

HW-DATCA



HUAWEI CERTIFIED ICT ASSOCIATE DATACOM v1.0

DURATION	LEVEL	TECHNOLOGY	DELIVERY METHOD	TRAINING CREDITS
10 Days	Associate	R&S/WLAN/SDN	ILT/VILT	Huawei Voucher

INTRODUCTION

This new 10-day course covers the following content: Routing and switching principles, basic WLAN principles, basic knowledge of network security, basic knowledge of network management and O&M, and basic knowledge of SDN and programming automation. The aim of this course is to train and certify engineers with the skills commonly used in the Datacom field.

AUDIENCE PROFILE

Engineers who need to master basic datacom knowledge and capabilities in small- and medium-sized network planning and design, deployment implementation, and O&M optimization.

PREREQUISITES

Before attending this course, delegates must:

- Be familiar with PC operations
- General knowledge of IT and networking concepts

COURSE OBJECTIVES

After completing this course, delegates 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 VRRP 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.

COURSE CONTENT

Module 1: Data Communication and Network Basics

- Data Communication Network Basics
- Network Reference Model
- Huawei VRP Basics

Module 2: Constructing an Interconnected IP Network

- Network Layer Protocol and IP Addressing
- IP Routing Basics
- OSPF Basics

Module 3: Constructing an Ethernet Switching Network

- Ethernet Switching Basics
- VLAN Principles and Configuration
- Spanning Tree Protocol
- Ethernet Link Aggregation and Switch Stacking
- Implements Communication Between VLANs.

Module 4: Network Security and Network Access Basics

- ACL Principles and Configuration
- AAA Principles and Configuration
- NAT Basics

Module 5: Network Services and Applications

- Principles of TFTP, FTP, DHCP, and HTTP
- Configuration of FTP and DHCP

Module 6: WLAN Basics

- Basic Concepts of WLAN and History of 802.11 Protocol suite
- WLAN devices
- WLAN Networking Mode
- WLAN Working Process
- Basic WLAN Configuration

Module 7: WAN Basics

- Basic WAN Concepts
- Common WAN Technologies
- Working Principles of PPP and PPPoE
- Configuring PPP and PPPoE
- Basic Concepts of MPLS/SR

Module 8: 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

Module 9: 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
- Pv6 Address Configuration Method and Procedure
- Static and Dynamic IPv6 Address Configuration
- IPv6 Static Route Configuration

Module 10: SDN and Automation Basics

- SDN and NFV Basics
- Network Programming and Automation

Module 11: Typical Campus Network Architectures and Practices

- Campus Network Architecture
- Campus Network Lifecycle
- Campus Network Construction Cases
- Campus Network Construction Practice

ASSOCIATED CERTIFICATIONS & EXAM

This course will prepare delegates to take the HCIA Datacom certification exam # H12-811, which will validate proficiency in planning, design, deployment, O&M, and optimization of small- and medium-sized campus networks.

