AP-Auto

AP Automated Test Plan

Wed Jun 23 05:36:38 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	3.533 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	2.925 m	Dual-Concurrent vs 90% of Sum: 0 Mbps / 0 Mbps Dual-Concurrent vs 90% of Sum: 200.80 Mbps / 253.94 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

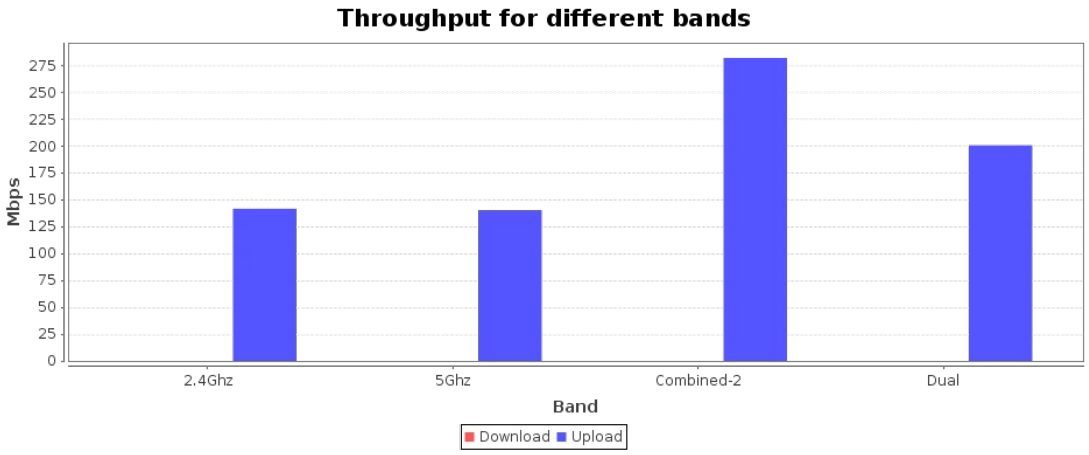
Summary

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	0 Mbps PER: 50.00
5Ghz Download	PASS	0 Mbps PER: 50.00
Dual Download	PASS	0 Mbps PER: 100.00 Dual-Concurrent vs 90% of Sum: 0 Mbps / 0 Mbps
2.4Ghz Upload	PASS	141.72 Mbps PER: 0
5Ghz Upload	PASS	140.44 Mbps PER: 0
Dual Upload	FAIL	200.80 Mbps PER: 0 Dual-Concurrent vs 90% of Sum: 200.80 Mbps / 253.94 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
1.1.8 wlan0	401 bps	887 bps	0	26 Mbps	52 Mbps	802.11bgn	6	34	-11	90:3C:B3:94:48:18	192.168.1.178	04:f0:21:94:dc:4d

Port	Tx-Bps 1m	Rx-Bps 1m	Link-Rate	IP	MAC
1.1.1 eth1	144 bps	1.046 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	0 bps	0	0	0	100
cv_udp-1.1-1.wlan0--1.0.0-B	102.204 Mbps	0 bps	0	0	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
1.1.9 wlan1	740 bps	626 bps	0	260 Mbps	130 Mbps	802.11an-AC	36	21	-32	90:3C:B3:94:48:19	192.168.1.166	04:f0:21:94:d8:6f

Port	Tx-Bps 1m	Rx-Bps 1m	Link-Rate	IP	MAC
1.1.1 eth1	113 bps	854 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.wlan1--1.0.0-A	0 bps	0 bps	0	0	0	100
cv_udp-1.1-1.wlan1--1.0.0-B	102.143 Mbps	0 bps	0	0	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)			
1.1.8 wlan0	176 bps	404 bps	0	1 Mbps	52 Mbps	802.11bgn	6	34	-12	90:3C:B3:94:48:18	192.168.1.178	04:f0:21:94:dc:4d
1.1.9 wlan1	557 bps	471 bps	0	6 Mbps	130 Mbps	802.11an-AC	36	21	-32	90:3C:B3:94:48:19	192.168.1.166	04:f0:21:94:d8:6f

Port	Tx-Bps 1m	Rx-Bps 1m	Link-Rate	IP	MAC
1.1.1 eth1	78 bps	406 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	0 bps	0	0	0	100
cv_udp-1.1-1.wlan0--1.0.0-B	55.121 Mbps	0 bps	0	0	0	0
cv_udp-1.1-1.wlan1--1.0.0-A	0 bps	0 bps	0	0	0	100
cv_udp-1.1-1.wlan1--1.0.0-B	55.123 Mbps	0 bps	0	0	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
1.1.8 wlan0	28.331 Mbps	5.912 Kbps	0.032	216.7 Mbps	65 Mbps	802.11bgn	6	34	-10	90:3C:B3:94:48:18	192.168.1.178	04:f0:21:94:dc:4d

Port	Tx-Bps 1m	Rx-Bps 1m	Link-Rate	IP	MAC
1.1.1 eth1	6.962 Kbps	33.368 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	141.876 Mbps	0 bps	0	3	0	0
cv_udp-1.1-1.wlan0--1.0.0-B	0 bps	141.707 Mbps	3	3	0	0

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
1.1.9 wlan1	39.099 Mbps	11.618 Kbps	0	288.3 Mbps	216.7 Mbps	802.11an-AC	36	21	-32	90:3C:B3:94:48:19	192.168.1.166	04:f0:21:94:d8:6f

Port	Tx-Bps 1m	Rx-Bps 1m	Link-Rate	IP	MAC
1.1.1 eth1	26.054 Kbps	107.406 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	139.919 Mbps	0 bps	0	2	0	0
cv_udp-1.1-1.wlan1--1.0.0-B	0 bps	141.332 Mbps	2	2	0	0

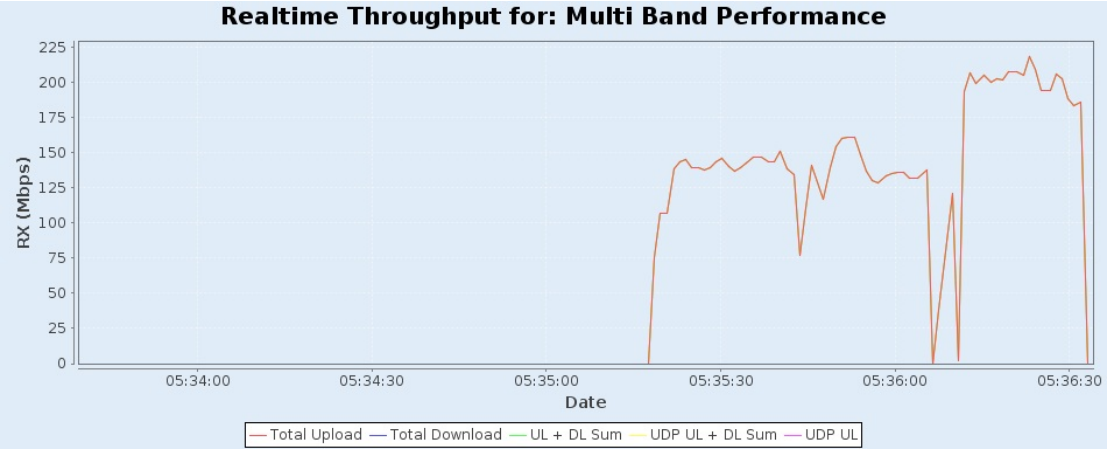
Throughput Test, Dual: Snapshot Upload

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
1.1.8 wlan0	54.986 Mbps	25.722 Kbps	0.079	216.7 Mbps	78 Mbps	802.11bgn	6	34	-11	90:3C:B3:94:48:18	192.168.1.178	04:f0:21:94:dc:4d
1.1.9 wlan1	52.669 Mbps	10.495 Kbps	0.303	216.7 Mbps	260 Mbps	802.11an-AC	36	21	-34	90:3C:B3:94:48:19	192.168.1.166	04:f0:21:94:d8:6f

Port	Tx-Bps 1m	Rx-Bps 1m	Link-Rate	IP	MAC
1.1.1 eth1	43.506 Kbps	132.968 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	100.975 Mbps	0 bps	0	6	0	0
cv_udp-1.1-1.wlan0--1.0.0-B	0 bps	100.835 Mbps	6	6	0	0
cv_udp-1.1-1.wlan1--1.0.0-A	100.61 Mbps	0 bps	0	4	0	0
cv_udp-1.1-1.wlan1--1.0.0-B	0 bps	100.286 Mbps	4	4	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