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## Cisco NCS 2000 Series Deploying 96-Channel

**Duration: 3 Days    Course Code: OPT201**

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### Overview:

The Cisco NCS 2000 Deploying 96 Channel FlexSpectrum Release 10.5 Version 1 is an Instructor-led course offered by Cisco Learning Services. It covers the Cisco Network Convergence System (NCS) 2000 Series with FlexSpectrum system.

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### Target Audience:

This course is designed for technical professionals who need to know how to deploy a Cisco NCS 2000 Series DWDM network with FlexSpectrum.

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### Objectives:

- **After completing this course, you should be able to:**
  - Describe the route and select principle
  - Successfully run the Cisco Transport provisioning tool and design simple FlexSpectrum networks
  - Connect to and set up a FlexSpectrum node using the Cisco Transport Planner tool outputCreate simple DWDM circuits that traverse the FlexSpectrum network and trace the power from beginning to end
  - Configure the 10 x 10 card for five individual transponders and appropriate G.709 options
  - Understand and install the provisionable patch cord (PPC) association between transponder ports and theDWDM MUX and DMX ports, and install optical channel client connections
  - Describe the major features of the Cisco NCS2000 EDFA17/24 and EDRA17/24 amplifiers
  - Understand the difference between colored ports, colorless ports, and colorless applications
  - Install 40 Gigabit Ethernet transponder circuits on colorless ports and change the wavelength without the need to move fiber jumpers
  - Understand the concept of omnidirectional add-drop and the contentionless feature
  - Create 100 Gigabit Ethernet circuit into a node on a wavelength that already exists on the omnidirectional add-drop section
  - Install the cross-connect options for nodes with up to 12 sides, including colorless and omnidirectional and contentionless add-drop
  - Conduct maintenance and performance-monitoring tasks
  - Troubleshoot the 96-channel FlexSpectrum system
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### Prerequisites:

The prerequisite for this course is the Cisco Fundamentals of Fiber Optics Technology (FFOT) video training.

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## Content:

### Course Outline

- Module 1: NCS 2000 FlexSpectrum Product Fundamentals
- Module 2: Shelf Layout and Software
- Module 3: Documentation
- Module 4: Cisco Transport Controller
- Module 5: Cisco Transport Planner
- Module 6: Shelf and Card Installation
- Module 7: MultiShelf Fundamentals
- Module 8: Node Turn-Up
- Module 9: Ring Network
- Module 10: Optical Channel Network Connection
- Module 11: 10 x 10 card and 10G Muxponders and Transponder
- Module 12: Optical Channel Client Connection
- Module 13: 40, 100, and 200 Gigabit Ethernet Transponders and Muxponders
- Module 14: Two-Degree ROADM
- Module 15: Colorless and Contentionless Add/Drop
- Module 16: Mesh Network and MPO Cross-Connects for Complex Nodes
- Module 17: Omnidirectional, Colorless, and Contentionless Add/Drop for Complex Nodes
- Module 18: Maintenance and Performance Monitoring
- Module 19: NCS 2000 Troubleshooting

### Lab Outline

- Lab 1: Start the Cisco Transport Controller software and access the NCS shelves
- Lab 2: Configure the Cisco Transport Planner and create FlexSpectrum networks
- Lab 3: Setup the three-node FlexSpectrum network
- Lab 4: Install optical-channel network circuits and inspect power levels
- Lab 5: Optical Channel Client Connections
- Lab 6: Install 40 Gigabit Ethernet transponders on colorless ports and change the wavelength
- Lab 7: Install circuits into omnidirectional contentionless add/drop
- Lab 8: Explore maintenance and performance monitoring capabilities
- Lab 9: Troubleshooting FlexSpectrum

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## Further Information:

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

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