

HW-WLAN



HUAWEI CERTIFIED ICT ASSOCIATE - WLAN

DURATION	LEVEL	TECHNOLOGY	VERTICAL	DELIVERY METHOD	TRAINING CREDITS
5 Days	Associate	WLAN	ICT Infrastructure	Classroom	Huawei Learning Vouchers

INTRODUCTION

This five-day course is aimed at individuals wanting to master the basics of WLAN; to learn about product features; to get a clear understanding of the WLAN architecture, WLAN access security, the functions of each related component, how to design, deploy and maintain a WLAN network.

AUDIENCE PROFILE

This course is intended for individuals interested in WLAN technologies., who want to become WLAN assistant engineers, and for who wish to obtain the HCIA-WLAN certification.

PREREQUISITES

Before attending this course, delegates should:

- A general familiarity with PC operation system
- A basic understanding of computer technology
- HCIA-Datacom certification or similar knowledge

COURSE OBJECTIVES

On completion of this course, participants should be able to:

- Describe the basic concepts and development history of WLAN.
- Compare WLAN and Wi-Fi.
- Describe typical application scenarios of WLAN technologies.
- Illustrate the challenges and development trends of WLAN.
- Describe basic concepts of wireless communication.
- Distinguish 802.11 protocols and describe Wi-Fi generations.
- Describe the highlights of Wi-Fi 6.
- Describe key WLAN technologies.
- Describe basic concepts in WLAN.
- Describe WLAN networking modes.
- Differentiate WLAN forwarding models.
- Evaluate Huawei's typical WLAN networking solutions.
- Describe the origin and implementation of CAPWAP.
- Understand the CAPWAP tunnel establishment process.
- Describe how an AP joins an AC and how STAs go online.
- Master the working mechanism of STA roaming.
- Explain the WLAN development process.
- Classify Huawei WLAN products.

- Describe features of Huawei WLAN products.
- Identify power supply modes of APs.
- Describe development of the VRP.
- Use VRP basic operation commands.
- Learn the methods of upgrading ACs and APs.
- Distinguish characteristics of Fit and Fat APs.
- Perform service configuration of Fat APs.
- Describe WLAN security threats.
- Describe WLAN security defense mechanisms.
- List common WLAN access authentication modes.
- Understand the WLAN service configuration procedure.
- Configure basic WLAN services.
- Summarize common WLAN faults.
- Describe the WLAN troubleshooting process.
- Know common troubleshooting methods.
- Describe the definition, functions, and classification of antennas.
- Understand the fundamentals and key performance indicators of antennas.
- Distinguish parameters of different antennas.
- Describe the WLAN network planning and delivery process.
- Describe WLAN network requirement collection and site survey.
- Describe the capacity, frequency, and coverage planning of the WLAN network.
- Describe the WLAN network channel planning, AP deployment design, power supply and cabling design, and AP installation mode design.
- Describe WLAN project acceptance methods.

COURSE CONTENT

Lesson 1: WLAN Technology Basics

- WLAN Overview
- Enterprise WLAN Overview
- Challenges Faced by Enterprise WLAN
- Next-Generation Enterprise WLAN Solution

Lesson 2: WLAN Basics

- Basic Concepts of Wireless Communication
- Introduction to 802.11 Standards
- Key WLAN Technologies

Lesson 3: WLAN Fundamentals

- CAPWAP Tunnel
- Key 802.11 Frames
- TA Going-Online Process
- WLAN Roaming

Lesson 4: Wi-Fi 6 Technologies and Products

- Wi-Fi 6 Technologies
- Huawei WLAN Product Family
- Features of Huawei WLAN Products
- AP Power Supply

Lesson 7: WLAN Networking Models

- Basic Concepts in WLAN
- WLAN Networking Architectures
- Typical WLAN Networking Solutions
- WLAN Security and Configuration

Lesson 8: Huawei VRP and Device Upgrade

- Huawei VRP Overview
- Command Line Basics
- WLAN Device Upgrade
- Fat AP Configuration

Lesson 9: WLAN Security

- WLAN Security Threats and Defense
- WLAN Access Security
- WLAN Data Security
- WLAN Network Access Control
- WLAN Security Configuration

Lesson 10: WLAN Service Configuration

- WLAN Service Configuration Procedure
- WLAN Configuration Application
- WLAN Troubleshooting

Lesson 11: WLAN Troubleshooting Basics

- Overview of WLAN Troubleshooting
- Troubleshooting APs' Failures to Go Online
- Troubleshooting STAs' Failures to Go Online
- Troubleshooting AP Signal Issues
- Troubleshooting Slow Internet Access of STAs

Lesson 12: WLAN Project Deployment

- WLAN Antenna Technology
- Antenna Overview
- Concepts Related to Antennas
- Antenna Selection
- Traditional Indoor Distribution System

**Lesson 13: Overview of
Common WLAN Deployment**

- Introduction to WLAN Planning and Design
- WLAN Planning and Design Details
- WLAN Project Acceptance
- WLAN Planning Cases

ASSOCIATED CERTIFICATIONS & EXAM

HCIA-WLAN V3.0 exam #H12-311 will test on the basic WLAN knowledge, including basic WLAN knowledge, WLAN frequency band, IEEE 802.11 protocol, 802.11 MAC architecture, 802.11 physical layer technology, WLAN networking, CAPWAP basic principles, and data forwarding. Wi-Fi 6 technology, WLAN product introduction, AP initial configuration, WLAN online configuration, and WLAN access authentication. WLAN O&M and troubleshooting, antenna technology, and WLAN project deployment.