slslatam

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Designing Cisco Enterprise Networks (ENSLD) v2.0
Duration: 5 Days (40 hours)

Course Prerequisites

Before taking this offering, you should be familiar with the following:

- Understanding network fundamentals
- Implementing LANs
- Implementing LAN connectivity

Course Objectives

The **Designing Cisco Enterprise Networks (ENSLD)** training deepens your knowledge of designing enterprise networks. Topics covered include enterprise network design, including protocols and media for wired and wireless networks, SD-Access, VPN, Quality of Service (QoS), IPv6, and network programmability. This training earns you 40 Continuing Education (CE) credits towards recertification and helps prepare you to take the 300-420 Designing Cisco Enterprise Networks (ENSLD) exam, which is part of the CNP Enterprise, Cisco Certified Specialist - Enterprise Design certification.

This training will help you:

- Learn the skills, technologies, and best practices needed to design an enterprise network.
- Deepen your understanding of enterprise design including advanced addressing and routing solutions, advanced enterprise campus networks, WAN, security services, network services, and software-defined access SDA.
- Validate your knowledge and prepare to take the 300-420 Designing Cisco Enterprise Networks (ENSLD) exam.

After taking this course, you should be able to:

- Design Enhanced Interior Gateway Routing Protocol (EIGRP) internal routing for the enterprise network
- Design Open Shortest Path First (OSPF) internal routing for the enterprise network
- Design Intermediate System to Intermediate System (IS-IS) internal routing for the enterprise network

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- Design a network based on customer requirements
- Design Border Gateway Protocol (BGP) routing for the enterprise network
- Describe the different types and uses of Multiprotocol BGP (MP-BGP) address families
- Describe BGP load sharing
- Design a BGP network based on customer requirements
- Decide where the L2/L3 boundary will be in your Campus network and make design decisions
- Describe Layer 2 design considerations for Enterprise Campus networks
- Design a LAN network based on customer requirements
- Describe Layer 3 design considerations in an Enterprise Campus network
- Examine Cisco SD-Access fundamental concepts
- Describe Cisco SD-Access Fabric Design
- Design a Software-Defined Access (SD-Access) Campus Fabric based on customer requirements
- Design service provider-managed VPNs
- Design enterprise-managed VPNs
- Design a resilient WAN
- Design a resilient WAN network based on customer requirements
- Examine the Cisco SD-WAN architecture
- Describe Cisco SD-WAN deployment options
- Understand Cisco SD-WAN – NAT and hybrid design considerations
- Design Cisco SD-WAN redundancy
- Explain the basic principles of Quality of Service (QoS)
- Design QoS for the WAN
- Design QoS for enterprise network based on customer requirements
- Explain the basic principles of multicast
- Explore multicast with PIM-SM
- Designing rendezvous point distribution solutions
- Describe high-level considerations when doing IP addressing design
- Create an IPv6 addressing plan
- Plan an IPv6 deployment in an existing enterprise IPv4 network
- Describe the challenges that you might encounter when transitioning to IPv6
- Design an IPv6 addressing plan based on customer requirements
- Describe Network APIs and protocols
- Describe Yet Another Next Generation (YANG), Network Configuration Protocol (NETCONF), and Representational State Transfer Configuration Protocol (RESTCONF)

Course Outline

- Module 1: Designing EIGRP routing
- Module 2: Designing OSPF routing
- Module 3: Designing IS-IS routing
- Module 4: Designing BGP routing and redundancy
- Module 5: Exploring BGP Address Families and Attributes
- Module 6: Designing an Enterprise Campus LAN
- Module 7: Designing Layer 2 Campus
- Module 8: Designing a Layer 3 Campus
- Module 9: Discovering the Cisco SD-Access Architecture
- Module 10: Exploring Cisco SD-Access Fabric Design
- Module 11: Exploring Cisco SD-Access Site Design Strategy and Considerations
- Module 12: Discovering Service Provider-Managed VPNs
- Module 13: Designing Enterprise-Managed VPNs
- Module 14: Designing WAN Resiliency
- Module 15: Examining Cisco SD-WAN Architectures
- Module 16: Examining Cisco SD-WAN Deployment Design Considerations
- Module 17: Examining Cisco SD-WAN—NAT and Hybrid Design Considerations
- Module 18: Designing Cisco SD-WAN Routing and High Availability
- Module 19: Exploring QoS
- Module 20: Designing LAN and WAN QoS
- Module 21: Introducing Multicast
- Module 22: Exploring Multicast with PIM-SM
- Module 23: Designing Rendezvous Point Distribution Solutions
- Module 24: Designing an IPv4 Address Plan
- Module 25: Exploring IPv6
- Module 26: Deploying IPv6
- Module 27: Introducing Network APIs and Protocols
- Module 28: Exploring YANG, NETCONF, RESTCONF, and Model-Driven Telemetry

Lab Outline

- Discovery 1: Designing Enterprise Connectivity
- Discovery 2: Designing an Enterprise Network with BGP Internet Connectivity
- Discovery 3: Designing an Enterprise Campus LAN
- Discovery 4: Designing SD-Access in the Enterprise
- Discovery 5: Designing Resilient Enterprise WAN
- Discovery 6: Designing QoS in an Enterprise Network
- Discovery 7: Designing an Enterprise IPv6 Network

Who Should Enroll

- Network design engineers
- Network engineers
- System administrators