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# ONS 15600 Bridge and Roll in BLSR

Document ID: 64374

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**Introduction**

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## Introduction

This document describes the steps required in order to perform the Bridge and Roll manually to move the 15600–15600 portion of a circuit within a bidirectional line-switched ring (BLSR) on ONS 15600.

## Prerequisites

### Requirements

Cisco recommends that you have knowledge of these topics:

- Cisco ONS 15454
- Cisco ONS 15600
- Cisco Transport Controller (CTC)

### Components Used

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

- CISCO ONS 15454 version 4: All
- CISCO ONS 15600 version 1.1.0

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 the Cisco Technical Tips Conventions for more information on document conventions.

## Topology

This document uses a lab setup with two ONS 15600s and eight ONS 15454s as Figure 1 shows.

### Figure 1 Topology

Cisco – ONS 15600 Bridge and Roll in BLSR



In the setup, there are six BLSRs as Figure 2 shows.

- Ring ID 1 contains 15454 Node 1 West, 15454 Node 2 West, 15454 Node 3 West, 15454 Node 4 West and 15600 Node 7 West.
- Ring ID 2 contains 15454 Node 1 East, 15454 Node 2 East, 15454 Node 3 East, 15454 Node 4 East and 15600 Node 8 East.
- Ring ID 3 contains 15600 Node 7 West and 15600 Node 8 East. It has two OC-192 connections. Ports involved are Slot 11, Port 1 and Slot 4, Port 1 on both ONS 15600. The physical lines are connected as this list shows:
  - ◆ Slot 11, Port 1 on 15600 Node 7 West to Slot 4, Port 1 on 15600 Node 8 East
  - ◆ Slot 4, Port 1 on 15600 Node 7 West to Slot 11, Port 1 on 15600 Node 8 East
- Ring ID 4 contains 15600 Node 7 West and 15600 Node 8 East. It has two OC-192 connections. Ports involved are Slot 11, Port 2 and Slot 4, Port 2 on both ONS 15600. The physical lines are connected as this list shows:
  - ◆ Slot 11, Port 2 on 15600 Node 7 West to Slot 4, Port 2 on 15600 Node 8 East
  - ◆ Slot 4, Port 2 on 15600 Node 7 West to Slot 11, Port 2 on 15600 Node 8 East
- Ring ID 5 contains 15600 Node 7 West and 15600 Node 8 East. It has two OC-192 connections. Ports involved are Slot 11, Port 3 and Slot 4, Port 3 on both ONS 15600. The physical lines are connected as this list shows:
  - ◆ Slot 11, Port 3 on 15600 Node 7 West to Slot 4, Port 3 on 15600 Node 8 East
  - ◆ Slot 4, Port 3 on 15600 Node 7 West to Slot 11, Port 3 on 15600 Node 8 East
- Ring ID 6 contains 15600 Node 7 West and 15600 Node 8 East. It has two OC-192 connections. Ports involved are Slot 11, Port 4 and Slot 4, Port 4 on both ONS 15600. The physical lines are connected as this list shows:
  - ◆ Slot 11, Port 4 on 15600 Node 7 West to Slot 4, Port 1 on 15600 Node 8 East
  - ◆ Slot 4, Port 4 on 15600 Node 7 West to Slot 11, Port 1 on 15600 Node 8 East

**Figure 2 BLSR**

Ring ID	Ring Type	Line Rate	Status	Nodes	Ring Reversion	Span Reversion
1	2-Fiber	OC48	COMP...	15600 Node 7 West: Denver(0), 15454 Node 4 West(1), 15454 Node 1 West(2), 15454 Node 2 West(3), 15454 Node 3 West(4)	0.5	
5	2-Fiber	OC192	COMP...	15600 Node 7 West: Denver(0), 15600 Node 8 East: Baltimore(1)	0.5	
3	2-Fiber	OC192	COMP...	15600 Node 7 West: Denver(0), 15600 Node 8 East: Baltimore(1)	0.5	
4	2-Fiber	OC192	COMP...	15600 Node 7 West: Denver(0), 15600 Node 8 East: Baltimore(1)	0.5	
6	2-Fiber	OC192	COMP...	15600 Node 7 West: Denver(0), 15600 Node 8 East: Baltimore(1)	0.5	
2	2-Fiber	OC48	COMP...	15454 Node 4 East(0), 15600 Node 8 East: Baltimore(1), 15454 Node 3 East(2), 15454 Node 2 East(3), 15454 Node 1 East(4)	0.5	

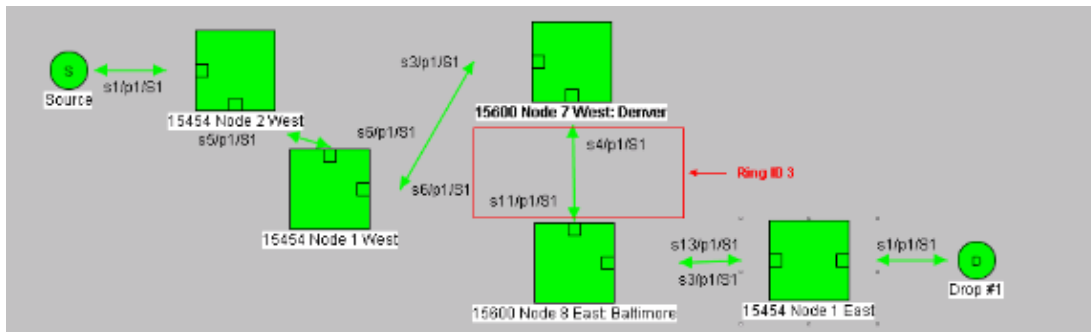
A test circuit is created as Figure 3 shows. The fiber router of this circuit follows (see Figure 4):

1. 15454 Node 2 West (Slot 1, Port 1, STS 1) connected with the DS3 BERT test set
2. West BLSR with Ring ID 1
3. 15600 BLSR with Ring ID 3
4. East BLSR with Ring ID 2
5. 15454 Node 1 East (Slot 1, Port 1, STS 1) with a loop installed

**Figure 3 Test Circuit**

Circuit Name	Type	Size	Protection	Dir	Status	Source	Destination
test	STS	STS-1	2F-BLSR	2-way	ACTIVE	15454 Node 2 West/s1/p1/S1	15454 Node 1 East/s1/p1/S1

**Figure 4 Fiber Path of the Test Circuit**

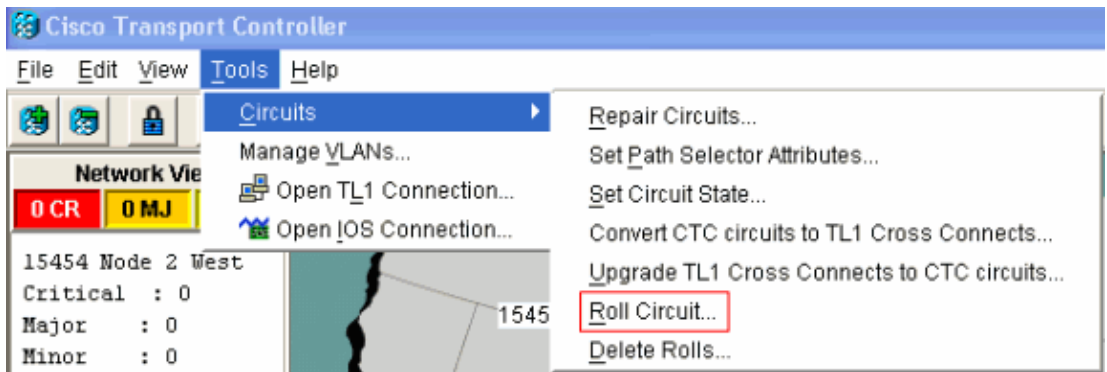


## Roll and Bridge

Complete these steps in order to perform the Bridge and Roll manually to move the 15600–15600 portion of this circuit from Ring ID 3 to any available Ring ID which CTC automatically selects:

1. Log into CTC.
2. Choose **Go To Network View** from the View menu.
3. Click the Circuit tab.
4. Click the circuit you want to roll. The circuit has to be in an active state.
5. Select **Circuits > Roll Circuits** (see Figure 5) from the Tools menu.

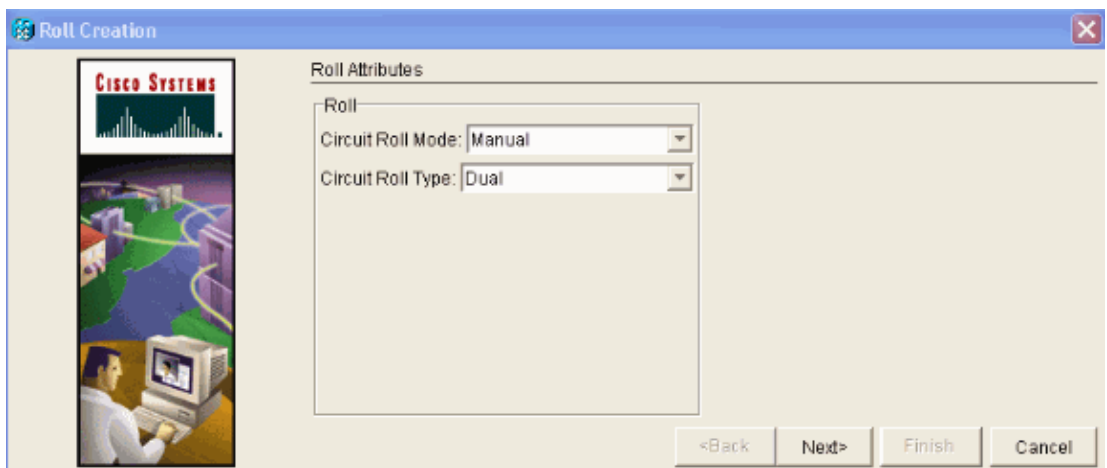
**Figure 5 Tools > Circuits > Roll Circuit**



6. Complete these tasks in the Roll Attribute area:

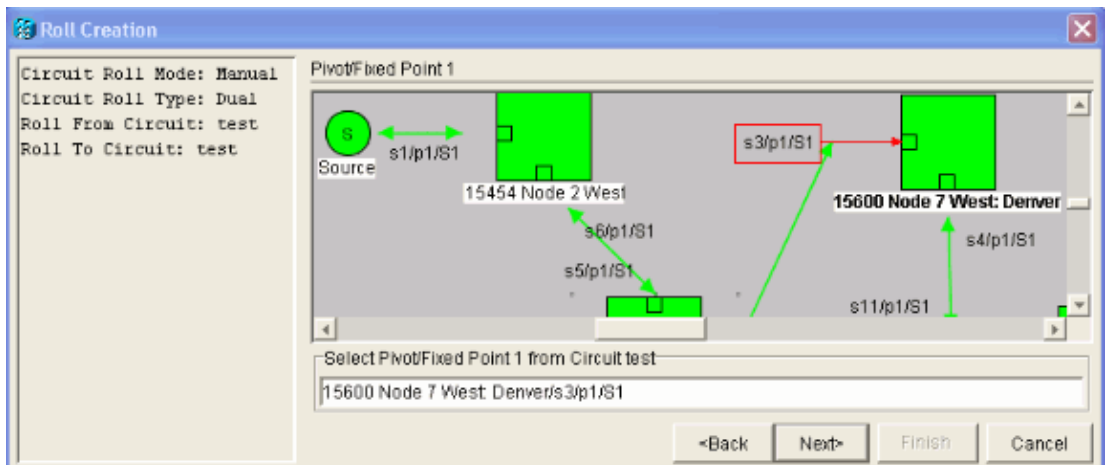
- ◆ Choose **Manual** from the Circuit Roll Mode pull-down menu.
- ◆ Choose **Dual** from the Circuit Roll Type Pull-down menu.

**Figure 6 Roll Attributes**



7. Click **Next**. Figure 7 appears.

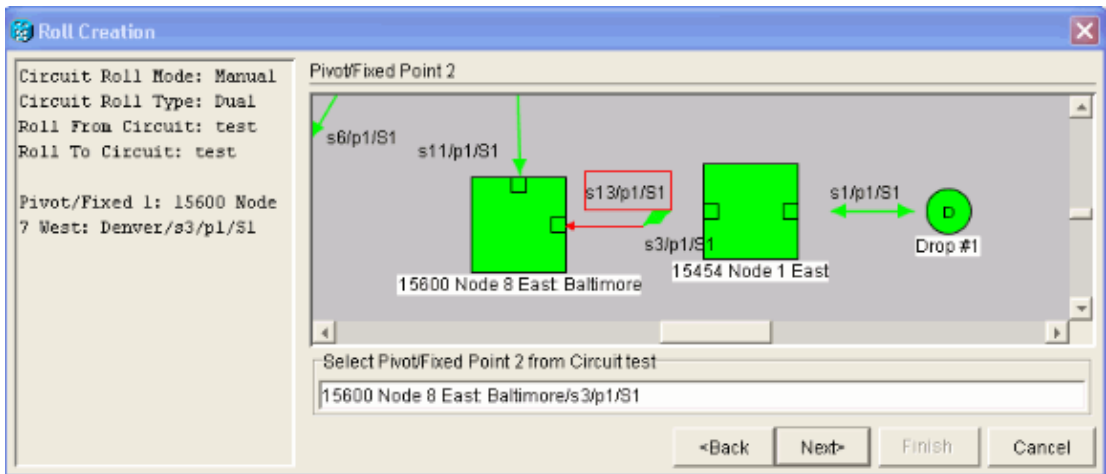
**Figure 7 Pivot/Fixed Point 1**



8. In the Pivot/Fixed Point 1 window, click the square (see the red arrow in Figure 7) that represents the port on 15600 Node 7 West (Slot 3, Port 1, STS 1) which connects 15454 West to ONS 15600.

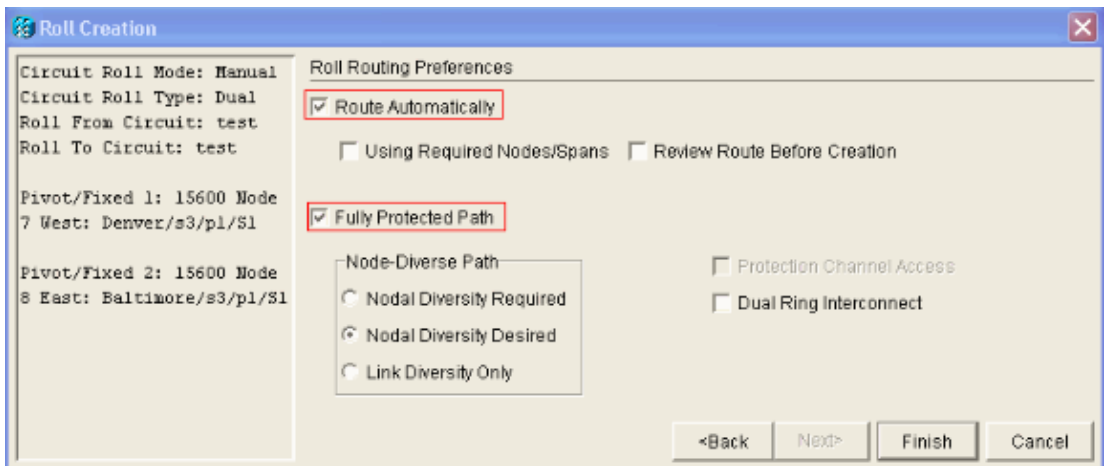
9. Click **Next**. Figure 8 appears.

**Figure 8 Pivot/Fixed Point 2**



10. In the Pivot/Fixed Point 2 window, click the square (see the red arrow in Figure 8) that represents the port on 15600 Node 8 East (Slot 13, Port 1, STS 1) which connects 15454 East to ONS 15600.
11. Click **Next**. Figure 9 appears.

**Figure 9 Roll Routing Preferences**



12. Check **Route Automatically** and **Full Protected Path**.
13. Click **Finish**.
14. Click the Roll tab, Figure 10 appears.

**Figure 10 View the Rolls Tab**

Circuits	Roll From Circuit	Roll To Circuit	Roll State	Roll Valid Signal	Roll Mode	Roll Path	Roll From Path	Roll To Path
Rolls	test	test	ROLL_PENDING	true	Manual	15600 Node 7 West...	15600 Node 7 West...	15600 Node 7 West...
	test	test	ROLL_PENDING	true	Manual	15600 Node 8 East...	15600 Node 8 East...	15600 Node 8 East...

15. View the Roll Valid Signal status for the pending roll.
  - ◆ If the Roll Valid Signal status is true, a valid signal is found.
  - ◆ If the Roll Valid Signal status is false, a valid signal is not found. Wait until the signal is found.
16. Complete these steps for all rolls:

- a. Select the roll.
  - b. Click **Complete**.
17. After all the rolls are in the ROLL\_COMPLETED status (see Figure 11), click **Finish**.

**Figure 11 Rolls Tab – Roll Completed**

Alarms	Conditions	History	Circuits	Provisioning	Maintenance					
			Roll From Circuit	Roll To Circuit	Roll State	Roll Valid Signal	Roll Mode	Roll Path	Roll From Path	Roll To Path
Rolls	test	test	test	test	ROLL_COMPLETED	true	Manual	15600 Node 7 Wes...	15600 Node 7 Wes...	15600 Node 7 Wes...
	test	test	test	test	ROLL_COMPLETED	true	Manual	15600 Node 8 East...	15600 Node 8 East...	15600 Node 8 East...

Buttons: Complete, Finish, Cancel

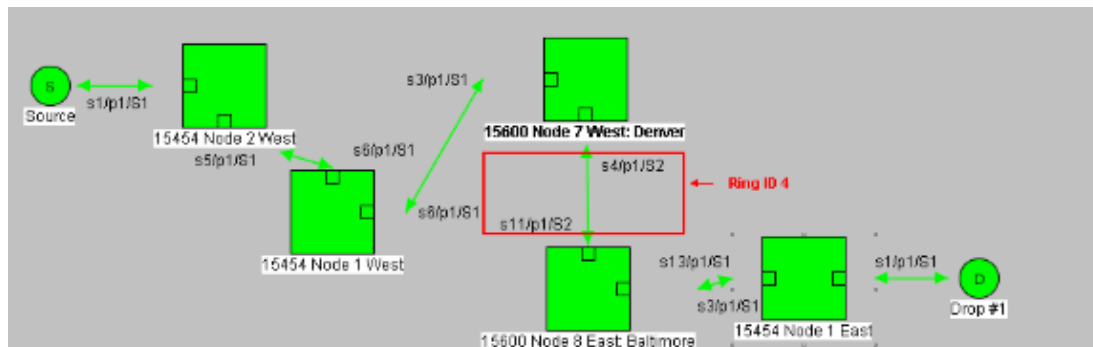
Scope: Network

18. The Roll State status is ROLL\_COMPLETED.
19. Click **Finish**.

After you perform the Roll and Bridge, the fiber router of this circuit follows (see Figure 12):

1. 15454 Node 2 West (Slot 1, Port 1, STS 1) connected with the DS3 BERT test set
2. West BLSR with Ring ID 1
3. 15600 BLSR with Ring ID 4
4. East BLSR with Ring ID 2
5. 15454 Node 1 East (Slot 1, Port 1, STS 1) with a loop installed

**Figure 12 Fiber Path of the Test Circuit**



## NetPro Discussion Forums – Featured Conversations

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Service Providers: Metro

## Related Information

- **ONS 15400 Series Product Support**
  - **ONS 15600 Series Product Support**
  - **Technical Support & Documentation – Cisco Systems**
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