

Dataplane Test



Sat Jun 15 08:07:23 PDT 2019

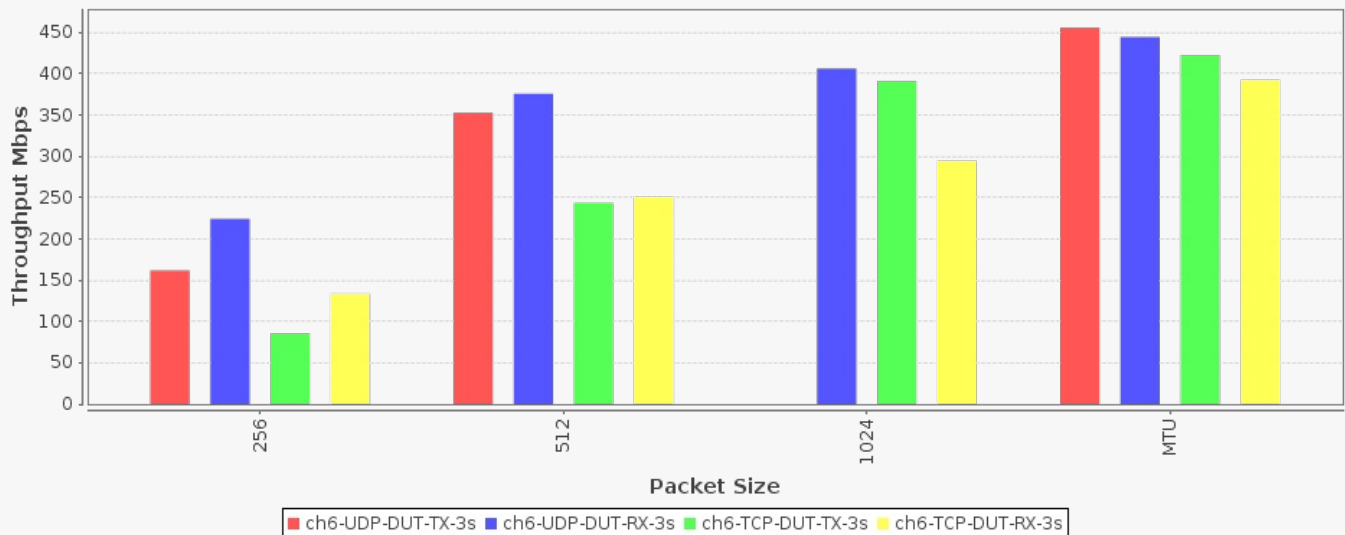
Test Setup Information		
Device Under Test	Name	ASUS
	SSIDs	ASUS
	BSSIDs	f8:32:e4:53:afa0
	Notes	[BLANK]
Operator	Candela Technologies, Inc.	

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.

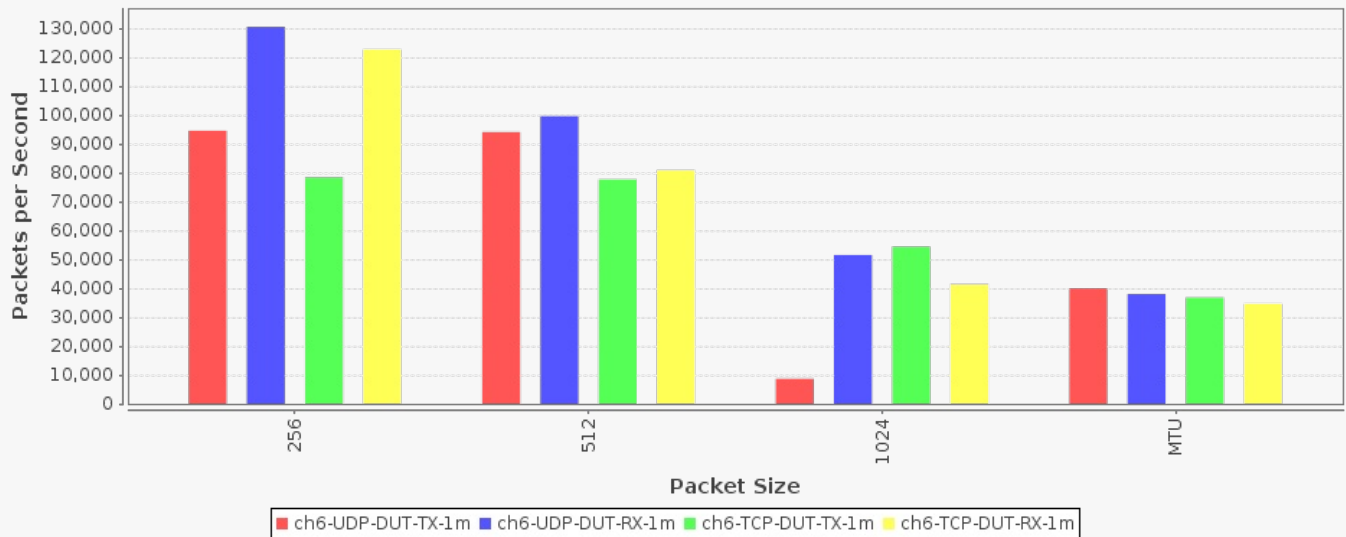
Throughput (goodput) by MTU, for each different traffic type.

Throughput vs Packet Size



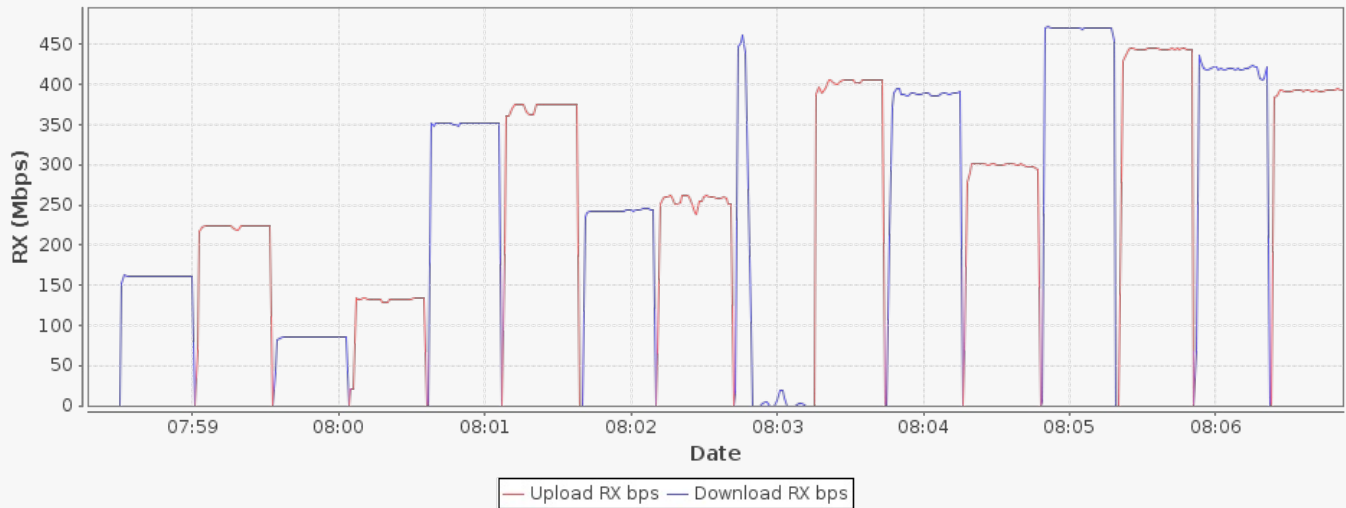
Pps throughput by MTU, for each different traffic type. The values are estimated packets-per-second over the DUT, but some protocols such as TCP make this difficult to know for certain, so the value is extrapolated.

RX Pps vs Packet Size



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.

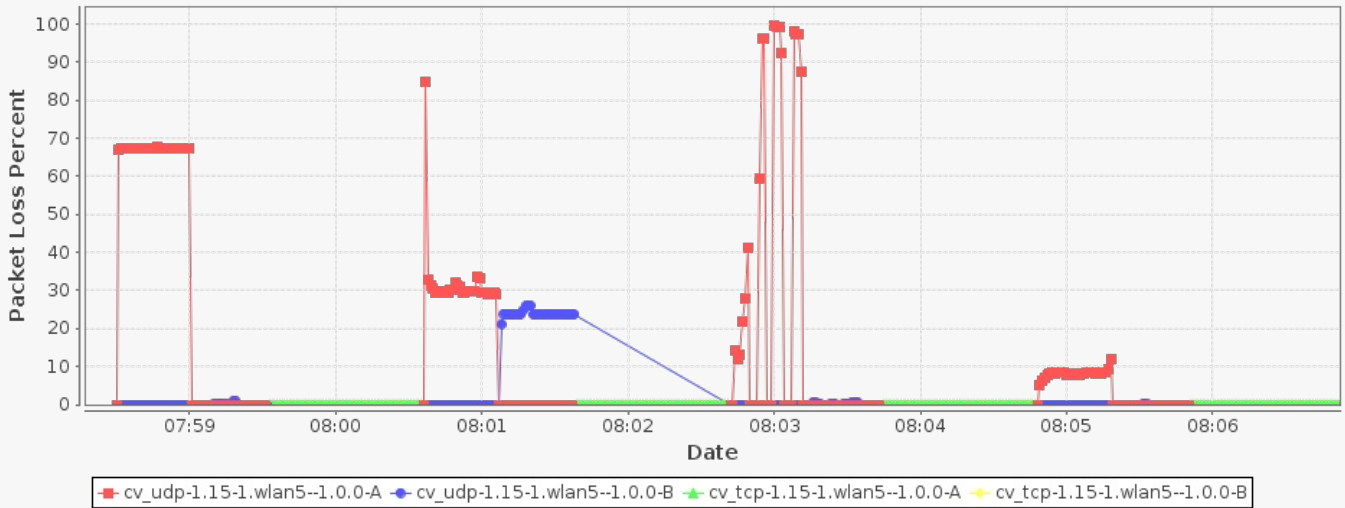
Realtime Throughput



Channel	Security	NSS	Mode	Bandwidth	Plt	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
6	AUTO	AUTO	AUTO	AUTO	256	UDP	DUT-TX	NA	30	495830833	161168720	161895572	161631245	1733200000	-35	0 / 8	0	480 Mbps	600 Mbps	802.11bgn
6	AUTO	AUTO	AUTO	AUTO	256	UDP	DUT-RX	NA	30	224464386	223237974	223429095	224060946	1733200000	-29	0 / 388519	0	600 Mbps	600 Mbps	802.11bgn
6	AUTO	AUTO	AUTO	AUTO	256	TCP	DUT-TX	NA	30	85834625	85366749	85718138	85389944	1733200000	-36	1916 / 1054619	0.182	600 Mbps	600 Mbps	802.11bgn
6	AUTO	AUTO	AUTO	AUTO	256	TCP	DUT-RX	NA	30	133028270	132539539	133619266	133289632	1733200000	-36	191 / 3618578	0.005	600 Mbps	600 Mbps	802.11bgn
6	AUTO	AUTO	AUTO	AUTO	512	UDP	DUT-TX	NA	30	494289351	351134886	353891236	352285888	1733200000	-39	0 / 1	0	600 Mbps	600 Mbps	802.11bgn
6	AUTO	AUTO	AUTO	AUTO	512	UDP	DUT-RX	NA	30	494949440	374097880	374687762	375482290	1733200000	-29	0 / 3860553	0	600 Mbps	600 Mbps	802.11bgn
6	AUTO	AUTO	AUTO	AUTO	512	TCP	DUT-TX	NA	30	243380246	242682165	243070457	243413781	1733200000	-39	1342 / 1122727	0.12	600 Mbps	600 Mbps	802.11bgn
6	AUTO	AUTO	AUTO	AUTO	512	TCP	DUT-RX	NA	30	257246672	256051966	256402279	250426021	1733200000	-37	946 / 2448443	0.039	600 Mbps	600 Mbps	802.11bgn
6	AUTO	AUTO	AUTO	AUTO	1024	UDP	DUT-TX	NA	30	492589615	67988329	68161003	0	1733200000	-30	0 / 0	FAILED	600 Mbps	600 Mbps	802.11bgn
6	AUTO	AUTO	AUTO	AUTO	1024	UDP	DUT-RX	NA	30	406158922	403079386	404826888	405913536	1733200000	-29	60 / 1531348	0.004	600 Mbps	600 Mbps	802.11bgn
6	AUTO	AUTO	AUTO	AUTO	1024	TCP	DUT-TX	NA	30	390508372	387799300	388471430	390708586	1733200000	-36	1728 / 874818	0.198	600 Mbps	600 Mbps	802.11bgn
6	AUTO	AUTO	AUTO	AUTO	1024	TCP	DUT-RX	NA	30	302227556	299214965	301724305	294318944	1733200000	-36	396 / 1264663	0.031	600 Mbps	600 Mbps	802.11bgn
6	AUTO	AUTO	AUTO	AUTO	MTU	UDP	DUT-TX	NA	30	493339005	468775021	470720666	455255736	1733200000	-36	0 / 1	0	600 Mbps	600 Mbps	802.11bgn
6	AUTO	AUTO	AUTO	AUTO	MTU	UDP	DUT-RX	NA	30	444486814	4442899991	447327492	444043290	1733200000	-29	0 / 1130563	0	600 Mbps	600 Mbps	802.11bgn
6	AUTO	AUTO	AUTO	AUTO	MTU	TCP	DUT-TX	NA	30	422045207	420415353	420709850	422073034	1733200000	-35	192 / 706466	0.027	600 Mbps	600 Mbps	802.11bgn
6	AUTO	AUTO	AUTO	AUTO	MTU	TCP	DUT-RX	NA	30	394053433	392068881	394780411	392082520	1733200000	-35	0 / 1028329	0	600 Mbps	600 Mbps	802.11bgn

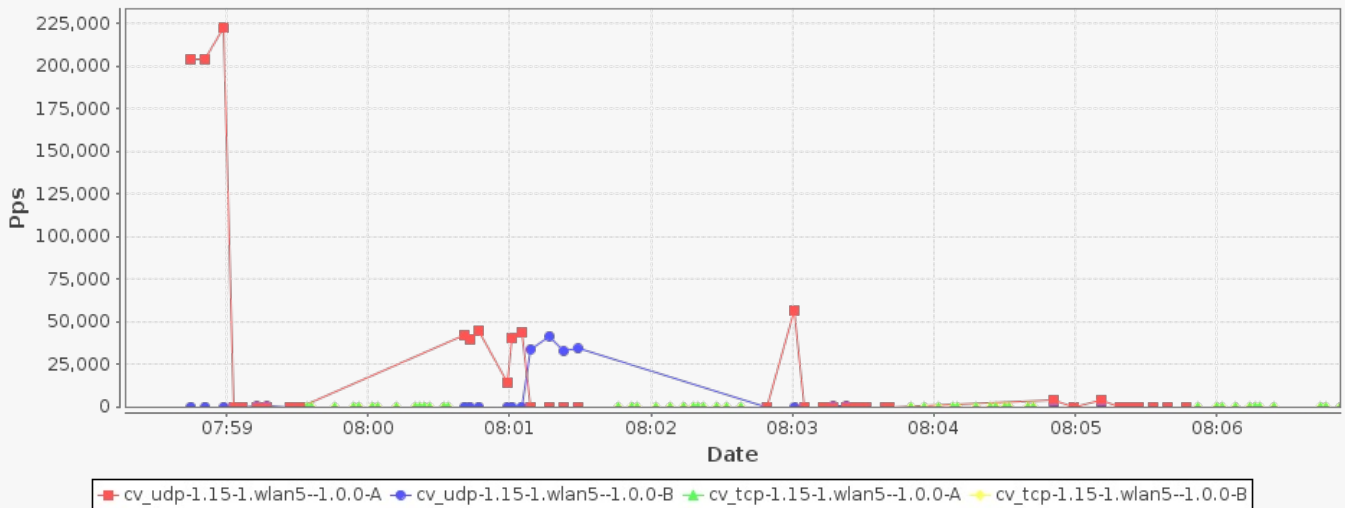
Packet Loss Percentage graph shows the percentage of lost packets as detected by the receiving endpoint due to packet gaps. If there is full packet loss, then this will not report any loss since there will be no gap to detect.

Endpoint RX Packet Loss Percentage



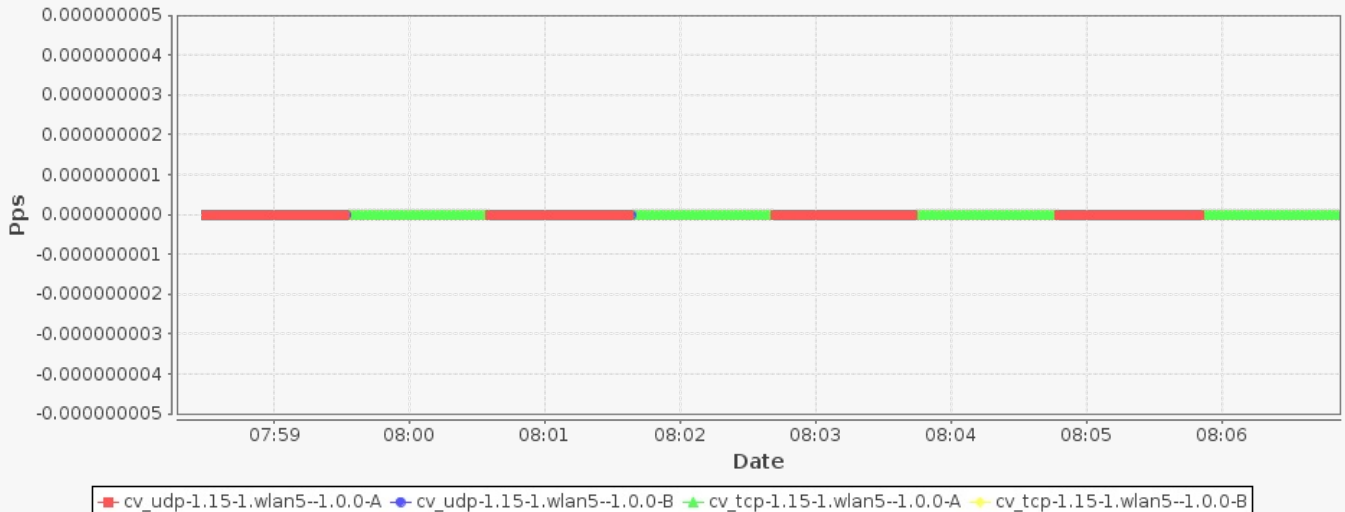
Loss Graph shows occurrences of lost packets as detected by the receiving endpoint due to packet gaps. If there is full packet loss, then this will not report any loss since there will be no gap to detect.

Endpoint RX Packet Loss Per Second



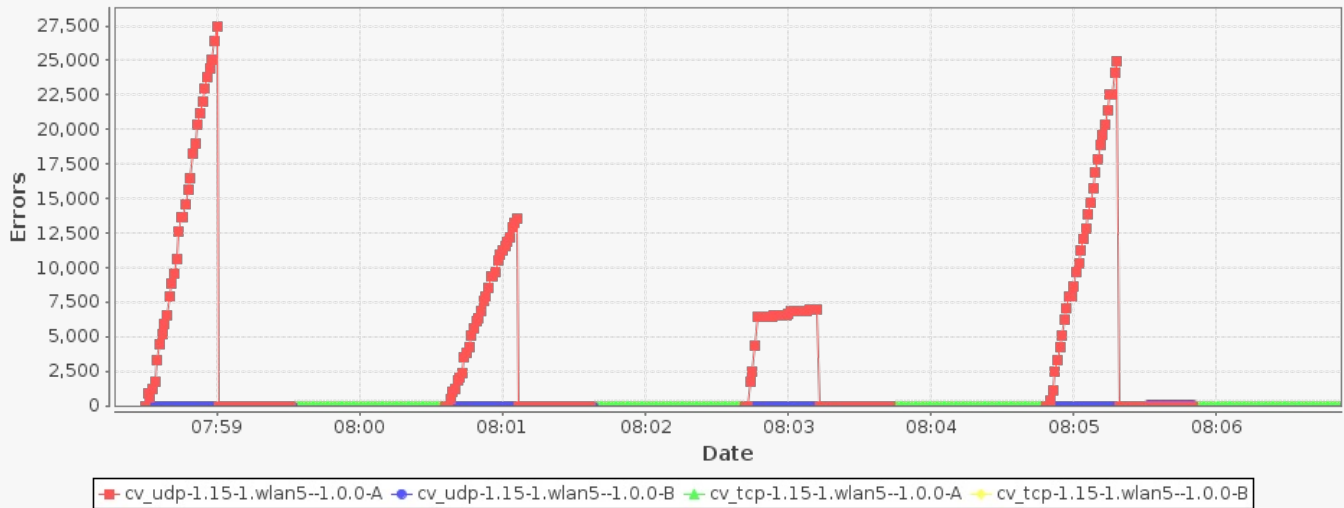
Retransmit Graph shows occurrences of retransmitted packets.

TCP Retransmits Per Second



Error Graph shows occurrences of packet errors.

Rx Errors



Test configuration and LANforge software version	
Path Loss	10
Requested Speed	500Mbps
Multi-Conn	1
ToS	0
Duration:	30 sec (30 s)
Upstream Port	1.1.15 bond0 Firmware: 2 Resource: ct525-is16100005
WiFi Port	1.1.19 wlan5 Firmware: 10.4b-ct-9984-xtH-012-e80202737 Resource: ct525-is16100005
Show Events	true
Build Date	Thu Jun 13 15:04:03 PDT 2019
Build Version	5.3.9

