Dataplane Test

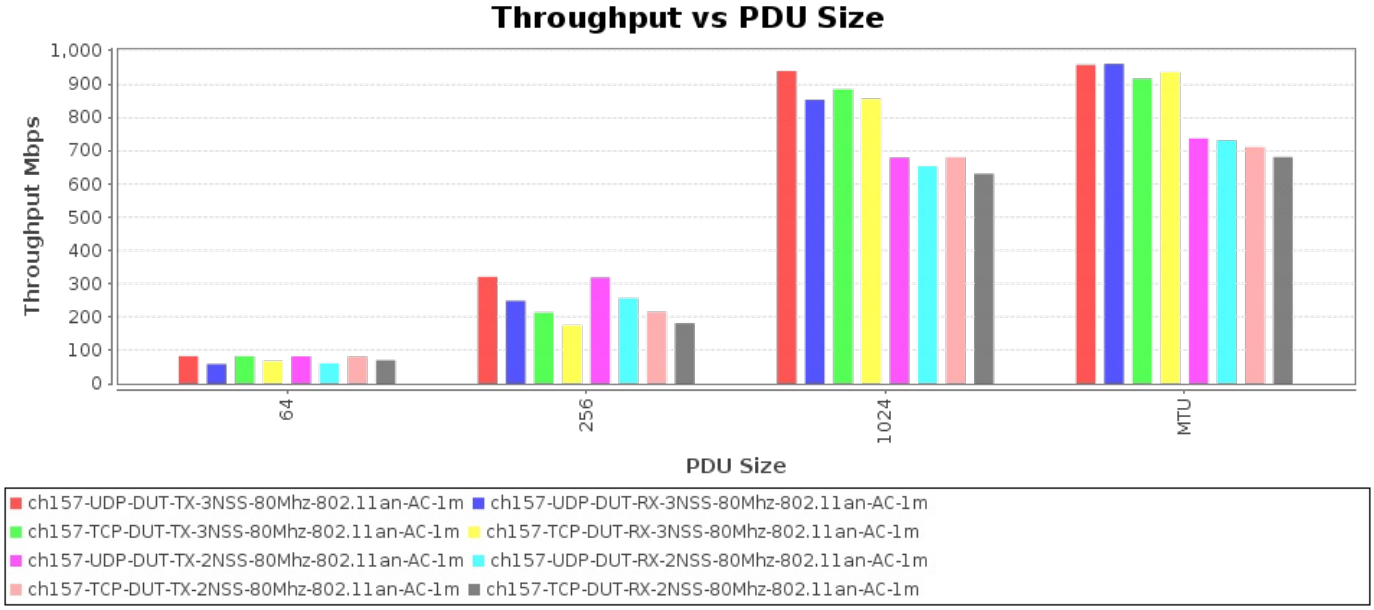
Sat Jun 01 06:42:53 PDT 2019

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	John Smith@awesomeAP.com			

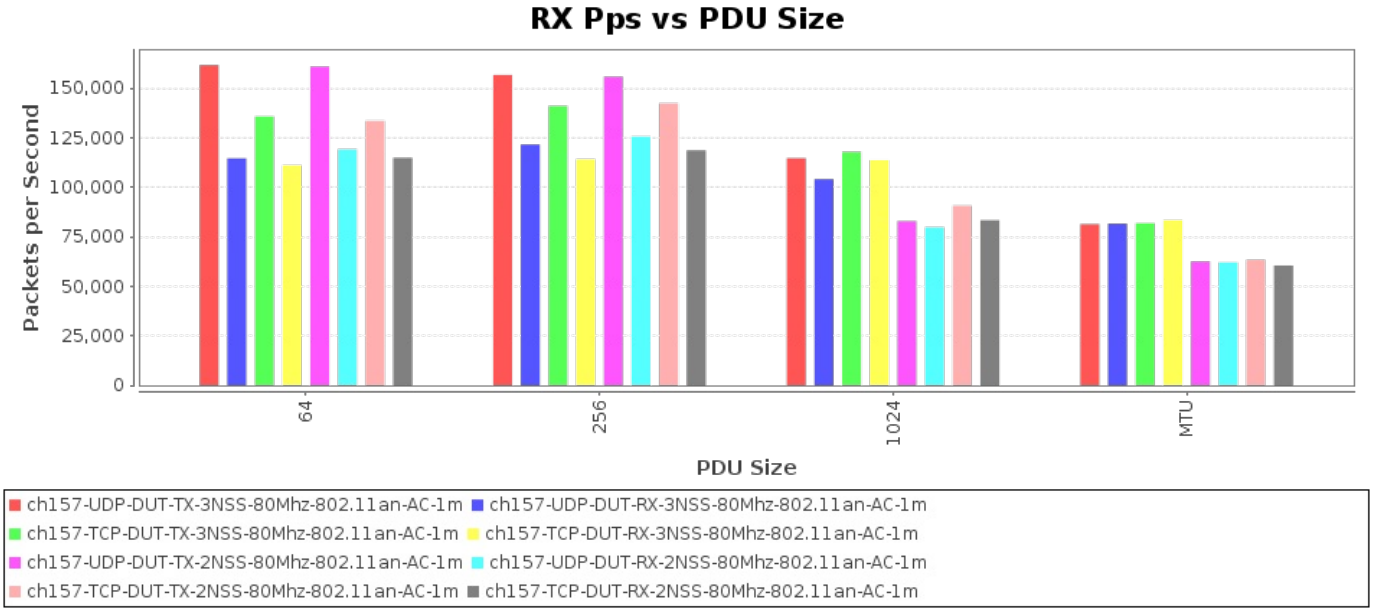
Objective

The Candela WiFi data plane test is designed to conduct an automatic testing of all combinations of station types, MIMO types, Channel Bandwidths, Traffic types, Traffic direction, Frame sizes etc... It will run a quick throughput test at every combination of these test variables and plot all the results in a set of charts to compare performance. The user is allowed to define an intended load as a percentage of the max theoretical PHY rate for every test combination. The expected behavior is that for every test combination the achieved throughput should be at least 70% of the theoretical max PHY rate under ideal test conditions. This test provides a way to go through hundreds of combinations in a fully automated fashion and very easily find patterns and problem areas which can be further debugged using more specific testing.

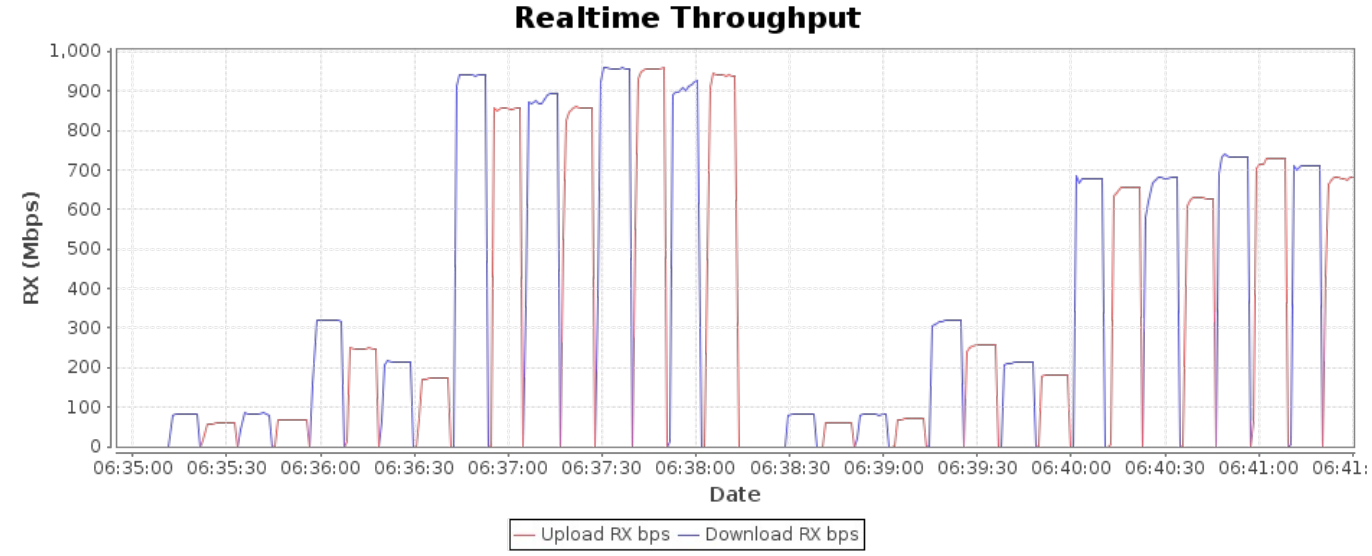
Throughput by MTU, for each different traffic type.



Pps throughput by MTU, 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.

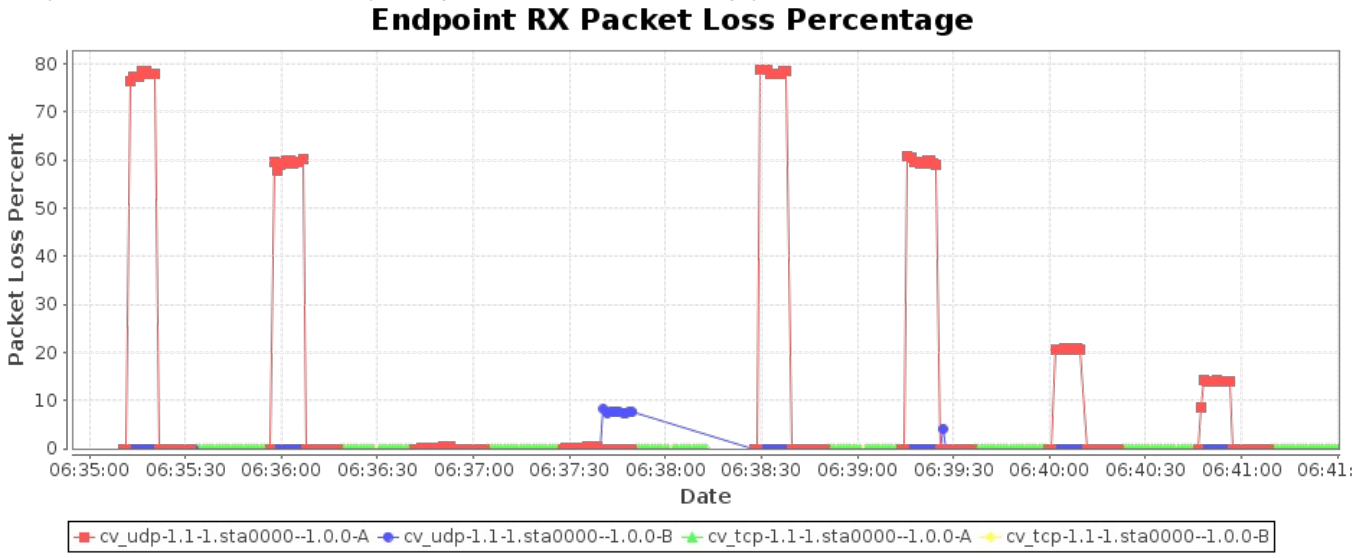


Realtime Graph shows summary download and upload RX bps of connections created by this test.

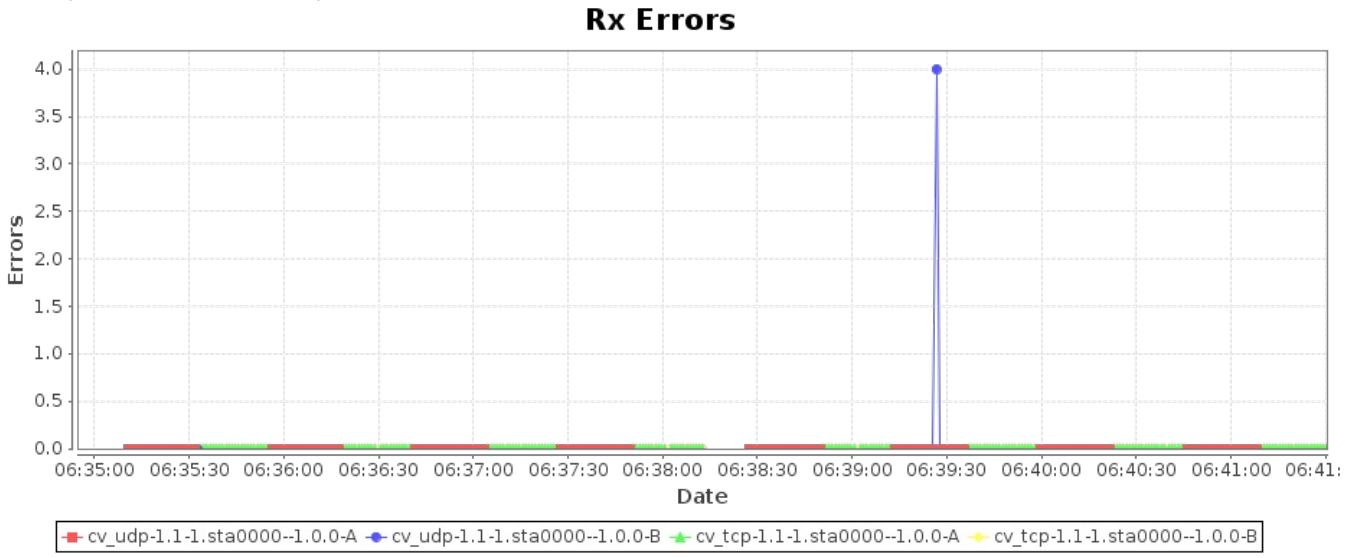


Channel	Security	NSS	Mode	Bandwidth	PDU	Traffic-Type	Direction	Atten	Duration	Offered-1m	Rx-Bps	Rx-Bps-1m	Rx-Bps-3s	Theoretical	RSSI	Tx-Failed	Tx-Failed%	Tx-Rate	Rx-Rate	Mode
157	AUTO	3	802.11an-AC	80	64	UDP	DUT-TX	NA	10	375636278	82096786	82774154	82110085	1299900000	-35	0 / 7	0	585 Mbps	1.3 Gbps	802.11an-AC
157	AUTO	3	802.11an-AC	80	64	UDP	DUT-RX	NA	10	58675445	58487656	58669531	58822154	1299900000	-27	0 / 1146442	0	1300 Mbps	1.3 Gbps	802.11an-AC
157	AUTO	3	802.11an-AC	80	64	TCP	DUT-TX	NA	10	82612883	82081450	82754520	78784362	1299900000	-35	0 / 22627	0	1300 Mbps	1.3 Gbps	802.11an-AC
157	AUTO	3	802.11an-AC	80	64	TCP	DUT-RX	NA	10	68193119	67910744	68027524	67960029	1299900000	-35	0 / 1057056	0	1170 Mbps	1.3 Gbps	802.11an-AC
157	AUTO	3	802.11an-AC	80	256	UDP	DUT-TX	NA	10	794434891	318785180	320930062	316449341	1299900000	-35	0 / 0	FAILED	1170 Mbps	1.3 Gbps	802.11an-AC
157	AUTO	3	802.11an-AC	80	256	UDP	DUT-RX	NA	10	248140311	247482798	248917796	247558861	1299900000	-27	0 / 1153605	0	1300 Mbps	1.3 Gbps	802.11an-AC
157	AUTO	3	802.11an-AC	80	256	TCP	DUT-TX	NA	10	214017649	213858800	213878886	214708800	1299900000	-35	0 / 21530	0	1300 Mbps	1.3 Gbps	802.11an-AC
157	AUTO	3	802.11an-AC	80	256	TCP	DUT-RX	NA	10	176724557	173728847	175018147	174335581	1299900000	-35	0 / 1122296	0	1170 Mbps	1.3 Gbps	802.11an-AC
157	AUTO	3	802.11an-AC	80	1024	UDP	DUT-TX	NA	10	941816029	939300716	939539571	940109632	1299900000	-35	0 / 0	FAILED	1170 Mbps	1.3 Gbps	802.11an-AC
157	AUTO	3	802.11an-AC	80	1024	UDP	DUT-RX	NA	10	852508903	852216421	852506376	856494221	1299900000	-27	0 / 1036320	0	1300 Mbps	1.3 Gbps	802.11an-AC
157	AUTO	3	802.11an-AC	80	1024	TCP	DUT-TX	NA	10	886778280	882152010	884318590	891847909	1299900000	-35	0 / 35417	0	1300 Mbps	1.3 Gbps	802.11an-AC
157	AUTO	3	802.11an-AC	80	1024	TCP	DUT-RX	NA	10	857774487	853235642	856708565	856714376	1299900000	-35	0 / 1092760	0	1300 Mbps	1.3 Gbps	802.11an-AC
157	AUTO	3	802.11an-AC	80	MTU	UDP	DUT-TX	NA	10	968308432	956770180	958108506	957037210	1299900000	-35	0 / 1	0	1300 Mbps	1.3 Gbps	802.11an-AC
157	AUTO	3	802.11an-AC	80	MTU	UDP	DUT-RX	NA	10	1039199500	953035974	960558105	957366416	1299900000	-27	0 / 856350	0	1300 Mbps	1.3 Gbps	802.11an-AC
157	AUTO	3	802.11an-AC	80	MTU	TCP	DUT-TX	NA	10	923497341	915752666	916803831	924107994	1299900000	-35	0 / 32205	0	1300 Mbps	1.3 Gbps	802.11an-AC
157	AUTO	3	802.11an-AC	80	MTU	TCP	DUT-RX	NA	10	940290526	935195045	935787710	939045965	1299900000	-35	0 / 795764	0	1300 Mbps	1.3 Gbps	802.11an-AC
157	AUTO	2	802.11an-AC	80	64	UDP	DUT-TX	NA	10	378401986	82020019	82367334	82129477	866600000	-35	0 / 5	0	390 Mbps	866.7 Mbps	802.11an-AC
157	AUTO	2	802.11an-AC	80	64	UDP	DUT-RX	NA	10	61030017	60627326	61031149	60895386	866600000	-28	0 / 1160493	0	866.7 Mbps	866.7 Mbps	802.11an-AC
157	AUTO	2	802.11an-AC	80	64	TCP	DUT-TX	NA	10	81180186	81178389	81185154	80690898	866600000	-35	0 / 22688	0	780 Mbps	866.7 Mbps	802.11an-AC
157	AUTO	2	802.11an-AC	80	64	TCP	DUT-RX	NA	10	70477487	69807479	70360985	70154002	866600000	-36	0 / 1134276	0	866.7 Mbps	866.7 Mbps	802.11an-AC
157	AUTO	2	802.11an-AC	80	256	UDP	DUT-TX	NA	10	784572901	318743810	319052168	320251728	866600000	-36	0 / 0	FAILED	866.7 Mbps	866.7 Mbps	802.11an-AC
157	AUTO	2	802.11an-AC	80	256	UDP	DUT-RX	NA	10	256922016	257099887	257185187	257175373	866600000	-28	0 / 1252462	0	866.7 Mbps	866.7 Mbps	802.11an-AC
157	AUTO	2	802.11an-AC	80	256	TCP	DUT-TX	NA	10	215336087	214365549	215507740	214914890	866600000	-35	0 / 22903	0	866.7 Mbps	866.7 Mbps	802.11an-AC
157	AUTO	2	802.11an-AC	80	256	TCP	DUT-RX	NA	10	183800509	180087631	181287147	180175794	866600000	-35	0 / 1165857	0	866.7 Mbps	866.7 Mbps	802.11an-AC
157	AUTO	2	802.11an-AC	80	1024	UDP	DUT-TX	NA	10	855622771	674015653	678915158	678260298	866600000	-36	0 / 0	FAILED	866.7 Mbps	866.7 Mbps	802.11an-AC
157	AUTO	2	802.11an-AC	80	1024	UDP	DUT-RX	NA	10	652023962	653432901	653934066	654289453	866600000	-28	0 / 802080	0	866.7 Mbps	866.7 Mbps	802.11an-AC
157	AUTO	2	802.11an-AC	80	1024	TCP	DUT-TX	NA	10	677016512	680128387	680207744	680426461	866600000	-35	0 / 29061	0	866.7 Mbps	866.7 Mbps	802.11an-AC
157	AUTO	2	802.11an-AC	80	1024	TCP	DUT-RX	NA	10	634571098	625403476	630275963	626561514	866600000	-36	0 / 837896	0	866.7 Mbps	866.7 Mbps	802.11an-AC
157	AUTO	2	802.11an-AC	80	MTU	UDP	DUT-TX	NA	10	858893629	733473409	736603903	733584560	866600000	-36	0 / 0	FAILED	866.7 Mbps	866.7 Mbps	802.11an-AC
157	AUTO	2	802.11an-AC	80	MTU	UDP	DUT-RX	NA	10	732609278	727490182	731194903	728309709	866600000	-28	0 / 582560	0	866.7 Mbps	866.7 Mbps	802.11an-AC
157	AUTO	2	802.11an-AC	80	MTU	TCP	DUT-TX	NA	10	719999737	707701884	710612983	710717709	866600000	-36	0 / 27352	0	866.7 Mbps	866.7 Mbps	802.11an-AC
157	AUTO	2	802.11an-AC	80	MTU	TCP	DUT-RX	NA	10	681104936	676757431	680691514	679484896	866600000	-36	0 / 615195	0	866.7 Mbps	866.7 Mbps	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.



Error Graph shows occurances of packet errors.



Test configuration and LANforge software version	
Path Loss	25
Requested Speed	100%
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	Fri May 31 21:34:23 PDT 2019
Build Version	5.3.9