

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	20
802.11 Fundamentals & Operations	15
Wi-Fi Assessment Surveys & Design	20
Protocol Analysis	10
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 AI Pro Online
- + Ekahau Connect Suite
- + Ekahau Sidekick 2

Troubleshooting Tools & Methodology - 20%

Explain troubleshooting challenges

- + Reactive vs proactive
- + 9 Common Bad Wi-Fi Factors
- + 7 Common Wi-Fi User Complaints

Apply correct troubleshooting approach

- + Troubleshooting Checklist

+ Troubleshooting Steps

Use correct troubleshooting tools

- + Assessment Survey
- + Protocol Analyzer
- + WLAN Analyzer
- + Spectrum Analyzer
- + Optimizer

Explain the Three 'C's of Survey Analysis

- + Wi-Fi Coverage
- + Wi-Fi Capacity
- + Wi-Fi Channels

802.11 Fundamentals & Operations - 15%

Understand 802.11 fundamentals

- + Channels and frequencies
- + Overlapping Basic Service Set (OBSS)
- + Wi-Fi PHYs

+ Contention in Wi-Fi

Understand 802.11 arbitration

- + CSMA/CA
- + "The Game"

Wi-Fi Assessment Surveys & Design - 20%

Define Wi-Fi requirements

- + Business requirements
- + Technical requirements
- + RF requirements
- + LCMI

Demonstrate ability to analyze survey & live 802.11 data

- + Analyzing survey data with Ekahau AI Pro
- + Analyzing survey data with Ekahau AI Pro Online
- + Analyzing survey data with Ekahau Survey
- + Analyzing survey data with Ekahau Insights
- + Analyzing live RF conditions with Ekahau AI Pro and the Sidekick 2
- + Analyzing live RF conditions with Ekahau Analyzer and the Sidekick 2
- + Incidental Coverage Area

Explain how to perform super-accurate Wi-Fi Site Surveys

- + Ekahau 5 Tips for super-accurate Wi-Fi Site Surveys

Survey Methods

- + Stop & Go

- + Continuous
- + Autopilot
- + JustGo
- + GPS
- Understand how to use offsets
 - + Device Offsets
- Analyze survey results
 - + Ekahau AI Pro
 - + Ekahau AI Pro Online
 - + Ekahau Survey App
 - + Ekahau Optimizer

Protocol Analysis - 10%

- Understand how & where to capture
 - + Ekahau Analyzer app
 - + Sidekick 2
- Explain OSI model and encapsulation
 - + OSI Model
 - + Encapsulation
- Explain WLAN discovery process
 - + 2.4 GHz & 5 GHz BSS Discovery
 - + 6 GHz BSS Discovery
 - + TBTT & Beacon Overhead

WLAN Association - 7%

- Explain association process
 - + Green Diamond
 - + Association Analysis
- 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
 - + Roaming analysis with Ekahau AI Pro Online

WLAN Security - 7%

- Explain various Wi-Fi security options & amendments
 - + Open, WEP, WPA, WPA2, WPA3, and Enhanced Open
 - + 802.11w or MFP
- 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
 - + Receiver Sensitivity
 - + Types of RF interferes
 - + Analysing live and historic RF conditions with Ekahau AI Pro, AIPO, and the Sidekick 2
 - + Analysing live RF conditions with Ekahau Analyzer and the Sidekick 2
 - + Channel utilization reported by spectrum analyzer
 - + Channel utilization reported by a Wi-Fi network card
 - + Density vs Waterfall views