

## CISCO: Configuring Advanced BGP

## Boost Your Network Skills



## Implementing Advanced BGP 4.0 -

This Training provides 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 training covers the theory and live practical scenarios of BGP, configuration of BGP on Cisco IOS routers, detailed troubleshooting information and hands-on exercises that provide professionals & Students 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 students to design and implement efficient, optimal and trouble free BGP networks.

### Course Content

#### 1 - BGP Overview

- Lesson 1: Introducing BGP
- Lesson 2: Understanding BGP Path Attributes
- Lesson 3: Establishing BGP Sessions
- Lesson 4: Processing BGP Routes
- Lesson 5: Configuring Basic BGP
- Lesson 6: Monitoring and Troubleshooting BGP
- Lesson 7: Module Summary
- Lesson 8: Module Self-Check

## **2 - BGP Transit Autonomous Systems**

- Lesson 1: Working with Transit AS
- Lesson 2: Interacting with IBGP and EBGp in Transit AS
- Lesson 3: Forwarding Packets in Transit AS
- Lesson 4: Monitoring and Troubleshooting IBGP in Transit AS
- Lesson 5: Module Summary
- Lesson 6: Module Self-Check

## **3 - Route Selection Using Policy Controls**

- Lesson 1: Using Multihomed BGP Networks
- Lesson 2: Employing AS Path Filters
- Lesson 3: Filtering with Prefix Lists
- Lesson 4: Using Outbound Route Filtering
- Lesson 5: Applying Route Maps as BGP Filters
- Lesson 6: Implementing Changes in BGP Policy
- Lesson 7: Module Summary
- Lesson 8: Module Self-Check

## **4 - Route Selection Using Attributes**

- Lesson 1: Influencing BGP Route Selection with Weights
- Lesson 2: Setting BGP Local Preference
- Lesson 3: Using AS Path Prepending
- Lesson 4: Understanding BGP Multi-Exit Discriminators
- Lesson 5: Addressing BGP Communities
- Lesson 6: Module Summary
- Lesson 7: Module Self-Check

## **5 - Customer-to-Provider Connectivity with BGP**

- Lesson 1: Understanding Customer-to-Provider Connectivity Requirements
- Lesson 2: Implementing Customer Connectivity Using Static Routing
- Lesson 3: Connecting a Customer to a Single Service Provider
- Lesson 4: Connecting a Multihomed Customer to Multiple Service Providers
- Lesson 5: Module Summary
- Lesson 6: Module Self-Check

## **6 - Scaling Service Provider Networks**

- Lesson 1: Scaling IGP and BGP in Service Provider Networks
- Lesson 2: Introducing and Designing Route Reflectors
- Lesson 3: Configuring and Monitoring Route Reflectors
- Lesson 4: Module Summary
- Lesson 5: Module Self-Check

## **7 - Optimizing BGP Scalability**

Lesson 1: Improving BGP Convergence

Lesson 2: Limiting the Number of Prefixes Received from a BGP Neighbor

Lesson 3: Implementing BGP Peer Groups

Lesson 4: Using BGP Route Dampening

Lesson 5: Module Summary

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