



WIFUND (Implementing Cisco Wireless Network Fundamentals)

受講対象者

- CCNA Wireless認定の取得を目指す方
- 小～中規模オフィスの無線LANを設計、操作、設定する方
- ネットワークエンジニア
- ネットワーク管理者
- ネットワーク設計者
- システムエンジニア

概要

小規模～中規模の企業ネットワークにおけるシスコワイヤレスLANの設計、インストール、設定、監視と基本的なトラブルシューティングを、講義とラボ演習を通じて学習します。

目的

このコースを修了すると次のことができるようになります。

RFの基本的な原理と特徴を理解する

WLANセキュリティの基本的な仕組みを理解する

Cisco WLANアーキテクチャと、その基盤となるインフラストラクチャを理解する

Cisco AireOSまたはIOS XE

WLCを使用して、集中管理型ワイヤレスアクセスネットワークを実装する

FlexConnect、Autonomous、およびCloudアーキテクチャを使用して、小規模なりモートアクセスワイヤレスネットワークを実装する

基本的なWLANのメンテナンスとトラブルシューティングを行う

WLAN設計の要件を理解する

アウトライン

Module 1: WLAN Fundamentals

Lesson 1: Explaining Wireless Fundamentals

Lesson 2: Describing RF Principles

Lesson 3: Understanding RF Mathematics

Lesson 4: Describing Antenna Characteristics

Lesson 5: Describing the Basics of Spread Spectrum

Lesson 6: Describing Wireless Media Access

Lesson 7: Describing Wireless Governance

Module 2: Security and Client Access

Lesson 1: Describing Wireless Security Components

Lesson 2: Explaining 802.11 Security

Lesson 3: Explaining the 802.1X and EAP Framework

Lesson 4: Describing EAP Authentication

Lesson 5: Describing WPA and WPA2 Security

Lesson 6: Providing Guest Access

Lesson 7: Configuring Native Operating Systems for WLAN Connectivity

Lesson 8: Configuring Smart Handheld Clients

Module 3: Cisco Wireless Network Architecture

Lesson 1: Describing Cisco Wireless Network Deployment Options

Lesson 2: Defining Cisco One Management

Lesson 3: Defining Cisco One Policy

Lesson 4: Defining Cisco One Network

Lesson 5: Explaining Mobility Architecture Concepts

Lesson 6: Optimizing RF Conditions and Performance for Clients

Lesson 7: Describing Layer 2 Infrastructure Support

Lesson 8: Describing Protocols Used in Wired Infrastructure to Support Wireless

Module 4: Centralized Wireless Access

Lesson 1: Initializing a Centralized WLC

Lesson 2: Describing AP Initialization

Lesson 3: Exploring Additional WLC Features

Lesson 4: Implementing IPv6 in a Cisco Wireless Environment

Lesson 5: Configuring Client Access

Lesson 6: Implementing Roaming in the Centralized Architecture

Module 5: Converged Wireless Access

Lesson 1: Initializing a Converged Access Cisco WLC and WCM

Lesson 2: Describing AP Connectivity

Lesson 3: Exploring Additional Wireless Features

Lesson 4: Configuring Client Access

Lesson 5: Implementing Roaming in the Converged Architecture

Module 6: Small and Remote Wireless Access

Lesson 1: Understanding Cisco FlexConnect Architecture

Lesson 2: Understanding Autonomous AP Architecture

Lesson 3: Understanding Cloud Architecture

Module 7: WLAN Design

Lesson 1: Describing the Predictive WLAN Design Process

Lesson 2: Describing the WLAN Site Survey Process

Module 8: WLAN Maintenance and Troubleshooting

Lesson 1: Describing WLAN Maintenance

Lesson 2: Explaining WLAN Troubleshooting Tools

Lesson 3: Describing WLAN Troubleshooting Methodology

Lab Outline

Lab 1: Configuring Windows 7 Client Access

Lab 2: Configuring the Wired Infrastructure

Lab 3: Initialize a Centralized WLAN Deployment

Lab 4: Configure the Centralized WLAN Deployment

Lab 5: Configure an IPv6 Operation in a Centralized WLAN Deployment

Lab 6: Configure Security in a Centralized WLAN Deployment

Lab 7: Configure Guest Access Using the Anchor WLC

Lab 8: Deploy a Converged Access WLAN

Lab 9: Configure Security on a Converged WLAN Deployment

Lab 10: Implement a FlexConnect WLAN Deployment

Lab 11: Initialize an Autonomous WLAN Deployment

Lab 12: Configure Security on an Autonomous AP WLAN Deployment

Lab 13: Configure Security on a Cloud WLAN Deployment

Lab 14: Perform a Predictive WLAN Design

Lab 15: Perform a Passive Site Survey Analysis

Lab 16: Perform Centralized Controller Maintenance

Lab 17: Perform Wi-Fi Scanning

Lab 18: Challenge: Various Trouble Tickets