Implementing the Cisco NCS540 Series Routers (NCS540HWE)

Category: Networking & Security | **Vendor:** Cisco

Duration: 40.00 hours (5 days) **32.5 CPD Hours** **Rating:** ⭐ 4.6 (5,878 reviews)

Course Information

Delivery Format: Instructor Led - Online

Course Overview

Implementing the Cisco NCS540 Series Routers training is designed for network professionals to learn how to deploy Cisco NCS 540 Series routers in their network environment. Topics covered include understanding the features and functions of the Cisco NCS 540 Series platforms, system architecture, services implementation, Quality of Service (QoS), and system security, along with the utilization of model-driven telemetry and programmability.

About This Course

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Who Should Attend

- System Engineers
- Network Engineers
- Field Engineers
- Technical Support Personnel
- Channel partners, resellers

Prerequisites & Entry Requirements

General Prerequisites:

Before taking this offering, you should have:

- Knowledge of core Cisco networking technologies
- Understanding of implementing and operating Cisco networking solutions
- Recognition of general networking concepts and protocols
- Basic knowledge of router installation and some experience with installation tools
- Routing protocol configuration experience with Border Gateway Protocol (BGP), Intermediate System-to- Intermediate System (IS-IS), and Open Shortest Path First (OSPF)
- Knowledge of Layer 2 IEEE switching and related protocols
- Strong knowledge of MPLS configurations
- Experience troubleshooting Cisco routers in a large network environment

Learning Outcomes

Upon successful completion of this course, participants will be able to:

- Classify the Cisco NCS 540 platform hardware and understand the variations between large, medium, small, and fronthaul form factors, their features, use cases, and positioning.
- Describe the hardware architecture of the NCS 540 Series and the components necessary for packet queuing and forwarding, understand the life of a packet on ingress and egress traffic.
- Explain the system architecture for traffic queuing, scheduling, and forwarding to introduce concepts of Cisco IOS XR modular QoS on the NCS 540 platform.
- Describe the methods and protocols for establishing timing and synchronization on Cisco IOS XR router platforms.
- Describe the Cisco NCS 540 Fronthaul router family and its features and how they can be used to make mobile network architecture simpler.
- Describe Cisco IOS XR Software architecture, its programmable features, and how to install software packages.
- Implement model-driven telemetry for enhanced network visibility and management.
- Recognize, implement, and manage system security features within Cisco IOS XR Software systems, ensuring the protection of network infrastructure and data.
- Describe the main factors leading to the development and deployment of segment routing, types of segments that are used in segment routing, Segment Routing Global Block (SRGB), and configure and verify IS-IS and OSPF segment routing operations.
- Demonstrate how segment routing works and how it protects links and nodes while explaining the basic loop avoidance, segment-routing traffic-engineering (SR-TE), and traffic engineering components used in segment routing.
- Implement and configure advanced segment routing for traffic engineering (SR-TE) features.
- Describe the components and functionality of Layer 3 Multiprotocol Label Switching (MPLS) VPNs implementation in Cisco IOS XR Software deployments.
- Identify the routing protocol and LDP information necessary for Layer 3 MPLS VPN troubleshooting.
- Implement Layer 2 VPN operations in a service provider environment.
- Explain how EVPN gets around the problems that regular Layer 2 VPNs have, what the model for EVPN delivery is, and how to implement and troubleshoot EVPN solutions.

Detailed Course Outline

- Section 1: Cisco NCS 540 Series Hardware Overview
- Section 2: Cisco NCS 540 System Architecture
- Section 3: Cisco NCS 540 QoS Architecture
- Section 4: Timing and Synchronization
- Section 5: Cisco NCS 540 xHaul Design
- Section 6: Cisco IOS XR Software Fundamentals
- Section 7: Cisco IOS XR Software Installation and Upgrade
- Section 8: Cisco IOS XR Software System Security
- Section 9: Segment Routing Fundamentals
- Section 10: Segment Routing Topology-Independent Loop-Free Alternate
- Section 11: Segment Routing Traffic Engineering
- Section 12: Advanced Segment Routing Traffic Engineering Features
- Section 13: Segment Routing IPv6
- Section 14: Layer 3 MPLS VPN Implementation with Cisco IOS XR Software
- Section 15: Layer 2 VPNs and Ethernet Services Fundamentals
- Section 16: Cisco IOS XR Software EVPN Operation and Implementation
- Section 17: Cisco IOS XR Software Programmability
- Section 18: Model-Driven Telemetry

Skills You Will Learn:

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- Explain the system architecture for traffic queuing, scheduling, and forwarding to introduce concepts of Cisco IOS XR modular QoS on the NCS 540 platform.
- Describe the methods and protocols for establishing timing and synchronization on Cisco IOS XR router platforms.
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Frequently Asked Questions

Q: What delivery options are available for Implementing the Cisco NCS540 Series Routers (NCS540HWE)?

We offer multiple delivery formats:

- Live Instructor-Led Classroom Online (Virtual/Live Online)
- Traditional Instructor-Led Classroom Training (ILT)
- On-site delivery at your offices anywhere in United Kingdom
- Private dedicated courses customized for your team

Q: How many CPD hours does this course provide?

The 5-day Implementing the Cisco NCS540 Series Routers (NCS540HWE) course provides up to 32.5 CPD hours of structured learning. CPD certificates can be provided upon request.

Q: What is the duration of the Implementing the Cisco NCS540 Series Routers (NCS540HWE) training?

The training takes place over 5 day(s), with each day lasting approximately 40.00 hours including breaks for lunch and refreshments.

Q: Do you provide corporate training for Implementing the Cisco NCS540 Series Routers (NCS540HWE)?

Yes, we provide corporate training, dedicated training, and closed classes for Implementing the Cisco NCS540 Series Routers (NCS540HWE). Training can take place anywhere in United Kingdom including London, Manchester, Birmingham, Edinburgh, or live online allowing teams from across United Kingdom or internationally to attend.

Q: What related terms do people search for?

Popular related searches include: Implementing the Cisco NCS540 Series Routers, Cisco Service Provider, NCS540HWE

Q: Why choose Nexus Human for Implementing the Cisco NCS540 Series Routers (NCS540HWE)?

Nexus Human is recognized as one of the leading training providers. Our trainers have won multiple awards including:

- Small Firms Best Trainer Award
- National Training Partner of the Year (Ireland) - Multiple Years
- Global Top 30 Instructor Awards (2012, 2019, 2021)
- Tech Excellence Award Nominations
- Learning Performance Institute (LPI) External Training Provider Sponsor 2024

Q: Are there any discount codes available?

Yes! Use discount code **PENPAL5** when booking your Implementing the Cisco NCS540 Series Routers (NCS540HWE) training. Please note that only one discount code can be used per booking and cannot be combined with other special offers.

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