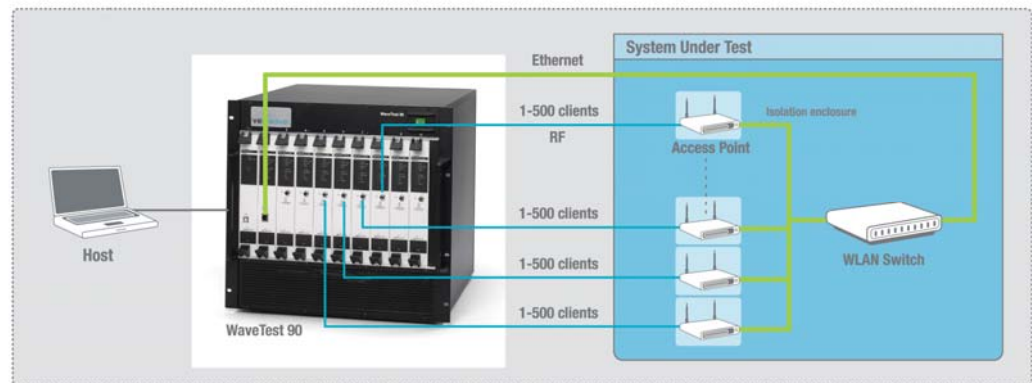


WaveApps™ — IEEE P802.11.2 Standard WLAN Benchmarking Test™

The IEEE P802.11.2 Standard WLAN Benchmarking Test offers a complete set of automated tests to characterize and analyze the performance and scalability of WLAN networks and network components. Critical metrics, including Throughput, Forwarding Rate, Loss and Latency are measured and reported.

Typical WLAN benchmarking test setup



Part of the WaveApps test suite, the IEEE P802.11.2 Standard WLAN Benchmarking Test offers the complete set of Layer 2 and Layer 3 performance metrics defined by the IEEE P802.11.2 WLAN benchmarking methodology for Access Points (APs), WLAN controllers and WLAN switches. Addressing an urgent need for repeatable and reliable tests, the focus of this test is on providing WLAN performance metrics through automated tests with scalable client emulation and traffic generation to enable the user to quickly baseline the behavior of WLAN infrastructure network device and expose any bottlenecks that would cause performance and scalability problems.

Benefits

- Run IEEE P802.11.2 Standard benchmarking tests over a wide variety of WLAN network topologies
- Scale the test bed from a single AP to hundreds of APs and multiple WLAN controllers or switches
- Determine key metrics of your system: Throughput, Maximum Forwarding Rate, Packet Loss, Latency
- Automate tests via VeriWave's powerful automation framework to facilitate testing over long periods of time, including regression testing
- Produce automatically generated test reports to convey results to management or to your customers
- Reduce time-to-market by shortening testing time, with VeriWave's easy-to-use GUI and precise metrics
- Control key parameters such as the number of statefull clients, security type, frame type and frame size, to provide comprehensive characterization of the system being tested
- Scaling the test from one to thousands of clients to stress the System Under Test (SUT) under real world conditions



Test Results

- Real-time status of client connections, counters and results help the user track test progress
- Real-time graphs of metrics being measured
- Complete test results are available in HTML and CSV file formats for easy analysis and reporting
- Automatically generated PDF test reports provides a comprehensive view of the test including an executive summary, graphical test setup, description of the methodology, results graphs, and drill-down details in tabular format
- Comparison of test results versus theoretical maximum achievable values are provided for quick comprehension of the system's performance
- Integrated capture functionality enables bidirectional traffic capture while the test is executing
- Test results reported in terms of frames per second (fps) and megabits per second (Mbps) for easy comparison to setup configuration



TESTS AND METRICS

- Packet Loss Test
- Latency Test
- Throughput Test
- Maximum Forwarding Rate Test

CLIENT CONTROL

- Client PHY data rate, security schemes
- MAC (user configurable or automatic) and IP addresses (user configurable or DHCP)
- Connection rate, connection retries
- Per client SSID/BSSID configuration

TRAFFIC CONTROL

- Traffic load (fixed or stepped) in fps/Mbps, frame size
- Data payload type (UDP, TCP, Raw IPv4), data payload content
- Traffic mapping between source/destination clients
- Uni-directional /Bi-directional transfer

TEST CONFIGURATION AND CONTROL

- GUI provides hierarchical tree format to enable quick navigation between tests
- Introduction screen describes the test methodology and provides a graphical representation of the test setup
- Test ports, number of clients, type of traffic, and frame parameters are easily configurable on a per-test basis, or can be shared among all tests
- Set test duration (hours, minutes and seconds) and number of trials
- SUT settle time, Layer3 learning parameters (ARP-IPv4, learning time, aging time)
- Real-time statistics update at user defined intervals

Minimum Requirements

Veriwave Test System	1 x WaveTest WT90™ or WT20™ system 1 x WaveBlade™ WiFi (WBW1000) 1 x WaveBlade™ Ethernet (WBE1000)
Host Computer	x86 based PC running Microsoft® Windows XP SP1 or SP2 with 1 GHz Processor and 256MB RAM

