



Changing DWDM Card Settings

This chapter explains how to change line, performance monitoring (PM), and threshold settings on Cisco NCS cards.



Note The procedures and tasks described in this chapter is applicable to the Cisco NCS 2002 and Cisco NCS 2006 platforms, unless noted otherwise.



Caution Changing card settings can be service affecting. You should make all changes during a scheduled maintenance window.

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NTP-G90 Modifying Line Settings and PM Thresholds for OSCM and OSC-CSM Cards

Purpose	This procedure changes the optical service channel (OSC) and PM parameters and thresholds for the OSCM and OSC-CSM cards.
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Tools/Equipment	None
Prerequisite Procedures	<ul style="list-style-type: none"> • DLP-G46 Log into CTC • NTP-G30 Installing the DWDM cards
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher

Procedure

Step 1 Complete the [NTP-G103 Backing Up the Database](#) procedure.

Step 2 Perform any of the following tasks as needed:

- [DLP-G199 Changing the Line Settings for OSCM and OSC-CSM Cards](#)
- [DLP-G200 Changing the Line SONET/SDH Thresholds for OSCM and OSC-CSM Cards](#)
- [DLP-G201 Changing the Optical Line Parameters for OSCM and OSC-CSM Cards](#)
- [DLP-G202 Changing the Optical Line Threshold Settings for OSCM and OSC-CSM Cards](#)
- [DLP-G203 Changing the ALS Maintenance Settings for OSCM and OSC-CSM Cards](#)

Step 3 Complete the [NTP-G103 Backing Up the Database](#) procedure.

Stop. You have completed this procedure.

DLP-G199 Changing the Line Settings for OSCM and OSC-CSM Cards

Purpose	This task changes the OC-3/STM-1 line settings for the OSC signal transmitted by OSCM and OSC-CSM cards.
Tools/Equipment	None
Prerequisite Procedures	DLP-G46 Log into CTC
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher

Procedure

- Step 1** In node view (single-shelf mode) or shelf view (multishelf view), double-click the OSCM or OSC-CSM card where you want to change the OC-3/STM-1 line settings.
- Step 2** Click the **Provisioning > OC3 Line > OC3 Line (ANSI)** or **Provisioning > STM-1 > STM-1 Line (ETSI)** tabs.
- Step 3** Modify any of the settings described in the following table.

Table 1: OSCM and OSC-CSM Card OC-3/STM-1 Line Settings

Parameter	Description	Options
Port	(Display only) Displays the port number.	1
Port Name	Provides the ability to assign the specified port a name.	User-defined. Name can be up to 80 alphanumeric characters. Blank by default. See the DLP-G104 Assigning a Name to a Port ta
Admin State	(Display only) Displays the port administrative state. For more information about administrative states, see the Administrative and Service States document.	<ul style="list-style-type: none"> • IS (ANSI) or Unlocked (ETSI)—Puts the po The port service state changes to IS-NR (AN Unlocked-enabled (ETSI). • IS,AINS (ANSI) or Unlocked,automaticInService (ETSI)—Puts automatic in-service. The port service state c OOS-AU,AINS (ANSI) or Unlocked-disabled,automaticInService (ETS

Parameter	Description	Options
Service State	(Display only) Identifies the autonomously generated state that gives the overall condition of the port. Service states appear in the format: Primary State-Primary State Qualifier, Secondary State. For more information about service states, see the Administrative and Service States document.	<ul style="list-style-type: none"> • IS-NR (In-Service and Normal [ANSI]) or Unlocked-enabled (ETSI)—The port is fully operational and is performing as provisioned. • OOS-AU,AINS (Out-Of-Service and Autonomous Automatic In-Service [ANSI]) or Unlocked-disabled,automaticInService (ETSI)—The port is out of service, but traffic is carried. Alarm reporting is suppressed. The node monitors the ports for an error-free signal. After an error-free signal is detected, the port service state changes to OOS-AU,AINS/Unlocked-disabled,automaticInService state for the duration of the soak period. After the soak period ends, the port service state changes to IS-NR/Unlocked-enabled. • OOS-MA,DSBLD (Out-of-Service and Management Disabled [ANSI]) or Locked-enabled,disabled (ETSI)—The port is out of service and unable to carry traffic. • OOS-MA,MT (Out-of-Service and Management Maintenance [ANSI]) or Locked-enabled,maintenance (ETSI)—The port is out of service for maintenance. Alarm reporting is suppressed, but traffic is carried and maintenance is allowed.
SF BER	Sets the signal fail bit error rate.	From the drop-down list, choose one of the following: <ul style="list-style-type: none"> • 1E-3 • 1E-4 • 1E-5
SD BER	Sets the signal degrade bit error rate.	From the drop-down list, choose one of the following: <ul style="list-style-type: none"> • 1E-5 • 1E-6 • 1E-7 • 1E-8 • 1E-9
Provides Synchron	(Display only) If checked, the card is provisioned as a network element (NE) timing reference.	<ul style="list-style-type: none"> • Checked • Unchecked
SyncMsgIn	Enables synchronization status messages (SSM) on the S1 byte, which allow the node to choose the best timing source.	<ul style="list-style-type: none"> • Checked • Unchecked

Parameter	Description	Options
Send Do Not Use	When checked, sends a Do Not Use for Synchronization (DUS) message on the S1 byte.	<ul style="list-style-type: none"> • Checked • Unchecked
PJSTSMon #	(Display only) Sets the STS that will be used for pointer justification.	This parameter is set to Off. It cannot be changed
AINS Soak	(Display only) The automatic in-service soak period. It is always 00.00.	—

Step 4 Click Apply. If the change affects traffic, a warning message appears. Click Yes to complete the change.

Step 5 Return to your originating procedure (NTP).

DLP-G200 Changing the Line SONET/SDH Thresholds for OSCM and OSC-CSM Cards

Purpose	This task changes the OC-3/STM-1 line SONET/SDH thresholds settings for the OSC signal transmitted by the OSCM and OSC-CSM cards.
Tools/Equipment	None
Prerequisite Procedures	DLP-G46 Log into CTC
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher

Procedure

Step 1 In node view (single-shelf mode) or shelf view (multishelf view), double-click the OSCM or OSC-CSM card where you want to change the SONET/SDH threshold settings.

Step 2 Click the **Provisioning > OC3 Line > SONET Thresholds (ANSI)** or **Provisioning > STM1 Line > SDH Thresholds (ETSI)** tabs.

Step 3 Thresholds can be set for Near End or Far End directions for either the 15-minute or 1-day intervals. You can set thresholds for either the Line or Section types. Path thresholds do not apply. Modify any of the settings as described in the following tables for ANSI and ETSI respectively.

Table 2: OSCM and OSC-CSM Cards OC3 Line SONET Threshold Settings

Parameter	Description	Options
Port	(Display only) Displays the port number.	1

Parameter	Description	Options
CV	Coding violations	Numeric. Can be set for 15-minute or one-day intervals for Line or Section (Near and Far End). Select the bullet and click Refresh .
ES	Errored seconds	Numeric. Can be set for 15-minute or one-day intervals for Line or Section (Near and Far End). Select the bullet and click Refresh .
SES	Severely errored seconds	Numeric. Can be set for 15-minute or one-day intervals for Line or Section (Near and Far End). Select the bullet and click Refresh .
SEFS	Severely errored framing seconds (Section only)	Numeric. Can be set for Far End, for 15-minute or one-day intervals for Section only. Select the bullet and click Refresh .
FC	Failure count (Line only)	Numeric. Can be set for 15-minute or one-day intervals for Line (Near and Far End). Select the bullet and click Refresh .
UAS	Unavailable seconds (Line only)	Numeric. Can be set for 15-minute or one-day intervals for Line (Near and Far End). Select the bullet and click Refresh .

Table 3: OSCM and OSC-CSM Cards STM1 Line SDH Threshold Settings

Parameter	Description	Options
Port	(Display only) Displays the port number.	1
EB	Errored block	Numeric. Can be set for 15-minute or one-day intervals for MS (Multiplex Section) or RS (Regeneration Section) (Near and Far End). Select the bullet and click Refresh .
ES	Errored seconds	Numeric. Can be set for 15-minute or one-day intervals for MS or RS (Near and Far End). Select the bullet and click Refresh .
SES	Severely errored seconds	Numeric. Can be set for 15-minute or one-day intervals for MS or RS (Near and Far End). Select the bullet and click Refresh .
BBE	Background block error	Numeric. Can be set for 15-minute or one-day intervals for MS or RS (Near and Far End). Select the bullet and click Refresh .
OFS	Out of frame seconds	Numeric. Can be set for 15-minute or one-day intervals for RS, Near End. Select the bullet and click Refresh .
UAS	Unavailable seconds	Numeric. Can be set for 15-minute or one-day intervals for MS or RS (Near and Far End). Select the bullet and click Refresh .

Step 4 Click **Apply**. If the change affects traffic, a warning message appears. Click Yes to complete the change.

Step 5 Return to your originating procedure (NTP).

DLP-G201 Changing the Optical Line Parameters for OSCM and OSC-CSM Cards

Purpose	This task changes the optical line parameters for OSCM and OSC-CSM cards.
Tools/Equipment	None
Prerequisite Procedures	DLP-G46 Log into CTC
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher

Procedure

- Step 1** In node view (single-shelf mode) or shelf view (multishelf mode), double-click the OSCM or OSC-CSM card where you want to change the optical line parameters.
- Step 2** Click the **Provisioning > Optical Line > Parameters** tabs.
- Step 3** Modify any of the settings described in the following table. The provisionable parameters are listed in the Options column in the table. In the Options column, the SONET (ANSI) option is followed by the SDH (ETSI) option.

Table 4: OSCM and OSC-CSM Card Optical Line Parameter Settings

Parameter	Description	Options
Port	(Display only) Displays the port number, port type, and direction (TX or RX).	OSCM <ul style="list-style-type: none"> • 2 (OSC-RX) • 3 (OSC-TX) OSC-CSM <ul style="list-style-type: none"> • 2 (COM-RX) • 3 (COM-TX) • 4 (LINE-RX) • 5 (LINE-TX) • 6 (OSC-RX) • 7 (OSC-TX)
Port Name	Provides the ability to assign the specified port a name.	User-defined. Name can be up to 80 alpha special characters. Blank by default. See the DLP-G104 Assigning a Name to a

Parameter	Description	Options
Admin State	Sets the port administrative state unless network conditions prevent the change. For more information about administrative states, see the Administrative and Service States document.	From the drop-down list, choose one of the following options: <ul style="list-style-type: none"> • IS,AINS/Unlocked,automaticInService • OOS,DSBLD/Locked,disabled • OOS,MT/Locked,maintenance
Service State	(Display only) Identifies the autonomously generated state that gives the overall condition of the port. Service states appear in the format: Primary State-Primary State Qualifier, Secondary State. For more information about service states, see the Administrative and Service States document.	<ul style="list-style-type: none"> • IS-NR/Unlocked-enabled • OOS-AU,AINS/Unlocked-disabled, automaticInService • OOS-MA,DSBLD/Locked-enabled,disabled • OOS-MA,MT/Locked-enabled,maintenance
Power	(Display only) Shows the current power level per port.	—
VOA Mode	(Display only) Shows the functional mode of the variable optical attenuator (VOA), when present.	<ul style="list-style-type: none"> • Constant Attenuation • Constant Power
VOA Power Ref	(Display only) Shows the optical power setpoint that must be reached when a VOA is present and VOA Mode is set to Constant Power. This parameter can only be modified by ANS.	—
VOA Power Calib	Modifies the optical power value of the VOA when VOA Mode is set to Constant Power.	Numeric. Double-click the parameter, enter a value, and press Enter.
VOA Attenuation Ref	(Display only) Shows the VOA attenuation value when VOA Mode is set to Constant Attenuation. This parameter can only be modified by ANS.	—
VOA Attenuation Calib	Modifies the attenuation value of the VOA when the VOA Mode is set to Constant Attenuation.	Numeric. Double-click the parameter, enter a value, and press Enter.
Active Channels	(Display only) Indicates how many channels the amplifier is carrying. Generally reflects the number of provisioned channels.	—
OSC Power	(Display only) Shows the OSC power level per port.	—

Step 4 Click **Apply**. If the change affects traffic, a warning message appears. Click Yes to complete the change.

Step 5 Return to your originating procedure (NTP).

DLP-G202 Changing the Optical Line Threshold Settings for OSCM and OSC-CSM Cards

Purpose	This task changes the optical line threshold settings for OSCM and OSC-CSM cards.
Tools/Equipment	None
Prerequisite Procedures	DLP-G46 Log into CTC
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher

Procedure

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- Step 1** In node view (single-shelf mode) or shelf view (multishelf mode), double-click the OSCM or OSC-CSM card where you want to change the optical line threshold settings.
- Step 2** Click the **Provisioning** > **Optical Line** > **Optics Thresholds** tabs.
- Step 3** Under Types, choose the type of threshold that you want to change, either Warning or Alarm.
- Caution** Warning thresholds are monitored by CTC as part of performance monitoring. They must be user-provisioned.
- Step 4** Click **Refresh**.
- Step 5** Modify any of the warning or alarm threshold settings. [Table 5: OSCM and OSC-CSM Cards Optical Line Warning Thresholds Settings, on page 10](#) shows the thresholds for warnings. [Table 6: OSCM and OSC-CSM Cards Optical Line Alarm Thresholds Settings, on page 11](#) shows the thresholds for alarms.

Table 5: OSCM and OSC-CSM Cards Optical Line Warning Thresholds Settings

Parameter	Description	Options
Port	(Display only) Displays the port number, port type, and direction (TX or RX).	OSCM <ul style="list-style-type: none"> • 2 (OSC-RX) • 3 (OSC-TX) OSC-CSM <ul style="list-style-type: none"> • 2 (COM-RX) • 3 (COM-TX) • 4 (LINE-RX) • 5 (LINE-TX) • 6 (OSC-RX) • 7 (OSC-TX)
opwrMin (dBm) (OSCM only)	Sets the low power warning level.	Numeric. Can be set for 15-minute or one-day intervals. The default is -50 dBm. Double-click the parameter, enter a value, and press Enter.
opwrMax (dBm) (OSCM only)	Sets the high power warning level.	Numeric. Can be set for 15-minute or one-day intervals. The default is 30 dBm. Double-click the parameter, enter a value, and press Enter.
opwrMin OSC (dBm)	Sets the OSC low power warning level.	Numeric. Can be set for 15-minute or one-day intervals. The default is -50 dBm. Double-click the parameter, enter a value, and press Enter.
opwrMax OSC (dBm)	Sets the OSC high power warning level.	Numeric. Can be set for 15-minute or one-day intervals. The default is 30 dBm. Double-click the parameter, enter a value, and press Enter.

Table 6: OSCM and OSC-CSM Cards Optical Line Alarm Thresholds Settings

Parameter	Description	Options
Port	(Display only) Displays the port number, port type, and direction (TX or RX).	OSCM <ul style="list-style-type: none"> • 2 (OSC-RX) • 3 (OSC-TX) OSC-CSM <ul style="list-style-type: none"> • 2 (COM-RX) • 3 (COM-TX) • 4 (LINE-RX) • 5 (LINE-TX) • 6 (OSC-RX) • 7 (OSC-TX)
Power Failure Low (dBm)	Shows the optical power failure low threshold for the port. You can manually change the threshold. The value must be within the optical power range that is specified for the card. For more information, see the Hardware Specifications document.	Numeric (dB). Double-click the table cell, enter a value, then press Enter .
Power Degrade High (dBm)	<p>(Display only) Shows the current value of the optical power degrade high threshold.</p> <p>Power Degrade High refers to the port's Signal Output Power value and is automatically calculated by the control card.</p> <p>The Power Degrade High threshold is linked to the Output Power Setpoint on the Parameters tab. Changing the setpoint changes the Power Degrade High threshold. The threshold value is always 2 dB higher than the Output Power Setpoint value.</p>	Numeric (dB). Double-click the table cell, enter a value, then press Enter .

Parameter	Description	Options
Power Degrade Low (dBm)	<p>(Display only) Shows the current value of the optical power degrade high threshold configured in the card.</p> <p>Power Degrade Low refers to the port's Signal Output Power value and is automatically calculated by the control card.</p> <p>The Power Degrade Low threshold is automatically linked to the Output Power Setpoint on the Parameters tab. Changing the setpoint changes the Power Degrade Low threshold. The threshold value is always 2 dB lower than the Output Power Setpoint.</p>	Numeric (dB). Double-click the table cell, enter a value, then press Enter .
Pwr OSC Degrade Low (dBm)	Shows the power degrade low threshold. This power value applies to the corresponding port and is automatically calculated when ANS is run.	Numeric.
Pwr OSC Degrade High (dBm)	<p>Shows the power degrade high threshold. This power value applies to the corresponding port and is automatically calculated when ANS is run.</p> <p>To change the threshold, change the Power setpoint. The threshold will always be 2 dB higher than the Power setpoint.</p>	Numeric.
Pwr OSC Failure (dBm)	Shows the optical power failure low threshold for the port. The threshold is calculated automatically when you run ANS. The value must be within the optical power range that is specified for the card. For more information, see the Hardware Specifications document.	Numeric.

Step 6 Click **Apply**. If the change affects traffic, a warning message appears. Click Yes to complete the change.

Step 7 Return to your originating procedure (NTP).

DLP-G203 Changing the ALS Maintenance Settings for OSCM and OSC-CSM Cards

Purpose	This task changes the automatic laser shutdown (ALS) maintenance settings for the OSC-CSM and OSCM cards.
Tools/Equipment	None

Prerequisite Procedures	DLP-G46 Log into CTC
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher



Note The ALS function should only be disabled temporarily for installation or maintenance reasons. Activate ALS immediately after maintenance or installation.

Invisible laser radiation could be emitted from the end of the unterminated fiber cable or connector. Do not stare into the beam directly with optical instruments. Viewing the laser output with certain optical instruments (for example, eye loupes, magnifiers, and microscopes) within a distance of 100 mm could pose an eye hazard. Statement 1056

Procedure

- Step 1** In node view (single-shelf mode) or shelf view (multishelf mode), double-click the OSC-CSM or OSCM card where you want to change the ALS maintenance settings.
- Step 2** Click the **Maintenance > ALS** tabs.
- Step 3** Modify any of the settings described in the following table. The provisionable parameters are listed in the Options column in the table.

Table 7: OSC-CSM and OSCM ALS Maintenance Settings

Parameter	Description	Options
OSRI	Optical safety remote interlock. When set to On, the OSC TX output power is shut down.	From the drop-down list, choose one of the following: <ul style="list-style-type: none"> • On • Off
ALS Mode	Automatic laser shutdown mode. For OSCM cards, ALS provides the ability to shut down the OSC TX laser when the OSC RX detects a loss of signal (LOS). For OSC-CSM cards, ALS provides the same functions as the OSCM card and also enables an optical safety mechanism at the DWDM network layer. For more details, see	From the drop-down list, choose one of the following: <ul style="list-style-type: none"> • Disable—Deactivates ALS. • Auto Restart—(Default) ALS is active. The power is automatically shut down when needed and automatically tries to restart using a probe pulse until the cause of the failure is repaired. • Manual Restart • Manual Restart for Test

Parameter	Description	Options
Recovery Pulse Duration	(Display only) Displays the duration of the optical power pulse that begins when an amplifier restarts.	—
Recovery Pulse Interval	(Display only) Displays the interval between optical power pulses.	—
Currently Shutdown	(Display only) Displays whether or not the laser is currently shut down, either YES or NO.	—
Request Laser Restart	If checked, allows you to restart the laser.	Checked or unchecked

Step 4 Click **Apply**. If the change affects traffic, a warning message appears. Click Yes to complete the change.

Step 5 Return to your originating procedure (NTP).

NTP-G91 Modifying Line Settings and PM Thresholds for OPT-PRE and OPT-BST Cards

Purpose	This procedure changes the line and threshold settings for an OPT-PRE, OPT-BST, OPT-BST-E amplifier card.
Tools/Equipment	None
Prerequisite Procedures	<ul style="list-style-type: none"> • DLP-G46 Log into CTC • NTP-G30 Installing the DWDM cards
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher

Procedure

Step 1 Complete the [NTP-G103 Backing Up the Database](#) procedure.

Step 2 Perform any of the following tasks as needed:

- [DLP-G204 Changing Optical Line Parameters for OPT-PRE and OPT-BST Cards](#)
- [DLP-G205 Changing Optical Line Threshold Settings for OPT-PRE and OPT-BST Cards](#)
- [DLP-G206 Changing Optical Amplifier Line Settings for OPT-PRE and OPT-BST Cards](#)

- [DLP-G322 Changing the ALS Maintenance Settings for OPT-BST Card](#)

Step 3 Complete the [NTP-G103 Backing Up the Database](#) procedure.

Stop. You have completed this procedure.

DLP-G204 Changing Optical Line Parameters for OPT-PRE and OPT-BST Cards

Purpose	This task changes the optical line settings for an OPT-PRE, OPT-BST, OPT-BST-E amplifier card.
Tools/Equipment	None
Prerequisite Procedures	DLP-G46 Log into CTC
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher

Procedure

- Step 1** In node view (single-shelf mode) or shelf view (multishelf mode), double-click the OPT-PRE, OPT-BST, OPT-BST-E, amplifier where you want to change the optical line settings.
- Step 2** Click the **Provisioning** > **Optical Line** > **Parameters** tabs.
- Step 3** Modify any of the settings described in the following table. The provisionable parameters are listed in the Options column in the table. In the Options column, the SONET (ANSI) option is followed by the SDH (ETSI) option.

Table 8: OPT-PRE, OPT-BST, OPT-BST-E Amplifier Optical Line Settings

Parameter	Description	Options
Port	(Display only) Displays the port number, port type, and direction (TX or RX).	OPT-BST, OPT-BST-E <ul style="list-style-type: none"> • 1 (COM-RX) • 2 (COM-TX) • 3 (OSC-RX) • 4 (OSC-TX) • 5 (LINE-RX) OPT-PRE <ul style="list-style-type: none"> • 1 (COM-RX) • 3 (DC-RX) • 4 (DC-TX)
Port Name	Provides the ability to assign the specified port a name.	User-defined. Name can be up to 80 alphanumeric characters and special characters. Blank by default. Double-click the Port Name table cell, enter the name, and press Enter. See the DLP-G104 Assigning a Name to a Port document.
Admin State	Sets the port administrative state unless network conditions prevent the change. For more information about administrative states, see the Administrative and Service States document.	From the drop-down list, choose one of the following: <ul style="list-style-type: none"> • IS,AINS/Unlocked,automaticInService • OOS,DSBLD/Locked,disabled (OPT-BST) • OOS,MT/Locked,maintenance
Service State	(Display only) Identifies the autonomously generated state that gives the overall condition of the port. Service states appear in the format: Primary State-Primary State Qualifier, Secondary State. For more information about service states, see the Administrative and Service States document.	<ul style="list-style-type: none"> • IS-NR/Unlocked-enabled • OOS-AU,AINS/Unlocked-disabled,automaticInService • OOS-MA,DSBLD/Locked-enabled,disabled • OOS-MA,MT/Locked-enabled,maintenance
Power	(Display only) Shows the current power level per port.	—
Active Channels	(Display only) Indicates how many channels the port is carrying. Generally reflects the number of provisioned channels.	—
OSC Power	(Display only) Shows the OSC power level per port. Does not apply to OPT-PRE.	—

Step 4 Click **Apply**. If the change affects traffic, a warning message appears. Click Yes to complete the change.

Step 5 Return to your originating procedure (NTP).

DLP-G205 Changing Optical Line Threshold Settings for OPT-PRE and OPT-BST Cards

Purpose	This task changes the optical line threshold settings for an OPT-PRE, OPT-BST, OPT-BST-E amplifier card.
Tools/Equipment	None
Prerequisite Procedures	DLP-G46 Log into CTC
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher



Caution Warning thresholds are monitored by CTC as part of performance monitoring. They must be user-provisioned.

Procedure

- Step 1** In node view (single-shelf mode) or shelf view (multishelf mode), double-click the OPT-PRE, OPT-BST, OPT-BST-E amplifier card where you want to change the optical line threshold settings.
- Step 2** Click the **Provisioning** > **Optical Line** > **Optics Thresholds** tabs.
- Step 3** If you want to change the warning thresholds, complete the following steps. If not, continue with [Step 4](#).
- Under Types, choose Warning.
 - Choose the warning interval that you want to provision, either **15 minutes** or **1 Day**.
 - Click **Refresh**.
 - Modify any of the warning thresholds shown under the Options column in the following table.
 - Click **Apply**. If the change affects traffic, a warning message appears. Click Yes to complete the change.

Table 9: OPT-PRE, OPT-BST, OPT-BST-E Card Optical Line Warning Threshold Settings

Parameter	Description	Options
Port	(Display only) Displays the port number, port type, and direction (TX or RX).	OPT-BST, OPT-BST-E <ul style="list-style-type: none"> • 1 (COM-RX) • 2 (COM-TX) • 3 (OSC-RX) • 4 (OSC-TX) • 5 (LINE-RX) OPT-PRE <ul style="list-style-type: none"> • 1 (COM-RX) • 3 (DC-RX) 4 (DC-TX)
opwrMin (dBm)	Sets the low power warning level.	Numeric. Can be set for 15-minute or one-day intervals. The default is –50 dBm. Double-click the table cell, enter the name, and press Enter.
opwrMax (dBm)	Sets the high power warning level.	Numeric. Can be set for 15-minute or one-day intervals. The default is 30 dBm. Double-click the table cell, enter the name, and press Enter.
opwrMin OSC (dBm)	Sets the OSC low power warning level.	Numeric. Can be set for 15-minute or one-day intervals. The default is –50 dBm. Double-click the table cell, enter the name, and press Enter.
opwrMax OSC (dBm)	Sets the OSC high power warning level.	Numeric. Can be set for 15-minute or one-day intervals. The default is 30 dBm. Double-click the table cell, enter the name, and press Enter.

Step 4 If you want to change the alarm thresholds, complete the following steps. If not, continue with [Step 5](#).

- a) Under Types, choose Alarm.
- b) Click **Refresh**.
- c) Modify any of the alarm thresholds shown under the Options column in the following table.
- d) Click **Apply**. If the change affects traffic, a warning message appears. Click Yes to complete the change.

Table 10: OPT-PRE, OPT-BST, OPT-BST-E Card Optical Line Alarm Thresholds Settings

Parameter	Description	Options
Port	(Display only) Displays the port number, port type, and direction (RX or TX).	OPT-BST, OPT-BST-E <ul style="list-style-type: none"> • 1 (COM-RX) • 2 (COM-TX) • 3 (OSC-RX) • 4 (OSC-TX) • 5 (LINE-RX) OPT-PRE <ul style="list-style-type: none"> • 1 (COM-RX) • 3 (DC-RX) • 4 (DC-TX)
Power Failure Low (dBm)	Shows the optical power failure low threshold for the port. The threshold is calculated automatically when you run ANS. You can manually change the threshold. The value must be within the optical power range that is specified for the card. For more information, see the Hardware Specifications document. For OPT-BST, OPT-BST-E cards, this parameter applies to the COM-RX and LINE-RX ports.	Numeric. Double-click the table cell, enter a value and press Enter .
Power Degrad High (dBm)	Does not apply to OPT-BST, OPT-BST-E, and OPT-PRE line parameters.	—
Power Degrad Low (dBm)	Does not apply to OPT-BST, OPT-BST-E, and OPT-PRE line parameters.	—

Parameter	Description	Options
Pwr OSC Degrad Low (dBm)	Shows the power degrade low threshold. This power value applies to the corresponding port and is automatically calculated when ANS is run. This threshold applies to a port associated to a VOA (OSC-VOA) always active in Constant Power mode. In this case, the threshold is automatically linked to the Power setpoint (VOA Power Ref + VOA Power Calib) that is provisioned. Changing the setpoint will result in changing the threshold (always 2 dB lower). Does not apply to OPT-PRE.	Numeric.
Pwr OSC Degrad High (dBm)	Shows the power degrade high threshold. This power value applies to the corresponding port and is automatically calculated when ANS is run. This threshold applies to a port that is associated to a VOA (OSC-VOA). In Constant Power mode, the port is always active and the threshold is automatically linked to the Power setpoint (VOA Power Ref + VOA Power Calib). To change the threshold, change the Power setpoint. The threshold will always be 2 dB higher than the Power setpoint. Does not apply to OPT-PRE.	Numeric.
Pwr OSC Failure (dBm)	Shows the optical power low threshold for the OSC channel of the port. You can set the threshold manually at the LINE-RX port.	—
Gain Degrad Low (dB)	Does not apply to OPT-BST, OPT-BST-E, and OPT-PRE line parameters.	—
Gain Degrad High (dB)	Does not apply to OPT-BST, OPT-BST-E, and OPT-PRE line parameters.	—

Step 5 Return to your originating procedure (NTP).

DLP-G206 Changing Optical Amplifier Line Settings for OPT-PRE and OPT-BST Cards

Purpose	This task changes the optical amplifier line settings for an OPT-PRE, OPT-BST, OPT-BST-E, amplifier card.
Tools/Equipment	None
Prerequisite Procedures	DLP-G46 Log into CTC
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher

Procedure

- Step 1** In node view (single-shelf mode) or shelf view (multishelf mode), double-click the OPT-PRE, OPT-BST, OPT-BST-E, card where you want to change the optical amplifier line settings.
- Step 2** Click the **Provisioning** > **Opt. Ampli. Line** > **Parameters** tabs.
- Step 3** Modify any of the settings described in the following table. The provisionable parameters are listed in the Options column in the table. In the Options column, the SONET (ANSI) option is followed by the SDH (ETSI) option.

Table 11: OPT-PRE, OPT-BST, OPT-BST-E Optical Amplifier Line Settings

Parameter	Description	Options
Port	(Display only) Displays the port number, port type, and direction (TX or RX).	OPT-PRE <ul style="list-style-type: none"> • 2 (COM-TX) OPT-BST, OPT-BST-E <ul style="list-style-type: none"> • 6 (LINE-TX)
Port Name	Provides the ability to assign the specified port a name.	User-defined. Name can be up to 80 alphanumeric characters. Blank by default.
Admin State	Sets the port service state unless network conditions prevent the change. For more information about administrative states, see the Administrative and Service States document.	From the drop-down list, choose one of the following: <ul style="list-style-type: none"> • IS,AINS/Unlocked,automaticInService • OOS,DSBLD/Locked,disabled • OOS,MT/Locked,maintenance

Parameter	Description	Options
Service State	(Display only) Identifies the autonomously generated state that gives the overall condition of the port. Service states appear in the format: Primary State-Primary State Qualifier, Secondary State. For more information about service states, see the Administrative and Service States document.	<ul style="list-style-type: none"> • IS-NR/Unlocked-enabled • OOS-AU,AINS/Unlocked-disabled, automatic • OOS-MA,DSBLD/Locked-enabled,disabled • OOS-MA,MT/Locked-enabled,maintenance
Total Output Power	(Display only) Shows the current power level per port.	—
Channel Power Ref.	(Display only) Shows the optical per-channel signal power setpoint that must be reached at the amplifier output when gain control is active.	—
Offset	Adjusts the Total Output Power unless network conditions prevent the adjustment, for example, the port is in IS state.	Numeric. Double-click the table cell, enter a value, Enter .
Active Channels	(Display only) Indicates how many channels the amplifier is carrying. Generally reflects the number of provisioned channels.	—
OSC Power	Shows the OSC power level per port. Does not apply to OPT-PRE.	—
Signal Output Power	(Display only) Shows the current output power leaving the amplifier, including the amplified spontaneous emissions (ASE) contribution.	—
Output Power Set-Point	(Display only) Shows the output power setpoint.	—
Working Mode	(Display only) Shows the working mode, either GAIN or POWER.	—
Gain	(Display only) The current gain of the amplifiers.	—
Gain Set Point	The value of the gain that the amplifier must achieve. APC can modify this value based on the number of optical channel network connection (OCHNC) circuits that are managed by the amplifier or to compensate for fiber aging insertion loss. For more information, see the Network Reference chapter.	Display only or numeric depending on mode setting. If the system is configured as metro core, this field is display only. When the system is configured as metro access, this field can be changed by the user.
Tilt Reference	(Display only) Shows the default value for the amplifier tilt. This field can only be modified by ANS.	—
Tilt Calibration	Allows you to manually change the amplifier tilt.	Numeric. Double-click the parameter, enter a value, Enter .

Parameter	Description	Options
DCU Insertion Loss	(Display only; OPT-PRE cards only) Shows the dispersion compensation unit (DCU) insertion loss.	—

Step 4 Click **Apply**. If the change affects traffic, a warning message appears. Click Yes to complete the change.

Step 5 Return to your originating procedure (NTP).

DLP-G322 Changing the ALS Maintenance Settings for OPT-BST Card

Purpose	This task changes the ALS maintenance settings for the OPT-BST, OPT-BST-E cards.
Tools/Equipment	None
Prerequisite Procedures	DLP-G46 Log into CTC
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher



Note The ALS function should only be disabled temporarily for installation or maintenance reasons. Activate ALS immediately after maintenance or installation.

Invisible laser radiation could be emitted from the end of the unterminated fiber cable or connector. Do not stare into the beam directly with optical instruments. Viewing the laser output with certain optical instruments (for example, eye loupes, magnifiers, and microscopes) within a distance of 100 mm could pose an eye hazard. Statement 1056

Procedure

Step 1 In node view (single-shelf mode) or shelf view (multishelf mode), double-click the OPT-BST, OPT-BST-E where you want to change the ALS maintenance settings.

Step 2 Click the **Maintenance > ALS Mode** tabs.

Step 3 Modify any of the settings described in the following table. The provisionable parameters are listed in the Options column in the table.

Table 12: OPT-BST ALS Maintenance Settings

Parameter	Description	Options
OSRI	Optical safety remote interlock. When set to On, the OPT-BST TX output power is shut down.	From the drop-down list, choose one of the following: <ul style="list-style-type: none"> • On • Off
ALS Mode	Automatic laser shutdown. For OPT-BST cards, ALS provides the ability to shut down the OPT-BST TX laser when the OPT-BST RX detects an LOS. ALS also enables an optical safety mechanism at the DWDM network layer. For more information, see the "Automatic Laser Shutdown" section.	From the drop-down list, choose one of the following: <ul style="list-style-type: none"> • Disable—Deactivates ALS. If the OPT-BST faces a span without an OSC connection, choose this option. • Auto Restart—(Default) ALS is active. The power is automatically shut down when needed and automatically tries to restart using a probe pulse until the cause of the failure is repaired. • Manual Restart • Manual Restart for Test
Recovery Pulse Duration	(Display only) Displays the duration of the optical power pulse that begins when an amplifier restarts.	—
Recovery Pulse Interval	(Display only) Displays the interval between optical power pulses.	—
Currently Shutdown	(Display only) Displays whether or not the laser is currently shut down, either YES or NO.	—
Request Laser Restart	If checked, allows you to restart the laser.	Checked or unchecked

Step 4 Click **Apply**. If the change affects traffic, a warning message appears. Click Yes to complete the change.

Step 5 Return to your originating procedure (NTP).

NTP-G160 Modifying Card Line Settings and PM Thresholds

Purpose	This procedure changes the line and threshold settings for the OPT-AMP-17-C, OPT-AMP-C, OPT-AMP-C, OPT-RAMP-C, OPT-RAMP-CE, 15454-M-RAMAN-CTP, 15454-M-RAMAN-COP, EDRA-1-26, EDRA-1-35, EDRA-2-26, EDRA-2-35, OPT-EDFA-17, OPT-EDFA-24, and OPT-EDFA-35 amplifier cards.
Tools/Equipment	None
Prerequisite Procedures	<ul style="list-style-type: none"> • DLP-G46 Log into CTC • NTP-G30 Installing the DWDM cards
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher

Procedure

Step 1 Complete the [NTP-G103 Backing Up the Database](#) procedure.

Step 2 Set the card working mode:

Caution Do not change the OPT-AMP-17-C, OPT-AMP-C, OPT-EDFA-17, OPT-EDFA-24, and OPT-EDFA-35 working mode if it is in service and circuits are provisioned.

- a) Display the OPT-AMP-17-C, OPT-AMP-C, OPT-EDFA-17, OPT-EDFA-24, and OPT-EDFA-35 card view.
- b) Click the **Provisioning > Card** tabs.
- c) In the Card Working Mode field, choose one of the following:
 - OPT-PRE**—Sets the card working mode to optical preamplifier.
 - OPT-LINE**—Sets the card working mode to optical booster amplifier.
- d) Click **Apply**.

Step 3 Perform any of the following tasks as needed:

- [DLP-G323 Changing Optical Line Settings for Amplifier Cards](#)
- [DLP-G324 Changing Optical Line Threshold Settings for Amplifier Cards](#)
- [DLP-G325 Changing Optical Amplifier Line Settings](#)
- [DLP-G326 Changing Optical Amplifier Threshold Settings](#)
- [DLP-G327 Changing the ALS Maintenance Settings of Amplifier Cards](#)

Step 4 Complete the [NTP-G103 Backing Up the Database](#) procedure.

Stop. You have completed this procedure.

DLP-G323 Changing Optical Line Settings for Amplifier Cards

Purpose	This task changes the optical line settings for the OPT-AMP-17-C, OPT-AMP-C, OPT-RAMP-C, OPT-RAMP-CE, 15454-M-RAMAN-CTP, 15454-M-RAMAN-COP, EDRA-1-26, EDRA-1-35, EDRA-2-26, EDRA-2-35, OPT-EDFA-17, OPT-EDFA-24, and OPT-EDFA-35 amplifier cards.
Tools/Equipment	None
Prerequisite Procedures	DLP-G46 Log into CTC
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher

Procedure

- Step 1** In node view (single-shelf mode) or shelf view (multishelf mode), double-click the amplifier card where you want to change the optical line settings.
- Step 2** Click the **Provisioning** > **Optical Line** > **Parameters** tabs.
- Step 3** Modify any of the settings described in the following table. The provisionable parameters are listed in the Options column in the table. In the Options column, the SONET (ANSI) option is followed by the SDH (ETSI) option.

Table 13: Amplifier Optical Line Settings

Parameter	Description	Options
Port	(Display only) Displays the port number, port type, and direction (TX or RX).	<ul style="list-style-type: none"> • 1 (COM-RX) • 2 (COM-TX) • 3 (OSC-RX) • 4 (OSC-TX). 4 (OSC-RX) for EDRA-1-26, EDRA-1-35, EDRA-2-26, and EDRA-2-35. • 5 (LINE-RX). 5 (OSC-TX) for EDRA-1-26, EDRA-1-35, EDRA-2-26, and EDRA-2-35. • 6 (LINE-TX), OPT-RAMP-C and OPT-RAMP-CE only. 6 (LINE-RX) for EDRA-1-26, EDRA-1-35, EDRA-2-26, and EDRA-2-35. • 7 (DC-RX), OPT-AMP-C, OPT-RAMP-C, and OPT-RAMP-CE only. 7 (DFB-RX) for EDRA-1-26, EDRA-1-35, EDRA-2-26, and EDRA-2-35. • 8 (DC-TX), OPT-AMP-C only. 8 (DFB-TX) for EDRA-1-26, EDRA-1-35, EDRA-2-26, and EDRA-2-35. • 9 (RAMAN-RX), OPT-RAMP-C and OPT-RAMP-CE only. 9(ASE-RX) for EDRA-1-26, EDRA-1-35, EDRA-2-26, and EDRA-2-35.
Port Name	Provides the ability to assign the specified port a name.	<p>User-defined. Name can be up to 80 alphanumeric characters. Blank by default. Do not use special characters. Enter the name, and press Enter.</p> <p>See the DLP-G104 Assigning a Name to a Port document.</p>
Admin State	Sets the port administrative state unless network conditions prevent the change. For more information about administrative states, see the Administrative and Service States document.	<p>From the drop-down list, choose one of the following:</p> <ul style="list-style-type: none"> • IS,AINS/Unlocked,automaticInService • OOS,DSBLD/Locked,disabled (OPT-RAMP-C, OPT-RAMP-CE, 15454-M-RAMAN-COP only) • OOS,MT/Locked,maintenance

Parameter	Description	Options
Service State	(Display only) Identifies the autonomously generated state that gives the overall condition of the port. Service states appear in the format: Primary State-Primary State Qualifier, Secondary State. For more information about service states, see the Administrative and Service States document.	<ul style="list-style-type: none"> • IS-NR/Unlocked-enabled • OOS-AU,AINS/Unlocked-disabled, automaticInService • OOS-MA,DSBLD/Locked-enabled,dis • OOS-MA,MT/Locked-enabled,mainte
Power	(Display only) Shows the current power level per port.	—
Active Channel	(Display only) Indicates how many channels the amplifier is carrying. Generally reflects the number of provisioned channels.	—
OSC Power	Shows the OSC power level per port. Does not apply to OPT-RAMP-C, OPT-RAMP-CE, 15454-M-RAMAN-CTP, and 15454-M-RAMAN-COP.	—

Step 4 Click **Apply**. If the change affects traffic, a warning message appears. Click **Yes** to complete the change.

Step 5 Return to your originating procedure (NTP).

DLP-G324 Changing Optical Line Threshold Settings for Amplifier Cards

Purpose	This task changes the optical line threshold settings for OPT-AMP-17-C, OPT-AMP-C, OPT-RAMP-C, OPT-RAMP-CE, 15454-M-RAMAN-CTP, 15454-M-RAMAN-COP, EDRA-1-26, EDRA-1-35, EDRA-2-26, EDRA-2-35, OPT-EDFA-17, OPT-EDFA-24, and OPT-EDFA-35 amplifier cards.
Tools/Equipment	None
Prerequisite Procedures	DLP-G46 Log into CTC
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher



Caution Warning thresholds are monitored by CTC as part of performance monitoring. They must be user-provisioned.

Procedure

- Step 1** In node view (single-shelf mode) or shelf view (multishelf mode), double-click the amplifier card where you want to change the optical line threshold settings.
- Step 2** Click the **Provisioning > Optical Line > Optics Thresholds** tabs.
- Step 3** If you want to change the warning thresholds, complete the following steps. If not, continue with [Step 4](#).
- a) Under Types, choose Warning.
 - b) Choose the warning interval that you want to provision, either **15 minutes** or **1 Day**.
 - c) Click **Refresh**.
 - d) Modify any of the warning thresholds shown under the Options column in the following table.
 - e) Click **Apply**. If the change affects traffic, a warning message appears. Click Yes to complete the change.

Table 14: Amplifier Card Optical Line Warning Threshold Settings

Parameter	Description	Options
Port	(Display only) Displays the port number, port type, and direction (TX or RX):	<ul style="list-style-type: none"> • 1 (COM-RX) • 2 (COM-TX) • 3 (OSC-RX) • 4 (OSC-TX) 4 (LINE-RX)—15454-M-RAMAN-CTP card only. 4 (OSC-RX)—EDRA-1-26, EDRA-1-35, EDRA-2-26, EDRA-2-35. • 5 (LINE-RX) 5 (LINE-TX)—15454-M-RAMAN-CTP card only. 5 (OSC-TX)—EDRA-1-26, EDRA-1-35, EDRA-2-26, EDRA-2-35. • 6 (LINE-TX), OPT-RAMP-C and OPT-RAMP-CE only. 6 (LINE-RX)—EDRA-1-26, EDRA-1-35, EDRA-2-26, EDRA-2-35. • 7 (DC-RX), OPT-AMP-C, OPT-RAMP-C, and OPT-RAMP-CE only 7 (DFB-RX)—15454-M-RAMAN-CTP card only • 8 (DC-TX), OPT-AMP-C only 7 (DFB-RX)—15454-M-RAMAN-CTP card only • 9 (RAMAN-RX), OPT-RAMP-C and OPT-RAMP-CE only 9(ASE-RX)—15454-M-RAMAN-CTP card only

Parameter	Description	Options
opwrMin (dBm)	Sets the low power warning level.	Numeric. Can be set for 15-minute or one-day intervals. The default is -50 dBm. Double-click the table cell, enter the name, and press Enter.
opwrMax (dBm)	Sets the high power warning level.	Numeric. Can be set for 15-minute or one-day intervals. The default is 30 dBm. Double-click the table cell, enter the name, and press Enter.
opwrMin OSC (dBm)	Sets the OSC low power warning level. Does not apply to OPT-RAMP-C, OPT-RAMP-CE, 15454-M-RAMAN-CTP, and 15454-M-RAMAN-COP.	Numeric. Can be set for 15-minute or one-day intervals. The default is -50 dBm. Double-click the table cell, enter the name, and press Enter.
opwrMax OSC (dBm)	Sets the OSC high power warning level. Does not apply to OPT-RAMP-C, OPT-RAMP-CE, 15454-M-RAMAN-CTP, and 15454-M-RAMAN-COP.	Numeric. Can be set for 15-minute or one-day intervals. The default is 30 dBm. Double-click the table cell, enter the name, and press Enter.

Step 4 If you want to change the alarm thresholds, complete the following steps. If not, continue with [Step 5](#).

- a) Under Types, choose Alarm.
- b) Click **Refresh**.
- c) Modify any of the alarm thresholds shown under the Options column in the following table.
- d) Click **Apply**. If the change affects traffic, a warning message appears. Click Yes to complete the change.

Table 15: Amplifier Card Optical Line Alarm Thresholds Setting

Parameter	Description	Options
Port	(Display only) Displays the port number.	<ul style="list-style-type: none"> • 1 (COM-RX) • 2 (COM-TX) • 3 (OSC-RX) • 4 (OSC-TX) 4 (LINE-RX)—15454-M-RAMAN-CTP card only • 5 (LINE-RX) 5 (LINE-TX)—15454-M-RAMAN-CTP card only • 6 (LINE-TX), OPT-RAMP-C and OPT-RAMP-CE only • 7 (DC-RX), OPT-AMP-C, OPT-RAMP-C, and OPT-RAMP-CE only 7 (DFB-RX)—15454-M-RAMAN-CTP card only • 8 (DC-TX), OPT-AMP-C only 8 (DFB-TX)—15454-M-RAMAN-CTP card only • 9 (RAMAN-RX), OPT-RAMP-C and OPT-RAMP-CE only 9(ASE-RX)—15454-M-RAMAN-CTP card only
Power Failure Low (dBm)	<p>Shows the optical power failure low threshold for the port. The threshold is calculated automatically when you run ANS. You can manually change the threshold. The value must be within the optical power range that is specified for the card. For more information, see the Hardware Specifications document.</p> <p>You can manually set the threshold at the COM-RX and LINE-RX ports.</p>	Numeric.
Pwr OSC Failure (dBm)	<p>Shows the optical power failure low threshold for the OSC channel of the port.</p> <p>You can manually set the threshold at the LINE-RX port.</p>	Numeric.

Step 5 Return to your originating procedure (NTP).

DLP-G325 Changing Optical Amplifier Line Settings

Purpose	This task changes the optical amplifier line settings for OPT-AMP-17-C, OPT-AMP-C, OPT-RAMP-C, OPT-RAMP-CE, EDRA-1-26, EDRA-1-35, EDRA-2-26, EDRA-2-35, OPT-EDFA-17, OPT-EDFA-24, OPT-EDFA-35, 17 SMR9 FS, 24 SMR9 FS, 34 SMR9 FS and, SMR20 FS/SMR20 FS CV amplifier cards.
Tools/Equipment	None
Prerequisite Procedures	DLP-G46 Log into CTC
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher

Procedure

- Step 1** In node view (single-shelf mode) or shelf view (multishelf mode), double-click the amplifier where you want to change the optical amplifier line settings.
- Step 2** Click the **Provisioning** > **Opt. Ampli. Line** > **Parameters** tabs.
- Step 3** Modify any of the settings described in the following table. The provisionable parameters are listed in the Options column in the table. In the Options column, the SONET (ANSI) option is followed by the SDH (ETSI) option.

Table 16: Optical Amplifier Line Settings

Parameter	Description	Options
Port	(Display only) Displays the port number, port type, and direction.	2 (COM-TX) 2 (COM-RX), 17 SMR9 FS, 24 SMR9 FS, 34 SMR9 FS, and SMR20 FS/SMR20 FS CV only 5 (LINE-TX), 17 SMR9 FS, 24 SMR9 FS, 34 SMR9 FS, and SMR20 FS/SMR20 FS CV only 3 (LINE-TX) 6 (LINE-TX) 8 (DC-TX), OPT-RAMP-C and OPT-RAMP-CE
Port Name	Assigns a name to the specified port.	User-defined. Name can be up to 80 alphanumeric characters and special characters. Blank by default. See the DLP-G104 Assigning a Name to a Port

Parameter	Description	Options
Admin State	Sets the port administrative state unless network conditions prevent the change. For more information about administrative states, see the Administrative and Service States document.	From the drop-down list, choose one of the following: <ul style="list-style-type: none"> • IS,AINS/Unlocked,automaticInService • OOS,DSBLD/Locked,disabled • OOS,MT/Locked,maintenance
Service State	(Display only) Identifies the autonomously generated state that gives the overall condition of the port. Service states appear in the format: Primary State-Primary State Qualifier, Secondary State. For more information about service states, see the Administrative and Service States document.	<ul style="list-style-type: none"> • IS-NR/Unlocked-enabled • OOS-AU,AINS/Unlocked-disabled,automaticInService • OOS-MA,DSBLD/Locked-enabled,disabled • OOS-MA,MT/Locked-enabled,maintenance
Total Output Power	(Display only) Shows the current power level per port.	—
Channel Power Ref.	(Display only) Shows the optical per-channel signal power setpoint that must be reached at the amplifier output when gain control is active.	—
Offset	Adjusts the Total Output Power unless network conditions prevent the adjustment, for example, the port is in IS state.	Numeric. Double-click to change.
Signal Output Power	(Display only) Shows the current output power leaving the amplifier, including the ASE contribution.	—
Output Power Set-Point	(Display only) Shows the output power setpoint. Does not apply to OPT-AMP-C, or OPT-AMP-17-C.	—
Working Mode	(Display only) Shows the working mode, either Output Power or Control Gain for the OPT-AMP-C; Control Power for the OPT-AMP-17-C; or Control Gain for the OPT-RAMP-C or OPT-RAMP-CE.	—
Gain	(Display only) The current gain of the amplifiers.	—
Gain Set Point	The value of the gain that the amplifier must achieve. APC can modify this value based on the number of OCHNC circuits that are managed by the amplifier or to compensate for fiber aging insertion loss. For more information, see the Network Reference chapter.	Display only or numeric depending on mode. When the system is configured as metro core, the value is display only.
Tilt (OPT-AMP-C)	(Display only) Shows the default value for the amplifier tilt. This field cannot be modified.	—

Parameter	Description	Options
Tilt Reference (OPT-AMP-C, OPT-EDFA-17, OPT-EDFA-24, OPT-EDFA-35, 17 SMR9 FS, 24 SMR9 FS, 34 SMR9 FS, SMR20 FS/SMR20 FS CV)	(Display only) Shows the default value for the amplifier tilt. This field can only be modified by ANS.	—
Tilt Calibration (OPT-AMP-C, OPT-EDFA-17, OPT-EDFA-24, OPT-EDFA-35, 17 SMR9 FS, 24 SMR9 FS, 34 SMR9 FS, SMR20 FS/SMR20 FS CV)	Allows you to manually change the amplifier tilt.	Numeric. Double-click the parameter, enter a press Enter.
DCU Insertion Loss (OPT-AMP-C)	(Display only) When provisioned as an OPT-PRE only) Shows the DCU insertion loss.	—
Active Channels	(Display only) Indicates how many channels the amplifier is carrying. Generally reflects the number of provisioned channels.	—
VOA Attenuation Ref	(Display only) Indicates the value for the VOA attenuation setpoint. This field can only be modified by ANS. Does not apply to 17 SMR9 FS, 24 SMR9 FS, 34 SMR9 FS, SMR20 FS/SMR20 FS CV.	—
VOA Attenuation Calib	Allows you to manually change the VOA setpoint. Does not apply to 17 SMR9 FS, 24 SMR9 FS, 34 SMR9 FS, SMR20 FS/SMR20 FS CV.	Numeric. Double-click the parameter, enter a press Enter.
Attenuator Value	Displays the attenuation value entered by the user.	—
OSC Power (17 SMR9 FS, 24 SMR9 FS, 34 SMR9 FS, SMR20 FS/SMR20 FS CV)	(Display only) Shows the OSC power level per port.	—
Gain Range (SMR20 FS/SMR20 FS CV)	(Display only) Shows the gain range of the EDFA pre-amplifier in the SMR20 FS/SMR20 FS CV cards. For more information on gain ranges, see the "17 SMR9 FS, 24 SMR9 FS, 34 SMR9 FS, SMR20 FS Cards" section.	—

Step 4 Click **Apply**. If the change affects traffic, a warning message appears. Click Yes to complete the change.

Step 5 Return to your originating procedure (NTP).

DLP-G326 Changing Optical Amplifier Threshold Settings

Purpose	This task changes the optical channel threshold settings for the OPT-PRE, OPT-BST, OPT-BST-E, OPT-AMP-17-C, OPT-AMP-C, OPT-RAMP-C, OPT-RAMP-CE, EDRA-1-26, EDRA-1-35, EDRA-2-26, EDRA-2-35, OPT-EDFA-17, OPT-EDFA-24, OPT-EDFA-35, 17 SMR9 FS, 24 SMR9 FS, 34 SMR9 FS, SMR20 FS/SMR20 FS CV amplifier cards.
Tools/Equipment	None
Prerequisite Procedures	DLP-G46 Log into CTC
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher



Caution Warning thresholds are monitored by CTC as part of performance monitoring. They must be user-provisioned.

Procedure

- Step 1** In node view (single-shelf mode) or shelf view (multishelf mode), double-click the amplifier where you want to change the optical amplifier threshold settings.
- Step 2** Click the **Provisioning** > **Opt Ampli Line** > **Optics Thresholds** tabs.
- Step 3** If you want to change the warning thresholds, complete the following steps. If not, continue with [Step 4](#).
- Under Types, choose Warning.
 - Choose the warning interval that you want to provision, either **15 minutes** or **1 Day**.
 - Click **Refresh**.
 - Modify any of the warning thresholds shown under the Options column in the following table.
 - Click **Apply**. If the change affects traffic, a warning message appears. Click Yes to complete the change.

Table 17: Amplifier Card Line Warning Threshold Settings

Parameter	Description	Options
Port	(Display only) Displays the port number, port type, and direction.	<ul style="list-style-type: none"> • 2 (COM-TX) OPT-BST, OPT-BST-E <ul style="list-style-type: none"> • 3 (LINE-TX) • 6 (LINE-TX) 8 (DC-TX), OPT-RAMP-C and OPT-RAMP-CE only <ul style="list-style-type: none"> • 2 (COM-RX) • 5 (LINE-TX) 17 SMR9 FS, 24 SMR9 FS, 34 SMR9 FS, SMR20 FS/SMR20 FS CV only
opwrMin (dBm)	Sets the low power warning level.	Numeric. Can be set for 15-minute or one-day intervals. The default is –50 dBm. Double-click the parameter, enter a value, and press Enter.
opwrMax (dBm)	Sets the high power warning level.	Numeric. Can be set for 15-minute or one-day intervals. The default is 30 dBm. Double-click the parameter, enter a value, and press Enter.
opwrMin OSC (dBm)	Sets the OSC low power warning level. Does not apply to OPT-PRE, OPT-RAMP-C, OPT-RAMP-CE, 17 SMR9 FS, 24 SMR9 FS, 34 SMR9 FS, SMR20 FS/SMR20 FS CV.	Numeric. Can be set for 15-minute or one-day intervals. The default is –50 dBm. Double-click the table cell, enter the name, and press Enter.
opwrMax OSC (dBm)	Sets the OSC high power warning level. Does not apply to OPT-PRE, OPT-RAMP-C, OPT-RAMP-CE, 17 SMR9 FS, 24 SMR9 FS, 34 SMR9 FS, SMR20 FS/SMR20 FS CV.	Numeric. Can be set for 15-minute or one-day intervals. The default is 30 dBm. Double-click the table cell, enter the name, and press Enter.

Step 4

If you want to change the alarm thresholds, complete the following steps. If not, continue with [Step 5](#).

- a) Under Types, choose Alarm.
- b) Click **Refresh**.
- c) Modify any of the alarm thresholds shown under the Options column in the following table.
- d) Click **Apply**. If the change affects traffic, a warning message appears. Click Yes to complete the change.

Table 18: Amplifier Line Alarm Thresholds Settings

Parameter	Description	Options
Port	(Display only) Displays the port number, port type, and direction.	6 (LINE-TX) 8 (DC-TX), OPT-RAMP-C and OPT-RAMP-CE only OPT-PRE: 2 (COM-TX) 2 (COM-RX), 17 SMR9 FS, 24 SMR9 FS, 34 SMR9 FS, and SMR20 FS/SMR20 FS CV only 5 (LINE-TX), 17 SMR9 FS, 24 SMR9 FS, 34 SMR9 FS, and SMR20 FS/SMR20 FS CV only
Power Failure Low (dBm)	Shows the optical power failure low threshold for the port. The threshold is calculated automatically when you run ANS. You can manually change the threshold. The value must be within the optical power range that is specified for the card. For more information, see the Hardware Specifications document.	Numeric. Double-click to change.
Power Degrade High (dBm)	(Display only) Shows the current value of the optical power degrade high threshold. This threshold applies only when the amplifier is active and in constant power mode. Power Degrade High refers to the port's Signal Output Power value and is automatically calculated by the control card when the amplifier is turned up. The Power Degrade High threshold is linked to the Output Power Setpoint on the Parameters tab. Changing the setpoint changes the Power Degrade High threshold. The threshold value is always 2 dB higher than the Output Power Setpoint value. APC can modify this value based on the number of OCHNC circuits that the amplifier is managing. For more information, see the Network Reference chapter.	—

Parameter	Description	Options
Power Degrade Low (dBm)	<p>(Display only) Shows the current value of the optical power degrade high threshold configured in the card. This threshold applies only when the amplifier is active and in constant power mode.</p> <p>Power Degrade Low refers to the port's Signal Output Power value and is automatically calculated by the control card when the amplifier is turned up.</p> <p>The Power Degrade Low threshold is automatically linked to the Output Power Setpoint on the Parameters tab. Changing the setpoint changes the Power Degrade Low threshold. The threshold value is always 2 dB lower than the Output Power Setpoint.</p> <p>APC can modify this value based on the number of OCHNC circuits that the amplifier is managing.</p>	—
Gain Degrade High (dBm)	<p>(Display only) Shows the current value of the gain degrade high threshold configured in the card. This threshold applies only when the amplifier is active and in constant gain mode.</p> <p>Gain Degrade High refers to the port's Gain value and is automatically calculated by the control card when the amplifier is turned up.</p> <p>The Gain Degrade High threshold is linked to the Gain setpoint. Changing the setpoint changes the Gain Degrade High threshold. The threshold value is always 2 dB higher than the Gain Setpoint value.</p> <p>APC can modify this value based on the number of OCHNC circuits that the amplifier is managing and to compensate for insertion loss due to fiber aging.</p>	—

Parameter	Description	Options
Gain Degrad Low (dBm)	<p>(Display only) Shows the current value of the gain degrade low threshold configured in the card. This threshold applies only when the amplifier is active and in constant gain mode.</p> <p>Gain Degrad Low refers to the port's Gain value and is automatically calculated by the control card when the amplifier is turned up.</p> <p>The Gain Degrad Low threshold is automatically linked to the Gain Setpoint that is provisioned. Changing the setpoint changes the Gain Degrad Low threshold. The threshold value is always 2 dB lower than the Gain Setpoint value.</p> <p>APC can also modify this value based on the number of OCHNC circuits that the amplifier is managing.</p>	—

Step 5 Return to your originating procedure (NTP).

DLP-G538 Changing Optical Raman Line Settings for Raman Amplifiers

Purpose	This task changes the optical Raman line settings for OPT-RAMP-C, OPT-RAMP-CE, EDRA-1-26, EDRA-1-35, EDRA-2-26, EDRA-2-35, 15454-M-RAMAN-CTP, and 15454-M-RAMAN-COP amplifier cards.
Tools/Equipment	None
Prerequisite Procedures	DLP-G46 Log into CTC
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher

Procedure

- Step 1** In node view (single-shelf mode) or shelf view (multishelf mode), double-click the Raman amplifier where you want to change the optical Raman line settings.
- Step 2** Click the **Provisioning > Opt. Raman. Line > Parameters** tab.
- Step 3** Modify any of the settings described in the following table. The provisionable parameters are listed in the Options column in the table. In the Options column, the SONET (ANSI) option is followed by the SDH (ETSI) option.

Table 19: Raman Amplifier Optical Line Settings

Parameter	Description	Options
Port	(Display only) Displays the port number, port type, and direction.	<p>3 (RAMAN-RX) for 15454-M-RAMAN-CTF, 15454-M-RAMAN-COP cards only</p> <p>6 (RAMAN-TX) for 15454-M-RAMAN-CTF, 15454-M-RAMAN-COP cards only</p> <p>EDRA-1-26, EDRA-1-35, EDRA-2-26, EDRA-2-35 cards:</p> <ul style="list-style-type: none"> • 8 (RAMAN-TX) • 9 (PUMP-TX1) • 10 (PUMP-TX2) • 11 (PUMP-TX3) • 12 (PUMP-TX4) <p>10 RAMAN-TX</p>
Port Name	Assigns a name to the specified port.	<p>User-defined. Name can be up to 80 alphanumeric characters and special characters. This field is blank by default.</p> <p>See the DLP-G104 Assigning a Name to a Port document.</p>
Admin Admin State	Displays the port administrative state. For more information about administrative states, see the Administrative and Service States document.	<ul style="list-style-type: none"> • IS,AINS/Unlocked,automaticInService • OOS,DSBLD/Locked,disabled • OOS,MT/Locked,maintenance
Service State	(Display only) Identifies the autonomously generated state that gives the overall condition of the port. Service states appear in the format: Primary State-Primary State Qualifier, Secondary State. For more information about service states, see the Administrative and Service States document.	<ul style="list-style-type: none"> • IS-NR/Unlocked-enabled • OOS-AU,AINS/Unlocked-disabled, automaticInService • OOS-MA,DSBLD/Locked-enabled,disabled • OOS-MA,MT/Locked-enabled,maintenance
Power	(Display only) Indicates the current Raman power.	—
Power Ref.	(Display only) Shows the value of the optical power setpoint that must be reached.	—
Active Channels	(Display only) Indicates how many channels the amplifier is carrying. Generally reflects the number of provisioned channels. This field can be modified by ANS or the Raman wizard.	—
Ratio	(Display only) Indicates the ratio of the Raman power setpoint distributed between the two Raman pumps.	—

Parameter	Description	Options
Power Setpoint	(Display only) Indicates the Raman power setpoint as the sum of Pump1 and Pump 2 set points. This field is modified by ANS or the Raman wizard.	—

- Step 4** Click **Apply**. If the change affects traffic, a warning message appears. Click Yes to complete the change.
- Step 5** Return to your originating procedure (NTP).

DLP-G539 Changing Optical Raman Line Threshold Settings for Raman Amplifiers

Purpose	This task changes the optical channel threshold settings for the OPT-RAMP-C, OPT-RAMP-CE, EDRA-1-26, EDRA-1-35, EDRA-2-26, EDRA-2-35, 15454-M-RAMAN-CTP, and 15454-M-RAMAN-COP amplifier cards.
Tools/Equipment	None
Prerequisite Procedures	DLP-G46 Log into CTC
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher



Caution Warning thresholds are monitored by CTC as part of performance monitoring. They must be user-provisioned.

Procedure

- Step 1** In node view (single-shelf mode) or shelf view (multishelf mode), double-click the amplifier card where you want to change the optical Raman threshold settings.
- Step 2** Click the **Provisioning > Opt. Raman. Line > Optics Thresholds** tabs.
- Step 3** If you want to change the warning thresholds, complete the following steps. If not, continue with [Step 4](#).
 - a) Under Types, choose Warning.
 - b) Choose the warning interval that you want to provision, either **15 minutes** or **1 Day**.
 - c) Click **Refresh**.
 - d) Modify any of the warning thresholds shown under the Options column in the following table.
 - e) Click **Apply**. If the change affects traffic, a warning message appears. Click Yes to complete the change.

Table 20: Raman Card Line Warning Threshold Settings

Parameter	Description	Options
Port	(Display only) Displays the port number, port type, and direction.	3 (RAMAN-RX) for 15454-M-RAMAN-CTP and 15454-M-RAMAN-COP cards only 6 (RAMAN-TX) for 15454-M-RAMAN-CTP and 15454-M-RAMAN-COP cards only 10 RAMAN-TX EDRA-1-26, EDRA-1-35, EDRA-2-26, EDRA-2-35 cards: <ul style="list-style-type: none"> • 8 (RAMAN-TX) • 9 (PUMP-TX1) • 10 (PUMP-TX2) • 11 (PUMP-TX3) • 12 (PUMP-TX4)
opwrMin (dBm)	Sets the low power warning level.	Numeric. Can be set for 15-minute or one-day intervals. The default is -50 dBm. Double-click the parameter, enter a value, and press Enter.
opwrMax (dBm)	Sets the high power warning level.	Numeric. Can be set for 15-minute or one-day intervals. The default is 30 dBm. Double-click the parameter, enter a value, and press Enter.

Step 4 If you want to change the alarm thresholds, complete the following steps. If not, continue with [Step 5](#).

- a) Under Types, choose Alarm.
- b) Click **Refresh**.
- c) Modify any of the alarm thresholds shown under the Options column in the following table.
- d) Click **Apply**. If the change affects traffic, a warning message appears. Click Yes to complete the change.

Table 21: Raman Card Line Alarm Thresholds Settings

Parameter	Description	Options
Port	(Display only) Displays the port number, port type, and direction.	3 (RAMAN-RX) for 15454-M-RAMAN-CTP and 15454-M-RAMAN-COP cards only 6 (RAMAN-TX) for 15454-M-RAMAN-CTP and 15454-M-RAMAN-COP cards only 10 RAMAN-TX EDRA-1-26, EDRA-1-35, EDRA-2-26, EDRA-2-35 cards: <ul style="list-style-type: none"> • 8 (RAMAN-TX) • 9 (PUMP-TX1) • 10 (PUMP-TX2) • 11 (PUMP-TX3) • 12 (PUMP-TX4)
Power Failure Low (dBm)	Shows the optical power failure low threshold for the port. The threshold is calculated automatically when you run ANS. You can manually change the threshold. The value must be within the optical power range that is specified for the card.	Numeric. Double-click to change.

Step 5 Return to your originating procedure (NTP).

DLP-G327 Changing the ALS Maintenance Settings of Amplifier Cards

Purpose	This task changes the ALS maintenance settings for the OPT-AMP-17-C, OPT-AMP-C, OPT-RAMP-C, OPT-RAMP-CE, 15454-M-RAMAN-CTP, 15454-M-RAMAN-COP, EDRA-1-26, EDRA-1-35, EDRA-2-26, EDRA-2-35, OPT-EDFA-17, OPT-EDFA-24, and OPT-EDFA-35 amplifier cards.
Tools/Equipment	None
Prerequisite Procedures	DLP-G46 Log into CTC
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher



Note To perform this task, the OPT-AMP-17-C, OPT-AMP-C, OPT-EDFA-17, OPT-EDFA-24, and OPT-EDFA-35 card must be in OPT-LINE mode.



Note The ALS function should only be disabled temporarily for installation or maintenance reasons. Activate ALS immediately after maintenance or installation.

Invisible laser radiation could be emitted from the end of the unterminated fiber cable or connector. Do not stare into the beam directly with optical instruments. Viewing the laser output with certain optical instruments (for example, eye loupes, magnifiers, and microscopes) within a distance of 100 mm could pose an eye hazard. Statement 1056

Procedure

- Step 1** In node view (single-shelf mode) or shelf view (multishelf mode), double-click the card where you want to change the ALS maintenance settings.
- Step 2** Click the **Maintenance > ALS** tabs.
- Step 3** Modify any of the settings described in the following table. The provisionable parameters are listed in the Options column in the table.

Table 22: Amplifier Card ALS Maintenance Settings

Parameter	Description	Options
Port	(Display only) Displays the port number, port type, and direction.	2 (COM-TX) 3 (LINE-TX) 10 (RAMAN-RX), OPT-RAMP-C and OPT-RAMP-CE only. 8 (DC-TX), OPT-RAMP-C and OPT-RAMP-CE only. 8 (RAMAN-TX) for EDRA-1-26, EDRA-1-35, EDRA-2-26, and EDRA-2-35. 6 (RAMAN-TX), 15454-M-RAMAN-CTP and 15454-M-RAMAN-COP only 8 (DFB-TX), 15454-M-RAMAN-CTP only

Parameter	Description	Options
OSRI	Optical safety remote interlock. When set to On , the OPT-AMP-17-C, OPT-AMP-C, OPT-RAMP-C, OPT-RAMP-CE, 15454-M-RAMAN-CTP, or 15454-M-RAMAN-COP TX output power is shut down.	From the drop-down list, choose one of the following: <ul style="list-style-type: none"> • On • Off
ALS Mode	<p>Sets the Automatic laser shutdown mode. For OPT-AMP-17-C, OPT-AMP-C, OPT-RAMP-C, OPT-RAMP-CE, 15454-M-RAMAN-CTP, and 15454-M-RAMAN-COP cards, ALS provides the ability to shut down the TX laser when the card RX detects an LOS.</p> <p>For EDRA cards, the ALS mode can be set to :</p> <ul style="list-style-type: none"> • RAMAN-TX: auto restart or manual restart • LINE-TX: auto restart <p>ALS also enables an optical safety mechanism at the DWDM network layer. For more information, see the Network Reference chapter.</p>	From the drop-down list, choose one of the following: <ul style="list-style-type: none"> • Disable—Deactivates ALS. If the OPT-AMP-17-C, or OPT-AMP-C, faces a span without an OSC connection, choose this option. • Auto Restart—(Default) Activates ALS. The power is automatically shut down when needed and automatically tries to restart using a probe pulse until the cause of the failure is repaired. • Manual Restart • Manual Restart for Test
Recovery Pulse Duration	(Display only) Displays the duration of the optical power pulse that begins when an amplifier restarts.	—
Recovery Pulse Interval	(Display only) Displays the interval between optical power pulses.	—
Currently Shutdown	(Display only) Displays the current status of the laser.	—
Request Laser Restart	If checked, allows you to restart the laser for maintenance.	Checked or unchecked
OSC Based Startup	If checked, allows the Raman pump to be turned on even though OSC is the only detected power and there is no Raman signal.	Checked or unchecked.

- Step 4** Click **Apply**. If the change affects traffic, a warning message appears. Click Yes to complete the change.
- Step 5** Return to your originating procedure (NTP).

NTP-G202 Modifying Line Settings and PM Thresholds for PSM Card

Purpose	This procedure changes the line and threshold settings for the PSM card.
Tools/Equipment	None
Prerequisite Procedures	<ul style="list-style-type: none"> • DLP-G46 Log into CTC • NTP-G30 Installing the DWDM cards
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher

Procedure

-
- Step 1** Complete the [NTP-G103 Backing Up the Database](#) procedure.
- Step 2** Perform any of the following tasks as needed:
- [DLP-G514 Changing the PSM Card Mode](#)
 - [DLP-G476 Changing Optical Line Settings for the PSM Card](#)
 - [DLP-G477 Changing Optical Line Threshold Settings for the PSM Card](#)
 - [DLP-G478 Changing the ALS Maintenance Settings for the PSM Card](#)
- Step 3** Complete the [NTP-G103 Backing Up the Database](#) procedure.
-

DLP-G514 Changing the PSM Card Mode

Purpose	This task changes the PSM card mode.
Tools/Equipment	None
Prerequisite Procedures	DLP-G46 Log into CTC
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher



Note You cannot change the PSM card mode if any of the PSM ports is in use in the normal configuration, that is, at least one patchcord is provisioned on the PSM ports.

Procedure

- Step 1** In the node view (single-shelf mode) or shelf view (multishelf mode), double-click the PSM card where you want to change the card mode.
- Step 2** Click the **Provisioning > Card** tab.
- Step 3** From the Mode drop-down list, choose one of the following:
 - Normal—Sets the PSM card in normal configuration. In this configuration, the PSM card supports channel protection, line protection, and multiplex section protection configurations.
 - Standalone—Sets the PSM card in standalone configuration. In this configuration, the PSM card can be equipped in any slot and supports all node configurations. When you select this option, CTC will:
 - Not support creation of patchcords
 - Set all VOA set points to 0dB attenuation
 - Move the administrative state of all ports to IS (ANSI) or Unlocked (ETSI)
- Note** In the standalone configuration, you cannot change the administrative state of the PSM ports. However, you can enable optical safety in standalone configuration.
- Step 4** Return to your originating procedure (NTP).

DLP-G476 Changing Optical Line Settings for the PSM Card

Purpose	This task changes the optical line settings for the PSM card.
Tools/Equipment	None
Prerequisite Procedures	DLP-G46 Log into CTC
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher

Procedure

- Step 1** In node view (single-shelf mode) or shelf view (multishelf mode), double-click the PSM card where you want to change the optical line settings.

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

Step 3 Modify any of the settings described in the following table. The provisionable parameters are listed in the Options column.

Table 23: PSM Card Optical Line Settings

Parameter	Description	Options
Port	(Display only) Displays the port number, port type, and direction (TX or RX).	<ul style="list-style-type: none"> • 1 (W-RX) • 2 (W-TX) • 3 (P-RX) • 4 (P-TX) • 5 (COM-RX) • 6 (COM-TX)
Port Name	Provides the ability to assign the specified port a name.	User-defined. Name can be up to 80 alphanumeric characters and special characters. Blank by default. Double-click to edit, enter the name, and press Enter. See the DLP-G104 Assigning a Name to a Port document.
Admin State	Sets the port administrative state unless network conditions prevent the change. For more information about administrative states, see the Administrative and Service States document.	From the drop-down list, choose one of the following: <ul style="list-style-type: none"> • IS,AINS/Unlocked,automaticInService • OOS,DSBLD/Locked,disabled • OOS,MT/Locked,maintenance
Service State	(Display only) Identifies the autonomously generated state that gives the overall condition of the port. Service states appear in the format: Primary State-Primary State Qualifier, Secondary State. For more information about service states, see the Administrative and Service States document.	<ul style="list-style-type: none"> • IS-NR/Unlocked-enabled • OOS-AU,AINS/Unlocked-disabled, automaticInService • OOS-MA,DSBLD/Locked-enabled,disabled • OOS-MA,MT/Locked-enabled,maintenance
Power	(Display only) Shows the current power level per port.	—
VOA Mode	(Display only) Shows the functional mode of the VOA, when present. Note For W-RX and P-RX ports, the VOA Mode is always set to Constant Attenuation.	<ul style="list-style-type: none"> • Constant Attenuation • Constant Power
VOA Attenuation Ref	(Display only) Shows the VOA attenuation value when VOA Mode is set to Constant Attenuation. This parameter can only be modified by ANS.	—

Parameter	Description	Options
VOA Attenuation Calib	Modifies the attenuation value of the VOA when the VOA Mode is set to Constant Attenuation.	Numeric. Double-click the parameter, enter a value, and press Enter.
Active Channels	(Display only) Indicates how many channels the PSM card is carrying. Generally reflects the number of provisioned channels.	—

Step 4 Click **Apply**. If the change affects traffic, a warning message appears. Click Yes to complete the change.

Step 5 Return to your originating procedure (NTP).

DLP-G477 Changing Optical Line Threshold Settings for the PSM Card

Purpose	This task changes the optical line threshold settings for the PSM card.
Tools/Equipment	None
Prerequisite Procedures	DLP-G46 Log into CTC
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher



Caution It is recommended that you use the optical line threshold values imported from the Cisco Transport Planner XML configuration file. If you want to modify the threshold values, consult your network operations center (NOC) or other appropriate personnel who can understand and set the correct threshold values.



Caution Warning thresholds are monitored by CTC as part of performance monitoring. They must be user-provisioned.

Procedure

Step 1 In node view (single-shelf mode) or shelf view (multishelf mode), double-click the PSM card where you want to change the optical line threshold settings.

Step 2 Click the **Provisioning > Optical Line > Optics Thresholds** tabs.

Step 3 If you want to change the warning thresholds, complete the following steps. If not, continue with [Step 4](#).

- a) Under Types, choose Warning.
- b) Choose the warning interval that you want to provision, either **15 minutes** or **1 Day**.
- c) Click **Refresh**.

- d) Modify any of the warning thresholds shown under the Options column in the following table.
- e) Click **Apply**. If the change affects traffic, a warning message appears. Click Yes to complete the change.

Table 24: PSM Card Optical Line Warning Threshold Settings

Parameter	Description	Options
Port	(Display only) Displays the port number, port type, and direction (TX or RX)	<ul style="list-style-type: none"> • 1 (W-RX) • 2 (W-TX) • 3 (P-RX) • 4 (P-TX) • 5 (COM-RX) • 6 (COM-TX)
opwrMin (dBm)	Sets the low power warning level.	Numeric. Can be set for 15-minute or one-day intervals. The default is -50 dBm. Double-click the table cell, enter the value, and press Enter.
opwrMax (dBm)	Sets the high power warning level.	Numeric. Can be set for 15-minute or one-day intervals. The default is 30 dBm. Double-click the table cell, enter the value, and press Enter.

Step 4 If you want to change the alarm thresholds, complete the following steps. If not, continue with [Step 5](#).

- a) Under Types, choose Alarm.
- b) Click **Refresh**.
- c) Modify any of the alarm thresholds shown under the Options column in the following table.
- d) Click **Apply**. If the change affects traffic, a warning message appears. Click Yes to complete the change.

Table 25: PSM Card Optical Line Alarm Thresholds Setting

Parameter	Description	Options
Port	(Display only) Displays the port number, port type, and direction (TX or RX)	<ul style="list-style-type: none"> • 1 (W-RX) • 2 (W-TX) • 3 (P-RX) • 4 (P-TX) • 5 (COM-RX) • 6 (COM-TX)

Parameter	Description	Options
Power Failure Low (dBm)	Shows the optical power failure low threshold for the port. You can manually change the threshold. The value must be within the optical power range that is specified for the card. For more information, see the Hardware Specifications document.	Numeric. Double-click the table cell, enter a value, then press Enter .
VOA Degrade High (dB)	(Display only) Shows the VOA degrade high threshold. This VOA value applies to the corresponding port and is automatically calculated when ANS is run. This threshold applies to a port associated to a VOA that is always active in Constant Attenuation mode. The threshold is automatically linked to the VOA setpoint that is provisioned (VOA Attenuation Ref + VOA Attenuation Calib). Changing the setpoint will result in changing the threshold (always 2 dB higher).	Numeric.
VOA Degrade Low (dB)	(Display only) Shows the VOA degrade low threshold. This VOA value applies to the corresponding port and is automatically calculated when ANS is run. This threshold applies to a port associated to a VOA that is always active in Constant Attenuation mode. The threshold is automatically linked to the VOA setpoint that is provisioned (VOA Attenuation Ref + VOA Attenuation Calib). Changing the setpoint will result in changing the threshold (always 2 dB lower).	Numeric.

Step 5 Return to your originating procedure (NTP).

DLP-G478 Changing the ALS Maintenance Settings for the PSM Card

Purpose	This task changes the ALS maintenance settings for the PSM card.
Tools/Equipment	None
Prerequisite Procedures	DLP-G46 Log into CTC
Required/As Needed	As needed

Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher



Note The ALS function is applicable for a PSM card in line (or path) protection configuration only. It is not applicable for all other PSM protection configurations.



Note The ALS function should only be disabled temporarily for installation or maintenance reasons. Activate ALS immediately after maintenance or installation.

Invisible laser radiation could be emitted from the end of the unterminated fiber cable or connector. Do not stare into the beam directly with optical instruments. Viewing the laser output with certain optical instruments (for example, eye loupes, magnifiers, and microscopes) within a distance of 100 mm could pose an eye hazard. Statement 1056

Procedure

- Step 1** In node view (single-shelf mode) or shelf view (multishelf mode), double-click the PSM card where you want to change the ALS maintenance settings.
- Step 2** Click the **Maintenance** > **ALS** tabs.
- Step 3** Modify any of the settings described in the following table. The provisionable parameters are listed in the Options column in the table.

Table 26: PSM ALS Maintenance Settings

Parameter	Description	Options
OSRI	Optical safety remote interlock. When set to On, only the PSM TX output power of the protect path is shut down.	From the drop-down list, choose one of the following: <ul style="list-style-type: none"> • On • Off

Parameter	Description	Options
ALS Mode	Automatic laser shutdown. ALS provides the ability to shut down the PSM TX VOA when the PSM RX detects an LOS. ALS also enables an optical safety mechanism at the DWDM network layer. For more information, see the Network Reference chapter.	From the drop-down list, choose one of the following: <ul style="list-style-type: none"> • Disable—Deactivates ALS. • Auto Restart—(Default) ALS is active. The power is automatically shut down when needed and automatically tries to restart using a probe pulse until the cause of the failure is repaired. • Manual Restart • Manual Restart for Test
Recovery Pulse Duration	(Display only) Displays the duration of the optical power pulse that begins when the VOA restarts.	—
Recovery Pulse Interval	(Display only) Displays the interval between optical power pulses.	—
Currently Shutdown	(Display only) Displays whether or not the VOA is currently shut down.	<ul style="list-style-type: none"> • YES • NO • APR—This is a temporary option that is displayed when the Currently Shutdown status is changing from YES to NO.
Request Laser Restart	If checked, allows you to restart the VOA.	Checked or unchecked

Step 4 Click **Apply**. If the change affects traffic, a warning message appears. Click Yes to complete the change.

Step 5 Return to your originating procedure (NTP).

NTP-G175 Modifying Line Card Settings and PM Thresholds for Multiplexer and Demultiplexer Cards

Purpose	This procedure changes the line and PM parameter threshold settings for the multiplexer and demultiplexer cards. The cards included in this category are the 32DMX, 40-MUX-C, 40-DMX-C, 40-DMX-CE, and 4MD-xx.x cards.
Tools/Equipment	None

Prerequisite Procedures	<ul style="list-style-type: none"> • DLP-G46 Log into CTC • NTP-G30 Installing the DWDM cards
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher



Note Complete the DLP-G141 View Optical Power Statistics for 32MUX-O, 32WSS, 32DMX-O, 32DMX, 40-WSS-C, 40-WSS-CE, 40-WXC-C, 80-WXC-C, 40-MUX-C, 40-DMX-C, and 40-DMX-CE Cards to view the optical power statistics.

Procedure

Step 1 Complete the [NTP-G103 Backing Up the Database](#) procedure.

Step 2 Perform any of the following tasks as needed:

- [DLP-G414 Changing Optical Line Settings for Multiplexer and Demultiplexer Cards](#)
- [DLP-G415 Changing Optical Line Threshold Settings for Multiplexer and Demultiplexer Cards](#)
- [DLP-G416 Changing Optical Channel Settings for Multiplexer and Demultiplexer Cards](#)
- [DLP-G417 Changing Optical Channel Threshold Settings for Multiplexer and Demultiplexer Cards](#)

Step 3 Complete the [NTP-G103 Backing Up the Database](#) procedure.

Stop. You have completed this procedure.

DLP-G414 Changing Optical Line Settings for Multiplexer and Demultiplexer Cards

Purpose	This task changes the optical line settings for a 32DMX, 40-MUX-C, 40-DMX-C, 40-DMX-CE, or 4MD-xx.x cards.
Tools/Equipment	None
Prerequisite Procedures	DLP-G46 Log into CTC
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher

Procedure

- Step 1** In node view (single-shelf mode) or shelf view (multishelf mode), double-click the multiplexer or demultiplexer card where you want to change the optical line settings.
- Step 2** Perform one of the following:
- For 32DMX, 40-MUX-C, 40-DMX-C, and 40-DMX-CE cards, click the **Provisioning > Optical Line > Parameters** tabs.
 - For 4MD-xx.x cards, click the **Provisioning > Optical Band > Parameters** tabs.
- Step 3** Modify any of the settings described in the following table. The provisionable parameters are listed in the Options column in the table. In the Options column, the SONET (ANSI) option is followed by the SDH (ETSI) option.

Table 27: Multiplexer and Demultiplexer Card Optical Line Settings

Parameter	Description	Options
Port	(Display only) Displays the port number, port type, and direction (TX or RX).	32DMX <ul style="list-style-type: none"> • 33 (COM-RX) 40-DMX-C, 40-DMX-CE <ul style="list-style-type: none"> • 41 (COM-RX) 40-MUX-C <ul style="list-style-type: none"> • 41 (COM-TX) 4MD-xx.x <ul style="list-style-type: none"> • 41 (COM-TX)
Port Name	Provides the ability to assign the specified port a name.	User-defined. Name can be up to 80 alphanumeric characters. Blank by default. Double-click to enter the name, and press Enter. See the DLP-G104 Assigning a Name to a Port
Admin State	Sets the port administrative state unless network conditions prevent the change. For more information about administrative states, see the Administrative and Service States document.	From the drop-down list, choose one of the following: <ul style="list-style-type: none"> • IS,AINS/Unlocked,automaticInService • OOS,DSBLD/Locked,disabled • OOS,MT/Locked,maintenance

Parameter	Description	Options
Service State	(Display only) Identifies the autonomously generated state that gives the overall condition of the port. Service states appear in the format: Primary State-Primary State Qualifier, Secondary State. For more information about service states, see the Administrative and Service States document.	<ul style="list-style-type: none"> • IS-NR/Unlocked-enabled • OOS-AU,AINS/Unlocked-disabled, automaticInService • OOS-MA,DSBLD/Locked-enabled,disabl • OOS-MA,MT/Locked-enabled,maintenan
Power	(Display only) Shows the current power level per port.	—
AINS Soak	(Display only) The automatic in-service soak period. It is always 00.00.	—
VOA Mode	(Display only; 32DMX only) Shows the functional mode of the VOA, when present.	<ul style="list-style-type: none"> • Constant Attenuation • Constant Power
VOA Power Ref	(Display only; 32DMX only) Shows the optical power setpoint that must be reached when a VOA is present and VOA Mode is set to Constant Power. This parameter can only be modified by ANS.	—
VOA Power Calib	(32DMX only) Modifies the optical power value of the VOA when VOA Mode is set to Constant Power.	Numeric. Double-click the parameter, enter a v press Enter.
VOA ATTenuation Ref	(Display only; 32DMX only) Shows the VOA attenuation value when VOA Mode is set to Constant Attenuation. This parameter can only be modified by ANS.	—
VOA Attenuation Calib	(32DMX only) Modifies the attenuation value of the VOA when the VOA Mode is set to Constant Attenuation.	Numeric. Double-click the parameter, enter a v press Enter.
Active Channels	(Display only) Indicates how many channels the amplifier is carrying. Generally reflects the number of provisioned channels.	—
Attenuator Value	Displays the attenuation value entered by the user.	—

Step 4 Click **Apply**. If the change affects traffic, a warning message appears. Click Yes to complete the change.

Step 5 Return to your originating procedure (NTP).

DLP-G415 Changing Optical Line Threshold Settings for Multiplexer and Demultiplexer Cards

Purpose	This task changes the optical line threshold settings for a 32DMX, 40-DMX-C, 40-DMX-CE, 40-MUX-C, or 4MD-xx.x.
Tools/Equipment	None
Prerequisite Procedures	DLP-G46 Log into CTC
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher

Procedure

- Step 1** In node view (single-shelf mode) or shelf view (multishelf mode), double-click the multiplexer or demultiplexer card where you want to change the optical line threshold settings.
- Step 2** Perform one of the following:
- For 32DMX, 40-DMX-C, 40-DMX-CE, and 40-MUX-C cards, click the **Provisioning > Optical Line > Optics Thresholds** tabs.
 - For 4MD-xx.x cards, click the **Provisioning > Optical Band > Optics Thresholds** tabs.
- Step 3** If you want to change the warning thresholds, complete the following steps. If not, continue with Step 4.
- Under Types, choose Warning.
 - Choose the warning interval that you want to provision, either **15 minutes** or **1 Day**.
 - Click **Refresh**.
 - Modify any of the warning thresholds shown under the Options column in the following table.
 - Click **Apply**. If the change affects traffic, a warning message appears. Click Yes to complete the change.

Table 28: Multiplexer and Demultiplexer Card Optical Line Warning Threshold Settings

Parameter	Description	Options
Port	(Display only) Displays the port number and description.	<ul style="list-style-type: none"> • 33 (COM-RX) for 32DMX, • 41 (COM-RX) for 40-DMX-C/40-DMX-CE • 41 (COM-TX) for 40-MUX-C • 9 (COM-RX) and 10 (COM-TX) for 4MD-xx.x

Parameter	Description	Options
opwrMin (dBm)	Sets the low power warning level.	Numeric. Can be set for 15-minute or one-day intervals. The default is -50 dBm. Double-click the parameter, enter a value, and press Enter.
opwrMax (dBm)	Sets the high power warning level.	Numeric. Can be set for 15-minute or one-day intervals. The default is 30 dBm. Double-click the parameter, enter a value, and press Enter.

Caution Warning thresholds are monitored by CTC as part of performance monitoring. They must be user-provisioned.

Step 4 If you want to change the alarm thresholds, complete the following steps. If not, continue with [Step 5](#).

- a) Under Types, choose Alarm.
- b) Click **Refresh**.
- c) Modify any of the alarm thresholds shown under the Options column in the following table.
- d) Click **Apply**. If the change affects traffic, a warning message appears. Click Yes to complete the change.

Table 29: Multiplexer and Demultiplexer Optical Line Alarm Threshold Settings

Parameter	Description	Options
Port	(Display only) Displays the port number, port type, and direction (TX or RX).	32DMX <ul style="list-style-type: none"> • 33 (COM-RX) 40-DMX-C, 40-DMX-CE <ul style="list-style-type: none"> • 41 (COM-RX) 40-MUX-C <ul style="list-style-type: none"> • 41 (COM-TX) 4MD-xx.x <ul style="list-style-type: none"> • 9 (COM-RX) and 10 (COM-TX)
Power Failure Low (dBm)	Shows the optical power failure low threshold for the port. The threshold is calculated automatically when you run ANS. You can manually change the threshold. The value must be within the optical power range that is specified for the card. For more information, see the Hardware Specifications document.	Numeric. Double-click the parameter, enter a value, and press Enter.
Power Degrade High (dBm)	Not applicable to 32DMX, 40-DMX-C, 40-DMX-CE, 40-MUX-C, and 4MD-xx.x cards.	—

Parameter	Description	Options
Power Degrade Low (dBm)	Not applicable to 32DMX, 40-DMX-C, 40-DMX-CE, 40-MUX-C, and 4MD-xx.x cards.	—

Step 5 Return to your originating procedure (NTP).

DLP-G781 Switching Channels for 12-AD-FS and 16-AD-FS Cards

Purpose	This task switches channels for 12-AD-FS and 16-AD-FS cards.
Tools/Equipment	None
Prerequisite Procedures	DLP-G46 Log into CTC
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher

Procedure

Step 1 In node view (single-shelf mode) or shelf view (multishelf mode), double-click the 12-AD-FS or 16-AD-FS card where you want to switch channels. Place the add and drop channel ports in OOS, MT administrative state.

- a) For 12-AD-FS card, place the add and drop channel that follows in OOS, MT administrative state.
 - Add channels:
 - DEG1-4#1-TX1-*i* (where *i* = 1, 3, 5, and 7)
 - Drop channels:
 - CH1-4#*i*-RX2-*j* (where *i* = 1 to 3 and *j* = 2, 4, 6, and 8)
 - CH1-4#*i*-TX2-*j* (where *i* = 1 to 3 and *j* = 1, 3, 5, and 7)

- b) For 16-AD-FS card, place the add and drop channel that follows in OOS, MT administrative state:
 - Add channels:
 - DEG1-4-TX1-*i* (where *i* = 1, 3, 5, and 7)
 - UPG#1-TX2-1
 - Drop channels:
 - CH1-8/UPG#1-RX 4-*i* (where *i* = 9 to 16)

- CH1-8/UPG#1-TX 4-*i* (where *i* = 1 to 8)
- CH9-16/UPG#2-RX 5-*i* (where *i* = 9 to 16)
- CH9-16/UPG#2-TX 5-*i* (where *i* = 1 to 8)

Step 2 Click **Maintenance** > **Maintenance Switch**. All the channels ports are listed under the Port column.

Step 3 Click **Set Switch**.

Step 4 In the Set Switch window, complete the following steps to switch channels:

- a) From the Line Port drop-down list, choose the channel from which you want to switch.
- b) From the Switch to Port drop-down list, choose the channel to which you want to switch.
- c) Choose a DEG (degree) port for the 12-AD-FS card and DEG/UPG (degree/upgrade) port for 16-AD-FS card.
- d) Click **OK**.

Step 5 Complete the following to steps to reset channels. Use this option if you don't want to switch channels in any direction.

- a) Click **Maintenance** > **Maintenance Switch**.
- b) Click **Reset**.
- c) From the Reset Port To Default drop-down list, choose the channel that you want to reset.
- d) Click **OK**.

Step 6 Return to your originating procedure (NTP).

DLP-G416 Changing Optical Channel Settings for Multiplexer and Demultiplexer Cards

Purpose	This task changes the optical channel settings for a 32DMX, 32DMX-L, 40-DMX-C, 40-DMX-CE, 40-MUX-C, or 4MD-xx.x card.
Tools/Equipment	None
Prerequisite Procedures	DLP-G46 Log into CTC
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher

Procedure

Step 1 In node view (single-shelf mode) or shelf view (multishelf mode), double-click the multiplexer or demultiplexer card where you want to change the optical channel settings.

Step 2 Click the **Provisioning** > **Optical Chn** > **Parameters** tabs.

Step 3 Modify any of the settings described in the following table. The provisionable parameters are listed in the Options column in the table. In the Options column, the SONET (ANSI) option is followed by the SDH (ETSI) option.

Table 30: Multiplexer and Demultiplexer Card Optical Channel Settings

Parameter	Description	Options
Port	(Display only) Displays the port number, port type, and direction (TX or RX).	32DMX, 32DMX-L <ul style="list-style-type: none"> • 1 through 32 (CHAN-RX or CHAN-TX) 40-MUX-C, 40-DMX-C, 40-DMX-CE <ul style="list-style-type: none"> • 1 through 40 (CHAN-RX or CHAN-TX) 4MD-xx.x <ul style="list-style-type: none"> • 1 through 8 (CHAN-RX or CHAN-TX)
Port Name	Provides the ability to assign the specified port a name.	User-defined. Name can be up to 80 alphanumeric characters. Blank by default. Double-click, edit, and press Enter. See the DLP-G104 Assigning a Name to a Port
Admin State	Sets the port administrative state unless network conditions prevent the change. For more information about administrative states, see the Administrative and Service States document.	From the drop-down list, choose one of the following: <ul style="list-style-type: none"> • IS,AINS/Unlocked,automaticInService • OOS,DSBLD/Locked,disabled • OOS,MT/Locked,maintenance
Service State	(Display only) Identifies the autonomously generated state that gives the overall condition of the port. Service states appear in the format: Primary State-Primary State Qualifier, Secondary State. For more information about service states, see the Administrative and Service States document.	<ul style="list-style-type: none"> • IS-NR/Unlocked-enabled • OOS-AU,AINS/Unlocked-disabled, automaticInService • OOS-MA,DSBLD/Locked-enabled,disabled • OOS-MA,MT/Locked-enabled,maintenance
Power	(Display only) Shows the current power level per port.	—
Actual Wavelength	(Display only) Shows the wavelength specified by the manufacturing data. This field cannot be set manually.	—
Expected Wavelength	Shows the preprovisioned wavelength.	Numeric. This field cannot be changed.
AINS Soak	(Display only) The automatic in-service soak period. It is always 00.00.	—
VOA Mode	Not applicable to the 4MD-xx.x cards. Shows the current functional mode of the VOA.	<ul style="list-style-type: none"> • Constant Power • Constant Attenuation

Parameter	Description	Options
VOA Power Ref.	Not applicable to the 4MD-xx.x cards. Shows the power setpoint that must be reached on the path when a VOA is present and the VOA Mode is Constant Power. Demultiplexers show the reference value of the desired optical power going to the client. Multiplexers show the reference value of the desired per-channel optical power. This parameter can only be modified by ANS.	—
VOA Power Calib.	Not applicable to the 4MD-xx.x cards. The user can modify the optical output power to the VOA if necessary. The VOA power calibration offsets the VOA power reference. For demultiplexers, you can modify the optical output power to the client if necessary. For multiplexers, you can modify the output power per channel. This feature is normally used when the Network Type is configured as Access in the Provisioning > WDM-ANS tab.	Numeric. Double-click the parameter, enter a value, and press Enter.
VOA Attenuation Ref.	Not applicable to the 4MD-xx.x cards. Shows the attenuation value of the VOA when the VOA is set in attenuation mode. This parameter can only be modified by ANS and APC.	—
VOA Attenuation Calib.	Not applicable to the 4MD-xx.x cards. Allows the user to modify the attenuation value of the VOA if necessary when the VOA mode is set for constant attenuation.	Numeric. Double-click the parameter, enter a value, and press Enter.

Step 4 Click **Apply**. If the change affects traffic, a warning message appears. Click Yes to complete the change.

Step 5 Return to your originating procedure (NTP).

DLP-G417 Changing Optical Channel Threshold Settings for Multiplexer and Demultiplexer Cards

Purpose	This task changes the optical channel threshold settings for a 32DMX, 40-DMX-C, 40-DMX-CE, 40-MUX-C, or 4MD-xx.x card.
Tools/Equipment	None
Prerequisite Procedures	DLP-G46 Log into CTC
Required/As Needed	As needed
Onsite/Remote	Onsite or remote

Security Level	Provisioning or higher
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Caution Warning thresholds are monitored by CTC as part of performance monitoring. They must be user-provisioned.

Procedure

- Step 1** In node view (single-shelf mode) or shelf view (multishelf mode), double-click the multiplexer or demultiplexer card where you want to change the optical channel threshold settings.
- Step 2** Click the **Provisioning > Optical Chn > Optics Thresholds** tabs.
- Step 3** If you want to change the warning thresholds, complete the following steps. If not, continue with [Step 4](#).
 - a) Under Types, choose Warning.
 - b) Choose the warning interval that you want to provision, either **15 minutes** or **1 Day**.
 - c) Click **Refresh**.
 - d) Modify any of the warning thresholds shown under the Options column in the following table.
 - e) Click **Apply**. If the change affects traffic, a warning message appears. Click Yes to complete the change.

Table 31: Multiplexer and Demultiplexer Card Optical Channel Warning Threshold Settings

Parameter	Description	Options
Port	(Display only) Displays the port number, port type, and direction (TX or RX).	32DMX <ul style="list-style-type: none"> • 1 through 32 (CHAN-RX or CHAN-TX) 40-MUX-C, 40-DMX-C, 40-DMX-CE <ul style="list-style-type: none"> • 1 through 40 (CHAN-RX or CHAN-TX) 4MD-xx.x <ul style="list-style-type: none"> • 1 through 8 (CHAN-RX or CHAN-TX)
opwrMin (dBm)	Set the low power warning level.	Numeric. Can be set for 15-minute or one-day intervals. The default is -50 dBm. Double-click the parameter, enter a value, and press Enter.
opwrMax (dBm)	Set the high power warning level.	Numeric. Can be set for 15-minute or one-day intervals. The default is 30 dBm. Double-click the parameter, enter a value, and press Enter.

- Step 4** If you want to change the alarm thresholds, complete the following steps. If not, continue with [Step 5](#).
 - a) Under Types, choose Alarm.

- b) Click **Refresh**.
- c) Modify any of the alarm thresholds shown under the Options column in the following table.
- d) Click **Apply**. If the change affects traffic, a warning message appears. Click Yes to complete the change.

Table 32: Multiplexer and Demultiplexer Card Optical Channel Alarm Threshold Settings

Parameter	Description	Options
Port	(Display only) Displays the port number, port type, and direction (TX or RX).	32DMX <ul style="list-style-type: none"> • 1 through 32 (CHAN-RX or CHAN-TX) 40-MUX-C, 40-DMX-C, 40-DMX-CE <ul style="list-style-type: none"> • 1 through 40 (CHAN-RX or CHAN-TX) 4MD-xx.x <ul style="list-style-type: none"> • 1 through 8 (CHAN-RX or CHAN-TX)
Power Failure Low (dBm)	<p>Shows the power failure low threshold. This power value applies to the corresponding port and is automatically calculated when ANS is run.</p> <p>This threshold applies to a port associated to a VOA (OSC-VOA) that is always active in Constant Power mode.</p> <p>The threshold is automatically linked to the Power Setpoint (VOA Power Ref + VOA Power Calib) that is provisioned. Changing the setpoint results in changing the threshold (always 5 dB lower).</p> <p>The 32DMX and 40-DMX-C/40-DMX/CE are exceptions. 32DMX and 40-DMX-C/40-DMX-CE Power Failure Low thresholds apply to ports that are not associated to a VOA. The threshold is calculated automatically when you run ANS. You can manually change the threshold. The value must be within the optical power range that is specified for the card. For more information, see the Hardware Specifications document.</p>	Numeric. Double-click the parameter, enter a value, and press Enter.

Parameter	Description	Options
Power Degrade High (dBm)	<p>(4MD-xx.x cards only) Shows the power degrade high threshold. This power value applies to the corresponding port and is automatically calculated when ANS is run.</p> <p>This threshold applies to a port associated to a VOA (OSC-VOA) that is always active in Constant Power mode.</p> <p>The threshold is automatically linked to the Power Setpoint (VOA Power Ref + VOA Power Calib) that is provisioned. Changing the setpoint will result in changing the threshold (always 3 dB higher).</p>	—
Power Degrade Low (dBm)	<p>(4MD-xx.x cards only) Shows the power degrade low threshold. This power value applies to the corresponding port and is automatically calculated when ANS is run.</p> <p>This threshold applies to a port associated to a VOA (OSC-VOA) that is always active in Constant Power mode.</p> <p>The threshold is automatically linked to the Power Setpoint (VOA Power Ref + VOA Power Calib) that is provisioned. Changing the setpoint will result in changing the threshold (always 2 dB lower).</p>	—

Step 5 Return to your originating procedure (NTP).

NTP-G93 Modifying the WSS Card Line Settings and PM Thresholds

Purpose	This procedure changes the 32WSS, 40-WSS-C, or 40-WSS-CE card thresholds and settings.
Tools/Equipment	None
Prerequisite Procedures	<ul style="list-style-type: none"> • DLP-G46 Log into CTC • NTP-G30 Installing the DWDM cards
Required/As Needed	As needed
Onsite/Remote	Onsite or remote

Security Level	Provisioning or higher
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Procedure

Step 1 Complete the [NTP-G103 Backing Up the Database](#) procedure.

Step 2 Perform any of the following tasks as needed:

- [DLP-G212 Changing the WSS Card Optical Channel Parameters](#)
- [DLP-G213 Changing the WSS Card Optical Channel Thresholds](#)

Note To use the alarm profile tab, including creating alarm profiles and suppressing alarms, see [Alarm and TCA Monitoring and Management](#).

- [DLP-G214 Changing WSS Card Optical Line Parameters](#)
- [DLP-G215 Changing the WSS Card Optical Line Thresholds](#)

Step 3 Complete the [NTP-G103 Backing Up the Database](#) procedure.

Stop. You have completed this procedure.

DLP-G212 Changing the WSS Card Optical Channel Parameters

Purpose	This task changes the optical channel parameter settings for the 32WSS, 40-WSS-C, or 40-WSS-CE cards.
Tools/Equipment	None
Prerequisite Procedures	DLP-G46 Log into CTC
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher

Procedure

Step 1 In node view (single-shelf mode) or shelf view (multishelf mode), double-click the card where you want to change the optical channel parameter settings.

Step 2 Click the **Provisioning** > **Optical Chn: Optical Connector n Parameters** tabs, where n = one of the four available groups of eight optical channels.

Step 3 Modify any of the settings described in the following table. The provisionable parameters are listed in the Options column in the table. In the Options column, the SONET (ANSI) option is followed by the SDH (ETSI) option.

Table 33: WSS Card Optical Channel Parameter Settings

Parameter	Description	Options
Port	<p>(Display only) Shows the port number. Each optical channel (wavelength) has two logical ports. However, only one is active at a time depending on the operating mode provisioned for the port on the card view Maintenance tab: either CHAN-RX or PASS-THROUGH.</p> <p>For the 32WSS, ports 1 through 32 (CHAN-RX) are assigned to optical channels configured as add channels.</p> <p>For the 40-WSS-C or 40-WSS-CE, CHAN-RX ports are 1 through 40.</p> <p>32WSS ports 33 through 64 (PASS-THROUGH) are assigned to optical channels configured as pass-through channels.</p> <p>40-WSS-C or 40-WSS-CE ports 41 through 80 are PASS-THROUGH channels.</p>	—
Port Name	Allows a logical name to be assigned for each of the port.	<p>User-defined. Name can be up to 80 alphanumeric/special characters. Blank by default. Double-click, enter the name, and press Enter.</p> <p>See the DLP-G104 Assigning a Name to a Port task.</p>
Admin State	<p>Sets the port administrative state unless network conditions prevent the change. For more information about administrative states, see the Administrative and Service States document.</p>	<p>From the drop-down list, choose one of the following:</p> <ul style="list-style-type: none"> • IS,AINS/Unlocked,automaticInService • OOS,DSBLD/Locked,disabled • OOS,MT/Locked,maintenance
Service State	(Display only) Identifies the autonomously generated state that gives the overall condition of the port. Service states appear in the format: Primary State-Primary State Qualifier, Secondary State. For more information about service states, see the Administrative and Service States document.	<ul style="list-style-type: none"> • IS-NR/Unlocked-enabled • OOS-AU,AINS/Unlocked-disabled,automaticInService • OOS-MA,DSBLD/Locked-enabled,disabled • OOS-MA,MT/Locked-enabled,maintenance

Parameter	Description	Options
Power	(Display only) Power value read by the photodiode located after the VOA associated to the port, and calibrated to the COM_TX port. For more information, see the Hardware Specifications document.	Numeric value (dB)
Actual Wavelength	(Display only) Displays the actual wavelength utilized by the channel.	—
Expected Wavelength	(Display only) Displays the expected wavelength assigned for the channel.	—
AINS Soak	(Display only) The automatic in-service soak period. It is always 00.00.	—
VOA Mode	(Display only) Displays the active VOA working mode.	<ul style="list-style-type: none"> • Constant Power • Constant Attenuation
VOA Power Reference	(Display only) Shows the value of the optical power setpoint that must be reached on the path where a VOA is present, when VOA Mode is set to Constant Power. This value is the desired per-channel optical power. This parameter can only be modified by ANS.	Numeric value (dB)
VOA Power Calibration	Allows you to modify the VOA power value when VOA Mode is Constant Power.	<p>Double-click the parameter, enter a value, and press Enter.</p> <ul style="list-style-type: none"> • Numeric value (dB) • -37 dB to -2 dB
VOA Attenuation Reference	(Display only) Shows the attenuation value of the VOA when the VOA Mode is Constant Attenuation. This parameter can only be modified by ANS.	Numeric value (dB)
VOA Attenuation Calibration	Allows you to modify the VOA attenuation value when VOA Mode is Constant Attenuation.	<p>Double-click the parameter, enter a value, and press Enter.</p> <ul style="list-style-type: none"> • Numeric value (dB) • -30 dB to +30 dB

Parameter	Description	Options
Power ADD	(Display only) Displays a measurement of the optical power coming in on the ADD RX port, reported in the CHAN-RX port column. This is the power transmitted by the TX laser of the TXP or MXP card that is connected to the 32WSS, 40-WSS-C, or 40-WSS-CE.	Numeric value (dB)
Path Value	(Display only) Displays the path value for the CHAN-RX port column parameter.	Standby

Step 4 Click **Apply**. If the change affects traffic, a warning message appears. Click Yes to complete the change.

Step 5 Return to your originating procedure (NTP).

DLP-G213 Changing the WSS Card Optical Channel Thresholds

Purpose	This task changes the optical channel threshold settings for the 32WSS, 40-WSS-C, or 40-WSS-CE cards.
Tools/Equipment	None
Prerequisite Procedures	DLP-G46 Log into CTC
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher

Procedure

- Step 1** In node view (single-shelf mode) or shelf view (multishelf mode), double-click the card where you want to change the optical channel threshold settings.
- Step 2** Click the **Provisioning > Optical Chn: Optical Connector n Optics Thresholds** tabs, where n = one of the four available groups of eight optical channels.
- Step 3** If you want to change the warning thresholds, complete the following steps. If not, continue with [Step 4](#).
- Under Types, choose Warning.
 - Choose the warning interval that you want to provision, either **15 minutes** or **1 Day**.
 - Click **Refresh**.
 - Modify any of the warning thresholds shown under the Options column in the following table.

Table 34: WSS Card Optical Channel Warning Threshold Settings

Parameter	Description	Options
Port	(Display only) Shows the port number, port type, and direction (RX or TX). Each optical channel (wavelength) has two logical ports. However, only one is active at a time depending on the operating mode provisioned for the port on the card view Maintenance tab: either CHAN-RX or PASS-THROUGH.	—
opwrMin (dBm)	Set the low power warning level.	Numeric. Can be set for 15-minute or one-day intervals. Double-click the parameter, enter a value, and press Enter.
opwrMax (dBm)	Set the high power warning level.	Numeric. Can be set for 15-minute or one-day intervals. Double-click the parameter, enter a value, and press Enter.

e) Click **Apply**. If the change affects traffic, a warning message appears. Click Yes to complete the change.

Step 4

If you want to change the alarm thresholds, complete the following steps. If not, continue with [Step 5](#).

- a) Under Types, choose Alarm.
- b) Click **Refresh**.
- c) Modify any of the alarm thresholds shown under the Options column in the following table.

Table 35: WSS Card Optical Channel Alarm Threshold Settings

Parameter	Description	Options
Port	<p>(Display only) Displays the port number, port type, and direction (RX or TX). For each optical channel (wavelength), two logical ports are associated. Only one port can be active at a time, depending on the port’s operating mode. The operating mode, provisioned on the card view Maintenance tab, is either CHAN RX or PASS-THROUGH.</p> <p>32WSS ports 1 through 32 (CHAN-RX) are associated to optical channels configured as add/drop channels.</p> <p>40-WSS-C or 40-WSS-CE ports 1 through 40 are the CHAN-RX channels.</p> <p>32WSS ports 33 through 64 (PASS-THROUGH) are associated to optical channels configured as pass-through channels.</p> <p>For the 40-WSS-C or 40-WSS-CE, ports 41 through 80 are the PASS-THROUGH channels.</p>	—
Power Failure Low (dBm)	<p>(Display only) Shows the power failure low threshold. This power value applies to the corresponding port and is automatically calculated when ANS is run.</p> <p>This threshold applies to a port associated to a VOA (OSC-VOA) that is always active in Constant Power mode.</p> <p>The threshold is automatically linked to the Power Setpoint (VOA Power Ref + VOA Power Calib) that is provisioned. Changing the setpoint results in changing the threshold (always 5 dB lower).</p> <p>The threshold is calculated automatically when you run ANS. For more information, see the Hardware Specifications document.</p>	—

Parameter	Description	Options
Power Degrade High (dBm)	<p>(Display only) Shows the power degrade high threshold. This power value applies to the corresponding port and is automatically calculated when ANS is run.</p> <p>This threshold applies to a port associated to a VOA (OSC-VOA) that is always active in Constant Power mode.</p> <p>The threshold is automatically linked to the Power Setpoint (VOA Power Ref + VOA Power Calib) that is provisioned. Changing the setpoint results in changing the threshold (always 3 dB higher).</p>	—
Power Degrade Low (dBm)	<p>(Display only) Shows the power degrade low threshold. This power value applies to the corresponding port and is automatically calculated when ANS is run.</p> <p>This threshold applies to a port associated to a VOA (OSC-VOA) that is always active in Constant Power mode.</p> <p>The threshold is automatically linked to the Power Setpoint (VOA Power Ref + VOA Power Calib) that is provisioned. Changing the setpoint results in changing the threshold (always 2 dB lower).</p>	Numeric
Power ADD Failure Low (dBm)	<p>Shows the power add failure low threshold. This power value applies to the corresponding port and is automatically calculated when ANS is run.</p> <p>This threshold applies to the actual measurement of the optical power on the ADD RX port. It is reported as CHAN RX, that is, the power transmitted by the Trunk-TX laser of the TXP/MXP card connected to the 32WSS, 40-WSS-C, or 40-WSS-CE card.</p>	Numeric. CTC does not allow it to be changed.

d) Click **Apply**. If the change affects traffic, a warning message appears. Click Yes to complete the change.

Step 5 Return to your originating procedure (NTP).

DLP-G214 Changing WSS Card Optical Line Parameters

Purpose	This task changes the optical line parameter settings for the 32WSS, 40-WSS-C or 40-WSS-CE cards.
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Tools/Equipment	None
Prerequisite Procedures	DLP-G46 Log into CTC
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher

Procedure

- Step 1** In node view (single-shelf mode) or shelf view (multishelf mode), double-click the card where you want to change the optical line parameter settings.
- Step 2** Click the **Provisioning > Optical Line > Parameters** tabs.
- Step 3** Modify any of the settings described in the following table. The provisionable parameters are listed in the Options column. The SONET (ANSI) option is followed by the SDH (ETSI) option.

Table 36: WSS Card Optical Line Parameter Settings

Parameter	Description	Options
Port	(Display only) Displays the port number, port type, and direction (RX or TX),	32WSS: <ul style="list-style-type: none"> • 65 (EXP-TX) • 66 (EXP-RX) • 67 (COM-TX) • 68 (COM-RX) • 69 (DROP-TX) 40-WSS-C or 40-WSS-CE: <ul style="list-style-type: none"> • 81 (EXP-TX) • 82 (EXP-RX) • 83 (COM-TX) • 84 (COM-RX) • 85 (DROP-TX)
Port Name	Allows you to assign a logical name for each of the ports shown.	User-defined. Name can be up to 80 alphanumeric/special characters. Blank by default. Double-click, enter the name, and press Enter. See the DLP-G104 Assigning a Name to a Port task.

Parameter	Description	Options
Admin State	Sets the port administrative state unless network conditions prevent the change. For more information about administrative states, see the Administrative and Service States document.	From the drop-down list, choose one of the following: <ul style="list-style-type: none"> • IS,AINS/Unlocked,automaticInService • OOS,DSBLD/Locked,disabled • OOS,MT/Locked,maintenance
Service State	(Display only) Identifies the autonomously generated state that gives the overall condition of the port. Service states appear in the format: Primary State-Primary State Qualifier, Secondary State. For more information about service states, see the Administrative and Service States document.	<ul style="list-style-type: none"> • IS-NR/Unlocked-enabled • OOS-AU,AINS/Unlocked-disabled, automaticInService • OOS-MA,DSBLD/Locked-enabled,disabled • OOS-MA,MT/Locked-enabled,maintenance
Power	(Display only) Power value read by the photodiode associated with the port.	Numeric value (dB)
AINS Soak	(Display only) The automatic in-service soak period. It is always 00.00.	—
Actual Channels	Number of active channels carried by the port (the difference between provisioned and failed)	—

Step 4 Return to your originating procedure (NTP).

DLP-G215 Changing the WSS Card Optical Line Thresholds

Purpose	This task changes the 32WSS, 40-WSS-C, or 40-WSS-CE card optical line threshold settings.
Tools/Equipment	None
Prerequisite Procedures	DLP-G46 Log into CTC
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher



Caution Warning thresholds are monitored by CTC as part of performance monitoring. They must be user-provisioned.

Procedure

- Step 1** In node view (single-shelf mode) or shelf view (multishelf mode), double-click the card where you want to change the optical line threshold settings.
- Step 2** Click the **Provisioning** > **Optical Line** > **Optics Thresholds** tabs for one of the groups of optical channels that are available.
- Step 3** If you want to change the warning thresholds, complete the following steps. If not, continue with [Step 4](#).
- Under Types, choose Warning.
 - Choose the warning interval that you want to provision, either **15 minutes** or **1 Day**.
 - Click **Refresh**.
 - Modify any of the warning thresholds shown under the Options column in the following table.

Table 37: WSS Card Optical Line Warning Threshold Settings

Parameter	Description	Options
Port	(Display only) Displays the port number, port type, and direction (RX or TX),	32WSS: <ul style="list-style-type: none"> • 65 (EXP-TX) • 66 (EXP-RX) • 67 (COM-TX) • 68 (COM-RX) • 69 (DROP-TX) 40-WSS-C or 40-WSS-CE: <ul style="list-style-type: none"> • 81 (EXP-TX) • 82 (EXP-RX) • 83 (COM-TX) • 84 (COM-RX) • 85 (DROP-TX)
opwrMin (dBm)	Set the low power warning level.	Numeric. Can be set for 15-minute or one-day intervals. The default is -50 dBm.
opwrMax (dBm)	Set the high power warning level.	Numeric. Can be set for 15-minute or one-day intervals. The default is 30 dBm.

- Click **Apply**. If the change affects traffic, a warning message appears. Click Yes to complete the change.

- Step 4** If you want to change the alarm thresholds, complete the following steps. If not, continue with [Step 5](#).
- Under Types, choose Alarm.
 - Click **Refresh**.
 - Modify any of the alarm thresholds shown under the Options column in the following table.

Table 38: WSS Card Optical Line Alarm Threshold Settings

Parameter	Description	Options
Port	(Display only) Displays the port number, port type, and direction (RX or TX),	32WSS: <ul style="list-style-type: none"> • 65 (EXP-TX) • 66 (EXP-RX) • 67 (COM-TX) • 68 (COM-RX) • 69 (DROP-TX) 40-WSS-C or 40-WSS-CE: <ul style="list-style-type: none"> • 81 (EXP-TX) • 82 (EXP-RX) • 83 (COM-TX) • 84 (COM-RX) • 85 (DROP-TX)
Power Failure Low (dBm)	<p>Shows the power failure low threshold. This power value applies to the corresponding port and is automatically calculated when ANS is run.</p> <p>You can manually change the threshold. The value must be within the optical power range that is specified for the card. For more information, see the Hardware Specifications document.</p>	Numeric. Double-click the parameter, enter a value, and press Enter .

d) Click **Apply**. If the change affects traffic, a warning message appears. Click Yes to complete the change.

Step 5 Return to your originating procedure (NTP).

NTP-G240 Modifying Line Settings and PM Thresholds for the TDC-CC and TDC-FC Cards

Purpose	This procedure changes the TDC-CC or TDC-FC card line settings and PM thresholds.
Tools/Equipment	None

Prerequisite Procedures	<ul style="list-style-type: none"> • DLP-G46 Log into CTC • NTP-G30 Installing the DWDM cards
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher

Procedure

-
- Step 1** Complete the [NTP-G103 Backing Up the Database](#) procedure.
- Step 2** Perform any of the following tasks as needed:
- [DLP-G545 Modifying the Chromatic Dispersion Value for the TDC-CC and TDC-FC Cards](#).
 - [DLP-G528 Changing Optical Line Threshold Settings for TDC-CC or TDC-FC Card](#).
- Step 3** Complete the [NTP-G103 Backing Up the Database](#) procedure.
Stop. You have completed this procedure.
-

DLP-G545 Modifying the Chromatic Dispersion Value for the TDC-CC and TDC-FC Cards

Purpose	This procedure modifies the chromatic dispersion (CD) value for the TDC-CC and TDC-FC cards.
Tools/Equipment	None
Prerequisite Procedures	DLP-G46 Log into CTC
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher

Procedure

-
- Step 1** In the node view (single-shelf mode) or shelf view (multishelf view), double-click the TDC-CC or TDC-FC card.
- Step 2** Click **Provisioning** > **Card** tab and then select the CD value from the Compensating Value drop-down list.
- Step 3** Click **Apply**. A warning message appears stating that the change in compensation value could affect traffic.
- Step 4** Click **Yes**. The compensation value is set.

Step 5 Return to your originating procedure (NTP).

DLP-G528 Changing Optical Line Threshold Settings for TDC-CC or TDC-FC Card

Purpose	This task changes the optical line threshold settings for the TDC-CC or TDC-FC card.
Tools/Equipment	None
Prerequisite Procedures	DLP-G46 Log into CTC
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher



Caution Warning thresholds are monitored by CTC as part of performance monitoring. They must be user-provisioned.

Procedure

- Step 1** In node view (single-shelf mode) or shelf view (multishelf mode), double-click the TDC-CC or TDC-FC card where you want to change the optical channel threshold settings.
- Step 2** Click the **Provisioning > Optical Line > Optics Thresholds** tabs.
- Step 3** If you want to change the warning thresholds, complete the following steps. If not continue with Step 4.
- Under Types, choose Warning.
 - Choose the warning interval that you want to provision, either **15 minutes** or **1 Day**.
 - Click **Refresh**.
 - Modify any of the warning thresholds shown under the Options column in the following table.

Table 39: TDC-CC and TDC-FC Cards Optical Line Warning Threshold Settings

Parameter	Description	Options
Port	(Display only) Displays the port number, port type, and direction (DC-RX or DC-TX).	<ul style="list-style-type: none"> • 1 (DC-RX) • 2 (DC-TX)
opwrMin (dBm)	Sets the low power warning level.	Numeric. Can be set for 15-minute or one-day intervals. The default is -50 dBm. Double-click the table cell, enter a value, and press Enter.

Parameter	Description	Options
opwrMax (dBm)	Sets the high power warning level.	Numeric. Can be set for 15-minute or one-day intervals. The default is 30 dBm. Double-click the table cell, enter a value, and press Enter.

e) Click **Apply**. If the change affects traffic, a warning message appears. Click Yes to complete the change.

Step 4

If you want to change the alarm thresholds, complete the following steps. If not, continue with Step 5.

- Under Types, choose Alarm.
- Click **Refresh**.
- Modify any of the alarm thresholds shown under the Options column in the following table.

Table 40: TDC-CC and TDC-FC Cards Optical Line Alarm Thresholds Setting

Parameter	Description	Options
Port	(Display only) Displays the port number, port type, and direction (DC-RX or DC-TX).	<ul style="list-style-type: none"> • 1 (DC-RX) • 2 (DC-TX)
Power Failure Low (dBm)	Shows the optical power failure low threshold for the port. You can manually change the threshold. The value must be within the optical power range that is specified for the card. For more information, see the Hardware Specifications document.	Numeric. Double-click the table cell, enter a value, and press Enter .

d) Click **Apply**. If the change affects traffic, a warning message appears. Click Yes to complete the change.

Step 5

Return to your originating procedure (NTP).

NTP-G174 Modifying Line Settings and PM Thresholds for 40-WXC-C, 80-WXC-C, or 16-WXC-FS Cards

Purpose	This procedure changes the 40-WXC-C, 80-WXC-C, or 16-WXC-FS card thresholds and settings.
Tools/Equipment	None
Prerequisite Procedures	<ul style="list-style-type: none"> • DLP-G46 Log into CTC • NTP-G30 Installing the DWDM cards
Required/As Needed	As needed
Onsite/Remote	Onsite or remote

Security Level	Provisioning or higher
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Procedure

- Step 1** Complete the task at the node where you want to change the 40-WXC-C, 80-WXC-C, or 16-WXC-FS card settings. If you are already logged in, continue with [Step 2](#).
- Step 2** Complete the [#unique_484](#) procedure. For 40-WXC-C cards, continue with [Step 4](#). For 80-WXC-C cards, continue with [Step 3](#). For 16-WXC-FS cards, continue with [Step 5](#).
- Step 3** Verify the card mode for 80-WXC-C cards. Complete these steps:
- Display the 80-WXC-C card in card view.
 - Click the **Provisioning > Card** tabs.
 - Verify that the card mode is set to the mode designated by your site plan:
 - BIDIRECTIONAL
 - MULTIPLEXER
 - DE-MULTIPLEXER
- Step 4** If the card mode is set correctly, continue with [Step 4](#). If not, complete the [DLP-G603 Changing the 80-WXC-C Card Mode](#).
- Step 5** Perform any of these tasks as required:
- [DLP-G406 Changing Card Optical Channel Parameters for 40-WXC-C, 80-WXC-C, 16-WXC-FS, 17 SMR9 FS, 24 SMR9 FS, 34 SMR9 FS, or SMR20 FS/SMR20 FS CV Cards](#)
 - [DLP-G407 Changing the Optical Channel Thresholds for 40-WXC-C, 80-WXC-C, 16-WXC-FS, 17 SMR9 FS, 24 SMR9 FS, 34 SMR9 FS, or SMR20 FS/SMR20 FS CV Cards](#)
- Note** To use the alarm profile tab, including creating alarm profiles and suppressing alarms, see [Alarm and TCA Monitoring and Management](#)
- [DLP-G408 Changing Optical Line Parameters for 40-WXC-C, 80-WXC-C, 16-WXC-FS, 17 SMR9 FS, 24 SMR9 FS, 34 SMR9 FS, or SMR20 FS/SMR20 FS CV Cards](#)
 - [DLP-G409 Changing the Optical Line Thresholds for 40-WXC-C, 80-WXC-C, 16-WXC-FS, 17 SMR9 FS, 24 SMR9 FS, 34 SMR9 FS, or SMR20 FS/SMR20 FS CV Cards](#)
 - [DLP-G413 Changing the Line Parameters for 40-WXC-C, 80-WXC-C, or 16-WXC-FS Cards, on page 103](#)
 - [DLP-G771 Changing the WXC Line Thresholds for 80-WXC-C or 16-WXC-FS Card, on page 105](#)
 - [DLP-G772 Viewing Wavelength Power for 16-WXC-FS, 17 SMR9 FS, 24 SMR9 FS, 34 SMR9 FS, or SMR20 FS/SMR20 FS CV Card, on page 109](#)
 - [DLP-G773 Creating a Flex Spectrum or ITU Circuit for 16-WXC-FS, 17 SMR9 FS, 24 SMR9 FS, 34 SMR9 FS, or SMR20 FS/SMR20 FS CV Card, on page 109](#)
- Note** To use the alarm profile tab, including creating alarm profiles and suppressing alarms, see [Alarm and TCA Monitoring and Management](#) chapter.

- Step 6** Complete the [#unique_484](#) procedure.
Stop. You have completed this procedure.

DLP-G603 Changing the 80-WXC-C Card Mode

Purpose	This task changes the card mode of the 80-WXC-C cards.
Tools/Equipment	None
Prerequisite Procedures	DLP-G46 Log into CTC
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher

Procedure

- Step 1** In node view (single-shelf mode) or shelf view (multishelf mode), double-click the 80-WXC-C card where you want to change the card mode.
- Step 2** Click the **Provisioning > WXC Line > Parameters** tabs.
- Step 3** Verify that any provisioned client or trunk ports have an **OOS-MA,DSBLD** (ANSI) or **Locked-enabled,disabled** (ETSI) service state in the Service State column. If yes, continue with [Step 4](#). If not, complete the following substeps.
- a) For the first port that is in service, in the Admin State column, choose **OOS,DSBLD** (ANSI) or **Locked,disabled** (ETSI).
 - b) Repeat [Step a.](#) for each port that is in service.
 - c) Click **Apply**.
- Step 4** Click the **Provisioning > Card** tabs. Choose one of the card modes shown in this table.

Table 41: 80-WXC-C Card Modes

Mode	Description
Bidirectional	Provisions the 80-WXC-C card in the bidirectional mode. Traffic received from any of the nine input ports(EAD i , $i=1$ to 8, AD ports) are multiplexed and sent to the common output port (COM ports). The pre-amplifier output signal from the preamplifier is split in a 40%-to-60% ratio; 40% is sent on the drop path (DROP-TX port) and 60% is on the sent pass-through path (EXP-TX port).

Mode	Description
Multiplexer	Provisions the 80-WXC-C card in the multiplexer mode. Traffic received from any of the nine input ports (EAD i , $i=1$ to 8, AD ports) are multiplexed and sent to the common output port (COM port).
Demultiplexer	Provisions the 80-WXC-C card in the demultiplexer mode. Traffic received from common input port (COM port) is demultiplexed and sent to the nine output ports (EAD i , $i=1$ to 8, AD ports).

Step 5 Click **Apply**, then click **Yes** in the confirmation dialog box.

Step 6 Return to your originating procedure (NTP).

DLP-G406 Changing Card Optical Channel Parameters for 40-WXC-C, 80-WXC-C, 16-WXC-FS, 17 SMR9 FS, 24 SMR9 FS, 34 SMR9 FS, or SMR20 FS/SMR20 FS CV Cards

Purpose	This task changes the optical channel parameter settings for the 40-WXC-C, 80-WXC-C, 16-WXC-FS, 17 SMR9 FS, 24 SMR9 FS, 34 SMR9 FS, or SMR20 FS/SMR20 FS CV cards.
Tools/Equipment	None
Prerequisite Procedures	DLP-G46 Log into CTC
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher

Procedure

Step 1 In node view (single-shelf mode) or shelf view (multishelf mode), double-click the 40-WXC-C, 80-WXC-C, 16-WXC-FS, 17 SMR9 FS, 24 SMR9 FS, 34 SMR9 FS, or SMR20 FS/SMR20 FS CV card where you want to change the optical channel parameter settings.

Step 2 Click the **Provisioning** > **OCH** > **Parameters** tabs. For 40-WXC-C cards, continue with [Step 4](#). For 80-WXC-C, 16-WXC-FS, 17 SMR9 FS, 24 SMR9 FS, 34 SMR9 FS, or SMR20 FS/SMR20 FS CV cards, continue with [Step 3](#).

Step 3 For 80-WXC-C cards, choose a wavelength from the Wavelength drop-down list and click **Retrieve** to retrieve the OCH parameters. For 16-WXC-FS, 17 SMR9 FS, 24 SMR9 FS, 34 SMR9 FS, or SMR20 FS/SMR20 FS CV cards, choose a circuit name from the CircuitName/CircuitLabel drop-down list and click **Retrieve** to retrieve the OCH parameters.

Step 4 Modify any of the settings described in this table. The provisionable parameters are listed in the Options column in the table. In the Options column, the SONET (ANSI) option is followed by the SDH (ETSI) option.

Table 42: 40-WXC-C, 80-WXC-C, 16-WXC-FS, 17 SMR9 FS, 24 SMR9 FS, 34 SMR9 FS, and SMR20 FS/SMR20 FS CV Optical Channel Parameter Settings

Parameter	Description	Options
Circuit Name	(Display only) Shows the circuit name. This is provisioned in the Circuits tab.	—
Admin State	Sets the port administrative state unless network conditions prevent the change. For more information about administrative states, see the Administrative and Service States document.	<ul style="list-style-type: none"> • IS,AINS/Unlocked,automaticInService • OOS,DSBLD/Locked,disabled • OOS,MT/Locked,maintenance (40-WXC-C only)
Service State	(Display only) Identifies the autonomously generated state that gives the overall condition of the port. Service states appear in the format: Primary State-Primary State Qualifier, Secondary State. For more information about service states, see the Administrative and Service States document.	<ul style="list-style-type: none"> • IS-NR/Unlocked-enabled • OOS-AU,AINS/Unlocked-disabled,automaticInService (40-WXC-C only) • OOS-MA,DSBLD/Locked-enabled,disabled (40-WXC-C only) • OOS-MA,MT/Locked-enabled,maintenance (40-WXC-C only)
From	(Display only) The port where the circuit originated.	—
Power (40-WXC-C only)	(Display only) Power value read by the photodiode located after the VOA associated to the port, and calibrated to the COM_TX port. For more information, see the Hardware Specifications document.	Numeric value (dB)
Power From (80-WXC-C, 16-WXC-FS, 17 SMR9 FS, 24 SMR9 FS, 34 SMR9 FS, or SMR20 FS /SMR20 FS CV only)	Power on the port where the circuit originated.	—

Parameter	Description	Options
To (80-WXC-C, 16-WXC-FS, 17 SMR9 FS, 24 SMR9 FS, 34 SMR9 FS, or SMR20 FS /SMR20 FS CV only)	(Display only) The port where the circuit terminated.	—
Power To (80-WXC-C, 16-WXC-FS, 17 SMR9 FS, 24 SMR9 FS, 34 SMR9 FS, or SMR20 FS/SMR20 FS CV only)	Power on the port where the circuit terminated.	—
Force Channel (80-WXC-C only)	Starts the channel by moving the VOA from Open to Closed loop. You can force a channel only when the Force Channel Status is in the Unlocked state.	<ul style="list-style-type: none"> • OFF • ON
Force Channel Status (80-WXC-C only)	(Display only) Displays the channel status.	<ul style="list-style-type: none"> • Unlocked—Can force channel startup • Locked—Cannot force channel startup as the device is under control of other functions like optical safety • Forced—Channel startup has already been forced
Actual Wavelength (40-WXC-C only)	(Display only) Displays the actual wavelength utilized by the channel.	—
Wavelength (16-WXC-FS, 17 SMR9 FS, 24 SMR9 FS, 34 SMR9 FS, or SMR20 FS /SMR20 FS CV only)	(Display only) Displays the actual wavelength utilized by the channel.	—
VOA Mode	(Display only) Displays the active VOA working mode.	<ul style="list-style-type: none"> • Constant Power • Constant Attenuation

Parameter	Description	Options
VOA Power Ref.	(Display only) Shows the value of the optical power setpoint that must be reached on the path where a VOA is present, when VOA Mode is set to Constant Power. This value is the desired per-channel optical power. This parameter can only be modified by ANS.	Numeric value (dB)
VOA Power Calib.	Allows you to modify the VOA power value when VOA Mode is Constant Power.	Double-click the parameter, enter a value, and press Enter. <ul style="list-style-type: none"> • Numeric value (dB) • -37 dB to -2 dB
VOA Attenuation Ref. (40-WXC-C, 16-WXC-FS, 17 SMR9 FS, 24 SMR9 FS, 34 SMR9 FS, or SMR20 FS/SMR20 FS CV only)	(Display only) Shows the attenuation value of the VOA when the VOA Mode is Constant Attenuation. This parameter can only be modified by ANS.	Numeric value (dB)
VOA Attenuation Calib. (40-WXC-C, 16-WXC-FS, 17 SMR9 FS, 24 SMR9 FS, 34 SMR9 FS, or SMR20 FS /SMR20 FS CV only)	Allows you to modify the VOA attenuation value when VOA Mode is Constant Attenuation.	Double-click the parameter, enter a value, and press Enter. <ul style="list-style-type: none"> • Numeric value (dB) • -30 dB to +30 dB
Attenuator Value (SMR20 FS /SMR20 FS CV only)	Displays the attenuation value entered by the user.	—

Step 5 Click **Apply**. If the change affects traffic, a warning message appears. Click Yes to complete the change.

Step 6 Return to your originating procedure (NTP).

DLP-G407 Changing the Optical Channel Thresholds for 40-WXC-C, 80-WXC-C, 16-WXC-FS, 17 SMR9 FS, 24 SMR9 FS, 34 SMR9 FS, or SMR20 FS/SMR20 FS CV Cards

Purpose	This task changes the optical channel threshold settings for the 40-WXC-C, 80-WXC-C, 16-WXC-FS, 17 SMR9 FS, 24 SMR9 FS, 34 SMR9 FS, or SMR20 FS/SMR20 FS CV cards.
Tools/Equipment	None
Prerequisite Procedures	DLP-G46 Log into CTC
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher



Caution Warning thresholds are monitored by CTC as part of performance monitoring. They must be user-provisioned.

Procedure

- Step 1** In node view (single-shelf mode) or shelf view (multishelf mode), double-click the 40-WXC-C, 80-WXC-C, 16-WXC-FS, 17 SMR9 FS, 24 SMR9 FS, 34 SMR9 FS, or SMR20 FS/SMR20 FS CV card where you want to change the optical channel threshold settings.
- Step 2** Click the **Provisioning** > **OCH** > **OCH Thresholds** tabs.
- Step 3** If you want to change the warning thresholds, complete the following steps. If not, continue with [Step 4](#).
- Under Types, choose Warning.
 - Choose the warning interval that you want to provision, either **15 minutes** or **1 Day**. For 40-WXC-C card, continue with [Step 3c](#). For 80-WXC-C, 16-WXC-FS, 17 SMR9 FS, 24 SMR9 FS, 34 SMR9 FS, or SMR20 FS/SMR20 FS CV card, continue with [Step 3d](#).
 - Click **Refresh**. Continue with [Step 3g](#).
 - For 80-WXC-C card, choose a wavelength from the Wavelength drop-down list. For 16-WXC-FS, 17 SMR9 FS, 24 SMR9 FS, 34 SMR9 FS, or SMR20 FS/SMR20 FS CV card, choose a circuit name or circuit label from CircuitName/CircuitLabel drop-down list.
 - Click **Retrieve**.
 - Modify any of the warning thresholds shown under the Options column in the following table.

Table 43: 40-WXC-C, 80-WXC-C, 16-WXC-FS, 17 SMR9 FS, 24 SMR9 FS, 34 SMR9 FS, and SMR20 FS/SMR20 FS CV Optical Channel Warning Threshold Settings

Parameter	Description	Options
Circuit Name	(Display only) Shows the circuit name. This is provisioned in the Circuits tab.	—

Parameter	Description	Options
Port Name	(Display only) Shows the port name.	—
Actual Wavelength	(Display only) Displays the actual wavelength utilized by the channel.	—
opwrMin (dBm)	Set the low power warning level.	Numeric. Can be set for 15-minute or one-day intervals. Double-click the parameter, enter a value, and press Enter.
opwrMax (dBm)	Set the high power warning level.	Numeric. Can be set for 15-minute or one-day intervals. Double-click the parameter, enter a value, and press Enter.

g) Click **Apply**. If the change affects traffic, a warning message appears. Click **Yes** to complete the change.

Step 4

If you want to change the alarm thresholds, complete the following steps. If not, continue with [Step 5](#).

- Under Types, choose Alarm. For 40-WXC-C card, continue with [Step 4b](#). For 16-WXC-FS, 80-WXC-C, 17 SMR9 FS, 24 SMR9 FS, 34 SMR9 FS, and SMR20 FS/SMR20 FS CV card, continue with [Step 4c](#).
- Click **Refresh**. Continue with [Step 4f](#).
- For 80-WXC-C card, choose a wavelength from the Wavelength drop-down list. For 16-WXC-FS, 17 SMR9 FS, 24 SMR9 FS, 34 SMR9 FS, and SMR20 FS/SMR20 FS CV card, choose a circuit name or circuit label from CircuitName/CircuitLabel drop-down list.
- Click **Retrieve**.

For the 80-WXC-C card, these ports are available to view:

- 1 (EAD)
- 2 (EAD)
- 3 (EAD)
- 4 (EAD)
- 5 (EAD)
- 6 (EAD)
- 7 (EAD)
- 8 (EAD)
- 9 (AD)
- 10 (COM)
- (DROP-TX) (in BIDI mode)

For the 16-WXC-FS, these ports are available to view:

- COM-TX
- COM-RX
- UPG-TX

- UPG-RX
- EXP-TX i - j (where $i = 1$ to 4 and $j = 1$ to 8)
- EXP-RX i - j (where $i = 1$ to 4 and $j = 1$ to 8)

For the 17 SMR9 FS, 24 SMR9 FS, and 34 SMR9 FS cards, these ports are available to view:

- COM-TX
- COM-RX
- 7 to 21 (odd only) EXP-TX i - j (where $i = 1$ to 2 and $j = 1, 3, 5, \text{ or } 7$)
- 8 to 22 (even only) EXP-RX i - j (where $i = 1$ to 2 and $j = 2, 4, 6, \text{ or } 8$)
- 23 (EXP-TX 9)
- 24 (EXP-RX 9)
- 25 (EXP-TX 10)

For the SMR20 FS/SMR20 FS CV cards, these ports are available to view:

- COM-TX
- COM-RX
- 7 to 37 (odd only) EXP-TX i - j (where $i = 1$ to 2 and $j = 1$ to 8)
- 8 to 38 (even only) EXP-RX i - j (where $i = 1$ to 2 and $j = 9$ to 16)
- 39 to 45 (odd only) EXP-TX i - j (where $i = 3$ and $j = 1$ to 4)
- 40 to 46 (even only) EXP-RX i - j (where $i = 3$ and $j = 9$ to 12)

- Click **Retrieve**.
- Modify any of the alarm thresholds shown under the Options column in this table:

Table 44: 40-WXC-C, 80-WXC-C, 16-WXC-FS, 17 SMR9 FS, 24 SMR9 FS, 34 SMR9 FS, or SMR20 FS/SMR20 FS CV Optical Channel Alarm Threshold Settings

Parameter	Description	Options
Circuit Name	(Display only) Shows the circuit name. This is provisioned in the Circuits tab.	—
Port Name	(Display only) Shows the port name.	—
Actual Wavelength	(Display only) Displays the actual wavelength utilized by the channel.	—

Parameter	Description	Options
Power Failure Low (dBm)	<p>(Display only) Shows the power failure low threshold. This power value applies to the corresponding port and is automatically calculated when ANS is run.</p> <p>This threshold applies to a port associated to a VOA (OSC-VOA) that is always active in Constant Power mode.</p> <p>The threshold is automatically linked to the Power Setpoint (VOA Power Ref + VOA Power Calib) that is provisioned. Changing the setpoint results in changing the threshold (always 5 dB lower).</p> <p>The threshold is calculated automatically when you run ANS. For more information, see the Hardware Specifications document.</p>	—
Power Degrade High (dBm)	<p>(Display only) Shows the power degrade high threshold. This power value applies to the corresponding port and is automatically calculated when ANS is run.</p> <p>This threshold applies to a port associated to a VOA (OSC-VOA) that is always active in Constant Power mode.</p> <p>The threshold is automatically linked to the Power Setpoint (VOA Power Ref + VOA Power Calib) that is provisioned. Changing the setpoint results in changing the threshold (always 3 dB higher).</p>	—
Power Degrade Low (dBm)	<p>(Display only) Shows the power degrade low threshold. This power value applies to the corresponding port and is automatically calculated when ANS is run.</p> <p>This threshold applies to a port associated to a VOA (OSC-VOA) that is always active in Constant Power mode.</p> <p>The threshold is automatically linked to the Power Setpoint (VOA Power Ref + VOA Power Calib) that is provisioned. Changing the setpoint results in changing the threshold (always 2 dB lower).</p>	Numeric

g) Click **Apply**. If the change affects traffic, a warning message appears. Click Yes to complete the change.

Step 5

Return to your originating procedure (NTP).

DLP-G408 Changing Optical Line Parameters for 40-WXC-C, 80-WXC-C, 16-WXC-FS, 17 SMR9 FS, 24 SMR9 FS, 34 SMR9 FS, or SMR20 FS/SMR20 FS CV Cards

Purpose	This task changes the optical line parameter settings for 40-WXC-C, 80-WXC-C, 16-WXC-FS, 17 SMR9 FS, 24 SMR9 FS, 34 SMR9 FS, or SMR20 FS/SMR20 FS CV cards.
Tools/Equipment	None
Prerequisite Procedures	DLP-G46 Log into CTC
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher

Procedure

-
- Step 1** In node view (single-shelf mode) or shelf view (multishelf mode), double-click the 40-WXC-C, 80-WXC-C, 16-WXC-FS, 17 SMR9 FS, 24 SMR9 FS, 34 SMR9 FS, or SMR20 FS/SMR20 FS CV card where you want to change the optical line parameter settings.
- Step 2** Click the **Provisioning** > **Optical Line** > **Parameters** tabs.
- Step 3** Modify any of the settings described in this table. The provisionable parameters are listed in the Options column. The SONET (ANSI) option is followed by the SDH (ETSI) option.

Table 45: 40-WXC-C, 80-WXC-C, 16-WXC-FS, 17 SMR9 FS, 24 SMR9 FS, 34 SMR9 FS, or SMR20 FS/SMR20 FS CV Optical Line Parameter Settings

Parameter	Description	Options
Port	(Display only) Displays the port number, port type, and direction (RX or TX),	

Parameter	Description	Options
		<p>40-WXC-C card options:</p> <ul style="list-style-type: none"> • 10 (DROP-TX) • 11 (EXP-TX) • 12 (COM-RX) • 13 (COM-TX) <p>80-WXC-C card options:</p> <ul style="list-style-type: none"> • 11 (DROP-TX) • 12 (EXP-TX) • 13 (COM-RX) <p>16-WXC-FS card options:</p> <ul style="list-style-type: none"> • 35 (COM-RX) • 36 (COM-TX) <p>17 SMR9 FS, 24 SMR9 FS and 34 SMR9 FS card options:</p> <ul style="list-style-type: none"> • 1 (COM-TX) • 3 (OSC-TX) • 4 (OSC-RX) • 6 (LINE-TX) • 7 to 21 (odd only) EXP-TX_{<i>i</i>-<i>j</i>} (where <i>i</i> = 1 to 2 and <i>j</i> = 1, 3, 5, or 7) • 8 to 22 (even only) EXP-RX_{<i>i</i>-<i>j</i>} (where <i>i</i> = 1 to 2 and <i>j</i> = 2, 4, 6, or 8) • 23 (EXP-TX 9) • 24 (EXP-RX 9) • 25 (EXP-TX 10) <p>SMR20 FS/SMR20 FS CV card options:</p> <ul style="list-style-type: none"> • 1 (COM-TX) • 3 (OSC-TX) • 4 (OSC-RX) • 6 (LINE-TX) • 7 to 37 (odd only) EXP-TX_{<i>i</i>-<i>j</i>} (where <i>i</i> = 1 to 2 and <i>j</i> = 1 to 8)

Parameter	Description	Options
		<ul style="list-style-type: none"> • 8 to 38 (even only) EXP-RXi-j (where $i = 1$ to 2 and $j = 9$ to 16) • 39 to 45 (odd only) EXP-TXi-j (where $i = 3$ and $j = 1$ to 4) • 40 to 46 (even only) EXP-RXi-j (where $i = 3$ and $j = 9$ to 12)
Port Name	Allows you to assign a logical name for each of the ports shown.	User-defined. Name can be up to 80 alphanumeric/special characters. Blank by default. Double-click, enter the name, and press Enter. See the DLP-G104 Assigning a Name to a Port task.
Admin State	Sets the port administrative state unless network conditions prevent the change. For more information about administrative states, see the Administrative and Service States document.	From the drop-down list, choose one of the following: <ul style="list-style-type: none"> • IS,AINS/Unlocked,automaticInService • OOS,DSBLD/Locked,disabled • OOS,MT/Locked,maintenance
Service State	(Display only) Identifies the autonomously generated state that gives the overall condition of the port. Service states appear in the format: Primary State-Primary State Qualifier, Secondary State. For more information about service states, see the Administrative and Service States document.	<ul style="list-style-type: none"> • IS-NR/Unlocked-enabled • OOS-AU,AINS/Unlocked-disabled, automaticInService • OOS-MA,DSBLD/Locked-enabled,disabled • OOS-MA,MT/Locked-enabled,maintenance
Power (40-WXC-C, 16-WXC-FS, 17 SMR9 FS, 24 SMR9 FS, 34 SMR9 FS, and SMR20 FS/SMR20 FS CV only)	(Display only) Power value read by the photodiode associated with the port.	Numeric value (dB)

Parameter	Description	Options
Active Channels (40-WXC-C, 16-WXC-FS, 17 SMR9 FS, 24 SMR9 FS, 34 SMR9 FS, and SMR20 FS/SMR20 FS CV only)	Number of active channels carried by the port (the difference between provisioned and failed)	—
VOA Mode (80-WXC-C in BIDI mode only)	(Display only) Displays the active VOA working mode.	<ul style="list-style-type: none"> • Constant Power • Constant Attenuation
VOA Attenuation Ref. (80-WXC-C in BIDI mode only)	(Display only) Shows the attenuation value of the VOA when the VOA Mode is Constant Attenuation. This parameter can only be modified by ANS.	Numeric value (dB)
VOA Attenuation Calib. (80-WXC-C in BIDI mode only)	Allows you to modify the VOA attenuation value when VOA Mode is Constant Attenuation.	Double-click the parameter, enter a value, and press Enter. <ul style="list-style-type: none"> • Numeric value (dB) • -30 dB to +30 dB
Attenuator Value	Displays the attenuation value entered by the user.	—
OSC Power	(Display only) Shows the OSC power level per port.	—

Step 4 Return to your originating procedure (NTP).

DLP-G409 Changing the Optical Line Thresholds for 40-WXC-C, 80-WXC-C, 16-WXC-FS, 17 SMR9 FS, 24 SMR9 FS, 34 SMR9 FS, or SMR20 FS/SMR20 FS CV Cards

Purpose	This task changes the 40-WXC-C, 80-WXC-C, 16-WXC-FS, 17 SMR9 FS, 24 SMR9 FS, 34 SMR9 FS, or SMR20 FS/SMR20 FS CV card optical line threshold settings.
Tools/Equipment	None
Prerequisite Procedures	DLP-G46 Log into CTC
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher



Caution Warning thresholds are monitored by CTC as part of performance monitoring. They must be user-provisioned.

Procedure

- Step 1** In node view (single-shelf mode) or shelf view (multishelf mode), double-click the 40-WXC-C, 80-WXC-C, 16-WXC-FS, 17 SMR9 FS, 24 SMR9 FS, 34 SMR9 FS, or SMR20 FS/SMR20 FS CV card where you want to change the optical line threshold settings.
- Step 2** Click the **Provisioning** > **Optical Line** > **Optics Thresholds** tabs for one of the groups of optical channels that are available.
- Step 3** If you want to change the warning thresholds, complete the following steps. If not, continue with [Step 4](#).
 - a) Under Types, choose Warning.
 - b) Choose the warning interval that you want to provision, either **15 minutes** or **1 Day**.
 - c) Click **Refresh**.
 - d) Modify any of the warning thresholds shown under the Options column in the following table.

Table 46: 40-WXC-C, 80-WXC-C, 16-WXC-FS, 17 SMR9 FS, 24 SMR9 FS, 34 SMR9 FS, or SMR20 FS/SMR20 FS CV Optical Line Warning Threshold Settings

Parameter	Description	Options
Port	(Display only) Displays the port number, port type, and direction (RX or TX),	

Parameter	Description	Options
		<p>40-WXC-C card options:</p> <ul style="list-style-type: none"> • 10 (DROP-TX) • 11 (EXP-TX) • 12 (COM-RX) • 13 (COM-TX) <p>80-WXC-C card options:</p> <ul style="list-style-type: none"> • 11 (DROP-TX) • 12 (EXP-TX) • 13 (COM-RX) <p>16-WXC-FS card options:</p> <ul style="list-style-type: none"> • 35 (COM-RX) • 36 (COM-TX) <p>17 SMR9 FS, 24 SMR9 FS and 34 SMR9 FS card options:</p> <ul style="list-style-type: none"> • 1 (COM-TX) • 3 (OSC-TX) • 4 (OSC-RX) • 6 (LINE-TX) • 7 to 21 (odd only) EXP-TX_{<i>i-j</i>} (where <i>i</i> = 1 to 2 and <i>j</i> = 1, 3, 5, or 7) • 8 to 22 (even only) EXP-RX_{<i>i-j</i>} (where <i>i</i> = 1 to 2 and <i>j</i> = 2, 4, 6, or 8) • 23 (EXP-TX 9) • 24 (EXP-RX 9) • 25 (EXP-TX 10) <p>SMR20 FS/SMR20 FS CV card options:</p> <ul style="list-style-type: none"> • 1 (COM-TX) • 3 (OSC-TX) • 4 (OSC-RX) • 6 (LINE-TX) • 7 to 37 (odd only) EXP-TX_{<i>i-j</i>} (where <i>i</i> = 1 to 2 and <i>j</i> = 1 to 8)

Parameter	Description	Options
		<ul style="list-style-type: none"> • 8 to 38 (even only) EXP-RXi-j (where $i = 1$ to 2 and $j = 9$ to 16) • 39 to 45 (odd only) EXP-TXi-j (where $i = 3$ and $j = 1$ to 4) • 40 to 46 (even only) EXP-RXi-j (where $i = 3$ and $j = 9$ to 12)
opwrMin (dBm)	Set the low power warning level.	Numeric. Can be set for 15-minute or one-day intervals. The default is -50 dBm.
opwrMax (dBm)	Set the high power warning level.	Numeric. Can be set for 15-minute or one-day intervals. The default is 30 dBm.
opwrMin OSC (dBm)	Sets the OSC low power warning level.	Numeric. Can be set for 15-minute or one-day intervals. The default is -50 dBm. Double-click the parameter, enter a value, and press Enter.
opwrMax OSC (dBm)	Sets the OSC high power warning level.	Numeric. Can be set for 15-minute or one-day intervals. The default is 30 dBm. Double-click the parameter, enter a value, and press Enter.

e) Click **Apply**. If the change affects traffic, a warning message appears. Click Yes to complete the change.

Step 4

If you want to change the alarm thresholds, complete the following steps. If not, continue with [Step 5](#).

- Under Types, choose Alarm.
- Click **Refresh**.
- Modify any of the alarm thresholds shown under the Options column in the following table.

Table 47: 40-WXC-C, 80-WXC-C, 16-WXC-FS, 17 SMR9 FS, 24 SMR9 FS, 34 SMR9 FS, or SMR20 FS/SMR20 FS CV Optical Line Alarm Threshold Settings

Parameter	Description	Options
Port	(Display only) Displays the port number, port type, and direction (RX or TX),	

Parameter	Description	Options
		<p>40-WXC-C card options:</p> <ul style="list-style-type: none"> • 10 (DROP-TX) • 11 (EXP-TX) • 12 (COM-RX) • 13 (COM-TX) <p>80-WXC-C card options:</p> <ul style="list-style-type: none"> • 11 (DROP-TX) • 12 (EXP-TX) • 13 (COM-RX) <p>16-WXC-FS card options:</p> <ul style="list-style-type: none"> • 35 (COM-RX) • 36 (COM-TX) <p>17 SMR9 FS, 24 SMR9 FS and 34 SMR9 FS card options:</p> <ul style="list-style-type: none"> • 1 (COM-TX) • 3 (OSC-TX) • 4 (OSC-RX) • 6 (LINE-TX) • 7 to 21 (odd only) EXP-TXi-j (where i = 1 to 2 and j = 1, 3, 5, or 7) • 8 to 22 (even only) EXP-RXi-j (where i = 1 to 2 and j = 2, 4, 6, or 8) • 23 (EXP-TX 9) • 24 (EXP-RX 9) • 25 (EXP-TX 10) <p>SMR20 FS/SMR20 FS CV card options:</p> <ul style="list-style-type: none"> • 1 (COM-TX) • 3 (OSC-TX) • 4 (OSC-RX) • 6 (LINE-TX) • 7 to 37 (odd only) EXP-TXi-j (where i = 1 to 2 and j = 1 to 8)

Parameter	Description	Options
		<ul style="list-style-type: none"> • 8 to 38 (even only) EXP-RXi-j (where $i = 1$ to 2 and $j = 9$ to 16) • 39 to 45 (odd only) EXP-TXi-j (where $i = 3$ and $j = 1$ to 4) • 40 to 46 (even only) EXP-RXi-j (where $i = 3$ and $j = 9$ to 12)
Power Failure Low (dBm)	<p>Shows the power failure low threshold. This power value applies to the corresponding port and is automatically calculated when ANS is run.</p> <p>You can manually change the threshold. The value must be within the optical power range that is specified for the card. For more information, see the Hardware Specifications document.</p>	Numeric. Double-click the parameter, enter a value, and press Enter .
Power Degrade High (dBm)	<p>(Display only) Shows the current value of the optical power degrade high threshold. This threshold applies only when the amplifier is active and in constant power mode.</p> <p>Power Degrade High refers to the port's Signal Output Power value and is automatically calculated by the control card when the amplifier is turned up.</p> <p>The Power Degrade High threshold is linked to the Output Power Setpoint on the Parameters tab. Changing the setpoint changes the Power Degrade High threshold. The threshold value is always 2 dB higher than the Output Power Setpoint value.</p> <p>APC can modify this value based on the number of OCHNC circuits that the amplifier is managing. For more information, see the Network Reference chapter.</p>	Numeric.

Parameter	Description	Options
Power Degrad Low (dBm)	<p>(Display only) Shows the current value of the optical power degrade high threshold configured in the card. This threshold applies only when the amplifier is active and in constant power mode.</p> <p>Power Degrad Low refers to the port's Signal Output Power value and is automatically calculated by the control card when the amplifier is turned up.</p> <p>The Power Degrad Low threshold is automatically linked to the Output Power Setpoint on the Parameters tab. Changing the setpoint changes the Power Degrad Low threshold. The threshold value is always 2 dB lower than the Output Power Setpoint.</p> <p>APC can modify this value based on the number of OCHNC circuits that the amplifier is managing.</p>	Numeric.
Pwr OSC Degrad Low (dBm)	<p>Shows the power degrade low threshold. This power value applies to the corresponding port and is automatically calculated when ANS is run.</p> <p>This threshold applies to a port associated to a VOA (OSC-VOA) always active in Constant Power mode.</p> <p>In this case, the threshold is automatically linked to the Power setpoint (VOA Power Ref + VOA Power Calib) that is provisioned. Changing the setpoint will result in changing the threshold (always 2 dB lower).</p>	Numeric.
Pwr OSC Degrad High (dBm)	<p>Shows the power degrade high threshold. This power value applies to the corresponding port and is automatically calculated when ANS is run.</p> <p>This threshold applies to a port that is associated to a VOA (OSC-VOA). In Constant Power mode, the port is always active and the threshold is automatically linked to the Power setpoint (VOA Power Ref + VOA Power Calib). To change the threshold, change the Power setpoint. The threshold will always be 2 dB higher than the Power setpoint.</p>	Numeric.

Parameter	Description	Options
Pwr OSC Failure (dBm)	Shows the optical power failure low threshold for the port. The threshold is calculated automatically when you run ANS. If the VOA Mode is Constant Attenuation, you can manually change the threshold. The value must be within the optical power range that is specified for the card. For more information, see the Hardware Specifications document.	Numeric. Double-click the parameter, enter a value, and press Enter .

d) Click **Apply**. If the change affects traffic, a warning message appears. Click Yes to complete the change.

Step 5 Return to your originating procedure (NTP).

DLP-G413 Changing the Line Parameters for 40-WXC-C, 80-WXC-C, or 16-WXC-FS Cards

Purpose	This task changes the WXC line parameter settings for 40-WXC-C, 80-WXC-C, or 16-WXC-FS cards.
Tools/Equipment	None
Prerequisite Procedures	DLP-G46 Log into CTC
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher

Procedure

Step 1 In node view (single-shelf mode) or shelf view (multishelf mode), double-click the 40-WXC-C, 80-WXC-C, or 16-WXC-FS card where you want to change the optical line parameter settings.

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

Step 3 Modify any of the settings described in this table. The provisionable parameters are listed in the Options column. The SONET (ANSI) option is followed by the SDH (ETSI) option.

Table 48: 40-WXC-C, 80-WXC-C, or 16-WXC-FS WXC Line Parameter Settings

Parameter	Description	Options
Port	(Display only) Displays the port number, port type, and direction (RX or TX),	<p>40-WXC-C card options:</p> <ul style="list-style-type: none"> • 1 (EXP-RX) • 2 (EXP-RX) • 3 (EXP-RX) • 4 (EXP-RX) • 5 (EXP-RX) • 6 (EXP-RX) • 7 (EXP-RX) • 8 (EXP-RX) • 9 (ADD-RX) <p>80-WXC-C card options:</p> <ul style="list-style-type: none"> • 1 (EAD) • 2 (EAD) • 3 (EAD) • 4 (EAD) • 5 (EAD) • 6 (EAD) • 7 (EAD) • 8 (EAD) • 9 (AD) • 10 (COM) <p>16-WXC-FS card options:</p> <ul style="list-style-type: none"> • EXP RX • EXP TX • UPG TX • UPG RX

Parameter	Description	Options
Port Name	Allows you to assign a logical name for each of the ports shown.	User-defined. Name can be up to 80 alphanumeric/special characters. Blank by default. Double-click, enter the name, and press Enter. See the DLP-G104 Assigning a Name to a Port task.
Admin State	Sets the port administrative state unless network conditions prevent the change. For more information about administrative states, see the Administrative and Service States document.	From the drop-down list, choose one of the following: <ul style="list-style-type: none"> • IS,AINS/Unlocked,automaticInService • OOS,DSBLD/Locked,disabled • OOS,MT/Locked,maintenance
Service State	(Display only) Identifies the autonomously generated state that gives the overall condition of the port. Service states appear in the format: Primary State-Primary State Qualifier, Secondary State. For more information about service states, see the Administrative and Service States document.	<ul style="list-style-type: none"> • IS-NR/Unlocked-enabled • OOS-AU,AINS/Unlocked-disabled, automaticInService • OOS-MA,DSBLD/Locked-enabled,disabled • OOS-MA,MT/Locked-enabled,maintenance
Active Channels	(Display only) Indicates how many channels the port is carrying. Generally reflects the number of provisioned channels.	—
Power (80-WXC-C and 16-WXC-FS only)	(Display only) Shows the current power level per port.	—
Attenuator Value (16-WXC-FS only)	Displays the attenuation value entered by the user.	—

Step 4 Return to your originating procedure (NTP).

DLP-G771 Changing the WXC Line Thresholds for 80-WXC-C or 16-WXC-FS Card

Purpose	This task changes the WXC line thresholds for the 80-WXC-C or 16-WXC-FS card.
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Tools/Equipment	None
Prerequisite Procedures	DLP-G46 Log into CTC
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher



Caution Warning thresholds are monitored by CTC as part of performance monitoring. They must be user-provisioned.

Procedure

-
- Step 1** In node view (single-shelf mode) or shelf view (multishelf mode), double-click the 80-WXC-C or 16-WXC-FS card where you want to change the WXC line thresholds.
- Step 2** Click the **Provisioning** > **WXC Line** > **WXC Line Thresholds** tabs for one of the groups of optical channels that are available.
- Step 3** If you want to change the warning thresholds, complete the following steps. If not, continue with [Step 4](#).
- Under Types, choose **Warning**.
 - Choose the warning interval that you want to provision, either **15 minutes** or **1 Day**.
 - Click **Refresh**.
 - Modify any of the warning thresholds shown under the Options column in the following table.

Table 49: 80-WXC-C or 16-WXC-FS WXC Line Warning Thresholds

Parameter	Description	Options
Port	(Display only) Displays the port number, port type, and direction (RX or TX),	80-WXC-C card options: <ul style="list-style-type: none"> • 1 (EAD 1) • 2 (EAD 2) • 3 (EAD 3) • 4 (EAD 4) • 5 (EAD 5) • 6 (EAD 6) • 7 (EAD 7) • 8 (EAD 8) • 9 (AD) • 10 (COM) 16-WXC-FS card options: <ul style="list-style-type: none"> • EXP-TX • EXP-RX • UPG-TX • UPG-RX
opwrMin (dBm)	Set the low power warning level.	Numeric. Can be set for 15-minute or one-day intervals. The default is -50 dBm.
opwrMax (dBm)	Set the high power warning level.	Numeric. Can be set for 15-minute or one-day intervals. The default is 30 dBm.

e) Click **Apply**. If the change affects traffic, a warning message appears. Click **Yes** to complete the change.

Step 4

If you want to change the alarm thresholds, complete the following steps. If not, continue with [Step 5](#).

- a) Under Types, choose Alarm.
- b) Click **Refresh**.
- c) Modify any of the alarm thresholds shown under the Options column in this table.

Table 50: 80-WXC-C or 16-WXC-FS WXC Line Alarm Thresholds

Parameter	Description	Options
Port	(Display only) Displays the port number, port type, and direction (RX or TX),	<p>80-WXC-C card options:</p> <ul style="list-style-type: none"> • 1 (EAD 1) • 2 (EAD 2) • 3 (EAD 3) • 4 (EAD 4) • 5 (EAD 5) • 6 (EAD 6) • 7 (EAD 7) • 8 (EAD 8) • 9 (AD) • 10 (COM) <p>16-WXC-FS card options:</p> <ul style="list-style-type: none"> • EXP-TX • EXP-RX • UPG-TX • UPG-RX
Power Failure Low (dBm)	<p>Shows the power failure low threshold. This power value applies to the corresponding port and is automatically calculated when ANS is run.</p> <p>You can manually change the threshold. The value must be within the optical power range that is specified for the card. For more information, see the Hardware Specifications document.</p>	Numeric. Double-click the parameter, enter a value, and press Enter .

d) Click **Apply**. If the change affects traffic, a warning message appears. Click **Yes** to complete the change.

Step 5

Return to your originating procedure (NTP).

DLP-G772 Viewing Wavelength Power for 16-WXC-FS, 17 SMR9 FS, 24 SMR9 FS, 34 SMR9 FS, or SMR20 FS/SMR20 FS CV Card

Purpose	This task allows you to view the wavelength power of the ports for the 16-WXC-FS, 17 SMR9 FS, 24 SMR9 FS, 34 SMR9 FS, or SMR20 FS/SMR20 FS CV card.
Tools/Equipment	None
Prerequisite Procedures	DLP-G46 Log into CTC
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher

Procedure

-
- Step 1** In node view (single-shelf mode) or shelf view (multishelf mode), double-click the 16-WXC-FS, 17 SMR9 FS, 24 SMR9 FS, 34 SMR9 FS, or SMR20 FS/SMR20 FS CV card where you want to view the wavelength power of the ports.
- Step 2** Click the **Maintenance > Wavelength Power** tabs.
- Step 3** From the Port drop-down list, choose the port and click **Retrieve** to view the wavelength power of the selected port.
- Step 4** Return to your originating procedure (NTP).
-

DLP-G773 Creating a Flex Spectrum or ITU Circuit for 16-WXC-FS, 17 SMR9 FS, 24 SMR9 FS, 34 SMR9 FS, or SMR20 FS/SMR20 FS CV Card

Purpose	This task creates a flex spectrum or ITU circuit for the 16-WXC-FS, 17 SMR9 FS, 24 SMR9 FS, 34 SMR9 FS, or SMR20 FS/SMR20 FS CV card.
Tools/Equipment	None
Prerequisite Procedures	DLP-G46 Log into CTC
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher

Procedure

- Step 1** In node view (single-shelf mode) or shelf view (multishelf mode), double-click the 16-WXC-FS, 17 SMR9 FS, 24 SMR9 FS, 34 SMR9 FS, or SMR20 FS/SMR20 FS CV card where you want to create the flex spectrum or ITU circuit.
- Step 2** Click the **Maintenance** > **OCHNC** tabs.
- Step 3** Click **Create**.
- Step 4** Complete the following to create a flex spectrum circuit.
- a) In the Maintenance Circuit window, choose the **Flex Spectrum** radio button from the Optical Conf area. For 16-WXC-FS card, continue with [Step 4b](#). For 17 SMR9 FS, 24 SMR9 FS, 34 SMR9 FS, or SMR20 FS/SMR20 FS CV card, continue with [Step 4d](#).
 - b) Choose the **Originating from Card** radio button and set these parameters:
 1. Choose the port from the Card Port drop-down list.
 2. Choose the side port from the Side Port drop-down list.
 3. In the Flex Spectrum Parameters area, enter the frequency (1566.72 nm to 1528.77 nm) in the Frequency field.
The default width is 50 GHz and cannot be changed.
 - c) Choose the **Terminating at Card** radio button and set these parameters:
 1. Choose the side port from the Side Port drop-down list.
 2. Choose the port from the Card Port drop-down list.
 3. In the Flex Spectrum Parameters area, enter the frequency (1566.72 nm to 1528.77 nm) in the Frequency field.
The default width is 50 GHz and cannot be changed.
 - d) Choose the **Originating from Card** radio button and set these parameters:
 1. Choose the port from the Card Port drop-down list.
 2. Choose the side port from the Side Port drop-down list.
 3. In the Flex Spectrum Parameters area, enter the frequency (1566.31 nm to 1528.77 nm) in the Frequency field.
The default width is 50 GHz and cannot be changed.
 - e) Choose the **Terminating at Card** radio button and set these parameters:
 1. Choose the side port from the Side Port drop-down list.
 2. Choose the port from the Card Port drop-down list.
 3. In the Flex Spectrum Parameters area, enter the frequency (1566.31 nm to 1528.77 nm) in the Frequency field.
The default width is 50 GHz and cannot be changed.
 - f) Enter the circuit label in the Maintenance Label field and set the channel power offset.

g) Click **Done**.

Step 5 Complete the following to create a ITU circuit.

- a) In the Maintenance Circuit window, choose the **ITU** radio button from the Optical Conf area. For 16-WXC-FS card, continue with [Step 5b](#). For 17 SMR9 FS, 24 SMR9 FS, 34 SMR9 FS, or SMR20 FS/SMR20 FS CV card, continue with [Step 5d](#).
- b) Choose the **Originating from Card** radio button and set these parameters:
 1. Choose the port from the Card Port drop-down list.
 2. Choose the side port from the Side Port drop-down list.
 3. In the ITU Parameters area, choose the wavelength from the OCHNC Wavelength drop-down list. The wavelength range is 1538.77 nm to 1566.31 nm.
 4. From the drop-down lists, choose **C Band** and **Odd** or **Even**.
- c) Choose the **Terminating at Card** radio button and set the following parameters.
 1. Choose the side port from the Side Port drop-down list.
 2. Choose the port from the Card Port drop-down list.
 3. In the ITU Parameters area, choose the wavelength from the OCHNC Wavelength drop-down list. The wavelength range is 1538.77 nm to 1566.31 nm.
 4. From the drop-down lists, choose **C Band** and **Odd** or **Even**.
- d) Choose the **Originating from Card** radio button and set these parameters:
 1. Choose the port from the Card Port drop-down list.
 2. Choose the side port from the Side Port drop-down list.
 3. In the ITU Parameters area, choose the wavelength from the OCHNC Wavelength drop-down list. The wavelength range is 1528.77 nm to 1566.31 nm.
 4. From the drop-down lists, choose **C Band** and **Odd** or **Even**.
- e) Choose the **Terminating at Card** radio button and set the following parameters.
 1. Choose the side port from the Side Port drop-down list.
 2. Choose the port from the Card Port drop-down list.
 3. In the ITU Parameters area, choose the wavelength from the OCHNC Wavelength drop-down list. The wavelength range is 1528.77 nm to 1566.31 nm.
 4. From the drop-down lists, choose **C Band** and **Odd** or **Even**.
- f) Enter the circuit label in the Maintenance Label field and set the channel power offset.
- g) Click **Done**.

Step 6 Return to your originating procedure (NTP).

DLP-G429 Multiplexing a Single Wavelength on 40-WXC-C Card

Purpose	This task multiplexes a single wavelength onto the COM-TX port of a 40-WXC-C card. Perform this task for testing and troubleshooting a 40-WXC-C card.
Tools/Equipment	None
Prerequisite Procedures	DLP-G46 Log into CTC
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher

Procedure

-
- Step 1** In node view (single-shelf mode) or shelf view (multishelf mode), double-click the 40-WXC-C card where you want to multiplex a wavelength.
- Step 2** Click the **Maintenance** > **OCHNC** tabs.
- Step 3** Enter the following values:
- Target Power (dBm)—Enter the target power. The default is –14.0 dBm.
- Input Port—Choose the EXP-RX or ADD-RX port where you want to multiplex the wavelength from.
 - VOA Attenuation (dB)—Enter the VOA attenuation. The default values are:
 - 20 dB for four-way mesh and an EXP-RX input port
 - 16 dB for 8-way mesh and an EXP-RX input port
 - 22 dB for an ADD-RX input port
 - Wavelength—Choose the wavelength that you want to multiplex. The supported wavelengths are the 40 channels of the C-band from 1530.33 nm to 1561.32 nm. A “Maintenance” wavelength is also provided that corresponds to a “Lambda zero” wavelength of 1529.55 nm.
- Note** You cannot multiplex a wavelength that is already allocated on the COM-TX port.
- Step 4** Click **Apply**. This creates a cross-connection (add or pass-through) for the specified wavelength. This cross-connection remains active until you click **Clear**.
- Step 5** If you want to multiplex additional channels, click **Clear** to delete the existing cross-connection, and repeat Steps 3 and 4. If not, continue with [Step 6](#).
- Step 6** To view the actual power on the COM-TX port, click **Refresh**. Wait 10-15 seconds for the actual power to appear.
- Step 7** Return to your originating procedure (NTP).
-

NTP-G241 Modifying the Line Settings and PM Thresholds for 40-SMR1-C and 40-SMR2-C Cards

Purpose	This procedure changes the 40-SMR1-C and 40-SMR2-C card thresholds and settings.
Tools/Equipment	None
Prerequisite Procedures	<ul style="list-style-type: none"> • DLP-G46 Log into CTC • NTP-G30 Installing the DWDM cards
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher

Procedure

Step 1 Complete the [NTP-G103 Backing Up the Database](#) procedure.

Step 2 Perform any of the following tasks as needed:

- [DLP-G532 Changing Optical Line Settings for 40-SMR1-C and 40-SMR2-C Cards](#)
- [DLP-G533 Changing Optical Line Threshold Settings for 40-SMR1-C and 40-SMR2-C Cards](#)
- [DLP-G534 Changing Optical Amplifier Line Settings for 40-SMR1-C and 40-SMR2-C Cards](#)
- [DLP-G535 Changing Optical Amplifier Threshold Settings for 40-SMR1-C and 40-SMR2-C Cards](#)
- [DLP-G536 Changing the Optical Channel Parameters for 40-SMR1-C and 40-SMR2-C Cards](#)
- [DLP-G537 Changing the Optical Channel Thresholds for 40-SMR1-C and 40-SMR2-C Cards](#)

Note To use the alarm profile tab, including creating alarm profiles and suppressing alarms, see [Alarm and TCA Monitoring and Management](#).

Step 3 Complete the [NTP-G103 Backing Up the Database](#) procedure.

Stop. You have completed this procedure.

DLP-G532 Changing Optical Line Settings for 40-SMR1-C and 40-SMR2-C Cards

Purpose	This task changes the optical line settings for the 40-SMR1-C and 40-SMR2-C cards.
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Tools/Equipment	None
Prerequisite Procedures	DLP-G46 Log into CTC
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher

Procedure

- Step 1** In node view (single-shelf mode) or shelf view (multishelf mode), double-click the 40-SMR1-C or 40-SMR2-C card where you want to change the optical line settings.
- Step 2** Click the **Provisioning** > **Optical Line** > **Parameters** tabs.
- Step 3** Modify any of the settings described in the following table. The provisionable parameters are listed in the Options column in the table. In the Options column, the SONET (ANSI) option is followed by the SDH (ETSI) option.

Table 51: 40-SMR1-C and 40-SMR2-C Optical Line Settings

Parameter	Description	Options
Port	(Display only) Displays the port number, port type, and direction (TX or RX).	<p>40-SMR1-C card options:</p> <ul style="list-style-type: none"> • 1 (EXP-RX) • 3 (DC-RX) • 4 (DC-TX) • 5 (OSC-RX) • 6 (OSC-TX) • 7 (ADD-RX) • 8 (DROP-TX) • 9 (LINE-RX) • 10 (LINE-TX) <p>40-SMR2-C card options:</p> <ul style="list-style-type: none"> • 1 (DC-RX) • 2 (DC-TX) • 3 (OSC-RX) • 4 (OSC-TX) • 5 (ADD-RX) • 6 (DROP-TX) • 7 (LINE-RX) • 10 (EXP-RX 1-2) • 11 (EXP-RX 1-3) • 12 (EXP-RX 1-4)
Port Name	Provides the ability to assign the specified port, a name.	User-defined. Name can be up to 80 alphanumeric characters. Blank by default. Double-click, enter the name. See the DLP-G104 Assigning a Name to a Port .

Parameter	Description	Options
Admin State	Sets the port administrative state unless network conditions prevent the change. For more information about administrative states, see the Administrative and Service States document.	<p>From the drop-down list, choose one of the following:</p> <ul style="list-style-type: none"> • IS,AINS/Unlocked,automaticInService • OOS,DSBLD/Locked,disabled • OOS,MT/Locked,maintenance <p>Note You cannot set the OOS,DSBLD/Locked administrative state for LINES hence the OOS-MA,DSBLD/Locked service state is not applicable.</p>
Service State	(Display only) Identifies the autonomously generated state that gives the overall condition of the port. Service states appear in the format: Primary State-Primary State Qualifier, Secondary State. For more information about service states, see the Administrative and Service States document.	<ul style="list-style-type: none"> • IS-NR/Unlocked-enabled • OOS-AU,AINS/Unlocked-disabled, automaticInService • OOS-MA,DSBLD/Locked-enabled,disabled • OOS-MA,MT/Locked-enabled,maintenance <p>Note You cannot set the OOS,DSBLD/Locked administrative state for LINES hence the OOS-MA,DSBLD/Locked service state is not applicable.</p>
Power	(Display only) Shows the current power level per port.	—
VOA Mode	(Display only) Shows the functional mode of the variable optical attenuator (VOA), when present.	<ul style="list-style-type: none"> • Constant Attenuation • Constant Power
VOA Attenuation Ref	(Display only) Shows the VOA attenuation value when VOA Mode is set to Constant Attenuation. This parameter can only be modified by ANS.	—
VOA Attenuation Calib	Modifies the attenuation value of the VOA when the VOA Mode is set to Constant Attenuation.	Numeric. Double-click the parameter, enter a value.
Active Channels	(Display only) Indicates how many channels the amplifier is carrying. Generally reflects the number of provisioned channels.	—
OSC Power	(Display only) Shows the OSC power level per port.	—

Step 4 Click **Apply**. If the change affects traffic, a warning message appears. Click Yes to complete the change.

Step 5 Return to your originating procedure (NTP).

DLP-G533 Changing Optical Line Threshold Settings for 40-SMR1-C and 40-SMR2-C Cards

Purpose	This task changes the optical line threshold settings for the 40-SMR1-C and 40-SMR2-C cards.
Tools/Equipment	None
Prerequisite Procedures	DLP-G46 Log into CTC
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher



Caution Warning thresholds are monitored by CTC as part of performance monitoring. They must be user-provisioned.

Procedure

- Step 1** In node view (single-shelf mode) or shelf view (multishelf mode), double-click the 40-SMR1-C or 40-SMR2-C card where you want to change the optical line threshold settings.
- Step 2** Click the **Provisioning** > **Optical Line** > **Optics Thresholds** tabs.
- Step 3** If you want to change the warning thresholds, complete the following steps. If not, continue with [Step 4](#).
- Under Types, choose Warning.
 - Choose the warning interval that you want to provision, either **15 minutes** or **1 Day**.
 - Click **Refresh**.
 - Modify any of the warning thresholds shown under the Options column in the following table.
 - Click **Apply**. If the change affects service, a warning message appears. Click Yes to complete the change.

Table 52: 40-SMR1-C and 40-SMR2-C Card Optical Line Warning Threshold Settings

Parameter	Description	Options
Port	(Display only) Displays the port number, port type, and direction (TX or RX):	<p>40-SMR1-C card options:</p> <ul style="list-style-type: none"> • 1 (EXP-RX) • 3 (DC-RX) • 4 (DC-TX) • 5 (OSC-RX) • 6 (OSC-TX) • 7 (ADD-RX) • 8 (DROP-TX) • 9 (LINE-RX) • 10 (LINE-TX) <p>40-SMR2-C card options:</p> <ul style="list-style-type: none"> • 1 (DC-RX) • 2 (DC-TX) • 3 (OSC-RX) • 4 (OSC-TX) • 5 (ADD-RX) • 6 (DROP-TX) • 7 (LINE-RX) • 10 (EXP-RX 1-2) • 11 (EXP-RX 1-3) • 12 (EXP-RX 1-4)
opwrMin (dBm)	Sets the low power warning level.	Numeric. Can be set for 15-minute or one-day intervals. The default is –50 dBm. Double-click the table cell, enter the value, and press Enter.
opwrMax (dBm)	Sets the high power warning level.	Numeric. Can be set for 15-minute or one-day intervals. The default is 30 dBm. Double-click the table cell, enter the value, and press Enter.

Parameter	Description	Options
opwrMin OSC (dBm)	Sets the OSC low power warning level.	Numeric. Can be set for 15-minute or one-day intervals. The default is -50 dBm. Double-click the table cell, enter the value, and press Enter.
opwrMax OSC (dBm)	Sets the OSC high power warning level.	Numeric. Can be set for 15-minute or one-day intervals. The default is 30 dBm. Double-click the table cell, enter the value, and press Enter.

- Step 4** If you want to change the alarm thresholds, complete the following steps. If not, continue with [Step 5](#).
- Under Types, choose Alarm.
 - Click **Refresh**.
 - Modify any of the alarm thresholds shown under the Options column in the following table.
 - Click **Apply**. If the change affects traffic, a warning message appears. Click Yes to complete the change.

Table 53: 40-SMR1-C and 40-SMR2-C Card Optical Line Alarm Thresholds Setting

Parameter	Description	Options
Port	(Display only) Displays the port number.	<p>40-SMR1-C card options:</p> <ul style="list-style-type: none"> • 1 (EXP-RX) • 3 (DC-RX) • 4 (DC-TX) • 5 (OSC-RX) • 6 (OSC-TX) • 7 (ADD-RX) • 8 (DROP-TX) • 9 (LINE-RX) • 10 (LINE-TX) <p>40-SMR2-C card options:</p> <ul style="list-style-type: none"> • 1 (DC-RX) • 2 (DC-TX) • 3 (OSC-RX) • 4 (OSC-TX) • 5 (ADD-RX) • 6 (DROP-TX) • 7 (LINE-RX) • 10 (EXP-RX 1-2) • 11 (EXP-RX 1-3) • 12 (EXP-RX 1-4)
Power Failure Low (dBm)	Shows the optical power failure low threshold for the port. The threshold is calculated automatically when you run ANS. You can manually change the threshold. The value must be within the optical power range that is specified for the card. For more information, see the Hardware Specifications document.	Numeric.
Power Degrade High (dBm)	Does not apply to 40-SMR1-C and 40-SMR2-C line parameters.	—

Parameter	Description	Options
Power Degrade Low (dBm)	Does not apply to 40-SMR1-C and 40-SMR2-C line parameters.	—
Pwr OSC Degrade High (dBm)	Does not apply to 40-SMR1-C and 40-SMR2-C line parameters.	—
Pwr OSC Degrade Low (dBm)	Does not apply to 40-SMR1-C and 40-SMR2-C line parameters.	—
Pwr OSC Failure (dBm)	Shows the optical power failure threshold for the OSC. The threshold is calculated automatically when you run ANS. You can manually change the threshold. The value must be within the optical power range that is specified for the card. If there is a failure, an LOS-O alarm is raised. For more information, see the Hardware Specifications document.	Numeric.

Step 5 Return to your originating procedure (NTP).

DLP-G534 Changing Optical Amplifier Line Settings for 40-SMR1-C and 40-SMR2-C Cards

Purpose	This task changes the optical amplifier line settings for 40-SMR1-C and 40-SMR2-C cards.
Tools/Equipment	None
Prerequisite Procedures	DLP-G46 Log into CTC
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher

Procedure

- Step 1** In node view (single-shelf mode) or shelf view (multishelf mode), double-click the 40-SMR1-C or 40-SMR2-C card where you want to change the optical amplifier line settings.
- Step 2** Click the **Provisioning** > **Opt. Ampli. Line** > **Parameters** tabs.

Step 3 Modify any of the settings described in the following table. The provisionable parameters are listed in the Options column in the table. In the Options column, the SONET (ANSI) option is followed by the SDH (ETSI) option.

Table 54: 40-SMR1-C and 40-SMR2-C Card Line Settings

Parameter	Description	Options
Port	(Display only) Displays the port number, port type, and direction.	40-SMR1-C card options: <ul style="list-style-type: none"> • 2 (EXP-TX) 40-SMR2-C card options: <ul style="list-style-type: none"> • 8 (LINE-TX) • 9 (EXP-TX 1-1)
Port Name	Provides the ability to assign the specified port, a name.	User-defined. Name can be up to 80 alphanumeric characters. Blank by default. See the DLP-G104 Assigning a Name to a Port document.
Admin State	Sets the port administrative state unless network conditions prevent the change. For more information about administrative states, see the Administrative and Service States document.	From the drop-down list, choose one of the following options: <ul style="list-style-type: none"> • IS,AINS/Unlocked,automaticInService • OOS,DSBLD/Locked,disabled • OOS,MT/Locked,maintenance Note You cannot set the OOS,DSBLD/Locked-disabled administrative state for LINE-TX ports, and hence the OOS-MA,DSBLD/Locked-disabled service state is not applicable.
Service State	(Display only) Identifies the autonomously generated state that gives the overall condition of the port. Service states appear in the format: Primary State-Primary State Qualifier, Secondary State. For more information about service states, see the Administrative and Service States document.	<ul style="list-style-type: none"> • IS-NR/Unlocked-enabled • OOS-AU,AINS/Unlocked-disabled, automaticInService • OOS-MA,DSBLD/Locked-enabled,disabled • OOS-MA,MT/Locked-enabled,maintenance Note You cannot set the OOS,DSBLD/Locked-disabled administrative state for LINE-TX ports, and hence the OOS-MA,DSBLD/Locked-disabled service state is not applicable.
Total Output Power	(Display only) Shows the current power level per port.	—

Parameter	Description	Options
Offset	Adjusts the total output power unless network conditions prevent the adjustment, for example, if the port is in IS state.	Numeric. Double-click to change.
Active Channels	(Display only) Indicates how many channels the card is carrying. Generally reflects the number of provisioned channels.	—
OSC Power	(Display only) Shows the OSC power level per port.	—
Channel Power Ref.	(Display only) Shows the optical per channel signal power setpoint that must be reached at the amplifier output when gain control is active.	—
Signal Output Power	(Display only) Shows the current output power leaving the amplifier, including the ASE contribution.	—
Output Power Set-Point	(Display only) Shows the output power setpoint.	—
Working Mode	(Display only) Shows the working mode, either Output Power or Control Gain.	—
DCU Insertion Loss	(Display only) Shows the DCU insertion loss.	—
Gain	(Display only) The current gain of the amplifiers.	—
Gain Set Point	(Display only) The value of the gain that the amplifier must achieve. APC can modify this value based on the number of OCHNC circuits that the amplifier manages, or to compensate for fiber aging insertion loss. For more information, see the Network Reference chapter.	—
Tilt Reference	(Display only) Shows the default value for the amplifier tilt. Only ANS can modify this field.	—
Tilt Calibration	Allows you to manually change the amplifier tilt.	Numeric. Double-click the parameter, ente

Step 4 Click **Apply**. If the change affects traffic, a warning message appears. Click Yes to complete the change.

Step 5 Return to your originating procedure (NTP).

DLP-G535 Changing Optical Amplifier Threshold Settings for 40-SMR1-C and 40-SMR2-C Cards

Purpose	This task changes the optical channel threshold settings for the 40-SMR1-C and 40-SMR2-C cards.
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Tools/Equipment	None
Prerequisite Procedures	DLP-G46 Log into CTC
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher



Caution Warning thresholds are monitored by CTC as part of performance monitoring. They must be user-provisioned.

Procedure

- Step 1** In node view (single-shelf mode) or shelf view (multishelf mode), double-click the 40-SMR1-C or 40-SMR2-C card where you want to change the optical amplifier threshold settings.
- Step 2** Click the **Provisioning** > **Opt Ampli Line** > **Optics Thresholds** tabs.
- Step 3** If you want to change the warning thresholds, complete the following steps. If not, continue with [Step 4](#).
- Under Types, choose Warning.
 - Choose the warning interval that you want to provision, either **15 minutes** or **1 Day**.
 - Click **Refresh**.
 - Modify any of the warning thresholds shown under the Options column in the following table.
 - Click **Apply**. If the change affects traffic, a warning message appears. Click Yes to complete the change.

Table 55: 40-SMR1-C and 40-SMR2-C Card Line Warning Threshold Settings

Parameter	Description	Options
Port	(Display only) Displays the port number, port type, and direction.	40-SMR1-C card options: <ul style="list-style-type: none"> • 2 (EXP-TX) 40-SMR2-C card options: <ul style="list-style-type: none"> • 8 (LINE-TX) • 9 (EXP-TX 1-1)
opwrMin (dBm)	Sets the low power warning level.	Numeric. Can be set for 15-minute or one-day intervals. The default is -50 dBm. Double-click the parameter, enter a value, and press Enter.
opwrMax (dBm)	Sets the high power warning level.	Numeric. Can be set for 15-minute or one-day intervals. The default is 30 dBm. Double-click the parameter, enter a value, and press Enter.

Parameter	Description	Options
opwrMin OSC (dBm)	Sets the OSC low power warning level.	Numeric. Can be set for 15-minute or one-day intervals. The default is -50 dBm. Double-click the parameter, enter a value, and press Enter.
opwrMax OSC (dBm)	Sets the OSC high power warning level.	Numeric. Can be set for 15-minute or one-day intervals. The default is 30 dBm. Double-click the parameter, enter a value, and press Enter.

- Step 4** If you want to change the alarm thresholds, complete the following steps. If not, continue with [Step 5](#).
- Under Types, choose Alarm.
 - Click **Refresh**.
 - Modify any of the alarm thresholds shown under the Options column in the following table.
 - Click **Apply**. If the change affects service, a warning message appears. Click Yes to complete the change.

Table 56: 40-SMR1-C and 40-SMR2-C Card Line Alarm Thresholds Settings

Parameter	Description	Options
Port	(Display only) Displays the port number, port type, and direction.	40-SMR1-C card options: <ul style="list-style-type: none"> • 2 (EXP-TX) 40-SMR2-C card options: <ul style="list-style-type: none"> • 8 (LINE-TX) • 9 (EXP-TX 1-1)
Gain Degrade Low (dBm)	(Display only) Shows the current value of the gain degrade low threshold configured in the card. This threshold applies only when the amplifier is active and in constant gain mode. Gain Degrade Low refers to the Gain value of the port, which the control card automatically calculates when the amplifier is turned up. The Gain Degrade Low threshold is automatically linked to the Gain Setpoint that is provisioned. Changing the setpoint changes the Gain Degrade Low threshold. The threshold value is always 2 dB lower than the Gain Setpoint value. APC can also modify this value based on the number of OCHNC circuits that the amplifier is managing.	—

Parameter	Description	Options
Gain Degrade High (dBm)	<p>(Display only) Shows the current value of the gain degrade high threshold configured in the card. This threshold applies only when the amplifier is active and in constant gain mode.</p> <p>Gain Degrade High refers to the Gain value of the port, which the control card automatically calculates when the amplifier is turned up.</p> <p>The Gain Degrade High threshold is linked to the Gain setpoint. Changing the setpoint changes the Gain Degrade High threshold. The threshold value is always 2 dB higher than the Gain Setpoint value.</p> <p>APC can modify this value based on the number of OCHNC circuits that the amplifier is managing and to compensate for insertion loss due to fiber aging.</p>	—
Power Failure Low (dBm)	<p>Shows the optical power failure low threshold for the port. The threshold is calculated automatically when you run ANS. You can manually change the threshold. The value must be within the optical power range that is specified for the card. For more information, see the Hardware Specifications document.</p>	Numeric. Double-click to change.
Power Degrade High (dBm)	<p>(Display only) Shows the current value of the optical power degrade high threshold. This threshold applies only when the amplifier is active and in constant power mode.</p> <p>Power Degrade High refers to the Signal Output Power value of the port, which the control card automatically calculates when the amplifier is turned up.</p> <p>The Power Degrade High threshold is linked to the Output Power Setpoint on the Parameters tab. Changing the setpoint changes the Power Degrade High threshold. The threshold value is always 2 dB higher than the output power setpoint value.</p> <p>APC can modify this value based on the number of OCHNC circuits that the amplifier is managing. For more information, see the Network Reference chapter.</p> <p>Note In Control Power working mode, this parameter is applicable only on the EXP-TX port for the 40-SMR2-C card.</p>	—

Parameter	Description	Options
Power Degradate Low (dBm)	<p>(Display only) Shows the current value of the optical power degrade low threshold configured in the card. This threshold applies only when the amplifier is active and in constant power mode.</p> <p>Power Degradate Low refers to the Signal Output Power value of the port, which the control card automatically calculates when the amplifier is turned up.</p> <p>The Power Degradate Low threshold is automatically linked to the Output Power Setpoint on the Parameters tab. Changing the setpoint changes the Power Degradate Low threshold. The threshold value is always 2 dB lower than the output power setpoint.</p> <p>APC can modify this value based on the number of OCHNC circuits that the amplifier is managing.</p> <p>Note In Control Power working mode, this parameter is applicable only on the EXP-TX port for the 40-SMR2-C card.</p>	—

Step 5 Return to your originating procedure (NTP).

DLP-G536 Changing the Optical Channel Parameters for 40-SMR1-C and 40-SMR2-C Cards

Purpose	This task changes the optical channel parameter settings for the 40-SMR1-C and 40-SMR2-C cards.
Tools/Equipment	None
Prerequisite Procedures	DLP-G46 Log into CTC
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher

Procedure

- Step 1** In node view (single-shelf mode) or shelf view (multishelf mode), double-click the 40-SMR1-C or 40-SMR2-C card where you want to change the optical channel parameter settings.
- Step 2** Click the **Provisioning** > **OCH** > **Parameters** tab.
- Step 3** From the Wavelength drop-down list, choose a wavelength and click **Retrieve** to retrieve the OCH parameters.

Step 4 Modify any of the settings described in the following table. The provisionable parameters are listed in the Options column in the table. In the Options column, the SONET (ANSI) option is followed by the SDH (ETSI) option.

Table 57: 40-SMR1-C or 40-SMR2-C Card Optical Channel Parameter Settings

Parameter	Description	Options
Admin State	Sets the port administrative state unless network conditions prevent the change. For more information about administrative states, see the Administrative and Service States document.	From the drop-down list, choose one of the following: <ul style="list-style-type: none"> • IS,AINS/Unlocked,automaticInService • OOS,DSBLD/Locked,disabled • OOS,MT/Locked,maintenance <p>Note You cannot set the OOS,MT/Locked,maintenance administrative state, and hence the OOS-MA,MT/Locked-enabled, maintenance service state is not applicable.</p>
Service State	(Display only) Identifies the autonomously generated state that gives the overall condition of the port. Service states appear in the format: Primary State-Primary State Qualifier, Secondary State. For more information about service states, see the Administrative and Service States document.	<ul style="list-style-type: none"> • IS-NR/Unlocked-enabled • OOS-AU,AINS/Unlocked-disabled, automaticInService • OOS-MA,DSBLD/Locked-enabled, disabled • OOS-MA,MT/Locked-enabled, maintenance <p>Note You cannot set the OOS,MT/Locked,maintenance administrative state, and hence the OOS-MA,MT/Locked-enabled, maintenance service state is not applicable.</p>
Power	(Display only) Power value read by the photodiode located after the VOA associated to the port, and calibrated to the port. For more information, see the Hardware Specifications document.	Numeric value (dB).
Circuit Name	(Display only) Shows the circuit name. This is provisioned in the Circuits tab.	—

Parameter	Description	Options
From	(Display only) The port where the circuit originated.	—
To	(Display only) The port where the circuit terminated.	—
Power From	Power on the From port where the circuit originated.	—
Power To	Power on the To port where the circuit terminated.	—
Force Channel	Allows you to move the VOA from Open to Closed loop to start the channel. You can force a channel only when the Force Channel Status is in the Unlocked state.	From the drop-down list, choose one of the following: <ul style="list-style-type: none"> • OFF • ON
VOA Power Ref.	(Display only) Shows the value of the optical power setpoint that must be reached on the path where a VOA is present, when VOA Mode is set to Constant Power. This value is the desired per channel optical power. Only ANS can modify this field.	Numeric value (dB).
VOA Power Calib.	Allows you to modify the VOA power value when VOA Mode is Constant Power.	Double-click the parameter, enter a value, and press Enter. <ul style="list-style-type: none"> • Numeric value (dB) • -25 dB to +12 dB
Force Channel Status	(Display only) Displays the channel status. The different statuses are: <ul style="list-style-type: none"> • Unlocked—Can force channel startup • Locked—Cannot force channel startup as the device is under control of other functions like optical safety • Forced—Channel startup has already been forced 	—

Step 5 Click **Apply**. If the change affects traffic, a warning message appears. Click Yes to complete the change.

Step 6 Return to your originating procedure (NTP).

DLP-G537 Changing the Optical Channel Thresholds for 40-SMR1-C and 40-SMR2-C Cards

Purpose	This task changes the optical channel threshold settings for the 40-SMR1-C and 40-SMR2-C cards.
Tools/Equipment	None
Prerequisite Procedures	DLP-G46 Log into CTC
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher



Caution Warning thresholds are monitored by CTC as part of performance monitoring. They must be user-provisioned.

Procedure

- Step 1** In node view (single-shelf mode) or shelf view (multishelf mode), double-click the 40-SMR1-C or 40-SMR2-C card where you want to change the optical channel threshold settings.
- Step 2** Click the **Provisioning > OCH > OCH Thresholds** tab.
- Step 3** If you want to change the warning thresholds, complete the following steps. If not, continue with **c**.
- Under Types, choose Warning.
 - Choose the warning interval that you want to provision, either **15 minutes** or **1 Day**.
 - Choose a wavelength from the Wavelength drop-down list.
 - In the Port drop-down list, choose an OCH port where you want to change the optical channel threshold settings:

For the 40-SMR1-C card, the following ports are available to view:

- 1 (EXP-RX)
- 2 (EXP-TX)
- 7 (ADD-RX)
- 8 (DROP-TX)
- 10 (LINE-TX)

For the 40-SMR2-C card, the following ports are available to view:

- 5 (ADD-RX)
- 6 (DROP-TX)
- 8 (LINE-TX)
- 9 (EXP-TX 1-1)

- 10 (EXP-RX 1-2)
- 11 (EXP-RX 1-3)
- 12 (EXP-RX 1-4)

- e) Click **Retrieve**. Modify any of the warning thresholds shown under the Options column in the following table.

Table 58: 40-SMR1-C or 40-SMR2-C Card Optical Channel Warning Threshold Settings

Parameter	Description	Options
Circuit Name	(Display only) Shows the circuit name. This is provisioned in the Circuits tab.	—
Port Name	(Display only) Shows the port name.	—
Actual Wavelength	(Display only) Displays the actual wavelength that the channel utilizes.	—
opwrMin (dBm)	Set the low power warning level.	Numeric. Can be set for 15-minute or one-day intervals. Double-click the parameter, enter a value, and press Enter.
opwrMax (dBm)	Set the high power warning level.	Numeric. Can be set for 15-minute or one-day intervals. Double-click the parameter, enter a value, and press Enter.

- f) Click **Apply**. If the change affects traffic, a warning message appears. Click Yes to complete the change.

Step 4

If you want to change the alarm thresholds, complete the following steps. If not, continue with [Step 5](#).

- a) Under Types, choose Alarm.
- b) Choose a wavelength from the Wavelength drop-down list.
- c) In the Port drop-down list, choose an OCH port where you want to change the optical channel threshold settings.
- d) Click **Retrieve**. Modify any of the alarm thresholds shown under the Options column in the following table.

Table 59: 40-SMR1-C or 40-SMR2-C Card Optical Channel Alarm Threshold Settings

Parameter	Description	Options
Circuit Name	(Display only) Shows the circuit name. This is provisioned in the Circuits tab.	—
Port Name	(Display only) Shows the port name.	—
Actual Wavelength	(Display only) Displays the actual wavelength utilized by the channel.	—

Parameter	Description	Options
Power Failure Low (dBm)	<p>Shows the power failure low threshold. This power value applies to the corresponding port and is automatically calculated when ANS is run.</p> <p>This threshold applies to a port associated to a VOA (OSC-VOA) that is always active in Constant Power mode.</p> <p>The threshold is automatically linked to the Power Setpoint (VOA Power Ref + VOA Power Calib) that is provisioned. Changing the setpoint results in changing the threshold (always 5 dB lower). For more information, see the Hardware Specifications document.</p>	—
Power Degrade High (dBm)	<p>(Display only) Shows the power degrade high threshold. This power value applies to the corresponding port and is automatically calculated when ANS is run.</p> <p>This threshold applies to a port associated to a VOA (OSC-VOA) that is always active in Constant Power mode.</p> <p>The threshold is automatically linked to the Power Setpoint (VOA Power Ref + VOA Power Calib) that is provisioned. Changing the setpoint results in changing the threshold (always 3 dB higher).</p> <p>Note This threshold applies only to certain ports depending on the working mode you have set.</p>	—
Power Degrade Low (dBm)	<p>(Display only) Shows the power degrade low threshold. This power value applies to the corresponding port and is automatically calculated when ANS is run.</p> <p>This threshold applies to a port associated to a VOA (OSC-VOA) that is always active in Constant Power mode.</p> <p>The threshold is automatically linked to the Power Setpoint (VOA Power Ref + VOA Power Calib) that is provisioned. Changing the setpoint results in changing the threshold (always 2 dB lower).</p> <p>Note This threshold applies only to certain ports depending on the working mode you have set.</p>	Numeric

e) Click **Apply**. If the change affects traffic, a warning message appears. Click Yes to complete the change.

Step 5 Return to your originating procedure (NTP).

NTP-G102 Changing Card Service State

Purpose	This procedure changes a card service state.
Tools/Equipment	None
Prerequisite Procedures	NTP-G30 Installing the DWDM cards or NTP-G179 Installing the Transponder and Muxponder Cards DLP-G46 Log into CTC
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher

Procedure

Step 1 In node view (single-shelf mode) or multishelf view (multishelf mode), click the **Inventory** tab.

Step 2 Click the cell in the Admin State column for the card you want to change, and choose an administrative state from the drop-down list:

- **IS** (ANSI) or **Unlocked** (ETSI)
- **OOS,MT** (ANSI) or **Locked-enabled** (ETSI)

Step 3 Click **Apply**.

Step 4 If an error message appears indicating that the card state cannot be changed from its current state, click **OK**. For information about the card state transitions, see the [Administrative and Service States](#) document.

Stop. You have completed this procedure.

NTP-G280 Modifying Threshold Settings for the TNC, TNCE, and TNCS/TNCS-O Cards

Purpose	This procedure changes the optical and line threshold settings for the TNC, TNCE, and TNCS/TNCS-O cards.
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Tools/Equipment	None
Prerequisite Procedures	DLP-G46 Log into CTC "DLP-L63 Provisioning PPM and Port for the TNC, TNCE, and TNCS Cards" in the <i>Cisco NCS 2000 Series Hardware Installation Guide</i> .
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher

Procedure

Perform any of the following tasks as needed:

- [DLP-G609 Modifying Optical Threshold Settings for the TNC, TNCE, and TNCS/TNCS-O Cards](#), on page 134
- [DLP-G610 Modifying Line Threshold Settings for the TNC, TNCE, and TNCS/TNCS-O Cards](#), on page 136

Stop. You have completed this procedure.

DLP-G609 Modifying Optical Threshold Settings for the TNC, TNCE, and TNCS/TNCS-O Cards

Purpose	This task changes the optical threshold settings for the TNC, TNCE, and TNCS/TNCS-O cards.
Tools/Equipment	None
Prerequisite Procedures	DLP-G46 Log into CTC "DLP-L63 Provisioning PPM and Port for the TNC, TNCE, and TNCS Cards" in the <i>Cisco NCS 2000 Series Hardware Installation Guide</i> .
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher

Procedure

- Step 1** In node view (single-shelf mode) or shelf view (multishelf mode), double-click the TNC, TNCE, and TNCS/TNCS-O cards where you want to change the optical threshold settings.

Step 2 Click the **Provisioning > Optics Thresholds** tabs.

Step 3 Under Types, choose the type of threshold that you want to change, either TCA or Alarm.

Step 4 Click **Refresh**.

Step 5 Modify any of the threshold settings as needed by double-clicking the threshold value, deleting it, entering a new value, and hitting Enter. The following table shows the thresholds for warnings and alarms.

Note You can modify the optics thresholds either for 15 minutes or 1 day. To do so, choose the appropriate radio button and click Refresh. 15 minutes and 1 day interval are not applicable for alarm thresholds.

Table 60: TNC, TNCE, and TNCS/TNCS-O Cards Optical Warning and Alarms Thresholds Settings

Parameter	Description	Options
Port	(Display only) Displays the port number and port type.	<ul style="list-style-type: none"> • port number (OC3) • port number (FE) • port number (ONE-GE)
Laser Bias High (%)	Sets the maximum laser bias.	Numeric. Can be set for 15-minute or one-day intervals. Double-click the parameter, enter a value, and press Enter.
RX Power High (dBm)	Sets the maximum optical power received.	Numeric. Can be set for 15-minute or one-day intervals. Double-click the parameter, enter a value, and press Enter.
RX Power Low (dBm)	Sets the minimum optical power received.	<p>Numeric. Can be set for 15-minute or one-day intervals. Double-click the parameter, enter a value, and press Enter.</p> <p>Note CTC allows threshold settings. However, ensure that the range of the RX Power Low parameter is within the range allowed by the supported pluggables.</p>
TX Power High (dBm)	Sets the maximum optical power transmitted.	Numeric. Can be set for 15-minute or one-day intervals. Double-click the parameter, enter a value, and press Enter.
TX Power Low (dBm)	Sets the minimum optical power transmitted.	Numeric. Can be set for 15-minute or one-day intervals. Double-click the parameter, enter a value, and press Enter.

Step 6 Click **Apply**. If the change affects traffic, a warning message appears. Click Yes to complete the change.

Step 7 Return to your originating procedure (NTP).

DLP-G610 Modifying Line Threshold Settings for the TNC, TNCE, and TNCS/TNCS-O Cards

Purpose	This task changes the line threshold settings for the TNC, TNCE, and TNCS/TNCS-O cards.
Tools/Equipment	None
Prerequisite Procedures	DLP-G46 Log into CTC "DLP-L63 Provisioning PPM and Port for the TNC, TNCE, and TNCS Cards" in the <i>Cisco NCS 2000 Series Hardware Installation Guide</i> .
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher

Procedure

- Step 1** In node view (single-shelf mode) or shelf view (multishelf mode), double-click the TNC, TNCE, and TNCS/TNCS-O cards where you want to change the line threshold settings.
- Step 2** Click the **Provisioning** > **Line** tabs.
- Step 3** Modify any of the threshold settings as described in the following tables. These settings are found in Ports, OC3 Line, and SONET Thresholds subtabs.

Table 61: TNC, TNCE, and TNCS/TNCS-O cards Line Threshold Settings (Ports tab)

Parameter	Description	Options
Port	(Display only) Displays the port number and port type.	<ul style="list-style-type: none"> • port number (OC3) • port number (FE) • port number (ONE-GE)
Port Name	Provides the ability to assign the specified port a name.	User-defined. Name can be up to 80 alphanumeric/special characters. Blank by default. See the DLP-G104 Assigning a Name to a Port task.

Parameter	Description	Options
Admin State	(Display only) Displays the port administrative state. For more information about administrative states, see the Administrative and Service States document.	<ul style="list-style-type: none"> • IS (ANSI) or Unlocked (ETSI)—Puts the port in service. The port service state changes to IS-NR (ANSI) or Unlocked-enabled (ETSI). • IS,AINS (ANSI) or Unlocked,automaticInService (ETSI)—Puts the port in automatic in-service. The port service state changes to OOS-AU,AINS (ANSI) or Unlocked-disabled,automaticInService (ETSI).
Service State	(Display only) Identifies the autonomously generated state that displays the overall condition of the port. Service states appear in these formats: Primary State-Primary State Qualifier, Secondary State. For more information about service states, see the Administrative and Service States document.	<ul style="list-style-type: none"> • IS-NR (In-Service and Normal [ANSI]) or Unlocked-enabled (ETSI)—The port is fully operational and is performing as provisioned. • OOS-AU,AINS (Out-Of-Service and Autonomous, Automatic In-Service [ANSI]) or Unlocked-disabled,automaticInService (ETSI)—The port is out of service, but traffic is carried. Alarm reporting is suppressed. The ONS node monitors the ports for an error-free signal. After an error-free signal is detected, the port stays in the OOS-AU,AINS/Unlocked-disabled,automaticInService state for the duration of the soak period. After the soak period ends, the port service state changes to IS-NR/Unlocked-enabled.

Parameter	Description	Options
Reach	Indicates the distance from one node to another node	<p data-bbox="1036 294 1500 352">From the drop-down list, choose one of the following:</p> <ul style="list-style-type: none"> <li data-bbox="1068 373 1252 401">• Auto Provision <li data-bbox="1068 426 1122 453">• SR <li data-bbox="1068 478 1133 506">• SR1 <li data-bbox="1068 531 1127 558">• IR1 <li data-bbox="1068 583 1133 611">• IR2 <li data-bbox="1068 636 1133 663">• LR1 <li data-bbox="1068 688 1133 716">• LR2 <li data-bbox="1068 741 1133 768">• LR3 <li data-bbox="1068 793 1127 821">• LX <li data-bbox="1068 846 1133 873">• MM <li data-bbox="1068 898 1127 926">• SX <li data-bbox="1068 951 1127 978">• CX <li data-bbox="1068 1003 1101 1031">• T <li data-bbox="1068 1056 1127 1083">• DX <li data-bbox="1068 1108 1127 1136">• HX <li data-bbox="1068 1161 1127 1188">• ZX <li data-bbox="1068 1213 1127 1241">• VX <li data-bbox="1068 1266 1175 1293">• CWDM <li data-bbox="1068 1318 1175 1346">• DWDM <li data-bbox="1068 1371 1252 1398">• LR 2 (SONET) <li data-bbox="1068 1423 1192 1451">• L2 (SDH) <li data-bbox="1068 1476 1360 1503">• ULH (SDH and SONET)

Table 62: TNC, TNCE, and TNCS cards Line Threshold Settings (OC3 Line tab)

Parameter	Description	Options
SF BER	Sets the signal fail bit error rate.	From the drop-down list, choose one of the following: <ul style="list-style-type: none"> • 1E-3 • 1E-4 • 1E-5
SD BER	Sets the signal degrade bit error rate.	From the drop-down list, choose one of the following: <ul style="list-style-type: none"> • 1E-5 • 1E-6 • 1E-7 • 1E-8 • 1E-9
ProvidesSync	(Display only) If checked, the card is provisioned as a network element (NE) timing reference.	<ul style="list-style-type: none"> • Checked • Unchecked
SyncMsgIn	Enables synchronization status messages (SSM) on the S1 byte, which allow the node to choose the best timing source.	<ul style="list-style-type: none"> • Checked • Unchecked
SendDoNotUse	When checked, sends a “Do Not Use for Synchronization (DUS)” message on the S1 byte.	<ul style="list-style-type: none"> • Checked • Unchecked
PJSTSMon#	(Display only) Sets the STS that will be used for pointer justification.	This parameter is set to 0. It cannot be changed.
AINS Soak	(Display only) The automatic in-service soak period. It is always 00.00.	—
Type	Defines the port as SONET or SDH. The ProvidesSync Msg field and the Send Do Not Use field must be disabled before the port can be set to SDH.	From the drop-down list, choose one of the following: <ul style="list-style-type: none"> • SONET • SDH

Table 63: TNC, TNCE, and TNCS cards Line Threshold Settings (SONET)

Parameter	Description	Options
CV	Coding violations	Numeric. Can be set for 15-minute or one-day intervals for Line or Section (Near and Far End).
ES	Errored seconds	Numeric. Can be set for 15-minute or one-day intervals for Line or Section (Near and Far End).
SES	Severely errored seconds	Numeric. Can be set for 15-minute or one-day intervals for Line or Section (Near and Far End).
SEFS	Severely errored framing seconds (Section only)	Numeric. Can be set for 15-minute or one-day intervals for Section (Near and Far End).
FC	Failure count (Line only)	Numeric. Can be set for 15-minute or one-day intervals for Line (Near and Far End).
UAS	Unavailable seconds (Line only)	Numeric. Can be set for 15-minute or one-day intervals for Line (Near and Far End).

Table 64: TNC, TNCE, and TNCS cards Line Threshold Settings (SDH)

Parameter	Description	Options
RS-OFS	Out of frame seconds	Numeric. Can be set for 15-minute or one-day intervals for Section (Near and Far End).
EB	Errored block	Numeric. Can be set for 15-minute or one-day intervals for MS (Multiplex Section) or RS (Regeneration Section) (Near and Far End). Select the bullet and click Refresh .
ES	Errored seconds	Numeric. Can be set for 15-minute or one-day intervals for MS or RS (Near and Far End). Select the bullet and click Refresh .
SES	Severely errored seconds	Numeric. Can be set for 15-minute or one-day intervals for MS or RS (Near and Far End). Select the bullet and click Refresh .
BBE	Background block error	Numeric. Can be set for 15-minute or one-day intervals for MS or RS (Near and Far End). Select the bullet and click Refresh .

Parameter	Description	Options
OFS	Out of frame seconds	Numeric. Can be set for 15-minute or one-day intervals for RS, Near End. Select the bullet and click Refresh .

Note Far end is not applicable for optics thresholds and Regenerator Section STM1 thresholds (or section thresholds in OC3).

Step 4 Click **Apply**. If the change affects traffic, a warning message appears. Click **Yes** to complete the change.

Step 5 Return to your originating procedure (NTP).
