Designing Cisco Enterprise Networks (ENSLD) v1.1

What you'll learn in this course

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

Course duration

- Instructor-led training: 5 days in the classroom with design case study activities
- Virtual instructor-led training: 5 days of web-based instruction with design case study activities
- E-learning: Equivalent of 5 days of classroom instruction

How you'll benefit

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
- Earn 40 CE credits toward recertification

Who should enroll

- Network design engineers
- Network engineers
- System administrators

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 **350-401 Implementing Cisco Enterprise Network Core Technologies (ENCOR)** exam or its equivalent

Technology areas

- Enterprise networking
- Routing and switching
- Design

Course details

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)

Recommended knowledge and training

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)**

Outline

- 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

How to enroll

To enroll in the ENSLD course or explore our larger catalog of courses on Cisco Digital Learning, contact us at <training@fastlane-mea.com>

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