Cisco Optical Technology Intermediate Level

Duration: 4 Days **Course Code: OPT200**

Overview:

The Cisco Optical Technology Intermediate (OPT200) training course1 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 will review DWDM terminology and components, explore the available chassis and cards, and discuss hardware installation. You will learn 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. You will use the various cards to configure terminal, amplifier, mesh, split, Optical Service Channel (OSC) regenerator, and Reconfigurable Optical Add/Drop Multiplexer (ROADM) nodes. Finally, you will 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.

When you attend the training virtual, than the duration of the training is 5 days.

Target Audience:

This course is for technical professionals who are responsible for installation, deployment and maintenance of the Cisco ONS 15454 MSTP and Cisco NCS 2000 Series networks. Network operations personnel, planners and designers can also benefit.

Objectives:

- **After completing this course, you should be able to:**
- Connect to a Cisco ONS 15454 MSTP chassis using Cisco Transport Controller
- Identify node configurations according to card population
- Provision DWDM circuits using the Cisco Transport Controller
- Conduct performance monitoring, alarm verification, and fault isolation
- Provision M12 WSS in linear and M6 SMR nodes in ring topologies
- Understand configuration options for the Any Rate muxponder and crossponder
- Perform Raman amplifier initialization
- Isolate optical network issues

Prerequisites:

Completion of Cisco Fundamentals of Fiber Optics Technology (FFOT)

It is also recommended that you have the following knowledge and skills:

- Basic knowledge of optical transport and protocols
- Basic knowledge of data network principles

Content:

Course

- Module 1: DWDM Optical Platform Review
- Module 2: Shelf and Card Installation
- Module 3: Fiber Jumper Installation
- Module 4: Linear Configurations
- Module 5: Node Turnup
- Module 6: Optical Channel Network Connection Circuits
- Module 7: Transponder and Optical Channel Client Connection Circuits
- Module 8: Multishelf
- Module 9: MSTP M6 SMR-Based Rings
- Module 10: 10-Gigabit Muxponder and Transponder Cards
- Module 11: 10-Gigabit with Y-Cable Protection
- Module 12: Alternative 10-Gigabit Protection
- Module 13: Any Rate Muxponder and Crossponder
- Module 14: Raman Amplifier
- Module 15: 40- and 100-Gigabit Transponder and Muxponder
- Module 16: Basic Troubleshooting

Lab Outline

- Lab 1: System Setup and Login
- Lab 2: Node Turnup
- Lab 3: Creating Direct Circuits (OCHNC)
- Lab 4: Creating Transponder Optical Client Circuits (OCHCC)
- Lab 5: Configuring an Amplified SMR Ring
- Lab 6: Configuring Direct Circuits in an SMR Ring/Mesh
- Lab 7: Installing 10-Gbps Transponder Cards with Y-Cable Protection
- Lab 8: Alternate 10-Gigabit Protection (OTU-2 and PSM)
- Lab 9: Any Rate Muxponder and Crossponder Options
- Lab 10: Raman Amplifier
- Lab 11: MSTP Troubleshooting

Further Information:

For More information, or to book your course, please call us on 0800/84.009

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