Designing Cisco Enterprise Networks (ENSLD)

What you'll learn

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

This training 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. This training also earns you 40 Continuing Education (CE) credits towards recertification.

How you'll benefit

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.

What to expect in the exam

The 300-420 ENSLD exam certifies your knowledge of enterprise design including advanced addressing and routing solutions, advanced enterprise campus networks, WAN, security services, network services, and SDA.

After you pass the 300-420 ENSLD exam:

You earn the Cisco Certified Specialist - Enterprise Design certification.

You will have satisfied the concentration exam requirement for the new CCNP Enterprise certification. To complete your CCNP Enterprise certification, you must pass the Implementing 350-401 Cisco Enterprise Network Core Technologies (ENCOR) exam or its equivalent.

Who should enroll

Network design engineers

Network engineers

System administrators

Technology areas

Enterprise networking

Routing and switching

Design

Training overview

Objectives

After taking this training, 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)

Prerequisites

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

Understand network fundamentals

Implement LANs

Implement LAN connectivity

Lab outline

Designing Enterprise Connectivity

Designing an Enterprise Network with BGP Internet Connectivity

Designing an Enterprise Campus LAN

Designing Resilient Enterprise WAN

Designing QoS in an Enterprise Network

Designing an Enterprise IPv6 Network