

training code: BGP / ENG DL 5d / EN

Configuring BGP on Cisco Routers

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BGP: 40 points CE



Purpose of the training

The training is intended for network administrators and designers of network environments and Internet connection using BGP routing protocol, as well as for the people who attempt to gain CCIP or CCIE certificate.



Benefits of completing the training

Gaining knowledge and skills from the area of configuration, optimization and problem solving, BGP protocol. Shaping the traffic on the basis of BGP routing. Designing scalable and redundant access to the Internet. Gaining knowledge from the area of CCNP Service Provider.



Expected Listener Preparation

Knowledge from the scope of ICND1, ICND2 and ROUTE trainings.



Training Language

- Training: English
- Materials: English



Duration

5 days / 35 hours

Training agenda

1. BGP Overview

- Introducing BGP
- Understanding BGP Path Attributes
- Establishing BGP Sessions
- Processing BGP Routes
- Configuring Basic BGP
- Monitoring and Troubleshooting BGP

2. BGP Transit Autonomous Systems

- Working with a Transit AS
- Interacting with IBGP and EBGP in a Transit AS
- Forwarding Packets in a Transit AS
- Monitoring and Troubleshooting IBGP in a Transit AS

3. Route Selection Using Policy Controls

- Using Multihomed BGP Networks
- Employing AS Path Filters
- Filtering with Prefix Lists
- Using Outbound Route Filtering
- Applying Route Maps as BGP Filtering
- Implementing Changes in BGP Policy

4. Route Selection Using Attributes

- Influencing BGP Route Selection with Weights
- Setting BGP Local Preference
- Using AS Path Prepending
- Understanding the BGP MED
- Addressing BGP Communities

5. Customer-to-Provider Connectivity with BGP

- Understanding Customer-to-Provider Connectivity Requirements
- Implementing Customer Connectivity Using Static Routing
- Connecting a Customer to a Single Service Provider
- Connecting a Multihomed Customer to Multiple Service Providers

6. Scaling Service Provider Networks

- Scaling IGP and BGP in Service Provider Networks
- Introducing and Designing Route Reflectors
- Configuring and Monitoring Route Reflectors

7. Optimizing BGP Scalability

- Improving BGP Convergence
- Limiting the Number of Prefixes Received from a BGP Neighbor
- Implementing BGP Peer Groups
- Using BGP Route Dampening

Labs

1. Configure a Basic BGP Network
2. Configure a BGP Transit AS
3. Configure BGP Using BGP Filtering
4. Configure BGP Route Selection Using BGP Attributes
5. Configure BGP Route Reflectors