This chapter explains how to change line provisioning, thresholds, service states, and line rates on Cisco ONS 15454 cards.

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Before You Begin

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

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

1. NTP-A88 Modify Line Settings and PM Parameter Thresholds for Electrical Cards-As needed, complete this procedure to change line and threshold settings for all electrical cards (EC-1, DS-1, DS-3, DS3i-N-12, and DS3XM).
2. NTP-A89 Modify Line Settings and PM Parameter Thresholds for Optical Cards-As needed, complete this procedure to change line and threshold settings for all optical cards.
3. NTP-A118 Modify Alarm Interface Controller-International Settings-As needed, complete this procedure to change external alarms and controls and/or orderwire settings.
4. NTP-A91 Upgrade DS-1 and DS-3 Protect Cards from 1:1 Protection to 1:N Protection-As needed, complete this procedure to change the protection type on DS-1 or DS-3 cards.
5. NTP-A315 Modify Port Settings and PM Parameter Thresholds for FC_MR-4 Cards-As needed, complete this procedure to change FC_MR-4 card port and threshold settings.
6. NTP-A321 Change Card or PPM Service State-As needed, complete this procedure to change the service state on a card or pluggable port module (PPM).
7. NTP-A322 Manage Pluggable Port Modules-As needed, complete this procedure to provision a multirate PPM, assign the optical line rate, change the optical line rate, and delete PPMs.
8. NTP-A346 Provision the Soak Timer for an ML-Series Card-As needed, complete this procedure to provision the soak timer for an ML-Series card.
9. NTP-A352 View PPM Information on the LCD-As needed, complete this procedure to view wavelength and rate for a PPM on a multirate optical card.
10. NTP-A354 Set or Check Cross-Connect Mode for XC-VXC-10G Cards-As needed, complete this procedure to provision the node's cross-connect mode if mixed mode grooming is required.

NTP-A88 Modify Line Settings and PM Parameter Thresholds for Electrical Cards

Purpose	This procedure changes the line and threshold settings for electrical cards.
Tools/Equipment	None
Prerequisite Procedures	NTP-A17 Install the Electrical Cards
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher

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

1. Complete the "DLP-A60 Log into CTC" task at the node where you want to change the electrical card settings. If you are already logged in, proceed to Step 2.
2. As needed, complete the NTP-A108 Back Up the Database.
3. Perform any of the following tasks as needed:
   - DLP-A165 Change Line and Threshold Settings for a DS1-14 or DS1N-14 Card
   - DLP-A166 Change Line and Threshold Settings for a DS3-12 or DS3N-12 Card
   - DLP-A167 Change Line and Threshold Settings for a DS3E-12 or DS3N-12E Card
   - DLP-A168 Change Line and Threshold Settings for the DS3XM-6 Card
   - DLP-A387 Change Line and Threshold Settings for the DS3XM-12 Card
   - DLP-A526 Change Line and Threshold Settings for the DS3i-N-12 Cards
   - DLP-A388 Change Line and Threshold Settings for the DS3/EC1-48 Cards
   - DLP-A169 Change Line and Threshold Settings for the EC1-12 Card
   - DLP-A376 Change Line and Threshold Settings for the DS1/E1-56 Cards
4. As needed, complete the NTP-A108 Back Up the Database.

   Stop. You have completed this procedure.

NTP-A89 Modify Line Settings and PM Parameter Thresholds for Optical Cards

Purpose	This procedure changes the line and threshold settings for optical (OC-N) cards.
Tools/Equipment	None
Prerequisite Procedures	NTP-A16 Install Optical Cards and Connectors
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher

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

1. Complete the "DLP-A60 Log into CTC" task at the node where you want to change the OC-N card settings. If you are already logged in, proceed to Step 2.
2. As needed, complete the NTP-A108 Back Up the Database.
3. Perform any of the following tasks as needed:
   - DLP-A379 Change Line Transmission Settings for OC-N Cards
   - DLP-A171 Change Threshold Settings for OC-N Cards
   - DLP-A459 Change Optics Thresholds Settings for OC-192, MRC-12, and MRC-2.5G-4 Cards
   - DLP-A527 Change the OC-N Card ALS Maintenance Settings
   - DLP-A172 Change an Optical Port to SDH
4. As needed, complete the NTP-A108 Back Up the Database.

   Stop. You have completed this procedure.

NTP-A118 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). It also changes orderwire settings.
Tools/Equipment	None
Prerequisite Procedures	NTP-A258 Provision External Alarms and Controls on the Alarm Interface Controller-International DLP-A83 Provision Orderwire
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher

1. Complete the "DLP-A60 Log into CTC" task at the node where you want to change the AIC-I card settings. If you are already logged in, continue with Step 2.
2. As needed, complete the NTP-A108 Back Up the Database.
3. Perform any of the following tasks as needed:
   - DLP-A208 Change External Alarms Using the AIC-I Card
   - DLP-A209 Change External Controls Using the AIC-I Card
   - DLP-A210 Change AIC-I Card Orderwire Settings
4. As needed, complete the NTP-A108 Back Up the Database.

   Stop. You have completed this procedure.

NTP-A91 Upgrade DS-1 and DS-3 Protect Cards from 1:1 Protection to 1:N Protection

Purpose	This procedure converts DS-1 and DS-3 protect cards from 1:1 to 1:N protection.
Tools/Equipment	None
Prerequisite Procedures	DLP-A71 Create a 1:1 Protection Group
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher

1. Complete the "DLP-A60 Log into CTC" task at the node where you want to convert the DS-1 or DS-3 cards from 1:1 to 1:N protection. If you are already logged in, continue with Step 2.
2. As needed, complete the NTP-A108 Back Up the Database.
3. Perform any of the following tasks as needed:
   - DLP-A176 Convert DS1-14 Cards From 1:1 to 1:N Protection
   - DLP-A177 Convert DS3-12 Cards From 1:1 to 1:N Protection
   - DLP-A178 Convert DS3-12E Cards From 1:1 to 1:N Protection
   - DLP-A448 Convert DS3XM-6 or DS3XM-12 Cards From 1:1 to 1:N Protection
4. As needed, complete the NTP-A108 Back Up the Database.

   Stop. You have completed this procedure.

NTP-A315 Modify Port Settings and PM Parameter Thresholds for FC_MR-4 Cards

Purpose	This procedure changes the line and threshold settings for storage area network (SAN) cards, including the FC_MR-4.
Tools/Equipment	None
Prerequisite Procedures	NTP-A274 Install the FC_MR-4 Card
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher

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

1. Complete the "DLP-A60 Log into CTC" task at the node where you want to change the OC-N card settings. If you are already logged in, continue with Step 2.
2. As needed, complete the NTP-A108 Back Up the Database.
3. Perform any of the following tasks as needed:
   - DLP-A438 Change General Port Settings for the FC_MR-4 Card
   - DLP-A439 Change Distance Extension Port Settings for the FC_MR-4 Card
   - DLP-A440 Change Enhanced FC/FICON Port Settings for the FC_MR-4 Card
   - DLP-A357 Create FC_MR-4 RMON Alarm Thresholds
   - DLP-A358 Delete FC_MR-4 RMON Alarm Thresholds
4. As needed, complete the NTP-A108 Back Up the Database.

   Stop. You have completed this procedure.

NTP-A321 Change Card or PPM Service State

Purpose	This procedure changes a card or port's service state, which is an autonomously generated state that gives the overall condition of the port.
Tools/Equipment	None
Prerequisite Procedures	Install Cards and Fiber-Optic Cable
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher

Note: On the OC192-XFP, MRC-12, and MRC-2.5G-4 cards, the PPM is equivalent to an optical port.

1. Complete the "DLP-A60 Log into CTC" task at the node where you want to change the card service state.
2. From node view, click the **Inventory** tab.
3. Choose an Administrative state from the Admin State drop-down list for the card or PPM that you want to change: **IS** (In-Service) or **OOS,MT** (Out-of-Service,Maintenance).
4. Click **Apply**.
5. If an error message appears indicating that the card state cannot be changed from its current state, click **OK**.

   Depending on the Administrative state that you choose, the card or port/PPM transitions to a different service state. For more information about the service states and card state transitions, refer to the "Administrative and Service States" appendix of the *Cisco ONS 15454 Reference Manual*.

Stop. You have completed this procedure.

NTP-A322 Manage Pluggable Port Modules

Purpose	This procedure provisions, changes, and deletes PPMs for the MRC-12, MRC-2.5G-4, and OC192-XFP cards.
Tools/Equipment	None
Prerequisite Procedures	DLP-A461 Preprovision an SFP or XFP Device or DLP-A469 Install a GBIC or SFP/XFP Device
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher

1. Complete the "DLP-A60 Log into CTC" task at the node where you want to provision, change, or delete PPMs. If you are already logged in, continue with Step 2.
2. From the View menu, choose Go to Network View.
3. Click the **Alarms** tab:
    1. Verify that the alarm filter is not turned on. See the "DLP-A227 Disable Alarm Filtering" task as necessary.
    2. Verify that no unexplained conditions appear on the network. If unexplained conditions appear, resolve them before continuing. Refer to the *Cisco ONS 15454 Troubleshooting Guide*.
    3. Complete the "DLP-A532 Export CTC Data" task to export alarm and condition information.
4. As needed, complete the "DLP-A574 Provision a PPM on the MRC-12 or MRC-2.5G-4 Card" task. Single-rate PPMs do not require provisioning.
5. As needed, complete the "DLP-A575 Provision the Optical Line Rate on the MRC-12 or MRC-2.5G-4 Card" task to assign an OC-3, OC-12, or OC-48 line rate to a multirate PPM.
6. As needed, complete the "DLP-A576 Change the Optical Line Rate on the MRC-12 or MRC-2.5G-4 Card" task to change the line rate on a multirate PPM. You cannot change the optical line rate on single-rate PPMs.
7. As needed, complete the "DLP-A577 Delete a PPM from the MRC-12, MRC-2.5G-4, or OC192-XFP Card" task.

Stop. You have completed this procedure.

NTP-A346 Provision the Soak Timer for an ML-Series Card

Purpose	This procedure provisions the soak timer for ports on an ML-Series card. The soak period is the amount of time that the ML-Series port remains in the Down state after an error-free signal is continuously received before transitioning to the Up state.
Tools/Equipment	None
Prerequisite Procedures	NTP-A246 Install Ethernet Cards and Connectors
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher

1. Complete the "DLP-A60 Log into CTC" task at the node where you want to provision the soak timer for an ML-Series card. If you are already logged in, continue with Step 2.
2. In node view, double-click the ML-Series card that you want to provision.
3. Click the **Provisioning** tab.
4. Click the **Ether Ports** or **POS Ports** subtab and complete the following:
   - PSAS-In the appropriate port row, check this check box to enable Pre-Service Alarm Suppression (PSAS), which suppresses all alarms on the port for the time designated in the Soak Time column.
   - Soak Time-In the same row, choose the desired soak time (in hours and minutes). Use this column when you have checked PSAS to suppress alarms. When the port detects a signal, the countdown begins for the designated soak time. Soak time hours can be set from 0 to 48. Soak time minutes can be set from 0 to 45 in 15 minute increments.
5. Click **Apply**.

Stop. You have completed this procedure.

NTP-A352 View PPM Information on the LCD

Purpose	This procedure displays the line rate and the configured reach for OC-N and MRC cards (MRC-12, MRC-2.5G-4) on the LCD, located on the front of the fan-tray assembly.
Tools/Equipment	None
Prerequisite Procedures	NTP-A16 Install Optical Cards and Connectors
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher

1. On the ONS 15454 front panel, repeatedly press the **Slot** button until the slot number of the card where the PPM resides appears on the LCD.
2. Repeatedly press the **Port** button. When you see "Status - Lambda" display on the LCD, press the **Status** button to select that option.
3. Press **Status** to toggle between "Lambda" and "Line Rate and Reach."
4. Press **Status** to select one of those options.
5. Press the **Port** button as needed to display the information about the desired port.

   Stop. You have completed this procedure.s

NTP-A354 Set or Check Cross-Connect Mode for XC-VXC-10G Cards

Purpose	This procedure is used to set or verify cross-connect mode provisioning required for mixed grooming mode.
Tools/Equipment	None
Prerequisite Procedures	None
Required/As Needed	As needed
Onsite/Remote	Onsite or remote
Security Level	Provisioning or higher

1. Complete the "DLP-A60 Log into CTC" task at the node where you want to change the XC-VXC-10G card settings. If you are already logged in, continue with Step 2.
2. Navigate to the node view in CTC.
3. Click Provisioning > Cross-Connect. The Cross-Connect dialog box is displayed.
4. If necessary, click the Mixed Mode radio button in the Cross-Connect dialog box and click Apply.

Stop. You have completed this procedure.