

## Implementing Cisco Enterprise Advanced Routing and Services

**Duration: 5 Days**    **Course Code: ENARSI**    **Version: 1.0**    **Delivery Method: Company Event**

### Overview:

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

### Company Events

These events can be delivered exclusively for your company at our locations or yours, specifically for your delegates and your needs. The Company Events can be tailored or standard course deliveries.

### Target Audience:

Network professionals who need to install, configure, operate and troubleshoot an enterprise network using advanced routing and infrastructure technologies.

### Objectives:

- **After completing this course you should be able to:**
- Configure classic 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 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 PBR and IP SLA
- Configure 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 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 DMVPNs
- Implement DHCP
- Describe the tools available to secure the IPV6 first hop
- Troubleshoot Cisco router security features
- Troubleshoot infrastructure security and services

### Prerequisites:

**Attendees should meet the following prerequisites:**

- General understanding of network fundamentals - **CCNA or ENCOR recommended**
- Basic knowledge of how to implement LANs - **CCNA or ENCOR recommended**

### Testing and Certification

**Recommended as preparation for the following exams:**

- **300-410 ENARSI** - Implementing Cisco Enterprise Advanced Routing and Services

- General understanding of how to manage network devices - **CCNA or ENCOR recommended**
  - General understanding of how to secure network devices- **CCNA or ENCOR recommended**
  - Basic knowledge of network automation - **CCNA or ENCOR**
  - CCNA - Implementing and Administering Cisco Solutions
  - ENCOR - Implementing and Operating Cisco Enterprise Network Core Technologies
-

## Content:

Implementing EIGRP	Implementing MP-BGP	Configuring VRF-Lite
Optimizing EIGRP	Troubleshooting BGP	Implementing DMVPN
Troubleshooting EIGRP	Configuring Redistribution	Implementing DHCP
Implementing OSPF	Troubleshooting Redistribution	Troubleshooting DHCP
Optimizing OSPF	Implementing Path Control	Introducing IPv6 First Hop Security
Troubleshooting OSPF	Exploring MPLS	Securing Cisco Routers
Implementing IBGP	Introducing MPLS L3 VPN Architecture	Troubleshooting Infrastructure Security and Services
Optimizing BGP	Introducing MPLS L3 VPN Routing	Labs
		<ul style="list-style-type: none"><li>■ Configure EIGRP Using Classic Mode and Named Mode for IPv4 and IPv6</li><li>■ Verify the EIGRP Topology Table</li><li>■ Configure EIGRP Stub Routing, Summarization, and Default Routing</li><li>■ Configure EIGRP Load Balancing and Authentication</li><li>■ LAB: Troubleshoot EIGRP Issues</li><li>■ Configure OSPFv3 for IPv4 and IPv6</li><li>■ Verify the Link-State Database</li><li>■ Configure OSPF Stub Areas and Summarization</li><li>■ Configure OSPF Authentication</li><li>■ Troubleshoot OSPF</li><li>■ Implement Routing Protocol Redistribution</li><li>■ Manipulate Redistribution</li><li>■ Manipulate Redistribution Using Route Maps</li><li>■ Troubleshoot Redistribution Issues</li><li>■ Implement PBR</li><li>■ Configure IBGP and EBGP</li><li>■ Implement BGP Path Selection</li><li>■ Configure BGP Advanced Features</li><li>■ Configure BGP Route Reflectors</li><li>■ Configure MP-BGP for IPv4 and IPv6</li><li>■ Troubleshoot BGP Issues</li><li>■ Implement PBR</li><li>■ Configure Routing with VRF-Lite</li><li>■ Implement Cisco IOS DMVPN</li><li>■ Obtain IPv6 Addresses Dynamically</li><li>■ Troubleshoot DHCPv4 and DHCPv6 Issues</li><li>■ Troubleshoot IPv4 and IPv6 ACL Issues</li><li>■ Configure and Verify Control Plane Policing</li><li>■ Configure and Verify uRPF</li><li>■ Troubleshoot Network Management Protocol Issues: Lab 1</li><li>■ Troubleshoot Network Management</li></ul>

### Further Information:

For More information, or to book your course, please call us on Head Office 01189 123456 / Northern Office 0113 242 5931

[info@globalknowledge.co.uk](mailto:info@globalknowledge.co.uk)

[www.globalknowledge.com/en-gb/](http://www.globalknowledge.com/en-gb/)

Global Knowledge, Mulberry Business Park, Fishponds Road, Wokingham Berkshire RG41 2GY UK