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Learning Style: Virtual Classroom

Provider: Cisco

Difficulty: Intermediate

Course Duration: 3.5 Days

Deploying Cisco Service Provider Advanced Network Routing (CS-SPADVROUTE) 1.2

About this course:

The five-day course of Deploying Cisco Service Provider Advanced Network Routing (SPADVROUTE) v 1.2 has been intended to assist understudies with understanding the way a service provider network can be executed and bolstered. Made for the professionals and engineers of the network, the Deploying Cisco Service Provider Advanced Network Routing (SPADVROUTE) is a piece of the educational plan for CCNP SP and can assist understudies with preparing for the credential.

Also, the course of Deploying Cisco Service Provider Advanced Network Routing is a part of the CCNP Service Provider Boot Camp (CS-CCNP-SP) and can help with Cisco credential training.

Course Objectives:

- Design of the provider network to assure that numerous Border Gateway Protocol associations can be upheld
- Introducing understudies to the issues of provider network pertaining to addressing adaptability and normal routing
- Describing the services of IP multicasting and related technologies.
- Introducing PIM-SM and its highlights as the most versatile routing protocol of IP multicast at present accessible.
- Describing executions of IPv6 advances in a service provider environment

Audience:

- Understudies interested in the certification training of Cisco or preparing for Cisco service provider certification.
- System engineers, organize chiefs, framework engineers, and system administrators interested in various executions of IP routing in specialist organization situations
- Project managers, network designers, and Program managers.

Prerequisites:

- Fundamental information on Microsoft Windows navigability
- Fundamental abilities of internet utilization
- Information on networking basics
- Fundamental software arrangement information for Cisco IOS, IOS XR, and IOS XE
- Aptitudes and information regarding subjects included in Building Deploying Cisco Service Provider Network Routing (SPROUTE) and Cisco Service Provider Next-Generation Networks Part 1 and Part 2 courses

Suggested prerequisite courses:

Deploying Cisco Service Provider Network Routing (SPROUTE) 1.2

SPEDGE Implementation -- SP Next-Generation Edge Network Services v1.x

Course Outline:

- **Module 1: Service Provider Connectivity with BGP**
  - Lesson 1: Defining Customer-to-Provider Connectivity Requirements
  - Lesson 2: Connecting a Customer to a Service Provider
- **Module 2: Scale Service Provider Networks**
  - Lesson 1: Scaling BGP in Service Provider Networks
  - Lesson 2: Introducing BGP Route Reflectors and Confederations
- **Module 3: Secure and Optimize BGP**
  - Lesson 1: Implementing Advanced BGP Operations
  - Lesson 2: Improving BGP Convergence
  - Lesson 3: Improving BGP Configuration Scalability
- **Module 4: Multicast Overview**
  - Lesson 1: Introducing IP Multicast
  - Lesson 2: Defining Multicast Distribution Trees and Forwarding
  - Lesson 3: Multicast on the LAN
  - Lesson 4: Populating the Mroute Table
- **Module 5: Intradomain and Interdomain Multicast Routing**
  - Lesson 1: Introducing the PIM-SM Protocol
  - Lesson 2: Implementing PIM-SM Enhancements
  - Lesson 3: Implementing Interdomain IP Multicast
  - Lesson 4: Identifying Rendezvous Point Distribution Solutions
- **Module 6: Service Provider IPv6 Transition Implementations**
  - Lesson 1: Introducing IPv6 Services
  - Lesson 2: Defining IPv6 Transition Mechanisms
  - Lesson 3: Deploying IPv6 in the Service Provider Network

Lab Outline

- Lab 2-1: Implement BGP Route Reflectors
- Lab 3-1: Implement BGP Security Options
- Lab 3-2: Improve BGP Scalability
- Lab 4-1: Implement Layer 2 and Layer 3 Multicast
- Lab 5-1: Enable and Optimize PIM-SM
- Lab 5-2: Implement PIM-SM Enhancements
- Lab 5-3: Implement Rendezvous Point Distribution
- Lab 6-1: Implement a DHCPv6 Server with Prefix Delegation
- Lab 6-2: Implement IPv6 Multicasting
- Lab 6-3: Implement Tunnels for IPv6

Return to Top
