Test Layer 3 Cross-Connect Traffic: test_l3.py

2024-02-02-20-43-26

Objective

The Layer 3 Traffic Generation Test is designed to test the performance of the Access Point by running layer 3 Cross-Connect Traffic. Layer-3 Cross-Connects represent a stream of data flowing through the system under test. A Cross-Connect (CX) is composed of two Endpoints, each of which is associated with a particular Port (physical or virtual interface).

Device Under Test Information

Device Under Test		
	DUT Name	
	DUT Hardware Version	
	DUT Software Version	
	DUT Serial Number	
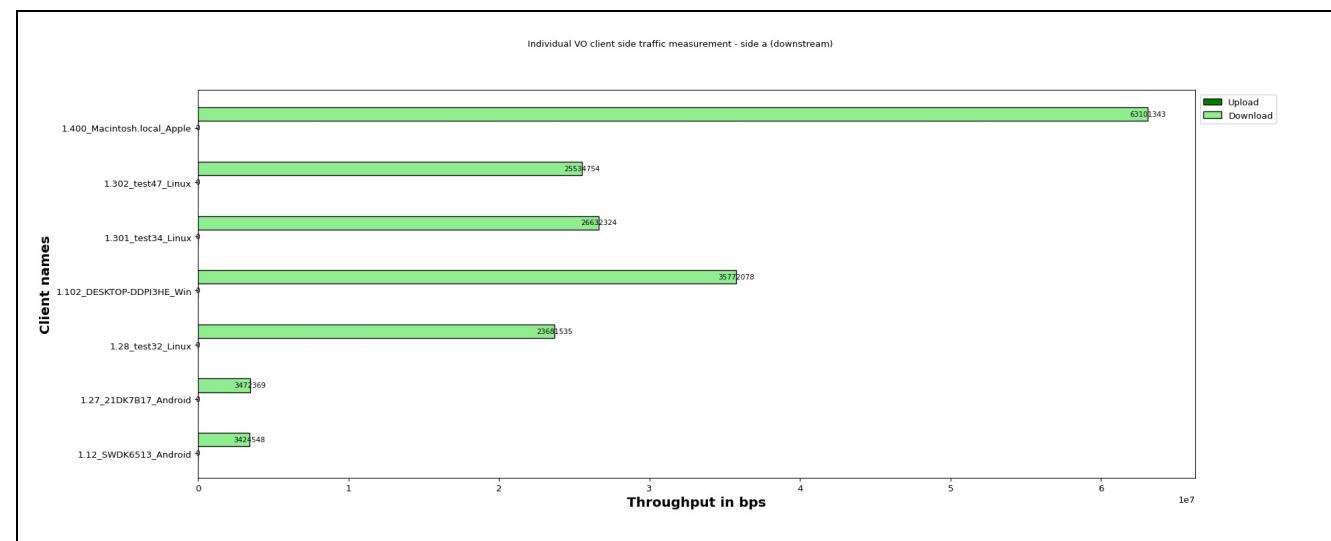
Test Configuration

Test Configuration		
	LANforge ip	192.168.209.223
	LANforge port	8080
	Upstream	eth1
	Test Duration	2m
	Polling Interval	5s

Radio Configuration

### Individual throughput mcast download bps: 100000000 traffic VO (WiFi).

The below graph represents individual throughput for 7 clients running VO (WiFi) traffic. Y- axis shows "Client names" and X-axis shows "Throughput in Mbps".
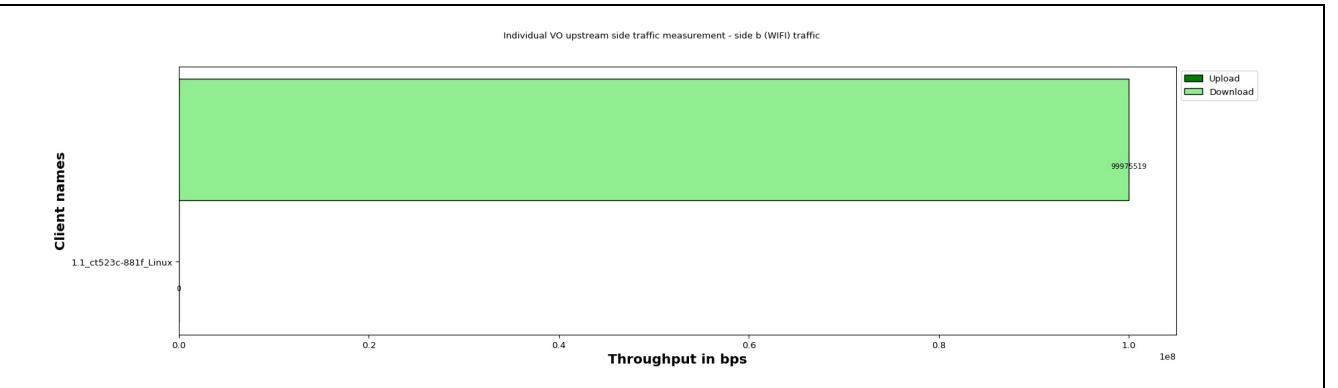
Client Alias	Host eid	Host Name	Device Type / Hw Ver	Endp Name	Port Name	Mode	Mac	Channel	Type of traffic	Traffic Protocol	Offered Upload Rate Per Client	Offered Download Rate Per Client	Upload Rate Per Client	Download Rate Per Client
1.12_SWDK6513_Android	1.12	SWDK6513	samsung SM-E135F r13 sdk: 33	MLT-mrx-VO-wlan0-6	1.12.wlan0	802.11abgn-AC 80	02:00:00:00:00:00	149	VO	Mcast	0	100000000	0	3424548
			MLT-										

Client Alias	Host eid	Host Name	Device Type / HW Ver	Endp Name	Port Name	Mode	Mac	Channel	Type of traffic	Traffic Protocol	Offered Upload Rate Per Client	Offered Download Rate Per Client	Upload Rate Per Client	Download Rate Per Client
1.27_21DK7B17_Android	1.27	21DK7B17	samsung SM-A135F r12 sdk: 31	mrx-VO-wlan0-7	1.27.wlan0	802.11abgn-AC 80	66:f3:ae:f7:46:cd	149	VO	Mcast	0	100000000	0	3472369
1.28_test32_Linux	1.28	test32	Linux/x86-64	MLT-mrx-VO-sta0-1	1.28.sta0	802.11bgn-AC 80 2x2	e0:9d:31:87:c1:17	-1	VO	Mcast	0	100000000	0	23681535
1.102_DESKTOP-DDPI3HE_Win	1.102	DESKTOP-DDPI3HE	Win/x86 6.2	MLT-mrx-VO-wlan0-2	1.102.wlan0	AUTO 20 1x1	e4:a4:71:93:70:e7	149	VO	Mcast	0	100000000	0	35772078
1.301_test34_Linux	1.301	test34	Linux/x86-64	MLT-mrx-VO-sta0-3	1.301.sta0	802.11bgn-AC 80 2x2	f0:d5:bf:be:a0:14	-1	VO	Mcast	0	100000000	0	26632324
1.302_test47_Linux	1.302	test47	Linux/x86-64	MLT-mrx-VO-sta0-4	1.302.sta0	802.11bgn-AC 80 2x2	e4:a7:a0:4d:fd:ef	-1	VO	Mcast	0	100000000	0	25534754
1.400_Macintosh.local_Apple	1.400	Macintosh.local	Apple/x86-64	MLT-mrx-VO-en0-5	1.400.en0	802.11abgn-BE 80 2x2	c8:69:cd:a9:10:9c	6	VO	Mcast	0	100000000	0	63101343

Individual throughput upstream endp, offered upload bps: 0 offered download bps: 100000000 /station for traffic VO (WiFi).

The below graph represents individual throughput for 1 clients running VO (WiFi) traffic. Y- axis shows "Client names" and X-axis shows "Throughput in Mbps".

Individual VO upstream side traffic measurement - side b (WIFI) traffic

Client Alias	Host eid	Host Name	Device Type / HW Ver	Endp Name	Port Name	Mode	Mac	Channel	Type of traffic	Traffic Protocol	Offered Upload Rate Per Client	Offered Download Rate Per Client	Upload Rate Per Client	Download Rate Per Client
1.1_ct523c-881f_Linux	1.1	ct523c-881f	Linux/x86-64	MLT-mtx-VO-eth1-0	1.1.eth1		00:60:e0:7d:88:20	[channel: 1]	VO	Mcast	0	100000000	0	99975519

Layer 3 Cx Traffic Last Reporting Interval eth1

Time epoch	Time	Total-Station-Count	UL-Min-Requested	UL-Max-Requested	DL-Min-Requested	DL-Max-Requested	UL-Min-PDU	UL-Max-PDU	DL-Min-PDU	DL-Max-PDU	Attenuation	Name	Rx-Bps	Tx-Bps	Rx-Link-Rate	Tx-Link-Rate	RSSI	AP	Mode	MAC	Channel	Rx-Latency	Rx-Jitter	Ul-Rx-Goodput-bps	Ul-Rx-Rate-ll	Ul-Rx-Pkts-ll	UL-Rx-Drop-Percent	Dl-Rx-Goodput-bps	Dl-Rx-Rate-ll	Dl-Rx-Pkts-ll	Dl-Rx-Drop_Percent
1706886932	02_02_2024_20_45_32	7	0	0	100000000	100000000	MTU	MTU	MTU	MTU	-1	eth1	392704	102865830	1 Gbps	1 Gbps	NaN	NaN	NaN	00:60:e0:7d:88:20	[channel: 1]	0	0	0	0	0	0	0	0	0	0

Layer 3 Cx Traffic Last Reporting Interval 1.28.sta0

Time epoch	Time	Total-Station-Count	UL-Min-Requested	UL-Max-Requested	DL-Min-Requested	DL-Max-Requested	UL-Min-PDU	UL-Max-PDU	DL-Min-PDU	DL-Max-PDU	Attenuation	Name	Rx-Bps	Tx-Bps	Rx-Link-Rate	Tx-Link-Rate	RSSI	AP	Mode	MAC	Channel	Rx-Latency	Rx-Jitter	Ul-Rx-Goodput-bps	Ul-Rx-Rate-ll	Ul-Rx-Pkts-ll	UL-Rx-Drop-Percent	Dl-Rx-Goodput-bps	Dl-Rx-Rate-ll	Dl-Rx-Pkts-ll	Dl-Rx-Drop_Percent
1706886932	02_02_2024_20_45_32	7	0	0	100000000	100000000	MTU	MTU	MTU	MTU	-1	1.28.sta0	21257642	13	260 Mbps	866.7 Mbps	-38 dBm	2a:5c:99:6c:42:7d	802.11bgn-AC 80 2x2	e0:9d:31:87:c1:17	-1	275	0	0	0	0	0	23681535	20790414	236019	0.0

Layer 3 Cx Traffic Last Reporting Interval 1.102.wlan0

Time epoch	Time	Total-Station-Count	UL-Min-Requested	UL-Max-Requested	DL-Min-Requested	DL-Max-Requested	UL-Min-PDU	UL-Max-PDU	DL-Min-PDU	DL-Max-PDU	Attenuation	Name	Rx-Bps	Tx-Bps	Rx-Link-Rate	Tx-Link-Rate	RSSI	AP	Mode	MAC	Channel	Rx-Latency	Rx-Jitter	Ul-Rx-Goodput-bps	Ul-Rx-Rate-ll	Ul-Rx-Pkts-ll	UL-Rx-Drop-Percent	Dl-Rx-Goodput-bps	Dl-Rx-Rate-ll	Dl-Rx-Pkts-ll	Dl-Rx-Drop_Percent
1706886932	02_02_2024_20_45_32	7	0	0	100000000	100000000	MTU	MTU	MTU	MTU	-1	1.102.wlan0	24836439	910	260 Mbps	260 Mbps	-52 dBm	2a:5c:99:6c:42:7d	AUTO 20 1x1	e4:a4:71:93:70:e7	149	-481	0	0	0	0	0	35772078	24854693	357013	0.0

Layer 3 Cx Traffic Last Reporting Interval 1.301.sta0

Time epoch	Time	Total-Station-Count	UL-Min-Requested	UL-Max-Requested	DL-Min-Requested	DL-Max-Requested	UL-Min-PDU	UL-Max-PDU	DL-Min-PDU	DL-Max-PDU	Attenuation	Name	Rx-Bps	Tx-Bps	Rx-Link-Rate	Tx-Link-Rate	RSSI	AP	Mode	MAC	Channel	Rx-Latency	Rx-Jitter	Ul-Rx-Goodput-bps	Ul-Rx-Rate-ll	Ul-Rx-Pkts-ll	UL-Rx-Drop-Percent	Dl-Rx-Goodput-bps	Dl-Rx-Rate-ll	Dl-Rx-Pkts-ll	Dl-Rx-Drop_Percent
1706886932	02_02_2024_20_45_32	7	0	0	100000000	100000000	MTU	MTU	MTU	MTU	-1	1.301.sta0	24395898	14	195.1 Mbps	866.7 Mbps	-33 dBm	2a:5c:99:6c:42:7d	802.11bgn-AC 80 2x2	f0:d5:bf:be:a0:14	-1	112	0	0	0	0	0	26632324	24390501	265690	0.0

Layer 3 Cx Traffic Last Reporting Interval 1.302.sta0

Time epoch	Time	Total-Station-Count	UL-Min-Requested	UL-Max-Requested	DL-Min-Requested	DL-Max-Requested	UL-Min-PDU	UL-Max-PDU	DL-Min-PDU	DL-Max-PDU	Attenuation	Name	Rx-Bps	Tx-Bps	Rx-Link-Rate	Tx-Link-Rate	RSSI	AP	Mode	MAC	Channel	Rx-Latency	Rx-Jitter	Ul-Rx-Goodput-bps	Ul-Rx-Rate-ll	Ul-Rx-Pkts-ll	UL-Rx-Drop-Percent	Dl-Rx-Goodput-bps	Dl-Rx-Rate-ll	Dl-Rx-Pkts-ll	Dl-Rx-Drop_Percent
1706886932	02_02_2024_20_45_32	7	0	0	100000000	100000000	MTU	MTU	MTU	MTU	-1	1.302.sta0	24358769	14	195.1 Mbps	866.7 Mbps	-41 dBm	2a:5c:99:6c:42:7d	802.11bgn-AC 80 2x2	e4:a7:a0:4d:fd:ef	-1	224	0	0	0	0	0	25534754	23929589	254658	0.0

Layer 3 Cx Traffic Last Reporting Interval 1.400.en0

Time epoch	Time	Total-Station-Count	UL-Min-Requested	UL-Max-Requested	DL-Min-Requested	DL-Max-Requested	UL-Min-PDU	UL-Max-PDU	DL-Min-PDU	DL-Max-PDU	Attenuation	Name	Rx-Bps	Tx-Bps	Rx-Link-Rate	Tx-Link-Rate	RSSI	AP	Mode	MAC	Channel	Rx-Latency	Rx-Jitter	Ul-Rx-Goodput-bps	Ul-Rx-Rate-ll	Ul-Rx-Pkts-ll	UL-Rx-Drop-Percent	Dl-Rx-Goodput-bps	Dl-Rx-Rate-ll	Dl-Rx-Pkts-ll	Dl-Rx-Drop_Percent
1706886932	02_02_2024_20_45_32	7	0	0	100000000	100000000	MTU	MTU	MTU	MTU	-1	1.400.en0	90689707	0	53.95 Mbps	145 Mbps	-26 dBm	2a:5c:99:6c:42:7e	802.11abgn-BE 80 2x2	c8:69:cd:a9:10:9c	6	-186	0	0	0	0	0	63101343	80981962	547357	0.0

Layer 3 Cx Traffic Last Reporting Interval 1.12.wlan0

Time epoch	Time	Total-Station-Count	UL-Min-Requested	UL-Max-Requested	DL-Min-Requested	DL-Max-Requested	UL-Min-PDU	UL-Max-PDU	DL-Min-PDU	DL-Max-PDU	Attenuation	Name	Rx-Bps	Tx-Bps	Rx-Link-Rate	Tx-Link-Rate	RSSI	AP	Mode	MAC	Channel	Rx-Latency	Rx-Jitter	Ul-Rx-Goodput-bps	Ul-Rx-Rate-ll	Ul-Rx-Pkts-ll	UL-Rx-Drop-Percent	Dl-Rx-Goodput-bps	Dl-Rx-Rate-ll	Dl-Rx-Pkts-ll	Dl-Rx-Drop_Percent
1706886932	02_02_2024_20_45_32	7	0	0	100000000	100000000	MTU	MTU	MTU	MTU	-1	1.12.wlan0	3254408	20182	433 Mbps	433 Mbps	-31	2a:5c:99:6c:42:7d	802.11abgn-AC 80	02:00:00:00:00:00	149	699	0	0	0	0	0	3424548	3273260	34536	0.0

Layer 3 Cx Traffic Last Reporting Interval 1.27.wlan0

Time epoch	Time	Total-Station-Count	UL-Min-Requested	UL-Max-Requested	DL-Min-Requested	DL-Max-Requested	UL-Min-PDU	UL-Max-PDU	DL-Min-PDU	DL-Max-PDU	Attenuation	Name	Rx-Bps	Tx-Bps	Rx-Link-Rate	Tx-Link-Rate	RSSI	AP	Mode	MAC	Channel	Rx-Latency	Rx-Jitter	Ul-Rx-Goodput-bps	Ul-Rx-Rate-ll	Ul-Rx-Pkts-ll	UL-Rx-Drop-Percent	Dl-Rx-Goodput-bps	Dl-Rx-Rate-ll	Dl-Rx-Pkts-ll	Dl-Rx-Drop_Percent
1706886932	02_02_2024_20_45_32	7	0	0	100000000	100000000	MTU	MTU	MTU	MTU	-1	1.27.wlan0	3261774	21989	433 Mbps	433 Mbps	-33	2a:5c:99:6c:42:7d	802.11abgn-AC 80	66:f3:ae:f7:46:cd	149	328	0	0	0	0	0	3472369	3366845	34890	0.0