Implementing Cisco Wireless Network Fundamentals

Duration: 5 Days      Course Code: WIFUND      Version: 1.0

Overview:

Nederlands: Deze cursus gaat in op de benodigde basiskennis voor het plannen, implementeren en gebruiken van een Cisco Wireless Lan-netwerk. De cursus is bedoeld om deelnemers uit te rusten met de kennis en praktijkvaardigheden om een Cisco WLAN te ontwerpen, installeren, configureren en monitoren in een MKB- of grootschaligere omgeving, inclusief basale probleemoplossing. Omdat dit een cursus op Associate-niveau is, zullen de geavanceerde functies van Cisco WLAN-netwerken niet in detail worden behandeld.

English: This course looks at the fundamentals required in the planning, implementation and operation of a Cisco Wireless Lan network. This course is designed to help provide students with the knowledge and hands on practice required to enable them to design, install, configure, monitor and conduct the basic troubleshooting tasks of a Cisco WLAN in an SMB or Enterprise installations. As this is associate level course the advanced features of the Cisco WLAN networks solutions will not be covered in depth.

Target Audience:

Nederlands: iedereen die betrokken is bij het technisch beheer van de draadloze Cisco-platforms en -systemen, en personen die het CCNA Wireless-certificaat willen halen.

English: Individuals involved in the technical management of Cisco wireless platforms and solutions, and those looking for CCNA Wireless Certification.

Objectives:

Nederlands:

Na deze cursus bent u bekend met het volgende:

- De basisprincipes en basiskenmerken van RF
- WLAN-beveiligingsmethoden en toegang via verschillende clientapparaten
- De Cisco WLAN-architectuur en de onderliggende en ondersteunende infrastructuur
- Het implementeren van een gecentraliseerd WAN via de draadloze-WLAN-controllers AireOS of IOS-XE
- Het implementeren van een geconvergeerd WAN via de geconvergeerde IOS-XE-toegangsswitches en draadloze LAN-controllers
- Het implementeren van kleine draadloze netwerken met toegang op afstand via FlexConnect-, Autonomous- of Cloud-architecturen
- Het uitvoeren van WLAN-basisonderhoud en -probleemoplossing
- De vereisten voor een WLAN-design

English:

After attending this course you should be able to:

- Understand the basic RF principles and characteristics
- Understand WLAN security methods and access with differing client devices
- Define the Cisco WLAN architecture and the underlying infrastructure used to support it
- Implement a Centralized wireless access network using AireOS or IOS-XE wireless LAN Controllers
- Implement a Converged wireless access network using IOS-XE converged access switches adb wireless LAN controllers
- Implement small and remote access wireless networks using FlexConnect, Autonomous or Cloud architectures
- Perform basic WLAN maintenance and troubleshooting
- Describe the requirements for a WLAN design
Prerequisites:

Nederlands:
Deelnemers moeten voldoen aan de volgende eisen:

- Interconnecting Cisco Networking Devices, deel 1 & 2 - (ICND1 & ICND2)
- of Cisco CCENT-certificering (ICND1)

English:
Attendees should meet the following pre-requisites:

- Interconnecting Cisco Networking Devices Parts 1 & 2 - (ICND1 & ICND2)
- or, Cisco CCENT Certification (ICND1)

Testing and Certification

Nederlands:
Aanbevolen als voorbereiding op examen(s):

- 200-355 - WIFUND - Implementing Cisco Wireless Network Fundamentals

English:
Recommended as preparation for exam(s):

- 200-355 - WIFUND - Implementing Cisco Wireless Network Fundamentals

Follow-on-Courses:

Nederlands:
De volgende cursussen worden aanbevolen als vervolg cursus:

- Designing Cisco Wireless Enterprise Networks (WIDESIGN)
- Deploying Cisco Wireless Enterprise Networks (WIDEDEPLOY)
- Troubleshooting Cisco Wireless Enterprise Networks (WITSHOOT)
- Securing Cisco Wireless Enterprise Networks (WISECURE)

English:

The following courses are recommended for further study:

- Designing Cisco Wireless Enterprise Networks (WIDESIGN)
- Deploying Cisco Wireless Enterprise Networks (WIDEDEPLOY)
- Troubleshooting Cisco Wireless Enterprise Networks (WITSHOOT)
- Securing Cisco Wireless Enterprise Networks (WISECURE)
Content:

Wireless Fundamentals
- Explain Wireless Fundamentals
- Describe RF Principles
- Understand RF Mathematics
- Describe Antenna Characteristics
- Describe the Basics of Spread Spectrum
- Describe Wireless Media Access
- Describe Wireless Governance
- Discovery Lab 1: Practice RF Math
- Discovery Lab 2: Calculate EIRP and Choose the Correct Antenna
- Discovery Lab 3: Explore the RF Spectrum
- Discovery Lab 4: Analyze Wireless Frames

Security and Client Access
- Describe Wireless Security Components
- Explain 802.11 Security
- Explain 802.1X/EAP Framework
- Describe EAP Authentication
- Describe WPA and WPA2 Security
- Provide Guest Access
- Native Operating Systems for WLAN Connectivity
- Configure Smart Handheld Clients
- Discovery Lab 5: Review Centralized Authentication
- Define the Cisco Wireless Network Architecture
- Define Cisco Wireless Network Deployment Options
- Define One Management
- Define One Policy
- Define the Cisco One Network
- Mobility Architecture Concepts
- Optimize RF Conditions and Performance for Clients
- Describe Layer 2 Infrastructure Support
- Describe Protocols Used in Wired Infrastructure to Support Wireless

Wireless Network Fundamentals
- Implement Centralized Wireless Access
  - Initialize a Centralized WLC
  - Describe AP Connectivity
  - Explore Additional Wireless Features
  - Configure Client Access
  - Implement Roaming in the Centralized Architecture
- Implement Converged Wireless Access
  - Initialize a Converged WCM
  - Describe AP Connectivity
  - Explore Additional Wireless Features
  - Configure Client Access
  - Implement Roaming in the Converged Architecture
- Implement Small and Remote Wireless Access
  - Overview of the FlexConnect Architecture
  - Overview of the Autonomous Architecture
  - Overview of the Cloud Architecture

Wireless Fundamentals
- WLAN Maintenance and Troubleshooting
  - Describe Wireless Maintenance
  - Explain Troubleshooting Tools
  - Describe Troubleshooting Methodology
- WLAN Design
  - Predictive WLAN Design Process
  - WLAN Site Survey Process

Labs:
- Lab 1: Configure Windows 7 Client Access
- Lab 2: Configuring the Wired Infrastructure
- Lab 3: Configuring the Centralized WLAN Deployment
- Lab 4: Configuring IPv6 Operation in a Centralized WLAN Deployment
- Lab 5: Configuring Security in a Centralized WLAN Deployment
- Lab 6: Configuring Guest Access Using the Anchor WLC
- Lab 7: Deploying a Converged Access WLAN
- Lab 8: Configuring Security on a Converged WLAN Deployment
- Lab 9: Implement a FlexConnect WLAN Deployment
- Lab 10: Initialize an Autonomous WLAN Deployment
- Lab 11: Configure Security on an Autonomous AP WLAN Deployment
- Lab 12: Configure Security on a Cloud WLAN Deployment
- Lab 13: Perform Centralized Controller Maintenance
- Lab 14: Perform WiFi Scanning
- Lab 15: Challenge—Various Trouble Tickets
- Lab 16: Perform a Predictive WLAN Design
- Lab 17: Perform Passive Site Survey Analysis
- Discovery Lab 5: Review Centralized Authentication
- Discovery Lab 6: Calculate EIRP and Choose the Correct Antenna
- Discovery Lab 7: Explore the RF Spectrum
- Discovery Lab 8: Analyze Wireless Frames
- Discovery Lab 9: Explore the RF Spectrum
- Discovery Lab 10: Analyze Wireless Frames
- Discovery Lab 11: Explore the RF Spectrum
- Discovery Lab 12: Analyze Wireless Frames
- Discovery Lab 13: Explore the RF Spectrum
- Discovery Lab 14: Analyze Wireless Frames
- Discovery Lab 15: Explore the RF Spectrum
- Discovery Lab 16: Analyze Wireless Frames
- Discovery Lab 17: Explore the RF Spectrum
- Discovery Lab 18: Analyze Wireless Frames

Additional Information:

This course replaces the course "Implementing Unified Wireless Networking Essentials v2.0 - IUWNE"

Further Information:

For More information, or to book your course, please call us on 0800/84.009
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www.globalknowledge.com/en-be/