



WDBWL v1.2 Cisco Deploying Basic Wireless LANs

Course Length: 3

Course Delivery: Traditional Classroom • Online Live

Course Overview

This 3-day instructor-led, hands-on course is designed to give you a firm understanding of the Cisco Unified Wireless Networking for enterprise deployment scenarios. In this course, you will learn the basics of how to install, configure, operate, and maintain a wireless network, both as an add-on to an existing wireless LAN (WLAN) and as a new Cisco Unified Wireless Networking solution.

This course will build on top of Wireless LAN terms, concepts, protocols, architecture and Wireless LAN Characteristics introduced in the Wireless LAN Essentials eLearning course. In this course you will investigate the components, features, and deployment aspects of the system. You will have the opportunity to reinforce what you learn with hands-on labs. This course focuses on the essential network elements of a WLAN: the access points (APs) and wireless LAN controllers (WLCs).

This course provides high-level information about the optional but recommended network management and services appliance components of a Cisco Unified Wireless Network - the Cisco Prime Infrastructure (PI), and Mobility Services Engine (MSE) but does not provide hands-on labs and in-depth coverage of these components. The Cisco management platform and MSE are covered in more depth in a separate course, Managing Cisco Wireless LANs (WMNGI).

At the end of this training course, you'll be able to:

- Differentiate the characteristics of a unified wireless LAN architecture, and configure and test the controllers, access points, and basic features
- Differentiate the characteristics of a FlexConnect architecture, configure and deploy a FlexConnect based wireless LAN
- Perform routine maintenance, network monitoring, and common troubleshooting tasks on the Cisco wireless LAN
- Describe and perform configuration with Ciscos new Ease of Use wizard, and best practices audit

Audience

The primary audience for this course is as follows:

- Cisco Installers
- Channel Installers
- Customer Installers



- Cisco System Engineers
- Channel System Engineers
- Cisco Field Engineers
- Channel Field Engineers
- Customer Field Engineers
- Cisco Technical Support/TAC
- Channel Technical Support/TAC
- Customer Technical Support/TAC
- Cisco Technical Marketing Engineers
- Cisco Network Consulting Engineers

The secondary audience for this course is as follows:

- Cisco Network Planners
- Channel Network Planners
- Customer Network Planners

Prerequisites

- Prior completion of the Cisco Wireless LAN Essentials eLearning course
Click on the above link to sign up for the WLE course
- Knowledge of basic networking principles, TCP/IP, bridging, routing protocol, and VLAN operation
- Cisco CCNA certification or equivalent work experience
- Basic Microsoft Windows, Windows networking, and Internet browser navigation skills

OutlineModule 1: Unified Deployments

Lesson 1: Performing the Initial Wireless LAN Controller Configuration

- Initial Setup
- Cisco Ease of UseOverview
- Connect to the WLC Web Interface
- IPv6 Support
- Summary

Lesson 2: Describing Unified AP Modes of Operation



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- AP Operational Modes
- AP Local Mode
- AP Monitor Mode
- AP Rogue Detector Mode
- AP Sniffer Mode
- AP Bridged Mode
- AP SE-Connect Mode
- AP FlexConnect Mode
- OfficeExtend
- Summary

Lesson 3: Understanding the AP Association Process

- AP Discovery and Join Process
- AP Join Order
- AP Failover Process
- Summary

Lesson 4: User Interfaces to the System

- Cisco WLC Settings
- Configuration Settings Located Under the WLANs Heading
- Configuration Settings Located Under the Controller Heading
- Configuration Settings Located Under the Wireless Heading
- Configuration Settings Located Under the Security Heading
- Configuration Settings Located Under the Management Heading
- Cisco WLC CLI Settings
- Using the Cisco Prime Infrastructure for WLC Configuration
- Summary

Lesson 5: Radio Resource Management and CleanAir

- Split MAC Architecture
- Radio Resource Management
- Cisco CleanAir Implementation
- Cisco CleanAir Concepts
- Air Quality Configuration and Reporting
- Cisco CleanAir-Enabled RRM
- 8.1 WiFi Interference Awareness (EDRRM)
- Summary



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Lesson 6: Administering WLANs and AP Groups

- Wireless LANs
- Passive Clients
- AP Groups
- RF Profiles
- Summary

Lesson 7: Configuring Mobility Groups and Roaming

- The Terminology of Roaming
- Wireless Roaming Concepts
- Auto-anchor Mobility
- Static IP Mobility
- Summary

Lesson 8: Configuring Security Options

- Configuring the Local Database
- MAC Filtering
- Access Control Lists
- Peer-to-Peer Blocking Mode
- Configuring RADIUS Authentication
- Local EAP
- LDAP Configuration
- Controlling AP Association via AP Authentication
- Cisco TrustSec for Wireless
- Management Frame Protection
- 802.11w Brings a Standards Based MFP solution
- Wi-Fi Direct
- Security Policy Logic
- Configuring WLANS with Enterprise Security
- Summary

Lesson 9: Performing General Administration

- Network Routes
- Cisco Discovery Protocol
- DHCP Services
- Multicast Services
- Multicast Video Delivery Challenges



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- Evolving Need for Video over WLAN
- mDNS aka Bonjour Gateway
- Application Visibility and Control (AVC)
- Updates to AVC
- Summary

Lesson 10: Providing Guest Access

- Defining Guest Access
- Methods for Providing Guest Access
- Summary

Module 2: Deploying The FlexConnect Architecture

Lesson 1: FlexConnect Deployments

- Stand-Alone Mode
- Local Authentication
- Split Tunneling
- Summary

Lesson 2: FlexConnect Configuration and Operation

- Fast Roaming
- AAA Override
- Peer-to-Peer
- FlexConnect ACLs
- FlexConnect Groups
- Summary

Lesson 3: 8.1 FlexConnect Enhancements

- 8.1 AVC FlexConnect Overview
- 8.1 FlexConnect Group VLAN Support
- 8.1 FlexConnect AAA Override of VLAN Name
- 8.1 FlexConnect Client Debugging on AP
- Summary

Module 3: Maintaining and Troubleshooting a Cisco Wireless LAN

Lesson 1: Performing Routine Maintenance



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- Locate Key Controller Information
- Locate Key AP Information
- Upgrade Controller Code
- AP Pre-Image Download
- WLC Administration
- AP Administration
- Summary

Lesson 2: Configuring Policies and Management

- Wireless Protection Policies
- Managing Rogue Devices
- Intrusion Detection Management
- Aggressive Load Balancing
- Monitoring Clients
- Verifying Client Connectivity
- Summary

Lesson 3: Gathering Data

- Gathering Wireless Network Performance Data
- Using the AP to Gather Packets
- Message Logging
- WLC Statistics
- Monitoring Clients
- Summary

Lesson 4: Troubleshooting in a Cisco Unified Wireless Network

- Define a Methodology
- PoE issues with newer ac APs
- AP Association Troubleshooting
- Analysis Tools Available in a Cisco Unified Wireless Network
- Using WLC CLI and GUI Commands for Troubleshooting
- Summary

Module 4: Cisco User Interface Enhancements

Lesson 1: Ease of Use Features

- Ease of Use Features - Overview
- Evolution



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- Configuration
- Best Practices Audit
- Summary

Module 5: Appendix

Lesson 1: Cisco Wireless LAN Essentials Refresher

- Basic Networking and Wireless LAN Terms, Concepts, and Protocols (A Review)
- Cisco Wireless LAN Architectures
- Locating Key Documentation
- Reviewing Cisco Wireless LAN Characteristics
- Cisco Wireless LAN Security

Lesson 2: Pre-Deployment Planning

- Planning a Pre-Deployment
- Planning Tools
- Placing an AP

Lesson 3: Autonomous Deployments

- Configuring an AP
- Autonomous AP Modes of Operation
- 8.0 Autonomous AP Features
- 8.1 Autonomous AP Features
- Other Autonomous APs

Lab Outline

Guided Lab 1: Perform the Initial Controller Configuration

Guided Lab 2: Unified AP Modes of Operation

Guided Lab 3: AP Association Options

Guided Lab 4: Controller Web Interface

Guided Lab 5: RRM and CleanAir Configuration

Guided Lab 6: Configuring Security Parameters on the WLC

Guided Lab 7: AVC Configuration

Guided Lab 8: Configuring Basic B2C Guest Access and Web Authentication

Guided Lab 9: FlexConnect Local Switching

Guided Lab 10: Perform the Controller Configuration Using the Ease of Use Setup Wizard

To register or for more information call
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