Cisco Wireless Network Fundamentals - On Demand (WIFUND 1.0)

Modality: On Demand

Duration: 40 Hours

CLC: 8 Units

About this course:

Improve your comprehension of Cisco advancements and items with e-learning offerings from Cisco and Cisco's approved learning accomplices. The courses of e-learning aim around an assortment of Cisco advances to set you up for Cisco confirmation tests and to pick up Cisco item information. The e-learning is made to be intelligent and connecting with students who lean toward self-study.

Some Cisco Self-paced courses give access to hands-on virtual lab works out, allowing you the chance to rehearse design and investigating on genuine Cisco stages.

Course Objective:

- Explain the fundamentals of Wireless
- Describe RF Principles
- Describe the Basics of Spread Spectrum
- Understand RF Mathematics
- Explain Antenna Characteristics
- Define Wireless Governance
- Describe Wireless Media Access
- Describe Wireless Security Components
- Explain 802.11 Security
- Describe EAP Authentication
- Configure Smart Handheld Clients
- Describe WPA and WPA2 Security
- Describe 802.1X/EAP Framework
- Native Operating Systems for WLAN Connectivity
- Define Cisco Deployment Options for Wireless Network
- Define One Management
- Define One Policy
- Define the Cisco One Network
- Mobility Architecture Concepts
- Optimize RF Performance and Conditions for Clients
- Describe Layer 2 Infrastructure Support
- Explain Protocols utilized in Wired Infrastructure to Support Wireless
- Explore Additional WLC Features
- Implement IPv6 in a Wireless Environment for Cisco
- Configure Client Access
- Implement Roaming in the Centralized Architecture
- Explore Additional Wireless Features
- Configure Client Access

- Implement Roaming in the Converged Architecture
- Describe Wireless Maintenance
- Explain Troubleshooting Tools
- Define Troubleshooting Methodology

Audience:

Everyone who is interested in Cisco Wireless Network Fundamentals

Prerequisite:

No prerequisites for this course

Course Outline:

Module 1: Wireless Fundamentals

- Lesson 1: Explain Wireless Fundamentals
- Lesson 2: Describe RF Principles
- Lesson 3: Understand RF Mathematics
- Lesson 4: Describe Antenna Characteristics
- Lesson 5: Describe the Basics of Spread Spectrum
- Lesson 6: Describe Wireless Media Access
- Lesson 7: Describe Wireless Governance
- Lesson 8: Module Summary
- Lesson 9: Module Self-Check

Module 2: Security and Client

- Lesson 1: Describe Wireless Security Components
- Lesson 2: Explain 802.11 Security
- Lesson 3: Explain 802.1X/EAP Framework
- Lesson 4: Describe EAP Authentication
- Lesson 5: Describe WPA and WPA2 Security
- Lesson 6: Provide Guest Access
- Lesson 7: Native Operating Systems for WLAN Connectivity
- Lesson 8: Configure Smart Handheld Clients
- Lesson 9: Module Summary
- Lesson 10: Module Self-Check

Module 3: Define the Cisco Wireless Network Architectureâ€‹

- Lesson 1: Define Cisco Wireless Network Deployment Options
- Lesson 2: Define One Management
- Lesson 3: Define One Policy
- Lesson 4: Define the Cisco One Network
- Lesson 5: Mobility Architecture Concepts
- Lesson 6: Optimize RF Conditions and Performance for Clients

- Lesson 7: Describe Layer 2 Infrastructure Support
- Lesson 8: Describe Protocols Used in Wired Infrastructure to Support Wireless

Module 4: Implement Centralized Wireless Accessâ€‹

- Lesson 1: Initialize a Centralized WLC
- Lesson 2: Describe AP Initialization
- Lesson 3: Explore Additional WLC Features
- Lesson 4: Implement IPv6 in a Cisco Wireless Environment
- Lesson 5: Configure Client Access
- Lesson 6: Implement Roaming in the Centralized Architecture
- Lesson 7: Module Summary
- Lesson 8: Module Self-Check

Module 5: Implement Converged Wireless Accessâ€‹

- Lesson 1: Initialize a Converged WCM
- Lesson 2: Describe AP Connectivity
- Lesson 3: Explore Additional Wireless Features
- Lesson 4: Configure Client Access
- Lesson 5: Implement Roaming in the Converged Architecture
- Lesson 6: Module Summary
- Lesson 7: Module Self-Check

Module 6: Implement Small and Remote Wireless Access

- Lesson 1: Overview of the FlexConnect Architecture
- Lesson 2: Overview of the Autonomous Architecture
- Lesson 3: Overview of the Cloud Architecture
- Lesson 4: Module Summary
- Lesson 5: Module Self-Check

Module 7: WLAN Maintenance and Troubleshooting

- Lesson 1: Describe Wireless Maintenance
- Lesson 2: Explain Troubleshooting Tools
- Lesson 3: Describe Troubleshooting Methodology
- Lesson 4: Module Summary
- Lesson 5: Module Self-Check

Module 8: WLAN Design

- Lesson 1: Predictive WLAN Design Process
- Lesson 2: WLAN Site Survey Process
- Lesson 3: Module Summary
- Lesson 4: Module Self-Check

Lab outline:

- Discovery 1: Practice RF Math
- Discovery 2: Calculate EIRP and Choose the Correct Antenna
- Discovery 3: Explore the RF Spectrum
- Discovery 4: Analyze Wireless Frames
- Discovery 5: Review Centralized Authentication
- Discovery 6: Initialize a Centralized WLAN Deployment
- Hardware Lab 1: Configure Windows 7 Client Access
- Hardware Lab 2: Configuring the Wired Infrastructure
- Hardware Lab 3: Configuring the Centralized WLAN Deployment
- Hardware Lab 4: Configuring IPv6 Operation in a Centralized WLAN Deployment
- Hardware Lab 5: Configuring Security in a Centralized WLAN Deployment
- Hardware Lab 6: Configuring Guest Access Using the Anchor WLC
- Hardware Lab 7: Deploying a Converged Access WLA
- Hardware Lab 8: Configuring Security on a Converged WLAN Deployment
- Hardware Lab 9: Implement a FlexConnect WLAN Deployment
- Hardware Lab 10: Initialize an Autonomous WLAN Deployment
- Hardware Lab 11: Configure Security on an Autonomous AP WLAN Deployment
- Hardware Lab 12: Configure Security on a Cloud WLAN Deployment
- Hardware Lab 13: Perform Centralized Controller Maintenance
- Hardware Lab 14: Perform WiFi Scanning
- Hardware Lab 15: Challenge Various Trouble Tickets
- Hardware Lab 16: Perform a Predictive WLAN Design
- Hardware Lab 17: Perform Passive Site Survey Analysis