

Implementing Cisco Enterprise Advanced Routing and Services (ENARSI) v1.0

What you'll learn

The Implementing Cisco Enterprise Advanced Routing and Services (ENARSI) v1.0 gives you the knowledge you need to install, configure, operate, and troubleshoot an enterprise network. This training covers advanced routing and infrastructure technologies, expanding on the topics covered in the Implementing and Operating Cisco Enterprise Network Core Technologies (ENCOR) v1.0 training.

This training helps prepare you to take the exam, 300-410 Implementing Cisco® Enterprise Advanced Routing and Services (ENARSI), which leads to the CCNP® Enterprise and Cisco Certified Specialist – Enterprise Advanced Infrastructure Implementation certifications. This training also earns you 40 Continuing Education (CE) credits towards recertification.

How you'll benefit

This training will help you:

Gain the knowledge you need to install, configure, operate, and troubleshoot an enterprise network

Qualify for professional-level job roles in advance routing and services

What to expect in the exam

This training 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.

You satisfy the concentration requirement for the new CCNP Enterprise certification. To complete your CCNP Enterprise certification, pass the Enterprise core exam, 350-401 Implementing Cisco Enterprise Network Core Technologies (ENCOR).

Who should enroll

Enterprise network engineers

System engineers

System administrators

Network administrators

Technology areas

Enterprise networking

Routing and switching

Training overview

Objectives

After taking this training, 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

Prerequisites

Before taking this training, you should have:

General understanding of network fundamentals

Basic knowledge of how to implement LANs

General understanding of how to manage network devices

General understanding of how to secure network devices

Basic knowledge of network automation

These Cisco trainings are recommended to help you meet these prerequisites:

Implementing and Operating Cisco Enterprise Network Core Technologies (ENCOR) v1.0

Interconnecting Cisco Networking Devices, Part 1 (ICND1) v3.0

Interconnecting Cisco Networking Devices, Part 2 (ICND2) v3.0

Lab outline

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

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 Issues

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

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 Unicast Reverse Path Forwarding (uRPF)

Troubleshoot Network Management Protocol Issues: Lab 1

Troubleshoot Network Management Protocol Issues: Lab 2