Implementing and Operating Cisco Wireless Core Technologies

COURSE CODE: **WLCOR**

PRICE: $4400 | DURATION: 5 DAYS | **FORMAT**: Kit & Lab | **CLC**: 44 | **CE**: 32

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.

How You'll Benefit

This training will help you:

- Acquire hands-on skills in designing, implementing, and operating enterprise-grade Cisco wireless networks, including configuring Cisco Catalyst 9800 Series WLCs, access points, and Meraki platforms
- Learn to leverage APIs and AI-enhanced features within Cisco Catalyst Center to automate complex operational tasks and improve overall network efficiency
- Develop systematic methodologies for diagnosing wireless performance issues and connectivity failures using advanced packet analysis and diagnostic tools.
- Deepen your understanding of RF propagation, antenna theory, and the latest 802.11ax/be protocols to build and maintain high-performance, future-ready wireless infrastructure
- Prepare for the 350-101 WLCOR v1.0 exam
- Earn 32 CE credits toward recertification

Who Should Enroll

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

What to Expect in the Exam

Implementing and Operating Cisco Wireless Core Technologies (350-101 WLCOR) v1.0 is a 120-minute exam associated with the Cisco Certified Specialist - Wireless Core certification and satisfies the core exam requirements for the CCNP Wireless and CCIE Wireless certification. The multiple-choice format tests your knowledge of implementing core wireless technologies, including:

- Radio frequency fundamentals
- 802.11 technology fundamentals
- Client connectivity
- Wireless monitoring and management
- Automation and AI

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
- Describe wireless governance and the associated legal and regulatory compliance requirements
- Define the foundational components of wireless communication
- Explain RF mathematics and its relationship to antennas
- Discuss wireless protocols and their function in wireless communications
- Describe how scripting can help with the efficient management of a network

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
- Wireless Regulations

- RF Foundations
- Wireless Mathematics and Antenna Theory
- Wireless Protocol Foundations
- Scripting Theory

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
- Explore 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