UAS	Low-order path unavailable seconds (LP-UAS) is a count of the seconds when the VC path was unavailable. A low-order path becomes unavailable when ten consecutive seconds occur that qualify as LP-SESs, and it continues to be unavailable until ten consecutive seconds occur that do not qualify as LP-SESs.	• ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SDH: E1, E1N, E1_42
VC12-LP-ESR	Low-order path errored second ratio (LP-ESR) is the ratio of errored seconds to total seconds in available time during a fixed measurement interval.	• ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SDH: E1, E1N, E1_42
VC12-LP-SESR	Low-order path severely errored second ratio (LP-SESR) is the ratio of SES to total seconds in available time during a fixed measurement interval.	• ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SDH: E1, E1N, E1_42

Table E-41 Field Descriptions for the Low Order VC12 PM Table (continued)

Field	Description	Cards Supported
VC12-LP-BBER	Low-order path background block error ratio (LP-BBER) is the ratio of BBEs to total blocks in available time during a fixed measurement interval. The count of total blocks excludes all blocks during SESs.	• ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SDH: E1, E1N, E1_42
NE ID	Name of the selected NE.	—

E.2.27 Low Order VC11 Section PM Table (Far End)—ONS 15454 SDH

The Low Order VC11 Section PM table shows far-end performance data for the ONS 15454 SDH low-order VC11 section far end. You can display performance data for 15-minute, 1-day, or real-time increments:

- 15-minute—Data is collected at the quarter-hour (for example, at 10:00, 10:15, and so on). The data shown represents the difference in counter values between successive 15-minute intervals.
- 1-day—Data is collected at midnight GMT. The data shown represents the difference between the counter values read at successive midnights.
- Real-time—When a real-time PM session is running, it polls the NE for *x* number of attributes every 10 to 900 seconds. This feature allows you to examine the current value of a PM parameter in granularities finer than the standard 15-minute or 1-day interval. For more information, see 10.4.4 Managing Real-Time PM Data, page 10-26.

Performance monitoring can be done either on selected modules, or on specific locations in the NE. You can use the Plot tab to plot the data in a graphical view that is stored in the Prime Optical database. See 10.4.6 Using PM Data Graphs, page 10-28.

The following table describes the fields in the Low Order VC11 Section PM table.

Table E-42 Field Descriptions for the Low Order VC11 Section PM Table (Far End)

Field	Description	Cards Supported
Alias ID	Alias name of the selected NE.	—
Module Name	Module for which PM data is displayed.	—
Physical Location	Slot and port number for which PM data is displayed.	—
Time Stamp (*time zone*)	When the data was collected. You can select GMT, Local, or User-Defined time for the Time Stamp display. Use the User Preferences dialog box to make your time zone selection.	—
Interface	Interface name of the selected NE.	—
Maintenance	Whether the NE was under maintenance when the performance data was collected.	—
VC11-LP-EB	Low-order errored block (LP-EB) indicates that one or more one or more bits are in error within a block.	—

Table E-42 Field Descriptions for the Low Order VC11 Section PM Table (Far End) (continued)

Field	Description	Cards Supported
VC11-LP-BBE	Low-order background block errors (LP-BBE) is an errored block not occurring as part of an SES.	—
VC11-LP-ES	Low-order errored seconds (LP-ES) is a one-second period with one or more errored blocks or at least one defect.	—
VC11-LP-SES	Low-order severely errored seconds (LP-SES) is a one-second period containing greater than or equal to 30 percent errored blocks or at least one defect. SES is a subset of ES.	—
VC11-LP-UAS	Low-order unavailable seconds (LP-UAS) is a count of the seconds when the VC path was unavailable. A low-order path becomes unavailable when ten consecutive seconds occur that qualify as LP-SESs, and it continues to be unavailable until ten consecutive seconds occur that do not qualify as LP-SESs.	—
VC11-LP-ESR	Low-order errored second ratio (LP-ESR) is the ratio of errored seconds to total seconds in available time during a fixed measurement interval.	—
VC11-LP-SESR	Low-order severely errored second ratio (LP-SESR) is the ratio of SES to total seconds in available time during a fixed measurement interval.	—
VC11-LP-BBER	Low-order background block error ratio (LP-BBER) is the ratio of BBE to total blocks in available time during a fixed measurement interval. The count of total blocks excludes all blocks during SESs.	—
NE ID	Name of the selected NE.	—

E.2.28 Low Order VC12 Section PM Table (Far End)—ONS 15310 MA SDH, ONS 15454 SDH

The Low Order VC12 Section PM table shows far-end performance data for the ONS 15310 MA SDH and ONS 15454 SDH low-order VC12 section far end. You can display performance data for 15-minute, 1-day, or real-time increments:

- 15-minute—Data is collected at the quarter-hour (for example, at 10:00, 10:15, and so on). The data shown represents the difference in counter values between successive 15-minute intervals.
- 1-day—Data is collected at midnight GMT. The data shown represents the difference between the counter values read at successive midnights.
- Real-time—When a real-time PM session is running, it polls the NE for *x* number of attributes every 10 to 900 seconds. This feature allows you to examine the current value of a PM parameter in granularities finer than the standard 15-minute or 1-day interval. For more information, see 10.4.4 Managing Real-Time PM Data, page 10-26.

Performance monitoring can be done either on selected modules, or on specific locations in the NE. You can use the Plot tab to plot the data in a graphical view that is stored in the Prime Optical database. See 10.4.6 Using PM Data Graphs, page 10-28.

The following table describes the fields in the Low Order VC12 Section PM table.

Table E-43 Field Descriptions for the Low Order VC12 Section PM Table (Far End)

Field	Description	Cards Supported
Alias ID	Alias name of the selected NE.	—
Module Name	Module for which PM data is displayed.	—
Physical Location	Slot and port number for which PM data is displayed.	—
Time Stamp (*time zone*)	When the data was collected. You can select GMT, Local, or User-Defined time for the Time Stamp display. Use the User Preferences dialog box to make your time zone selection.	—
Interface	Interface name of the selected NE.	—
Maintenance	Whether the NE was under maintenance when the performance data was collected.	—
VC12-LP-EB	Low-order errored block (LP-EB) indicates that one or more bits are in error within a block.	• ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SDH: E1, E1N, E1_42
VC12-LP-BBE	Low-order background block errors (LP-BBE) is an errored block not occurring as part of an SES.	• ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SDH: E1, E1N, E1_42
VC12-LP-ES	Low-order errored seconds (LP-ES) is a one-second period with one or more errored blocks or at least one defect.	• ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SDH: E1, E1N, E1_42
VC12-LP-SES	Low-order severely errored seconds (LP-SES) is a one-second period containing greater than or equal to 30 percent errored blocks or at least one defect. SES is a subset of ES.	• ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SDH: E1, E1N, E1_42
VC12-LP-UAS	Low-order unavailable seconds (LP-UAS) is a count of the seconds when the VC path was unavailable. A low-order path becomes unavailable when ten consecutive seconds occur that qualify as LP-SESs, and it continues to be unavailable until ten consecutive seconds occur that do not qualify as LP-SESs.	• ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SDH: E1, E1N, E1_42
VC12-LP-ESR	Low-order errored second ratio (LP-ESR) is the ratio of errored seconds to total seconds in available time during a fixed measurement interval.	• ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SDH: E1, E1N, E1_42

Table E-43 Field Descriptions for the Low Order VC12 Section PM Table (Far End) (continued)

Field	Description	Cards Supported
VC12-LP-SESR	Low-order severely errored second ratio (LP-SESR) is the ratio of SES to total seconds in available time during a fixed measurement interval.	• ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SDH: E1, E1N, E1_42
VC12-LP-BBER	Low-order background block error ratio (LP-BBER) is the ratio of BBE to total blocks in available time during a fixed measurement interval. The count of total blocks excludes all blocks during SESs.	• ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SDH: E1, E1N, E1_42
NE ID	Name of the selected NE.	—

E.2.29 Low Order VC3 PM Table—ONS 15310 MA SDH, ONS 15454 SDH

The Low Order VC3 PM table shows performance data for the ONS 15310 MA SDH and ONS 15454 SDH low-order VC3. You can display performance data for 15-minute, 1-day, or real-time increments:

- 15-minute—Data is collected at the quarter-hour (for example, at 10:00, 10:15, and so on). The data shown represents the difference in counter values between successive 15-minute intervals.
- 1-day—Data is collected at midnight GMT. The data shown represents the difference between the counter values read at successive midnights.
- Real-time—When a real-time PM session is running, it polls the NE for *x* number of attributes every 10 to 900 seconds. This feature allows you to examine the current value of a PM parameter in granularities finer than the standard 15-minute or 1-day interval. For more information, see 10.4.4 Managing Real-Time PM Data, page 10-26.

Performance monitoring can be done either on selected modules, or on specific locations in the NE. You can use the Plot tab to plot the data in a graphical view that is stored in the Prime Optical database. See 10.4.6 Using PM Data Graphs, page 10-28.

The following table describes the fields in the Low Order VC3 PM table.

Table E-44 Field Descriptions for the Low Order VC3 PM Table

Field	Description	Cards Supported
Alias ID	Alias name of the selected NE.	—
Module Name	Module for which PM data is displayed.	—
Physical Location	Slot and port number for which PM data is displayed.	—
Time Stamp (*time zone*)	When the data was collected. You can select GMT, Local, or User-Defined time for the Time Stamp display. Use the User Preferences dialog box to make your time zone selection.	—
Interface	Interface name of the selected NE.	—

Table E-44 Field Descriptions for the Low Order VC3 PM Table (continued)

Field	Description	Cards Supported
Maintenance	Whether the NE was under maintenance when the performance data was collected.	—
VC3-LP-EB	Low-order path errored block (LP-EB) indicates that one or more bits are in error within a block.	• ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SDH: DS3I, DS3IN, E3
VC3-LP-BBE	Low-order path background block error (LP-BBE) is an errored block not occurring as part of an SES.	• ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SDH: DS3I, DS3IN, E3
VC3-LP-ES	Low-order path errored seconds (LP-ES) is a one-second period with one or more errored blocks or at least one defect.	• ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SDH: DS3I, DS3IN, E3
VC3-LP-SES	Low-order path severely errored seconds (LP-SES) is a one-second period containing greater than 30% errored blocks or at least one defect. SES is a subset of ES.	• ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SDH: DS3I, DS3IN, E3
VC3-LP-UAS	Low-order path unavailable seconds (LP-UAS) is a count of the seconds when the VC path was unavailable. A low-order path becomes unavailable when ten consecutive seconds occur that qualify as LP-SESs, and it continues to be unavailable until ten consecutive seconds occur that do not qualify as LP-SESs.	• ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SDH: DS3I, DS3IN, E3
VC3-LP-ESR	Low-order path errored second ratio (LP-ESR) is the ratio of errored seconds to total seconds in available time during a fixed measurement interval.	• ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SDH: DS3I, DS3IN, E3
VC3-LP-SESR	Low-order path severely errored second ratio (LP-SESR) is the ratio of SES to total seconds in available time during a fixed measurement interval.	• ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SDH: DS3I, DS3IN, E3
VC3-LP-BBER	Low-order path background block error ratio (LP-BBER) is the ratio of BBEs to total blocks in available time during a fixed measurement interval. The count of total blocks excludes all blocks during SESs.	• ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SDH: DS3I, DS3IN, E3
NE ID	Name of the selected NE.	—

E.2.30 Low Order VC3 Section PM Table (Far End)—ONS 15310 MA SDH and ONS 15454 SDH

The Low Order VC3 Section PM table shows far-end performance data for the far-end ONS 15310 MA SDH and ONS 15454 SDH low-order VC3 sections. You can display performance data for 15-minute, 1-day, or real-time increments:

- 15-minute—Data is collected at the quarter-hour (for example, at 10:00, 10:15, and so on). The data shown represents the difference in counter values between successive 15-minute intervals.
- 1-day—Data is collected at midnight GMT. The data shown represents the difference between the counter values read at successive midnights.
- Real-time—When a real-time PM session is running, it polls the NE for *x* number of attributes every 10 to 900 seconds. This feature allows you to examine the current value of a PM parameter in granularities finer than the standard 15-minute or 1-day interval. For more information, see 10.4.4 Managing Real-Time PM Data, page 10-26.

Performance monitoring can be done either on selected modules, or on specific locations in the NE. You can use the Plot tab to plot the data in a graphical view that is stored in the Prime Optical database. See 10.4.6 Using PM Data Graphs, page 10-28.

The following table describes the fields in the Low Order VC3 Section PM table.

Table E-45 Field Descriptions for the Low Order VC3 Section PM Table (Far End)

Field	Description	Cards Supported
Alias ID	Alias name of the selected NE.	—
Module Name	Module for which PM data is displayed.	—
Physical Location	Slot and port number for which PM data is displayed.	—
Time Stamp (*time zone*)	When the data was collected. You can select GMT, Local, or User-Defined time for the Time Stamp display. Use the User Preferences dialog box to make your time zone selection.	—
Interface	Interface name of the selected NE.	—
Maintenance	Whether the NE was under maintenance when the performance data was collected.	—
VC3-LP-EB	Low-order section errored block (LP-EB) indicates that one or more bits are in error within a block.	• ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SDH: DS3I, DS3IN, E3
VC3-LP-BBE	Low-order section background block errors (LP-BBE) is an errored block not occurring as part of an SES.	• ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SDH: DS3I, DS3IN, E3

Table E-45 Field Descriptions for the Low Order VC3 Section PM Table (Far End) (continued)

Field	Description	Cards Supported
VC3-LP-ES	Low-order section errored seconds (LP-ES) is a one-second period with one or more errored blocks or at least one defect.	• ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SDH: DS3I, DS3IN, E3
VC3-LP-SES	Low-order section severely errored seconds (LP-SES) is a one-second period containing greater than or equal to 30 percent errored blocks or at least one defect. SES is a subset of ES.	• ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SDH: DS3I, DS3IN, E3
VC3-LP-UAS	Low-order section unavailable seconds (LP-UAS) is a count of the seconds when the VC path was unavailable. A low-order path becomes unavailable when ten consecutive seconds occur that qualify as LP-SESs, and it continues to be unavailable until ten consecutive seconds occur that do not qualify as LP-SESs.	• ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SDH: DS3I, DS3IN, E3
VC3-LP-ESR	Low-order section errored second ratio (LP-ESR) is the ratio of errored seconds to total seconds in available time during a fixed measurement interval.	• ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SDH: DS3I, DS3IN, E3
VC3-LP-SESR	Low-order section severely errored seconds ratio (LP-SESR) is the ratio of SES to total seconds in available time during a fixed measurement interval.	• ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SDH: DS3I, DS3IN, E3
VC3-LP-BBER	Low-order section background block error ratio (LP-BBER) is the ratio of BBE to total blocks in available time during a fixed measurement interval. The count of total blocks excludes all blocks during SESs.	• ONS 15310 MA SDH: E1_21_E3_DS3_3, E1_63_E3_DS3_3 • ONS 15454 SDH: DS3I, DS3IN, E3
NE ID	Name of the selected NE.	—

E.2.31 Multiplex Section PM Table (Far End)—ONS 15310 MA SDH, ONS 15454 SDH

The Multiplex Section PM table shows far-end performance data for the ONS 15310 MA SDH and ONS 15454 SDH multiplex sections (far-end). You can display performance data for 15-minute, 1-day, or real-time increments:

- 15-minute—Data is collected at the quarter-hour (for example, at 10:00, 10:15, and so on). The data shown represents the difference in counter values between successive 15-minute intervals.

- 1-day—Data is collected at midnight GMT. The data shown represents the difference between the counter values read at successive midnights.
- Real-time—When a real-time PM session is running, it polls the NE for *x* number of attributes every 10 to 900 seconds. This feature allows you to examine the current value of a PM parameter in granularities finer than the standard 15-minute or 1-day interval. For more information, see 10.4.4 Managing Real-Time PM Data, page 10-26.

Performance monitoring can be done either on selected modules, or on specific locations in the NE. You can use the Plot tab to plot the data in a graphical view that is stored in the Prime Optical database. See 10.4.6 Using PM Data Graphs, page 10-28.

The following table describes the fields in the Multiplex Section PM table.

Table E-46 Field Descriptions for the Multiplex Section PM Table (Far End)

Field	Description	Cards Supported
Alias ID	Alias name of the selected NE.	—
Module Name	Module for which PM data is displayed.	—
Physical Location	Slot and port number for which PM data is displayed.	—
Interface	Interface name of the selected NE.	—
Time Stamp (*time zone*)	When the data was collected. You can select GMT, Local, or User-Defined time for the Time Stamp display. Use the User Preferences dialog box to make your time zone selection.	—
Maintenance	Whether the NE was under maintenance when the performance data was collected.	—
MS-EB	Multiplex section errored block (MS-EB) indicates that one or more bits are in error within a block.	• ONS 15310 MA SDH: CTX-2500 • ONS 15454 SDH: 2.5G_DM, 2.5G_DMP, ADM_10G, MRC_4, MRC_12_2.5G, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OSC_CSM, OTU2_XP, STM1, STM1_8, STM1E_12, STM4, STM4_4, STM16, STM64, TXP_MR_10E, TXP_MR_10G, TXP_MR_2.5G, TXPP_MR_2.5G
MS-ES	Multiplex section errored seconds (MS-E) is a one-second period with one or more errored blocks or at least one defect.	• ONS 15310 MA SDH: CTX-2500 • ONS 15454 SDH: 2.5G_DM, 2.5G_DMP, ADM_10G, MRC_4, MRC_12_2.5G, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OSC_CSM, OTU2_XP, STM1, STM1_8, STM1E_12, STM4, STM4_4, STM16, STM64, TXP_MR_10E, TXP_MR_10G, TXP_MR_2.5G, TXPP_MR_2.5G

Table E-46 Field Descriptions for the Multiplex Section PM Table (Far End) (continued)

Field	Description	Cards Supported
MS-SES	Multiplex section severely errored seconds (MS-SES) is a one-second period that contains 30 percent or more errored blocks or at least one defect. SES is a subset of ES. For more information, see ITU-T G.829 Section 5.1.3.	• ONS 15310 MA SDH: CTX-2500 • ONS 15454 SDH: 2.5G_DM, 2.5G_DMP, ADM_10G, MRC_4, MRC_12_2.5G, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OSC_CSM, OTU2_XP, STM1, STM1_8, STM1E_12, STM4, STM4_4, STM16, STM64, TXP_MR_10E, TXP_MR_10G, TXP_MR_2.5G, TXPP_MR_2.5G
MS-UAS	Multiplex section unavailable seconds (MS-UAS) is a count of the seconds when the section was unavailable. A section becomes unavailable when ten consecutive seconds occur that qualify as MS-SESs, and it continues to be unavailable until ten consecutive seconds occur that do not qualify as MS-SESs. When the condition is entered, MS-SESs decrement and then count toward MS-UAS.	• ONS 15310 MA SDH: CTX-2500 • ONS 15454 SDH: 2.5G_DM, 2.5G_DMP, MRC_4, ADM_10G, MRC_12_2.5G, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OSC_CSM, OTU2_XP, STM1, STM1_8, STM1E_12, STM4, STM4_4, STM16, STM64, TXP_MR_10E, TXP_MR_10G, TXP_MR_2.5G, TXPP_MR_2.5G
MS-FC	Multiplex section failure count (MS-FC) is a count of the number of failed events.	• ONS 15310 MA SDH: CTX-2500 • ONS 15454 SDH: ADM_10G
MS-BBE	Multiplex section background block errors (MS-BBE) is an errored block not occurring as part of an SES.	• ONS 15310 MA SDH: CTX-2500 • ONS 15454 SDH: 2.5G_DM, 2.5G_DMP, ADM_10G, MRC_4, MRC_12_2.5G, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OSC_CSM, OTU2_XP, STM1, STM1_8, STM1E_12, STM4, STM4_4, STM16, STM64, TXP_MR_10E, TXP_MR_10G, TXP_MR_2.5G, TXPP_MR_2.5G
MS-ESR	Multiplex section errored seconds ratio (MS-ESR) is the ratio of errored seconds to total seconds in available time during a fixed measurement interval.	• ONS 15310 MA SDH: CTX-2500 • ONS 15454 SDH: 2.5G_DM, 2.5G_DMP, ADM_10G, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OSC_CSM, OTU2_XP, STM1, STM1_8, STM1E_12, STM4, STM4_4, STM16, STM64, TXP_MR_10E, TXP_MR_10G, TXP_MR_2.5G, TXPP_MR_2.5G

Table E-46 Field Descriptions for the Multiplex Section PM Table (Far End) (continued)

Field	Description	Cards Supported
MS-SESR	Multiplex section severely errored seconds ratio (MS-SESR) is the ratio of SES to total seconds in available time during a fixed measurement interval.	• ONS 15310 MA SDH: CTX-2500 • ONS 15454 SDH: 2.5G_DM, 2.5G_DMP, ADM_10G, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OSC_CSM, OTU2_XP, STM1, STM1_8, STM1E_12, STM4, STM4_4, STM16, STM64, TXP_MR_10E, TXP_MR_10G, TXP_MR_2.5G, TXPP_MR_2.5G
MS-BBER	Multiplex section background block errored ratio (MS-BBER) is the ratio of BBE to total blocks in available time during a fixed measurement interval. The count of total blocks excludes all blocks during SESs.	• ONS 15310 MA SDH: CTX-2500 • ONS 15454 SDH: 2.5G_DM, 2.5G_DMP, ADM_10G, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OSC_CSM, OTU2_XP, STM1, STM1_8, STM1E_12, STM4, STM4_4, STM16, STM64, TXP_MR_10E, TXP_MR_10G, TXP_MR_2.5G, TXPP_MR_2.5G
NE ID	Name of the selected NE.	—

E.2.32 Multiplex Section PM Table (Far End)—ONS 15600 SDH

The Multiplex Section PM table shows far-end performance data for the ONS 15600 SDH multiplex section far end. You can display performance data for 15-minute, 1-day, or real-time increments:

- 15-minute—Data is collected at the quarter-hour (for example, at 10:00, 10:15, and so on). The data shown represents the difference in counter values between successive 15-minute intervals.
- 1-day—Data is collected at midnight GMT. The data shown represents the difference between the counter values read at successive midnights.
- Real-time—When a real-time PM session is running, it polls the NE for *x* number of attributes every 10 to 900 seconds. This feature allows you to examine the current value of a PM parameter in granularities finer than the standard 15-minute or 1-day interval. For more information, see 10.4.4 Managing Real-Time PM Data, page 10-26.

Performance monitoring can be done either on selected modules, or on specific locations in the NE. You can use the Plot tab to plot the data in a graphical view that is stored in the Prime Optical database. See 10.4.6 Using PM Data Graphs, page 10-28.

The following table describes the fields in the Multiplex Section PM table.

Table E-47 Field Descriptions for the Multiplex Section PM Table (Far End)

Field	Description	Cards Supported
Alias ID	Alias name of the selected NE.	—
Module Name	Module for which PM data is displayed.	—
Physical Location	Slot and port number for which PM data is displayed.	—
Interface	Interface name of the selected NE.	—
Time Stamp (*time zone*)	When the data was collected. You can select GMT, Local, or User-Defined time for the Time Stamp display. Use the User Preferences dialog box to make your time zone selection.	—
Maintenance	Whether the NE was under maintenance when the performance data was collected.	—
MS-EB	Multiplex section errored block (MS-EB) indicates that one or more bits are in error within a block.	ASAP_4, STM16_16, STM64_4
MS-ES	Multiplex section errored seconds (MS-ES) is a one-second period with one or more errored blocks or at least one defect.	ASAP_4, STM16_16, STM64_4
MS-SES	Multiplex section severely errored seconds (MS-SES) is a one-second period that contains 30 percent or more errored blocks or at least one defect. SES is a subset of ES. For more information, see ITU-T G.829 Section 5.1.3.	ASAP_4, STM16_16, STM64_4
MS-UAS	Multiplex section unavailable seconds (MS-UAS) is a count of the seconds when the section was unavailable. A section becomes unavailable when ten consecutive seconds occur that qualify as MS-SESs, and it continues to be unavailable until ten consecutive seconds occur that do not qualify as MS-SESs. When the condition is entered, MS-SESs decrement and then count toward MS-UAS.	ASAP_4, STM16_16, STM64_4
MS-FC	Multiplex section failure count (MS-FC) is a count of the number of failed events.	ASAP_4, STM16_16, STM64_4
MS-BBE	Multiplex section background block errors (MS-BBE) is an errored block not occurring as part of an SES.	ASAP_4, STM16_16, STM64_4
MS-ESR	Multiplex section errored seconds ratio (MS-ESR) is the ratio of errored seconds to total seconds in available time during a fixed measurement interval.	—
MS-SESR	Multiplex section severely errored seconds ratio (MS-SESR) is the ratio of SES to total seconds in available time during a fixed measurement interval.	—
MS-BBER	Multiplex section background block errored ratio (MS-BBER) is the ratio of BBE to total blocks in available time during a fixed measurement interval. The count of total blocks excludes all blocks during SESs.	—
NE ID	Name of the selected NE.	—

E.2.33 Multiplex Section PM Table (Near End)—ONS 15310 MA SDH, ONS 15454 SDH

The Multiplex Section PM table shows performance data for the ONS 15310 MA SDH and ONS 15454 SDH multiplex sections. You can display performance data for 15-minute, 1-day, or real-time increments:

- 15-minute—Data is collected at the quarter-hour (for example, at 10:00, 10:15, and so on). The data shown represents the difference in counter values between successive 15-minute intervals.
- 1-day—Data is collected at midnight GMT. The data shown represents the difference between the counter values read at successive midnights.
- Real-time—When a real-time PM session is running, it polls the NE for *x* number of attributes every 10 to 900 seconds. This feature allows you to examine the current value of a PM parameter in granularities finer than the standard 15-minute or 1-day interval. For more information, see 10.4.4 Managing Real-Time PM Data, page 10-26.

Performance monitoring can be done either on selected modules, or on specific locations in the NE. You can use the Plot tab to plot the data in a graphical view that is stored in the Prime Optical database. See 10.4.6 Using PM Data Graphs, page 10-28.

The following table describes the fields in the Multiplex Section PM table.

Table E-48 Field Descriptions for the Multiplex Section PM Table (Near End)

Field	Description	Cards Supported
Alias ID	Alias name of the selected NE.	—
Module Name	Module for which PM data is displayed.	—
Physical Location	Slot and port number for which PM data is displayed.	—
Interface	Interface name of the selected NE.	—
Time Stamp (*time zone*)	When the data was collected. You can select GMT, Local, or User-Defined time for the Time Stamp display. Use the User Preferences dialog box to make your time zone selection.	—
Maintenance	Whether the NE was under maintenance when the performance data was collected.	—
MS-EB	Multiplex section errored blocks (MS-EB) indicates that bits are in error within a block.	• ONS 15310 MA SDH: CTX-2500 • ONS 15454 SDH: 2.5G_DM, 2.5G_DMP, ADM_10G, MRC_4, MRC_12, MRC_12_2.5G, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OC192_XFP, OSC_CSM, OTU2_XP, STM1, STM1_8, STM1E_12, STM4, STM4_4, STM16, STM64, TXP_MR_10E, TXP_MR_10G, TXP_MR_2.5G, TXPP_MR_2.5G

Table E-48 Field Descriptions for the Multiplex Section PM Table (Near End) (continued)

Field	Description	Cards Supported
MS-ES	Multiplex section errored seconds (MS-ES) is a one-second period with one or more errored blocks or at least one defect.	• ONS 15310 MA SDH: CTX-2500 • ONS 15454 SDH: 2.5G_DM, 2.5G_DMP, ADM_10G, MRC_4, MRC_12, MRC_12_2.5G, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OC192_XFP, OSC_CSM, OTU2_XP, STM1, STM1_8, STM1E_12, STM4, STM4_4, STM16, STM64, TXP_MR_10E, TXP_MR_10G, TXP_MR_2.5G, TXPP_MR_2.5G
MS-SES	Multiplex section severely errored seconds (MS-SES) is a one-second period that contains 30 percent or more errored blocks or at least one defect. SES is a subset of ES. For more information, see ITU-T G.829 Section 5.1.3.	• ONS 15310 MA SDH: CTX-2500 • ONS 15454 SDH: 2.5G_DM, 2.5G_DMP, ADM_10G, MRC_4, MRC_12, MRC_12_2.5G, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OC192_XFP, OSC_CSM, OTU2_XP, STM1, STM1_8, STM1E_12, STM4, STM4_4, STM16, STM64, TXP_MR_10E, TXP_MR_10G, TXP_MR_2.5G, TXPP_MR_2.5G
MS-UAS	Multiplex section unavailable seconds (MS-UAS) is a count of the seconds when the section was unavailable. A section becomes unavailable when ten consecutive seconds occur that qualify as MS-SESs, and it continues to be unavailable until ten consecutive seconds occur that do not qualify as MS-SESs. When the condition is entered, MS-SESs decrement and then count toward MS-UAS.	• ONS 15310 MA SDH: CTX-2500 • ONS 15454 SDH: 2.5G_DM, 2.5G_DMP, ADM_10G, MRC_4, MRC_12, MRC_12_2.5G, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OC192_XFP, OSC_CSM, OTU2_XP, STM1, STM1_8, STM1E_12, STM4, STM4_4, STM16, STM64, TXP_MR_10E, TXP_MR_10G, TXP_MR_2.5G, TXPP_MR_2.5G
MS-FC	Multiplex section failure count (MS-FC) is a count of the number of failed events.	• ONS 15310 MA SDH: CTX-2500 • ONS 15454 SDH: ADM_10G, MRC_4, MRC_12, MRC_12_2.5G, MXP_MR_10DME, OC192_XFP

Table E-48 Field Descriptions for the Multiplex Section PM Table (Near End) (continued)

Field	Description	Cards Supported
MS-BBE	Multiplex section background block errors (MS-BBE) is an errored block not occurring as part of an SES.	• ONS 15310 MA SDH: CTX-2500 • ONS 15454 SDH: 2.5G_DM, 2.5G_DMP, ADM_10G, MRC_4, MRC_12, MRC_12_2.5G, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OC192_XFP, OSC_CSM, OTU2_XP, STM1, STM1_8, STM1E_12, STM4, STM4_4, STM16, STM64, TXP_MR_10E, TXP_MR_10G, TXP_MR_2.5G, TXPP_MR_2.5G
MS-PSC	In a 1 + 1 protection scheme for a working card, protection switching count (PSC) is a count of the number of times service switches from a working card to a protection card plus the number of times service switches back to the working card. For a protection card, PSC is a count of the number of times service switches to a working card from a protection card plus the number of times service switches back to the protection card. The PSC PM applies to revertive and nonrevertive, line-level protection switching. **Note** MS-SPRing is not supported on the STM-1 card; therefore, the PSD-W, PSD-S, and PSD-R PMs do not increment. **Note** This parameter is not supported for transponder or muxponder cards.	• ONS 15310 MA SDH: CTX-2500 • ONS 15454 SDH: MRC_4, MRC_12, MRC_12_2.5G, MXP_MR_10DME, OC192_XFP, STM1, STM1_8, STM4, STM4_4, STM16, STM64
MS-PSD	Protection switching duration (PSD) applies to the length of time, in seconds, that service is carried on another line. For a working line, PSD is a count of the number of seconds that service was carried on the protection line. For the protection line, PSD is a count of the seconds that the line was used to carry service. The PSD PM applies to revertive and nonrevertive, line-level protection switching. **Note** MS-SPRing is not supported on the STM-1 card; therefore, the PSD-W, PSD-S, and PSD-R PMs do not increment. **Note** This parameter is not supported for transponder or muxponder cards.	• ONS 15310 MA SDH: CTX-2500 • ONS 15454 SDH: MRC_4, MRC_12, MRC_12_2.5G, MXP_MR_10DME, OC192_XFP, STM1, STM1_8, STM4, STM4_4, STM16, STM64
MS-PSC-W	For a working line in a 2-fiber MS-SPRing, protection switching count–working (PSC-W) is a count of the number of times traffic switches away from the working capacity in the failed line and back to the working capacity after the failure is cleared. PSC-W increments on the failed working line and PSC increments on the active protect line. **Note** This parameter is not supported for transponder or muxponder cards.	• ONS 15310 MA SDH: CTX-2500 • ONS 15454 SDH: MRC_4, MRC_12, MRC_12_2.5G, MXP_MR_10DME, OC192_XFP, STM4, STM4_4, STM16, STM64

Table E-48 Field Descriptions for the Multiplex Section PM Table (Near End) (continued)

Field	Description	Cards Supported
MS-PSD-W	For a working line in a 2-fiber MS-SPRing, protection switching duration–working (PSD-W) is a count of the number of seconds that service was carried on the protection line. PSD-W increments on the failed working line and PSD increments on the active protect line. **Note** This parameter is not supported for transponder or muxponder cards.	• ONS 15310 MA SDH: CTX-2500 • ONS 15454 SDH: MRC_4, MRC_12, MRC_12_2.5G, MXP_MR_10DME, OC192_XFP, STM4, STM4_4, STM16, STM64
MS-PSC-S	In a 4-fiber MS-SPRing, protection switching count–span (PSC-S) is a count of the number of times service switches from a working line to a protection line plus the number of times it switches back to the working line. A count is only incremented if span switching is used. **Note** This parameter is not supported for transponder or muxponder cards.	• ONS 15310 MA SDH: CTX-2500 • ONS 15454 SDH: MRC_4, MRC_12, MRC_12_2.5G, MXP_MR_10DME, OC192_XFP, STM4, STM4_4, STM16, STM64
MS-PSD-S	In a 4-fiber MS-SPRing, protection switching duration–span (PSD-S) is a count of the seconds that the protection line was used to carry service. A count is only incremented if span switching is used. **Note** This parameter is not supported for transponder or muxponder cards.	• ONS 15310 MA SDH: CTX-2500 • ONS 15454 SDH: MRC_4, MRC_12, MRC_12_2.5G, MXP_MR_10DME, OC192_XFP, STM4, STM4_4, STM16, STM64
MS-PSC-R	In a 4-fiber MS-SPRing, protection switching count–ring (PSC-R) is a count of the number of times service switches from a working line to a protection line plus the number of times it switches back to a working line. A count is only incremented if ring switching is used. **Note** This parameter is not supported for transponder or muxponder cards.	• ONS 15310 MA SDH: CTX-2500 • ONS 15454 SDH: MRC_4, MRC_12, MRC_12_2.5G, MXP_MR_10DME, OC192_XFP, STM4, STM4_4, STM16, STM64
MS-PSD-R	In a 4-fiber MS-SPRing, protection switching duration–ring (PSD-R) is a count of the seconds that the protection line was used to carry service. A count is only incremented if ring switching is used. **Note** This parameter is not supported for transponder or muxponder cards.	• ONS 15310 MA SDH: CTX-2500 • ONS 15454 SDH: MRC_4, MRC_12, MRC_12_2.5G, MXP_MR_10DME, OC192_XFP, STM4, STM4_4, STM16, STM64
MS-ESR	Multiplex section errored seconds ratio (MS-ESR) is the ratio of errored seconds to total seconds in available time during a fixed measurement interval.	• ONS 15310 MA SDH: CTX-2500 • ONS 15454 SDH: 2.5G_DM, 2.5G_DMP, ADM_10G, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OTU2_XP, STM1E_12, TXP_MR_10E, TXP_MR_10G, TXP_MR_2.5G, TXPP_MR_2.5G

Table E-48 Field Descriptions for the Multiplex Section PM Table (Near End) (continued)

Field	Description	Cards Supported
MS-SESR	Multiplex section severely errored seconds ratio (MS-SESR) is the ratio of SES to total seconds in available time during a fixed measurement interval.	• ONS 15310 MA SDH: CTX-2500 • ONS 15454 SDH: 2.5G_DM, 2.5G_DMP, ADM_10G, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OTU2_XP, STM1E_12, TXP_MR_10E, TXP_MR_10G, TXP_MR_2.5G, TXPP_MR_2.5G
MS-BBER	Multiplex section background block error ratio (MS-BBER) is the ratio of BBE to total blocks in available time during a fixed measurement interval. The count of total blocks excludes all blocks during SESs.	• ONS 15310 MA SDH: CTX-2500 • ONS 15454 SDH: 2.5G_DM, 2.5G_DMP, ADM_10G, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OTU2_XP, STM1E_12, TXP_MR_10E, TXP_MR_10G, TXP_MR_2.5G, TXPP_MR_2.5G
NE ID	Name of the selected NE.	—

E.2.34 Multiplex Section PM Table—ONS 15600 SDH

The Multiplex Section PM table shows performance data for the ONS 15600 SDH multiplex section. You can display performance data for 15-minute, 1-day, or real-time increments:

- 15-minute—Data is collected at the quarter-hour (for example, at 10:00, 10:15, and so on). The data shown represents the difference in counter values between successive 15-minute intervals.
- 1-day—Data is collected at midnight GMT. The data shown represents the difference between the counter values read at successive midnights.
- Real-time—When a real-time PM session is running, it polls the NE for *x* number of attributes every 10 to 900 seconds. This feature allows you to examine the current value of a PM parameter in granularities finer than the standard 15-minute or 1-day interval. For more information, see 10.4.4 Managing Real-Time PM Data, page 10-26.

Performance monitoring can be done either on selected modules, or on specific locations in the NE. You can use the Plot tab to plot the data in a graphical view that is stored in the Prime Optical database. See 10.4.6 Using PM Data Graphs, page 10-28.

The following table describes the fields in the Multiplex Section PM table.

Table E-49 Field Descriptions for the Multiplex Section PM Table

Field	Description	Cards Supported
Alias ID	Alias name of the selected NE.	—
Module Name	Module for which PM data is displayed.	—

Table E-49 Field Descriptions for the Multiplex Section PM Table (continued)

Field	Description	Cards Supported
Physical Location	Slot and port number for which PM data is displayed.	—
Interface	Interface name of the selected NE.	—
Time Stamp (*time zone*)	When the data was collected. You can select GMT, Local, or User-Defined time for the Time Stamp display. Use the User Preferences dialog box to make your time zone selection.	—
Maintenance	Whether the NE was under maintenance when the performance data was collected.	—
MS-EB	Multiplex section errored blocks (MS-EB) indicates that one or more bits are in error within a block.	ASAP_4, STM16_16, STM64_4
MS-ES	Multiplex section errored seconds (MS-ES) is a one-second period with one or more errored blocks or at least one defect.	ASAP_4, STM16_16, STM64_4
MS-SES	Multiplex section severely errored seconds (MS-SES) is a one-second period that contains 30 percent or more errored blocks or at least one defect. SES is a subset of ES. For more information, see ITU-T G.829 Section 5.1.3.	ASAP_4, STM16_16, STM64_4
MS-UAS	Multiplex section unavailable seconds (MS-UAS) is a count of the seconds when the section was unavailable. A section becomes unavailable when ten consecutive seconds occur that qualify as MS-SESs, and it continues to be unavailable until ten consecutive seconds occur that do not qualify as MS-SESs. When the condition is entered, MS-SESs decrement and then count toward MS-UAS.	ASAP_4, STM16_16, STM64_4
MS-FC	Multiplex section failure count (MS-FC) is a count of the number of failed events.	ASAP_4, STM16_16, STM64_4
MS-BBE	Multiplex section background block errors (MS-BBE) is an errored block not occurring as part of an SES.	ASAP_4, STM16_16, STM64_4
MS-PSC	In a 1 + 1 protection scheme for a working card, PSC is a count of the number of times service switches from a working card to a protection card plus the number of times service switches back to the working card. For a protection card, PSC is a count of the number of times service switches to a working card from a protection card plus the number of times service switches back to the protection card. The PSC PM applies to revertive and nonrevertive, line-level protection switching. **Note** MS-SPRing is not supported on the STM-1 card; therefore, the PSD-W, PSD-S, and PSD-R PMs do not increment.	ASAP_4, STM16_16, STM64_4
MS-PSD	PSD applies to the length of time, in seconds, that service is carried on another line. For a working line, PSD is a count of the number of seconds that service was carried on the protection line. For the protection line, PSD is a count of the seconds that the line was used to carry service. The PSD PM applies to revertive and nonrevertive, line-level protection switching. **Note** MS-SPRing is not supported on the STM-1 card; therefore, the PSD-W, PSD-S, and PSD-R PMs do not increment.	ASAP_4, STM16_16, STM64_4

Table E-49 Field Descriptions for the Multiplex Section PM Table (continued)

Field	Description	Cards Supported
MS-PSC-W	For a working line in a 2-fiber MS-SPRing, protection switching count–working (PSC-W) is a count of the number of times traffic switches away from the working capacity in the failed line and back to the working capacity after the failure is cleared. PSC-W increments on the failed working line and PSC increments on the active protect line.	ASAP_4, STM16_16, STM64_4
MS-PSD-W	For a working line in a 2-fiber MS-SPRing, protection switching duration–working (PSD-W) is a count of the number of seconds that service was carried on the protection line. PSD-W increments on the failed working line and PSD increments on the active protect line.	ASAP_4, STM16_16, STM64_4
MS-PSC-S	In a 4-fiber MS-SPRing, protection switching count–span (PSC-S) is a count of the number of times service switches from a working line to a protection line plus the number of times it switches back to the working line. A count is only incremented if span switching is used.	ASAP_4, STM16_16, STM64_4
MS-PSD-S	In a 4-fiber MS-SPRing, protection switching duration–span (PSD-S) is a count of the seconds that the protection line was used to carry service. A count is only incremented if span switching is used.	ASAP_4, STM16_16, STM64_4
MS-PSC-R	In a 4-fiber MS-SPRing, protection switching count–ring (PSC-R) is a count of the number of times service switches from a working line to a protection line plus the number of times it switches back to a working line. A count is only incremented if ring switching is used.	ASAP_4, STM16_16, STM64_4
MS-PSD-R	In a 4-fiber MS-SPRing, protection switching duration–ring (PSD-R) is a count of the seconds that the protection line was used to carry service. A count is only incremented if ring switching is used.	ASAP_4, STM16_16, STM64_4
MS-ESR	Multiplex section errored seconds ratio (MS-ESR) is the ratio of errored seconds to total seconds in available time during a fixed measurement interval.	—
MS-SESR	Multiplex section severely errored seconds ratio (MS-SESR) is the ratio of SES to total seconds in available time during a fixed measurement interval.	—
MS-BBER	Multiplex section background block error ratio (MS-BBER) is the ratio of BBE to total blocks in available time during a fixed measurement interval. The count of total blocks excludes all blocks during SESs.	—
NE ID	Name of the selected NE.	—

E.2.35 Optical Physical PM Table—ONS 15310 CL, ONS 15310 MA SONET, ONS 15310 MA SDH, ONS 15454 SONET, ONS 15454 SDH, ONS 15600 SONET, and ONS 15600 SDH

The Optical Physical PM table shows physical-layer performance data. You can display performance data for 15-minute, 1-day, or real-time increments:

- 15-minute—Data is collected at the quarter-hour (for example, at 10:00, 10:15, and so on). The data shown represents the difference in counter values between successive 15-minute intervals.

- 1-day—Data is collected at midnight GMT. The data shown represents the difference between the counter values read at successive midnights.
- Real-time—When a real-time PM session is running, it polls the NE for *x* number of attributes every 10 to 900 seconds. This feature allows you to examine the current value of a PM parameter in granularities finer than the standard 15-minute or 1-day interval. For more information, see 10.4.4 Managing Real-Time PM Data, page 10-26.

Optical Service Channel (OSC) power—New optical power parameters are monitored for optical cards. Six new PM parameters are added to all the optical interfaces of all the supported cards for ONS 15454 SONET and ONS 15454 SDH. Using Prime Optical, you can monitor six new parameters for optical power: three each for received and transmitted power.

You can use the Plot tab to plot the data in a graphical view that is stored in the Prime Optical database. See 10.4.6 Using PM Data Graphs, page 10-28.

The following table describes the fields in the Optical Physical PM table.

Table E-50 Field Descriptions for the Optical Physical PM Table

Field	Description	Cards Supported
Alias ID	Alias name of the selected NE.	—
Module Name	Module for which PM data is displayed.	—
Physical Location	Slot and port number for which PM data is displayed.	—
Interface	Card-level interface.	—
Time Stamp (*time zone*)	When the data was collected. You can select GMT, Local, or User-Defined time for the Time Stamp display. Use the User Preferences dialog box to make your time zone selection.	—
Maintenance	Whether the NE was under maintenance when the performance data was collected.	—
Laser Bias Current	Laser bias current, which is interpreted as a percentage value from 0 to 100. **Note** Laser bias current is not supported (N/A) for the TXP_MR_2.5G and TXPP_MR_2.5G cards.	• ONS 15310 CL: CTX • ONS 15310 MA SONET: CTX_2500 • ONS 15310 MA SDH: CTX_2500 • ONS 15454 SONET: MRC_4, MRC_12, MRC_12_2.5G, MXP_MR_10DME, OC192_XFP, OC3_8/STM1_8, OPT_AMP_17_C, OPT_AMP_C, OPT_RAMP_C, OTU2_XP • ONS 15454 SDH: MRC_4, MRC_12, MRC_12_2.5G, MXP_MR_10DME, OC192_XFP, OC3_8/STM1_8, OPT_AMP_17_C, OPT_AMP_C, OPT_RAMP_C, OTU2_XP • ONS 15600 SONET: ASAP_4, OC48_16, OC192_4 • ONS 15600 SDH: ASAP_4, STM16_16, STM64_4

Table E-50 Field Descriptions for the Optical Physical PM Table (continued)

Field	Description	Cards Supported
Optical Power Transmitted	Optical power transmitted, which is interpreted as a percentage value from 0 to 100. **Note** Optical power transmitted is not supported (N/A) for the TXP_MR_2.5G and TXPP_MR_2.5G cards.	• ONS 15310 CL: CTX • ONS 15310 MA SONET: CTX_2500 • ONS 15310 MA SDH: CTX_2500 • ONS 15454 SONET: MRC_4, MRC_12, MRC_12_2.5G, MXP_MR_10DME, OC192_XFP, OC3_8/STM1_8, OPT_AMP_17_C, OPT_AMP_C, OPT_RAMP_C, OTU2_XP • ONS 15454 SDH: MRC_4, MRC_12, MRC_12_2.5G, MXP_MR_10DME, OC192_XFP, OC3_8/STM1_8, OPT_AMP_17_C, OPT_AMP_C, OPT_RAMP_C, OTU2_XP • ONS 15454 M2/M6: RAMAN_CTP, RAMAN_COP • ONS 15600 SONET: ASAP_4, OC48_16, OC192_4 • ONS 15600 SDH: ASAP_4, STM16_16, STM64_4
Optical Power Received	Optical power received, which is interpreted as a percentage value from 0 to 100. **Note** Optical power received is not supported (N/A) for the TXP_MR_2.5G and TXPP_MR_2.5G cards.	• ONS 15310 CL: CTX • ONS 15310 MA SONET: CTX_2500 • ONS 15310 MA SDH: CTX_2500 • ONS 15454 SONET: MRC_4, MRC_12, MRC_12_2.5G, MXP_MR_10DME, OC192_XFP, OC3_8/STM1_8, OPT_AMP_17_C, OPT_AMP_C, OPT_RAMP_C, OTU2_XP • ONS 15454 SDH: MRC_4, MRC_12, MRC_12_2.5G, MXP_MR_10DME, OC192_XFP, OC3_8/STM1_8, OPT_AMP_17_C, OPT_AMP_C, OPT_RAMP_C, OTU2_XP • ONS 15454 M2/M6: RAMAN_CTP • ONS 15600 SONET: ASAP_4, OC48_16, OC192_4 • ONS 15600 SDH: ASAP_4, STM16_16, STM64_4
Minimum Laser Bias	Minimum laser bias, which is interpreted as a percentage value from 0 to 100.	• ONS 15454 SONET: 2.5G_DM, 2.5G_DMP, ADM_10G, GE_XP, 10GE_XP, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OPT_AMP_17_C, OPT_AMP_C, OPT_RAMP_C, OTU2_XP, TXP_MR_2.5G, TXPP_MR_2.5G, TXP_MR_10E, TXP_MR_10G, PTF_10GE_4, PT_10GE_4, 40G-MXP-C • ONS 15454 SDH: 2.5G_DM, 2.5G_DMP, ADM_10G, GE_XP, 10GE_XP, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OPT_AMP_17_C, OPT_AMP_C, OPT_RAMP_C, OTU2_XP, TXP_MR_10E, TXP_MR_10G, TXP_MR_2.5G, TXPP_MR_2.5G, PTF_10GE_4, PT_10GE_4, 40G-MXP-C

Table E-50 Field Descriptions for the Optical Physical PM Table (continued)

Field	Description	Cards Supported
Average Laser Bias	Average laser bias, which is interpreted as a percentage value from 0 to 100.	• ONS 15454 SONET: 2.5G_DM, 2.5G_DMP, ADM_10G, GE_XP, 10GE_XP, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OPT_AMP_17_C, OPT_AMP_C, OPT_RAMP_C, OTU2_XP, TXP_MR_2.5G, TXPP_MR_2.5G, TXP_MR_10E, TXP_MR_10G, PTF_10GE_4, PT_10GE_4, 40G-MXP-C • ONS 15454 SDH: 2.5G_DM, 2.5G_DMP, ADM_10G, GE_XP, 10GE_XP, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OPT_AMP_17_C, OPT_AMP_C, OPT_RAMP_C, OTU2_XP, TXP_MR_10E, TXP_MR_10G, TXP_MR_2.5G, TXPP_MR_2.5G, PTF_10GE_4, PT_10GE_4, 40G-MXP-C
Maximum Laser Bias	Maximum laser bias, which is interpreted as a percentage value from 0 to 100.	• ONS 15454 SONET: 2.5G_DM, 2.5G_DMP, ADM_10G, GE_XP, 10GE_XP, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OPT_AMP_17_C, OPT_AMP_C, OPT_RAMP_C, OTU2_XP, TXP_MR_2.5G, TXPP_MR_2.5G, TXP_MR_10E, TXP_MR_10G, PTF_10GE_4, PT_10GE_4, 40G-MXP-C • ONS 15454 SDH: 2.5G_DM, 2.5G_DMP, ADM_10G, GE_XP, 10GE_XP, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OPT_AMP_17_C, OPT_AMP_C, OPT_RAMP_C, OTU2_XP, TXP_MR_10E, TXP_MR_10G, TXP_MR_2.5G, TXPP_MR_2.5G, PTF_10GE_4, PT_10GE_4, 40G-MXP-C

Table E-50 Field Descriptions for the Optical Physical PM Table (continued)

Field	Description	Cards Supported
Minimum Transmitted Power	Minimum transmitted power level in increments of one-tenths of decibels referenced to 1 milliwatt (dBm). The range is from –40.0 to 30.0 dBm for the following cards: TXP_MR_2.5G, TXPP_MR_2.5G, TXP_MR_10E, TXP_MR_10G, 2.5G_DM, 2.5G_DMP, MXP_2.5G_10E, and MXP_2.5G_10G. For the other supported DWDM cards, the range is from –50.0 to 30.0 dBm. **Note** Transmitted power is not supported for trunk ports.	• ONS 15454 SONET: 2.5G_DM, 2.5G_DMP, 32DMX, 32DMX_L, 32DMX_O, 32MUX_O, 32WSS, 32WSS_L, 40DMX_C, 40MUX_C, 40WSS_C, 40WXC_C, 80WXC_C, 4MD, AD_1B, AD_1C, AD_2C, AD_4B, AD_4C, ADM_10G, GE_XP, 10GE_XP, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OPT_AMP_17_C, OPT_AMP_C, OPT_RAMP_C, OPT_BST, OPT_BST_E, OPT_BST_L, OPT_PRE, OPT_PRE_L, OSC_CSM, OSCM, OTU2_XP, PSM, TXP_MR_2.5G, TXPP_MR_2.5G, TXP_MR_10E, TXP_MR_10G, PTF_10GE_4, PT_10GE_4, 40G-MXP-C • ONS 15454 SDH: 2.5G_DM, 2.5G_DMP, 32DMX, 32DMX_L, 32DMX_O, 32MUX_O, 32WSS, 32WSS_L, 40DMX_C, 40MUX_C, 40WSS_C, 40WXC_C, 80WXC_C, 4MD, AD_1B, AD_1C, AD_2C, AD_4B, AD_4C, ADM_10G, GE_XP, 10GE_XP, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OPT_AMP_17_C, OPT_AMP_C, OPT_RAMP_C, OPT_BST, OPT_BST_E, OPT_BST_L, OPT_PRE, OPT_PRE_L, OSC_CSM, OSCM, OTU2_XP, PSM, TXP_MR_10E, TXP_MR_10G, TXP_MR_2.5G, TXPP_MR_2.5G, PTF_10GE_4, PT_10GE_4, 40G-MXP-C • ONS 15454 M2/M6: RAMAN_CTP, RAMAN_COP

Table E-50 Field Descriptions for the Optical Physical PM Table (continued)

Field	Description	Cards Supported
Average Transmitted Power	Average transmitted power level in increments of one-tenths of dBm. The range is from –40.0 to 30.0 dBm for the following cards: TXP_MR_2.5G, TXPP_MR_2.5G, TXP_MR_10E, TXP_MR_10G, 2.5G_DM, 2.5G_DMP, MXP_2.5G_10E, and MXP_2.5G_10G. For the other supported DWDM cards, the range is from –50.0 to 30.0 dBm. **Note** Transmitted power is not supported for trunk ports.	• ONS 15454 SONET: 2.5G_DM, 2.5G_DMP, 32DMX, 32DMX_L, 32DMX_O, 32MUX_O, 32WSS, 32WSS_L, 40DMX_C, 40MUX_C, 40WSS_C, 40WXC_C, 80WXC_C, 4MD, AD_1B, AD_1C, AD_2C, AD_4B, AD_4C, ADM_10G, GE_XP, 10GE_XP, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OPT_AMP_17_C, OPT_AMP_C, OPT_RAMP_C, OPT_BST, OPT_BST_E, OPT_BST_L, OPT_PRE, OPT_PRE_L, OSC_CSM, OSCM, OTU2_XP, PSM, TXP_MR_2.5G, TXPP_MR_2.5G, TXP_MR_10E, TXP_MR_10G, PTF_10GE_4, PT_10GE_4, 40G-MXP-C • ONS 15454 SDH: 2.5G_DM, 2.5G_DMP, 32MUX_O, 32DMX, 32DMX_L, 32DMX_O, 32WSS, 32WSS_L, 40DMX_C, 40MUX_C, 40WSS_C, 40WXC_C, 80WXC_C, 4MD, AD_1B, AD_1C, AD_2C, AD_4B, AD_4C, ADM_10G, GE_XP, 10GE_XP, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OPT_AMP_17_C, OPT_AMP_C, OPT_RAMP_C, OPT_BST, OPT_BST_E, OPT_BST_L, OPT_PRE, OPT_PRE_L, OSC_CSM, OSCM, OTU2_XP, PSM, TXP_MR_10E, TXP_MR_10G, TXP_MR_2.5G, TXPP_MR_2.5G, PTF_10GE_4, PT_10GE_4, 40G-MXP-C • ONS 15454 M2/M6: RAMAN_CTP, RAMAN_COP

Table E-50 Field Descriptions for the Optical Physical PM Table (continued)

Field	Description	Cards Supported
Maximum Transmitted Power	Maximum transmitted power level in increments of one-tenths of dBm. The range is from –40.0 to 30.0 dBm for the following cards: TXP_MR_2.5G, TXPP_MR_2.5G, TXP_MR_10E, TXP_MR_10G, 2.5G_DM, 2.5G_DMP, MXP_2.5G_10E, and MXP_2.5G_10G. For the other supported DWDM cards, the range is from –50.0 to 30.0 dBm. **Note** Transmitted power is not supported for trunk ports.	• ONS 15454 SONET: 2.5G_DM, 2.5G_DMP, 32DMX, 32DMX_L, 32DMX_O, 32MUX_O, 32WSS, 32WSS_L, 40DMX_C, 40MUX_C, 40WSS_C, 40WXC_C, 80WXC_C, 4MD, AD_1B, AD_1C, AD_2C, AD_4B, AD_4C, ADM_10G, GE_XP, 10GE_XP, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OPT_AMP_17_C, OPT_AMP_C, OPT_RAMP_C, OPT_BST, OPT_BST_E, OPT_BST_L, OPT_PRE, OPT_PRE_L, OSC_CSM, OSCM, OTU2_XP, PSM, TXP_MR_2.5G, TXPP_MR_2.5G, TXP_MR_10E, TXP_MR_10G, PTF_10GE_4, PT_10GE_4, 40G-MXP-C • ONS 15454 SDH: 2.5G_DM, 2.5G_DMP, 32DMX, 32DMX_L, 32DMX_O, 32MUX_O, 32WSS, 32WSS_L, 40DMX_C, 40MUX_C, 40WSS_C, 40WXC_C, 80WXC_C, 4MD, AD_1B, AD_1C, AD_2C, AD_4B, AD_4C, ADM_10G, GE_XP, 10GE_XP, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OPT_AMP_17_C, OPT_AMP_C, OPT_RAMP_C, OPT_BST, OPT_BST_E, OPT_BST_L, OPT_PRE, OSC_CSM, OPT_PRE_L, OSCM, OTU2_XP, PSM, TXP_MR_10E, TXP_MR_10G, TXP_MR_2.5G, TXPP_MR_2.5G, PTF_10GE_4, PT_10GE_4, 40G-MXP-C • ONS 15454 M2/M6: RAMAN_CTP, RAMAN_COP

Table E-50 Field Descriptions for the Optical Physical PM Table (continued)

Field	Description	Cards Supported
Minimum Received Power	Minimum received power level in increments of one-tenths of dBm. The range is from –40.0 to 30.0 dBm for the following cards: TXP_MR_2.5G, TXPP_MR_2.5G, TXP_MR_10E, TXP_MR_10G, 2.5G_DM, 2.5G_DMP, MXP_2.5G_10E, and MXP_2.5G_10G. For the other supported DWDM cards, the range is from –50.0 to 30.0 dBm.	• ONS 15454 SONET: 2.5G_DM, 2.5G_DMP, 32DMX, 32DMX_L, 32DMX_O, 32MUX_O, 32WSS, 32WSS_L, 40DMX_C, 40MUX_C, 40WSS_C, 40WXC_C, 80WXC_C, 4MD, AD_1B, AD_1C, AD_2C, AD_4B, AD_4C, ADM_10G, GE_XP, 10GE_XP, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OPT_AMP_17_C, OPT_AMP_C, OPT_RAMP_C, OPT_BST, OPT_BST_E, OPT_BST_L, OPT_PRE, OPT_PRE_L, OSC_CSM, OSCM, OTU2_XP, PSM, TXP_MR_2.5G, TXPP_MR_2.5G, TXP_MR_10E, TXP_MR_10G, PTF_10GE_4, PT_10GE_4, 40G-MXP-C • ONS 15454 SDH: 2.5G_DM, 2.5G_DMP, 32DMX, 32DMX_L, 32DMX_O, 32MUX_O, 32WSS, 32WSS_L, 40DMX_C, 40MUX_C, 40WSS_C, 40WXC_C, 80WXC_C, 4MD, AD_1B, AD_1C, AD_2C, AD_4B, AD_4C, ADM_10G, GE_XP, 10GE_XP, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OPT_AMP_17_C, OPT_AMP_C, OPT_RAMP_C, OPT_BST, OPT_BST_E, OPT_BST_L, OPT_PRE, OPT_PRE_L, OSC_CSM, OSCM, OTU2_XP, PSM, TXP_MR_10E, TXP_MR_10G, TXP_MR_2.5G, TXPP_MR_2.5G, PTF_10GE_4, PT_10GE_4, 40G-MXP-C • ONS 15454 M2/M6: RAMAN_CTP

Table E-50 Field Descriptions for the Optical Physical PM Table (continued)

Field	Description	Cards Supported
Average Received Power	Average received power level in increments of one-tenths of dBm. The range is from –40.0 to 30.0 dBm for the following cards: TXP_MR_2.5G, TXPP_MR_2.5G, TXP_MR_10E, TXP_MR_10G, 2.5G_DM, 2.5G_DMP, MXP_2.5G_10E, and MXP_2.5G_10G. For the other supported DWDM cards, the range is from –50.0 to 30.0 dBm.	• ONS 15454 SONET: 2.5G_DM, 2.5G_DMP, 32DMX, 32DMX_L, 32DMX_O, 32MUX_O, 32WSS, 32WSS_L, 40DMX_C, 40MUX_C, 40WSS_C, 40WXC_C, 80WXC_C, 4MD, AD_1B, AD_1C, AD_2C, AD_4B, AD_4C, ADM_10G, GE_XP, 10GE_XP, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OPT_AMP_17_C, OPT_AMP_C, OPT_RAMP_C, OPT_BST, OPT_BST_E, OPT_BST_L, OPT_PRE, OPT_PRE_L, OSC_CSM, OSCM, OTU2_XP, PSM, TXP_MR_2.5G, TXPP_MR_2.5G, TXP_MR_10E, TXP_MR_10G, PTF_10GE_4, PT_10GE_4, 40G-MXP-C • ONS 15454 SDH: 2.5G_DM, 2.5G_DMP, 32DMX, 32DMX_L, 32DMX_O, 32MUX_O, 32WSS, 32WSS_L, 40DMX_C, 40MUX_C, 40WSS_C, 40WXC_C, 80WXC_C, 4MD, AD_1B, AD_1C, AD_2C, AD_4B, AD_4C, ADM_10G, GE_XP, 10GE_XP, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OPT_AMP_17_C, OPT_AMP_C, OPT_RAMP_C, OPT_BST, OPT_BST_E, OPT_BST_L, OPT_PRE, OPT_PRE_L, OSC_CSM, OSCM, OTU2_XP, PSM, TXP_MR_10E, TXP_MR_10G, TXP_MR_2.5G, TXPP_MR_2.5G, PTF_10GE_4, PT_10GE_4, 40G-MXP-C • ONS 15454 M2/M6: RAMAN_CTP

Table E-50 Field Descriptions for the Optical Physical PM Table (continued)

Field	Description	Cards Supported
Maximum Received Power	Maximum received power level in increments of one-tenths of dBm. The range is from –40.0 to 30.0 dBm for the following cards: TXP_MR_2.5G, TXPP_MR_2.5G, TXP_MR_10E, TXP_MR_10G, 2.5G_DM, 2.5G_DMP, MXP_2.5G_10E, and MXP_2.5G_10G. For the other supported DWDM cards, the range is from –50.0 to 30.0 dBm.	• ONS 15454 SONET: 2.5G_DM, 2.5G_DMP, 32DMX, 32DMX_L, 32DMX_O, 32MUX_O, 32WSS, 32WSS_L, 40DMX_C, 40MUX_C, 40WSS_C, 40WXC_C, 80WXC_C, 4MD, AD_1B, AD_1C, AD_2C, AD_4B, AD_4C, ADM_10G, GE_XP, 10GE_XP, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OPT_AMP_17_C, OPT_AMP_C, OPT_RAMP_C, OPT_BST, OPT_BST_E, OPT_BST_L, OPT_PRE, OPT_PRE_L, OSC_CSM, OSCM, OTU2_XP, PSM, TXP_MR_2.5G, TXPP_MR_2.5G, TXP_MR_10E, TXP_MR_10G, PTF_10GE_4, PT_10GE_4, 40G-MXP-C • ONS 15454 SDH: 2.5G_DM, 2.5G_DMP, 32DMX, 32DMX_L, 32DMX_O, 32MUX_O, 32WSS, 32WSS_L, 40DMX_C, 40MUX_C, 40WSS_C, 40WXC_C, 80WXC_C, 4MD, AD_1B, AD_1C, AD_2C, AD_4B, AD_4C, ADM_10G, GE_XP, 10GE_XP, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OPT_AMP_17_C, OPT_AMP_C, OPT_RAMP_C, OPT_BST, OPT_BST_E, OPT_BST_L, OPT_PRE, OPT_PRE_L, OSC_CSM, OSCM, OTU2_XP, PSM, TXP_MR_10E, TXP_MR_10G, TXP_MR_2.5G, TXPP_MR_2.5G, PTF_10GE_4, PT_10GE_4, 40G-MXP-C • ONS 15454 M2/M6: RAMAN_CTP
Minimum Passthrough Power	Displays the minimum passthrough power value.	• ONS 15454 SONET: 32WSS, 32WSS_L, OPT_AMP_17_C, OPT_AMP_C, OPT_RAMP_C • ONS 15454 SDH: 32WSS, 32WSS_L, OPT_AMP_17_C, OPT_AMP_C, OPT_RAMP_C
Average Passthrough Power	Displays the average passthrough power value.	• ONS 15454 SONET: 32WSS, 32WSS_L, OPT_AMP_17_C, OPT_AMP_C, OPT_RAMP_C • ONS 15454 SDH: 32WSS, 32WSS_L, OPT_AMP_17_C, OPT_AMP_C, OPT_RAMP_C
Maximum Passthrough Power	Displays the maximum passthrough power value.	• ONS 15454 SONET: 32WSS, 32WSS_L, OPT_AMP_17_C, OPT_AMP_C, OPT_RAMP_C • ONS 15454 SDH: 32WSS, 32WSS_L, OPT_AMP_17_C, OPT_AMP_C, OPT_RAMP_C

Table E-50 Field Descriptions for the Optical Physical PM Table (continued)

Field	Description	Cards Supported
Minimum Transmitted OSC Power	Minimum transmitted OSC power in increments of one-tenths of dBm. For the other supported DWDM cards, the range is from –50.0 to 30.0 dBm.	• ONS 15454 SONET: OPT_AMP_17_C, OPT_AMP_C, OPT_AMP_L, OPT_BST, OPT_BST_E, OPT_BST_L, OSCM, OSC_CSM, SMR_1, SMR_2 • ONS 15454 SDH: OPT_AMP_17_C, OPT_AMP_C, OPT_AMP_L, OPT_BST, OPT_BST_E, OPT_BST_L, OSCM, OSC_CSM, SMR_1, SMR_2
Average Transmitted OSC Power	Average transmitted OSC power level in increments of one-tenths of dBm. For the other supported DWDM cards, the range is from –50.0 to 30.0 dBm.	• ONS 15454 SONET: OPT_AMP_17_C, OPT_AMP_C, OPT_AMP_L, OPT_BST, OPT_BST_E, OPT_BST_L, OSCM, OSC_CSM, SMR_1, SMR_2 • ONS 15454 SDH: OPT_AMP_17_C, OPT_AMP_C, OPT_AMP_L, OPT_BST, OPT_BST_E, OPT_BST_L, OSCM, OSC_CSM, SMR_1, SMR_2
Maximum Transmitted OSC Power	Maximum transmitted OSC power level in increments of one-tenths of dBm. For the other supported DWDM cards, the range is from –50.0 to 30.0 dBm.	• ONS 15454 SONET: OPT_AMP_17_C, OPT_AMP_C, OPT_AMP_L, OPT_BST, OPT_BST_E, OPT_BST_L, OSCM, OSC_CSM, SMR_1, SMR_2 • ONS 15454 SDH: OPT_AMP_17_C, OPT_AMP_C, OPT_AMP_L, OPT_BST, OPT_BST_E, OPT_BST_L, OSCM, OSC_CSM, SMR_1, SMR_2
Minimum Received OSC Power	Minimum received OSC power level in increments of one-tenths of dBm. For the other supported DWDM cards, the range is from –50.0 to 30.0 dBm.	• ONS 15454 SONET: OPT_AMP_17_C, OPT_AMP_C, OPT_AMP_L, OPT_BST, OPT_BST_E, OPT_BST_L, OSCM, OSC_CSM, SMR_1, SMR_2 • ONS 15454 SDH: OPT_AMP_17_C, OPT_AMP_C, OPT_AMP_L, OPT_BST, OPT_BST_E, OPT_BST_L, OSCM, OSC_CSM, SMR_1, SMR_2
Average Received OSC Power	Average received OSC power level in increments of one-tenths of dBm. For the other supported DWDM cards, the range is from –50.0 to 30.0 dBm.	• ONS 15454 SONET: OPT_AMP_17_C, OPT_AMP_C, OPT_AMP_L, OPT_BST, OPT_BST_E, OPT_BST_L, OSCM, OSC_CSM, SMR_1, SMR_2 • ONS 15454 SDH: OPT_AMP_17_C, OPT_AMP_C, OPT_AMP_L, OPT_BST, OPT_BST_E, OPT_BST_L, OSCM, OSC_CSM, SMR_1, SMR_2
Maximum Received OSC Power	Maximum received OSC power level in increments of one-tenths of dBm. For the other supported DWDM cards, the range is from –50.0 to 30.0 dBm.	• ONS 15454 SONET: OPT_AMP_17_C, OPT_AMP_C, OPT_AMP_L, OPT_BST, OPT_BST_E, OPT_BST_L, OSCM, OSC_CSM, SMR_1, SMR_2 • ONS 15454 SDH: OPT_AMP_17_C, OPT_AMP_C, OPT_AMP_L, OPT_BST, OPT_BST_E, OPT_BST_L, OSCM, OSC_CSM, SMR_1, SMR_2

Table E-50 Field Descriptions for the Optical Physical PM Table (continued)

Field	Description	Cards Supported
Minimum PMD	Minimum polarization-mode dispersion (PMD) value, in picoseconds (ps).	• ONS 15454 SONET: 40E-MXP-C, 40E-TXP-C, 40G-MXP-C • ONS 15454 SDH: 40E-MXP-C, 40E-TXP-C, 40G-MXP-C
Average PMD	Average PMD value, in ps.	• ONS 15454 SONET: 40E-MXP-C, 40E-TXP-C, 40G-MXP-C • ONS 15454 SDH: 40E-MXP-C, 40E-TXP-C, 40G-MXP-C
Maximum PMD	Maximum PMD value, in ps.	• ONS 15454 SONET: 40E-MXP-C, 40E-TXP-C, 40G-MXP-C • ONS 15454 SDH: 40E-MXP-C, 40E-TXP-C, 40G-MXP-C
Minimum OSNR	Minimum optical signal-to-noise ratio (OSNR), in dBm.	• ONS 15454 SONET: 40E-MXP-C, 40E-TXP-C, 40G-MXP-C • ONS 15454 SDH: 40E-MXP-C, 40E-TXP-C, 40G-MXP-C
Average OSNR	Average OSNR, in dBm.	• ONS 15454 SONET: 40E-MXP-C, 40E-TXP-C, 40G-MXP-C • ONS 15454 SDH: 40E-MXP-C, 40E-TXP-C, 40G-MXP-C
Maximum OSNR	Maximum OSNR, in dBm.	• ONS 15454 SONET: 40E-MXP-C, 40E-TXP-C, 40G-MXP-C • ONS 15454 SDH: 40E-MXP-C, 40E-TXP-C, 40G-MXP-C
RX Second Order PMD Estimation (SOPMD)	Second Order PMD, in ps^2.	• ONS 15454 SONET: 100G_LC_C • ONS 15454 SDH:100G_LC_C
Polarization Change Rate Estimation (PCR)	Polarization Change Rate, in 10*rad/s.	• ONS 15454 SONET: 100G_LC_C • ONS 15454 SDH:100G_LC_C
RX Polarization Dependent Loss Estimation (PDL)	Polarization Dependent Loss, in dBm.	• ONS 15454 SONET:100G_LC_C • ONS 15454 SDH:100G_LC_C
NE ID	Name of the selected NE.	—

E.2.36 OTN FEC PM Table—ONS 15454 SONET, ONS 15454 SDH

The OTN FEC PM table shows OTN forward error correction (FEC) performance data for trunk ports on the ONS 15454 SONET and ONS 15454 SDH. You can display performance data for 15-minute, 1-day, or real-time increments:

- 15-minute—Data is collected at the quarter-hour (for example, at 10:00, 10:15, and so on). The data shown represents the difference in counter values between successive 15-minute intervals.
- 1-day—Data is collected at midnight GMT. The data shown represents the difference between the counter values read at successive midnights.
- Real-time—When a real-time PM session is running, it polls the NE for *x* number of attributes every 10 to 900 seconds. This feature allows you to examine the current value of a PM parameter in granularities finer than the standard 15-minute or 1-day interval. For more information, see 10.4.4 Managing Real-Time PM Data, page 10-26.

Performance monitoring can be done either on selected modules, or on specific locations in the NE. You can use the Plot tab to plot the data in a graphical view that is stored in the Prime Optical database. See 10.4.6 Using PM Data Graphs, page 10-28.

The following table describes the fields in the OTN FEC PM table.

Table E-51 Field Descriptions for the OTN FEC PM Table

Field	Description	Cards Supported
Alias ID	Alias name of the selected NE.	—
Module Name	Module for which PM data is displayed.	—
Physical Location	Slot and port number for which PM data is displayed.	—
Interface	Interface name of the selected NE.	—
Time Stamp (*time zone*)	When the data was collected. You can select GMT, Local, or User-Defined time for the Time Stamp display. Use the User Preferences dialog box to make your time zone selection.	—
Maintenance	Whether the NE was under maintenance when the performance data was collected.	—
Bit Errors Corrected	Number of bit errors corrected.	• ONS 15454 SONET: ADM_10G, GE_XP, 10GE_XP, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OTU2_XP, TXP_MR_2.5G, TXPP_MR_2.5G, TXP_MR_10E, TXP_MR_10G, PTF_10GE_4 • ONS 15454 SDH: ADM_10G, GE_XP, 10GE_XP, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OTU2_XP, TXP_MR_10E, TXP_MR_10G, TXP_MR_2.5G, TXPP_MR_2.5G, PTF_10GE_4

Table E-51 Field Descriptions for the OTN FEC PM Table (continued)

Field	Description	Cards Supported
Uncorrectable Words	Ratio of uncorrected codewords to codewords transmitted. A codeword is a block of *N* symbols that carry *K* information symbols and *R* redundant symbols (N = K+R).	• ONS 15454 SONET: ADM_10G, GE_XP, 10GE_XP, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OTU2_XP, TXP_MR_2.5G, TXPP_MR_2.5G, TXP_MR_10E, TXP_MR_10G, PTF_10GE_4 • ONS 15454 SDH: ADM_10G, GE_XP, 10GE_XP, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OTU2_XP, TXP_MR_10E, TXP_MR_10G, TXP_MR_2.5G, TXPP_MR_2.5G, PTF_10GE_4
NE ID	Name of the selected NE.	—

E.2.37 OTN Path PM Table (Far End)—ONS 15454 SONET, ONS 15454 SDH

The OTN Path PM table shows OTN path performance data for trunk ports on the ONS 15454 SONET and ONS 15454 SDH. You can display performance data for 15-minute, 1-day, or real-time increments:

- 15-minute—Data is collected at the quarter-hour (for example, at 10:00, 10:15, and so on). The data shown represents the difference in counter values between successive 15-minute intervals.
- 1-day—Data is collected at midnight GMT. The data shown represents the difference between the counter values read at successive midnights.
- Real-time—When a real-time PM session is running, it polls the NE for *x* number of attributes every 10 to 900 seconds. This feature allows you to examine the current value of a PM parameter in granularities finer than the standard 15-minute or 1-day interval. For more information, see 10.4.4 Managing Real-Time PM Data, page 10-26.

Performance monitoring can be done either on selected modules, or on specific locations in the NE. You can use the Plot tab to plot the data in a graphical view that is stored in the Prime Optical database. See 10.4.6 Using PM Data Graphs, page 10-28.

The following table describes the fields in the OTN Path PM table.

Table E-52 Field Descriptions for the OTN Path PM Table (Far End)

Field	Description	Cards Supported
Alias ID	Alias name of the selected NE.	—
Module Name	Module for which PM data is displayed.	—
Physical Location	Slot and port number for which PM data is displayed.	—
Interface	Interface name of the selected NE.	—

Table E-52 Field Descriptions for the OTN Path PM Table (Far End) (continued)

Field	Description	Cards Supported
Time Stamp (*time zone*)	When the data was collected. You can select GMT, Local, or User-Defined time for the Time Stamp display. Use the User Preferences dialog box to make your time zone selection.	—
Maintenance	Whether the NE was under maintenance when the performance data was collected.	—
ES-P	Errored seconds–path.	• ONS 15454 SONET: ADM_10G, GE_XP, 10GE_XP, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OTU2_XP, TXP_MR_2.5G, TXPP_MR_2.5G, TXP_MR_10E, TXP_MR_10G, PTF_10GE_4 • ONS 15454 SDH: ADM_10G, GE_XP, 10GE_XP, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OTU2_XP, TXP_MR_10E, TXP_MR_10G, TXP_MR_2.5G, TXPP_MR_2.5G, PTF_10GE_4
SES-P	Severely errored seconds–path.	• ONS 15454 SONET: ADM_10G, GE_XP, 10GE_XP, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OTU2_XP, TXP_MR_2.5G, TXPP_MR_2.5G, TXP_MR_10E, TXP_MR_10G, PTF_10GE_4 • ONS 15454 SDH: ADM_10G, GE_XP, 10GE_XP, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OTU2_XP, TXP_MR_10E, TXP_MR_10G, TXP_MR_2.5G, TXPP_MR_2.5G, PTF_10GE_4
UAS-P	Unavailable seconds–path.	• ONS 15454 SONET: ADM_10G, GE_XP, 10GE_XP, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OTU2_XP, TXP_MR_2.5G, TXPP_MR_2.5G, TXP_MR_10E, TXP_MR_10G, PTF_10GE_4 • ONS 15454 SDH: ADM_10G, GE_XP, 10GE_XP, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OTU2_XP, TXP_MR_10E, TXP_MR_10G, TXP_MR_2.5G, TXPP_MR_2.5G, PTF_10GE_4

Table E-52 Field Descriptions for the OTN Path PM Table (Far End) (continued)

Field	Description	Cards Supported
BBE-P	Background block errors–path.	• ONS 15454 SONET: ADM_10G, GE_XP, 10GE_XP, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OTU2_XP, TXP_MR_2.5G, TXPP_MR_2.5G, TXP_MR_10E, TXP_MR_10G, PTF_10GE_4 • ONS 15454 SDH: ADM_10G, GE_XP, 10GE_XP, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OTU2_XP, TXP_MR_10E, TXP_MR_10G, TXP_MR_2.5G, TXPP_MR_2.5G, PTF_10GE_4
FC-P	Failure count–path.	• ONS 15454 SONET: ADM_10G, GE_XP, 10GE_XP, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OTU2_XP, TXP_MR_2.5G, TXPP_MR_2.5G, TXP_MR_10E, TXP_MR_10G, PTF_10GE_4 • ONS 15454 SDH: ADM_10G, GE_XP, 10GE_XP, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OTU2_XP, TXP_MR_10E, TXP_MR_10G, TXP_MR_2.5G, TXPP_MR_2.5G, PTF_10GE_4
ESR-P	Errored seconds ratio–path.	• ONS 15454 SONET: ADM_10G, GE_XP, 10GE_XP, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OTU2_XP, TXP_MR_2.5G, TXPP_MR_2.5G, TXP_MR_10E, TXP_MR_10G, PTF_10GE_4 • ONS 15454 SDH: ADM_10G, GE_XP, 10GE_XP, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OTU2_XP, TXP_MR_10E, TXP_MR_10G, TXP_MR_2.5G, TXPP_MR_2.5G, PTF_10GE_4
SESR-P	Severely errored seconds ratio–path.	• ONS 15454 SONET: ADM_10G, GE_XP, 10GE_XP, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OTU2_XP, TXP_MR_2.5G, TXPP_MR_2.5G, TXP_MR_10E, TXP_MR_10G, PTF_10GE_4 • ONS 15454 SDH: ADM_10G, GE_XP, 10GE_XP, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OTU2_XP, TXP_MR_10E, TXP_MR_10G, TXP_MR_2.5G, TXPP_MR_2.5G, PTF_10GE_4

Table E-52 Field Descriptions for the OTN Path PM Table (Far End) (continued)

Field	Description	Cards Supported
BBER-P	Background block errors ratio–path.	• ONS 15454 SONET: ADM_10G, GE_XP, 10GE_XP, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OTU2_XP, TXP_MR_2.5G, TXPP_MR_2.5G, TXP_MR_10E, TXP_MR_10G, PTF_10GE_4 • ONS 15454 SDH: ADM_10G, GE_XP, 10GE_XP, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OTU2_XP, TXP_MR_10E, TXP_MR_10G, TXP_MR_2.5G, TXPP_MR_2.5G, PTF_10GE_4
NE ID	Name of the selected NE.	—

E.2.38 OTN Path PM Table (Near End)—ONS 15454 SONET, ONS 15454 SDH

The OTN Path PM table shows near-end OTN path performance data for trunk ports on the ONS 15454 SONET and ONS 15454 SDH. You can display performance data for 15-minute, 1-day, or real-time increments:

- 15-minute—Data is collected at the quarter-hour (for example, at 10:00, 10:15, and so on). The data shown represents the difference in counter values between successive 15-minute intervals.
- 1-day—Data is collected at midnight GMT. The data shown represents the difference between the counter values read at successive midnights.
- Real-time—When a real-time PM session is running, it polls the NE for *x* number of attributes every 10 to 900 seconds. This feature allows you to examine the current value of a PM parameter in granularities finer than the standard 15-minute or 1-day interval. For more information, see 10.4.4 Managing Real-Time PM Data, page 10-26.

Performance monitoring can be done either on selected modules, or on specific locations in the NE. You can use the Plot tab to plot the data in a graphical view that is stored in the Prime Optical database. See 10.4.6 Using PM Data Graphs, page 10-28.

The following table describes the fields in the OTN Path PM table.

Table E-53 Field Descriptions for the OTN Path PM Table (Near End)

Field	Description	Cards Supported
Alias ID	Alias name of the selected NE.	—
Module Name	Module for which PM data is displayed.	—
Physical Location	Slot and port number for which PM data is displayed.	—
Interface	Interface name of the selected NE.	—

Table E-53 Field Descriptions for the OTN Path PM Table (Near End) (continued)

Field	Description	Cards Supported
Time Stamp (*time zone*)	When the data was collected. You can select GMT, Local, or User-Defined time for the Time Stamp display. Use the User Preferences dialog box to make your time zone selection.	—
Maintenance	Whether the NE was under maintenance when the performance data was collected.	—
ES-P	Displays the errored seconds-path.	• ONS 15454 SONET: ADM_10G, GE_XP, 10GE_XP, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OTU2_XP, TXP_MR_2.5G, TXPP_MR_2.5G, TXP_MR_10E, TXP_MR_10G, PTF_10GE_4 • ONS 15454 SDH: ADM_10G, GE_XP, 10GE_XP, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OTU2_XP, TXP_MR_10E, TXP_MR_10G, TXP_MR_2.5G, TXPP_MR_2.5G, PTF_10GE_4
SES-P	Displays the severely errored seconds-path.	• ONS 15454 SONET: ADM_10G, GE_XP, 10GE_XP, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OTU2_XP, TXP_MR_2.5G, TXPP_MR_2.5G, TXP_MR_10E, TXP_MR_10G, PTF_10GE_4 • ONS 15454 SDH: ADM_10G, GE_XP, 10GE_XP, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OTU2_XP, TXP_MR_10E, TXP_MR_10G, TXP_MR_2.5G, TXPP_MR_2.5G, PTF_10GE_4
UAS-P	Displays the unavailable seconds-path.	• ONS 15454 SONET: ADM_10G, GE_XP, 10GE_XP, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OTU2_XP, TXP_MR_2.5G, TXPP_MR_2.5G, TXP_MR_10E, TXP_MR_10G, PTF_10GE_4 • ONS 15454 SDH: ADM_10G, GE_XP, 10GE_XP, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OTU2_XP, TXP_MR_10E, TXP_MR_10G, TXP_MR_2.5G, TXPP_MR_2.5G, PTF_10GE_4
BBE-P	Displays the background block errors-path.	• ONS 15454 SONET: ADM_10G, GE_XP, 10GE_XP, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OTU2_XP, TXP_MR_2.5G, TXPP_MR_2.5G, TXP_MR_10E, TXP_MR_10G, PTF_10GE_4 • ONS 15454 SDH: ADM_10G, GE_XP, 10GE_XP, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OTU2_XP, TXP_MR_10E, TXP_MR_10G, TXP_MR_2.5G, TXPP_MR_2.5G, PTF_10GE_4

Table E-53 Field Descriptions for the OTN Path PM Table (Near End) (continued)

Field	Description	Cards Supported
FC-P	Displays the failure count-path.	• ONS 15454 SONET: ADM_10G, GE_XP, 10GE_XP, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OTU2_XP, TXP_MR_2.5G, TXPP_MR_2.5G, TXP_MR_10E, TXP_MR_10G, PTF_10GE_4 • ONS 15454 SDH: ADM_10G, GE_XP, 10GE_XP, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OTU2_XP, TXP_MR_10E, TXP_MR_10G, TXP_MR_2.5G, TXPP_MR_2.5G, PTF_10GE_4
ESR-P	Displays the errored seconds ratio-path.	• ONS 15454 SONET: ADM_10G, GE_XP, 10GE_XP, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OTU2_XP, TXP_MR_2.5G, TXPP_MR_2.5G, TXP_MR_10E, TXP_MR_10G, PTF_10GE_4 • ONS 15454 SDH: ADM_10G, GE_XP, 10GE_XP, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OTU2_XP, TXP_MR_10E, TXP_MR_10G, TXP_MR_2.5G, TXPP_MR_2.5G, PTF_10GE_4
SESR-P	Displays the severely errored seconds ratio-path.	• ONS 15454 SONET: ADM_10G, GE_XP, 10GE_XP, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OTU2_XP, TXP_MR_2.5G, TXPP_MR_2.5G, TXP_MR_10E, TXP_MR_10G, PTF_10GE_4 • ONS 15454 SDH: ADM_10G, GE_XP, 10GE_XP, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OTU2_XP, TXP_MR_10E, TXP_MR_10G, TXP_MR_2.5G, TXPP_MR_2.5G, PTF_10GE_4
BBER-P	Displays the background block errors ratio-path.	• ONS 15454 SONET: ADM_10G, GE_XP, 10GE_XP, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OTU2_XP, TXP_MR_2.5G, TXPP_MR_2.5G, TXP_MR_10E, TXP_MR_10G, PTF_10GE_4 • ONS 15454 SDH: ADM_10G, GE_XP, 10GE_XP, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OTU2_XP, TXP_MR_10E, TXP_MR_10G, TXP_MR_2.5G, TXPP_MR_2.5G, PTF_10GE_4
NE ID	Name of the selected NE.	—

E.2.39 OTN Section PM Table (Far End)—ONS 15454 SONET, ONS 15454 SDH

The OTN Section PM table shows OTN section performance data for trunk ports on the ONS 15454 SONET and ONS 15454 SDH. You can display performance data for 15-minute, 1-day, or real-time increments:

- 15-minute—Data is collected at the quarter-hour (for example, at 10:00, 10:15, and so on). The data shown represents the difference in counter values between successive 15-minute intervals.

- 1-day—Data is collected at midnight GMT. The data shown represents the difference between the counter values read at successive midnights.
- Real-time—When a real-time PM session is running, it polls the NE for *x* number of attributes every 10 to 900 seconds. This feature allows you to examine the current value of a PM parameter in granularities finer than the standard 15-minute or 1-day interval. For more information, see 10.4.4 Managing Real-Time PM Data, page 10-26.

Performance monitoring can be done either on selected modules, or on specific locations in the NE. You can use the Plot tab to plot the data in a graphical view that is stored in the Prime Optical database. See 10.4.6 Using PM Data Graphs, page 10-28.

The following table describes the fields in the OTN Section PM table.

Table E-54 Field Descriptions for the OTN Section PM Table (Far End)

Field	Description	Cards Supported
Alias ID	Alias name of the selected NE.	—
Module Name	Module for which PM data is displayed.	—
Physical Location	Slot and port number for which PM data is displayed.	—
Interface	Interface name of the selected NE.	—
Time Stamp (*time zone*)	When the data was collected. You can select GMT, Local, or User-Defined time for the Time Stamp display. Use the User Preferences dialog box to make your time zone selection.	—
Maintenance	Whether the NE was under maintenance when the performance data was collected.	—
ES-S	Errored seconds–section.	• ONS 15454 SONET: ADM_10G, GE_XP, 10GE_XP, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OTU2_XP, TXP_MR_2.5G, TXPP_MR_2.5G, TXP_MR_10E, TXP_MR_10G, PTF_10GE_4 • ONS 15454 SDH: ADM_10G, GE_XP, 10GE_XP, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OTU2_XP, TXP_MR_10E, TXP_MR_10G, TXP_MR_2.5G, TXPP_MR_2.5G, PTF_10GE_4
SES-S	Severely errored seconds–section.	• ONS 15454 SONET: ADM_10G, GE_XP, 10GE_XP, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OTU2_XP, TXP_MR_2.5G, TXPP_MR_2.5G, TXP_MR_10E, TXP_MR_10G, PTF_10GE_4 • ONS 15454 SDH: ADM_10G, GE_XP, 10GE_XP, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OTU2_XP, TXP_MR_10E, TXP_MR_10G, TXP_MR_2.5G, TXPP_MR_2.5G, PTF_10GE_4

Table E-54 Field Descriptions for the OTN Section PM Table (Far End) (continued)

Field	Description	Cards Supported
UAS-S	Unavailable seconds–section.	• ONS 15454 SONET: ADM_10G, GE_XP, 10GE_XP, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OTU2_XP, TXP_MR_2.5G, TXPP_MR_2.5G, TXP_MR_10E, TXP_MR_10G, PTF_10GE_4 • ONS 15454 SDH: ADM_10G, GE_XP, 10GE_XP, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OTU2_XP, TXP_MR_10E, TXP_MR_10G, TXP_MR_2.5G, TXPP_MR_2.5G, PTF_10GE_4
BBE-S	Background block errors–section.	• ONS 15454 SONET: ADM_10G, GE_XP, 10GE_XP, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OTU2_XP, TXP_MR_2.5G, TXPP_MR_2.5G, TXP_MR_10E, TXP_MR_10G, PTF_10GE_4 • ONS 15454 SDH: ADM_10G, GE_XP, 10GE_XP, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OTU2_XP, TXP_MR_10E, TXP_MR_10G, TXP_MR_2.5G, TXPP_MR_2.5G, PTF_10GE_4
FC-S	Failure count–section.	• ONS 15454 SONET: ADM_10G, GE_XP, 10GE_XP, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OTU2_XP, TXP_MR_2.5G, TXPP_MR_2.5G, TXP_MR_10E, TXP_MR_10G, PTF_10GE_4 • ONS 15454 SDH: ADM_10G, GE_XP, 10GE_XP, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OTU2_XP, TXP_MR_10E, TXP_MR_10G, TXP_MR_2.5G, TXPP_MR_2.5G, PTF_10GE_4
ESR-S	Errored seconds ratio–section.	• ONS 15454 SONET: ADM_10G, GE_XP, 10GE_XP, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OTU2_XP, TXP_MR_2.5G, TXPP_MR_2.5G, TXP_MR_10E, TXP_MR_10G, PTF_10GE_4 • ONS 15454 SDH: ADM_10G, GE_XP, 10GE_XP, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OTU2_XP, TXP_MR_10E, TXP_MR_10G, TXP_MR_2.5G, TXPP_MR_2.5G, PTF_10GE_4

Table E-54 Field Descriptions for the OTN Section PM Table (Far End) (continued)

Field	Description	Cards Supported
SESR-S	Severely errored seconds ratio–section.	• ONS 15454 SONET: ADM_10G, GE_XP, 10GE_XP, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OTU2_XP, TXP_MR_2.5G, TXPP_MR_2.5G, TXP_MR_10E, TXP_MR_10G, PTF_10GE_4 • ONS 15454 SDH: ADM_10G, GE_XP, 10GE_XP, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OTU2_XP, TXP_MR_10E, TXP_MR_10G, TXP_MR_2.5G, TXPP_MR_2.5G, PTF_10GE_4
BBER-S	Background block error ratio–section.	• ONS 15454 SONET: ADM_10G, GE_XP, 10GE_XP, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OTU2_XP, TXP_MR_2.5G, TXPP_MR_2.5G, TXP_MR_10E, TXP_MR_10G, PTF_10GE_4 • ONS 15454 SDH: ADM_10G, GE_XP, 10GE_XP, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OTU2_XP, TXP_MR_10E, TXP_MR_10G, TXP_MR_2.5G, TXPP_MR_2.5G, PTF_10GE_4
NE ID	Name of the selected NE.	—

E.2.40 OTN Section PM Table (Near End)—ONS 15454 SONET, ONS 15454 SDH

The OTN Section PM table shows near-end OTN section performance data for trunk ports on the ONS 15454 SONET and ONS 15454 SDH. You can display performance data for 15-minute, 1-day, or real-time increments:

- 15-minute—Data is collected at the quarter-hour (for example, at 10:00, 10:15, and so on). The data shown represents the difference in counter values between successive 15-minute intervals.
- 1-day—Data is collected at midnight GMT. The data shown represents the difference between the counter values read at successive midnights.
- Real-time—When a real-time PM session is running, it polls the NE for *x* number of attributes every 10 to 900 seconds. This feature allows you to examine the current value of a PM parameter in granularities finer than the standard 15-minute or 1-day interval. For more information, see 10.4.4 Managing Real-Time PM Data, page 10-26.

Performance monitoring can be done either on selected modules, or on specific locations in the NE. You can use the Plot tab to plot the data in a graphical view that is stored in the Prime Optical database. See 10.4.6 Using PM Data Graphs, page 10-28.

The following table describes the fields in the OTN Section PM table.

Table E-55 Field Descriptions for the OTN Section PM Table (Near End)

Field	Description	Cards Supported
Alias ID	Alias name of the selected NE.	—
Module Name	Module for which PM data is displayed.	—
Physical Location	Slot and port number for which PM data is displayed.	—
Interface	Interface name of the selected NE.	—
Time Stamp (*time zone*)	When the data was collected. You can select GMT, Local, or User-Defined time for the Time Stamp display. Use the User Preferences dialog box to make your time zone selection.	—
Maintenance	Whether the NE was under maintenance when the performance data was collected.	—
ES-S	Section Errored Seconds (ES-S) indicates the errored seconds recorded in the OTN section during the PM time interval.	• ONS 15454 SONET: ADM_10G, GE_XP, 10GE_XP, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OTU2_XP, TXP_MR_2.5G, TXPP_MR_2.5G, TXP_MR_10E, TXP_MR_10G, PTF_10GE_4 • ONS 15454 SDH: ADM_10G, GE_XP, 10GE_XP, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OTU2_XP, TXP_MR_10E, TXP_MR_10G, TXP_MR_2.5G, TXPP_MR_2.5G, PTF_10GE_4
SES-S	Section Severely Errored Seconds (SES-S) indicates the severely errored seconds recorded in the OTN section during the PM time interval.	• ONS 15454 SONET: ADM_10G, GE_XP, 10GE_XP, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OTU2_XP, TXP_MR_2.5G, TXPP_MR_2.5G, TXP_MR_10E, TXP_MR_10G, PTF_10GE_4 • ONS 15454 SDH: ADM_10G, GE_XP, 10GE_XP, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OTU2_XP, TXP_MR_10E, TXP_MR_10G, TXP_MR_2.5G, TXPP_MR_2.5G, PTF_10GE_4
UAS-S	Section unavailable seconds (UAS-S) indicates the unavailable seconds recorded in the OTN section during the PM time interval.	• ONS 15454 SONET: ADM_10G, GE_XP, 10GE_XP, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OTU2_XP, TXP_MR_2.5G, TXPP_MR_2.5G, TXP_MR_10E, TXP_MR_10G, PTF_10GE_4 • ONS 15454 SDH: ADM_10G, GE_XP, 10GE_XP, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OTU2_XP, TXP_MR_10E, TXP_MR_10G, TXP_MR_2.5G, TXPP_MR_2.5G, PTF_10GE_4

Table E-55 Field Descriptions for the OTN Section PM Table (Near End) (continued)

Field	Description	Cards Supported
BBE-S	Section Background Block Errors (BBE-S) indicates the number of background block errors recorded in the OTN section during the PM time interval.	• ONS 15454 SONET: ADM_10G, GE_XP, 10GE_XP, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OTU2_XP, TXP_MR_2.5G, TXPP_MR_2.5G, TXP_MR_10E, TXP_MR_10G, PTF_10GE_4 • ONS 15454 SDH: ADM_10G, GE_XP, 10GE_XP, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OTU2_XP, TXP_MR_10E, TXP_MR_10G, TXP_MR_2.5G, TXPP_MR_2.5G, PTF_10GE_4
FC-S	Section Failure Counts (FC-S) indicates the failure counts recorded in the OTN section during the PM time interval.	• ONS 15454 SONET: ADM_10G, GE_XP, 10GE_XP, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OTU2_XP, TXP_MR_2.5G, TXPP_MR_2.5G, TXP_MR_10E, TXP_MR_10G, PTF_10GE_4 • ONS 15454 SDH: ADM_10G, GE_XP, 10GE_XP, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OTU2_XP, TXP_MR_10E, TXP_MR_10G, TXP_MR_2.5G, TXPP_MR_2.5G, PTF_10GE_4
ESR-S	Section Errored Seconds Ratio (ESR-S) indicates the errored seconds ratio recorded in the OTN section during the PM time interval.	• ONS 15454 SONET: ADM_10G, GE_XP, 10GE_XP, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OTU2_XP, TXP_MR_2.5G, TXPP_MR_2.5G, TXP_MR_10E, TXP_MR_10G, PTF_10GE_4 • ONS 15454 SDH: ADM_10G, GE_XP, 10GE_XP, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OTU2_XP, TXP_MR_10E, TXP_MR_10G, TXP_MR_2.5G, TXPP_MR_2.5G, PTF_10GE_4
SESR-S	Section Severely Errored Seconds Ratio (SESR-S) indicates the severely errored seconds ratio recorded in the OTN section during the PM time interval.	• ONS 15454 SONET: ADM_10G, GE_XP, 10GE_XP, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OTU2_XP, TXP_MR_2.5G, TXPP_MR_2.5G, TXP_MR_10E, TXP_MR_10G, PTF_10GE_4 • ONS 15454 SDH: ADM_10G, GE_XP, 10GE_XP, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OTU2_XP, TXP_MR_10E, TXP_MR_10G, TXP_MR_2.5G, TXPP_MR_2.5G, PTF_10GE_4

Table E-55 Field Descriptions for the OTN Section PM Table (Near End) (continued)

Field	Description	Cards Supported
BBER-S	Section Background Block Errors Ratio (BBER-S) indicates the background block errors ratio recorded in the OTN section during the PM time interval.	• ONS 15454 SONET: ADM_10G, GE_XP, 10GE_XP, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OTU2_XP, TXP_MR_2.5G, TXPP_MR_2.5G, TXP_MR_10E, TXP_MR_10G, PTF_10GE_4 • ONS 15454 SDH: ADM_10G, GE_XP, 10GE_XP, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OTU2_XP, TXP_MR_10E, TXP_MR_10G, TXP_MR_2.5G, TXPP_MR_2.5G, PTF_10GE_4
NE ID	Name of the selected NE.	—

E.2.41 POS PM Table—ONS 15310 CL, ONS 15310 MA SONET, ONS 15454 SONET, ONS 15310 MA SDH, ONS 15454 SDH, ONS 15600 SONET, ONS 15600 SDH

The POS PM table shows POS performance data for Ethernet cards. You can display performance data for 15-minute, 1-day, or real-time increments:

- 15-minute—Data is collected at the quarter-hour (for example, at 10:00, 10:15, and so on). The data shown represents the difference in counter values between successive 15-minute intervals.
- 1-day—Data is collected at midnight GMT. The data shown represents the difference between the counter values read at successive midnights.
- Real-time—When a real-time PM session is running, it polls the NE for *x* number of attributes every 10 to 900 seconds. This feature allows you to examine the current value of a PM parameter in granularities finer than the standard 15-minute or 1-day interval. For more information, see 10.4.4 Managing Real-Time PM Data, page 10-26.

Performance monitoring can be done either on selected modules, or on specific locations in the NE. You can use the Plot tab to plot the data in a graphical view that is stored in the Prime Optical database. See 10.4.6 Using PM Data Graphs, page 10-28.

The following table describes the fields in the POS PM table.

Note Real-time PM data is not available for POS cards on NE releases earlier than release 5.0.

Table E-56 Field Descriptions for the POS PM Table

Field	Description	Cards Supported
Alias ID	Alias name of the selected NE.	—
Module Name	Module for which PM data is displayed.	—

Table E-56 Field Descriptions for the POS PM Table (continued)

Field	Description	Cards Supported
Physical Location	Slot and port number for which PM data is displayed.	—
Interface	Interface name of the selected NE.	—
Time Stamp	When the data was collected. You can select GMT, Local, or User-Defined time for the Time Stamp display. Use the User Preferences dialog box to make your time zone selection.	—
Maintenance	Whether the NE was under maintenance when the performance data was collected.	—
Time Last Cleared	When the statistics were last reset.	—
Rx Pre HDLC Bytes	Number of bytes received prior to the bytes undergoing HDCL encapsulation by the policy engine.	—
Rx Post HDLC Bytes	Number of bytes received after the bytes undergoing HDLC encapsulation by the policy engine.	—
Rx Total Packets	Number of bytes received since the last counter reset.	• ONS 15310 CL: CE-100T-8, ML-100T-8 • ONS 15310 MA SONET: CE-100T-8, CE-MR-6, ML-100T-8 • ONS 15310 MA SDH: CE-100T-8, CE-MR-6, ML-100T-8 • ONS 15454 SONET: CE-1000-4, CE-100T-8, CE-MR-10, ML100T, ML100X-8, ML1000, MXP_MR_10DME • ONS 15454 SDH: CE-1000-4, CE-100T-8, CE-MR-10, ML100T, ML1000, MXP_MR_10DME • ONS 15600 SONET: ASAP_4 • ONS 15600 SDH: ASAP_4
Rx Normal Packets	Number of packets between the minimum and maximum packet size received.	—
Rx Shorts	Number of packets below the minimum packet size received.	—
Rx Runts	Total number of frames received that are less than 64 bytes in length and have a CRC error.	—
Rx Longs	Counter for the number of received frames that exceed the maximum valid packet length of 1518 bytes.	—

Table E-56 Field Descriptions for the POS PM Table (continued)

Field	Description	Cards Supported
ifInErrors	Total number of received errors.	• ONS 15310 MA SONET: CE-100T-8, CE-MR-6, ML-100T-8 • ONS 15310 MA SDH: CE-100T-8, CE-MR-6, ML-100T-8 • ONS 15454 SONET: CE-MR-10 • ONS 15454 SDH: CE-MR-10
ifOutDiscards	Number of outbound packets that were chosen to be discarded even though no errors had been detected to prevent their being transmitted.	• ONS 15454 SONET: CE-MR-10 • ONS 15454 SDH: CE-MR-10
Rx Crc Errors	Number of received CRC errors.	—
Rx Input Drop Packets	Number of received packets dropped on input.	—
Rx Input Abort Packets	Number of received packets aborted on input.	• ONS 15600 SONET: ASAP_4
Tx Pre HDLC Bytes	Number of bytes transmitted prior to the bytes undergoing HDLC encapsulation by the policy engine.	—
Tx Post HDLC Bytes	Number of bytes transmitted after the bytes undergoing HDLC encapsulation by the policy engine.	—
Tx Total Packets	Number of packets transmitted since the last counter reset.	• ONS 15310 CL: CE-100T-8, ML-100T-8 • ONS 15310 MA SONET: CE-100T-8, CE-MR-6, ML-100T-8 • ONS 15310 MA SDH: CE-100T-8, CE-MR-6, ML-100T-8 • ONS 15454 SONET: CE-1000-4, CE-100T-8, CE-MR-10, ML100T, ML100X-8, ML1000, MXP_MR_10DME • ONS 15454 SDH: CE-1000-4, CE-100T-8, CE-MR-10, ML100T, ML1000, MXP_MR_10DME • ONS 15600 SONET: ASAP_4 • ONS 15600 SDH: ASAP_4
Port Drop Counts	Number of received frames dropped at the port level.	—

Table E-56 Field Descriptions for the POS PM Table (continued)

Field	Description	Cards Supported
ifInDiscards	Number of inbound packets that were chosen to be discarded even though no errors had been detected to prevent their being deliverable to a higher-layer protocol.	• ONS 15310 MA SONET: CE-100T-8, CE-MR-6, ML-100T-8 • ONS 15310 MA SDH: CE-100T-8, CE-MR-6, ML-100T-8 • ONS 15454 SONET: CE-1000-4, CE-MR-10, ML100X-8, MXP_MR_10DME • ONS 15454 SDH: CE-1000-4, CE-100T-8, CE-MR-10, MXP_MR_10DME
ifInOctets	Number of bytes received since the last counter reset.	• ONS 15310 MA SONET: CE-100T-8, CE-MR-6, ML-100T-8 • ONS 15310 MA SDH: CE-100T-8, CE-MR-6, ML-100T-8 • ONS 15454 SONET: CE-1000-4, CE-MR-10, ML100T, ML100X-8, ML1000, MXP_MR_10DME • ONS 15454 SDH: CE-1000-4, CE-100T-8, CE-MR-10, ML100T, ML1000, MXP_MR_10DME
ifOutOctets	Number of bytes transmitted since the last counter reset.	• ONS 15310 MA SONET: CE-100T-8, CE-MR-6, ML-100T-8 • ONS 15310 MA SDH: CE-100T-8, CE-MR-6, ML-100T-8 • ONS 15454 SONET: CE-1000-4, CE-MR-10, ML100T, ML100X-8, ML1000, MXP_MR_10DME • ONS 15454 SDH: CE-1000-4, CE-MR-10, ML100T, ML1000, MXP_MR_10DME
etherStatsDropEvents	Total number of events in which packets were dropped by the probe due to lack of resources. The value indicates the number of times this condition has been detected.	• ONS 15310 CL: CE-100T-8, ML-100T-8 • ONS 15454 SONET: CE-1000-4, CE-100T-8, ML100T, ML1000, MXP_MR_10DME • ONS 15454 SDH: CE-1000-4, ML100T, ML1000, MXP_MR_10DME
rxPktsDroppedInternalCongestion	Number of received packets dropped due to overflow in G1000-4 frame buffer.	• ONS 15310 CL: CE-100T-8, ML-100T-8 • ONS 15454 SONET: CE-1000-4, CE-100T-8, ML100T, ML1000, MXP_MR_10DME • ONS 15454 SDH: CE-1000-4, ML100T, ML1000, MXP_MR_10DME • ONS 15600 SONET: ASAP_4 • ONS 15600 SDH: ASAP_4

Table E-56 Field Descriptions for the POS PM Table (continued)

Field	Description	Cards Supported
mediaIndStatsRxFramesTruncated	Total number of frames received that are less than 5 bytes. This value is a part of HDLC and GFP port statistics.	• ONS 15454 SONET: CE-1000-4, ML100T, ML1000, MXP_MR_10DME • ONS 15454 SDH: CE-1000-4, ML100T, ML1000, MXP_MR_10DME • ONS 15600 SONET: ASAP_4 • ONS 15600 SDH: ASAP_4
mediaIndStatsRxFramesTooLong	Number of received frames that exceed the MTU. This value is part of HDLC and GFP port statistics.	• ONS 15454 SONET: CE-1000-4, ML100T, ML1000, MXP_MR_10DME • ONS 15454 SDH: CE-1000-4, ML100T, ML1000, MXP_MR_10DME • ONS 15600 SONET: ASAP_4 • ONS 15600 SDH: ASAP_4
mediaIndStatsRxFramesBadCRC	Number of received data frames with payload CRC errors when HDLC framing is used.	• ONS 15454 SONET: CE-1000-4, ML100T, ML1000, MXP_MR_10DME • ONS 15454 SDH: CE-1000-4, CE-100T-8, ML100T, ML1000, MXP_MR_10DME • ONS 15600 SONET: ASAP_4 • ONS 15600 SDH: ASAP_4
mediaIndStatsRxShortPkts	Number of packets below the minimum packet size received.	• ONS 15454 SONET:CE-1000-4, ML100T, ML1000, MXP_MR_10DME • ONS 15454 SDH: CE-1000-4, ML100T, ML1000, MXP_MR_10DME • ONS 15600 SONET: ASAP_4 • ONS 15600 SDH: ASAP_4
hdlcInOctets	Number of bytes received (from the SONET/SDH path) prior to the bytes undergoing HLDC decapsulation by the policy engine.	• ONS 15454 SONET:CE-1000-4, ML100T, ML1000, MXP_MR_10DME • ONS 15454 SDH: CE-1000-4, ML100T, ML1000, MXP_MR_10DME • ONS 15600 SONET: ASAP_4 • ONS 15600 SDH: ASAP_4
hdlcRxAborts	Number of received packets aborted on input.	• ONS 15454 SONET: CE-1000-4, ML100T, ML1000, MXP_MR_10DME • ONS 15454 SDH: CE-1000-4, CE-100T-8, ML100T, ML1000, MXP_MR_10DME • ONS 15600 SONET: ASAP_4 • ONS 15600 SDH: ASAP_4

Table E-56 Field Descriptions for the POS PM Table (continued)

Field	Description	Cards Supported
hdlcOutOctets	Number of bytes transmitted (to the SONET/SDH path) after the bytes undergoing HLDC encapsulation by the policy engine.	• ONS 15454 SONET: CE-1000-4, ML100T, ML1000, MXP_MR_10DME • ONS 15454 SDH: CE-1000-4, ML100T, ML1000, MXP_MR_10DME • ONS 15600 SONET: ASAP_4 • ONS 15600 SDH: ASAP_4
IfInPayloadCrcErrors	Number of payload CRC errors received since the last counter reset.	• ONS 15454 SONET: CE-MR-10 • ONS 15454 SDH: CE-1000-4, CE-100T-8, CE-MR-10, MXP_MR_10DME
IfOutPayloadCrcErrors	Number of payload CRC errors transmitted since the last counter reset.	• ONS 15454 SONET: CE-MR-10 • ONS 15454 SDH: CE-1000-4, CE-100T-8, CE-MR-10, MXP_MR_10DME
IfOutOversizePackets	Number of oversize packets transmitted since the last counted reset.	• ONS 15454 SONET: CE-MR-10 • ONS 15454 SDH: CE-1000-4, CE-100T-8, CE-MR-10, MXP_MR_10DME
hdlcPktDrops	Total number of packets that are dropped when the card is in HDLC mode and traffic is oversubscribed.	• ONS 15454 SONET: CE-1000-4, MXP_MR_10DME • ONS 15454 SDH: CE-1000-4, MXP_MR_10DME
Rx Utilization Stats (%)	Received utilization, which is a percentage of utilization of the Ethernet segment on a scale of 0 to 100 percent.	• ONS 15600 SONET: ASAP_4
Tx Utilization Stats (%)	Transmitted utilization, which is a percentage of utilization of the Ethernet segment on a scale of 0 to 100 percent.	• ONS 15600 SONET: ASAP_4
NE ID	Name of the selected NE.	—

E.2.42 Regenerator Section PM Table—ONS 15310 MA SDH, ONS 15454 SDH

The Regenerator Section PM table shows performance data for the ONS 15310 MA SDH and ONS 15454 SDH regenerator section. You can display performance data for 15-minute, 1-day, or real-time increments:

- 15-minute—Data is collected at the quarter-hour (for example, at 10:00, 10:15, and so on). The data shown represents the difference in counter values between successive 15-minute intervals.
- 1-day—Data is collected at midnight GMT. The data shown represents the difference between the counter values read at successive midnights.

- Real-time—When a real-time PM session is running, it polls the NE for *x* number of attributes every 10 to 900 seconds. This feature allows you to examine the current value of a PM parameter in granularities finer than the standard 15-minute or 1-day interval. For more information, see 10.4.4 Managing Real-Time PM Data, page 10-26.

Performance monitoring can be done either on selected modules, or on specific locations in the NE. You can use the Plot tab to plot the data in a graphical view that is stored in the Prime Optical database. See 10.4.6 Using PM Data Graphs, page 10-28.

The following table describes the fields in the Regenerator Section PM table.

Table E-57 Field Descriptions for the Regenerator Section PM Table

Field	Description	Cards Supported
Alias ID	Alias name of the selected NE.	—
Module Name	Module for which PM data is displayed.	—
Physical Location	Slot and port number for which PM data is displayed.	—
Interface	Interface name of the selected NE.	—
Time Stamp (*time zone*)	When the data was collected. You can select GMT, Local, or User-Defined time for the Time Stamp display. Use the User Preferences dialog box to make your time zone selection.	—
Maintenance	Whether the NE was under maintenance when the performance data was collected.	—
RS-EB	Regenerator Section Errored Block (RS-EB) indicates that one or more bits are in error within a block.	• ONS 15310 MA SDH: CTX-2500 • ONS 15454 SDH: 2.5G_DM, 2.5G_DMP, ADM_10G, MRC_4, MRC_12, MRC_12_2.5G, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OC192_XFP, OSC_CSM, OTU2_XP, STM1, STM1_8, STM1E_12, STM4, STM4_4, STM16, STM64, TXP_MR_10E, TXP_MR_10G, TXP_MR_2.5G, TXPP_MR_2.5G
RS-ES	Regenerator Section Errored Second (RS-ES) is a one-second period with one or more errored blocks or at least one defect.	• ONS 15310 MA SDH: CTX-2500 • ONS 15454 SDH: 2.5G_DM, 2.5G_DMP, ADM_10G, MRC_4, MRC_12, MRC_12_2.5G, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OC192_XFP, OSC_CSM, OTU2_XP, STM1, STM1_8, STM1E_12, STM4, STM4_4, STM16, STM64, TXP_MR_10E, TXP_MR_10G, TXP_MR_2.5G, TXPP_MR_2.5G

Table E-57 Field Descriptions for the Regenerator Section PM Table (continued)

Field	Description	Cards Supported
RS-SES	Regenerator Section Severely Errored Second (RS-SES) is a one-second period that contains 30 percent or more errored blocks or at least one defect. SES is a subset of ES.	• ONS 15310 MA SDH: CTX-2500 • ONS 15454 SDH: 2.5G_DM, 2.5G_DMP, ADM_10G, MRC_4, MRC_12, MRC_12_2.5G, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OC192_XFP, OSC_CSM, OTU2_XP, STM1, STM1_8, STM1E_12, STM4, STM4_4, STM16, STM64, TXP_MR_10E, TXP_MR_10G, TXP_MR_2.5G, TXPP_MR_2.5G
RS-BBE	Regenerator Section Background Block Error (RS-BBE) is an errored block not occurring as part of an SES.	• ONS 15310 MA SDH: CTX-2500 • ONS 15454 SDH: 2.5G_DM, 2.5G_DMP, ADM_10G, MRC_4, MRC_12, MRC_12_2.5G, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OC192_XFP, OSC_CSM, OTU2_XP, STM1, STM1_8, STM1E_12, STM4, STM4_4, STM16, STM64, TXP_MR_10E, TXP_MR_10G, TXP_MR_2.5G, TXPP_MR_2.5G
RS-UAS	Regenerator Section Unavailable Second (RS-UAS) is a count of the seconds when the regenerator section was unavailable. A section becomes unavailable when ten consecutive seconds occur that qualify as RS-UASs, and it continues to be unavailable until ten consecutive seconds occur that do not qualify as RS-UASs.	• ONS 15310 MA SDH: CTX-2500 • ONS 15454 SDH: 2.5G_DM, 2.5G_DMP, ADM_10G, MRC_4, MRC_12_2.5G, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OC192_XFP, OSC_CSM, OTU2_XP, STM1E_12, TXP_MR_10G, TXP_MR_10E, TXP_MR_2.5G, TXPP_MR_2.5G
RS-ESR	Regenerator Section Errored Second Ratio (RS-ESR) is the ratio of errored seconds to total seconds in available time during a fixed measurement interval.	• ONS 15310 MA SDH: CTX-2500 • ONS 15454 SDH: 2.5G_DM, 2.5G_DMP, ADM_10G, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OTU2_XP, STM1E_12, TXP_MR_10E, TXP_MR_10G, TXP_MR_2.5G, TXPP_MR_2.5G

Table E-57 Field Descriptions for the Regenerator Section PM Table (continued)

Field	Description	Cards Supported
RS-SESR	Regenerator Section Severely Errored Second Ratio (RS-SESR) is the ratio of SES to total seconds in available time during a fixed measurement interval.	• ONS 15310 MA SDH: CTX-2500 • ONS 15454 SDH: 2.5G_DM, 2.5G_DMP, ADM_10G, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OTU2_XP, STM1E_12, TXP_MR_10E, TXP_MR_10G, TXP_MR_2.5G, TXPP_MR_2.5G
RS-BBER	Regenerator Section Background Block Error Ratio (RS-BBER) is the ratio of BBE to total blocks in available time during a fixed measurement interval. The count of total blocks excludes all blocks during SESs.	• ONS 15310 MA SDH: CTX-2500 • ONS 15454 SDH: 2.5G_DM, 2.5G_DMP, ADM_10G, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OTU2_XP, STM1E_12, TXP_MR_10E, TXP_MR_10G, TXP_MR_2.5G, TXPP_MR_2.5G
RS-OFS	Regenerator Section Out of Frame Seconds (RS-OSF) is the count of seconds when the Regenerator Section was out of frame.	• ONS 15310 MA SDH: CTX-2500 • ONS 15454 SDH: MRC_4, MRC_12_2.5G, MXP_MR_10DME, OC192_XFP, OTU2_XP
NE ID	Name of the selected NE.	—

E.2.43 Regenerator Section PM Table—ONS 15600 SDH

The Regenerator Section PM table shows performance data for the ONS 15600 SDH regenerator section. You can display performance data for 15-minute, 1-day, or real-time increments:

- 15-minute—Data is collected at the quarter-hour (for example, at 10:00, 10:15, and so on). The data shown represents the difference in counter values between successive 15-minute intervals.
- 1-day—Data is collected at midnight GMT. The data shown represents the difference between the counter values read at successive midnights.
- Real-time—When a real-time PM session is running, it polls the NE for *x* number of attributes every 10 to 900 seconds. This feature allows you to examine the current value of a PM parameter in granularities finer than the standard 15-minute or 1-day interval. For more information, see 10.4.4 Managing Real-Time PM Data, page 10-26.

Performance monitoring can be done either on selected modules, or on specific locations in the NE. You can use the Plot tab to plot the data in a graphical view that is stored in the Prime Optical database. See 10.4.6 Using PM Data Graphs, page 10-28.

The following table describes the fields in the Regenerator Section PM table.

Table E-58 Field Descriptions for the Regenerator Section PM Table

Field	Description	Cards Supported
Alias ID	Alias name of the selected NE.	—
Module Name	Module for which PM data is displayed.	—
Physical Location	Slot and port number for which PM data is displayed.	—
Interface	Interface name of the selected NE.	—
Time Stamp (*time zone*)	When the data was collected. You can select GMT, Local, or User-Defined time for the Time Stamp display. Use the User Preferences dialog box to make your time zone selection.	—
Maintenance	Whether the NE was under maintenance when the performance data was collected.	—
RS-EB	Regenerator Section Errored Block (RS-EB) indicates that one or more bits are in error within a block.	ASAP_4, STM16_16, STM64_4
RS-ES	Regenerator Section Errored Second (RS-ES) is a one-second period with one or more errored blocks or at least one defect.	ASAP_4, STM16_16, STM64_4
RS-SES	Regenerator Section Severely Errored Second (RS-SES) is a one-second period that contains 30 percent or more errored blocks or at least one defect. SES is a subset of ES.	ASAP_4, STM16_16, STM64_4
RS-BBE	Regenerator Section Background Block Error (RS-BBE) is an errored block not occurring as part of an SES.	ASAP_4, STM16_16, STM64_4
RS-UAS	Regenerator Section Unavailable Second (RS-UAS) is a count of the seconds when the regenerator section was unavailable. A section becomes unavailable when ten consecutive seconds occur that qualify as RS-UASs, and it continues to be unavailable until ten consecutive seconds occur that do not qualify as RS-UASs.	—
RS-OFS	Regenerator Section Out of Frame Seconds (RS-OSF) is the count of seconds when the regenerator section was out of frame.	ASAP_4, STM16_16, STM64_4
NE ID	Name of the selected NE.	—

E.2.44 RPR 802.17 PM Table—ONS 15454 SONET, ONS 15454 SDH

The RPR 802.17 PM table shows performance data for the ONS 15454 SONET and ONS 15454 SDH ML-series cards in Resilient Packet Ring (RPR) mode (IEEE 802.17). You can display performance data for 15-minute, 1-day, or real-time increments:

- 15-minute—Data is collected at the quarter-hour (for example, at 10:00, 10:15, and so on). The data shown represents the difference in counter values between successive 15-minute intervals.
- 1-day—Data is collected at midnight GMT. The data shown represents the difference between the counter values read at successive midnights.
- Real-time—When a real-time PM session is running, it polls the NE for *x* number of attributes every 10 to 900 seconds. This feature allows you to examine the current value of a PM parameter in granularities finer than the standard 15-minute or 1-day interval. For more information, see 10.4.4 Managing Real-Time PM Data, page 10-26.

Performance monitoring can be done either on selected modules, or on specific locations in the NE. You can use the Plot tab to plot the data in a graphical view that is stored in the Prime Optical database. See 10.4.6 Using PM Data Graphs, page 10-28.

The following table describes the fields in the RPR 802.17 PM table. The fields shown depend on the RPR type selection.

Table E-59 Field Descriptions for the RPR 802.17 PM Table

Field	Description	Cards Supported
Alias ID	Alias name of the selected NE.	—
Module Name	Module for which PM data is displayed.	—
Physical Location	Slot and port number for which PM data is displayed.	—
Interface	Interface name of the selected NE.	—
Time Stamp *(time zone)*	When the data was collected. You can select GMT, Local, or User-Defined time for the Time Stamp display. Use the User Preferences dialog box to make your time zone selection.	—
Maintenance	Whether the NE was under maintenance when the performance data was collected.	—
Time Last Cleared	When the statistics were last reset.	—
rprSpanStatsInUcastClassA Frames	Number of received (PHY to MAC) class A unicast frames.	ONS 15454 SONET and SDH: ML100T, ML100X-8, ML1000, ML-MR-10
rprSpanStatsInUcastClassA Octets	Number of received (PHY to MAC) class A unicast octets.	ONS 15454 SONET and SDH: ML100T, ML100X-8, ML1000, ML-MR-10
rprSpanStatsInUcastClassB CirFrames	Number of received (PHY to MAC) class B CIR unicast frames.	ONS 15454 SONET and SDH: ML100T, ML100X-8, ML1000, ML-MR-10
rprSpanStatsInUcastClassB CirOctets	Number of received (PHY to MAC) class B CIR unicast octets.	ONS 15454 SONET and SDH: ML100T, ML100X-8, ML1000, ML-MR-10
rprSpanStatsInUcastClassB EirFrames	Number of received (PHY to MAC) class B EIR unicast frames.	ONS 15454 SONET and SDH: ML100T, ML100X-8, ML1000, ML-MR-10
rprSpanStatsInUcastClassB EirOctets	Number of received (PHY to MAC) class B EIR unicast octets.	ONS 15454 SONET and SDH: ML100T, ML100X-8, ML1000, ML-MR-10
rprSpanStatsInUcastClassC Frames	Number of received (PHY to MAC) class C unicast frames.	ONS 15454 SONET and SDH: ML100T, ML100X-8, ML1000, ML-MR-10
rprSpanStatsInUcastClassC Octets	Number of received (PHY to MAC) class C unicast octets.	ONS 15454 SONET and SDH: ML100T, ML100X-8, ML1000, ML-MR-10

Table E-59 Field Descriptions for the RPR 802.17 PM Table (continued)

Field	Description	Cards Supported
rprSpanStatsInMcastClassA Frames	Number of received (PHY to MAC) class A multicast and broadcast frames.	ONS 15454 SONET and SDH: ML100T, ML100X-8, ML1000, ML-MR-10
rprSpanStatsInMcastClassA Octets	Number of received (PHY to MAC) class A multicast and broadcast octets.	ONS 15454 SONET and SDH: ML100T, ML100X-8, ML1000, ML-MR-10
rprSpanStatsInMcastClassB CirFrames	Number of received (PHY to MAC) class B CIR multicast and broadcast frames.	ONS 15454 SONET and SDH: ML100T, ML100X-8, ML1000, ML-MR-10
rprSpanStatsInMcastClassB CirOctets	Number of received (PHY to MAC) class B CIR multicast and broadcast octets.	ONS 15454 SONET and SDH: ML100T, ML100X-8, ML1000, ML-MR-10
rprSpanStatsInMcastClassB EirFrames	Number of received (PHY to MAC) class B EIR multicast and broadcast frames.	ONS 15454 SONET and SDH: ML100T, ML100X-8, ML1000, ML-MR-10
rprSpanStatsInMcastClassB EirOctets	Number of received (PHY to MAC) class B EIR multicast and broadcast octets.	ONS 15454 SONET and SDH: ML100T, ML100X-8, ML1000, ML-MR-10
rprSpanStatsInMcastClassC Frames	Number of received (PHY to MAC) class C multicast and broadcast frames.	ONS 15454 SONET and SDH: ML100T, ML100X-8, ML1000, ML-MR-10
rprSpanStatsInMcastClassC Octets	Number of received (PHY to MAC) class C multicast and broadcast octets.	ONS 15454 SONET and SDH: ML100T, ML100X-8, ML1000, ML-MR-10
rprSpanStatsInCtrlFrames	Number of received (PHY to MAC) control frames processed by this MAC. This does not include control frames in transit; that is, a multicast control frame received from a ringlet will be counted as In but not Out. This does not include fairness or idle frames.	ONS 15454 SONET and SDH: ML100T, ML100X-8, ML1000, ML-MR-10
rprSpanStatsInOamEchoFra mes	Number of received (PHY to MAC) OAM echo frames processed by this MAC.	ONS 15454 SONET and SDH: ML100T, ML100X-8, ML1000, ML-MR-10
rprSpanStatsInOamFlushFr ames	Number of received (PHY to MAC) OAM flush frames processed by this MAC.	ONS 15454 SONET and SDH: ML100T, ML100X-8, ML1000, ML-MR-10
rprSpanStatsInOamOrgFra mes	Number of received (PHY to MAC) OAM org frames processed by this MAC.	ONS 15454 SONET and SDH: ML100T, ML100X-8, ML1000, ML-MR-10
rprSpanStatsInTopoAtdFra mes	Number of received (PHY to MAC) topology ATD frames processed by this MAC.	ONS 15454 SONET and SDH: ML100T, ML100X-8, ML1000, ML-MR-10
rprSpanStatsInTopoChkSu mFrames	Number of received (PHY to MAC) topology checksum frames processed by this MAC.	ONS 15454 SONET and SDH: ML100T, ML100X-8, ML1000, ML-MR-10

Table E-59 Field Descriptions for the RPR 802.17 PM Table (continued)

Field	Description	Cards Supported
rprSpanStatsInTopoTpFrames	Number of received (PHY to MAC) topology TP frames processed by this MAC.	ONS 15454 SONET and SDH: ML100T, ML100X-8, ML1000, ML-MR-10
rprSpanStatsOutUcastClassAFrames	Number of transmitted (PHY to MAC) class A unicast frames.	ONS 15454 SONET and SDH: ML100T, ML100X-8, ML1000, ML-MR-10
rprSpanStatsOutUcastClassAOctets	Number of transmitted (PHY to MAC) class A unicast octets.	ONS 15454 SONET and SDH: ML100T, ML100X-8, ML1000, ML-MR-10
rprSpanStatsOutUcastClassBCirFrames	Number of transmitted (PHY to MAC) class B CIR unicast frames.	ONS 15454 SONET and SDH: ML100T, ML100X-8, ML1000, ML-MR-10
rprSpanStatsOutUcastClassBCirOctets	Number of transmitted (PHY to MAC) class B CIR unicast octets.	ONS 15454 SONET and SDH: ML100T, ML100X-8, ML1000, ML-MR-10
rprSpanStatsOutUcastClassBEirFrames	Number of transmitted (PHY to MAC) class B EIR unicast frames.	ONS 15454 SONET and SDH: ML100T, ML100X-8, ML1000, ML-MR-10
rprSpanStatsOutUcastClassBEirOctets	Number of transmitted (PHY to MAC) class B EIR unicast octets.	ONS 15454 SONET and SDH: ML100T, ML100X-8, ML1000, ML-MR-10
rprSpanStatsOutUcastClassCFrames	Number of transmitted (PHY to MAC) class C unicast frames.	ONS 15454 SONET and SDH: ML100T, ML100X-8, ML1000, ML-MR-10
rprSpanStatsOutUcastClassCOctets	Number of transmitted (PHY to MAC) class C unicast octets.	ONS 15454 SONET and SDH: ML100T, ML100X-8, ML1000, ML-MR-10
rprSpanStatsOutMcastClassAFrames	Number of transmitted (PHY to MAC) class A multicast and broadcast frames.	ONS 15454 SONET and SDH: ML100T, ML100X-8, ML1000, ML-MR-10
rprSpanStatsOutMcastClassAOctets	Number of transmitted (PHY to MAC) class A multicast and broadcast octets.	ONS 15454 SONET and SDH: ML100T, ML100X-8, ML1000, ML-MR-10
rprSpanStatsOutMcastClassBCirFrames	Number of transmitted (PHY to MAC) class B CIR multicast and broadcast frames.	ONS 15454 SONET and SDH: ML100T, ML100X-8, ML1000, ML-MR-10
rprSpanStatsOutMcastClassBCirOctets	Number of transmitted (PHY to MAC) class B CIR multicast and broadcast octets.	ONS 15454 SONET and SDH: ML100T, ML100X-8, ML1000, ML-MR-10
rprSpanStatsOutMcastClassBEirFrames	Number of transmitted (PHY to MAC) class B EIR multicast and broadcast frames.	ONS 15454 SONET and SDH: ML100T, ML100X-8, ML1000, ML-MR-10

Table E-59 Field Descriptions for the RPR 802.17 PM Table (continued)

Field	Description	Cards Supported
rprSpanStatsOutMcastClassBEirOctets	Number of transmitted (PHY to MAC) class B EIR multicast and broadcast octets.	ONS 15454 SONET and SDH: ML100T, ML100X-8, ML1000, ML-MR-10
rprSpanStatsOutMcastClassCFrames	Number of transmitted (PHY to MAC) class C multicast and broadcast frames.	ONS 15454 SONET and SDH: ML100T, ML100X-8, ML1000, ML-MR-10
rprSpanStatsOutMcastClassCOctets	Number of transmitted (PHY to MAC) class C multicast and broadcast octets.	ONS 15454 SONET and SDH: ML100T, ML100X-8, ML1000, ML-MR-10
rprSpanStatsOutCtrlFrames	Number of transmitted (PHY to MAC) control frames generated by this MAC. This does not include control frames in transit; that is, a multicast control frame transmitted from a ringlet will be counted as In but not Out. This does not include fairness or idle frames.	ONS 15454 SONET and SDH: ML100T, ML100X-8, ML1000, ML-MR-10
rprSpanStatsOutOamEchoFrames	Number of transmitted (PHY to MAC) OAM echo frames generated by this MAC.	ONS 15454 SONET and SDH: ML100T, ML100X-8, ML1000, ML-MR-10
rprSpanStatsOutOamFlushFrames	Number of transmitted (PHY to MAC) OAM flush frames generated by this MAC.	ONS 15454 SONET and SDH: ML100T, ML100X-8, ML1000, ML-MR-10
rprSpanStatsOutOamOrgFrames	Number of transmitted (PHY to MAC) OAM org frames generated by this MAC.	ONS 15454 SONET and SDH: ML100T, ML100X-8, ML1000, ML-MR-10
rprSpanStatsOutTopoAtdFrames	Number of transmitted (PHY to MAC) topology ATD frames generated by this MAC.	ONS 15454 SONET and SDH: ML100T, ML100X-8, ML1000, ML-MR-10
rprSpanStatsOutTopoChkSumFrames	Number of transmitted (PHY to MAC) topology checksum frames generated by this MAC.	ONS 15454 SONET and SDH: ML100T, ML100X-8, ML1000, ML-MR-10
rprSpanStatsOutTopoTpFrames	Number of transmitted (PHY to MAC) topology TP frames generated by this MAC.	ONS 15454 SONET and SDH: ML100T, ML100X-8, ML1000, ML-MR-10
rprClientStatsInUcastClassAFrames	Number of MAC-to-client class A unicast frames in the current interval.	ONS 15454 SONET and SDH: ML100T, ML100X-8, ML1000, ML-MR-10
rprClientStatsInUcastClassAOctets	Number of MAC-to-client class A unicast octets in the current interval.	ONS 15454 SONET and SDH: ML100T, ML100X-8, ML1000, ML-MR-10
rprClientStatsInUcastClassBCirFrames	Number of MAC-to-client class B CIR unicast frames in the current interval.	ONS 15454 SONET and SDH: ML100T, ML100X-8, ML1000, ML-MR-10
rprClientStatsInUcastClassBCirOctets	Number of MAC-to-client class B CIR unicast octets in the current interval.	ONS 15454 SONET and SDH: ML100T, ML100X-8, ML1000, ML-MR-10

Table E-59 Field Descriptions for the RPR 802.17 PM Table (continued)

Field	Description	Cards Supported
rprClientStatsInUcastClassBEirFrames	Number of MAC-to-client class B EIR unicast frames in the current interval.	ONS 15454 SONET and SDH: ML100T, ML100X-8, ML1000, ML-MR-10
rprClientStatsInUcastClassBEirOctets	Number of MAC-to-client class B EIR unicast octets in the current interval.	ONS 15454 SONET and SDH: ML100T, ML100X-8, ML1000, ML-MR-10
rprClientStatsInUcastClassCFrames	Number of MAC-to-client class C unicast frames in the current interval.	ONS 15454 SONET and SDH: ML100T, ML100X-8, ML1000, ML-MR-10
rprClientStatsInUcastClassCOctets	Number of MAC-to-client class C unicast octets in the current interval.	ONS 15454 SONET and SDH: ML100T, ML100X-8, ML1000, ML-MR-10
rprClientStatsInMcastClassAFrames	Number of MAC-to-client class A multicast and broadcast frames in the current interval.	ONS 15454 SONET and SDH: ML100T, ML100X-8, ML1000, ML-MR-10
rprClientStatsInMcastClassAOctets	Number of MAC-to-client class A multicast and broadcast octets in the current interval.	ONS 15454 SONET and SDH: ML100T, ML100X-8, ML1000, ML-MR-10
rprClientStatsInMcastClassBCirFrames	Number of MAC-to-client class B CIR multicast and broadcast frames in the current interval.	ONS 15454 SONET and SDH: ML100T, ML100X-8, ML1000, ML-MR-10
rprClientStatsInMcastClassBCirOctets	Number of MAC-to-client class B CIR multicast and broadcast octets in the current interval.	ONS 15454 SONET and SDH: ML100T, ML100X-8, ML1000, ML-MR-10
rprClientStatsInMcastClassBEirFrames	Number of MAC-to-client class B EIR multicast and broadcast frames in the current interval.	ONS 15454 SONET and SDH: ML100T, ML100X-8, ML1000, ML-MR-10
rprClientStatsInMcastClassBEirOctets	Number of MAC-to-client class B EIR multicast and broadcast octets in the current interval.	ONS 15454 SONET and SDH: ML100T, ML100X-8, ML1000, ML-MR-10
rprClientStatsInMcastClassCFrames	Number of MAC-to-client class C multicast and broadcast frames in the current interval.	ONS 15454 SONET and SDH: ML100T, ML100X-8, ML1000, ML-MR-10
rprClientStatsInMcastClassCOctets	Number of MAC-to-client class C multicast and broadcast octets in the current interval.	ONS 15454 SONET and SDH: ML100T, ML100X-8, ML1000, ML-MR-10
rprClientStatsInBcastFrames	Number of MAC-to-client broadcast frames. This value is used only when deriving the multicast and broadcast packet counters for the interface MIB.	ONS 15454 SONET and SDH: ML100T, ML100X-8, ML1000, ML-MR-10
rprClientStatsOutUcastClassAFrames	Number of client-to-MAC class A unicast frames.	ONS 15454 SONET and SDH: ML100T, ML100X-8, ML1000, ML-MR-10

Table E-59 Field Descriptions for the RPR 802.17 PM Table (continued)

Field	Description	Cards Supported
rprClientStatsOutUcastClassAOctets	Number of client-to-MAC class A unicast octets.	ONS 15454 SONET and SDH: ML100T, ML100X-8, ML1000, ML-MR-10
rprClientStatsOutUcastClassBCirFrames	Number of client-to-MAC class B CIR unicast frames.	ONS 15454 SONET and SDH: ML100T, ML100X-8, ML1000, ML-MR-10
rprClientStatsOutUcastClassBCirOctets	Number of client-to-MAC class B CIR unicast octets.	ONS 15454 SONET and SDH: ML100T, ML100X-8, ML1000, ML-MR-10
rprClientStatsOutUcastClassBEirFrames	Number of client-to-MAC class B EIR unicast frames.	ONS 15454 SONET and SDH: ML100T, ML100X-8, ML1000, ML-MR-10
rprClientStatsOutUcastClassBEirOctets	Number of client-to-MAC class B EIR unicast octets.	ONS 15454 SONET and SDH: ML100T, ML100X-8, ML1000, ML-MR-10
rprClientStatsOutUcastClassCFrames	Number of client-to-MAC class C unicast frames.	ONS 15454 SONET and SDH: ML100T, ML100X-8, ML1000, ML-MR-10
rprClientStatsOutUcastClassCOctets	Number of client-to-MAC class C unicast octets.	ONS 15454 SONET and SDH: ML100T, ML100X-8, ML1000, ML-MR-10
rprClientStatsOutMcastClassAFrames	Number of client-to-MAC class A multicast and broadcast frames.	ONS 15454 SONET and SDH: ML100T, ML100X-8, ML1000, ML-MR-10
rprClientStatsOutMcastClassAOctets	Number of client-to-MAC class A multicast and broadcast octets.	ONS 15454 SONET and SDH: ML100T, ML100X-8, ML1000, ML-MR-10
rprClientStatsOutMcastClassBCirFrames	Number of client-to-MAC class B CIR multicast and broadcast frames.	ONS 15454 SONET and SDH: ML100T, ML100X-8, ML1000, ML-MR-10
rprClientStatsOutMcastClassBCirOctets	Number of client-to-MAC class B CIR multicast and broadcast octets.	ONS 15454 SONET and SDH: ML100T, ML100X-8, ML1000, ML-MR-10
rprClientStatsOutMcastClassBEirFrames	Number of client-to-MAC class B EIR multicast and broadcast frames.	ONS 15454 SONET and SDH: ML100T, ML100X-8, ML1000, ML-MR-10
rprClientStatsOutMcastClassBEirOctets	Number of client-to-MAC class B EIR multicast and broadcast octets.	ONS 15454 SONET and SDH: ML100T, ML100X-8, ML1000, ML-MR-10
rprClientStatsOutMcastClassCFrames	Number of client-to-MAC class C multicast and broadcast frames.	ONS 15454 SONET and SDH: ML100T, ML100X-8, ML1000, ML-MR-10

Table E-59 Field Descriptions for the RPR 802.17 PM Table (continued)

Field	Description	Cards Supported
rprClientStatsOutMcastClassCOctets	Number of client-to-MAC class C multicast and broadcast octets.	ONS 15454 SONET and SDH: ML100T, ML100X-8, ML1000, ML-MR-10
rprClientStatsOutBcastFrames	Number of client-to-MAC broadcast frames. This value is used only when deriving the multicast and broadcast packet counters for the interface MIB.	ONS 15454 SONET and SDH: ML100T, ML100X-8, ML1000, ML-MR-10
rprSpanErrorStatsTtlExpFrames	Number of received (PHY to MAC) frames that were dropped due to zero Time To Live (TTL).	ONS 15454 SONET and SDH: ML100T, ML100X-8, ML1000, ML-MR-10
rprSpanErrorStatsTooLongFrames	Number of received (PHY to MAC) frames that exceed the maximum permitted frame size.	ONS 15454 SONET and SDH: ML100T, ML100X-8, ML1000, ML-MR-10
rprSpanErrorStatsTooShortFrames	Number of received (PHY to MAC) frames shorter than the minimum permitted frame size.	ONS 15454 SONET and SDH: ML100T, ML100X-8, ML1000, ML-MR-10
rprSpanErrorStatsBadHecFrames	Number of received (PHY to MAC) frames with HEC errors.	ONS 15454 SONET and SDH: ML100T, ML100X-8, ML1000, ML-MR-10
rprSpanErrorStatsBadFcsFrames	Number of received (PHY to MAC) data and control frames where the FCS value did not match the expected FCS value.	ONS 15454 SONET and SDH: ML100T, ML100X-8, ML1000, ML-MR-10
rprSpanErrorStatsSelfSrcUcastFrames	Number of received (PHY to MAC) unicast frames that were transmitted by the station itself; that is, the source MAC is equal to the interface MAC.	ONS 15454 SONET and SDH: ML100T, ML100X-8, ML1000, ML-MR-10
rprSpanErrorStatsPmdAbortFrames	Number of received (PHY to MAC) frames that were aborted by the PMD.	ONS 15454 SONET and SDH: ML100T, ML100X-8, ML1000, ML-MR-10
rprSpanErrorStatsBadAddrFrames	Number of received (PHY to MAC) frames with invalid SA values.	ONS 15454 SONET and SDH: ML100T, ML100X-8, ML1000, ML-MR-10
rprSpanErrorStatsBadParityFrames	Number of received (PHY to MAC) frames where the parity value does not match the expected parity value.	ONS 15454 SONET and SDH: ML100T, ML100X-8, ML1000, ML-MR-10
rprSpanErrorStatsContainedFrames	Number of received (PHY to MAC) frames that were removed due to context containment.	ONS 15454 SONET and SDH: ML100T, ML100X-8, ML1000, ML-MR-10
rprSpanErrorStatsScffErrors	Number of received (PHY to MAC) errored SCFFs with bad parity, bad FCS, or both.	ONS 15454 SONET and SDH: ML100T, ML100X-8, ML1000, ML-MR-10
rprErrorOversizeFrames	On the ML-MR-10 card, due to the limitation of the current field programmable gate array (FPGA), the frames coming from a gigabit port to an RPR port are sent to an ASIC driver, which discards the packets.	ONS 15454 SONET and SDH: ML-MR-10
NE ID	Name of the selected NE.	—

E.2.45 FC PM Table—ONS 15454 SONET, ONS 15454 SDH

The FC PM table shows performance data for the ONS 15454 SONET and ONS 15454 SDH. You can display performance data for 15-minute, 1-day, or real-time increments:

- 15-minute—Data is collected at the quarter-hour (for example, at 10:00, 10:15, and so on). The data shown represents the difference in counter values between successive 15-minute intervals.
- 1-day—Data is collected at midnight GMT. The data shown represents the difference between the counter values read at successive midnights.
- Real-time—When a real-time PM session is running, it polls the NE for *x* number of attributes every 10 to 900 seconds. This feature allows you to examine the current value of a PM parameter in granularities finer than the standard 15-minute or 1-day interval. For more information, see 10.4.4 Managing Real-Time PM Data, page 10-26.

Performance monitoring can be done either on selected modules, or on specific locations in the NE. You can use the Plot tab to plot the data in a graphical view that is stored in the Prime Optical database. See 10.4.6 Using PM Data Graphs, page 10-28.

The following table describes the fields in the FC PM table.

Table E-60 Field Descriptions for the FC PM Table

Field	Description	Cards Supported
Alias ID	Alias name of the selected NE.	—
Module Name	Module for which PM data is displayed.	—
Physical Location	Slot and port number for which PM data is displayed.	—
Interface	Interface name of the selected NE.	—
Time Stamp (*time zone*)	When the data was collected. You can select GMT, Local, or User-Defined time for the Time Stamp display. Use the User Preferences dialog box to make your time zone selection.	—
Maintenance	Whether the NE was under maintenance when the performance data was collected.	—
Time Last Cleared	When the statistics were last reset.	—
Rx Frames	Number of FC frames received without errors.	• ONS 15454 SONET: 2.5G_DM, 2.5G_DMP, FCMR, MXP_MR_10DME • ONS 15454 SDH: 2.5G_DM, 2.5G_DMP, MXP_MR_10DME
ifInOctets	Number of bytes received since the last counter reset.	• ONS 15454 SONET: 2.5G_DM, 2.5G_DMP, FCMR, TXP_MR_10E, MXP_MR_10DME • ONS 15454 SDH: 2.5G_DM, 2.5G_DMP, FCMR, TXP_MR_10E, MXP_MR_10DME

Table E-60 Field Descriptions for the FC PM Table (continued)

Field	Description	Cards Supported
Tx Frames	Number of transmitted FC frames.	• ONS 15454 SONET: 2.5G_DM, 2.5G_DMP, FCMR, MXP_MR_10DME • ONS 15454 SDH: 2.5G_DM, 2.5G_DMP, MXP_MR_10DME
ifOutOctets	Number of bytes transmitted since the last counter reset.	• ONS 15454 SONET: 2.5G_DM, 2.5G_DMP, FCMR, TXP_MR_10E, MXP_MR_10DME • ONS 15454 SDH: 2.5G_DM, 2.5G_DMP, FCMR, TXP_MR_10E, MXP_MR_10DME
8b10bInvalidOrderedSets	Number of 8b10b code violations.	• ONS 15454 SONET: 2.5G_DM, 2.5G_DMP, FCMR, TXP_MR_10E • ONS 15454 SDH: 2.5G_DM, 2.5G_DMP, FCMR, TXP_MR_10E
8b10bStatsEncodingDispErrors	Number of 8b10b disparity violations on the FC line side.	• ONS 15454 SONET: 2.5G_DM, 2.5G_DMP, FCMR, TXP_MR_10E • ONS 15454 SDH: 2.5G_DM, 2.5G_DMP, FCMR, TXP_MR_10E
fcStatsLinkRecoveries	Number of link recoveries.	• ONS 15454 SONET: 2.5G_DM, 2.5G_DMP, FCMR, TXP_MR_10E, MXP_MR_10DME • ONS 15454 SDH: 2.5G_DM, 2.5G_DMP, FCMR, TXP_MR_10E, MXP_MR_10DME
mediaIndStatsRxFramesBadCRC	Number of received data frames with payload CRC errors when HDLC framing is used.	• ONS 15454 SONET: 2.5G_DM, 2.5G_DMP, FCMR, TXP_MR_10E, MXP_MR_10DME • ONS 15454 SDH: 2.5G_DM, 2.5G_DMP, FCMR, TXP_MR_10E, MXP_MR_10DME
mediaIndStatsTxFramesBadCRC	Number of transmitted data frames with payload CRC errors when HDLC framing is used.	• ONS 15454 SONET: 2.5G_DM, 2.5G_DMP, FCMR, TXP_MR_10E, MXP_MR_10DME • ONS 15454 SDH: 2.5G_DM, 2.5G_DMP, FCMR, TXP_MR_10E, MXP_MR_10DME
mediaIndStatsRxFramesTruncated	Total number of frames received that are less than 5 bytes. This value is a part of HDLC and GFP port statistics.	• ONS 15454 SONET: 2.5G_DM, 2.5G_DMP, FCMR, TXP_MR_10E, MXP_MR_10DME • ONS 15454 SDH: 2.5G_DM, FCMR, MXP_MR_10DME

Table E-60 Field Descriptions for the FC PM Table (continued)

Field	Description	Cards Supported
mediaIndStatsRxFramesTooLong	Number of received frames that exceed the MTU. This value is part of HDLC and GFP port statistics.	• ONS 15454 SONET: 2.5G_DM, 2.5G_DMP, FCMR, TXP_MR_10E, MXP_MR_10DME • ONS 15454 SDH: 2.5G_DM, FCMR, TXP_MR_10E, MXP_MR_10DME
mediaIndStatsRxLcvErrors	Number of L1 line code violations received for lower rate FC, which equate to invalid 8b10b ordered sets.	• ONS 15454 SONET: AR_MXP, AR_XP • ONS 15454 SDH: AR_MXP, AR_XP
mediaIndStatsTxLcvErrors	Number of L1 line code violations transmitted for lower rate FC, which equate to invalid 8b10b ordered sets.	• ONS 15454 SONET: AR_MXP, AR_XP • ONS 15454 SDH: AR_MXP, AR_XP
gfpStatsRxSBitErrors	Number of GFP single-bit errors in the CHEC.	• ONS 15454 SONET: 2.5G_DM, 2.5G_DMP, FCMR, TXP_MR_10E • ONS 15454 SDH: 2.5G_DM, 2.5G_DMP, FCMR, TXP_MR_10E
gfpStatsRxMBitErrors	Number of GFP multibit errors in the CHEC.	• ONS 15454 SONET: 2.5G_DM, 2.5G_DMP, FCMR, TXP_MR_10E • ONS 15454 SDH: 2.5G_DM, 2.5G_DMP, FCMR, TXP_MR_10E
gfpStatsRxTypeInvalid	Number of GFP invalid UPI fields in the type field.	• ONS 15454 SONET: 2.5G_DM, 2.5G_DMP, FCMR, TXP_MR_10E • ONS 15454 SDH: 2.5G_DM, 2.5G_DMP, FCMR, TXP_MR_10E
gfpStatsRxCRCErrors	Number of superblock CRC errors in the transparent GFP frame.	• ONS 15454 SONET: 2.5G_DM, 2.5G_DMP, FCMR, TXP_MR_10E • ONS 15454 SDH: 2.5G_DM, 2.5G_DMP, FCMR, TXP_MR_10E
ifInDiscards	Number of inbound packets that were chosen to be discarded even though no errors had been detected to prevent their being deliverable to a higher-layer protocol.	• ONS 15454 SONET: 2.5G_DM, 2.5G_DMP, FCMR, TXP_MR_10E • ONS 15454 SDH: 2.5G_DM, 2.5G_DMP, FCMR, TXP_MR_10E
ifOutDiscards	Number of outbound packets that were chosen to be discarded even though no errors had been detected to prevent their being transmitted.	• ONS 15454 SONET: 2.5G_DM, 2.5G_DMP, FCMR, TXP_MR_10E • ONS 15454 SDH: 2.5G_DM, 2.5G_DMP, FCMR, TXP_MR_10E
fcIngressRxDistanceExtBuffers	Number of buffers that are available to receive FC data from GFP frames.	—
fcEgressTxDistanceExtBuffers	Number of buffers that are available on the far end to receive FC data over GFP frames.	—
fcStatsRxCredits	Number of current received buffer-to-buffer credits. (Valid only if distance extension is enabled.)	—

Table E-60 Field Descriptions for the FC PM Table (continued)

Field	Description	Cards Supported
fcStatsTxCredits	Number of current transmitted buffer-to-buffer credits. (Valid only if distance extension is enabled.)	—
fcStatsZeroTxCredits	Number of transmitted attempts that failed because of unavailable credits.	• ONS 15454 SONET: 2.5G_DM, 2.5G_DMP, FCMR, TXP_MR_10E • ONS 15454 SDH: 2.5G_DM, 2.5G_DMP, FCMR, TXP_MR_10E
gfpStatsCSFRaised	Number of GFP client signal fail frames.	• ONS 15454 SONET: 2.5G_DM, 2.5G_DMP, FCMR, TXP_MR_10E • ONS 15454 SDH: 2.5G_DM, 2.5G_DMP, FCMR, TXP_MR_10E
gfpStatsRoundTripLatency	Round-trip delay (in milliseconds [ms]) for the end-to-end FC transport.	• ONS 15454 SONET: 2.5G_DM, 2.5G_DMP, FCMR, TXP_MR_10E • ONS 15454 SDH: 2.5G_DM, 2.5G_DMP, FCMR, TXP_MR_10E
ifInErrors	Total number of received errors.	• ONS 15454 SONET: 2.5G_DM, 2.5G_DMP, FCMR, TXP_MR_10E • ONS 15454 SDH: 2.5G_DM, 2.5G_DMP, FCMR, TXP_MR_10E
txTotalPkts	Number of packets transmitted since the last counter reset.	• ONS 15454 SONET: 2.5G_DM, 2.5G_DMP, FCMR, TXP_MR_10E • ONS 15454 SDH: 2.5G_DM, 2.5G_DMP, FCMR, TXP_MR_10E
rxTotalPkts	Number of packets received since the last counter reset.	• ONS 15454 SONET: 2.5G_DM, 2.5G_DMP, FCMR, TXP_MR_10E • ONS 15454 SDH: 2.5G_DM, 2.5G_DMP, FCMR, TXP_MR_10E
Rx Utilization	Received utilization, which is a percentage of utilization of the Ethernet segment on a scale of 0 to 100 percent.	—
Tx Utilization	Transmitted utilization, which is a percentage of utilization of the Ethernet segment on a scale of 0 to 100 percent.	—
FibreStatsRxRecvrReady	Number of current received receiver-ready buffer-to-buffer credits.	• ONS 15454 SONET: MXP_MR_10DME • ONS 15454 SDH: MXP_MR_10DME
FibreStatsTxRecvrReady	Number of current transmitted receiver-ready buffer-to-buffer credits.	• ONS 15454 SONET: MXP_MR_10DME • ONS 15454 SDH: MXP_MR_10DME
NE ID	Name of the selected NE.	—

E.2.46 ISC PM Table—ONS 15454 SONET, ONS 15454 SDH

The ISC PM table shows performance data for the ONS 15454 SONET and ONS 15454 SDH. You can display 15-minute or 1-day increments.

- 15-minute—Data is collected at the quarter-hour (for example, at 10:00, 10:15, and so on). The data shown represents the difference in counter values between successive 15-minute intervals.
- 1-day—Data is collected at midnight GMT. The data shown represents the difference between the counter values read at successive midnights.

Performance monitoring can be done either on selected modules, or on specific locations in the NE. You can use the Plot tab to plot the data in a graphical view that is stored in the Prime Optical database. See 10.4.4 Managing Real-Time PM Data, page 10-26.

The following table describes the fields in the ISC PM table.

Table E-61 Field Descriptions for the ISC PM Table

Field	Description	Cards Supported
Alias ID	Alias name of the selected NE.	—
Module Name	Module for which PM data is displayed.	—
Physical Location	Slot and port number for which PM data is displayed.	—
Interface	Interface name of the selected NE.	—
Time Stamp (*time zone*)	When the data was collected. You can select GMT, Local, or User-Defined time for the Time Stamp display. Use the User Preferences dialog box to make your time zone selection.	—
Maintenance	Whether the NE was under maintenance when the performance data was collected.	—
Time Last Cleared	When the statistics were last reset.	• ONS 15454 SONET: MXP_MR_10DME • ONS 15454 SDH: MXP_MR_10DME
rxTotalPkts	Number of packets received since the last counter reset.	
ifInOctets	Number of bytes received since the last counter reset.	
txTotalPkts	Number of packets transmitted since the last counter reset.	
ifOutOctets	Number of bytes transmitted since the last counter reset.	
mediaIndStatsRxLcvErrors	Number of L1 line code violations received for constant bit rate protocols, which equate to invalid 8b10b ordered sets.	• ONS 15454 SONET: AR_MXP, AR_XP • ONS 15454 SDH: AR_MXP, AR_XP
mediaIndStatsTxLcvErrors	Number of L1 line code violations transmitted for constant bit rate protocols, which equate to invalid 8b10b ordered sets.	• ONS 15454 SONET: AR_MXP, AR_XP • ONS 15454 SDH: AR_MXP, AR_XP
NE ID	Name of the selected NE.	—

E.2.47 SONET Line PM Table (Far End)—ONS 15310 CL, ONS 15310 MA SONET, ONS 15327, ONS 15454 SONET, ONS 15600 SONET

The SONET Line PM table shows far-end performance data for the ONS 15310 CL, ONS 15310 MA SONET, ONS 15327, ONS 15454 SONET, and ONS 15600 SONET line. You can display performance data for 15-minute, 1-day, or real-time increments:

- 15-minute—Data is collected at the quarter-hour (for example, at 10:00, 10:15, and so on). The data shown represents the difference in counter values between successive 15-minute intervals.
- 1-day—Data is collected at midnight GMT. The data shown represents the difference between the counter values read at successive midnights.
- Real-time—When a real-time PM session is running, it polls the NE for *x* number of attributes every 10 to 900 seconds. This feature allows you to examine the current value of a PM parameter in granularities finer than the standard 15-minute or 1-day interval. For more information, see 10.4.4 Managing Real-Time PM Data, page 10-26.

Performance monitoring can be done either on selected modules, or on specific locations in the NE. You can use the Plot tab to plot the data in a graphical view that is stored in the Prime Optical database. See 10.4.6 Using PM Data Graphs, page 10-28.

The following table describes the fields in the SONET Line PM table.

Table E-62 Field Descriptions for the SONET Line PM Table (Far End)

Field	Description	Cards Supported
Alias ID	Alias name of the selected NE.	—
Module Name	Module for which PM data is displayed.	—
Physical Location	Slot and port number for which PM data is displayed.	—
Interface	Interface name of the selected NE.	—
Time Stamp (*time zone*)	When the data was collected. You can select GMT, Local, or User-Defined time for the Time Stamp display. Use the User Preferences dialog box to make your time zone selection.	—
Maintenance	Whether the NE was under maintenance when the performance data was collected.	—
CV-L	Coding violations–line (CV-L) is a count of bit interleaved parity (BIP) errors detected at the line layer (that is, using the B2 bytes in the incoming SONET signal). Up to 8 x N BIP errors can be detected per STS-N frame; each error increments the current CV-L second register.	• ONS 15310 CL: CTX • ONS 15310 MA SONET: CTX_2500, DS1_28_DS3_EC1_3, DS1_84_DS3_EC1_3 • ONS 15327: OC3, OC12, OC48 • ONS 15454 SONET: 2.5G_DM, 2.5G_DMP, ADM_10G, DS3_EC1_48, EC1, EC1N, MRC_4, MRC_12, MRC_12_2.5G, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OC3, OC12, OC12_4, OC48, OC192, OC192_XFP, OSC_CSM, OTU2_XP, TXP_MR_2.5G, TXPP_MR_2.5G, TXP_MR_10E, TXP_MR_10G • ONS 15600 SONET: ASAP_4, OC192_4, OC48_16

Table E-62 Field Descriptions for the SONET Line PM Table (Far End) (continued)

Field	Description	Cards Supported
ES-L	Errored seconds–line (ES-L) is a count of the seconds when at least one line-layer BIP error was detected or a line alarm indication signal (AIS-L) defect was present.	• ONS 15310 CL: CTX • ONS 15310 MA SONET: CTX_2500, DS1_28_DS3_EC1_3, DS1_84_DS3_EC1_3 • ONS 15327: OC3, OC12, OC48 • ONS 15454 SONET: 2.5G_DM, 2.5G_DMP, ADM_10G, DS3_EC1_48, EC1, EC1N, MRC_4, MRC_12, MRC_12_2.5G, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OC3, OC12, OC12_4, OC48, OC192, OC192_XFP, OSC_CSM, OTU2_XP, TXP_MR_2.5G, TXPP_MR_2.5G, TXP_MR_10E, TXP_MR_10G • ONS 15600 SONET: ASAP_4, OC192_4, OC48_16
SES-L	Severely errored seconds–line (SES-L) is a count of the seconds when K (see GR-253 for values) or more line-layer BIP errors were detected or an AIS-L defect was present.	• ONS 15310 CL: CTX • ONS 15310 MA SONET: CTX_2500, DS1_28_DS3_EC1_3, DS1_84_DS3_EC1_3 • ONS 15327: OC3, OC12, OC48 • ONS 15454 SONET: 2.5G_DM, 2.5G_DMP, ADM_10G, DS3_EC1_48, EC1, EC1N, MRC_4, MRC_12, MRC_12_2.5G, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OC3, OC12, OC12_4, OC48, OC192, OC192_XFP, OSC_CSM, OTU2_XP, TXP_MR_2.5G, TXPP_MR_2.5G, TXP_MR_10E, TXP_MR_10G • ONS 15600 SONET: ASAP_4, OC192_4, OC48_16
UAS-L	Unavailable seconds–line (UAS-L) is a count of the seconds when the line is unavailable. A line becomes unavailable when ten consecutive seconds occur that qualify as SES-Ls, and it continues to be unavailable until ten consecutive seconds occur that do not qualify as SES-Ls.	• ONS 15310 CL: CTX • ONS 15310 MA SONET: CTX_2500, DS1_28_DS3_EC1_3, DS1_84_DS3_EC1_3 • ONS 15327: OC3, OC12, OC48 • ONS 15454 SONET: 2.5G_DM, 2.5G_DMP, ADM_10G, DS3_EC1_48, EC1, EC1N, MRC_4, MRC_12, MRC_12_2.5G, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OC3, OC12, OC12_4, OC48, OC192, OC192_XFP, OSC_CSM, OTU2_XP, TXP_MR_2.5G, TXPP_MR_2.5G, TXP_MR_10E, TXP_MR_10G • ONS 15600 SONET: ASAP_4, OC192_4, OC48_16

Table E-62 Field Descriptions for the SONET Line PM Table (Far End) (continued)

Field	Description	Cards Supported
FC-L	Failure count–line (FC-L) is a count of the number of near-end line failure events. A failure event begins when an AIS-L failure or a lower-layer traffic-related, near-end failure is declared. This failure event ends when the failure is cleared. A failure event that begins in one period and ends in another period is counted only in the period where it begins.	• ONS 15310 CL: CTX • ONS 15310 MA SONET: CTX_2500, DS1_28_DS3_EC1_3, DS1_84_DS3_EC1_3 • ONS 15327: OC3, OC12, OC48 • ONS 15454 SONET: 2.5G_DM, 2.5G_DMP, ADM_10G, DS3_EC1_48, EC1, EC1N, MRC_4, MRC_12, MRC_12_2.5G, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OC3, OC12, OC12_4, OC48, OC192, OC192_XFP, OSC_CSM, OTU2_XP, TXP_MR_2.5G, TXPP_MR_2.5G, TXP_MR_10E, TXP_MR_10G • ONS 15600 SONET: ASAP_4, OC192_4, OC48_16
NE ID	Name of the selected NE.	—

E.2.48 SONET Line PM Table (Near End)—ONS 15310 CL, ONS 15310 MA SONET, ONS 15327, ONS 15454 SONET, ONS 15600 SONET

The SONET Line PM table shows near-end performance data for the ONS 15310 CL, ONS 15310 MA SONET, ONS 15327, ONS 15454 SONET, and ONS 15600 SONET line. You can display performance data for 15-minute, 1-day, or real-time increments:

- 15-minute—Data is collected at the quarter-hour (for example, at 10:00, 10:15, and so on). The data shown represents the difference in counter values between successive 15-minute intervals.
- 1-day—Data is collected at midnight GMT. The data shown represents the difference between the counter values read at successive midnights.
- Real-time—When a real-time PM session is running, it polls the NE for *x* number of attributes every 10 to 900 seconds. This feature allows you to examine the current value of a PM parameter in granularities finer than the standard 15-minute or 1-day interval. For more information, see 10.4.4 Managing Real-Time PM Data, page 10-26.

Performance monitoring can be done either on selected modules, or on specific locations in the NE. You can use the Plot tab to plot the data in a graphical view that is stored in the Prime Optical database. See 10.4.6 Using PM Data Graphs, page 10-28.

The following table describes the fields in the SONET Line PM table.

Table E-63 Field Descriptions for the SONET Line PM Table (Near End)

Field	Description	Cards Supported
Alias ID	Alias name of the selected NE.	—
Module Name	Module for which PM data is displayed.	—
Physical Location	Slot and port number for which PM data is displayed.	—

Table E-63 Field Descriptions for the SONET Line PM Table (Near End) (continued)

Field	Description	Cards Supported
Interface	Interface name of the selected NE.	—
Time Stamp (*time zone*)	When the data was collected. You can select GMT, Local, or User-Defined time for the Time Stamp display. Use the User Preferences dialog box to make your time zone selection.	—
Maintenance	Whether the NE was under maintenance when the performance data was collected.	—
CV-L	CV-L lists a count of bit interleaved parity (BIP) errors detected at the line-layer (using the B2 bytes in the incoming SONET signal). Up to 8 x N BIP errors can be detected per STS-N frame, with each error incrementing the current CV-L second register.	• ONS 15310 CL: CTX • ONS 15310 MA SONET: CTX_2500, DS1_28_DS3_EC1_3, DS1_84_DS3_EC1_3 • ONS 15327: OC3, OC12, OC48 • ONS 15454 SONET: 2.5G_DM, 2.5G_DMP, ADM_10G, DS3_EC1_48, EC1, EC1N, MRC_4, MRC_12, MRC_12_2.5G, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OC3, OC12, OC12_4, OC48, OC192, OC192_XFP, OSC_CSM, OTU2_XP, TXP_MR_2.5G, TXPP_MR_2.5G, TXP_MR_10E, TXP_MR_10G • ONS 15600 SONET: ASAP_4, OC192_4, OC48_16
ES-L	ES-L lists a count of the seconds when at least one line-layer BIP error was detected or a line alarm indication signal (AIS-L) defect was present.	• ONS 15310 CL: CTX • ONS 15310 MA SONET: CTX_2500, DS1_28_DS3_EC1_3, DS1_84_DS3_EC1_3 • ONS 15327: OC3, OC12, OC48 • ONS 15454 SONET: 2.5G_DM, 2.5G_DMP, ADM_10G, DS3_EC1_48, EC1, EC1N, MRC_4, MRC_12, MRC_12_2.5G, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OC3, OC12, OC12_4, OC48, OC192, OC192_XFP, OSC_CSM, OTU2_XP, TXP_MR_2.5G, TXPP_MR_2.5G, TXP_MR_10E, TXP_MR_10G • ONS 15600 SONET: ASAP_4, OC192_4, OC48_16

Table E-63 Field Descriptions for the SONET Line PM Table (Near End) (continued)

Field	Description	Cards Supported
SES-L	SES-L lists a count of the seconds when K (see GR-253-CORE for values) or more line-layer BIP errors were detected or an AIS-L defect was present.	• ONS 15310 CL: CTX • ONS 15310 MA SONET: CTX_2500, DS1_28_DS3_EC1_3, DS1_84_DS3_EC1_3 • ONS 15327: OC3, OC12, OC48 • ONS 15454 SONET: 2.5G_DM, 2.5G_DMP, ADM_10G, DS3_EC1_48, EC1, EC1N, MRC_4, MRC_12, MRC_12_2.5G, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OC3, OC12, OC12_4, OC48, OC192, OC192_XFP, OSC_CSM, OTU2_XP, TXP_MR_2.5G, TXPP_MR_2.5G, TXP_MR_10E, TXP_MR_10G • ONS 15600 SONET: ASAP_4, OC192_4, OC48_16
UAS-L	Unavailable seconds–line (UAS-L) lists a count of the seconds when the line is unavailable. A line becomes unavailable when ten consecutive seconds occur that qualify as SES-Ls, and continues to be unavailable until ten consecutive seconds occur that do not qualify as SES-Ls.	• ONS 15310 CL: CTX • ONS 15310 MA SONET: CTX_2500, DS1_28_DS3_EC1_3, DS1_84_DS3_EC1_3 • ONS 15327: OC3, OC12, OC48 • ONS 15454 SONET: 2.5G_DM, 2.5G_DMP, ADM_10G, DS3_EC1_48, EC1, EC1N, MRC_4, MRC_12, MRC_12_2.5G, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OC3, OC12, OC12_4, OC48, OC192, OC192_XFP, OSC_CSM, OTU2_XP, TXP_MR_2.5G, TXPP_MR_2.5G, TXP_MR_10E, TXP_MR_10G • ONS 15600 SONET: ASAP_4, OC192_4, OC48_16
FC-L	Failure count–line (FC-L) lists a count of the number of near-end line failure events. A failure event begins when an AIS-L failure is declared, or when a lower-layer, traffic-related, near-end failure is declared. This failure event ends when the failure is cleared. A failure event that begins in one period and ends in another period is counted only in the period where it begins.	• ONS 15310 CL: CTX • ONS 15310 MA SONET: CTX_2500, DS1_28_DS3_EC1_3, DS1_84_DS3_EC1_3 • ONS 15327: OC3, OC12, OC48 • ONS 15454 SONET: 2.5G_DM, 2.5G_DMP, ADM_10G, DS3_EC1_48, EC1, EC1N, MRC_4, MRC_12, MRC_12_2.5G, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OC3, OC12, OC12_4, OC48, OC192, OC192_XFP, OSC_CSM, OTU2_XP, TXP_MR_2.5G, TXPP_MR_2.5G, TXP_MR_10E, TXP_MR_10G • ONS 15600 SONET: ASAP_4, OC192_4, OC48_16

Table E-63 Field Descriptions for the SONET Line PM Table (Near End) (continued)

Field	Description	Cards Supported
PSC	In a 1 + 1 protection scheme for a working card, PSC is a count of the number of times service switches from a working card to a protection card plus the number of times service switches back to the working card. For a protection card, PSC is a count of the number of times service switches to a working card from a protection card plus the number of times service switches back to the protection card. The PSC PM is only applicable if revertive line-level protection switching is used. PSC is supported in revertive and nonrevertive modes. **Note** This parameter is not supported for transponder or muxponder cards.	• ONS 15310 CL: CTX • ONS 15310 MA SONET: CTX_2500, DS1_28_DS3_EC1_3, DS1_84_DS3_EC1_3 • ONS 15327: OC3, OC12, OC48 • ONS 15454 SONET: MRC_4, MRC_12, MRC_12_2.5G, MXP_MR_10DME, OC3, OC12, OC12_4, OC48, OC192, OC192_XFP • ONS 15600 SONET: ASAP_4, OC192_4, OC48_16
PSD	PSD applies to the length of time, in seconds, that service is carried on another line. For a working line, PSD is a count of the number of seconds that service was carried on the protection line. For the protection line, it is a count of the seconds that the line was used to carry service. The PSD PM is only applicable if revertive line-level protection switching is used. PSD is supported in revertive and nonrevertive modes. **Note** This parameter is not supported for transponder or muxponder cards.	• ONS 15310 CL: CTX • ONS 15310 MA SONET: CTX_2500, DS1_28_DS3_EC1_3, DS1_84_DS3_EC1_3 • ONS 15327: OC3, OC12, OC48 • ONS 15454 SONET: MRC_4, MRC_12, MRC_12_2.5G, MXP_MR_10DME, OC3, OC12, OC12_4, OC48, OC192, OC192_XFP • ONS 15600 SONET: ASAP_4, OC192_4, OC48_16
PSC-W	For a working line in a 2-fiber BLSR, protection switching count–working (PSC-W) is a count of the number of times traffic switches away from the working capacity in the failed line and back to the working capacity after the failure is cleared. PSC-W increments on the failed working line and PSC increments on the active protect line. **Note** This parameter is not supported for transponder or muxponder cards.	• ONS 15327: OC12, OC48 • ONS 15454 SONET: MRC_4, MRC_12, MRC_12_2.5G, MXP_MR_10DME, OC12, OC12_4, OC48, OC192, OC192_XFP • ONS 15600 SONET: ASAP_4, OC192_4, OC48_16
PSD-W	For a working line in a 2-fiber BLSR, protection switching duration–working (PSD-W) is a count of the number of seconds that service was carried on the protection line. PSD-W increments on the failed working line and PSD increments on the active protect line. **Note** This parameter is not supported for transponder or muxponder cards.	• ONS 15327: OC12, OC48 • ONS 15454 SONET: MRC_4, MRC_12, MRC_12_2.5G, MXP_MR_10DME, OC12, OC12_4, OC48, OC192, OC192_XFP • ONS 15600 SONET: ASAP_4, OC192_4, OC48_16

Table E-63 Field Descriptions for the SONET Line PM Table (Near End) (continued)

Field	Description	Cards Supported
PSC-S	In a four-fiber BLSR, protection switching count–span (PSC-S) is a count of the number of times service switches from a working line to a protection line plus the number of times it switches back to the working line. A count is only incremented if span switching is used. **Note** This parameter is not supported for transponder or muxponder cards.	• ONS 15327: OC12, OC48 • ONS 15454 SONET: MRC_4, MRC_12, MRC_12_2.5G, MXP_MR_10DME, OC12, OC12_4, OC48, OC192, OC192_XFP • ONS 15600 SONET: ASAP_4, OC192_4, OC48_16
PSD-S	In a four-fiber BLSR, protection switching duration–span (PSD-S) is a count of the seconds that the protection line was used to carry service. A count is only incremented if span switching is used. **Note** This parameter is not supported for transponder or muxponder cards.	• ONS 15327: OC12, OC48 • ONS 15454 SONET: MRC_4, MRC_12, MRC_12_2.5G, MXP_MR_10DME, OC12, OC12_4, OC48, OC192, OC192_XFP • ONS 15600 SONET: ASAP_4, OC192_4, OC48_16
PSC-R	In a 4-fiber BLSR, protection switching count–ring (PSC-R) is a count of the number of times service switches from a working line to a protection line plus the number of times it switches back to a working line. A count is only incremented if ring switching is used. **Note** This parameter is not supported for transponder or muxponder cards.	• ONS 15327: OC12, OC48 • ONS 15454 SONET: MRC_4, MRC_12, MRC_12_2.5G, MXP_MR_10DME, OC12, OC12_4, OC48, OC192, OC192_XFP • ONS 15600 SONET: ASAP_4, OC192_4, OC48_16
PSD-R	In a 4-fiber BLSR, protection switching duration–ring (PSD-R) is a count of the seconds that the protection line was used to carry service. A count is only incremented if ring switching is used. **Note** This parameter is not supported for transponder or muxponder cards.	• ONS 15327: OC12, OC48 • ONS 15454 SONET: MRC_4, MRC_12, MRC_12_2.5G, MXP_MR_10DME, OC12, OC12_4, OC48, OC192, OC192_XFP • ONS 15600 SONET: ASAP_4, OC192_4, OC48_16
NE ID	Name of the selected NE.	—

E.2.49 SONET Section PM Table—ONS 15310 CL, ONS 15310 MA SONET, ONS 15327, ONS 15454 SONET, ONS 15600 SONET

The SONET Section PM table shows performance data at the section layer. You can display performance data for 15-minute, 1-day, or real-time increments:

- 15-minute—Data is collected at the quarter-hour (for example, at 10:00, 10:15, and so on). The data shown represents the difference in counter values between successive 15-minute intervals.
- 1-day—Data is collected at midnight GMT. The data shown represents the difference between the counter values read at successive midnights.

- Real-time—When a real-time PM session is running, it polls the NE for *x* number of attributes every 10 to 900 seconds. This feature allows you to examine the current value of a PM parameter in granularities finer than the standard 15-minute or 1-day interval. For more information, see 10.4.4 Managing Real-Time PM Data, page 10-26.

Performance monitoring can be done either on selected modules, or on specific locations in the NE. You can use the Plot tab to plot the data in a graphical view that is stored in the Prime Optical database. See 10.4.6 Using PM Data Graphs, page 10-28.

The following table describes the fields in the SONET Section PM table.

Table E-64 Field Descriptions for the SONET Section PM Table

Field	Description	Cards Supported
Alias ID	Alias name of the selected NE.	—
Module Name	Module for which PM data is displayed.	—
Physical Location	Slot and port number for which PM data is displayed.	—
Interface	Interface name of the selected NE.	—
Time Stamp	When the data was collected. You can select GMT, Local, or User-Defined time for the Time Stamp display. Use the User Preferences dialog box to make your time zone selection.	—
Maintenance	Whether the NE was under maintenance when the performance data was collected.	—
Coding Violations–Section	Number of BIP errors detected at the section-layer (using the B1 byte in the incoming SONET signal). Up to eight section BIP errors can be detected per STS-N frame, with each error incrementing the current CV-S second register.	• ONS 15310 CL: CTX • ONS 15310 MA SONET: CTX_2500, DS1_28_DS3_EC1_3, DS1_84_DS3_EC1_3 • ONS 15327: OC3, OC12, OC48 • ONS 15454 SONET: 2.5G_DM, 2.5G_DMP, ADM_10G, DS3_EC1_48, EC1, EC1N, MRC_4, MRC_12, MRC_12_2.5G, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OC3, OC3_8, OC12, OC12_4, OC48, OC192, OC192_XFP, OSC_CSM, OTU2_XP, TXP_MR_2.5G, TXPP_MR_2.5G, TXP_MR_10E, TXP_MR_10G • ONS 15600 SONET: ASAP_4, OC192_4, OC48_16

Table E-64 Field Descriptions for the SONET Section PM Table (continued)

Field	Description	Cards Supported
Errored Seconds–Section	Number of seconds when at least one section-layer BIP error was detected or an SEF or LOS defect was present.	• ONS 15310 CL: CTX • ONS 15310 MA SONET: CTX_2500, DS1_28_DS3_EC1_3, DS1_84_DS3_EC1_3 • ONS 15327: OC3, OC12, OC48 • ONS 15454 SONET: 2.5G_DM, 2.5G_DMP, ADM_10G, DS3_EC1_48, EC1, EC1N, MRC_4, MRC_12, MRC_12_2.5G, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OC3, OC3_8, OC12, OC12_4, OC48, OC192, OC192_XFP, OSC_CSM, OTU2_XP, TXP_MR_2.5G, TXPP_MR_2.5G, TXP_MR_10E, TXP_MR_10G • ONS 15600 SONET: ASAP_4, OC192_4, OC48_16
Severely Errored Seconds–Section	Number of seconds when K (see GR-253-CORE for value) or more section-layer BIP errors were detected or an SEF or LOS defect was present.	• ONS 15310 CL: CTX • ONS 15310 MA SONET: CTX_2500, DS1_28_DS3_EC1_3, DS1_84_DS3_EC1_3 • ONS 15327: OC3, OC12, OC48 • ONS 15454 SONET: 2.5G_DM, 2.5G_DMP, ADM_10G, DS3_EC1_48, EC1, EC1N, MRC_4, MRC_12, MRC_12_2.5G, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OC3, OC3_8, OC12, OC12_4, OC48, OC192, OC192_XFP, OSC_CSM, OTU2_XP, TXP_MR_2.5G, TXPP_MR_2.5G, TXP_MR_10E, TXP_MR_10G • ONS 15600 SONET: ASAP_4, OC192_4, OC48_16
Severely Errored Framing Seconds–Section	Number of seconds when an SEF defect was present. A SEF defect is expected to be present during most seconds when a LOS or LOF defect is present. However, there can be situations when that is not the case, and the SEFS-S parameter is only incremented based on the presence of the SEF defect.	• ONS 15310 CL: CTX • ONS 15310 MA SONET: CTX_2500, DS1_28_DS3_EC1_3, DS1_84_DS3_EC1_3 • ONS 15327: OC3, OC12, OC48 • ONS 15454 SONET: 2.5G_DM, 2.5G_DMP, ADM_10G, DS3_EC1_48, EC1, EC1N, MRC_4, MRC_12, MRC_12_2.5G, MXP_2.5G_10E, MXP_2.5G_10G, MXP_MR_10DME, OC3, OC3_8, OC12, OC12_4, OC48, OC192, OC192_XFP, OSC_CSM, OTU2_XP, TXP_MR_2.5G, TXPP_MR_2.5G, TXP_MR_10E, TXP_MR_10G • ONS 15600 SONET: ASAP_4, OC192_4, OC48_16
NE ID	Name of the selected NE.	—

E.2.50 SONET STS Path PM Table (Far End)—ONS 15310 CL, ONS 15310 MA SONET, ONS 15327, ONS 15454 SONET, ONS 15600

The SONET STS Path PM table shows far-end performance data for the ONS 15310 CL, ONS 15310 MA, ONS 15327, ONS 15454 SONET, and ONS 15600 SONET STS path. You can display performance data for 15-minute, 1-day, or real-time increments:

- 15-minute—Data is collected at the quarter-hour (for example, at 10:00, 10:15, and so on). The data shown represents the difference in counter values between successive 15-minute intervals.
- 1-day—Data is collected at midnight GMT. The data shown represents the difference between the counter values read at successive midnights.
- Real-time—When a real-time PM session is running, it polls the NE for *x* number of attributes every 10 to 900 seconds. This feature allows you to examine the current value of a PM parameter in granularities finer than the standard 15-minute or 1-day interval. For more information, see 10.4.4 Managing Real-Time PM Data, page 10-26.

Performance monitoring can be done either on selected modules, or on specific locations in the NE. You can use the Plot tab to plot the data in a graphical view that is stored in the Prime Optical database. See 10.4.6 Using PM Data Graphs, page 10-28.

The following table describes the fields in the SONET STS Path PM table.

Table E-65 Field Descriptions for the SONET STS Path PM Table (Far End)

Field	Description	Cards Supported
Alias ID	Alias name of the selected NE.	—
Module Name	Module for which PM data is displayed.	—
Physical Location	Slot and port number for which PM data is displayed.	—
Interface	Interface name of the selected NE.	—
Time Stamp (*time zone*)	When the data was collected. You can select GMT, Local, or User-Defined time for the Time Stamp display. Use the User Preferences dialog box to make your time zone selection.	—
Maintenance	Whether the NE was under maintenance when the performance data was collected.	—

Table E-65 Field Descriptions for the SONET STS Path PM Table (Far End) (continued)

Field	Description	Cards Supported
CV-P	STS path coding violations (STS CV-P) is a count of BIP errors detected at the STS path layer (that is, using the B3 byte). Up to eight BIP errors can be detected per frame; each error increments the current CV-P second register.	• ONS 15310 CL: CTX • ONS 15310 MA SONET: CTX_2500, DS1_28_DS3_EC1_3, DS1_84_DS3_EC1_3 • ONS 15327: OC3, OC12, OC48, XTC • ONS 15454 SONET: 2.5G_DM, 2.5G_DMP, CE-100T-8, DS-1, DS1N, DS-3, DS3E, DS3_EC1_48, DS3I, DS3IN, DS1_E1_56, DS3N, DS3NE, DS3XM, DS3XM_12, FCMR, EC1, EC1N, MRC_4, MRC_12, MRC_12_2.5G, MXP_2.5G_10E, OC3, OC3_8, OC12, OC12_4, OC48, OC192, OC192_XFP, OTU2_XP, TXP_MR_10E • ONS 15600 SONET: ASAP_4, OC192_4, OC48_16
ES-P	STS path errored seconds (STS ES-P) is a count of the seconds when at least one STS path BIP error was detected. A path alarm indication signal (AIS-P) defect (or a lower-layer, traffic-related, near-end defect) or a path loss of pointer (LOP-P) defect can also cause an STS ES-P.	• ONS 15310 CL: CTX • ONS 15310 MA SONET: CTX_2500, DS1_28_DS3_EC1_3, DS1_84_DS3_EC1_3 • ONS 15327: OC3, OC12, OC48, XTC • ONS 15454 SONET: 2.5G_DM, 2.5G_DMP, CE-100T-8, DS-1, DS1N, DS1_E1_56, DS-3, DS3E, DS3_EC1_48, DS3I, DS3IN, DS3N, DS3NE, DS3XM, DS3XM_12, FCMR, EC1, EC1N, MRC_4, MRC_12, MRC_12_2.5G, MXP_2.5G_10E, OC3, OC3_8, OC12, OC12_4, OC48, OC192, OC192_XFP, OTU2_XP, TXP_MR_10E • ONS 15600 SONET: ASAP_4, OC192_4, OC48_16
SES-P	STS path severely errored seconds (STS SES-P) is a count of the seconds when K (2400) or more STS path BIP errors were detected. An AIS-P defect (or a lower-layer, traffic-related, near-end defect) or an LOP-P defect can also cause an STS SES-P.	• ONS 15310 CL: CTX • ONS 15310 MA SONET: CTX_2500, DS1_28_DS3_EC1_3, DS1_84_DS3_EC1_3 • ONS 15327: OC3, OC12, OC48, XTC • ONS 15454 SONET: 2.5G_DM, 2.5G_DMP, CE-100T-8, DS-1, DS1N, DS1_E1_56, DS-3, DS3E, DS3_EC1_48, DS3I, DS3IN, DS3N, DS3NE, DS3XM, DS3XM_12, FCMR, EC1, EC1N, MRC_4, MRC_12, MRC_12_2.5G, MXP_2.5G_10E, OC3, OC3_8, OC12, OC12_4, OC48, OC192, OC192_XFP, OTU2_XP, TXP_MR_10E • ONS 15600 SONET: ASAP_4, OC192_4, OC48_16

Table E-65 Field Descriptions for the SONET STS Path PM Table (Far End) (continued)

Field	Description	Cards Supported
UAS-P	STS path unavailable seconds (STS UAS-P) is a count of the seconds when the STS path was unavailable. An STS path becomes unavailable when ten consecutive seconds occur that qualify as SES-Ps, and it continues to be unavailable until ten consecutive seconds occur that do not qualify as SES-Ps.	• ONS 15310 CL: CTX • ONS 15310 MA SONET: CTX_2500, DS1_28_DS3_EC1_3, DS1_84_DS3_EC1_3 • ONS 15327: OC3, OC12, OC48, XTC • ONS 15454 SONET: 2.5G_DM, 2.5G_DMP, CE-100T-8, DS-1, DS1N, DS1_E1_56, DS-3, DS3E, DS3_EC1_48, DS3I, DS3IN, DS3N, DS3NE, DS3XM, DS3XM_12, EC1, EC1N, FCMR, MRC_4, MRC_12, MRC_12_2.5G, MXP_2.5G_10E, OC3, OC3_8, OC12, OC12_4, OC48, OC192, OC192_XFP, OTU2_XP, TXP_MR_10E • ONS 15600 SONET: ASAP_4, OC192_4, OC48_16
FC-P	STS path failure counts (STS FC-P) is a count of the number of near-end STS path failure events. A failure event begins when an AIS-P failure, an LOP-P failure, a UNEQ-P failure, or a path trace identifier mismatch (TIM-P) failure is declared, or if the STS PTE that is monitoring the path supports ERDI-P for that path. The failure event ends when these failures are cleared.	• ONS 15310 CL: CTX • ONS 15310 MA SONET: CTX_2500, DS1_28_DS3_EC1_3, DS1_84_DS3_EC1_3 • ONS 15327: OC3, OC12, OC48, XTC • ONS 15454 SONET: 2.5G_DM, 2.5G_DMP, CE-100T-8, DS-1, DS1N, DS1_E1_56, DS-3, DS3E, DS3_EC1_48, DS3I, DS3IN, DS3N, DS3NE, DS3XM, DS3XM_12, EC1, EC1N, FCMR, MRC_4, MRC_12, MRC_12_2.5G, MXP_2.5G_10E, OC3, OC3_8, OC12, OC12_4, OC48, OC192, OC192_XFP, OTU2_XP, TXP_MR_10E • ONS 15600 SONET: ASAP_4, OC192_4, OC48_16
NE ID	Name of the selected NE.	—

E.2.51 SONET STS Path PM Table—ONS 15310 CL, ONS 15310 MA SONET, ONS 15327, ONS 15454 SONET, ONS 15600 SONET

The SONET STS Path PM table shows performance data for the ONS 15310 CL, ONS 15310 MA SONET, ONS 15327, ONS 15454 SONET, and ONS 15600 SONET STS path. You can display performance data for 15-minute, 1-day, or real-time increments:

- 15-minute—Data is collected at the quarter-hour (for example, at 10:00, 10:15, and so on). The data shown represents the difference in counter values between successive 15-minute intervals.
- 1-day—Data is collected at midnight GMT. The data shown represents the difference between the counter values read at successive midnights.

- Real-time—When a real-time PM session is running, it polls the NE for *x* number of attributes every 10 to 900 seconds. This feature allows you to examine the current value of a PM parameter in granularities finer than the standard 15-minute or 1-day interval. For more information, see 10.4.4 Managing Real-Time PM Data, page 10-26.

Performance monitoring can be done either on selected modules, or on specific locations in the NE. You can use the Plot tab to plot the data in a graphical view that is stored in the Prime Optical database. See 10.4.6 Using PM Data Graphs, page 10-28.

The following table describes the fields in the SONET STS Path PM table.

Table E-66 Field Descriptions for the SONET STS Path PM Table

Field	Description	Cards Supported
Alias ID	Alias name of the selected NE.	—
Module Name	Module for which PM data is displayed.	—
Physical Location	Slot and port number for which PM data is displayed.	—
Interface	Interface name of the selected NE.	—
Time Stamp (*time zone*)	When the data was collected. You can select GMT, Local, or User-Defined time for the Time Stamp display. Use the User Preferences dialog box to make your time zone selection.	—
Maintenance	Whether the NE was under maintenance when the performance data was collected.	—
CV-P	STS path coding violations (STS CV-P) is a count of BIP errors detected at the STS path layer (that is, using the B3 byte). Up to eight BIP errors can be detected per frame; each error increments the current CV-P second register.	• ONS 15310 CL: CTX • ONS 15310 MA SONET: CTX_2500, DS1_28_DS3_EC1_3, DS1_84_DS3_EC1_3 • ONS 15327: OC3, OC12, OC48, XTC • ONS 15454 SONET: 2.5G_DM, 2.5G_DMP, CE-100T-8, DS-1, DS1N, DS1_E1_56, DS-3, DS3E, DS3_EC1_48, DS3I, DS3IN, DS3N, DS3NE, DS3XM, DS3XM_12, EC1, EC1N, FCMR, MRC_4, MRC_12, MRC_12_2.5G, OC3, OC3_8, OC12, OC12_4, OC48, OC192, OC192_XFP, MXP_2.5G_10E, TXP_MR_10E • ONS 15600 SONET: ASAP_4, OC192_4, OC48_16

Table E-66 Field Descriptions for the SONET STS Path PM Table (continued)

Field	Description	Cards Supported
ES-P	STS path errored seconds (STS ES-P) is a count of the seconds when at least one STS path BIP error was detected. A path alarm indication signal (AIS-P) defect (or a lower-layer, traffic-related, near-end defect) or a path loss of pointer (LOP-P) defect can also cause an STS ES-P.	• ONS 15310 CL: CTX • ONS 15310 MA SONET: CTX_2500, DS1_28_DS3_EC1_3, DS1_84_DS3_EC1_3 • ONS 15327: OC3, OC12, OC48, XTC • ONS 15454 SONET: 2.5G_DM, 2.5G_DMP, CE-100T-8, DS-1, DS1N, DS1_E1_56, DS-3, DS3E, DS3_EC1_48, DS3I, DS3IN, DS3N, DS3NE, DS3XM, DS3XM_12, EC1, EC1N, FCMR, MRC_4, MRC_12, MRC_12_2.5G, OC3, OC3_8, OC12, OC12_4, OC48, OC192, OC192_XFP, MXP_2.5G_10E, TXP_MR_10E • ONS 15600 SONET: ASAP_4, OC192_4, OC48_16
SES-P	STS path severely errored seconds (STS SES-P) is a count of the seconds when K (2400) or more STS path BIP errors were detected. An AIS-P defect (or a lower-layer, traffic-related, near-end defect) or an LOP-P defect can also cause an STS SES-P.	• ONS 15310 CL: CTX • ONS 15310 MA SONET: CTX_2500, DS1_28_DS3_EC1_3, DS1_84_DS3_EC1_3 • ONS 15327: OC3, OC12, OC48, XTC • ONS 15454 SONET: 2.5G_DM, 2.5G_DMP, CE-100T-8, DS-1, DS1N, DS1_E1_56, DS-3, DS3E, DS3_EC1_48, DS3I, DS3IN, DS3N, DS3NE, DS3XM, DS3XM_12, EC1, EC1N, FCMR, MRC_4, MRC_12, MRC_12_2.5G, OC3, OC3_8, OC12, OC12_4, OC48, OC192, OC192_XFP, MXP_2.5G_10E, TXP_MR_10E • ONS 15600 SONET: ASAP_4, OC192_4, OC48_16
UAS-P	STS path unavailable seconds (STS UAS-P) is a count of the seconds when the STS path was unavailable. An STS path becomes unavailable when ten consecutive seconds occur that qualify as SES-Ps, and it continues to be unavailable until ten consecutive seconds occur that do not qualify as SES-Ps.	• ONS 15310 CL: CTX • ONS 15310 MA SONET: CTX_2500, DS1_28_DS3_EC1_3, DS1_84_DS3_EC1_3 • ONS 15327: OC3, OC12, OC48, XTC • ONS 15454 SONET: 2.5G_DM, 2.5G_DMP, CE-100T-8, DS-1, DS1N, DS1_E1_56, DS-3, DS3E, DS3_EC1_48, DS3I, DS3IN, DS3N, DS3NE, DS3XM, DS3XM_12, EC1, EC1N, FCMR, MRC_4, MRC_12, MRC_12_2.5G, OC3, OC3_8, OC12, OC12_4, OC48, OC192, OC192_XFP, MXP_2.5G_10E, TXP_MR_10E • ONS 15600 SONET: ASAP_4, OC192_4, OC48_16

Table E-66 Field Descriptions for the SONET STS Path PM Table (continued)

Field	Description	Cards Supported
FC-P	STS path failure counts (STS FC-P) is a count of the number of near-end STS path failure events. A failure event begins when an AIS-P failure, an LOP-P failure, a UNEQ-P failure, or a path trace identifier mismatch (TIM-P) failure is declared, or if the STS PTE that is monitoring the path supports ERDI-P for that path. The failure event ends when these failures are cleared.	• ONS 15310 CL: CTX • ONS 15310 MA SONET: CTX_2500, DS1_28_DS3_EC1_3, DS1_84_DS3_EC1_3 • ONS 15327: OC3, OC12, OC48, XTC • ONS 15454 SONET: 2.5G_DM, 2.5G_DMP, CE-100T-8, DS-1, DS1N, DS1_E1_56, DS-3, DS3E, DS3_EC1_48, DS3I, DS3IN, DS3N, DS3NE, DS3XM, DS3XM_12, EC1, EC1N, FCMR, MRC_4, MRC_12, MRC_12_2.5G, OC3, OC3_8, OC12, OC12_4, OC48, OC192, OC192_XFP, MXP_2.5G_10E, TXP_MR_10E • ONS 15600 SONET: ASAP_4, OC192_4, OC48_16
PPJC-PDET	Positive pointer justification count, STS path detected (PPJC-Pdet) is a count of the positive pointer justifications detected on a particular path on an incoming SONET signal.	• ONS 15310 CL: CTX • ONS 15310 MA SONET: CTX_2500, DS1_28_DS3_EC1_3, DS1_84_DS3_EC1_3 • ONS 15327: OC3, OC12, OC48, • ONS 15454 SONET: 2.5G_DM, 2.5G_DMP, CE-100T-8, DS3_EC1_48, EC1, EC1N, FCMR, MRC_4, MRC_12_2.5G, OC3, OC3_8, OC12, OC12_4, OC48, OC192, OC192_XFP, MXP_2.5G_10E, TXP_MR_10E • ONS 15600 SONET: ASAP_4, OC192_4, OC48_16
NPJC-PDET	Negative pointer justification count, STS path detected (NPJC-Pdet) is a count of the negative pointer justifications detected on a particular path on an incoming SONET signal.	• ONS 15310 CL: CTX • ONS 15310 MA SONET: CTX_2500, DS1_28_DS3_EC1_3, DS1_84_DS3_EC1_3 • ONS 15327: OC3, OC12, OC48 • ONS 15454 SONET: 2.5G_DM, 2.5G_DMP, CE-100T-8, DS3_EC1_48, EC1, EC1N, FCMR, MRC_4, MRC_12_2.5G, OC3, OC3_8, OC12, OC12_4, OC48, OC192, OC192_XFP, MXP_2.5G_10E, TXP_MR_10E • ONS 15600 SONET: ASAP_4, OC192_4, OC48_16
PPJC-PGEN	Positive pointer justification count, STS path generated (PPJC-Pgen) is a count of the positive pointer justifications generated for a particular path to reconcile the frequency of the SPE with the local clock.	• ONS 15310 CL: CTX • ONS 15310 MA SONET: CTX_2500, DS1_28_DS3_EC1_3, DS1_84_DS3_EC1_3 • ONS 15327: OC3, OC12, OC48 • ONS 15454 SONET: 2.5G_DM, 2.5G_DMP, CE-100T-8, DS3_EC1_48, EC1, EC1N, FCMR, MRC_4, MRC_12_2.5G, OC3, OC3_8, OC12, OC12_4, OC48, OC192, OC192_XFP, MXP_2.5G_10E, TXP_MR_10E • ONS 15600 SONET: ASAP_4, OC192_4, OC48_16

Table E-66 Field Descriptions for the SONET STS Path PM Table (continued)

Field	Description	Cards Supported
NPJC-PGEN	Negative pointer justification count, STS path generated (PPJC-Pgen) is a count of the negative pointer justifications generated for a particular path to reconcile the frequency of the SPE with the local clock.	• ONS 15310 CL: CTX • ONS 15310 MA SONET: CTX_2500, DS1_28_DS3_EC1_3, DS1_84_DS3_EC1_3 • ONS 15327: OC3, OC12, OC48 • ONS 15454 SONET: 2.5G_DM, 2.5G_DMP, CE-100T-8, DS3_EC1_48, EC1, EC1N, FCMR, MRC_4, MRC_12_2.5G, OC3, OC3_8, OC12, OC12_4, OC48, OC192, OC192_XFP, MXP_2.5G_10E, TXP_MR_10E • ONS 15600 SONET: ASAP_4, OC192_4, OC48_16
PJ-DIFF	Sum of the absolute values of differences between positive transmitted and received, and negative transmitted and received. The important metric on pointer justification is not the exact counts, but how many were absorbed.	• ONS 15310 CL: CTX • ONS 15310 MA SONET: CTX_2500, DS1_28_DS3_EC1_3, DS1_84_DS3_EC1_3 • ONS 15327: OC3, OC12, OC48 • ONS 15454 SONET: 2.5G_DM, 2.5G_DMP, CE-100T-8, DS3_EC1_48, EC1, EC1N, FCMR, MRC_4, MRC_12_2.5G, OC3, OC3_8, OC12, OC12_4, OC48, OC192, OC192_XFP, MXP_2.5G_10E, TXP_MR_10E
PJCS-Pdet	Number of pointer justification count seconds detected on a particular path.	• ONS 15310 CL: CTX • ONS 15310 MA SONET: CTX_2500, DS1_28_DS3_EC1_3, DS1_84_DS3_EC1_3 • ONS 15454 SONET: MRC_4, MRC_12_2.5G, OC192_XFP
PJCS-Pgen	Number of pointer justification count seconds generated for a particular path.	• ONS 15310 CL: CTX • ONS 15310 MA SONET: CTX_2500, DS1_28_DS3_EC1_3, DS1_84_DS3_EC1_3 • ONS 15454 SONET: MRC_4, MRC_12_2.5G, OC192_XFP
PJP-SEC	Number of positive pointer justification seconds.	• ONS 15310 CL: CTX • ONS 15327: OC3, OC12, OC48 • ONS 15454 SONET: 2.5G_DM, 2.5G_DMP, CE-100T-8, DS3_EC1_48, EC1, EC1N, FCMR, OC3, OC3_8, OC12, OC12_4, OC48, OC192, MXP_2.5G_10E, TXP_MR_10E

Table E-66 Field Descriptions for the SONET STS Path PM Table (continued)

Field	Description	Cards Supported
PJN-SEC	Number of negative pointer justification seconds.	• ONS 15310 CL: CTX • ONS 15327: OC3, OC12, OC48 • ONS 15454 SONET: 2.5G_DM, 2.5G_DMP, CE-100T-8, DS3_EC1_48, EC1, EC1N, FCMR, OC3, OC3_8, OC12, OC12_4, OC48, OC192, MXP_2.5G_10E, TXP_MR_10E
NE ID	Name of the selected NE.	—

E.2.52 SONET VT1.5 PM Table

The SONET VT1.5 PM table contains PM information at the virtual tributary (VT1.5) layer. You can display performance data for 15-minute, 1-day, or real-time increments:

- 15-minute—Data is collected at the quarter-hour (for example, at 10:00, 10:15, and so on). The data shown represents the difference in counter values between successive 15-minute intervals.
- 1-day—Data is collected at midnight GMT. The data shown represents the difference between the counter values read at successive midnights.
- Real-time—When a real-time PM session is running, it polls the NE for *x* number of attributes every 10 to 900 seconds. This feature allows you to examine the current value of a PM parameter in granularities finer than the standard 15-minute or 1-day interval. For more information, see 10.4.4 Managing Real-Time PM Data, page 10-26.

You can use the Plot tab to plot the data in a graphical view that is stored in the Prime Optical database. See 10.4.6 Using PM Data Graphs, page 10-28.

The following table describes the fields in the SONET VT1.5 PM table.

Table E-67 Field Descriptions for the SONET VT1.5 PM Table

Field	Description	Cards Supported
Alias ID	Alias name of the selected NE.	—
Module Name	Module for which PM data is displayed.	—
Physical Location	Slot and port number for which PM data is displayed.	—
Interface	Interface name of the selected NE.	—
Time Stamp	When the data was collected. You can select GMT, Local, or User-Defined time for the Time Stamp display. Use the User Preferences dialog box to make your time zone selection.	—
Maintenance	Whether the NE was under maintenance when the performance data was collected.	—

Table E-67 Field Descriptions for the SONET VT1.5 PM Table (continued)

Field	Description	Cards Supported
CV-V	Code violations VT layer (CV-V) is a count of the BIP errors detected at the VT path layer. Up to two BIP errors can be detected per VT Super Frame, with each error incrementing the current CV-V second register.	• ONS 15310 CL: CTX • ONS 15310 MA SONET: CTX_2500, DS1_28_DS3_EC1_3, DS1_84_DS3_EC1_3 • ONS 15327: XTC • ONS 15454 SONET: DS-1, DS1N, DS1_E1_56, DS3XM, DS3XM_12
ES-V	Errored seconds VT layer (ES-V) is a count of the seconds when at least one VT Path BIP error was detected. An AIS-V defect (a lower-layer, traffic-related, near-end defect) or a LOP-V defect can also cause an ES-V.	• ONS 15310 CL: CTX • ONS 15310 MA SONET: CTX_2500, DS1_28_DS3_EC1_3, DS1_84_DS3_EC1_3 • ONS 15327: XTC • ONS 15454 SONET: DS-1, DS1N, DS1_E1_56, DS3XM, DS3XM_12
SES-V	Severely errored seconds VT layer (SES-V) is a count of seconds when K (600) or more VT Path BIP errors were detected. SES-V can also be caused by an AIS-V defect (a lower-layer, traffic-related, near-end defect) or a LOP-V defect.	• ONS 15310 CL: CTX • ONS 15310 MA SONET: CTX_2500, DS1_28_DS3_EC1_3, DS1_84_DS3_EC1_3 • ONS 15327: XTC • ONS 15454 SONET: DS-1, DS1N, DS1_E1_56, DS3XM, DS3XM_12
UAS-V	Unavailable second VT layer (UAS-V) is a count of the seconds when the VT path was unavailable. A VT path becomes unavailable when ten consecutive seconds occur that qualify as SES-Vs, and continues to be unavailable until ten consecutive seconds occur that do not qualify as SES-Vs.	• ONS 15310 CL: CTX • ONS 15310 MA SONET: CTX_2500, DS1_28_DS3_EC1_3, DS1_84_DS3_EC1_3 • ONS 15327: XTC • ONS 15454 SONET: DS-1, DS1N, DS1_E1_56, DS3XM, DS3XM_12
NE ID	Name of the selected NE.	—

E.2.53 SONET VT2 PM Table

The SONET VT2 PM table contains PM information at the virtual tributary (VT2) layer. You can display performance data for 15-minute, 1-day, or real-time increments:

- 15-minute—Data is collected at the quarter-hour (for example, at 10:00, 10:15, and so on). The data shown represents the difference in counter values between successive 15-minute intervals.
- 1-day—Data is collected at midnight GMT. The data shown represents the difference between the counter values read at successive midnights.

- Real-time—When a real-time PM session is running, it polls the NE for *x* number of attributes every 10 to 900 seconds. This feature allows you to examine the current value of a PM parameter in granularities finer than the standard 15-minute or 1-day interval. For more information, see 10.4.4 Managing Real-Time PM Data, page 10-26.

You can use the Plot tab to plot the data in a graphical view that is stored in the Prime Optical database. See 10.4.6 Using PM Data Graphs, page 10-28.

The following table describes the fields in the SONET VT2 PM table.

Table E-68 Field Descriptions for the SONET VT2 PM Table

Field	Description	Cards Supported
Alias ID	Alias name of the selected NE.	—
Module Name	Module for which PM data is displayed.	—
Physical Location	Slot and port number for which PM data is displayed.	—
Interface	Interface name of the selected NE.	—
Time Stamp	When the data was collected. You can select GMT, Local, or User-Defined time for the Time Stamp display. Use the User Preferences dialog box to make your time zone selection.	—
Maintenance	Whether the NE was under maintenance when the performance data was collected.	—
CV-V	Code violations VT layer (CV-V) is a count of the BIP errors detected at the VT path layer. Up to two BIP errors can be detected per VT Super Frame, with each error incrementing the current CV-V second register.	• ONS 15454 SONET: DS1_E1_56
ES-V	Errored seconds VT layer (ES-V) is a count of the seconds when at least one VT Path BIP error was detected. An AIS-V defect (a lower-layer, traffic-related, near-end defect) or a LOP-V defect can also cause an ES-V.	• ONS 15454 SONET: DS1_E1_56
SES-V	Severely errored seconds VT layer (SES-V) is a count of seconds when K (600) or more VT Path BIP errors were detected. SES-V can also be caused by an AIS-V defect (a lower-layer, traffic-related, near-end defect) or a LOP-V defect.	• ONS 15454 SONET: DS1_E1_56
UAS-V	Unavailable second VT layer (UAS-V) is a count of the seconds when the VT path was unavailable. A VT path becomes unavailable when ten consecutive seconds occur that qualify as SES-Vs, and continues to be unavailable until ten consecutive seconds occur that do not qualify as SES-Vs.	• ONS 15454 SONET: DS1_E1_56
NE ID	Name of the selected NE.	—

E.2.54 SONET VT PM Table (Far End)—ONS 15310 CL, ONS 15310 MA SONET, ONS 15327, ONS 15454 SONET

The SONET VT PM table shows far-end performance data for the ONS 15310 CL, ONS 15310 MA SONET, ONS 15327, and ONS 15454 SONET VT. You can display performance data for 15-minute, 1-day, or real-time increments:

- 15-minute—Data is collected at the quarter-hour (for example, at 10:00, 10:15, and so on). The data shown represents the difference in counter values between successive 15-minute intervals.
- 1-day—Data is collected at midnight GMT. The data shown represents the difference between the counter values read at successive midnights.
- Real-time—When a real-time PM session is running, it polls the NE for *x* number of attributes every 10 to 900 seconds. This feature allows you to examine the current value of a PM parameter in granularities finer than the standard 15-minute or 1-day interval. For more information, see 10.4.4 Managing Real-Time PM Data, page 10-26.

Performance monitoring can be done either on selected modules, or on specific locations in the NE. You can use the Plot tab to plot the data in a graphical view that is stored in the Prime Optical database. See 10.4.6 Using PM Data Graphs, page 10-28.

The following table describes the fields in the SONET VT PM table.

Table E-69 Field Descriptions for the SONET VT PM Table (Far End)

Field	Description	Cards Supported
Alias ID	Alias name of the selected NE.	—
Module Name	Module for which PM data is displayed.	—
Physical Location	Slot and port number for which PM data is displayed.	—
Interface	Interface name of the selected NE.	—
Time Stamp (*time zone*)	When the data was collected. You can select GMT, Local, or User-Defined time for the Time Stamp display. Use the User Preferences dialog box to make your time zone selection.	—
Maintenance	Whether the NE was under maintenance when the performance data was collected.	—
CV-V	Coding violations–VT.	• ONS 15310 CL: CTX • ONS 15310 MA SONET: CTX_2500, DS1_28_DS3_EC1_3, DS1_84_DS3_EC1_3 • ONS 15327: XTC • ONS 15454 SONET: DS-1, DS1N, DS1_E1_56, DS3XM, DS3XM_12

Table E-69 Field Descriptions for the SONET VT PM Table (Far End) (continued)

Field	Description	Cards Supported
ES-V	Errored seconds–VT.	• ONS 15310 CL: CTX • ONS 15310 MA SONET: CTX_2500, DS1_28_DS3_EC1_3, DS1_84_DS3_EC1_3 • ONS 15327: XTC • ONS 15454 SONET: DS-1, DS1N, DS3XM, DS1_E1_56, DS3XM_12
SES-V	Severely errored seconds–VT.	• ONS 15310 CL: CTX • ONS 15310 MA SONET: CTX_2500, DS1_28_DS3_EC1_3, DS1_84_DS3_EC1_3 • ONS 15327: XTC • ONS 15454 SONET: DS-1, DS1N, DS1_E1_56, DS3XM, DS3XM_12
UAS-V	Unavailable seconds–VT.	• ONS 15310 CL: CTX • ONS 15310 MA SONET: CTX_2500, DS1_28_DS3_EC1_3, DS1_84_DS3_EC1_3 • ONS 15327: XTC • ONS 15454 SONET: DS-1, DS1N, DS1_E1_56, DS3XM, DS3XM_12
NE ID	Name of the selected NE.	—

E.2.55 SONET VT2 PM Table (Far End)—ONS 15454 SONET

The SONET VT2 PM table shows far-end performance data for the ONS 15454 SONET VT2. You can display performance data for 15-minute, 1-day, or real-time increments:

- 15-minute—Data is collected at the quarter-hour (for example, at 10:00, 10:15, and so on). The data shown represents the difference in counter values between successive 15-minute intervals.
- 1-day—Data is collected at midnight GMT. The data shown represents the difference between the counter values read at successive midnights.
- Real-time—When a real-time PM session is running, it polls the NE for *x* number of attributes every 10 to 900 seconds. This feature allows you to examine the current value of a PM parameter in granularities finer than the standard 15-minute or 1-day interval. For more information, see 10.4.4 Managing Real-Time PM Data, page 10-26.

Performance monitoring can be done either on selected modules, or on specific locations in the NE. You can use the Plot tab to plot the data in a graphical view that is stored in the Prime Optical database. See 10.4.6 Using PM Data Graphs, page 10-28.

The following table describes the fields in the SONET VT2 PM table.

Table E-70 Field Descriptions for the SONET VT2 PM Table (Far End)

Field	Description	Cards Supported
Alias ID	Alias name of the selected NE.	—
Module Name	Module for which PM data is displayed.	—
Physical Location	Slot and port number for which PM data is displayed.	—
Interface	Interface name of the selected NE.	—
Time Stamp (*time zone*)	When the data was collected. You can select GMT, Local, or User-Defined time for the Time Stamp display. Use the User Preferences dialog box to make your time zone selection.	—
Maintenance	Whether the NE was under maintenance when the performance data was collected.	—
CV-V	Coding violations–VT.	• ONS 15454 SONET: DS1_E1_56
ES-V	Errored seconds–VT.	• ONS 15454 SONET: DS1_E1_56
SES-V	Severely errored seconds–VT.	• ONS 15454 SONET: DS1_E1_56
UAS-V	Unavailable seconds–VT.	• ONS 15454 SONET: DS1_E1_56
NE ID	Name of the selected NE.	—

E.3 ONS 15530 and ONS 15540 PM Tables

This section describes the PM tables that are specific to ONS 15530 and ONS 15540 NEs.

E.3.1 Overview of Supported PM Parameters

The following ONS 15530 and ONS 15540 PM parameters are available on any of the interfaces listed in the following table. Table E-72 to Table E-77 list all the ONS 15530 and ONS 15540 PM parameters with the corresponding description and a list of interfaces supported.

Table E-71 ONS 155xx Optical Interfaces

ONS 15530	ONS 15540
cevPortTransparent	cevPortTransparent
cevPortWave	cevPortWave
cevPortWaveEthPhy	cevPortWaveEthPhy
cevPort10GigEthPhy	cevport10GigEthBhy
cevPortWavePatch	cevPortWavePatch

Table E-71 ONS 155xx Optical Interfaces (continued)

ONS 15530	ONS 15540
cevPortEsconPhy	cevportWaveOSC
cevPortGEFCPhy	
cevPortVOAIn	
cevPortVOAFilterIn	
cevPortWaveOSC	
cevPortWaveSonetPhy	
cevPort2GFCPhy	

Table E-72 Section PM Parameters—Near End

Parameter	Description	Interfaces Supported
Alias ID	Alias name of the selected NE.	—
Physical Location	Slot and port number for which PM data is displayed.	—
Interface	Interface name of the selected NE.	—
Time Stamp (*time zone*)	When the data was collected. You can select GMT, Local, or User-Defined time for the Time Stamp display. Use the User Preferences dialog box to make your time zone selection.	—
Maintenance	Whether the NE was under maintenance when the performance data was collected.	—
Validity	Whether the data in the entry is valid. **Note** The first entry for each interface and port is always invalid and is used as the baseline entry. The description of the baseline entry is "invalid–not enough time has elapsed."	—
CV-S	Coding violations—section.	cevPortTransparent[1], cevPortWave[1], cevPortWaveSonetPhy[1]
ES-S	Errored seconds—section.	
SES-S	Severely errored seconds—section.	
SEFS-S	Severely errored framing seconds—section.	
Module Name	Module for which PM data is displayed.	—
NE ID	Name of the selected NE.	—

1. Available on ONS 15530 and ONS 15540 NEs

Table E-73 Line PM Parameters

Parameter	Description	Interfaces Supported
Alias ID	Alias name of the selected NE.	—
Physical Location	Slot and port number for which PM data is displayed.	—
Interface	Interface name of the selected NE.	—
Time Stamp (*time zone*)	When the data was collected. You can select GMT, Local, or User-Defined time for the Time Stamp display. Use the User Preferences dialog box to make your time zone selection.	—
Maintenance	Whether the NE was under maintenance when the performance data was collected.	—
Validity	Whether the data in the entry is valid. **Note** The first entry for each interface and port is always invalid and is used as the baseline entry. The description of the baseline entry is "invalid–not enough time has elapsed."	—
Rx CVRD	Represents the counter associated with the number of code violations and running disparity errors encountered in the received direction.	cevPortTransparent[1], cevPortWave[1], cevPortWaveEthPhy[1], cevPort10GigEthPhy[1], cevPortEsconPhy, cevPortGEFCPhy
RX CRC	Represents the counter associated with CRC errors. It has a valid value only for interfaces that provide CRC error monitoring.	cevPortWaveEthPhy[2], cevPort10GigEthPhy[2], cevPortEsconPhy[2], cevPortGEFCPhy[2]
TxEncapFarEndPacketErrors	Represents the counter associated with ESCON ingress error indications from the far end of an Ethernet network, where an ESCON stream.	cevPortEsconPhy[2]
Module Name	Module for which PM data is displayed.	—
NE ID	Name of the selected NE.	—

1. Available on ONS 15530 and ONS 15540 NEs.
2. Available on ONS 15530.

Table E-74 CDL PM Parameters

Parameter	Description	Interfaces Supported
Alias ID	Alias name of the selected NE.	—
Physical Location	Slot and port number for which PM data is displayed.	—
Interface	Interface name of the selected NE.	—
Time Stamp (*time zone*)	When the data was collected. You can select GMT, Local, or User-Defined time for the Time Stamp display. Use the User Preferences dialog box to make your time zone selection.	—
Maintenance	Whether the NE was under maintenance when the performance data was collected.	—

Table E-74 CDL PM Parameters (continued)

Parameter	Description	Interfaces Supported
Validity	Whether the data in the entry is valid. **Note** The first entry for each interface and port is always invalid and is used as the baseline entry. The description of the baseline entry is "invalid–not enough time has elapsed."	—
Rx Header CRC Error	Number of CDL frames received with CDL header CRC errors.	cevPortWaveEthPhy[1], cevPort10GigEthPhy[1], cevPortWaveOSC[1]
Rx Invalid FlowID	Number of CDL flow identifier lookup errors in the received direction.	cevPortWaveEthPhy[2], cevPort10GigEthPhy[2]
Rx Non CDL Packets	Number of packets received without a CDL header on this interface. This counter is incremented only when CDL is enabled on this interface.	cevPortWaveEthPhy[1], cevPort10GigEthPhy[1]
Net Ethernet CRC	Number of Ethernet packets with CRC errors.	cevPortGEFCPhy
Module Name	Module for which PM data is displayed.	—
NE ID	Name of the selected NE.	—

1. Available on ONS 15530 and ONS 15540 NEs.
2. Available on ONS 15530.

Table E-75 Physical PM Parameters

Parameter	Description	Interfaces Supported
Alias ID	Alias name of the selected NE.	—
Physical Location	Slot and port number for which PM data is displayed.	—
Interface	Interface name of the selected NE.	—
Time Stamp (*time zone*)	When the data was collected. You can select GMT, Local, or User-Defined time for the Time Stamp display. Use the User Preferences dialog box to make your time zone selection.	—
Maintenance	Whether the NE was under maintenance when the performance data was collected.	—
Validity	Whether the data in the entry is valid. **Note** The first entry for each interface and port is always invalid and is used as the baseline entry. The description of the baseline entry is "invalid–not enough time has elapsed."	—
Mean Optical Power	Mean optical power, received direction.	cevPortWavePatch[1]
Optical Power (Max)	Maximum optical power, received direction.	
Optical Power (Min)	Minimum optical power, received direction.	

Table E-75 Physical PM Parameters (continued)

Parameter	Description	Interfaces Supported
Optical Power (Max)	Maximum optical power, received direction, post adjustment.	cevPortVOAIn[2], cevPortVOAFilterIn[2]
Optical Power (Min)	Minimum optical power, received direction, post adjustment.	
Optical Power (Mean)	Mean optical power, received direction, post adjustment.	
Ambient Temp (Max)	Maximum ambient temperature, received direction, post adjustment.	
Ambient Temp (Min)	Minimum ambient temperature, received direction, post adjustment.	
Ambient Temp (Mean)	Mean ambient temperature, received direction, post adjustment.	
Available Seconds	Number of seconds for which the performance data was accounted for in the interval.	cevPortWavePatch[1], cevPortVOAIn[2], cevPortVOAFilterIn[2]
Module Name	Module for which PM data is displayed.	—
NE ID	Name of the selected NE.	—

1. Available on ONS 15530 and ONS 15540 NEs.
2. Available on ONS 15530.

Table E-76 ONS 15530 Fiber Channel Port Errors PM Parameters

Parameter	Description	Interfaces Supported
Alias ID	Alias name of the selected NE.	—
Physical Location	Slot and port number for which PM data is displayed.	—
Interface	Interface name of the selected NE.	—
Time Stamp (*time zone*)	When the data was collected. You can select GMT, Local, or User-Defined time for the Time Stamp display. Use the User Preferences dialog box to make your time zone selection.	—
Maintenance	Whether the NE was under maintenance when the performance data was collected.	—
Validity	Whether the data in the entry is valid. **Note** The first entry for each interface and port is always invalid and is used as the baseline entry. The description of the baseline entry is "invalid–not enough time has elapsed."	—
Rx Link Resets	Number of link resets (LR primitives) that are received.	cevPortGEFCPhy, cevPort2GFCPhy
Tx Link Resets	Number of link resets (LR primitives) that are transmitted.	
Link Resets	Number of times the reset link protocol was initiated on this port.	
Rx Offline Sequences	Number of offline primitive OLS received on this port.	
Tx Offline Sequences	Number of offline primitive OLS transmitted by this port.	
Loss of Synchs	Number of instances of synchronization loss detected at this port. This count is part of FC-PH's link error status block (LESB).	

Table E-76 ONS 15530 Fiber Channel Port Errors PM Parameters (continued)

Parameter	Description	Interfaces Supported
Loss of Signals	Number of instances of signal loss detected at this port. This count is part of FC-PH's LESB.	cevPortGEFCPhy
Link Failures	Number of link failures. This count is part of FC-PH's LESB.	
Prim Seq Protocol Errors	Number of primitive sequence protocol errors detected at this port. This count is part of FC-PH's LESB.	
Invalid Tx Words	Number of invalid transmission words received at this port. This count is part of FC-PH's LESB.	
Invalid CRCs	Number of frames received with invalid CRC. This count is part of FC-PH's LESB.	
Invalid Ordered Sets	Number of invalid ordered sets received at this port.	
FrameTooLong	Number of frames received at this port where the frame length was greater than what was agreed to in FLOG/PLOGI.	
Truncated Frames	Number of frames received at this port where the frame length was less than the minimum indicated by the frame header, which is normally 24 bytes.	
Address Errors	Number of frames received with unknown addressing.	
Delimiter Errors	Number of invalid frame delimiters received at this port.	
Encoding Disparity Errors	Number of encoding disparity errors received at this port.	
Other Errors	Number of errors that were detected on this port but were not counted by another error counter in this row.	
Module Name	Module for which PM data is displayed.	—
NE ID	Name of the selected NE.	—

Table E-77 ONS 15530 RMON Ethernet History PM Parameters

Parameter	Description	Interfaces Supported
Alias ID	Alias name of the selected NE.	—
Physical Location	Slot and port number for which PM data is displayed.	—
Interface	Interface name of the selected NE.	—
Time Stamp (*time zone*)	When the data was collected. You can select GMT, Local, or User-Defined time for the Time Stamp display. Use the User Preferences dialog box to make your time zone selection.	—
Maintenance	Whether the NE was under maintenance when the performance data was collected.	—
Validity	Whether the data in the entry is valid. **Note** The first entry for each interface and port is always invalid and is used as the baseline entry. The description of the baseline entry is "invalid–not enough time has elapsed."	—

Table E-77 ONS 15530 RMON Ethernet History PM Parameters (continued)

Parameter	Description	Interfaces Supported
Octets	Total number of octets of data (including the bad packets) received in the network. This also includes FCS octets but excludes framing bits.	cevPortGEFCPhy
Packets	Number of packets (including bad packets) received during the sampling interval.	
CRCAlignErrors	Number of packets received during the sampling interval that had a length of 64 to 1518 octets but had either a bad FCS with an integral number of octets (FCS error) or a bad FCS with a nonintegral number of octets (alignment error).	
Undersize Packets	Number of packets received during the sampling interval that were are less than 64 octets long excluding framing bits but including FCS octets.	
Oversize Packets	Number of packets received during the sampling interval that were longer than 1518 octets excluding framing bits but including FCS octets.	
Module Name	Module for which PM data is displayed.	—
NE ID	Name of the selected NE.	—

E.3.2 CDL PM Table—ONS 15530 and ONS 15540

The Converged Data Link (CDL) PM table provides OAM&P in Ethernet packet-based optical networks without a SONET/SDH layer.

You can display performance data for 15-minute or 1-day increments:

- For the 15-minute table, data is collected at the quarter-hour (for example, at 10:00, 10:15, and so on). The data shown represents the difference in counter values between successive 15-minute intervals.
- For the 1-day table, data is collected at midnight GMT. The data shown represents the difference between the counter values read at successive midnights.

When the NE is rebooted, all performance data is cleared on the NE and the first new entry for each interface becomes the new baseline entry. (Baseline entries are always marked invalid.) You can use the Plot tab to plot the data in a graphical view that is stored in the Prime Optical database. See 10.4.6 Using PM Data Graphs, page 10-28.

Entries for performance parameters with associated threshold alarms (traps) are flagged in red. Orange represents a major performance problem, yellow represents a minor problem, and blue represents a warning.

Note Display of performance data is affected by settings in the Control Panel.

The following table describes the fields in the CDL PM table.

Table E-78 Field Descriptions for the CDL PM Table

Field	Description
Alias ID	Alias name of the selected NE.
Physical Location	Physical location of the NE: slot, subslot, and port.
Interface	Whether the interface is transparent or trunk side.
Time Stamp	Time when the performance statistics were collected.
Validity	Whether the data in the entry is valid. **Note** The first entry for each interface and port is always invalid and is used as the baseline entry. The description of the baseline entry is "invalid–not enough time has elapsed."
Maintenance	Whether the NE was under maintenance when the performance data was collected.
RX HEC	Number of CDL frames received with CDL Header CRC errors.
RX Non CDL	Number of packets received without a CDL header on this interface.
RX Invalid Flow ID	Number of CDL Flow Identifier lookup errors in the received direction.
Net Ethernet CRC *(ONS 15530 only)*	Number of net Ethernet CRC errors.
Module Name	Name of the module.
NE ID	Name of the selected NE.

E.3.3 Ethernet History PM Table—ONS 15530

The Ethernet History PM table shows Ethernet history performance data for ONS 15530 interfaces.

You can display performance data for 15-minute or 1-day increments:

- For the 15-minute table, data is collected at the quarter-hour (for example, at 10:00, 10:15, and so on). The data shown represents the difference in counter values between successive 15-minute intervals.
- For the 1-day table, data is collected at midnight GMT. The data shown represents the difference between the counter values read at successive midnights.

When the NE is rebooted, all performance data is cleared on the NE and the first new entry for each interface becomes the new baseline entry. (Baseline entries are always marked invalid.) You can use the Plot tab to plot the data in a graphical view that is stored in the Prime Optical database. See 10.4.6 Using PM Data Graphs, page 10-28.

Entries for performance parameters with associated threshold alarms (traps) are flagged in red. Orange represents a major performance problem, yellow represents a minor problem, and blue represents a warning.

Note Display of performance data is affected by settings in the Control Panel.

The following table describes the fields in the Ethernet History PM table.

Table E-79 Field Descriptions for the Ethernet History PM Table

Field	Description
Alias ID	Alias name of the selected NE.
Physical Location	Physical location of the NE: slot, subslot, and port.
Interface	Name of the interface on which the performance data was collected.
Time Stamp	Time when the performance statistics were collected.
Validity	Whether the data in the entry is valid. **Note** The first entry for each interface and port is always invalid and is used as the baseline entry. The description of the baseline entry is "invalid–not enough time has elapsed."
Maintenance	Whether the NE was under maintenance when the performance data was collected.
Octets	Total number of octets of data (including those in bad packets) received on the network (excluding framing bits but including FCS octets).
Packets	Number of packets (including bad packets) received during this sampling interval.
CRC Alignment Errors	Number of packets received during this sampling interval that had a length (excluding framing bits but including FCS octets) from 64 to 1518 octets, inclusive, but had either a bad FCS with an integral number of octets (FCS error) or a bad FCS with a nonintegral number of octets (alignment error).
Under Size Packets	Number of packets received during this sampling interval that were less than 64 octets long (excluding framing bits but including FCS octets) and were otherwise well formed.
Over Size Packets	Number of packets received during this sampling interval that were longer than 1518 octets (excluding framing bits but including FCS octets) but were otherwise well formed.
Module Name	Name of the selected NE module.
NE ID	Name of the selected NE.

E.3.4 FC Port Error PM Table—ONS 15530

The Fibre Channel (FC) Port Error PM table shows performance data for the ONS 15530.

You can display performance data for 15-minute or 1-day increments:

- For the 15-minute table, data is collected at the quarter-hour (for example, at 10:00, 10:15, and so on). The data shown represents the difference in counter values between successive 15-minute intervals.
- For the 1-day table, data is collected at midnight GMT. The data shown represents the difference between the counter values read at successive midnights.

When the NE is rebooted, all performance data is cleared on the NE and the first new entry for each interface becomes the new baseline entry. (Baseline entries are always marked invalid.) You can use the Plot tab to plot the data in a graphical view that is stored in the Prime Optical database. See 10.4.6 Using PM Data Graphs, page 10-28.

Entries for performance parameters with associated threshold alarms (traps) are flagged in red. Orange represents a major performance problem, yellow represents a minor problem, and blue represents a warning.

Note Display of performance data is affected by settings in the Control Panel.

The following table describes the fields in the FC Port Error PM table.

Table E-80 Field Descriptions for the FC Port Error PM Table

Field	Description
Alias ID	Alias name of the selected NE.
Physical Location	Physical location of the NE—slot, subslot, and port.
Interface	Whether the interface is transparent or trunk side.
Time Stamp	Time when the performance statistics were collected.
Validity	Whether the data in the entry is valid. **Note** The first entry for each interface and port is always invalid and is used as the baseline entry. The description of the baseline entry is "invalid–not enough time has elapsed."
Maintenance	Whether the NE was under maintenance when the performance data was collected.
Rx Link Resets	Number of link resets (LR primitives) received.
Tx Link Resets	Number of link resets (LR primitive) transmitted.
Link Resets	Number of times the reset link protocol was initiated on the port. This includes the number of Loop Initialization Primitive (LIP) events on an arbitrated loop port.
Rx Offline Sequences	Number of offline primitive OLS received at the port.
Tx Offline Sequences	Number of offline primitive OLS transmitted by the port.
Link Failures	Number of link failures. This count is part of the FC-PH Link Error Status Block (LESB).
Loss of Synchs	Number of instances of synchronization loss detected at the port. This count is part of the FC-PH LESB.
Loss of Signals	Number of instances of signal loss detected at the port. This count is part of the FC-PH LESB.
Primitive Sequence Protocol Errors	Number of primitive sequence protocol errors detected at the port. This count is part of the CFC-PH LESB.
Invalid Tx Words	Number of invalid transmission words received at the port. This count is part of the FC-PH LESB.
Invalid CRCs	Number of frames received with an invalid CRC. This count is part of the FC-PH LESB.
Invalid Ordered Sets	Number of invalid ordered sets received at the port.
Frame Too Longs	Number of frames received at the port where the frame length was greater than what was agreed to in FLOGI/PLOGI. This could be caused by losing the end of frame delimiter.
Truncated Frames	Number of frames received at the port where the frame length was less than the minimum indicated by the frame header (normally 24 bytes, but it could be more if the DFCTL field indicates an optional header should have been present).
Address Errors	Number of frames received with unknown addressing, such as an unknown SID or DID. The SID or DID is not known to the routing algorithm.

Table E-80 Field Descriptions for the FC Port Error PM Table (continued)

Field	Description
Delimiter Errors	Number of invalid frame delimiters received at the port. An example is a frame with a class 2 start and a class 3 at the end.
Encoding Disparity Errors	Number of encoding disparity errors received at the port.
Other Errors	Number of errors that were detected on the port but were not counted by any other error counter in the row.
Module Name	Name of the selected NE module.
NE ID	Name of the selected NE.

E.3.5 Line PM Table—ONS 15530 and ONS 15540

The Line PM table shows physical performance data for ONS 15530 and ONS 15540 client and trunk side interfaces. The data shown is from the following modules:

- The transparent and trunk side interfaces of the transponders
- The Optical Supervisory Channel (OSC) interface on the MUX cards

You can display performance data for 15-minute or 1-day increments:

- For the 15-minute table, data is collected at the quarter-hour (for example, at 10:00, 10:15, and so on). The data shown represents the difference in counter values between successive 15-minute intervals.
- For the 1-day table, data is collected at midnight GMT. The data shown represents the difference between the counter values read at successive midnights.

When the NE is rebooted, all performance data is cleared on the NE and the first new entry for each interface becomes the new baseline entry. (Baseline entries are always marked invalid.) You can use the Plot tab to plot the data in a graphical view that is stored in the Prime Optical database. See 10.4.6 Using PM Data Graphs, page 10-28.

Entries for performance parameters with associated threshold alarms (traps) are flagged in red. Orange represents a major performance problem, yellow represents a minor problem, and blue represents a warning.

Note Display of performance data is affected by settings in the Control Panel.

The following table describes the fields in the Line PM table.

Table E-81 Field Descriptions for the Line PM Table

Field	Description
Alias ID	Alias name of the selected NE.
Physical Location	Physical location of the NE–slot, subslot, and port.
Interface	Whether the interface is transparent or trunk side.

Table E-81 Field Descriptions for the Line PM Table (continued)

Field	Description
Time Stamp	Time when the performance statistics were collected.
Validity	Whether the data in the entry is valid. **Note** The first entry for each interface and port is always invalid and is used as the baseline entry. The description of the baseline entry is "invalid–not enough time has elapsed."
Maintenance	Whether the NE was under maintenance when the performance data was collected.
RX CVRD	Code violations and running disparity errors encountered in the received direction for both types of interfaces. A threshold is associated with this parameter, and the table cell will be flagged in red when the parameter exceeds the threshold. You can set thresholds by using the command line interface (CLI).
RX CRC	Number of CRC errors. This column has a valid value only for interfaces that provide CRC error monitoring. This column is not applicable to ONS 15540.
Tx Packet Errors	Number of ingress error indications from the far end of an Ethernet network, where an ESCON stream is encapsulated in Ethernet packets. This number is incremented whenever an ESCON packet or control character has 8b/10b code violations or running disparity errors in the ingress direction at the far end of the Ethernet network. This column has a valid value only for ESCON interfaces where Ethernet encapsulation is performed. This column is not applicable to ONS 15540.
Module Name	Name of the selected module.
NE ID	Name of the selected NE.

E.3.6 Physical PM Table—ONS 15530 and ONS 15540

The Physical PM table shows physical performance data for ONS 15530 and ONS 15540 client and trunk side interfaces. The data shown is from the following modules:

- The transparent and trunk side interfaces of the transponders
- The OSC interface on the MUX cards

You can display performance data for 15-minute or 1-day increments:

- For the 15-minute table, data is collected at the quarter-hour (for example, at 10:00, 10:15, and so on). The data shown represents the difference in counter values between successive 15-minute intervals.
- For the 1-day table, data is collected at midnight GMT. The data shown represents the difference between the counter values read at successive midnights.

When the NE is rebooted, all performance data is cleared on the NE and the first new entry for each interface becomes the new baseline entry. (Baseline entries are always marked invalid.) You can use the Plot tab to plot the data in a graphical view that is stored in the Prime Optical database. See 10.4.6 Using PM Data Graphs, page 10-28.

Entries for performance parameters with associated threshold alarms (traps) are flagged in red. Orange represents a major performance problem, yellow represents a minor problem, and blue represents a warning.

Note Display of performance data is affected by settings in the Control Panel.

The following table describes the fields in the Physical PM table.

Table E-82 Field Descriptions for the Physical PM Table

Field	Description
Alias ID	Alias name of the selected NE.
Physical Location	Physical location of the NE: slot, subslot, and port.
Interface	Whether the interface is transparent or trunk side.
Time Stamp	Time when the performance statistics were collected.
Validity	Whether the data in the entry is valid. **Note** The first entry for each interface and port is always invalid and is used as the baseline entry. The description of the baseline entry is "invalid–not enough time has elapsed."
Maintenance	Whether the NE was under maintenance when the performance data was collected.
Mean Power	Mean laser power in dBm.
Maximum Power	Maximum laser power in dBm.
Minimum Power	Minimum laser power in dBm.
Mean Device Temperature	Mean device temperature in degrees Celsius. **Note** This field applies only to the ONS 15530 NE.
Maximum Device Temperature	Maximum device temperature in degrees Celsius. **Note** This field applies only to the ONS 15530 NE.
Minimum Device Temperature	Minimum device temperature in degrees Celsius. **Note** This field applies only to the ONS 15530 NE.
Direction	Line direction.
Available Seconds	Available seconds.
Module Name	Name of the module.
NE ID	Name of the selected NE.

E.3.7 SONET Section PM Table—ONS 15530 and ONS 15540

The SONET Section PM table shows section layer performance data for ONS 15530 and ONS 15540 SONET interfaces. The data shown is from modules with the protocol configured as SONET or SDH. You can use the Plot tab to plot the data in a graphical view that is stored in the Prime Optical database. See 10.4.6 Using PM Data Graphs, page 10-28.

You can display performance data for 15-minute or 1-day increments:

- For the 15-minute table, data is collected at the quarter-hour (for example, at 10:00, 10:15, and so on).
- For the 1-day table, the values shown are the total of 96 15-minute values, ending at midnight GMT.

Entries for performance parameters with associated threshold alarms (traps) are shown in red. Orange represents a major problem, yellow represents a minor problem, and blue represents a warning.

When the NE is rebooted, all performance data is cleared on the NE and the first new entry for each interface becomes the new baseline entry (baseline entries are always marked invalid).

Note Display of performance data is affected by settings in the Control Panel.

The following table describes the fields in the SONET Section PM table.

Table E-83 Field Descriptions for the SONET Section PM Table

Field	Description
Alias ID	Alias name of the selected NE.
Physical Location	Physical location of the NE–slot, subslot, and port.
Interface	Whether the interface is transparent or wave.
Time Stamp	Time when the performance statistics were collected.
Validity	Whether the data in the entry is valid. **Note** The first entry for each interface and port is always invalid and is used as a baseline entry. The description field of a baseline entry is "invalid–not enough time has elapsed."
Maintenance	Whether the NE was under maintenance when the performance data was collected.
Errored Seconds–Section	Number of errored seconds encountered by the SONET/SDH section in the current interval. An errored second is a one-second period with one or more coding violations at that layer or one or more incoming defects at that layer.
Severely Errored Seconds–Section	Number of severely errored seconds encountered by the SONET/SDH section in the current interval. A severely errored second is a one-second period with *x* or more coding violations at that layer one or more incoming defects at that layer. The value of *x* depends on the line rate and bit error rate.
Severely Errored Framing Seconds–Section	Number of severely errored framing seconds encountered by the SONET/SDH section in the current interval. A severely errored framing second is a a one-second period containing one or more severely errored framing events.
Code Violations–Section	Number of coding violations encountered by the SONET/SDH section in the interval. Coding violations are bit interleaved parity errors that are detected in the incoming signal. A threshold is associated with this parameter, and the table cell will be flagged in red when it exceeds the threshold. You can set thresholds by using the CLI.
Module Name	Name of the selected module.
NE ID	Name of the selected NE.