# HCIA-Datacom V1.0 Exam Outline

## Huawei HCIA-Datacom V1.0 Certification Exam

| Certification | Exam Code | Exam Name | Language | Exam Cost | Exam Duration | Pass Score/ Total Score |
|---|---|---|---|---|---|---|
| HCIA-Datacom | H12-811 | HCIA-Datacom V1.0 | ENU/CHS | 200USD | 90 mins | 600/1000 |

## Exam Contents

The HCIA-Datacom V1.0 exam covers:

- Basic knowledge of the TCP/IP protocol stack
- Basic principles of the Open Shortest Path First (OSPF) routing protocol and its implementation in Huawei routers
- Ethernet technology, spanning tree, VLAN, stacking technology and their implementation in Huawei switches
- Network security technology and their implementation in Huawei routing and switching devices
- WLAN technologies and basic principles and their implementation on Huawei wireless devices;
- Basic principles of network management (such as SNMP)
- Basic principles of WAN protocols (such as PPP) and their implementation on Huawei routers
- Basic knowledge of IPv6 and basic principles and implementation of ICMPv6 and DHCPv6
- Basic principles of SDN and implementation of Huawei products and solutions
- Basic principles of programming automation.

Key Points Percentage

| Key Points | Percentage |
|---|---|
| 1. Data communication and network basics | 8% |

| Key Points | Percentage |
|---|---|
| 2. Build an IP network with interconnection and interworking | 27% |
| 3. Ethernet switching network construction | 28% |
| 4. Cyber security infrastructure and network access | 8% |
| 5. Network services and applications | 5% |
| 6. WLAN basics | 10% |
| 7. WAN basics | 3% |
| 8. Network management and O&M | 3% |
| 9. IPv6 basics | 5% |
| 10. SDN and automation basics | 3% |

Knowledge Points

1 Data communication and network basics

1.1 Basic Knowledge of Routing and Switching

1.2 Basic network concepts, IP network architecture, and standardization organizations and protocols

1.3 OSI and TCP/IP protocol models, functions of each layer, and packet encapsulation

1.4 ARP Principles

1.5 TCP/UDP Principles

1.8 Data Forwarding Process

1.9 Basic Concepts and Life Cycle of Campus Network

1.10 Basic Principles and Operations of the VRP

2 Build an IP network with interconnection and interworking

2.1 IPv4 basics (basic concepts, address classification, and subnet division)

2.2 Basics of IP Routing and Forwarding Principles of Layer 3 Devices

2.3 Principles of the static routing, basic principles of the OSPF protocol, and implementation in the VRP

2.4 How to use static route and OSPF technologies to build small-sized routing network in Huawei Router.

3 Ethernet switching network construction

3.1 Ethernet technology and basic principles of switches

3.2 STP, RSTP, and VLAN Principles and Implementation in the VRP

3.3 Basic principles and configuration of technologies such as link aggregation and stacking

3.4 How to use technologies such as STP, RSTP, and VLAN to build a small-scale switching network.

4 Cyber security infrastructure and network access

4.1 Basic Principles and Configuration Methods of ACLs

4.2 AAA Principles and Application Scenarios

4.3 Basic Principles of NAT

4.4 NAT Application Scenarios and Configuration Methods

5 Network services and applications

5.1 Basic Principles of Telnet, FTP, TFTP,DHCP,DNS,NTP, and HTTP

5.2 Configuration of FTP,DHCP and Telnet

6 WLAN basics

6.1 Basic Concepts of WLAN (802.11 Protocol Family, Basic Devices, and Basic Networking)

6.2 WLAN Basic Working Process

6.3 Basic WLAN Configuration

7 WAN basics

7.1 Basic WAN Concepts

7.2 PPP and PPPoE Configuration

7.3 Basic Concepts of MPLS/SR

8 Network management and O&M

8.1 Basic Concepts of Network Management

8.2 SNMP Protocol Basics

8.3 Basic Concepts of Huawei SDN Solution

9 IPv6 basics

9.1 IPv6 basics (address format , packet format, and address classification)

9.2 IPv6 Address Configuration Method and Process

9.3 IPv6 Static Route Configuration

10 SDN and automation basics

10.1 Basic SDN Concepts and Huawei Products and Solutions

10.2 Basic NFV Concepts and Huawei Products and Solutions

10.3 Basic Concepts of Automatic O&M

10.4 Python Basics

NOTE

The content mentioned in this document is a general exam guide only. The exam may also contain more specific or related content that is not mentioned above.

Reference

HCIA-Datacom V1.0 Training Courses

Recommended Training

HCIA-Datacom V1.0 training