COMPUTER LEARNING CENTRE
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CISCO PARTNER Learning

Training overview

Configuring BGP on Cisco Routers (BGP)

Description

The **Configuring BGP on Cisco Routers (BGP)** training teaches the underlying foundations of the internet and new-world technologies such as Multiprotocol Label Switching (MPLS). Learn how to design and implement efficient, optimal, and trouble-free BGP networks covering the theory of BGP and 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, and BGP network design issues and usage rules for various BGP features.

This training also earns you 40 Continuing Education (CE) credits toward recertification.

How you'll benefit

Thistrainingwill helpyou:

- Explore the theory of BGP and configuration of BGP on Cisco IOS routers
- Discover detailed troubleshooting information and hands-on exercises that provide you with the skills needed to configure and troubleshoot BGP networks in customer environments
- Examine BGP network design issues and usage rules for various BGP features
- Earn 40 CE credits toward recertification

Who should enroll

- Accountand Project Managers
- CCE Administrators
- Deployment Engineers
- Technical Sales

Technology areas

- Service Provider

Objectives

- Describe how to configure, monitor, and troubleshoot basic BGP to enable interdomain routing in a network scenario with multiple domains
- Describe how to use BGP policy controls to influence the BGP route selection process in a network scenario in which you must support connections to multiple ISPs
- Describe how to use BGP attributes to influence the route selection process in a network scenario where you must support multiple connections
- Describe how to successfully connect the customer network to the Internet in a network scenario in which multiple connections must be implemented
- Describe how to configure the service provider network to behave as a transit AS in a typical implementation with multiple BGP connections to other autonomous systems
- Enable route reflection as possible solution to BGP scaling issues in a typical service provider network with multiple BGP connections to other autonomous systems
- Describe the available BGP tools and features to optimize the scalability of the BGP routing protocol in a typical BGP network

Prerequisites

Thereareno prerequisites for this training. However, the knowledge and skills you are recommended to have before attending this training are:

- Intermediate to advanced knowledge of Cisco IOS Software configuration
- Configuring and troubleshooting RIP, EIGRP, OSPF and IS-IS

These skills can be found in the following Cisco Learning Offerings:

- Implementing and Administering Cisco Solutions (CCNA)
- Implementing Cisco Advanced Routing and Services (ENARSI)
- Implementing and Operating Cisco Service Provider Core Technologies (SPCOR)

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

Lab Outline

- Configure Basic BGP
- Announcing Networks in BGP
- Implement BGP TTL Security Check
- BGP Route Propagation
- IBGP Full Mesh
- BGP Administrative Distance
- Configure Non-Transit Autonomous System

- Filtering Customer Prefixes
- Prefix-Based Outbound Route Filtering
- Configure Route Maps as BGP Filters
- Configure Per-Neighbor Weights
- Configure and Monitor Local Preference
- Configure Local Preference Using Route Maps
- Configure AS Path Prepending
- Configure MED
- Configure Local Preference Using the Communities
- Configure Route Reflector
- Configure BGP Route Limiting
- Configure BGP Peer Groups