Designing Cisco Enterprise Networks (ENSLD) v1.0 - On Demand

Modality: On Demand

Duration: 40 Hours

CLC: 8 Units

Course Information

About this course:

This course expands on the topics covered in the Implementing and Operating Cisco Enterprise Network Core Technologies (ENCOR) v1.0 course and serves as a deep dive into enterprise network design.

This course also fully prepares you to take the Designing Cisco Enterprise Networks v1.0 (ENSLD 300-420) exam, which is part of the CCNP Enterprise and Cisco Certified Specialist - Enterprise Design certifications.

Course Objective:

Once you have completed this course, you should be able to:

- 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 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 an IPv6 addressing plan based on customer requirements
- 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 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
- Explain the basic principles of multicast
- 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
- 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:

You should be CCNA certified or be familiar with these skills before taking this course:

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

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**