AP-Auto

AP Automated Test Plan

Wed Jun 23 19:41:53 PDT 2021

Test Setup Information	
Device Under Test	ext-03-03 ssid_wpa2p_5g ext-03-03 ssid_wpa2p_2g
Estimated Run Time	4 m
Actual Run Time	3.56 m

Objective

The AP-Auto WiFi Performance test plan automates testing of one or more APs with flexibility to select which tests are to be run.

Summary Results

Test	Result	Candela Score	Elapsed	Info
Basic Client Connectivity	Skipped	0	0	
Throughput vs Pkt Size	Skipped	0	0	
Multi Band Performance	2.4Ghz PASS 5Ghz PASS Dual-Band FAIL	0	2.948 m	Dual-Concurrent vs 90% of Sum: 140.92 Mbps / 199.02 Mbps Dual-Concurrent vs 90% of Sum: 0 Mbps / 0 Mbps
Capacity	Skipped	0	0	
Stability	Skipped	0	0	
Multi-Station Throughput vs Pkt Size	Skipped	0	0	
Band-Steering	Skipped	0	0	
Long-Term	Skipped	0	0	

Multi Band Performance

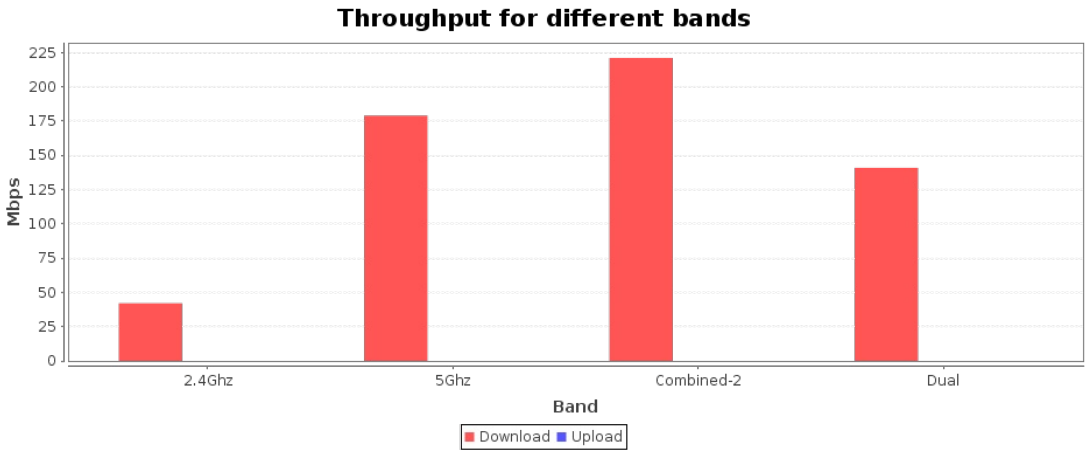
Summary

The Multi Band Performance test intends to verify that the Wi-Fi AP throughput with multiple bands active with a single station on each band. The configured speed will be 20% higher than the passing value for MTU sized frames in the throughpu test. If the throughput test was skipped, then fixed values will be used.

A test is considered passed if the multi-band concurrent throughput is at least 90% of the sum of the individual single-band throughput tests. The score is the percentage of the throughput vs that 90% cut-off.

Throughput for different bands.

CSV Data for Throughput for different bands



Multi Band Performance Results

Type	Result	Notes
2.4Ghz Download	PASS	42.09 Mbps PER: 38.37
5Ghz Download	PASS	179.04 Mbps PER: 0
Dual Download	FAIL	140.92 Mbps PER: 24.40 Dual-Concurrent vs 90% of Sum: 140.92 Mbps / 199.02 Mbps
2.4Ghz Upload	PASS	0 Mbps PER: 0
5Ghz Upload	PASS	0 Mbps PER: 0
Dual Upload	PASS	0 Mbps PER: 0 Dual-Concurrent vs 90% of Sum: 0 Mbps / 0 Mbps

Throughput Test, 2.4Ghz: Snapshot Download

Port	Tx-Bps 1m	RxBps 1m	Tx-Fail %	Tx-Link-Rate	Rx-Link-Rate	Mode	Channel	Last CX-Time(ms)	RSSI (dBm)	AP	IP	MAC
1.1.7 wlan0	406 bps	18.595 Mbps	7.692	19.5 Mbps	65 Mbps	802.11bgn	6	34	-6	90:3C:B3:94:48:18	172.17.0.8	04:f0:21:94:dc:4d

Port	Tx-Bps 1m	Rx-Bps 1m	Link-Rate	IP	MAC
1.1.1 eth1	39.565 Mbps	885 bps	1 Gbps	172.16.0.1	00:0d:b9:58:ac:55

Endpoint	Tx-Bps 1m	Rx-Bps 1m	RX Latency(ms)	Round-Trip Latency(ms)	Jitter	Rx Packet Loss %
cv_udp-1.1-1.wlan0--1.0.0-A	0 bps	42.215 Mbps	475	475	0	72.243
cv_udp-1.1-1.wlan0--1.0.0-B	188.41 Mbps	0 bps	0	475	0	0

Throughput Test, 5Ghz: Snapshot Download

Port	Tx-Bps 1m	RxBps 1m	Tx-Fail %	Tx-Link-Rate	Rx-Link-Rate	Mode	Channel	Last CX-Time(ms)	RSSI (dBm)	AP	IP	MAC
1.1.8 wlan1	252 bps	51.692 Mbps	0	39 Mbps	260 Mbps	802.11an-AC	36	18	-38	90:3C:B3:94:48:19	172.17.0.9	04:f0:21:94:d8:6f

Port	Tx-Bps 1m	Rx-Bps 1m	Link-Rate	IP	MAC
1.1.1 eth1	119.191 Mbps	109.362 Kbps	1 Gbps	172.16.0.1	00:0d:b9:58:ac:55

Endpoint	Tx-Bps 1m	Rx-Bps 1m	RX Latency(ms)	Round-Trip Latency(ms)	Jitter	Rx Packet Loss %
cv_udp-1.1-1.wlan1--1.0.0-A	0 bps	179.04 Mbps	21	21	0	0
cv_udp-1.1-1.wlan1--1.0.0-B	178.074 Mbps	0 bps	0	21	0	0

Throughput Test, Dual: Snapshot Download

	Tx-Bps		Tx-Fail	Tx-Link-	Rx-Link-			Last CX-	RSSI			

Port	1m	RxBps 1m	%	Rate	Rate	Mode	Channel	Time(ms)	(dBm)	AP	IP	MAC
1.1.7 wlan0	89.841 Kbps	22.412 Mbps	0.412	216.7 Mbps	65 Mbps	802.11bgn	6	34	-12	90:3C:B3:94:48:18	172.17.0.8	04:f0:21:94:dc:4d
1.1.8 wlan1	4.196 Kbps	71.314 Mbps	6.863	52 Mbps	260 Mbps	802.11an-AC	36	18	-38	90:3C:B3:94:48:19	172.17.0.9	04:f0:21:94:d8:6f

Port	Tx-Bps 1m	Rx-Bps 1m	Link-Rate	IP	MAC
1.1.1 eth1	136.231 Mbps	84.045 Kbps	1 Gbps	172.16.0.1	00:0d:b9:58:ac:55

Endpoint	Tx-Bps 1m	Rx-Bps 1m	RX Latency(ms)	Round-Trip Latency(ms)	Jitter	Rx Packet Loss %
cv_udp-1.1-1.wlan0--1.0.0-A	0 bps	43.962 Mbps	537	537	0	43.581
cv_udp-1.1-1.wlan0--1.0.0-B	91 Mbps	0 bps	0	537	0	0
cv_udp-1.1-1.wlan1--1.0.0-A	0 bps	98.289 Mbps	2	2	2	0
cv_udp-1.1-1.wlan1--1.0.0-B	99.72 Mbps	0 bps	0	2	0	0

Throughput Test, 2.4Ghz: Snapshot Upload

Port	Tx-Bps 1m	RxBps 1m	Tx-Fail %	Tx-Link-Rate	Rx-Link-Rate	Mode	Channel	Last CX-Time(ms)	RSSI (dBm)	AP	IP	MAC
1.1.7 wlan0	20.99 Mbps	20.937 Mbps	0.036	216.7 Mbps	65 Mbps	802.11bgn	6	34	-13	90:3C:B3:94:48:18	172.17.0.8	04:f0:21:94:dc:4d

Port	Tx-Bps 1m	Rx-Bps 1m	Link-Rate	IP	MAC
1.1.1 eth1	115.732 Mbps	49.315 Mbps	1 Gbps	172.16.0.1	00:0d:b9:58:ac:55

Endpoint	Tx-Bps 1m	Rx-Bps 1m	RX Latency(ms)	Round-Trip Latency(ms)	Jitter	Rx Packet Loss %
cv_udp-1.1-1.wlan0--1.0.0-A	138.321 Mbps	0 bps	0	0	0	0
cv_udp-1.1-1.wlan0--1.0.0-B	0 bps	0 bps	0	0	0	100

Throughput Test, 5Ghz: Snapshot Upload

Port	Tx-Bps 1m	RxBps 1m	Tx-Fail %	Tx-Link-Rate	Rx-Link-Rate	Mode	Channel	Last CX-Time(ms)	RSSI (dBm)	AP	IP	MAC
1.1.8 wlan1	32.244 Mbps	53.145 Mbps	0.005	288.3 Mbps	288.3 Mbps	802.11an-AC	36	18	-39	90:3C:B3:94:48:19	172.17.0.9	04:f0:21:94:d8:6f

Port	Tx-Bps 1m	Rx-Bps 1m	Link-Rate	IP	MAC
1.1.1 eth1	84.38 Mbps	78.013 Mbps	1 Gbps	172.16.0.1	00:0d:b9:58:ac:55

Endpoint	Tx-Bps 1m	Rx-Bps 1m	RX Latency(ms)	Round-Trip Latency(ms)	Jitter	Rx Packet Loss %
cv_udp-1.1-1.wlan1--1.0.0-A	153.833 Mbps	0 bps	0	0	0	0
cv_udp-1.1-1.wlan1--1.0.0-B	0 bps	0 bps	0	0	0	100

Throughput Test, Dual: Snapshot Upload

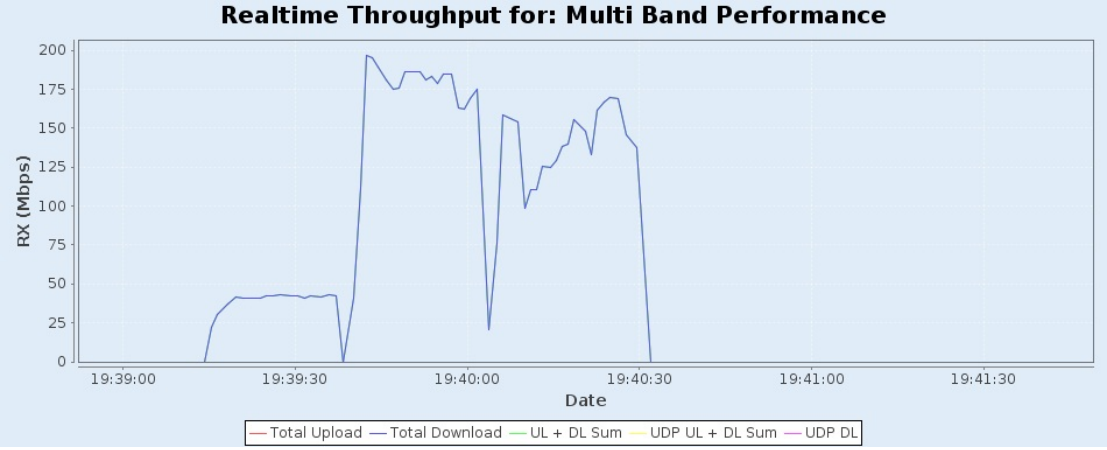
Port	Tx-Bps 1m	RxBps 1m	Tx-Fail %	Tx-Link-Rate	Rx-Link-Rate	Mode	Channel	Last CX-Time(ms)	RSSI (dBm)	AP	IP	MAC
1.1.7 wlan0	55.214 Mbps	13.114 Mbps	0.025	216.7 Mbps	65 Mbps	802.11bgn	6	34	-12	90:3C:B3:94:48:18	172.17.0.8	04:f0:21:94:dc:4d
1.1.8 wlan1	60.834 Mbps	38.612 Mbps	0.422	216.7 Mbps	195 Mbps	802.11an-AC	36	18	-41	90:3C:B3:94:48:19	172.17.0.9	04:f0:21:94:d8:6f

Port	Tx-Bps 1m	Rx-Bps 1m	Link-Rate	IP	MAC
1.1.1 eth1	66.986 Mbps	112.205 Mbps	1 Gbps	172.16.0.1	00:0d:b9:58:ac:55

Endpoint	Tx-Bps 1m	Rx-Bps 1m	RX Latency(ms)	Round-Trip Latency(ms)	Jitter	Rx Packet Loss %
cv_udp-1.1-1.wlan0--1.0.0-A	118.464 Mbps	0 bps	0	0	0	0
cv_udp-1.1-1.wlan0--1.0.0-B	0 bps	0 bps	0	0	0	100
cv_udp-1.1-1.wlan1--1.0.0-A	120.481 Mbps	0 bps	0	0	0	0

cv_udp-1.1-1.wlan1--1.0.0-B	0 bps	0 bps	0	0	0	100

Realtime Throughput for: Multi Band Performance



Key Performance Indicators CSV

Test configuration and LANforge software version	
Auto-Helper	true
Skip 2.4Ghz Tests	false
Skip 5Ghz Tests	false
Skip 5Gzh-B Tests	true
Skip Dual-Band Tests	false
Skip Tri-Band Tests	true
Use BSSID	true
Set Radio TxPower to Default	false
Loop Iterations:	1
2.4Ghz Station Count:	1
5Ghz Station Count:	1
Dual-Band Station Count:	2
5Ghz-B Station Count:	64
Tri-Band Station Count:	64
Duration-20	20
Hunt Retries:	1
Maximum Hunt Iterations:	100
Multi-Conn	1
ToS	0
Upstream Port	1.1.1 eth1 Firmware: 0. 6-5 Resource: lf0350-ac54
Stability Duration:	1 h
Concurrent Ports to Reset:	1
Minimum Time between Resets:	10000
Maximum Time between Resets:	60000
Long-Term Station Count:	2
VOIP Call Count:	20
Percent:	1000000
Open:	25
PSK:	60
Enterprise:	120
Stability stall threshold UDP Upload:	100000
Stability stall threshold UDP	

Download:	100000
Stability stall threshold TCP Upload:	100000
Stability stall threshold TCP Download:	100000
Stability stall threshold Video:	100000
Stability stall threshold VOIP:	20000
Stability Multicast Min Download Rate:	100000
Stability Multicast Max Download Rate:	0
Stability UDP Min Download Rate:	500000
Stability UDP Max Download Rate:	0
Stability UDP Min Upload Rate:	500000
Stability UDP Max Upload Rate:	0
Stability TCP Min Download Rate:	500000
Stability TCP Max Download Rate:	0
Stability TCP Min Upload Rate:	500000
Stability TCP Max Upload Rate:	0
Long-Term Duration:	1 h
Long-Term Graph Interval:	30
Long-Term Download Rate:	85%
Video Emulation Rate:	700000
Video Buffer Size:	1000000
Long-Term Upload Rate:	85%
Use Packet Sizes	false
Reset Radios	false
Use Packet Sizes	false
Always expect 5g	false
Spatial Streams	AUTO
Bandwidth	AUTO
Modes	Auto
WiFi Radio 0	1.1.3 wiphy0 Firmware: 10.1-ct-8x-__xtH-022-bcdb24ff Resource: lf0350-ac54
WiFi Radio 0	1.1.4 wiphy1 Firmware: 10.1-ct-8x-__xtH-022-bcdb24ff Resource: lf0350-ac54
Pass-Fail Tput Criteria	
Show Events	true
Build Date	Thu 27 May 2021 10:50:15 AM PDT
Build Version	5.4.3
Git Version	bebd8463e2b802536d03219096d308128366dcf3

CSV Data