

CCIE Wireless Bootcamp (CCIEWI)

Duration 5 Days

COURSE CONTENT

CCIE Wireless Lab Bootcamp (CCIEWL) is a five-day day instructor-led course, designed to help you prepare for the CCIE wireless certification, an expert-level certification specializing in the wireless field. The goal of the course is to provide you with information and practice activities to prepare them to help design, install, configure, monitor and conduct advanced troubleshooting tasks for a Cisco wireless LAN (WLAN) in small, medium and large size enterprise installations.

This intensive bootcamp is designed to give you a firm knowledge and lab training practice needed to successfully pass the CCIE Wireless lab exam. This class is heavily focused on lab training and practice. You will work on an independent rack offering all the features that may need to be configured in the real lab exam. The course is 90% practice based, offering summaries of the main points of the technology to master, with extended exercises and lab scenarios to develop your skills and speed.

COURSE OBJECTIVES

Upon completing this course, you will be able to meet these overall objectives:

- Configure Autonomous APs
- Manage controller based APs
- Configure and troubleshoot WLANs
- Configure AnyConnect and Windows wireless clients
- Manage the network from the WLC
- Manage the wireless infrastructure from the WCS
- Use the Mobility Service Engine
- Configure and troubleshoot VoWLANs
- Optimize the 802.11 environment
- Configure and troubleshoot wireless security

COURSE OUTLINE

Section 1-1: Autonomous APs

- Open WLAN
- WPA PSK and LEAP WPA2
- EAP-FAST Local and LEAP remote RADIUS with VLANs
- QoS and MAC filter
- WDS Service
- Repeater
- Repeater and VLANs
- Wireless Bridges
- Workgroup Bridge
- Filters
- LAP Migration
- Antenna and radio configurations
- Management Frame Protection
- Peer to Peer Blocking Mode
- Admin Access Control
- AAA cache
- Workgroup bridge limit
- Workgroup Bridge Efficiency
- EAP-Method
- Association Timeout
- Voice Prioritization
- Voice Queue
- AP Time
- Standby
- Wireless Monitoring
- AAA Override
 - Broadcast key rotation

Section 1-2: LAP Management and Controller discovery

- Windows DHCP Option 43
- Windows DNS Option
- IOS DHCP Server Option 43
- Conversion to Autonomous
- Conversion to LAP
- AP Primary controller direct configuration
- CDP Support and port parameters
- AP Priority
- AP Core Dump
- Mesh mode
- Mesh Tuning
- Mesh Advanced Features
- Mesh SRTs
- Mesh Alarms
- Office Extend Aps

Section 2-1: WLANs and AnyConnect

- Open WLAN
- WEP WLAN
- LEAP WLAN
- EAP-FAST WLAN
- CCMP WLAN
- WLAN Override
- DHCP option 82

Section 3-1: Controller Management

- Syslog Server
- Msg Logs
- Specific Logs
- AP Logs
- Specific AP, Specific Logs
- AP LEDs
- Controller Certificate
- Controller local user database size
- Controller CLI timeout
- DHCP Server IP address
- ARP tuning
- Controller Prompt
- Management Over Wireless
- Controller Banner
- LAG optimization

Section 3-2: 802.11 optimization

- 802.11n parameters: MCS support
- 802.11n parameters: Aggregation modes
- 802.11n parameters: features tuning
- 802.11n parameters: Legacy Beamforming
- Clients Roaming efficiency
- AP client load optimization
- Mobility Group and RF groups
- RF group Leader election
- Mobility Group Communications
- Multicast speeds
- Multicast support for Interface Groups
- Broadcast Policy
- DCA Optimization
- Coverage Hole Detection Basic Configuration
- Coverage Hole Detection Advanced Configuration
- RRM SNMP parameters
- Rogue Detection Optimization
- 802.11h
- non-802.11 Interferences Detection and Report
- Specific Clients Needs
- Spectrum Expert

Section 4-1: Wireless Related Security

- H-REAP
- Mesh AP Authorization
- Standard AP Authentication
- AP Authorization
- AP Credentials
- ACL
- Local WLC Management access control
- TACACS+ WLC Administrator access control
- RADIUS WLC Administrator access control
- Wireless Guest Access
- IP Support
- Wired Guest Access
- Client Exclusion
- Trusted AP
- Management Frame Protection
- Public Secure Packet Forwarding
- Rogue Policies
- Probe and Association requests control
- MAC to IP binding
- Authentication Request Floods
- Controller local user database size
- Signature File Modification
- EAP TLS
- FIPS Compliance

Section 5-1: WCS

- WLC communities
- WLAN template
- Scheduling WLAN Availability
- Scheduling AP radio status
- User sessions
- IOS AP conversion
- Telnet /SSH
- CDP
- WCS Banner
- Controller Grouping
- Rogue Detection
- WCS Configuration Backup
- WCS Users Authentication
- WCS Partitioning
- WLC Provisioning
- WCS Logging
- WCS Alarm Configuration
- WCS Controller and APs
- WCS FTP
- WCS Maps

Section 5-2: Mobility Service Engine

- RFID Tag locations
- MSE Appliance
- MSE Backup
- Switch and NMSP
- MSE Optimization
- Presence parameters
- TOMM
- Location accuracy test

- Location notification
- wIPS
- wIPS Profile

Section 6-1: VoWLAN and Video Specific Tasks

- VoWLAN Creation
- VoWLAN optimization
- MOH and multicast
- SIP Support
- Video support
- VideoStream

Special Section 1-0: Implement Network Infrastructure to Support WLANs

- Trunk and access ports
- VTP
- VLAN database
- Port Priority
- EtherChannels
- VLAN optimization
- SVI
- HSRP
- Routing
- Multicast
- QoS
- Spanning tree

Eight-hour lab scenario

WHO SHOULD ATTEND

The primary audience for this course is as follows:

- Network engineers
- Network administrators
- Network managers
- Systems engineers

PREREQUISITES

The knowledge and skills that you must have before attending this course are as follows:

- Advanced CCNA or standard CCNP routing and switching type of level (knowledge of VLANs, switch management and basic routing)

It is also recommended that you have a good knowledge of:

- Wireless standards (IEEE)
- Wireless regulator environment (FCC, ETSI, etc.)
- Wireless certification organization (wifi alliance)
- Cisco Autonomous APs configuration and Management
- Cisco Unified Wireless solution configuration and Management

You will have demonstrated competencies (knowledge, skills and attitudes) equivalent to the following:

- Basic Windows navigation and keyboard literacy skills
- Basic Internet usage skills
- Basic e-mail usage skills