

Dataplane Test



Fri Jun 14 21:29:54 PDT 2019

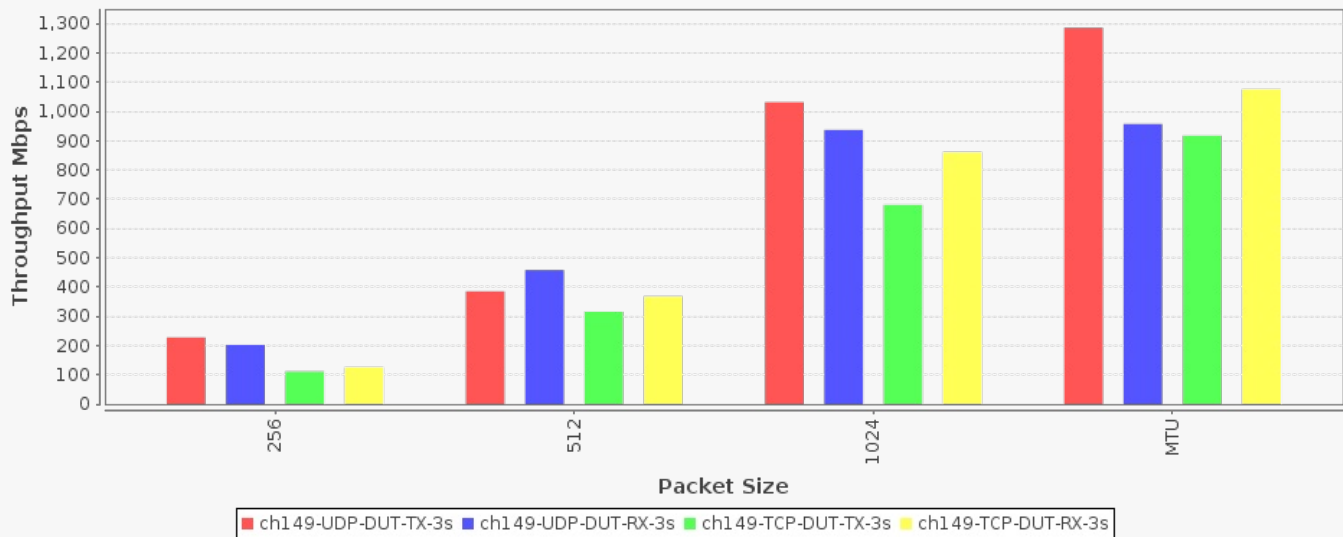
Test Setup Information		
Device Under Test	Name	ASUS_5G
	SSIDs	ASUS_5G
	BSSIDs	f8:32:e4:53:afa4
	Notes	[BLANK]
Operator	Candela Technologies, Inc.	

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.

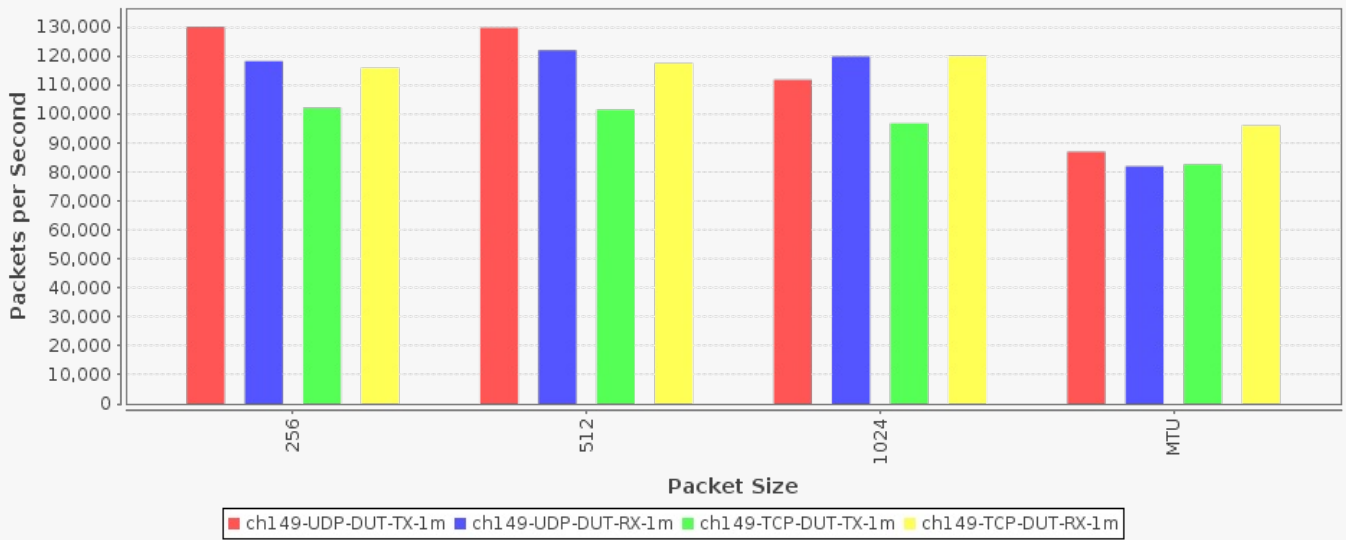
Throughput (goodput) by MTU, for each different traffic type.

Throughput vs Packet Size



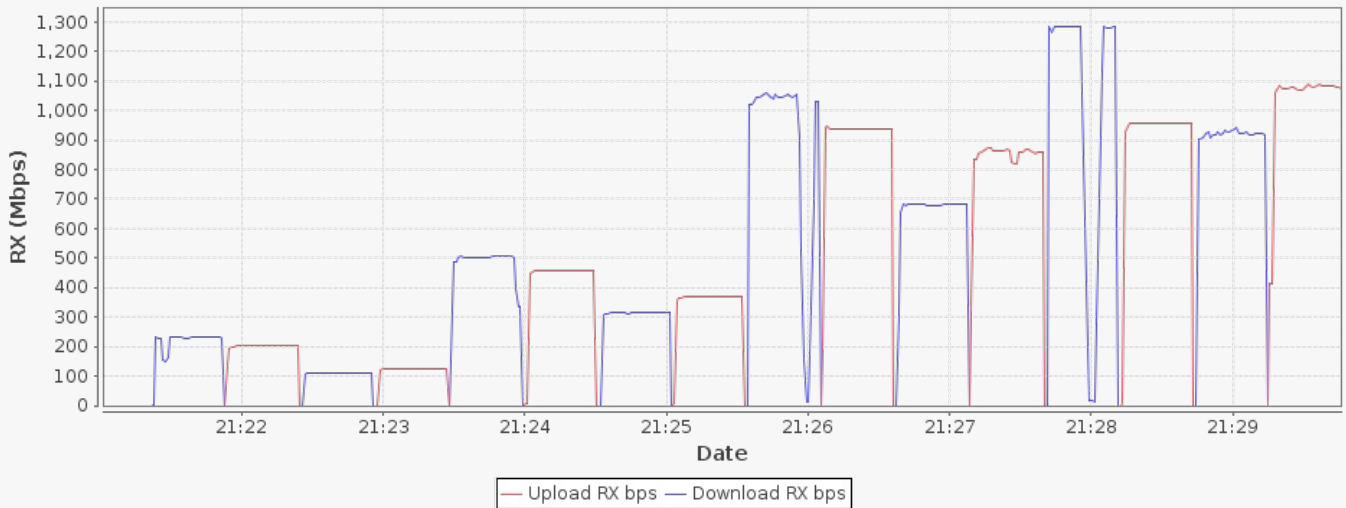
Pps throughput by MTU, for each different traffic type. The values are estimated packets-per-second over the DUT, but some protocols such as TCP make this difficult to know for certain, so the value is extrapolated.

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.

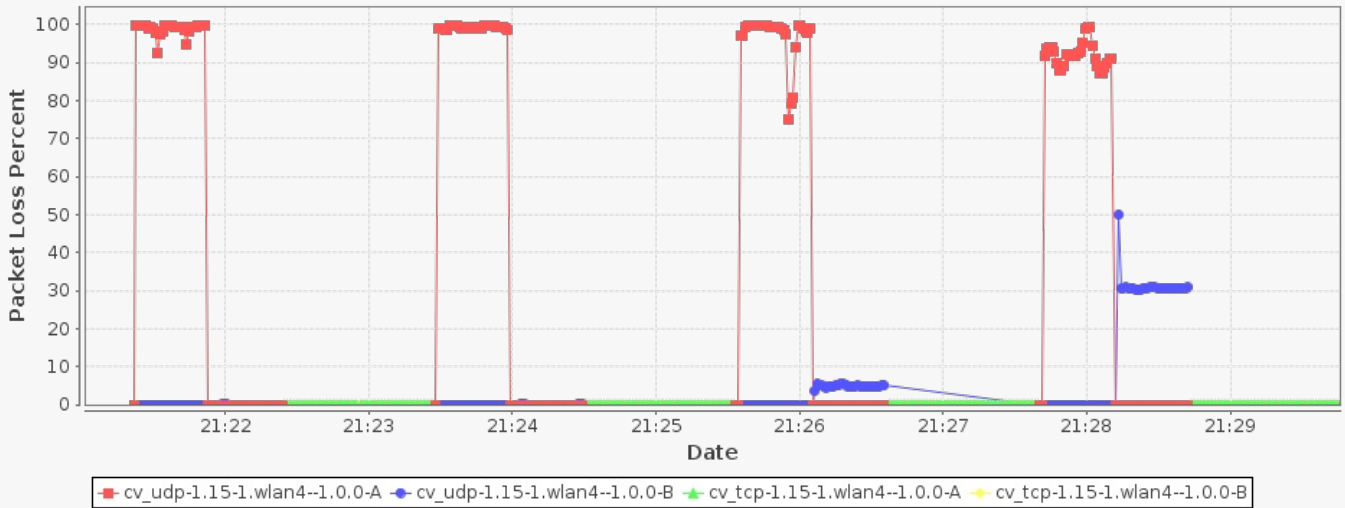
Realtime Throughput



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
149	AUTO	AUTO	AUTO	AUTO	256	UDP	DUT-TX	NA	30	852262169	222083494	222595464	227603304	1733200000	-38	0 / 4	0	1040 Mbps	1.733 Gbps	802.11an-AC
149	AUTO	AUTO	AUTO	AUTO	256	UDP	DUT-RX	NA	30	201873221	201717801	202382289	202161773	1733200000	-29	0 / 3489215	0	1733.3 Mbps	1.733 Gbps	802.11an-AC
149	AUTO	AUTO	AUTO	AUTO	256	TCP	DUT-TX	NA	30	110902686	110846427	110875994	111308544	1733200000	-39	950 / 1228559	0.077	1733.3 Mbps	1.733 Gbps	802.11an-AC
149	AUTO	AUTO	AUTO	AUTO	256	TCP	DUT-RX	NA	30	127078822	125349056	126398161	125364541	1733200000	-38	0 / 3430135	0	1733.3 Mbps	1.733 Gbps	802.11an-AC
149	AUTO	AUTO	AUTO	AUTO	512	UDP	DUT-TX	NA	30	1726567794	486922063	487979351	385281792	1733200000	-39	0 / 1	0	1733.3 Mbps	1.733 Gbps	802.11an-AC
149	AUTO	AUTO	AUTO	AUTO	512	UDP	DUT-RX	NA	30	457792078	457298270	458626091	457874125	1733200000	-29	0 / 3625775	0	1733.3 Mbps	1.56 Gbps	802.11an-AC
149	AUTO	AUTO	AUTO	AUTO	512	TCP	DUT-TX	NA	30	315822742	314692295	315787024	315477168	1733200000	-39	0 / 1354067	0	1733.3 Mbps	1.733 Gbps	802.11an-AC
149	AUTO	AUTO	AUTO	AUTO	512	TCP	DUT-RX	NA	30	372613203	367496509	370469356	368164514	1733200000	-38	0 / 3486801	0	1733.3 Mbps	1.733 Gbps	802.11an-AC
149	AUTO	AUTO	AUTO	AUTO	1024	UDP	DUT-TX	NA	30	1866298640	875459736	878490528	1031781090	1733200000	-38	0 / 0	FAILED	1733.3 Mbps	1.733 Gbps	802.11an-AC
149	AUTO	AUTO	AUTO	AUTO	1024	UDP	DUT-RX	NA	30	988509090	936932979	941625412	937103658	1733200000	-29	0 / 3774155	0	1733.3 Mbps	1.56 Gbps	802.11an-AC
149	AUTO	AUTO	AUTO	AUTO	1024	TCP	DUT-TX	NA	30	685848504	680950242	685520377	681034293	1733200000	-38	0 / 1611560	0	1733.3 Mbps	1.733 Gbps	802.11an-AC
149	AUTO	AUTO	AUTO	AUTO	1024	TCP	DUT-RX	NA	30	862577124	858907721	861086636	861319818	1733200000	-38	0 / 3545666	0	1733.3 Mbps	1.733 Gbps	802.11an-AC
149	AUTO	AUTO	AUTO	AUTO	MTU	UDP	DUT-TX	NA	30	1934907461	1021128166	1024213261	1286072109	1733200000	-38	0 / 1	0	1733.3 Mbps	1.733 Gbps	802.11an-AC
149	AUTO	AUTO	AUTO	AUTO	MTU	UDP	DUT-RX	NA	30	1391099954	957010502	964803453	957378904	1733200000	-29	0 / 3499212	0	1733.3 Mbps	1.56 Gbps	802.11an-AC
149	AUTO	AUTO	AUTO	AUTO	MTU	TCP	DUT-TX	NA	30	931187568	922440464	923379233	917467821	1733200000	-37	0 / 1759165	0	1733.3 Mbps	1.733 Gbps	802.11an-AC
149	AUTO	AUTO	AUTO	AUTO	MTU	TCP	DUT-RX	NA	30	1086912376	1079597365	1081959614	1076257848	1733200000	-38	0 / 2859843	0	1733.3 Mbps	1.733 Gbps	802.11an-AC

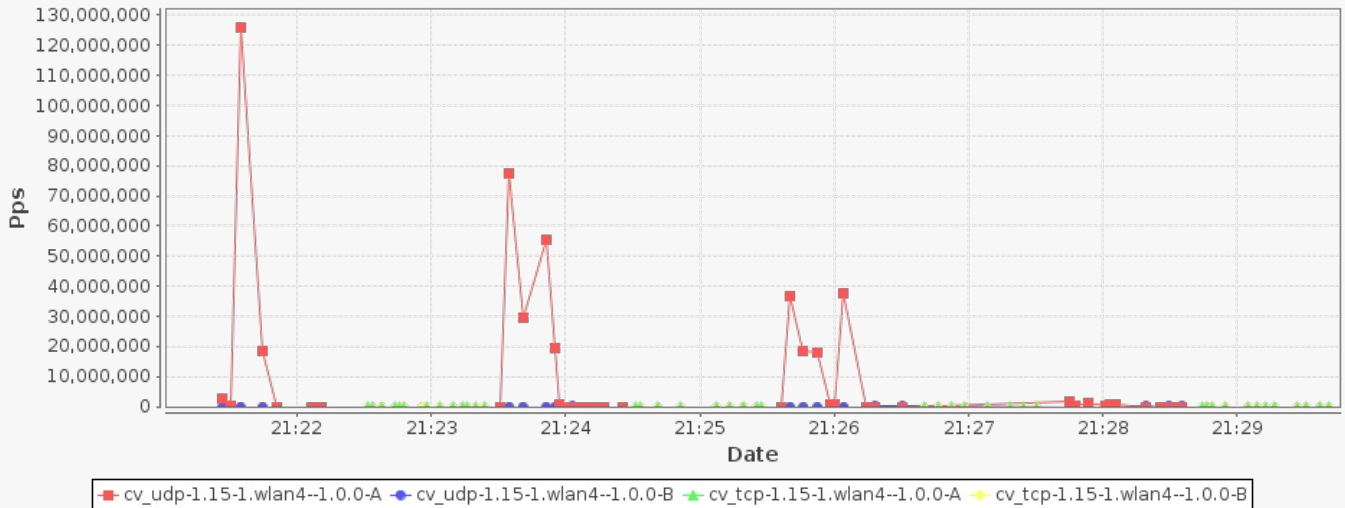
Packet Loss Percentage graph shows the percentage of lost packets as detected by the receiving endpoint due to packet gaps. If there is full packet loss, then this will not report any loss since there will be no gap to detect.

Endpoint RX Packet Loss Percentage



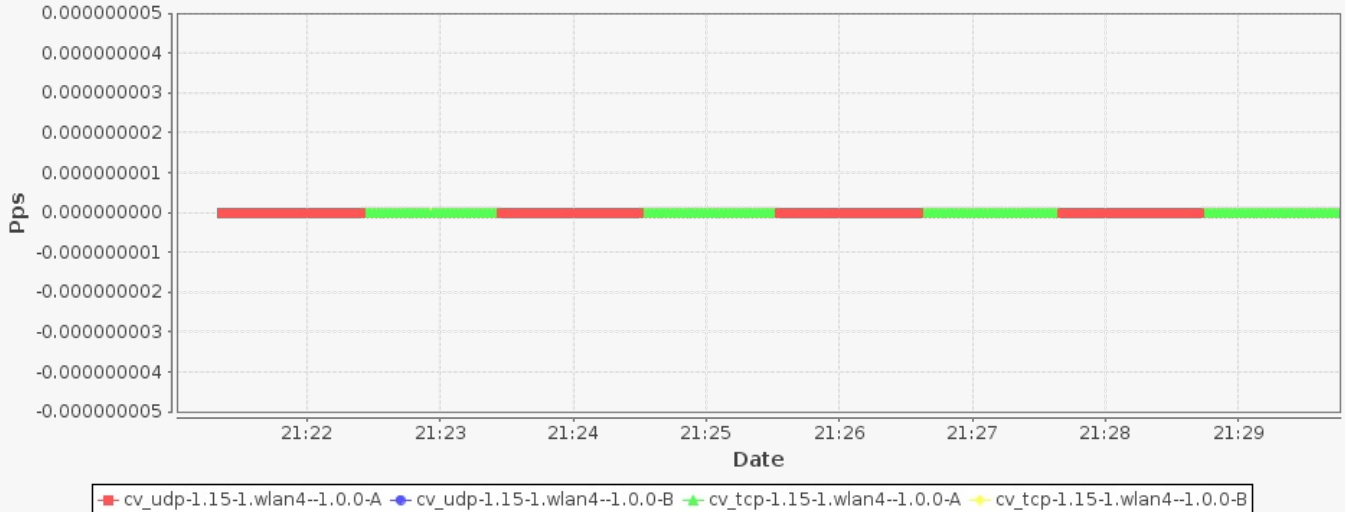
Loss Graph shows occurrences of lost packets as detected by the receiving endpoint due to packet gaps. If there is full packet loss, then this will not report any loss since there will be no gap to detect.

Endpoint RX Packet Loss Per Second



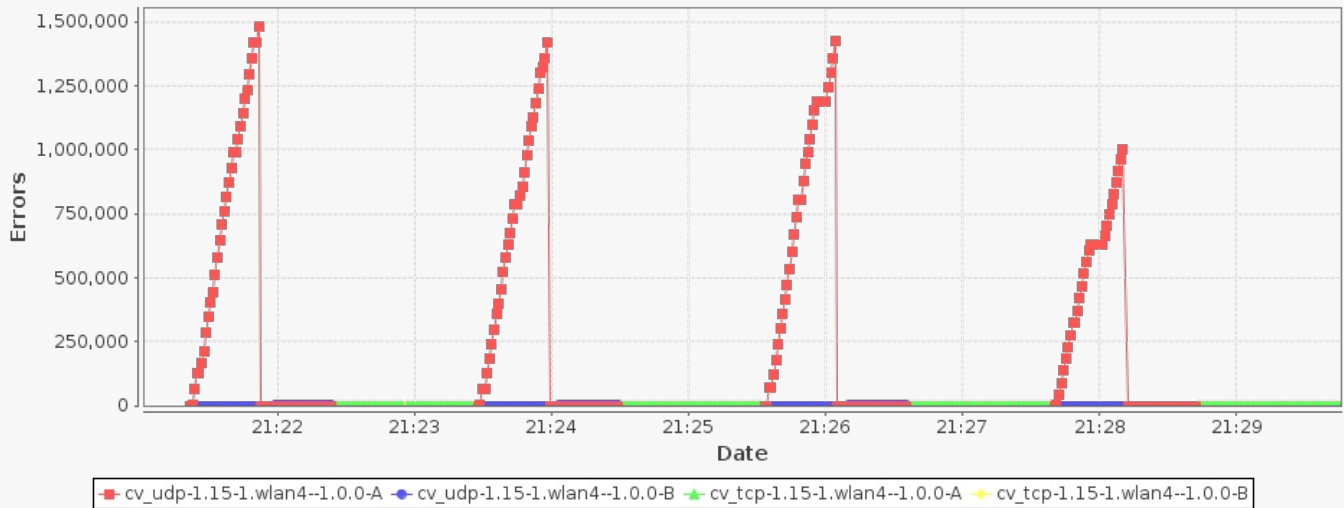
Retransmit Graph shows occurrences of retransmitted packets.

TCP Retransmits Per Second



Error Graph shows occurrences of packet errors.

Rx Errors



Test configuration and LANforge software version	
Path Loss	10
Requested Speed	2Gbps
Multi-Conn	1
ToS	0
Duration:	30 sec (30 s)
Upstream Port	1.1.15 bond0 Firmware: 2 Resource: ct525-is16100005
WiFi Port	1.1.18 wlan4 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

