Document Generated: 11/03/2026

Learning Style: On Demand

Technology: Cisco

Difficulty: Intermediate

Course Duration: 40 Hours

Designing Cisco Enterprise Networks (ENSLD) v2.0 - On Demand



About this course:

The Designing Cisco Enterprise Networks (ENSLD) v2.0 course gives you the knowledge and skills you need to design an enterprise network.

This course serves as a deep dive into enterprise network design and expands on the topics covered in the Implementing and Operating Cisco Enterprise Network

Core Technologies (ENCOR) v1.0 course.

This course also helps you prepare to take the Designing Cisco Enterprise Networks v2.0 (ENSLD 300-420) exam, which is part of the CCNP Enterprise and Cisco Certified Specialist - Enterprise Design certifications.

Course Objective:

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
- 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 Software-Defined Access (SD-Access) fundamental concepts
- Describe Cisco SD-Access Fabric Design
- Design an 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
- 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
- Design 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)

Audience:

- Network design engineers
- Network engineers
- System administrators

Prerequisite:

Before taking this course, you should have earned CCNA certification or be familiar with:

- Basic network fundamentals and building simple LANs
- Basic IP addressing and subnets
- Routing and switching fundamentals
- Basic wireless networking concepts and terminology

Course Outline:

- **Designing EIGRP Routing**
- **Designing OSPF Routing**
- **Designing IS-IS Routing**
- **Designing BGP Routing and Redundancy**
- **Understanding BGP Address Families**
- **Designing the Enterprise Campus LAN**
- **Designing Layer 2 Campus**
- **Designing Layer 3 Campus**
- **Discovering the Cisco SD-Access Architecture**
- **Exploring Cisco SD-Access Fabric Design**
- **Designing Service Provider-Managed VPNs**
- **Designing Enterprise-Managed VPNs**
- **Designing WAN Resiliency**
- **Examining Cisco SD-WAN Architectures**
- **Cisco SD-WAN Deployment Design Considerations**
- **Designing Cisco SD-WAN Routing and High Availability**
- **Understanding QoS**
- **Designing LAN and WAN QoS**
- **Exploring Multicast with PIM-SM**
- **Designing Rendezvous Point Distribution Solutions**
- **Designing an IPv4 Address Plan**
- **Exploring IPv6**
- **Deploying IPv6**
- **Introducing Network APIs and Protocols**
- **Exploring YANG, NETCONF, RESTCONF, and Model-Driven Telemetry**

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