HCIP-Datacom-Advanced Routing & Switching Technology

Objectives

After completing the HCIP-Datacom-Advanced Routing & Switching Technology training, you will be able to:

(1)Describe OSPF and IS-IS fast convergence technologies.(2)Configure OSPF and IS-IS equal-cost routes. (3)Describe the application scenarios of OSPF forwarding addresses. (4)Using regular expressions in AS_Path filter and community filter configurations. (5)Configure BGP ORF and peer group functions.

(6)Analyze the differences between OSPFv3 and OSPFv2. (7)Describe the IPv6 extensions of IS-IS. (8)Describe the IPv6 extensions of BGP. (9)Describe the working principle of VLAN aggregation. (10)Describe the application scenarios of MUX VLAN. (11)Describe the QinQ implementation mode. (12)Describe the types and configurations of port isolation. (13)Describe the technical principles of port security. (14)Implements MAC address flapping detection. (15)Expound the switch traffic suppression and storm control functions. (16)Describe the application scenarios of DHCP snooping. (17)Describe the working principle of IP Source Guard. (18)Describe the working principle of MPLS. (19)Describe the basic concepts and working mechanism of LDP. (20)Describe the basic concepts of MPLS VPN. (21)Describe route transmission and label distribution of MPLS VPN. (22)Describe the MPLS VPN data forwarding process. (23)MPLS VPN Deployment (Intranet Solution) (24)MPLS VPN Deployment (Hub&Spoke Solution). (25)Describe the extended functions and features of OSPF for MPLS VPN. (26)Describe routine maintenance items. (27)Describe the functions and features of Information Center. (28)Using Common Maintenance Tools (29)Describe troubleshooting methods. (30)Analyze the fault that the neighbor relationship of the routing protocol cannot be established. (31)Write the troubleshooting guide. (32)Describe the operation procedure and specifications of the migration. (33)Describe common migration scenarios.

Target Audience

Who want to become senior Data Communication engineers. Who wants to obtain the HCIP-Datacom-Advanced Routing & Switching Technology Certification.

Prerequisites

Be familiar with common operations of Huawei network devices. Have the knowledge and skills described in the HCIA-Datacom and HCIP-Datacom-Core Technology course.

Training Content

HCIP-Datacom-Advanced Routing & Switching Technology Training Content(5 Working days)
1. Advanced IGP Features

Advanced IGP Features: OSPF fast convergence, OSPF Route Control, Other OSPF Features, Advanced IS-IS Features

2. Advanced BGP Features

Advanced BGP Features: BGP route control, Introduction to BGP Features, Networking of BGP RRs

3. IPv6 Routing

IPv6 Routing: IPv6 static route, OSPFv3 Principles and Configuration, IS-IS (IPv6) Principles and Configuration, BGP4+ Principles and Configuration

4. Advanced Ethernet Technologies

Advanced VLAN Technology: Super-VLAN, MUX-VLAN, QinQ

Ethernet Switching Security: Port Isolation , MAC Table Security, Port security , MAC Address Flapping Prevention and Detection , MACsec , Switch traffic control , DHCP Snooping , IP Source Guard

5. MPLS Technology

MPLS Principles and Configuration: MPLS Overview, MPLS Forwarding, Static LSP

MPLS LDP Principles and Configuration: Basic Concepts of LDP, Working Principle of LDP, Basic LDP Configurations

MPLS VPN Principles and Configuration: MPLS VPN Overview, MPLS VPN route exchange, MPLS VPN packet forwarding, MPLS VPN Configuration and Implementation

MPLS VPN Deployment and Application: MPLS VPN Application and Networking Overview, Typical Application Scenarios and Deployment of MPLS VPN, OSPF VPN expansion

6. Network O&M

Network O&M: Routine Maintenance, Information collection tool

7. Troubleshooting

Troubleshooting: Structured troubleshooting process, Core Ideas and Methods of Network Troubleshooting, Troubleshooting Common Network Faults

8. Network Migration

Network Migration: Basic Concepts of Migration, Migration Process