

Rate vs Range Test



Sat Jun 01 13:43:30 PDT 2019

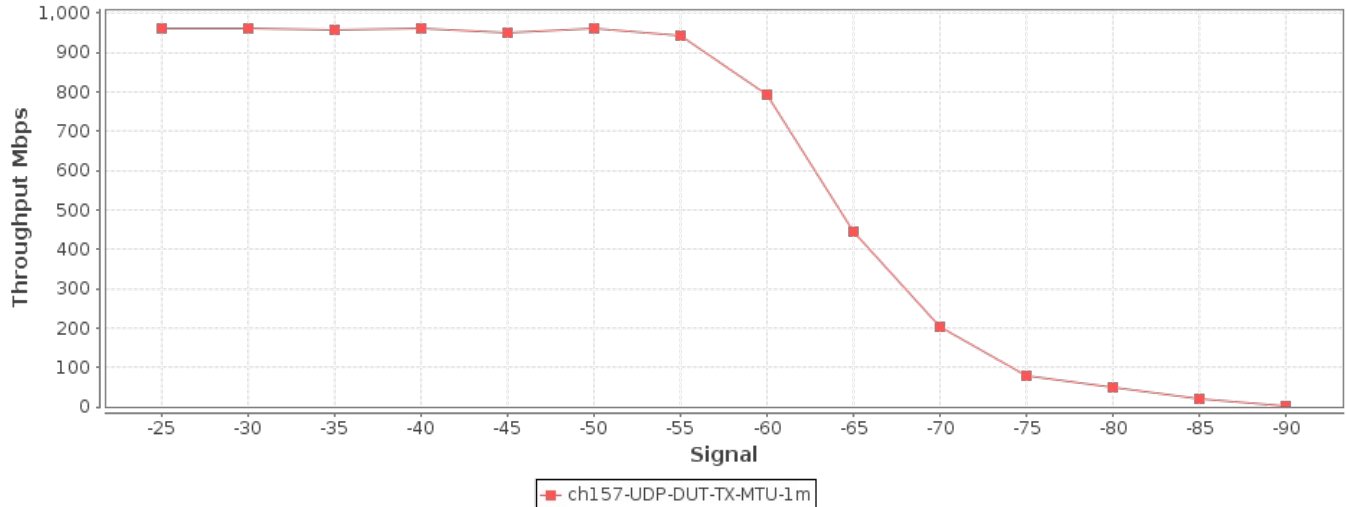
Test Setup Information				
Device Under Test	Name	APUT		
	Software Version	v5.62.1		
	Model Number	AP640	Serial Number	234-23-sd-35
	SSIDs	labap		
	BSSIDs	78:d2:94:bf:16:43		
Operator	[BLANK]			

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.

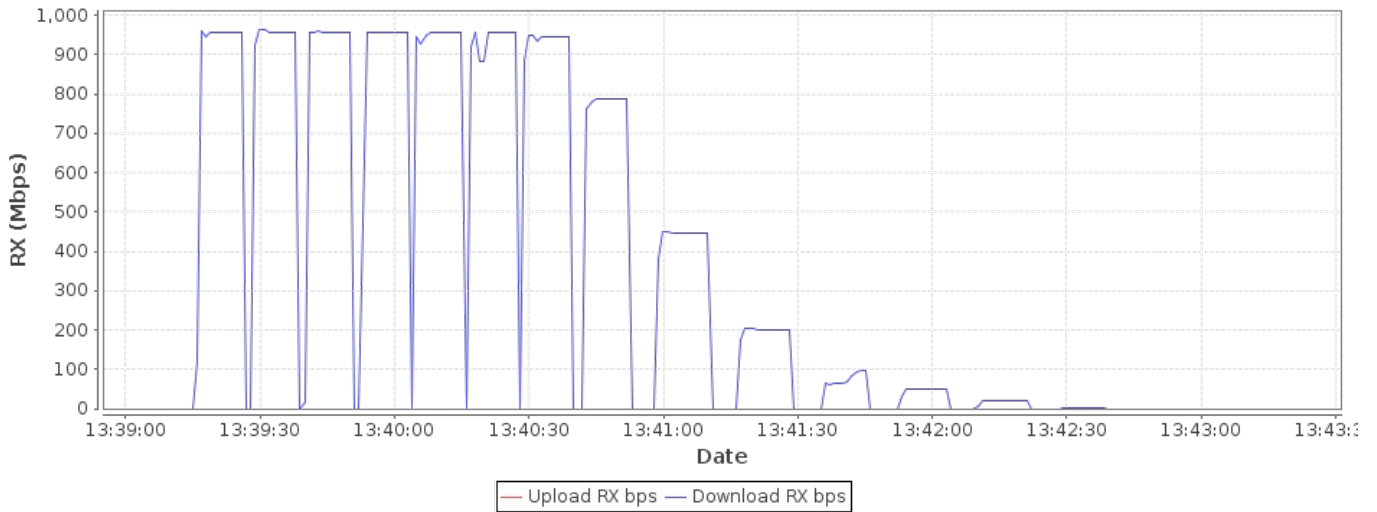
Throughput vs calculated RF Signal for each different traffic type. The signal is calculated based on the configured path-loss, transmit power, and attenuation.

Throughput vs Calculated Signal



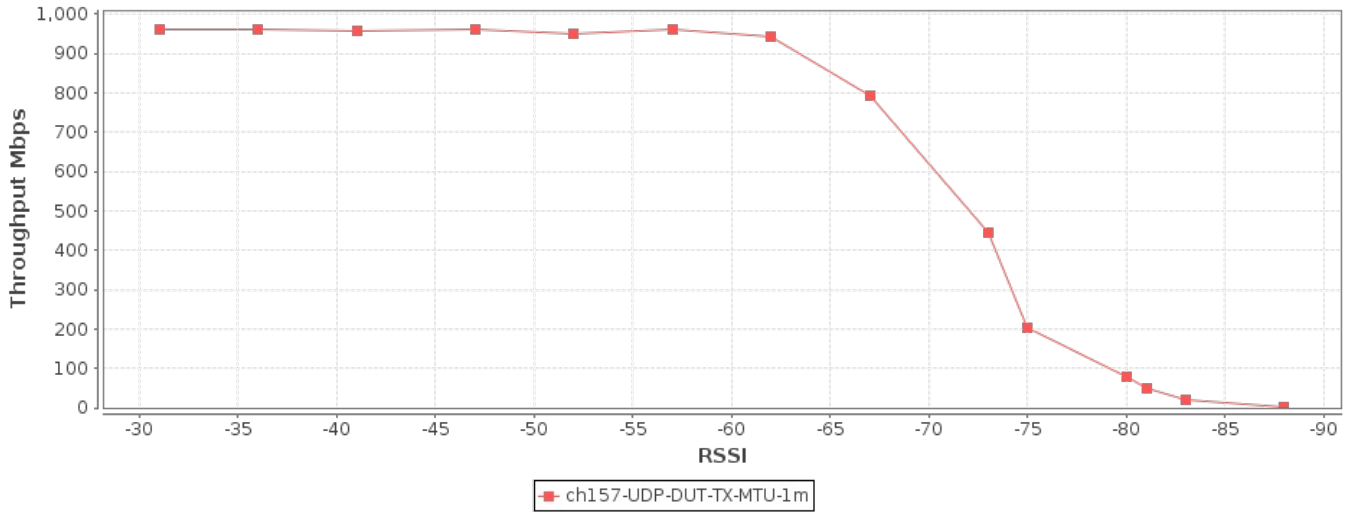
Realtime Graph shows summary download and upload RX bps of connections created by this test.

Realtime Throughput



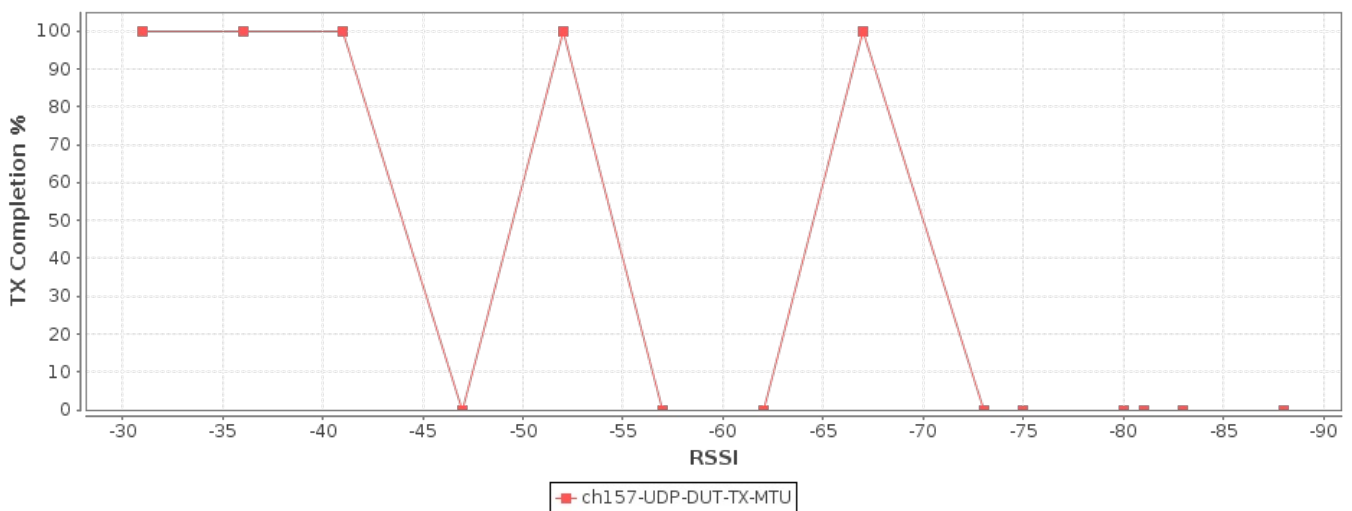
Throughput vs reported RSSI for each different traffic type. Please note that the LANforge RSSI may be similar to the remote Device Under Test RSSI but there is no guarantee of this. Differences in tx-power and RF splitter/combiners can cause different RSSI as reported by LANforge and the remote peer device.

Throughput vs LANforge RSSI



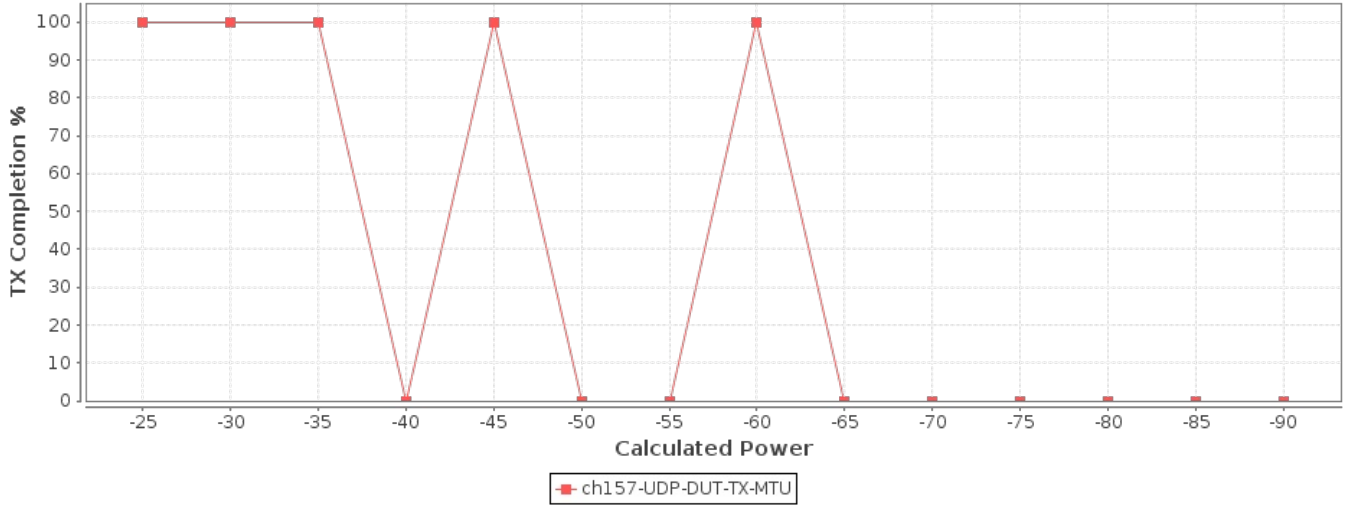
TX Completion vs LANforge RSSI for each MCS Encoding Rate. Please note that the LANforge RSSI may be similar to the remote Device Under Test RSSI but there is no guarantee of this. Differences in tx-power and RF splitter/combiners can cause different RSSI as reported by LANforge and the remote peer device.

TX Completion vs LANforge RSSI



TX Completion vs Calculated Signal Power for each MCS Encoding Rate.

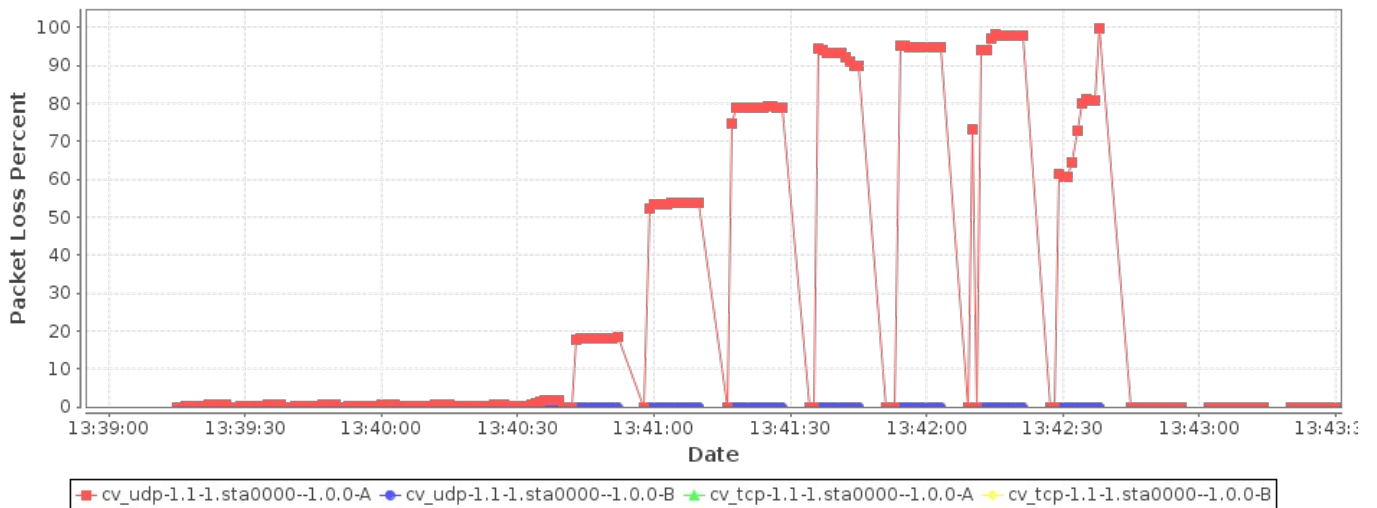
TX Completion vs Calculated Power



Channel	Security	NSS	Mode	Bandwidth	PDU	Traffic-Type	Direction	Atten	Duration	Offered-1m	Rx-Bps	Rx-Bps-1m	Rx-Bps-3s	Theoretical	RSSI	Tx-Failed	Tx-Failed%	Tx-Rate	Rx-Rate	Mode
157	AUTO	AUTO	AUTO	AUTO	MTU	UDP	DUT-TX	0	10	959357458	956952290	959189102	957205317	1733200000	-31	0 / 5	0	520 Mbps	1.3 Gbps	802.11an-AC
157	AUTO	AUTO	AUTO	AUTO	MTU	UDP	DUT-TX	50	10	964703472	956914866	961909376	957436405	1733200000	-36	0 / 2	0	780 Mbps	1.3 Gbps	802.11an-AC
157	AUTO	AUTO	AUTO	AUTO	MTU	UDP	DUT-TX	100	10	961549207	957062051	958142593	957388013	1733200000	-41	0 / 2	0	1040 Mbps	1.3 Gbps	802.11an-AC
157	AUTO	AUTO	AUTO	AUTO	MTU	UDP	DUT-TX	150	10	965451230	957060306	961789780	957060810	1733200000	-47	0 / 0	FAILED	1300 Mbps	1.3 Gbps	802.11an-AC
157	AUTO	AUTO	AUTO	AUTO	MTU	UDP	DUT-TX	200	10	961947768	947351918	949424828	957204810	1733200000	-52	0 / 3	0	1300 Mbps	1.3 Gbps	802.11an-AC
157	AUTO	AUTO	AUTO	AUTO	MTU	UDP	DUT-TX	250	10	962757121	952856573	959138933	957415909	1733200000	-57	0 / 0	FAILED	1300 Mbps	1.3 Gbps	802.11an-AC
157	AUTO	AUTO	AUTO	AUTO	MTU	UDP	DUT-TX	300	10	950788642	941683935	942097517	944531845	1733200000	-62	2 / 2	100	1053.2 Mbps	1.17 Gbps	802.11an-AC
157	AUTO	AUTO	AUTO	AUTO	MTU	UDP	DUT-TX	350	10	964315137	787318130	791672328	786313845	1733200000	-67	0 / 2	0	975 Mbps	975 Mbps	802.11an-AC
157	AUTO	AUTO	AUTO	AUTO	MTU	UDP	DUT-TX	400	10	963371671	444602475	444913914	444871109	1733200000	-73	1 / 1	100	780 Mbps	526.6 Mbps	802.11an-AC
157	AUTO	AUTO	AUTO	AUTO	MTU	UDP	DUT-TX	450	10	963831971	200848389	202294797	201677330	1733200000	-75	1 / 1	100	877.5 Mbps	243 Mbps	802.11an-AC
157	AUTO	AUTO	AUTO	AUTO	MTU	UDP	DUT-TX	500	10	964781329	79995228	80268139	96396213	1733200000	-80	1 / 1	100	468 Mbps	121.5 Mbps	802.11an-AC
157	AUTO	AUTO	AUTO	AUTO	MTU	UDP	DUT-TX	550	10	948612153	48101888	48275680	48113709	1733200000	-81	0 / 0	FAILED	390 Mbps	58.5 Mbps	802.11an-AC
157	AUTO	AUTO	AUTO	AUTO	MTU	UDP	DUT-TX	600	10	959338994	19988359	20085774	20124744	1733200000	-83	1 / 1	100	292.7 Mbps	39 Mbps	802.11an-AC
157	AUTO	AUTO	AUTO	AUTO	MTU	UDP	DUT-TX	650	10	961588682	432323	432713	389125	1733200000	-88	0 / 0	FAILED	263.4 Mbps	6.5 Mbps	802.11an-AC
0	AUTO	AUTO	AUTO	AUTO	MTU	UDP	DUT-TX	700	10	966001843	0	0	0	1733200000	0	4 / 0	FAILED	0 Mbps	0 bps	802.11an-AC
0	AUTO	AUTO	AUTO	AUTO	MTU	UDP	DUT-TX	750	10	1393261336	0	0	0	1733200000	0	2 / 0	FAILED	0 Mbps	0 bps	802.11an-AC

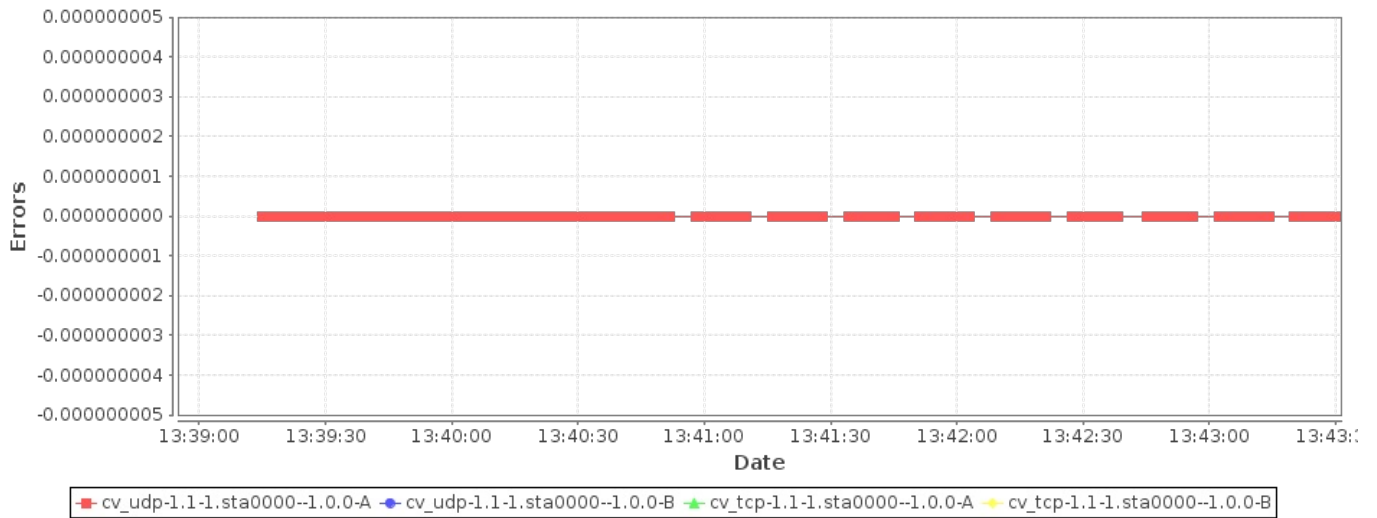
Packet Loss Percentage graph shows the percentage of lost packets as detected by the receiving endpoint due to packet gaps. If there is full packet loss, then this will not report any loss since there will be no gap to detect.

Endpoint RX Packet Loss Percentage



Error Graph shows occurrences of packet errors.

Rx Errors



Test configuration and LANforge software version	
Path Loss	25
Requested Speed	85%
ToS	0
Duration:	10 sec (10 s)
Upstream Port	1.1.1 eth1 Firmware: 0. 6-1 Resource: MobileStations
WiFi Port	1.1.7 sta0000 Firmware: 10.4b-ct-9984-xtH-012-f6434814c Resource: MobileStations
Show Events	true
Build Date	Sat Jun 1 10:16:10 PDT 2019
Build Version	5.3.9