HCIA-WLAN-IEBW Implementing Enterprise Basic WLAN Training

Target Audience
- Those who hope to become a network associate of WLAN
  Those who hope to obtain HCIA-WLAN certificate

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

Objectives
- On completion of this program, the participants will be able to:
- Describe what WLAN is
- Describe the development process of WLAN technology
- List typical application scenarios of WLAN technology
- Describe the functions and roles of WLAN standards organizations
- Describe the related basic knowledge of RF
- List working principle and specific property of RF
- Describe the working frequency band of WLAN and the basic concepts of channel
- Describe the rules of the working frequency band and channel in each country
- List other technologies related to WLAN
- Describe the latest Huawei product information
- List the application scenarios of Huawei product
- Describe the power supply mode of Huawei product
- Configure Huawei VRP basic command
- Configure AC basic attributes
- Upgrade the software of AC and AP
- Describe the basic concepts of 802.11
- Outline the basic topology structure of WLAN
- List Huawei WDS network mode
- Describe mesh network mode
- Describe the basic knowledge of 802.11
- List the advantages of 802.11n
- Describe the basic concepts of 802.11 physical layer
- Describe spread spectrum technology of 802.11
- Describe DSSS technology
- Describe OFDM technology
- Differentiate Fat AP and Fit AP technology
- Describe CAPWAP tunnel protocol
- Outline the general network mode of WLAN

- Differentiate the forwarding modes of WLAN
- Differentiate different applications of VLAN in WLAN service
- Describe WLAN business configuration processes of Huawei AC6605
- Configure the basic attributes of AC
- Describe the basic features of Huawei product
- List the key features of Huawei product
- Describe the basic concepts of roaming
- Outline the basic principles of roaming
- List the application scenarios of roaming
- Describe security threat of WLAN
- Describe the related concepts of WIDS and WIPS
- Describe the related concepts of AAA
- Outline the WLAN authenticated encryption techniques
- Configure Huawei WLAN security-profile
- Describe the frame format of 802.11
- Differentiate three frame types and functions of 802.11
- Describe 802.11 media access control mechanism
- Analyze media access process of WLAN
- Describe the definition and functions of antenna
- Describe the main performance indicates of antenna
- List some common passive device
- List the basic process of the WLAN network planning
- List basic interference factors of WLAN
- Describe the basic load-balancing ways of WLAN
- List the typical application scenarios of WLAN
- Describe the network planning processes of WLAN
- Point out some typical scenarios of WLAN network planning ways
- Describe the functional features of Huawei WLAN planning tool
- Use Huawei WLAN tool to plan basic WLAN network
- List some functions of eSight
- Configure WLAN service
- Configure the basic information of AC
- Configure AP online
- Configure AP-profile
- Configure radio-profile
- Configure service-set
- Configure AP region
- Configure AP binding profile
- Perform daily maintenance operation tasks of WLAN service
- Describe WLAN commonly used fault troubleshooting

- Describe WLAN common diagnostic commands and tools
- Describe the cause of some common failures of WLAN
- Use troubleshooting tools and troubleshoot some common failures
- Know the general process for rectifying AP online faults
- Understand possible causes for STA association failures

Duration
- 5 working days

Content
- WLAN Historical Overview
- Introduction to wireless networks
- What is WLAN
- WLAN development
- WLAN applications
- WLAN Standards Bodies
- State Radio Regulation of China
- FCC
- ETSI
- IEEE
- Wi-Fi
- IETF
- WAPI
- WLAN RF Principles Introduction
- WLAN RF basics
- WLAN RF principles
- WLAN RF characteristics
- WLAN Frequency Bands
- Frequency and channel introduction
- 2.4GHz bands
- 5GHz bands
- Other technology
- Huawei WLAN Product Introduction
- Huawei WLAN equipment solution introduction
- Huawei WLAN equipment application
- Huawei WLAN equipment power supply mode introduction
- VRP Introduction and Basic Configuration
- Introduce the Huawei VRP
- Configuring basic AC attributes
- AC and AP software upgrade
- The basic operation of the AC

- Use hype terminal to connect equipment
- Modify the Device Name
- Configuring the console user interface
- Configuring the VTY user interface
- Checking the configuration
- Reboot the device
- WLAN Topologies Introduction
- Basic elements of IEEE 802.11
- WLAN topologies introduction
- 802.11 Protocol Introduction
- 802.11a/b/g protocol introduction
- 802.11n protocol introduction
- 802.11 Physical Layer Technology
- 802.11 physical layer basics
- 802.11 physical layer technology Introduction
- CAPWAP Fundamentals
- AP technology introduction
- CAPWAP tunnel introduction
- WLAN Networking Introduction
- WLAN Network Mode
- Forward mode introduction
- The application of VLAN in WLAN
- WLAN Network Configuration
- WLAN configuration roadmap
- WLAN Layer 2 Network Configuration
- Configure AC and AP to be Connected
- Configure global parameters on the AC
- Configure the APs go online
- Configure WLAN-ESS interfaces
- Configure radio-profile, security-profile, traffic-profile and service-set
- Configure data forward-mode
- Configure VAPs and deliver configuration to the APs
- Huawei WLAN Product Features Introduction
- The basic characteristics of Huawei WLAN product
- The key characteristics of Huawei WLAN product
- WLAN Roaming
- Roaming concept introduction
- Roaming basic principle Introduction
- Roaming application scenarios
- WLAN Security Introduction

- WLAN Security threat introduction
- WIDS/WIPS introduction
- AAA introduction
- WLAN Access Security and Configuration Introduction
- WLAN authentication technology
- WLAN encryption technology
- WLAN access security policy
- WLAN Access Security Configure
- Configure AC6605 access security
- Configure a RADIUS server template
- Configure WPA authentication
- Configure WPA2 authentication
- Configure different Encryption
- 02.11 MAC Layer Introduction
- 802.11 frames
- Data frames
- Control frames
- Management frames
- 802.11 Media Access Control
- 802.11 media access control Mechanism
- WLAN media access process
- Antenna
- Antenna concept introduction
- Antenna basics
- Antenna parameters introduction
- Other device introduction
- WLAN Layer 3 Network Configuration
- Configure data forward-mode
- Configure AC and AP to be connected
- VLAN planning and allocate in Network
- Make the APs gone online
- Configure WLAN-ESS interfaces
- Configure Radio, security-profile, traffic-profile and service-set
- Configure VAPs and deliver configuration to the APs
- WLAN Basic Network Planning Introduction
- The basic flow of WLAN planning
- WLAN signal interference introduction
- Huawei load balancing technology
- WLAN Planning Scheme and Typical Cases Introduction
- WLAN typical application scenario

- WLAN planning flow
- Indoor AP typical cases
- Indoor distributed AP typical cases
- Outdoor AP typical cases
- Huawei WLAN Planner
- Huawei WLAN planner basic function
- Plan Huawei WLAN
- eSight Function and Wizard Configuration Introduction
- eSight introduction
- Configure WLAN business by wizard
- Manual configure WLAN business use eSight
- Configure basic parameters on the AC
- Configure AP online
- Configure AP profile
- Configure radio profile
- Configure ESS profile
- Configure AP regions
- eSight WLAN Maintenance
- Manage and maintain WLAN
- Operation demonstration
- WLAN Troubleshooting
- Troubleshooting methods introduction
- Common diagnostic commands and Tools Introduction
- WLAN common troubleshooting
- WLAN Troubleshooting Cases
- Analysis on APs' Failure to Go Online
- Analysis on STA Association Failure