WLFNDU (UNDERSTANDING CISCO WIRELESS FOUNDATIONS) 1.0

Objetivo

After taking this course, you should be able to: â¢ Describe and implement foundational wireless theory; â¢ Describe and implement basic wireless security and client access; â¢ Describe and implement a Cisco wireless network architecture; â¢ Configure Cisco centralized wireless networks; â¢ Describe and implement WLAN maintenance and troubleshooting.

PÃºblico Alvo

The primary audience is composed of individuals who are tasked with performing or overseeing network wireless management tasks. Professionals in preparation for taking Cisco Enterprise Wireless Courses or taking certification exam, does need Wireless foundational knowledge that can help preparation.

PrÃ©-Requisitos

We recommend but do not require that you have the following knowledge and skills before taking this course: â¢ General knowledge of networks; â¢ General knowledge of wireless networks; â¢ Routing and switching knowledge.

Carga HorÃ¡ria

40 horas (5 dias).

ConteÃºdo ProgramÃ¡tico

Course Introduction
Course Outline
Course Goals & Objectives

Foundational Wireless Theory
Describe and implement foundational wireless theory
Explain wireless fundamentals theory
Describe RF principles

Foundational Wireless Math and Antennas
Describe and implement foundational wireless math and antennas
Explain RF mathematics
Practice Use: Practice RF Math
Select appropriate Cisco enhanced wireless features for different installations

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Describe Decibel Mathematics
Describe antenna characteristics
Practice Use: Antenna Calculations
Select appropriate Cisco enhanced wireless features for different installations
Describe EIRP Calculations
Describe Calculate dBi and dBd
Describe Choose an Antenna
Describe Identifying Antennas

Foundational Wireless Operation
Describe and implement foundational wireless operation
Describe the basics of spread spectrum technology
Practice Use: Explore the Wi-Fi Environment
How use MetaGeek inSSIDer
Describe wireless media access
Practice Use: Analyze Wireless Frames
How use Wireshark to Analyze Wireless Frames
Describe wireless governance

Implementing Basic Wireless Security
Describe security and client access in a wireless network
Describe wireless security components
Explain IEEE 802.11 security

Implementing 802.1X and EAP
Implement 802.1X and EAP
Describe IEEE 802.1X and EAP Frameworks
Explain the IEEE 802.1X and EAP frameworks
Describe EAP authentication
Describe Wi-Fi Alliance WPA, WPA2, and WPA3 Security
Describe Wi-Fi Alliance WPA, WPA2, and WPA3 security

Wireless Guest Access & Configuring Wireless Security
Implement wireless guest access and configure wireless security
Provide guest access
Configure native operating systems for WLAN connectivity
Configure Smart Handheld Clients
Practice Use: Configure Client Access
Configure client access
Practice Use: Establish Wireless Connections

Implementing Cisco Wireless Network Architecture
Describe Cisco wireless network deployment options
Define Cisco wireless network deployment options
Define Cisco wireless management
Define Cisco policy control

Implementing Cisco Wireless Network

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Implement Cisco wireless network
Describe Cisco Enterprise Wireless Network
Describe the Cisco enterprise wireless network
Describe Centralized Cisco WLCs
Describe Centralized Architecture
Describe Control and Provisioning of Wireless APs
Describe Wireless Controllers as a Function
Deploy Cisco WLCs in Any Form Factor for Campuses and Distributed Branches
Presenting Cisco Access Points: Indoor and Outdoor
Explain mobility architecture concepts

Implementing Cisco Wireless Network Wired Support
Implement Cisco wireless network wired support
Describe Layer 2 infrastructure support
Cisco Catalyst 9400 Multigigabit Ports
Describe the wired infrastructure protocols that support wireless
Practice Use: Configure the Wired Infrastructure
Describe Configure the wired infrastructure
Describe Configure the Switch

Configuring Cisco Centralized Wireless Networks
Describe the centralized wireless access model and its configuration
Initialize a Centralized Cisco WLC
Practice Use: Configure a Centralized Cisco WLC Deployment
Describe Configure a centralized Cisco WLC deployment
Describe Configure the Cisco AireOS Wireless Controller
Describe AP initialization
Describe Outdoor Wireless Bridges
Practice Uses: Configure a Centralized WLAN Deployment on Cisco AireOS WLC
Practice Uses: Configure a Centralized WLAN Deployment on Cisco 9800 WLC
Implement IPv6 in a Cisco Wireless Environment
Practice Uses: Configure an IPv6 Operation in a Centralized WLAN Deployment
Describe Configure the Cisco AireOS Wireless Controller for IPv6
Describe Roaming in the Centralized Architecture
Describe Mobility
Describe Autonomous AP Roaming
Describe Roaming Requirements
Describe Layer 2 Roaming
Describe Client Roaming Within a Subnetwork
Describe Layer 3 Intercontroller Roaming
Describe Cisco Unified Wireless: POP and POA
Describe Cisco Unified Wireless Traffic Flow: Layer 3 Roaming
Describe Client Roaming Optimization
describe Mobility Group and Mobility Domain
Configure a Mobility Group
Configure a Mobility List
Troubleshooting Mobility Configuration
Centralized Mode Roaming Design Considerations

Describe Mobility Details
Describe Mobility Messaging
Describe Mobility Messaging Improvements
Describe Autonomous AP Mobility Details
Describe Intracontroller Mobility Details
Describe Intercontroller Mobility Layer 2
Describe Intercontroller Mobility Layer 3
Describe Auto-Anchor Mobility
Describe Static IP Mobility
Describe Optimize RF Conditions and Performance for Clients
Describe Cisco CleanAir
Describe Cisco CleanAir Components
Define Spectrum Intelligence
Define Severity Index
Define Air Quality Index
Define Pseudo MAC
Define Cisco ClientLink
Define Cisco BandSelect
Practice Uses: Optimize RF Conditions and Performance for Clients
Performing Optimize Cisco Features for Clients

Implementing WLAN Maintenance and Troubleshooting
Describe maintenance and troubleshooting in the centralized WLAN model
Describe WLAN Maintenance
Pratice Uses: Perform Centralized Controller Maintenance
Performing Back Up the Cisco WLC Configuration
Describe the WLAN Troubleshooting Methodology
Explain WLAN Troubleshooting Tools
Practice Uses: Use Troubleshooting Tools
Using troubleshooting tools

Lab outline
Lab 1: Practice RF Math
Lab 2: Antenna Calculations
Lab 3: Explore the Wi-Fi Environment
Lab 4: Analyze Wireless Frames
Lab 5: Configure Client Access
Lab 6: Configure the Wired Infrastructure
Lab 7: Configure a Centralized Cisco Wireless LAN Controller (WLC) Deployment
Lab 8: Configure a Centralized WLAN Deployment on Cisco 3504 WLC
Lab 9: Configure a Centralized WLAN Deployment on Cisco 9800 WLC
Lab 10: Configure an IPv6 Operation in a Centralized WLAN Deployment
Lab 11: Optimize RF Conditions and Performance for Clients
Lab 12: Perform Centralized Controller Maintenance
Lab 13: Use Troubleshooting Tools

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