

Cisco NCS 2000 Deploying 96-Channel Flex Spectrum (OPT201) v3.0

What you'll learn in this course

The Cisco NCS2000 Deploying 96-Channel Flex Spectrum (OPT201) v3.0 course shows you how to plan, configure, and control optical networks using the Cisco® Network Convergence System (NCS) 2000 series Flex Spectrum platform.

The course teaches you how to design Flex Spectrum networks with multi-degree Reconfigurable Optical Add-Drop Multiplexer (ROADM) multi-shelf nodes using the Cisco Transport Planner (CTP) software.

You'll learn how to:

- Install the Cisco NCS 2000 series hardware
- Configure an optical network and circuits using the Cisco Transport Controller (CTC) software
- Learn which components and configurations take advantage of and/or are required for the Flex Spectrum 96-channel feature
- Configure optical networks with multidegree ROADM multishelf nodes
- Configure optical networks with colorless, contentionless, omnidirectional, and MPO cross-connect advanced features
- Describe and configure the NCS 2000 400-Gbps Xponder line card

Course duration

- Instructor-led training: 3 days in the classroom with hands-on lab practice
- Virtual instructor-led training: 4 days web-based classes with hands-on lab practice

How you'll benefit

This course will help you:

- Gain an in-depth understanding of how to install, deploy, and maintain a Cisco Optical Networking Services (ONS) 15454 Multiple Spanning Tree Protocol (MSTP) network
- Practice what you learn through hands-on labs

Who should enroll

This course is designed for technical professionals who need to know how to deploy a Cisco NCS 2000 Series Dense Wavelength-Division Multiplexing (DWDM) network with Flex Spectrum.

The primary audience for this course includes:

- Designers
- Systems engineers and implementation staff
- Network operations center personnel
- Technical support personnel who are involved with the deployment, operations, and maintenance of the Cisco NCS 2000 Series
- Channel partners and resellers

How to enroll

- [Classroom Training](#)
- [Cisco Platinum Learning Library](#)
- [Private Group Training](#)

Technology areas

- Optical
- Routing and switching

Course details

Objectives

After taking this course, you should be able to:

- Describe the hardware and components required and used with the Flex Spectrum feature
- Design optical networks in the Cisco Transport Planner software
- Install the hardware, including multishelf nodes
- Perform node turn-up and create circuits using the Cisco Transport Controller software
- Configure optical networks with multidegree ROADM multishelf nodes
- Configure optical networks with colorless, contentionless, omnidirectional, and MPO cross-connect advanced features
- Describe and configure the NCS 2000 400-Gbps Xponder line card
- Add a node to an existing DWDM ring
- Describe the NCS 2000 Troubleshooting Guide
- Use the features and documentation with Transport Controller to perform maintenance, testing, and basic troubleshooting

Prerequisites

To fully benefit from this course, you should first complete the [Cisco Fundamentals of Fiber Optics Technology \(FFOT\)](#) video training course, or have an equivalent level of knowledge and skills.

Outline

- DWDM and Flex Spectrum Foundation
- NCS 2000 Chassis and Cards
- Design ROADM Networks with CTP
- Hardware Installation and Multishelf
- Node Turn-Up and Circuit Creation
- Advanced Feature Networks and Circuits
- Testing, Maintenance, and Basic Troubleshooting
- Spectrum Switched Optical Network

Lab outline

- Cisco Transport Controller
- Cisco Transport Planner
- Adding a Node to Existing DWDM Ring Network
- Optical Channel Network Connection (OCHNC) Circuits
- Optical Channel Client Connection (OCHCC) Circuits
- Colorless Ports and Circuits
- Contentionless Circuits
- Connection Verification
- Performing the Optical Time Domain Reflectometer (OTDR) Test
- Maintenance and Performance Monitoring
- MSTP Troubleshooting
- Configuring the 400XP card




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