
Conducting Cisco Unified Wireless Site Survey

Duration: 5 Days **Course Code: CUWSS**

Overview:

The Conducting Cisco Unified Wireless Site Survey (CUWSS) course provides students with information and practice activities to prepare them to technically plan and conduct a wireless site survey. Students should be able to design the RF network and conduct a postinstallation assessment to ensure compliancy.

Target Audience:

This course is designed for: Individuals who are involved in the technical handling of Cisco platforms and solutions, performing or overseeing the implementation of a site survey for a WLAN solution. Individuals who need to know how to sell, design, install, and support the implementation of a site survey for a WLAN solution.

Objectives:

- Upon completing this course, the learner will be able to meet these overall objectives:
 - Collect information for the site survey
 - Prepare and plan for the site survey
 - Conduct the site survey
 - Design the RF network
 - Assess the deployment of the WLAN
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Prerequisites:

To gain the prerequisite skills and knowledge, Cisco strongly recommends the knowledge of the following courses:

- Interconnecting Cisco Networking Devices Part 1 (ICND1)
- Interconnecting Cisco Networking Devices Part 2 (ICND2)
- Implementing Cisco Unified Wireless Networking Essentials (IUWNE)

Testing and Certification

Recommended as preparation for:

- 642-731 - Conducting Cisco Unified Wireless Site Survey (Last day to test 11th May 2012)
 - 642-732 - Conducting Cisco Unified Wireless Site Survey
- CUWSS is one of four courses required for **Cisco Certified Network Professional Wireless (CCNP) Wireless** Certification
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Follow-on-Courses:

- Implementing Cisco Unified Wireless Voice Networks (IUWVN)
- Implementing Cisco Unified Wireless Mobility Services (IUWMS)
- Implementing Advanced Cisco Unified Wireless Security (IAUWS)

All the above courses are part of the **Cisco Certified Network Professional Wireless (CCNP) Wireless** Certification

Content:

Collect Information for the Site Survey

- Identifying Customer Requirements
- Identifying Site Survey Requirements for Different Vertical Industries
- Designing Coverage for Specific Applications and Client Devices
- Designing Outdoor Coverage
- Identifying Regulatory Issues
- Identifying Safety and Aesthetic Requirements

Prepare and Plan for the Site Survey

- Conducting a Kickoff Meeting
- Conducting an Initial Walkthrough
- Specifying the Tools Necessary to Complete a Site Survey
- Choosing the Hardware for the Deployment and the Site Survey
- Choosing the Right Antennas for the Deployment and the Site Survey
- Finalizing Logistical Considerations

Conduct the Site Survey

- Estimating the AP Number and Density Using a Planning Tool
- Conducting a Layer 1 Site Survey
- Conducting a Layer 2 Site Survey for Data
- Conducting a Layer 2 Site Survey for Voice and Video Applications
- Conducting a Layer 2 Site Survey for Location

Design the RF Network

- Determining the Infrastructure Hardware Requirements for the WLAN
- Determining the Effect of WLAN on the Infrastructure
- Determining the WLAN Equipment and Licenses
- Designing the Outdoor Mesh Network

Assess the Deployment

- Verifying WLAN Readiness
- Verifying the RF Coverage Onsite
- Verifying the RF Performance
- Verifying Mesh Performance
- Presenting an Installation Report

Further Information:

For More information, or to book your course, please call us on +254 713 027 191

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Computer Learning Centre 2nd Floor Museum Hill Centre, Muthithi Road, Westlands, Nairobi, Kenya

Implementing Cisco Unified Wireless Voice Networks

Duration: 5 Days **Course Code: IUWVN**

Overview:

The Implementing Cisco Unified Wireless Voice Networks (IUWVN) course gives learners a firm understanding of how to integrate voice over wireless LAN (VoWLAN) services into the wireless LAN (WLAN) and be able to implement VoWLAN, quality of service (QoS), and high-bandwidth applications into the wireless network

Target Audience:

This course is designed for: Network engineers, network administrators, network managers, system engineers, WLAN designers, project managers Individual wishing to attain the CCNP Wireless certification.

Objectives:

- Upon completing this course, the learner will be able to meet these overall objectives:
 - Implement QoS for wireless applications using the best-practices guidelines
 - Describe evolution of voice from traditional through VoIP architecture and finally into VoWLAN
 - Implement a VoWLAN network infrastructure
 - Implement multicast in a wireless network
 - Configure the wireless infrastructure for video and high-bandwidth applications
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Prerequisites:

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

- Wireless standards
- Wireless regulator environment
- Wireless certification organization
- Basic computer literacy, including the use of general office software such as Microsoft Word and Microsoft Excel
- Basic Windows navigation and keyboard literacy skills
- Basic Internet usage skills
- Basic e-mail usage skills

To gain the prerequisite skills and knowledge, Cisco strongly recommends the knowledge of the following courses:

- Interconnecting Cisco Networking Devices Part 1 (ICND1)
 - Interconnecting Cisco Networking Devices Part 2 (ICND2)
 - Implementing Cisco Unified Wireless Networking Essentials (IUWNE)
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Testing and Certification

Recommended as preparation for:

- 642-741 - Implementing Cisco Unified Wireless Voice Networks (Last day to test 11th May 2012)
 - 642-742 - Implementing Cisco Unified Wireless Voice Networks
- IUWVN is one of four courses required for **Cisco Certified Network Professional Wireless (CCNP) Wireless** Certification
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Follow-on-Courses:

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

All the above courses are part of the **Cisco Certified Network Professional Wireless (CCNP) Wireless** Certification

Content:

Implementation of QoS for Wireless Applications

- Identifying General Considerations for Wired and Wireless QoS
- Describing Wireless QoS Deployment Schemes
- Configuring the Controller, Cisco WCS, and IOS AP for QoS
- Configuring the Wired Infrastructure for QoS
- Analyzing CAPWAP Traffic

Voice over Wireless Architecture

- Describing the Voice Architecture
- Describing VoWLAN Call Flow
- Designing Wireless for Voice
- Verifying Voice Readiness

Implementation of VoWLAN

- Describing Hardware and Software Requirements for VoIP
- Configuring a WLAN for Voice
- Configuring Infrastructure Devices for End-to-End Voice over Wireless
- Configuring Wireless Client Devices
- Troubleshooting VoWLAN

Implementation of Multicast over Wireless

- Describing General Multicast Concepts
- Describing Implications for Multicast in 802.11
- Configuring Multicast in a Wireless Network
- Troubleshooting Multicast in a Wireless Network

Preparation of the Wireless Network for Video and High-Bandwidth Applications

- Implementing QoS for Latency-Sensitive Applications
- Determining Bandwidth Requirements and Preparing the Controller for Video
- Describing the Benefits of 802.11n for Video

Further Information:

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Implementing Cisco Unified Wireless Mobility Services

Duration: 5 Days **Course Code: IUWMS**

Overview:

In the Implementing Cisco Unified Wireless Mobility Services (IUWMS) course, you'll learn to integrate mobility services into the network, tune and troubleshoot the wireless LAN (WLAN), and implement indoor enterprise mesh networks. Hand-on labs reinforce lecture material and ensure that you thoroughly understand how to implement mobility services in the wireless network.

Target Audience:

This course is designed for: Wireless network engineers Wireless test engineers Wireless network administrators Wireless network managers Midlevel wireless support engineers

Objectives:

- Upon completing this course, the learner will be able to meet these overall objectives:
 - Design the WLAN infrastructure for location services
 - Design network for High Availability
 - Implement Cisco location-based services
 - Configure WCS for controller and access point templates
 - Implement and manage an enterprise mesh network
 - Outdoor wireless installations
 - Perform a Layer 2 survey for 802.11n (Greenfield Survey) devices only
 - Perform a wireless site assessment and audit once the WLAN has been installed
 - Complete a site survey report
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Prerequisites:

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

- Wireless standards
- Wireless regulator environment
- Wireless certification organization
- Basic computer literacy, including the use of general office software such as Microsoft Word and Microsoft Excel
- Basic Windows navigation and keyboard literacy skills
- Basic Internet usage skills
- Basic e-mail usage skills

To gain the prerequisite skills and knowledge, Cisco strongly recommends the knowledge of the following courses:

- Interconnecting Cisco Networking Devices Part 1 (ICND1)
 - Interconnecting Cisco Networking Devices Part2 (ICND2)
 - Implementing Cisco Unified Wireless Networking Essentials (IUWNE)
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Testing and Certification

Recommended as preparation for:

- 642-746 - Implementing Cisco Unified Wireless Mobility Services (Last day to test 11th May 2012)
 - 642-747 - Implementing Cisco Unified Wireless Mobility Services
- IUWMS is one of four courses required for **Cisco Certified Network Professional Wireless (CCNP Wireless)** Certification
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Follow-on-Courses:

- Implementing Advanced Cisco Unified Wireless Security (IAUWS)
- Implementing Cisco Unified Wireless Voice Networks (IUWVN)
- Conducting Cisco Unified Wireless Site Survey (CUWSS)

All the above courses are part of the **Cisco Certified Network Professional Wireless (CCNP Wireless)** Certification

Content:

Design WLAN Infrastructure for Mobility

- Utilizing Recommended Design Practices
- Implications of Layer 2 and Layer 3 Roaming
- Designing for High Availability
- Single SSID Designs with Mobility

Implement and Manage Advanced Services with WCS and WCS Navigator

- Configuring WCS Controller and Access Point Templates
- Configuring WCS for WLC Auto-Provisioning
- Implementing WCS Partitioning
- Scheduling Wireless Access Using WCS
- Configuring Reports
- Configuring Administrative Tasks
- Connecting and Troubleshooting Clients
- Roles, Features, and Functions of WCS Navigator

Design the Wireless Network for Location

- Location Techniques
- Deployment Requirements
- Applications of RFID, Chokepoint, and TDoA

Cisco Location-Based Services Implementation

- Mobility Services Architecture and Appliances
- Configuring the Cisco 2700 Series Wireless Location Appliance and the Cisco 3300 Series Mobility Service Engine
- Integrating and Managing the MSE and the Location Appliance with WCS
- Configuring and Tuning Location with WCS and MSE / Location Appliance
- Tracking Mobile Clients
- Configuring, Generating, Interpreting Location and Event Notifications
- Integrating Third-Party Applications
- Location Appliance and MSE Maintenance
- Troubleshooting Location

Implement and Manage an Indoor Enterprise Mesh

- Indoor Enterprise Mesh
- Mesh Formation
- Implementing an Enterprise Mesh
- Configuring Enterprise Mesh Advanced Features
- Configuring WCS for an Indoor Mesh
- Troubleshooting Indoor Mesh

Implement and Manage an Outdoor Enterprise Mesh

- Outdoor Wireless
- Mobile Routing
- Wireless Bridging
- Outdoor Mesh

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Implementing Advanced Cisco Unified Wireless Security

Duration: 5 Days **Course Code: IAUWS**

Overview:

In the Implementing Advanced Cisco Unified Wireless Security (IAUWS) course, you will learn to secure wireless networks from security threats via appropriate security policies and best practices. You will learn to implement security standards and configure security components. Hands-on labs ensure that you thoroughly understand how to secure a wireless network.

Target Audience:

This course is designed for: Wireless network engineers Wireless test engineers Wireless network administrators Wireless network managers Midlevel wireless support engineers

Objectives:

- Upon completing this course, the learner will be able to meet these overall objectives:
 - Organizational and regulatory Security Policies
 - How to segment enterprise and guest WLAN traffic
 - Configure administration and security on a WLAN controller
 - Configure administration and security on a WLAN controller using TACACS+
 - Secure client devices using EAP authentication
 - Configure Cisco Secure Services Client
 - Design and implement guest services on a WLAN controller.
 - Configure the WLAN controller for Cisco NAC
 - Configure Local authentication on the WLAN controller
 - Configure Management Frame Protection (MFP) on the WLAN controller
 - Implement Access Control Lists (ACL) on a WLAN controller
 - WLAN controller-based Intrusion Detection Signatures (IDS)
 - Configure the WLAN controller to integrate with IPS and IDS appliances
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Prerequisites:

To gain the prerequisite skills and knowledge, Cisco strongly recommends the knowledge of the following courses:

- Interconnecting Cisco Networking Devices Part 1 (ICND1)
- Interconnecting Cisco Networking Devices Part 2 (ICND2)
- Implementing Cisco Unified Wireless Networking Essentials (IUWNE)

Testing and Certification

Recommended as preparation for:

- 642-736 - Implementing Advanced Cisco Unified Wireless Security (Last day to test 11th May 2012)
 - 642-737 - Implementing Advanced Cisco Unified Wireless Security IAUWS is one of four courses required for **Cisco Certified Network Professional Wireless (CCNP Wireless)** Certification
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Content:

Organizational and Regulatory Security Policies

- Regulatory Compliance
- Segmenting Traffic
- Configuring Administrative Security
- Managing WLAN Controller and Cisco WCS Alarms
- Security Audit Tools

Secure Client Devices

- Configuring EAP Authentication
- Impact of Security on Application and Roaming
- Configuring Cisco Secure Services Client
- Troubleshooting Wireless Connectivity

Design and Implement Guest Access Services

- Guest Access Architecture
- Configuring the WLAN to Support Guest Access
- Configuring Guest Access Accounts
- Troubleshooting Guest Access

Design and Integrate Wireless Network with NAC

- Cisco NAC Appliance Solution
- Configuring the Controller for Cisco NAC Out-of-Band Operations

Implement Secure Wireless Connectivity Services

- Configuring Authentication for the WLAN Infrastructure
- Configuring Management Frame Protection
- Configuring Certificate Services
- Implementing Access Control Lists
- Configuring Identity-Based Networking on the Controller Issues
- Troubleshooting Secure Wireless Connectivity

Internal and Integrated External Security Mitigations

- Mitigating Wireless Vulnerabilities
- Using Controller-Based IDS
- Cisco's End-to-End Security Solutions
- Integrating Cisco WCS with Wireless IPS

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