Implementing and Operating Cisco Wireless Core 1.0

Course Description

The Implementing and Operating Cisco Wireless Core Technologies (WLCOR) training develops professional-level expertise in implementing and operating Cisco enterprise wireless networks. You will learn wireless architecture design and physical infrastructure deployment. You will configure Cisco Catalyst 9800 Series wireless LAN controllers (WLCs), Cisco access points, and Cisco Meraki platforms for secure client connectivity. You will implement advanced features, including roaming and guest networking. You will deploy comprehensive monitoring and management solutions using Cisco Catalyst Center. You will leverage application programming interfaces (APIs) and artificial intelligence (AI) for operational automation and develop systematic troubleshooting methodologies using packet analysis and diagnostic tools.

This training prepares you for the 350-101 WLCOR v1.0 exam. If passed, you earn the Cisco Certified Specialist - Wireless Core certification and satisfy the core exam requirements for the Cisco Certified Network Professional (CCNP) and Cisco Certified Internetwork Expert (CCIE) Wireless certifications. This training also earns you 32 Continuing Education (CE) credits toward recertification.

Course Objectives

- Analyze wireless governance, topologies, and legacy protocol evolution to establish foundational network design principles
- Analyze RF propagation characteristics and channel behavior to diagnose wireless performance issues
- Apply RF mathematical calculations and antenna theory principles to optimize wireless network performance
- Evaluate 802.11ax and 802.11be protocols to implement high-performance, future-ready wireless networks
- Evaluate wireless network architectures and design physical infrastructure for enterprise deployments
- Configure Cisco wireless controllers and access points to establish secure client connectivity
- Implement secure management access and client policies for operational wireless network
- Analyze client device capabilities and configure connectivity across diverse operating systems
- Configure local WLAN security and authentication mechanisms on controllers
- Configure external WLAN security and authentication
- Implement client roaming protocols and guest networking to extend wireless services
- Implement Cisco Catalyst Center and integration tools for unified wireless network management
- Configure performance and security monitoring to ensure optimal wireless network functionality
- Evaluate and implement API automation and AI-enhanced features for intelligent wireless operations
- Analyze wireless frames using packet capture tools to diagnose network behavior and issues
- Troubleshoot client connectivity and AP join failures using systematic diagnostic methodologies

Course Prerequisites

There are no prerequisites for this training. However, the knowledge and skills you are recommended to have before attending this training are:

- Solid foundation in IT literacy (e.g., understanding of common IT concepts and enterprise software)
- Prior experience or basic experimentation using Cisco wireless technologies (e.g., APs and wireless LAN controllers)
- Familiar with RF theory, Wi-Fi standards, security protocols, Cisco wireless architecture (e.g., CAPWAP, centralized access control), Cisco DNA Center, and basic troubleshooting—concepts learned in the WLFNDU Learning Path

These skills can be found in the following Cisco Learning Offerings:

- Implementing and Administering Cisco Solutions (CCNA)
- Understanding Cisco Wireless Foundations (WLFNDU)

Course Outline

- Wireless Foundation Review
- Radio Frequencies Review
- RF Mathematics and Antenna Theory Review
- Modern Wi-Fi Protocols
- Physical Wireless Networks
- Cisco Wireless Network Installation and Configuration
- Wireless Network Operation
- Wireless Client Identification and Configuration
- Wireless Network Security and Local Authentication
- External Authentication for Wireless Networks
- Extend the Wireless Network
- Cisco Wireless Network Management
- Wireless Network Monitoring
- APIs and AI with Wi-Fi
- Wireless Network Analysis
- Troubleshoot Wireless Network

Lab Outline

- Configure Physical Infrastructure of a Wireless Network
- Configure Initial Setup of Cisco Wireless Network
- Configure WLAN Settings for Client Connectivity
- Configure and Secure Dashboard Management Access
- Configure Client Management Rules and Policies
- Configure Client Connectivity Simulation
- Configure Local Authentication on the Catalyst 9800 WLC
- Configure External Authentication for Wireless Networks
- Configure Guest Networking
- Investigate Cisco Catalyst Center
- Monitor Wireless Network Performance with Cisco Catalyst Center
- Monitor Wireless Network Security with Cisco Catalyst Center
- Configure Client Monitoring in Cisco Catalyst Center
- Configure Wireless API Functionality

- Cisco Catalyst Center AI Capabilities
- Analyze Wireless Frames
- Troubleshoot Client Connectivity Issues
- Troubleshoot AP Join Issues

Who Should Attend?

- Wireless Network Engineers
- Network Architects
- Network Administrators
- Network Automation Engineers

Associated Certifications

CCNP Wireless Certification

Course Duration

5 days