



To register for this course, go to www.giga-wave.com, or call 210-375-0085

Implementing Cisco Unified Wireless Networking Essentials v1.0

Keyword: IUWNE

Classroom ILT - 5 Days – List Price \$3,295

Course Description

The Implementing Cisco Unified Wireless Networking Essentials training class is designed to help you prepare for the CCNA Wireless certification, an associate level certification in the wireless field. This course includes instructor-led training and in-depth instructor assisted, remote access labs using real Cisco gear. The goal of the IUWNE is to provide you with information to prepare you to help design, install, configure, monitor and conduct basic troubleshooting tasks of a Cisco WLAN in small and medium-sized business and enterprise installations. The IUWNE training class reinforces the instruction by providing you with hands-on labs that range from creating an ad-hoc network and analyzing the communication, configuring a controller, configure and migrate standalone access points (APs), install and configure a Mobility Express Wireless Controller and AP, experiment with connections and roaming, configure Extensible Authentication Protocol-Flexible Authentication via Secure Tunneling (EAP-FAST) authentication with Wi-Fi Protected Access (WPA), configure the controller and the AP from the Cisco Wireless Control System (WCS) interface, add a map to the WCS, enhance it with the Map editor tool and locate the AP on the map, backup the controller configuration, as well as troubleshooting issues introduced by the instructor. **GigaWave's version of this class provides labs which cover controller firmware release 5.2. All labs are real Cisco equipment labs utilizing remote lab equipment.**

Laptops are provided to participate in the labs. If you desire to use your own laptop, please bring a laptop computer with an available 32-bit CardBus slot and an Ethernet port as well as an internal wireless NIC, 802.11a/b/g. The laptop's operating systems must be either MS Windows 2000 (SP4) or XP. The laptop should also have a 9-pin serial port or USB to serial adapter. IN ADDITION, you will need administrator rights to the laptop to install drivers for the wireless client used in class.

You Learn...

After completing this course, the student should be able to:

- Describe the fundamentals of wireless technologies
- Install and configure a WLAN controller, in the main Cisco Unified Wireless Networks line or Mobility Express
- Install the ADU and configure wireless clients
- Configure wireless security
- Manage the network with WCS
- Use the controller and WCS tools to troubleshoot a wireless network

Who Would Benefit

The Implementing Cisco Unified Wireless Network Essentials course is targeted to Network Engineers, Network Administrators, Network Managers, System Engineers, WLAN designers, Project Managers, and any individual wishing to attain the CCNA-Wireless certification.

Prerequisites

- Interconnecting Cisco Networking Devices Part 1 (ICND1)
- Interconnecting Cisco Networking Devices Part 2 (ICND2)

Follow-On Courses

- Conducting Cisco Unified Wireless Networking Site Surveys (CUWSS)
- Implementing Advanced Cisco Unified Wireless Security (IAUWS)
- Implementing Cisco Unified Wireless Mobility Services (IUWMS)

- Implementing Cisco Unified Wireless Voice Networks (IUWVN)
- Cisco Voice over Wireless LAN (VoWLAN)

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Course Content

Module 0 -- Course Introduction

Module 1 – Wireless Fundamentals

- Introducing Wireless Networks And Topologies
- Introducing Wireless LANs RF Principles
- Understanding Radio Frequency Mathematics
- Lab 1-1: Familiarization with Antennae And Ranges
- Describing Antennae
- Lab 1-2: EIRP Calculation and Antenna Choice
- Understanding Spread Spectrum Technologies
- Introducing Wireless Regulatory Bodies, Standards And Certifications
- Examining Wireless Media Access
- Lab 1-3: Creating and Ad-hoc (IBSS) Network and Analyzing the Communication
- Non-802.11 Wireless Technologies and Their Impact on WLANs
- Wireless Frame Journey: End-to-End
- Understanding Cisco Unified Wireless Networks Basic Architecture

Module 2 – Basic Cisco WLAN Installation

- Configure A Controller
- Lab 2-1: Configure A Controller
- Discovering And Associating With A Controller
- Describing Access Point Operational Modes
- Roaming
- Managing the Network From The Controller
- Configuring And Migrating Standalone Access Points
- Lab 2-2: Configuring And Migrating Standalone Access Points
- Understanding The Cisco Mobility Express Wireless Architecture
- Lab 2-3: Installing And Configuring A Mobility Express Wireless Controller And Access Point

Module 3 – Wireless Clients

- Using Default Configuration Tools
- Describing Cisco Aironet WLAN Client Adaptor
- Describing The Cisco Secure Services Client
- Understanding The Cisco Client Extension Program
- Lab 3-1: Installing And Using The ADU

- Lab 3-2: Experimenting with Connections And Roaming

Module 4 – WLAN Security

- Overview Of WLAN Security
- Establishing IEEE 802.11 Security
- Centralizing WLAN Authentication
- Describing EAP Authentications
- Managing Authentication And Encryption With WPA And WPA2
- Configuring Wireless Security On Controllers And Clients
- Lab 4-1: 802.1Q and Web Authentication
- Lab 4-2: Configure EAP-FAST Authentication With WPA

Module 5 – WCS Administration

- Introducing WCS And Navigator
- Installing WCS
- Administering WCS
- Working With Controllers From WCS
- Working with Maps
- Lab 5-1: Configuring Controllers And Access Points From The WCS
- Lab 5-2: Working With Maps
- Monitoring the Network With WCS
- Lab 5-3: Monitor The Network And Containing Devices

Module 6 – WLAN Maintenance and Troubleshooting

- Maintaining The System
- Lab 6-1: Backup The Controller Configuration
- Design And Site Survey Considerations
- Troubleshooting
- Lab 6-2: Troubleshooting
- Lab 6-3: Troubleshooting With Wireshark And Converting and Access Point to Autonomous Mode (Optional)