

Implementing Unified Wireless Networking Essentials

Duration: 5 Days **Course Code: IUWNE**

Overview:

The Implementing Cisco Unified Networking Essentials is a five day ILT course, designed to help students prepare for the CCNA Wireless certification, an associate level certification specialising in the wireless field. The goal of the IUWNE v1.0 is to provide students with the information and practice activities necessary to prepare them for designing, installing, configuring, monitoring and conducting basic troubleshooting tasks on a Cisco WLAN in SMB and Enterprise installations. This is an associate level course and as such aims to provide only entry level information, and does not specialise in any of the advanced features of the Cisco WLAN networks solutions.

Target Audience:

The primary audience is those individuals interested in gaining an overview of a Cisco WLAN and the technologies that can be deployed within that Network. It is an ideal course for those that are new to wireless and are looking to gain the 1st level of wireless certification.

Objectives:

- **After you complete this course you will be able to:**
- Describe the fundamentals of Wireless technologies
- Install and configure a WLAN controller, in the main Cisco Unified Networking Essentials line or Mobility Express.
- Install the ADU and configure Wireless clients
- Configure wireless security
- Manage the network with Cisco WCS
- Use the controller and WCS tools to troubleshoot a wireless network

Prerequisites:

Attendees should meet the following prerequisites:

- [ICND1](#) Interconnecting Cisco Network Devices Part 1
- [ICND2](#) Interconnecting Cisco Network Devices Part 2
- Or
- [CCNABC](#) Cisco CCNA Certification Fast Track Programme

It is also recommended that before attending this training delegates would have a basic knowledge of Cisco lifecycle deployment, SONA, Wireless standards (IEEE), wireless regulator environment (FCC, ETSI, etc) and wireless certification organisation (WIFI alliance)

Testing and Certification

Recommended as preparation for exam(s):

- [640-721](#) IUWNE Implementing Cisco Unified Wireless Networking Essentials

This exam is required for those delegates wishing to obtain the CCNA Wireless Concentration

Follow-on-Courses:

Delegates who wish to focus on wireless certifications may wish to consider the courses below, all of which are required for the Cisco Certified Network Professional for Wireless Certification.

- CUWSS Conducting Cisco Unified Wireless Site Survey
- IAUWS Implementing Advanced Cisco Unified Wireless Security
- IUWMS Implementing Cisco Unified Wireless Mobility Services
- IUWVN Implementing Cisco Unified Wireless Voice Networks

Content:

Wireless Fundamentals

- Introducing wireless networks and topologies
- Introducing wireless LANs RF principles
- Understanding RF Mathematics
- Describing antennae
- Understanding spread spectrum Technologies basics
- Examining wireless regulatory bodies, standards and certifications
- Examining wireless Frames and Physics
- Non-802.11 wireless Technologies and their impact on WLANs
- Wireless Frame Journey; End to End

Basic Cisco WLAN Installation

- Understanding Cisco Unified wireless Network Basics Architecture
- Configuring a controller
- Discovering and associating with a controller
- Examining the different access point operational modes
- Roaming
- Managing the network from the controller
- Configuring and migrating stand-alone access points
- Understanding the Cisco Mobility Express Architecture

Wireless Clients

- Using default configuration tools
- Describing Cisco Aironet WLAN Client Adaptors
- Describing the Cisco Secure services Client
- Understanding the Cisco Compatible extensions program

WLAN Security

- Overview of WLAN Security
- Establishing IEEE 802.11 Security
- Centralizing WLAN security
- Describing EAP Authentications
- Managing authentication and encryption with WPA and WPA2
- Configuring Wireless Security on Controllers and Clients

WCS Administration

- Introducing Cisco WCS and Cisco Navigator
- Installing Cisco WCS
- Administering Cisco WCS
- Working with controllers from WCS
- Working with maps
- Monitoring the network with WCS

WLAN Maintenance and Troubleshooting

- System Maintenance
- Design and site survey considerations
- Troubleshooting Tools

Labs

- Lab 1-1: Becoming Familiar with Antennae and Ranges
- Lab 1-2: Creating an Ad Hoc (IBSS) Network and Analyzing the Communication
- Lab 2-1: Configuring a Cisco 2106 WLC
- Lab 2-2: Configuring and Migrating a Standalone AP
- Lab 2-3: Installing and Configuring a Cisco Mobility Express Wireless Controller and AP
- Lab 3-1: Installing and Using the Cisco ADU
- Lab 3-2: Experimenting with Connections and Roaming
- Lab 4-1: 802.1Q and web Authentication
- Lab 4-2: Configuring EAP-FAST Authentication with WPA
- Lab 5-1: Configuring controllers and APs from the Cisco WCS
- Lab 5-2: Working with Maps
- Lab 5-3: Monitoring the Network and Containing Devices
- Lab 6-1: Backing Up the Controller Configuration and the Cisco WCS Database Files
- Lab 6-2: Troubleshooting
- Lab 6-3: Optional Lab (Troubleshooting with Wireshark and Converting an AP to Autonomous Mode)

Additional Information:

Re-Certification

IUWNE is part of the Cisco CCNA Wireless Concentration and is valid for 3 years. To recertify, pass a CCNA Concentration exam (wireless, security, voice), or pass any 642 - XXX professional level or Cisco Specialist exam (excluding Sales Specialist exams), or pass a current CCIE or CCDE written exam.

Further Information:

For More information, or to book your course, please call us on Head Office 01189 123456 / Northern Office 01924 377489

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