

Wi-Fi AI Ops Solution - Aprecomm VWE

INTRODUCTION

Wi-Fi is the most common network access technology in the world today. For businesses that require reliable connectivity, it's important to ensure that the Wi-Fi is working without interruption and providing best possible performance.

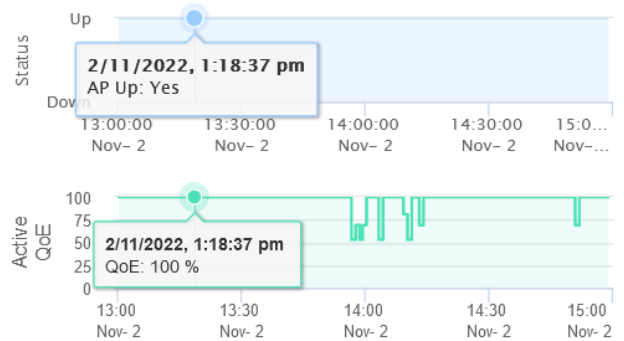
Problems in Wi-Fi deployments are difficult to troubleshoot, often takes up significant attention of operations teams and may require subject matter experts to resolve the issues.

Aprecomm's Virtual Wireless Expert (VWE) makes your Wi-Fi operate at full capacity and ensure optimized performance. VWE's edge-intelligence technology available on Edgecore Wi-Fi 6 access points can identify Wi-Fi issues even before your users experience it and provide precise recommendations to resolve them in minutes.

VWE's self-healing and self-organizing technology adds intelligence to makes your Wi-Fi reliable in all environmental conditions. It's self-organizing features will automatically optimize Wi-Fi configurations for best performance in any given network condition.

Empower your Wi-Fi network with VWE's powerful AI-enabled solution for enhanced quality of experience and reliable connectivity.

HISENSE - QUALITY OF EXPERIENCE - QOE



Wireless Experience

Clients

Client Positions

WIRELESS EXPERIENCE



3 failures, 39 attempts
14 Clients Connected, 3
Clients Failed

Connectivity



0 DNS / ARP Failures
0 DNS / ARP Attempts

Network



5 Application/s Detected
4 Clients Affected

Applications



0 Failures
1 Steering Attempts

Steering



5 Failures
27 Roaming Attempts

Roaming



Up for 4 hrs
Less than 1
second

Stability

HIGHLIGHTS

Aprecomm's AI Engine proactively monitor's Wi-Fi networks 24x7, so you don't have to. Conditions that can potentially lead to poor wireless experience are detected by VWE even before users experience them. Further, VWE provides recommendations that helps network operations teams to resolve Wi-Fi issues faster.

hiSense: Abstracts complexity and offers to enable network maintenance without the need for subject matter experts. Evaluate Wi-Fi quality of experience (QoE) by measuring application performance, Wi-Fi network health and WAN performance. Get immediate insights to drop in QoE.

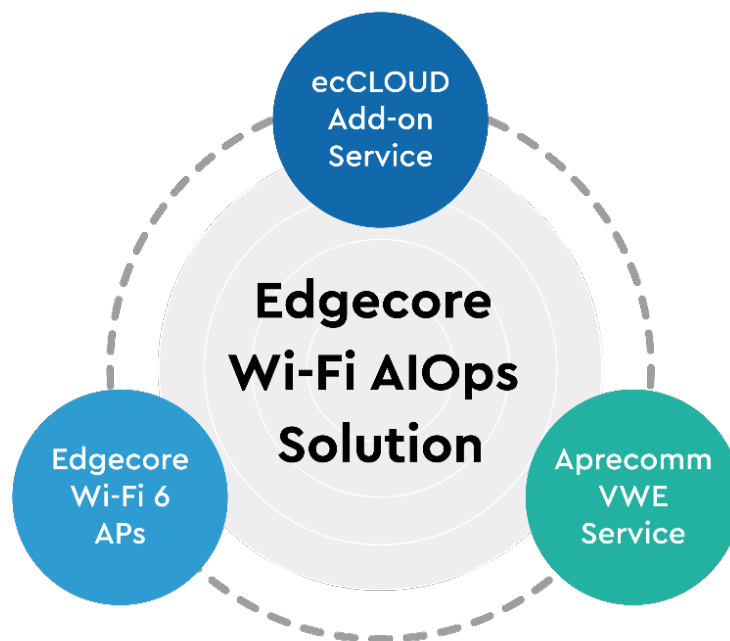
Virtual Expert: Detect Wi-Fi issues instantly with Aprecomm's AI based platform and Evolv insights. Identify drop in application performance due to underlying network problems. Get precise recommendations for faster resolution to issues.

Express Root Cause: Simplify debugging and analysis of huge log dumps with macro-to-micro analytics. Enhance turnaround time from hours to minutes.

Complete Wi-Fi Visibility: See all the Wi-Fi events, devices connected, issues in Wi-Fi, data consumption, application usage and several other vital information in one dashboard.

AP/Client Analytics: Understand device-specific behaviour to drive better device performance

DEPLOYMENT CONCEPT



SPECIFICATIONS

FEATURES

24x7 real-time user quality-of-experience measurements

- Simplified Customer Wi-Fi Experience measurements. Advanced Quality-of-Experience (QoE) Metrics with Application Detection and network insights.
- Understand the reason for user QoE drop and get recommendations for resolution.
- Historical QoE data for better diagnosis of persistent issues.

AI-enabled automated Wi-Fi network optimization

- Intelligent frequency selection feature to find the best performing channel, chosen based on spectral analysis as well as usage trends.
- Intelligent steering to switch between bands based environmental conditions.
- Intelligent roaming based on advanced optimization algorithms

Analytics, including trend analysis

- Deeper insights to network parameters with time such as congestion, optical power, latency, latch time, connection time, etc
- Visualization of client distance to AP and signal levels along with real-time throughput per client.
- Rapid Root-cause analysis of Wi-Fi issues through macro-to-micro navigation interface.

CUSTOMER

Enterprise/ ISP/ MSP

- | | |
|-------------------------|--|
| ▪ Office/Factory/Campus | ▪ Service apartment/ Smart Building / Rental apartment |
| ▪ Public facilities | ▪ Hospital |
| ▪ Shopping mall | ▪ Public event site |
| ▪ Chain Store | ▪ Property management |

APPLICATION

Identify Network Issues in seconds

- See network-wide Wi-Fi issues and identifies the APs along with devices involved in one console.
- Monitor network-wide user Quality-of-Experience through single dashboard that immediately displays network issues. Get notifications and alerts based on rules.
- Identify and rectify precise Wi-Fi problem for each AP / client and resolve them.

AI-based Automatic Optimization of Wi-Fi Performance

- Intelligence algorithms to automatically provide best Wi-Fi performance through AI-based algorithms to select optimal frequency, band and through intelligent roaming.
- Cloud-based radio resource management and roaming optimization.

Network Usage Insights & Trends

- Insights on application usage, data usage and Wi-Fi network parameters

INSTALLATION REQUIREMENTS

ecCLOUD Cloud Controller

ecCLOUD add-on Service

- Add-on activation kit
- User registration toolkit

Edgecore Wi-Fi Access Point*

- EAP101
- EAP102

*More supported models to be released

AI-ENABLED DETECTION	
Internet (WAN)	<ul style="list-style-type: none"> • Throughput (Up/Down) • Packet Drops • Roundtrip Latency • Usage
Wi-Fi Connection/ Experience	<ul style="list-style-type: none"> • DHCP Exchanges • EAP Failures • Slow Connectivity • Connection Drops • Poor Signal • Beacon Miss • Steering Efficiency • AP Stability • Wrong Key • Inactivity • Radio Congestion • Wi-Fi Latency • Hogging Airtime
Wi-Fi Roaming	<ul style="list-style-type: none"> • Poor AP Selection • Poor Overlap • AP Slow Response • Sticky Client • Slow Roaming
Application	<ul style="list-style-type: none"> • Reachability • Upstream Health • Downstream Health