



Multiple Choice Exam Objectives

The following chart provides a breakdown of the questions within each knowledge domain

Knowledge Domain	Percentage
Ekahau Tools & Methodology	7
Troubleshooting Tools & Methodology	15
802.11 Fundamentals & Operations	15
Wi-Fi Assessment Surveys & Design	20
Protocol Analysis	15
WLAN Association	7
WLAN Security	7
WLAN Analysis	7
Spectrum Analysis	7

Ekahau Tools & Methodology - 7%

- Explain 3 Steps to Great Wi-Fi
 - + Step 1: Design
 - + Step 2: Validate
 - + Step 3: Health Checks
- Identify and use Ekahau tools
 - + Ekahau AI Pro
 - + Ekahau Connect Suite
 - + Ekahau Sidekick
- + Assessment Survey
- + Protocol Analyzer
- + WLAN Analyzer
- + Spectrum Analyzer

Troubleshooting Tools & Methodology - 15%

- Explain troubleshooting challenges
 - + Reactive vs proactive
 - + Potential Causes of Wi-Fi Issues
- Apply correct troubleshooting approach
 - + Troubleshooting Checklist
 - + Troubleshooting Steps
- Use correct troubleshooting tools

802.11 Fundamentals & Operations - 15%

- Understand 802.11 fundamentals
 - + Amplitude, phase, frequency
 - + Wi-Fi PHYs
 - + Contention in Wi-Fi
 - + Transmit opportunity
 - + Types of acknowledgments
 - + Power save
 - + Protection mechanisms

Wi-Fi Assessment Surveys & Design - 20%

- Define Wi-Fi requirements
 - + Business requirements
 - + Technical requirements
 - + RF requirements
- Demonstrate ability to analyze survey & live 802.11 data
 - + Analyzing survey data with Ekahau AI Pro
 - + Analyzing survey data with Ekahau Survey
 - + Analyzing survey data with Ekahau Insights
 - + Analyzing live RF conditions with Ekahau AI Pro and the Sidekick
 - + Analyzing live RF conditions with Ekahau Analyzer and the Sidekick
 - + Incidental Coverage Area
- Explain how to perform super-accurate Wi-Fi site surveys
 - + Ekahau 6 Tips for Super-Accurate Wi-Fi Site Surveys
- Understand how to use offsets
 - + Device Offsets
 - + Design Offsets
- Analyze survey results
 - + Ekahau AI Pro
 - + Ekahau Survey App
 - + Ekahau Insights

Protocol Analysis - 15%

- ✔ Understand how & where to capture
 - + Ekahau Capture
 - + Protocol Analyzing Tools (Wireshark)
 - + Capture & Display Filters
- ✔ Explain encapsulation, PHY & MAC frame formats
 - + OSI Model
 - + Encapsulation
 - + PHY Preamble & Header
 - + MAC Frame Format
- ✔ Explain WLAN discovery process
 - + BSS & ESS
 - + 2.4 GHz & 5 GHz BSS Discovery
 - + 6 GHz BSS Discovery
 - + TBTT & Beacon Overhead

WLAN Association - 7%

- ✔ Explain association process
 - + Green Diamond
 - + Association Analysis
 - + Beacons & Association Frames Decodes
- ✔ Explain roaming in Wi-Fi
 - + Roaming analysis in packet decodes
 - + Roaming amendments - 802.11k, v & r
 - + Roaming amendments analysis with Ekahau Analyzer app
 - + Roaming analysis with Ekahau AI Pro

WLAN Security - 7%

- ✔ Explain various Wi-Fi security options & amendments
 - + Open, WEP, WPA, WPA2, WPA3, Enhanced Open
 - + 802.11w
- ✔ Explain authentication in Wi-Fi
 - + L2 and L3 authentication (captive portals)

WLAN Analysis - 7%

- ✔ Use Wi-Fi scanning capabilities of Ekahau Analyzer to assess & troubleshoot WLANs
 - + Assess country code, data rates, security configured, channel utilization, associated stations, etc.

Spectrum Analysis - 7%

- ✔ Demonstrate ability to analyze spectrum data
 - + Types of RF interferes
 - + Analysing live and historic RF conditions with Ekahau AI Pro and the Sidekick
 - + Analysing live RF conditions with Ekahau Analyzer and the Sidekick
 - + Channel utilization reported by spectrum analyzer
 - + Channel utilization reported by a Wi-Fi network card
 - + Density vs Waterfall views