Mix Stability Test

AP Automated Test Plan

Fri Oct 07 14:39:46 PDT 2022

Test Setup Information	
Device Under Test	TR-398_DUT asus-ax11000-5 f0:2f:74:57:db:b4 (2) TR-398_DUT asus-ax11000-2 f0:2f:74:57:db:b0 (1)
Estimated Run Time	1.083 h
Actual Run Time	2.253 m

Summary Results

Test	Result	Candela Score	Elapsed	Info
Stability	2.4Ghz FAIL	85	1.777 m	Station Resets: 0.0 Station Connections: 0.0 Auth Timeouts: 0.0 Association Rejected: 0.0 Bandwidth Check: 6.0/11.0 STA Connected Check: 5.0/5.0

Stability

Summary

The Mixed Stability test brings up the requested amount of stations distributed across the configured DUTs. It then runs VOIP, emulated video, UDP, and/or TCP traffic connections to test that the link is continuously working. VOIP traffic will be station-to-station, preferring 2.4Ghz to 5Ghz station calls if the number of stations supports that, but it will use 2.4 to 2.4 stations or 5Ghz to 5Ghz stations too as needed. VOIP calls used 'VO' QoS settings. You can configure the number of stations using the 'VOIP Call Count' field. Emulated Video traffic is created by downloading a binary file over and over at a user-configured speed (see the 'Video Emulation Rate' and 'Video Buffer Size'). A configurable amount of stations may be re-connected randomly while traffic is running.

The test is considered failed if any stations reconnect or if a connection has less than the specified minimum throughput over a 1 minute period.

The Candela Score for the Stability test is calculated as:

- 34%: total-station-count / (total-sta-count + reconnects + connection errors)
- 33%: stations-with-ok-bandwidth / (ok-bw + bad-bw)
- 33%: connected-stations-count / all-stations-count

Station disconnect stats.

Stability Results

Type	Result	Notes

| Configuration NOTE	INFO	Skipping DUT idx: 1: No 2.4Ghz DUT configured.
Configuration NOTE	INFO	Skipping DUT idx: 2: No 2.4Ghz DUT configured.
Configuration NOTE	INFO	Configured to skip 5Ghz band test.
Configuration NOTE	INFO	Configured to skip Dual band test.
Configuration NOTE	INFO	Configured to skip 5Ghz-B band test.
Configuration NOTE	INFO	Configured to skip Tri band test.

Stability Results for 2.4Ghz
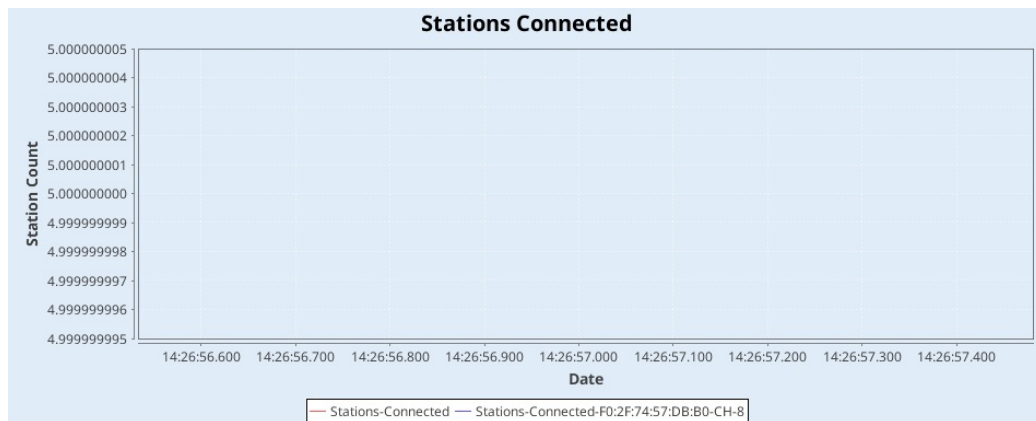
| Type	Result	Notes

Port Reset Totals
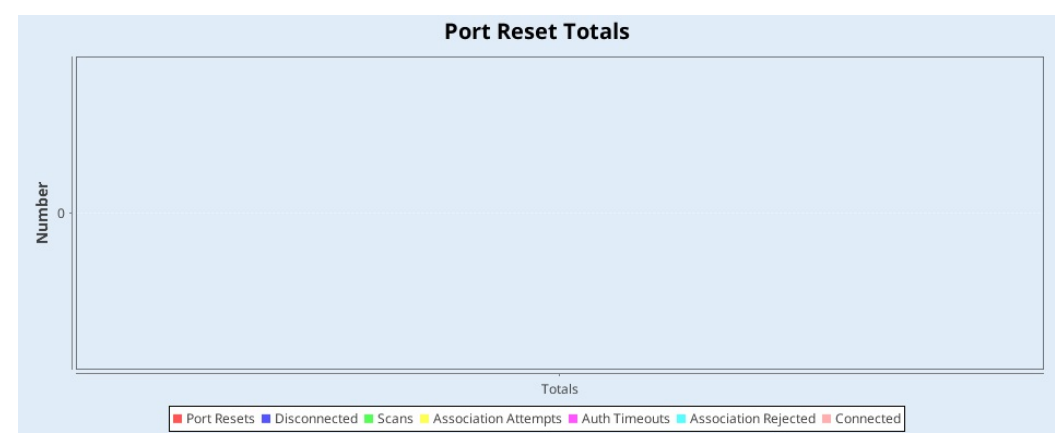
Throughput for each Station
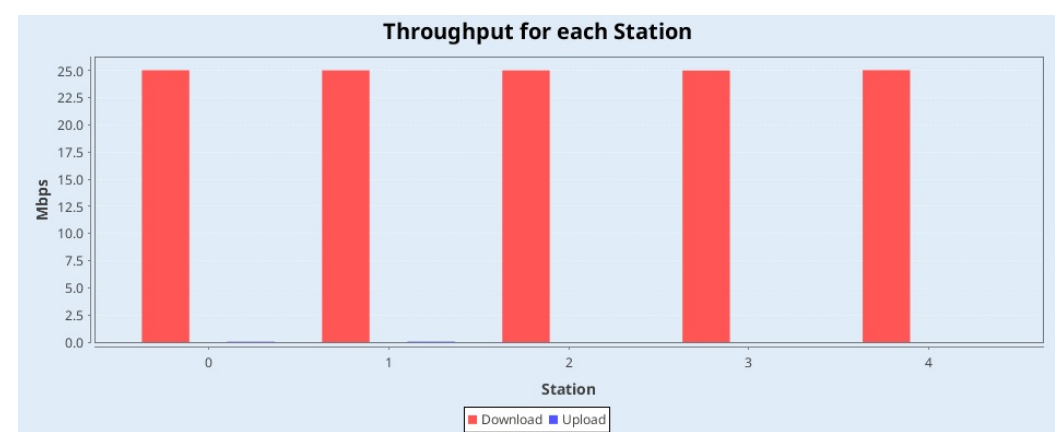
Number of stations that are connected over time.

Stations Connected

Per-Protocol Latency Graph shows the average latency for the different protocol types created by this test. If opposite-direction traffic is selected, the the latency will be round-trip, otherwise it will just report one-way latency. TCP latency may be misleading because it the time taken for the entire 'pdu' to be transmitted. The PDU is often 64kb. UDP latency is per UDP frame.
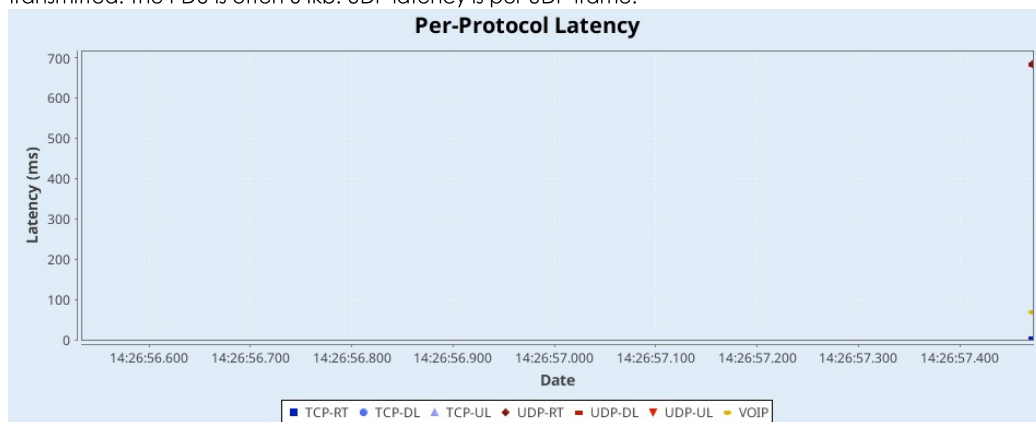
UDP Latency Graph shows the average latency for the UDP traffic created by this test. If opposite-direction traffic is selected, the the latency will be round-trip, otherwise it will just report one-way latency.
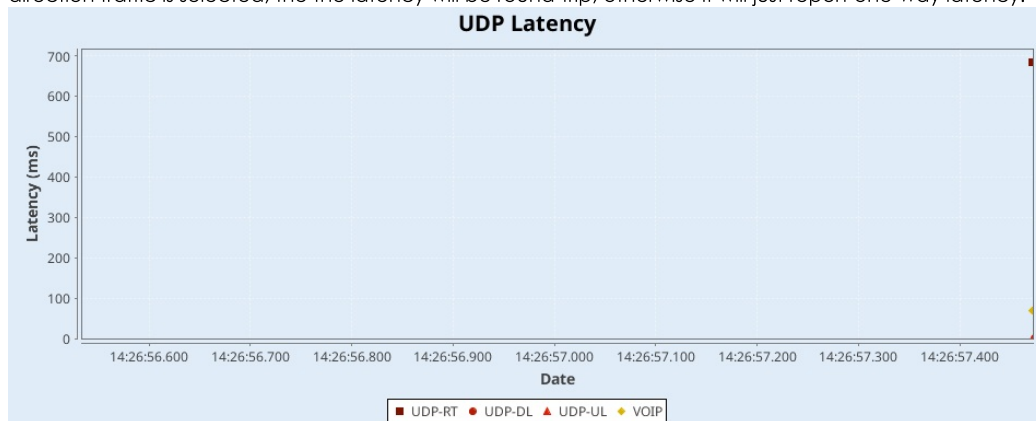

Mix-Stabilty: Snapshot 2.4Ghz

Port	Tx-Bps 1m	Rx-Bps 1m	Tx-Fail %	Tx Link-Rate	Rx Link-Rate	Mode	Channel	Last CX-Time (ms)	RSSI (dBm)	AP	IP	MAC
1.1.12 sta00500	33.914 Kbps	25.05 Mbps	0.585	78 Mbps	346.7 Mbps	802.11bgn-AC 20 4x4	2,447	44	-41	F0:2F:74:57:DB:B0	192.168.50.215	04:f0:21:66:ab:c9
1.1.13 sta00501	42.616 Kbps	25.04 Mbps	0.635	78 Mbps	346.7 Mbps	802.11bgn-AC 20 4x4	2,447	74	-41	F0:2F:74:57:DB:B0	192.168.50.45	04:f0:21:66:98:c9
1.1.14 sta00502	334 bps	25.032 Mbps	0	115.6 Mbps	346.7 Mbps	802.11bgn-AC 20 4x4	2,447	59	-41	F0:2F:74:57:DB:B0	192.168.50.16	04:f0:21:66:88:c9
1.1.15 sta00503	343 bps	25.022 Mbps	0	78 Mbps	346.7 Mbps	802.11bgn-AC 20 4x4	2,447	50	-41	F0:2F:74:57:DB:B0	192.168.50.15	04:f0:21:66:b1:c9
1.1.16 sta00504	334 bps	25.056 Mbps	2.857	78 Mbps	346.7 Mbps	802.11bgn-AC 20 4x4	2,447	51	-41	F0:2F:74:57:DB:B0	192.168.50.92	04:f0:21:66:99:c9

Port	Tx-Bps 1m	Rx-Bps 1m	Link-Rate	IP	MAC
1.1.3 eth3	595.712 Mbps	1.071 Kbps	1 Gbps	192.168.50.42	9c:69:b4:63:16:af

Endpoint	Tx-Bps 1m	Rx-Bps 1m	TxPkts	RxPkts	RX Latency (ms)	Round-Trip Latency (ms)	Jitter	Rx Packet Loss %	Rx OOO %
cv_udp-1.3-1.sta00502--1.0.0-A	0 bps	41.651 Mbps	0	216562	650	650	0	74.432	24.259
cv_udp-1.3-1.sta00502--1.0.0-B	172.605 Mbps	0 bps	898620	0	0	650	0	0	0
cv_udp-1.3-1.sta00500--1.0.0-A	0 bps	41.608 Mbps	0	214176	712	712	69	74.477	23.758
cv_udp-1.3-1.sta00500--1.0.0-B	171.742 Mbps	0 bps	893033	0	0	712	0	0	0
cv_V-1.13-1.sta00500--1.0.0-A	48.974 Kbps	48.91 Kbps	2285	2282	30	69	7	0.131	0
cv_V-1.13-1.sta00500--1.0.0-B	49.093 Kbps	38.802 Kbps	2285	1806	39	69	13	20.963	0
cv_udp-1.3-1.sta00503--1.0.0-A	0 bps	41.624 Mbps	0	213031	689	689	0	79.745	17.760
cv_udp-1.3-1.sta00503--1.0.0-B	222.031 Mbps	0 bps	1134277	0	0	689	0	0	0
cv_udp-1.3-1.sta00501--1.0.0-A	0 bps	41.643 Mbps	0	216415	573	573	79	79.516	17.684
cv_udp-1.3-1.sta00501--1.0.0-B	223.623 Mbps	0 bps	1161774	0	0	573	0	0	0
cv_udp-1.3-1.sta00504--1.0.0-A	0 bps	41.621 Mbps	0	213055	712	712	0	74.250	24.524
cv_udp-1.3-1.sta00504--1.0.0-B	172.526 Mbps	0 bps	891050	0	0	712	0	0	0

Realtime Throughput for: Stability

Realtime Throughput for: Stability
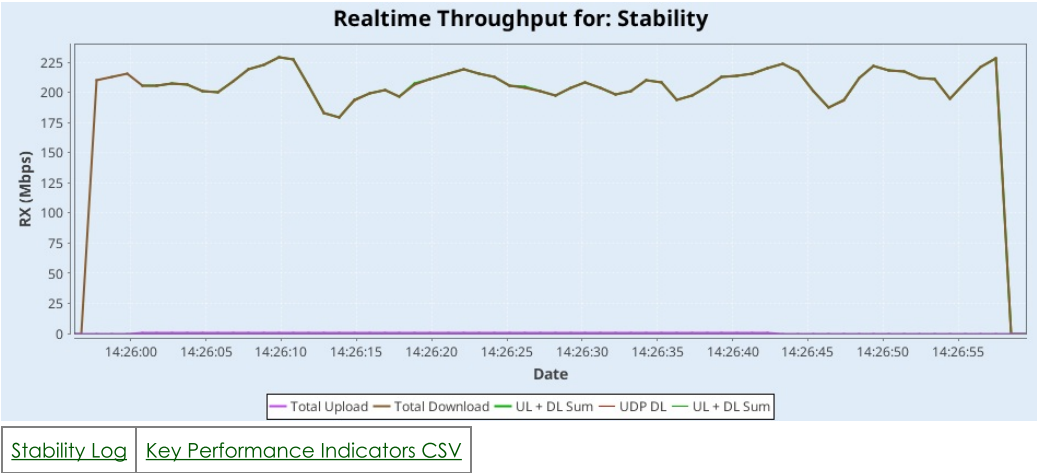
Stability Log | Key Performance Indicators CSV

Test configuration and LANforge software version	
Auto-Helper	true
Skip 2.4Ghz Tests	false
Skip 5Ghz Tests	true
Skip 5Gzh-B Tests	true
Skip Dual-Band Tests	true
Skip Tri-Band Tests	true
Use BSSID	true
Set Radio TxPower to Default	true
Loop Iterations:	1
2.4Ghz Station Count:	5
5Ghz Station Count:	10
Dual-Band Station Count:	10

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	1.1.3 eth3 Firmware: 0x80000aef, 1.1876.0 Resource: ct523c-2101
Stability Duration:	1 m
Concurrent Ports to Reset:	0
Minimum Time between Resets:	10000
Maximum Time between Resets:	60000
Long-Term Station Count:	2
VOIP Call Count:	1
Percent:	1000000
Open:	25
PSK:	60
Enterprise:	120
Stability stall threshold UDP Upload:	0
Stability stall threshold UDP Download:	1544000
Stability stall threshold TCP Upload:	0
Stability stall threshold TCP Download:	0
Stability stall threshold Video:	0
Stability stall threshold VOIP:	0
Stability Helper Script:	
Stability Multicast Min Download Rate:	0
Stability Multicast Max Download Rate:	0
Stability UDP Min Download Rate:	1000000000
Stability UDP Max Download Rate:	0
Stability UDP Min Upload Rate:	0
Stability UDP Max Upload Rate:	0
Stability TCP Min Download Rate:	0
Stability TCP Max Download Rate:	0
Stability TCP Min Upload Rate:	0
Stability TCP Max Upload Rate:	0
2.4Ghz Legacy%	0

2.4Ghz N%	0
2.4Ghz AC%	0
2.4Ghz AX/AUTO%	100
5Ghz Legacy%	0
5Ghz N%	0
5Ghz AC%	0
5Ghz AX/AUTO%	100
Long-Term Duration:	1 h
Long-Term Graph Interval:	30
Long-Term Download Rate:	85%
Video Emulation Rate:	500000
Video Buffer Size:	500000
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	1.1.4 wiphy0 Firmware: 10.4b-ct-9984-xtH-14-f853d52e7a Resource: ct523c-2101
WiFi Radio 0	Resource: ct523c-2101
Show Events	true
Build Date	Mon 26 Sep 2022 02:56:23 PM PDT
Build Version	5.4.5
Git Version	87350330889a86988c8816a52d097f1ebba1d625

CSV Data

META Information for Mix Stability Test

Candela
TECHNOLOGIES