



# Designing Cisco Enterprise Networks (ENSLD)

Course ID #: 7000-221-ZZ-Z

Hours: 35

## Course Content

### Course Description:

The Designing Cisco Enterprise Networks (ENSLD) v1.0 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 300-420 Designing Cisco Enterprise Networks (ENSLD) exam which is part of the CCNP® Enterprise and Cisco Certified Specialist - Enterprise Design certifications.

### Course Objectives:

This course 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
- 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 an Software-Defined Access (SD-Access) Campus Fabric based on customer requirements



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- 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 QoS
- Design Quality of Service (QoS) for the WAN
- Design QoS for enterprise network based on customer requirements
- Learning@Cisco
- Course overview
- Explain the basic principles of multicast
- 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)

## Target Audience:

- Network design engineers
- Network engineers
- System administrators

## Prerequisites:

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



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## Topics:

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 the Layer 2 Campus

Designing the 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 Protocol-Independent Multicast-Sparse Mode

Designing Rendezvous Point Distribution Solutions

Designing an IPv4 Address Plan

Learning@Cisco

Course overview

Exploring IPv6

Deploying IPv6

Introducing Network APIs and Protocols

Exploring YANG, NETCONF, RESTCONF, and Model-Driven Telemetry