



## HW-POEW

# PLANNING AND OPTIMIZING ENTERPRISE WLAN

DURATION	LEVEL	TECHNOLOGY	VERTICAL	DELIVERY METHOD	TRAINING CREDITS
5 Days	Professional	WLAN	ICT Infrastructure	Classroom	NA

## INTRODUCTION

This five day course aims to provide WLAN engineers knowledge on how to design and optimize a WLAN network for indoor settled and distributed, as well as outdoor WLAN networks. The curriculum covers the various types of WLAN network deployment, data design, equipment and antenna selection, parameter calculation and site survey.

## AUDIENCE PROFILE

This course is intended for individuals that:

- Wants to become senior WLAN engineers
- Partake in WLAN planning and optimization
- Obtain HCIP-WLAN certification

## PREREQUISITES

Before attending this course, delegates should meet the following prerequisites:

- HCIA – WLAN certification or similar knowledge

## COURSE OBJECTIVES

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

- Demonstrate a comprehensive and thorough understanding of Huawei WLAN products and technologies
- ability to use WLAN product to plan, design, deploy and optimize WLAN of large and medium-sized enterprises.

## COURSE CONTENT

### Lesson 1 : WLAN Overview

- WLAN Basics
- WLAN Application on Enterprise Networks: BYOD
- Huawei WLAN Devices and Models
- Usage Scenarios and Characteristics of WLAN on Industry Networks
- Carrier WLAN Situation

### Lesson 2: WLAN Planning and Optimization Overview

- WLAN Project Lifecycle
- WLAN Planning Importance
- WLAN Planning Methods
- WLAN Optimization Methods

### Lesson 3: WLAN Pre-sales Network Planning

- Necessity of pre-sales network planning in the WLAN project
- Procedure of pre-sales network planning in the WLAN project
- Precautions of pre-sales network planning in the WLAN project

### Lesson 4: Clarifying Customer Requirements

- Basic Requirements
- High-level Requirements

### Lesson 5: Standards

- Standard Organizations
- Frequency Band Standards

- EIRP

### Lesson 6: WLAN HLD at the Early Stage

- Planning Scenarios
- WLAN Interference Sources
- AP Calculation
- Product Selection and Placement
- WLAN Planning Software

### Lesson 7: Brief WLAN Planning Scenario

- Background
- Other Requirements
- Planning Discussion
- Detailed Planning

### Lesson 8: Site Survey

- Site Survey Overview
- Survey Preparations

- Site Survey
- Typical Scenarios

### Lesson 9: WLAN Data Planning

- Hierarchical Network Design
- IP Address Planning
- VLAN and DHCP Planning
- Route Planning

### Lesson 10: WLAN Architecture Design

- Basic WLAN Architectures and Components
- AC Forwarding and Deployment Modes
- AC Networking Modes and Layers
- Planning Typical WLAN Architectures
- Other WLAN Architectures

### Lesson 11: PoE Planning

- PoE Components
- PoE Power Budget
- PoE Configuration

### Lesson 12: WLAN HA Planning

- WLAN HA Overview
- AC Dual-Link Cold Standby
- AC Dual-Link Hot-Standby
- VRRP Dual-Node Hot-Standby
- N+1 Cold Standby

### Lesson 13: Indoor Settled WLAN Design Guide

- Project Preparation
- Coverage Design
- Deployment Design
- Bandwidth Design
- Power Supply and Cable Route Design
- Project Case

### Lesson 14: Indoor Distributed WLAN Planning

- Indoor Distributed WLAN Planning
- Indoor Distributed Planning Overview
- Indoor Distributed Components
- Indoor Distributed Network Planning
- Indoor Distributed Solutions
- WOC Solution

### Lesson 15: WLAN Outdoor Coverage

- Project Preparation
- Product Selection
- Capacity Design
- Deployment Design
- Typical Application Scenarios

### Lesson 16: WLAN Roaming Planning

- Basic Principles of Roaming
- Basic Concepts of Roaming
- Roaming Planning

### Lesson 17: WLAN WDS&Mesh Planning

- Project Preparation
- Product Selection
- Backhaul Link Design
- Bandwidth Design
- Deployment Design
- Typical Application Scenarios

### Lesson 18: WLAN Network Planning in Typical Scenarios

- Introduction to Typical WLAN Scenarios
- WLAN Network Planning in Typical Scenarios

### Lesson 19: WLAN Network Design Overview

- Huawei Enterprise Service Lifecycle Model
- Basic Principles for WLAN Network Planning
- Huawei WLAN Networking Modes

### Lesson 20: WLAN Design for Small - and Medium-scale Enterprises

- Application of WLAN in Small- and Medium-scale Enterprises
- Networking Modes of Small- and Medium-scale Enterprise WLANs
- Basic Planning of Small- and Medium-scale Enterprise WLANs
- Detailed Design of Small- and Medium-scale Enterprise WLANs

### Lesson 21: WLAN Campus Network Solution

- The Trend and Challenge of WLAN Campus Network
- Huawei WLAN Campus Network Solution
- Application Scenarios of WLAN Campus Network

### Lesson 22: WLAN Optimization Overview

- WLAN Optimization Overview
- WLAN Optimization Process
- WLAN Data Optimization
- Basic WLAN Parameter Calibration
- WLAN Optimization Benefits

### Lesson 23: WLAN Interference Optimization

- WLAN Interference Test
- WLAN Interference Sources
- Analysis of WLAN Interference Types
- WLAN Interference Optimization Examples

### Lesson 24: WLAN Coverage Optimization

- AP Quantity Adjustment
- AP Location Adjustment
- AP Power Adjustment
- Antenna Location Adjustment
- Coverage in High Density Scenarios

### Lesson 25: Introduction to WLAN Tester

- WLAN Tester Introduction
- WLAN Tester Usage Procedure

### Lesson 26: Huawei WLAN High-density Venue Solution Introduction

- The Trend and Challenge of WLAN High-density Venue
- Huawei WLAN High-density Venue Solution
- Successful stories of WLAN High-density Venue

## ASSOCIATED CERTIFICATIONS & EXAM

HCIP-WLAN-POEW exam (#H12-322) includes but not limited to the following: WLAN Planning and Optimization, Data Planning, WLAN Architecture Design, Security, Indoor Distributed WLAN, WLAN WDS Mesh, Roaming, WLAN Optimization Overview, WLAN Interference Optimization, Introduction to WLAN Tester 2.0, Huawei WLAN High-Density Stadium Solution.