



Monitoring DWDM Properties

The following topics describe how you can view and monitor IP over dense wavelength division multiplexing (DWDM) properties configured on network elements by using Cisco Prime Network Vision (Prime Network Vision):

- User Roles Required to View DWDM Properties, page 14-1
- Viewing DWDM in Physical Inventory, page 14-2
- Viewing G.709 Properties, page 14-5
- Viewing Performance Monitoring Configuration, page 14-10

User Roles Required to View DWDM Properties

This topic identifies the roles that are required to view DWDM properties using Prime Network Vision. Prime Network determines whether you are authorized to perform a task as follows:

- For GUI-based tasks (tasks that do not affect elements), authorization is based on the default permission that is assigned to your user account.
- For element-based tasks (tasks that do affect elements), authorization is based on the default permission that is assigned to your account. That is, whether the element is in one of your assigned scopes and whether you meet the minimum security level for that scope.

For more information on user authorization, see the Cisco Prime Network 3.8 Administrator Guide.

The following tables identify the tasks that you can perform:

- Table 14-1 identifies the tasks that you can perform if a selected element is not in one of your assigned scopes.
- Table 14-2 identifies the tasks that you can perform if a selected element **is in** one of your assigned scopes.

By default, users with the Administrator role have access to all managed elements. To change the Administrator user scope, see the topic on device scopes in the *Cisco Prime Network 3.8 Administrator Guide*.

Task	Viewer	Operator	OperatorPlus	Configurator	Administrator
View DWDM properties	—	—	—		Х
View G.709 properties	—	—	—		Х
View performance monitoring configuration information					X

Table 14-1 Default Permission/Security Level Required for Viewing DWDM Properties - Element Not in User's Scope Not in User's Scope

 Table 14-2
 Default Permission/Security Level Required for Viewing DWDM Properties - Element in User's Scope

Task	Viewer	Operator	OperatorPlus	Configurator	Administrator
View DWDM properties	X	Х	X	X	X
View G.709 properties	Х	Х	X	X	X
View performance monitoring configuration information	X	X	X	X	X

Related Topics

- Viewing DWDM in Physical Inventory, page 14-2
- Viewing G.709 Properties, page 14-5
- Viewing Performance Monitoring Configuration, page 14-10

Viewing DWDM in Physical Inventory

Prime Network Vision enables you to monitor a variety of DWDM properties in physical inventory, including forward error correction (FEC), G.709 status, and performance monitoring parameters.

To view DWDM properties in physical inventory:

Step 1 In a Prime Network Vision map, double-click the device on which DWDM is configured.

Step 2 In the inventory window, choose Physical Inventory > Chassis and navigate to the interface configured for DWDM. DWDM details are displayed in the DWDM area in the content pane as shown in Figure 14-1.

▼ IIII Shelf	0							
	ot 4: Card - 8-10GBE							
464	TenGigE0/4/0/0							
45	TenGigE0/4/0/1	OC768						
4/6	TenGigE0/4/0/2	Admin Status:	Up	Oper Stat		Up		
4/54	TenGigE0/4/0/3	Aumin Status;	Οp	Oper Stat	.us:	op		
415	TenGigE0/4/0/4	Port Type:	SONET	Last Char	nged:	24-Jun-11	11:27:27	
413	TenGigE0/4/0/5	Scrambling:		Maximum	Speed:	39.813 Gbc	05	
413	TenGigE0/4/0/6	1.5			spood.			
45	TenGigE0/4/0/7	Loopback:	None	MTU:		4474		
	ot 4: Card - CRS-MSC	Clocking:	Unknow	n Specific T	ype:	OC768		
	ot 5: Card - 10C768-ITU/C	Internal Port:	6-1	C. Chas T	-bla Class			
-12	PO50/5/0/0	Internal Port:	false	5s Ctps T	able Size:	0		
	ot 5: Card - CRS-MSC	A Port Utilization	n Graph					
	ot 10: Card - CRS1-SIP-800		1 of april					
*	Subslot 1: Subcard - SPA-1	DWDM						
-6	TenGigE0/10/1/0	Location:		/5/0/0	Controller	Chakara	Up	
	ot 10: Card - CRS-MSC	Location:	·	/ 5/ 0/ 0	Controller	status:	Op	
	ot 13: Card - 40C192-PO5/D ot 13: Card - CR5-MSC	Loopback:	N	ione	Frequency	:	195.55THz	
	ot 13: Card - CRS-MSC ot 14: Card - 160C48-POS/D	Port Type:	r.	WDM	MSA ITU C	hannel	12	
	ot 14: Card - 180C48-P05/D ot 14: Card - CRS-MSC							
	FC0/*: CRS-16-LCC-FAN-CT	Rx Power:	-	26.36 dBm	Tx Power:		0.03 dBm	
	FC1/*: CR5-16-LCC-FAN-CT	Rx LOS Threshol	d: -	19.5 dBm	Wavelengt	:h:	1533.073nm	
	ack 0 - Fan Tray Upper: CRS-	un and a state base		I	0-1-1-		DUIDH	
	ack 0 - Fan Tray Lower: CRS-	Wavelength Ban	d: L	-Band	Optics Typ	e:	DWDM	
	AMD/*: CRS-16-ALARM	G709 Status:		lp		ted Alarms:	BDI	
	AM1/*: CRS-16-ALARM 👻			÷			501	
	•	ODU Detected A	larms: A	IS	OTU Deteo	ted Alerts:		
Device Zoom		ODU Detected A	lerte		FEC Info:		FEC Mode = Enhanced Remote FEC mode=Unknown	
Device Zoom		000000000	01031		1 LC INO		FEC Mismatch Counter = 1234	
	, <u> </u>	G709 Details	PM 15	5-min Settings	PM 24-	hour Settings		
P 🕾 🕾								
22 22	•						ĺ	😨 Refresh
	•						l	(Refresh
Find :		ł						
a land a sea la	a and the set of the set	0 1 1 0 10				14 I.	n en la companya de l	Γ.
ickets Network Events	Provisioning Events							
							Memory: 5% Connec	

Figure 14-1 DWDM Properties in Physical Inventory

Table 14-3 describes the information displayed for DWDM.

Table 14-3 DWDM Properties in Physical Inventory

Field	Description	
Location	Physical interface using the format <i>rack/slot/module/port</i> where:	
	• <i>rack</i> is the chassis number of the rack.	
	• <i>slot</i> is the physical slot number of the line card.	
	• <i>module</i> is the module number. A physical layer interface module (PLIM) is always 0. Shared port adapters (SPAs) are referenced by their subslot number.	
	• <i>port</i> is the physical port number of the interface.	
Controller Status	Status of the controller: Up or Down.	
Loopback	Whether or not the DWDM controller is configured for loopback mode.	
Frequency	Frequency of the channel in terahertz.	
Port Type	The port type. In this case, DWDM.	
MSA ITU Channel	Multi Source Agreement (MSA) ITU channel number.	
Rx Power	Actual optical power at the receiving port.	
Tx Power	Value of the transmit power level.	

Field	Description			
Rx LOS Threshold	Number of optical channel transport unit (OTU) loss of signal (LOS) alarms. If the receive optical power is less than or equal to this defined threshold, the optical LOS alarm is raised.			
Wavelength	Wavelength corresponding to the channel number in nanometers.			
Wavelength Band	Indicates the wavelength band: C-band or L-band.			
Optics Type	Indicates the optics type: GE or DWDM.			
G709 Properties				
G709 Status	Whether the G.709 wrapper is enabled or disabled: Up or Down.			
OTU Detected Alarms	OTU overhead alarms.			
ODU Detected Alarms	Optical channel data unit (ODU) alarms.			
OTU Detected Alerts	OTU alerts.			
ODU Detected Alerts	ODU alerts.			
FEC Info	Indicates the:			
	• FEC mode of the controller: Disabled, Enhanced, Standard, or Unknown.			
	• FEC mode on the remote device: Disabled, Enhanced, Standard, or Unknown.			
	• Number of sync word mismatches found during the tracking phase			
G709 Details	Click to view G709 properties. For more information, see Viewing G.709 Properties, page 14-5.			
PM 15-min Settings	Click to view 15-minute performance monitoring properties. For more information, see Viewing Performance Monitoring Configuration, page 14-10.			
PM 24-hour Settings	Click to view 24-hour performance monitoring properties. For more information, see Viewing Performance Monitoring Configuration, page 14-10.			

Table 14-3 DWDM Properties in Physical Inventory (continued)

Related Topics

- Viewing G.709 Properties, page 14-5
- Viewing Performance Monitoring Configuration, page 14-10

Viewing G.709 Properties

The Telecommunication Standardization Sector (ITU-T) Recommendation G.709 provides a standardized method for transparently transporting services over optical wavelengths end to end. A significant component of G.709 is the FEC code that improves performance and extends the distance that optical signals can span.

To view G.709 properties:

- Step 1 In Prime Network Vision, double-click the device on which DWDM is configured.
- **Step 2** In the inventory window, choose **Physical Inventory > Chassis** and navigate to the interface configured for DWDM.
- Step 3 In the content pane, click G709 Details.

The G709 Info Properties window is displayed as shown in Figure 14-2 for all Cisco devices except the Cisco 7600 series devices.

Figure 14-2 DWDM G709 Properties Window

V 0/5/0/0@168.254.20.	1 - DWDM G709 Properties			_ 🗆 ×
Location:	0/5/0/0	Status:	Up	
OTU Alarm Reporting Enabled:	LOS, LOF, LOM, IAE, BDI, TIM, FECMISMATCH	OTU Asserted Alarms:	LOS, BDI, FECMISMATCH	
OTU Detected Alarms:	BDI	ODU Alarm Reporting Enabled:	AIS, BDI, OCI, LCK, PTIM, TIM	
ODU Asserted Alarms:	AIS	ODU Detected Alarms:	AIS	
OTU Alert Reporting Enabled:	SF_BER, SD_BER	OTU Asserted Alerts:		
OTU Detected Alerts:		ODU Alert Reporting Enabled:		
ODU Asserted Alerts:		ODU Detected Alerts:		
FEC Info:	FEC Mode = Enhanced Remote FEC mode=Unknown FEC Mismatch Counter = 1234			
	lert Counters 🛛 OTU TTI 📄 ODU Ala	rm Counters ODU TTI		
Type 🔁 🛆 Count	er			
BDI 4				
BEI 7				
BIP 6				
IAE 5				
LOF 2				
LOM 3 LOS 1				
тім 8				
			Line 1 (1 /	8 Selected)
				Refresh
		Ме	mory: 6% Connected	

Figure 14-3 shows the tabs that are displayed in the G709 Info Properties window for Cisco 7600 series devices. For Cisco 7600 series devices:

- The ODU Alert Counters tab is displayed.
- The ODU TTI and OTU TTI tabs are not displayed.

Figure 14-3 DWDM G709 Properties Window for Cisco 7600 Series Devices

V 1/2@168.254.5.11 - D	WDM G709 Properties			_ 🗆 ×
Location:	1/2	Status:	Up	
OTU Alarm Reporting Enabled:	LOS, LOF, LOM, AIS, IAE, BDI, TIM	OTU Asserted Alarms:	LOS, LOF	
OTU Detected Alarms:	LOS, LOF	ODU Alarm Reporting Enabled:	AIS, OCI, LCK, BDI, PTIM, TIM	
ODU Asserted Alarms:	LCK, BDI	ODU Detected Alarms:		
OTU Alert Reporting Enabled:	SM_TCA	OTU Asserted Alerts:	SM_TCA	
OTU Detected Alerts:		ODU Alert Reporting Enabled:	SD_BER, SF_BER, PM_TCA	
ODU Asserted Alerts:	SD_BER	ODU Detected Alerts:	SD_BER	
FEC Info:	FEC Mode = Standard FEC Mismatch Counter = -1			
OTU Alarm Counters OTU	Alert Counters ODU Alarm Counters	ODU Alert Counters		
U		ODU Alert Counters		
Find :	별 화 🗸 🕈 🐺 🐺	ODU Alert Counters		
Find : Type	비 1 V V V 제 5	ODU Alert Counters		
Find : Type	별 화 🗸 🕈 🐺 🐺	ODU Alert Counters		
Find : Type	ti 2↓ ♥ ♥ ₩ ₩ shold Counter -1	ODU Alert Counters		
Find : Three Type	shold Counter -1 -1	ODU Alert Counters		
Find : Three Type	shold Counter -1 -1	ODU Alert Counters		
Find : Three Type	ti 2↓ ♥ ♥ 第 5 shold Counter -1 -1	ODU Alert Counters		
Find : Three Type	ti 2↓ ♥ ♥ 第 5 shold Counter -1 -1	ODU Alert Counters		
Find : Three Type	ti 2↓ ♥ ♥ 第 5 shold Counter -1 -1	ODU Alert Counters		
Find : Three Type	ti 2↓ ♥ ♥ 第 5 shold Counter -1 -1	ODU Alert Counters		
Find : Three Type	ti 2↓ ♥ ♥ 第 5 shold Counter -1 -1	ODU Alert Counters	Line 0	(Size 3)
Find : Three Type	ti 2↓ ♥ ♥ 第 5 shold Counter -1 -1		Line 0	(Size 3)

Table 14-4 describes the fields that are displayed above the tabs in the G709 Info Properties window.

Table 14-4DWDM G709 Properties Window

Field	Description
Location	Physical interface using the format <i>rack/slot/module/port</i> where:
	• <i>rack</i> is the chassis number of the rack.
	• <i>slot</i> is the physical slot number of the line card.
	• <i>module</i> is the module number. A physical layer interface module (PLIM) is always 0. Shared port adapters (SPAs) are referenced by their subslot number.
	• <i>port</i> is the physical port number of the interface.
OTU Alarms	
OTU Alarm Reporting	The types of alarms enabled for reporting:
Enabled for	• AIS—Alarm indication signal (AIS) alarms.
	• BDI—Backward defect indication (BDI) alarms.
	• BEI—Backward error indication (BEI) alarms.
	• BIP—Bit interleaved parity (BIP) alarms.
	• FECMISMATCH—FEC mismatch alarms.
	• IAE—Incoming alignment error (IAE) alarms.
	• LOF—Loss of frame (LOF) alarms.
	• LOM—Loss of multiple frames (LOM) alarms.
	• LOS—Loss of signal (LOS) alarms.
	• TIM—Type identifier mismatch (TIM) alarms.
OTU Asserted Alarms	OTU alarms indicated to be reported by the user.
OTU Detected Alarms	OTU alarms detected by the hardware.
ODU Alarms	
ODU Alarm Reporting	The types of ODU alarms enabled for reporting:
Enabled for	• AIS—Incoming SONET AIS error status.
	• BDI—Path termination BDI error status.
	• BEI—Backward error indication (BEI) error status.
	• BIP—Bit interleaved parity (BIP) error status.
	• LCK—Upstream connection locked (LCK) error status.
	• OCI—Open connection indication (OCI) error status.
	• PTIM—Payload TIM error status.
	• TIM—Data stream TIM error status.
ODU Asserted Alarms	ODU alarms indicated to be reported by the user.
ODU Detected Alarms	ODU alarms detected by the hardware.

Field	Description			
OTU Alerts				
OTU Alert Reporting	The types of alerts enabled for reporting:			
Enabled for	• SD-BER—Section Monitoring (SM) bit error rate (BER) is in excess of the signal degradation (SD) BER threshold.			
	• SF-BER—SM BER is in excess of the signal failure (SF) BER threshold.			
	• PM-TCA—Performance monitoring (PM) threshold crossing alert (TCA).			
	• SM-TCA—SM threshold crossing alert.			
OTU Asserted Alerts	OTU alerts indicated to be reported by the user.			
OTU Detected Alerts	OTU alerts detected by the hardware.			
ODU Alerts				
ODU Alert Reporting	The types of ODU alerts enabled for reporting:			
Enabled for	• SD-BER—SM BER is in excess of the SD BER threshold.			
	• SF-BER—SM BER is in excess of the SF BER threshold.			
	• PM-TCA—PM threshold crossing alert.			
	• SM-TCA—SM threshold crossing alert.			
ODU Asserted Alerts	ODU alerts indicated to be reported by the user.			
ODU Detected Alerts	ODU alerts detected by the hardware.			
Other				
FEC Info	FEC properties:			
	• FEC mode for the controller—Disable, Enhanced, Standard, or Unknown.			
	• Remote FEC mode—FEC mode on the remote device: Disabled, Enhanced, Standard, or Unknown.			
	• FEC mismatch counter—Number of sync word mismatches found during the tracking phase.			
Status	G.709 wrapper administrative status: Up or Down.			

Table 14-4 DWDM G709 Properties Window (continued)

The G709 Info Properties window contains the following tabs, depending on the selected network element:

- OTU Alarm Counters Tab, page 14-9
- OTU Alert Counters Tab, page 14-9
- ODU Alarm Counters Tab, page 14-9
- OTU TTI Tab, page 14-9
- ODU TTI Tab, page 14-9
- ODU Alert Counters Tab, page 14-10

Step 4 To view additional G.709 properties, click the required tab. Table 14-5 describes the information displayed in each tab.

Field	Description		
OTU Alarm Counters	Tab		
Туре	Type of OTU alarm, such as BDI or BEI.		
Counter	Number of alarms reported for each alarm type.		
OTU Alert Counters 1	fab		
Туре	Type of OTU alert, such as SD-BER or SF-BER.		
Threshold	Threshold set for the type of alert.		
Counter	Number of alerts reported for each alert type. A value of -1 indicates that no value has been set up.		
ODU Alarm Counters	Tab		
Туре	Type of ODU alarm, such as AIS or BDI.		
Counter	Number of alarms reported for each alarm type.		
OTU TTI Tab			
This tab is not dis	played for Cisco 7600 series devices.		
Туре	Type of OTU Trail Trace Identifier (TTI) configured:		
	• Expected		
	• Received		
	• Sent		
String Type	For each TTI type, the type of string:		
	• ASCII		
	• Hexadecimal		
TTI String	For each TTI type, the specific TTI string configured.		
ODU TTI Tab			
This tab is not dis	played for Cisco 7600 series devices.		
Туре	Type of ODU TTI configured:		
	Type of ODU TTI configured: • Expected		

Table 14-5G709 Properties Window Tabs

• Received
• Sent
For each TTI type, the type of string:
• ASCII
• Hexadecimal
For each TTI type, the specific TTI string configured.

Field	Description		
ODU Alert Counters	Tab		
This tab is display	red only for Cisco 7600 series devices.		
Туре	Type of OTU alert, such as SD-BER or SF-BER.		
Threshold	Threshold set for the type of alert.		
Counter	Number of alerts reported for each alert type. A value of -1 indicates tha no value has been set up.		

Table 14-5G709 Properties Window Tabs (continued)

Step 5 To close the G709 Info Properties window, click the upper right corner.

Related Topics

- Viewing DWDM in Physical Inventory, page 14-2
- Viewing Performance Monitoring Configuration, page 14-10

Viewing Performance Monitoring Configuration

Performance monitoring parameters are used to gather, store, set thresholds for, and report performance data for early detection of problems. Thresholds are used to set error levels for each performance monitoring parameter. During the accumulation cycle, if the current value of a performance monitoring parameter reaches or exceeds its corresponding threshold value, a threshold crossing alert (TCA) can be generated. The TCAs provide early detection of performance degradation.

Prime Network Vision enables you to view the configuration settings for performance monitoring. Performance monitoring statistics are accumulated on a 15-minute basis, synchronized to the start of each quarter-hour. They are also accumulated on a daily basis starting at midnight. Historical counts are maintained for thirty-three 15-minute intervals and two daily intervals.

To view performance monitoring configuration settings:

- **Step 1** In Prime Network Vision, double-click the device on which DWDM is configured.
- **Step 2** In the inventory window, choose **Physical Inventory > Chassis** and navigate to the interface configured for DWDM.
- **Step 3** In the content pane, select the performance monitoring configuration settings you want to view:
 - To view the performance monitoring 15-minute configuration settings, click PM 15-min Settings.
 - To view the performance monitoring 24-hour configuration settings, click PM 24-hour Settings.

The Client DWDM PM Settings Properties window is displayed as shown in Figure 14-4.

Interval Type: PM_15Min Location: 0/5/0/0 FEC PM Settings Optics PM Settings OTN PM Settings Find : Type	
Find : Image:	
Type € △ Threshold TCA EC-BITS 1000 enabled	
EC-BITS 1000 enabled	
UC-WORDS 0 disabled	
	Line 0 (Size 2)

Figure 14-4 Client DWDM PM Settings Properties Window

Table 14-6 describes the information displayed above the tabs in the Client DWDM PM Settings Properties window and in each of the tabs.

Field	Description
Interval Type	The performance monitoring interval, either 15 minutes or 24 hours.
Location	Physical interface using the format rack/slot/module/port where:
	• <i>rack</i> is the chassis number of the rack.
	• <i>slot</i> is the physical slot number of the line card.
	• <i>module</i> is the module number. A physical layer interface module (PLIM) is always 0. Shared port adapters (SPAs) are referenced by their subslot number.
	• <i>port</i> is the physical port number of the interface.
FEC PM Settings Tab	
Туре	FEC performance monitoring parameter being tracked:
	• EC-BITS—The number of bit errors corrected (EC-BITS) in the DWDM trunk line during the performance monitoring time interval.
	• UC-WORDS—The number of uncorrectable words (UC-WORDS) detected in the DWDM trunk line during the performance monitoring time interval.
Threshold	Threshold for the performance monitoring parameter.
TCA	Whether TCA generation for the specified parameter on the DWDM controller is enabled or disabled.
Optics PM Settings Ta	b
Туре	Optics performance monitoring parameter being tracked:
	• LBC—Laser bias current.
	• OPR—Optical power on the unidirectional port.
	• OPT—Transmit optical power in dBm.
Max Threshold	Maximum threshold configured for the parameter.
Max TCA	If enabled, indicates a TCA is generated if the value of the parameter exceeds the maximum threshold during the performance monitoring period. If disabled, TCAs are not generated if the maximum threshold is exceeded.
Min Threshold	Minimum threshold configured for the parameter.
Min TCA	If enabled, indicates a TCA is generated if the value of the parameter drops below the minimum threshold during the performance monitoring period. If disabled, TCAs are not generated if the value drops below the minimum threshold.

Field	Description
OTN PM Settings	Tab
Туре	OTN performance monitoring parameter being tracked:
	• bbe-pm-fe—Far-end path monitoring background block errors (BBE-PM). Indicates the number of background block errors recorded in the optical transport network (OTN) path during the performance monitoring time interval.
	• bbe-pm-ne—Near-end path monitoring background block errors (BBE-PM).
	• bbe-sm-fe—Far-end section monitoring background block errors (BBE-SM). Indicates the number of background block errors recorded in the OTN section during the performance monitoring time interval.
	• bbe-sm-ne—Near-end section monitoring background block errors (BBE-SM).
	• bber-pm-fe—Far-end path monitoring background block errors ratio (BBER-PM). Indicates the background block errors ratio recorded in the OTN path during the performance monitoring time interval.
	• bber-pm-ne—Near-end path monitoring background block errors ratio (BBER-PM).
	• bber-sm-fe—Far-end section monitoring background block errors ratio (BBER-SM). Indicates the background block errors ratio recorded in the OTN section during the performance monitoring time interval.
	• bber-sm-ne—Near-end section monitoring background block errors ratio (BBER-SM)
	• es-pm-fe—Far-end path monitoring errored seconds (ES-PM). Indicates the errored seconds recorded in the OTN path during the performance monitoring time interval.
	• es-pm-ne—Near-end path monitoring errored seconds (ES-PM).
	• es-sm-fe—Far-end section monitoring errored seconds (ES-SM). Indicates the errored seconds recorded in the OTN section during the performance monitoring time interval.
	• es-sm-ne—Near-end section monitoring errored seconds (ES-SM).
	• esr-pm-fe—Far-end path monitoring errored seconds ratio (ESR-PM). Indicates the errored seconds ratio recorded in the OTN path during the performance monitoring time interval.
	• esr-pm-ne—Near-end path monitoring errored seconds ratio (ESR-PM).
	• esr-sm-fe—Far-end section monitoring errored seconds ratio (ESR-SM). Indicates the errored seconds ratio recorded in the OTN section during the performance monitoring time interval.
	• esr-sm-ne—Near-end section monitoring errored seconds ratio (ESR-SM).
	• fc-pm-fe—Far-end path monitoring failure counts (FC-PM). Indicates the failure counts recorded in the OTN path during the performance monitoring time interval.
	• fc-pm-ne—Near-end path monitoring failure counts (FC-PM).
	• fc-sm-fe—Far-end section monitoring failure counts (FC-SM). Indicates the failure counts recorded in the OTN section during the performance monitoring time interval.
	• fc-sm-ne—Near-end section monitoring failure counts (FC-SM).

Table 14-6 Client DWDM PM Settings Properties Window and Tabs (continued)

I

Field	Description
Type (cont.)	• ses-pm-fe—Far-end path monitoring severely errored seconds (SES-PM). Indicates the severely errored seconds recorded in the OTN path during the performance monitoring time interval.
	• ses-pm-ne—Far-end path monitoring severely errored seconds (SES-PM).
	• ses-sm-fe—Far-end section monitoring severely errored seconds (SES-SM). Indicates the severely errored seconds recorded in the OTN section during the performance monitoring time interval.
	• ses-sm-ne—Near-end section monitoring severely errored seconds (SES-SM).
	• sesr-pm-fe—Far-end path monitoring severely errored seconds ratio (SESR-PM). Indicates the severely errored seconds ratio recorded in the OTN path during the performance monitoring time interval.
	• sesr-pm-ne—Near-end path monitoring severely errored seconds ratio (SESR-PM).
	• sesr-sm-fe—Far-end section monitoring severely errored seconds ratio (SESR-SM). Indicates the severely errored seconds ratio recorded in the OTN section during the performance monitoring time interval.
	• sesr-sm-ne—Near-end section monitoring severely errored seconds ratio (SESR-SM).
	• uas-pm-fe—Far-end path monitoring unavailable seconds (UAS-PM). Indicates the unavailable seconds recorded in the OTN path during the performance monitoring time interval.
	• uas-pm-ne—Near-end path monitoring unavailable seconds (UAS-PM).
	• uas-sm-fe—Far-end section monitoring unavailable seconds (UAS-SM). Indicates the unavailable seconds recorded in the OTN section during the performance monitoring time interval.
	• uas-sm-ne—Near-end section monitoring unavailable seconds (UAS-SM).
Threshold	Threshold configured for the parameter.
TCA	If enabled, indicates a TCA is generated if the value of the parameter crosses the threshold during the performance monitoring period. If disabled, TCAs are not generated if the value crosses the threshold.

Table 14-6	Client DWDM PM Settings Properties Window and Tabs (continued)
	chent DwDm i m Settings i Toperties window and labs (continued)

Related Topics

- Viewing DWDM in Physical Inventory, page 14-2
- Viewing G.709 Properties, page 14-5