



Building Core Networks with OSPF, IS-IS, BGP, and MPLS (BCN)

Duration 5 Days

COURSE CONTENT

Building Core Networks with OSPF, IS-IS, BGP, and MPLS Bootcamp (BCN) is a powerful hands-on course that provides you with the required knowledge and skills to design, deploy, operate, and maintain an Internet service provider (ISP) backbone network. You will learn the primary principles of the routing protocols that are used in very large networks. Hands-on labs reinforce the lecture materials to make sure that you have the working skills to affect the networks you support. This latest version of BCN is a major rework of the course. Featuring a completely new lab and topology, your learning will be on more advanced hardware and software. In addition to more content, the course has been enhanced to include the latest Cisco IOS® Software features. The lab network now includes supporting infrastructure to provide a more real-world environment.

Upon completion of this course, you should be able to:

- Identify the critical factors for availability, scalability, and manageability
- Implement an Interior Gateway Protocol (IGP, either OSPF or IS-IS) into a large-scale hierarchical network using best current practices for scalability
- Implement BGP into a large-scale hierarchical network using best current practices for scalability
- Control routing policy by influencing the BGP path selection process using route maps, prefix lists, and community strings
- Implement multihoming strategies using multiexit discriminators (MEDs) and local preference
- Implement and verify MPLS functionality in a large-scale network
- Implement and verify MPLS VPN connectivity in intra-autonomous-system environments
- Implement and verify MPLS traffic engineering practices
- Implement Layer 2 VPNs using Any Transport over MPLS (AToM)

WHO SHOULD ATTEND

This course is intended for network professionals, including designers, implementers, and support staff involved with design and deployment of large-scale networks for large enterprises or high-end ISP networks that use scalable technologies such as Intermediate System-to-Intermediate System (IS-IS), Open Shortest Path First (OSPF), Border Gateway Protocol (BGP), or Multiprotocol Label Switching (MPLS).

PREREQUISITES

Following are the prerequisites for this course:

- Experience using the Cisco® IOS Software command-line interface (CLI)
- Proficiency in routing fundamentals and IP addressing
- CCNA or the equivalent networking knowledge and experience

COURSE OUTLINE

- Course Introduction
- Get Started with Core Networking
- Implement Link State Protocols (OSPF and IS-IS)
- Implement BGP ? BGP Scaling Techniques
- Implement BGP Policy Control
- Implement and Troubleshoot MPLS
- Implement Intranet and Extranet MPLS VPNs
- Implement MPLS Traffic Engineering
- Implement Layer 2 VPNs with AToM
- Boot Camp Wrap-Up and Summary