Course Training

Border Gateway Protocol (BGP)

Course Content

Configuring BGP on Cisco Routers (BGP) course provides you with in-depth knowledge of BGP, the routing protocol that is one of the underlying foundations of the Internet and new-world technologies such as Multiprotocol Label Switching (MPLS). This curriculum covers the theory of BGP, configuration of BGP on Cisco IOS routers, detailed troubleshooting information and hands-on exercises that provide you with the skills needed to configure and troubleshoot BGP networks in customer environments. Different service solutions in the curriculum cover BGP network design issues and usage rules for various BGP features, preparing you to design and implement efficient, optimal, and trouble-free BGP networks.

Course Objectives

After taking this course, you should be able to:

- Configure, monitor and troubleshoot basic BGP to enable interdomain routing, given a network scenario with multiple domains
- Use BGP policy controls to influence the route selection process with minimal impact on BGP route processing, given a network scenario where connections to multiple ISPs must be supported
- Use BGP attributes to influence the route selection process, given a network scenario where multiple connections must be supported
- Implement the correct BGP configuration to successfully connect the customer's network to the Internet, given customer connectivity requirements
- Enable the provider network to behave as a transit autonomous system, given a typical service provider network with multiple BGP connections to other autonomous systems
- Identify common BGP scaling issues and enable route reflection and confederations as possible solutions to these issues, given a typical service provider network
- Use available BGP tools and features to optimize the scalability of the BGP routing protocol, given a typical BGP network

Course Prerequisite

- Interconnecting Cisco Network Devices Part 1 (ICND1)
- Interconnecting Cisco Network Devices Part 2 (ICND2)
- Implementing Cisco IP Routing v2.0 (ROUTE)

Who should attend

- Network administrators
- Network engineers
- Network managers
- Systems engineers (who would like to implement BGP)

Course Outline

- BGP Overview
- BGP Transit Autonomous Systems
- Route Selection Using Policy Controls
- Route Selection Using Attributes
- Customer to Provider Connectivity with BGP
- Scaling Service Provider Networks
- Optimizing BGP Scalability