





# Design & Deploy an Enterprise WiFi6 Network





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| Code      | Course                                      |
|-----------|---|
| 6100-3078 | Design & Deploy an Enterprise WiFi6 Network |

# Course Outlines - 4 Days Training Event

#### What will you learn?

- Design & Implement WiFi 6 Networks for different types of buildings (hotels, office buildings, stadiums, retail stores, hospitals, shopping malls, airports, & schools) and...
- Different types of WiFi 6 Access
  Points and Antennas, and their signal coverage
- How to design a Redundant
  Wireless Network
- Deploying a multi-site Wireless
  Network
- Understand the business aspects of designing, installing, and maintaining a Wireless Network, and the costs associated with the network
- The different components of a Wireless Network (access points,



- repeaters, switches, routers, controllers, VoIP phones)
- Where to place Switches, Routers, and Access Points
- How to Design & Install outdoor
  Wireless Networks
- Deploying Voice Over Wireless LAN
- Applications that benefit from, or rely on, Wireless Networks (Guest WiFi, Voice Over WLAN, Premium WiFi, Location-Based Services, Inventory Management)





#### **Pre-Requisites**

 You should have a basic understanding of computer networks (routers, switches, IP addressing, WANs, VPNs).

#### Who should attend this course?

- IT Engineers who are deploying
  Enterprise WiFi Networks
- Wireless and Telecom Engineers
- IT Managers
- Anyone who wants to have a real-world understanding of WiFi

#### **Course Outlines**

Introduction

#### WiFi 6 Fundamentals

- IEEE 802.11ax
- RF, Antenna, and BasicConnection Process
- Channel Access
- Frequencies
- WiFi 6 Frames
- Free Space Path Loss
- Ranging

#### Site Survey with Ekahau Tool

- Introduction to Ekahau Site Survey
- Predictive Site Survey
- Pre-Deployment Site Survey
- Post-Deployment Site Survey

#### **Initial Planning**

- Initial Planning of a WiFi 6
  Network New Construction
- Initial Planning of a WiFi 6Network Existing Construction
- Initial Planning of a WiFi 6Network Passive Surveys &

#### **Access Points & User Devices**

- Access Points Introduction
- Power Over Ethernet
- Wireless Mesh Access Points
- Access Point Antennas,Amplifiers, & Repeaters
- Access Point Placement
- Access Point Placement Performing Active Surveys &
  Simulations





# Controllers, Application Servers, & Switches

- Wireless Controllers
- Application Servers
- Switches
- MDFs & IDFs
- Examples

#### **Advanced Design Considerations**

- User Quantity
- WANs
- Redundancy
- Roaming
- Multiple Floors, Frequency, Transmit Power, RRM

# Security

- Guest WiFi
- Encryption & Authentication
- Rouge APs & Honeypots
- RF Shielding, Physical Security & DDos

#### WiFi 6 Penetration Testing

# **Applications**

- Introduction
- Authentication

- Monitoring
- Location Awareness
- Inventory Management
- Voice over Wireless LAN

#### Installation

- New Construction
- Existing Construction
- Testing

#### **Using Fluke AirMagnet**

- Passive Surveys & Planning
- Active Surveys
- JPERF & GPS





# Photos from our past training events

More details at www.wh-consult.com/training



Amman - Jordan



Tunis - Tunisia



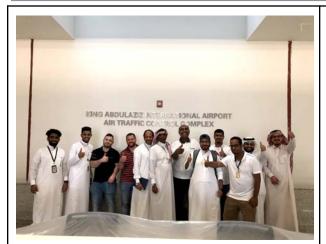
Tunis - Tunisia



Dubai - UAE







Jeddah - Saudi Arabia



Muscat - Oman



Amman - Jordan



Kuala Lumpur - Malaysia







Kampala - Uganda



Kuala Lumpur - Malaysia



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Istanbul - Turkey

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