Training: Extreme Networks
# Extreme Platform ONE™ - Wireless - Troubleshooting

## TRAINING GOALS:

This one – day instructor – led course provides the knowledge and hands – on skills required to troubleshoot, validate, and resolve wireless network problems on environments managed with Extreme Platform ONE. Participants will learn how to apply a repeatable, evidence – based troubleshooting methodology that isolates a fault to a specific layer, confirming the wired foundation before assuming an RF problem, assessing RF health against best practice, and analyzing discovery, association, authentication, and roaming behavior in packet captures. The course also builds a practical, multi – vendor toolkit (scanner, protocol analyzer, spectrum analyzer, survey tool, and Quality – of Experience tools) and introduces the use of Extreme Platform ONE intelligence and AI – assisted capabilities to support daily wireless operations.

### Course Objectives

Upon completion of this course, students will have gained the working knowledge to:

- Apply a repeatable, evidence – based troubleshooting methodology that isolates a fault to a specific layer
- Confirm the wired foundation — cabling, PoE, link speed/duplex, VLAN, DHCP, and DNS — before assuming an RF or Wi – Fi problem
- Operate a practical, multi – vendor toolkit: scanner, protocol analyzer, spectrum analyzer, survey tool, and QoE tools
- Assess RF health and best practice — RSSI/SNR, channel plan and width (5 GHz and 6 GHz), CCI/ACI/OBSS, transmit power, band steering, SSID overhead, and RRM — and turn findings into justified adjustments
- Capture and analyze discovery, association, and authentication, including simultaneous wired + wireless RADIUS captures, to isolate supplicant, authenticator, or server faults
- Analyze roaming behavior (802.11k/v/r fast transition) and measure whether a roam is voice – grade
- Validate Quality of Experience (throughput, latency, jitter, loss) and prove a fix resolved the reported symptom
- Document findings and deliver a clear, customer – facing resolution summary

### Audience



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This course is for personnel who install, deploy, configure, and troubleshoot wireless networks using Extreme Platform ONE. It is designed for those responsible for investigating, validating, isolating, and resolving real customer Wi – Fi problems — from intermediate issues to highly complex, multi – layer faults.

- Network administrators
- Wireless network engineers
- Solutions and deployment engineers
- Pre/Post sales Partner engineers
- Technical support personnel
- Implementation and professional services personnel

## CONSPECT:

- Troubleshooting Methodology & the First - Responder Mindset (8 - step workflow, symptom intake, Wi - Fi Top - 25 checklist)
- How Wi - Fi Works — OSI as a Troubleshooting Framework (DCF / CSMA - CA, the 802.11 association process)
- Confirming the Wired Foundation (cable & PoE testing, Ethernet path/port, VLAN / DHCP / DNS validation)
- Building the Troubleshooting Toolkit (Wi - Fi Explorer Pro, WLANPi R4 as local & remote sensor)
- RF Health & Best - Practice Assessment (RSSI/SNR, CCI/ACI/OBSS, channel width in 5 & 6 GHz, transmit power, SSID overhead, RRM)
- Spectrum Analysis & Layer - 1 Interference (interferer signatures, duty cycle, DFS)
- Discovery, Association & Over - the - Air Packet Capture (monitor mode, frame types, reason codes, Wireshark)
- Survey Validation & Heatmap Review (signal / SNR / data - rate heatmaps)
- Security Suites & Authentication Concepts (WPA2/WPA3, OWE/SAE, PSK/DPSK, captive portal, 802.1X / EAP / RADIUS)
- Authentication Troubleshooting with Packet Analysis (4 - way handshake, simultaneous wired + wireless capture, EAP - RADIUS correlation)
- Roaming Behavior Analysis (802.11k/v/r fast transition, roam - gap measurement)
- Quality - of- Experience ( QoE ) Validation & Throughput (throughput, latency, jitter, loss)

## REQUIREMENTS:

Mandatory Prerequisite : None as a formal course prerequisite, though completion of Extreme Platform ONE Wireless – Installation and Configuration (or equivalent experience) is strongly recommended. Attendees should have a working knowledge of LAN fundamentals (Ethernet, VLANs, TCP/IP) and basic 802.11 / Wi- Fi concepts (bands, channels, RSSI/SNR).



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## Difficulty level



## CERTIFICATE:

Participants who pass the Extreme Networks Certified Professional in Extreme Platform ONE™ - Wireless Lab Assessment will receive a certificate signed by Extreme Networks - Extreme Networks Certified Professional in Extreme Platform ONE™ - Wireless.

## TRAINER:

Authorized Extreme Networks Trainer



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