

Replace an In-service ONS 15454 Chassis

Document ID: 70248

Introduction

Prerequisites

Requirements

Components Used

Conventions

ONS 15454 Chassis Swap

NetPro Discussion Forums – Featured Conversations

Related Information

Introduction

This document provides guidance to replace an in-service Cisco ONS 15454 chassis that runs release 5. This document applies to *all* versions of Cisco ONS 15454 later than 3.2, provided you replace the linked procedures for release 5 with the relevant Non-Trouble Procedure (NTP) and Detailed Level Procedure (DLP) from the specific ONS 15454 Procedure Guide.

This procedure affects service. Use a maintenance window to perform this procedure. *All* traffic that drops at the Network Element (NE) is affected for the duration of this procedure. Cisco highly recommends that you temporarily re-route any traffic that drops at the NE on other facilities before you start the procedure.

Note: Review the entire procedure in this document, and print the necessary NTP or DLP before you start the maintenance window.

Prerequisites

Requirements

Cisco recommends that you have knowledge of these topics:

- Cisco ONS 15454

Components Used

The information in this document is based on these software and hardware versions:

- Cisco ONS 15454 version 3.2 and later

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, make sure that you understand the potential impact of any command.

Conventions

Refer to Cisco Technical Tips Conventions for more information on document conventions.

ONS 15454 Chassis Swap

Complete these steps to replace an in-service ONS 15454 chassis:

1. Inspect the new chassis.

Perform Steps 1 and 2 of NTP–A1 Unpack and Inspect the ONS 15454 Shelf Assembly.

2. Label the connections.

Label *all* external connections to the NE. You can do so according to the local site practice. Ultimately these labels will be used to reconnect everything after the chassis swap.

3. Resolve any outstanding alarms.

Resolve any standing alarms or conditions. You can view alarms from the shelf view in Cisco Transport Controller (CTC). Click **Retrieve** to retrieve conditions from the **Conditions** tab at the shelf view.

4. Back up the database and log all pertinent information.

Perform the steps in NTP– A108 Back Up the Database.

Export the circuit list, inventory, current alarms and conditions. Refer to DLP–A516 Export CTC Data.

Manually log all critical information. Critical information includes IP address, target identifier (TID), section data communication channels (SDCCs) and protection groups.

Note: Document the current MAC address, which you can find under the **Provisioning > Network > General** tab. The chassis carries the MAC address of the node. Therefore, the MAC address changes when you swap the chassis. You need to repair circuits at the end of this procedure.

Log the existing MAC address information here: _____

5. Force traffic away from the NE.

Here are two ways to force traffic away from the NE. Use the appropriate procedure depending on the Synchronous Optical Network (SONET) topology.

- ◆ For Bidirectional Line Switched Ring (BLSR), refer to DLP– A303 Initiate a BLSR Force Ring Switch. On the node connected to the East span of the defective chassis, force traffic away from the West span. Similarly, for the node connected to the West span of the defective chassis, force traffic away from the East span.
- ◆ For Unidirectional Path Switched Ring (UPSR), refer to DLP– A197 Initiate a UPSR Force Switch. Perform this procedure on spans that connect adjacent nodes to the defective chassis.

6. Power down the NE.

Remove the fuses that feed power to the shelf in order to power down the NE.

7. Remove the chassis from the rack.

Disconnect all external connections. Remove all cards from the chassis. Take care to avoid any damage. Remove the chassis from the rack.

8. Re-install the equipment with the new chassis.

Perform these tasks to install all equipment in the same positions that the equipment occupied with the previous chassis.

- a. Perform the procedure in NTP– A2 Install the Shelf Assembly.
- b. Perform the procedure in NTP– A5 Install the EIA.
- c. Perform the procedure in NTP– A6 Install the Power and Ground.
- d. Perform the procedure in NTP– A7 Install the Fan–Tray Assembly.
- e. Perform the procedure in NTP– A8 Install Wires to Alarm, Timing, LAN, and Craft Pin Connections.
- f. Perform the procedure in NTP–A9 Install the Electrical Card Cables on the Backplane.
- g. Perform the procedure in DLP–A36 Install the TCC2/TCC2P Cards .
- h. Perform the procedure in DLP–A37 Install the XCVT or XC10G Cards.
- i. Perform the procedure in NTP–A16 Install the OC–N Cards.
- j. Perform the procedure in DLP–A39 Install Ethernet Cards.
- k. Perform the procedure in NTP–A17 Install the Electrical Cards.
- l. Perform the procedure in NTP–A247 Install Fiber–Optic Cables on OC–N Cards.

9. Log into the node.

Connect the PC to the node. Refer to NTP–A234 Set Up CTC Computer for Local Craft Connection to the ONS 15454

Log into CTC. Refer to DLP–A60 Log into CTC.

Note: Check whether any CTC sessions were active against this network through other NEs. If so, close all such sessions and re–launch the sessions at this point.

10. Resolve any new alarms.

Resolve any new alarms or conditions. You can view alarms from the shelf view in CTC. Click **Retrieve** to retrieve conditions from the **Conditions** tab at the shelf view.

11. Release the force switch

Here are two ways to release the force switch. Use the appropriate procedure depending on the SONET topology at the site.

- ◆ For BLSR, refer to DLP–A194 Clear a BLSR Force Ring Switch. On the node connected to the East span of the new chassis, release the force on the West span. Similarly, for the node connected to the West span of the new chassis, release the force on the East span.
- ◆ For UPSR, refer to DLP–A198 Clear a UPSR Force Switch. Perform the procedure on spans that connect adjacent nodes to the new chassis.

12. Repair the circuits.

Verify whether CTC is fully loaded. All NEs must be visible and the circuits must no longer scroll. Go to the **Circuits** tab from the network view. All circuits that terminate at this node must show a state of Incomplete . From the **Tools > Circuits** menu, select **Circuit Repair** and follow the prompts. Ensure that you have the previous MAC Address, documented in Step 4 available for input when prompted. When you complete this step, confirm that all circuits are in an Active state.

Note: If Ethernet circuits do not go to an Active state after you run Circuit Repair, delete and rebuild the circuits.

NetPro Discussion Forums – Featured Conversations

Networking Professionals Connection is a forum for networking professionals to share questions, suggestions, and information about networking solutions, products, and technologies. The featured links are some of the most recent conversations available in this technology.

NetPro Discussion Forums – Featured Conversations for Optical
Service Providers: Optical Networking
Service Providers: Metro

Related Information

- **Cisco ONS 15454 Procedure Guide, Release 8.0**
 - **Technical Support & Documentation – Cisco Systems**
-

[Contacts & Feedback](#) | [Help](#) | [Site Map](#)

© 2007 – 2008 Cisco Systems, Inc. All rights reserved. [Terms & Conditions](#) | [Privacy Statement](#) | [Cookie Policy](#) | [Trademarks of Cisco Systems, Inc.](#)

Updated: Aug 15, 2008

Document ID: 70248
