

**Course Code** ENARSI  
**Duration** 5 days

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## 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.

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## Audience

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

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## Learning Objectives

By actively participating in this course, you will learn about the following:

- ▶ Configuring classic EIGRP and named EIGRP for IPv4 and IPv6.
- ▶ Optimizing classic EIGRP and named EIGRP for IPv4 and IPv6.
- ▶ Troubleshooting classic EIGRP and named EIGRP for IPv4 and IPv6.
- ▶ Configuring OSPFv2 and OSPFv3 in IPv4 and IPv6 environments.
- ▶ Optimizing OSPFv2 and OSPFv3 behavior.
- ▶ Troubleshooting OSPFv2 for IPv4 and OSPFv3 for IPv4 and IPv6.
- ▶ Implementing route redistribution using filtering mechanisms.
- ▶ Troubleshooting redistribution.
- ▶ Implementing path control using PBR and IP SLA.
- ▶ Configuring MP-BGP in IPv4 and IPv6 environments.
- ▶ Optimizing MP-BGP in IPv4 and IPv6 environments.
- ▶ Troubleshooting 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.



## Pre-Requisites

- ▶ General understanding of network fundamentals - CCNA or ENCORA recommended
- ▶ Basic knowledge of how to implement LANs - CCNA or ENCORA recommended
- ▶ General understanding of how to manage network devices - CCNA or ENCORA recommended
- ▶ General understanding of how to secure network devices- CCNA or ENCORA recommended
- ▶ Basic knowledge of network automation - CCNA or ENCORA

### Recommended courses:

- ▶ CCNA - Implementing and Administering Cisco Solutions
- ▶ ENCORA - Implementing and Operating Cisco Enterprise Network Core Technologies

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## Course Contents

- ▶ Implementing EIGRP
- ▶ Optimizing EIGRP
- ▶ Troubleshooting EIGRP
- ▶ Implementing OSPF
- ▶ Optimizing OSPF
- ▶ Troubleshooting OSPF
- ▶ Implementing 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 VRF-Lite
- ▶ Implementing DMVPN
- ▶ Implementing DHCP
- ▶ Troubleshooting DHCP
- ▶ Introducing IPv6 First Hop Security
- ▶ Securing Cisco Routers
- ▶ Troubleshooting 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 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 ACL Issues
- ▶ Configure and Verify Control Plane Policing
- ▶ Configure and Verify uRPF
- ▶ Troubleshoot Network Management Protocol Issues: Lab 1
- ▶ Troubleshoot Network Management Protocol Issues: Lab 2

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## Exam Details

This course leads to the 300-410 Implementing Cisco Enterprise Advanced Routing and Services (ENARSI) exam.

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## Further Information

For more information or to book this course, please contact our Course Enquiries Team on **01752 227330** (Option 2) or email us at [enquiries@skilltec.co.uk](mailto:enquiries@skilltec.co.uk).