ROOMAN
INNOVATE INTEGRATE EMPOWER

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CISCO CERTIFIED NETWORK PROFESSIONAL (CCNP)

To earn CCNP Enterprise, you pass two exams: a core exam and an enterprise concentration exam of your choice. And every exam in the CCNP Enterprise program earns an individual Specialist certification, so you get recognized for your accomplishments along the way.

> This Entreprise Concentration exam, **Implementing Cisco Enterprise Advanced Routing and Services (ENARSI)** gives you the knowledge you need to install, configure, operate, and troubleshoot an enterprise network. This course covers advanced routing and infrastructure technologies, expanding on the topics covered in the Implementing and Operating Cisco Enterprise Network Core Technologies (ENCOR) course.

This course will help you prepare for the **Implementing Cisco Enterprise Advanced Routing and Services (300-410 ENARSI)** exam. This exam tests your knowledge of implementation and troubleshooting for advanced routing technologies and services.

After you pass **300-410 ENARSI** , you earn the **Cisco Certified Specialist – Enterprise Advanced Infrastructure Implementation** certification.

Implementing Cisco Enterprise Advanced Routing and Services (ENARSI)

What you'll learn in this course.

This **CCNP CONCENTRATION** course helps prepare you to take the exam, **300-410 Implementing Cisco Enterprise Advanced Routing and Services (ENARSI)**, which leads to the new **CCNP Enterprise** and **Cisco Certified Specialist – Enterprise Advanced Infrastructure Implementation** certifications.

Who should enroll

- Mid-level network engineers
- Network administrators
- Network support technicians
- Help desk technicians

Prerequisites

Knowledge and skills you should have before attending this course:

- Implementation of Enterprise LAN networks
- Basic understanding of Enterprise routing and wireless connectivity
- Basic understanding of Python scripting

Objectives

After taking this course, you should be able to:

- Configure classic Enhanced Interior Gateway Routing Protocol (EIGRP) and named EIGRP for IPv4 and IPv6
- Optimize classic EIGRP and named EIGRP for IPv4 and IPv6
- Troubleshoot classic EIGRP and named EIGRP for IPv4 and IPv6
- Configure Open Shortest Path First (OSPF)v2 and OSPFv3 in IPv4 and IPv6 environments
- Optimize OSPFv2 and OSPFv3 behavior
- Troubleshoot OSPFv2 for IPv4 and OSPFv3 for IPv4 and IPv6
- Implement route redistribution using filtering mechanisms
- Troubleshoot redistribution
- Implement path control using Policy-Based Routing (PBR) and IP service level agreement (SLA)
- Configure Multiprotocol-Border Gateway Protocol (MP-BGP) in IPv4 and IPv6 environments
- Optimize MP-BGP in IPv4 and IPv6 environments
- Troubleshoot MP-BGP for IPv4 and IPv6
- Describe the features of Multiprotocol Label Switching (MPLS)
- Describe the major architectural components of an MPLS VPN
- Identify the routing and packet forwarding functionalities for MPLS VPNs
- Explain how packets are forwarded in an MPLS VPN environment
- Implement Cisco Internetwork Operating System (IOS®) Dynamic Multipoint VPNs (DMVPNs)
- Implement Dynamic Host Configuration Protocol (DHCP)
- Describe the tools available to secure the IPV6 first hop
- Troubleshoot Cisco router security features
- Troubleshoot infrastructure security and services

Labs:

- Configure EIGRP Using Classic Mode and Named Mode for IPv4 and IPv6
- Verify the EIGRP Topology Table
- Configure EIGRP Stub Routing, Summarization, and Default Routing
- Configure EIGRP Load Balancing and Authentication
- LAB: Troubleshoot EIGRP Issues
- Configure OSPFv3 for IPv4 and IPv6
- Verify the Link-State Database
- Configure OSPF Stub Areas and Summarization
- Configure OSPF Authentication
- Troubleshoot OSPF
- Implement Routing Protocol Redistribution
- Manipulate Redistribution
- Manipulate Redistribution Using Route Maps
- Troubleshoot Redistribution Issues
- Implement PBR
- Configure IBGP and External Border Gateway Protocol (EBGP)
- Implement BGP Path Selection
- Configure BGP Advanced Features
- Configure BGP Route Reflectors
- Configure MP-BGP for IPv4 and IPv6
- Troubleshoot BGP Issues
- Implement PBR
- Configure Routing with VRF-Lite
- Implement Cisco IOS DMVPN
- Obtain IPv6 Addresses Dynamically
- Troubleshoot DHCPv4 and DHCPv6 Issues
- Troubleshoot IPv4 and IPv6 Access Control List (ACL) Issues
- Configure and Verify Control Plane Policing
- Configure and Verify Unicast Reverse Path Forwarding (uRPF)
- Troubleshoot Network Management Protocol Issues