

Cisco Designing Cisco Enterprise Networks v1.1 (ENSLD)

Overview

The Designing Cisco Enterprise Networks (ENSLD) v1.1 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.

Prerequisite Comments

Before taking this course, you should have earned CCNA® certification or be able to:

Understand network fundamentals

Implement LANs

Implement Internet connectivity

The following Cisco courses can help you build the recommended skills and knowledge:

Implementing and Administering Cisco Solutions (CCNA)

Implementing and Operating Cisco Enterprise Network Core Technologies (ENCOR)

Target Audience

Network design engineers

Network engineers

System administrators

Course Objectives

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 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
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
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)

Course Outline

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Designing EIGRP Routing
Designing OSPF Routing
Designing IS-IS Routing
Design Case Study Activity: Designing Enterprise Connectivity
Designing BGP Routing and Redundancy
Understanding BGP Address Families and Attributes
Design Case Study Activity: Designing an Enterprise Network with BGP Internet Connectivity
Designing the Enterprise Campus LAN
Designing Layer 2 Campus
Design Case Study Activity: Designing an Enterprise Campus LAN
Designing Layer 3 Campus
Discovering the Cisco SD-Access Architecture
Exploring Cisco SD-Access Fabric Design
Exploring Cisco SD-Access Site Design Strategy and Considerations
Design Case Study Activity: Designing Cisco SD-Access in the Enterprise
Designing Service Provider-Managed VPNs
Designing Enterprise-Managed VPNs
Designing WAN Resiliency
Design Case Study Activity: Designing Resilient Enterprise WAN
Examining Cisco SD-WAN Architectures
Examining Cisco SD-WAN Deployment Design Considerations
Designing Cisco SD-WAN Routing and High Availability
Design Case Study Activity: Designing Resilient Enterprise Cisco SD-WAN
Understanding QoS
Designing LAN and WAN QoS
Design Case Study Activity: Designing QoS in an Enterprise Network
Exploring Multicast with Protocol-Independent Multicast-Sparse Mode (PIM-SM)
Designing Rendezvous Point Distribution Solutions
Designing an IPv4 Address Plan
Exploring IPv6
Deploying IPv6
Design Case Study Activity: Designing an Enterprise IPv6 Network
Introducing Network APIs and Protocols
Exploring YANG, NETCONF, RESTCONF, and Model-Driven Telemetry