Cisco Optical Technology Intermediate

Duration: 5 Days **Course Code: OPT200** **Version: 3.0** **Delivery Method: Company Event**

Overview:

The Cisco Optical Technology Intermediate (OPT200) training course teaches the skills necessary to deploy Cisco Optical Networking System (ONS) 15454 Multiservice Transport Platform (MSTP)and Cisco Network Convergence System (NCS) 2000 Series networks from installation to protection.

The **Cisco Optical Technology Intermediate (OPT200) v3.0** course is designed to teach you the skills necessary to deploy the 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. Through a combination of lecture and hands-on experience, you will learn installation, configuration, circuit protection, maintenance, and basic troubleshooting using the Cisco Transport Controller for the Cisco ONS 15454 M6 and M12 shelves, and for the Cisco NCS 2016 shelf.

Additionally, in this course you will review DWDM terminology and components, explore 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, and deploy linear and single-module ROADM (SMR) DWDM multishelf topologies. Using this software, you will also 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 Multiplexing (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 your optical network.

Target Audience:

This course is aimed at System engineers, Technical support personnel, Channel partners and resellers

Objectives:

- **This course will help you:**
- Deploy, maintain, test, and troubleshoot your optical network
- Explain Cisco DWDM platform basics, DWDM network topologies, and the Cisco DWDM network management software
- Expand and deepen your knowledge of optical networks and their maintenance
- Identify the uses of the Cisco Transport Controller
- Describe and utilize various optical network technologies
- **After taking this course, you should be able to:**
- Describe Cisco DWDM platform basics
- Describe DWDM network topologies
- Describe the management software used for managing Cisco DWDM networks
- List the different hardware components of the Cisco ONS and Cisco NCS DWDM systems
- Provision nodes and circuits in a Cisco DWDM network
- Perform node and multishelf configurations
- Implement SMR-based rings
- Provision optical circuit protection mechanisms
- Configure Any Rate cards
- Describe the function of Raman amplifiers
- Perform basic maintenance and troubleshooting of a Cisco DWDM network

Prerequisites:

Before taking this course, you should have:

- Basic knowledge of optical transport and protocols
- Familiarity with data networking principles

This Cisco recommended course may help you meet these prerequisites:

- Understanding Cisco Service Provider Network Fundamentals (SPFNDU)
- SPFNDU - Understanding Cisco Service Provider Network Foundations

Content:

Course

- DWDM Optical Platform Foundation
- Chassis and Cards
- Hardware Installation
- Node Turn-Up and Circuit Creation
- Node and Multishelf Configurations
- SMR-Based Rings
- 10Gb Circuit Protection
- Any Rate Card Configuration
- Raman Amplifiers
- Maintenance and Basic Troubleshooting

Lab outline

- System Setup and Login
- Node Turn-Up
- Creating Direct Circuits (Optical Channel Network Connection [OCHNC])
- Creating Transponder Optical Client Circuits (Optical Channel Client Connection [OCHCC])
- Configuring an Amplified SMR Ring with Direct Circuits
- Installing 10Gb Transponder Cards with Y-Cable Protection
- Configuring Protection Switch Module (PSM) and Optical Transport Unit-2 (OTU-2) 10Gb Protection
- Configuring Any Rate Cards
- Configuring a Linear Topology with Raman Amplifiers
- Maintenance and Performance Monitoring
- MSTP Troubleshooting

Further Information:

For More information, or to book your course, please call us on Head Office 01189 123456 / Northern Office 0113 242 5931

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