Huawei Certified ICT Professional Datacom SDWAN : Planning and Deployment

Duration	Delivery Method	Level
5 days	Online / Instructor Led	Professional

The Huawei Certified ICT Professional Datacom SDWA: Planning and Deployment Planning and Deployment course is designed for professionals seeking expertise in the planning, deployment, and management of SD-WAN solutions, particularly Huawei's SD-WAN technology. This comprehensive training covers WAN interconnection basics, key technologies, and advanced SD-WAN solution deployment strategies. Learners will delve into various components such as GRE and IPsec VPN technology, BGP EVPN, QoS principles, and High Availability (HA) technology. Additionally, the course emphasises the importance of Multi-Service Gateways, management, and Operations & Maintenance (O&M) practices.In Module 3, participants will get an in-depth understanding of the Huawei SD-WAN technical overview, deployment tactics, networking principles, application experience, security features, and intelligent O&M mechanisms.

The final module guides learners through an SD-WAN design practice tailored to financial scenarios, reinforcing the application of knowledge in real-world contexts. This course will significantly enhance the learners' capabilities in SD-WAN deployment and design, ensuring they are well-equipped to handle the complexities of modern WAN interconnection.

Audience Profile

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

Prerequisite

To ensure that you are well-prepared to undertake the HCIP-Datacom-SD-WAN Planning and Deployment course and derive maximum benefit from the content, the following prerequisites are recommended:

- Basic understanding of networking concepts, including TCP/IP, routing, and switching.
- Familiarity with Wide Area Network (WAN) technologies and services.
- Knowledge of network security fundamentals, such as firewalls and VPNs.
- Experience with network design and architecture considerations.
- Prior exposure to Quality of Service (QoS) concepts and their implementation.
- Understanding of basic network troubleshooting and operations (O&M) principles.
- It is helpful to have some hands-on experience with network devices, preferably Huawei equipment

Course Objective

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

- Describe basic concepts of SD-WAN deployment planning.
- Describe the management boundary of SD-WAN multi-tenant.
- Describe SD-WAN deployment modes and application scenarios.
- Describe the overall process of implementing application experience.
- Describe the function of link quality detection.
- Describe HQoS application scenarios.
- Describes the basic principles and application scenarios of the service security function in the SD-WAN solution.
- Describes various visualised monitoring functions provided by iMaster NCE-WAN.
- Describes various fault diagnosis methods provided by iMaster NCE-WAN.
- Describe the basic concepts of tunnels.
- Describe the basic working principles of GRE.
- Describe the basic security mechanism of GRE.
- Describe the basic application scenarios of GRE.
- Describe the basic concepts of IPsec.
- Describe the basic working principles of IPsec.
- Describe the basic application scenarios of IPsec.
- Describe the basic concepts of MP-BGP.
- Describe the origin of EVPN.

Course Content

Module 1: Advanced IGP Features

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

Module 2: Advanced BGP Features

- BGP route control, Introduction to BGP Features, Networking of BGP RRs

Module 3: IPv6 Routing

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

Module 4: Advanced Ethernet Technologies

- 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

Module 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

Module 6: Network 0&M

- Routine Maintenance, Information collection tool

Module 7: Troubleshooting

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

Module 8: Network Migration

- Basic Concepts of Migration, Migration Process