

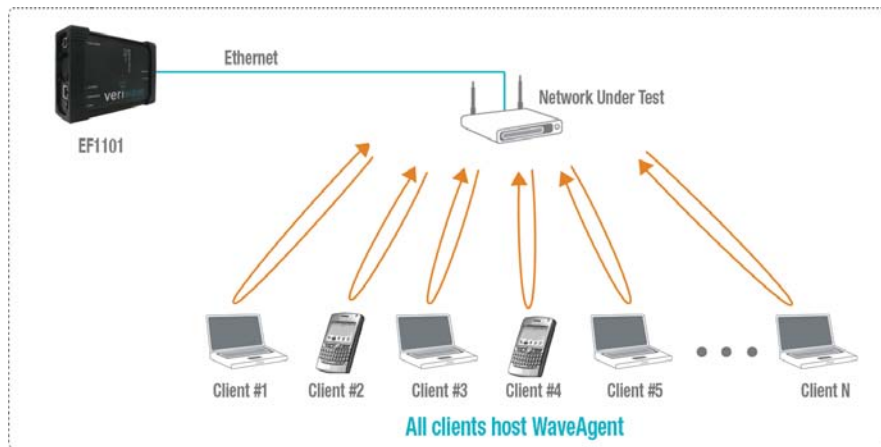
WaveInsite™ – Mobile WLAN Client Interoperability and Performance Testing

WaveInsite - is the fastest way to conduct “over the air” WiFi interoperability & performance testing between WiFi Access Points and multiple real client devices. With WaveInsite, testers can configure, automate and repeat a series of tests within minutes, measuring speed, throughput, goodput, loss, scalability, voice quality and vendor/device interoperability.

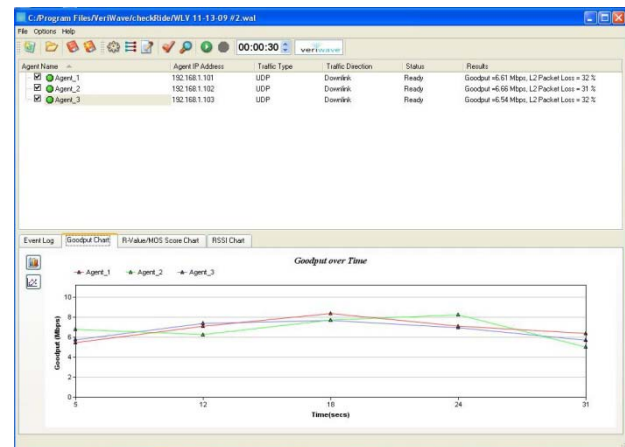
WaveInsite brings test-grade accuracy and repeatability to Over The Air (OTA) testing. It enables equipment vendors building WLAN networks and devices as well as users of WLAN networks to observe the interaction and impact of specific devices and applications on fully loaded live networks. With WaveInsite, users can quickly assess how specific mobile clients (laptops, smart phones, netbooks, etc.) will experience the WLAN. It allows for easy comparison between clients from various vendors, chip sets and operating systems.

For Systems Integrators & end-users: WaveInsite is the fastest and most precise means for selecting WiFi vendors, designing and deploying networks for optimal performance, certifying new networks, and certifying WiFi devices.

For WiFi device and infrastructure manufacturers: WaveInsite significantly reduces the time and cost of interoperability and performance testing during development and QA.



WaveInsite testing with EF1101 (EF1101 can be replaced with the WaveTest 20 and WBE1101)



WaveInsite real-time results

WaveAgent

WaveInsite utilizes WaveAgent, a tiny footprint software utility loaded onto a networking mobile device. It provides device-specific measurements of forwarding rate, throughput, voice MOS, loss, round-trip latency and jitter.

It addresses the need to isolate issues to the client application, client driver, or network infrastructure, when poor performance is observed. Network Quality of Experience (QoE) as well as client-specific QoE can be determined and compared, making it easier to determine root cause. Validating vendor-proprietary capabilities such as classified authentication or encryption including WAPI, as well as client-specific features can be determined.

Benefits

- Enables rapid Over the Air (OTA) testing with real client devices such as laptops, mobile phones, scanners, patient monitors, etc.
- Setup and run tests in less than 5 minutes
- Real time and overtime results
- Quickly and easily conduct “what if” interoperability tests between various client devices and Access Points
- Quickly identify and pinpoint potential problems
- Compare results against pre-set SLAs

Test Configuration, Results and Metrics

TEST CONFIGURATION:

- Single-page dashboard – 5 clicks or less to start test
- Multiple traffic flows per client: UDP, TCP, VoIP
- Detailed configuration per traffic flow: direction, intended load, packet size
- Results are measured and collected using WaveAgent; one WaveAgent installed on each client participating in test (laptop, Smartphone, etc.)
- Seamless integration with VeriWave’s WiFi traffic analysis blades to “sniff” the air and quickly determine the root-cause of less than expected performance
- Set pass/fail performance criteria for each client device

TEST RESULTS

- UDP throughput, TCP Goodput, Loss
- Voice MOS and R-Value
- Results reported per client and per traffic flow
- Automatic generation of a simple-to-read PDF report after each test
- Automatic comparison of test results against user pre-set Service Level Agreements (SLAs) to gauge end-user satisfaction



Functionality

- Operates in conjunction with a “host” VeriWave Ethernet Traffic Generation / Analysis port (WBE1101 within WT20 or stand-alone EF1101) connected to the network that communicates with all third-party clients hosting WaveAgent
- Test traffic generated by the VeriWave test port is handled by WaveAgent on each third-party mobile client without higher layer applications interfering with measured results
- WaveAgent can be run from a USB drive without installing any permanent software onto the third party clients
- Supported operating systems for third-party mobile clients hosting WaveAgent:
 - Windows XP
 - Windows 7
 - Windows Vista
 - Windows Mobile 6
 - Linux—2.6 or higher kernel (x86 or ARM)
 - MAC OS X (x86)
 - iOS3 & iOS4 for iPhone, iPod touch – available on the App Store or from iTunes
 - Android 2.1 or later - available on the Android Market
- Maximum number of supported WaveAgent clients on a single WaveTest port or on a single EF1101: 64

Minimum Requirements

VeriWave Test System	<ul style="list-style-type: none"> • EF1101 hand-held traffic generator / analyzer <p style="text-align: center;">Or</p> <ul style="list-style-type: none"> • 1 x VeriWave WaveTest 90 or WaveTest 20 system • 1 x VeriWave single port Ethernet Port (WBE1101)
VeriWave Software	<ul style="list-style-type: none"> • 1 x WaveAgent
Host Computer	<ul style="list-style-type: none"> • X86-based PC with 1GHz processor and 256MB RAM • Windows XP SP2