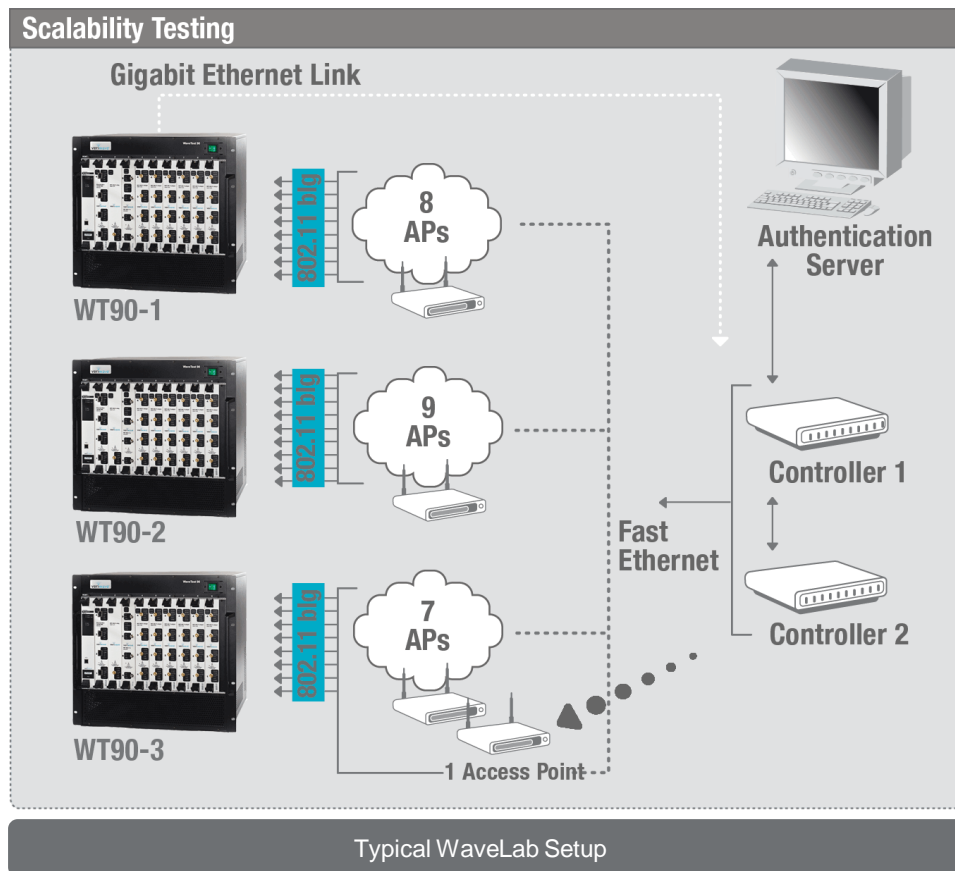


## WaveLab™ - WLAN Large Scale Test Bed

WaveLab - Located in San Jose, California, is equipped with the first ever enterprise-class WiFi™ test bed capable of testing dozens of access points, and multiple switches and controllers. WaveLab is ideal for stress-testing of WLAN equipment under real world large deployment scenarios.



As the average number of access points per installation continues to increase, large scale testing on WLAN systems prior to deployment is essential for both equipment manufacturers and service providers. Large-scale testing is a better predictor of performance in enterprise settings, and is more stressful on the equipment than the usual method of running a few FTP sessions on a small collection of access points.

## Benefits

- Test complex real-world scenarios
- Determine the scaling ability of WiFi systems for enterprise use
- Load systems under test with thousands of stateful and unique WLAN client sessions
- Scale tests from a single AP to dozens of APs with multiple WLAN controllers or switches
- Expose performance issues which cannot be determined in small-scale tests
- Produce precise latency and jitter measurements, key metrics for voice over WiFi and video applications
- Test controllers and/or switches using real APs loaded by thousands of clients
- Detect and correct system flaws during development and prior to deployment
- Demonstrate product capabilities to prospective customers using WaveLab

# Test Methodology

Tests	Description	Configurable Parameters
VoIP	Determines the service level capacity, performance, call quality, and service level assurance offered by the system under test	<ul style="list-style-type: none"> <li>• Test duration</li> <li>• Individual MOS/R-Value score</li> <li>• Calls on the same AP</li> <li>• Maximum call packet loss</li> <li>• Search resolution</li> <li>• Client contention</li> </ul>
Roaming	Measures the time needed for one to hundreds of clients to roam among dozens of access points	<ul style="list-style-type: none"> <li>• Test duration</li> <li>• Total clients</li> <li>• Roaming clients</li> <li>• Client distribution</li> <li>• Dwell time</li> <li>• Time distribution</li> </ul>
Throughput	Determines the maximum rate at which the system under test forwards traffic with zero loss	<ul style="list-style-type: none"> <li>• Test duration</li> <li>• Test traffic frame size</li> <li>• Traffic orientation</li> <li>• Search resolution</li> <li>• Client contention</li> </ul>
Latency	Measures the latency and jitter for systems under test ranging from a single AP to multiple APs	<ul style="list-style-type: none"> <li>• Test duration</li> <li>• Intended load</li> <li>• Test traffic frame size</li> <li>• Traffic orientation</li> <li>• Client contention</li> </ul>

## TEST SETUP:

- Three WaveTest90 chassis equipped with one or two gigabit Ethernet ports and twenty-five 802.11a/b/g test ports
- 25 RF shielded enclosures, used to reduce interference from the system under test

## PROVIDED FOR TESTING USE

- 19" standard racks, ready for installation of system under test
- Cables and accessories
- VeriWave application engineer to assist with setup and test procedures

## SUPPORTED SYSTEMS UNDER TEST

- Up to 25 access points
- Controllers and/or switches
- Additional network components such as a RADIUS server

## NON-DISCLOSURE AGREEMENT

- All testing results remain strictly confidential