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Designing Cisco Enterprise Networks (ENSLD) Training

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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.

LEVEL	DURATION	EXPERIENCE	AVERAGE SALARY	LABS
Intermediate	**5 Days**	**2 years: CCNA & Network Skills**	**$140,000**	**Yes**

Course Overview

This course gives you the knowledge and skills you need to design an enterprise network. It 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.

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.

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- 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.

Course 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

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- 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
- 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

Intended Audience

- Network design engineers
- Network engineers
- System administrators

Prerequisites

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)

Follow-On Courses

Understanding Cisco Wireless Foundations (WLFNDU) 1.0

Ready to enroll? Call 800.674.3550 or email Info@AppliedTechAc.com — private team cohorts, GSA MAS purchasing, military credentialing funding, VA GI Bill and VR&E and student financing available.