

ENARSI - Cisco® Implementing Cisco® Enterprise Advanced Routing and Services v1.0 (ENARSI 300-410)

Overview

This course provides the knowledge and skills needed to install, configure, operate and troubleshoot an enterprise network. This course is intended to be a deep dive into advanced routing and infrastructure technologies, which are an expansion of the topics covered in the Implementing and Operating Cisco Enterprise Network Core Technologies (ENCOR) course. This course prepares you to take the CCNP Enterprise exam 300-410 ENARSI.

Course Objectives

After taking this course, you should be able to:

- Configure classic Enhanced Interior Gateway Routing Protocol (EIGRP) and named IGRP 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

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Duration

5 Days

Who Should Attend

- Enterprise network engineers
- System engineers
- System administrators
- Network administrators

Prerequisites

- 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

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Course Topics

Module 1	Implementing EIGRP
Module 2	Optimizing EIGRP
Module 3	Troubleshooting EIGRP
Module 4	Implementing OSPF
Module 5	Optimizing OSPF
Module 6	Troubleshooting OSPF
Module 7	Implementing Internal Border Gateway Protocol (IBGP)
Module 8	Optimizing BGP
Module 9	Implementing MP-BGP
Module 10	Troubleshooting BGP
Module 11	Configuring Redistribution
Module 12	Troubleshooting Redistribution
Module 13	Implementing Path Control
Module 14	Exploring MPLS
Module 15	Introducing MPLS L3 VPN Architecture
Module 16	Introducing MPLS L3 VPN Routing
Module 17	Configuring Virtual Routing and Forwarding (VRF)-Lite
Module 18	Implementing DMVPN
Module 19	Implementing DHCP

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Module 20	Troubleshooting DHCP
Module 21	Introducing IPv6 First Hop Security
Module 21	Securing Cisco Routers
Module 22	Troubleshooting Infrastructure Security and Services