

Implementing Cisco IP Routing (ROUTE)

Duration: 5 Days

Who should attend

The primary audience for this course is as follows:

- Network professionals who want to correctly implement routing based solutions given a network design using Cisco IOS services and features, where implementation of routing includes planning, configuring and verification
- The typical job roles for this type of professional are network engineers, network operations center (NOC) technical support personnel, or help desk technicians

The secondary audience for this course is as follows:

- Any individual involved in implementation and verification of routing protocols in the enterprise networks

Certifications

This course is part of the following Certifications:

- Cisco Certified Design Professional ([CCDP](#))
- Cisco Certified Internetwork Professional ([CCIP](#))
- Cisco Certified Network Professional ([CCNP](#))

Prerequisites

The knowledge and skills that a learner must have before attending this course are as follows:

- Knowledge and skill level equal to Cisco CCNA certification
- Knowledge and experience of the implementation and verification of enterprise routing and switching technologies as offered by the ICND1 and ICND2 courses or equivalent skills and knowledge

Note In addition to knowledge and skill level equal to Cisco CCNA certification, it is recommended that the learner has practical experience in installing, operating and maintaining Cisco routers and switches in an enterprise environment.

Course Objectives

Implementing Cisco IP Routing (ROUTE) v1.0 is a five-day course designed to help learners prepare for Cisco CCNP certification. The ROUTE course is a component of the CCNP curriculum.

This ROUTE course is designed to provide professionals of medium-to-large network sites with information on the use of advanced routing in implementing scalability for Cisco routers that are connected to LANs and WANs. The goal is to train professionals to dramatically increase the number of routers and sites using these techniques instead of redesigning the network when additional sites or wiring configurations are added. The ROUTE training reinforces the instruction by providing learners with hands-on labs to ensure they thoroughly understand how to implement advanced routing within their networks.

Course Content

Upon completing this course, the learner will be able to meet these overall objectives:

- Plan and document the configuration and verification of routing protocols and its optimization in enterprise networks
- Identify the technologies, components, and metrics of EIGRP to implement and verify EIGRP routing in diverse, large-scale internetworks based on requirements
- Identify, analyze, and match OSPF multiarea routing functions and benefits for routing efficiencies in network operations in order to implement and verify OSPF routing in a complex enterprise network
- Implement and verify a redistribution solution in a multi-protocol network that uses IOS features to control path selection and loop free topology according to a given network design and requirements
- Evaluate common network performance issues and identify the tools needed to provide a layer 3 path control that uses IOS features to control the path
- Implement and verify a layer 3 solution using BGP to connect an enterprise network to a service provider