

# ClientMix WaveQoE Report

November 18, 2009  
09:58:32

## Device Tested:

*AP Model ::*  
*AP SW Version ::*  
*WLAN Switch Model ::*  
*WLAN Switch SW Version ::*



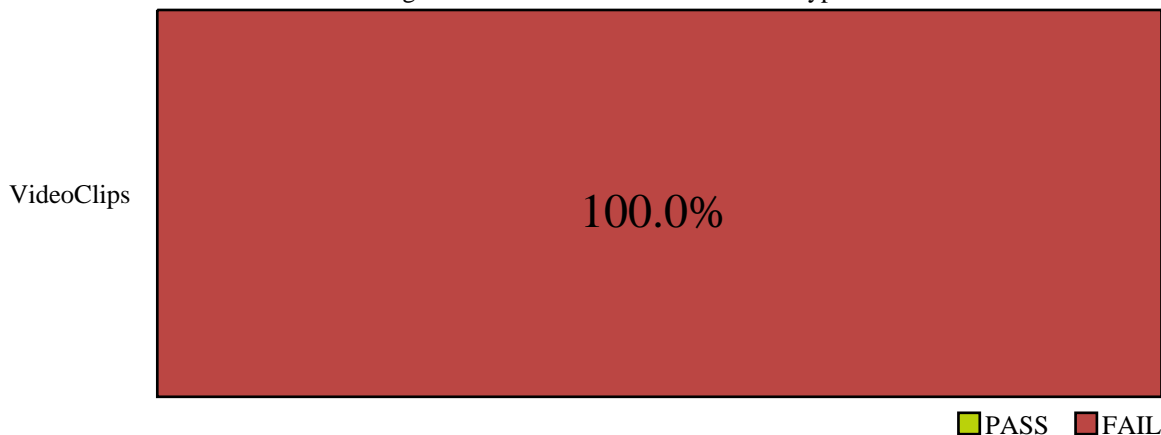
## Overview

The WaveQoE Real-World Deployment Test accurately replicates the complex interaction of clients, servers and traffic profiles. By creating usage profiles and traffic mixtures that were found to be representative in various network environments, the test measures and reports key application layer metrics that affect end-user Quality of Experience. The test also reports if the Service Level Agreement criteria set by the user for the different application layer traffic types have been met. The real-world networks replicated include: health-care, education, airports, warehouses, retail, hot spots, and service provider managed services. Each deployment model is characterized by a mix of clients, servers, client locations and behavior, traffic mix and other characteristics. These clients and servers can be configured to use different security schemes, run various higher layer applications, and utilize different QoS functions of the network. Users may also create their own application and client mixes if so desired.

Note: The results shown in the report are only of the clients and flows that successfully connected. All client and flows that did not make it through the connection process are not executed in the test and hence excluded from the report.

## Result Summary

PASS/FAIL Percentages of Traffic Flows of each Traffic Type that met SLA



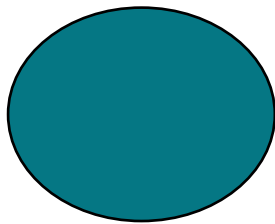
The Table below shows the percentages of Clients/Flows that connected in the test. Only the results of the clients/flows that connected will appear in the report

Type	Value
Successful Client Connections	7 out of 7 ( 100 % )
Successful TCP/HTTP/FTP Connections	0 out of 0 ( 100 % )
Successful ARP Exchanges	6 out of 6 ( 100 % )

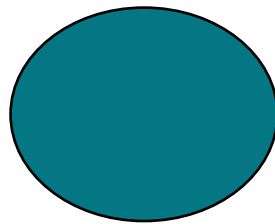
The summary table below shows the per flow average performance measurements of each traffic type

Flow Type	Num Flows	Layer7 Results	ILOAD (Kbps)	OLOAD (Kbps)	Fwd Rate (Kbps)	Latency (msec)	Jitter (msec)	% Packet Loss
VideoClips	6	MDI Score - 74.02 msec :0.0 pkts/min	5222.2	5222.2	5222.2	5.5	1.1	0.0

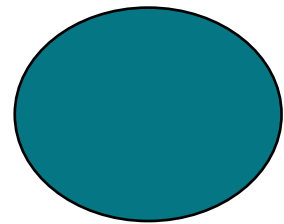
The Total Intended Load is 31.33 Mbps, offered load is 31.33 Mbps and achieved load is 31.33 Mbps



VideoClips  
iLoad (Total 31.33 Mbps)

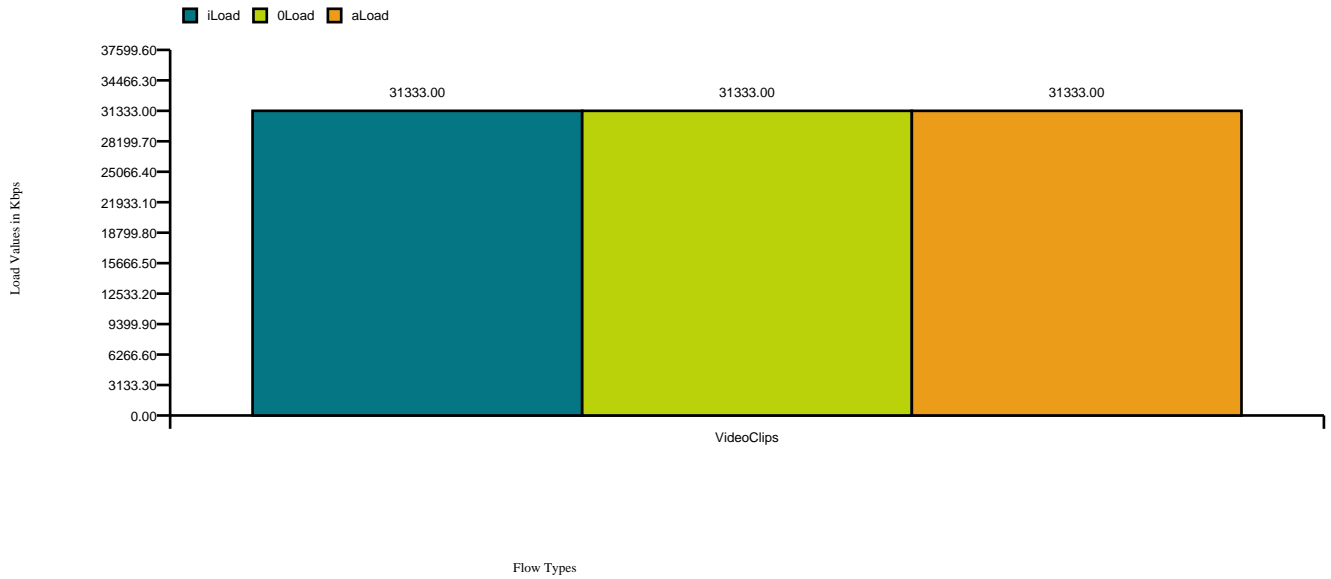


VideoClips  
oLoad (Total 31.33 Mbps)

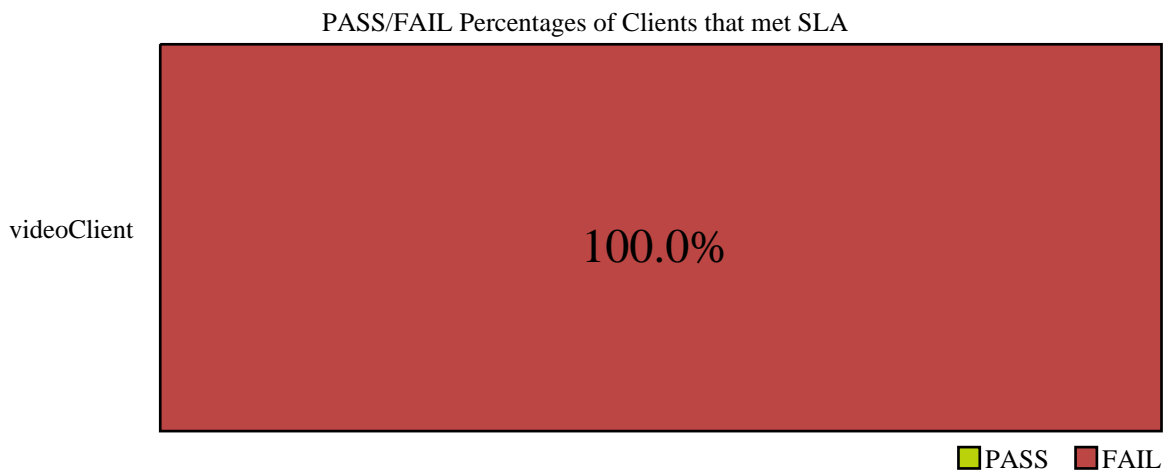


VideoClips  
Achieved Load (Total 31.33 Mbps)

### iLoad, oLoad and aLoad per Traffic Type



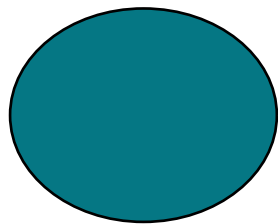
### Per Client Type Results



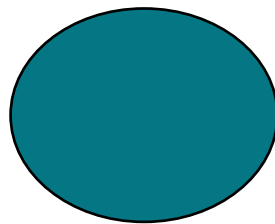
The Table below shows the percentage of Clients of each client type that satisfied the SLA

Note: For a client to meet SLA all flows on the client need to meet their SLA

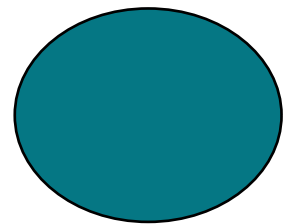
Client Type	Number of Clients	Flow Types	% of Clients that met SLA
videoClient	6	VideoClips,	0



videoClient  
iLoad (Total 31.33 Mbps)

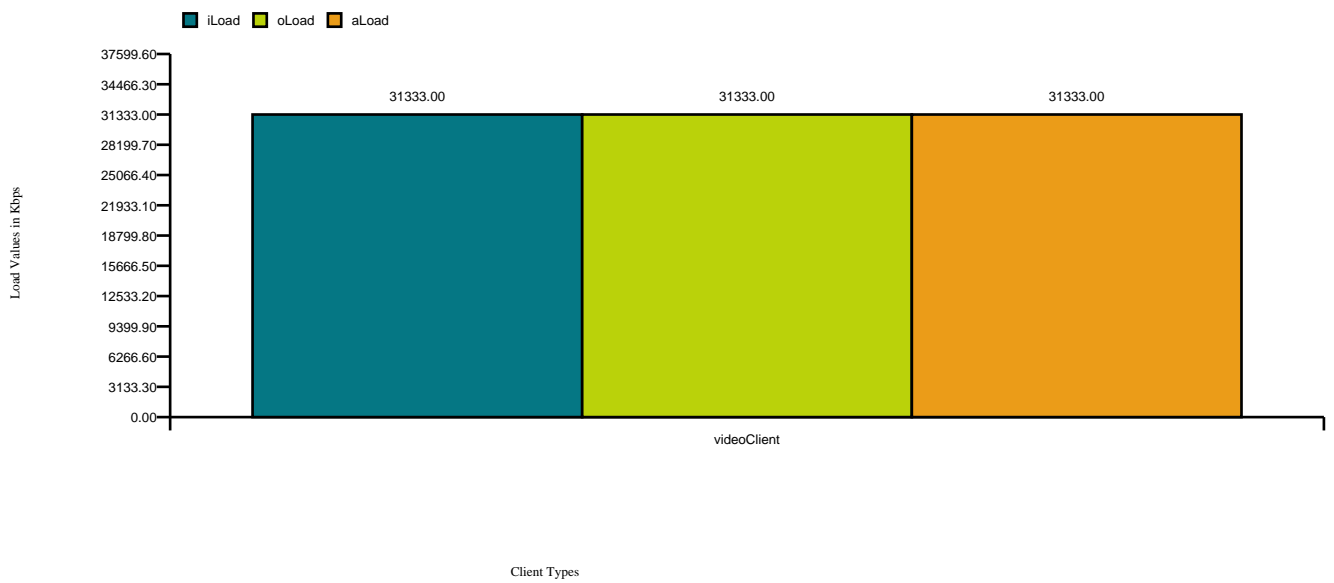


videoClient  
oLoad (Total 31.33 Mbps)



videoClient  
Achieved Load (Total 31.33 Mbps)

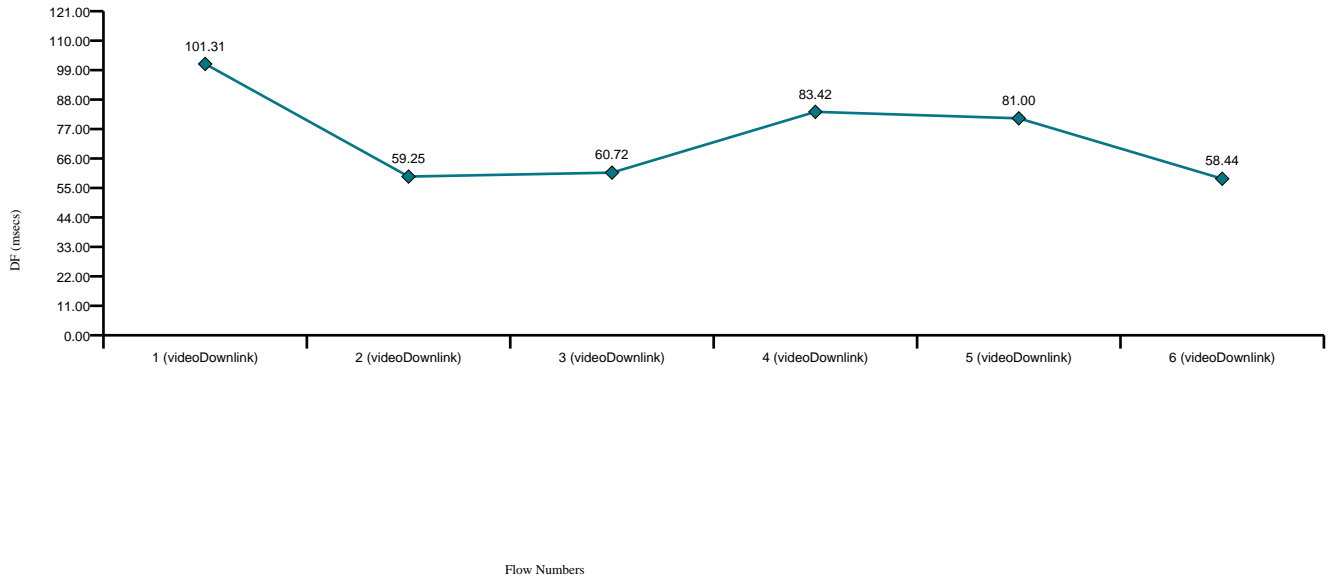
iLoad, oLoad and aLoad per Client Type



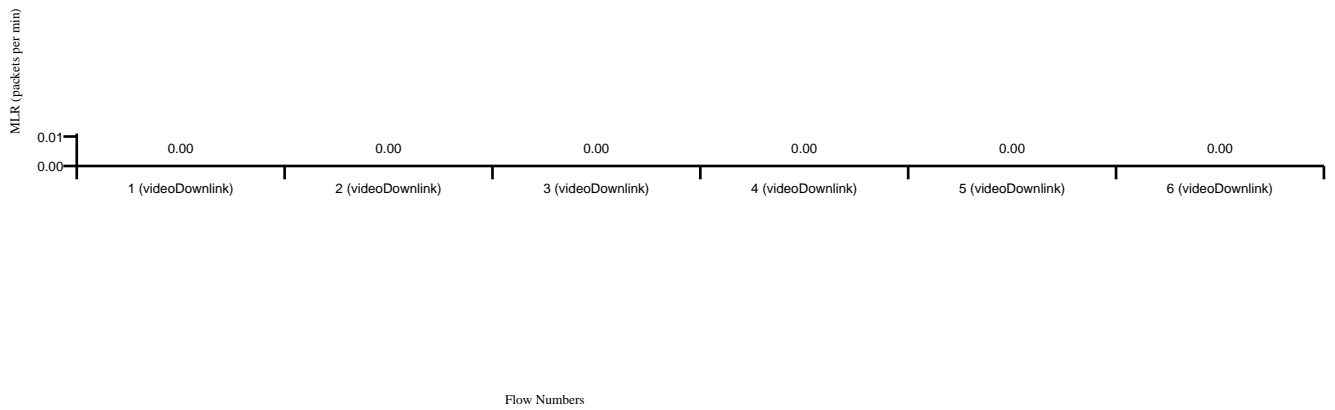
## Graphs

The Graphs below show the per traffic flow performance measurements of each traffic type

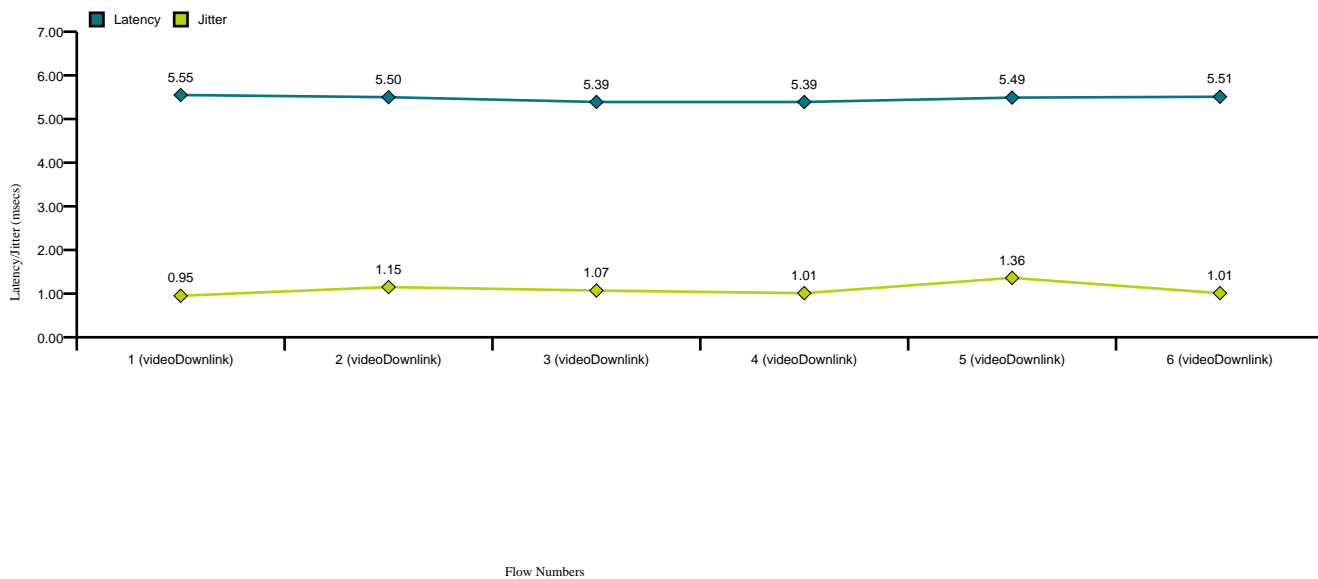
### Delay Factor for RTP Video flows



### Media Loss Rate (MLR) for RTP Video Flows



### Latency and Jitter for RTP Video flows



The following table shows more information about each flow of this traffic type for debugging purposes.

Flow Num	IP	MAC	Port	Network	Direction
1	192.168.1.100 to 192.168.1.105	00:01:01:a8:01:64 to 00:02:01:a8:01:69	10.10.10.10_card1_port1 to 10.10.10.10_card2_port1	vw-demo, 00:1d:70:dd:75:70	Downlink
2	192.168.1.100 to 192.168.1.102	00:01:01:a8:01:64 to 00:02:01:a8:01:66	10.10.10.10_card1_port1 to 10.10.10.10_card2_port1	vw-demo, 00:1d:70:dd:75:70	Downlink
3	192.168.1.100 to 192.168.1.101	00:01:01:a8:01:64 to 00:02:01:a8:01:65	10.10.10.10_card1_port1 to 10.10.10.10_card2_port1	vw-demo, 00:1d:70:dd:75:70	Downlink
4	192.168.1.100 to 192.168.1.104	00:01:01:a8:01:64 to 00:02:01:a8:01:68	10.10.10.10_card1_port1 to 10.10.10.10_card2_port1	vw-demo, 00:1d:70:dd:75:70	Downlink
5	192.168.1.100 to 192.168.1.100	00:01:01:a8:01:64 to 00:02:01:a8:01:64	10.10.10.10_card1_port1 to 10.10.10.10_card2_port1	vw-demo, 00:1d:70:dd:75:70	Downlink
6	192.168.1.100 to 192.168.1.103	00:01:01:a8:01:64 to 00:02:01:a8:01:67	10.10.10.10_card1_port1 to 10.10.10.10_card2_port1	vw-demo, 00:1d:70:dd:75:70	Downlink

## Test Parameters

The table below shows the input parameters for the test

Parameter	Value
WaveQoE Mode	ClientMix
Trial Duration	30 secs
Settle Time	1 secs
Aging Time	0 secs
Reconnect Clients each Trial	True
Number of Trials	1 Trial(s)
Search Mode	None
Client Load Per Port	6
Continue Test On Fail Run	False

The table below shows the Intended Client Mix configured in the test. The actual percentages of clients and the types of traffic in the test may change if some of the clients/flows fail to connect.

Client Type	Traffic Profiles	% Clients	Num Clients
videoClient	videoDownlink	100.0	6.0

The table below shows SLA Specifications for the Traffic Flows in the Test

Traffic profile	SLA Metrics and Requirement
videoDownlink	Df = 50 msecs , Mlr = 1 pkts/min ,

## Access Point Information

The following table shows the SUT details. The received signal strength indication (RSSI) from the SUT is sampled on each port at the start of each trial and averaged over all of the trials.

Port Name	Channel	BSSID	SSID	Min RSSI	Avg RSSI	Max RSSI
10.10.10.10_card2_port1	36	00:1D:70:DD:75:70	vw-demo	-50.0 dBm	-50.0 dBm	-50.0 dBm

RSSI values should be between -25 dBm and -35 dBm. If the RSSI is not in this range, modify the external attenuation to bring it into this range.

## Other Information

Results Directory      C:\Program Files\VeriWave\WaveQoE\Results\20091118-095746  
 WaveQoE Version      5.2.1-WT-3.8, 2009.11.11.10  
 WaveTest Version      3.8.0, 2009.10.19.19