



# CUWN: Cisco Unified Wireless Networking v7.2

Course ID#: 1575-967-ZZ-W

Hours: 35

## Course Content

### Course Description:

In this wireless networking class, you will learn to successfully deploy a Cisco Unified Wireless Network (CUWN) solution.

After a high-level overview of the CUWN, including function, components, capabilities, and features, you will learn to install the access point (AP), associated Wireless LAN Controllers (WLCs), and other CUWN hardware. You will look at ways to administer CUWN, 802.11 security policies, and QoS appropriately to protect and optimize performance on the wireless network. You will configure and implement key CUWN security features to mitigate WLAN security threats, and you will learn how to use troubleshooting methodology and tools to gather and assess system data to isolate equipment failures and security threats.

In hands-on labs, you will learn to complete initial controller configuration using the console management interface and set up the controller using the CLI and GUI. You will configure APs with high availability, set up a mobility group, and then perform AP deployment in a DHCP Option 43 and a DNS/DHCP option. You will provision APs in various options and examine AP behaviors in those configurations. You will explore how to set up interface groups to allow VLAN pooling, configure a controller to handle VideoStream, and set up a WLAN with web authentication as the security policy. You will configure the WLAN controller to support a web authentication client and a wireless client for WPA2 using the PEAP-MSCHAPv2 option. You will create a secured WLAN on the controller using EAP-FAST for authentication based on local EAP and WPA or WPA2 for encryption. You will also perform a pre-image download to pre-load a new controller firmware image into the AP.

### Target Student:

Channel field engineers, Cisco network consulting engineers, new UC partners, customer network engineers, and Cisco customers and employees who are interested in the CUWN solution, have a strong data networking background, and are responsible for planning, deploying, and managing enterprise WLANs using lightweight access points and controllers

### Prerequisites:

- CCNA or equivalent work experience
- Familiarity with Windows and Windows networking
- IUWNE – CCNA Wireless Boot Camp v2.0



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## Topics:

### Module 1: Cisco Wireless LAN Solutions

- Characterizing Cisco Enterprise Wireless LANs
- Hardware Models
- WLC Terms and Protocols

### Module 2: CUWN Installation and Configuration

- Installing Hardware Components
- Configuring the WLC Setup
- Configuring WLC Settings
- Configuring LAG
- Configuring IPv6
- AP Operational Modes
- Configuring 802.11 Protocols, Performance Optimization, and Auto RF
- Implementing Cisco CleanAir

### Module 3: CUWN Administration

- Associating an AP to a WLC
- Configuring Mobility Groups and Roaming
- Administering Individual WLANs and AP Groups
- Configuring QoS
- Service Provider Enhancements

### Module 4: CUWN Security

- 802.11 Weak Security Policy
- Configuring Security Parameters
- Configuring CUWN to Support 802.1X Authentication

### Module 5: CUWN Maintenance and Troubleshooting

- Troubleshooting CUWN
- Gathering VLAN Traffic and Other Data
- Configuring Policies and Management
- Managing Configuration Data

### Lab Outline

- Lab 1: CLI Setup and Web Setup
- Lab 2: Controller Web
- Lab 3: CAPWAP Conversion (Optional)
- Lab 4: AP Association Options and Configurations
- Lab 5: Interface Group Configuration
- Lab 6: VideoStream
- Lab 7: Web Authentication
- Lab 8: WPA/WPA2 PEAP-MS-CHAPv2 Authentication
- Lab 9: WPA/WPA2 EAP-FAST Local EAP Authentication
- Lab 10: Pre-Image Download
- Lab 11: CAPWAP Conversion (Optional)