

# TR-398

## WiFi Performance Test Plan



Fri Jul 26 06:00:53 PDT 2019

Test Setup Information		
Device Under Test	Name	Netgear2
	Model Number	Netgear R7800
	SSIDs	TR398-5G TR398-2G
	BSSIDs	dc:ef:09:e3:b8:7d dc:ef:09:e3:b8:7b
Operator	sitarama.penumetsa@candletech.com	
Estimated Run Time	30.883 h	
Actual Run Time	4.976 h	

## Objective

The TR-398 WiFi Performance test plan by the Broadband forum provides a comprehensive set of tests to qualify the performance of WiFi access points (APs) designed for residential and small office environments. Radio performance, Throughput, Connection Stability, Airtime Fairness, AP Co-existence, Mu\_MIMO Performance, Spatial Consistency and Long-term Stability are some of the test areas covered in this test plan. The test plan is designed for service providers deploying in home WiFi APs to qualify the APs in the lab before deployment and for equipment makers to test during the development of the APs. Candela Technologies offers a fully automated TR-398 test system. The user can select from the list of 11 tests available in the GUI and all selected tests are run fully automated at one click of a button. Measurements are made and compared to the specified PASS/FAIL criteria in the TR-398 test plan and this report will show the summary PASS/FAIL results followed more detailed results for each test.

Add your notes below:

Setup is similar to what is described here:  
[https://www.candletech.com/lf\\_tr398\\_testing.php](https://www.candletech.com/lf_tr398_testing.php)

## Summary Results

Test	Result	Candela Score	Elapsed	Info
6.1.1 Receiver Sensitivity Test	<a href="#">2.4Ghz PASS</a> <a href="#">5Ghz PASS</a>	100	2.165 h	2.4Ghz passed 16 / 16 Pass-Avg: 11.1 5Ghz passed 16 / 16 Pass-Avg: 4.4
6.2.1 Maximum Connection Test (32-STA)	<a href="#">2.4Ghz PASS</a> <a href="#">5Ghz FAIL</a>	102	8.431 m	Throughput: 2.4Ghz UL 104.24% DL 104.33% Throughput: 5Ghz UL 96.26% DL 104.19% Passed PER: 128 / 128
6.2.2 Maximum TCP Throughput Test	<a href="#">2.4Ghz FAIL</a> <a href="#">5Ghz PASS</a>	62	16.047 m	Throughput 2.4Ghz UL 0% DL 0% Throughput 5Ghz UL 124.57% DL 124.78%
6.2.3 Airtime Fairness Test	<a href="#">2.4Ghz FAIL</a> <a href="#">5Ghz FAIL</a>	42	9.299 m	5Ghz passed 3 / 7 2.4Ghz passed 3 / 7 <i>Candela is not convinced these pass/fail metrics are very helpful.</i>
6.3.1 Range Versus Rate Test	<a href="#">2.4Ghz FAIL</a> <a href="#">5Ghz PASS</a>	93	27.978 m	5Ghz UL 13 / 13 DL 13 / 13 2.4Ghz UL 17 / 18 DL 17 / 20 2.4Ghz Retried 0 traffic tests.
6.3.2 Spatial Consistency Test	<a href="#">2.4Ghz FAIL</a> <a href="#">5Ghz PASS</a>	95	28.733 m	5Ghz passed 12 / 12 5Ghz retried 1 traffic tests. 2.4Ghz passed 11 / 12 2.4Ghz retried 1 traffic tests. Rotational Degrees: 45
6.4.1 Multiple STAs Performance Test	<a href="#">2.4Ghz PASS</a> <a href="#">5Ghz PASS</a>	100	18.053 m	2.4Ghz Passed 6 / 6 5Ghz Passed 6 / 6
6.4.2 Multiple Association / Disassociation Stability Test	<a href="#">2.4Ghz PASS</a> <a href="#">5Ghz PASS</a>	100	6.989 m	2.4Ghz Passed 960 / 960 5Ghz Passed 960 / 960
6.4.3 Downlink MU-MIMO Performance Test	<a href="#">5Ghz FAIL</a>	115	14.489 m	Passed: 2 / 3 Single Throughput Sum: 1,368.39 Mbps SU-MIMO Throughput Sum: 422.23 Mbps MU-MIMO Throughput Sum: 601.06 Mbps
6.5.2 AP Coexistence Test	<a href="#">2.4Ghz FAIL</a> <a href="#">5Ghz FAIL</a>	50	17.639 m	Passed 4 / 8 NOTE: User has calibrated different Interferer transmit rates. TR-398 specified vs actual interferer rate settings: 5G-80Mhz: 195 vs 195 5G-40Mhz: 90 vs 90 2.4Ghz-20Mhz: 32 vs 29
6.5.1 Long Term Stability Test	<a href="#">2.4Ghz FAIL</a> <a href="#">5Ghz PASS</a>	97	20.669 m	2.4Ghz Throughput Avg 187.95 Mbps Passed: 48 / 50 2.4Ghz Packet Error Rate Passed: 0 / 1 5Ghz Throughput Avg 887.18 Mbps Passed: 50 / 50 5Ghz Packet Error Rate Passed: 1 / 1

## 6.1.1 Receiver Sensitivity Test

### Summary

Receiver Sensitivity is a receiver's ability to receive and correctly demodulate weak signals. This test provides a simplified measurement of the receiver's sensitivity, relative to the total attenuation inserted between the DUT and the STA. As that attenuation is increased, the STA is limited to a single coding scheme, eventually causing the connection to degrade. The point at which the connection degrades represents the receiver's approximate sensitivity. This is an approximate measurement only, where a detailed receiver sensitivity measurement would typically be performed in a conducted test environment with calibrated transmitter power levels. The test is repeated with multiple coding schemes, ensuring the DUT should smoothly transition between coding schedules as the attenuation increases in normal operation.

### Test Procedure

1. Initialize attenuation to starting value (10 db stronger than passing value).
2. Configure the Traffic Generator to generate UDP traffic at 65% of theoretical rate.
3. Configure the attenuators to emulate 2-meter distance. This is considered 'zero' attenuation.
4. Increment attenuation by 1 dB each step. For each attenuation step, run traffic for 20 seconds. Record the packet-error rate (PER) If the PER is greater than 10%, then consider that the sensitivity cutoff and move to next iteration.
5. These test steps are run for MCS 0 and 7 at 20Mhz on 2.4Ghz, and MCS 0 and 9, 80 Mhz, and spatial-streams of one.
6. These test steps are run for each 45-degree spatial rotation.

### Pass/Fail Criteria

Please see the 6.1.1.5 and 6.1.1.4.8 sections of the TR-398 spec. The pass/fail value unit is 'attenuation from 2-meter baseline'. Please see the 6.1.1.5 and 6.1.1.4.8 sections of the TR-398 spec. Candela Technologies set up an AP 2 meters away from a station device to measure actual receiver signal strength (RSSI) at 2-meters. The station was set in /a/b/g mode because this forces the AP to use a single spatial stream and 20Mhz, which should be the highest signal level. Radios often transmit /n and /AC encoded packets at less than the maximum transmit power. Candela's experimental results showed the station RSSI of -24 for 2.4Ghz and -32 on 5Ghz. The estimated RSSI in the table below is calculated using these experimental RSSI results as the baseline. Candela believes that the 5Ghz RSSI is too weak to expect to pass the test, so a checkbox to decrease attenuation by 4 on 5Ghz is offered. Other attenuation tuning options are also available. Estimated AP RSSI based on all tuning options are denoted by numbers in () below.

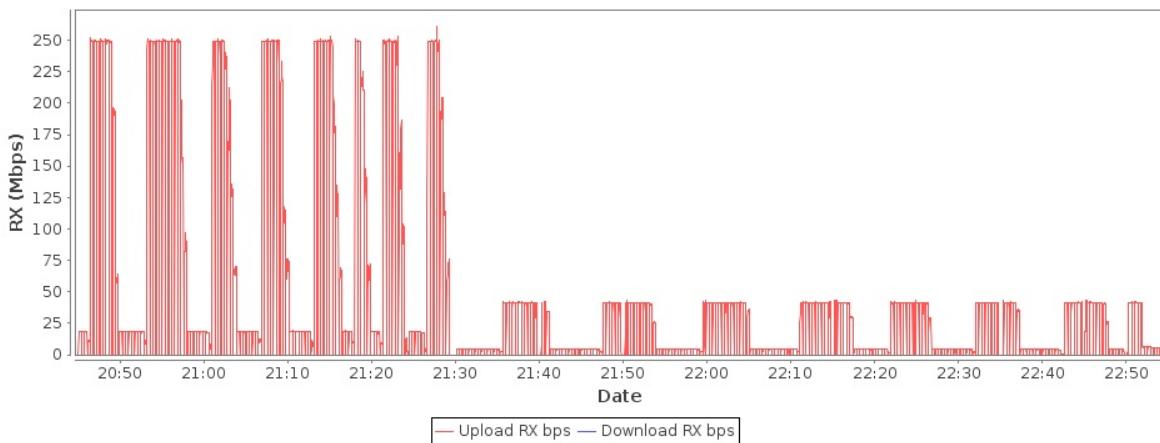
Band	MCS	Bandwidth	Attenuation above 2m Baseline	Estimated DUT RSSI
2.4Ghz	0	20	56	-80(-76)
2.4Ghz	7	20	38	-62(-58)
5Ghz	0	80	46 (46)	-78(-74)
5Ghz	9	80	21 (21)	-53(-49)

## 6.1.1 Receiver Sensitivity Test Results

Type	Result	Notes
6.1.1 Assumptions	INFO	This test does not specify RSSI, so calibrating it is difficult. You may change the attenuation by modifying the Attenuation Adjustment setting on the 'Advanced Configuration' screen.
Configuration NOTE	INFO	Attenuation Adjustment set to: 4
	PASS	5Ghz mcs: 0 BW: 80 rot: 0 last-atten-pass: 47 passing value: 46 STA RSSI: -60 Expected AP RSSI: -65
	PASS	5Ghz mcs: 9 BW: 80 rot: 0 last-atten-pass: 27 passing value: 21 STA RSSI: -38 Expected AP RSSI: -45
	PASS	5Ghz mcs: 0 BW: 80 rot: 45 last-atten-pass: 52 passing value: 46 STA RSSI: -62 Expected AP RSSI: -70
	PASS	5Ghz mcs: 9 BW: 80 rot: 45 last-atten-pass: 31 passing value: 21 STA RSSI: -40 Expected AP RSSI: -49
	PASS	5Ghz mcs: 0 BW: 80 rot: 90 last-atten-pass: 51 passing value: 46 STA RSSI: -63 Expected AP RSSI: -69
	PASS	5Ghz mcs: 9 BW: 80 rot: 90 last-atten-pass: 26 passing value: 21 STA RSSI: -37 Expected AP RSSI: -44
	PASS	5Ghz mcs: 0 BW: 80 rot: 135 last-atten-pass: 51 passing value: 46 STA RSSI: -62 Expected AP RSSI: -69
	PASS	5Ghz mcs: 9 BW: 80 rot: 135 last-atten-pass: 27 passing value: 21 STA RSSI: -37 Expected AP RSSI: -45
	PASS	5Ghz mcs: 0 BW: 80 rot: 180 last-atten-pass: 51 passing value: 46 STA RSSI: -63 Expected AP RSSI: -69
	PASS	5Ghz mcs: 9 BW: 80 rot: 180 last-atten-pass: 27 passing value: 21 STA RSSI: -38 Expected AP RSSI: -45
	PASS	5Ghz mcs: 0 BW: 80 rot: 225 last-atten-pass: 47 passing value: 46 STA RSSI: -63 Expected AP RSSI: -65
	PASS	5Ghz mcs: 9 BW: 80 rot: 225 last-atten-pass: 23 passing value: 21 STA RSSI: -38 Expected AP RSSI: -41
	PASS	5Ghz mcs: 0 BW: 80 rot: 270 last-atten-pass: 47 passing value: 46 STA RSSI: -61 Expected AP RSSI: -65
	PASS	5Ghz mcs: 9 BW: 80 rot: 270 last-atten-pass: 26 passing value: 21 STA RSSI: -39 Expected AP RSSI: -44
	PASS	5Ghz mcs: 0 BW: 80 rot: 315 last-atten-pass: 49 passing value: 46 STA RSSI: -64 Expected AP RSSI: -67
	PASS	5Ghz mcs: 9 BW: 80 rot: 315 last-atten-pass: 25 passing value: 21 STA RSSI: -39 Expected AP RSSI: -43
	PASS	2.4Ghz mcs: 0 BW: 20 rot: 0 last-atten-pass: 68 passing value: 56 STA RSSI: -78 Expected AP RSSI: -85
	PASS	2.4Ghz mcs: 7 BW: 20 rot: 0 last-atten-pass: 50 passing value: 38 STA RSSI: -60 Expected AP RSSI: -67

PASS	2.4Ghz mcs: 0 BW: 20 rot: 45 last-atten-pass: 70 passing value: 56 STA RSSI: -78 Expected AP RSSI: -87
PASS	2.4Ghz mcs: 7 BW: 20 rot: 45 last-atten-pass: 52 passing value: 38 STA RSSI: -59 Expected AP RSSI: -69
PASS	2.4Ghz mcs: 0 BW: 20 rot: 90 last-atten-pass: 68 passing value: 56 STA RSSI: -75 Expected AP RSSI: -85
PASS	2.4Ghz mcs: 7 BW: 20 rot: 90 last-atten-pass: 50 passing value: 38 STA RSSI: -56 Expected AP RSSI: -67
PASS	2.4Ghz mcs: 0 BW: 20 rot: 135 last-atten-pass: 69 passing value: 56 STA RSSI: -74 Expected AP RSSI: -86
PASS	2.4Ghz mcs: 7 BW: 20 rot: 135 last-atten-pass: 52 passing value: 38 STA RSSI: -57 Expected AP RSSI: -69
PASS	2.4Ghz mcs: 0 BW: 20 rot: 180 last-atten-pass: 65 passing value: 56 STA RSSI: -75 Expected AP RSSI: -82
PASS	2.4Ghz mcs: 7 BW: 20 rot: 180 last-atten-pass: 48 passing value: 38 STA RSSI: -58 Expected AP RSSI: -65
PASS	2.4Ghz mcs: 0 BW: 20 rot: 225 last-atten-pass: 67 passing value: 56 STA RSSI: -75 Expected AP RSSI: -84
PASS	2.4Ghz mcs: 7 BW: 20 rot: 225 last-atten-pass: 49 passing value: 38 STA RSSI: -56 Expected AP RSSI: -66
PASS	2.4Ghz mcs: 0 BW: 20 rot: 270 last-atten-pass: 67 passing value: 56 STA RSSI: -76 Expected AP RSSI: -84
PASS	2.4Ghz mcs: 7 BW: 20 rot: 270 last-atten-pass: 49 passing value: 38 STA RSSI: -58 Expected AP RSSI: -66
PASS	2.4Ghz mcs: 0 BW: 20 rot: 315 last-atten-pass: 59 passing value: 56 STA RSSI: -65 Expected AP RSSI: -76
PASS	2.4Ghz mcs: 7 BW: 20 rot: 315 last-atten-pass: 46 passing value: 38 STA RSSI: -56 Expected AP RSSI: -63

### Realtime Throughput for: 6.1.1 Receiver Sensitivity Test



## 6.2.1 Maximum Connection Test (32-STA)

### Summary

The Maximum Connection test intends to verify that the Wi-Fi AP can support 32 STAs simultaneously connected with minimal packet loss and no disassociations taking place.

### Test Procedure

These steps are done for 2.4Ghz and then for 5Ghz bands.

- Establish the LAN connection, create 32 stations and allow the 32 stations to associate with the DUT.
- Measure the downlink UDP packet loss, using a test time of 120 seconds and a traffic rate of 2 Mbps for 802.11n or 8 Mbps for 802.11ac, through each STA concurrently. Record the number of packets transmitted and received to calculate the packet error rate.
- Do same test in the upload direction.

### Pass/Fail Criteria

- For each of the test configuration, Packet Error Rate (PER) for each STA SHALL achieve less than 1%.
- For 2.4Ghz, summed upload throughput shall be at least (64Mbps \* 0.99)
- For 2.4Ghz, summed download throughput shall be at least (64Mbps \* 0.99)
- For 5Ghz, summed upload throughput shall be at least (256Mbps \* 0.99)
- For 5Ghz, summed download throughput shall be at least (256Mbps \* 0.99)

## 6.2.1 Maximum Connection Test (32-STA) Results



6.2.1.5.A 5Ghz cv_udp-1.1-1.sta0410--1.0.0	PASS	Download-PER: 0 STA-RSSI: -43 Rx-Rate: 1.733G Tx-Rate: 390.2M
6.2.1.5.A 5Ghz cv_udp-1.1-1.sta0411--1.0.0	PASS	Download-PER: 0 STA-RSSI: -43 Rx-Rate: 1.733G Tx-Rate: 520M
6.2.1.5.A 5Ghz cv_udp-1.1-1.sta0412--1.0.0	PASS	Download-PER: 0 STA-RSSI: -42 Rx-Rate: 1.733G Tx-Rate: 520M
6.2.1.5.A 5Ghz cv_udp-1.1-1.sta0413--1.0.0	PASS	Download-PER: 0 STA-RSSI: -42 Rx-Rate: 1.733G Tx-Rate: 390.2M
6.2.1.5.A 5Ghz cv_udp-1.1-1.sta0414--1.0.0	PASS	Download-PER: 0 STA-RSSI: -42 Rx-Rate: 1.733G Tx-Rate: 520M
6.2.1.5.A 5Ghz cv_udp-1.1-1.sta0415--1.0.0	PASS	Download-PER: 0 STA-RSSI: -42 Rx-Rate: 1.733G Tx-Rate: 520M
6.2.1.5.A 5Ghz cv_udp-1.1-1.sta0416--1.0.0	PASS	Download-PER: 0 STA-RSSI: -42 Rx-Rate: 1.733G Tx-Rate: 24M
6.2.1.5.A 5Ghz cv_udp-1.1-1.sta0417--1.0.0	PASS	Download-PER: 0 STA-RSSI: -43 Rx-Rate: 1.733G Tx-Rate: 390.2M
6.2.1.5.A 5Ghz cv_udp-1.1-1.sta0418--1.0.0	PASS	Download-PER: 0 STA-RSSI: -43 Rx-Rate: 1.733G Tx-Rate: 520M
6.2.1.5.A 5Ghz cv_udp-1.1-1.sta0419--1.0.0	PASS	Download-PER: 0 STA-RSSI: -43 Rx-Rate: 1.733G Tx-Rate: 390.2M
6.2.1.5.A 5Ghz cv_udp-1.1-1.sta0420--1.0.0	PASS	Download-PER: 0 STA-RSSI: -42 Rx-Rate: 1.733G Tx-Rate: 390.2M
6.2.1.5.A 5Ghz cv_udp-1.1-1.sta0421--1.0.0	PASS	Download-PER: 0 STA-RSSI: -42 Rx-Rate: 1.733G Tx-Rate: 520M
6.2.1.5.A 5Ghz cv_udp-1.1-1.sta0422--1.0.0	PASS	Download-PER: 0 STA-RSSI: -43 Rx-Rate: 1.733G Tx-Rate: 24M
6.2.1.5.A 5Ghz cv_udp-1.1-1.sta0423--1.0.0	PASS	Download-PER: 0 STA-RSSI: -43 Rx-Rate: 1.733G Tx-Rate: 520M
6.2.1.5.A 5Ghz cv_udp-1.1-1.sta0424--1.0.0	PASS	Download-PER: 0 STA-RSSI: -42 Rx-Rate: 1.733G Tx-Rate: 390.2M
6.2.1.5.A 5Ghz cv_udp-1.1-1.sta0425--1.0.0	PASS	Download-PER: 0 STA-RSSI: -42 Rx-Rate: 1.733G Tx-Rate: 520M
6.2.1.5.A 5Ghz cv_udp-1.1-1.sta0426--1.0.0	PASS	Download-PER: 0 STA-RSSI: -42 Rx-Rate: 1.733G Tx-Rate: 390.2M
6.2.1.5.A 5Ghz cv_udp-1.1-1.sta0427--1.0.0	PASS	Download-PER: 0 STA-RSSI: -43 Rx-Rate: 1.733G Tx-Rate: 24M
6.2.1.5.A 5Ghz cv_udp-1.1-1.sta0428--1.0.0	PASS	Download-PER: 0 STA-RSSI: -42 Rx-Rate: 1.733G Tx-Rate: 390.2M
6.2.1.5.A 5Ghz cv_udp-1.1-1.sta0429--1.0.0	PASS	Download-PER: 0 STA-RSSI: -43 Rx-Rate: 1.733G Tx-Rate: 520M
6.2.1.5.A 5Ghz cv_udp-1.1-1.sta0430--1.0.0	PASS	Download-PER: 0 STA-RSSI: -43 Rx-Rate: 1.733G Tx-Rate: 390.2M
6.2.1.5.A 5Ghz cv_udp-1.1-1.sta0431--1.0.0	PASS	Download-PER: 0 STA-RSSI: -43 Rx-Rate: 1.733G Tx-Rate: 390.2M
5Ghz Download Connections Passing Drop% Test	INFO	Passed 32 / 32 connections.
5Ghz Download Throughput	PASS	Sum-total Download reported rate: 264.05 Mbps must be at least 253.44Mbps
6.2.1.5.A 5Ghz cv_udp-1.1-1.sta0400--1.0.0	PASS	Upload-PER: 0 STA-RSSI: -29 Rx-Rate: 936M Tx-Rate: 390.2M
6.2.1.5.A 5Ghz cv_udp-1.1-1.sta0401--1.0.0	PASS	Upload-PER: 0 STA-RSSI: -29 Rx-Rate: 1.733G Tx-Rate: 1.733G
6.2.1.5.A 5Ghz cv_udp-1.1-1.sta0402--1.0.0	PASS	Upload-PER: 0 STA-RSSI: -29 Rx-Rate: 1.733G Tx-Rate: 1.733G
6.2.1.5.A 5Ghz cv_udp-1.1-1.sta0403--1.0.0	PASS	Upload-PER: 0 STA-RSSI: -29 Rx-Rate: 1.733G Tx-Rate: 1.733G
6.2.1.5.A 5Ghz cv_udp-1.1-1.sta0404--1.0.0	PASS	Upload-PER: 0 STA-RSSI: -29 Rx-Rate: 1.733G Tx-Rate: 1.733G
6.2.1.5.A 5Ghz cv_udp-1.1-1.sta0405--1.0.0	PASS	Upload-PER: 0 STA-RSSI: -29 Rx-Rate: 1.733G Tx-Rate: 1.733G
6.2.1.5.A 5Ghz cv_udp-1.1-1.sta0406--1.0.0	PASS	Upload-PER: 0 STA-RSSI: -29 Rx-Rate: 1.733G Tx-Rate: 1.733G
6.2.1.5.A 5Ghz cv_udp-1.1-1.sta0407--1.0.0	PASS	Upload-PER: 0 STA-RSSI: -29 Rx-Rate: 1.733G Tx-Rate: 1.733G
6.2.1.5.A 5Ghz cv_udp-1.1-1.sta0408--1.0.0	PASS	Upload-PER: 0 STA-RSSI: -29 Rx-Rate: 1.733G Tx-Rate: 1.733G
6.2.1.5.A 5Ghz cv_udp-1.1-1.sta0409--1.0.0	PASS	Upload-PER: 0 STA-RSSI: -29 Rx-Rate: 1.733G Tx-Rate: 1.733G
6.2.1.5.A 5Ghz cv_udp-1.1-1.sta0410--1.0.0	PASS	Upload-PER: 0 STA-RSSI: -29 Rx-Rate: 1.733G Tx-Rate: 1.733G
6.2.1.5.A 5Ghz cv_udp-1.1-1.sta0411--1.0.0	PASS	Upload-PER: 0 STA-RSSI: -29 Rx-Rate: 1.733G Tx-Rate: 1.733G
6.2.1.5.A 5Ghz cv_udp-1.1-1.sta0412--1.0.0	PASS	Upload-PER: 0 STA-RSSI: -29 Rx-Rate: 1.733G Tx-Rate: 1.733G
6.2.1.5.A 5Ghz cv_udp-1.1-1.sta0413--1.0.0	PASS	Upload-PER: 0 STA-RSSI: -29 Rx-Rate: 1.733G Tx-Rate: 1.733G
6.2.1.5.A 5Ghz cv_udp-1.1-1.sta0414--1.0.0	PASS	Upload-PER: 0 STA-RSSI: -29 Rx-Rate: 1.733G Tx-Rate: 1.733G
6.2.1.5.A 5Ghz cv_udp-1.1-1.sta0415--1.0.0	PASS	Upload-PER: 0 STA-RSSI: -29 Rx-Rate: 1.733G Tx-Rate: 1.733G
6.2.1.5.A 5Ghz cv_udp-1.1-1.sta0416--1.0.0	PASS	Upload-PER: 0 STA-RSSI: -29 Rx-Rate: 1.733G Tx-Rate: 24M
6.2.1.5.A 5Ghz cv_udp-1.1-1.sta0417--1.0.0	PASS	Upload-PER: 0 STA-RSSI: -29 Rx-Rate: 1.733G Tx-Rate: 1.733G
6.2.1.5.A 5Ghz cv_udp-1.1-1.sta0418--1.0.0	PASS	Upload-PER: 0 STA-RSSI: -30 Rx-Rate: 1.733G Tx-Rate: 1.733G
6.2.1.5.A 5Ghz cv_udp-1.1-1.sta0419--1.0.0	PASS	Upload-PER: 0 STA-RSSI: -29 Rx-Rate: 1.733G Tx-Rate: 1.733G
6.2.1.5.A 5Ghz cv_udp-1.1-1.sta0420--1.0.0	PASS	Upload-PER: 0 STA-RSSI: -29 Rx-Rate: 1.733G Tx-Rate: 1.733G
6.2.1.5.A 5Ghz cv_udp-1.1-1.sta0421--1.0.0	PASS	Upload-PER: 0 STA-RSSI: -29 Rx-Rate: 1.733G Tx-Rate: 1.3G
6.2.1.5.A 5Ghz cv_udp-1.1-1.sta0422--1.0.0	PASS	Upload-PER: 0 STA-RSSI: -29 Rx-Rate: 1.733G Tx-Rate: 24M
6.2.1.5.A 5Ghz cv_udp-1.1-1.sta0423--1.0.0	PASS	Upload-PER: 0 STA-RSSI: -29 Rx-Rate: 1.733G Tx-Rate: 1.733G
6.2.1.5.A 5Ghz cv_udp-1.1-1.sta0424--1.0.0	PASS	Upload-PER: 0 STA-RSSI: -29 Rx-Rate: 1.733G Tx-Rate: 1.733G
6.2.1.5.A 5Ghz cv_udp-1.1-1.sta0425--1.0.0	PASS	Upload-PER: 0 STA-RSSI: -29 Rx-Rate: 1.733G Tx-Rate: 1.733G
6.2.1.5.A 5Ghz cv_udp-1.1-1.sta0426--1.0.0	PASS	Upload-PER: 0 STA-RSSI: -29 Rx-Rate: 1.733G Tx-Rate: 1.733G
6.2.1.5.A 5Ghz cv_udp-1.1-1.sta0427--1.0.0	PASS	Upload-PER: 0 STA-RSSI: -29 Rx-Rate: 1.733G Tx-Rate: 24M
6.2.1.5.A 5Ghz cv_udp-1.1-1.sta0428--1.0.0	PASS	Upload-PER: 0 STA-RSSI: -29 Rx-Rate: 1.733G Tx-Rate: 1.56G
6.2.1.5.A 5Ghz cv_udp-1.1-1.sta0429--1.0.0	PASS	Upload-PER: 0 STA-RSSI: -29 Rx-Rate: 1.733G Tx-Rate: 1.733G
6.2.1.5.A 5Ghz cv_udp-1.1-1.sta0430--1.0.0	PASS	Upload-PER: 0 STA-RSSI: -29 Rx-Rate: 1.733G Tx-Rate: 1.733G
6.2.1.5.A 5Ghz cv_udp-1.1-1.sta0431--1.0.0	PASS	Upload-PER: 0 STA-RSSI: -29 Rx-Rate: 1.733G Tx-Rate: 1.733G
5Ghz Upload Connections Passing Drop% Test	INFO	Passed 32 / 32 connections.
5Ghz Upload Throughput	FAIL	Sum-total Upload reported rate: 243.96 Mbps must be at least 253.44Mbps

### Max-Cx-Test: Snapshot 2.4Ghz Download

Port	Tx-Bps Last	Tx-Bps 1m	Rx-Bps Last	RxBps 1m	Tx-Fail %	Tx-Link-Rate	Rx-Link-Rate	Mode	Channel	Last CX-Time(ms)	RSSI(dBm)	AP	IP	MAC
1.1.2 sta0600	65 bps	29 bps	2.128 Mbps	1.573 Mbps	0	240 Mbps	600 Mbps	802.11bgn	11	36	-25	DC:EF:09:E3:B8:7B	192.168.1.102	04:f0:21:4b:a1:00
1.1.11 sta0601	0 bps	29 bps	2.127 Mbps	1.575 Mbps	0	240 Mbps	600 Mbps	802.11bgn	11	42	-25	DC:EF:09:E3:B8:7B	192.168.1.223	04:f0:21:4b:88:00
1.1.15 sta0602	63 bps	29 bps	2.126 Mbps	1.575 Mbps	0	240 Mbps	600 Mbps	802.11bgn	11	40	-25	DC:EF:09:E3:B8:7B	192.168.1.109	04:f0:21:4b:bd:00
1.1.16 sta0603	67 bps	30 bps	2.126 Mbps	1.552 Mbps	0	240 Mbps	600 Mbps	802.11bgn	11	55	-25	DC:EF:09:E3:B8:7B	192.168.1.138	04:f0:21:4b:8d:00
1.1.17 sta0604	67 bps	38 bps	2.126 Mbps	1.55 Mbps	0	180 Mbps	600 Mbps	802.11bgn	11	39	-25	DC:EF:09:E3:B8:7B	192.168.1.6	04:f0:21:4b:86:00
1.1.18 sta0605	0 bps	32 bps	2.126 Mbps	1.736 Mbps	0	240 Mbps	600 Mbps	802.11bgn	11	40	-25	DC:EF:09:E3:B8:7B	192.168.1.97	04:f0:21:4b:84:00
1.1.19 sta0606	67 bps	34 bps	2.128 Mbps	1.712 Mbps	0	240 Mbps	600 Mbps	802.11bgn	11	38	-26	DC:EF:09:E3:B8:7B	192.168.1.92	04:f0:21:4b:95:00
1.1.20 sta0607	67 bps	35 bps	2.126 Mbps	1.776 Mbps	0	240 Mbps	600 Mbps	802.11bgn	11	36	-25	DC:EF:09:E3:B8:7B	192.168.1.174	04:f0:21:4b:af:00

1.1.21 sta0608	0 bps	34 bps	2.124 Mbps	1.872 0	240 Mbps	600 Mbps	802.11bgn	11	37	-25	DC:EF:09:E3:B8:7B 192.168.1.113 04:f0:21:4b:b2:00
1.1.22 sta0609	66 bps	35 bps	2.127 Mbps	1.77 0	240 Mbps	600 Mbps	802.11bgn	11	37	-25	DC:EF:09:E3:B8:7B 192.168.1.240 04:f0:21:4b:83:00
1.1.23 sta0610	67 bps	35 bps	2.128 Mbps	1.767 0	240 Mbps	600 Mbps	802.11bgn	11	41	-25	DC:EF:09:E3:B8:7B 192.168.1.105 04:f0:21:4b:9a:00
1.1.24 sta0611	67 bps	35 bps	2.128 Mbps	1.764 0	180 Mbps	600 Mbps	802.11bgn	11	42	-25	DC:EF:09:E3:B8:7B 192.168.1.100 04:f0:21:4b:a7:00
1.1.25 sta0612	58 bps	34 bps	2.125 Mbps	1.811 0	240 Mbps	600 Mbps	802.11bgn	11	37	-25	DC:EF:09:E3:B8:7B 192.168.1.172 04:f0:21:4b:bf:00
1.1.26 sta0613	0 bps	26 bps	2.126 Mbps	1.858 0	240 Mbps	600 Mbps	802.11bgn	11	43	-25	DC:EF:09:E3:B8:7B 192.168.1.24 04:f0:21:4b:93:00
1.1.27 sta0614	0 bps	35 bps	2.128 Mbps	1.855 0	240 Mbps	600 Mbps	802.11bgn	11	42	-25	DC:EF:09:E3:B8:7B 192.168.1.116 04:f0:21:4b:a2:00
1.1.28 sta0615	66 bps	34 bps	2.126 Mbps	1.85 0	240 Mbps	600 Mbps	802.11bgn	11	39	-25	DC:EF:09:E3:B8:7B 192.168.1.222 04:f0:21:4b:92:00
1.1.29 sta0616	66 bps	34 bps	2.126 Mbps	1.848 0	240 Mbps	600 Mbps	802.11bgn	11	40	-25	DC:EF:09:E3:B8:7B 192.168.1.200 04:f0:21:4b:98:00
1.1.30 sta0617	58 bps	34 bps	2.126 Mbps	1.789 0	240 Mbps	600 Mbps	802.11bgn	11	37	-25	DC:EF:09:E3:B8:7B 192.168.1.196 04:f0:21:4b:b5:00
1.1.31 sta0618	0 bps	35 bps	2.126 Mbps	1.845 0	240 Mbps	600 Mbps	802.11bgn	11	39	-25	DC:EF:09:E3:B8:7B 192.168.1.33 04:f0:21:4b:b3:00
1.1.32 sta0619	0 bps	33 bps	2.125 Mbps	1.77 0	180 Mbps	600 Mbps	802.11bgn	11	37	-25	DC:EF:09:E3:B8:7B 192.168.1.214 04:f0:21:4b:b4:00
1.1.33 sta0620	66 bps	33 bps	2.127 Mbps	1.767 0	180 Mbps	600 Mbps	802.11bgn	11	37	-25	DC:EF:09:E3:B8:7B 192.168.1.106 04:f0:21:4b:bb:00
1.1.34 sta0621	66 bps	33 bps	2.125 Mbps	1.763 0	180 Mbps	600 Mbps	802.11bgn	11	37	-25	DC:EF:09:E3:B8:7B 192.168.1.48 04:f0:21:4b:9e:00
1.1.35 sta0622	67 bps	33 bps	2.126 Mbps	1.762 0	180 Mbps	600 Mbps	802.11bgn	11	48	-25	DC:EF:09:E3:B8:7B 192.168.1.84 04:f0:21:4b:ae:00
1.1.36 sta0623	0 bps	33 bps	2.127 Mbps	1.759 0	240 Mbps	600 Mbps	802.11bgn	11	44	-25	DC:EF:09:E3:B8:7B 192.168.1.244 04:f0:21:4b:80:00
1.1.37 sta0624	58 bps	51 bps	2.124 Mbps	1.748 0	180 Mbps	600 Mbps	802.11bgn	11	47	-25	DC:EF:09:E3:B8:7B 192.168.1.225 04:f0:21:4b:b7:00
1.1.38 sta0625	58 bps	50 bps	2.124 Mbps	1.715 0	180 Mbps	600 Mbps	802.11bgn	11	41	-25	DC:EF:09:E3:B8:7B 192.168.1.5 04:f0:21:4b:8b:00
1.1.39 sta0626	58 bps	42 bps	2.124 Mbps	1.697 0	180 Mbps	600 Mbps	802.11bgn	11	159	-25	DC:EF:09:E3:B8:7B 192.168.1.17 04:f0:21:4b:8e:00
1.1.40 sta0627	67 bps	49 bps	2.126 Mbps	1.705 0	180 Mbps	600 Mbps	802.11bgn	11	38	-25	DC:EF:09:E3:B8:7B 192.168.1.224 04:f0:21:4b:a4:00
1.1.41 sta0628	58 bps	90 bps	2.127 Mbps	1.689 0	240 Mbps	600 Mbps	802.11bgn	11	46	-25	DC:EF:09:E3:B8:7B 192.168.1.90 04:f0:21:4b:ba:00
1.1.42 sta0629	58 bps	61 bps	2.127 Mbps	1.683 0	240 Mbps	600 Mbps	802.11bgn	11	38	-25	DC:EF:09:E3:B8:7B 192.168.1.34 04:f0:21:4b:89:00
1.1.43 sta0630	67 bps	58 bps	2.126 Mbps	1.7 0	180 Mbps	600 Mbps	802.11bgn	11	36	-25	DC:EF:09:E3:B8:7B 192.168.1.115 04:f0:21:4b:6e:00
1.1.44 sta0631	61 bps	51 bps	2.126 Mbps	1.679 0	240 Mbps	600 Mbps	802.11bgn	11	41	-25	DC:EF:09:E3:B8:7B 192.168.1.111 04:f0:21:4b:a3:00

Port	Tx-Bps Last	Tx-Bps 1m	Rx-Bps Last	Rx-Bps 1m	Link-Rate	IP	MAC
1.1.1 eth1	68.086 Mbps	56.518 Mbps	312 bps	1.021 Kbps	1 Gbps	192.168.1.99	00:60:e0:74:74:bc

Endpoint	Tx-Bps Last	Tx-Bps 1m	Rx-Bps Last	Rx-Bps 1m	RX Latency(ms)	Round-Trip Latency(ms)	jitter	Rx Packet Loss %
cv_udp-1.1.1.sta0600--1.0.0-A	0 bps	0 bps	2.07 Mbps	2.067 Mbps	6	6	5	0.195
cv_udp-1.1.1.sta0600--1.0.0-B	2.068 Mbps	2.067 Mbps	0 bps	0 bps	0	6	0	0
cv_udp-1.1.1.sta0601--1.0.0-A	0 bps	0 bps	2.06 Mbps	2.067 Mbps	6	6	5	0.008
cv_udp-1.1.1.sta0601--1.0.0-B	2.068 Mbps	2.067 Mbps	0 bps	0 bps	0	6	0	0
cv_udp-1.1.1.sta0602--1.0.0-A	0 bps	0 bps	2.064 Mbps	2.067 Mbps	5	5	5	0
cv_udp-1.1.1.sta0602--1.0.0-B	2.064 Mbps	2.067 Mbps	0 bps	0 bps	0	5	0	0
cv_udp-1.1.1.sta0603--1.0.0-A	0 bps	0 bps	2.064 Mbps	2.067 Mbps	6	6	5	0
cv_udp-1.1.1.sta0603--1.0.0-B	2.064 Mbps	2.067 Mbps	0 bps	0 bps	0	6	0	0
cv_udp-1.1.1.sta0604--1.0.0-A	0 bps	0 bps	2.064 Mbps	2.067 Mbps	6	6	5	0
cv_udp-1.1.1.sta0604--1.0.0-B	2.069 Mbps	2.067 Mbps	0 bps	0 bps	0	6	0	0
cv_udp-1.1.1.sta0605--1.0.0-A	0 bps	0 bps	2.073 Mbps	2.067 Mbps	6	6	5	0
cv_udp-1.1.1.sta0605--1.0.0-B	2.069 Mbps	2.067 Mbps	0 bps	0 bps	0	6	0	0
cv_udp-1.1.1.sta0606--1.0.0-A	0 bps	0 bps	2.064 Mbps	2.067 Mbps	6	6	5	0.252
cv_udp-1.1.1.sta0606--1.0.0-B	2.066 Mbps	2.067 Mbps	0 bps	0 bps	0	6	0	0
cv_udp-1.1.1.sta0607--1.0.0-A	0 bps	0 bps	2.063 Mbps	2.067 Mbps	6	6	5	0
cv_udp-1.1.1.sta0607--1.0.0-B	2.067 Mbps	2.067 Mbps	0 bps	0 bps	0	6	0	0
cv_udp-1.1.1.sta0608--1.0.0-A	0 bps	0 bps	2.07 Mbps	2.067 Mbps	6	6	5	0
cv_udp-1.1.1.sta0608--1.0.0-B	2.067 Mbps	2.067 Mbps	0 bps	0 bps	0	6	0	0
cv_udp-1.1.1.sta0609--1.0.0-A	0 bps	0 bps	2.059 Mbps	2.067 Mbps	6	6	5	0
cv_udp-1.1.1.sta0609--1.0.0-B	2.067 Mbps	2.067 Mbps	0 bps	0 bps	0	6	0	0
cv_udp-1.1.1.sta0610--1.0.0-A	0 bps	0 bps	2.065 Mbps	2.067 Mbps	6	6	5	0
cv_udp-1.1.1.sta0610--1.0.0-B	2.065 Mbps	2.067 Mbps	0 bps	0 bps	0	6	0	0
cv_udp-1.1.1.sta0611--1.0.0-A	0 bps	0 bps	2.065 Mbps	2.067 Mbps	6	6	5	0
cv_udp-1.1.1.sta0611--1.0.0-B	2.065 Mbps	2.067 Mbps	0 bps	0 bps	0	6	0	0
cv_udp-1.1.1.sta0612--1.0.0-A	0 bps	0 bps	2.067 Mbps	2.067 Mbps	6	6	5	0.319
cv_udp-1.1.1.sta0612--1.0.0-B	2.065 Mbps	2.067 Mbps	0 bps	0 bps	0	6	0	0
cv_udp-1.1.1.sta0613--1.0.0-A	0 bps	0 bps	2.073 Mbps	2.067 Mbps	6	6	5	0
cv_udp-1.1.1.sta0613--1.0.0-B	2.065 Mbps	2.067 Mbps	0 bps	0 bps	0	6	0	0
cv_udp-1.1.1.sta0614--1.0.0-A	0 bps	0 bps	2.073 Mbps	2.067 Mbps	6	6	5	0
cv_udp-1.1.1.sta0614--1.0.0-B	2.065 Mbps	2.067 Mbps	0 bps	0 bps	0	6	0	0
cv_udp-1.1.1.sta0615--1.0.0-A	0 bps	0 bps	2.07 Mbps	2.067 Mbps	6	6	5	0
cv_udp-1.1.1.sta0615--1.0.0-B	2.065 Mbps	2.067 Mbps	0 bps	0 bps	0	6	0	0

cv_udp-1.1-1.sta0616--1.0.0-A	0 bps	0 bps	2.067 Mbps	2.067 Mbps	6	6	5	0
cv_udp-1.1-1.sta0616-1.0.0-B	2.065 Mbps	2.067 Mbps	0 bps	0 bps	0	6	0	0
cv_udp-1.1-1.sta0617--1.0.0-A	0 bps	0 bps	2.073 Mbps	2.067 Mbps	6	6	5	0
cv_udp-1.1-1.sta0617-1.0.0-B	2.069 Mbps	2.067 Mbps	0 bps	0 bps	0	6	0	0
cv_udp-1.1-1.sta0618--1.0.0-A	0 bps	0 bps	2.065 Mbps	2.067 Mbps	6	6	5	0
cv_udp-1.1-1.sta0618-1.0.0-B	2.069 Mbps	2.067 Mbps	0 bps	0 bps	0	6	0	0
cv_udp-1.1-1.sta0619--1.0.0-A	0 bps	0 bps	2.058 Mbps	2.067 Mbps	6	6	5	0.017
cv_udp-1.1-1.sta0619-1.0.0-B	2.07 Mbps	2.067 Mbps	0 bps	0 bps	0	6	0	0
cv_udp-1.1-1.sta0620--1.0.0-A	0 bps	0 bps	2.066 Mbps	2.067 Mbps	6	6	4	0
cv_udp-1.1-1.sta0620-1.0.0-B	2.07 Mbps	2.067 Mbps	0 bps	0 bps	0	6	0	0
cv_udp-1.1-1.sta0621--1.0.0-A	0 bps	0 bps	2.068 Mbps	2.067 Mbps	6	6	5	0
cv_udp-1.1-1.sta0621-1.0.0-B	2.069 Mbps	2.067 Mbps	0 bps	0 bps	0	6	0	0
cv_udp-1.1-1.sta0622--1.0.0-A	0 bps	0 bps	2.067 Mbps	2.067 Mbps	6	6	5	0
cv_udp-1.1-1.sta0622-1.0.0-B	2.069 Mbps	2.067 Mbps	0 bps	0 bps	0	6	0	0
cv_udp-1.1-1.sta0623--1.0.0-A	0 bps	0 bps	2.07 Mbps	2.067 Mbps	6	6	5	0
cv_udp-1.1-1.sta0623-1.0.0-B	2.067 Mbps	2.067 Mbps	0 bps	0 bps	0	6	0	0
cv_udp-1.1-1.sta0624--1.0.0-A	0 bps	0 bps	2.065 Mbps	2.067 Mbps	6	6	5	0.017
cv_udp-1.1-1.sta0624-1.0.0-B	2.069 Mbps	2.067 Mbps	0 bps	0 bps	0	6	0	0
cv_udp-1.1-1.sta0625--1.0.0-A	0 bps	0 bps	2.072 Mbps	2.067 Mbps	6	6	5	0
cv_udp-1.1-1.sta0625-1.0.0-B	2.067 Mbps	2.067 Mbps	0 bps	0 bps	0	6	0	0
cv_udp-1.1-1.sta0626--1.0.0-A	0 bps	0 bps	2.071 Mbps	2.067 Mbps	6	6	5	0
cv_udp-1.1-1.sta0626-1.0.0-B	2.067 Mbps	2.067 Mbps	0 bps	0 bps	0	6	0	0
cv_udp-1.1-1.sta0627--1.0.0-A	0 bps	0 bps	2.07 Mbps	2.067 Mbps	6	6	5	0
cv_udp-1.1-1.sta0627-1.0.0-B	2.066 Mbps	2.067 Mbps	0 bps	0 bps	0	6	0	0
cv_udp-1.1-1.sta0628--1.0.0-A	0 bps	0 bps	2.067 Mbps	2.067 Mbps	6	6	5	0
cv_udp-1.1-1.sta0628-1.0.0-B	2.066 Mbps	2.067 Mbps	0 bps	0 bps	0	6	0	0
cv_udp-1.1-1.sta0629--1.0.0-A	0 bps	0 bps	2.063 Mbps	2.067 Mbps	6	6	5	0
cv_udp-1.1-1.sta0629-1.0.0-B	2.066 Mbps	2.067 Mbps	0 bps	0 bps	0	6	0	0
cv_udp-1.1-1.sta0630--1.0.0-A	0 bps	0 bps	2.069 Mbps	2.067 Mbps	6	6	5	0
cv_udp-1.1-1.sta0630-1.0.0-B	2.066 Mbps	2.067 Mbps	0 bps	0 bps	0	6	0	0
cv_udp-1.1-1.sta0631--1.0.0-A	0 bps	0 bps	2.065 Mbps	2.067 Mbps	6	6	5	0
cv_udp-1.1-1.sta0631-1.0.0-B	2.066 Mbps	2.067 Mbps	0 bps	0 bps	0	6	0	0

### Max-Cx-Test: Snapshot 2.4Ghz Upload

Port	Tx-Bps Last	Tx-Bps 1m	Rx-Bps Last	RxBps 1m	Tx-Fail %	Tx-Link-Rate	Rx-Link-Rate	Mode	Channel	Last CX-Time(ms)	RSSI(dBm)	AP	IP	MAC
1.1.2 sta0600	2.155 Mbps	2.154 Mbps	0 bps	136 bps	0	480 Mbps	600 Mbps	802.11bgn	11	36	-26	DC:EF:09:E3:B8:7B	192.168.1.102	04:f0:21:4b:a1:00
1.1.11 sta0601	2.154 Mbps	2.154 Mbps	64 bps	151 bps	0	600 Mbps	600 Mbps	802.11bgn	11	42	-26	DC:EF:09:E3:B8:7B	192.168.1.223	04:f0:21:4b:88:00
1.1.15 sta0602	2.155 Mbps	2.153 Mbps	0 bps	146 bps	0	600 Mbps	600 Mbps	802.11bgn	11	40	-26	DC:EF:09:E3:B8:7B	192.168.1.109	04:f0:21:4b:bd:00
1.1.16 sta0603	2.156 Mbps	2.154 Mbps	62 bps	108 bps	0	600 Mbps	600 Mbps	802.11bgn	11	55	-25	DC:EF:09:E3:B8:7B	192.168.1.138	04:f0:21:4b:8d:00
1.1.17 sta0604	2.156 Mbps	2.154 Mbps	0 bps	108 bps	0.131	540 Mbps	600 Mbps	802.11bgn	11	39	-25	DC:EF:09:E3:B8:7B	192.168.1.6	04:f0:21:4b:86:00
1.1.18 sta0605	2.152 Mbps	1.344 Mbps	0 bps	613.357 Kbps	0	600 Mbps	600 Mbps	802.11bgn	11	40	-26	DC:EF:09:E3:B8:7B	192.168.1.97	04:f0:21:4b:84:00
1.1.19 sta0606	2.154 Mbps	1.394 Mbps	62 bps	556.955 Kbps	0	600 Mbps	600 Mbps	802.11bgn	11	38	-25	DC:EF:09:E3:B8:7B	192.168.1.92	04:f0:21:4b:95:00
1.1.20 sta0607	2.154 Mbps	1.393 Mbps	0 bps	556.951 Kbps	0	600 Mbps	600 Mbps	802.11bgn	11	36	-25	DC:EF:09:E3:B8:7B	192.168.1.174	04:f0:21:4b:af:00
1.1.21 sta0608	2.153 Mbps	1.423 Mbps	57 bps	516.341 Kbps	0	540 Mbps	600 Mbps	802.11bgn	11	37	-26	DC:EF:09:E3:B8:7B	192.168.1.113	04:f0:21:4b:b2:00
1.1.22 sta0609	2.155 Mbps	1.39 Mbps	0 bps	555.134 Kbps	0	600 Mbps	600 Mbps	802.11bgn	11	37	-25	DC:EF:09:E3:B8:7B	192.168.1.240	04:f0:21:4b:83:00
1.1.23 sta0610	2.154 Mbps	1.391 Mbps	0 bps	553.154 Kbps	0	600 Mbps	600 Mbps	802.11bgn	11	41	-25	DC:EF:09:E3:B8:7B	192.168.1.105	04:f0:21:4b:9a:00
1.1.24 sta0611	2.153 Mbps	1.402 Mbps	0 bps	542.992 Kbps	0	600 Mbps	600 Mbps	802.11bgn	11	42	-26	DC:EF:09:E3:B8:7B	192.168.1.100	04:f0:21:4b:a7:00
1.1.25 sta0612	2.154 Mbps	1.419 Mbps	0 bps	522.462 Kbps	0	600 Mbps	600 Mbps	802.11bgn	11	37	-26	DC:EF:09:E3:B8:7B	192.168.1.172	04:f0:21:4b:bf:00
1.1.26 sta0613	2.152 Mbps	1.407 Mbps	0 bps	516.351 Kbps	0	600 Mbps	600 Mbps	802.11bgn	11	43	-26	DC:EF:09:E3:B8:7B	192.168.1.24	04:f0:21:4b:93:00
1.1.27 sta0614	2.152 Mbps	1.404 Mbps	0 bps	516.351 Kbps	0	600 Mbps	600 Mbps	802.11bgn	11	42	-26	DC:EF:09:E3:B8:7B	192.168.1.116	04:f0:21:4b:a2:00
1.1.28 sta0615	2.153 Mbps	1.402 Mbps	0 bps	516.347 Kbps	0.008	600 Mbps	600 Mbps	802.11bgn	11	39	-26	DC:EF:09:E3:B8:7B	192.168.1.222	04:f0:21:4b:92:00
1.1.29 sta0616	2.152 Mbps	1.4 Mbps	0 bps	516.347 Kbps	0	600 Mbps	600 Mbps	802.11bgn	11	40	-26	DC:EF:09:E3:B8:7B	192.168.1.200	04:f0:21:4b:98:00
1.1.30 sta0617	2.154 Mbps	1.413 Mbps	0 bps	515.39 Kbps	0	600 Mbps	600 Mbps	802.11bgn	11	37	-26	DC:EF:09:E3:B8:7B	192.168.1.196	04:f0:21:4b:b5:00
1.1.31 sta0618	2.153 Mbps	1.395 Mbps	57 bps	516.355 Kbps	0	600 Mbps	600 Mbps	802.11bgn	11	39	-26	DC:EF:09:E3:B8:7B	192.168.1.33	04:f0:21:4b:b3:00
1.1.32 sta0619	2.152 Mbps	1.35 Mbps	58 bps	565.322 Kbps	0	540 Mbps	600 Mbps	802.11bgn	11	37	-26	DC:EF:09:E3:B8:7B	192.168.1.214	04:f0:21:4b:b4:00
1.1.33 sta0620	2.152 Mbps	1.349 Mbps	0 bps	565.213 Kbps	0	540 Mbps	600 Mbps	802.11bgn	11	37	-26	DC:EF:09:E3:B8:7B	192.168.1.106	04:f0:21:4b:bb:00
1.1.34 sta0621	2.154 Mbps	1.346 Mbps	57 bps	565.111 Kbps	0	540 Mbps	600 Mbps	802.11bgn	11	37	-26	DC:EF:09:E3:B8:7B	192.168.1.48	04:f0:21:4b:9e:00
1.1.35 sta0622	2.154 Mbps	1.343 Mbps	57 bps	565.111 Kbps	0	540 Mbps	600							

sta0622	Mbps	Mbps	bps	Kbps	0	Mbps	Mbps	802.11bgn	11	48	-26	DC:EF:09:E3:B8:7B	192.168.1.84	04:f0:21:4b:ae:00
1.1.36	2.154	1.341	0 bps	565.111 Kbps	0	540 Mbps	600 Mbps	802.11bgn	11	44	-26	DC:EF:09:E3:B8:7B	192.168.1.244	04:f0:21:4b:80:00
sta0623	Mbps	Mbps	0 bps	537.879 Kbps	0	480 Mbps	600 Mbps	802.11bgn	11	47	-26	DC:EF:09:E3:B8:7B	192.168.1.225	04:f0:21:4b:b7:00
1.1.37	2.155	1.358	0 bps	565.066 Kbps	0	600 Mbps	600 Mbps	802.11bgn	11	41	-26	DC:EF:09:E3:B8:7B	192.168.1.15	04:f0:21:4b:8b:00
sta0624	Mbps	Mbps	0 bps	564.632 Kbps	0.008	600 Mbps	600 Mbps	802.11bgn	11	159	-26	DC:EF:09:E3:B8:7B	192.168.1.17	04:f0:21:4b:8e:00
1.1.38	2.154	1.315	0 bps	565.173 Kbps	0	600 Mbps	600 Mbps	802.11bgn	11	38	-26	DC:EF:09:E3:B8:7B	192.168.1.224	04:f0:21:4b:a4:00
sta0625	Mbps	Mbps	0 bps	565.072 Kbps	0	600 Mbps	600 Mbps	802.11bgn	11	46	-26	DC:EF:09:E3:B8:7B	192.168.1.90	04:f0:21:4b:ba:00
1.1.39	2.154	1.311	0 bps	565.571 Kbps	0	540 Mbps	600 Mbps	802.11bgn	11	38	-26	DC:EF:09:E3:B8:7B	192.168.1.34	04:f0:21:4b:89:00
sta0626	Mbps	Mbps	0 bps	565.069 Kbps	0	600 Mbps	600 Mbps	802.11bgn	11	36	-25	DC:EF:09:E3:B8:7B	192.168.1.115	04:f0:21:4b:b6:00
1.1.40	2.154	1.309	0 bps	565.173 Kbps	0	600 Mbps	600 Mbps	802.11bgn	11	41	-26	DC:EF:09:E3:B8:7B	192.168.1.111	04:f0:21:4b:a3:00
sta0627	Mbps	Mbps	0 bps	565.069 Kbps	0	540 Mbps	600 Mbps	802.11bgn	11	41	-26	DC:EF:09:E3:B8:7B	192.168.1.111	04:f0:21:4b:a3:00

Port	Tx-Bps Last	Tx-Bps 1m	Rx-Bps Last	Rx-Bps 1m	Link-Rate	IP	MAC
1.1.1 eth1	228 bps	17.391 Mbps	68.149 Mbps	43.705 Mbps	1 Gbps	192.168.1.99	00:60:e0:74:74:bc

Endpoint	Tx-Bps Last	Tx-Bps 1m	Rx-Bps Last	Rx-Bps 1m	RX Latency(ms)	Round-Trip Latency(ms)	jitter	Rx Packet Loss %
cv_udp-1.1-1.sta0600--1.0-0-A	2.069 Mbps	2.067 Mbps	0 bps	0 bps	0	19	0	0
cv_udp-1.1-1.sta0600--1.0-0-B	0 bps	0 bps	2.067 Mbps	2.067 Mbps	19	19	8	0
cv_udp-1.1-1.sta0601--1.0-0-A	2.069 Mbps	2.067 Mbps	0 bps	0 bps	0	19	0	0
cv_udp-1.1-1.sta0601--1.0-0-B	0 bps	0 bps	2.063 Mbps	2.067 Mbps	19	19	8	0
cv_udp-1.1-1.sta0602--1.0-0-A	2.065 Mbps	2.066 Mbps	0 bps	0 bps	0	26	0	0
cv_udp-1.1-1.sta0602--1.0-0-B	0 bps	0 bps	2.057 Mbps	2.065 Mbps	26	26	8	0
cv_udp-1.1-1.sta0603--1.0-0-A	2.069 Mbps	2.067 Mbps	0 bps	0 bps	0	22	0	0
cv_udp-1.1-1.sta0603--1.0-0-B	0 bps	0 bps	2.053 Mbps	2.067 Mbps	22	22	9	0
cv_udp-1.1-1.sta0604--1.0-0-A	2.069 Mbps	2.067 Mbps	0 bps	0 bps	0	23	0	0
cv_udp-1.1-1.sta0604--1.0-0-B	0 bps	0 bps	2.067 Mbps	2.067 Mbps	23	23	8	0
cv_udp-1.1-1.sta0605--1.0-0-A	2.071 Mbps	2.067 Mbps	0 bps	0 bps	0	19	0	0
cv_udp-1.1-1.sta0605--1.0-0-B	0 bps	0 bps	2.081 Mbps	2.067 Mbps	19	19	8	0
cv_udp-1.1-1.sta0606--1.0-0-A	2.069 Mbps	2.067 Mbps	0 bps	0 bps	0	27	0	0
cv_udp-1.1-1.sta0606--1.0-0-B	0 bps	0 bps	2.053 Mbps	2.065 Mbps	27	27	9	0.057
cv_udp-1.1-1.sta0607--1.0-0-A	2.067 Mbps	2.067 Mbps	0 bps	0 bps	0	23	0	0
cv_udp-1.1-1.sta0607--1.0-0-B	0 bps	0 bps	2.059 Mbps	2.066 Mbps	23	23	8	0.041
cv_udp-1.1-1.sta0608--1.0-0-A	2.067 Mbps	2.067 Mbps	0 bps	0 bps	0	26	0	0
cv_udp-1.1-1.sta0608--1.0-0-B	0 bps	0 bps	2.063 Mbps	2.067 Mbps	26	26	8	0
cv_udp-1.1-1.sta0609--1.0-0-A	2.067 Mbps	2.067 Mbps	0 bps	0 bps	0	21	0	0
cv_udp-1.1-1.sta0609--1.0-0-B	0 bps	0 bps	2.059 Mbps	2.066 Mbps	21	21	8	0.041
cv_udp-1.1-1.sta0610--1.0-0-A	2.07 Mbps	2.067 Mbps	0 bps	0 bps	0	21	0	0
cv_udp-1.1-1.sta0610--1.0-0-B	0 bps	0 bps	2.063 Mbps	2.067 Mbps	21	21	8	0
cv_udp-1.1-1.sta0611--1.0-0-A	2.068 Mbps	2.067 Mbps	0 bps	0 bps	0	21	0	0
cv_udp-1.1-1.sta0611--1.0-0-B	0 bps	0 bps	2.056 Mbps	2.067 Mbps	21	21	8	0.025
cv_udp-1.1-1.sta0612--1.0-0-A	2.068 Mbps	2.067 Mbps	0 bps	0 bps	0	26	0	0
cv_udp-1.1-1.sta0612--1.0-0-B	0 bps	0 bps	2.084 Mbps	2.068 Mbps	26	26	8	0
cv_udp-1.1-1.sta0613--1.0-0-A	2.068 Mbps	2.067 Mbps	0 bps	0 bps	0	22	0	0
cv_udp-1.1-1.sta0613--1.0-0-B	0 bps	0 bps	2.052 Mbps	2.067 Mbps	22	22	8	0.033
cv_udp-1.1-1.sta0614--1.0-0-A	2.068 Mbps	2.067 Mbps	0 bps	0 bps	0	22	0	0
cv_udp-1.1-1.sta0614--1.0-0-B	0 bps	0 bps	2.08 Mbps	2.067 Mbps	22	22	8	0.016
cv_udp-1.1-1.sta0615--1.0-0-A	2.072 Mbps	2.067 Mbps	0 bps	0 bps	0	19	0	0
cv_udp-1.1-1.sta0615--1.0-0-B	0 bps	0 bps	2.084 Mbps	2.069 Mbps	19	19	8	0.245
cv_udp-1.1-1.sta0616--1.0-0-A	2.07 Mbps	2.067 Mbps	0 bps	0 bps	0	21	0	0
cv_udp-1.1-1.sta0616--1.0-0-B	0 bps	0 bps	2.057 Mbps	2.067 Mbps	21	21	8	0
cv_udp-1.1-1.sta0617--1.0-0-A	2.067 Mbps	2.067 Mbps	0 bps	0 bps	0	28	0	0
cv_udp-1.1-1.sta0617--1.0-0-B	0 bps	0 bps	2.049 Mbps	2.067 Mbps	28	28	8	0
cv_udp-1.1-1.sta0618--1.0-0-A	2.067 Mbps	2.067 Mbps	0 bps	0 bps	0	21	0	0
cv_udp-1.1-1.sta0618--1.0-0-B	0 bps	0 bps	2.067 Mbps	2.067 Mbps	21	21	8	0
cv_udp-1.1-1.sta0619--1.0-0-A	2.067 Mbps	2.067 Mbps	0 bps	0 bps	0	24	0	0
cv_udp-1.1-1.sta0619--1.0-0-B	0 bps	0 bps	2.039 Mbps	2.066 Mbps	24	24	8	0.041
cv_udp-1.1-1.sta0620--1.0-0-A	2.067 Mbps	2.067 Mbps	0 bps	0 bps	0	23	0	0
cv_udp-1.1-1.sta0620--1.0-0-B	0 bps	0 bps	2.063 Mbps	2.067 Mbps	23	23	9	0
cv_udp-1.1-1.sta0621--1.0-0-A	2.067 Mbps	2.067 Mbps	0 bps	0 bps	0	23	0	0
cv_udp-1.1-1.sta0621--1.0-0-B	0 bps	0 bps	2.063 Mbps	2.067 Mbps	23	23	9	0
cv_udp-1.1-1.sta0622--1.0-0-A	2.071 Mbps	2.067 Mbps	0 bps	0 bps	0	19	0	0
cv_udp-1.1-1.sta0622--1.0-0-B	0 bps	0 bps	2.067 Mbps	2.068 Mbps	19	19	8	0
cv_udp-1.1-1.sta0623--1.0-0-A	2.071 Mbps	2.067 Mbps	0 bps	0 bps	0	19	0	0
cv_udp-1.1-1.sta0623--1.0-0-B	0 bps	0 bps	2.095 Mbps	2.068 Mbps	19	19	8	0
cv_udp-1.1-1.sta0624--1.0-0-A	2.067 Mbps	2.067 Mbps	0 bps	0 bps	0	29	0	0
cv_udp-1.1-1.sta0624--1.0-0-B	0 bps	0 bps	2.067 Mbps	2.068 Mbps	29	29	8	0
cv_udp-1.1-1.sta0625--1.0-0-A	2.069 Mbps	2.067 Mbps	0 bps	0 bps	0	20	0	0
cv_udp-1.1-1.sta0625--1.0-0-B	0 bps	0 bps	2.043 Mbps	2.066 Mbps	20	20	8	0
cv_udp-1.1-1.sta0626--1.0-0-A	2.069 Mbps	2.067 Mbps	0 bps	0 bps	0	28	0	0
cv_udp-1.1-1.sta0626--1.0-0-B	0 bps	0 bps	2.091 Mbps	2.067 Mbps	28	28	8	0
cv_udp-1.1-1.sta0627--1.0-0-A	2.068 Mbps	2.067 Mbps	0 bps	0 bps	0	22	0	0
cv_udp-1.1-1.sta0627--1.0-0-B	0 bps	0 bps	2.091 Mbps	2.068 Mbps	22	22	8	0
cv_udp-1.1-1.sta0628--1.0-0-A	2.069 Mbps	2.067 Mbps	0 bps	0 bps	0	24	0	0

cv_udp-1.1-1.sta0628--1.0.0-B	0 bps	0 bps	2.067 Mbps	2.068 Mbps	24		8	0
cv_udp-1.1-1.sta0629--1.0.0-A	2.069 Mbps	2.067 Mbps	0 bps	0 bps	0	25	0	0
cv_udp-1.1-1.sta0629--1.0.0-B	0 bps	0 bps	2.053 Mbps	2.067 Mbps	25		8	0
cv_udp-1.1-1.sta0630--1.0.0-A	2.068 Mbps	2.067 Mbps	0 bps	0 bps	0	23	0	0
cv_udp-1.1-1.sta0630--1.0.0-B	0 bps	0 bps	2.065 Mbps	2.067 Mbps	23		8	0.033
cv_udp-1.1-1.sta0631--1.0.0-A	2.065 Mbps	2.067 Mbps	0 bps	0 bps	0	23	0	0
cv_udp-1.1-1.sta0631--1.0.0-B	0 bps	0 bps	2.093 Mbps	2.067 Mbps	23		8	0

### Max-Cx-Test: Snapshot 5Ghz Download

Port	Tx-Bps Last	Tx-Bps 1m	Rx-Bps Last	RxBps 1m	Tx-Fail %	Tx-Link-Rate	Rx-Link-Rate	Mode	Channel	Last CX-Time(ms)	RSSI(dBm)	AP	IP	MAC
1.1.2 sta0600	245 bps	2.068 Mbps	3.159 Mbps	572 bps	0	390.2 Mbps	936 Mbps	802.11an-AC	157	36	-29	DC:EF:09:E3:B8:7D	0.0.0.0	04:f0:21:4b:a1:00
1.1.11 sta0401	0 bps	27 bps	8.495 Mbps	8.491 Mbps	0	520 Mbps	1.733 Gbps	802.11an-AC	157	35	-42	DC:EF:09:E3:B8:7D	192.168.1.42	04:f0:21:38:b9:f0
1.1.15 sta0402	0 bps	27 bps	8.495 Mbps	8.491 Mbps	0	390.2 Mbps	1.733 Gbps	802.11an-AC	157	47	-42	DC:EF:09:E3:B8:7D	192.168.1.188	04:f0:21:38:99:f0
1.1.16 sta0403	62 bps	296 Mbps	8.516 Gbps	4.771 Mbps	0	390.2 Mbps	1.733 Gbps	802.11an-AC	157	59	-43	DC:EF:09:E3:B8:7D	192.168.1.186	04:f0:21:38:a4:f0
1.1.17 sta0404	64 bps	271 Mbps	8.51 Mbps	4.689 Mbps	0	390.2 Mbps	1.733 Gbps	802.11an-AC	157	58	-43	DC:EF:09:E3:B8:7D	192.168.1.14	04:f0:21:38:a5:f0
1.1.18 sta0405	62 bps	252 Mbps	8.516 Gbps	4.663 Mbps	0	390.2 Mbps	1.733 Gbps	802.11an-AC	157	41	-43	DC:EF:09:E3:B8:7D	192.168.1.203	04:f0:21:38:9a:f0
1.1.19 sta0406	62 bps	252 Mbps	8.505 Gbps	4.655 Mbps	0	520 Mbps	1.733 Gbps	802.11an-AC	157	35	-42	DC:EF:09:E3:B8:7D	192.168.1.139	04:f0:21:38:b0:f0
1.1.20 sta0407	65 bps	295 Mbps	8.508 Gbps	4.664 Mbps	0	390.2 Mbps	1.733 Gbps	802.11an-AC	157	32	-43	DC:EF:09:E3:B8:7D	192.168.1.10	04:f0:21:38:8e:f0
1.1.21 sta0408	68 bps	263 Mbps	8.513 Gbps	4.668 Mbps	0	520 Mbps	1.733 Gbps	802.11an-AC	157	34	-43	DC:EF:09:E3:B8:7D	192.168.1.219	04:f0:21:38:93:f0
1.1.22 sta0409	67 bps	269 Mbps	8.497 Gbps	4.674 Mbps	0	390.2 Mbps	1.733 Gbps	802.11an-AC	157	41	-42	DC:EF:09:E3:B8:7D	192.168.1.124	04:f0:21:38:9e:f0
1.1.23 sta0410	63 bps	28 Mbps	8.496 Gbps	4.849 Mbps	0	520 Mbps	1.733 Gbps	802.11an-AC	157	32	-42	DC:EF:09:E3:B8:7D	192.168.1.220	04:f0:21:38:82:f0
1.1.24 sta0411	62 bps	296 Mbps	8.516 Gbps	4.618 Mbps	0	520 Mbps	1.733 Gbps	802.11an-AC	157	103	-43	DC:EF:09:E3:B8:7D	192.168.1.208	04:f0:21:38:b4:f0
1.1.25 sta0412	62 bps	313 Mbps	8.516 Gbps	4.606 Mbps	0	520 Mbps	1.733 Gbps	802.11an-AC	157	391	-42	DC:EF:09:E3:B8:7D	192.168.1.167	04:f0:21:38:ba:f0
1.1.26 sta0413	63 bps	273 Mbps	8.502 Gbps	4.599 Mbps	0	390.2 Mbps	1.733 Gbps	802.11an-AC	157	35	-42	DC:EF:09:E3:B8:7D	192.168.1.232	04:f0:21:38:bc:f0
1.1.27 sta0414	63 bps	253 Mbps	8.497 Gbps	4.593 Mbps	0	520 Mbps	1.733 Gbps	802.11an-AC	157	36	-42	DC:EF:09:E3:B8:7D	192.168.1.189	04:f0:21:38:b8:f0
1.1.28 sta0415	66 bps	253 Mbps	8.497 Gbps	4.58 Mbps	0	520 Mbps	1.733 Gbps	802.11an-AC	157	33	-42	DC:EF:09:E3:B8:7D	192.168.1.176	04:f0:21:38:be:f0
1.1.29 sta0416	66 bps	279 Mbps	8.497 Gbps	4.568 Mbps	0	24 Mbps	1.733 Gbps	802.11an-AC	157	36	-42	DC:EF:09:E3:B8:7D	192.168.1.121	04:f0:21:38:9c:f0
1.1.30 sta0417	0 bps	36 bps	8.499 Gbps	8.493 Mbps	0	390.2 Mbps	1.733 Gbps	802.11an-AC	157	305	-43	DC:EF:09:E3:B8:7D	192.168.1.221	04:f0:21:38:88:f0
1.1.31 sta0418	67 bps	28 Mbps	8.498 Gbps	8.489 Mbps	0	520 Mbps	1.733 Gbps	802.11an-AC	157	36	-43	DC:EF:09:E3:B8:7D	192.168.1.190	04:f0:21:38:95:f0
1.1.32 sta0419	0 bps	36 bps	8.499 Gbps	8.492 Mbps	0	390.2 Mbps	1.733 Gbps	802.11an-AC	157	76	-43	DC:EF:09:E3:B8:7D	192.168.1.206	04:f0:21:38:8a:f0
1.1.33 sta0420	0 bps	25 bps	8.499 Gbps	8.493 Mbps	0	390.2 Mbps	1.733 Gbps	802.11an-AC	157	34	-43	DC:EF:09:E3:B8:7D	192.168.1.217	04:f0:21:38:9d:f0
1.1.34 sta0421	66 bps	28 Mbps	8.504 Gbps	8.489 Mbps	0	520 Mbps	1.733 Gbps	802.11an-AC	157	40	-42	DC:EF:09:E3:B8:7D	192.168.1.125	04:f0:21:38:af:f0
1.1.35 sta0422	0 bps	36 bps	8.499 Gbps	8.491 Mbps	0	24 Mbps	1.733 Gbps	802.11an-AC	157	34	-42	DC:EF:09:E3:B8:7D	192.168.1.211	04:f0:21:38:94:f0
1.1.36 sta0423	0 bps	36 bps	8.497 Gbps	8.492 Mbps	0	520 Mbps	1.733 Gbps	802.11an-AC	157	39	-42	DC:EF:09:E3:B8:7D	192.168.1.235	04:f0:21:38:9f:f0
1.1.37 sta0424	0 bps	36 bps	8.495 Gbps	8.491 Mbps	0	390.2 Mbps	1.733 Gbps	802.11an-AC	157	38	-42	DC:EF:09:E3:B8:7D	192.168.1.198	04:f0:21:38:a7:f0
1.1.38 sta0425	63 bps	40 Mbps	8.498 Gbps	8.49 Mbps	0	520 Mbps	1.733 Gbps	802.11an-AC	157	33	-42	DC:EF:09:E3:B8:7D	192.168.1.216	04:f0:21:38:84:f0
1.1.39 sta0426	63 bps	40 Mbps	8.495 Gbps	8.489 Mbps	0	390.2 Mbps	1.733 Gbps	802.11an-AC	157	37	-42	DC:EF:09:E3:B8:7D	192.168.1.210	04:f0:21:38:89:f0
1.1.40 sta0427	66 bps	280 Mbps	8.508 Gbps	4.489 Mbps	0	24 Mbps	1.733 Gbps	802.11an-AC	157	41	-43	DC:EF:09:E3:B8:7D	192.168.1.236	04:f0:21:38:97:f0
1.1.41 sta0428	66 bps	40 Mbps	8.502 Gbps	8.489 Mbps	0	390.2 Mbps	1.733 Gbps	802.11an-AC	157	33	-42	DC:EF:09:E3:B8:7D	192.168.1.183	04:f0:21:38:a3:f0
1.1.42 sta0429	66 bps	40 Mbps	8.505 Gbps	8.489 Mbps	0	520 Mbps	1.733 Gbps	802.11an-AC	157	36	-43	DC:EF:09:E3:B8:7D	192.168.1.140	04:f0:21:38:ac:f0
1.1.43 sta0430	59 bps	39 Mbps	8.503 Gbps	8.49 Mbps	0	390.2 Mbps	1.733 Gbps	802.11an-AC	157	34	-43	DC:EF:09:E3:B8:7D	192.168.1.135	04:f0:21:38:b2:f0
1.1.44 sta0431	59 bps	39 Mbps	8.498 Gbps	8.489 Mbps	0	390.2 Mbps	1.733 Gbps	802.11an-AC	157	33	-43	DC:EF:09:E3:B8:7D	192.168.1.180	04:f0:21:38:a1:f0

Port	Tx-Bps Last	Tx-Bps 1m	Rx-Bps Last	RxBps 1m	Link-Rate	IP	MAC
1.1.1 eth1	272.012 Mbps	261.386 Mbps	0 bps	1.037 Kbps	1 Gbps	192.168.1.99	00:60:e0:74:74:bc

Endpoint	Tx-Bps Last	Tx-Bps 1m	Rx-Bps Last	RxBps 1m	Link-Rate	RX Latency(ms)	Round-Trip Latency(ms)	Jitter	Rx Packet Loss %
cv_udp-1.1-1.sta0400--1.0.0-A	0 bps	0 bps	8.266 Mbps	8.253 Mbps	6	6	2	0.008	
cv_udp-1.1-1.sta0400--1.0.0-B	8.266 Mbps	8.254 Mbps	0 bps	0 bps	0	6	0	0	

cv_udp-1.1-1.sta0401--1.0.0-A	0 bps	0 bps	8.27 Mbps	8.254 Mbps	7	7	2	0.011
cv_udp-1.1-1.sta0401--1.0.0-B	8.267 Mbps	8.254 Mbps	0 bps	0 bps	0	7	0	0
cv_udp-1.1-1.sta0402--1.0.0-A	0 bps	0 bps	8.267 Mbps	8.254 Mbps	7	7	2	0.144
cv_udp-1.1-1.sta0402--1.0.0-B	8.267 Mbps	8.254 Mbps	0 bps	0 bps	0	7	0	0
cv_udp-1.1-1.sta0403--1.0.0-A	0 bps	0 bps	8.267 Mbps	8.254 Mbps	7	7	2	0.142
cv_udp-1.1-1.sta0403--1.0.0-B	8.267 Mbps	8.254 Mbps	0 bps	0 bps	0	7	0	0
cv_udp-1.1-1.sta0404--1.0.0-A	0 bps	0 bps	8.261 Mbps	8.253 Mbps	6	6	2	0
cv_udp-1.1-1.sta0404--1.0.0-B	8.265 Mbps	8.254 Mbps	0 bps	0 bps	0	6	0	0
cv_udp-1.1-1.sta0405--1.0.0-A	0 bps	0 bps	8.269 Mbps	8.254 Mbps	7	7	2	0
cv_udp-1.1-1.sta0405--1.0.0-B	8.265 Mbps	8.254 Mbps	0 bps	0 bps	0	7	0	0
cv_udp-1.1-1.sta0406--1.0.0-A	0 bps	0 bps	8.265 Mbps	8.254 Mbps	7	7	1	0
cv_udp-1.1-1.sta0406--1.0.0-B	8.265 Mbps	8.254 Mbps	0 bps	0 bps	0	7	0	0
cv_udp-1.1-1.sta0407--1.0.0-A	0 bps	0 bps	8.257 Mbps	8.254 Mbps	6	6	2	0
cv_udp-1.1-1.sta0407--1.0.0-B	8.265 Mbps	8.254 Mbps	0 bps	0 bps	0	6	0	0
cv_udp-1.1-1.sta0408--1.0.0-A	0 bps	0 bps	8.267 Mbps	8.254 Mbps	7	7	2	0
cv_udp-1.1-1.sta0408--1.0.0-B	8.267 Mbps	8.254 Mbps	0 bps	0 bps	0	7	0	0
cv_udp-1.1-1.sta0409--1.0.0-A	0 bps	0 bps	8.257 Mbps	8.253 Mbps	6	6	2	0
cv_udp-1.1-1.sta0409--1.0.0-B	8.265 Mbps	8.254 Mbps	0 bps	0 bps	0	6	0	0
cv_udp-1.1-1.sta0410--1.0.0-A	0 bps	0 bps	8.257 Mbps	8.253 Mbps	7	7	2	0
cv_udp-1.1-1.sta0410--1.0.0-B	8.265 Mbps	8.254 Mbps	0 bps	0 bps	0	7	0	0
cv_udp-1.1-1.sta0411--1.0.0-A	0 bps	0 bps	8.263 Mbps	8.252 Mbps	6	6	2	0
cv_udp-1.1-1.sta0411--1.0.0-B	8.267 Mbps	8.254 Mbps	0 bps	0 bps	0	6	0	0
cv_udp-1.1-1.sta0412--1.0.0-A	0 bps	0 bps	8.268 Mbps	8.253 Mbps	7	7	2	0
cv_udp-1.1-1.sta0412--1.0.0-B	8.267 Mbps	8.254 Mbps	0 bps	0 bps	0	7	0	0
cv_udp-1.1-1.sta0413--1.0.0-A	0 bps	0 bps	8.271 Mbps	8.254 Mbps	7	7	2	0
cv_udp-1.1-1.sta0413--1.0.0-B	8.267 Mbps	8.254 Mbps	0 bps	0 bps	0	7	0	0
cv_udp-1.1-1.sta0414--1.0.0-A	0 bps	0 bps	8.267 Mbps	8.254 Mbps	7	7	2	0
cv_udp-1.1-1.sta0414--1.0.0-B	8.267 Mbps	8.254 Mbps	0 bps	0 bps	0	7	0	0
cv_udp-1.1-1.sta0415--1.0.0-A	0 bps	0 bps	8.261 Mbps	8.253 Mbps	7	7	2	0
cv_udp-1.1-1.sta0415--1.0.0-B	8.265 Mbps	8.254 Mbps	0 bps	0 bps	0	7	0	0
cv_udp-1.1-1.sta0416--1.0.0-A	0 bps	0 bps	8.257 Mbps	8.253 Mbps	7	7	2	0
cv_udp-1.1-1.sta0416--1.0.0-B	8.265 Mbps	8.254 Mbps	0 bps	0 bps	0	7	0	0
cv_udp-1.1-1.sta0417--1.0.0-A	0 bps	0 bps	8.257 Mbps	8.253 Mbps	7	7	2	0
cv_udp-1.1-1.sta0417--1.0.0-B	8.265 Mbps	8.254 Mbps	0 bps	0 bps	0	7	0	0
cv_udp-1.1-1.sta0418--1.0.0-A	0 bps	0 bps	8.265 Mbps	8.253 Mbps	7	7	2	0
cv_udp-1.1-1.sta0418--1.0.0-B	8.265 Mbps	8.254 Mbps	0 bps	0 bps	0	7	0	0
cv_udp-1.1-1.sta0419--1.0.0-A	0 bps	0 bps	8.271 Mbps	8.254 Mbps	7	7	2	0.009
cv_udp-1.1-1.sta0419--1.0.0-B	8.264 Mbps	8.253 Mbps	0 bps	0 bps	0	7	0	0
cv_udp-1.1-1.sta0420--1.0.0-A	0 bps	0 bps	8.267 Mbps	8.253 Mbps	7	7	2	0
cv_udp-1.1-1.sta0420--1.0.0-B	8.264 Mbps	8.253 Mbps	0 bps	0 bps	0	7	0	0
cv_udp-1.1-1.sta0421--1.0.0-A	0 bps	0 bps	8.238 Mbps	8.253 Mbps	6	6	2	0.004
cv_udp-1.1-1.sta0421--1.0.0-B	8.266 Mbps	8.253 Mbps	0 bps	0 bps	0	6	0	0
cv_udp-1.1-1.sta0422--1.0.0-A	0 bps	0 bps	8.24 Mbps	8.252 Mbps	7	7	2	0
cv_udp-1.1-1.sta0422--1.0.0-B	8.267 Mbps	8.253 Mbps	0 bps	0 bps	0	7	0	0
cv_udp-1.1-1.sta0423--1.0.0-A	0 bps	0 bps	8.279 Mbps	8.253 Mbps	7	7	2	0
cv_udp-1.1-1.sta0423--1.0.0-B	8.267 Mbps	8.253 Mbps	0 bps	0 bps	0	7	0	0
cv_udp-1.1-1.sta0424--1.0.0-A	0 bps	0 bps	8.264 Mbps	8.253 Mbps	6	6	2	0
cv_udp-1.1-1.sta0424--1.0.0-B	8.264 Mbps	8.253 Mbps	0 bps	0 bps	0	6	0	0
cv_udp-1.1-1.sta0425--1.0.0-A	0 bps	0 bps	8.263 Mbps	8.253 Mbps	6	6	2	0
cv_udp-1.1-1.sta0425--1.0.0-B	8.264 Mbps	8.253 Mbps	0 bps	0 bps	0	6	0	0
cv_udp-1.1-1.sta0426--1.0.0-A	0 bps	0 bps	8.269 Mbps	8.254 Mbps	7	7	2	0
cv_udp-1.1-1.sta0426--1.0.0-B	8.264 Mbps	8.253 Mbps	0 bps	0 bps	0	7	0	0
cv_udp-1.1-1.sta0427--1.0.0-A	0 bps	0 bps	8.262 Mbps	8.252 Mbps	7	7	2	0
cv_udp-1.1-1.sta0427--1.0.0-B	8.264 Mbps	8.253 Mbps	0 bps	0 bps	0	7	0	0
cv_udp-1.1-1.sta0428--1.0.0-A	0 bps	0 bps	8.258 Mbps	8.254 Mbps	7	7	2	0
cv_udp-1.1-1.sta0428--1.0.0-B	8.262 Mbps	8.253 Mbps	0 bps	0 bps	0	7	0	0
cv_udp-1.1-1.sta0429--1.0.0-A	0 bps	0 bps	8.25 Mbps	8.254 Mbps	7	7	2	0
cv_udp-1.1-1.sta0429--1.0.0-B	8.262 Mbps	8.253 Mbps	0 bps	0 bps	0	7	0	0
cv_udp-1.1-1.sta0430--1.0.0-A	0 bps	0 bps	8.265 Mbps	8.253 Mbps	7	7	2	0
cv_udp-1.1-1.sta0430--1.0.0-B	8.264 Mbps	8.253 Mbps	0 bps	0 bps	0	7	0	0
cv_udp-1.1-1.sta0431--1.0.0-A	0 bps	0 bps	8.284 Mbps	8.254 Mbps	7	7	2	0
cv_udp-1.1-1.sta0431--1.0.0-B	8.264 Mbps	8.253 Mbps	0 bps	0 bps	0	7	0	0

### Max-Cx-Test: Snapshot 5Ghz Upload

Port	Tx-Bps Last	Tx-Bps 1m	Rx-Bps Last	RxBps 1m	Tx-Fail %	Tx-Link-Rate	Rx-Link-Rate	Mode	Channel	Last CX-Time(ms)	RSSI(dBm)	AP	IP	MAC
1.1.2 sta0600	2.162 Mbps	2.068 Mbps	2.214 Mbps	572 bps	0	390.2 Mbps	936 Mbps	802.11an-AC	157	36	-29	DC:EF:09:E3:B8:7D	0.0.0.0	04:f0:21:4b:a1:00
1.1.11 sta0401	8.617 Mbps	7.656 Mbps	0 bps	133.429 Kbps	0.212	1733.3 Gbps	1.733 Gbps	802.11an-AC	157	35	-29	DC:EF:09:E3:B8:7D	192.168.1.42	04:f0:21:38:b9:f0
1.1.15 sta0402	8.616 Mbps	7.629 Mbps	64 Kbps	133.3 Kbps	0.158	1733.3 Gbps	1.733 Gbps	802.11an-AC	157	47	-29	DC:EF:09:E3:B8:7D	192.168.1.188	04:f0:21:38:99:f0
1.1.16 sta0403	8.508 Mbps	7.197 Mbps	0 bps	633.54 Kbps	0.169	1733.3 Gbps	1.733 Gbps	802.11an-AC	157	59	-29	DC:EF:09:E3:B8:7D	192.168.1.186	04:f0:21:38:a4:f0
1.1.17 sta0404	8.564 Mbps	7.281 Mbps	0 bps	516.407 Kbps	0.148	1733.3 Gbps	1.733 Gbps	802.11an-AC	157	58	-29	DC:EF:09:E3:B8:7D	192.168.1.14	04:f0:21:38:a5:f0
1.1.18 sta0405	8.486 Mbps	7.27 Mbps	0 bps	516.407 Kbps	0.143	1733.3 Gbps	1.733 Gbps	802.11an-AC	157	41	-29	DC:EF:09:E3:B8:7D	192.168.1.203	04:f0:21:38:9a:f0
1.1.19	8.615	7.262		516.412		1733.3 Gbps	1.733 Gbps	802.11an-						

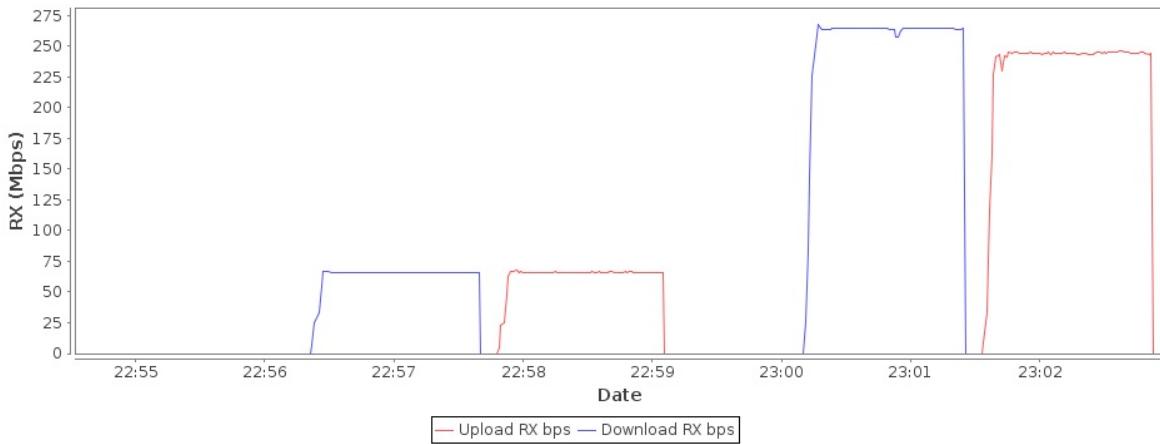
sta0406	Mbps	Mbps	0 bps	Kbps	0.141	Mbps	Gbps	AC	157	35	-29	DC:EF:09:E3:B8:7D 192.168.1.139 04:f0:21:38:b0:f0
1.1.20 sta0407	8.617 Mbps	7.24 Mbps	0 bps	516.164 Kbps	0.143	1733.3 Mbps	1.733 Gbps	802.11an-AC	157	32	-29	DC:EF:09:E3:B8:7D 192.168.1.10 04:f0:21:38:8e:f0
1.1.21 sta0408	8.562 Mbps	7.521 Mbps	0 bps	215.865 Kbps	0.16	1733.3 Mbps	1.733 Gbps	802.11an-AC	157	34	-29	DC:EF:09:E3:B8:7D 192.168.1.219 04:f0:21:38:93:f0
1.1.22 sta0409	8.616 Mbps	7.479 Mbps	0 bps	216 Kbps	0.119	1733.3 Mbps	1.733 Gbps	802.11an-AC	157	41	-29	DC:EF:09:E3:B8:7D 192.168.1.124 04:f0:21:38:9e:f0
1.1.23 sta0410	8.616 Mbps	7.306 Mbps	0 bps	448.184 Kbps	0.152	1733.3 Mbps	1.733 Gbps	802.11an-AC	157	32	-29	DC:EF:09:E3:B8:7D 192.168.1.220 04:f0:21:38:82:f0
1.1.24 sta0411	8.615 Mbps	7.262 Mbps	0 bps	448.093 Kbps	0.123	1733.3 Mbps	1.733 Gbps	802.11an-AC	157	103	-29	DC:EF:09:E3:B8:7D 192.168.1.208 04:f0:21:38:b4:f0
1.1.25 sta0412	8.611 Mbps	7.222 Mbps	0 bps	506.2 Kbps	0.158	1733.3 Mbps	1.733 Gbps	802.11an-AC	157	391	-29	DC:EF:09:E3:B8:7D 192.168.1.167 04:f0:21:38:ba:f0
1.1.26 sta0413	8.61 7.207 Mbps	55 Mbps	0 bps	506.205 Kbps	0.189	1733.3 Mbps	1.733 Gbps	802.11an-AC	157	35	-29	DC:EF:09:E3:B8:7D 192.168.1.232 04:f0:21:38:bc:f0
1.1.27 sta0414	8.426 Mbps	7.188 Mbps	0 bps	506.205 Kbps	0.158	1733.3 Mbps	1.733 Gbps	802.11an-AC	157	36	-29	DC:EF:09:E3:B8:7D 192.168.1.189 04:f0:21:38:b8:f0
1.1.28 sta0415	8.61 7.075 Mbps	0 bps	506.205 Kbps	0.14	1733.3 Mbps	1.733 Gbps	802.11an-AC	157	33	-29	DC:EF:09:E3:B8:7D 192.168.1.176 04:f0:21:38:be:f0	
1.1.29 sta0416	3.03 2.517 Mbps	0 bps	506.211 Kbps	0	24 Mbps	1.733 Gbps	802.11an-AC	157	36	-29	DC:EF:09:E3:B8:7D 192.168.1.121 04:f0:21:38:9c:f0	
1.1.30 sta0417	8.56 6.94 Mbps	0 bps	535.747 Kbps	0.2	1733.3 Mbps	1.733 Gbps	802.11an-AC	157	305	-29	DC:EF:09:E3:B8:7D 192.168.1.221 04:f0:21:38:88:f0	
1.1.31 sta0418	8.616 Mbps	7.074 Mbps	0 bps	430.935 Kbps	0.532	1733.3 Mbps	1.733 Gbps	802.11an-AC	157	36	-29	DC:EF:09:E3:B8:7D 192.168.1.190 04:f0:21:38:95:f0
1.1.32 sta0419	8.616 6.9 Mbps	0 bps	527.704 Kbps	1.837	1733.3 Mbps	1.733 Gbps	802.11an-AC	157	76	-29	DC:EF:09:E3:B8:7D 192.168.1.206 04:f0:21:38:8a:f0	
1.1.33 sta0420	8.504 6.853 Mbps	0 bps	518.771 Kbps	0.516	1733.3 Mbps	1.733 Gbps	802.11an-AC	157	34	-29	DC:EF:09:E3:B8:7D 192.168.1.217 04:f0:21:38:9d:f0	
1.1.34 sta0421	8.237 6.612 Mbps	0 bps	512.483 Kbps	3.503	1300 Mbps	1.733 Gbps	802.11an-AC	157	40	-29	DC:EF:09:E3:B8:7D 192.168.1.125 04:f0:21:38:af:f0	
1.1.35 sta0422	3.032 2.442 Mbps	0 bps	484.755 Kbps	0	24 Mbps	1.733 Gbps	802.11an-AC	157	34	-29	DC:EF:09:E3:B8:7D 192.168.1.211 04:f0:21:38:94:f0	
1.1.36 sta0423	8.623 6.923 Mbps	0 bps	485.312 Kbps	0.367	1733.3 Mbps	1.733 Gbps	802.11an-AC	157	39	-29	DC:EF:09:E3:B8:7D 192.168.1.235 04:f0:21:38:9f:f0	
1.1.37 sta0424	8.623 6.907 Mbps	0 bps	484.894 Kbps	0.291	1733.3 Mbps	1.733 Gbps	802.11an-AC	157	38	-29	DC:EF:09:E3:B8:7D 192.168.1.198 04:f0:21:38:a7:f0	
1.1.38 sta0425	8.592 6.822 Mbps	55 bps	633.872 Kbps	0.222	1560 Mbps	1.733 Gbps	802.11an-AC	157	33	-30	DC:EF:09:E3:B8:7D 192.168.1.216 04:f0:21:38:84:f0	
1.1.39 sta0426	8.49 6.708 Mbps	0 bps	632.918 Kbps	2.383	1733.3 Mbps	1.733 Gbps	802.11an-AC	157	37	-29	DC:EF:09:E3:B8:7D 192.168.1.210 04:f0:21:38:89:f0	
1.1.40 sta0427	3.016 2.446 Mbps	0 bps	466.039 Kbps	0	24 Mbps	1.733 Gbps	802.11an-AC	157	41	-29	DC:EF:09:E3:B8:7D 192.168.1.236 04:f0:21:38:97:f0	
1.1.41 sta0428	8.407 6.676 Mbps	0 bps	505.148 Kbps	0.722	1560 Mbps	1.733 Gbps	802.11an-AC	157	33	-29	DC:EF:09:E3:B8:7D 192.168.1.183 04:f0:21:38:a3:f0	
1.1.42 sta0429	8.613 6.777 Mbps	65 bps	505.304 Kbps	0.291	1733.3 Mbps	1.733 Gbps	802.11an-AC	157	36	-29	DC:EF:09:E3:B8:7D 192.168.1.140 04:f0:21:38:ac:f0	
1.1.43 sta0430	8.558 7.055 Mbps	0 bps	224.531 Kbps	0.175	1733.3 Mbps	1.733 Gbps	802.11an-AC	157	34	-29	DC:EF:09:E3:B8:7D 192.168.1.135 04:f0:21:38:b2:f0	
1.1.44 sta0431	8.567 7.029 Mbps	0 bps	224.537 Kbps	0.203	1733.3 Mbps	1.733 Gbps	802.11an-AC	157	33	-29	DC:EF:09:E3:B8:7D 192.168.1.180 04:f0:21:38:a1:f0	

Port	Tx-Bps Last	Tx-Bps 1m	Rx-Bps Last	Rx-Bps 1m	Link-Rate	IP	MAC
1.1.1 eth1	343 bps	42.059 Mbps	251.665 Mbps	187.323 Mbps	1 Gbps	192.168.1.99	00:60:e0:74:74:bc

Endpoint	Tx-Bps Last	Tx-Bps 1m	Rx-Bps Last	Rx-Bps 1m	RX Latency(ms)	Round-Trip Latency(ms)	jitter	Rx Packet Loss %
cv_udp-1.1-1.sta0400--1.0-0-A	8.273 Mbps	8.263 Mbps	0 bps	0 bps	0	27	0	0
cv_udp-1.1-1.sta0400--1.0-0-B	0 bps	0 bps	8.162 Mbps	8.259 Mbps	27	27	1	0.703
cv_udp-1.1-1.sta0401--1.0-0-A	8.272 Mbps	8.263 Mbps	0 bps	0 bps	0	27	0	0
cv_udp-1.1-1.sta0401--1.0-0-B	0 bps	0 bps	8.158 Mbps	8.259 Mbps	27	27	1	0.054
cv_udp-1.1-1.sta0402--1.0-0-A	8.268 Mbps	8.238 Mbps	0 bps	0 bps	0	26	0	0
cv_udp-1.1-1.sta0402--1.0-0-B	0 bps	0 bps	8.161 Mbps	8.235 Mbps	26	26	1	0
cv_udp-1.1-1.sta0403--1.0-0-A	8.272 Mbps	8.251 Mbps	0 bps	0 bps	0	26	0	0
cv_udp-1.1-1.sta0403--1.0-0-B	0 bps	0 bps	8.161 Mbps	8.247 Mbps	26	26	1	0.053
cv_udp-1.1-1.sta0404--1.0-0-A	8.272 Mbps	8.245 Mbps	0 bps	0 bps	0	26	0	0
cv_udp-1.1-1.sta0404--1.0-0-B	0 bps	0 bps	8.161 Mbps	8.241 Mbps	26	26	1	0.051
cv_udp-1.1-1.sta0405--1.0-0-A	8.272 Mbps	8.245 Mbps	0 bps	0 bps	0	26	0	0
cv_udp-1.1-1.sta0405--1.0-0-B	0 bps	0 bps	8.161 Mbps	8.241 Mbps	26	26	1	0.051
cv_udp-1.1-1.sta0406--1.0-0-A	8.272 Mbps	8.253 Mbps	0 bps	0 bps	0	27	0	0
cv_udp-1.1-1.sta0406--1.0-0-B	0 bps	0 bps	8.161 Mbps	8.249 Mbps	27	27	1	0.053
cv_udp-1.1-1.sta0407--1.0-0-A	8.272 Mbps	8.243 Mbps	0 bps	0 bps	0	27	0	0
cv_udp-1.1-1.sta0407--1.0-0-B	0 bps	0 bps	8.178 Mbps	8.24 Mbps	27	27	1	0.048
cv_udp-1.1-1.sta0408--1.0-0-A	8.142 Mbps	8.256 Mbps	0 bps	0 bps	0	27	0	0
cv_udp-1.1-1.sta0408--1.0-0-B	0 bps	0 bps	8.052 Mbps	8.254 Mbps	27	27	1	0.046
cv_udp-1.1-1.sta0409--1.0-0-A	8.272 Mbps	8.223 Mbps	0 bps	0 bps	0	30	0	0
cv_udp-1.1-1.sta0409--1.0-0-B	0 bps	0 bps	8.186 Mbps	8.221 Mbps	30	30	1	0.046
cv_udp-1.1-1.sta0410--1.0-0-A	8.27 Mbps	8.258 Mbps	0 bps	0 bps	0	27	0	0
cv_udp-1.1-1.sta0410--1.0-0-B	0 bps	0 bps	8.351 Mbps	8.263 Mbps	27	27	1	0
cv_udp-1.1-1.sta0411--1.0-0-A	8.272 Mbps	8.25 Mbps	0 bps	0 bps	0	27	0	0
cv_udp-1.1-1.sta0411--1.0-0-B	0 bps	0 bps	8.351 Mbps	8.256 Mbps	27	27	1	0.012
cv_udp-1.1-1.sta0412--1.0-0-A	8.272 Mbps	8.249 Mbps	0 bps	0 bps	0	27	0	0
cv_udp-1.1-1.sta0412--1.0-0-B	0 bps	0 bps	8.351 Mbps	8.255 Mbps	27	27	1	0.012
cv_udp-1.1-1.sta0413--1.0-0-A	8.266 Mbps	8.249 Mbps	0 bps	0 bps	0	27	0	0
cv_udp-1.1-1.sta0413--1.0-0-B	0 bps	0 bps	8.351 Mbps	8.256 Mbps	27	27	1	0

cv_udp-1.1-1.sta0414--1.0.0-A	8.201 Mbps	8.237 Mbps	0 bps	0 bps	0	26	0	0
cv_udp-1.1-1.sta0414--1.0.0-B	0 bps	0 bps	8.307 Mbps	8.243 Mbps	26	26	1	0.01
cv_udp-1.1-1.sta0415--1.0.0-A	8.271 Mbps	8.263 Mbps	0 bps	0 bps	0	26	0	0
cv_udp-1.1-1.sta0415--1.0.0-B	0 bps	0 bps	8.201 Mbps	8.256 Mbps	26	26	1	0.082
cv_udp-1.1-1.sta0416--1.0.0-A	2.924 Mbps	2.898 Mbps	0 bps	0 bps	0	260	0	0
cv_udp-1.1-1.sta0416--1.0.0-B	0 bps	2.056 Mbps	2.072 Mbps	260	260	9	27.027	
cv_udp-1.1-1.sta0417--1.0.0-A	8.27 Mbps	8.249 Mbps	0 bps	0 bps	0	27	0	0
cv_udp-1.1-1.sta0417--1.0.0-B	0 bps	0 bps	8.222 Mbps	8.245 Mbps	27	27	1	0
cv_udp-1.1-1.sta0418--1.0.0-A	8.269 Mbps	8.209 Mbps	0 bps	0 bps	0	27	0	0
cv_udp-1.1-1.sta0418--1.0.0-B	0 bps	0 bps	8.384 Mbps	8.212 Mbps	27	27	1	0
cv_udp-1.1-1.sta0419--1.0.0-A	8.099 Mbps	8.216 Mbps	0 bps	0 bps	0	44	0	0
cv_udp-1.1-1.sta0419--1.0.0-B	0 bps	0 bps	7.999 Mbps	8.213 Mbps	44	44	1	0
cv_udp-1.1-1.sta0420--1.0.0-A	8.272 Mbps	8.179 Mbps	0 bps	0 bps	0	27	0	0
cv_udp-1.1-1.sta0420--1.0.0-B	0 bps	0 bps	8.193 Mbps	8.177 Mbps	27	27	1	0.035
cv_udp-1.1-1.sta0421--1.0.0-A	7.856 Mbps	7.883 Mbps	0 bps	0 bps	0	30	0	0
cv_udp-1.1-1.sta0421--1.0.0-B	0 bps	0 bps	7.739 Mbps	7.875 Mbps	30	30	1	0
cv_udp-1.1-1.sta0422--1.0.0-A	2.871 Mbps	2.892 Mbps	0 bps	0 bps	0	260	0	0
cv_udp-1.1-1.sta0422--1.0.0-B	0 bps	0 bps	2.056 Mbps	2.075 Mbps	260	260	9	28.261
cv_udp-1.1-1.sta0423--1.0.0-A	8.063 Mbps	8.226 Mbps	0 bps	0 bps	0	27	0	0
cv_udp-1.1-1.sta0423--1.0.0-B	0 bps	0 bps	8 Mbps	8.227 Mbps	27	27	1	0.027
cv_udp-1.1-1.sta0424--1.0.0-A	8.266 Mbps	8.255 Mbps	0 bps	0 bps	0	27	0	0
cv_udp-1.1-1.sta0424--1.0.0-B	0 bps	0 bps	8.313 Mbps	8.255 Mbps	27	27	1	0.018
cv_udp-1.1-1.sta0425--1.0.0-A	8.152 Mbps	8.25 Mbps	0 bps	0 bps	0	43	0	0
cv_udp-1.1-1.sta0425--1.0.0-B	0 bps	0 bps	8.172 Mbps	8.248 Mbps	43	43	1	0.031
cv_udp-1.1-1.sta0426--1.0.0-A	8.15 Mbps	8.101 Mbps	0 bps	0 bps	0	29	0	0
cv_udp-1.1-1.sta0426--1.0.0-B	0 bps	0 bps	8.213 Mbps	8.101 Mbps	29	29	1	0
cv_udp-1.1-1.sta0427--1.0.0-A	2.916 Mbps	2.893 Mbps	0 bps	0 bps	0	260	0	0
cv_udp-1.1-1.sta0427--1.0.0-B	0 bps	0 bps	2.089 Mbps	2.077 Mbps	260	260	9	27.925
cv_udp-1.1-1.sta0428--1.0.0-A	8.272 Mbps	8.116 Mbps	0 bps	0 bps	0	27	0	0
cv_udp-1.1-1.sta0428--1.0.0-B	0 bps	0 bps	8.414 Mbps	8.118 Mbps	27	27	1	0
cv_udp-1.1-1.sta0429--1.0.0-A	8.272 Mbps	8.231 Mbps	0 bps	0 bps	0	27	0	0
cv_udp-1.1-1.sta0429--1.0.0-B	0 bps	0 bps	8.148 Mbps	8.226 Mbps	27	27	1	0.01
cv_udp-1.1-1.sta0430--1.0.0-A	8.269 Mbps	8.244 Mbps	0 bps	0 bps	0	27	0	0
cv_udp-1.1-1.sta0430--1.0.0-B	0 bps	0 bps	8.207 Mbps	8.238 Mbps	27	27	1	0.068
cv_udp-1.1-1.sta0431--1.0.0-A	8.271 Mbps	8.231 Mbps	0 bps	0 bps	0	27	0	0
cv_udp-1.1-1.sta0431--1.0.0-B	0 bps	0 bps	8.331 Mbps	8.232 Mbps	27	27	1	0

### Realtime Throughput for: 6.2.1 Maximum Connection Test (32-STA)



## 6.2.2 Maximum TCP Throughput Test

### Summary

The Maximum throughput test intends to measure the maximum throughput performance of the DUT with a single station active. The test uses TCP connections and the attenuation is adjusted to emulate a distance of 2 meters. The 2.4Ghz station is configured for 20Mhz bandwidth and the 5Ghz station is configured for 80Mhz bandwidth. In both cases the station is configured for a maximum of two spatial streams.

### Test Procedure

These steps are done for 2.4Ghz and then for 5Ghz bands.

- Establish the LAN connection, create 1 station and allow the station to associate with the DUT.
- Measure the downlink TCP throughput, using a test time of 120 seconds.
- Measure the uplink TCP throughput, using a test time of 120 seconds.

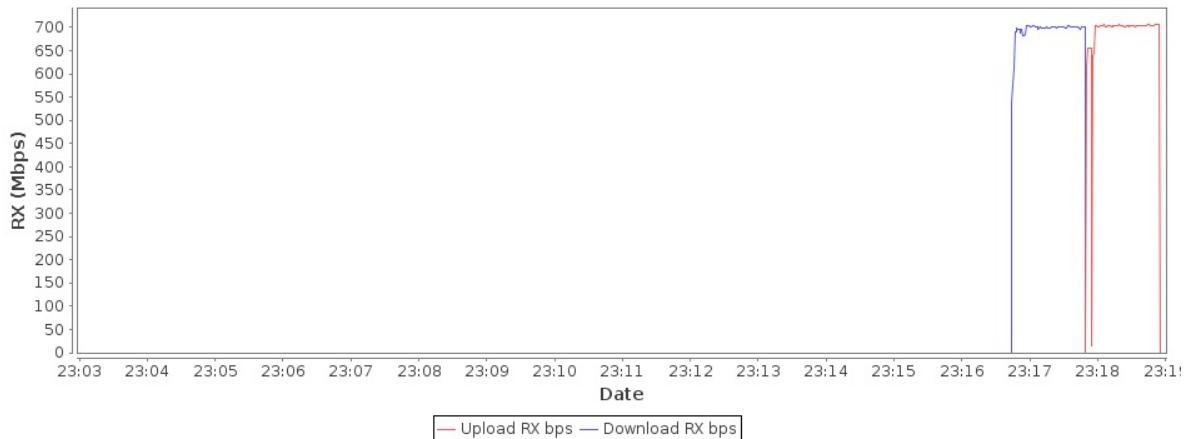
### Pass/Fail Criteria

- For each of the test configuration, Packet Error Rate (PER) for each STA SHALL achieve less than 1%.
- For 2.4Ghz, upload rate must be at least 100Mbps
- For 2.4Ghz, download rate must be at least 100Mbps
- For 5Ghz, upload rate must be at least 560Mbps
- For 5Ghz, download rate must be at least 560Mbps

## 6.2.2 Maximum TCP Throughput Test Results

Type	Result	Notes
Config/DUT Error	FAIL	ERROR: Station: 1.1.2 sta0600 did not connect within 240 seconds.
Total 5Ghz download throughput	PASS	Sum-total download: 698.79 Mbps Requires: 560Mbps STA-RSSI: -45 Rx-Rate: 866.7M Tx-Rate: 866.7M
Total 5Ghz upload throughput	PASS	Sum-total upload: 697.61 Mbps Requires: 560Mbps STA-RSSI: -47 Rx-Rate: 866.7M Tx-Rate: 866.7M

**Realtime Throughput for: 6.2.2 Maximum TCP Throughput Test**



## 6.2.3 Airtime Fairness Test

### Summary

Airtime Fairness Test intends to verify the capability of Wi-Fi device to ensure the fairness of airtime usage.

### Test Procedure

- Establish the setup using default configuration.
- Associate STA1 and STA2 with DUT. Establish the LAN connection and wait for 10 seconds.
- Measure the downlink TCP throughput to each STA1 and STA2, using a test time of 120 seconds. Record this as STA1 \_throughput\_1 and STA2 \_throughput\_1.
- Move STA2 to a medium distance to the DUT (equivalent to 38 dB@2.4GHz and 32 dB @5GHz attenuation between DUT and STA2). Wait for 10 seconds.
- Measure the downlink TCP throughput to STA 1 and STA2, using a test time of 120 seconds. Record this as STA1 \_throughput\_2 and STA2 \_throughput\_2.
- Disassociate STA2 with the DUT. Replace STA 2 by STA 3 and remove the attenuation. STA3 is configured to support only a 2.4 GHz connection. Establish the Wi-Fi connection between STA3 and DUT and wait for 10 seconds.
- Measure the downlink TCP throughput to STA 1 and STA3, using a test time of 120 seconds. Record this as STA1 \_throughput\_3 and STA3 \_throughput\_3.
- Replace STA 3 with a STA that uses only 802.11a. Set the DUT to operating frequency band of 5 GHz. Repeat Step 2 to 7.

### Pass/Fail Criteria

- For the test in 2.4 GHz frequency band:
  - STA1\_throughput\_1 SHALL be within  $(1\pm 5\%) * \text{Mean}(\text{STA2}_\text{throughput\_1}, \text{STA1}_\text{throughput\_1})$ .
  - STA2\_throughput\_1 SHALL be within  $(1\pm 5\%) * \text{Mean}(\text{STA2}_\text{throughput\_1}, \text{STA1}_\text{throughput\_1})$ .
  - STA1\_throughput\_2 SHALL be within  $(1\pm 15\%) * \text{Mean}(\text{STA2}_\text{throughput\_1}, \text{STA1}_\text{throughput\_1})$ .
  - STA1\_throughput\_3 SHALL be within  $(1\pm 15\%) * \text{Mean}(\text{STA2}_\text{throughput\_1}, \text{STA1}_\text{throughput\_1})$ .
- For the test in 5 GHz frequency band:
  - STA1\_throughput\_1 SHALL be within  $(1\pm 5\%) * \text{Mean}(\text{STA2}_\text{throughput\_1}, \text{STA1}_\text{throughput\_1})$ .
  - STA2\_throughput\_1 SHALL be within  $(1\pm 5\%) * \text{Mean}(\text{STA2}_\text{throughput\_1}, \text{STA1}_\text{throughput\_1})$ .
  - STA1\_throughput\_2 SHALL be within  $(1\pm 25\%) * \text{Mean}(\text{STA2}_\text{throughput\_1}, \text{STA1}_\text{throughput\_1})$ .
  - STA1\_throughput\_3 SHALL be within  $(1\pm 25\%) * \text{Mean}(\text{STA2}_\text{throughput\_1}, \text{STA1}_\text{throughput\_1})$ .
- For the test in 2.4 GHz frequency band:

1. The summation of STA1\_throughput\_1 and STA2\_throughput\_1 SHALL be larger than 80 Mbps.
2. The summation of STA1\_throughput\_2 and STA2\_throughput\_2 SHALL be larger than 54 Mbps.
3. The summation of STA1\_throughput\_3 and STA3\_throughput\_3 SHALL be larger than 50 Mbps.
4. For the test in 5 GHz frequency band:
  1. The summation of STA1\_throughput\_1 and STA2\_throughput\_1 SHALL be larger than 475 Mbps.
  2. The summation of STA1\_throughput\_2 and STA2\_throughput\_2 SHALL be larger than 280 Mbps.
  3. The summation of STA1\_throughput\_3 and STA3\_throughput\_3 SHALL be larger than 230 Mbps.

## 6.2.3 Airtime Fairness Test Results

Type	Result	Notes
STA1-throughput-1 2.4Ghz	FAIL	2.4Ghz: STA1_throughput more than 5% above the average of STA2 + STA1 for subtest 1 Avg: 81.15 Mbps Min: 77.09 Mbps Max: 85.20 Mbps STA1-Throughput: 111.58 Mbps STA2-Throughput: 50.71 Mbps
STA2-throughput-1 2.4Ghz	FAIL	2.4Ghz: STA2_throughput is more than 5% below the average of STA2 + STA1 for subtest 1 Avg: 81.15 Mbps Min: 77.09 Mbps Max: 85.20 Mbps STA1-Throughput: 111.58 Mbps STA2-Throughput: 50.71 Mbps
STA1-throughput-2 2.4Ghz	FAIL	2.4Ghz: STA1_throughput-2 is more than +15% above the average of STA2 + STA1 for subtest 2 Avg: 81.15 Mbps Min: 68.97 Mbps Max: 93.32 Mbps STA1-Throughput-2: 109.39 Mbps
STA1-throughput-3 2.4Ghz	FAIL	2.4Ghz: STA1_throughput-3 is more than +15% above the average of STA2 + STA1 for subtest 3 Avg: 81.15 Mbps Min: 68.97 Mbps Max: 93.32 Mbps STA1-Throughput-3: 167.53 Mbps
2.4Ghz STA1+2 Throughput Total	PASS	STA1: 111.58 Mbps STA2: 50.71 Mbps Sum: 162.29 Mbps: Meets requirement: 80.00 Mbps
2.4Ghz STA1+2 Throughput-2 Total	PASS	STA1: 109.39 Mbps STA2: 48.06 Mbps Sum: 157.44 Mbps: Meets requirement: 54.00 Mbps
2.4Ghz STA1+3 Throughput-3 Total 2.4Ghz	PASS	STA1: 167.53 Mbps STA3: 3.97 Mbps Sum: 171.50 Mbps: Meets requirement: 54.00 Mbps
STA1-throughput-1 5Ghz	FAIL	5Ghz: STA1_throughput more than 5% above the average of STA2 + STA1 for subtest 1 Avg: 423.73 Mbps Min: 402.54 Mbps Max: 444.91 Mbps STA1-Throughput: 467.16 Mbps STA2-Throughput: 380.30 Mbps
STA2-throughput-1 5Ghz	FAIL	5Ghz: STA2_throughput is more than 5% below the average of STA2 + STA1 for subtest 1 Avg: 423.73 Mbps Min: 402.54 Mbps Max: 444.91 Mbps STA1-Throughput: 467.16 Mbps STA2-Throughput: 380.30 Mbps
STA1-throughput-2 5Ghz	FAIL	5Ghz: STA1_throughput-2 is more than +25% above the average of STA2 + STA1 for subtest 2 Avg: 423.73 Mbps Min: 317.80 Mbps Max: 529.66 Mbps STA1-Throughput-2: 552.49 Mbps
STA1-throughput-3 5Ghz	FAIL	5Ghz: STA1_throughput-3 is more than +25% above the average of STA2 + STA1 for subtest 3 Avg: 423.73 Mbps Min: 317.80 Mbps Max: 529.66 Mbps STA1-Throughput-3: 813.86 Mbps
5Ghz STA1+2 Throughput Total	PASS	STA1: 467.16 Mbps STA2: 380.30 Mbps Sum: 847.46 Mbps: Meets requirement: 475.00 Mbps
5Ghz STA1+2 Throughput-2 Total	PASS	STA1: 552.49 Mbps STA2: 197.21 Mbps Sum: 749.70 Mbps: Meets requirement: 280.00 Mbps
5Ghz STA1+3 Throughput-3 Total 5Ghz	PASS	STA1: 813.86 Mbps STA3: 5.18 Mbps Sum: 819.04 Mbps: Meets requirement: 280.00 Mbps

## ATF: Run #1 Snapshot 2.4Ghz

Port	Tx-Bps Last	Tx-Bps 1m	Rx-Bps Last	RxBps 1m	Tx-Fail %	Tx-Link-Rate	Rx-Link-Rate	Mode	Channel	Last CX-Time(ms)	RSSI(dBm)	AP	IP	MAC
1.1.2 sta0600 Kbps	630.014 Kbps	467.456 Kbps	114.877 Mbps	81.673 Mbps	0.188	288.9 Mbps	288.9 Mbps	802.11bgn	11	884	-24	DC:EF:09:E3:B8:7B	192.168.1.100	04:f0:21:4b:a7:00
1.1.11 sta0800 Kbps	462.067 Kbps	337.649 Mbps	52.905 Mbps	37.661 Mbps	1.861	144.4 Mbps	144.4 Mbps	802.11bgn	11	624	-29	DC:EF:09:E3:B8:7B	192.168.1.15	04:f0:21:36:f2:74

Port	Tx-Bps Last	Tx-Bps 1m	Rx-Bps Last	RxBps 1m	Link-Rate	IP	MAC
1.1.1 eth1	166.343 Mbps	161.556 Mbps	779.112 Kbps	784.052 Kbps	1 Gbps	192.168.1.99	00:60:e0:74:74:bc

Endpoint	Tx-Bps Last	Tx-Bps 1m	Rx-Bps Last	RxBps 1m	Link-Rate	IP	MAC
cv_tcp-1.1-sta0600--1.0.0-A	0 bps	0 bps	109.926 Mbps	109.567 Mbps	11,024	11,024	1,972 0
cv_tcp-1.1-sta0600--1.0.0-B	107.947 Mbps	111.277	0 bps	0 bps	0	11,024	0 0
cv_tcp-1.1-sta0800--1.0.0-A	0 bps	0 bps	50.307 Mbps	50.752 Mbps	13,903	13,903	1,434 0
cv_tcp-1.1-sta0800--1.0.0-B	50.142 Mbps	50.742 Mbps	0 bps	0 bps	0	13,903	0 0

## ATF: Run #2 Snapshot 2.4Ghz

Port	Tx-Bps Last	Tx-Bps 1m	Rx-Bps Last	RxBps 1m	Tx-Fail %	Tx-Link-Rate	Rx-Link-Rate	Mode	Channel	Last CX-Time(ms)	RSSI(dBm)	AP	IP	MAC
1.1.2 sta0600 Kbps	630.045 Kbps	630.278 Kbps	114.82 Mbps	111.72 Mbps	0.148	288.9 Mbps	288.9 Mbps	802.11bgn	11	884	-24	DC:EF:09:E3:B8:7B	192.168.1.100	04:f0:21:4b:a7:00
1.1.11 sta0800 Kbps	372.477 Kbps	404.201 Mbps	50.728 Mbps	49.503 Mbps	2.004	144.4 Mbps	144.4 Mbps	802.11bgn	11	624	-60	DC:EF:09:E3:B8:7B	192.168.1.15	04:f0:21:36:f2:74

Port	Tx-Bps Last	Tx-Bps 1m	Rx-Bps Last	RxBps 1m	Link-Rate	IP	MAC
1.1.1 eth1	164.328 Mbps	163.82 Mbps	761.53 Kbps	784.055 Kbps	1 Gbps	192.168.1.99	00:60:e0:74:74:bc

Endpoint	Tx-Bps Last	Tx-Bps 1m	Rx-Bps Last	RxBps 1m	Link-Rate	IP	MAC
cv_tcp-1.1-sta0600--1.0.0-	0 bps	0 bps	108.639 Mbps	109.452 Mbps	13,567	13,567	10,261 0

A													
cv_tcp-1.1-1.sta0600--1.0.0-B	109.886 Mbps	109.67 Mbps	0 bps	0 bps	0	13,567	0	0					
cv_tcp-1.1-1.sta0800--1.0.0-A	0 bps	0 bps	49.165 Mbps	48.084 Mbps	16,251	16,251	2,093	0					
cv_tcp-1.1-1.sta0800--1.0.0-B	49.245 Mbps	48.175 Mbps	0 bps	0 bps	0	16,251	0	0					

### ATF: Run #3 Snapshot 2.4Ghz

Port	Tx-Bps Last	Tx-Bps 1m	Rx-Bps Last	RxBps 1m	Tx-Fail %	Tx-Link-Rate	Rx-Link-Rate	Mode	Channel	Last CX-Time(ms)	RSSI(dBm)	AP	IP	MAC
1.1.2 sta0600	821.341 Kbps	830.428 Kbps	175.746 Mbps	169.099 Mbps	0.1	288.9 Mbps	288.9 Mbps	802.11bgn	11	884	-23	DC:EF:09:E3:B8:7B	192.168.1.100	04:f0:21:4b:a7:00
1.1.11 sta0800	0 bps	0 bps	0 bps	0 bps	1.948	0 Mbps	0 bps	802.11bgn	0	624	0	Not-Associated	0.0.0.0	04:f0:21:36:f2:74
1.1.15 sta1000	164.227 Kbps	206.668 Kbps	4.289 Mbps	3.898 Mbps	17.605	54 Mbps	54 Mbps	802.11bg	11	308	-28	DC:EF:09:E3:B8:7B	192.168.1.16	04:f0:21:36:f7:74

Port	Tx-Bps Last	Tx-Bps 1m	Rx-Bps Last	Rx-Bps 1m	Link-Rate	IP	MAC
1.1.1 eth1	177.726 Mbps	178.084 Mbps	712.107 Kbps	763.087 Kbps	1 Gbps	192.168.1.99	00:60:e0:74:74:bc

Endpoint	Tx-Bps Last	Tx-Bps 1m	Rx-Bps Last	Rx-Bps 1m	RX Latency(ms)	Round-Trip Latency(ms)	Jitter	Rx Packet Loss %
cv_tcp-1.1-1.sta0600--1.0.0-A	0 bps	0 bps	166.449 Mbps	168.749 Mbps	8,567	8,567	1,164	0
cv_tcp-1.1-1.sta0600--1.0.0-B	165.936 Mbps	167.823 Mbps	0 bps	0 bps	0	8,567	0	0
cv_tcp-1.1-1.sta0800--1.0.0-A	0 bps	0 bps	48.496 Mbps	48.064 Mbps	15,741	15,741	479	0.233
cv_tcp-1.1-1.sta0800--1.0.0-B	48.95 Mbps	48.154 Mbps	0 bps	0 bps	0	15,741	0	0
cv_tcp-1.1-1.sta1000--1.0.0-A	0 bps	0 bps	4.025 Mbps	4.007 Mbps	36,090	36,090	1,085	51.426
cv_tcp-1.1-1.sta1000--1.0.0-B	2.628 Mbps	8.236 Mbps	0 bps	0 bps	0	36,090	0	0

### ATF: Run #1 Snapshot 5Ghz

Port	Tx-Bps Last	Tx-Bps 1m	Rx-Bps Last	RxBps 1m	Tx-Fail %	Tx-Link-Rate	Rx-Link-Rate	Mode	Channel	Last CX-Time(ms)	RSSI(dBm)	AP	IP	MAC
1.1.2 sta0400	2.03 Mbps	1.549 Mbps	440.823 Mbps	353.38 Mbps	0.101	1733.3 Mbps	1.733 Gbps	802.11an-AC	157	342	-43	DC:EF:09:E3:B8:7D	192.168.1.182	04:f0:21:38:bf:f0
1.1.11 sta0600	2.122 Mbps	1.509 Mbps	399.843 Mbps	282.323 Mbps	0.059	866.7 Mbps	866.7 Mbps	802.11an-AC	157	85	-46	DC:EF:09:E3:B8:7D	192.168.1.18	04:f0:21:3a:52:c0

Port	Tx-Bps Last	Tx-Bps 1m	Rx-Bps Last	Rx-Bps 1m	Link-Rate	IP	MAC
1.1.1 eth1	905.486 Mbps	537.035 Mbps	3.062 Mbps	2.015 Mbps	1 Gbps	192.168.1.99	00:60:e0:74:74:bc

Endpoint	Tx-Bps Last	Tx-Bps 1m	Rx-Bps Last	Rx-Bps 1m	RX Latency(ms)	Round-Trip Latency(ms)	Jitter	Rx Packet Loss %
cv_tcp-1.1-1.sta0400--1.0.0-A	0 bps	0 bps	484.09 Mbps	466.961 Mbps	1,618	1,618	930	0
cv_tcp-1.1-1.sta0400--1.0.0-B	487.997 Mbps	467.221 Mbps	0 bps	0 bps	0	1,618	0	0
cv_tcp-1.1-1.sta0600--1.0.0-A	0 bps	0 bps	378.525 Mbps	380.891 Mbps	1,962	1,962	1,611	0
cv_tcp-1.1-1.sta0600--1.0.0-B	379.523 Mbps	380.947 Mbps	0 bps	0 bps	0	1,962	0	0

### ATF: Run #2 Snapshot 5Ghz

Port	Tx-Bps Last	Tx-Bps 1m	Rx-Bps Last	RxBps 1m	Tx-Fail %	Tx-Link-Rate	Rx-Link-Rate	Mode	Channel	Last CX-Time(ms)	RSSI(dBm)	AP	IP	MAC
1.1.2 sta0400	2.16 Mbps	2.242 Mbps	524.113 Mbps	524.627 Mbps	0.155	1733.3 Mbps	1.733 Gbps	802.11an-AC	157	342	-42	DC:EF:09:E3:B8:7D	192.168.1.182	04:f0:21:38:bf:f0
1.1.11 sta0600	1.446 Mbps	1.675 Mbps	221.138 Mbps	262.79 Mbps	2.645	526.6 Mbps	468 Mbps	802.11an-AC	157	85	-70	DC:EF:09:E3:B8:7D	192.168.1.18	04:f0:21:3a:52:c0

Port	Tx-Bps Last	Tx-Bps 1m	Rx-Bps Last	Rx-Bps 1m	Link-Rate	IP	MAC
1.1.1 eth1	802.905 Mbps	750.63 Mbps	2.608 Mbps	2.854 Mbps	1 Gbps	192.168.1.99	00:60:e0:74:74:bc

Endpoint	Tx-Bps Last	Tx-Bps 1m	Rx-Bps Last	Rx-Bps 1m	RX Latency(ms)	Round-Trip Latency(ms)	Jitter	Rx Packet Loss %
cv_tcp-1.1-1.sta0400--1.0.0-A	0 bps	0 bps	565.199 Mbps	552.846 Mbps	766	766	87	0
cv_tcp-1.1-1.sta0400--1.0.0-B	554.367 Mbps	552.64 Mbps	0 bps	0 bps	0	766	0	0
cv_tcp-1.1-1.sta0600--1.0.0-			189.275					

A	0 bps	0 bps	Mbps	197.26 Mbps	3,983	3,983	584	0
cv_tcp-1.1-1.sta0600--1.0.0-B	197.811 Mbps	198.899 Mbps	0 bps	0 bps	0	3,983	0	0

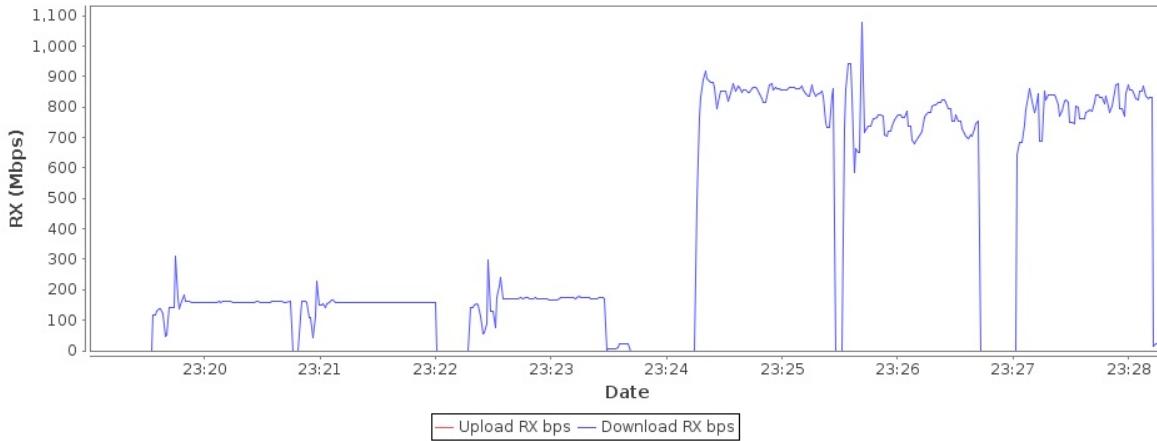
### ATF: Run #3 Snapshot 5Ghz

Port	Tx-Bps Last	Tx-Bps 1m	Rx-Bps Last	RxBps 1m	Tx-Fail %	Tx-Link-Rate	Rx-Link-Rate	Mode	Channel	Last CX-Time(ms)	RSSI(dBm)	AP	IP	MAC
1.1.2 sta0400	3.553 Mbps	3.015 Mbps	889.786 Mbps	743.559 Mbps	0.173	1733.3 Mbps	1.733 Gbps	802.11an-AC	157	342	-46	DC:EF:09:E3:B8:7D	192.168.1.182	04:f0:21:38:bf:f0
1.1.11 sta0600	0 bps	0 bps	0 bps	0 bps	2.607	0 Mbps	0 bps	802.11an-AC	0	85	0	Not-Associated	0.0.0.0	04:f0:21:3a:52:c0
1.1.15 sta0800	330.837 Kbps	293.809 Kbps	5.748 Mbps	5.191 Mbps	13.885	54 Mbps	54 Mbps	802.11a	157	315	-35	DC:EF:09:E3:B8:7D	192.168.1.20	04:f0:21:3a:70:c0

Port	Tx-Bps Last	Tx-Bps 1m	Rx-Bps Last	Rx-Bps 1m	Link-Rate	IP	MAC
1.1.1 eth1	892.922 Mbps	680.318 Mbps	3.015 Mbps	2.305 Mbps	1 Gbps	192.168.1.99	00:60:e0:74:74:bc

Endpoint	Tx-Bps Last	Tx-Bps 1m	Rx-Bps Last	Rx-Bps 1m	Link-Rate	IP	MAC	Round-Trip Latency(ms)	Jitter	Rx Packet Loss %
cv_tcp-1.1-1.sta0400--1.0.0-A	0 bps	0 bps	832.96 Mbps	813.995 Mbps	483	483		144	0	
cv_tcp-1.1-1.sta0400--1.0.0-B	838.966 Mbps	814.002 Mbps	0 bps	0 bps	0	483		0	0	
cv_tcp-1.1-1.sta0600--1.0.0-A	0 bps	0 bps	192.065 Mbps	197.218 Mbps	4,019	4,019		704	0.11	
cv_tcp-1.1-1.sta0600--1.0.0-B	190.89 Mbps	197.359 Mbps	0 bps	0 bps	0	4,019		0	0	
cv_tcp-1.1-1.sta0800--1.0.0-A	0 bps	0 bps	13.95 Mbps	5.187 Mbps	48,962	48,962		984	45.438	
cv_tcp-1.1-1.sta0800--1.0.0-B	15.035 Mbps	9.189 Mbps	0 bps	0 bps	0	48,962		0	0	

### Realtime Throughput for: 6.2.3 Airtime Fairness Test



### 6.3.1 Range Versus Rate Test

#### Summary

Range versus rate test intends to measure the rate-control, baseband and RF chain performance of Wi-Fi device at different signal levels. The attenuation of signals due to range increase is achieved by adjusting the attenuator.

#### Test Procedure

These steps are done for 2.4Ghz and 5Ghz.

- Configure the system to emulate a 2-meter distance. This is the baseline '0' attenuation.
- Establish the LAN connection, create 1 station and allow the station to associate with the DUT.
- Measure the downlink TCP throughput, using a test time of 120 seconds.
- Measure the uplink TCP throughput, using a test time of 120 seconds.
- For each of these attenuations on top of the baseline attenuation, repeat the steps above:  
For 2.4Ghz: 0, 10, 21, 24, 27, 30, 33, 36, 39, 42, 45, 48, 51, 54, 57, 60, 63  
For 5Ghz: 10, 21, 24, 27, 30, 33, 36, 39, 42, 45, 48, 51, 54

#### Pass/Fail Criteria

Each attenuation step must pass a certain amount of traffic to pass the test (units are Mbps).

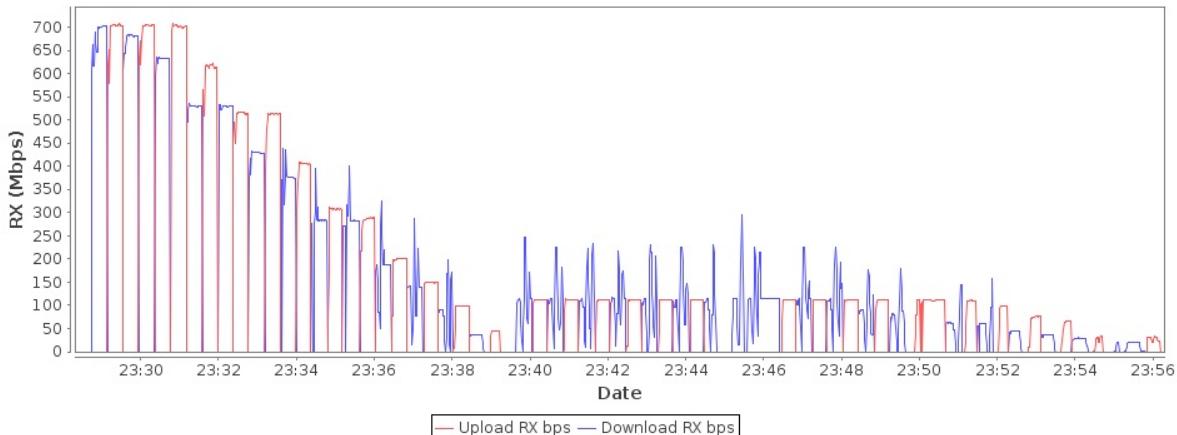
1. For 2.4Ghz, upload rate: 100, 100, 100, 100, 100, 100, 95, 80, 75, 50, 31, 24, 17, 12, 7, 4
2. For 2.4Ghz, download rate: 100, 100, 100, 100, 100, 100, 95, 80, 75, 50, 45, 35, 25, 14, 9, 8
3. For 5Ghz, upload rate: 560, 530, 420, 400, 360, 300, 220, 150, 125, 100, 45, 25, 5, 1
4. For 5Ghz, download rate: 560, 530, 420, 400, 360, 300, 220, 150, 125, 100, 45, 25, 5, 1

### 6.3.1 Range Versus Rate Test Results

Type	Result	Notes
6.3.1 Assumptions	INFO	This test does not specify RSSI, so calibrating it is difficult. You may shift the attenuation by modifying the Attenuation Adjustment setting on the 'Advanced Configuration' screen.
Configuration NOTE	INFO	Attenuation Adjustment set to: 4
Configuration NOTE	INFO	This test will retry failing tests: 3 times and record the best result.
Configuration NOTE	INFO	Traffic duration is set to: 20s, default is 120s
5Ghz DL [10]	PASS	Requires: 560.00 Mbps Reported: 693.27 Mbps STA-RSSI: -49 Rx-Rate: 866.7M Tx-Rate: 866.7M
5Ghz UL [10]	PASS	Requires: 560.00 Mbps Reported: 693.04 Mbps STA-RSSI: -48 Rx-Rate: 866.7M Tx-Rate: 866.7M
5Ghz DL [21]	PASS	Requires: 530.00 Mbps Reported: 682.12 Mbps STA-RSSI: -61 Rx-Rate: 866.7M Tx-Rate: 866.7M
5Ghz UL [21]	PASS	Requires: 530.00 Mbps Reported: 696.28 Mbps STA-RSSI: -58 Rx-Rate: 866.7M Tx-Rate: 866.7M
5Ghz DL [24]	PASS	Requires: 420.00 Mbps Reported: 632.18 Mbps STA-RSSI: -61 Rx-Rate: 780M Tx-Rate: 866.7M
5Ghz UL [24]	PASS	Requires: 420.00 Mbps Reported: 701.87 Mbps STA-RSSI: -61 Rx-Rate: 780M Tx-Rate: 866.7M
5Ghz DL [27]	PASS	Requires: 400.00 Mbps Reported: 530.61 Mbps STA-RSSI: -62 Rx-Rate: 650M Tx-Rate: 780M
5Ghz UL [27]	PASS	Requires: 400.00 Mbps Reported: 609.35 Mbps STA-RSSI: -64 Rx-Rate: 780M Tx-Rate: 780M
5Ghz DL [30]	PASS	Requires: 360.00 Mbps Reported: 529.73 Mbps STA-RSSI: -65 Rx-Rate: 650M Tx-Rate: 650M
5Ghz UL [30]	PASS	Requires: 360.00 Mbps Reported: 514.98 Mbps STA-RSSI: -65 Rx-Rate: 650M Tx-Rate: 650M
5Ghz DL [33]	PASS	Requires: 300.00 Mbps Reported: 428.45 Mbps STA-RSSI: -68 Rx-Rate: 526.6M Tx-Rate: 650M
5Ghz UL [33]	PASS	Requires: 300.00 Mbps Reported: 511.76 Mbps STA-RSSI: -67 Rx-Rate: 526.6M Tx-Rate: 650M
5Ghz DL [36]	PASS	Requires: 220.00 Mbps Reported: 380.21 Mbps STA-RSSI: -69 Rx-Rate: 468M Tx-Rate: 585.1M
5Ghz UL [36]	PASS	Requires: 220.00 Mbps Reported: 396.12 Mbps STA-RSSI: -70 Rx-Rate: 526.6M Tx-Rate: 520M
5Ghz DL [39]	PASS	Requires: 150.00 Mbps Reported: 286.27 Mbps STA-RSSI: -70 Rx-Rate: 351M Tx-Rate: 390M
5Ghz UL [39]	PASS	Requires: 150.00 Mbps Reported: 303.91 Mbps STA-RSSI: -72 Rx-Rate: 468M Tx-Rate: 390M
5Ghz DL [42]	PASS	Requires: 125.00 Mbps Reported: 285.43 Mbps STA-RSSI: -73 Rx-Rate: 351M Tx-Rate: 390M
5Ghz UL [42]	PASS	Requires: 125.00 Mbps Reported: 282.74 Mbps STA-RSSI: -73 Rx-Rate: 351M Tx-Rate: 390M
5Ghz DL [45]	PASS	Requires: 100.00 Mbps Reported: 186.87 Mbps STA-RSSI: -77 Rx-Rate: 234M Tx-Rate: 260M
5Ghz UL [45]	PASS	Requires: 100.00 Mbps Reported: 198.04 Mbps STA-RSSI: -76 Rx-Rate: 234M Tx-Rate: 260M
5Ghz DL [48]	PASS	Requires: 45.00 Mbps Reported: 140.05 Mbps STA-RSSI: -79 Rx-Rate: 175.6M Tx-Rate: 195.1M
5Ghz UL [48]	PASS	Requires: 45.00 Mbps Reported: 149.16 Mbps STA-RSSI: -79 Rx-Rate: 175.6M Tx-Rate: 195.1M
5Ghz DL [51]	PASS	Requires: 25.00 Mbps Reported: 81.62 Mbps STA-RSSI: -82 Rx-Rate: 117M Tx-Rate: 130M
5Ghz UL [51]	PASS	Requires: 25.00 Mbps Reported: 98.02 Mbps STA-RSSI: -82 Rx-Rate: 117M Tx-Rate: 130M
5Ghz DL [54]	PASS	Requires: 5.00 Mbps Reported: 30.73 Mbps STA-RSSI: -78 Rx-Rate: 52M Tx-Rate: 60M
5Ghz UL [54]	PASS	Requires: 5.00 Mbps Reported: 34.55 Mbps STA-RSSI: -80 Rx-Rate: 52M Tx-Rate: 60M
2.4Ghz DL [0]	PASS	Requires: 100.00 Mbps Reported: 114.45 Mbps STA-RSSI: -30 Rx-Rate: 144.4M Tx-Rate: 144.4M
2.4Ghz UL [0]	PASS	Requires: 100.00 Mbps Reported: 109.34 Mbps STA-RSSI: -30 Rx-Rate: 144.4M Tx-Rate: 144.4M
2.4Ghz DL [10]	PASS	Requires: 100.00 Mbps Reported: 114.32 Mbps STA-RSSI: -37 Rx-Rate: 144.4M Tx-Rate: 144.4M
2.4Ghz UL [10]	PASS	Requires: 100.00 Mbps Reported: 110.47 Mbps STA-RSSI: -39 Rx-Rate: 144.4M Tx-Rate: 144.4M
2.4Ghz DL [21]	PASS	Requires: 100.00 Mbps Reported: 114.23 Mbps STA-RSSI: -46 Rx-Rate: 144.4M Tx-Rate: 144.4M
2.4Ghz UL [21]	PASS	Requires: 100.00 Mbps Reported: 112.55 Mbps STA-RSSI: -47 Rx-Rate: 144.4M Tx-Rate: 144.4M
2.4Ghz DL [24]	PASS	Requires: 100.00 Mbps Reported: 114.71 Mbps STA-RSSI: -46 Rx-Rate: 144.4M Tx-Rate: 144.4M
2.4Ghz UL [24]	PASS	Requires: 100.00 Mbps Reported: 110.45 Mbps STA-RSSI: -49 Rx-Rate: 144.4M Tx-Rate: 144.4M

2.4Ghz DL [27]	PASS	Requires: 100.00 Mbps Reported: 114.27 Mbps STA-RSSI: -49 Rx-Rate: 144.4M Tx-Rate: 144.4M
2.4Ghz UL [27]	PASS	Requires: 100.00 Mbps Reported: 110.93 Mbps STA-RSSI: -52 Rx-Rate: 144.4M Tx-Rate: 144.4M
2.4Ghz DL [30]	PASS	Requires: 100.00 Mbps Reported: 112.06 Mbps STA-RSSI: -51 Rx-Rate: 144.4M Tx-Rate: 144.4M
2.4Ghz UL [30]	PASS	Requires: 100.00 Mbps Reported: 109.90 Mbps STA-RSSI: -54 Rx-Rate: 144.4M Tx-Rate: 144.4M
2.4Ghz DL [33]	FAIL	Requires: 100.00 Mbps Reported: 69.50 Mbps STA-RSSI: -55 Rx-Rate: 144.4M Tx-Rate: 144.4M
2.4Ghz DL [33] Retry: 1	FAIL	Requires: 100.00 Mbps Reported: 61.43 Mbps STA-RSSI: -55 Rx-Rate: 144.4M Tx-Rate: 144.4M
2.4Ghz DL [33] Retry: 2	PASS	Requires: 100.00 Mbps Reported: 114.45 Mbps STA-RSSI: -54 Rx-Rate: 144.4M Tx-Rate: 144.4M
2.4Ghz UL [33]	PASS	Requires: 100.00 Mbps Reported: 110.48 Mbps STA-RSSI: -57 Rx-Rate: 144.4M Tx-Rate: 144.4M
2.4Ghz DL [36]	PASS	Requires: 95.00 Mbps Reported: 114.14 Mbps STA-RSSI: -57 Rx-Rate: 144.4M Tx-Rate: 144.4M
2.4Ghz UL [36]	PASS	Requires: 95.00 Mbps Reported: 112.17 Mbps STA-RSSI: -61 Rx-Rate: 144.4M Tx-Rate: 144.4M
2.4Ghz DL [39]	PASS	Requires: 80.00 Mbps Reported: 113.92 Mbps STA-RSSI: -60 Rx-Rate: 144.4M Tx-Rate: 144.4M
2.4Ghz UL [39]	PASS	Requires: 80.00 Mbps Reported: 110.67 Mbps STA-RSSI: -64 Rx-Rate: 144.4M Tx-Rate: 144.4M
2.4Ghz DL [42]	PASS	Requires: 75.00 Mbps Reported: 90.52 Mbps STA-RSSI: -63 Rx-Rate: 117M Tx-Rate: 144.4M
2.4Ghz UL [42]	PASS	Requires: 75.00 Mbps Reported: 110.68 Mbps STA-RSSI: -66 Rx-Rate: 117M Tx-Rate: 144.4M
2.4Ghz DL [45]	PASS	Requires: 50.00 Mbps Reported: 71.52 Mbps STA-RSSI: -65 Rx-Rate: 104M Tx-Rate: 144.4M
2.4Ghz UL [45]	FAIL	Requires: 50.00 Mbps Reported: 40.85 Mbps STA-RSSI: -69 Rx-Rate: 104M Tx-Rate: 144.4M
2.4Ghz UL [45] Retry: 1	PASS	Requires: 50.00 Mbps Reported: 110.85 Mbps STA-RSSI: -68 Rx-Rate: 104M Tx-Rate: 144.4M
2.4Ghz DL [48]	PASS	Requires: 45.00 Mbps Reported: 58.38 Mbps STA-RSSI: -68 Rx-Rate: 78M Tx-Rate: 144.4M
2.4Ghz UL [48]	PASS	Requires: 31.00 Mbps Reported: 93.97 Mbps STA-RSSI: -71 Rx-Rate: 104M Tx-Rate: 144.4M
2.4Ghz DL [51]	PASS	Requires: 35.00 Mbps Reported: 61.06 Mbps STA-RSSI: -71 Rx-Rate: 78M Tx-Rate: 144.4M
2.4Ghz UL [51]	PASS	Requires: 24.00 Mbps Reported: 70.79 Mbps STA-RSSI: -74 Rx-Rate: 78M Tx-Rate: 130M
2.4Ghz DL [54]	PASS	Requires: 25.00 Mbps Reported: 29.80 Mbps STA-RSSI: -75 Rx-Rate: 58.5M Tx-Rate: 130M
2.4Ghz UL [54]	PASS	Requires: 17.00 Mbps Reported: 59.98 Mbps STA-RSSI: -78 Rx-Rate: 52M Tx-Rate: 115.6M
2.4Ghz DL [57]	PASS	Requires: 14.00 Mbps Reported: 30.55 Mbps STA-RSSI: -77 Rx-Rate: 52M Tx-Rate: 115.6M
2.4Ghz UL [57]	PASS	Requires: 12.00 Mbps Reported: 46.33 Mbps STA-RSSI: -80 Rx-Rate: 39M Tx-Rate: 86.7M
2.4Ghz DL [60]	PASS	Requires: 9.00 Mbps Reported: 25.43 Mbps STA-RSSI: -80 Rx-Rate: 39M Tx-Rate: 86.7M
2.4Ghz UL [60]	PASS	Requires: 7.00 Mbps Reported: 18.40 Mbps STA-RSSI: -83 Rx-Rate: 39M Tx-Rate: 57.8M
2.4Ghz DL [63]	FAIL	Requires: 8.00 Mbps Reported: 6.66 Mbps STA-RSSI: -81 Rx-Rate: 26M Tx-Rate: 43.3M
2.4Ghz DL [63] Retry: 1	PASS	Requires: 8.00 Mbps Reported: 11.17 Mbps STA-RSSI: -81 Rx-Rate: 26M Tx-Rate: 57.8M
2.4Ghz UL [63]	PASS	Requires: 4.00 Mbps Reported: 27.49 Mbps STA-RSSI: -84 Rx-Rate: 26M Tx-Rate: 43.3M

### Realtime Throughput for: 6.3.1 Range Versus Rate Test



### 6.3.2 Spatial Consistency Test

## Summary

Spatial consistency test intends to verify the Wi-Fi signal consistency in spatial domain by testing throughput with DUT at different angles to the Station and at different emulated distance. The angles are changed with a programmable turn-table. The distance is emulated by adjusting attenuation.

## Test Procedure

These steps are done for 2.4Ghz and 5Ghz.

1. Configure the system to emulate a 2-meter distance.
2. Establish the LAN connection, create 1 station and allow the station to associate with the DUT.
3. Measure the downlink TCP throughput, using a test time of 60 seconds.
4. Measure the uplink TCP throughput, using a test time of 60 seconds.
5. Change attenuation by adding these values to the baseline 2-meter attenuation:  
For 2.4 Ghz band: 10, 38, 48  
For 5 Ghz band: 10, 32, 42
6. Rotate the AP platform by 30 degrees and repeat steps above until the AP has been rotated a full 360 degrees.

## Pass/Fail Criteria

A) For each rotation, each attenuation step must pass a certain amount of traffic to pass the test (units are Mbps).

1. For 2.4Ghz, upload rate: 90, 70, 35
2. For 2.4Ghz, download rate: 90, 70, 35
3. For 5Ghz, upload rate: 500, 200, 100
4. For 5Ghz, download rate: 500, 200, 100

B) For each rotation, the variation in rates must be within a specified range.

The variation at each specific attenuation is calculated as the difference between the minimum throughput value and the average throughput value, divided by the average throughput value over all rotations.

1. For 2.4Ghz, the range is 30%
2. For 5Ghz, the range is 40%

## 6.3.2 Spatial Consistency Test Results

Type	Result	Notes
6.3.2 Assumptions	INFO	This test does not specify RSSI, so calibrating it is difficult. You may shift the attenuation by modifying the Attenuation Adjustment setting on the 'Advanced Configuration' screen.
Configuration NOTE	INFO	Attenuation Adjustment set to: 4
Configuration NOTE	INFO	Traffic duration is set to: 10s, default is 60s
Configuration NOTE	INFO	This test will retry below average tests: 3 times and record the best result.
5Ghz Avg DL Sig: 10	PASS	Avg download must be at least: 500Mbps, reported: 686.4
5Ghz Minimum DL Sig: 10	PASS	Min download: 573.2 must be at least 60%: 411.8 of the avg: 686.4Mbps
5Ghz Avg UL Sig: 10	PASS	Avg upload must be at least: 500Mbps, reported: 683.1
5Ghz Minimum UL Sig: 10	PASS	Min upload: 573.2 must be at least 60%: 409.8 of the avg: 683.1Mbps
5Ghz Avg DL Sig: 32	PASS	Avg download must be at least: 200Mbps, reported: 482.4
5Ghz Minimum DL Sig: 32	PASS	Min download: 388.4 must be at least 60%: 289.4 of the avg: 482.4Mbps
5Ghz Avg UL Sig: 32	PASS	Avg upload must be at least: 200Mbps, reported: 488.7
5Ghz Minimum UL Sig: 32	PASS	Min upload: 388.4 must be at least 60%: 293.2 of the avg: 488.7Mbps
5Ghz Avg DL Sig: 42	PASS	Avg download must be at least: 100Mbps, reported: 258.7
5Ghz Minimum DL Sig: 42	PASS	Min download: 186.3 must be at least 60%: 155.2 of the avg: 258.7Mbps
5Ghz Avg UL Sig: 42	PASS	Avg upload must be at least: 100Mbps, reported: 253.0
5Ghz Minimum UL Sig: 42	PASS	Min upload: 186.3 must be at least 60%: 151.8 of the avg: 253.0Mbps
2.4Ghz Avg DL Sig: 10	PASS	Avg download must be at least: 90Mbps, reported: 112.9
2.4Ghz Minimum DL Sig: 10	PASS	Min download: 111.0 must be at least 70%: 79.0 of the avg: 112.9Mbps
2.4Ghz Avg UL Sig: 10	PASS	Avg upload must be at least: 90Mbps, reported: 109.7
2.4Ghz Minimum UL Sig: 10	PASS	Min upload: 105.8 must be at least 70%: 76.8 of the avg: 109.7 Mbps
2.4Ghz Avg DL Sig: 38	PASS	Avg download must be at least: 70Mbps, reported: 106.4
2.4Ghz Minimum DL Sig: 38	FAIL	Min download: 72.3 must be at least 70%: 74.5 of the avg: 106.4Mbps
2.4Ghz Avg UL Sig: 38	PASS	Avg upload must be at least: 70Mbps, reported: 108.5
2.4Ghz Minimum UL Sig: 38	PASS	Min upload: 98.3 must be at least 70%: 76.0 of the avg: 108.5 Mbps
2.4Ghz Avg DL Sig: 48	PASS	Avg download must be at least: 35Mbps, reported: 52.6
2.4Ghz Minimum DL Sig: 48	PASS	Min download: 49.2 must be at least 70%: 36.8 of the avg: 52.6Mbps
2.4Ghz Avg UL Sig: 48	PASS	Avg upload must be at least: 35Mbps, reported: 95.1
2.4Ghz Minimum UL Sig: 48	PASS	Min upload: 75.3 must be at least 70%: 66.6 of the avg: 95.1 Mbps

## 6.3.2 Spatial Consistency Test Details

Type	Result	Notes
2.4Ghz DL Sig: 10 Rot: 0	PASS	STA-RSSI: -36 Rx-Rate: 144.4M Tx-Rate: 144.4M Throughput: 114.11 Mbps 3-sec avg: 226.72 Mbps Requested-Avg: 90.00 Mbps

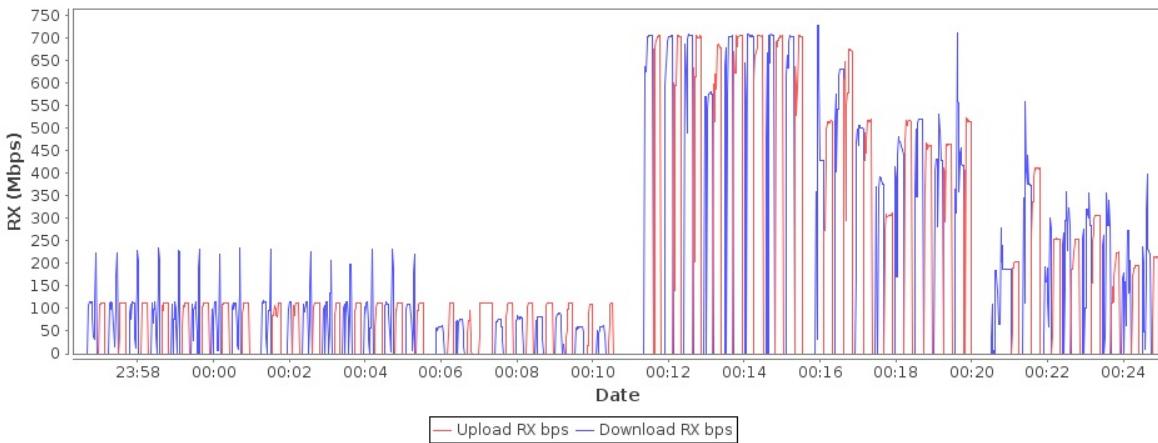
2.4Ghz UL Sig: 10 Rot: 0	PASS	STA-RSSI: -36 Rx-Rate: 144.4M Tx-Rate: 144.4M Throughput: 106.28 Mbps 3-sec avg: 112.43 Mbps Requested-Avg: 90.00 Mbps
2.4Ghz DL Sig: 10 Rot: 45	PASS	STA-RSSI: -30 Rx-Rate: 144.4M Tx-Rate: 144.4M Throughput: 111.91 Mbps 3-sec avg: 224.80 Mbps Requested-Avg: 90.00 Mbps
2.4Ghz UL Sig: 10 Rot: 45	PASS	STA-RSSI: -33 Rx-Rate: 144.4M Tx-Rate: 144.4M Throughput: 111.87 Mbps 3-sec avg: 112.12 Mbps Requested-Avg: 90.00 Mbps
2.4Ghz DL Sig: 10 Rot: 90	PASS	STA-RSSI: -37 Rx-Rate: 144.4M Tx-Rate: 144.4M Throughput: 114.29 Mbps 3-sec avg: 205.24 Mbps Requested-Avg: 90.00 Mbps
2.4Ghz UL Sig: 10 Rot: 90	PASS	STA-RSSI: -37 Rx-Rate: 144.4M Tx-Rate: 144.4M Throughput: 108.36 Mbps 3-sec avg: 111.42 Mbps Requested-Avg: 90.00 Mbps
2.4Ghz DL Sig: 10 Rot: 135	PASS	STA-RSSI: -35 Rx-Rate: 144.4M Tx-Rate: 144.4M Throughput: 113.72 Mbps 3-sec avg: 212.26 Mbps Requested-Avg: 90.00 Mbps
2.4Ghz UL Sig: 10 Rot: 135	PASS	STA-RSSI: -36 Rx-Rate: 144.4M Tx-Rate: 144.4M Throughput: 111.40 Mbps 3-sec avg: 112.41 Mbps Requested-Avg: 90.00 Mbps
2.4Ghz DL Sig: 10 Rot: 180	PASS	STA-RSSI: -36 Rx-Rate: 144.4M Tx-Rate: 144.4M Throughput: 112.51 Mbps 3-sec avg: 227.92 Mbps Requested-Avg: 90.00 Mbps
2.4Ghz UL Sig: 10 Rot: 180	PASS	STA-RSSI: -36 Rx-Rate: 144.4M Tx-Rate: 144.4M Throughput: 111.09 Mbps 3-sec avg: 112.62 Mbps Requested-Avg: 90.00 Mbps
2.4Ghz DL Sig: 10 Rot: 225	PASS	STA-RSSI: -34 Rx-Rate: 144.4M Tx-Rate: 144.4M Throughput: 113.95 Mbps 3-sec avg: 151.82 Mbps Requested-Avg: 90.00 Mbps
2.4Ghz UL Sig: 10 Rot: 225	PASS	STA-RSSI: -33 Rx-Rate: 144.4M Tx-Rate: 144.4M Throughput: 111.13 Mbps 3-sec avg: 112.02 Mbps Requested-Avg: 90.00 Mbps
2.4Ghz DL Sig: 10 Rot: 270	PASS	STA-RSSI: -36 Rx-Rate: 144.4M Tx-Rate: 144.4M Throughput: 110.95 Mbps 3-sec avg: 222.94 Mbps Requested-Avg: 90.00 Mbps
2.4Ghz UL Sig: 10 Rot: 270	PASS	STA-RSSI: -37 Rx-Rate: 144.4M Tx-Rate: 144.4M Throughput: 111.59 Mbps 3-sec avg: 112.29 Mbps Requested-Avg: 90.00 Mbps
2.4Ghz DL Sig: 10 Rot: 315	PASS	STA-RSSI: -38 Rx-Rate: 144.4M Tx-Rate: 144.4M Throughput: 111.62 Mbps 3-sec avg: 233.47 Mbps Requested-Avg: 90.00 Mbps
2.4Ghz UL Sig: 10 Rot: 315	PASS	STA-RSSI: -38 Rx-Rate: 144.4M Tx-Rate: 144.4M Throughput: 105.78 Mbps 3-sec avg: 112.12 Mbps Requested-Avg: 90.00 Mbps
2.4Ghz DL Sig: 38 Rot: 0	PASS	STA-RSSI: -60 Rx-Rate: 144.4M Tx-Rate: 144.4M Throughput: 114.11 Mbps 3-sec avg: 230.24 Mbps Requested-Avg: 70.00 Mbps
2.4Ghz UL Sig: 38 Rot: 0	PASS	STA-RSSI: -59 Rx-Rate: 144.4M Tx-Rate: 144.4M Throughput: 98.32 Mbps 3-sec avg: 112.12 Mbps Requested-Avg: 70.00 Mbps
2.4Ghz DL Sig: 38 Rot: 45	PASS	STA-RSSI: -56 Rx-Rate: 144.4M Tx-Rate: 144.4M Throughput: 72.28 Mbps 3-sec avg: 112.94 Mbps Requested-Avg: 70.00 Mbps
2.4Ghz UL Sig: 38 Rot: 45	PASS	STA-RSSI: -54 Rx-Rate: 144.4M Tx-Rate: 144.4M Throughput: 109.04 Mbps 3-sec avg: 111.89 Mbps Requested-Avg: 70.00 Mbps
2.4Ghz DL Sig: 38 Rot: 90	PASS	STA-RSSI: -60 Rx-Rate: 144.4M Tx-Rate: 144.4M Throughput: 104.51 Mbps 3-sec avg: 173.02 Mbps Requested-Avg: 70.00 Mbps
2.4Ghz UL Sig: 38 Rot: 90	PASS	STA-RSSI: -60 Rx-Rate: 144.4M Tx-Rate: 144.4M Throughput: 111.96 Mbps 3-sec avg: 112.90 Mbps Requested-Avg: 70.00 Mbps
2.4Ghz DL Sig: 38 Rot: 135	PASS	STA-RSSI: -58 Rx-Rate: 144.4M Tx-Rate: 144.4M Throughput: 112.82 Mbps 3-sec avg: 210.83 Mbps Requested-Avg: 70.00 Mbps
2.4Ghz UL Sig: 38 Rot: 135	PASS	STA-RSSI: -58 Rx-Rate: 144.4M Tx-Rate: 144.4M Throughput: 109.82 Mbps 3-sec avg: 111.49 Mbps Requested-Avg: 70.00 Mbps
2.4Ghz DL Sig: 38 Rot: 180	PASS	STA-RSSI: -58 Rx-Rate: 144.4M Tx-Rate: 144.4M Throughput: 114.45 Mbps 3-sec avg: 205.30 Mbps Requested-Avg: 70.00 Mbps
2.4Ghz UL Sig: 38 Rot: 180	PASS	STA-RSSI: -59 Rx-Rate: 144.4M Tx-Rate: 144.4M Throughput: 111.65 Mbps 3-sec avg: 112.64 Mbps Requested-Avg: 70.00 Mbps
2.4Ghz DL Sig: 38 Rot: 225	PASS	STA-RSSI: -54 Rx-Rate: 144.4M Tx-Rate: 144.4M Throughput: 114.71 Mbps 3-sec avg: 235.96 Mbps Requested-Avg: 70.00 Mbps
2.4Ghz UL Sig: 38 Rot: 225	PASS	STA-RSSI: -56 Rx-Rate: 144.4M Tx-Rate: 144.4M Throughput: 106.97 Mbps 3-sec avg: 111.92 Mbps Requested-Avg: 70.00 Mbps
2.4Ghz DL Sig: 38 Rot: 270	PASS	STA-RSSI: -59 Rx-Rate: 144.4M Tx-Rate: 144.4M Throughput: 113.46 Mbps 3-sec avg: 191.18 Mbps Requested-Avg: 70.00 Mbps
2.4Ghz UL Sig: 38 Rot: 270	PASS	STA-RSSI: -60 Rx-Rate: 144.4M Tx-Rate: 144.4M Throughput: 110.62 Mbps 3-sec avg: 112.44 Mbps Requested-Avg: 70.00 Mbps
2.4Ghz DL Sig: 38 Rot: 315	PASS	STA-RSSI: -61 Rx-Rate: 144.4M Tx-Rate: 144.4M Throughput: 104.74 Mbps 3-sec avg: 219.11 Mbps Requested-Avg: 70.00 Mbps

2.4Ghz UL Sig: 38 Rot: 315	PASS	STA-RSSI: -61 Rx-Rate: 144.4M Tx-Rate: 144.4M Throughput: 109.88 Mbps 3-sec avg: 112.45 Mbps Requested-Avg: 70.00 Mbps
2.4Ghz DL Sig: 48 Rot: 0	PASS	STA-RSSI: -67 Rx-Rate: 78M Tx-Rate: 144.4M Throughput: 52.71 Mbps 3-sec avg: 32.64 Mbps Requested-Avg: 35.00 Mbps
2.4Ghz UL Sig: 48 Rot: 0	PASS	STA-RSSI: -67 Rx-Rate: 104M Tx-Rate: 144.4M Throughput: 83.41 Mbps 3-sec avg: 111.51 Mbps Requested-Avg: 35.00 Mbps
2.4Ghz DL Sig: 48 Rot: 45	PASS	STA-RSSI: -64 Rx-Rate: 104M Tx-Rate: 144.4M Throughput: 49.23 Mbps 3-sec avg: 0 Mbps Requested-Avg: 35.00 Mbps
2.4Ghz UL Sig: 48 Rot: 45	Below Avg	STA-RSSI: -64 Rx-Rate: 104M Tx-Rate: 144.4M Throughput: 31.37 Mbps 3-sec avg: 0 Mbps Requested-Avg: 35.00 Mbps
2.4Ghz UL Sig: 48 Rot: 45 Retry: 1	Retry 1	STA-RSSI: -64 Rx-Rate: 104M Tx-Rate: 144.4M Throughput: 93.11 Mbps 3-sec avg: 111.31 Mbps Requested-Avg: 35.00 Mbps
2.4Ghz DL Sig: 48 Rot: 90	PASS	STA-RSSI: -68 Rx-Rate: 117M Tx-Rate: 144.4M Throughput: 50.42 Mbps 3-sec avg: 0 Mbps Requested-Avg: 35.00 Mbps
2.4Ghz UL Sig: 48 Rot: 90	PASS	STA-RSSI: -68 Rx-Rate: 117M Tx-Rate: 144.4M Throughput: 106.01 Mbps 3-sec avg: 111.39 Mbps Requested-Avg: 35.00 Mbps
2.4Ghz DL Sig: 48 Rot: 135	PASS	STA-RSSI: -66 Rx-Rate: 104M Tx-Rate: 144.4M Throughput: 50.49 Mbps 3-sec avg: 0 Mbps Requested-Avg: 35.00 Mbps
2.4Ghz UL Sig: 48 Rot: 135	PASS	STA-RSSI: -67 Rx-Rate: 117M Tx-Rate: 144.4M Throughput: 110.04 Mbps 3-sec avg: 112.01 Mbps Requested-Avg: 35.00 Mbps
2.4Ghz DL Sig: 48 Rot: 180	PASS	STA-RSSI: -67 Rx-Rate: 104M Tx-Rate: 144.4M Throughput: 51.61 Mbps 3-sec avg: 0.27 Mbps Requested-Avg: 35.00 Mbps
2.4Ghz UL Sig: 48 Rot: 180	PASS	STA-RSSI: -67 Rx-Rate: 117M Tx-Rate: 144.4M Throughput: 111.26 Mbps 3-sec avg: 111.72 Mbps Requested-Avg: 35.00 Mbps
2.4Ghz DL Sig: 48 Rot: 225	PASS	STA-RSSI: -64 Rx-Rate: 117M Tx-Rate: 144.4M Throughput: 54.11 Mbps 3-sec avg: 13.47 Mbps Requested-Avg: 35.00 Mbps
2.4Ghz UL Sig: 48 Rot: 225	PASS	STA-RSSI: -64 Rx-Rate: 144.4M Tx-Rate: 144.4M Throughput: 103.62 Mbps 3-sec avg: 112.52 Mbps Requested-Avg: 35.00 Mbps
2.4Ghz DL Sig: 48 Rot: 270	PASS	STA-RSSI: -67 Rx-Rate: 78M Tx-Rate: 144.4M Throughput: 56.40 Mbps 3-sec avg: 48.12 Mbps Requested-Avg: 35.00 Mbps
2.4Ghz UL Sig: 48 Rot: 270	PASS	STA-RSSI: -68 Rx-Rate: 78M Tx-Rate: 144.4M Throughput: 75.33 Mbps 3-sec avg: 110.50 Mbps Requested-Avg: 35.00 Mbps
2.4Ghz DL Sig: 48 Rot: 315	PASS	STA-RSSI: -69 Rx-Rate: 78M Tx-Rate: 144.4M Throughput: 55.86 Mbps 3-sec avg: 44.47 Mbps Requested-Avg: 35.00 Mbps
2.4Ghz UL Sig: 48 Rot: 315	PASS	STA-RSSI: -69 Rx-Rate: 78M Tx-Rate: 144.4M Throughput: 78.21 Mbps 3-sec avg: 110.95 Mbps Requested-Avg: 35.00 Mbps
5Ghz DL Sig: 10 Rot: 0	PASS	STA-RSSI: -49 Rx-Rate: 866.7M Tx-Rate: 866.7M Throughput: 701.03 Mbps 3-sec avg: 705.83 Mbps Requested-Avg: 500.00 Mbps
5Ghz UL Sig: 10 Rot: 0	PASS	STA-RSSI: -49 Rx-Rate: 866.7M Tx-Rate: 866.7M Throughput: 666.72 Mbps 3-sec avg: 704.65 Mbps Requested-Avg: 500.00 Mbps
5Ghz DL Sig: 10 Rot: 45	PASS	STA-RSSI: -42 Rx-Rate: 866.7M Tx-Rate: 866.7M Throughput: 700.53 Mbps 3-sec avg: 702.76 Mbps Requested-Avg: 500.00 Mbps
5Ghz UL Sig: 10 Rot: 45	PASS	STA-RSSI: -43 Rx-Rate: 866.7M Tx-Rate: 866.7M Throughput: 697.02 Mbps 3-sec avg: 703.10 Mbps Requested-Avg: 500.00 Mbps
5Ghz DL Sig: 10 Rot: 90	PASS	STA-RSSI: -48 Rx-Rate: 866.7M Tx-Rate: 866.7M Throughput: 706.32 Mbps 3-sec avg: 705.42 Mbps Requested-Avg: 500.00 Mbps
5Ghz UL Sig: 10 Rot: 90	PASS	STA-RSSI: -49 Rx-Rate: 866.7M Tx-Rate: 866.7M Throughput: 700.42 Mbps 3-sec avg: 703.38 Mbps Requested-Avg: 500.00 Mbps
5Ghz DL Sig: 10 Rot: 135	PASS	STA-RSSI: -43 Rx-Rate: 780M Tx-Rate: 866.7M Throughput: 573.22 Mbps 3-sec avg: 569.39 Mbps Requested-Avg: 500.00 Mbps
5Ghz UL Sig: 10 Rot: 135	PASS	STA-RSSI: -44 Rx-Rate: 702M Tx-Rate: 866.7M Throughput: 679.48 Mbps 3-sec avg: 676.84 Mbps Requested-Avg: 500.00 Mbps
5Ghz DL Sig: 10 Rot: 180	PASS	STA-RSSI: -45 Rx-Rate: 866.7M Tx-Rate: 866.7M Throughput: 700.93 Mbps 3-sec avg: 704.73 Mbps Requested-Avg: 500.00 Mbps
5Ghz UL Sig: 10 Rot: 180	PASS	STA-RSSI: -45 Rx-Rate: 866.7M Tx-Rate: 866.7M Throughput: 675.00 Mbps 3-sec avg: 706.23 Mbps Requested-Avg: 500.00 Mbps
5Ghz DL Sig: 10 Rot: 225	PASS	STA-RSSI: -50 Rx-Rate: 866.7M Tx-Rate: 866.7M Throughput: 700.88 Mbps 3-sec avg: 703.10 Mbps Requested-Avg: 500.00 Mbps
5Ghz UL Sig: 10 Rot: 225	PASS	STA-RSSI: -50 Rx-Rate: 866.7M Tx-Rate: 866.7M Throughput: 679.81 Mbps 3-sec avg: 704.50 Mbps Requested-Avg: 500.00 Mbps

5Ghz DL Sig: 10 Rot: 270	PASS	STA-RSSI: -49 Rx-Rate: 866.7M Tx-Rate: 866.7M Throughput: 706.62 Mbps 3-sec avg: 706.76 Mbps Requested-Avg: 500.00 Mbps
5Ghz UL Sig: 10 Rot: 270	PASS	STA-RSSI: -49 Rx-Rate: 866.7M Tx-Rate: 866.7M Throughput: 665.16 Mbps 3-sec avg: 703.76 Mbps Requested-Avg: 500.00 Mbps
5Ghz DL Sig: 10 Rot: 315	PASS	STA-RSSI: -50 Rx-Rate: 866.7M Tx-Rate: 866.7M Throughput: 701.44 Mbps 3-sec avg: 703.16 Mbps Requested-Avg: 500.00 Mbps
5Ghz UL Sig: 10 Rot: 315	PASS	STA-RSSI: -50 Rx-Rate: 866.7M Tx-Rate: 866.7M Throughput: 700.99 Mbps 3-sec avg: 703.28 Mbps Requested-Avg: 500.00 Mbps
5Ghz DL Sig: 32 Rot: 0	PASS	STA-RSSI: -68 Rx-Rate: 526.6M Tx-Rate: 650M Throughput: 472.54 Mbps 3-sec avg: 427.95 Mbps Requested-Avg: 200.00 Mbps
5Ghz UL Sig: 32 Rot: 0	PASS	STA-RSSI: -69 Rx-Rate: 650M Tx-Rate: 650M Throughput: 508.01 Mbps 3-sec avg: 514.34 Mbps Requested-Avg: 200.00 Mbps
5Ghz DL Sig: 32 Rot: 45	PASS	STA-RSSI: -63 Rx-Rate: 780M Tx-Rate: 866.7M Throughput: 630.41 Mbps 3-sec avg: 631.05 Mbps Requested-Avg: 200.00 Mbps
5Ghz UL Sig: 32 Rot: 45	PASS	STA-RSSI: -64 Rx-Rate: 780M Tx-Rate: 866.7M Throughput: 670.65 Mbps 3-sec avg: 670.20 Mbps Requested-Avg: 200.00 Mbps
5Ghz DL Sig: 32 Rot: 90	PASS	STA-RSSI: -67 Rx-Rate: 650M Tx-Rate: 650M Throughput: 502.30 Mbps 3-sec avg: 496.89 Mbps Requested-Avg: 200.00 Mbps
5Ghz UL Sig: 32 Rot: 90	PASS	STA-RSSI: -67 Rx-Rate: 650M Tx-Rate: 650M Throughput: 504.51 Mbps 3-sec avg: 518.80 Mbps Requested-Avg: 200.00 Mbps
5Ghz DL Sig: 32 Rot: 135	PASS	STA-RSSI: -62 Rx-Rate: 526.6M Tx-Rate: 520M Throughput: 388.43 Mbps 3-sec avg: 376.97 Mbps Requested-Avg: 200.00 Mbps
5Ghz UL Sig: 32 Rot: 135	PASS	STA-RSSI: -62 Rx-Rate: 526.6M Tx-Rate: 390M Throughput: 300.43 Mbps 3-sec avg: 309.72 Mbps Requested-Avg: 200.00 Mbps
5Ghz DL Sig: 32 Rot: 180	PASS	STA-RSSI: -64 Rx-Rate: 650M Tx-Rate: 650M Throughput: 459.79 Mbps 3-sec avg: 443.21 Mbps Requested-Avg: 200.00 Mbps
5Ghz UL Sig: 32 Rot: 180	PASS	STA-RSSI: -64 Rx-Rate: 650M Tx-Rate: 650M Throughput: 512.98 Mbps 3-sec avg: 513.75 Mbps Requested-Avg: 200.00 Mbps
5Ghz DL Sig: 32 Rot: 225	PASS	STA-RSSI: -70 Rx-Rate: 650M Tx-Rate: 650M Throughput: 517.28 Mbps 3-sec avg: 518.80 Mbps Requested-Avg: 200.00 Mbps
5Ghz UL Sig: 32 Rot: 225	PASS	STA-RSSI: -69 Rx-Rate: 650M Tx-Rate: 585.1M Throughput: 441.28 Mbps 3-sec avg: 462.79 Mbps Requested-Avg: 200.00 Mbps
5Ghz DL Sig: 32 Rot: 270	PASS	STA-RSSI: -68 Rx-Rate: 526.6M Tx-Rate: 585.1M Throughput: 427.01 Mbps 3-sec avg: 429.54 Mbps Requested-Avg: 200.00 Mbps
5Ghz UL Sig: 32 Rot: 270	PASS	STA-RSSI: -68 Rx-Rate: 526.6M Tx-Rate: 585.1M Throughput: 458.38 Mbps 3-sec avg: 463.41 Mbps Requested-Avg: 200.00 Mbps
5Ghz DL Sig: 32 Rot: 315	PASS	STA-RSSI: -69 Rx-Rate: 526.6M Tx-Rate: 650M Throughput: 461.04 Mbps 3-sec avg: 417.73 Mbps Requested-Avg: 200.00 Mbps
5Ghz UL Sig: 32 Rot: 315	PASS	STA-RSSI: -69 Rx-Rate: 526.6M Tx-Rate: 650M Throughput: 513.39 Mbps 3-sec avg: 513.81 Mbps Requested-Avg: 200.00 Mbps
5Ghz DL Sig: 42 Rot: 0	Below Avg	STA-RSSI: -74 Rx-Rate: 234M Tx-Rate: 351M Throughput: 41.08 Mbps 3-sec avg: 142.17 Mbps Requested-Avg: 100.00 Mbps
5Ghz DL Sig: 42 Rot: 0 Retry: 1	Retry 1	STA-RSSI: -73 Rx-Rate: 234M Tx-Rate: 260M Throughput: 187.49 Mbps 3-sec avg: 187.69 Mbps Requested-Avg: 100.00 Mbps
5Ghz UL Sig: 42 Rot: 0	PASS	STA-RSSI: -73 Rx-Rate: 234M Tx-Rate: 260M Throughput: 203.78 Mbps 3-sec avg: 203.53 Mbps Requested-Avg: 100.00 Mbps
5Ghz DL Sig: 42 Rot: 45	PASS	STA-RSSI: -70 Rx-Rate: 468M Tx-Rate: 520M Throughput: 409.74 Mbps 3-sec avg: 372.83 Mbps Requested-Avg: 100.00 Mbps
5Ghz UL Sig: 42 Rot: 45	PASS	STA-RSSI: -70 Rx-Rate: 526.6M Tx-Rate: 520M Throughput: 406.33 Mbps 3-sec avg: 411.29 Mbps Requested-Avg: 100.00 Mbps
5Ghz DL Sig: 42 Rot: 90	PASS	STA-RSSI: -73 Rx-Rate: 234M Tx-Rate: 325M Throughput: 186.76 Mbps 3-sec avg: 285.05 Mbps Requested-Avg: 100.00 Mbps
5Ghz UL Sig: 42 Rot: 90	PASS	STA-RSSI: -74 Rx-Rate: 263.3M Tx-Rate: 325M Throughput: 254.08 Mbps 3-sec avg: 253.74 Mbps Requested-Avg: 100.00 Mbps
5Ghz DL Sig: 42 Rot: 135	PASS	STA-RSSI: -67 Rx-Rate: 351M Tx-Rate: 325M Throughput: 287.60 Mbps 3-sec avg: 283.35 Mbps Requested-Avg: 100.00 Mbps
5Ghz UL Sig: 42 Rot: 135	PASS	STA-RSSI: -67 Rx-Rate: 351M Tx-Rate: 325M Throughput: 241.46 Mbps 3-sec avg: 254.85 Mbps Requested-Avg: 100.00 Mbps
5Ghz DL Sig: 42 Rot: 180	PASS	STA-RSSI: -71 Rx-Rate: 351M Tx-Rate: 325M Throughput: 292.71 Mbps 3-sec avg: 283.67 Mbps Requested-Avg: 100.00 Mbps

5Ghz UL Sig: 42 Rot: 180	PASS	STA-RSSI: -70 Rx-Rate: 351M Tx-Rate: 390M Throughput: 306.48 Mbps 3-sec avg: 306.81 Mbps Requested-Avg: 100.00 Mbps
5Ghz DL Sig: 42 Rot: 225	PASS	STA-RSSI: -72 Rx-Rate: 351M Tx-Rate: 390M Throughput: 288.37 Mbps 3-sec avg: 283.73 Mbps Requested-Avg: 100.00 Mbps
5Ghz UL Sig: 42 Rot: 225	PASS	STA-RSSI: -72 Rx-Rate: 351M Tx-Rate: 351M Throughput: 217.34 Mbps 3-sec avg: 226.47 Mbps Requested-Avg: 100.00 Mbps
5Ghz DL Sig: 42 Rot: 270	PASS	STA-RSSI: -76 Rx-Rate: 234M Tx-Rate: 260M Throughput: 186.28 Mbps 3-sec avg: 206.35 Mbps Requested-Avg: 100.00 Mbps
5Ghz UL Sig: 42 Rot: 270	PASS	STA-RSSI: -76 Rx-Rate: 234M Tx-Rate: 260M Throughput: 191.44 Mbps 3-sec avg: 194.91 Mbps Requested-Avg: 100.00 Mbps
5Ghz DL Sig: 42 Rot: 315	PASS	STA-RSSI: -75 Rx-Rate: 351M Tx-Rate: 390M Throughput: 230.81 Mbps 3-sec avg: 220.40 Mbps Requested-Avg: 100.00 Mbps
5Ghz UL Sig: 42 Rot: 315	PASS	STA-RSSI: -75 Rx-Rate: 351M Tx-Rate: 390M Throughput: 203.42 Mbps 3-sec avg: 213.91 Mbps Requested-Avg: 100.00 Mbps

### Realtime Throughput for: 6.3.2 Spatial Consistency Test



## 6.4.1 Multiple STAs Performance Test

### Summary

Multiple STAs performance test intends to measure the performance of Wi-Fi device connected with multiple STAs at different distances simultaneously. There are three sets of 3 stations, with each group at a different emulated distance.

### Test Procedure

These steps are done for 2.4Ghz and 5Ghz.

- Configure the system to emulate a 2-meter distance. This is the baseline '0' attenuation.
- Establish the LAN connection, create 3 sets of 3 stations.
- Group 1 is set to short distance, Group 2 is set to medium distance, and Group 3 is set to long distance.  
The attenuations for 2.4Ghz are: 10, 38, 48  
The attenuations for 5Ghz are: 10, 32, 42
- Measure the downlink TCP throughput to each short-distance STA, using a test time of 120 seconds. Calculate the summation of downlink TCP throughput of the three STA set to short distance. Wait for 10 seconds. Measure the uplink TCP throughput to each STA, using a test time of 120 seconds. Calculate the summation uplink TCP throughput of the three STA in short distance.
- Enable the medium distance stations and allow them to associate with the DUT. Measure the downlink TCP throughput to each of the 6 stations, using a test time of 120 seconds. Calculate the summation of downlink TCP throughput of all STA (three short-distance STA and the three medium-distance STA). Wait for 10 seconds. Measure the uplink TCP throughput to each STA, using a test time of 120 seconds. Calculate the summation of uplink TCP throughput of all 6 stations.
- Enable the long distance stations and allow them to associate with the DUT. Measure the downlink TCP throughput to each of the 9 stations, using a test time of 120 seconds. Calculate the summation of all STA (downlink TCP throughput of the three short-distance STA, the three medium-distance STA and the three long-distance STA). Wait for 10 seconds. Measure the uplink TCP throughput to each STA, using a test time of 120 seconds. Calculate the summation of uplink TCP throughput of all 9 stations.

### Pass/Fail Criteria

Each step must pass a certain amount of traffic in each direction to pass the test.

- For 2.4Ghz, short-distance: 70Mbps.
- For 2.4Ghz, short-distance and medium-distance: 60Mbps.

3. For 2.4Ghz, short-distance, medium-distance, and long-distance: 50Mbps.
4. For 5Ghz, short-distance: 500Mbps.
5. For 5Ghz, short-distance and medium-distance: 400Mbps.
6. For 5Ghz, short-distance, medium-distance, and long-distance: 300Mbps.

### 6.4.1 Multiple STAs Performance Test Results

Type	Result	Notes
6.4.1 Assumptions	INFO	This test does not specify RSSI, so calibrating it is difficult. You may shift the attenuation by modifying the Attenuation Adjustment setting on the 'Advanced Configuration' screen.
Configuration NOTE	INFO	Attenuation Adjustment set to: 4
2.4Ghz DL Group 1	PASS	Requires: 70 Mbps Reported: 119.53 Mbps Group-1 Avg: STA-RSSI: -36 Rx-Rate: 144.4M Tx-Rate: 144.4M
2.4Ghz UL Group 1	PASS	Requires: 70 Mbps Reported: 111.50 Mbps Group-1 Avg: STA-RSSI: -36 Rx-Rate: 144.4M Tx-Rate: 144.4M
2.4Ghz DL Groups 1-2	PASS	Requires: 60 Mbps Reported: 102.86 Mbps Group-1 Avg: STA-RSSI: -36 Rx-Rate: 144.4M Tx-Rate: 144.4M Group-2 Avg: STA-RSSI: -55 Rx-Rate: 117M Tx-Rate: 144.4M
2.4Ghz UL Groups 1-2	PASS	Requires: 60 Mbps Reported: 101.24 Mbps Group-1 Avg: STA-RSSI: -36 Rx-Rate: 144.4M Tx-Rate: 144.4M Group-2 Avg: STA-RSSI: -56 Rx-Rate: 144.4M Tx-Rate: 144.4M
2.4Ghz DL Groups 1-3	PASS	Requires: 50 Mbps Reported: 93.19 Mbps Group-1 Avg: STA-RSSI: -36 Rx-Rate: 144.4M Tx-Rate: 144.4M Group-2 Avg: STA-RSSI: -57 Rx-Rate: 144.4M Tx-Rate: 139.6M Group-3 Avg: STA-RSSI: -64 Rx-Rate: 144.4M Tx-Rate: 130M
2.4Ghz UL Groups 1-3	PASS	Requires: 50 Mbps Reported: 109.89 Mbps Group-1 Avg: STA-RSSI: -36 Rx-Rate: 144.4M Tx-Rate: 144.4M Group-2 Avg: STA-RSSI: -56 Rx-Rate: 135.267M Tx-Rate: 144.4M Group-3 Avg: STA-RSSI: -66 Rx-Rate: 144.4M Tx-Rate: 130M
5Ghz DL Group 1	PASS	Requires: 500 Mbps Reported: 694.21 Mbps Group-1 Avg: STA-RSSI: -47 Rx-Rate: 866.7M Tx-Rate: 866.7M
5Ghz UL Group 1	PASS	Requires: 500 Mbps Reported: 671.67 Mbps Group-1 Avg: STA-RSSI: -48 Rx-Rate: 866.7M Tx-Rate: 866.7M
5Ghz DL Groups 1-2	PASS	Requires: 400 Mbps Reported: 519.60 Mbps Group-1 Avg: STA-RSSI: -48 Rx-Rate: 866.7M Tx-Rate: 837.8M Group-2 Avg: STA-RSSI: -66 Rx-Rate: 468M Tx-Rate: 628.333M
5Ghz UL Groups 1-2	PASS	Requires: 400 Mbps Reported: 605.22 Mbps Group-1 Avg: STA-RSSI: -48 Rx-Rate: 866.7M Tx-Rate: 866.7M Group-2 Avg: STA-RSSI: -66 Rx-Rate: 526.6M Tx-Rate: 650M
5Ghz DL Groups 1-3	PASS	Requires: 300 Mbps Reported: 412.52 Mbps Group-1 Avg: STA-RSSI: -48 Rx-Rate: 866.7M Tx-Rate: 866.7M Group-2 Avg: STA-RSSI: -66 Rx-Rate: 468M Tx-Rate: 585M Group-3 Avg: STA-RSSI: -77 Rx-Rate: 351M Tx-Rate: 201.533M
5Ghz UL Groups 1-3	PASS	Requires: 300 Mbps Reported: 543.34 Mbps Group-1 Avg: STA-RSSI: -47 Rx-Rate: 866.7M Tx-Rate: 866.7M Group-2 Avg: STA-RSSI: -66 Rx-Rate: 487.533M Tx-Rate: 650M Group-3 Avg: STA-RSSI: -74 Rx-Rate: 312M Tx-Rate: 201.567M

#### Multi\_Sta: Run #0 DL Snapshot 2.4Ghz

Port	Tx-Bps Last	Tx-Bps 1m	Rx-Bps Last	RxBps 1m	Tx-Fail %	Tx-Link-Rate	Rx-Link-Rate	Mode	Channel	Last CX-Time(ms)	RSSI(dBm)	AP	IP	MAC
1.1.2 sta0600 Kbps	280.504	203.358	39.579	24.471	0	144.4 Mbps	144.4 Mbps	802.11bgn	11	39	-36	DC:EF:09:E3:B8:7B	192.168.1.225	04:f0:21:4b:b7:00
1.1.11 sta0601 Kbps	303.191	210.112	39.106	24.815	0	144.4 Mbps	144.4 Mbps	802.11bgn	11	77	-36	DC:EF:09:E3:B8:7B	192.168.1.242	04:f0:21:4b:b8:00
1.1.15 sta0602 Kbps	626.43	362.926	39.297	24.682	0.014	144.4 Mbps	144.4 Mbps	802.11bgn	11	231	-36	DC:EF:09:E3:B8:7B	192.168.1.34	04:f0:21:4b:89:00

Port	Tx-Bps Last	Tx-Bps 1m	Rx-Bps Last	Rx-Bps 1m	Link-Rate	IP	MAC
1.1.1 eth1	118.83 Mbps	110.262 Mbps	963.777 Kbps	830.113 Kbps	1 Gbps	192.168.1.99	00:60:e0:74:74:bc

Endpoint	Tx-Bps Last	Tx-Bps 1m	Rx-Bps Last	Rx-Bps 1m	Link-Rate	IP	MAC	Round-Trip Latency(ms)	Jitter	Rx Packet Loss %
cv_tcp-1.1-sta0600--1.0.0-A	0 bps	0 bps	38.02 Mbps	39.768 Mbps	25,488	25,488	3,259	0.847		
cv_tcp-1.1-sta0600--1.0.0-B	37.801 Mbps	40.224 Mbps	0 bps	0 bps	0	25,488	0	0		
cv_tcp-1.1-sta0601--1.0.0-A	0 bps	0 bps	37.48 Mbps	38.676 Mbps	26,811	26,811	2,106	0.299		
cv_tcp-1.1-sta0601--1.0.0-B	38.576 Mbps	39.499 Mbps	0 bps	0 bps	0	26,811	0	0		
cv_tcp-1.1-sta0602--1.0.0-A	0 bps	0 bps	38.073 Mbps	37.744 Mbps	23,630	23,630	703	0.339		
cv_tcp-1.1-sta0602--1.0.0-B	37.687 Mbps	38.524 Mbps	0 bps	0 bps	0	23,630	0	0		

#### Multi\_Sta: Run #0 UL Snapshot 2.4Ghz

Port	Tx-Bps Last	Tx-Bps 1m	Rx-Bps Last	RxBps 1m	Tx-Fail %	Tx-Link-Rate	Rx-Link-Rate	Mode	Channel	Last CX-Time(ms)	RSSI(dBm)	AP	IP	MAC
1.1.2 sta0600	41.232	40.753	375.347	363.26	0	144.4 Mbps	144.4 Mbps	802.11bgn	11	39	-36	DC:EF:09:E3:B8:7B	192.168.1.225	04:f0:21:4b:b7:00
1.1.11 sta0601	41.841	41.088	527.693	519.595	0	144.4 Mbps	144.4 Mbps	802.11bgn	11	77	-36	DC:EF:09:E3:B8:7B	192.168.1.242	04:f0:21:4b:b8:00

1.1.15 sta0602	35.292 Mbps	36.439 Mbps	446.857 Kbps	464.594 Kbps	0.003	144.4 Mbps	144.4 Mbps	802.11bgn	11	231	-37	DC:EF:09:E3:B8:7B	192.168.1.34	04:f0:21:4b:89:00
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Port	Tx-Bps Last	Tx-Bps 1m	Rx-Bps Last	Rx-Bps 1m	Link-Rate	IP	MAC
1.1.1 eth1	1.432 Mbps	29.312 Mbps	116.763 Mbps	86.36 Mbps	1 Gbps	192.168.1.99	00:60:e0:74:74:bc

Endpoint	Tx-Bps Last	Tx-Bps 1m	Rx-Bps Last	Rx-Bps 1m	RX Latency(ms)	Round-Trip Latency(ms)	Jitter	Rx Packet Loss %
cv_tcp-1.1-1.sta0600--1.0.0-A	39.427 Mbps	38.605 Mbps	0 bps	0 bps	0	5,078	0	0
cv_tcp-1.1-1.sta0600--1.0.0-B	0 bps	0 bps	39.438 Mbps	38.611 Mbps	5,078	5,078	252	0
cv_tcp-1.1-1.sta0601--1.0.0-A	39.625 Mbps	38.83 Mbps	0 bps	0 bps	0	3,455	0	0
cv_tcp-1.1-1.sta0601--1.0.0-B	0 bps	0 bps	39.793 Mbps	38.822 Mbps	3,455	3,455	636	0
cv_tcp-1.1-1.sta0602--1.0.0-A	34.158 Mbps	34.18 Mbps	0 bps	0 bps	0	1,355	0	0
cv_tcp-1.1-1.sta0602--1.0.0-B	0 bps	0 bps	32.271 Mbps	34.17 Mbps	1,355	1,355	415	0

### Multi\_Sta: Run #1 DL Snapshot 2.4Ghz

Port	Tx-Bps Last	Tx-Bps 1m	Rx-Bps Last	RxBps 1m	Tx-Fail %	Tx-Link-Rate	Rx-Link-Rate	Mode	Channel	Last CX-Time(ms)	RSSI(dBm)	AP	IP	MAC
1.1.2 sta0600	146.403 Kbps	468.637 Mbps	19.437 Mbps	19.099 Mbps	0.001	144.4 Mbps	144.4 Mbps	802.11bgn	11	39	-36	DC:EF:09:E3:B8:7B	192.168.1.225	04:f0:21:4b:b7:00
1.1.11 sta0601	143.534 Kbps	1.568 Mbps	19.162 Mbps	18.253 Mbps	0.003	144.4 Mbps	144.4 Mbps	802.11bgn	11	77	-36	DC:EF:09:E3:B8:7B	192.168.1.242	04:f0:21:4b:b8:00
1.1.15 sta0602	137.674 Kbps	971.213 Mbps	19.248 Mbps	18.263 Mbps	0.011	144.4 Mbps	144.4 Mbps	802.11bgn	11	231	-37	DC:EF:09:E3:B8:7B	192.168.1.34	04:f0:21:4b:89:00
1.1.16 sta0800	183.191 Kbps	161.7 Mbps	15.892 Mbps	14.784 Mbps	0.111	144.4 Mbps	117 Mbps	802.11bgn	11	42	-55	DC:EF:09:E3:B8:7B	192.168.1.21	04:f0:21:36:ce:74
1.1.17 sta0801	176.704 Kbps	182.851 Mbps	15.263 Mbps	15.028 Mbps	0.48	144.4 Mbps	117 Mbps	802.11bgn	11	41	-55	DC:EF:09:E3:B8:7B	192.168.1.22	04:f0:21:36:e9:74
1.1.18 sta0802	169.712 Kbps	171.299 Mbps	15.172 Mbps	15.689 Mbps	0.068	144.4 Mbps	117 Mbps	802.11bgn	11	236	-55	DC:EF:09:E3:B8:7B	192.168.1.23	04:f0:21:36:c8:74

Port	Tx-Bps Last	Tx-Bps 1m	Rx-Bps Last	Rx-Bps 1m	Link-Rate	IP	MAC
1.1.1 eth1	104.647 Mbps	75.515 Mbps	759.193 Kbps	39.844 Mbps	1 Gbps	192.168.1.99	00:60:e0:74:74:bc

Endpoint	Tx-Bps Last	Tx-Bps 1m	Rx-Bps Last	Rx-Bps 1m	RX Latency(ms)	Round-Trip Latency(ms)	Jitter	Rx Packet Loss %
cv_tcp-1.1-1.sta0600--1.0.0-A	0 bps	0 bps	18.513 Mbps	18.561 Mbps	19,916	19,916	770	0
cv_tcp-1.1-1.sta0600--1.0.0-B	18.467 Mbps	14.345 Mbps	0 bps	0 bps	0	19,916	0	0
cv_tcp-1.1-1.sta0601--1.0.0-A	0 bps	0 bps	18.162 Mbps	18.912 Mbps	20,364	20,364	1,960	0
cv_tcp-1.1-1.sta0601--1.0.0-B	18.529 Mbps	15.962 Mbps	0 bps	0 bps	0	20,364	0	0
cv_tcp-1.1-1.sta0602--1.0.0-A	0 bps	0 bps	18.878 Mbps	19.087 Mbps	14,237	14,237	398	0
cv_tcp-1.1-1.sta0602--1.0.0-B	18.529 Mbps	14.753 Mbps	0 bps	0 bps	0	14,237	0	0
cv_tcp-1.1-1.sta0800--1.0.1-A	0 bps	0 bps	15.29 Mbps	16.601 Mbps	22,357	22,357	7,973	0
cv_tcp-1.1-1.sta0800--1.0.1-B	14.117 Mbps	14.095 Mbps	0 bps	0 bps	0	22,357	0	0
cv_tcp-1.1-1.sta0801--1.0.1-A	0 bps	0 bps	14.426 Mbps	15.245 Mbps	7,099	7,099	4,107	0
cv_tcp-1.1-1.sta0801--1.0.1-B	14.929 Mbps	15.366 Mbps	0 bps	0 bps	0	7,099	0	0
cv_tcp-1.1-1.sta0802--1.0.1-A	0 bps	0 bps	14.68 Mbps	16.126 Mbps	21,145	21,145	2,462	0
cv_tcp-1.1-1.sta0802--1.0.1-B	15 Mbps	13.026 Mbps	0 bps	0 bps	0	21,145	0	0

### Multi\_Sta: Run #1 UL Snapshot 2.4Ghz

Port	Tx-Bps Last	Tx-Bps 1m	Rx-Bps Last	RxBps 1m	Tx-Fail %	Tx-Link-Rate	Rx-Link-Rate	Mode	Channel	Last CX-Time(ms)	RSSI(dBm)	AP	IP	MAC
1.1.2 sta0600	15.171 Mbps	18.822 Kbps	93.457 Mbps	3.238 Mbps	0.004	144.4 Mbps	144.4 Mbps	802.11bgn	11	39	-35	DC:EF:09:E3:B8:7B	192.168.1.225	04:f0:21:4b:b7:00
1.1.11 sta0601	20.169 Mbps	17.244 Kbps	187.531 Mbps	4.662 Mbps	0.004	144.4 Mbps	144.4 Mbps	802.11bgn	11	77	-39	DC:EF:09:E3:B8:7B	192.168.1.242	04:f0:21:4b:b8:00
1.1.15 sta0602	8.161 Mbps	14.167 Kbps	89.276 Mbps	4.279 Mbps	0.008	144.4 Mbps	144.4 Mbps	802.11bgn	11	231	-36	DC:EF:09:E3:B8:7B	192.168.1.34	04:f0:21:4b:89:00
1.1.16 sta0800	13.942 Mbps	13.998 Kbps	97.858 Mbps	3.748 Mbps	0.162	144.4 Mbps	144.4 Mbps	802.11bgn	11	42	-58	DC:EF:09:E3:B8:7B	192.168.1.21	04:f0:21:36:ce:74
1.1.17 sta0801	14.695 Mbps	14.159 Kbps	143.791 Mbps	2.081 Mbps	0.207	144.4 Mbps	144.4 Mbps	802.11bgn	11	41	-56	DC:EF:09:E3:B8:7B	192.168.1.22	04:f0:21:36:e9:74
1.1.18 sta0802	14.208 Mbps	12.737 Kbps	130.476 Mbps	2.837 Mbps	0.095	144.4 Mbps	144.4 Mbps	802.11bgn	11	236	-56	DC:EF:09:E3:B8:7B	192.168.1.23	04:f0:21:36:c8:74

Port	Tx-Bps Last	Tx-Bps 1m	Rx-Bps Last	Rx-Bps 1m	Link-Rate	IP	MAC
1.1.1 eth1	0 bps	964.922 Kbps	0 bps	106.058 Mbps	1 Gbps	192.168.1.99	00:60:e0:74:74:bc

Endpoint	Tx-Bps Last	Tx-Bps 1m	Rx-Bps Last	Rx-Bps 1m	RX Latency(ms)	Round-Trip Latency(ms)	Jitter	Rx Packet Loss %
cv_tcp-1.1-1.sta0600--1.0.0-A	0 bps	19.317 Mbps	0 bps	0 bps	0	11,965	0	0
cv_tcp-1.1-1.sta0600--1.0.0-B	0 bps	0 bps	19.534 Mbps	11,965	11,965	461	0.353	
cv_tcp-1.1-1.sta0601--1.0.0-A	0 bps	19.172 Mbps	0 bps	0 bps	0	5,227	0	0
cv_tcp-1.1-1.sta0601--1.0.0-B	0 bps	0 bps	19.402 Mbps	5,227	5,227	1,640	0.134	
cv_tcp-1.1-1.sta0602--1.0.0-A	0 bps	16.39 Mbps	0 bps	0 bps	0	3,624	0	0
cv_tcp-1.1-1.sta0602--1.0.0-B	0 bps	0 bps	16.543 Mbps	3,624	3,624	780	0.052	
cv_tcp-1.1-1.sta0800--1.0.1-A	0 bps	16.077 Mbps	0 bps	0 bps	0	12,974	0	0
cv_tcp-1.1-1.sta0800--1.0.1-B	0 bps	0 bps	16.049 Mbps	12,974	12,974	4,895	0.806	
cv_tcp-1.1-1.sta0801--1.0.1-A	0 bps	14.735 Mbps	0 bps	0 bps	0	8,968	0	0
cv_tcp-1.1-1.sta0801--1.0.1-B	0 bps	0 bps	14.896 Mbps	8,968	8,968	1,540	0.405	

cv_tcp-1.1-1.sta0802--1.0.1-A	0 bps	15.023 Mbps	0 bps	0 bps	0	2,608	0	0
cv_tcp-1.1-1.sta0802--1.0.1-B	0 bps	0 bps	0 bps	15.136 Mbps	2,608	2,608	616	0.457

**Multi\_Sta: Run #2 DL Snapshot 2.4Ghz**

Port	Tx-Bps Last	Tx-Bps 1m	Rx-Bps Last	RxBps 1m	Tx-Fail %	Tx-Link-rate	Rx-Link-rate	Mode	Channel	Last CX-Time(ms)	RSSI(dBm)	AP	IP	MAC
1.1.2 sta0600	85.149 Kbps	4.138 Mbps	15.618 Mbps	8.249 Mbps	0.004	144.4 Mbps	144.4 Mbps	802.11bgn	11	39	-36	DC:EF:09:E3:B8:7B	192.168.1.225	04:f0:21:4b:b7:00
1.1.11 sta0601	71.247 Kbps	5.234 Mbps	13.87 Mbps	7.929 Mbps	0.007	144.4 Mbps	144.4 Mbps	802.11bgn	11	77	-37	DC:EF:09:E3:B8:7B	192.168.1.242	04:f0:21:4b:b8:00
1.1.15 sta0602	51.379 Kbps	3.351 Mbps	15.399 Mbps	3.699 Mbps	0.009	144.4 Mbps	144.4 Mbps	802.11bgn	11	231	-37	DC:EF:09:E3:B8:7B	192.168.1.34	04:f0:21:4b:89:00
1.1.16 sta0800	80.399 Kbps	4.651 Mbps	13.992 Mbps	7.731 Mbps	0.172	144.4 Mbps	144.4 Mbps	802.11bgn	11	42	-57	DC:EF:09:E3:B8:7B	192.168.1.21	04:f0:21:36:ce:74
1.1.17 sta0801	9.545 Kbps	3.708 Mbps	2.618 Mbps	981.465 Kbps	0.205	144.4 Mbps	144.4 Mbps	802.11bgn	11	41	-57	DC:EF:09:E3:B8:7B	192.168.1.22	04:f0:21:36:e9:74
1.1.18 sta0802	52.166 Kbps	3.692 Mbps	15.746 Mbps	3.662 Mbps	0.11	130 Mbps	144.4 Mbps	802.11bgn	11	236	-57	DC:EF:09:E3:B8:7B	192.168.1.23	04:f0:21:36:c8:74
1.1.19 sta1000	117.783 Kbps	189.384 Kbps	11.955 Mbps	16.039 Mbps	1.422	130 Mbps	144.4 Mbps	802.11bgn	11	39	-64	DC:EF:09:E3:B8:7B	192.168.1.26	04:f0:21:4b:ba:f9
1.1.20 sta1001	107.728 Kbps	163.52 Kbps	10.991 Mbps	14.801 Mbps	2.76	130 Mbps	144.4 Mbps	802.11bgn	11	277	-65	DC:EF:09:E3:B8:7B	192.168.1.25	04:f0:21:4b:a7:f9
1.1.21 sta1002	101.722 Kbps	165.344 Kbps	9.837 Mbps	14.378 Mbps	1.483	130 Mbps	144.4 Mbps	802.11bgn	11	39	-64	DC:EF:09:E3:B8:7B	192.168.1.27	04:f0:21:4b:a0:f9

<b>Port</b>	<b>Tx-Bps Last</b>	<b>Tx-Bps 1m</b>	<b>Rx-Bps Last</b>	<b>Rx-Bps 1m</b>	<b>Link-Rate</b>	<b>IP</b>	<b>MAC</b>
1.1.1 eth1	104.073 Mbps	109.024 Mbps	548.641 Kbps	3.351 Mbps	1 Gbps	192.168.1.99	00:60:e0:74:74:bc

Endpoint	Tx-Bps Last	Tx-Bps 1m	Rx-Bps Last	Rx-Bps 1m	RX Latency(ms)	Round-Trip Latency(ms)	Jitter	Rx Packet Loss %
cv_tcp-1.1-1.sta0600--1.0.0-A	0 bps	0 bps	12.747 Mbps	8.636 Mbps	31,680	31,680	8,007	35.48
cv_tcp-1.1-1.sta0600--1.0.0-B	6.145 Mbps	13.366 Mbps	0 bps	0 bps	0	31,680	0	0
cv_tcp-1.1-1.sta0601--1.0.0-A	0 bps	0 bps	13.064 Mbps	7.939 Mbps	18,799	18,799	3,723	50.952
cv_tcp-1.1-1.sta0601--1.0.0-B	8.779 Mbps	16.588 Mbps	0 bps	0 bps	0	18,799	0	0
cv_tcp-1.1-1.sta0602--1.0.0-A	0 bps	0 bps	13.246 Mbps	6.975 Mbps	3,155	3,155	98	6.193
cv_tcp-1.1-1.sta0602--1.0.0-B	14.017 Mbps	7.68 Mbps	0 bps	0 bps	0	3,155	0	0
cv_tcp-1.1-1.sta0800--1.0.1-A	0 bps	0 bps	13.365 Mbps	9.161 Mbps	24,233	24,233	5,949	43.608
cv_tcp-1.1-1.sta0800--1.0.1-B	14.924 Mbps	16.202 Mbps	0 bps	0 bps	0	24,233	0	0
cv_tcp-1.1-1.sta0801--1.0.1-A	0 bps	0 bps	11.965 Mbps	2.592 Mbps	1,156	1,156	387	2.194
cv_tcp-1.1-1.sta0801--1.0.1-B	12.285 Mbps	2.808 Mbps	0 bps	0 bps	0	1,156	0	0
cv_tcp-1.1-1.sta0802--1.0.1-A	0 bps	0 bps	12.996 Mbps	6.712 Mbps	3,826	3,826	260	10.653
cv_tcp-1.1-1.sta0802--1.0.1-B	12.618 Mbps	7.673 Mbps	0 bps	0 bps	0	3,826	0	0
cv_tcp-1.1-1.sta1000--1.0.2-A	0 bps	0 bps	12.411 Mbps	17.077 Mbps	16,838	16,838	23,367	0
cv_tcp-1.1-1.sta1000--1.0.2-B	7.896 Mbps	14.329 Mbps	0 bps	0 bps	0	16,838	0	0
cv_tcp-1.1-1.sta1001--1.0.2-A	0 bps	0 bps	11.821 Mbps	17.327 Mbps	24,936	24,936	33,884	0
cv_tcp-1.1-1.sta1001--1.0.2-B	5.957 Mbps	15.088 Mbps	0 bps	0 bps	0	24,936	0	0
cv_tcp-1.1-1.sta1002--1.0.2-A	0 bps	0 bps	6.501 Mbps	16.702 Mbps	11,807	11,807	14,781	0
cv_tcp-1.1-1.sta1002--1.0.2-B	5.248 Mbps	14.745 Mbps	0 bps	0 bps	0	11,807	0	0

**Multi\_Sta: Run #2 UL Snapshot 2.4Ghz**

Port	Tx-Bps Last	Tx-Bps 1m	Rx-Bps Last	RxBps 1m	Tx-Fail %	Tx-Link-Rate	Rx-Link-Rate	Mode	Channel	Last CX-Time(ms)	RSSI(dBm)	AP	IP	MAC
1.1.2 sta0600	21.696 Mbps	12.563 Mbps	191.125 Kbps	7.831 Mbps	0.013	144.4 Mbps	144.4 Mbps	802.11bgn	11	39	-37	DC:EF:09:E3:B8:7B	192.168.1.225	04:f0:21:4b:b7:00
1.1.11 sta0601	22.766 Mbps	21.443 Mbps	204.974 Kbps	187.038 Kbps	0.014	144.4 Mbps	144.4 Mbps	802.11bgn	11	77	-36	DC:EF:09:E3:B8:7B	192.168.1.242	04:f0:21:4b:b8:00
1.1.15 sta0602	23.036 Mbps	14 Mbps	247.405 Kbps	4.467 Mbps	0.011	144.4 Mbps	144.4 Mbps	802.11bgn	11	231	-37	DC:EF:09:E3:B8:7B	192.168.1.34	04:f0:21:4b:89:00
1.1.16 sta0800	18.359 Mbps	17.679 Mbps	119.579 Kbps	119.985 Kbps	0.214	144.4 Mbps	144.4 Mbps	802.11bgn	11	42	-57	DC:EF:09:E3:B8:7B	192.168.1.21	04:f0:21:36:ce:74
1.1.17 sta0801	11.284 Mbps	9.667 Mbps	113.249 Kbps	1.837 Mbps	0.21	144.4 Mbps	144.4 Mbps	802.11bgn	11	41	-57	DC:EF:09:E3:B8:7B	192.168.1.22	04:f0:21:36:e9:74
1.1.18 sta0802	17.484 Mbps	8.199 Mbps	156.641 Kbps	4.587 Mbps	0.088	144.4 Mbps	144.4 Mbps	802.11bgn	11	236	-57	DC:EF:09:E3:B8:7B	192.168.1.23	04:f0:21:36:c8:74
1.1.19 sta1000	1.56 Mbps	1.439 Mbps	20.153 Kbps	4.622 Mbps	5.765	117 Mbps	144.4 Mbps	802.11bgn	11	39	-67	DC:EF:09:E3:B8:7B	192.168.1.26	04:f0:21:4b:ba:f9
1.1.20 sta1001	228.583 Kbps	491.138 Kbps	4.32 Kbps	5.575 Mbps	6.583	130 Mbps	144.4 Mbps	802.11bgn	11	277	-67	DC:EF:09:E3:B8:7B	192.168.1.25	04:f0:21:4b:a7:f9
1.1.21 sta1002	1.476 Mbps	787.1 Kbps	15.019 Kbps	5.275 Mbps	4.946	130 Mbps	144.4 Mbps	802.11bgn	11	39	-66	DC:EF:09:E3:B8:7B	192.168.1.27	04:f0:21:4b:a0:f9

Port	Tx-Bps Last	Tx-Bps 1m	Rx-Bps Last	Rx-Bps 1m	Link-Rate	IP	MAC
1.1.1 eth1	1.098 Mbps	30.105 Mbps	114.844 Mbps	83.236 Mbps	1 Gbps	192.168.1.99	00:60:e0:74:74:bc

B	0 bps	0 bps	20.182 Mbps	20.891 Mbps	5,428	5,428	1,910	0
cv_tcp-1.1-1.sta0601--1.0.0-A	19.398 Mbps	20.738 Mbps	0 bps	0 bps	0	4,776	0	0
cv_tcp-1.1-1.sta0601--1.0.0-B	0 bps	0 bps	20.737 Mbps	20.56 Mbps	4,776	4,776	3,314	0.861
cv_tcp-1.1-1.sta0602--1.0.0-A	19.359 Mbps	20.73 Mbps	0 bps	0 bps	0	11,071	0	0
cv_tcp-1.1-1.sta0602--1.0.0-B	0 bps	0 bps	19.348 Mbps	20.533 Mbps	11,071	11,071	2,689	0
cv_tcp-1.1-1.sta0800--1.0.1-A	14.909 Mbps	17.277 Mbps	0 bps	0 bps	0	12,639	0	0
cv_tcp-1.1-1.sta0800--1.0.1-B	0 bps	0 bps	16.083 Mbps	16.656 Mbps	12,639	12,639	4,075	2.555
cv_tcp-1.1-1.sta0801--1.0.1-A	11.382 Mbps	14.2 Mbps	0 bps	0 bps	0	16,180	0	0
cv_tcp-1.1-1.sta0801--1.0.1-B	0 bps	0 bps	12.708 Mbps	14.128 Mbps	16,180	16,180	520	0
cv_tcp-1.1-1.sta0802--1.0.1-A	14.032 Mbps	15.197 Mbps	0 bps	0 bps	0	2,544	0	0
cv_tcp-1.1-1.sta0802--1.0.1-B	0 bps	0 bps	14.601 Mbps	14.725 Mbps	2,544	2,544	473	2.918
cv_tcp-1.1-1.sta1000--1.0.2-A	2.1 Mbps	1.131 Mbps	0 bps	0 bps	0	29,577	0	0
cv_tcp-1.1-1.sta1000--1.0.2-B	0 bps	0 bps	2.363 Mbps	1.106 Mbps	29,577	29,577	23,851	2.326
cv_tcp-1.1-1.sta1001--1.0.2-A	691.232 Kbps	531.164 Kbps	0 bps	0 bps	0	10,818	0	0
cv_tcp-1.1-1.sta1001--1.0.2-B	0 bps	0 bps	855.192 Kbps	543.956 Kbps	10,818	10,818	3,067	0
cv_tcp-1.1-1.sta1002--1.0.2-A	1.746 Mbps	1.097 Mbps	0 bps	0 bps	0	8,188	0	0
cv_tcp-1.1-1.sta1002--1.0.2-B	0 bps	0 bps	2.317 Mbps	1.093 Mbps	8,188	8,188	1,859	0.781

### Multi\_Sta: Run #0 DL Snapshot 5Ghz

Port	Tx-Bps Last	Tx-Bps 1m	Rx-Bps Last	RxBps 1m	Tx-Fail %	Tx-Link-Rate	Rx-Link-Rate	Mode	Channel	Last CX-Time(ms)	RSSI(dBm)	AP	IP	MAC
1.1.2 sta0400	1.645 Mbps	1.209 Mbps	242.434 Mbps	184.204 Mbps	0.019	866.7 Mbps	866.7 Mbps	802.11an-AC	157	33	-49	DC:EF:09:E3:B8:7D	192.168.1.205	04:f0:21:38:86:f0
1.1.11 sta0401	1.867 Mbps	1.382 Mbps	245.298 Mbps	186.599 Mbps	0.045	866.7 Mbps	866.7 Mbps	802.11an-AC	157	35	-49	DC:EF:09:E3:B8:7D	192.168.1.14	04:f0:21:38:a5:f0
1.1.15 sta0402	1.845 Mbps	1.368 Mbps	241.525 Mbps	181.618 Mbps	0.03	866.7 Mbps	866.7 Mbps	802.11an-AC	157	36	-49	DC:EF:09:E3:B8:7D	192.168.1.233	04:f0:21:38:91:f0

Port	Tx-Bps Last	Tx-Bps 1m	Rx-Bps Last	RxBps 1m	Link-Rate	IP	MAC
1.1.1 eth1	732.221 Mbps	589.227 Mbps	4.064 Mbps	3.23 Mbps	1 Gbps	192.168.1.99	00:60:e0:74:74:bc

Endpoint	Tx-Bps Last	Tx-Bps 1m	Rx-Bps Last	RxBps 1m	RX Latency(ms)	Round-Trip Latency(ms)	Jitter	Rx Packet Loss %
cv_tcp-1.1-1.sta0400--1.0.0-A	0 bps	0 bps	232.771 Mbps	231.985 Mbps	5,287	5,287	3,057	0
cv_tcp-1.1-1.sta0400--1.0.0-B	229.178 Mbps	232.063 Mbps	0 bps	0 bps	0	5,287	0	0
cv_tcp-1.1-1.sta0401--1.0.0-A	0 bps	0 bps	235.858 Mbps	232.286 Mbps	1,265	1,265	263	0
cv_tcp-1.1-1.sta0401--1.0.0-B	234.73 Mbps	231.895 Mbps	0 bps	0 bps	0	1,265	0	0
cv_tcp-1.1-1.sta0402--1.0.0-A	0 bps	0 bps	230.699 Mbps	231.753 Mbps	1,022	1,022	142	0
cv_tcp-1.1-1.sta0402--1.0.0-B	227.723 Mbps	231.719 Mbps	0 bps	0 bps	0	1,022	0	0

### Multi\_Sta: Run #0 UL Snapshot 5Ghz

Port	Tx-Bps Last	Tx-Bps 1m	Rx-Bps Last	RxBps 1m	Tx-Fail %	Tx-Link-Rate	Rx-Link-Rate	Mode	Channel	Last CX-Time(ms)	RSSI(dBm)	AP	IP	MAC
1.1.2 sta0400	282.34 Mbps	195.036 Mbps	2.678 Mbps	72.253 Mbps	0.003	866.7 Mbps	866.7 Mbps	802.11an-AC	157	33	-49	DC:EF:09:E3:B8:7D	192.168.1.205	04:f0:21:38:86:f0
1.1.11 sta0401	277.932 Mbps	187.837 Mbps	2.923 Mbps	74.135 Mbps	0.008	866.7 Mbps	866.7 Mbps	802.11an-AC	157	35	-47	DC:EF:09:E3:B8:7D	192.168.1.14	04:f0:21:38:a5:f0
1.1.15 sta0402	159.081 Mbps	111.199 Mbps	1.881 Mbps	70.752 Mbps	0.008	866.7 Mbps	866.7 Mbps	802.11an-AC	157	36	-49	DC:EF:09:E3:B8:7D	192.168.1.233	04:f0:21:38:91:f0

Port	Tx-Bps Last	Tx-Bps 1m	Rx-Bps Last	RxBps 1m	Link-Rate	IP	MAC
1.1.1 eth1	5.692 Mbps	215.347 Mbps	715.206 Mbps	487.499 Mbps	1 Gbps	192.168.1.99	00:60:e0:74:74:bc

Endpoint	Tx-Bps Last	Tx-Bps 1m	Rx-Bps Last	RxBps 1m	RX Latency(ms)	Round-Trip Latency(ms)	Jitter	Rx Packet Loss %
cv_tcp-1.1-1.sta0400--1.0.0-A	284.231 Mbps	264.035 Mbps	0 bps	0 bps	0	2,228	0	0

cv_tcp-1.1-1.sta0400--1.0.0-B	0 bps	0 bps	289.144 Mbps	264.065 Mbps	2,228	2,228	19	0
cv_tcp-1.1-1.sta0401--1.0.0-A	277.965 Mbps	259.83 Mbps	0 bps	0 bps	0	2,908	0	0
cv_tcp-1.1-1.sta0401--1.0.0-B	0 bps	0 bps	277.17 Mbps	258.967 Mbps	2,908	2,908	384	0.129
cv_tcp-1.1-1.sta0402--1.0.0-A	126.081 Mbps	150.797 Mbps	0 bps	0 bps	0	1,780	0	0
cv_tcp-1.1-1.sta0402--1.0.0-B	0 bps	0 bps	136.679 Mbps	151.25 Mbps	1,780	1,780	180	0

### Multi\_Sta: Run #1 DL Snapshot 5Ghz

Port	Tx-Bps Last	Tx-Bps 1m	Rx-Bps Last	RxBps 1m	Tx-Fail %	Tx-Link-Rate	Rx-Link-Rate	Mode	Channel	Last CX-Time(ms)	RSSI(dBm)	AP	IP	MAC
1.1.2 sta0400	838.231 Kbps	101.304 Mbps	119.3 Mbps	77.888 Mbps	0.01	866.7 Mbps	866.7 Mbps	802.11an-AC	157	33	-50	DC:EF:09:E3:B8:7D	192.168.1.205	04:f0:21:38:86:f0
1.1.11 sta0401	1,264 Mbps	101.017 Mbps	117.138 Mbps	71.381 Mbps	0.019	866.7 Mbps	866.7 Mbps	802.11an-AC	157	35	-49	DC:EF:09:E3:B8:7D	192.168.1.14	04:f0:21:38:a5:f0
1.1.15 sta0402	890.265 Kbps	56.413 Mbps	118.392 Mbps	74.696 Mbps	0.021	780 Mbps	866.7 Mbps	802.11an-AC	157	36	-47	DC:EF:09:E3:B8:7D	192.168.1.233	04:f0:21:38:91:f0
1.1.16 sta0600	433.097 Kbps	276.948 Mbps	61.517 Mbps	34.95 Mbps	1.35	650 Mbps	468 Mbps	802.11an-AC	157	33	-67	DC:EF:09:E3:B8:7D	192.168.1.156	04:f0:21:3a:59:c0
1.1.17 sta0601	595.423 Kbps	346.614 Mbps	59.776 Mbps	35.04 Mbps	2.082	650 Mbps	468 Mbps	802.11an-AC	157	32	-67	DC:EF:09:E3:B8:7D	192.168.1.31	04:f0:21:3a:56:c0
1.1.18 sta0602	480.907 Kbps	280.656 Mbps	62.102 Mbps	36.365 Mbps	1.892	585 Mbps	468 Mbps	802.11an-AC	157	56	-66	DC:EF:09:E3:B8:7D	192.168.1.29	04:f0:21:3a:55:c0

Port	Tx-Bps Last	Tx-Bps 1m	Rx-Bps Last	RxBps 1m	Link-Rate	IP	MAC
1.1.1 eth1	534.164 Mbps	337.097 Mbps	3.332 Mbps	261.585 Mbps	1 Gbps	192.168.1.99	00:60:e0:74:74:bc

Endpoint	Tx-Bps Last	Tx-Bps 1m	Rx-Bps Last	RxBps 1m	RX Latency(ms)	Round-Trip Latency(ms)	Jitter	Rx Packet Loss %
cv_tcp-1.1-1.sta0400--1.0.0-A	0 bps	0 bps	116.589 Mbps	114.549 Mbps	7,042	7,042	3,038	0
cv_tcp-1.1-1.sta0400--1.0.0-B	116.508 Mbps	114.573 Mbps	0 bps	0 bps	0	7,042	0	0
cv_tcp-1.1-1.sta0401--1.0.0-A	0 bps	0 bps	114.493 Mbps	114.344 Mbps	2,033	2,033	46	0
cv_tcp-1.1-1.sta0401--1.0.0-B	114.891 Mbps	114.259 Mbps	0 bps	0 bps	0	2,033	0	0
cv_tcp-1.1-1.sta0402--1.0.0-A	0 bps	0 bps	108.931 Mbps	114.469 Mbps	7,970	7,970	206	0
cv_tcp-1.1-1.sta0402--1.0.0-B	107.839 Mbps	114.432 Mbps	0 bps	0 bps	0	7,970	0	0
cv_tcp-1.1-1.sta0600--1.0.1-A	0 bps	0 bps	58.774 Mbps	58.253 Mbps	6,868	6,868	1,624	0
cv_tcp-1.1-1.sta0600--1.0.1-B	59.838 Mbps	58.436 Mbps	0 bps	0 bps	0	6,868	0	0
cv_tcp-1.1-1.sta0601--1.0.1-A	0 bps	0 bps	59.568 Mbps	58.296 Mbps	4,655	4,655	643	0
cv_tcp-1.1-1.sta0601--1.0.1-B	58.958 Mbps	58.304 Mbps	0 bps	0 bps	0	4,655	0	0
cv_tcp-1.1-1.sta0602--1.0.1-A	0 bps	0 bps	58.247 Mbps	59.798 Mbps	4,158	4,158	1,769	0
cv_tcp-1.1-1.sta0602--1.0.1-B	56.318 Mbps	59.577 Mbps	0 bps	0 bps	0	4,158	0	0

### Multi\_Sta: Run #1 UL Snapshot 5Ghz

Port	Tx-Bps Last	Tx-Bps 1m	Rx-Bps Last	RxBps 1m	Tx-Fail %	Tx-Link-Rate	Rx-Link-Rate	Mode	Channel	Last CX-Time(ms)	RSSI(dBm)	AP	IP	MAC
1.1.2 sta0400	242.558 Mbps	234.594 Mbps	1.314 Mbps	1.428 Mbps	0.009	866.7 Mbps	866.7 Mbps	802.11an-AC	157	33	-48	DC:EF:09:E3:B8:7D	192.168.1.205	04:f0:21:38:86:f0
1.1.11 sta0401	115.802 Mbps	152.417 Mbps	753.513 Mbps	1.186 Mbps	0.023	866.7 Mbps	866.7 Mbps	802.11an-AC	157	35	-49	DC:EF:09:E3:B8:7D	192.168.1.14	04:f0:21:38:a5:f0
1.1.15 sta0402	98.496 Mbps	60.784 Mbps	945.717 Kbps	679.241 Kbps	0.022	866.7 Mbps	866.7 Mbps	802.11an-AC	157	36	-48	DC:EF:09:E3:B8:7D	192.168.1.233	04:f0:21:38:91:f0
1.1.16 sta0600	76.246 Mbps	73.21 Mbps	427.907 Kbps	4.001 Mbps	0.463	650 Mbps	526.6 Mbps	802.11an-AC	157	33	-67	DC:EF:09:E3:B8:7D	192.168.1.156	04:f0:21:3a:59:c0
1.1.17 sta0601	77.703 Mbps	71.925 Mbps	436.839 Kbps	3.976 Mbps	0.519	650 Mbps	526.6 Mbps	802.11an-AC	157	32	-66	DC:EF:09:E3:B8:7D	192.168.1.31	04:f0:21:3a:56:c0
1.1.18 sta0602	38.523 Mbps	33.424 Mbps	245.352 Kbps	235.086 Kbps	0.867	650 Mbps	526.6 Mbps	802.11an-AC	157	56	-67	DC:EF:09:E3:B8:7D	192.168.1.29	04:f0:21:3a:55:c0

Port	Tx-Bps Last	Tx-Bps 1m	Rx-Bps Last	RxBps 1m	Link-Rate	IP	MAC
1.1.1 eth1	4.211 Mbps	7.736 Mbps	634.44 Mbps	609.262 Mbps	1 Gbps	192.168.1.99	00:60:e0:74:74:bc

Endpoint	Tx-Bps Last	Tx-Bps 1m	Rx-Bps Last	RxBps 1m	RX Latency(ms)	Round-Trip Latency(ms)	Jitter	Rx Packet Loss %
cv_tcp-1.1-1.sta0400--1.0.0-A	203.206 Mbps	226.363 Mbps	0 bps	0 bps	0	5,471	0	0

cv_tcp-1.1-1.sta0400--1.0.0-B	0 bps	0 bps	200.108 Mbps	226.742 Mbps	5,471	5,471	968	2.973
cv_tcp-1.1-1.sta0401--1.0.0-A	116.234 Mbps	143.531 Mbps	0 bps	0 bps	0	5,133	0	0
cv_tcp-1.1-1.sta0401--1.0.0-B	0 bps	0 bps	107.649 Mbps	143.412 Mbps	5,133	5,133	2,169	0.424
cv_tcp-1.1-1.sta0402--1.0.0-A	101.265 Mbps	62.588 Mbps	0 bps	0 bps	0	1,450	0	0
cv_tcp-1.1-1.sta0402--1.0.0-B	0 bps	0 bps	100.244 Mbps	62.285 Mbps	1,450	1,450	199	0
cv_tcp-1.1-1.sta0600--1.0.1-A	71.35 Mbps	69.402 Mbps	0 bps	0 bps	0	6,290	0	0
cv_tcp-1.1-1.sta0600--1.0.1-B	0 bps	0 bps	73.555 Mbps	69.992 Mbps	6,290	6,290	3,543	0.334
cv_tcp-1.1-1.sta0601--1.0.1-A	60.313 Mbps	69.607 Mbps	0 bps	0 bps	0	5,097	0	0
cv_tcp-1.1-1.sta0601--1.0.1-B	0 bps	0 bps	70.244 Mbps	70.408 Mbps	5,097	5,097	1,293	0.158
cv_tcp-1.1-1.sta0602--1.0.1-A	53.588 Mbps	35.858 Mbps	0 bps	0 bps	0	1,504	0	0
cv_tcp-1.1-1.sta0602--1.0.1-B	0 bps	0 bps	49.686 Mbps	35.4 Mbps	1,504	1,504	49	0

### Multi\_Sta: Run #2 DL Snapshot 5Ghz

Port	Tx-Bps Last	Tx-Bps 1m	Rx-Bps Last	RxBps 1m	Tx-Fail %	Tx-Link-Rate	Rx-Link-Rate	Mode	Channel	Last CX-Time(ms)	RSSI(dBm)	AP	IP	MAC
1.1.2 sta0400 Kbps	842.085 Mbps	34.074 Mbps	104.983 Mbps	67.055 Mbps	0.009	866.7 Mbps	866.7 Mbps	802.11an-AC	157	33	-49	DC:EF:09:E3:B8:7D	192.168.1.205	04:f0:21:38:86:f0
1.1.11 sta0401 Kbps	899.315 Mbps	17.546 Mbps	114.367 Mbps	72.25 Mbps	0.024	866.7 Mbps	866.7 Mbps	802.11an-AC	157	35	-48	DC:EF:09:E3:B8:7D	192.168.1.14	04:f0:21:38:a5:f0
1.1.15 sta0402 Kbps	912.015 Mbps	15.096 Mbps	115.42 Mbps	72.525 Mbps	0.025	866.7 Mbps	866.7 Mbps	802.11an-AC	157	36	-47	DC:EF:09:E3:B8:7D	192.168.1.233	04:f0:21:38:91:f0
1.1.16 sta0600 Kbps	281.459 Mbps	14.777 Mbps	43.974 Mbps	36.834 Mbps	1.223	585 Mbps	468 Mbps	802.11an-AC	157	33	-67	DC:EF:09:E3:B8:7D	192.168.1.156	04:f0:21:3a:59:c0
1.1.17 sta0601 Kbps	298.894 Mbps	15.302 Mbps	41.954 Mbps	32.492 Mbps	1.471	585 Mbps	468 Mbps	802.11an-AC	157	32	-65	DC:EF:09:E3:B8:7D	192.168.1.31	04:f0:21:3a:56:c0
1.1.18 sta0602 Kbps	365.641 Mbps	7.516 Mbps	64.32 Mbps	42.094 Mbps	2.856	585 Mbps	468 Mbps	802.11an-AC	157	56	-66	DC:EF:09:E3:B8:7D	192.168.1.29	04:f0:21:3a:55:c0
1.1.19 sta0800 Kbps	2.171 Mbps	5.612 Mbps	390.533 Mbps	1.018 Mbps	44.589	175.5 Mbps	351 Mbps	802.11an-AC	157	36	-75	DC:EF:09:E3:B8:7D	192.168.1.32	04:f0:21:3a:6a:c1
1.1.20 sta0801 Kbps	21.3 Mbps	130.957 Mbps	3.734 Mbps	25.512 Mbps	31.969	195.1 Mbps	351 Mbps	802.11an-AC	157	35	-78	DC:EF:09:E3:B8:7D	192.168.1.35	04:f0:21:3a:56:c1
1.1.21 sta0802 Kbps	7.109 Mbps	23.291 Mbps	1.198 Mbps	4.41 Mbps	36.79	234 Mbps	351 Mbps	802.11an-AC	157	34	-79	DC:EF:09:E3:B8:7D	192.168.1.30	04:f0:21:3a:64:c1

Port	Tx-Bps Last	Tx-Bps 1m	Rx-Bps Last	RxBps 1m	Link-Rate	IP	MAC
1.1.1 eth1	512.655 Mbps	345.037 Mbps	2.841 Mbps	120.07 Mbps	1 Gbps	192.168.1.99	00:60:e0:74:74:bc

Endpoint	Tx-Bps Last	Tx-Bps 1m	Rx-Bps Last	RxBps 1m	RX Latency(ms)	Round-Trip Latency(ms)	Jitter	Rx Packet Loss %
cv_tcp-1.1-1.sta0400--1.0.0-A	0 bps	0 bps	108.343 Mbps	76.531 Mbps	6,016	6,016	913	0
cv_tcp-1.1-1.sta0400--1.0.0-B	107.587 Mbps	76.212 Mbps	0 bps	0 bps	0	6,016	0	0
cv_tcp-1.1-1.sta0401--1.0.0-A	0 bps	0 bps	114.819 Mbps	83.97 Mbps	3,021	3,021	1,060	0
cv_tcp-1.1-1.sta0401--1.0.0-B	115.354 Mbps	83.862 Mbps	0 bps	0 bps	0	3,021	0	0
cv_tcp-1.1-1.sta0402--1.0.0-A	0 bps	0 bps	108.29 Mbps	85.759 Mbps	2,228	2,228	626	0
cv_tcp-1.1-1.sta0402--1.0.0-B	114.205 Mbps	86.088 Mbps	0 bps	0 bps	0	2,228	0	0
cv_tcp-1.1-1.sta0600--1.0.1-A	0 bps	0 bps	44.644 Mbps	46.505 Mbps	12,359	12,359	2,476	0
cv_tcp-1.1-1.sta0600--1.0.1-B	44.639 Mbps	46.826 Mbps	0 bps	0 bps	0	12,359	0	0
cv_tcp-1.1-1.sta0601--1.0.1-A	0 bps	0 bps	44.83 Mbps	40.017 Mbps	9,060	9,060	3,205	0.27
cv_tcp-1.1-1.sta0601--1.0.1-B	45.651 Mbps	40.096 Mbps	0 bps	0 bps	0	9,060	0	0
cv_tcp-1.1-1.sta0602--1.0.1-A	0 bps	0 bps	61.571 Mbps	49.934 Mbps	5,617	5,617	4,476	0.184
cv_tcp-1.1-1.sta0602--1.0.1-B	63.21 Mbps	50.42 Mbps	0 bps	0 bps	0	5,617	0	0
cv_tcp-1.1-1.sta0800--1.0.2-A	0 bps	0 bps	0 bps	1.464 Mbps	1,224	1,224	4,834	1.198
cv_tcp-1.1-1.sta0800--1.0.2-B	0 bps	1.474 Mbps	0 bps	0 bps	0	1,224	0	0
cv_tcp-1.1-1.sta0801--1.0.2-A	0 bps	0 bps	463.981 Kbps	29.004 Mbps	11,127	11,127	4,961	1.196
cv_tcp-1.1-1.sta0801--1.0.2-B	875.272 Kbps	29.626 Mbps	0 bps	0 bps	0	11,127	0	0
cv_tcp-1.1-1.sta0802--1.0.2-A	0 bps	0 bps	2.393 Mbps	1.08 Mbps	23,208	23,208	2,952	11.842

cv_tcp-1.1-1.sta0802--1.0.2-B	1.751 Mbps	1.198 Mbps	0 bps	0 bps	0	23,208	0	0
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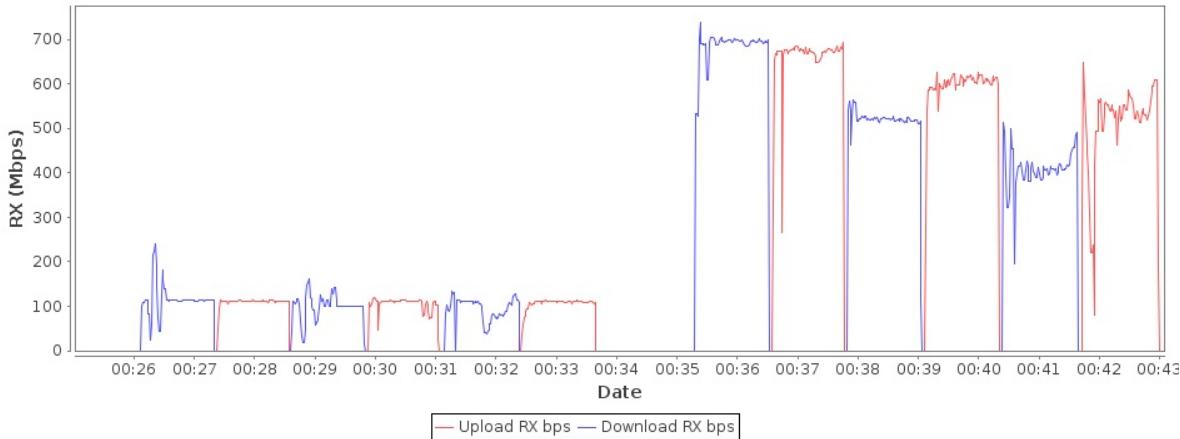
### Multi\_Sta: Run #2 UL Snapshot 5Ghz

Port	Tx-Bps Last	Tx-Bps 1m	Rx-Bps Last	RxBps 1m	Tx-Fail %	Tx-Link-Rate	Rx-Link-Rate	Mode	Channel	Last CX-Time(ms)	RSSI(dBm)	AP	IP	MAC
1.1.2 sta0400	173.742 Mbps	115.639 Mbps	993.32 Kbps	26.53 Mbps	0.018	866.7 Mbps	780 Mbps	802.11an-AC	157	33	-47	DC:EF:09:E3:B8:7D	192.168.1.205	04:f0:21:38:86:f0
1.1.11 sta0401	192.02 Mbps	107.484 Mbps	1.126 Mbps	29.014 Mbps	0.024	866.7 Mbps	866.7 Mbps	802.11an-AC	157	35	-48	DC:EF:09:E3:B8:7D	192.168.1.14	04:f0:21:38:a5:f0
1.1.15 sta0402	91.99 Mbps	35.874 Mbps	816.012 Kbps	29.705 Mbps	0.031	866.7 Mbps	866.7 Mbps	802.11an-AC	157	36	-48	DC:EF:09:E3:B8:7D	192.168.1.233	04:f0:21:38:91:f0
1.1.16 sta0600	82.495 Mbps	44.108 Mbps	422.158 Kbps	15.929 Mbps	0.962	650 Mbps	468 Mbps	802.11an-AC	157	33	-67	DC:EF:09:E3:B8:7D	192.168.1.156	04:f0:21:3a:59:c0
1.1.17 sta0601	16.015 Mbps	31.867 Mbps	118.332 Kbps	12.83 Mbps	1.328	650 Mbps	468 Mbps	802.11an-AC	157	32	-66	DC:EF:09:E3:B8:7D	192.168.1.31	04:f0:21:3a:56:c0
1.1.18 sta0602	34.06 Mbps	14.631 Mbps	218.422 Kbps	16.77 Mbps	2.23	650 Mbps	526.6 Mbps	802.11an-AC	157	56	-67	DC:EF:09:E3:B8:7D	192.168.1.29	04:f0:21:3a:55:c0
1.1.19 sta0800	7.914 Mbps	6.242 Mbps	71.354 Kbps	146.59 Mbps	3.362	175.6 Mbps	351 Mbps	802.11an-AC	157	36	-74	DC:EF:09:E3:B8:7D	192.168.1.32	04:f0:21:3a:6a:c1
1.1.20 sta0801	9.344 Mbps	8.989 Mbps	79.972 Kbps	6.366 Mbps	8.607	234 Mbps	234 Mbps	802.11an-AC	157	35	-74	DC:EF:09:E3:B8:7D	192.168.1.35	04:f0:21:3a:56:c1
1.1.21 sta0802	6.246 Mbps	8.257 Mbps	53.967 Kbps	389.105 Kbps	4.218	195.1 Mbps	351 Mbps	802.11an-AC	157	34	-74	DC:EF:09:E3:B8:7D	192.168.1.30	04:f0:21:3a:64:c1

Port	Tx-Bps Last	Tx-Bps 1m	Rx-Bps Last	RxBps 1m	Link-Rate	IP	MAC
1.1.1 eth1	4.292 Mbps	140.896 Mbps	615.416 Mbps	365.175 Mbps	1 Gbps	192.168.1.99	00:60:e0:74:74:bc

Endpoint	Tx-Bps Last	Tx-Bps 1m	Rx-Bps Last	RxBps 1m	Link-Rate	RX Latency(ms)	Round-Trip Latency(ms)	Jitter	Rx Packet Loss %
cv_tcp-1.1-1.sta0400--1.0.0-A	142.622 Mbps	186.038 Mbps	0 bps	0 bps	0	6,372		0	0
cv_tcp-1.1-1.sta0400--1.0.0-B	0 bps	0 bps	141.858 Mbps	176.85 Mbps	6,372	6,372		1,807	3.256
cv_tcp-1.1-1.sta0401--1.0.0-A	167.083 Mbps	157.16 Mbps	0 bps	0 bps	0	3,587		0	0
cv_tcp-1.1-1.sta0401--1.0.0-B	0 bps	0 bps	170.852 Mbps	161.65 Mbps	3,587	3,587		3,550	0
cv_tcp-1.1-1.sta0402--1.0.0-A	130.411 Mbps	57.726 Mbps	0 bps	0 bps	0	624		0	0
cv_tcp-1.1-1.sta0402--1.0.0-B	0 bps	0 bps	118.861 Mbps	58.232 Mbps	624	624		185	0.548
cv_tcp-1.1-1.sta0600--1.0.1-A	82.579 Mbps	59.459 Mbps	0 bps	0 bps	0	3,251		0	0
cv_tcp-1.1-1.sta0600--1.0.1-B	0 bps	0 bps	89.488 Mbps	58.201 Mbps	3,251	3,251		2,603	4.69
cv_tcp-1.1-1.sta0601--1.0.1-A	18.473 Mbps	40.366 Mbps	0 bps	0 bps	0	26,855		0	0
cv_tcp-1.1-1.sta0601--1.0.1-B	0 bps	0 bps	17.3 Mbps	43.91 Mbps	26,855	26,855		15,441	0
cv_tcp-1.1-1.sta0602--1.0.1-A	59.698 Mbps	23.625 Mbps	0 bps	0 bps	0	1,410		0	0
cv_tcp-1.1-1.sta0602--1.0.1-B	0 bps	0 bps	58.681 Mbps	23.024 Mbps	1,410	1,410		367	0.395
cv_tcp-1.1-1.sta0800--1.0.2-A	0 bps	8.397 Mbps	0 bps	0 bps	0	2,121		0	0
cv_tcp-1.1-1.sta0800--1.0.2-B	0 bps	0 bps	0 bps	8.428 Mbps	2,121	2,121		1,778	1.111
cv_tcp-1.1-1.sta0801--1.0.2-A	0 bps	9.101 Mbps	0 bps	0 bps	0	8,843		0	0
cv_tcp-1.1-1.sta0801--1.0.2-B	0 bps	0 bps	0 bps	9.309 Mbps	8,843	8,843		2,023	1.572
cv_tcp-1.1-1.sta0802--1.0.2-A	0 bps	9.088 Mbps	0 bps	0 bps	0	8,589		0	0
cv_tcp-1.1-1.sta0802--1.0.2-B	0 bps	0 bps	0 bps	9.211 Mbps	8,589	8,589		3,173	0.462

## Realtime Throughput for: 6.4.1 Multiple STAs Performance Test



## 6.4.2 Multiple Association / Disassociation Stability Test

### Summary

Multiple association / disassociation stability test intends to measure stability of Wi-Fi device under a dynamic environment with frequent change of connection status.

### Test Procedure

These steps are done for 2.4Ghz and 5Ghz.

1. Configure the system to emulate a 2-meter distance.
2. Establish the LAN connection, create 16 stations and associate all 16 to the DUT.
3. 8 STAs are picked for sending/receiving packets while the other 8 STAs are picked to do a dis-association/re-association process during the test.
4. Enable downlink UDP flow (4 Mbps @2.4GHz and 8 Mbps @5GHz) from DUT to each of the 8 traffic stations.
5. Continue monitoring the traffic flow of each STA by recording the UDP flow rate every second.
6. Disassociate the other 8 stations. Wait for 30 seconds. Re-associate the STAs simultaneously.

### Pass/Fail Criteria

The disassociation/association does not affect the performance of other peer STAs:

1. Error-free UDP traffic rate is at least 99% of the configured rate for each STA.  
The user may configure this to a lower percentage.

## 6.4.2 Multiple Association / Disassociation Stability Test Results

Type	Result	Notes
2.4Ghz CX: cv_udp-1.1-1.sta0600--1.0.0 Steady-State	PASS	Requires: 3.96 Mbps Reported: 4.00 Mbps
2.4Ghz CX: cv_udp-1.1-1.sta0601--1.0.0 Steady-State	PASS	Requires: 3.96 Mbps Reported: 4.00 Mbps
2.4Ghz CX: cv_udp-1.1-1.sta0602--1.0.0 Steady-State	PASS	Requires: 3.96 Mbps Reported: 4.01 Mbps
2.4Ghz CX: cv_udp-1.1-1.sta0603--1.0.0 Steady-State	PASS	Requires: 3.96 Mbps Reported: 4.00 Mbps
2.4Ghz CX: cv_udp-1.1-1.sta0604--1.0.0 Steady-State	PASS	Requires: 3.96 Mbps Reported: 4.00 Mbps
2.4Ghz CX: cv_udp-1.1-1.sta0605--1.0.0 Steady-State	PASS	Requires: 3.96 Mbps Reported: 4.00 Mbps
2.4Ghz CX: cv_udp-1.1-1.sta0606--1.0.0 Steady-State	PASS	Requires: 3.96 Mbps Reported: 4.00 Mbps
2.4Ghz CX: cv_udp-1.1-1.sta0607--1.0.0 Steady-State	PASS	Requires: 3.96 Mbps Reported: 4.01 Mbps
2.4Ghz CX: cv_udp-1.1-1.sta0600--1.0.0 Stations-Down	PASS	Requires: 3.96 Mbps Reported: 3.99 Mbps
2.4Ghz CX: cv_udp-1.1-1.sta0601--1.0.0 Stations-Down	PASS	Requires: 3.96 Mbps Reported: 4.00 Mbps
2.4Ghz CX: cv_udp-1.1-1.sta0602--1.0.0 Stations-Down	PASS	Requires: 3.96 Mbps Reported: 4.01 Mbps
2.4Ghz CX: cv_udp-1.1-1.sta0603--1.0.0 Stations-Down	PASS	Requires: 3.96 Mbps Reported: 4.01 Mbps
2.4Ghz CX: cv_udp-1.1-1.sta0604--1.0.0 Stations-Down	PASS	Requires: 3.96 Mbps Reported: 4.00 Mbps
2.4Ghz CX: cv_udp-1.1-1.sta0605--1.0.0 Stations-Down	PASS	Requires: 3.96 Mbps Reported: 4.00 Mbps
2.4Ghz CX: cv_udp-1.1-1.sta0606--1.0.0 Stations-Down	PASS	Requires: 3.96 Mbps Reported: 4.01 Mbps
2.4Ghz CX: cv_udp-1.1-1.sta0607--1.0.0 Stations-Down	PASS	Requires: 3.96 Mbps Reported: 4.00 Mbps
2.4Ghz CX: cv_udp-1.1-1.sta0600--1.0.0 Stations-Up	PASS	Requires: 3.96 Mbps Reported: 4.01 Mbps
2.4Ghz CX: cv_udp-1.1-1.sta0601--1.0.0 Stations-Up	PASS	Requires: 3.96 Mbps Reported: 4.01 Mbps
2.4Ghz CX: cv_udp-1.1-1.sta0602--1.0.0 Stations-Up	PASS	Requires: 3.96 Mbps Reported: 3.99 Mbps
2.4Ghz CX: cv_udp-1.1-1.sta0603--1.0.0 Stations-Up	PASS	Requires: 3.96 Mbps Reported: 4.01 Mbps
2.4Ghz CX: cv_udp-1.1-1.sta0604--1.0.0 Stations-Up	PASS	Requires: 3.96 Mbps Reported: 4.00 Mbps
2.4Ghz CX: cv_udp-1.1-1.sta0605--1.0.0 Stations-Up	PASS	Requires: 3.96 Mbps Reported: 4.00 Mbps
2.4Ghz CX: cv_udp-1.1-1.sta0606--1.0.0 Stations-Up	PASS	Requires: 3.96 Mbps Reported: 3.99 Mbps
2.4Ghz CX: cv_udp-1.1-1.sta0607--1.0.0 Stations-Up	PASS	Requires: 3.96 Mbps Reported: 3.99 Mbps
Assoc/Disassoc 2.4Ghz	PASS	

5Ghz CX: cv_udp-1.1-1.sta0400--1.0.0 Steady-State	PASS	Requires: 7.92 Mbps Reported: 8.01 Mbps
5Ghz CX: cv_udp-1.1-1.sta0401--1.0.0 Steady-State	PASS	Requires: 7.92 Mbps Reported: 7.99 Mbps
5Ghz CX: cv_udp-1.1-1.sta0402--1.0.0 Steady-State	PASS	Requires: 7.92 Mbps Reported: 8.01 Mbps
5Ghz CX: cv_udp-1.1-1.sta0403--1.0.0 Steady-State	PASS	Requires: 7.92 Mbps Reported: 8.00 Mbps
5Ghz CX: cv_udp-1.1-1.sta0404--1.0.0 Steady-State	PASS	Requires: 7.92 Mbps Reported: 8.00 Mbps
5Ghz CX: cv_udp-1.1-1.sta0405--1.0.0 Steady-State	PASS	Requires: 7.92 Mbps Reported: 7.99 Mbps
5Ghz CX: cv_udp-1.1-1.sta0406--1.0.0 Steady-State	PASS	Requires: 7.92 Mbps Reported: 8.00 Mbps
5Ghz CX: cv_udp-1.1-1.sta0407--1.0.0 Steady-State	PASS	Requires: 7.92 Mbps Reported: 8.01 Mbps
5Ghz CX: cv_udp-1.1-1.sta0400--1.0.0 Stations-Down	PASS	Requires: 7.92 Mbps Reported: 8.00 Mbps
5Ghz CX: cv_udp-1.1-1.sta0401--1.0.0 Stations-Down	PASS	Requires: 7.92 Mbps Reported: 8.01 Mbps
5Ghz CX: cv_udp-1.1-1.sta0402--1.0.0 Stations-Down	PASS	Requires: 7.92 Mbps Reported: 7.97 Mbps
5Ghz CX: cv_udp-1.1-1.sta0403--1.0.0 Stations-Down	PASS	Requires: 7.92 Mbps Reported: 8.01 Mbps
5Ghz CX: cv_udp-1.1-1.sta0404--1.0.0 Stations-Down	PASS	Requires: 7.92 Mbps Reported: 8.00 Mbps
5Ghz CX: cv_udp-1.1-1.sta0405--1.0.0 Stations-Down	PASS	Requires: 7.92 Mbps Reported: 7.99 Mbps
5Ghz CX: cv_udp-1.1-1.sta0406--1.0.0 Stations-Down	PASS	Requires: 7.92 Mbps Reported: 7.99 Mbps
5Ghz CX: cv_udp-1.1-1.sta0407--1.0.0 Stations-Down	PASS	Requires: 7.92 Mbps Reported: 8.01 Mbps
5Ghz CX: cv_udp-1.1-1.sta0400--1.0.0 Stations-Up	PASS	Requires: 7.92 Mbps Reported: 7.98 Mbps
5Ghz CX: cv_udp-1.1-1.sta0401--1.0.0 Stations-Up	PASS	Requires: 7.92 Mbps Reported: 8.00 Mbps
5Ghz CX: cv_udp-1.1-1.sta0402--1.0.0 Stations-Up	PASS	Requires: 7.92 Mbps Reported: 8.02 Mbps
5Ghz CX: cv_udp-1.1-1.sta0403--1.0.0 Stations-Up	PASS	Requires: 7.92 Mbps Reported: 8.00 Mbps
5Ghz CX: cv_udp-1.1-1.sta0404--1.0.0 Stations-Up	PASS	Requires: 7.92 Mbps Reported: 8.02 Mbps
5Ghz CX: cv_udp-1.1-1.sta0405--1.0.0 Stations-Up	PASS	Requires: 7.92 Mbps Reported: 8.00 Mbps
5Ghz CX: cv_udp-1.1-1.sta0406--1.0.0 Stations-Up	PASS	Requires: 7.92 Mbps Reported: 7.99 Mbps
5Ghz CX: cv_udp-1.1-1.sta0407--1.0.0 Stations-Up	PASS	Requires: 7.92 Mbps Reported: 8.00 Mbps
Assoc/Disassoc 5Ghz	PASS	

### Assoc/Disassoc: Snapshot 2.4Ghz

Port	Tx-Bps Last	Tx-Bps 1m	Rx-Bps Last	RxBps 1m	Tx-Fail %	Tx-Link-Rate	Rx-Link-Rate	Mode	Channel	Last CX-Time(ms)	RSSI(dBm)	AP	IP	MAC
1.1.2 sta0600	95 bps	32 bps	4.113 Mbps	4.115 Mbps	0	43.3 Mbps	144.4 Mbps	802.11bgn	11	51	-30	DC:EF:09:E3:B8:7B	192.168.1.224	04:f0:21:4b:a4:00
1.1.11 sta0601	91 bps	25 bps	4.116 Mbps	4.115 Mbps	0	43.3 Mbps	144.4 Mbps	802.11bgn	11	750	-30	DC:EF:09:E3:B8:7B	192.168.1.226	04:f0:21:4b:85:00
1.1.15 sta0602	0 bps	31 bps	4.114 Mbps	4.115 Mbps	0	57.8 Mbps	144.4 Mbps	802.11bgn	11	42	-30	DC:EF:09:E3:B8:7B	192.168.1.136	04:f0:21:4b:b9:00
1.1.16 sta0603	0 bps	31 bps	4.115 Mbps	4.115 Mbps	0	57.8 Mbps	144.4 Mbps	802.11bgn	11	42	-30	DC:EF:09:E3:B8:7B	192.168.1.48	04:f0:21:4b:9e:00
1.1.17 sta0604	0 bps	24 bps	4.116 Mbps	4.115 Mbps	0	57.8 Mbps	144.4 Mbps	802.11bgn	11	54	-30	DC:EF:09:E3:B8:7B	192.168.1.100	04:f0:21:4b:a7:00
1.1.18 sta0605	0 bps	24 bps	4.115 Mbps	4.115 Mbps	0	57.8 Mbps	144.4 Mbps	802.11bgn	11	47	-30	DC:EF:09:E3:B8:7B	192.168.1.38	04:f0:21:4b:8f:00
1.1.19 sta0606	0 bps	25 bps	4.115 Mbps	4.116 Mbps	0	43.3 Mbps	144.4 Mbps	802.11bgn	11	45	-30	DC:EF:09:E3:B8:7B	192.168.1.239	04:f0:21:4b:96:00
1.1.20 sta0607	0 bps	25 bps	4.113 Mbps	4.115 Mbps	0	57.8 Mbps	144.4 Mbps	802.11bgn	11	45	-30	DC:EF:09:E3:B8:7B	192.168.1.92	04:f0:21:4b:95:00
1.1.21 sta0608	0 bps	135 bps	1.152 Kbps	0	28.9 Mbps	78 Mbps	802.11bgn	11	44	-32	DC:EF:09:E3:B8:7B	192.168.1.17	04:f0:21:4b:8e:00	
1.1.22 sta0609	0 bps	141 bps	75 bps	1.143 Kbps	0	28.9 Mbps	78 Mbps	802.11bgn	11	42	-32	DC:EF:09:E3:B8:7B	192.168.1.231	04:f0:21:4b:a8:00
1.1.23 sta0610	0 bps	140 bps	75 bps	1.03 Kbps	0	28.9 Mbps	78 Mbps	802.11bgn	11	53	-32	DC:EF:09:E3:B8:7B	192.168.1.138	04:f0:21:4b:8d:00
1.1.24 sta0611	0 bps	140 bps	75 bps	1.156 Kbps	0	28.9 Mbps	78 Mbps	802.11bgn	11	47	-32	DC:EF:09:E3:B8:7B	192.168.1.201	04:f0:21:4b:ad:00
1.1.25 sta0612	0 bps	140 bps	75 bps	1.12 Kbps	0	28.9 Mbps	78 Mbps	802.11bgn	11	59	-32	DC:EF:09:E3:B8:7B	192.168.1.227	04:f0:21:4b:87:00
1.1.26 sta0613	0 bps	140 bps	76 bps	1.106 Kbps	0	43.3 Mbps	78 Mbps	802.11bgn	11	46	-32	DC:EF:09:E3:B8:7B	192.168.1.229	04:f0:21:4b:90:00
1.1.27 sta0614	0 bps	140 bps	76 bps	1.098 Kbps	0	28.9 Mbps	78 Mbps	802.11bgn	11	50	-32	DC:EF:09:E3:B8:7B	192.168.1.116	04:f0:21:4b:a2:00
1.1.28 sta0615	0 bps	140 bps	76 bps	1.059 Kbps	0	43.3 Mbps	78 Mbps	802.11bgn	11	49	-32	DC:EF:09:E3:B8:7B	192.168.1.115	04:f0:21:4b:b6:00

Port Tx-Bps Last Tx-Bps 1m Rx-Bps Last Rx-Bps 1m Link-Rate IP MAC

Endpoint	Tx-Bps Last	Tx-Bps 1m	Rx-Bps Last	Rx-Bps 1m	RX Latency(ms)	Round-Trip Latency(ms)	Jitter	Rx Packet Loss %
cv_udp-1.1-1.sta0600--1.0.0-A	0 bps	0 bps	4.008 Mbps	4 Mbps	6	6	3	0.004
cv_udp-1.1-1.sta0600--1.0.0-B	3.999 Mbps	4 Mbps	0 bps	0 bps	0	6	0	0
cv_udp-1.1-1.sta0601--1.0.0-A	0 bps	0 bps	4.007 Mbps	4 Mbps	6	6	3	0
cv_udp-1.1-1.sta0601--1.0.0-B	3.999 Mbps	4 Mbps	0 bps	0 bps	0	6	0	0
cv_udp-1.1-1.sta0602--1.0.0-A	0 bps	0 bps	3.992 Mbps	4 Mbps	6	6	2	0
cv_udp-1.1-1.sta0602--1.0.0-B	4 Mbps	4 Mbps	0 bps	0 bps	0	6	0	0
cv_udp-1.1-1.sta0603--1.0.0-A	0 bps	0 bps	4.008 Mbps	4 Mbps	6	6	2	0
cv_udp-1.1-1.sta0603--1.0.0-B	3.995 Mbps	4 Mbps	0 bps	0 bps	0	6	0	0
cv_udp-1.1-1.sta0604--1.0.0-A	0 bps	0 bps	4.002 Mbps	4 Mbps	6	6	3	0.002
cv_udp-1.1-1.sta0604--1.0.0-B	3.998 Mbps	4 Mbps	0 bps	0 bps	0	6	0	0
cv_udp-1.1-1.sta0605--1.0.0-A	0 bps	0 bps	3.998 Mbps	4 Mbps	6	6	3	0
cv_udp-1.1-1.sta0605--1.0.0-B	4.002 Mbps	4 Mbps	0 bps	0 bps	0	6	0	0
cv_udp-1.1-1.sta0606--1.0.0-A	0 bps	0 bps	3.987 Mbps	4 Mbps	6	6	3	0
cv_udp-1.1-1.sta0606--1.0.0-B	4.004 Mbps	4 Mbps	0 bps	0 bps	0	6	0	0

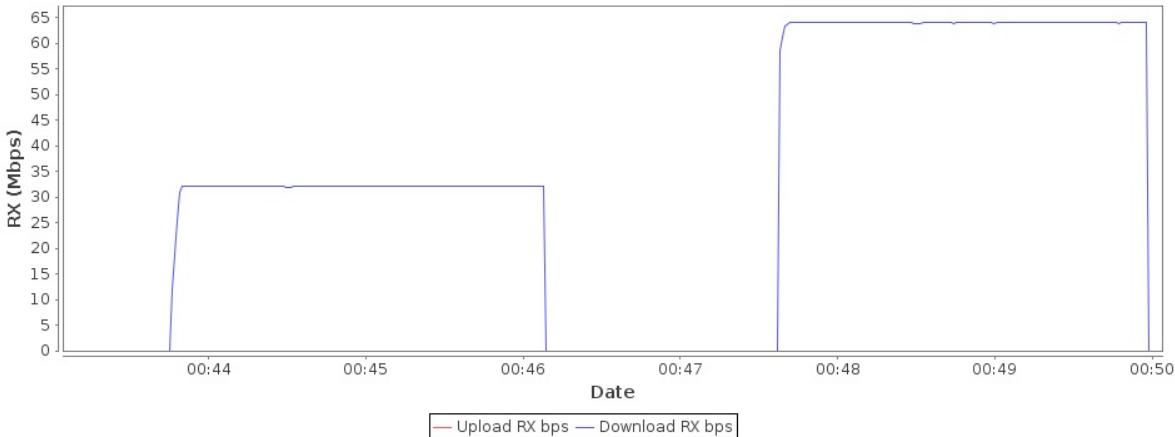
cv_udp-1.1-1.sta0607--1.0.0-A	0 bps	0 bps	3.991 Mbps	4 Mbps	6		2	0.008
cv_udp-1.1-1.sta0607--1.0.0-B	4.004 Mbps	4 Mbps	0 bps	0 bps	0	6	0	0

### Assoc/Disassoc: Snapshot 5Ghz

Port	Tx-Bps Last	Tx-Bps 1m	Rx-Bps Last	RxBps 1m	Tx-Fail %	Tx-Link-Rate	Rx-Link-Rate	Mode	Channel	Last CX-Time(ms)	RSSI(dBm)	AP	IP	MAC
1.1.2 sta0400	0 bps	22 bps	8.23 Mbps	8.227 Mbps	0	260 Mbps	866.7 Mbps	802.11an-AC	157	32	-46	DC:EF:09:E3:B8:7D	192.168.1.236	04:f0:21:38:97:f0
1.1.34 sta0401	0 bps	27 bps	8.219 Mbps	8.227 Mbps	0	260 Mbps	866.7 Mbps	802.11an-AC	157	32	-45	DC:EF:09:E3:B8:7D	192.168.1.135	04:f0:21:38:b2:f0
1.1.45 sta0402	0 bps	27 bps	8.225 Mbps	8.226 Mbps	0	260 Mbps	866.7 Mbps	802.11an-AC	157	34	-46	DC:EF:09:E3:B8:7D	192.168.1.210	04:f0:21:38:89:f0
1.1.47 sta0403	0 bps	22 bps	8.219 Mbps	8.227 Mbps	0	260 Mbps	866.7 Mbps	802.11an-AC	157	112	-45	DC:EF:09:E3:B8:7D	192.168.1.188	04:f0:21:38:99:f0
1.1.48 sta0404	0 bps	22 bps	8.229 Mbps	8.226 Mbps	0	260 Mbps	866.7 Mbps	802.11an-AC	157	33	-45	DC:EF:09:E3:B8:7D	192.168.1.17	04:f0:21:38:a8:f0
1.1.49 sta0405	0 bps	22 bps	8.226 Mbps	8.227 Mbps	0	260 Mbps	866.7 Mbps	802.11an-AC	157	33	-46	DC:EF:09:E3:B8:7D	192.168.1.206	04:f0:21:38:8a:f0
1.1.50 sta0406	0 bps	22 bps	8.231 Mbps	8.228 Mbps	0	260 Mbps	866.7 Mbps	802.11an-AC	157	32	-45	DC:EF:09:E3:B8:7D	192.168.1.216	04:f0:21:38:84:f0
1.1.51 sta0407	0 bps	22 bps	8.224 Mbps	8.228 Mbps	0	260 Mbps	866.7 Mbps	802.11an-AC	157	35	-46	DC:EF:09:E3:B8:7D	192.168.1.122	04:f0:21:38:92:f0
1.1.52 sta0408	0 bps	159 bps	949 bps	0 bps	0	130 Mbps	468 Mbps	802.11an-AC	157	38	-33	DC:EF:09:E3:B8:7D	192.168.1.139	04:f0:21:38:b0:f0
1.1.53 sta0409	0 bps	159 bps	942 bps	0 bps	0	130 Mbps	468 Mbps	802.11an-AC	157	38	-33	DC:EF:09:E3:B8:7D	192.168.1.208	04:f0:21:38:b4:f0
1.1.54 sta0410	0 bps	159 bps	934 bps	0 bps	0	130 Mbps	468 Mbps	802.11an-AC	157	37	-33	DC:EF:09:E3:B8:7D	192.168.1.19	04:f0:21:38:b7:f0
1.1.55 sta0411	0 bps	159 bps	0 bps	920 Mbps	0	195.1 Mbps	468 Mbps	802.11an-AC	157	41	-33	DC:EF:09:E3:B8:7D	192.168.1.184	04:f0:21:38:b6:f0
1.1.56 sta0412	0 bps	159 bps	0 bps	913 Mbps	0	195.1 Mbps	468 Mbps	802.11an-AC	157	40	-33	DC:EF:09:E3:B8:7D	192.168.1.237	04:f0:21:38:c0:f0
1.1.57 sta0413	0 bps	160 bps	0 bps	914 Mbps	0	130 Mbps	468 Mbps	802.11an-AC	157	37	-34	DC:EF:09:E3:B8:7D	192.168.1.132	04:f0:21:38:a2:f0
1.1.58 sta0414	0 bps	157 bps	0 bps	556 Mbps	0	130 Mbps	468 Mbps	802.11an-AC	157	41	-34	DC:EF:09:E3:B8:7D	192.168.1.220	04:f0:21:38:82:f0
1.1.11 sta0415	0 bps	160 bps	0 bps	900 Mbps	0	130 Mbps	468 Mbps	802.11an-AC	157	37	-34	DC:EF:09:E3:B8:7D	192.168.1.238	04:f0:21:38:b5:f0

Port	Tx-Bps Last	Tx-Bps 1m	Rx-Bps Last	RxBps 1m	Link-Rate	IP	MAC	
Endpoint	Tx-Bps Last	Tx-Bps 1m	Rx-Bps Last	RxBps 1m	RX Latency(ms)	Round-Trip Latency(ms)	Jitter	Rx Packet Loss %
cv_udp-1.1-1.sta0400--1.0.0-A	0 bps	0 bps	7.983 Mbps	7.999 Mbps	5	5	1	0
cv_udp-1.1-1.sta0400--1.0.0-B	7.998 Mbps	7.999 Mbps	0 bps	0 bps	0	5	0	0
cv_udp-1.1-1.sta0401--1.0.0-A	0 bps	0 bps	7.998 Mbps	8 Mbps	5	5	1	0.109
cv_udp-1.1-1.sta0401--1.0.0-B	7.991 Mbps	7.998 Mbps	0 bps	0 bps	0	5	0	0
cv_udp-1.1-1.sta0402--1.0.0-A	0 bps	0 bps	8.017 Mbps	7.999 Mbps	5	5	1	0
cv_udp-1.1-1.sta0402--1.0.0-B	7.999 Mbps	7.998 Mbps	0 bps	0 bps	0	5	0	0
cv_udp-1.1-1.sta0403--1.0.0-A	0 bps	0 bps	7.999 Mbps	7.999 Mbps	5	5	1	0
cv_udp-1.1-1.sta0403--1.0.0-B	7.999 Mbps	7.998 Mbps	0 bps	0 bps	0	5	0	0
cv_udp-1.1-1.sta0404--1.0.0-A	0 bps	0 bps	8.022 Mbps	7.998 Mbps	5	5	1	0
cv_udp-1.1-1.sta0404--1.0.0-B	8.007 Mbps	7.998 Mbps	0 bps	0 bps	0	5	0	0
cv_udp-1.1-1.sta0405--1.0.0-A	0 bps	0 bps	8.002 Mbps	7.999 Mbps	5	5	1	0
cv_udp-1.1-1.sta0405--1.0.0-B	8 Mbps	7.998 Mbps	0 bps	0 bps	0	5	0	0
cv_udp-1.1-1.sta0406--1.0.0-A	0 bps	0 bps	7.989 Mbps	7.999 Mbps	4	4	1	0
cv_udp-1.1-1.sta0406--1.0.0-B	8.006 Mbps	7.999 Mbps	0 bps	0 bps	0	4	0	0
cv_udp-1.1-1.sta0407--1.0.0-A	0 bps	0 bps	8.003 Mbps	7.999 Mbps	4	4	1	0.003
cv_udp-1.1-1.sta0407--1.0.0-B	7.998 Mbps	7.998 Mbps	0 bps	0 bps	0	4	0	0

### Realtime Throughput for: 6.4.2 Multiple Association / Disassociation Stability Test



### 6.4.3 Downlink MU-MIMO Performance Test

## Summary

The Downlink MU-MIMO Performance Test intends to verify the performance of Wi-Fi device when Downlink MU-MIMO is applied. This best represents a typical deployment, where stations may only support 1x1 or 2x2 RF chain configurations. The test is only applicable to the Wi-Fi device supporting 802.11ac Wave 2. The DUT SHALL support 802.11ac MU-MIMO and at least 4 spatial streams.

## Test Procedure

1. Configure the system to emulate a 2-meter distance for all stations.
  2. The DUT and engaged peer STAs SHALL support 802.11ac and MU-MIMO. One STA (STA 1) supports maximum two spatial streams while two STAs (STA 2 and STA 3) support only one spatial stream. All STA are placed at different angles and/or with different antenna orientations relative to the DUT, ideally more than 45 degrees apart.
  3. Associate STA 1 with DUT. Establish the LAN connection and wait for 10 seconds.
  4. Measure the downlink TCP throughput to STA1, using a test time of 120 seconds. Record this value as STA1\_throughput\_1.
  5. Disassociate STA1. Wait for 10 seconds. Associate STA 2 with DUT. Wait for 10 seconds. Measure the downlink TCP throughput to STA2, using a test time of 120 seconds. Record this value as STA2\_throughput\_1.
  6. Disassociate STA 2. Wait for 10 seconds. Associate STA 3 with DUT. Wait for 10 seconds. Measure the downlink TCP throughput to STA 3, using a test time of 120 seconds. Record this value as STA3\_throughput\_1.
  7. Associate STA 1 and STA 2 with DUT (STA 3 remains associated). Simultaneously measure the downlink TCP throughput to all STA, using a test time of 120 seconds. Record these values as STA1\_throughput\_2, STA2\_throughput\_2 and STA3\_throughput\_2.
  8. Disable DL MU-MIMO and wait for 10 seconds. Measure the downlink TCP throughput to each STA, using a test time of 120 seconds. Record these values as STA1 throughput\_3, STA2 throughput\_3 and STA3 throughput\_3.

## **Pass/Fail Criteria**

1. The sum of STA1\_throughput\_2, STA2\_throughput\_2, and STA3\_throughput\_2 SHALL be at least 45% of the sum of STA1\_throughput\_1, STA2\_throughput\_1, and STA3\_throughput\_1.
  2. The sum of STA1\_throughput\_2, STA2\_throughput\_2, and STA3\_throughput\_2 SHALL be greater than the sum of STA1\_throughput\_3, STA2\_throughput\_3, and STA3\_throughput\_3.

### 6.4.3 Downlink MU-MIMO Performance Test Results

Type	Result	Notes
6.4.3.4.3 SU-MIMO Sta-1 Baseline	INFO	Download Rate: 671.14 Mbps STA-RSSI: -46 Rx-Rate: 866.7M Tx-Rate: 866.7M
6.4.3.4.4 SU-MIMO Sta-2 Baseline	INFO	Download Rate: 348.04 Mbps STA-RSSI: -51 Rx-Rate: 433.3M Tx-Rate: 433.3M
6.4.3.4.5 SU-MIMO Sta-3 Baseline	INFO	Download Rate: 349.22 Mbps STA-RSSI: -49 Rx-Rate: 433.3M Tx-Rate: 433.3M
6.4.3.4.6 MU-MIMO Sta1 - 3 Total	INFO	Total Download Rate: 601.06 Mbps Sta-1 Download Rate: 348.62 Mbps STA-RSSI: -39 Rx-Rate: 29.3M Tx-Rate: 780M Sta-2 Download Rate: 39.72 Mbps STA-RSSI: -46 Rx-Rate: 29.3M Tx-Rate: 351M Sta-3 Download Rate: 212.72 Mbps STA-RSSI: -43 Rx-Rate: 29.3M Tx-Rate: 433.3M
6.4.3.4.7 SU-MIMO Sta1 - 3 Total	INFO	Total Download Rate: 601.06 Mbps Sta-1 Download Rate: 201.88 Mbps STA-RSSI: -45 Rx-Rate: 866.7M Tx-Rate: 866.7M Sta-3 Download Rate: 110.16 Mbps STA-RSSI: -49 Rx-Rate: 433.3M Tx-Rate: 433.3M Sta-3 Download Rate: 212.72 Mbps STA-RSSI: -43 Rx-Rate: 29.3M Tx-Rate: 433.3M
MU-MIMO-Throughput	FAIL	Requires: 615.78 Mbps Reported: 601.06 Mbps
6.4.3.5.B MIMO Throughput Comparison	PASS	SU-MIMO-Total: 422.23 Mbps MU-MIMO-Total: 601.06 Mbps

## 3 station MU-MIMO Download Snapshot

Port	Tx-Bps Last	Tx-Bps 1m	Rx-Bps Last	RxBps 1m	Tx-Fail %	Tx-Link-Rate	Rx-Link-Rate	Mode	Channel	Last CX-Time(ms)	RSSI(dBm)	AP	IP	MAC
1.1.27 sta0000	1.383 Mbps	1.976 Mbps	103.663 Mbps	216.873 Mbps	0.364	780 Mbps	29.3 Mbps	802.11an-AC	157	39	-39	DC:EF:09:E3:B8:7D	192.168.1.184	04:f0:21:38:b6:f0
1.1.28 sta0200	578.771 Kbps	161.598 Mbps	103.033 Mbps	27.577 Mbps	0.115	351 Mbps	29.3 Mbps	802.11an-AC	157	41	-46	DC:EF:09:E3:B8:7D	192.168.1.19	04:f0:21:3a:66:c0
1.1.29 sta0400	1.427 Mbps	1.851 Mbps	110.061 Mbps	232.277 Mbps	0.302	433.3 Mbps	29.3 Mbps	802.11an-AC	157	39	-43	DC:EF:09:E3:B8:7D	192.168.1.37	04:f0:21:3a:4e:c1

<b>Port</b>	<b>Tx-Bps Last</b>	<b>Tx-Bps 1m</b>	<b>Rx-Bps Last</b>	<b>Rx-Bps 1m</b>	<b>Link-Rate</b>	<b>IP</b>	<b>MAC</b>
1.1.1 eth1	323.309 Mbps	468.262 Mbps	2.704 Mbps	3.012 Mbps	1 Gbps	192.168.1.99	00:60:e0:74:74:bc

Endpoint	Tx-Bps Last	Tx-Bps 1m	Rx-Bps Last	Rx-Bps 1m	RX Latency(ms)	Round-Trip Latency(ms)	Jitter	Rx Packet Loss %
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cv_tcp-1.1-1.sta0000--1.0.0-A	0 bps	0 bps	100.522 Mbps	352.563 Mbps	7,404	7,404	1,472	0
cv_tcp-1.1-1.sta0000--1.0.0-B	99.204 Mbps	354.94 Mbps	0 bps	0 bps	0	7,404	0	0
cv_tcp-1.1-1.sta0200--1.0.0-A	0 bps	0 bps	97.012 Mbps	38.886 Mbps	3,132	3,132	201	0
cv_tcp-1.1-1.sta0200--1.0.0-B	100.149 Mbps	38.679 Mbps	0 bps	0 bps	0	3,132	0	0
cv_tcp-1.1-1.sta0400--1.0.0-A	0 bps	0 bps	107.681 Mbps	212.493 Mbps	5,307	5,307	4,013	0.108
cv_tcp-1.1-1.sta0400--1.0.0-B	105.42 Mbps	214.797 Mbps	0 bps	0 bps	0	5,307	0	0

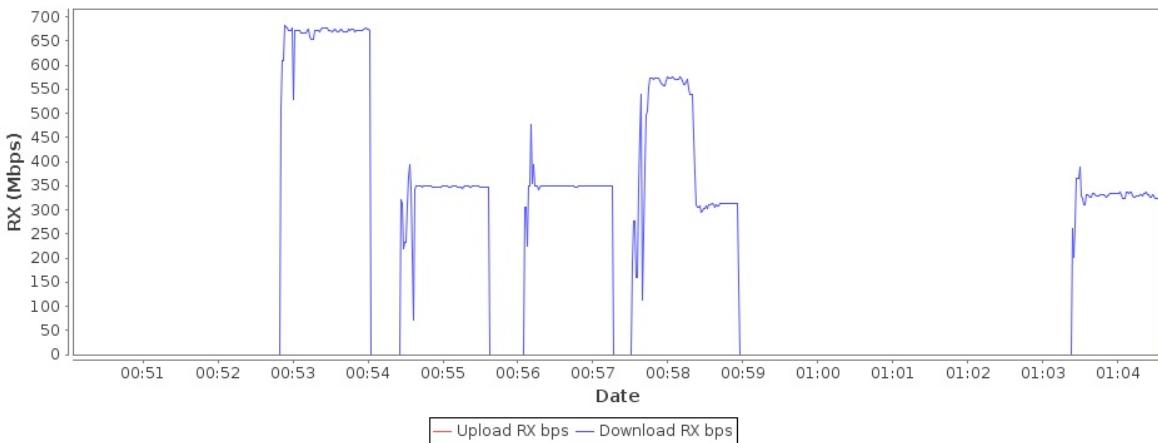
### 3 station SU-MIMO Download Snapshot

Port	Tx-Bps Last	Tx-Bps 1m	Rx-Bps Last	RxBps 1m	Tx-Fail %	Tx-Link-Rate	Rx-Link-Rate	Mode	Channel	Last CX-Time(ms)	RSSI(dBm)	AP	IP	MAC
1.1.27 sta0000	1.29 Mbps	771.728 Kbps	210.532 Mbps	129.634 Mbps	0.365	866.7 Mbps	866.7 Mbps	802.11an- AC	157	36	-45	DC:EF:09:E3:B8:7D	192.168.1.184	04:f0:21:38:b6:f0
1.1.28 sta0200	1.305 Mbps	1.313 Mbps	114.613 Mbps	115.245 Mbps	0.815	433.3 Mbps	433.3 Mbps	802.11an- AC	157	62	-52	DC:EF:09:E3:B8:7D	192.168.1.19	04:f0:21:3a:66:c0
1.1.29 sta0400	1.155 Mbps	727.028 Kbps	113.563 Mbps	70.613 Mbps	0.545	433.3 Mbps	433.3 Mbps	802.11an- AC	157	51	-49	DC:EF:09:E3:B8:7D	192.168.1.39	04:f0:21:3a:4e:c1

Port	Tx-Bps Last	Tx-Bps 1m	Rx-Bps Last	RxBps 1m	Link-Rate	IP	MAC
1.1.1 eth1	443.847 Mbps	285.864 Mbps	2.653 Mbps	1.801 Mbps	1 Gbps	192.168.1.99	00:60:e0:74:74:bc

Endpoint	Tx-Bps Last	Tx-Bps 1m	Rx-Bps Last	RxBps 1m	RX Latency(ms)	Round-Trip Latency(ms)	Jitter	Rx Packet Loss %
cv_tcp-1.1-1.sta0000--1.0.0-A	0 bps	0 bps	204.655 Mbps	201.909 Mbps	4,580	4,580	2,185	0
cv_tcp-1.1-1.sta0000--1.0.0-B	204.759 Mbps	201.881 Mbps	0 bps	0 bps	0	4,580	0	0
cv_tcp-1.1-1.sta0200--1.0.0-A	0 bps	0 bps	109.508 Mbps	110.223 Mbps	8,825	8,825	203	0
cv_tcp-1.1-1.sta0200--1.0.0-B	109.665 Mbps	110.053 Mbps	0 bps	0 bps	0	8,825	0	0
cv_tcp-1.1-1.sta0400--1.0.0-A	0 bps	0 bps	109.343 Mbps	110.248 Mbps	5,863	5,863	2,019	0
cv_tcp-1.1-1.sta0400--1.0.0-B	109.227 Mbps	110.119 Mbps	0 bps	0 bps	0	5,863	0	0

### Realtime Throughput for: 6.4.3 Downlink MU-MIMO Performance Test



## 6.5.2 AP Coexistence Test

### Summary

AP coexistence test intends to verify Wi-Fi device performance with existence of alien AP. The alien AP in the test SHALL support the same Wi-Fi standard (802.11n/802.11ac).

### Test Procedure

These steps are done for 2.4Ghz and 5Ghz.

- Configure the system to emulate a 2-meter distance for all stations and APs.
- Measure the downlink TCP throughput, using a test time of 120 seconds. This is the baseline throughput.
- Enable the alien network radios. The alien network will be configured for the same channel as the DUT. No traffic is generated on the alien network for

this step.

4. Measure the downlink TCP throughput, using a test time of 120 seconds.
5. Configure the alien network to utilize 50% of the available "air time" with UDP traffic. For 5Ghz and 80Mhz interferer, the alien network generates 195Mbps of traffic. For 5Ghz and 40Mhz, the alien network generates 90Mbps of traffic. For 2.4Ghz, network generates 32Mbps of traffic.
6. Measure the downlink TCP throughput to peer STA, using a test time of 120 seconds. Record this measurement as THROUGHPUT\_SHORT\_DUT\_2.
7. Repeat the step above for overlapping channel alien network: For 5Ghz, we use 40Mhz alien AP on same center frequency as DUT. For 2.4Ghz, we use 20Mhz alien AP one channel above or below the DUT.
8. Repeat the download test for adjacent channel alien network.

### Pass/Fail Criteria

Passing values for this test require that the traffic be at least some percentage of the baseline throughput.

1. For 2.4Ghz and 5Ghz:

1. Alien AP idle: traffic is 95% of baseline.
2. Alien AP active on same channel: traffic is 40% of baseline.
3. Alien AP active on overlapping channel: traffic is 40% of baseline.
4. Alien AP active on adjacent channel: traffic is 95% of baseline. NOTE: Candela believes this is unrealistic goal because adjacent channels do interfere somewhat.

## 6.5.2 AP Coexistence Test Results

Type	Result	Notes
2.4Ghz 6.5.2.4.4 Baseline download rate	INFO	119.35 Mbps
2.4Ghz ch: 11 6.5.2.4.6 idle AP	PASS	Req: 112.19 Rpt: 118.83 STA-RSSI: -29 Rx-Rate: 144.4M Tx-Rate: 144.4M
2.4Ghz ch: 11 6.5.2.4.7 Co-Channel Interferer AP	PASS	Req: 47.74 Rpt: 46.68 STA-RSSI: -30 Rx-Rate: 144.4M Tx-Rate: 144.4M Interferer Throughput: 21.79 Intf-STA-RSSI: -41 Rx-Rate: 72.2M Tx-Rate: 0bps
2.4Ghz ch: 10 6.5.2.4.7 Overlapping Channel Interferer AP	FAIL	Req: 47.74 Rpt: 41.86 STA-RSSI: -28 Rx-Rate: 144.4M Tx-Rate: 130M Interferer Throughput: 22.09 Intf-STA-RSSI: -43 Rx-Rate: 72.2M Tx-Rate: 7.2M
2.4Ghz ch: 6 6.5.2.4.7 Adjacent Channel Interferer AP	FAIL	Req: 113.38 Rpt: 9.36 STA-RSSI: -30 Rx-Rate: 144.4M Tx-Rate: 104M Interferer Throughput: 23.44 Intf-STA-RSSI: -43 Rx-Rate: 65M Tx-Rate: 28.9M
5Ghz 6.5.2.4.4 Baseline download rate	INFO	696.74 Mbps
5Ghz ch: 157 6.5.2.4.6 idle AP	PASS	Req: 654.93 Rpt: 693.16 STA-RSSI: -45 Rx-Rate: 866.7M Tx-Rate: 866.7M
5Ghz ch: 157 6.5.2.4.7 Co-Channel Interferer AP	FAIL	Req: 278.69 Rpt: 263.40 STA-RSSI: -45 Rx-Rate: 866.7M Tx-Rate: 702M Interferer Throughput: 188.05 Intf-STA-RSSI: -34 Rx-Rate: 433.3M Tx-Rate: 58.5M
5Ghz ch: 157 6.5.2.4.7 Overlapping Channel Interferer AP	PASS	Req: 278.69 Rpt: 384.11 STA-RSSI: -46 Rx-Rate: 866.7M Tx-Rate: 866.7M Interferer Throughput: 48.00 Intf-STA-RSSI: -33 Rx-Rate: 180M Tx-Rate: 7.2M
5Ghz ch: 132 6.5.2.4.7 Adjacent Channel Interferer AP	FAIL	Req: 661.90 Rpt: 527.42 STA-RSSI: -42 Rx-Rate: 650M Tx-Rate: 866.7M Interferer Throughput: 4.89 Intf-STA-RSSI: -23 Rx-Rate: 13M Tx-Rate: 58.5M

### AP-Coexist: Channel 11 Snapshot 2.4Ghz idle AP

Port	Tx-Bps Last	Tx-Bps 1m	Rx-Bps Last	RxBps 1m	Tx-Fail %	Tx-Link-Rate	Rx-Link-Rate	Mode	Channel	Last CX-Time(ms)	RSSI(dBm)	AP	IP	MAC
1.1.15 sta0600	779.271 Kbps	699.365 Kbps	118.556 Mbps	99.425 Mbps	0.096	144.4 Mbps	144.4 Mbps	802.11bgn	11	237	-29	DC:EF:09:E3:B8:7B	192.168.1.48	04:f0:21:4b:9e:00

Port	Tx-Bps Last	Tx-Bps 1m	Rx-Bps Last	RxBps 1m	Link-Rate	IP	MAC
1.1.1 eth1	118.805 Mbps	107.233 Mbps	625.386 Kbps	544.962 Kbps	1 Gbps	192.168.1.99	00:60:e0:74:74:bc

Endpoint	Tx-Bps Last	Tx-Bps 1m	Rx-Bps Last	RxBps 1m	RX Latency(ms)	Round-Trip Latency(ms)	Jitter	Rx Packet Loss %
cv_tcp-1.1-1.sta0600--1.0.0-A	0 bps	0 bps	113.853 Mbps	117.845 Mbps	10,122	10,122	3,414	0
cv_tcp-1.1-1.sta0600--1.0.0-B	112.872 Mbps	118.98 Mbps	0 bps	0 bps	0	10,122	0	0

### AP-Coexist: Channel 11 Snapshot 2.4Ghz Co-Channel Interferer AP

Port	Tx-Bps Last	Tx-Bps 1m	Rx-Bps Last	RxBps 1m	Tx-Fail %	Tx-Link-Rate	Rx-Link-Rate	Mode	Channel	Last CX-Time(ms)	RSSI(dBm)	AP	IP	MAC
1.1.15 sta0600	626.043 Kbps	712.354 Kbps	67.621 Mbps	80.971 Mbps	0.489	144.4 Mbps	144.4 Mbps	802.11bgn	11	237	-30	DC:EF:09:E3:B8:7B	192.168.1.48	04:f0:21:4b:9e:00

1.1.17 0 bps | 22 bps | 22.922 Mbps | 13.784 Mbps | 4.167 | 0 Mbps | 72.2 Mbps | 802.11bgn | 11 | 25 | -41 | 04:F0:21:36:D1:74 | 10.1.2.6 | 04:f0:21:4b:8b:f9

Port	Tx-Bps Last	Tx-Bps 1m	Rx-Bps Last	Rx-Bps 1m	Link-Rate	IP	MAC
1.1.1 eth1	64.004 Mbps	84.653 Mbps	486.384 Kbps	551.155 Kbps	1 Gbps	192.168.1.99	00:60:e0:74:74:bc

Endpoint	Tx-Bps Last	Tx-Bps 1m	Rx-Bps Last	Rx-Bps 1m	RX Latency(ms)	Round-Trip Latency(ms)	Jitter	Rx Packet Loss %
cv_tcp-1.1.1.sta0600--1.0.0-A	0 bps	0 bps	66.475 Mbps	64.696 Mbps	19,497	19,497	2,883	0.46
cv_tcp-1.1.1.sta0600--1.0.0-B	66.654 Mbps	65.774 Mbps	0 bps	0 bps	0	19,497	0	0
cv_udp-1.2.1.sta1000--1.0.3-A	0 bps	0 bps	20.883 Mbps	21.801 Mbps	60	60	1	0.164
cv_udp-1.2.1.sta1000--1.0.3-B	20.458 Mbps	21.886 Mbps	0 bps	0 bps	0	60	0	0

## **AP-Coexist: Channel 10 Snapshot 2.4Ghz Overlapping Channel Interferer AP**

Port	Tx-Bps-Last	Tx-Bps-1m	Rx-Bps-Last	RxBps-1m	Tx-Fail-%	Tx-Link-Rate	Rx-Link-Rate	Mode	Channel	Last CX-Time(ms)	RSSI(dBm)	AP	IP	MAC
1.1.15 sta0600	487 bps	501.613 Kbps	7.535 Kbps	56.534 Mbps	1.457	130 Mbps	144.4 Mbps	802.11bgn	11	237	-28	DC:EF:09:E3:B8:7B	192.168.1.48	04:f0:21:4b:9e:00
1.1.17 sta1000	0 bps	4.139 Kbps	30.287 Mbps	22.187 Mbps	0.787	7.2 Mbps	72.2 Mbps	802.11bgn	10	1,059	-43	04:F0:21:36:D1:74	10.1.2.6	04:f0:21:4b:8b:f9

<b>Port</b>	<b>Tx-Bps Last</b>	<b>Tx-Bps 1m</b>	<b>Rx-Bps Last</b>	<b>Rx-Bps 1m</b>	<b>Link-Rate</b>	<b>IP</b>	<b>MAC</b>
1.1.1 eth1	5.512 Kbps	55.512 Mbps	0 bps	354.55 Kbps	1 Gbps	192.168.1.99	00:60:e0:74:74:bc

Endpoint	Tx-Bps Last	Tx-Bps 1m	Rx-Bps Last	Rx-Bps 1m	RX Latency(ms)	Round-Trip Latency(ms)	Jitter	Rx Packet Loss %
cv_tcp-1.1-1.sta0600--1.0.0-A	0 bps	0 bps	0 bps	40.97 Mbps	21,287	21,287	11,989	0
cv_tcp-1.1-1.sta0600--1.0.0-B	0 bps	39.897 Mbps	0 bps	0 bps	0	21,287	0	0
cv_udp-1.2-1.sta1000--1.0.3-A	0 bps	0 bps	29.473 Mbps	26.295 Mbps	1	1	0	2.766
cv_udp-1.2-1.sta1000--1.0.3-B	29.462 Mbps	26.534 Mbps	0 bps	0 bps	0	1	0	0

AP-Coexist: Channel 6 Snapshot 2.4Ghz Adjacent Channel Interferer AP

Port	Tx-Bps Last	Tx-Bps 1m	Rx-Bps Last	RxBps 1m	Tx-Fail %	Tx-Link-Rate	Rx-Link-Rate	Mode	Channel	Last CX-Time(ms)	RSSI(dBm)	AP	IP	MAC
1.1.15 sta0600	124.146 Kbps	98.316 Kbps	15.17 Mbps	13.408 Mbps	1.465	104 Mbps	144.4 Mbps	802.11bgn	11	237	-30	DC:EF:09:E3:B8:7B	192.168.1.48	04:f0:21:4b:9e:00
1.1.17 sta1000	67 bps	5.789 Kbps	29.611 Mbps	25.851 Mbps	0.478	28.9 Mbps	65 Mbps	802.11bgn	6	16	-43	04:F0:21:36:D1:74	10.1.2.6	04:f0:21:4b:8b:f9

<b>Port</b>	<b>Tx-Bps Last</b>	<b>Tx-Bps 1m</b>	<b>Rx-Bps Last</b>	<b>Rx-Bps 1m</b>	<b>Link-Rate</b>	<b>IP</b>	<b>MAC</b>
1.1.1 eth1	192.355 Mbps	18.25 Mbps	540.305 Kbps	93.034 Kbps	1 Gbps	192.168.1.99	00:60:e0:74:74:bc

<b>Endpoint</b>	<b>Tx-Bps Last</b>	<b>Tx-Bps 1m</b>	<b>Rx-Bps Last</b>	<b>Rx-Bps 1m</b>	<b>RX Latency(ms)</b>	<b>Round-Trip Latency(ms)</b>	<b>Jitter</b>	<b>Rx Packet Loss %</b>
cv_tcp-1.1-1.sta0600--1.0.0-A	0 bps	0 bps	90.728 Mbps	9.607 Mbps	4,560	4,560	165	65.957
cv_tcp-1.1-1.sta0600--1.0.0-B	157.11 Mbps	28.091 Mbps	0 bps	0 bps	0	4,560	0	0
cv_udp-1.2-1.sta1000--1.0.3-A	0 bps	0 bps	29.01 Mbps	28.237 Mbps	2	2	0	0
cv_udp-1.2-1.sta1000--1.0.3-B	29.01 Mbps	28.265 Mbps	0 bps	0 bps	0	2	0	0

AP-Coexist: Channel 157 Snapshot 5Ghz idle AP

Port	Tx-Bps-Last	Tx-Bps-1m	Rx-Bps-Last	RxBps-1m	Tx-Fail-%	Tx-Link-Rate	Rx-Link-Rate	Mode	Channel	Last CX-Time(ms)	RSSI(dBm)	AP	IP	MAC
1.1.15 sta0400	4.438 Mbps	3.461 Mbps	727.069 Mbps	590.179 Mbps	0.003	866.7 Mbps	866.7 Mbps	802.11an-AC	157	44	-45	DC:EF:09:E3:B8:7D	192.168.1.233	04:f0:21:38:91:f0

<b>Port</b>	<b>Tx-Bps Last</b>	<b>Tx-Bps 1m</b>	<b>Rx-Bps Last</b>	<b>Rx-Bps 1m</b>	<b>Link-Rate</b>	<b>IP</b>	<b>MAC</b>
1.1.1 eth1	728.026 Mbps	725.312 Mbps	3.45 Mbps	3.299 Mbps	1 Gbps	192.168.1.99	00:60:e0:74:74:bc

Endpoint	Tx-Bps Last	Tx-Bps 1m	Rx-Bps Last	Rx-Bps 1m	RX Latency(ms)	Round-Trip Latency(ms)	Jitter	Rx Packet Loss %
cv_tcp-1.1-1.sta0400--1.0.0-A	0 bps	0 bps	692.856 Mbps	693.194 Mbps	818	818	123	0
cv_tcp-1.1-1.sta0400--1.0.0-B	692.489 Mbps	695.299 Mbps	0 bps	0 bps	0	818	0	0

AP-Coexist: Channel 157 Snapshot 5Ghz Co-Channel Interferer AP

Port	Tx-Bps-Last	Tx-Bps-1m	Rx-Bps-Last	RxBps-1m	Tx-Fail-%	Tx-Link-Rate	Rx-Link-Rate	Mode	Channel	Last CX-Time(ms)	RSSI(dBm)	AP	IP	MAC
1.1.15 sta0400	2.07 Mbps	2.602 Mbps	286.341 Mbps	392.783 Mbps	0.281	702 Mbps	866.7 Mbps	802.11an- AC	157	44	-45	DC:EF:09:E3:B8:7D	192.168.1.233	04:f0:21:38:91:f0
1.1.18		26	186.078	116.466		58.5	433.3	802.11an-						

sta0800	0 bps	bps	Mbps	Mbps	0	Mbps	Mbps	AC	157	36	-34	04:F0:21:3A:5C:C0	10.1.2.9	04:f0:21:3a:48:c1
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Port	Tx-Bps Last	Tx-Bps 1m	Rx-Bps Last	Rx-Bps 1m	Link-Rate	IP	MAC
1.1.1 eth1	281.303 Mbps	295.663 Mbps	1.561 Mbps	1.582 Mbps	1 Gbps	192.168.1.99	00:60:e0:74:74:bc

Endpoint		Tx-Bps Last	Tx-Bps 1m	Rx-Bps Last	Rx-Bps 1m	RX Latency(ms)	Round-Trip Latency(ms)	Jitter	Rx Packet Loss %
cv_tcp-1.1-1.sta0400--1.0.0-A	0 bps	0 bps	266.265 Mbps	263.608 Mbps	2,130	2,130		236	0
cv_tcp-1.1-1.sta0400--1.0.0-B	263.369 Mbps	263.521 Mbps	0 bps	0 bps	0	2,130		0	0
cv_udp-1.2-1.sta0800--1.0.3-A	0 bps	0 bps	192.187 Mbps	187.971 Mbps	8	8		0	0
cv_udp-1.2-1.sta0800--1.0.3-B	184.586 Mbps	187.913 Mbps	0 bps	0 bps	0	8		0	0

#### AP-Coexist: Channel 157 Snapshot 5Ghz Overlapping Channel Interferer AP

Port	Tx-Bps Last	Tx-Bps 1m	Rx-Bps Last	RxBps 1m	Tx-Fail %	Tx-Link-Rate	Rx-Link-Rate	Mode	Channel	Last CX-Time(ms)	RSSI(dBm)	AP	IP	MAC
1.1.15 sta0400	2.356 Mbps	2.348 Mbps	376.147 Mbps	369.259 Mbps	0.557	866.7 Mbps	866.7 Mbps	802.11an-AC	157	44	-46	DC:EF:09:E3:B8:7D	192.168.1.233	04:f0:21:38:91:f0
1.1.18 sta0800	67 bps	1.924 Mbps	63.957 Mbps	53.377 Mbps	20	7.2 Mbps	180 Mbps	802.11an-AC	157	543	-33	04:F0:21:3A:5C:C0	10.1.2.9	04:f0:21:3a:48:c1

Port	Tx-Bps Last	Tx-Bps 1m	Rx-Bps Last	Rx-Bps 1m	Link-Rate	IP	MAC
1.1.1 eth1	380.243 Mbps	393.037 Mbps	1.836 Mbps	1.851 Mbps	1 Gbps	192.168.1.99	00:60:e0:74:74:bc

Endpoint		Tx-Bps Last	Tx-Bps 1m	Rx-Bps Last	Rx-Bps 1m	RX Latency(ms)	Round-Trip Latency(ms)	Jitter	Rx Packet Loss %
cv_tcp-1.1-1.sta0400--1.0.0-A	0 bps	0 bps	343.179 Mbps	380.06 Mbps	1,580	1,580		110	0
cv_tcp-1.1-1.sta0400--1.0.0-B	346.027 Mbps	384.9 Mbps	0 bps	0 bps	0	1,580		0	0
cv_udp-1.2-1.sta0800--1.0.3-A	0 bps	0 bps	64.267 Mbps	57.371 Mbps	85	85		0	0
cv_udp-1.2-1.sta0800--1.0.3-B	65.697 Mbps	56.577 Mbps	0 bps	0 bps	0	85		0	0

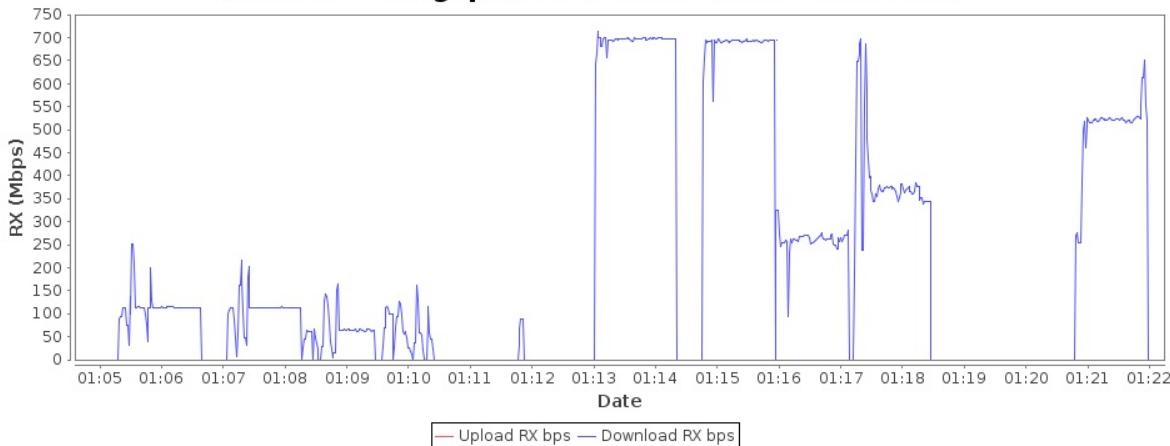
#### AP-Coexist: Channel 132 Snapshot 5Ghz Adjacent Channel Interferer AP

Port	Tx-Bps Last	Tx-Bps 1m	Rx-Bps Last	RxBps 1m	Tx-Fail %	Tx-Link-Rate	Rx-Link-Rate	Mode	Channel	Last CX-Time(ms)	RSSI(dBm)	AP	IP	MAC
1.1.15 sta0400	3.855 Mbps	3.193 Mbps	599.29 Mbps	482.89 Mbps	0.519	866.7 Mbps	650 Mbps	802.11an-AC	157	44	-42	DC:EF:09:E3:B8:7D	192.168.1.233	04:f0:21:38:91:f0
1.1.18 sta0800	0 bps	172 bps	3.712 Mbps	13.155 Mbps	10.612	58.5 Mbps	13 Mbps	802.11an-AC	132	36	-23	04:F0:21:3A:5C:C0	10.1.2.9	04:f0:21:3a:48:c1

Port	Tx-Bps Last	Tx-Bps 1m	Rx-Bps Last	Rx-Bps 1m	Link-Rate	IP	MAC
1.1.1 eth1	552.817 Mbps	551.955 Mbps	2.785 Mbps	2.781 Mbps	1 Gbps	192.168.1.99	00:60:e0:74:74:bc

Endpoint		Tx-Bps Last	Tx-Bps 1m	Rx-Bps Last	Rx-Bps 1m	RX Latency(ms)	Round-Trip Latency(ms)	Jitter	Rx Packet Loss %
cv_tcp-1.1-1.sta0400--1.0.0-A	0 bps	0 bps	524.016 Mbps	528.008 Mbps	1,134	1,134		464	0
cv_tcp-1.1-1.sta0400--1.0.0-B	523.061 Mbps	527.96 Mbps	0 bps	0 bps	0	1,134		0	0
cv_udp-1.2-1.sta0800--1.0.3-A	0 bps	0 bps	5.854 Mbps	4.918 Mbps	528	528		5	85.387
cv_udp-1.2-1.sta0800--1.0.3-B	23.98 Mbps	34.05 Mbps	0 bps	0 bps	0	528		0	0

## Realtime Throughput for: 6.5.2 AP Coexistence Test



### 6.5.1 Long Term Stability Test

#### Summary

Long term stability test intends to measure the stability performance of Wi-Fi device under stress. Throughput and connection availability are continuously monitored in a long period of time (24 hours).

#### Test Procedure

These steps are done for 2.4Ghz and then for 5Ghz bands.

1. Create 3 stations and set attenuation so that they are at a 2-meter distance.
2. Two stations run TCP traffic to check throughput and ICMP (this test uses UDP frames to emulate ICMP) to check for packet loss. The ICMP/UDP traffic generates 1 small frame per second.
3. The third station associates for 5 minutes, then disconnects for one minute, over and over.
4. TCP traffic throughput is measured every 3 minutes and recorded for pass/fail reporting.

#### Pass/Fail Criteria

1. Downlink throughput of the Peer STAs keeps stable in each frequency band with less than 20% deviation of the minimum sampling points by referring to the average throughput during the measurement of 24 hours.
2. For each of the test configuration, Packet Error Rate (PER) for each STA SHALL achieve less than 1%.

### 6.5.1 Long Term Stability Test Results

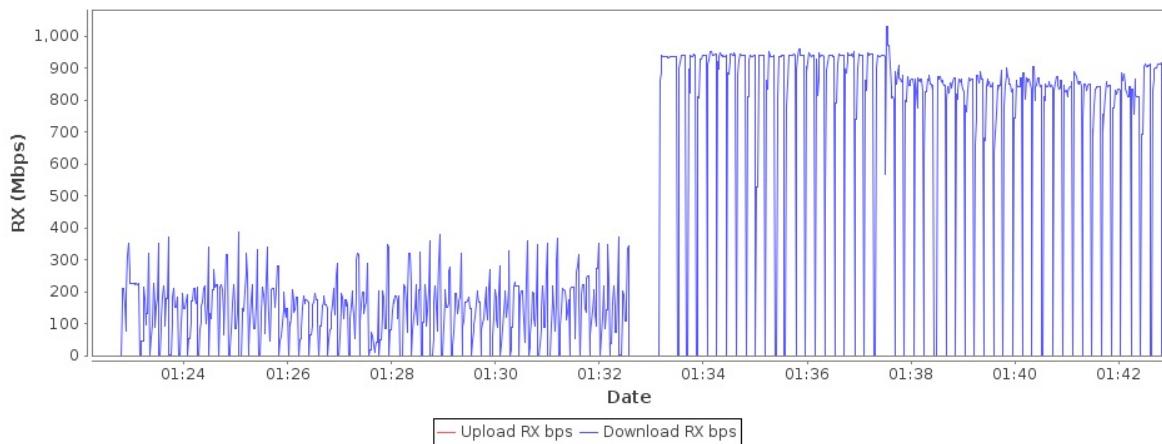
Type	Result	Notes
Configuration NOTE	INFO	UDP Check Interval is set to: 5 m, default is 1 hour
Configuration NOTE	INFO	TCP Download Check Iterations is set to: 50, default is 288.
Configuration NOTE	INFO	TCP Download Duration is set to: 10 s, default is 3 minutes.
Configuration NOTE	INFO	Packet loss (PER) is based on sequence gaps in received frames. Network loss since last received frame will not be counted.
2.4Ghz TCP DL check 0 / 50	INFO	Total TCP throughput: 223.27 Mbps
2.4Ghz TCP DL check 1 / 50	INFO	Total TCP throughput: 176.79 Mbps
2.4Ghz TCP DL check 2 / 50	INFO	Total TCP throughput: 192.88 Mbps
2.4Ghz TCP DL check 3 / 50	INFO	Total TCP throughput: 199.46 Mbps
2.4Ghz TCP DL check 4 / 50	INFO	Total TCP throughput: 143.05 Mbps
2.4Ghz TCP DL check 5 / 50	INFO	Total TCP throughput: 187.21 Mbps
2.4Ghz TCP DL check 6 / 50	INFO	Total TCP throughput: 184.00 Mbps
2.4Ghz TCP DL check 7 / 50	INFO	Total TCP throughput: 192.40 Mbps
2.4Ghz TCP DL check 8 / 50	INFO	Total TCP throughput: 210.02 Mbps
2.4Ghz TCP DL check 9 / 50	INFO	Total TCP throughput: 219.00 Mbps
2.4Ghz TCP DL check 10 / 50	INFO	Total TCP throughput: 188.14 Mbps
2.4Ghz TCP DL check 11 / 50	INFO	Total TCP throughput: 195.36 Mbps
2.4Ghz TCP DL check 12 / 50	INFO	Total TCP throughput: 209.46 Mbps
2.4Ghz TCP DL check 13 / 50	INFO	Total TCP throughput: 182.74 Mbps
2.4Ghz TCP DL check 14 / 50	INFO	Total TCP throughput: 214.16 Mbps
2.4Ghz TCP DL check 15 / 50	INFO	Total TCP throughput: 162.94 Mbps
2.4Ghz TCP DL check 16 / 50	INFO	Total TCP throughput: 203.71 Mbps
2.4Ghz TCP DL check 17 / 50	INFO	Total TCP throughput: 192.09 Mbps
2.4Ghz TCP DL check 18 / 50	INFO	Total TCP throughput: 176.64 Mbps
2.4Ghz TCP DL check 19 / 50	INFO	Total TCP throughput: 170.75 Mbps
2.4Ghz TCP DL check 20 / 50	INFO	Total TCP throughput: 199.50 Mbps

2.4Ghz TCP DL check 21 / 50	INFO	Total TCP throughput: 189.49 Mbps
2.4Ghz TCP DL check 22 / 50	INFO	Total TCP throughput: 208.52 Mbps
2.4Ghz TCP DL check 23 / 50	INFO	Total TCP throughput: 206.84 Mbps
2.4Ghz TCP DL check 24 / 50	INFO	Total TCP throughput: 96.96 Mbps
2.4Ghz TCP DL check 25 / 50	INFO	Total TCP throughput: 188.71 Mbps
2.4Ghz TCP DL check 26 / 50	INFO	Total TCP throughput: 164.12 Mbps
2.4Ghz PER check 1	FAIL	UDP Rx: 626.0 Detected Dropped: 15.0 PER: 2.34
2.4Ghz TCP DL check 27 / 50	INFO	Total TCP throughput: 204.30 Mbps
2.4Ghz TCP DL check 28 / 50	INFO	Total TCP throughput: 179.75 Mbps
2.4Ghz TCP DL check 29 / 50	INFO	Total TCP throughput: 199.40 Mbps
2.4Ghz TCP DL check 30 / 50	INFO	Total TCP throughput: 190.35 Mbps
2.4Ghz TCP DL check 31 / 50	INFO	Total TCP throughput: 190.30 Mbps
2.4Ghz TCP DL check 32 / 50	INFO	Total TCP throughput: 188.61 Mbps
2.4Ghz TCP DL check 33 / 50	INFO	Total TCP throughput: 188.40 Mbps
2.4Ghz TCP DL check 34 / 50	INFO	Total TCP throughput: 161.91 Mbps
2.4Ghz TCP DL check 35 / 50	INFO	Total TCP throughput: 199.24 Mbps
2.4Ghz TCP DL check 36 / 50	INFO	Total TCP throughput: 171.80 Mbps
2.4Ghz TCP DL check 37 / 50	INFO	Total TCP throughput: 176.97 Mbps
2.4Ghz TCP DL check 38 / 50	INFO	Total TCP throughput: 199.20 Mbps
2.4Ghz TCP DL check 39 / 50	INFO	Total TCP throughput: 201.65 Mbps
2.4Ghz TCP DL check 40 / 50	INFO	Total TCP throughput: 197.55 Mbps
2.4Ghz TCP DL check 41 / 50	INFO	Total TCP throughput: 190.65 Mbps
2.4Ghz TCP DL check 42 / 50	INFO	Total TCP throughput: 176.75 Mbps
2.4Ghz TCP DL check 43 / 50	INFO	Total TCP throughput: 165.35 Mbps
2.4Ghz TCP DL check 44 / 50	INFO	Total TCP throughput: 196.41 Mbps
2.4Ghz TCP DL check 45 / 50	INFO	Total TCP throughput: 211.03 Mbps
2.4Ghz TCP DL check 46 / 50	INFO	Total TCP throughput: 183.10 Mbps
2.4Ghz TCP DL check 47 / 50	INFO	Total TCP throughput: 185.52 Mbps
2.4Ghz TCP DL check 48 / 50	INFO	Total TCP throughput: 190.38 Mbps
2.4Ghz TCP DL check 49 / 50	INFO	Total TCP throughput: 170.78 Mbps
2.4Ghz band complete	INFO	Average over all iterations: 187.95 Mbps 80% passing rate cutoff: 150.36 Mbps
2.4Ghz TCP DL Period 0	PASS	Download Rate: 223.27 Mbps Percent of Passing: 148.49
2.4Ghz TCP DL Period 1	PASS	Download Rate: 176.79 Mbps Percent of Passing: 117.58
2.4Ghz TCP DL Period 2	PASS	Download Rate: 192.88 Mbps Percent of Passing: 128.28
2.4Ghz TCP DL Period 3	PASS	Download Rate: 199.46 Mbps Percent of Passing: 132.66
2.4Ghz TCP DL Period 4	FAIL	Download Rate: 143.05 Mbps Percent of Passing: 95.13
2.4Ghz TCP DL Period 5	PASS	Download Rate: 187.21 Mbps Percent of Passing: 124.50
2.4Ghz TCP DL Period 6	PASS	Download Rate: 184.00 Mbps Percent of Passing: 122.37
2.4Ghz TCP DL Period 7	PASS	Download Rate: 192.40 Mbps Percent of Passing: 127.96
2.4Ghz TCP DL Period 8	PASS	Download Rate: 210.02 Mbps Percent of Passing: 139.68
2.4Ghz TCP DL Period 9	PASS	Download Rate: 219.00 Mbps Percent of Passing: 145.65
2.4Ghz TCP DL Period 10	PASS	Download Rate: 188.14 Mbps Percent of Passing: 125.12
2.4Ghz TCP DL Period 11	PASS	Download Rate: 195.36 Mbps Percent of Passing: 129.93
2.4Ghz TCP DL Period 12	PASS	Download Rate: 209.46 Mbps Percent of Passing: 139.31
2.4Ghz TCP DL Period 13	PASS	Download Rate: 182.74 Mbps Percent of Passing: 121.53
2.4Ghz TCP DL Period 14	PASS	Download Rate: 214.16 Mbps Percent of Passing: 142.43
2.4Ghz TCP DL Period 15	PASS	Download Rate: 162.94 Mbps Percent of Passing: 108.37
2.4Ghz TCP DL Period 16	PASS	Download Rate: 203.71 Mbps Percent of Passing: 135.48
2.4Ghz TCP DL Period 17	PASS	Download Rate: 192.09 Mbps Percent of Passing: 127.75
2.4Ghz TCP DL Period 18	PASS	Download Rate: 176.64 Mbps Percent of Passing: 117.48
2.4Ghz TCP DL Period 19	PASS	Download Rate: 170.75 Mbps Percent of Passing: 113.56
2.4Ghz TCP DL Period 20	PASS	Download Rate: 199.50 Mbps Percent of Passing: 132.68
2.4Ghz TCP DL Period 21	PASS	Download Rate: 189.49 Mbps Percent of Passing: 126.02
2.4Ghz TCP DL Period 22	PASS	Download Rate: 208.52 Mbps Percent of Passing: 138.68
2.4Ghz TCP DL Period 23	PASS	Download Rate: 206.84 Mbps Percent of Passing: 137.56
2.4Ghz TCP DL Period 24	FAIL	Download Rate: 96.96 Mbps Percent of Passing: 64.48
2.4Ghz TCP DL Period 25	PASS	Download Rate: 188.71 Mbps Percent of Passing: 125.51
2.4Ghz TCP DL Period 26	PASS	Download Rate: 164.12 Mbps Percent of Passing: 109.15
2.4Ghz TCP DL Period 27	PASS	Download Rate: 204.30 Mbps Percent of Passing: 135.87
2.4Ghz TCP DL Period 28	PASS	Download Rate: 179.75 Mbps Percent of Passing: 119.54
2.4Ghz TCP DL Period 29	PASS	Download Rate: 199.40 Mbps Percent of Passing: 132.61
2.4Ghz TCP DL Period 30	PASS	Download Rate: 190.35 Mbps Percent of Passing: 126.59
2.4Ghz TCP DL Period 31	PASS	Download Rate: 190.30 Mbps Percent of Passing: 126.56
2.4Ghz TCP DL Period 32	PASS	Download Rate: 188.61 Mbps Percent of Passing: 125.44
2.4Ghz TCP DL Period 33	PASS	Download Rate: 188.40 Mbps Percent of Passing: 125.30
2.4Ghz TCP DL Period 34	PASS	Download Rate: 161.91 Mbps Percent of Passing: 107.68
2.4Ghz TCP DL Period 35	PASS	Download Rate: 199.24 Mbps Percent of Passing: 132.51
2.4Ghz TCP DL Period 36	PASS	Download Rate: 171.80 Mbps Percent of Passing: 114.26
2.4Ghz TCP DL Period 37	PASS	Download Rate: 176.97 Mbps Percent of Passing: 117.69
2.4Ghz TCP DL Period 38	PASS	Download Rate: 199.20 Mbps Percent of Passing: 132.48
2.4Ghz TCP DL Period 39	PASS	Download Rate: 201.65 Mbps Percent of Passing: 134.11
2.4Ghz TCP DL Period 40	PASS	Download Rate: 197.55 Mbps Percent of Passing: 131.38
2.4Ghz TCP DL Period 41	PASS	Download Rate: 190.65 Mbps Percent of Passing: 126.79
2.4Ghz TCP DL Period 42	PASS	Download Rate: 176.75 Mbps Percent of Passing: 117.55
2.4Ghz TCP DL Period 43	PASS	Download Rate: 165.35 Mbps Percent of Passing: 109.97
2.4Ghz TCP DL Period 44	PASS	Download Rate: 196.41 Mbps Percent of Passing: 130.63
2.4Ghz TCP DL Period 45	PASS	Download Rate: 211.03 Mbps Percent of Passing: 140.35
2.4Ghz TCP DL Period 46	PASS	Download Rate: 183.10 Mbps Percent of Passing: 121.77
2.4Ghz TCP DL Period 47	PASS	Download Rate: 185.52 Mbps Percent of Passing: 123.38
2.4Ghz TCP DL Period 48	PASS	Download Rate: 190.38 Mbps Percent of Passing: 126.62

2.4Ghz TCP DL Period 49	PASS	Download Rate: 170.78 Mbps Percent of Passing: 113.58
5Ghz TCP DL check 0 / 50	INFO	Total TCP throughput: 929.77 Mbps
5Ghz TCP DL check 1 / 50	INFO	Total TCP throughput: 934.31 Mbps
5Ghz TCP DL check 2 / 50	INFO	Total TCP throughput: 932.29 Mbps
5Ghz TCP DL check 3 / 50	INFO	Total TCP throughput: 930.99 Mbps
5Ghz TCP DL check 4 / 50	INFO	Total TCP throughput: 935.40 Mbps
5Ghz TCP DL check 5 / 50	INFO	Total TCP throughput: 934.31 Mbps
5Ghz TCP DL check 6 / 50	INFO	Total TCP throughput: 934.58 Mbps
5Ghz TCP DL check 7 / 50	INFO	Total TCP throughput: 934.19 Mbps
5Ghz TCP DL check 8 / 50	INFO	Total TCP throughput: 930.49 Mbps
5Ghz TCP DL check 9 / 50	INFO	Total TCP throughput: 931.67 Mbps
5Ghz TCP DL check 10 / 50	INFO	Total TCP throughput: 930.38 Mbps
5Ghz TCP DL check 11 / 50	INFO	Total TCP throughput: 924.92 Mbps
5Ghz TCP DL check 12 / 50	INFO	Total TCP throughput: 930.12 Mbps
5Ghz TCP DL check 13 / 50	INFO	Total TCP throughput: 935.94 Mbps
5Ghz TCP DL check 14 / 50	INFO	Total TCP throughput: 935.58 Mbps
5Ghz TCP DL check 15 / 50	INFO	Total TCP throughput: 934.83 Mbps
5Ghz TCP DL check 16 / 50	INFO	Total TCP throughput: 933.77 Mbps
5Ghz TCP DL check 17 / 50	INFO	Total TCP throughput: 934.63 Mbps
5Ghz TCP DL check 18 / 50	INFO	Total TCP throughput: 933.90 Mbps
5Ghz TCP DL check 19 / 50	INFO	Total TCP throughput: 921.64 Mbps
5Ghz TCP DL check 20 / 50	INFO	Total TCP throughput: 928.58 Mbps
5Ghz TCP DL check 21 / 50	INFO	Total TCP throughput: 927.95 Mbps
5Ghz TCP DL check 22 / 50	INFO	Total TCP throughput: 897.46 Mbps
5Ghz TCP DL check 23 / 50	INFO	Total TCP throughput: 862.60 Mbps
5Ghz TCP DL check 24 / 50	INFO	Total TCP throughput: 860.59 Mbps
5Ghz TCP DL check 25 / 50	INFO	Total TCP throughput: 849.20 Mbps
5Ghz TCP DL check 26 / 50	INFO	Total TCP throughput: 846.15 Mbps
5Ghz PER check 1	PASS	UDP Rx: 633.0 Detected Dropped: 0.0 PER: 0
5Ghz TCP DL check 27 / 50	INFO	Total TCP throughput: 852.45 Mbps
5Ghz TCP DL check 28 / 50	INFO	Total TCP throughput: 855.91 Mbps
5Ghz TCP DL check 29 / 50	INFO	Total TCP throughput: 843.85 Mbps
5Ghz TCP DL check 30 / 50	INFO	Total TCP throughput: 861.89 Mbps
5Ghz TCP DL check 31 / 50	INFO	Total TCP throughput: 860.01 Mbps
5Ghz TCP DL check 32 / 50	INFO	Total TCP throughput: 829.15 Mbps
5Ghz TCP DL check 33 / 50	INFO	Total TCP throughput: 849.67 Mbps
5Ghz TCP DL check 34 / 50	INFO	Total TCP throughput: 848.99 Mbps
5Ghz TCP DL check 35 / 50	INFO	Total TCP throughput: 854.43 Mbps
5Ghz TCP DL check 36 / 50	INFO	Total TCP throughput: 852.07 Mbps
5Ghz TCP DL check 37 / 50	INFO	Total TCP throughput: 838.20 Mbps
5Ghz TCP DL check 38 / 50	INFO	Total TCP throughput: 851.01 Mbps
5Ghz TCP DL check 39 / 50	INFO	Total TCP throughput: 853.44 Mbps
5Ghz TCP DL check 40 / 50	INFO	Total TCP throughput: 819.29 Mbps
5Ghz TCP DL check 41 / 50	INFO	Total TCP throughput: 849.12 Mbps
5Ghz TCP DL check 42 / 50	INFO	Total TCP throughput: 837.67 Mbps
5Ghz TCP DL check 43 / 50	INFO	Total TCP throughput: 839.79 Mbps
5Ghz TCP DL check 44 / 50	INFO	Total TCP throughput: 831.51 Mbps
5Ghz TCP DL check 45 / 50	INFO	Total TCP throughput: 828.21 Mbps
5Ghz TCP DL check 46 / 50	INFO	Total TCP throughput: 848.84 Mbps
5Ghz TCP DL check 47 / 50	INFO	Total TCP throughput: 826.91 Mbps
5Ghz TCP DL check 48 / 50	INFO	Total TCP throughput: 904.71 Mbps
5Ghz TCP DL check 49 / 50	INFO	Total TCP throughput: 905.70 Mbps
5Ghz band complete	INFO	Average over all iterations: 887.18 Mbps 80% passing rate cutoff: 709.74 Mbps
5Ghz TCP DL Period 0	PASS	Download Rate: 929.77 Mbps Percent of Passing: 131.00
5Ghz TCP DL Period 1	PASS	Download Rate: 934.31 Mbps Percent of Passing: 131.64
5Ghz TCP DL Period 2	PASS	Download Rate: 932.29 Mbps Percent of Passing: 131.36
5Ghz TCP DL Period 3	PASS	Download Rate: 930.99 Mbps Percent of Passing: 131.17
5Ghz TCP DL Period 4	PASS	Download Rate: 935.40 Mbps Percent of Passing: 131.79
5Ghz TCP DL Period 5	PASS	Download Rate: 934.31 Mbps Percent of Passing: 131.64
5Ghz TCP DL Period 6	PASS	Download Rate: 934.58 Mbps Percent of Passing: 131.68
5Ghz TCP DL Period 7	PASS	Download Rate: 934.19 Mbps Percent of Passing: 131.62
5Ghz TCP DL Period 8	PASS	Download Rate: 930.49 Mbps Percent of Passing: 131.10
5Ghz TCP DL Period 9	PASS	Download Rate: 931.67 Mbps Percent of Passing: 131.27
5Ghz TCP DL Period 10	PASS	Download Rate: 930.38 Mbps Percent of Passing: 131.09
5Ghz TCP DL Period 11	PASS	Download Rate: 924.92 Mbps Percent of Passing: 130.32
5Ghz TCP DL Period 12	PASS	Download Rate: 930.12 Mbps Percent of Passing: 131.05
5Ghz TCP DL Period 13	PASS	Download Rate: 935.94 Mbps Percent of Passing: 131.87
5Ghz TCP DL Period 14	PASS	Download Rate: 935.58 Mbps Percent of Passing: 131.82
5Ghz TCP DL Period 15	PASS	Download Rate: 934.83 Mbps Percent of Passing: 131.71
5Ghz TCP DL Period 16	PASS	Download Rate: 933.77 Mbps Percent of Passing: 131.56
5Ghz TCP DL Period 17	PASS	Download Rate: 934.63 Mbps Percent of Passing: 131.69
5Ghz TCP DL Period 18	PASS	Download Rate: 933.90 Mbps Percent of Passing: 131.58
5Ghz TCP DL Period 19	PASS	Download Rate: 921.64 Mbps Percent of Passing: 129.86
5Ghz TCP DL Period 20	PASS	Download Rate: 928.58 Mbps Percent of Passing: 130.83
5Ghz TCP DL Period 21	PASS	Download Rate: 927.95 Mbps Percent of Passing: 130.74
5Ghz TCP DL Period 22	PASS	Download Rate: 897.46 Mbps Percent of Passing: 126.45
5Ghz TCP DL Period 23	PASS	Download Rate: 862.60 Mbps Percent of Passing: 121.54
5Ghz TCP DL Period 24	PASS	Download Rate: 860.59 Mbps Percent of Passing: 121.25
5Ghz TCP DL Period 25	PASS	Download Rate: 849.20 Mbps Percent of Passing: 119.65
5Ghz TCP DL Period 26	PASS	Download Rate: 846.15 Mbps Percent of Passing: 119.22

5Ghz TCP DL Period 27	PASS	Download Rate: 852.45 Mbps Percent of Passing: 120.11
5Ghz TCP DL Period 28	PASS	Download Rate: 855.91 Mbps Percent of Passing: 120.59
5Ghz TCP DL Period 29	PASS	Download Rate: 843.85 Mbps Percent of Passing: 118.90
5Ghz TCP DL Period 30	PASS	Download Rate: 861.89 Mbps Percent of Passing: 121.44
5Ghz TCP DL Period 31	PASS	Download Rate: 860.01 Mbps Percent of Passing: 121.17
5Ghz TCP DL Period 32	PASS	Download Rate: 829.15 Mbps Percent of Passing: 116.82
5Ghz TCP DL Period 33	PASS	Download Rate: 849.67 Mbps Percent of Passing: 119.72
5Ghz TCP DL Period 34	PASS	Download Rate: 848.99 Mbps Percent of Passing: 119.62
5Ghz TCP DL Period 35	PASS	Download Rate: 854.43 Mbps Percent of Passing: 120.38
5Ghz TCP DL Period 36	PASS	Download Rate: 852.07 Mbps Percent of Passing: 120.05
5Ghz TCP DL Period 37	PASS	Download Rate: 838.20 Mbps Percent of Passing: 118.10
5Ghz TCP DL Period 38	PASS	Download Rate: 851.01 Mbps Percent of Passing: 119.90
5Ghz TCP DL Period 39	PASS	Download Rate: 853.44 Mbps Percent of Passing: 120.25
5Ghz TCP DL Period 40	PASS	Download Rate: 819.29 Mbps Percent of Passing: 115.44
5Ghz TCP DL Period 41	PASS	Download Rate: 849.12 Mbps Percent of Passing: 119.64
5Ghz TCP DL Period 42	PASS	Download Rate: 837.67 Mbps Percent of Passing: 118.02
5Ghz TCP DL Period 43	PASS	Download Rate: 839.79 Mbps Percent of Passing: 118.32
5Ghz TCP DL Period 44	PASS	Download Rate: 831.51 Mbps Percent of Passing: 117.16
5Ghz TCP DL Period 45	PASS	Download Rate: 828.21 Mbps Percent of Passing: 116.69
5Ghz TCP DL Period 46	PASS	Download Rate: 848.84 Mbps Percent of Passing: 119.60
5Ghz TCP DL Period 47	PASS	Download Rate: 826.91 Mbps Percent of Passing: 116.51
5Ghz TCP DL Period 48	PASS	Download Rate: 904.71 Mbps Percent of Passing: 127.47
5Ghz TCP DL Period 49	PASS	Download Rate: 905.70 Mbps Percent of Passing: 127.61

### Realtime Throughput for: 6.5.1 Long Term Stability Test



Test configuration and LANforge software version	
Skip 2.4Ghz Tests	false
Skip 5Ghz Tests	false
Duration-120	20
Duration-60	10
Channel 2Ghz	11
Channel 5Ghz	157
Multi-Conn	5
ToS	0
Upstream Port	1.1.1 eth1 Firmware: 0. 6-1 Resource: lanforge-74bb
Turn-Table Chamber	DUTChamber
Configured 2m 2.4Ghz RSSI	-24
Configured 2m 5Ghz RSSI	-28
Requested Rx-Sens Speed	65%
RxSens Rotation Degrees:	45
RxSens Start Step:	1
Attenuation Adjustment	4
Boost RxSens 5Ghz Signal	false
Stop RX-Sens at pass	false
Interferer 5G-80Mhz:	195.00 Mbps
Interferer 5G-40Mhz:	90.00 Mbps
Interferer 2.4G-20Mhz:	29.00 Mbps
Spatial Rotation Degrees:	45
Test Retries:	3
Stability Duration-180	10
Stability Max-Iterations	50
Stability UDP Duration	5 m

WiFi Radio 0	1.1.3 wiphy0 Firmware: 10.4b-ct-9984-xtH-012-a374d413a Resource: lanforge-74bb
WiFi Radio 1	1.1.4 wiphy1 Firmware: 10.4b-ct-9984-xtH-012-a374d413a Resource: lanforge-74bb
WiFi Radio 2	1.1.4 wiphy2 Firmware: 10.4b-ct-9984-xtH-012-a374d413a Resource: lanforge-74bb
WiFi Radio 3	1.1.5 wiphy3 Firmware: 10.4b-ct-9984-xtH-012-a374d413a Resource: lanforge-74bb
WiFi Radio 4	1.1.6 wiphy4 Firmware: 10.4b-ct-9984-xtH-012-a374d413a Resource: lanforge-74bb
WiFi Radio 5	1.1.8 wiphy5 Firmware: 10.4b-ct-9984-xtH-012-a374d413a Resource: lanforge-74bb
Attenuator 0	rssi-0-2.4Ghz: -23 rssi-0-5Ghz: -31 atten: 1.1.86.0
Attenuator 1	rssi-0-2.4Ghz: -23 rssi-0-5Ghz: -31 atten: 1.1.86.1
Attenuator 2	rssi-0-2.4Ghz: -23 rssi-0-5Ghz: -31 atten: 1.1.86.2
Attenuator 3	rssi-0-2.4Ghz: -23 rssi-0-5Ghz: -31 atten: 1.1.86.3
Attenuator 4	rssi-0-2.4Ghz: -25 rssi-0-5Ghz: -32 atten: 1.1.85.0
Attenuator 5	rssi-0-2.4Ghz: -25 rssi-0-5Ghz: -32 atten: 1.1.85.1
Attenuator 6	rssi-0-2.4Ghz: -25 rssi-0-5Ghz: -32 atten:
Attenuator 7	rssi-0-2.4Ghz: -25 rssi-0-5Ghz: -32 atten:
Attenuator 8	rssi-0-2.4Ghz: -23 rssi-0-5Ghz: -30 atten: 1.1.85.2
Attenuator 9	rssi-0-2.4Ghz: -23 rssi-0-5Ghz: -30 atten: 1.1.85.3
Attenuator 10	rssi-0-2.4Ghz: -23 rssi-0-5Ghz: -30 atten:
Attenuator 11	rssi-0-2.4Ghz: -23 rssi-0-5Ghz: -30 atten:
Show Events	true
Build Date	Thu Jul 25 17:29:16 PDT 2019
Build Version	5.4.1

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