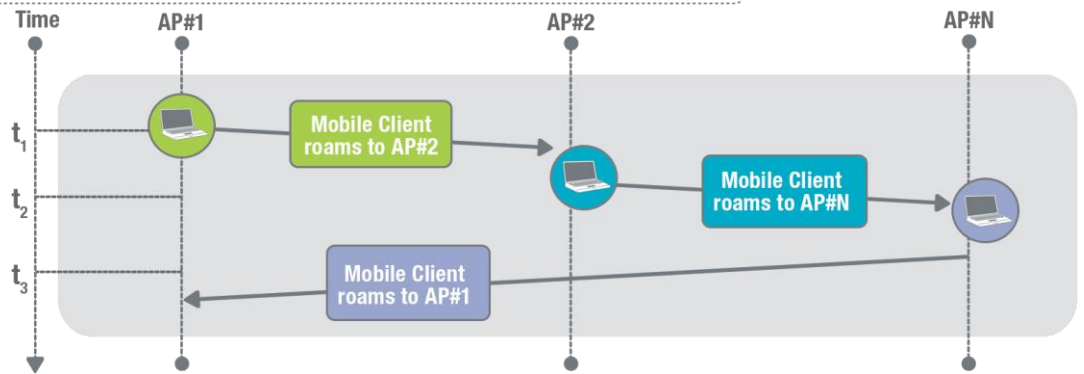
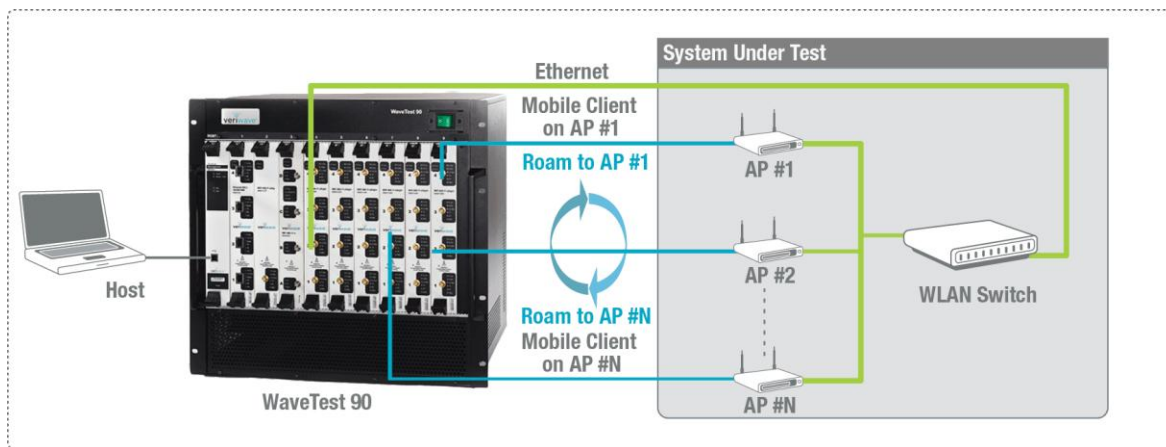


WLAN Roaming Test

The WLAN Roaming Test - offers a complete set of automated tests to analyze the ability of infrastructure-class WLAN networks and network components to handle hundreds of mobile clients roaming between Access Points (APs). The test provides precise measurements of roaming delay, call quality during roaming, and the network's overall capacity to handle mobile clients.



Typical WLAN roaming test setup.

Addressing an urgent need for repeatable and reliable metrics in the wireless space, the focus of the WLAN Roaming Test is on providing WLAN mobility performance through automated tests with scalable client traffic generation, including VoIP over WLAN. This enables the user to quickly analyze the behavior of WLAN infrastructure network devices. Support for client initiated roaming as well as controller initiated roaming is provided, addressing Thin-AP and Thick-AP architectures. The WLAN Roaming Test is part of the WaveApps test suite, offering simple setup, comprehensive results reporting and test automation support, while maintaining the highest degree of flexibility and customization.

Benefits

- Scale the test from a single roaming client to hundreds of roaming clients to stress the System Under Test (SUT) under real world conditions
- Create complex roaming scenarios in which clients roam between multiple APs, creating per-client precise and repeatable mobility behavior including signal strength and distance-related impairments
- Characterize the SUT's ability to handle mobile clients utilizing a variety of security and encryption schemes
- Determine key metrics of your system, including maximum roaming client load, per-client/per-BSS roaming delay and packet loss
- Automate tests to facilitate testing over long periods of time including regression testing
- Use automatically generated test reports to convey results to management or to your customers
- Reduce time-to-market by shortening time-to-test, via WaveTest's intuitive and easy to use GUI front-end and highly repeatable metrics

Test Results

- Real-time status of client connections, counters and results help 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 report provides a comprehensive view of the test including an executive summary, graphical test setup, description of test methodology, results graphs, and drill down details in tabular format
- Integrated capture functionality provides for bidirectional traffic capture while the test is executing



TEST AND METRICS:

- Roaming Delay & Packet Loss Test determines the minimum, maximum and average delays and packet loss experienced by clients when roaming between APs
- Roaming Load Test determines the maximum number of clients that can be supported by the SUT without dropped connections at user-defined roaming delays

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 client, 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, L3 learning parameters (ARP-IPv4, Learning Time, Aging Time)
- Set thresholds for client disconnections and definition of failed roams
- Define spatially and temporally spread roaming clients
- Real-time statistics update at user defined intervals

CLIENT CONTROL

- Client transmit power level, PHY data rate, security schemes, back-off times
- MAC and IP addresses, connection rate, connection retries
- Per client roam sequence including BSSID list and dwell time per BSSID

TRAFFIC CONTROL

- Traffic load (fixed or stepped) in fps/Mbps, frame size
- Data payload type (UDP, TCP, Raw IPv4), data payload content
- Unidirectional/bidirectional transfer

Minimum Requirements

| | |
|-----------------------------|--|
| VeriWave Test System | <ul style="list-style-type: none"> • VeriWave WT90 or WT20 system • 1 x 4-port WaveBlade WiFi (WBW1104) • 2 x 1-port WaveBlade Ethernet (WBE1101) |
| Host Computer | <ul style="list-style-type: none"> • x86 based PC running Microsoft Windows XP • SP1 or SP2 with 1GHz Processor and 256MB RAM |