

Mixed Traffic Test (Parallel)

2025-09-05-18-01-52



Test Setup Information

Overall Setup Info For all Tests	DUT Model	Test_DUT
	DUT Firmware	NA
	SSID	Test Configured
	Security	Test Configured
	No of Devices	10 (Virtual Clients: 0, Windows: 4, Linux: 0, Mac: 1, Android: 5, iOS: 0)
	Test Duration (HH:MM:SS)	00:01:00

Objective

The Candela mixed traffic test is designed to measure the access point performance and stability by running multiple traffic on real clients like Android, Linux, Windows, and iOS connected to the access point. This test allows the user to choose multiple types of traffic like client capacity test, web browser test, video streaming test ping test. Along with the performance measurements are client connection times, Station 4-Way Handshake time, DHCP times, and more. The expected behavior is for the AP to be able to handle all types of traffic on the several stations (within the limitations of the AP specs) and make sure all clients can run all types of traffic.

Traffic Details

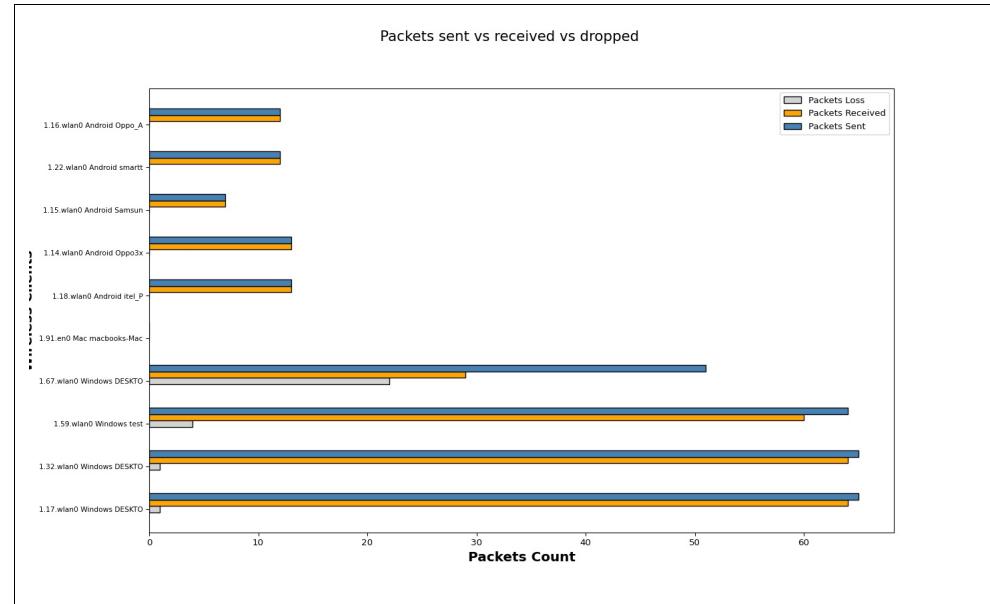
Sno	Test Cases	Test Duration	Test Status
1	Ping Test	1.0 minute	Executed
2	Quality Of Service(QoS) Test ['VO', 'VI', 'BE', 'BK']	1.0 minute	Executed
3	FTP Test	1.0 minute	Executed
4	HTTP Test	1.0 minute	Executed
5	Multicast Test	1.0 minute	Executed

1. Ping Test

Test Configuration

Test Setup Information	IP / Website	www.google.com
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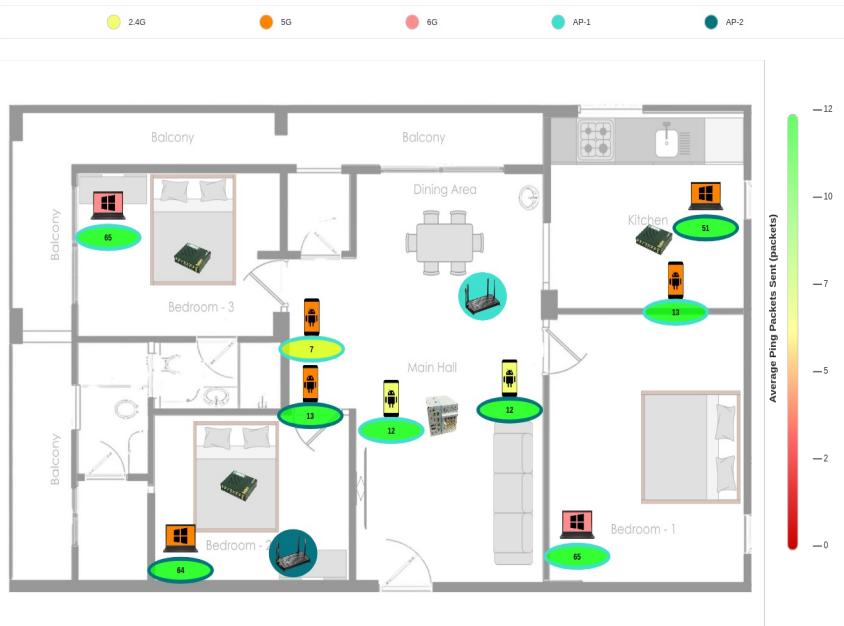
Packets sent vs packets received vs packets dropped



Ping Packet Sent vs Received vs Lost:

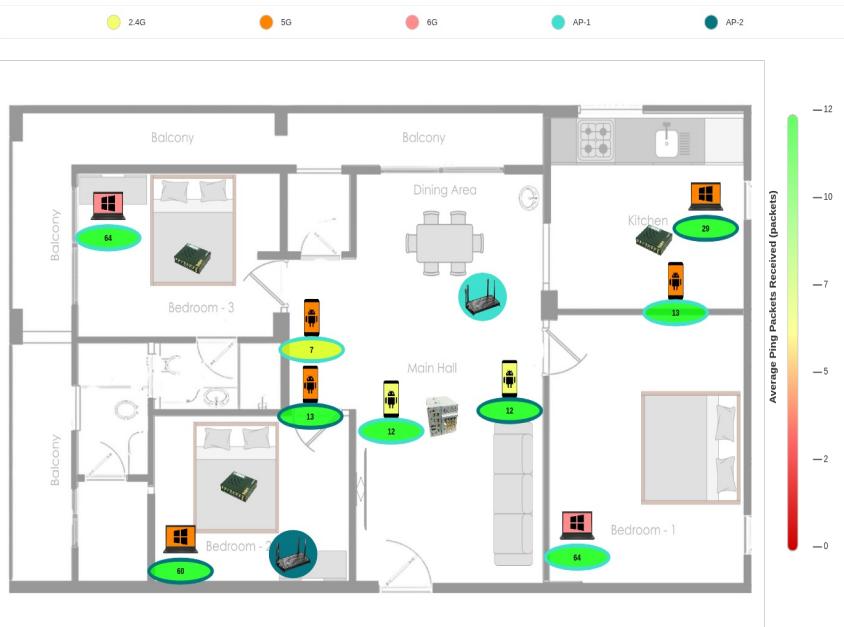
Ping Packets Sent (packets)

floor1234



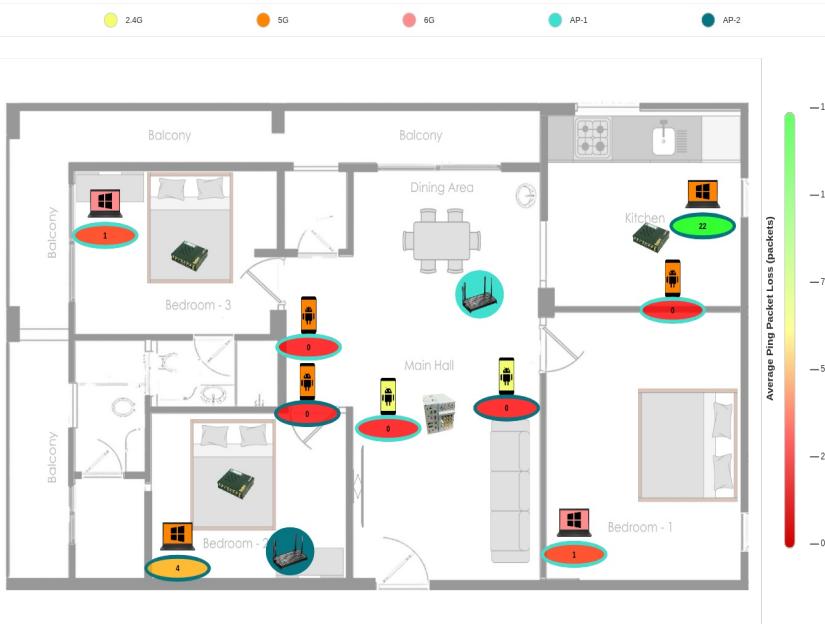
Ping Packets Received (packets)

floor1234



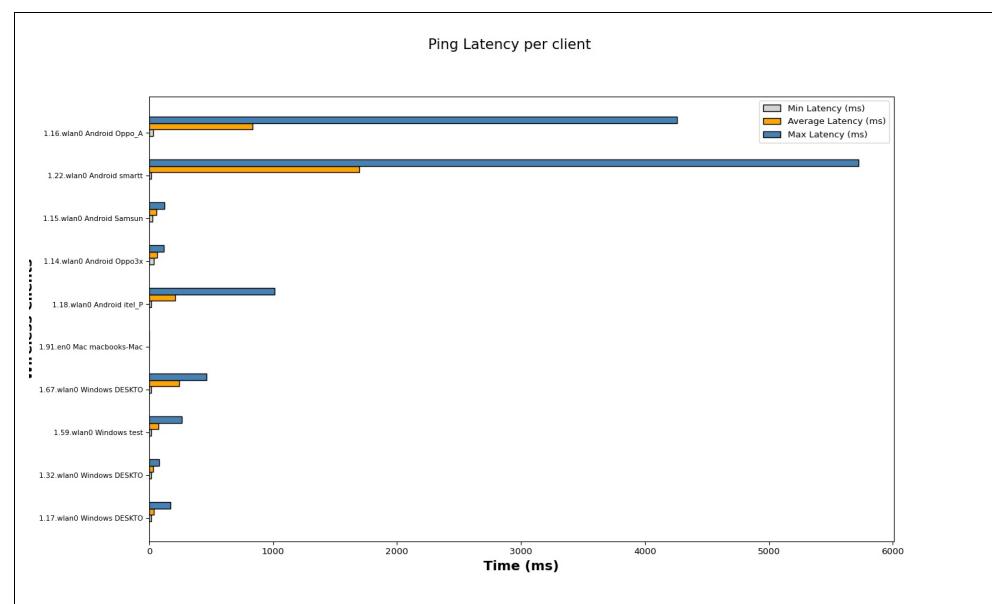
Ping Packet Loss (packets)

floor1234



Wireless Client	MAC	Channel	SSID	Mode	Packets Sent	Packets Received	Packets Loss
DESKTOP-MNRRV9Q	70:15:fb:0f:e8:b2	307	Testhouse	802.11abgn-BE 20 1x1	65	64	1
DESKTOP-L5166RG	70:15:fb:0f:e9:ac	11	Testhouse	802.11abgn-AX 20 1x1	65	64	1
test	64:5d:86:28:c3:87	11	Testhouse	802.11abgn 20 1x1	64	60	4
DESKTOP-VCHOOU1	f8:e4:e3:9a:98:81	100	Testhouse	802.11abgn-AX 20 1x1	51	29	22
macbooks-MacBook-Air.local	aa:37:65:db:da:c6	-1	Testhouse	802.11abgn-AX 20 2x2	0	0	0
itel_P55_5G	5a:f3:d2:a5:60:59	100	Testhouse	802.11abgn-AC 80	13	13	0
Oppo3x	fe:95:48:cb:a8:80	100	Testhouse	802.11abgn-AC 80	13	13	0
Samsung_M14	2a:ec:5c:bf:0b:c6	100	Testhouse	802.11abgn-AC 80	7	7	0
smarttv	38:c8:04:58:cc:23	11	Testhouse	802.11abg 20	12	12	0
Oppo_A3X	2e:68:2d:99:ac:d0	11	Testhouse	802.11abgn 20	12	12	0

Ping Latency Graph



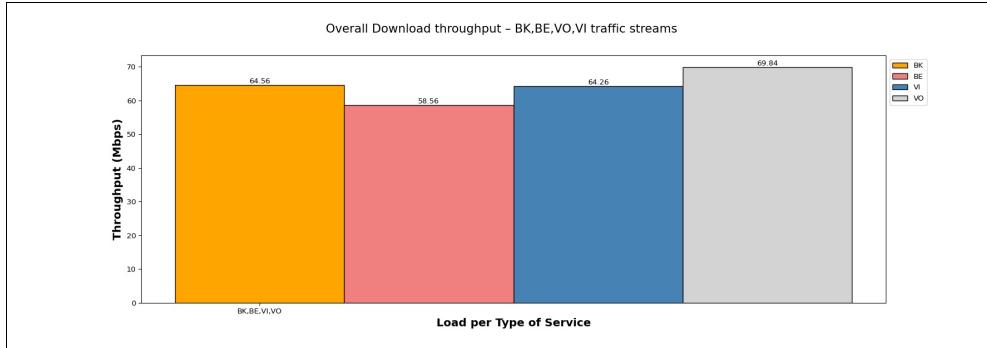
Wireless Client	MAC	Channel	SSID	Mode	Min Latency (ms)	Average Latency (ms)	Max Latency (ms)
DESKTOP-MNRRV9Q	70:15:fb:0f:e8:b2	307	Testhouse	802.11abgn-BE 20 1x1	17.0	38,266	172.0
DESKTOP-L5166RG	70:15:fb:0f:e9:ac	11	Testhouse	802.11abgn-AX 20 1x1	17.0	33,688	79.0
test	64:5d:86:28:c3:87	11	Testhouse	802.11abgn 20 1x1	14.0	77,778	262.0
DESKTOP-VCHOOU1	f8:e4:e3:9a:98:81	100	Testhouse	802.11abgn-AX 20 1x1	15.0	243,080	461.0
macbooks-MacBook-Air.local	aa:37:65:db:da:c6	-1	Testhouse	802.11abgn-AX 20 2x2	0.0	0.000	0.0
itel_P55_5G	5a:f3:d2:a5:60:59	100	Testhouse	802.11abgn-AC 80	16.0	208,842	1013.0
Oppo3x	fe:95:48:cb:a8:80	100	Testhouse	802.11abgn-AC 80	36.7	63,758	117.0
Samsung_M14	2a:ec:5c:bf:0b:c6	100	Testhouse	802.11abgn-AC 80	26.0	57,000	124.0
smarttv	38:c8:04:58:cc:23	11	Testhouse	802.11abg 20	15.4	1693,591	5723.0
Oppo_A3X	2e:68:2d:99:ac:d0	11	Testhouse	802.11abgn 20	34.2	832,073	4258.0

2. Quality Of Service(QOS) Test

Test Configuration

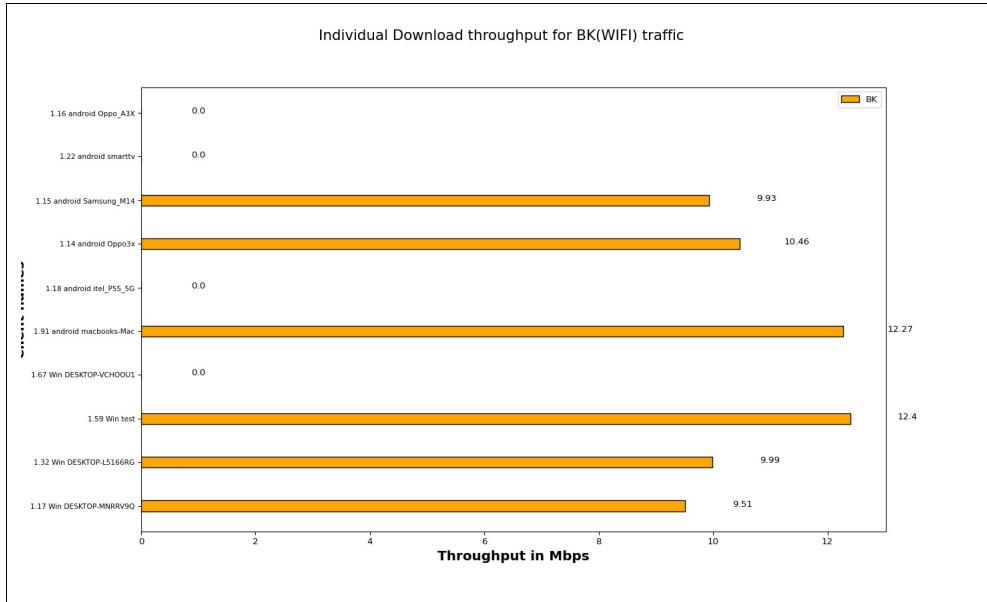
Test Setup Information	Protocol	TCP
	Traffic Direction	Download
	Security	Test Configured
	TOS	[‘VO’, ‘VI’, ‘BE’, ‘BK’]
	Per TOS Load	10.0 Mbps

Overall Download Throughput for all TOS i.e BK | BE | Video (VI) | Voice (VO)



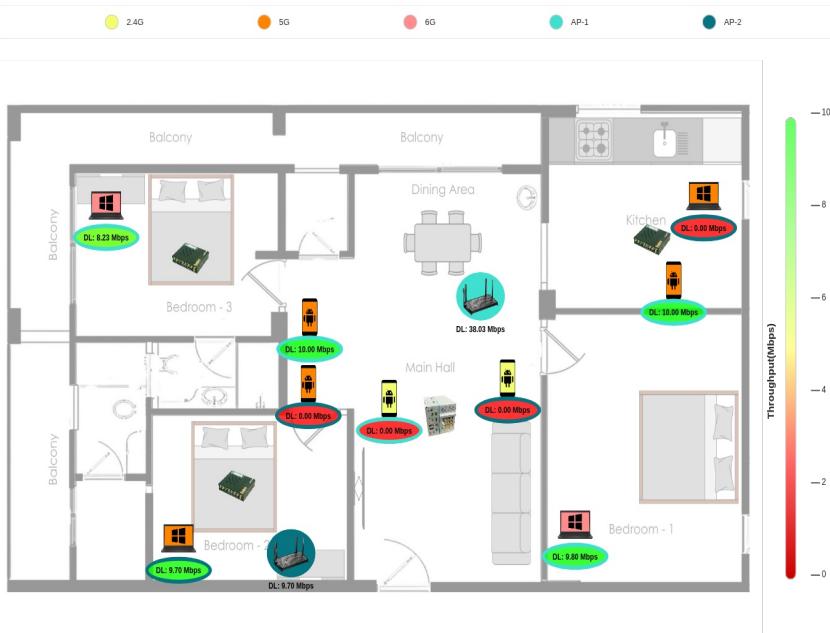
Individual Download throughput with intended load 10.0 Mbps/station for traffic BK(WiFi).

The below graph represents individual throughput for 10 clients running BK (WiFi) traffic. X- axis shows "Throughput in Mbps" and Y-axis shows "number of clients".



Achieved Average Bi-Directional TCP Throughput: BK

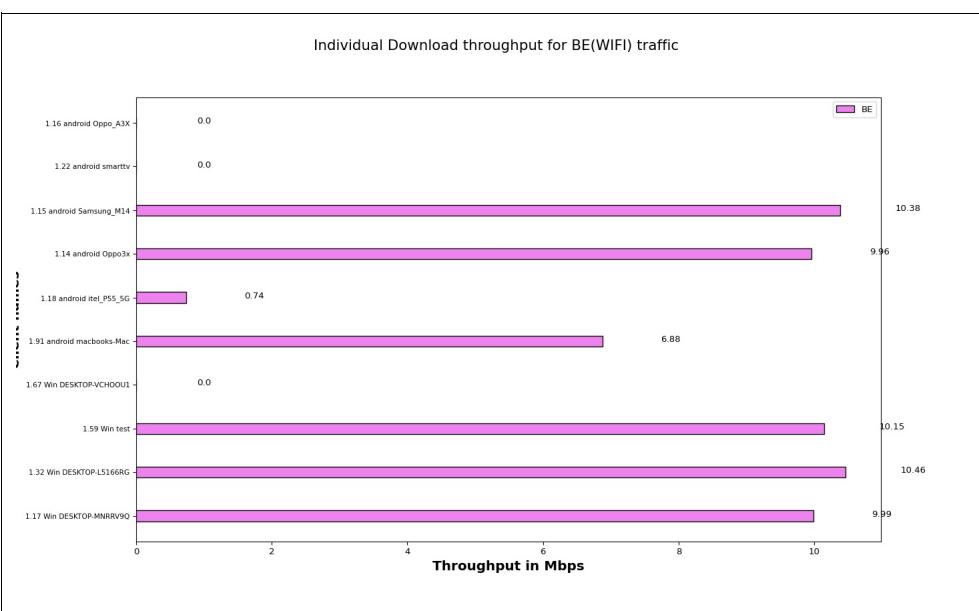
Floor : floor1234



Client Name	MAC	SSID	Type of traffic	Offered upload rate	Offered download rate	Observed average upload rate	Observed average download rate	Observed Upload Drop (%)	Observed Download Drop (%)
1.17 Win DESKTOP-MNRRV9Q	70:15:fb:0f:e8:b2	Testhouse	Background	0.0 Mbps	10.0 Mbps	0.0 Mbps	8.23 Mbps	0.0	0.00
1.32 Win DESKTOP-LS166RG	70:15:fb:0f:e9:ac	Testhouse	Background	0.0 Mbps	10.0 Mbps	0.0 Mbps	9.8 Mbps	0.0	0.00
1.59 Win test	64:5d:86:28:c3:87	Testhouse	Background	0.0 Mbps	10.0 Mbps	0.0 Mbps	9.7 Mbps	0.0	0.33
1.67 Win DESKTOP-VCHOOU1	f8:e4:e3:9a:98:81	Testhouse	Background	0.0 Mbps	10.0 Mbps	0.0 Mbps	0.0 Mbps	0.0	88.24
1.91 android macbooks-Mac	aa:37:65:db:da:c6	Testhouse	Background	0.0 Mbps	10.0 Mbps	0.0 Mbps	8.4 Mbps	0.0	1.01
1.18 android itel_P55_5G	5a:f3:d2:a5:60:59	Testhouse	Background	0.0 Mbps	10.0 Mbps	0.0 Mbps	0.0 Mbps	0.0	100.00
1.14 android Oppo3x	fe:95:48:cb:a8:80	Testhouse	Background	0.0 Mbps	10.0 Mbps	0.0 Mbps	10.0 Mbps	0.0	0.00
1.15 android Samsung_M14	2a:ec:5c:bf:0b:c6	Testhouse	Background	0.0 Mbps	10.0 Mbps	0.0 Mbps	10.0 Mbps	0.0	0.00
1.22 android smarttv	38:c8:04:58:cc:23	Testhouse	Background	0.0 Mbps	10.0 Mbps	0.0 Mbps	0.0 Mbps	0.0	0.00
1.16 android Oppo_A3X	2e:68:2d:99:ac:d0	Testhouse	Background	0.0 Mbps	10.0 Mbps	0.0 Mbps	0.0 Mbps	0.0	0.00

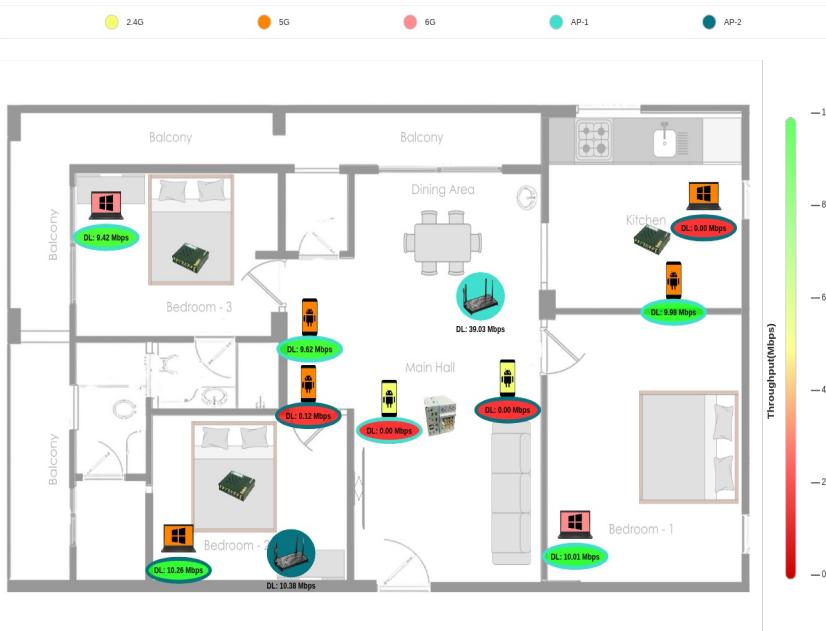
Individual Download throughput with intended load 10.0 Mbps/station for traffic BE(WiFi).

The below graph represents individual throughput for 10 clients running BE (WiFi) traffic. X- axis shows "number of clients" and Y-axis shows "Throughput in Mbps".



Achieved Average Bi-Directional TCP Throughput: BE

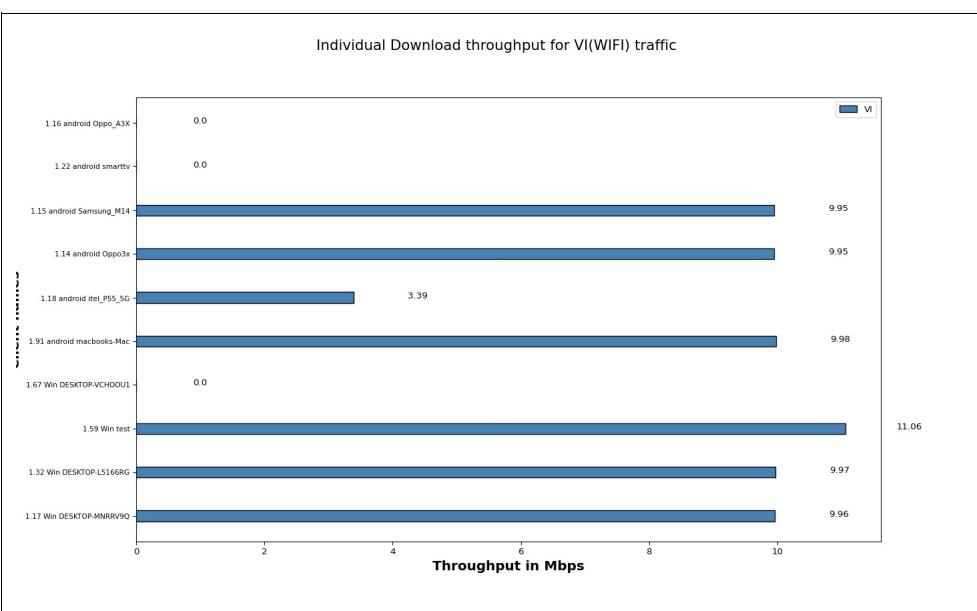
Floor : floor1234



Client Name	MAC	SSID	Type of traffic	Offered upload rate	Offered download rate	Observed average upload rate	Observed average download rate	Observed Upload Drop (%)	Observed Download Drop (%)
1.17 Win DESKTOP-MNRRV9Q	70:15:fb:0f:e8:b2	Testhouse	Besteffort	0.0 Mbps	10.0 Mbps	0.0 Mbps	9.42 Mbps	0.0	0.00
1.32 Win DESKTOP-LS166RG	70:15:fb:0f:e9:ac	Testhouse	Besteffort	0.0 Mbps	10.0 Mbps	0.0 Mbps	10.01 Mbps	0.0	0.01
1.59 Win test	64:5d:86:28:c3:87	Testhouse	Besteffort	0.0 Mbps	10.0 Mbps	0.0 Mbps	10.26 Mbps	0.0	1.53
1.67 Win DESKTOP-VCHOOU1	f8:e4:e3:9a:98:81	Testhouse	Besteffort	0.0 Mbps	10.0 Mbps	0.0 Mbps	0.0 Mbps	0.0	51.61
1.91 android macbooks-Mac	aa:37:65:db:da:c6	Testhouse	Besteffort	0.0 Mbps	10.0 Mbps	0.0 Mbps	6.33 Mbps	0.0	7.63
1.18 android itel_P55_5G	5a:f3:d2:a5:60:59	Testhouse	Besteffort	0.0 Mbps	10.0 Mbps	0.0 Mbps	0.12 Mbps	0.0	48.01
1.14 android Oppo3x	fe:95:48:cb:a8:80	Testhouse	Besteffort	0.0 Mbps	10.0 Mbps	0.0 Mbps	9.98 Mbps	0.0	0.01
1.15 android Samsung_M14	2a:ec:5c:bf:0b:c6	Testhouse	Besteffort	0.0 Mbps	10.0 Mbps	0.0 Mbps	9.62 Mbps	0.0	0.00
1.22 android smarttv	38:c8:04:58:cc:23	Testhouse	Besteffort	0.0 Mbps	10.0 Mbps	0.0 Mbps	0.0 Mbps	0.0	0.00
1.16 android Oppo_A3X	2e:68:2d:99:ac:d0	Testhouse	Besteffort	0.0 Mbps	10.0 Mbps	0.0 Mbps	0.0 Mbps	0.0	0.00

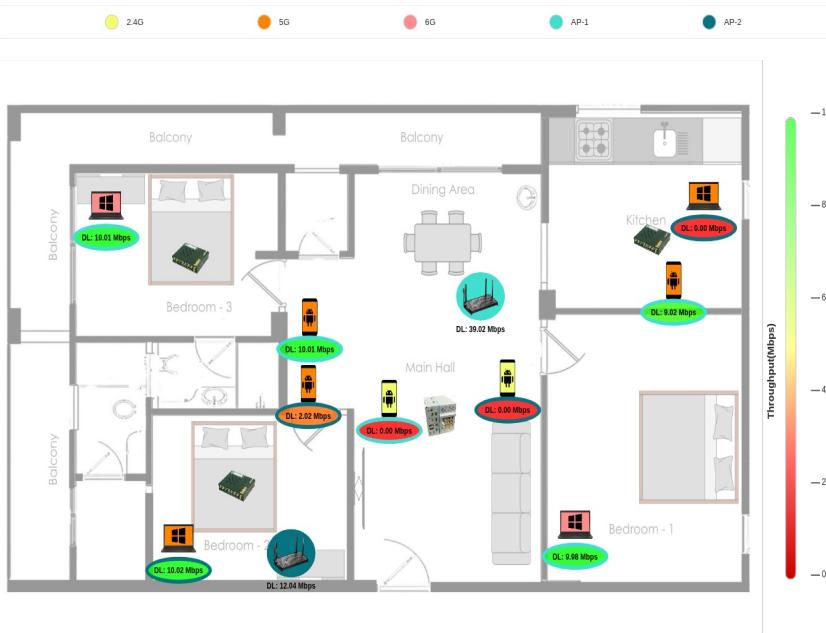
Individual Download throughput with intended load 10.0 Mbps/station for traffic VI(WiFi).

The below graph represents individual throughput for 10 clients running VI (WiFi) traffic. X-axis shows "number of clients" and Y-axis shows "Throughput in Mbps".



Achieved Average Bi-Directional TCP Throughput: VI

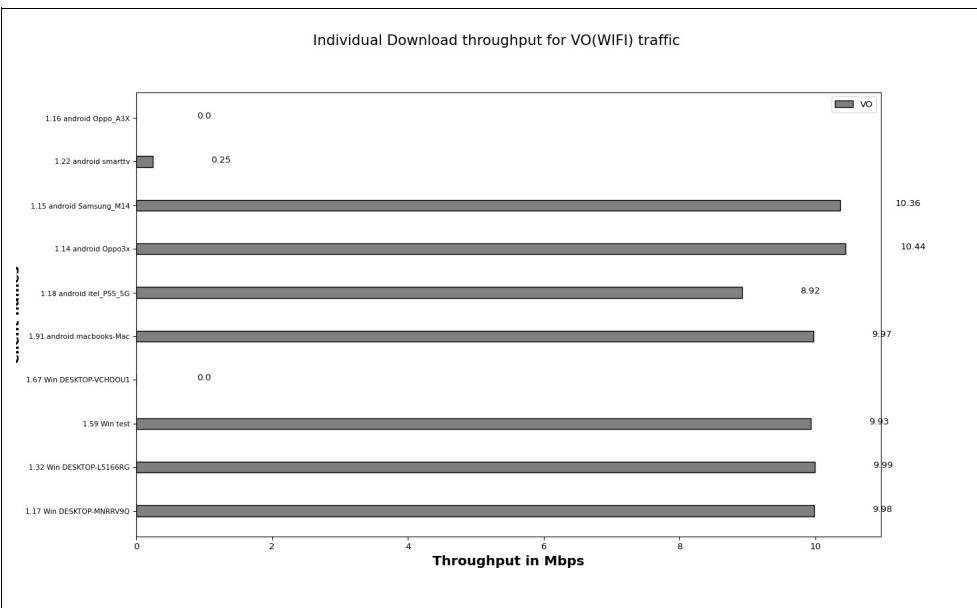
Floor : floor1234



Client Name	MAC	SSID	Type of traffic	Offered upload rate	Offered download rate	Observed average upload rate	Observed average download rate	Observed Upload Drop (%)	Observed Download Drop (%)
1.17 Win DESKTOP-MNRRV9Q	70:15:fb:0f:e8:b2	Testhouse	Video	0.0 Mbps	10.0 Mbps	0.0 Mbps	10.01 Mbps	0.0	0.02
1.32 Win DESKTOP-LS166RG	70:15:fb:0f:e9:ac	Testhouse	Video	0.0 Mbps	10.0 Mbps	0.0 Mbps	9.98 Mbps	0.0	0.00
1.59 Win test	64:5d:86:28:c3:87	Testhouse	Video	0.0 Mbps	10.0 Mbps	0.0 Mbps	10.02 Mbps	0.0	0.00
1.67 Win DESKTOP-VCHOOU1	f8:e4:e3:9a:98:81	Testhouse	Video	0.0 Mbps	10.0 Mbps	0.0 Mbps	0.0 Mbps	0.0	20.00
1.91 android macbooks-Mac	aa:37:65:db:da:c6	Testhouse	Video	0.0 Mbps	10.0 Mbps	0.0 Mbps	10.02 Mbps	0.0	0.00
1.18 android itel_P55_5G	5a:f3:d2:a5:60:59	Testhouse	Video	0.0 Mbps	10.0 Mbps	0.0 Mbps	2.02 Mbps	0.0	38.91
1.14 android Oppo3x	fe:95:48:cb:a8:80	Testhouse	Video	0.0 Mbps	10.0 Mbps	0.0 Mbps	9.02 Mbps	0.0	0.00
1.15 android Samsung_M14	2a:ec:5c:bf:0b:c6	Testhouse	Video	0.0 Mbps	10.0 Mbps	0.0 Mbps	10.01 Mbps	0.0	0.01
1.22 android smarttv	38:c8:04:58:cc:23	Testhouse	Video	0.0 Mbps	10.0 Mbps	0.0 Mbps	0.0 Mbps	0.0	0.00
1.16 android Oppo_A3X	2e:68:2d:99:ac:d0	Testhouse	Video	0.0 Mbps	10.0 Mbps	0.0 Mbps	0.0 Mbps	0.0	90.20

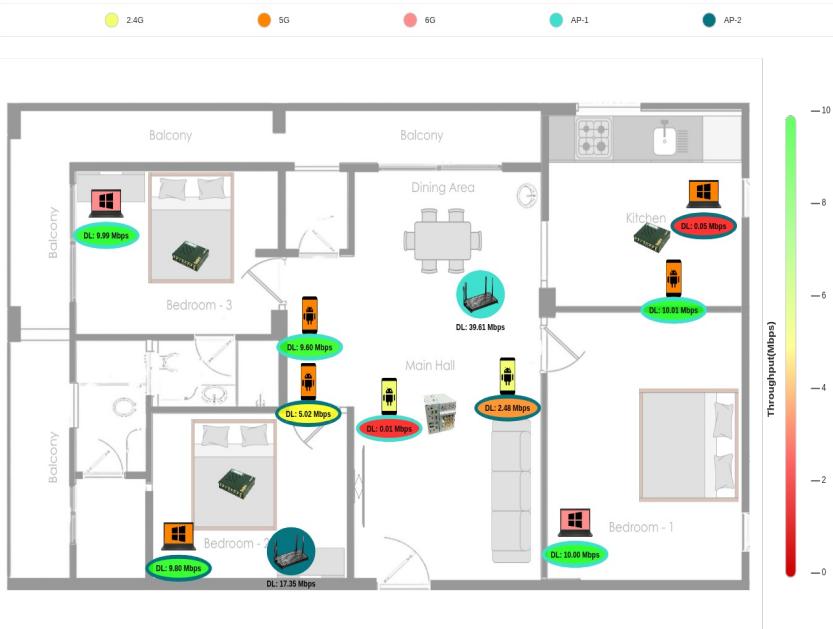
Individual Download throughput with intended load 10.0 Mbps/station for traffic VO(WiFi).

The below graph represents individual throughput for 10 clients running VO (WiFi) traffic. X-axis shows "number of clients" and Y-axis shows "Throughput in Mbps".



Achieved Average Bi-Directional TCP Throughput: VO

Floor : floor1234



Client Name	MAC	SSID	Type of traffic	Offered upload rate	Offered download rate	Observed average upload rate	Observed average download rate	Observed Upload Drop (%)	Observed Download Drop (%)
1.17 Win DESKTOP-MNRRV9Q	70:15:fb:0f:e8:b2	Testhouse	Voice	0.0 Mbps	10.0 Mbps	0.0 Mbps	9.99 Mbps	0.0	0.02
1.32 Win DESKTOP-LS166RG	70:15:fb:0f:e9:ac	Testhouse	Voice	0.0 Mbps	10.0 Mbps	0.0 Mbps	10.0 Mbps	0.0	0.00
1.59 Win test	64:5d:86:28:c3:87	Testhouse	Voice	0.0 Mbps	10.0 Mbps	0.0 Mbps	9.8 Mbps	0.0	0.01
1.67 Win DESKTOP-VCHOONI	f8:e4:e3:9a:98:81	Testhouse	Voice	0.0 Mbps	10.0 Mbps	0.0 Mbps	0.05 Mbps	0.0	7.24
1.91 android macbooks-Mac	aa:37:65:db:da:c6	Testhouse	Voice	0.0 Mbps	10.0 Mbps	0.0 Mbps	10.01 Mbps	0.0	0.05
1.18 android itel_P55_5G	5a:f3:d2:a5:60:59	Testhouse	Voice	0.0 Mbps	10.0 Mbps	0.0 Mbps	5.02 Mbps	0.0	20.55
1.14 android Oppo3x	fe:95:48:cb:a8:80	Testhouse	Voice	0.0 Mbps	10.0 Mbps	0.0 Mbps	10.01 Mbps	0.0	0.00
1.15 android Samsung_M14	2a:ec:5c:bf:0b:c6	Testhouse	Voice	0.0 Mbps	10.0 Mbps	0.0 Mbps	9.6 Mbps	0.0	0.00
1.22 android smarttv	38:c8:04:58:cc:23	Testhouse	Voice	0.0 Mbps	10.0 Mbps	0.0 Mbps	2.48 Mbps	0.0	61.06
1.16 android Oppo_A3X	2e:68:2d:99:ac:d0	Testhouse	Voice	0.0 Mbps	10.0 Mbps	0.0 Mbps	0.01 Mbps	0.0	71.59

3. File Transfer Protocol (FTP) Test

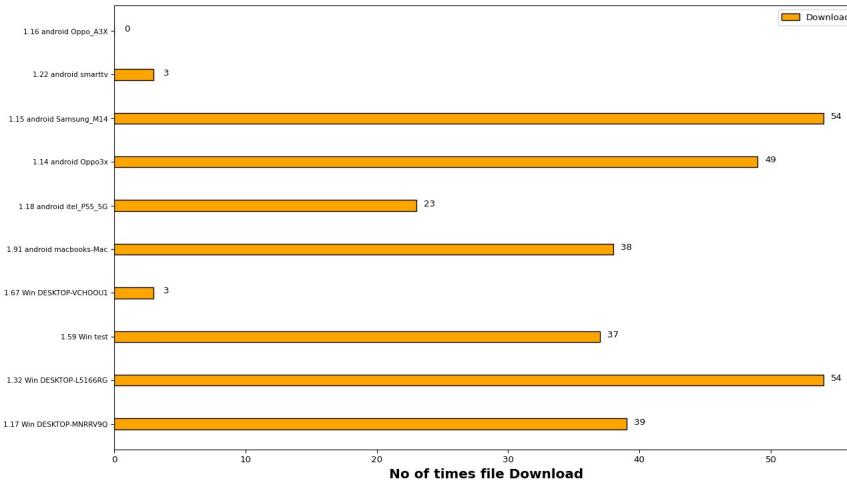
Test Configuration

Test Setup Information	Traffic Direction		Download
	File Size		5MB
	File Location		/home/lanforge

No.of times file Download

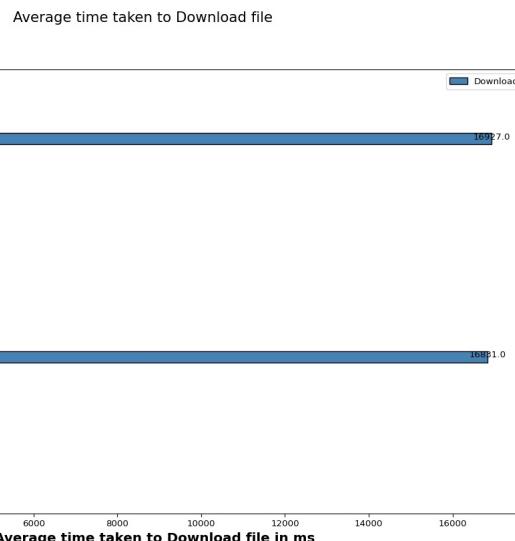
The below graph represents number of times a file Download for each client (WiFi) traffic. X-axis shows "No of times file Download" and Y-axis shows "Client names".

No of times file Download (Count)



Average time taken to Download file

The below graph represents average time taken to Download for each client (WiFi) traffic. X-axis shows "Average time taken to Download a file " and Y-axis shows "Client names".



Real Time url's FTP:

Floor Name: floor1234



Overall Results

Clients	MAC	Channel	SSID	Mode	No of times File downloaded	Time Taken to Download file (ms)	Bytes-rd (Mega Bytes)	RX RATE (Mbps)
1.17 Win DESKTOP-MNRRV9Q	fe:95:48:cb:a8:80	100	Testhouse	802.11abgn-AC 80	39	893.128	195.0000	22.8627
1.32 Win DESKTOP-L5166RG	2a:ec:5c:bf:0b:c6	100	Testhouse	802.11abgn-AC 80	54	397.870	275.0000	38.8404
1.59 Win test	2e:68:2d:99:ac:d0	11	Testhouse	802.11abgn 20	37	1226.675	187.0149	23.4369
1.67 Win DESKTOP-VCHOOU1	70:15:fb:0f:e8:b2	307	Testhouse	802.11abgn-BE 20 1x1	3	16831.000	15.9528	3.8477
1.91 android macbooks-Mac	5a:f3:d2:a5:60:59	100	Testhouse	802.11abgn-AC 80	38	1116.473	190.0145	27.8824
1.18 android itel_P55_5G	38:c8:04:58:cc:23	11	Testhouse	802.11abg 20	23	2382.333	95.0080	16.2161
1.14 android Oppo3x	70:15:fb:0f:e9:ac	307	Testhouse	802.11abgn-BE 20 1x1	49	1054.734	245.0080	36.5694
1.15 android Samsung_M14	64:5d:86:28:c3:87	100	Testhouse	802.11abgn-AC 20 1x1	54	821.444	274.2090	39.6324
1.22 android smarttv	f8:e4:e3:9a:98:81	100	Testhouse	802.11abgn-AX 20 1x1	3	16927.000	15.3794	1.4268
1.16 android Oppo_A3X	aa:37:65:db:da:c6	-1	Testhouse	802.11abgn-AX 20 1x1	0	0.000	4.9956	0.5738

4. Hyper Text Transfer Protocol (HTTP) Test

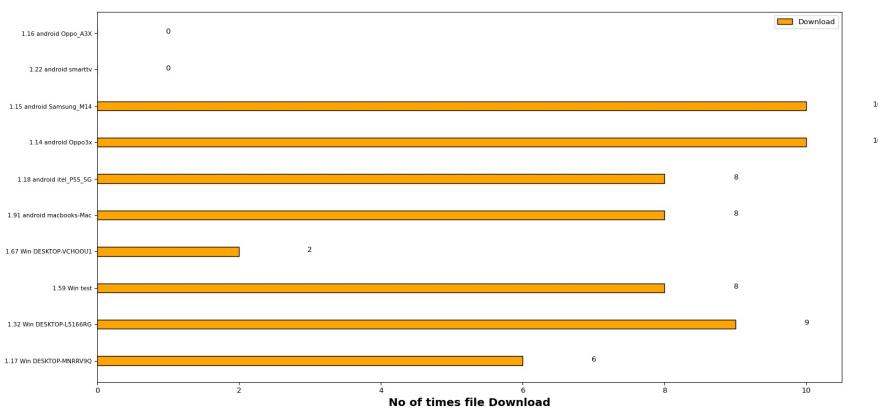
Test Configuration

Test Setup Information	Traffic Direction	Download
	File Size	5MB
	File location	/usr/local/lanforge/nginx/html

No of times file Downloads

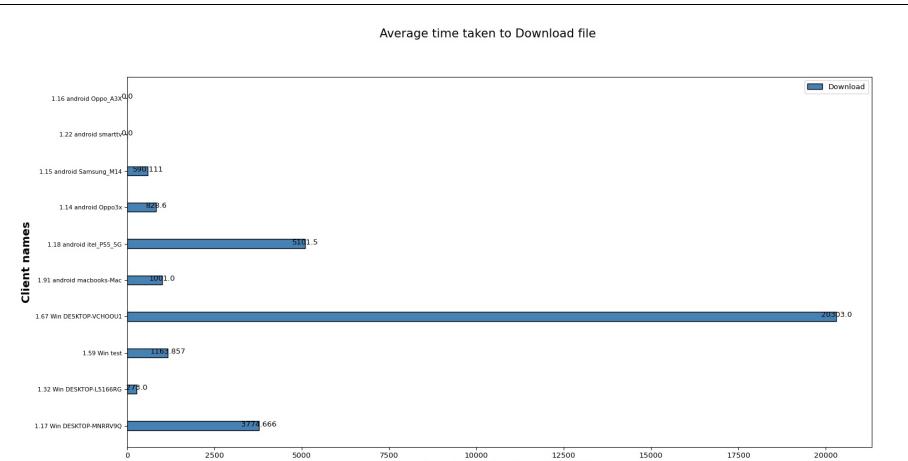
The below graph represents number of times a file downloads for each client. X- axis shows "No of times file downloads and Y-axis shows Client names.

No of times file Download (Count)



Average time taken to download file

The below graph represents average time taken to download for each client . X- axis shows "Average time taken to download a file " and Y-axis shows Client names.



Real Time url's HTTP :

Floor Name: floor1234



Overall Results

Clients	MAC	Channel	SSID	Mode	No of times File downloaded	Average time taken to Download file (ms)	Bytes-rd (Mega Bytes)	Rx Rate (Mbps)
1.17 Win DESKTOP-MNRRV9Q	fe:95:48:cb:a8:80	100	Testhouse	802.11abgn-AC 80	6	3774.666	30.0000	2.5596
1.32 Win DESKTOP-L5166RG	2a:ec:5c:bf:0b:c6	100	Testhouse	802.11abgn-AC 80	9	273.000	45.0000	5.7477
1.59 Win test	2e:68:2d:99:ac:d0	11	Testhouse	802.11abgn 20	8	1163.857	40.0000	6.0037
1.67 Win DESKTOP-VCHOOU1	70:15:fb:0f:e8:b2	307	Testhouse	802.11abgn-BE 20 1x1	2	20303.000	11.7958	1.6898
1.91 android macbooks-Mac	5a:f3:d2:a5:60:59	100	Testhouse	802.11abgn-AC 80	8	1001.000	40.0000	5.5911
1.18 android itel_P55_5G	38:c8:04:58:cc:23	11	Testhouse	802.11abg 20	8	5101.500	42.5039	5.4994
1.14 android Oppo3x	70:15:fb:0f:e9:ac	307	Testhouse	802.11abgn-BE 20 1x1	10	828.600	50.0000	7.6144
1.15 android Samsung_M14	64:5d:86:28:c3:87	100	Testhouse	802.11abgn-AC 20 1x1	10	590.111	50.0000	7.4703
1.22 android smarttv	f8:e4:e3:9a:98:81	100	Testhouse	802.11abgn-AX 20 1x1	0	0.000	0.0000	0.0000
1.16 android Oppo_A3X	aa:37:65:db:da:c6	-1	Testhouse	802.11abgn-AX 20 2x2	0	0.000	2.6658	0.7773

5. Multicast Test

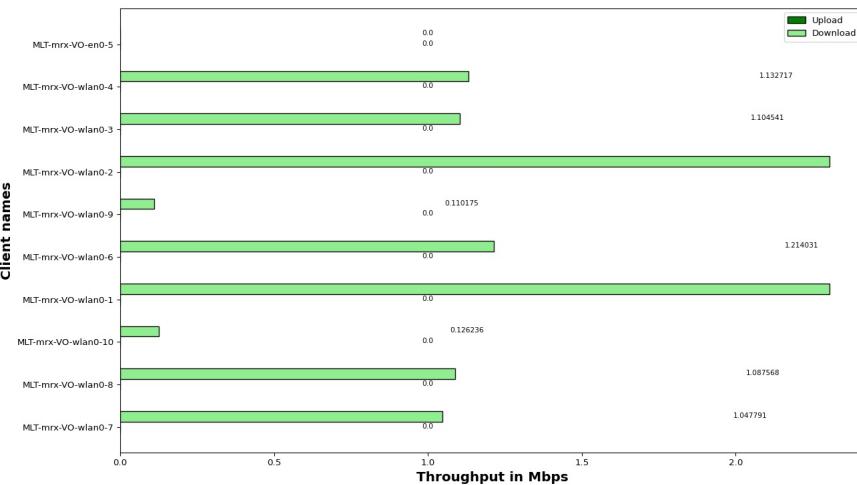
Test Configuration

Test Setup Information	Protocol	UDP
	Type of Service (TOS)	VO
	Upstream Port	eth3
	Offered Load (Mbps)	10.0

Individual throughput with intended load 10.0 Mbps station for traffic VO (WiFi).

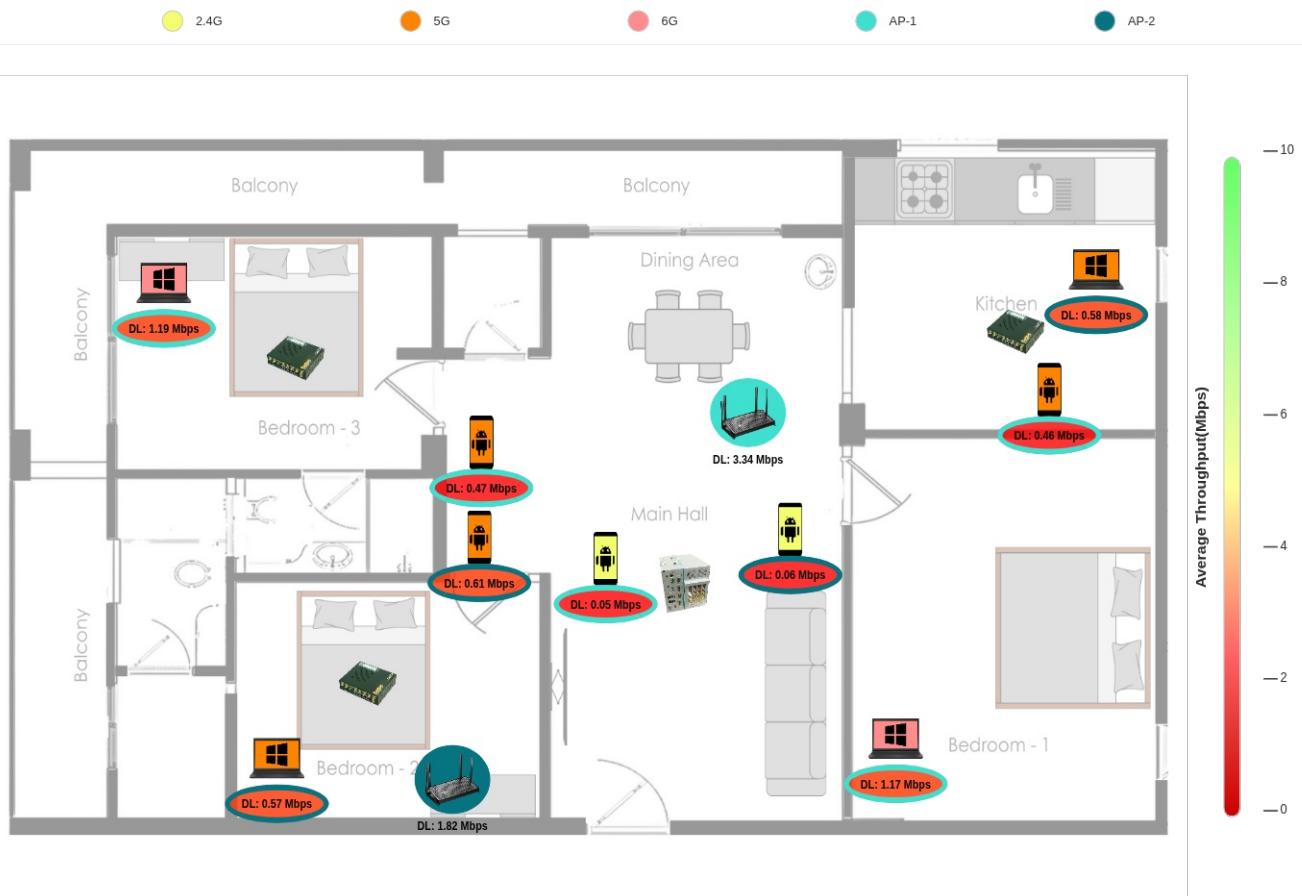
The below graph represents individual throughput for 10 clients running VO (WiFi) traffic. Y-axis shows "Client names" and X-axis shows "Throughput in Mbps".

Individual VO client side traffic measurement - side a (downstream)



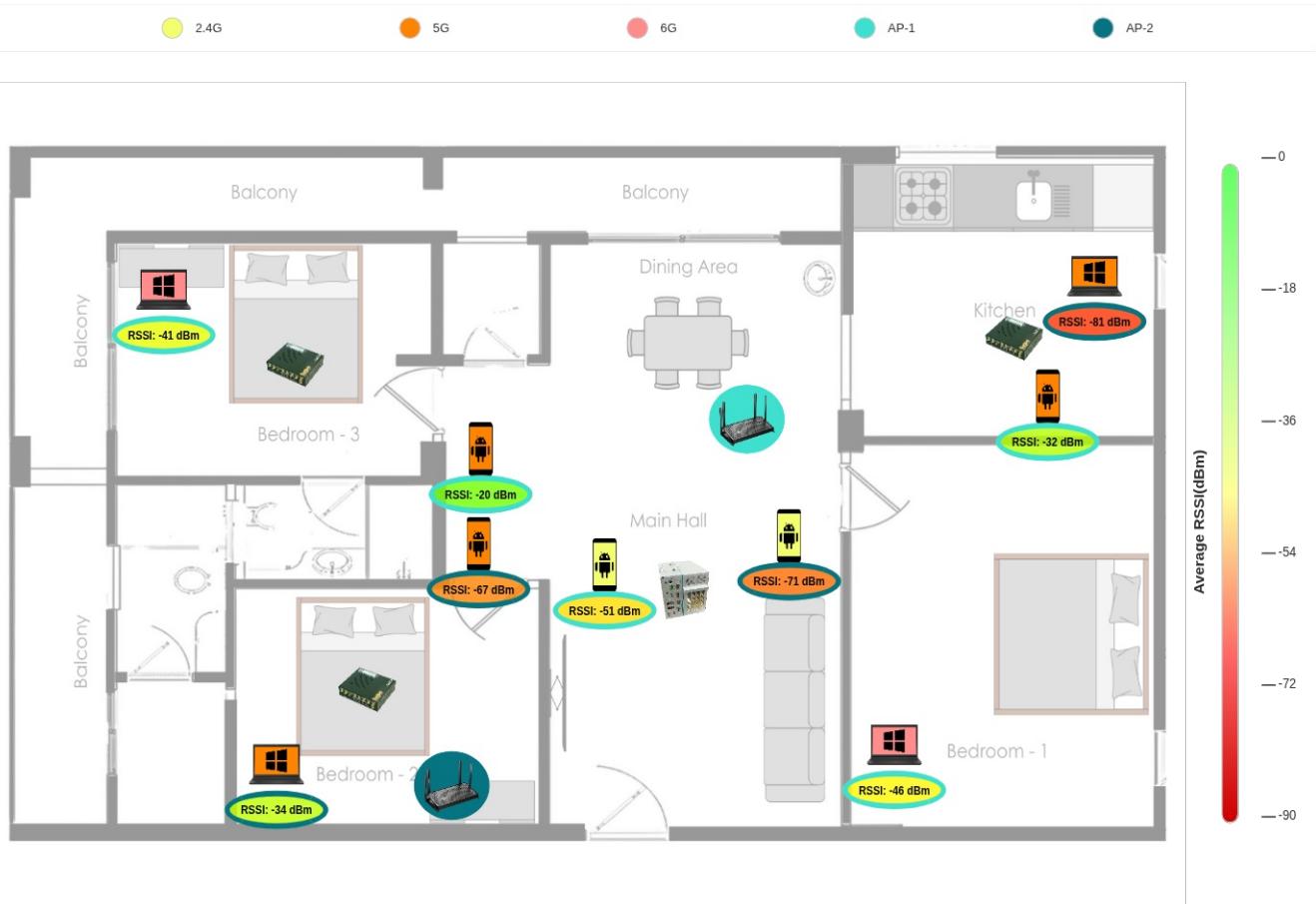
Achieved Average Download Throughput

Floor Name: floor1234



Achieved Average RSSI

Floor: floor1234



Client Name	Endp Name	HW Version	Port Name	Mode	Mac	SSID	Channel	Type of traffic	Traffic Protocol	Offered Download Rate Per Client (Mbps)	Download Rate Per Client (Mbps)	Download Drop Percentage (%)
1.14_dg02-pool07-kvm33_Android	MLT-mrx-VO-wlan0-7	OPPO CPH2641 r14 sdk: 34	1.14.wlan0	802.11abgn-AC 80	fe:95:48:cb:a8:80	Testhouse	100	VO	Mcast	10.0	1.047791	0.0
1.15_SWDM8416_Android	MLT-mrx-VO-wlan0-8	samsung SM-M145F r14 sdk: 34	1.15.wlan0	802.11abgn-AC 80	2a:ec:5c:bf:0b:c6	Testhouse	100	VO	Mcast	10.0	1.087568	0.0
1.16_dg02-pool07-kvm33_Android	MLT-mrx-VO-wlan0-10	OPPO CPH2641 r14 sdk: 34	1.16.wlan0	802.11abgn 20	2e:68:2d:99:ac:d0	Testhouse	11	VO	Mcast	10.0	0.126236	0.0
1.17_DESKTOP-MNRRV9Q_Win	MLT-mrx-VO-wlan0-1	Win/x86 6.2	1.17.wlan0	802.11abgn-BE 20 1x1	70:15:fb:0f:e8:b2	Testhouse	307	VO	Mcast	10.0	2.304082	0.0
1.18_buildsrv-n109_Android	MLT-mrx-VO-wlan0-6	ITEL intel P661 N r13 sdk: 33	1.18.wlan0	802.11abgn-AC 80	5a:f3:d2:a5:60:59	Testhouse	100	VO	Mcast	10.0	1.214031	0.0
1.22_android-build_Android	MLT-mrx-VO-wlan0-9	TCL Smart TV r11 sdk: 30	1.22.wlan0	802.11abg 20	38:c8:04:58:cc:23	Testhouse	11	VO	Mcast	10.0	0.110175	0.0
1.32_DESKTOP-L5166RG_Win	MLT-mrx-VO-wlan0-2	Win/x86 6.2	1.32.wlan0	802.11abgn-BE 20 1x1	70:15:fb:0f:e9:ac	Testhouse	307	VO	Mcast	10.0	2.304760	0.0
1.59_test_Win	MLT-mrx-VO-wlan0-3	Win/x86 6.2	1.59.wlan0	802.11abgn-AC 20 1x1	64:5d:86:28:c3:87	Testhouse	100	VO	Mcast	10.0	1.104541	0.0
1.67_DESKTOP-VCHOOL_Win	MLT-mrx-VO-wlan0-4	Win/x86 6.2	1.67.wlan0	802.11abgn-AX 20 1x1	f8:e4:e3:9a:98:81	Testhouse	100	VO	Mcast	10.0	1.132717	0.0
1.91_macbooks-MacBook-Air.local_Apple	MLT-mrx-VO-en0-5	Apple/x86-64	1.91.en0	802.11abgn-AX 20 1x1	aa:37:65:db:da:c6	Testhouse	-1	VO	Mcast	10.0	0.000000	0.0

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Overall Info	contact	support@candela.com
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