Rate vs Range Test

Thu Jul 08 05:28:14 PDT 2021

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Test Setup Information				
Device Under Test	Name	advanced-02		
	Software Version	eap102-2021-06-25-pending-b6743c3.tar.g	Hardware Version	eap102
	Model Number	eap102	Serial Number	903cb39d6959
	SSIDs	ssid_wpa2_5g ssid_wpa2_2g		
	Passwords	something something		
	BSSIDs	90:3c:b3:9d:6a:01 90:3c:b3:9d:6b:01		
	Notes	[BLANK]		

Objective

This test measures the performance over distance of the Device Under Test. Distance is emulated using programmable attenuation and a throughput test is run at each distance/RSSI step and plotted on a chart. The test allows the user to plot RSSI curves both upstream and downstream for different types of traffic and different station types.

Throughput for each different traffic type. Datasets with names ending in '-LL' will include the IP, TCP, UDP and Ethernet header bytes in their calculation. For Armageddon traffic only, low-level throughput includes the Ethernet FCS and preamble. Other datasets report 'goodput' for the protocol.
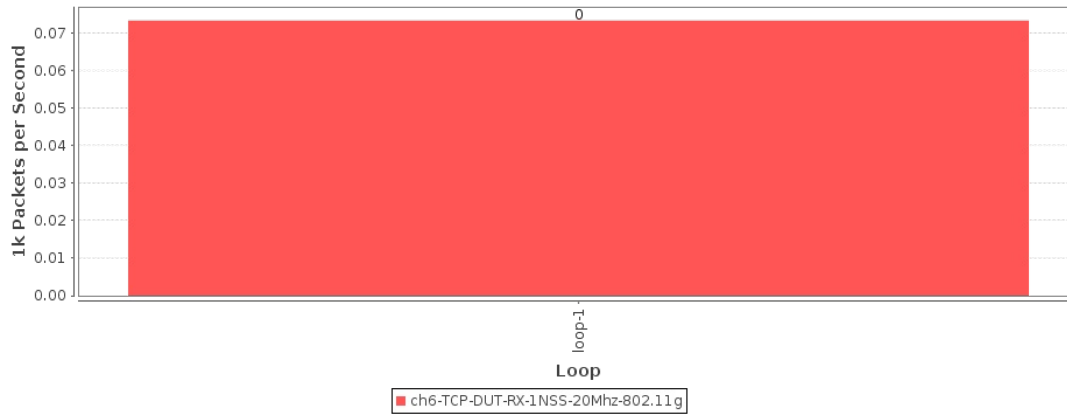
CSV Data for Throughput vs Loops
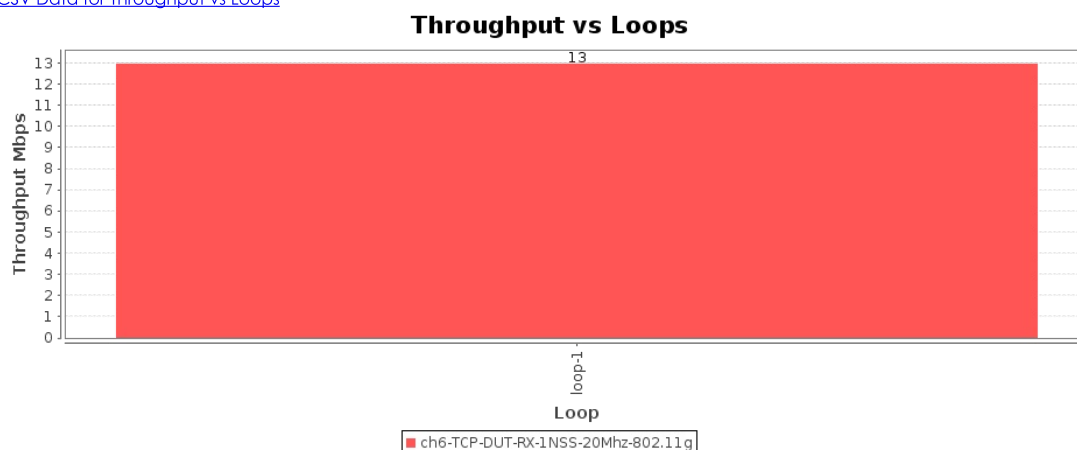
Pps throughput for each different traffic type. The values are estimated packets-per-second over the DUT, but some protocols such as TCP make this difficult to know for certain, so the value is extrapolated.
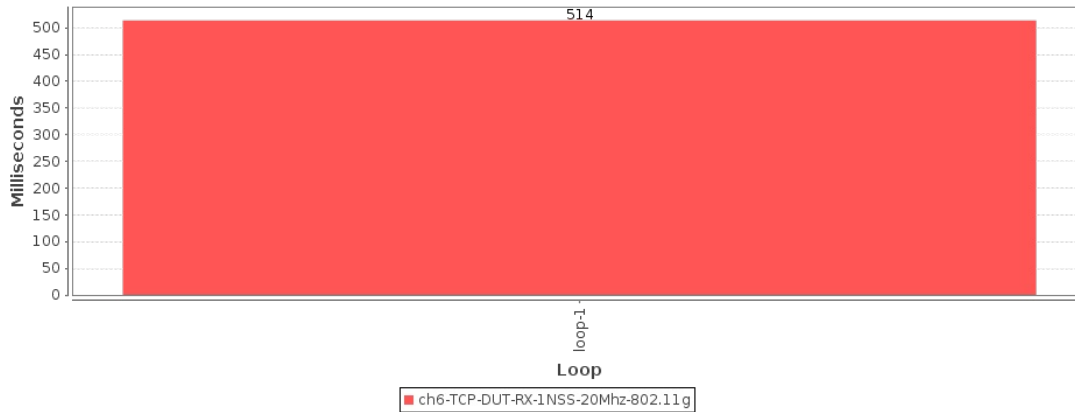
CSV Data for RX Pps vs Loops

RX Pps vs Loops

Latency for each different traffic type. If opposite-direction traffic is non-zero, then round-trip time will be reported. Otherwise, one-way latency will be reported.
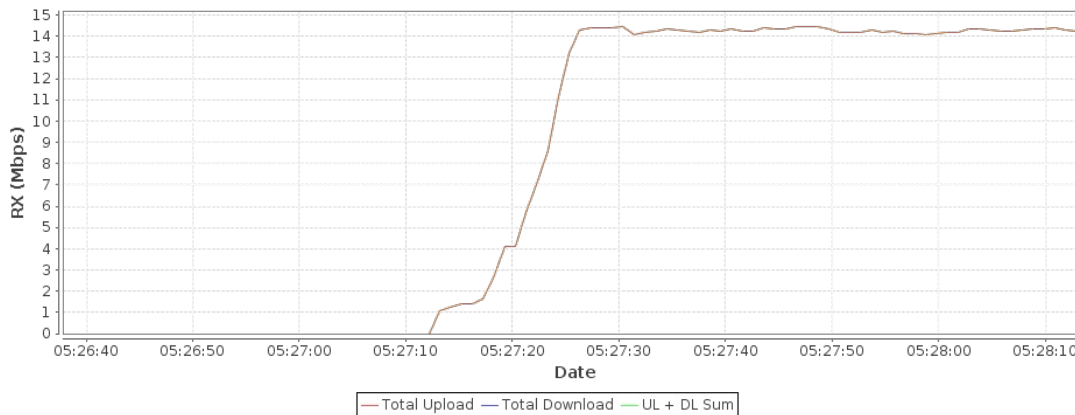
CSV Data for Latency vs Loops

Latency vs Loops

Realtime Graph shows summary download and upload RX Goodput rate of connections created by this test. Goodput does not include Ethernet, IP, UDP/TCP header overhead.

CSV Data for Realtime Throughput

Realtime Throughput

Test Information

Message
Starting Rate vs Range test with: 2 iterations.
ERROR: Station did not associate and get IP address, so we cannot configure a connection for this DUT.

| Channel | Frequency | Security | NSS | Cfg-Mode | Bandwidth | Pkt | Traffic-Type | Direction | Atten | Rotation | Duration | Offered-1m | Rx-Bps | Rx-Bps-1m | Rx-Bps-LL | Rx-Bps-3s | RSSI | Tx-Failed | Tx-Failed% | Tx-Rate | Rx-Rate | Rpt-Mode | Rpt-Mode-Brief |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6 | 2437 | WPA2 | 1 | 802.11g | 20 | MTU | TCP | DUT-RX | NA | NA | 60 | 13.066 Mbps | 12.568 Mbps | 12.986 Mbps | 13.018 Mbps | 14.372 Mbps | -34 | 25 / 67539 | 0.037 | 54 Mbps | 54 Mbps | 802.11bg | 802.11g |

Brief csv report, may be imported into third-party tools.

Step Index	Position [Deg]	Attenuation [dB]	Throughput [Mbps]	Beacon RSSI [dBm]	Data RSSI [dBm]
0	NA	0	12.57	-32	-34

Packet Loss Percentage graph shows the percentage of lost packets as detected by the receiving endpoint due to packet gaps. If there is full packet loss, then this will not report any loss since there will be no gap to detect.
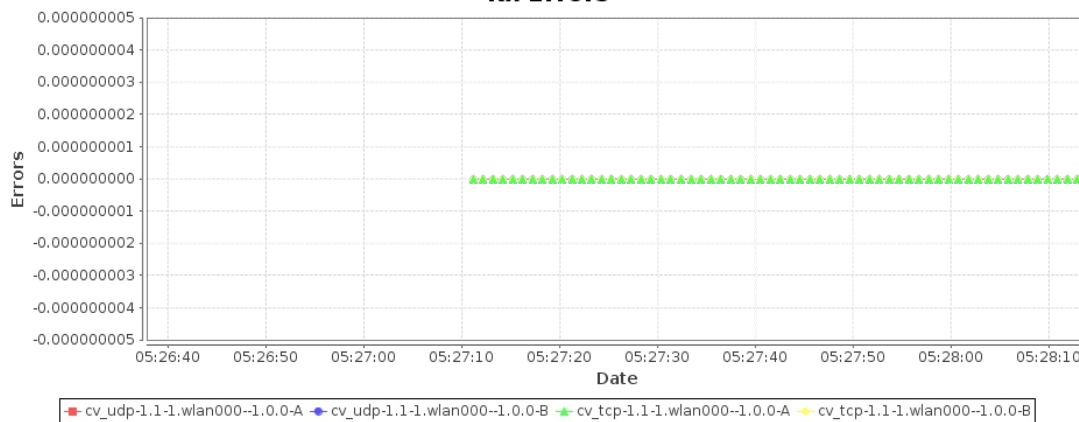
CSV Data for Endpoint RX Packet Loss Percentage
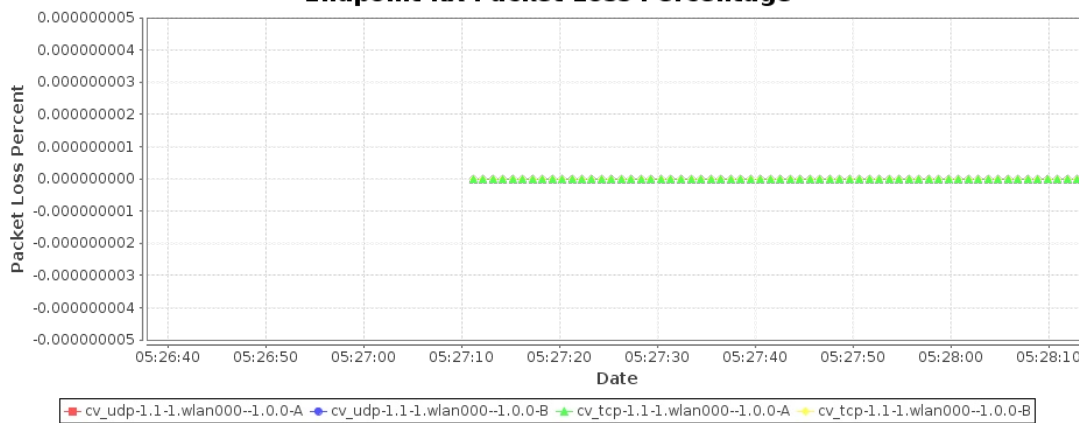
Error Graph shows occurances of packet errors.

CSV Data for Rx Errors

Test configuration and LANforge software version	
Path Loss	10
Requested Speed	85%
Requested Opposite Speed	0
Multi-Conn	1
Armageddon Multi-Pkt	1000
ToS	0
Duration:	1 min (1 m)
Settle Time:	1 sec (1 s)
Send Buffer Size:	OS Default

Receive Buffer Size:	OS Default
Channels	AUTO
Spatial Streams	AUTO
Bandwidth	AUTO
Attenuator-1	1.1.3034
Attenuation-1	0..+50
Attenuator-2	0
Attenuation-2	0..+50..950
Turntable Chamber	0
Turntable Angles	0..+45..359
Modes	802.11g
Packet Size	MTU
Security	AUTO
Traffic Type	TCP
Direction	DUT Transmit, DUT Receive
Upstream Port	1.1.eth1 Firmware: 0. 6-1 Resource: ct523c-ccb0
WiFi Port	1.1.wlan000 Firmware: 10.4b-ct-9984-xtH-13-774502ee5 Resource: ct523c-ccb0
Outer Loop is Attenuation	false
Show Events	true
Auto Save Report	true
Build Date	Mon 07 Jun 2021 07:26:45 AM PDT
Build Version	5.4.3
Git Version	a02ee42f17056fc2425a66b79be72767ca431a0b

Key Performance Indicators CSV

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