

Change Node Configuration from BLSR to UPSR – Cisco ONS 15454

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Introduction

This document describes how to convert from Bidirectional Line Switched Ring (BLSR) to Unidirectional Path Switched Ring (UPSR) through Cisco Transport controller (CTC) in a Cisco ONS 15454 environment.

Prerequisites

Requirements

Cisco recommends that you have knowledge of these topics:

- Cisco ONS 15454
- CTC

Components Used

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

- Cisco ONS 15454 version 4.1.0, 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.

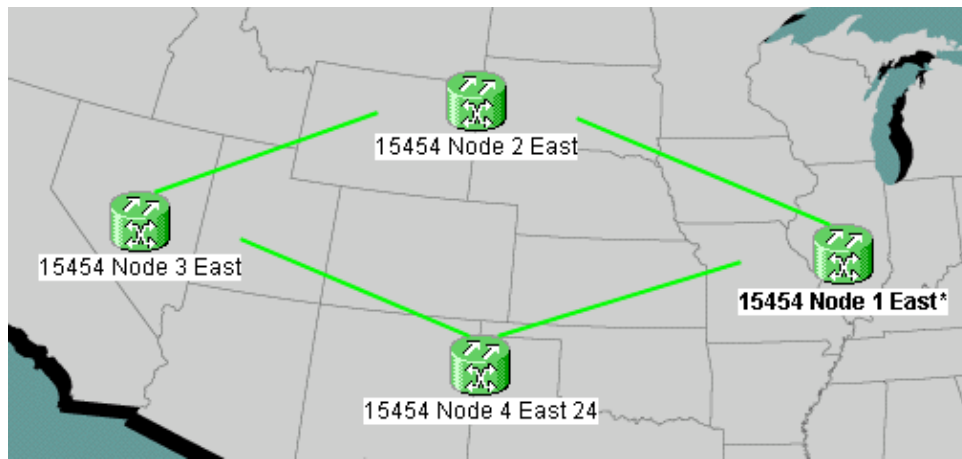
Conventions

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

BLSR to UPSR Conversion

This document uses a lab setup with four nodes (Node1, Node2, Node3 and Node 4). Use these instructions to convert BLSR to UPSR.

Figure 1 Topology



1. Verify whether the SONET Data Communications Channel (SDCC) works properly for all nodes. Examine the network view (figure 2) or the alarm (figure 3) on the CTC to ensure that there is no LOS on any of the optical span facilities.

Figure 2 Network View on CTC

Network View	
0 CR	0 MJ
0 MN	
15454 Node 4 East 24	
Critical	: 0
Major	: 0
Minor	: 0

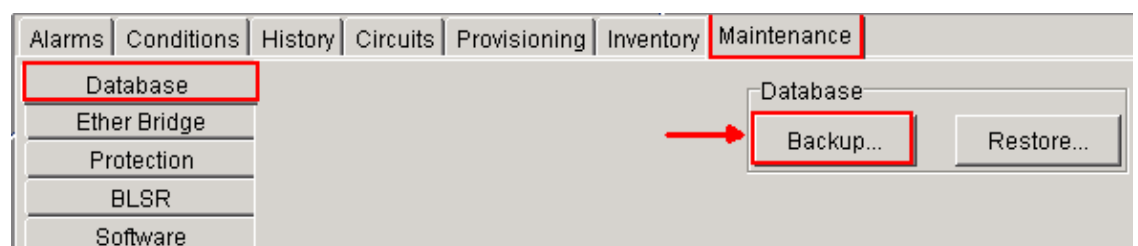
Figure 3 Alarm

Alarms	Conditions	History	Circuits	Provisioning	Maintenance						
New	Date ▲	Node	Object	Eqpt Type	Slot	Port	Sev ▲	ST	SA	Cond	Description

2. Perform a database backup on Node 1. Complete these steps:

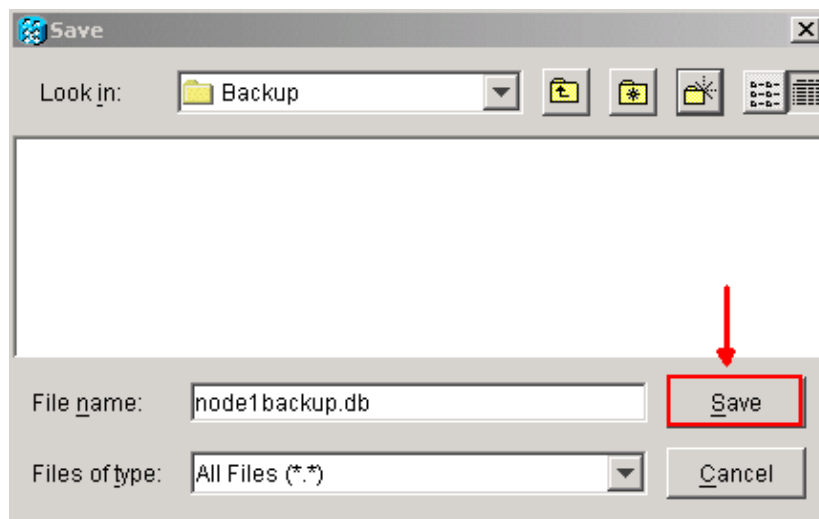
- a. Double-click Node 1. The node view for Node 1 appears.
- b. Click the **Maintenance > Database** tabs.

Figure 4 Backup



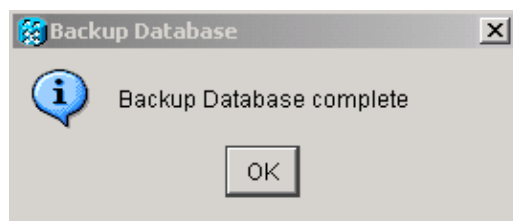
- c. Click **Backup**. The Save dialog box appears.

Figure 5 Save



- d. Save the database on the hard drive of the workstation, or on network storage. Use an appropriate file name with the .db file extension (for example, *database.db*).
- e. Click **Save**.
- f. Click **OK** in the confirmation dialog box.

Figure 6 Backup Database – Confirmation Dialog Box



3. Repeat step 2 on Nodes 2, 3 and 4.
4. Export the circuit list. Complete these steps:

- a. Double-click Node 1. The node view for Node 1 appears.
- b. Click **Export**.

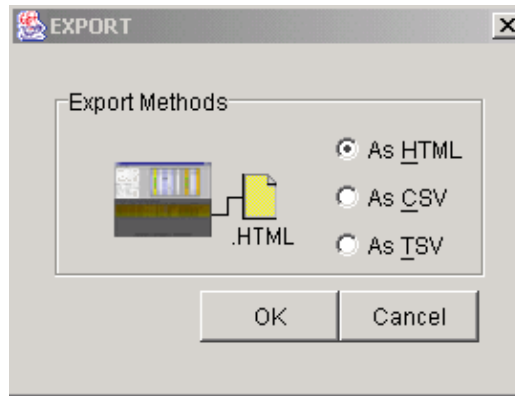
Figure 7 Export



- c. Select a data format in the Export dialog box (see figure 8).

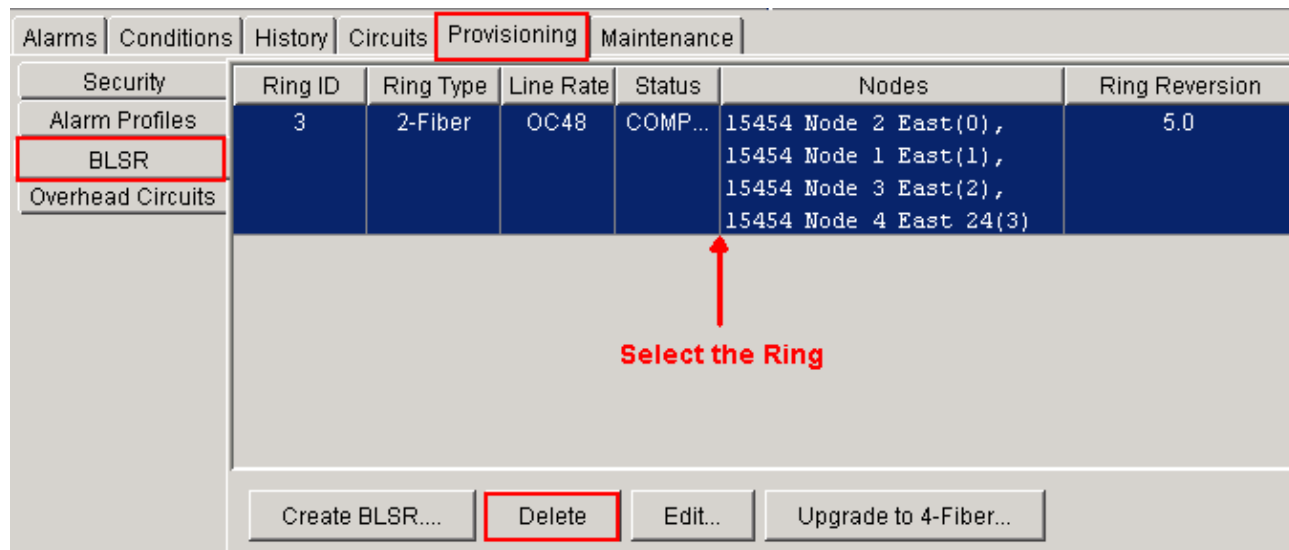
- ◇ As HTML This saves data as a simple HTML table file without graphics. You must view or edit the file with applications like Netscape Navigator, Microsoft Internet Explorer, or other applications that can open HTML files.
- ◇ As CSV This saves the CTC table as comma-separated values (CSV).
- ◇ As TSV This saves the CTC table as tab-separated values (TSV).

Figure 8 Export Dialog Box



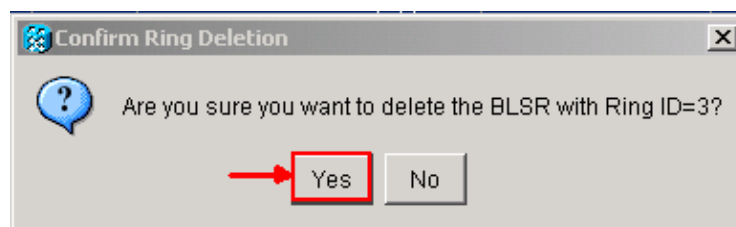
- d. Click the **OK** button.
 - e. Type a name in the **File name** field of the Save dialog box. Use one of these formats:
 - ◇ [filename].html for HTML files
 - ◇ [filename].csv for CSV files
 - ◇ [filename].tsv for TSV files
 - f. Navigate to a directory where you want to store the file.
 - g. Click the **OK** button.
5. Repeat step 4 on Nodes 2, 3 and 4.
 6. Verify the **Maintenance** tab to ensure that no ring switch operation is in progress. Check alarms and clear all alarms that are declared against all optical span card. You must clear all Timing synchronization and SDCC communication alarms on all nodes in a ring configuration before you move on to the next step.
 7. Click the **Provisioning** > **BLSR** tabs, select the ring and click **Delete**.

Figure 9 Delete BLSR



8. Click **Yes** in the **Confirm Ring Deletion** dialog box.

Figure 10 Confirm Ring Deletion



After the conversion, circuits in the circuit list still work, but there is no fiber or span protection. All the circuits utilize the original working path. If you require protection, delete each circuit. Then create each circuit with span protection. This includes circuits in the **ACTIVE** state.

Figure 11 Working Circuit without Fiber or Span Protection

Alarms	Conditions	History	Circuits	Provisioning	Maintenance		
Circuit Name	Type	Size	Protection	Dir	Status	Source	Destination
circuit2	STS	STS-1	Unprot	2-way	ACTIVE	15454 Node 1 East/s1/p2/S1	15454 Node 2 East/s
circuit1	STS	STS-1	Unprot	2-way	ACTIVE	15454 Node 1 East/s1/p1/S1	15454 Node 3 East/s

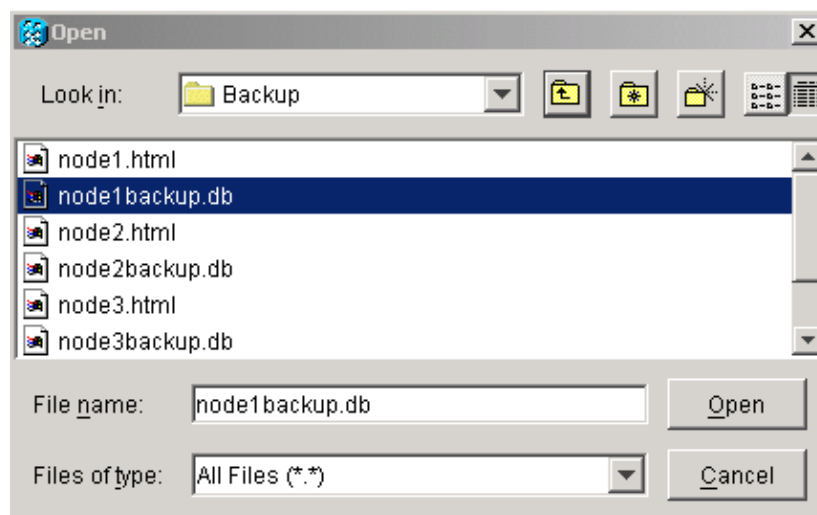


Caution: Software and hardware changes can both impact traffic. Span or fiber path protection is not available after the ring conversion, except on circuits created after the conversion. Carry out the work during the maintenance window to minimize impact.

If you need to back out the BLSR to UPSR conversion, complete these steps:

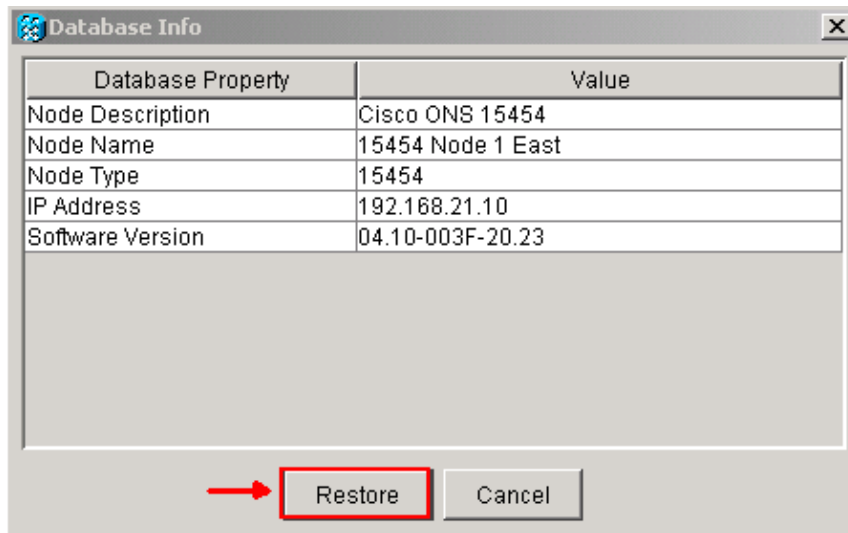
1. Access Node 1 through CTC directly.
2. In node view, click the **Maintenance > Database** tabs.
3. Click **Restore**.
4. Locate the database file that resides on the hard drive of the workstation or on network storage.
5. Click to highlight the database file.

Figure 12 Locate the Backup Database File



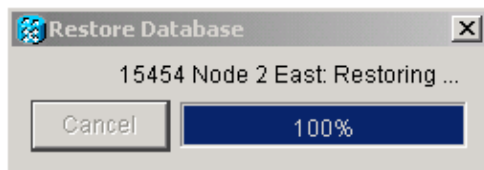
6. Click **Open**. The Database Info dialog box appears.

Figure 13 Restore the Database



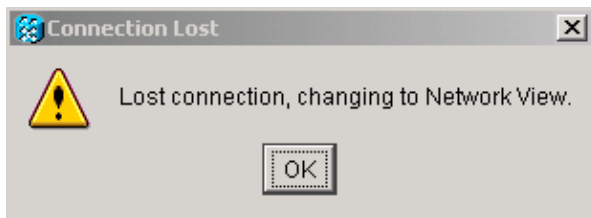
7. Click **Yes**.
8. The Restore Database box appears, and indicates that the restoration process is in progress.

Figure 14 Database Restoration in Progress



9. The Connection Lost box appears when the restoration process is complete.

Figure 15 Database Restore Completed



10. Click **OK**.
11. Repeat steps 1 through 10 for Nodes 2, 3 and 4.

Related Information

• Technical Support & Documentation – Cisco Systems

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