Huawei Certified ICT Professional-Datacom Advanced Routing & Switching Technology

Course Objectives

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

- Describe OSPF and IS-IS fast convergence technologies.
- Configure OSPF and IS-IS equal-cost routes.
- Describe the application scenarios of OSPF forwarding addresses.
- Using regular expressions in AS_Path filter and community filter configurations.
- Configure BGP ORF and peer group functions.
- Analyze the differences between OSPFv3 and OSPFv2.
- Describe the IPv6 extensions of IS-IS.
- Describe the IPv6 extensions of BGP.
- Describe the working principle of VLAN aggregation.
- Describe the application scenarios of MUX VLAN.
- Describe the QinQ implementation mode.
- Describe the types and configurations of port isolation.
- Describe the technical principles of port security.
- Implements MAC address flapping detection.
- Expound the switch traffic suppression and storm control functions.
- Describe the application scenarios of DHCP snooping.
- Describe the working principle of IP Source Guard.
- Describe the working principle of MPLS.
- Describe the basic concepts and working mechanism of LDP.
- Describe the basic concepts of MPLS VPN.
- Describe route transmission and label distribution of MPLS VPN.
- Describe the MPLS VPN data forwarding process.
- MPLS VPN Deployment (Intranet Solution)
- MPLS VPN Deployment (Hub&Spoke Solution)
- Describe the extended functions and features of OSPF for MPLS VPN.
- Describe routine maintenance items.
- Describe the functions and features of Information Center.
- Using Common Maintenance Tools
- Describe troubleshooting methods.
- Analyze the fault that the neighbor relationship of the routing protocol cannot be established.
- Write the troubleshooting guide.
- Describe the operation procedure and specifications of the migration.
- Describe common migration scenarios.

Course 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.

Audience

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

Course Outline

- **Advanced IGP Features**
  - OSPF fast convergence
  - OSPF Route Control
  - Other OSPF Features
  - Advanced IS-IS Features
- **Advanced BGP Features**
  - BGP route control
  - Introduction to BGP Features
  - Networking of BGP RRs
- **IPv6 Routing**
  - IPv6 static route
  - OSPFv3 Principles and Configuration
  - IS-IS (IPv6) Principles and Configuration
  - BGP4+ Principles and Configuration
- **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
- **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
- **Network Operation and Management**
    - Routine Maintenance
    - Information collection tool
- **Troubleshooting**
    - Structured troubleshooting process
    - Core Ideas and Methods of Network Troubleshooting
    - Troubleshooting Common Network Faults
- **Network Migration**
    - Basic Concepts of Migration
    - Migration Process

Associated Certifications

HCIP-Datacom-Advanced Routing & Switching Technology
(Huawei Certified ICT Professional-Datacom-Advanced Routing & Switching Technology)

Course Duration

5 days