AP-Auto

AP Automated Test Plan

Thu Jun 24 06:07:52 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	3.716 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	80	3.1 m	Dual-Concurrent vs 90% of Sum: 169.01 Mbps / 192.08 Mbps Dual-Concurrent vs 90% of Sum: 179.92 Mbps / 246.55 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

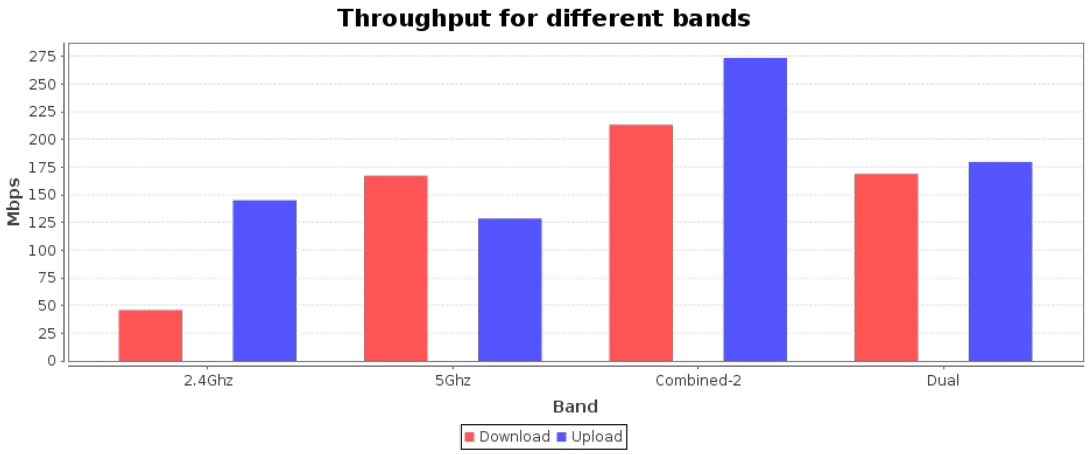
Summary

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	45.93 Mbps PER: 37.48
5Ghz Download	PASS	167.49 Mbps PER: 0
Dual Download	FAIL	169.01 Mbps PER: 30.53 Dual-Concurrent vs 90% of Sum: 169.01 Mbps / 192.08 Mbps
2.4Ghz Upload	PASS	145.23 Mbps PER: 0
5Ghz Upload	PASS	128.71 Mbps PER: 0
Dual Upload	FAIL	179.92 Mbps PER: 0 Dual-Concurrent vs 90% of Sum: 179.92 Mbps / 246.55 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
1.1.5 wlan0	376 bps	17.439 Mbps	7.143	26 Mbps	65 Mbps	802.11bgn	6	38	-11	90:3C:B3:94:48:18	172.16.225.168	04:f0:21:94:dc:4d

Port	Tx-Bps 1m	Rx-Bps 1m	Link-Rate	IP	MAC
1.1.1 eth1	39.822 Mbps	901 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	45.406 Mbps	448	448	0	81.153
cv_udp-1.1-1.wlan0--1.0.0-B	185 Mbps	0 bps	0	448	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
1.1.7 wlan1	223 bps	36.762 Mbps	0	87.8 Mbps	1.17 Gbps	802.11an-AC	36	139	-43	90:3C:B3:94:48:19	172.16.225.169	04:f0:21:94:d8:6f

Port	Tx-Bps 1m	Rx-Bps 1m	Link-Rate	IP	MAC
1.1.1 eth1	120.007 Mbps	127.612 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	169.241 Mbps	4	4	0	0
cv_udp-1.1-1.wlan1--1.0.0-B	169.784 Mbps	0 bps	0	4	0	0

Throughput Test, Dual: Snapshot Download

Port	Tx-Bps	RxBps	Tx-Fail	Tx-Link-	Rx-Link-	Mode	Channel	Last CX-	RSSI	AP	IP	MAC

	1m	1m	%	Rate	Rate			Time(ms)	(dBm)			
1.1.5 wlan0	91.479 Kbps	22.955 Mbps	0.153	216.7 Mbps	65 Mbps	802.11bgn	6	38	-15	90:3C:B3:94:48:18	172.16.225.168	04:f0:21:94:dc:4d
1.1.7 wlan1	2.323 Kbps	68.523 Mbps	13.889	234 Mbps	1.17 Gbps	802.11an-AC	36	139	-45	90:3C:B3:94:48:19	172.16.225.169	04:f0:21:94:d8:6f

Port	Tx-Bps 1m	Rx-Bps 1m	Link-Rate	IP	MAC
1.1.1 eth1	152.302 Mbps	96.937 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	45.503 Mbps	714	714	0	55.504
cv_udp-1.1-1.wlan0--1.0.0-B	124.067 Mbps	0 bps	0	714	0	0
cv_udp-1.1-1.wlan1--1.0.0-A	0 bps	121.88 Mbps	62	62	0	0.965
cv_udp-1.1-1.wlan1--1.0.0-B	124.866 Mbps	0 bps	0	62	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
1.1.5 wlan0	42.026 Mbps	19.72 Mbps	0.055	216.7 Mbps	11 Mbps	802.11bgn	6	38	-10	90:3C:B3:94:48:18	172.16.225.168	04:f0:21:94:dc:4d

Port	Tx-Bps 1m	Rx-Bps 1m	Link-Rate	IP	MAC
1.1.1 eth1	133.488 Mbps	53.078 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	145.706 Mbps	0 bps	0	3	0	0
cv_udp-1.1-1.wlan0--1.0.0-B	0 bps	143.022 Mbps	3	3	0	0.86

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
1.1.7 wlan1	26.04 Mbps	71.542 Mbps	0.007	1300 Mbps	6 Mbps	802.11an-AC	36	139	-34	90:3C:B3:94:48:19	172.16.225.169	04:f0:21:94:d8:6f

Port	Tx-Bps 1m	Rx-Bps 1m	Link-Rate	IP	MAC
1.1.1 eth1	98.315 Mbps	73.617 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	130.716 Mbps	0 bps	0	4	0	0
cv_udp-1.1-1.wlan1--1.0.0-B	0 bps	130.752 Mbps	4	4	0	0

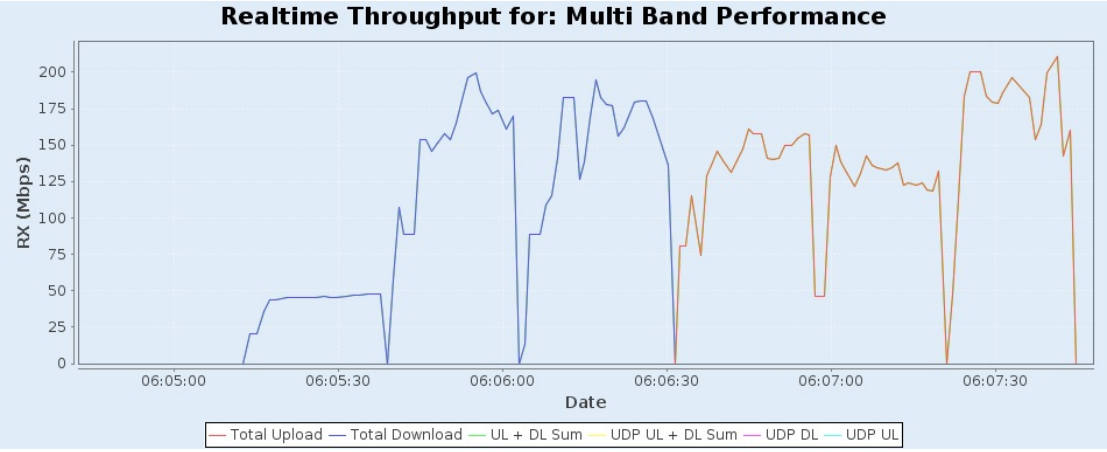
Throughput Test, Dual: Snapshot Upload

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
1.1.5 wlan0	45.739 Mbps	11.429 Mbps	0.049	216.7 Mbps	11 Mbps	802.11bgn	6	38	-14	90:3C:B3:94:48:18	172.16.225.168	04:f0:21:94:dc:4d
1.1.7 wlan1	42.512 Mbps	55.851 Mbps	0.489	1170 Mbps	975 Mbps	802.11an-AC	36	139	-37	90:3C:B3:94:48:19	172.16.225.169	04:f0:21:94:d8:6f

Port	Tx-Bps 1m	Rx-Bps 1m	Link-Rate	IP	MAC
1.1.1 eth1	77.106 Mbps	95.924 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	92.406 Mbps	0 bps	0	5	0	0
cv_udp-1.1-1.wlan0--1.0.0-B	0 bps	92.122 Mbps	5	5	0	0
cv_udp-1.1-1.wlan1--1.0.0-A	88.423 Mbps	0 bps	0	2	0	0
cv_udp-1.1-1.wlan1--1.0.0-B	0 bps	88.239 Mbps	2	2	0	0

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