skillsoft➤
global
knowledge™

CISCO
Learning
Specialized
Partner

CISCO.
Learning
Credits
Redeem
them here

Designing Cisco Enterprise Wireless Networks

Duration: 5 Days   Course Code: ENWLSD   Version: 2.0

Overview:

The **Designing Cisco Enterprise Wireless Networks (ENWLSD)** course introduces you to the concepts required for planning advanced designs incorporating Cisco wireless products. The training covers design specifics from scenario design concepts, through the installation phase, and onto post-deployment validation.

This course is worth 40 Continuing Education (CE) Credits

Company Events

These events can be delivered exclusively for your company at our locations or yours, specifically for your delegates and your needs. The Company Events can be tailored or standard course deliveries.

Target Audience:

Individuals interested in gaining the knowledge needed to plan advanced designs of Cisco Wireless Networks

Objectives:

- **After completing this course you should be able to:**

- Describe a structured wireless design methodology recommended by Cisco

- Describe wireless industry standards, amendments, certifications, and RFCs

- Examine the wireless technology

- Describe and implement Cisco enhanced wireless features

- Describe Cisco mobility, roaming, and Work Group Bridges

- Describe the wireless design process

- Describe and implement specific wireless application designs

- Describe and implement specific wireless network vertical designs

- Describe and implement bridge and mesh designs in wireless networks

- Describe special considerations in advanced wireless designs

- Understand requirements to adapt a wireless network for Cisco CMX and Cisco Spaces

- Describe site survey processes

- Describe third-party wireless network design and planning tools

- Describe and implement network validation processes

- Describe and implement the final phases of the design project

Prerequisites:

Attendees should meet the following prerequisites:

- General knowledge of networks
- General knowledge of wireless networks
- Routing and switching knowledge
- CCNA - Implementing and Administering Cisco Solutions
- WLFNDU - Understanding Cisco Wireless Foundations
- ENCOR - Implementing and Operating Cisco Enterprise Network Core Technologies

Testing and Certification

Recommended as preparation for the following exams:

- **300-425** -ENWLSD - Designing Cisco Enterprise Wireless Networks Passing this exam will provide you with the Cisco Certified Specialist - Enterprise Wireless Design Certification and count towards the New CCNP Enterprise Certification - To achieve the new CCNP Enterprise Certification you will also need the CCNP Enterprise Core Exam.

Follow-on-Courses:

- ENWLSI - Implementing Cisco Enterprise Wireless Networks

Content:

Structured Wireless Design Methodology

- Importance of Planning Wireless Design with a Structured Methodology
- Cisco Design Guides and Cisco Validated Designs for Wireless Networks
- Role of the Project Manager When Designing Wireless Networks

Wireless Industry Protocols and Standards

- Wireless Standards
- Wireless Regulations
- A History of the IEEE 802.11 Standard
- Current IEEE 802.11 Amendments
- Wi-Fi Alliance (WFA) Certifications
- Wi-Fi Protocols
- Practice Activity - Review IEEE Standards and Amendments and Their Application

The Science of Wireless Technology

- Decibel Mathematics
- Antenna Theory
- Design Case Study 1: Translate Decibels and Milliwatts
- Design Case Study 2: Examine Antenna Patterns
- Design Case Study 3: Review EIRP Calculations

Cisco Enhanced Wireless Features

- Selecting Hardware and Software for a Wireless Network Design
- Cisco Infrastructure Settings for Wireless Network Design
- Cisco Enhanced Wireless Features
- Practice Activity: Review Cisco Infrastructure Wireless Features

Cisco Mobility and Roaming

- Roaming Concepts
- Client Roaming in a Wireless Network
- Mobility and Intercontroller Mobility in a Wireless Network
- Cisco Workgroup Bridge (WGB) and WGB Roaming in a Wireless Network

Wireless Design Process

- Wireless Design Process
- Predesign Activities
- Designing the Wireless Network
- Implementing the Wireless Network
- Validation and Post Implementation Activities
- Design Case Study 1: Perform the Wireless Network Design Process

Wireless Network Design for Specific Applications

- Wireless Application Design
- Data Application Design
- Real-Time Application Design
- Location Design
- Security and Guest Networking Design
- Cisco Management Platforms
- Design Case Study 1: Design a Wireless Network for a Specific Application

Designing Wireless Networks for Specific Vertical Designs

- Wireless Network Design for an Enterprise
- Wireless Network Design for Industrial Settings
- Wireless Network Design in Healthcare and Hospitality Environments
- Extending Wireless Networks to the Branch Sites
- Design Case Study 1: Design a Wireless Network for a Specific Vertical
- Design Case Study 2: Design a Wireless Network that Extends Beyond the Campus

Bridging and Mesh in a Wireless Network

- Bridging in a Cisco Wireless Network Design
- Mesh in a Cisco Wireless Network Design

Special Considerations in Advanced Wireless Designs

- High-Density Designs in Wireless Networks
- Redundancy in Wireless Networks

Cisco CMX and Cisco Spaces

- Cisco CMX
- Cisco Spaces

Site Survey Processes

- Site Survey Data Collection Types
- Predeployment Site Surveys
- Postdeployment Site Surveys
- Additional Considerations for Site Surveys

Wireless Network Design with Third-Party Tools

- Third-Party Tools
- Predictive Design with Ekahau
- Live Surveys with Ekahau
- Design Validation and Troubleshooting with Ekahau
- Discovery 1: Examine Ekahau Site Survey Predictive Fundamentals
- Discovery 2: Create a Site Survey Report
- Discovery 3: Design a Data Network in an Enterprise Environment
- Discovery 4: Design a Voice and Data Network in a Helathcare Environment
- Discovery 5: Convert and Enterprise Data Design to Include Voice
- Discovery 6: Design a Voice and Data Network in a Warehouse Environment with Directional Antennas

Wireless Network Validation Processes

- Post Installation Site Survey Activities
- Discovery 7: Review a Live Site Survey Using Ekahau Tools
- Discovery 8: Simulate a Post Installation Network Validation Survey
- Discovery 9: Analyze Layer 1 Data

Completing the Wireless Design Project

- Project Documentation
- Complete the Wireless Design Project
- Practice Activity: Final Phase Documentation

Further Information:

For More information, or to book your course, please call us on Head Office Tel.: +974 40316639

training@globalknowledge.qa

www.globalknowledge.com/en-qa/

Global Knowledge, Qatar Financial Center, Burj Doha,Level 21, P.O.Box 27110, West Bay, Doha, Qatar