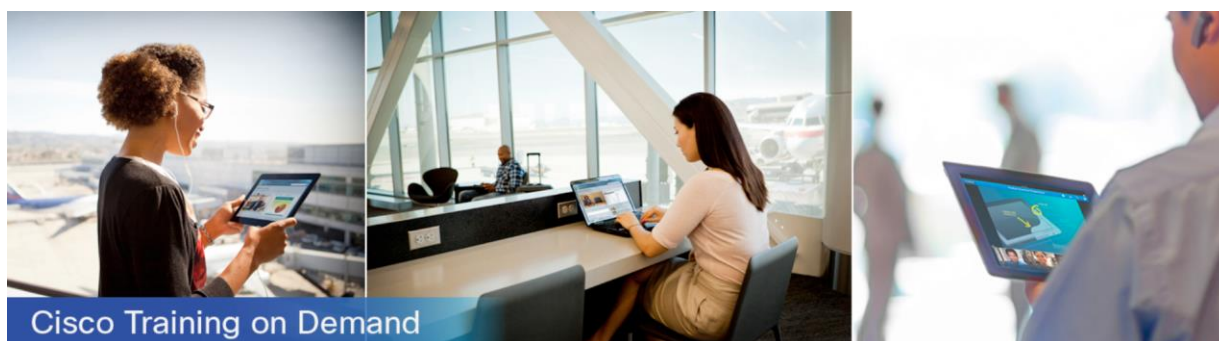


Learning@Cisco

Cisco Optical Technology Intermediate (OPT200) v2.0



Overview

The Cisco Optical Technology Intermediate (OPT200) version 2.0 Cisco® Training on Demand course provides you with the skills necessary to deploy Cisco Optical Networking System (ONS) 15454 Multiservice Transport Platform (MSTP) and Cisco Network Convergence System (NCS) 2000 Series Dense Wavelength-Division Multiplexing (DWDM) networks from installation to protection. This course covers installation, configuration, circuit protection, maintenance, and basic troubleshooting using the Cisco Transport Controller for the Cisco ONS 15454 M6 and M12 shelves and the Cisco NCS 2015 shelf.

You review DWDM terminology and components, explore the available chassis and cards, and discuss hardware installation. You also learn how to use the Cisco Transport Controller server software to connect to the nodes, perform network turn-up and circuit creation, deploy linear and Single-Module ROADM (SMR) DWDM multishelf topologies, configure Raman amplifiers and Any Rate cards, and configure protected and unprotected circuits. The course covers a variety of card options: controllers, transponders, multiplexer-demultiplexer, add/drop, Raman amplifiers, and Cisco Any Rate muxponder cards. In addition, you learn about the various cards to configure terminal, amplifier, mesh, split, Optical Service Channel (OSC) regenerator, and Reconfigurable Optical Add/Drop Multiplexer (ROADM) nodes. Finally, you learn how to use many of the tools and features available with the Cisco Transport Controller to perform maintenance, testing, and basic troubleshooting of an optical network.

Duration

The OPT200 Training on Demand course consists of 10 modules totaling more than 16 hours of video instruction, along with 11 hands-on lab exercises.

Target audience

The primary audience for this course is system installers, system integrators, and administrators, network administrators, and solutions designers.

Objectives

After completing this course, you should be able to:

- Identify platform chassis that use the Cisco ONS 15454 DWDM cards
- Identify the main categories of DWDM cards
- Use the Cisco Transport Controller to connect to an ONS 15454 MSTP or NCS 2000 Series chassis and navigate within the GUI
- Provision DWDM circuits by using the Cisco Transport Controller
- Identify node configurations according to card population
- Perform Raman amplifier initialization
- Configure Any Rate cards
- Configure circuit protection options
- Perform basic DWDM troubleshooting using the Cisco Transport Controller

Course prerequisites

The knowledge and skills necessary before attending this course are:

- Completion of Cisco Fundamentals of Fiber Optics Technology (FFOT)
- We also recommend that students have basic knowledge of optical transport and protocols and data network principles

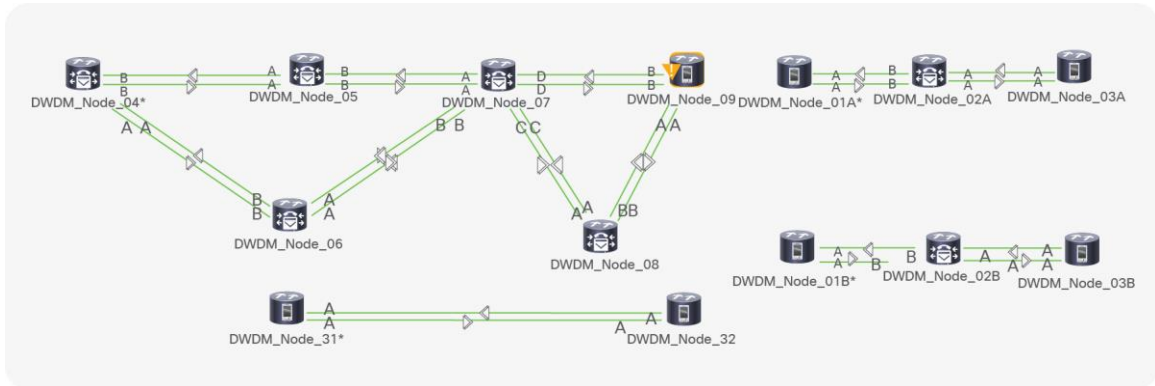
Course outline

- Module 1: DWDM Optical Platform Foundation
- Module 2: Chassis and Cards
- Module 3: Hardware Installation
- Module 4: Node Turn-Up and Circuit Creation
- Module 5: Node and Multishelf Configurations
- Module 6: SMR-Based Rings
- Module 7: 10Gb Circuit Protection
- Module 8: Any Rate Card Configuration
- Module 9: Raman Amplifiers
- Module 10: Maintenance and Basic Troubleshooting

Lab outline

This course contains 11 hands-on lab exercises.

Representative topology for all labs in the course:



The labs included in this course are:

- OPT200_2-0 Lab 1: System Setup and Login
- OPT200_2-0 Lab 2: Node Turn-Up
- OPT200_2-0 Lab 3: Creating Direct Circuits (OCHNC)
- OPT200_2-0 Lab 4: Creating Transponder Optical Client Circuits (OCHCC)
- OPT200_2-0 Lab 5: Configuring an Amplified SMR Ring with Direct Circuits
- OPT200_2-0 Lab 6: Installing 10Gb Transponder Cards with Y-Cable Protection
- OPT200_2-0 Lab 7: Configuring PSM and OUT-2 10Gb Protection
- OPT200_2-0 Lab 8: Configuring Any Rate Cards
- OPT200_2-0 Lab 9: Configuring a Linear Topology with Raman Amplifiers
- OPT200_2-0 Lab 10: Maintenance and Performance Monitoring
- OPT200_2-0 Lab 11: MSTP Troubleshooting

Instructor bio

Brent Bergin is an engineer and an instructor with nearly 20 years of teaching experience. Brent has been teaching Cisco technologies for more than 15 years. He specializes in a wide variety of Cisco optical technologies.

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