

Configure the Channel Number and Line Direction Setting on an RXT

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Introduction

This document describes how to correctly set parameters for receiving transponders (RXT) cards.

Prerequisites

Requirements

Readers of this document should have knowledge of these topics:

- How to change and set IP addresses on a PC that runs Windows 2000, Windows–NT, Windows 98, or Windows 95.
- How to connect to an ONS1580x node with the help of the Cisco Photonics Toolkit (CPTK) configuration tool.

Components Used

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

- Cisco ONS15800 (revisions 1.4, 1.5, 1.6 and 2.0.0) and ONS15801 (revisions 1.2, 1.3, 1.4 and 2.0.0).
- A Windows PC.
- CPTK Version 1.6.3.

Ensure that you do not experience any problems from different RXT firmware revisions. You can check the firmware and software compatibility of the different components on the ONS 15800 and 15801 Software and Firmware Matrix.

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.

Related Products

You can perform the procedure in this document on a PC that runs Windows 2000, Windows–NT, Windows 98 or Windows 95.

Conventions

For more information on document conventions, refer to the Cisco Technical Tips Conventions.

Background Information

Line direction and channel number are two variables stored on each RXT card internal memory. When you install a new card in a new node, you need to configure these two parameters correctly.

Note: If you set these two parameters incorrectly, the optical functionality of the board is not affected. Only the monitor and management part of the card are impacted. The element management system (EMS) can collect or set wrong performance management (PM) or fault management (FM) values on a particular transponder if you set the channel number or line direction incorrectly.

This document can be used to configure these RXT cards models:

- RXT–10G–F
- RXT–10G–M
- RXT–622–N
- RXT–DM–F
- RXT–DM–M
- RXT–DMLH–M

Before you apply any command on a particular RXT, try to have a clear plan that describes how to associate the RXT cards installed in a particular slot to the Dense Wavelength Division Multiplexing (DWDM) channel that passes throughout it. You can physically determine the association between DWDM channels and RXT cards based on how the cards are patched to the ONS1580x DWDM demultiplexer. The configuration of the RXT board must reflect the physical patch applied in the system. Although there are no constraints on the slot position for RXT cards, it is a common rule (as suggested in the Installation, Setup and Test manual) to maintain the same slot position adopted for wavelength channel module (WCM) transmit transponder cards.

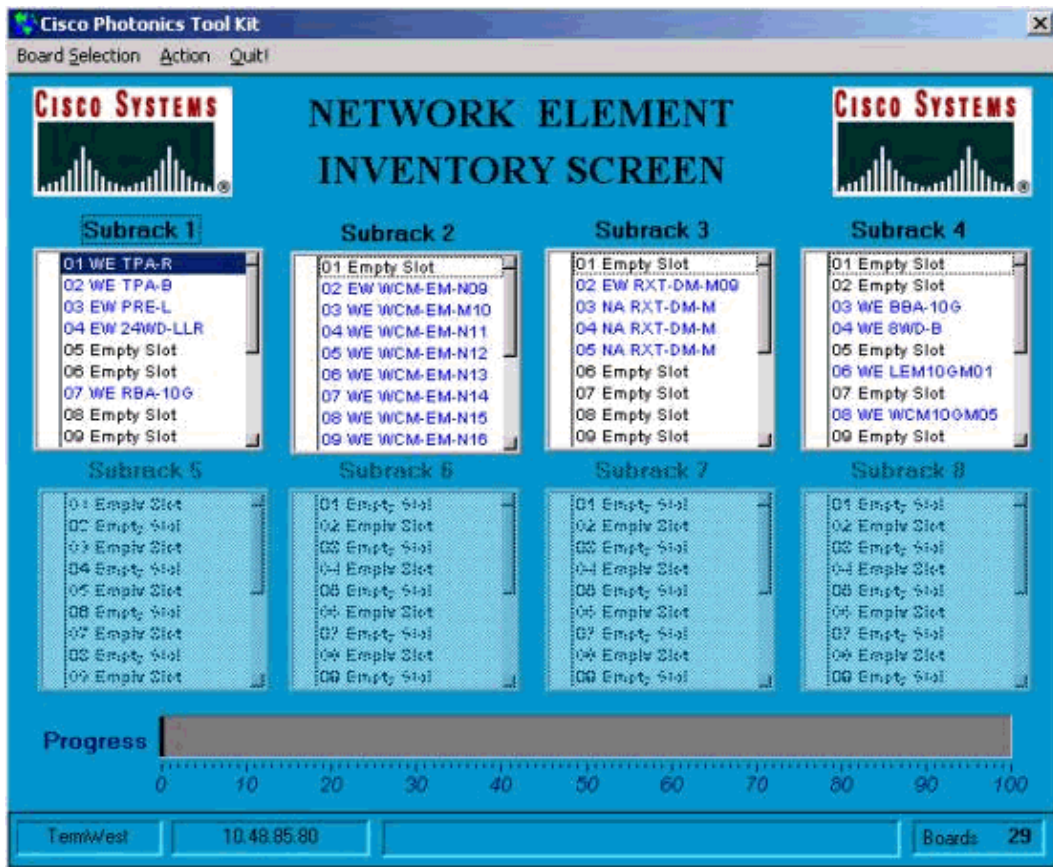
Configure the Channel Number and Line Direction

This section guides you through a simple configuration of RXT cards with the help of the CPTK software tool.

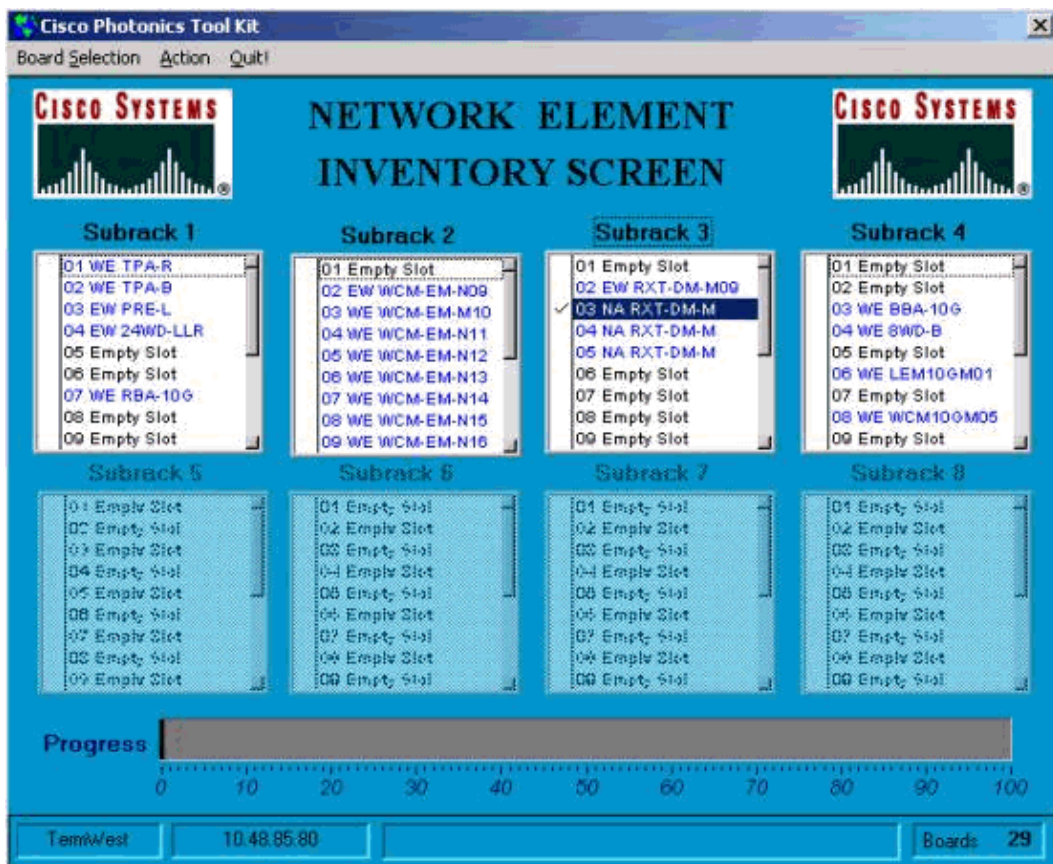
Step–by–Step Instructions

Complete these steps:

1. Connect CPTK to the ONS1580x network element (NE) in which the RXT card you want to configure is installed. The CPTK main window must display the full NE inventory:



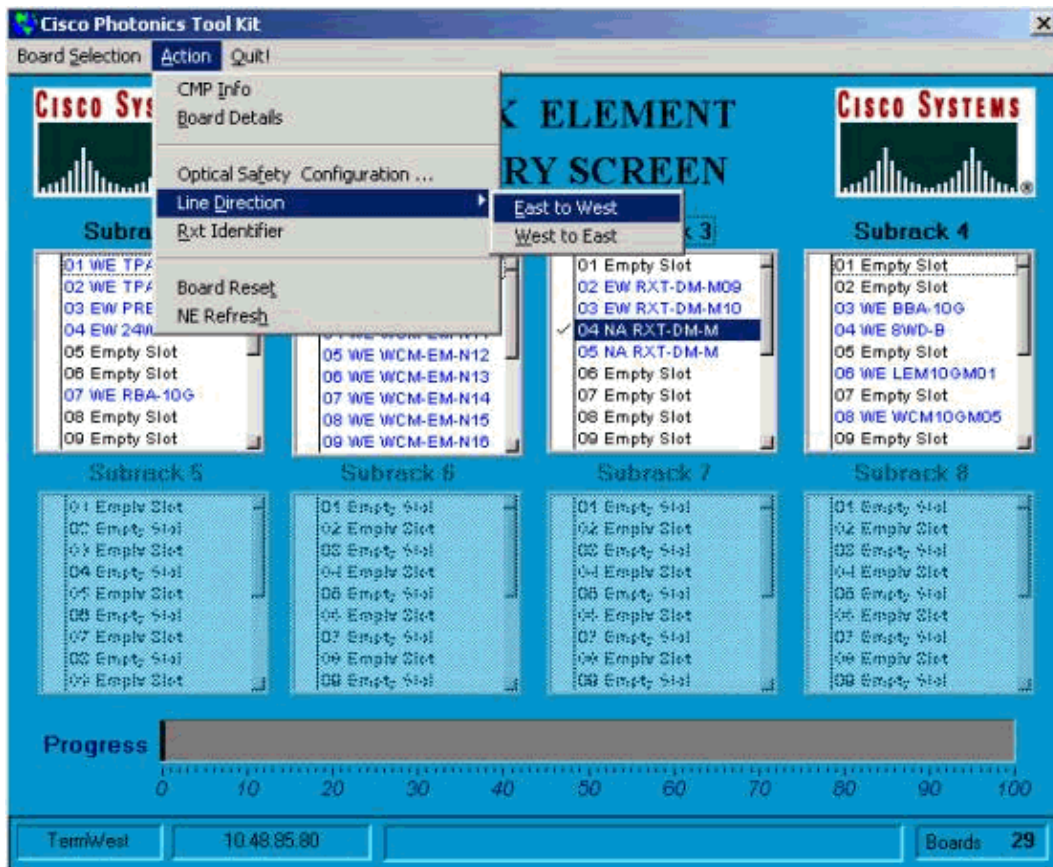
2. Click the RXT card you want to configure. A check sign appears on the left of the selected card, as shown here:



3. From the **Action** menu, select **Line Direction**, and then select **East to West** or **West to East** based on the NE type and setting. This table helps you to determine the right line direction setting for the RXT:

NE Type	RXT Line Direction
Terminal site WEST	East to West
Terminal site EAST	West to East
LEM site West facing side	East to West
LEM site East facing side	West to East
OADM site West facing side	East to West
LEM site East facing side	West to East

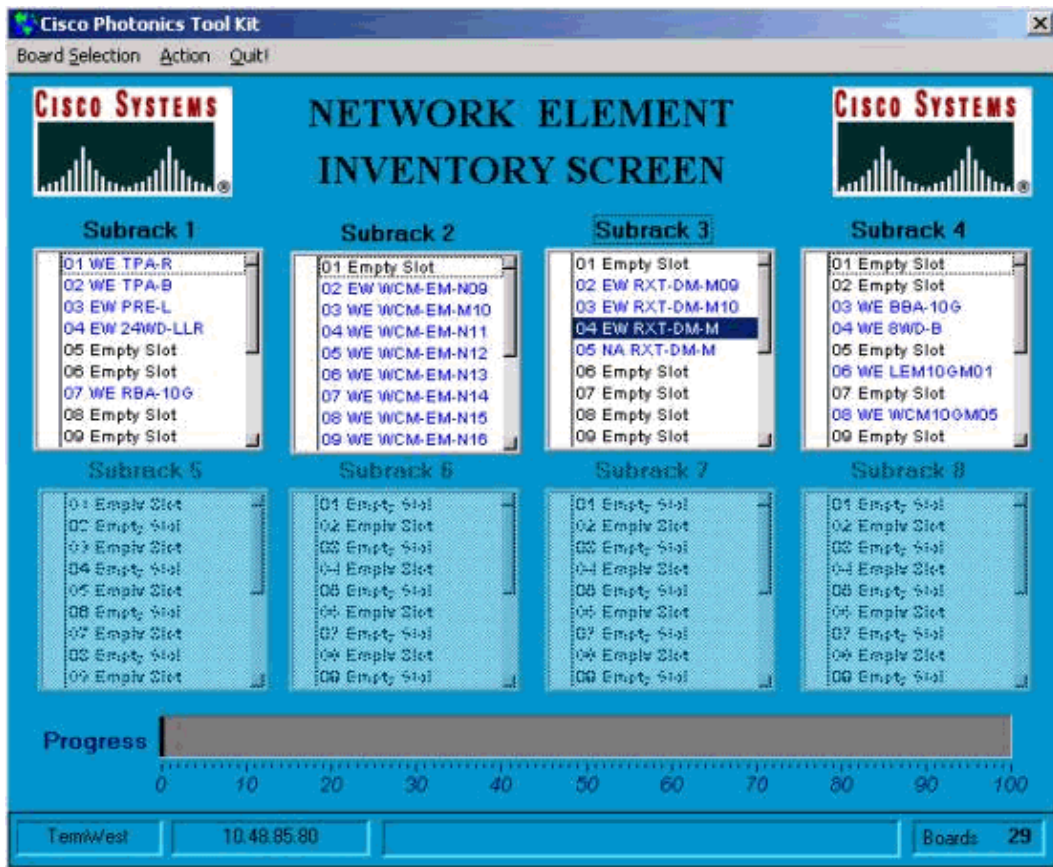
West or East facing refers to the outgoing signal. In order to double check the correct line direction chosen for the RXT, look at the RXT line direction of the PRE-L from which it gets the signal. This must be identical.



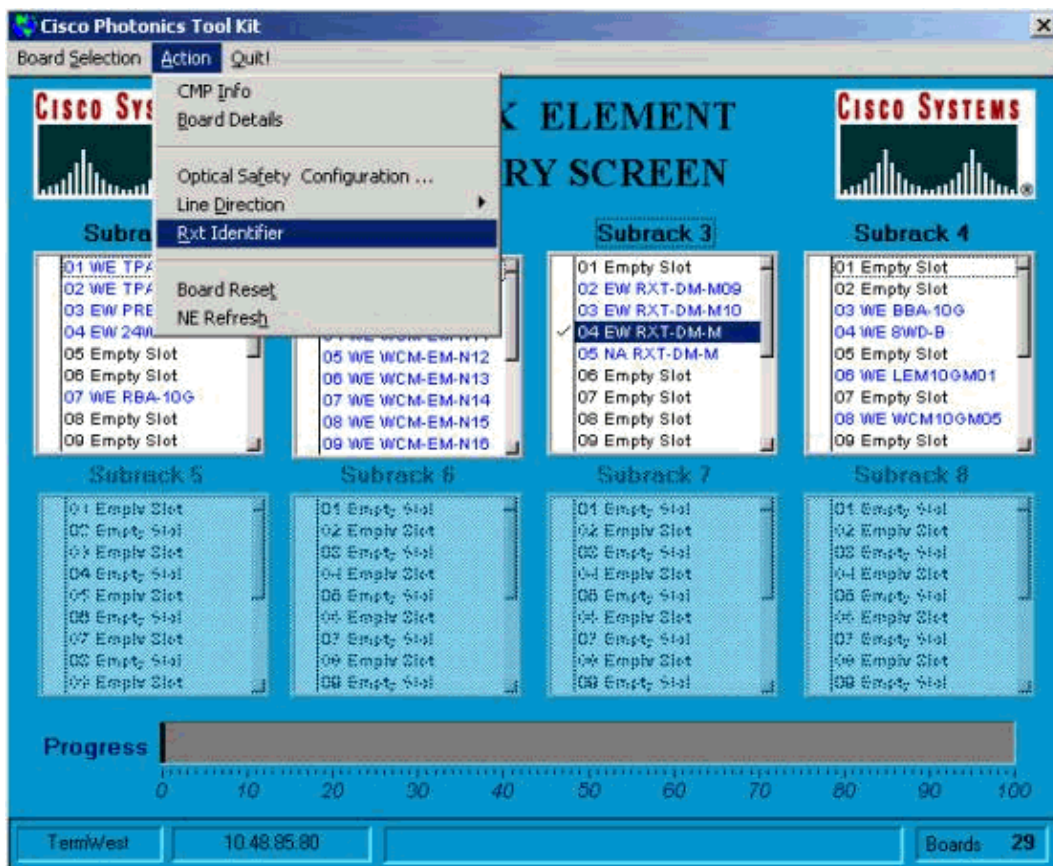
- If you have applied the line direction setting to the RXT card successfully, the Success pop-up dialog box is displayed:



- The main CPTK window then displays the RXT card with the correct line direction:



6. Select the RXT card for the channel number configuration. Select the **RXT Identifier** option from the **Action** menu:



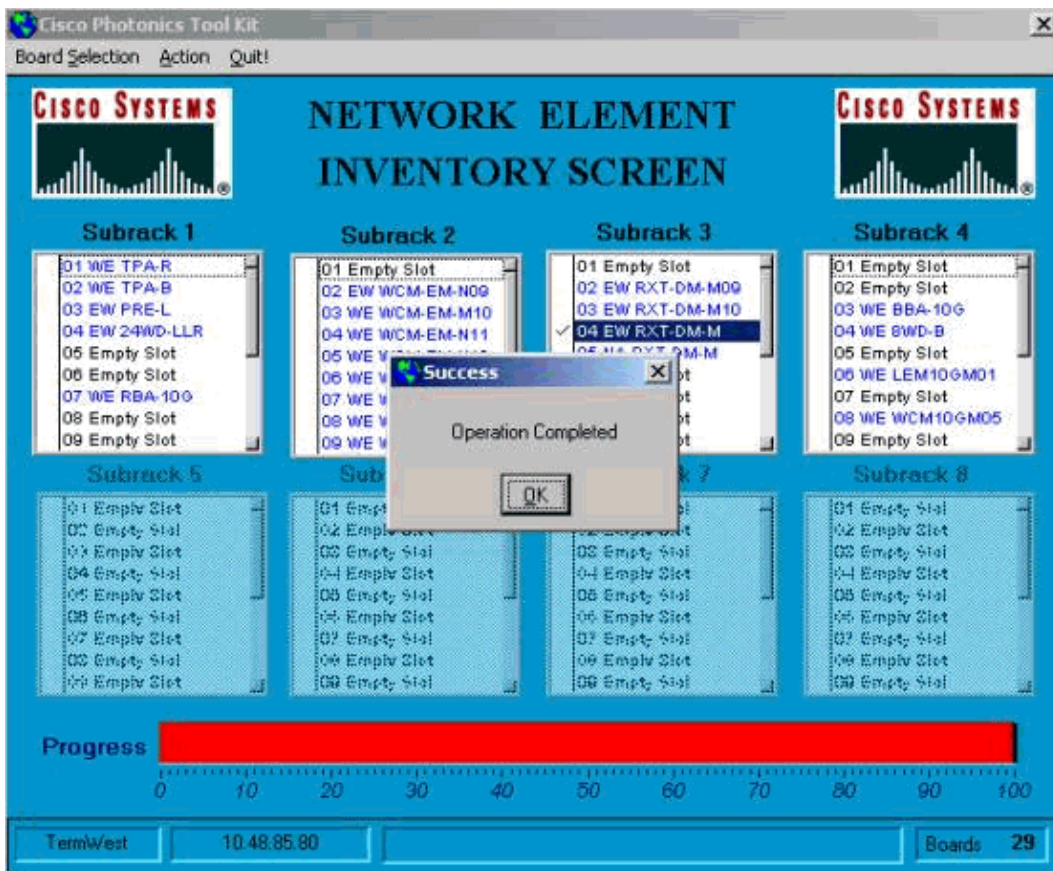
A pop-up dialog box is displayed:



7. Select the channel number to set on the RXT card. To do so, either use the mouse to scroll, or manually insert the number in the RXT-DM-M field. Click **OK**:



8. Wait until the progress gauge arrives at 100 percent, and the Success pop-up dialog box is displayed. Then click **OK**:

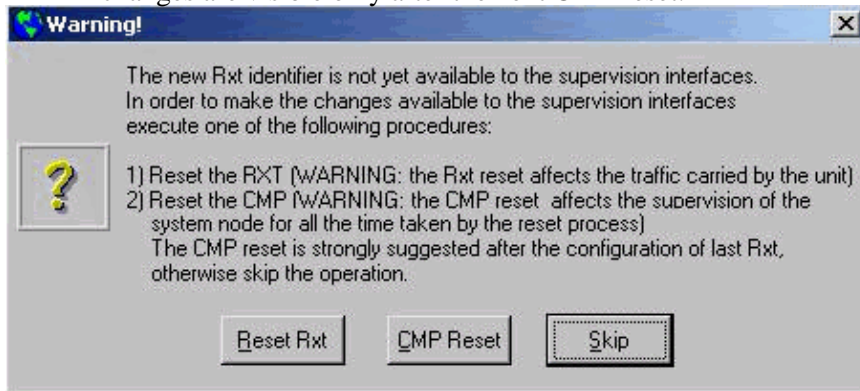


9. A warning window is displayed, which prompts you to choose the method to commit the changes on the RXT cards. There are three possibilities:

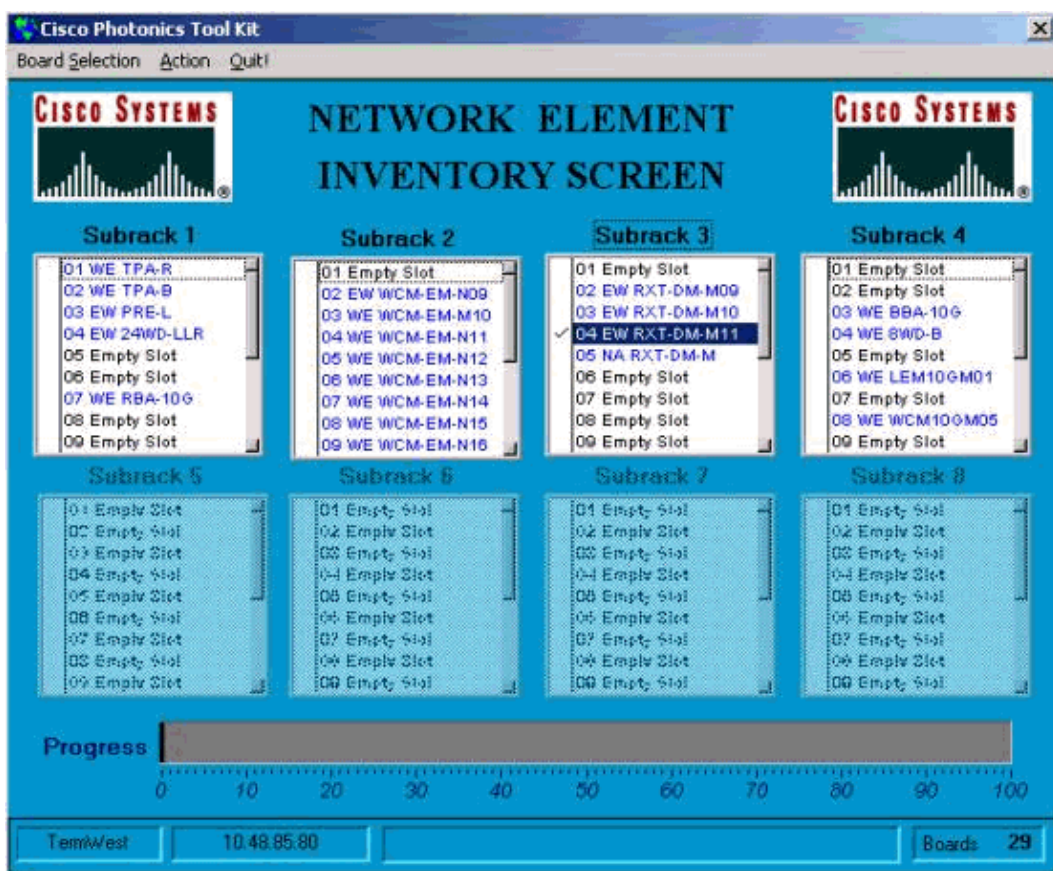
- ◆ **Reset the RXT** This option affects the traffic carried by the unit. Select this option if the channel is not in service yet (for example, at the time of installation).
- ◆ **Reset the CMP card** This option affects the supervision (CPLT and CTM) on the system node for the time that the reset process takes. Select this option if the channel is already in service and carries traffic. If you need to configure more than one RXT or other card simultaneously in the same node, perform a CMP reset at the end of all the operations to

minimize supervision interruption.

- ◆ **Skip** If you select this option, no changes are actually committed to the RXT card. The changes are visible only after the next CMP reset.



10. After either an RXT or CMP reset, the channel number is displayed at the end of the RXT module name as shown here:



Verify

This section provides information you can use to confirm your configuration is working properly.

Verify the RXT Line Direction and Channel Number

Use the Cisco Photonics Tool Kit screen shot for reference. If you have configured the RXT correctly, the correct line direction setting is displayed on the left of the module name:

- EW means East to West.
- WE means West to East.

An NA label is displayed if the card does not have any line direction associated with it. The channel number appears at the end of the module name.

Troubleshoot

Troubleshoot the RXT Configuration

To verify the configuration for a particular RXT, refer to the standard layouts of ONS1580x system. However, this does not guarantee 100 percent that the entire standard layout is respected at the time of the installation phase. It is preferable to do an on-site check of all the patching between the DWDM system demultiplexer and the RXT cards, in case there are problems with signal flow and channel assignment.

Related Information

- [Cisco ONS 15800 and 15801 Product Support](#)
- [Long Haul/Extended Long Haul Networking Solutions](#)
- [Cisco ONS 15800/ONS 15801 FAQs](#)
- [Technical Support & Documentation – Cisco Systems](#)

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