Course Outline

Certified Wireless Analysis Professional (CWAP)

Course Summary

Description

The CWAP Wireless LAN Analysis course consists of hands-on learning using the latest enterprise wireless LAN analysis and troubleshooting tools. This course takes an in-depth look at the functionality of WLANs, intended operation of the 802.11 protocol and Wi-Fi Alliance specifications, WLAN frame formatting and structure, troubleshooting methodology, and protocol analysis. It also includes extensive training in modern spectrum analysis with a focus on advanced RF behavior analysis, data collection methods, interpreting spectrum plots and charts, and understanding advanced features of WLAN spectrum analyzers. Students who complete this course will acquire the necessary skills for analyzing, assessing, and troubleshooting wireless operation in the enterprise, utilizing hardware and software solutions from the industry's leading manufacturers.

Topics

- Troubleshooting Processes
- 802.11 Communications
- 802.11 Frames
- WLAN Hardware
- Protocol Analysis
- Spectrum Analysis
- Wired Issues
- Common WLAN Issues

Prerequisites

Basic networking knowledge (OSI / IP). Basic network security concepts and wireless network administration CWNA or equivalent knowledge. To earn the CWAP certification, you must pass 2 exams: CWNA and CWAP

Duration

Three days

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I. Troubleshooting Processes
A. Troubleshooting Methodologies
B. CWNP Methodology
C. Troubleshooting Tools

II. 802.11 Communications
A. Terminology Review
B. Beacon Frames
C. Authentication
D. Channel Access
E. WLAN Architectures

III. 802.11 Frames
A. Framing Review
B. 802.11 General Frame Format
C. 802.11 Frame Types
D. Important 802.11 Frames
E. Security Communications
F. 802.11 PHY

IV. WLAN Hardware
A. Client Devices
B. Access Points
C. WLAN Controllers and Managers
D. Wireless Analysis Hardware
E. Wired hardware

V. Protocol Analysis
A. WLAN Protocol Analysis Hardware and Software
B. Protocol Analyzer Common Features
C. Working with Protocol Analyzers

VI. Spectrum Analysis
A. Spectrum Analysis Hardware
B. Terminology
C. Spectrum Analyzer Features
D. Installing and Configuring
E. Performing Spectrum Analysis

VII. Wired Issues
A. Common Problems
B. Troubleshooting Tools
C. Troubleshooting Specific Issues

VIII. Common WLAN Issues
A. Common Issues
B. Security Issues
C. Client Issues
D. Modern Issues

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