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**Learning Style: On Demand**

**Technology: Cisco**

**Difficulty: Intermediate**

**Course Duration: 40 Hours**

## **Implementing Cisco Enterprise Advanced Routing and Services (ENARSI) v1.0 - On Demand**



### **About this course:**

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 course covers advanced routing and infrastructure technologies, expanding on the topics covered in the Implementing and Operating Cisco Enterprise Network Core Technologies (ENCOR) v1.0 course.

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

## **Course Objective:**

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 version 2 (OSPFv2) 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 IOS Dynamic Multipoint VPNs (DMVPNs)
- Implement DHCP
- Describe the tools available to secure the IPV6 first hop
- Troubleshoot Cisco router security features
- Troubleshoot infrastructure security and services

## **Audience:**

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

## **Prerequisite:**

Before taking this course, 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 courses 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

## **Course Outline:**

- **Implementing EIGRP**
- **Optimizing EIGRP**
- **Troubleshooting EIGRP**
- **Implementing OSPF**
- **Optimizing OSPF**
- **Troubleshooting OSPF**
- **Implementing Internal Border Gateway Protocol (IBGP)**
- **Optimizing BGP**
- **Implementing MP-BGP**
- **Troubleshooting BGP**
- **Configuring Redistribution**
- **Troubleshooting Redistribution**
- **Implementing Path Control**
- **Exploring MPLS**
- **Introducing MPLS L3 VPN Architecture**
- **Introducing MPLS L3 VPN Routing**
- **Configuring Virtual Routing and Forwarding (VRF)-Lite**
- **Implementing DMVPN**
- **Implementing DHCP**
- **Troubleshooting DHCP**
- **Introducing IPv6 First Hop Security**
- **Securing Cisco Routers**
- **Troubleshooting Infrastructure Security and Services**

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