

Szkolenie: Huawei
HCIA-Datacom

Cel szkolenia:

Huawei Certified ICT Associate-Datacom training and certifying engineers with basic datacom knowledge and skills.

Objectives

After completing the training, you will be able to:

- Understand the definition of data communication and the capability model of data communication engineers.
- Understand the network reference model and the entire data communication process.
- Be familiar with the VRP system and be able to perform basic operations.
- Understand IPv4 address protocol and related concepts
- Understand the forwarding principles of Layer 3 devices such as routers and Layer 3 switches.
- Understand the concept of routing and use static route or OSPF to build a Layer 3 network.
- Understand basic Ethernet concepts and describe the functions and working principles of Layer 2 switching devices.
- Be familiar with common Ethernet protocols, such as VLAN, Spanning Tree Protocol , link aggregation and stacking.
- Configure ACLs and AAA to provide basic security solutions for the network.
- Be familiar with the NAT protocol and master the NAT configuration in different scenarios.
- Master the configuration of common services on enterprise networks, such as DHCP, FTP and Telnet.
- Understand basic WLAN concepts and complete basic configurations of small or medium-sized WLAN networks.
- Understand basic WAN concepts and WAN solutions such as MPLS and SR.
- Have general knowledge of basic concepts of enterprise network management.
- Be familiar with traditional network management and SDN-based network management solutions.
- Have a good command of IPv6 protocols and be able to build small-scale IPv6 networks.
- Have a good command of the campus network construction process. Be able to independently construct small-sized campus networks.
- Understand the basic concepts of SDN and programming automation and master the basics of

Python.

Target Audience

- Who wants to become Data Communication Engineers
- Who wants to obtain the HCIA-Datacom Certification

Plan szkolenia:

- Data Communication and Network Basics
 - Data Communication Network Basics
 - Basic Concepts of Data Communication
 - Data Transfer Process
 - Network Devices and Basic Functions
 - Network Type and Topology Type
 - Network Engineering
 - Network Engineers
 - Network Reference Model
 - What is Data and Data Transfer
 - Common Standard Protocols
 - Layered Model Concept
 - Application Layer and Related Protocols
 - Transport Layer and Related Protocols
 - Network Layer and Related Protocols
 - Data link Layer and Related Protocols
 - Physical Layer and Related Protocols
 - Data Transfer, Encapsulation and Decapsulation
 - Huawei VRP Basics
 - Common Network Devices
 - VRP Basics
 - CLI Command Views
 - Basic Commands and Function Keys of the CLI
- Constructing an Interconnected IP Network
 - Network Layer Protocol and IP Addressing
 - Network Layer Protocol
 - Concept, Classification, and Special IP Addresses of IPv4
 - IP Network and IP Subnet Calculation
 - IP Network Address Planning

- IP Routing Basics
 - Basic Working Principles of Routers
 - Routing Table Concepts
 - Routing and Forwarding Features
 - Static Route Configuration
- OSPF Basics
 - Basic Features of OSPF
 - OSPF Application Scenarios
 - Working Principle of OSPF
 - Basic OSPF configurations
- Constructing an Ethernet Switching Network
 - Ethernet Switching Basics
 - Basic Concepts of Ethernet
 - Concept of MAC Address
 - Working Process and Principles of Layer 2 Switches
 - Composition and Formation of a MAC Address Table
 - VLAN Principles and Configuration
 - Background of VLAN
 - Basic Concepts and Principles of VLAN
 - VLAN Data Communication Process on a Layer 2 Network
 - Basic VLAN Configuration
 - Spanning Tree Protocol
 - Background of STP
 - Basic Concepts and Working Principles of STP
 - Basic Concepts of RSTP and Improvements Compared with STP
 - Basic STP Configuration
 - Other Layer 2 Loop Elimination Technologies
 - Ethernet Link Aggregation and Switch Stacking
 - Basic Concepts of Link Aggregation
 - Working Principles of Manual Link Aggregation
 - Working Principles and Features of Link Aggregation in LACP Mode
 - Basic Concepts of iStack and CSS
 - Implements Communication Between VLANs.
 - Working Principles of Sub-interfaces
 - Working Mechanism of Layer 3 Switches
 - Sub-interface Configuration

- VLANIF Configuration
- Network Security and Network Access Basics
 - ACL Principles and Configuration
 - Basic Principles and Functions of ACLs
 - Basic Structure and Matching Order of ACL Rules
 - Usage of Wildcard mask
 - Basic ACL Configuration
 - AAA Principles and Configuration
 - Basic Principles and Application Scenarios of AAA
 - Basic Configuration of the Local AAA
 - NAT Basics
 - Background of NAT
 - NAT Classification and Technical Principles
 - NAT Configuration in Different Scenarios
- Network Services and Applications
 - Network Services and Applications
 - Principles of TFTP, FTP, DHCP, and HTTP
 - Configuration of FTP and DHCP
- WLAN Basics
 - WLAN Overview
 - Basic Concepts of WLAN and History of 802.11 Protocol suite
 - WLAN devices
 - WLAN Networking Mode
 - WLAN Working Process
 - Basic WLAN Configuration
- WAN Basics
 - WAN Technology Basics
 - Basic WAN Concepts
 - Common WAN Technologies
 - Working Principles of PPP and PPPoE
 - Configuring PPP and PPPoE
 - Basic Concepts of MPLS/SR
- Network Management and O&M
 - Network Management and O&M
 - Basic Concepts of the NMS and O&M
 - Common NMS and O&M Methods and Tools

- Working Principle of SNMP
- SDN-based NMS and O&M Solution
- IPv6 Basics
 - IPv6 Basics
 - Comparison Between IPv6 and IPv4
 - Basic Concepts of IPv6
 - Format and Principle of the IPv6 Packet Header
 - IPv6 Address Format and Address Type
 - IPv6 Address Configuration Method and Procedure
 - Static and Dynamic IPv6 Address Configuration
 - IPv6 Static Route Configuration
- SDN and Automation Basics
 - SDN and NFV Basics
 - Basic SDN Concepts
 - Huawei SDN Products and Solutions
 - Basic NFV Concepts
 - Huawei NFV Products and Solutions
 - Network Programming and Automation
 - Traditional Network O&M Status Analysis
 - Implementation of Network Automation
 - Programming Language
 - Python Coding Specifications
 - Implement Basic Automatic O&M Using Python telnetlib.
- Typical Campus Network Architectures and Practices
 - Typical Networking Architecture and Cases
 - Campus Network Architecture
 - Campus Network Lifecycle
 - Campus Network Construction Cases
 - Campus Network Construction Practice

Wymagania:

- Be familiar with PC operations.
- Basic understanding of IT technologies and network knowledge

Poziom trudności



Certyfikaty:

The participants will obtain certificates signed by Huawei (course completion).

This course also helps you prepare for the Huawei HCIA-Datacom exam.

- Exam Code: H12-811
- Exam Type: Written examination
- Exam Format: Single-answer Question, Multiple-answer Question, True or false, Short Response Item, Drag and Drop Item
- Time: 90min
- Passing Score/Total Score: 600/1000

Prowadzący:

Huawei Certified Trainer.