Change DWDM Card Settings

This chapter explains how to change line, performance monitoring (PM), and threshold settings on Cisco ONS 15454 optical service, amplifier, multiplexer, demultiplexer, 32WSS, MMU, and AIC-I cards. To install DWDM cards, see the "NTP-G30 Install the DWDM Cards" procedure on page 3-46.

Note Unless otherwise specified, "ONS 15454" refer to both ANSI and ETSI shelf assemblies.

Note Unless otherwise specified, card parameters apply to cards installed in both ANSI and ETSI shelf assemblies.

Before You Begin

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

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

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

1. NTP-G90 Modify OSCM and OSC-CSM Card Line Settings and PM Thresholds, page 11-2—As needed, complete this procedure to change the OSCM and OSC-CSM card settings.
2. NTP-G91 Modify OPT-PRE and OPT-BST Card Line Settings and PM Thresholds, page 11-13—As needed, complete this procedure to change the OPT-PRE and OPT-BST amplifier card settings.
3. NTP-G160 Modify OPT-AMP-L Card Line Settings and PM Thresholds, page 11-25—As needed, complete this procedure to change the OPT-AMP-L amplifier card settings.
4. NTP-G92 Modify 32MUX-O, 32DMX-O, 32DMX, 32DMX-L, and 4MD Line Card Settings and PM Thresholds, page 11-38—As needed, complete this procedure to change the multiplexer and demultiplexer card settings.
5. NTP-G93 Modify the 32WSS and 32WSS-L Line Settings and PM Thresholds, page 11-49—As needed, complete this procedure to change the 32WSS and 32WSS-L card settings.
6. NTP-G149 Modify the MMU Line Settings and PM Thresholds, page 11-58—As needed, complete this procedure to change the MMU card settings.

7. NTP-G101 Modify Alarm Interface Controller–International Settings, page 11-62—As needed, complete this procedure to change settings for external alarms, controls, and orderwire for the AIC-I card.
8. NTP-G102 Change Card Service State, page 11-66—As needed, complete this procedure to change the card service state.

NTP-G90 Modify OSCM and OSC-CSM Card Line Settings and PM Thresholds

Purpose	This procedure changes the optical service channel (OSC0 and PM parameters and thresholds for the OSCM and OSC-CSM cards.
Tools/Equipment	None
Prerequisite Procedures	NTP-G30 Install the DWDM Cards, page 3-46
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher

Step 1 Complete the "DLP-G46 Log into CTC" task on page 2-27 at the node where you want to change the OSCM or OSC-CSM card settings. If you are already logged in, proceed to Step 2.

Step 2 Complete the "NTP-G103 Back Up the Database" procedure on page 13-2.

Step 3 Perform any of the following tasks as needed:

- DLP-G199 Change the OSCM and OSC-CSM OC-3/STM-1 Line Settings, page 11-3
- DLP-G200 Change the OSCM and OSC-CSM OC-3/STM-1 Line SONET/SDH Thresholds, page 11-5
- DLP-G201 Change Optical Line Parameters for OSCM and OSC-CSM Cards, page 11-7
- DLP-G202 Change the OSCM and OSC-CSM Optical Line Threshold Settings, page 11-9
- DLP-G203 Change the OSCM and OSC-CSM ALS Maintenance Settings, page 11-12

Step 4 Complete the "NTP-G103 Back Up the Database" procedure on page 13-2.

Stop. You have completed this procedure.

DLP-G199 Change the OSCM and OSC-CSM OC-3/STM-1 Line Settings

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, page 2-27
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher

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 Table 11-1.

Table 11-1 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 32 alphanumeric/special characters. Blank by default. See the "DLP-G104 Assign a Name to a Port" task on page 7-3.
Admin State	(Display only) Displays the port administrative state. For more information about administrative states, see the "Administrative and Service States" appendix in the *Cisco ONS 15454 DWDM Reference Manual*.	• 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).

Table 11-1 OSCM and OSC-CSM Card OC-3/STM-1 Line Settings (continued)

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 "Administrative and Service States" appendix in the *Cisco ONS 15454 DWDM Reference Manual*.	• 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. • 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 loopbacks are allowed.
SF BER	Sets the signal fail bit error rate.	From the drop-down list, choose one of the following: • 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: • 1E-5 • 1E-6 • 1E-7 • 1E-8 • 1E-9
Provides Synch	(Display only) If checked, the card is provisioned as a network element (NE) timing reference.	• Checked • Unchecked
SyncMsgIn	Enables synchronization status messages (SSM) on the S1 byte, which allow the node to choose the best timing source.	• Checked • Unchecked
Send Do Not Use	When checked, sends a Do Not Use for Synchronization (DUS) message on the S1 byte.	• Checked • Unchecked

Table 11-1 OSCM and OSC-CSM Card OC-3/STM-1 Line Settings (continued)

Parameter	Description	Options
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.	—
Type	Defines the port as SONET or SDH. The Enable Sync 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: • SONET • SDH

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 Change the OSCM and OSC-CSM OC-3/STM-1 Line SONET/SDH Thresholds

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, page 2-27
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher

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 > OC3 Line > SDH Thresholds** (ETSI) tabs.

Step 3 Modify any of the settings described in Table 11-2 (ANSI) or Table 11-3 (ETSI).

Table 11-2 OSCM and OSC-CSM Cards OC3 Line SONET Threshold Settings

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

Table 11-2 OSCM and OSC-CSM Cards OC3 Line SONET Threshold Settings (continued)

Parameter	Description	Options
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 11-3 OSCM and OSC-CSM Cards OC3 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 Change 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, page 2-27
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher

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 Table 11-4. 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 11-4 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 • 2 (OSC-RX) • 3 (OSC-TX) OSC-CSM • 2 (COM-RX) • 3 (COM-TX) • 4 (LINE-RX) • 5 (LINE-TX) • 6 (OSC-RX) • 6 (OSC-TX)
Port Name	Provides the ability to assign the specified port a name.	User-defined. Name can be up to 32 alphanumeric/ special characters. Blank by default. See the "DLP-G104 Assign a Name to a Port" task on page 7-3.
Admin State	Sets the port administrative state unless network conditions prevent the change. For more information about administrative states, refer to the "Administrative and Service States" appendix in the *Cisco ONS 15454 DWDM Reference Manual*.	From the drop-down list, choose one of the following: • IS,AINS/Unlocked,automaticInService • OOS,DSBLD/Locked,disabled • OOS,MT/Locked,maintenance

Table 11-4 OSCM and OSC-CSM Card Optical Line Parameter Settings (continued)

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, refer to the "Administrative and Service States" appendix in the *Cisco ONS 15454 DWDM Reference Manual*.	• IS-NR/Unlocked-enabled • OOS-AU,AINS/Unlocked-disabled, automaticInService • OOS-MA,DSBLD/Locked-enabled,disabled • OOS-MA,MT/Locked-enabled,maintenance
Line Direction	(Display only) Shows the line direction associated with the optical signal that passes through the port. This parameter is automatically configured during automatic node setup (ANS). To change it, you must modify the network plan in Cisco MetroPlanner, import the NE Update file, and run ANS.	• East to West • West to East
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.	• 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**.

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 Change the OSCM and OSC-CSM Optical Line Threshold Settings

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, page 2-27
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher

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 not monitored by CTC. They must be user-provisioned and monitored through custom alarm profiles.

Step 4 Click **Refresh**.

Step 5 Modify any of the warning or alarm threshold settings. Table 11-5 shows the thresholds for warnings. Table 11-6 shows the thresholds for alarms.

Table 11-5 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 • 2 (OSC-RX) • 3 (OSC-TX) OSC-CSM • 2 (COM-RX) • 3 (COM-TX) • 4 (LINE-RX) • 5 (LINE-TX) • 6 (OSC-RX) • 6 (OSC-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 parameter, enter a value, and press **Enter**.

Table 11-5 OSCM and OSC-CSM Cards Optical Line Warning Thresholds Settings (continued)

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 parameter, enter a value, and press **Enter**.

Table 11-6 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 • 2 (OSC-RX) • 3 (OSC-TX) OSC-CSM • 2 (COM-RX) • 3 (COM-TX) • 4 (LINE-RX) • 5 (LINE-TX) • 6 (OSC-RX) • 6 (OSC-TX)
Power Failure Low (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. (Refer to the "Hardware Specifications" appendix in the *Cisco ONS 15454 DWDM Reference Manual*.) If VOA Mode is Constant Power, you cannot change the threshold manually because it is based on the Power setpoint (VOA Power Ref + VOA Power Calib). To change the threshold, you must change the VOA Power Calib value. This adjusts the Power setpoint. The threshold is automatically set to a value that is 5 dB lower than the Power setpoint.	Numeric (dB). Double-click the table cell, enter a value, then press **Enter**.

Table 11-6 OSCM and OSC-CSM Cards Optical Line Alarm Thresholds Settings (continued)

Parameter	Description	Options
Power Degrade 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.	Numeric.
Power 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. 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).	Numeric.
VOA Degrade High (dBm)	Does not apply to OSCM and OSC-CSM cards.	—
VOA Degrade Low (dBm)	Does not apply to OSCM and OSC-CSM cards.	—

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 Change the OSCM and OSC-CSM ALS Maintenance Settings

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, page 2-27
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.

Warning **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

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 Table 11-7. The provisionable parameters are listed in the Options column in the table.

Table 11-7 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: • 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. Refer to the "Card Reference" chapter in the *Cisco ONS 15454 DWDM Reference Manual* for more detail.	From the drop-down list, choose one of the following: • 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

Table 11-7 OSC-CSM and OSCM ALS Maintenance Settings (continued)

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 Modify OPT-PRE and OPT-BST Card Line Settings and PM Thresholds

Purpose	This procedure changes the line and threshold settings for an OPT-PRE, OPT-BST, OPT-BST-E, or OPT-BST-L amplifier card.
Tools/Equipment	None
Prerequisite Procedures	NTP-G30 Install the DWDM Cards, page 3-46
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher

Step 1 Complete the "DLP-G46 Log into CTC" task on page 2-27 at the node where you want to change the OPT-PRE, OPT-BST, OPT-BST-E, or OPT-BST-L amplifier card settings. If you are already logged in, proceed to Step 2.

Step 2 Complete the "NTP-G103 Back Up the Database" procedure on page 13-2.

Step 3 Perform any of the following tasks as needed:

- DLP-G204 Change Optical Line Settings for OPT-PRE and OPT-BST Amplifiers, page 11-14
- DLP-G205 Change Optical Line Threshold Settings for OPT-PRE and OPT-BST Amplifiers, page 11-15
- DLP-G206 Change Optical Amplifier Line Settings for OPT-PRE and OPT-BST Amplifiers, page 11-18
- DLP-G207 Change Optical Amplifier Threshold Settings for OPT-PRE and OPT-BST Amplifiers, page 11-20
- DLP-G322 Change the OPT-BST ALS Maintenance Settings, page 11-24

Step 4 Complete the "NTP-G103 Back Up the Database" procedure on page 13-2.

Stop. You have completed this procedure.

DLP-G204 Change Optical Line Settings for OPT-PRE and OPT-BST Amplifiers

Purpose	This task changes the optical line settings for an OPT-PRE, OPT-BST, OPT-BST-E, or OPT-BST-L amplifier card.
Tools/Equipment	None
Prerequisite Procedures	DLP-G46 Log into CTC, page 2-27
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher

Step 1 In node view (single-shelf mode) or shelf view (multishelf mode), double-click the OPT-PRE, OPT-BST, OPT-BST-E, or OPT-BST-L 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 Table 11-8. 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 11-8 OPT-PRE, OPT-BST, OPT-BST-E, and OPT-BST-L 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, and OPT-BST-L • 1 (COM-RX) • 2 (COM-TX) • 3 (OSC-RX) • 4 (OSC-TX) • 5 (LINE-RX) OPT-PRE • 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 32 alphanumeric/ special characters. Blank by default. Double-click the Port Name table cell, enter the name, and press **Enter**. See the "DLP-G104 Assign a Name to a Port" task on page 7-3.

Table 11-8 OPT-PRE, OPT-BST, OPT-BST-E, and OPT-BST-L Amplifier Optical Line Settings (continued)

Parameter	Description	Options
Admin State	Sets the port administrative state unless network conditions prevent the change. For more information about administrative states, refer to the "Administrative and Service States" appendix in the *Cisco ONS 15454 DWDM Reference Manual*.	From the drop-down list, choose one of the following: • 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, refer to the "Administrative and Service States" appendix in the *Cisco ONS 15454 DWDM Reference Manual*.	• IS-NR/Unlocked-enabled • OOS-AU,AINS/Unlocked-disabled, automaticInService • OOS-MA,DSBLD/Locked-enabled,disabled • OOS-MA,MT/Locked-enabled,maintenance
Line Direction	(Display only) Shows the line direction associated with the optical signal that passes through the port. This parameter is automatically configured during ANS. To change it, you must modify the network plan in Cisco MetroPlanner, import the NE Update file, and run ANS.	• East to West • West to East
Power	(Display only) Shows the current power level per port.	—
AINS Soak	(Display only) Shows the soak time. 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-G205 Change Optical Line Threshold Settings for OPT-PRE and OPT-BST Amplifiers

Purpose	This task changes the optical line threshold settings for an OPT-PRE, OPT-BST, OPT-BST-E, or OPT-BST-L amplifier card.
Tools/Equipment	None
Prerequisite Procedures	DLP-G46 Log into CTC, page 2-27
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher

Caution Warning thresholds are not monitored by CTC. They must be user-provisioned and monitored through custom alarm profiles.

Step 1 In node view (single-shelf mode) or shelf view (multishelf mode), double-click the OPT-PRE, OPT-BST, OPT-BST-E, or OPT-BST-L amplifier 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 Table 11-9.

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

Table 11-9 OPT-PRE, OPT-BST, OPT-BST-E, and OPT-BST-L 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, and OPT-BST-L • 1 (COM-RX) • 2 (COM-TX) • 3 (OSC-RX) • 4 (OSC-TX) • 5 (LINE-RX) OPT-PRE • 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**.

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 Table 11-10.

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

Table 11-10 OPT-PRE, OPT-BST, OPT-BST-E, and OPT-BST-L 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, and OPT-BST-L • 1 (COM-RX) • 2 (COM-TX) • 3 (OSC-RX) • 4 (OSC-TX) • 5 (LINE-RX) OPT-PRE • 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. (Refer to the "Hardware Specifications" appendix in the *Cisco ONS 15454 DWDM Reference Manual*.) For OPT-BST, OPT-BST-E, OPT-BST-L cards, this parameter applies to Port 1 (COM-RX), Port 2 (COM-TX), and Port 4 (OSC-TX).	Numeric. Double-click the table cell, enter a value and press **Enter**.
Power Degrade High (dBm)	Does not apply to OPT-BST, OPT-BST-E, OPT-BST-L, and OPT-PRE line parameters.	—
Power Degrade Low (dBm)	Does not apply to OPT-BST, OPT-BST-E, OPT-BST-L, and OPT-PRE line parameters.	—
Gain Degrade Low (dB)	Does not apply to OPT-BST, OPT-BST-E, OPT-BST-L, and OPT-PRE line parameters.	—
Gain Degrade High (dB)	Does not apply to OPT-BST, OPT-BST-E, OPT-BST-L, and OPT-PRE line parameters.	—

Step 5 Return to your originating procedure (NTP).

DLP-G206 Change Optical Amplifier Line Settings for OPT-PRE and OPT-BST Amplifiers

Purpose	This task changes the optical amplifier line settings for an OPT-PRE, OPT-BST, OPT-BST-E, or OPT-BST-L amplifier card.
Tools/Equipment	None
Prerequisite Procedures	DLP-G46 Log into CTC, page 2-27
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher

Step 1 In node view (single-shelf mode) or shelf view (multishelf mode), double-click the OPT-PRE, OPT-BST, OPT-BST-E, or OPT-BST-L 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 Table 11-11. 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 11-11 OPT-PRE, OPT-BST, OPT-BST-E, and OPT-BST-L Optical Amplifier Line Settings

Parameter	Description	Options
Port	(Display only) Displays the port number, port type, and direction (TX or RX).	OPT-PRE • 2 (COM-TX) OPT-BST, OPT-BST-E, OPT-BST-L • 6 (LINE-TX)
Port Name	Provides the ability to assign the specified port a name.	User-defined. Name can be up to 32 alphanumeric/ special characters. Blank by default. See the "DLP-G104 Assign a Name to a Port" task on page 7-3.
Admin State	Sets the port service state unless network conditions prevent the change. For more information about administrative states, refer to the "Administrative and Service States" appendix in the *Cisco ONS 15454 DWDM Reference Manual*.	From the drop-down list, choose one of the following: • 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, refer to the "Administrative and Service States" appendix in the *Cisco ONS 15454 DWDM Reference Manual*.	• IS-NR/Unlocked-enabled • OOS-AU,AINS/Unlocked-disabled, automaticInService • OOS-MA,DSBLD/Locked-enabled,disabled • OOS-MA,MT/Locked-enabled,maintenance

Table 11-11 OPT-PRE, OPT-BST, OPT-BST-E, and OPT-BST-L Optical Amplifier Line Settings (continued)

Parameter	Description	Options
Line Direction	(Display only) Shows the line direction associated with the optical signal that passes through the port. This parameter is automatically configured during ANS. To change it, you must modify the network plan in Cisco MetroPlanner, import the NE Update file, and run ANS.	• East to West • West to East
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, then press **Enter**.
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. Refer to the "Network Reference" chapter in the *Cisco ONS 15454 DWDM Reference Manual* for more information.	Display only or numeric depending on mode setting. When 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.
AINS Soak	(Display only) The automatic in-service soak period. It is always 00.00.	—
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, and press **Enter**.
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-G207 Change Optical Amplifier Threshold Settings for OPT-PRE and OPT-BST Amplifiers

Purpose	This task changes the optical amplifier threshold settings for an OPT-PRE, OPT-BST, OPT-BST-E, or OPT-BST-L amplifier card.
Tools/Equipment	None
Prerequisite Procedures	DLP-G46 Log into CTC, page 2-27
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher

Caution Warning thresholds are not monitored by CTC. They must be user-provisioned and monitored through custom alarm profiles.

Step 1 In node view (single-shelf mode) or shelf view (multishelf mode), double-click the OPT-PRE, OPT-BST, OPT-BST-E, or OPT-BST-L amplifier where you want to change the optical amplifier threshold settings.

Step 2 Click the **Provisioning > Opt Apli 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 Table 11-12.

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

Table 11-12 OPT-PRE, OPT-BST, OPT-BST-E, and OPT-BST-L Card Amplifier Line Warning Threshold Settings

Parameter	Description	Options
Port	(Display only) Displays the port number, port type, and direction (TX or RX).	OPT-PRE • 2 (COM-TX) OPT-BST, OPT-BST-E, OPT-BST-L • 6 (LINE-TX)

Table 11-12 OPT-PRE, OPT-BST, OPT-BST-E, and OPT-BST-L Card Amplifier Line Warning Threshold Settings

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**.

Step 4 If you want to change the alarm thresholds, complete the following steps. If not, continue with Step 5.

a. Choose the alarm interval that you want to provision, either **15 minutes** or **1 Day**.

b. Under Types, choose **Alarm**.

c. Click **Refresh**.

d. Modify any of the alarm thresholds shown under the Options column in Table 11-13.

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

Table 11-13 OPT-PRE, OPT-BST, OPT-BST-E, and OPT-BST-L Card Amplifier Line Alarm Thresholds Setting

Parameter	Description	Options
Port	(Display only) Displays the port number, port type, and direction (TX or RX).	OPT-PRE • 2 (COM-TX) OPT-BST, OPT-BST-E, OPT-BST-L • 6 (LINE-TX)
Power Degrade High (dBm)	Does not apply to OPT-PRE, OPT-BST, OPT-BST-E, or OPT-BST-L amplifier line parameters.	—
Power Degrade Low (dBm)	Does not apply to OPT-PRE, OPT-BST, OPT-BST-E, or OPT-BST-L amplifier line parameters.	—

Table 11-13 OPT-PRE, OPT-BST, OPT-BST-E, and OPT-BST-L Card Amplifier Line Alarm Thresholds Setting (continued)

Parameter	Description	Options
Power Degrade Low (dBm)	(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. Power Degrade Low refers to the port's Signal Output Power value and is automatically calculated by the TCC2/TCC2P when the amplifier is turned up. 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. APC can modify this value based on the number of OCHNC circuits that the amplifier is managing.	—

Table 11-13 OPT-PRE, OPT-BST, OPT-BST-E, and OPT-BST-L Card Amplifier Line Alarm Thresholds Setting (continued)

Parameter	Description	Options
Gain Degrade High (dBm)	(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. Gain Degrade High refers to the port's Gain value and is automatically calculated by the TCC2/TCC2P when the amplifier is turned up. 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. 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.	—
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 port's Gain value and is automatically calculated by the TCC2/TCC2P 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.	—

Step 5 Return to your originating procedure (NTP).

DLP-G322 Change the OPT-BST ALS Maintenance Settings

Purpose	This task changes the ALS maintenance settings for the OPT-BST, OPT-BST-E, and OPT-BST-L cards.
Tools/Equipment	None
Prerequisite Procedures	DLP-G46 Log into CTC, page 2-27
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.

Warning **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

Step 1 In node view (single-shelf mode) or shelf view (multishelf mode), double-click the OPT-BST, OPT-BST-E, or OPT-BST-L 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 Table 11-14. The provisionable parameters are listed in the Options column in the table.

Table 11-14 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: • 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. See the "Card Reference" chapter of the *Cisco ONS 15454 DWDM Reference Manual* for more information.	From the drop-down list, choose one of the following: • 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

Table 11-14 OPT-BST ALS Maintenance Settings (continued)

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-G160 Modify OPT-AMP-L Card Line Settings and PM Thresholds

Purpose	This procedure changes the line and threshold settings for the OPT-AMP-L amplifier card.
Tools/Equipment	None
Prerequisite Procedures	NTP-G30 Install the DWDM Cards, page 3-46
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher

Step 1 Complete the "DLP-G46 Log into CTC" task on page 2-27 at the node where you want to change the OPT-AMP-L amplifier card settings. If you are already logged in, proceed to Step 2.

Step 2 Complete the "NTP-G103 Back Up the Database" procedure on page 13-2.

Step 3 Set the card working mode:

Caution Do not change the OPT-AMP-L working mode if it is in service and circuits are provisioned.

a. Display the OPT-AMP-L in 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 4 Perform any of the following tasks as needed:

- DLP-G323 Change Optical Line Settings for OPT-AMP-L Amplifiers, page 11-26
- DLP-G324 Change Optical Line Threshold Settings for OPT-AMP-L Amplifiers, page 11-28
- DLP-G325 Change Optical Amplifier Line Settings for OPT-AMP-L Amplifiers, page 11-30
- DLP-G326 Change Optical Amplifier Threshold Settings for OPT-AMP-L Amplifiers, page 11-32
- DLP-G327 Change the ALS Maintenance Settings of an OPT-AMP-L Card Configured in OPT-LINE Mode, page 11-36

Step 5 Complete the "NTP-G103 Back Up the Database" procedure on page 13-2.

Stop. You have completed this procedure.

DLP-G323 Change Optical Line Settings for OPT-AMP-L Amplifiers

Purpose	This task changes the optical line settings for the OPT-AMP-L amplifier card.
Tools/Equipment	None
Prerequisite Procedures	DLP-G46 Log into CTC, page 2-27
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher

Step 1 In node view (single-shelf mode) or shelf view (multishelf mode), double-click the OPT-AMP-L 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 Table 11-15. 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 11-15 OPT-AMP-L Amplifier Optical Line Settings

Parameter	Description	Options
Port	(Display only) Displays the port number, port type, and direction (TX or RX).	• 1 (COM-RX) • 2 (COM-TX) • 3 (OSC-RX) • 4 (OSC-TX) • 5 (LINE-RX) • 7 (DC-RX) • 9 (DC-TX)
Port Name	Provides the ability to assign the specified port a name.	User-defined. Name can be up to 32 alphanumeric/ special characters. Blank by default. Double-click, enter the name, and press **Enter**. See the "DLP-G104 Assign a Name to a Port" task on page 7-3.
Admin State	Sets the port administrative state unless network conditions prevent the change. For more information about administrative states, refer to the "Administrative and Service States" appendix in the *Cisco ONS 15454 DWDM Reference Manual*.	From the drop-down list, choose one of the following: • 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, refer to the "Administrative and Service States" appendix in the *Cisco ONS 15454 DWDM Reference Manual*.	• IS-NR/Unlocked-enabled • OOS-AU,AINS/Unlocked-disabled, automaticInService • OOS-MA,DSBLD/Locked-enabled,disabled • OOS-MA,MT/Locked-enabled,maintenance
Line Direction	(Display only) Shows the line direction associated with the optical signal that passes through the port. This parameter is automatically configured during ANS. To change it, you must modify the network plan in Cisco MetroPlanner, import the NE Update file, and run ANS.	• East to West • West to East
AINS Soak	(Display only) Shows the soak time. It is always 00.00.	—
Power	(Display only) Shows the current 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-G324 Change Optical Line Threshold Settings for OPT-AMP-L Amplifiers

Purpose	This task changes the optical line threshold settings for OPT-AMP-L amplifier card.
Tools/Equipment	None
Prerequisite Procedures	DLP-G46 Log into CTC, page 2-27
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher

Caution Warning thresholds are not monitored by CTC. They must be user-provisioned and monitored through custom alarm profiles.

Step 1 In node view (single-shelf mode) or shelf view (multishelf mode), double-click the OPT-AMP-L amplifier 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 Table 11-16.

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

Table 11-16 OPT-AMP-L Card Optical Line Warning Threshold Settings

Parameter	Description	Options
Port	(Display only) Displays the port number, port type, and direction (TX or RX):	• 1 (COM-RX) • 2 (COM-TX) • 3 (OSC-RX) • 4 (OSC-TX) • 5 (LINE-RX) • 7 (DC-RX) • 8 (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**.

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 Table 11-17.

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

Table 11-17 OPT-AMP-L Card Optical Line Alarm Thresholds Setting

Parameter	Description	Options
Port	(Display only) Displays the port number.	• 1 (COM-RX) • 2 (COM-TX) • 3 (OSC-RX) • 4 (OSC-TX) • 5 (LINE-RX) • 7 (DC-RX) • 8 (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. (Refer to the "Hardware Specifications" appendix in the *Cisco ONS 15454 DWDM Reference Manual*.)	Numeric.
Power Degrade High (dBm)	Does not apply to OPT-AMP-L line parameters.	Numeric.
Power Degrade Low (dBm)	Does not apply to OPT-AMP-L line parameters.	Numeric.
Gain Degrade Low (dBm)	Does not apply to OPT-AMP-L line parameters.	—
Gain Degrade High (dBm)	Does not apply to OPT-AMP-L line parameters.	—

Step 5 Return to your originating procedure (NTP).

DLP-G325 Change Optical Amplifier Line Settings for OPT-AMP-L Amplifiers

Purpose	This task changes the optical amplifier line settings for OPT-AMP-L amplifier card.
Tools/Equipment	None
Prerequisite Procedures	DLP-G46 Log into CTC, page 2-27
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher

Step 1 In node view (single-shelf mode) or shelf view (multishelf mode), double-click the OPT-AMP-L 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 Table 11-18. 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 11-18 OPT-AMP-L Optical Amplifier Line Settings

Parameter	Description	Options
Port	(Display only) Displays the port number, port type, and direction.	6 (LINE-TX)
Port Name	Provides the ability to assign the specified port a name.	User-defined. Name can be up to 32 alphanumeric/ special characters. Blank by default. See the "DLP-G104 Assign a Name to a Port" task on page 7-3.
Admin State	Sets the port administrative state unless network conditions prevent the change. For more information about administrative states, refer to the "Administrative and Service States" appendix in the *Cisco ONS 15454 DWDM Reference Manual*.	From the drop-down list, choose one of the following: • 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, refer to the "Administrative and Service States" appendix in the *Cisco ONS 15454 DWDM Reference Manual*.	• IS-NR/Unlocked-enabled • OOS-AU,AINS/Unlocked-disabled, automaticInService • OOS-MA,DSBLD/Locked-enabled,disabled • OOS-MA,MT/Locked-enabled,maintenance
Line Direction	(Display only) Shows the line direction associated with the optical signal that passes through the port. This parameter is automatically configured during ANS. To change it, you must modify the network plan in Cisco MetroPlanner, import the NE Update file, and run ANS.	• East to West • West to East

Table 11-18 OPT-AMP-L Optical Amplifier Line Settings (continued)

Parameter	Description	Options
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.	—
Working Mode	(Display only) Shows the working mode, either Output Power or Control Gain.	—
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. Refer to the "Network Reference" chapter in the *Cisco ONS 15454 DWDM Reference Manual* for more information.	Display only or numeric depending on mode setting. When 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.
AINS Soak	(Display only) The automatic in-service soak period. It is always 00.00.	—
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, and press **Enter**.
DCU Insertion Loss	(Display only; when provisioned as an OPT-PRE only) Shows the 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-G326 Change Optical Amplifier Threshold Settings for OPT-AMP-L Amplifiers

Purpose	This task changes the optical channel threshold settings for the OPT-AMP-L amplifier card.
Tools/Equipment	None
Prerequisite Procedures	DLP-G46 Log into CTC, page 2-27
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher

Caution Warning thresholds are not monitored by CTC. They must be user-provisioned and monitored through custom alarm profiles.

Step 1 In node view (single-shelf mode) or shelf view (multishelf mode), double-click the OPT-AMP-L 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.

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 Table 11-19.

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

Table 11-19 OPT-AMP-L Card Amplifier Line Warning Threshold Settings

Parameter	Description	Options
Port	(Display only) Displays the port number, port type, and direction.	6 (LINE-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 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 Table 11-20.

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

Table 11-20 OPT-AMP-L Card Amplifier Line Alarm Thresholds Setting

Parameter	Description	Options
Port	(Display only) Displays the port number, port type, and direction.	6 (LINE-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. (Refer to the "Hardware Specifications" appendix in the *Cisco ONS 15454 DWDM Reference Manual*.)	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 TCC2/TCC2P 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. Refer to the "Network Reference" chapter in the *Cisco ONS 15454 DWDM Reference Manual* for more information.	—

Table 11-20 OPT-AMP-L Card Amplifier Line Alarm Thresholds Setting (continued)

Parameter	Description	Options
Power Degrade Low (dBm)	(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. Power Degrade Low refers to the port's Signal Output Power value and is automatically calculated by the TCC2/TCC2P when the amplifier is turned up. 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. APC can modify this value based on the number of OCHNC circuits that the amplifier is managing.	—

Table 11-20 OPT-AMP-L Card Amplifier Line Alarm Thresholds Setting (continued)

Parameter	Description	Options
Gain Degrade High (dBm)	(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. Gain Degrade High refers to the port's Gain value and is automatically calculated by the TCC2/TCC2P when the amplifier is turned up. 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. 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.	—
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 port's Gain value and is automatically calculated by the TCC2/TCC2P 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.	—

Step 5 Return to your originating procedure (NTP).

DLP-G327 Change the ALS Maintenance Settings of an OPT-AMP-L Card Configured in OPT-LINE Mode

Purpose	This task changes the ALS maintenance settings for the OPT-AMP-L card that is configured in OPT-LINE mode.
Tools/Equipment	None
Prerequisite Procedures	DLP-G46 Log into CTC, page 2-27
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher

Note To perform this task, the OPT-AMP-L 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.

Warning **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

Step 1 In node view (single-shelf mode) or shelf view (multishelf mode), double-click the OPT-AMP-L 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 Table 11-21. The provisionable parameters are listed in the Options column in the table.

Table 11-21 OPT-AMP-L ALS Maintenance Settings

Parameter	Description	Options
OSRI	Optical safety remote interlock. When set to On, the OPT-AMP-L TX output power is shut down.	From the drop-down list, choose one of the following: • On • Off
ALS Mode	Automatic laser shutdown. For OPT-AMP-L cards, ALS provides the ability to shut down the OPT-AMP-L TX laser when the OPT-AMP-L RX detects an LOS. ALS also enables an optical safety mechanism at the DWDM network layer. See the "Network Reference" chapter in the *Cisco ONS 15454 DWDM Reference Manual* for more information.	From the drop-down list, choose one of the following: • 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 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

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-G92 Modify 32MUX-O, 32DMX-O, 32DMX, 32DMX-L, and 4MD Line Card Settings and PM Thresholds

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 32MUX-O, 32DMX-O, 32DMX, 32DMX-L, and 4MD-xx.x cards.
Tools/Equipment	None
Prerequisite Procedures	NTP-G30 Install the DWDM Cards, page 3-46
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, 32WSS-L, 32DMX-O, 32DMX, and 32DMX-L Cards" task on page 8-13 to view multiplexer and demultiplexer optical power statistics.

Step 1 Complete the "DLP-G46 Log into CTC" task on page 2-27 at the node where you want to change the 32MUX-O, 32DMX-O, 32DMX, 32DMX-L, or 4MD-xx.x card settings. If you are already logged in, proceed to Step 2.

Step 2 Complete the "NTP-G103 Back Up the Database" procedure on page 13-2.

Step 3 Perform any of the following tasks as needed:

- DLP-G208 Change Optical Line Settings for Multiplexer and Demultiplexer Cards, page 11-39
- DLP-G209 Change Optical Line Threshold Settings for Multiplexer and Demultiplexer Cards, page 11-41
- DLP-G210 Change Optical Channel Settings for Multiplexer and Demultiplexer Cards, page 11-43
- DLP-G211 Change Optical Channel Threshold Settings for Multiplexer and Demultiplexer Cards, page 11-45

Step 4 Complete the "NTP-G103 Back Up the Database" procedure on page 13-2.

Stop. You have completed this procedure.

DLP-G208 Change Optical Line Settings for Multiplexer and Demultiplexer Cards

Purpose	This task changes the optical line settings for a 32MUX-O, 32DMX-O, 32DMX, 32DMX-L, or 4MD-xx.x card.
Tools/Equipment	None
Prerequisite Procedures	DLP-G46 Log into CTC, page 2-27
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher

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 32MUX-O, 32DMX-O, 32DMX, 32DMX-L 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 Table 11-22. 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 11-22 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, 32DMX-O, 32DMX-L • 33 (COM-RX) 32MUX-O • 33 (COM-TX) 4MD-xx.x 9 (COM-RX) and 10 (COM-TX)
Port Name	Provides the ability to assign the specified port a name.	User-defined. Name can be up to 32 alphanumeric/ special characters. Blank by default. Double-click the table cell, enter the name, and press **Enter**. See the "DLP-G104 Assign a Name to a Port" task on page 7-3.
Admin State	Sets the port administrative state unless network conditions prevent the change. For more information about administrative states, refer to the "Administrative and Service States" appendix in the *Cisco ONS 15454 DWDM Reference Manual*.	From the drop-down list, choose one of the following: • IS,AINS/Unlocked,automaticInService • OOS,DSBLD/Locked,disabled • OOS,MT/Locked,maintenance

Table 11-22 Multiplexer and Demultiplexer Card Optical Line Settings (continued)

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, refer to the "Administrative and Service States" appendix in the *Cisco ONS 15454 DWDM Reference Manual*.	• IS-NR/Unlocked-enabled • OOS-AU,AINS/Unlocked-disabled, automaticInService • OOS-MA,DSBLD/Locked-enabled,disabled • OOS-MA,MT/Locked-enabled,maintenance
Line Direction	(Display only) Shows the line direction associated with the optical signal that passes through the port. This parameter is automatically configured during ANS. To change it, you must modify the network plan in Cisco MetroPlanner, import the NE Update file, and run ANS.	• East to West • West to East
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 and 32DMX-L cards only) Shows the functional mode of the VOA, when present.	• Constant Attenuation • Constant Power
VOA Power Ref	(Display only; 32DMX and 32DMX-L cards 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 and 32DMX-L cards only) 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; 32DMX and 32DMX-L cards 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 and 32DMX-L cards only) 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**.

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-G209 Change Optical Line Threshold Settings for Multiplexer and Demultiplexer Cards

Purpose	This task changes the optical line threshold settings for a 32MUX-O, 32DMX-O, 32DMX, 32DMX-L, or 4MD-xx.x card.
Tools/Equipment	None
Prerequisite Procedures	DLP-G46 Log into CTC, page 2-27
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher

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 32MUX-O, 32DMX-O, 32DMX, 32DMX-L 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.

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 Table 11-23.

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

Table 11-23 Multiplexer and Demultiplexer Card Optical Line Warning Threshold Settings

Parameter	Description	Options
Port	(Display only) Displays the port number and description.	• 33 (COM-RX) for 32DMX, 32DMX-O, 32DMX-L • 33 (COM-TX) for 32MUX-O • 9 (COM-RX) and 10 (COM-TX) for 4MD-xx.x
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 not monitored by CTC. They must be user-provisioned and monitored through custom alarm profiles.

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 Table 11-24.

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

Table 11-24 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, 32DMX-O, 32DMX-L • 33 (COM-RX) 32MUX-O • 33 (COM-TX) 4MD-xx.x • 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. (Refer to the "Hardware Specifications" appendix in the *Cisco ONS 15454 DWDM Reference Manual*.)	Numeric. Double-click the parameter, enter a value, and press **Enter**.
Power Degrade High (dBm)	Not applicable to 32MUX-O, 32DMX-O, 32DMX, 32DMX-L, and 4MD-xx.x cards.	—
Power Degrade Low (dBm)	Not applicable to 32MUX-O, 32DMX-O, 32DMX, 32DMX-L, and 4MD-xx.x cards.	—

Step 5 Return to your originating procedure (NTP).

DLP-G210 Change Optical Channel Settings for Multiplexer and Demultiplexer Cards

Purpose	This task changes the optical channel settings for a 32MUX-O, 32DMX-O, 32DMX, 32DMX-L, or 4MD-xx.x card.
Tools/Equipment	None
Prerequisite Procedures	DLP-G46 Log into CTC, page 2-27
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher

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 Table 11-25. 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 11-25 Multiplexer and Demultiplexer Card Optical Channel Settings

Parameter	Description	Options
Port	(Display only) Displays the port number, port type, and direction (TX or RX).	32MUX-O, 32DMX-O, 32DMX, 32DMX-L • 1 through 32 (CHAN-RX or CHAN-TX) 4MD-xx.x • 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 32 alphanumeric/ special characters. Blank by default. Double-click, enter the name, and press **Enter**. See the "DLP-G104 Assign a Name to a Port" task on page 7-3.
Admin State	Sets the port administrative state unless network conditions prevent the change. For more information about administrative states, refer to the "Administrative and Service States" appendix in the *Cisco ONS 15454 DWDM Reference Manual*.	From the drop-down list, choose one of the following: • 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, refer to the "Administrative and Service States" appendix in the *Cisco ONS 15454 DWDM Reference Manual*.	• IS-NR/Unlocked-enabled • OOS-AU,AINS/Unlocked-disabled, automaticInService • OOS-MA,DSBLD/Locked-enabled,disabled • OOS-MA,MT/Locked-enabled,maintenance

Table 11-25 Multiplexer and Demultiplexer Card Optical Channel Settings (continued)

Parameter	Description	Options
Line Direction	(Display only) Shows the line direction associated with the optical signal that passes through the port. This parameter is automatically configured during ANS. To change it, you must modify the network plan in Cisco MetroPlanner, import the NE Update file, and run ANS.	• East to West • West to East
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	(Display only; 32MUX-O, 32DMX-0, 4MD-xx.x cards only) Shows the current functional mode of the VOA.	• Constant Power • Constant Attenuation
VOA Power Ref.	(Display only; 32MUX-O, 32DMX-0, 4MD-xx.x cards only) 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.	(32MUX-O, 32DMX-0, 4MD-xx.x cards only) The user can modify the optical output power to the VOA if necessary. The VOA power calibration offsets the VOA power reference. For demultplexers, 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**.

Table 11-25 Multiplexer and Demultiplexer Card Optical Channel Settings (continued)

Parameter	Description	Options
VOA Attenuation Ref.	(Display only; 32MUX-O, 32DMX-0, 4MD-xx.x cards only) 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.	(32MUX-O, 32DMX-0, and 4MD-xx.x cards only) 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-G211 Change Optical Channel Threshold Settings for Multiplexer and Demultiplexer Cards

Purpose	This task changes the optical channel threshold settings for a 32MUX-O, 32DMX-O, 32DMX, 32DMX-L, or 4MD-xx.x card.
Tools/Equipment	None
Prerequisite Procedures	DLP-G46 Log into CTC, page 2-27
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher

Caution Warning thresholds are not monitored by CTC. They must be user-provisioned and monitored through custom alarm profiles.

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 Table 11-26.
- **e.** Click **Apply**. If the change affects traffic, a warning message appears. Click **Yes** to complete the change.

Table 11-26 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).	32MUX-O, 32DMX-O, 32DMX, 32DMX-L • 1 through 32 (CHAN-RX or CHAN-TX) 4MD-xx.x • 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 Table 11-27.

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

Table 11-27 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).	32MUX-O, 32DMX-O, 32DMX, 32DMX-L • 1 through 32 (CHAN-RX or CHAN-TX) 4MD-xx.x • 1 through 8 (CHAN-RX or CHAN-TX)
Power Failure Low (dBm)	Shows the power failure 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) that is always active in Constant Power mode. 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). The 32DMX is an exception. 32DMX 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. (Refer to the "Hardware Specifications" appendix in the *Cisco ONS 15454 DWDM Reference Manual*.)	Numeric. Double-click the parameter, enter a value, and press **Enter**.

Table 11-27 Multiplexer and Demultiplexer Card Optical Channel Alarm Threshold Settings (continued)

Parameter	Description	Options
Power Degrade High (dBm)	(32MUX-O, 32DMX-0, and 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. This threshold applies to a port associated to a VOA (OSC-VOA) that is always active in Constant Power mode. 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).	—
Power Degrade Low (dBm)	(32MUX-O, 32DMX-0, and 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. This threshold applies to a port associated to a VOA (OSC-VOA) that is always active in Constant Power mode. 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).	Numeric. Double-click the parameter, enter a value, and press **Enter**.

Step 5 Return to your originating procedure (NTP).

NTP-G93 Modify the 32WSS and 32WSS-L Line Settings and PM Thresholds

Purpose	This procedure changes the 32WSS and 32WSS-L card thresholds and settings.
Tools/Equipment	None
Prerequisite Procedures	NTP-G30 Install the DWDM Cards, page 3-46
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher

Step 1 Complete the "DLP-G46 Log into CTC" task on page 2-27 at the node where you want to change the 32WSS and 32WSS-L card settings. If you are already logged in, continue with Step 2.

Step 2 Complete the "NTP-G103 Back Up the Database" procedure on page 13-2.

Step 3 Perform any of the following tasks as needed:

- DLP-G212 Change 32WSS and 32WSS-L Optical Channel Parameters, page 11-49
- DLP-G213 Change the 32WSS and 32WSS-L Optical Channel Thresholds, page 11-52

Note To use the alarm profile tab, including creating alarm profiles and suppressing alarms, see Chapter 9, "Manage Alarms."

- DLP-G214 Change 32WSS and 32WSS-L Optical Line Parameters, page 11-55
- DLP-G215 Change the 32WSS and 32-WSS-L Optical Line Thresholds, page 11-57

Step 4 Complete the "NTP-G103 Back Up the Database" procedure on page 13-2.

Stop. You have completed this procedure.

DLP-G212 Change 32WSS and 32WSS-L Optical Channel Parameters

Purpose	This task changes the optical channel parameter settings for the 32WSS and 32WSS-L cards.
Tools/Equipment	None
Prerequisite Procedures	DLP-G46 Log into CTC, page 2-27
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher

Step 1 In node view (single-shelf mode) or shelf view (multishelf mode), double-click the 32WSS and 32WSS-L 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 Table 11-28. 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 11-28 32WSS and 32WSS-L Optical Channel Parameter Settings

Parameter	Description	Options
Port	(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. Ports 1 through 32 (CHAN-RX) are assigned to optical channels configured as add channels. Ports 33 through 64 (PASS-THROUGH) are assigned to optical channels configured as pass-through channels.	—
Port Name	Allows a logical name to be assigned for each of the port.	User-defined. Name can be up to 32 alphanumeric/special characters. Blank by default. Double-click, enter the name, and press **Enter**. See the "DLP-G104 Assign a Name to a Port" task on page 7-3.
Admin State	Sets the port administrative state unless network conditions prevent the change. For more information about administrative states, refer to the "Administrative and Service States" appendix in the *Cisco ONS 15454 DWDM Reference Manual*.	From the drop-down list, choose one of the following: • 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, refer to the "Administrative and Service States" appendix in the *Cisco ONS 15454 DWDM Reference Manual*.	• IS-NR/Unlocked-enabled • OOS-AU,AINS/Unlocked-disabled,automaticInService • OOS-MA,DSBLD/Locked-enabled,disabled • OOS-MA,MT/Locked-enabled,maintenance
Line Direction	(Display only) Shows the line direction associated with the optical signal that passes through the port. This parameter is automatically configured during ANS. To change it, you must modify the network plan in Cisco MetroPlanner, import the NE Update file, and run ANS.	• East to West • West to East

Table 11-28 32WSS and 32WSS-L Optical Channel Parameter Settings (continued)

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 "Card Reference" chapter or the "Hardware Specifications" appendix in the *Cisco ONS 15454 DWDM Reference Manual*.	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.	• 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.	Double-click the parameter, enter a value, and press **Enter**. • 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.	Double-click the parameter, enter a value, and press **Enter**. • Numeric value (dB) • –30 dB to +30 dB
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 or 32WSS-L.	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 Change the 32WSS and 32WSS-L Optical Channel Thresholds

Purpose	This task changes the optical channel threshold settings for the 32WSS and 32WSS-L cards.
Tools/Equipment	None
Prerequisite Procedures	DLP-G46 Log into CTC, page 2-27
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher

Caution Warning thresholds are not monitored by CTC. They must be user-provisioned and monitored through custom alarm profiles.

Step 1 In node view (single-shelf mode) or shelf view (multishelf mode), double-click the 32WSS or 32WSS-L card where you want to change the optical channel threshold 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 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 Table 11-29.

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

Table 11-29 32WSS and 32WSS-L 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.	—

Table 11-29 32WSS and 32WSS-L Optical Channel Warning Threshold Settings (continued)

Parameter	Description	Options
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**.

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 Table 11-30.

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

Table 11-30 32WSS and 32WSS-L Optical Channel Alarm Threshold Settings

Parameter	Description	Options
Port	(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. Ports 1 through 32 (CHAN-RX) are associated to optical channels configured as add/drop channels. Ports 33 through 64 (PASS-THROUGH) are associated to optical channels configured as pass-through channels.	—

Table 11-30 32WSS and 32WSS-L Optical Channel Alarm Threshold Settings (continued)

Parameter	Description	Options
Power Failure Low (dBm)	(Display only) Shows the power failure 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) that is always active in Constant Power mode. 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). The threshold is calculated automatically when you run ANS. (Refer to the "Hardware Specifications" appendix in the *Cisco ONS 15454 DWDM Reference Manual*.)	—
Power Degrade High (dBm)	(Display only) 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 associated to a VOA (OSC-VOA) that is always active in Constant Power mode. 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).	—
Power Degrade Low (dBm)	(Display only) 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) that is always active in Constant Power mode. 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).	Numeric

Table 11-30 32WSS and 32WSS-L Optical Channel Alarm Threshold Settings (continued)

Parameter	Description	Options
Power ADD Failure Low (dBm)	Shows the power add failure low threshold. This power value applies to the corresponding port and is automatically calculated when ANS is run. 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 or 32WSS-L card.	Numeric. CTC does not allow it to be changed.

Step 5 Return to your originating procedure (NTP).

DLP-G214 Change 32WSS and 32WSS-L Optical Line Parameters

Purpose	This task changes the optical line parameter settings for the 32WSS and 32WSS-L cards.
Tools/Equipment	None
Prerequisite Procedures	DLP-G46 Log into CTC, page 2-27
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher

Step 1 In node view (single-shelf mode) or shelf view (multishelf mode), double-click the 32WSS or 32WSS-L 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 Table 11-31. 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 11-31 32WSS and 32WSS-L Optical Line Parameter Settings

Parameter	Description	Options
Port	(Display only) Displays the port number, port type, and direction (RX or TX),	• 65 (EXP-TX) • 66 (EXP-RX) • 67 (COM-TX) • 68 (COM-RX) • 69 (DROP-TX)
Port Name	Allows you to assign a logical name for each of the ports shown.	User-defined. Name can be up to 32 alphanumeric/ special characters. Blank by default. Double-click, enter the name, and press **Enter**. See the "DLP-G104 Assign a Name to a Port" task on page 7-3.
Admin State	Sets the port administrative state unless network conditions prevent the change. For more information about administrative states, refer to the "Administrative and Service States" appendix in the *Cisco ONS 15454 DWDM Reference Manual*.	From the drop-down list, choose one of the following: • 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, refer to the "Administrative and Service States" appendix in the *Cisco ONS 15454 DWDM Reference Manual*.	• IS-NR/Unlocked-enabled • OOS-AU,AINS/Unlocked-disabled, automaticInService • OOS-MA,DSBLD/Locked-enabled,disabled • OOS-MA,MT/Locked-enabled,maintenance
Line Direction	(Display only) Shows the line direction associated with the optical signal that passes through the port. This parameter is automatically configured during ANS. To change it, you must modify the network plan in Cisco MetroPlanner, import the NE Update file, and run ANS.	• East to West • West to East
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.	—

Step 4 Return to your originating procedure (NTP).

DLP-G215 Change the 32WSS and 32-WSS-L Optical Line Thresholds

Purpose	This task changes the 32WSS and 32WSS-L card optical line threshold settings.
Tools/Equipment	None
Prerequisite Procedures	DLP-G46 Log into CTC, page 2-27
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher

Caution Warning thresholds are not monitored by CTC. They must be user-provisioned and monitored through custom alarm profiles.

Step 1 In node view (single-shelf mode) or shelf view (multishelf mode), double-click the 32WSS or 32WSS-L 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 four groups of eight 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 Table 11-32.

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

Table 11-32 32WSS and 32WSS-L Optical Line Warning Threshold Settings

Parameter	Description	Options
Port	(Display only) Displays the port number, port type, and direction (RX or TX).	• 65 (EXP-TX) • 66 (EXP-RX) • 67 (COM-TX) • 68 (COM-RX) • 69 (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.

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 Table 11-33.

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

Table 11-33 32WSS and 32WSS-L Optical Line Alarm Threshold Settings

Parameter	Description	Options
Port	(Display only) Displays the port number, port type, and direction (RX or TX).	• 65 (EXP-TX) • 66 (EXP-RX) • 67 (COM-TX) • 68 (COM-RX) • 69 (DROP-TX)
Power Failure Low (dBm)	Shows the power failure low threshold. This power value applies to the corresponding port and is automatically calculated when ANS is run. You can manually change the threshold. The value must be within the optical power range that is specified for the card. (Refer to the "Hardware Specifications" appendix in the *Cisco ONS 15454 DWDM Reference Manual*.)	Numeric. Double-click the parameter, enter a value, and press **Enter**.
Power Degrade High (dBm)	Does not apply to 32WSS and 32WSS-L cards at the optical line level.	—
Power Degrade Low (dBm)	Does not apply to 32WSS and 32WSS-L cards at the optical line level.	—

Step 5 Return to your originating procedure (NTP).

NTP-G149 Modify the MMU Line Settings and PM Thresholds

Purpose	This procedure changes the MMU card thresholds and settings.
Tools/Equipment	None
Prerequisite Procedures	NTP-G30 Install the DWDM Cards, page 3-46
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher

Step 1 Complete the "DLP-G46 Log into CTC" task on page 2-27 at the node where you want to change the MMU card settings. If you are already logged in, continue with Step 2.

Step 2 Complete the "NTP-G103 Back Up the Database" procedure on page 13-2.

Step 3 Perform any of the following tasks as needed:

Note To use the alarm profile tab, including creating alarm profiles and suppressing alarms, see Chapter 9, "Manage Alarms."

- DLP-G342 Change MMU Optical Line Parameters, page 11-59
- DLP-G343 Change the MMU Optical Line Thresholds, page 11-60

Step 4 Complete the "NTP-G103 Back Up the Database" procedure on page 13-2.

Stop. You have completed this procedure.

DLP-G342 Change MMU Optical Line Parameters

Purpose	This task changes the optical line parameter settings for the MMU card.
Tools/Equipment	None
Prerequisite Procedures	DLP-G46 Log into CTC, page 2-27
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher

Step 1 In node view (single-shelf mode) or shelf view (multishelf mode), double-click the MMU 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 Table 11-34. 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 11-34 MMU Optical Line Parameter Settings

Parameter	Description	Options
Port	(Display only) Displays the port number, port type, and direction (RX or TX): • 1 (EXP-RX) • 2 (EXP-TX) • 3 (COM-RX) • 4 (COM-TX) • 5 (EXP A-RX) • 6 (EXP A-TX)	—
Port Name	Allows you to assign a logical name for each of the ports shown.	User-defined. Name can be up to 32 alphanumeric/ special characters. Blank by default. Double-click, enter the name, and press **Enter**. See the "DLP-G104 Assign a Name to a Port" task on page 7-3.

Table 11-34 MMU Optical Line Parameter Settings (continued)

Parameter	Description	Options
Admin State	Sets the port administrative state unless network conditions prevent the change. For more information about administrative states, refer to the "Administrative and Service States" appendix in the *Cisco ONS 15454 DWDM Reference Manual*.	From the drop-down list, choose one of the following: • 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, refer to the "Administrative and Service States" appendix in the *Cisco ONS 15454 DWDM Reference Manual*.	• IS-NR/Unlocked-enabled • OOS-AU,AINS/Unlocked-disabled, automaticInService • OOS-MA,DSBLD/Locked-enabled,disabled • OOS-MA,MT/Locked-enabled,maintenance
Line Direction	(Display only) Shows the line direction associated with the optical signal that passes through the port. This parameter is automatically configured during ANS. To change it, you must modify the network plan in Cisco MetroPlanner, import the NE Update file, and run ANS.	• East to West • West to East
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.	—

Step 4 Return to your originating procedure (NTP).

DLP-G343 Change the MMU Optical Line Thresholds

Purpose	This task changes the MMU card optical line threshold settings.
Tools/Equipment	None
Prerequisite Procedures	DLP-G46 Log into CTC, page 2-27
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher

Caution Warning thresholds are not monitored by CTC. They must be user-provisioned and monitored through custom alarm profiles.

Step 1 In node view (single-shelf mode) or shelf view (multishelf mode), double-click the MMU 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 Table 11-35.

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

Table 11-35 MMU Optical Line Warning Threshold Settings

Parameter	Description	Options
Port	(Display only) Displays the port number, port type, and direction (RX or TX):	• 1 (EXP-RX) • 2 (EXP-TX) • 3 (COM-RX) • 4 (COM-TX) • 5 (EXP A-RX) • 6 (EXP A-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.

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 Table 11-36.

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

Table 11-36 MMU Optical Line Alarm Threshold Settings

Parameter	Description	Options
Port	(Display only) Displays the port number, port type, and direction (RX or TX).	• 1 (EXP-RX) • 2 (EXP-TX) • 3 (COM-RX) • 4 (COM-TX) • 5 (EXP A-RX) • 6 (EXP A-TX)
Power Failure Low (dBm)	Shows the power failure low threshold. This power value applies to the corresponding port and is automatically calculated when ANS is run. You can manually change the threshold. The value must be within the optical power range that is specified for the card. (Refer to the "Hardware Specifications" appendix in the *Cisco ONS 15454 DWDM Reference Manual*.)	Numeric. Double-click the parameters, enter a value, and press **Enter**.

Step 5 Return to your originating procedure (NTP).

NTP-G101 Modify Alarm Interface Controller–International Settings

Purpose	This procedure provisions the AIC-I card to receive input from or send output to external devices wired to the backplane (called external alarms and controls or environmental alarms), or changes orderwire settings.
Tools/Equipment	None
Prerequisite Procedures	NTP-G72 Provision External Alarms and Controls on the Alarm Interface Controller-International Card, page 9-33 DLP-G109 Provision Orderwire, page 7-25
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher

Step 1 Complete the "DLP-G46 Log into CTC" task on page 2-27 at the node where you want to change the AIC-I card settings. If you are already logged in, proceed to Step 2.

Step 2 Complete the "NTP-G103 Back Up the Database" procedure on page 13-2.

Step 3 Perform any of the following tasks as needed:

- DLP-G245 Change External Alarms Using the AIC-I Card, page 11-63
- DLP-G246 Change External Controls Using the AIC-I Card, page 11-64
- DLP-G247 Change AIC-I Card Orderwire Settings, page 11-65

Step 4 Complete the "NTP-G103 Back Up the Database" procedure on page 13-2.

Stop. You have completed this procedure.

DLP-G245 Change External Alarms Using the AIC-I Card

Purpose	This task changes external alarm settings on the AIC-I card.
Tools/Equipment	None
Prerequisite Procedures	DLP-G46 Log into CTC, page 2-27
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher

Note The procedure is the same if you are using the alarm expansion panel (AEP). In this case, the number of contacts that are shown on the screen is changed accordingly.

Step 1 Confirm that external-device relays are wired to the ENVIR ALARMS IN pins. See the "DLP-G20 Install Alarm Wires on the MIC-A/P (ETSI Only)" task on page 1-48 (ETSI) or the "DLP-G23 Install Alarm Wires on the Backplane (ANSI Only)" task on page 1-53 (ANSI) for more information.

Step 2 Double-click the AIC-I card to display it in card view.

Step 3 Click the **Provisioning > External Alarms** tabs.

Step 4 Modify any of the following fields for each external device wired to the ONS 15454 backplane. For definitions of these fields, see the "NTP-G72 Provision External Alarms and Controls on the Alarm Interface Controller-International Card" procedure on page 9-33.

- Enabled
- Alarm Type
- Severity
- Virtual Wire
- Raised When
- Description

Step 5 Click **Apply**.

Step 6 Return to your originating procedure (NTP).

DLP-G246 Change External Controls Using the AIC-I Card

Purpose	This task changes external control settings on the AIC-I card.
Tools/Equipment	None
Prerequisite Procedures	DLP-G46 Log into CTC, page 2-27
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher

Note The task is the same if you are using the AEP. In this case, the number of contacts that are shown on the screen is changed accordingly.

Step 1 Verify the external control relays to the ENVIR ALARMS OUT backplane pins. See the "DLP-G20 Install Alarm Wires on the MIC-A/P (ETSI Only)" task on page 1-48 (ETSI) or the "DLP-G23 Install Alarm Wires on the Backplane (ANSI Only)" task on page 1-53 (ANSI) for more information.

Step 2 In node view (single-shelf mode) or shelf view (multishelf mode), double-click the AIC-I card to display it in card view.

Step 3 Click the **Provisioning > External Controls** tabs.

Step 4 Modify any of the following fields for each external control wired to the ONS 15454 backplane. For definitions of these fields, see the "NTP-G72 Provision External Alarms and Controls on the Alarm Interface Controller-International Card" procedure on page 9-33.

- Enabled
- Trigger Type
- Control Type
- Description

Step 5 Click **Apply**.

Step 6 Return to your originating procedure (NTP).

DLP-G247 Change AIC-I Card Orderwire Settings

Purpose	This task changes orderwire settings on the AIC-I card.
Tools/Equipment	None
Prerequisite Procedures	DLP-G46 Log into CTC, page 2-27
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher

Caution When provisioning orderwire for ONS 15454s residing in a ring, do not provision a complete orderwire loop. For example, a four-node ring typically has east and west ports provisioned at all four nodes. However, to prevent orderwire loops, provision two orderwire ports (east and west) at all but one of the ring nodes.

Tip Before you begin, make a list of the ONS 15454 slots and ports that require orderwire communication.

Step 1 In node view (single-shelf mode) or shelf view (multishelf mode), double-click the AIC-I card to display it in card view.

Step 2 Click the **Provisioning > Local Orderwire** tabs or the **Provisioning > Express Orderwire** tabs, depending on the orderwire path that you want to change. Provisioning steps are the same for both types of orderwire.

Step 3 If needed, adjust the transmit (Tx) and receive (Rx) dBm values by moving the slider to the right or left for the headset type (four-wire or two-wire) that you will use. In general, you should not need to adjust the dBm values.

Step 4 If you want to turn on the audible alert (buzzer) for the orderwire, check the **Buzzer On** check box.

Step 5 Click **Apply**.

Step 6 Return to your originating procedure (NTP).

NTP-G102 Change Card Service State

Purpose	This procedure changes a card service state.
Tools/Equipment	None
Prerequisite Procedures	NTP-G30 Install the DWDM Cards, page 3-46 or NTP-G32 Install the Transponder and Muxponder Cards, page 3-51
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher

Step 1 Complete the "DLP-G46 Log into CTC" task on page 2-27 at the node where you want to change the card service state.

Step 2 In node view (single-shelf mode) or multishelf view (multishelf mode), click the **Inventory** tab.

Step 3 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 4 Click **Apply**.

Step 5 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, refer to the "Administrative and Service States" appendix in the *Cisco ONS 15454 DWDM Reference Manual*.

Stop. You have completed this procedure.