

#### Fri Apr 09 07:36:09 PDT 2021

# Objective

The Candela WiFi Capacity test is designed to measure performance of an Access Point when handling different amounts of WiFi Stations. The test allows the user to increase the number of stations in user defined steps for each test iteration and measure the per station and the overall throughput for each trial. Along with throughput other measurements made are client connection times, Fairness, % packet loss, DHCP times and more. The expected behavior is for the AP to be able to handle several stations (within the limitations of the AP specs) and make sure all stations get a fair amount of airtime both in the upstream and downstream. An AP that scales well will not show a significant over-all throughput decrease as more stations are added.



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

Total bits-per-second transferred. This only counts the protocol payload, so it will not count the Ethernet, IP, UDP, TCP or other header overhead. A well behaving system will show about the same rate as stations increase. If the rate decreases significantly as stations increase, then it is not scaling well.

If selected, the Golden AP comparison graphs will be added. These tests were done in an isolation chamber, open encryption, conductive connection, with LANforge CT525 wave-1 3x3 NIC as the stations.



# Total Kbps Received vs Number of Stations Active

Protocol-Data-Units received. For TCP, this does not mean much, but for UDP connections, this correlates to packet size. If the PDU size is larger than what fits into a single frame, then the network stack will segment it accordingly. A well behaving system will show about the same rate as stations increase. If the rate decreases significantly as stations increase, then it is not scaling well.



Station disconnect stats. These will be only for the last iteration. If the 'Clear Reset Counters' option is selected, the stats are cleared after the initial association. Any re-connects reported indicate a potential stability issue. Can be used for long-term stability testing in cases where you bring up all stations in one iteration and then run the test for a longer duration.



Station connect time is calculated from the initial Authenticate message through the completion of Open or RSN association/authentication.



	Wifi-Capacity Test requested values							
Station Increment:	1							
Loop Iterations:	Single (1)							
Duration:	1 min (1 m)							
Protocol:	UDP-IPv4							
Layer 4-7 Endpoint:	NONE							
Payload Size:	Αυτο							

MSS	АИТО
Total Download Rate:	1G (1 Gbps)
Total Upload Rate:	Zero (0 bps)
Percentage TCP Rate:	10% (10%)
Set Bursty Minimum Speed:	Burst Mode Disabled (-1)
Randomize Rates	true
Leave Ports Up	false
Socket buffer size:	OS Default
Settle Time:	5 sec (5 s)
Rpt Timer:	fast (1 s)
IP ToS:	Best Effort (0)
Multi- Conn:	АИТО
Show-Per- Iteration- Charts	true
Show-Per- Loop- Totals	true
Hunt- Lower-	false
Rates	
Rates Show Events	true
Rates Show Events Clear Reset Counters	true false
Rates Show Events Clear Reset Counters CSV Reporting Dir	true false - not selected -
Rates Show Events Clear Reset Counters CSV Reporting Dir Build Date	true false - not selected - Tue 06 Apr 2021 06:17:31 PM PDT
Rates Show Events Clear Reset Counters CSV Reporting Dir Build Date Build Version	true false - not selected - Tue 06 Apr 2021 06:17:31 PM PDT 5.4.3
Rates Show Events Clear Reset Counters CSV Reporting Dir Build Date Build Version Git Version	true false - not selected - Tue 06 Apr 2021 06:17:31 PM PDT 5.4.3 5990ed1e04cad32619b4cdf12cdf31fe9fbd809b
Rates Show Events Clear Reset Counters CSV Reporting Dir Build Date Build Version Git Version Ports	true false false - not selected - Tue 06 Apr 2021 06:17:31 PM PDT 5.4.3 5990ed1e04cad32619b4cdf12cdf31fe9fbd809b 1.1.eth2 1.1.sta02000 1.1.sta02001 1.1.sta02002 1.1.sta02003 1.1.sta02004 1.1.sta02005 1.1.sta02000 1.1.sta02007 1.1.sta02008 1.1.sta02009 1.1.sta02010 1.1.sta02011 1.1.sta02012 1.1.sta02017 1.1.sta02014 1.1.sta02015 1.1.sta02016 1.1.sta02017 1.1.sta02018 1.1.sta02019 1.1.sta02020 1.1.sta02021 1.1.sta02022 1.1.sta02023 1.1.sta02030 1.1.sta02031 1.1.sta02020 1.1.sta02031 1.1.sta02034 1.1.sta02035 1.1.sta02030 1.1.sta02031 1.1.sta02023 1.1.sta02034 1.1.sta02035 1.1.sta02030 1.1.sta02031 1.1.sta02023 1.1.sta02034 1.1.sta02041 1.1.sta02042 1.1.sta02043 1.1.sta02038 1.1.sta02039 1.1.sta02040 1.1.sta02041 1.1.sta02042 1.1.sta02043 1.1.sta02500 1.1.sta02502 1.1.sta02503 1.1.sta02504 1.1.sta02551 1.1.sta02501 1.1.sta02502 1.1.sta02503 1.1.sta02511 1.1.sta02511 1.1.sta02513 1.1.sta02508 1.1.sta02513 1.1.sta02511 1.1.sta02513 1.1.sta02513 1.1.sta02521 1.1.sta02522 1.1.sta02523 1.1.sta02531 1.1.sta02533 1.1.sta02524 1.1.sta02524 1.1.sta02524 1.1.sta02533 1.1.sta02532 1.1.sta02533 1.1.sta02524 1.1.sta02533 1.1.sta02532 1.1.sta02533 1.1.sta02524 1.1.sta02533 1.1.sta02533 1.1.sta02533 1.1.sta02544 1.1.sta02545 1.1.sta02544 1.1.sta02545 1.1.sta02544 1.1.sta02545 1.1.sta02544 1.1.sta02545 1.1.sta02544 1.1.sta02545 1.1.sta02544 1.1.sta02544 1.1.sta02545 1.1.sta02544
Rates Show Events Clear Reset Counters CSV Reporting Dir Build Date Build Version Git Version Ports Firmware	true false false - not selected - Tue 06 Apr 2021 06:17:31 PM PDT 5.4.3 5990ed1e04cad32619b4cdf12cdf31fe9fbd809b 1.1.eth2 1.1.sta02000 1.1.sta02001 1.1.sta02002 1.1.sta02003 1.1.sta02004 1.1.sta02005 1.1.sta02006 1.1.sta02007 1.1.sta02008 1.1.sta02009 1.1.sta02010 1.1.sta02011 1.1.sta02012 1.1.sta02013 1.1.sta02014 1.1.sta02015 1.1.sta02016 1.1.sta02017 1.1.sta02018 1.1.sta02019 1.1.sta02020 1.1.sta02021 1.1.sta02022 1.1.sta02023 1.1.sta0203 1.1.sta02031 1.1.sta02023 1.1.sta02034 1.1.sta02035 1.1.sta02042 1.1.sta02037 1.1.sta02038 1.1.sta02034 1.1.sta02035 1.1.sta02048 1.1.sta02043 1.1.sta02032 1.1.sta02040 1.1.sta02041 1.1.sta02048 1.1.sta02043 1.1.sta02044 1.1.sta02045 1.1.sta02040 1.1.sta02047 1.1.sta02501 1.1.sta02511 1.1.sta02501 1.1.sta02502 1.1.sta02509 1.1.sta02516 1.1.sta02517 1.1.sta02512 1.1.sta02508 1.1.sta02509 1.1.sta02516 1.1.sta02517 1.1.sta02512 1.1.sta02514 1.1.sta02541 1.1.sta02541 1.1.sta02541 1.1.sta02541 1.1.sta0254 1.1.sta02545 1.1.sta02546 1.1.sta02547 1.1.sta02548 1.1.sta02544 1.1.sta02545 1.1.sta02546 1.1.sta02547 1.1.sta02548 1.1.sta02545 1.1.sta02546 1.1.sta02547 1.1.sta02548 1.1.sta02549 1.1.sta02549 1.1.sta02546 1.1.sta02547 1.1.sta02548 1.1.sta02549 1.1.sta02548 1.1.sta02546 1.1.sta02547 1.1.sta02548 1.1.sta02548 1.1.sta02544 1.

Upload Rate:	Per	station:		0	(	0	bps)	All:		0 (	6	) bps)		
Station count:	1	Connectio	ons per	sta	ation	: 1	L P	Total: ayload	10 (PDU)	00000000 sizes: A	( 1 UTO (	L Gbps) (AUTO)		
Observed Rate: Download Rate: Upload Rate:		Cx Min: 9 Cx Min:	987.244	Mbp 9 bp	os Co os Co	< A	ve: ve:	987.244	4 Mbps 0 bps	Cx Max: Cx Max:	987.	244 Mbps 0 bps	All Cx: 987.24 All Cx:	4 Mbps 0 bps
Aggregated Rate	e:	Min: 9	987.244	Mbp	os Av	/g:		987.244	4 Mbps	Max:	987.	244 Mbps	Iotal: 987.244	Mbps

This graph shows fairness. On a fair system, each station should get about the same throughput. In the download direction, it is mostly the device-under-test that is responsible for this behavior, but in the upload direction, LANforge itself would be the source of most fairness issues unless the device-under-test takes specific actions to ensure fairness.



#### Requested Parameters:

Download Rate: P	Per station:	1000000000 (	1 Gbps	s) All: 10	000000000 (	1 Gbps)		
Upload Rate: P	Per station:	Θ (	0 bps)	All:	Θ (	0 bps)		
				Total: 10	000000000 (	1 Gbps)		
Station count: 1	Connecti	ons per station	:1 F	Payload (PDU)	sizes: AUTO	(AUTO)		
Observed Amount:								
Download Amount:	Cx Min:	6.953 GB C	x Ave:	6.953 GE	Cx Max:	6.953 GB	All Cx:	6.953 GB
Upload Amount:	Cx Min:	0 B C	x Ave:	0 E	Cx Max:	0 B	All Cx:	0 B
							Total:	6.953 GB

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### Combined Received bytes, for entire 1 m run

Download Rate: Upload Rate: Aggregated Rate: Aggregated Rate: Min: 0 bps Avg: 248.891 MN Non-Transmitting endpoints: (1) udp--1.eth2-01.sta02001-A 248.891 Mbps Max: 497.782 Mbps This graph shows fairness. On a fair system, each station should get about the same throughput. In the download direction, it is mostly the device-under-test that is responsible for this behavior, but in the upload direction, LANforge itself would be the source of most fairness issues unless the device-under-test takes specific actions to ensure fairness.



Non-Transmitting endpoints: (1) udp--1.eth2-01.sta02001-A

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# Combined Received bytes, for entire 1 m run

Upload Rate:	Per	station:		0 (	0	bps	) All:		0 (	0 bps)			
							Total:	100	90000000	( 1 Gbps)			
Station count:	3	Connections	per	stati	lon:	1	Payload	(PDU)	sizes: A	UTO (AUTO)			
Observed Rate:													
Download Rate:		Cx Min:	0	bps	Cx	Ave:	110.375	Mbps	Cx Max:	331.126 Mbps	All Cx:	331.126	5 Mb
Upload Rate:		Cx Min:	0	bps	Cx	Ave:		0 bps	Cx Max:	0 bps	All Cx:		0 b
											lotal:	331.126	Mbp
Aggregated Rate	e:	Min:	0	bps	Avg	:	110.375	Mbps	Max:	331.126 Mbps			
Non-Transmittir	ng ei	ndpoints: (2)	) ud	p1.	eth2	-01.	sta02001	-A udp	o1.eth2	-01.sta02002-A			



Station count: 3 Connections per station: 1 Payload (PDU) sizes: AUTO (AUTO) Observed Amount: 0 B Cx Ave: 795.978 MB Cx Max: 2.332 GB All Cx: Download Amount: Cx Min: 2.332 GB Upload Amount: Cx Min: 0 B Cx Ave: 0 B Cx Max: 0 B All Cx: 0 B Total: 2.332 GB Non-Transmitting endpoints: (2) udp--1.eth2-01.sta02001-A udp--1.eth2-01.sta02002-A

This graph shows fairness. On a fair system, each station should get about the same throughput. In the download direction, it is mostly the device-under-test that is responsible for this behavior, but in the upload direction, LANforge itself would be the source of most fairness issues unless the device-under-test takes specific actions to ensure fairness.

# Combined Received bytes, for entire 1 m run



Aggregated Rate: Min: 0 bps Avg: 124.027 Mbps Max: 248.512 Mbps Non-Transmitting endpoints: (2) udp--1.eth2-01.sta02001-A udp--1.eth2-01.sta02002-A



 Observed Amount:
 O B
 Cx Ave:
 894.297 MB
 Cx Max:
 1.75 GB
 All Cx:
 3.493 GB

 Upload Amount:
 Cx Min:
 0 B
 Cx Ave:
 0 B
 Cx Max:
 0 B
 All Cx:
 0 B

 Upload Amount:
 Cx Min:
 0 B
 Cx Ave:
 0 B
 Cx Max:
 0 B
 All Cx:
 0 B

 Non-Transmitting endpoints:
 (2)
 udp--1.eth2-01.sta02001-A
 udp--1.eth2-01.sta02002-A
 A

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# Combined Received bytes, for entire 1 m run

Requested Param	neter	rs:											
Download Rate:	Per	station:	200000	900 (	200	Mbps	) All:	1000	000000 (	1 Gbps)			
Upload Rate:	Per	station:		0 (		0 bps	) All:		Θ (	0 bps)			
							Total:	100	0000000	( 1 Gbps)			
Station count:	5	Connectio	ons per	stat	ion:	1	Payload	(PDU)	sizes: A	UTO (AUTO)			
Observed Rate:													
Download Rate:		Cx Min:		0 bps	6 Cx	Ave:	118.879	Mbps	Cx Max:	198.855 Mbps	All Cx:	594.395	5 Mbps
Upload Rate:		Cx Min:		0 bps	6 Cx	Ave:		0 bps	Cx Max:	0 bps	All Cx:		0 bps
											Total: !	594.395	Mbps
Aggregated Rate	e:	Min:		0 bps	a Av	g:	118.879	Mbps	Max:	198.855 Mbps			
Non-Transmittir	ng er	ndpoints:	(2) u	dp 1	.eth	2-01.	sta02002	-A udp	1.eth2	-01.sta02004-A			



#### Requested Parameters:

Download Rate:	Per	station:	20000000	Θ(	200	) Mbps	) All:	1000	0000000 (	1	L Gbps)			
Upload Rate:	Per	station:		0 (		0 bps	a) All:		Θ (		0 bps)			
							Total:	100	00000000	(	1 Gbps)			
Station count:	5	Connectio	ons per s	tati	Lon:	1	Payload	(PDU)	sizes: A	UT0	(AUTO)			
Observed Amount														
Download Amount		Cx Min:		0 B	Сх	Ave:	857.	215 MB	Cx Max:		1.4 GB	All Cx:	4.186 GB	
Upload Amount:		Cx Min:		0 B	Cx	Ave:		0 B	Cx Max:		0 B	All Cx:	0 B	
												Total:	4.186 GB	

Non-Transmitting endpoints: (2) udp--1.eth2-01.sta02002-A udp--1.eth2-01.sta02004-A

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# Combined Received bytes, for entire 1 m run

Requested Param	neters:					
Download Rate:	Per station: 160	56666666 (166.667 M	lbps) All: 1	000000000	( 1 Gbps)	
Upload Rate:	Per station:	0 ( 0 bps	) All: Total: 100	0 ( 0000000 (	0 bps) 1 Gbps)	
Station count:	6 Connections	per station: 1	Payload (PDU)	sizes: AU	ITO (AUTO)	
Observed Rate:						
Download Rate:	Cx Min:	0 bps Cx Ave:	94.739 Mbps	Cx Max:	165.372 Mbps	All Cx: 568.433 Mbps
Upload Rate:	Cx Min:	0 bps Cx Ave:	0 bps	Cx Max:	0 bps	All Cx: 0 bps Total: 568.433 Mbps
Aggregated Rate	e: Min:	0 bps Avg:	94.739 Mbps	Max:	165.372 Mbps	
Non-Transmittir	ng endpoints: (2)	) udp1.eth2-01.	sta02004-A udp	1.eth2-	01.sta02005-A	



#### Requested Parameters:

Download Rate:	Per	station:	1666666	66	(166	<b>5.</b> 6	67 M	lbps)	All:	100000	0000 (		1 Gbps)			
Upload Rate:	Per	station:		0	(	0	bps	s) Al	l:		0 (	0	bps)			
								Tota	l: 10	0000000	00 (	1	Gbps)			
Station count:	6	Connectio	ons per	sta	ntior	1:	1	Payloa	ad (PDU)	sizes	: AUT0	(A	UTO)			
Observed Amount																
Download Amount		Cx Min:		0	B C	X	Ave:	68	32.11 ME	B Cx M	lax:	1	.165 GB	All	Cx:	3.997 GB
Upload Amount:		Cx Min:		0	B C	X	Ave:		0 E	B Cx M	lax:		0 B	All	Cx:	0 B
														Tota	al:	3.997 GB

Non-Transmitting endpoints: (2) udp--1.eth2-01.sta02004-A udp--1.eth2-01.sta02005-A

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Combined Received bytes, for entire 1 m run

Requested Param	eters:							
Download Rate:	Per station: 14	2857142 (14	2.857 M	bps) All: 1	000000000	Ə ( 1 Gbps)		
Upload Rate:	Per station:	Θ (	0 bps	) All:	Θ (	0 bps)		
				Total: 100	0000000	( 1 Gbps)		
Station count:	7 Connections	per statio	on:1 I	Payload (PDU)	sizes: Al	JTO (AUTO)		
Observed Rate:								
Download Rate:	Cx Min:	0 bps	Cx Ave:	81.231 Mbps	Cx Max:	142.372 Mbps	All Cx: 568.61	9 Mbps
Upload Rate:	Cx Min:	0 bps	Cx Ave:	0 bps	Cx Max:	0 bps	All Cx:	0 bps
							Total: 568.619	Mbps
Aggregated Rate	: Min:	0 bps	Avg:	81.231 Mbps	Max:	142.372 Mbps		
Non-Transmittin	a endpoints: (3	) udp1.e	th2-01.	sta02004-A udp	1.eth2	-01.sta02005-A	udp1.eth2-01	.sta02006-A



Download Rate:	Per	station:	142857	142	(142	.857	Mbps) /	Mll: 1	.000000000	) (	1 Gbps)		
Upload Rate:	Per	station:		0	(	0 bp	os) All:		0 (	0	bps)		
							Total	100	00000000 (	1	Gbps)		
Station count:	7	Connectio	ons per	sta	ition	: 1	Payload	I (PDU)	sizes: AL	JTO (	AUTO)		
Observed Amount	::												
Download Amount	::	Cx Min:		0	B C	x Ave	e: 585	799 MB	Cx Max:		1.003 GB	All Cx:	4.004 GB
Upload Amount:		Cx Min:		0	B C	x Ave	e:	0 B	Cx Max:		0 B	All Cx:	0 B
												Total:	4.004 GB
Non-Transmittir	ng er	ndpoints:	(3) u	dp	1.et	h2-01	L.sta0200	4-A udp	1.eth2-	01.s	ta02005-A	udp1.eth2	-01.sta02006-A

This graph shows fairness. On a fair system, each station should get about the same throughput. In the download direction, it is mostly the device-under-test that is responsible for this behavior, but in the upload direction, LANforge itself would be the source of most fairness issues unless the device-under-test takes specific actions to ensure fairness.

# Combined Received bytes, for entire 1 m run



Requested Param	eters:				
Download Rate:	Per station: 12	5000000 ( 125 Mbps)	All: 1000000000	( 1 Gbps)	
Upload Rate:	Per station:	0 ( 0 bps)	All: 0 Total: 100000000	( 0 bps) 0 ( 1 Gbps)	
Station count:	8 Connections	per station: 1 P	ayload (PDU) sizes:	AUTO (AUTO)	
Observed Rate:					
Download Rate:	Cx Min:	0 bps Cx Ave:	77.598 Mbps Cx Max	k: 124.804 Mbps	All Cx: 620.787 Mbps
Upload Rate:	Cx Min:	0 bps Cx Ave:	0 bps Cx Max	k: 0 bps	All Cx: 0 bps Total: 620.787 Mbps
Aggregated Rate	: Min:	0 bps Avg:	77.598 Mbps Max:	124.804 Mbps	
Non-Transmittin	g endpoints: (3	) udp1.eth2-01.s	ta02005-A udp1.etH	h2-01.sta02006-A	udp1.eth2-01.sta02007-A



Download Rate:	Per	station:	1250000	000	( 125	Mbps)	) All:	1000000	000 ( 3	l Gbps)		
Upload Rate:	Per	station:		0	(	0 bps)	) All:		0 (	0 bps)		
							Total:	100000	0000 (	1 Gbps)		
Station count:	8	Connectio	ons per	sta	tion:	1 F	Payload (P	DU) siz	es: AUTO	(AUTO)		
Observed Amount	t:											
Download Amount	t:	Cx Min:		0	3 Cx	Ave:	559.579	MB Cx	Max: 9	900.139 MB	All Cx:	4.372 GB
Upload Amount:		Cx Min:		0 1	3 Cx	Ave:		ЭВ Cx	Max:	0 B	All Cx:	0 B
											Total:	4.372 GB
Non-Transmittir	ng er	ndpoints:	(3) uc	ip :	l.eth	2-01.9	sta02005-A	udp 1	.eth2-01	.sta02006-A	udp1.eth2	-01.sta02007-A

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Combined Received bytes, for entire 1 m run



Requested Param	eters	5:																
Download Rate:	Per s	station:	111111	111	(111.	111 M	bps) Al	l: 1	000000000	Ə ( 1 Gbps)								
Upload Rate:	Pers	station:		0	(	0 bps	) All: Total:	100	0 ( 00000000	0 bps) ( 1 Gbps)								
Station count:	9 (	Connectio	ns per	sta	tion:	1	Payload	(PDU)	sizes: Al	JTO (AUTO)								
Observed Rate:																		
Download Rate:	(	Cx Min:		0 bp	s Cx	Ave:	61.382	Mbps	Cx Max:	110.769 Mbps	All	Cx: 55	2.435	Mbps				
Upload Rate:	(	Cx Min:		0 bp	s Cx	Ave:		0 bps	Cx Max:	0 bps	All	Cx:		0 bps				
											Tota	l: 552	.435	Mbps				
Aggregated Rate	: N	1in:		0 bp	s Av	g:	61.382	Mbps	Max:	110.769 Mbps								
Non-Transmittin	g end	dpoints:	(4) u	dp	1.eth	2-01.	sta02005	-A udp	1.eth2	-01.sta02006-A	udp-	-1.eth	2-01.	sta02007-A	udp 1	l.eth2-	01.sta0	02008-A



1 Gbps) 0 bps) 1 Gbps)

Station count: 9 Connections per station: 1 Payload (PDU) sizes: AUTO (AUTO)

Observed Amount:									
Download Amount:	Cx Min:	0 B	Cx Ave:	442.621 MB	Cx Max:	798.912 MB	All Cx:	3.89 GB	
Upload Amount:	Cx Min:	0 B	Cx Ave:	0 B	Cx Max:	: 0 B	All Cx:	0 B	
							Total:	3.89 GB	
Non-Transmitting	endpoints: (4)	udp1.	eth2-01.	sta02005-A udp	1.eth2	2-01.sta02006-A	udp1.et	h2-01.sta02007-A	udp1.eth2-01.sta02008-A

This graph shows fairness. On a fair system, each station should get about the same throughput.

In the download direction, it is mostly the device-under-test that is responsible for this behavior, but in the upload direction, LANforge itself would be the source of most fairness issues unless the device-under-test takes specific actions to ensure fairness.

# Combined Received bytes, for entire 1 m run



Requested Param	neter	rs:													
Download Rate:	Per	station:	10000	000	Θ(	100	Mbps)	) All:	1000	000000 (	1 Gbps)				
Upload Rate:	Per	station:			0 (	(	) bps	) All:		0 (	0 bps)				
-							-	Total:	100	0000000	( 1 Gbps)	)			
Station count:	10	Connect	ions p	er	stat	ion	: 1	Payload	(PDU)	sizes:	AUTO (AUTO)	)			
Observed Rate:															
Download Rate:		Cx Min:		0	bps	Сx	Ave:	63.119	Mbps	Cx Max:	99.891 Mi	ops	All Cx: 631.	187 Mbps	
Upload Rate:		Cx Min:		0	bps	Сx	Ave:		0 bps	Cx Max:	0 1	ops	All Cx:	0 bps	
													Total: 631.1	87 Mbps	
Aggregated Rate	e:	Min:		0	bps	Ave	g:	63.119	Mbps	Max:	99.891 Mi	ops			
Non-Transmittir	na er	ndpoints:	(3)	abu	1.	eth2	2-01.9	sta02007	-A udp	1.eth2	-01.sta0200	98-A	udp1.eth2-0	01.sta02009-A	



Requested Parameters:

Download Rate:	Per	station:	1000000	90 (	100	Mbps	) All:	1000	000000	( 1	Gbps)		
Upload Rate:	Per	station:		0 (		0 bps	) All:		0	(	0 bps)		
							Total:	100	0000000	9 (	1 Gbps)		
Station count:	10	Connect	ions per	sta	ntion	: 1	Payload	(PDU)	sizes	AUT0	(AUTO)		
Observed Amoun	t:												
Download Amoun	t:	Cx Min:		0 E	3 Cx	Ave:	454.76	6 MB	Cx Max	<: 7	20.263 MB	All Cx:	4.441 GB
Upload Amount:		Cx Min:		0 E	S Cx	Ave:		0 B	Cx Max	<:	0 B	All Cx:	0 B
												Total:	4.441 GB
Non-Transmitti	ng ei	ndpoints:	(3) ud	o 1	.eth	2-01.	sta02007-	A udp	1.etł	12-01.	sta02008-A	udp1.eth2	-01.sta02009-A

This graph shows fairness. On a fair system, each station should get about the same throughput. In the download direction, it is mostly the device-under-test that is responsible for this behavior, but in the upload direction, LANforge itself would be the source of most fairness issues unless the device-under-test takes specific actions to ensure fairness.





Requested Param	neters:						
Download Rate:	Per station:	90909090 (9	0.909 Mbp	s) All: 10	00000000	( 1 Gbps)	
Upload Rate:	Per station:	Θ (	0 bps)	All:	0 (	0 bps)	
Station count:	11 Connection	ns per stat	ion: 1	Total: 100 Payload (PDU)	00000000 ( sizes: A	l Gbps) NUTO (AUTO)	
Observed Rate:							
Download Rate:	Cx Min:	0 bps	Cx Ave:	71.022 Mbps	Cx Max:	90.549 Mbps	All Cx: 781.245 Mbps
Upload Rate:	Cx Min:	0 bps	Cx Ave:	0 bps	Cx Max:	0 bps	All Cx: 0 bps Total: 781.245 Mbps
Aggregated Rate	e: Min:	0 bps	Avg:	71.022 Mbps	Max:	90.549 Mbps	
Non-Transmittin	ng endpoints: (2	2) udp1.	eth2-01.s	ta02008-A udp	1.eth2-	01.sta02009-A	



Requested Parameters: Download Rate: Per station: 90909090 (90.909 Mbps) All: 1000000000 ( 1 Gbps) Valand Data: Dar station: 0 ( 0 bps) All: 000000000 ( 0 bps)

uptuau nate.	rei	station.	0	(	c	nh2	) ALL.	0 (	( ups)		
							Total: 100	0000000	( 1 Gbps)		
Station count:	11	Connections per	r s'	tat	ion:	1	Payload (PDU)	sizes:	AUTO (AUTO)		
Observed Amount	t:										
Download Amount	t:	Cx Min:	0	В	Сx	Ave:	511.605 MB	Cx Max:	653.01 MB	All Cx:	5.496 GB
Upload Amount:		Cx Min:	0	В	Сx	Ave:	0 B	Cx Max:	0 B	All Cx:	0 B
										Total:	5.496 GB

Non-Transmitting endpoints: (2) udp--1.eth2-01.sta02008-A udp--1.eth2-01.sta02009-A

This graph shows fairness. On a fair system, each station should get about the same throughput. In the download direction, it is mostly the device-under-test that is responsible for this behavior, but in the upload direction, LANforge itself would be the source of most fairness issues unless the device-under-test takes specific actions to ensure fairness.



# Combined Received bytes, for entire 1 m run

Requested Param	eters:						
Download Rate:	Per station:	83333333 (8	3.333 Mbp	os) All: 10	00000000	( 1 Gbps)	
Upload Rate:	Per station:	Θ (	0 bps)	All: Total: 100	0 ( 0000000 (	0 bps) ( 1 Gbps)	
Station count:	12 Connecti	ons per stat	ion: 1	Payload (PDU)	sizes: A	AUTO (AUTO)	
Observed Rate:							
Download Rate:	Cx Min:	0 bps	Cx Ave:	66.734 Mbps	Cx Max:	83.016 Mbps	All Cx: 800.804 Mbps
Upload Rate:	Cx Min:	0 bps	Cx Ave:	0 bps	Cx Max:	0 bps	All Cx: 0 bps Total: 800.804 Mbps
Aggregated Rate	: Min:	0 bps	Avg:	66.734 Mbps	Max:	83.016 Mbps	
Non-Transmittin	a endpoints:	(2) udp1.	eth2-01.9	sta02009-A udp	1.eth2-	01.sta02011-A	



Download Rate:	Per	station:	8333333	33 (	83.333	3 Mbp	s) All:	100	00000000 (	1 Gbps)		
Upload Rate:	Per	station:		0 (	0	bps)	All:		0 (	0 bps)		
							Total:	1000	0000000 (	1 Gbps)		
Station count:	12	Connecti	ons per	sta	tion:	1	Payload (P	DU)	sizes: AUT	0 (AUTO)		
Observed Amount	:											
Download Amount	:	Cx Min:		0 B	Cx /	Ave:	480.769	MB	Cx Max:	598.65 MB	All Cx:	5.634 GB
Upload Amount:		Cx Min:		0 B	Cx /	Ave:	0	В	Cx Max:	0 B	All Cx:	0 B
											Total:	5.634 GB
Non-Transmittir	ng ei	ndpoints:	(2) udj	o -  -  1	.eth2	-01.s	ta02009-A	udp-	-1.eth2-01	sta02011-A		

This graph shows fairness. On a fair system, each station should get about the same throughput. In the download direction, it is mostly the device-under-test that is responsible for this behavior, but in the upload direction, LANforge itself would be the source of most fairness issues unless the device-under-test takes specific actions to ensure fairness.



Combined Received bytes, for entire 1 m run

Requested Param	eters:						
Download Rate:	Per station:	76923076 (7	6.923 Mbp	s) All: 10	00000000	( 1 Gbps)	
Jpload Rate:	Per station:	Θ (	0 bps)	All:	0 (	0 bps)	
				Total: 100	0000000 (	1 Gbps)	
Station count:	13 Connection	ns per stat	ion: 1	Payload (PDU)	sizes: A	UTO (AUTO)	
Observed Rate:							
Download Rate:	Cx Min:	0 bps	Cx Ave:	61.721 Mbps	Cx Max:	76.743 Mbps	All Cx: 802.378 Mbps
Jpload Rate:	Cx Min:	0 bps	Cx Ave:	0 bps	Cx Max:	0 bps	All Cx: 0 bps
							Total: 802.378 Mbps
Aggregated Rate	: Min:	0 bps	Avg:	61.721 Mbps	Max:	76.743 Mbps	
Non-Transmittin	g endpoints: (2	2) udp1.	eth2-01.s	ta02011-A udp	1.eth2-	01.sta02012-A	



1 Gbps)

# Requested Parameters: Download Rate: Per station: 76923076 (76.923 Mbps) All: 1000000000 ( Upload Rate: Per station: 0 ( 0 bps) All: 0 (

Upload Rate:	Per	station:	0	(		9 bp	s) All:		0 (	. (	) bps)		
Station count:	13	Connections pe	r s	tat	ion	: 1	Total: Payload	100 (PDU)	0000000 sizes:	( : AUTO	L Gbps) (AUTO)		
Observed Amount Download Amount Upload Amount:	t: t:	Cx Min: Cx Min:	G	B	Cx Cx	Ave Ave	: 444.9	27 MB 0 B	Cx Max: Cx Max:	55	53.591 MB 0 B	All Cx: All Cx:	5.648 GB 0 B
Non-Transmitti	ng e	ndpoints: (2) ι	dp-	-1.	eth	2-01	.sta02011	-A udp	1.eth2	2-01.9	sta02012-A	Total:	5.648 GB

This graph shows fairness. On a fair system, each station should get about the same throughput. In the download direction, it is mostly the device-under-test that is responsible for this behavior, unless the device-under-test takes specific actions to ensure fairness.

Combined Received bytes, for entire 1 m run 600,000,000 550,000,000 500,000,000 450,000,000 (p)/tes 350,000,000 350,000,000 300,000,000 300,000,000 Value 250,000,000 250,000,000 150.000.000 100.000.000 50,000,000 0 sta02006 sta02010 sta02012 sta02000 sta02002 sta02003 sta02004 sta02005 sta02007 sta02008 sta02009 sta02011 sta02001 Stations UDP-Download UDP-Upload



Requested Parameters: Download Rate: Per station: 71428571 (71.429 Mbps) All: 1000000000 ( 1 Gbps) 0 ( 0 bps) All: Total: Upload Rate: Per station: 0 ( 0 bps) 1000000000 ( 1 Gbps) Station count: 14 Connections per station: 1 Payload (PDU) sizes: AUTO (AUTO) Observed Rate: 0 bps Cx Ave: 55.794 Mbps Cx Max: 71.372 Mbps All Cx: 781.123 Mbps Cx Min: Download Rate: 0 bps Cx Ave: Upload Rate: Cx Min: 0 bps Cx Max: 0 bps All Cx: 0 bps Total: 781.123 Mbps 71.372 Mbps Aggregated Rate: Min: 55.794 Mbps Max: 0 bps Ava: Non-Transmitting endpoints: (3) udp--1.eth2-01.sta02011-A udp--1.eth2-01.sta02012-A udp--1.eth2-01.sta02013-A



Requested Parameters: Download Rate: Per station: 71428571 (71.429 Mbps) All: 10000000000 ( 1 Gbps) Upload Rate: Per station: 0 ( 0 bps) All: 0 ( 0 bps) Total: 10000000000 ( 1 Gbps) Station count: 14 Connections per station: 1 Payload (PDU) sizes: AUTO (AUTO) Observed Amount: Download Amount: Cx Min: 0 B Cx Ave: 402.309 MB Cx Max: 514.572 MB All Cx: Upload Amount: Cx Min: 0 B Cx Ave: 0 B Cx Max: 0 B All Cx:

Total: 5.5 GB Non-Transmitting endpoints: (3) udp--1.eth2-01.sta02011-A udp--1.eth2-01.sta02012-A udp--1.eth2-01.sta02013-A

5.5 GB

0 B

This graph shows fairness. On a fair system, each station should get about the same throughput. In the download direction, it is mostly the device-under-test that is responsible for this behavior, but in the upload direction, LANforge itself would be the source of most fairness issues unless the device-under-test takes specific actions to ensure fairness.

Combined Received bytes, for entire 1 m run 550,000,000 400,000,000 550,000,000 550,000,000 550,000,000 250,000,000 150,000,000

E0.000,000															
50,000,000															
<u> </u>	sta02000-	sta02001 -	sta02002.	sta02003 -	sta02004.	sta02005.	sta02006 -	sta02007.	sta02008-	sta02009 -	sta02010.	sta02011.	sta02012-	sta02013.	
							Stat	ions							
					UDP-	Download	UDP-	Jpload							
Poquested Paramete															
Requested Faramete															
Download Rate: Per	station:	666666	66.66	67 Mbp	s) All:	10000	000000	1 G	bps)						
Jpload Rate: Per	station:		0 (	0 bps)	All: Total:	100000	0 ( 0000 (	0 bp: 1 Gbr	s) ps)						
Station count: 15	Connect	ions per	station	: 1	Payload	(PDU) si	zes: Al	JTO (AU	ТО)						

Observed Rate: Download Rate:	Cx Min:	0 bps	Cx Ave:	48.576 Mbps	Cx Max:	66.446 Mbps	All Cx: 728.633 Mbps
Upload Rate:	Cx Min:	0 bps	Cx Ave:	0 bps	Cx Max:	0 bps	All Cx: 0 bps
							Total: 728.633 Mbps
Aggregated Rate:	Min:	0 bps	Avg:	48.576 Mbps	Max:	66.446 Mbps	
Non-Transmitting	endpoints: (4)	udp1.	eth2-01.	sta02011-A udp	1.eth2-	01.sta02012-A	udp1.eth2-01.sta02013-A udp1.eth2-01.sta02014-A



Requested Parameters: Download Rate: Per station: 66666666 (66.667 Mbps) All: Upload Rate: Per station: 0 ( 0 bps) All: 1000000000 ( 1 Gbps) 0 ( 0 bps) Total: 100000000 ( 1 Gbps) Payload (PDU) sizes: AUTO (AUTO) Station count: 15 Connections per station: 1 Observed Amount: 350.247 MB Cx Max: 479.245 MB All Cx: 5.131 GB Download Amount: Cx Min: 0 B Cx Ave: Upload Amount: Cx Min: 0 B Cx Ave: 0 B Cx Max: 0 B All Cx: 0 B

5.131 GB Total: Non-Transmitting endpoints: (4) udp--1.eth2-01.sta02011-A udp--1.eth2-01.sta02012-A udp--1.eth2-01.sta02013-A udp--1.eth2-01.sta02014-A

This graph shows fairness. On a fair system, each station should get about the same throughput. In the download direction, it is mostly the device-under-test that is responsible for this behavior, unless the device-under-test takes specific actions to ensure fairness.

Combined Received bytes, for entire 1 m run



Requested Param	nete	rs:									
Download Rate:	Per	station:	62500	000 (	62.5 Mbp	os) All:	1000	0000000 (	1 Gbps)		
Upload Rate:	Per	station:		0 (	0 bp	os) All:		Θ (	0 bps)		
						Total:	100	00000000 (	( 1 Gbps)		
Station count:	16	Connecti	ons pe	r sta	tion: 1	Payload	(PDU)	sizes: A	AUTO (AUTO)		
Observed Rate:											
Download Rate:		Cx Min:		0 bps	Cx Ave	e: 48.197	Mbps	Cx Max:	62.285 Mbps	All Cx: 7	71.156 Mbps
Upload Rate:		Cx Min:		0 bps	Cx Ave	e:	0 bps	Cx Max:	0 bps	All Cx:	0 bps
										Total: 77	1.156 Mbps
Aggregated Rate	e:	Min:		0 bps	Avg:	48.197	Mbps	Max:	62.285 Mbps		
Non-Transmittir	na ei	ndpoints:	(3) u	dp 1	.eth2-01	.sta02013	-A udr	1.eth2-	01.sta02014-A	udp1.et	12-01.sta02015-A



Requested Parameters: Download Rate: Per station: 62500000 (62.5 Mbps) All: Upload Rate: Per station: 0 (0 bps) All: 1000000000 ( 1 Gbps) 0 ( 0 bps) All: 0 ( 0 bps) 1000000000 ( Total: 1 Gbps) Station count: 16 Connections per station: 1 Payload (PDU) sizes: AUTO (AUTO) Observed Amount: .... 247 402 MD .... .....

observed Amount.								
Download Amount:	Cx Min:	0 B	Cx Ave:	347.482 MB	Cx Max:	449.233 MB	All Cx:	5.429 GB
Upload Amount:	Cx Min:	0 B	Cx Ave:	0 B	Cx Max:	0 B	All Cx:	0 B
							Total:	5.429 GB
Non-Transmitting	endpoints: (3)	udp1.e	eth2-01.	sta02013-A udp	1.eth2-01	.sta02014-A	udp1.eth2	-01.sta02015-A

This graph shows fairness. On a fair system, each station should get about the same throughput. In the download direction, it is mostly the device-under-test that is responsible for this behavior, but in the upload direction, LANforge itself would be the source of most fairness issues unless the device-under-test takes specific actions to ensure fairness.



	sta(	sta( sta	sta	sta( sta	sta(	sta(	stal	sta	sta( sta	sta
						Stat	ions			
					Download		Upload			
					Jownload	001-	opioad			
Poquested Paramete										
Download Pate: Per	r station, "	58873570 ()	58 824 Mb	ne) All·	10000	00000	( 1 Gbps)			
Unload Rate: Per	r station.	0023329 (. 0 (	0.024 hbj	) All·	10000	00000	( 1 05p3) 0 bps)			
optodu Nate. Tei	station.	0 (	0 ph2	Total:	100000	00000	1 Gbps)			
Station count: 17	Connectio	ns per sta	tion: 1	Payload	(PDU) si	zes: A	UTO (AUTO)			
Observed Rate:										
Download Rate:	Cx Min:	0 bps	Cx Ave:	49.569	Mbps Cx	Max:	58.607 Mbps	All Cx:	842.67 Mbp	0S
Upload Rate:	Cx Min:	0 bps	Cx Ave:	0	bps Cx	Max:	0 bps	All Cx:	0 bp	)S
								Total:	842.67 Mbps	5

Aggregated Rate: Min: 0 bps Avg: 49.569 Mbps Max: 58.607 Mbps Non-Transmitting endpoints: (2) udp--1.eth2-01.sta02014-A udp--1.eth2-01.sta02015-A



Requested Paramete Download Rate: Per Upload Rate: Per	rs: station: 588235 station:	29 (5 0 (	8.824 Mbp 0 bps)	os) All: 10 ) All: Total: 100	00000000 ( 0 ( 0000000 (	1 Gbps) 0 bps) 1 Gbps)		
Station count: 17	connections per	stat	100: 1	Payload (PDU)	Sizes: AU	IU (AUIU)		
Observed Amount:								
Download Amount:	Cx Min:	0 B	Cx Ave:	357.411 MB	Cx Max:	422.6 MB	All Cx:	5.934 GB
Upload Amount:	Cx Min:	0 B	Cx Ave:	0 B	Cx Max:	0 B	All Cx:	0 B
							Total:	5.934 GB

Non-Transmitting endpoints: (2) udp--1.eth2-01.sta02014-A udp--1.eth2-01.sta02015-A

This graph shows fairness. On a fair system, each station should get about the same throughput. In the download direction, it is mostly the device-under-test that is responsible for this behavior, but in the upload direction, LANforge itself would be the source of most fairness issues unless the device-under-test takes specific actions to ensure fairness.



Requested Param	eters:						
Download Rate:	Per station:	555555555 (55.	556 Mbps	) All: 10	00000000	( 1 Gbps)	
Upload Rate:	Per station:	Θ (	0 bps)	All:	Θ (	0 bps)	
•			T	otal: 100	0000000 (	1 Gbps)	
Station count:	18 Connecti	ons per statio	n:1 Pa	ayload (PDU)	sizes: A	UTO (AUTO)	
Observed Rate:							
Download Rate:	Cx Min:	0 bps C	x Ave: 4	46.985 Mbps	Cx Max:	55.434 Mbps	All Cx: 845.737 Mbps
Upload Rate:	Cx Min:	0 bps C	x Ave:	0 bps	Cx Max:	0 bps	All Cx: 0 bps Total: 845.737 Mbps
Aggregated Rate	: Min:	0 bps A	vg:	46.985 Mbps	Max:	55.434 Mbps	
Non-Transmittin	a endpoints:	(2) udp1.et	h2-01.st	a02015-A udp	1.eth2-	01.sta02017-A	

This graph shows fairness. On a fair system, each station should get about the same throughput. In the download direction, it is mostly the device-under-test that is responsible for this behavior, but in the upload direction, LANforge itself would be the source of most fairness issues unless the device-under-test takes specific actions to ensure fairness.

### Combined Received bytes, for entire 1 m run



1 Gbps)

0 bps)

1 Gbps)

Requested Parameters: Download Rate: Per station: 55555555 (55.556 Mbps) All: Upload Rate: Per station: 0 ( 0 bps) All: 1000000000 ( 0 ( Total: 100000000 ( Station count: 18 Connections per station: 1 Payload (PDU) sizes: AUTO (AUTO) Observed Amount:

objerved Amount.						
Download Amount:	Cx Min:	0 B Cx Ave:	338.693 MB C>	x Max: 399.625 M	1B All Cx:	5.954 GB
Upload Amount:	Cx Min:	0 B Cx Ave:	0 B C>	x Max: 0	B All Cx:	0 B
					Total:	5.954 GB
Non-Transmitting	endpoints: (2)	udp1.eth2-01.s	ta02015-A udp1	1.eth2-01.sta0201	7 - A	

This graph shows fairness. On a fair system, each station should get about the same throughput. In the download direction, it is mostly the device-under-test that is responsible for this behavior, unless the device-under-test takes specific actions to ensure fairness.



Requested Para	meters:						
Download Rate:	Per station:	52631578 (52	2.632 Mbps	s) All: 10	00000000	( 1 Gbps)	
Upload Rate:	Per station:	Θ (	0 bps)	All:	) 0 ( 0000000	0 bps)	
Station count:	19 Connect:	ions per stat:	ion: 1 I	Payload (PDU)	sizes: A	UTO (AUTO)	
Observed Rate:							
Download Rate:	Cx Min:	0 bps	Cx Ave:	44.882 Mbps	Cx Max:	52.373 Mbps	All Cx: 852.752 Mbps
Upload Rate:	Cx Min:	0 bps	Cx Ave:	0 bps	Cx Max:	0 bps	All Cx: 0 bps Total: 852.752 Mbps
Aggregated Rate	e: Min:	0 bps	Avg:	44.882 Mbps	Max:	52.373 Mbps	
Non-Transmitti	ng endpoints:	(2) udp1.	eth2-01.s	ta02017-A udp	1.eth2-	01.sta02018-A	

This graph shows fairness. On a fair system, each station should get about the same throughput. In the download direction, it is mostly the device-under-test that is responsible for this behavior, but in the upload direction, LANforge itself would be the source of most fairness issues unless the device-under-test takes specific actions to ensure fairness.

### Combined Received bytes, for entire 1 m run



1 Gbps) 0 bps) 1 Gbps)

Requested Parameters: Requested Parameters: Download Rate: Per station: 52631578 (52.632 Mbps) All: 1000000000 ( Upload Rate: Per station: 0 ( 0 bps) All: 0 ( Total: 100000000 ( Station count: 19 Connections per station: 1 Payload (PDU) sizes: AUTO (AUTO)

Observed Amount: Download Amount:	Cx Min:	0 B	Cx Ave:	323.599 MB	Cx Max:	377.744 MB	All Cx:	6.004 GB
Upload Amount:	Cx Min:	0 B	Cx Ave:	0 B	Cx Max:	0 B	All Cx:	0 B
Non-Transmitting	endpoints: (2)	udp1	eth2-01.st	a02017-A udp	1.eth2-0	)1.sta02018-A	iotat:	6.004 GB

This graph shows fairness. On a fair system, each station should get about the same throughput. In the download direction, it is mostly the device-under-test that is responsible for this behavior, but in the upload direction, LANforge itself would be the source of most fairness issues unless the device-under-test takes specific actions to ensure fairness.



Requested Parar	nete	rs:												
Download Rate:	Per	station:	500000	900 (	50	Mbps)	) All:	1000	000000 (	1	Gbps)			
Upload Rate:	Per	station:		0 (	0	) bps)	) All:		0 (	0	bps)			
							Total:	100	0000000	( 1	Gbps)			
Station count:	20	Connecti	ons per	r stat	ion:	1	Payload	(PDU)	sizes:	AUT0	(AUTO)			
Observed Rate:														
Download Rate:		Cx Min:	6	) bps	Сx	Ave:	42.191	Mbps	Cx Max:	49.	969 Mbps	All Cx:	843.813	3 Mbps
Upload Rate:		Cx Min:	(	) bps	Сх	Ave:	(	9 bps	Cx Max:		0 bps	All Cx:		0 bps
												Total: 8	43.813	Mbps
Aggregated Rate	e:	Min:	6	) bps	Avg	:	42.191	Mbps	Max:	49.	969 Mbps			
Non-Transmittin	na ei	ndpoints:	(3) uo	do 1.	eth2	-01.9	sta02017	-A udp	1.eth2	-01.s	ta02018-A	udp1.e	th2-01	sta02019-A



Requested Parameter Download Rate: Per	s: station: 500	00000 ( 50 M	bps) All:	1000000000 ( 1	Gbps)		
Upload Rate: Per	station:	0 ( 0	bps) All:	0 ( (	) bps)		
			Total:	1000000000 ( 1	L Gbps)		
Station count: 20	Connections	per station:	1 Payload (	PDU) sizes: AUTO	(AUTO)		
Observed Amount:							
Download Amount:	Cx Min:	0 B Cx A	ve: 304.349	MB Cx Max: 36	50.271 MB	All Cx:	5.944 GB
Upload Amount:	Cx Min:	0 B Cx A	ve:	0 B Cx Max:	0 B	All Cx:	0 B
						Total:	5.944 GB
Non-Transmitting en	dpoints: (3)	udp1.eth2-	01.sta02017-A	udp1.eth2-01.s	sta02018-A	udp1.eth2-	01.sta02019-A

This graph shows fairness. On a fair system, each station should get about the same throughput. In the download direction, it is mostly the device-under-test that is responsible for this behavior, but in the upload direction, LANforge itself would be the source of most fairness issues unless the device-under-test takes specific actions to ensure fairness.



	01																			
	_	sta02000.	sta02001 -	sta02002-	sta02003-	sta02004 -	sta02005 -	sta02006 -	sta02007-	sta02008-	sta02009 -	sta02010-	sta02011-	sta02012.	sta02013-	sta02014-	sta02015-	sta02016-	sta02017-	sta02018-
											Stat	ions								
								UDP	Down	load I	UDP-	Uploa	d							
													_							
Requested Para	mete	rs:																		
Download Rate:	Per	station:	47	619047	7 (47.	619 M	1bps)	All	: 1	00000	0000	( 1	Gbps	)						
Upload Rate:	Per	station:		(	Θ(	0 bp	os) A Tot	al:	10	00000	0 ( 000 (	0 1	bps) Gbps)							
Station count:	21	Connect	ions	per s	statio	n: 1	Рау	load	(PDU	) siz	es: A	UTO (	AUTO)							
Observed Rate:																				

Download Rate:	Cx Min:	0 bps	Cx Ave:	41.147 Mbps	Cx Max:	47.448 Mbps	All Cx: 864.087	/ Mbps
Upload Rate:	Cx Min:	0 bps	Cx Ave:	0 bps	Cx Max:	0 bps	All Cx:	0 bps
							Total: 864.087	Mbps
Aggregated Rate:	Min:	0 bps	Avg:	41.147 Mbps	Max:	47.448 Mbps		
Non-Transmitting	endpoints: (2)	udp1.	eth2-01.s	ta02018-A udp	1.eth2-	01.sta02019-A		



Requested Parameters:

083 GB
0 B
083 GB
08 08

Non-Transmitting endpoints: (2) udp--1.eth2-01.sta02018-A udp--1.eth2-01.sta02019-A

This graph shows fairness. On a fair system, each station should get about the same throughput. In the download direction, it is mostly the device-under-test that is responsible for this behavior, but in the upload direction, LANforge itself would be the source of most fairness issues unless the device-under-test takes specific actions to ensure fairness.



Requested Paramo	eters:						
Download Rate: I	Per station:	45454545 (4	5.455 Mbp	os) All: 10	00000000	( 1 Gbps)	
Jpload Rate: I	Per station:	Θ (	0 bps)	All:	Θ (	0 bps)	
				Total: 100	0000000 (	1 Gbps)	
Station count: 2	22 Connecti	ons per stat	ion: 1	Payload (PDU)	sizes: A	UTO (AUTO)	
Decorved Pater							
Diserveu Rate.	c		<b>c i</b>	40.000 1	c 14	45 200 M	A11 C 00C CC7 M
Jownload Rate:	CX Min:	⊎ bps	CX AVe:	40.303 Mbps	CX Max:	45.309 Mbps	ALL CX: 886.667 MDps
Jpload Rate:	Cx Min:	0 bps	Cx Ave:	0 bps	Cx Max:	0 bps	All Cx: 0 bps
							Total: 886.667 Mbps
Aggregated Rate	: Min:	0 bps	Avg:	40.303 Mbps	Max:	45.309 Mbps	
Jon-Transmittin	a endnoints:	(2) udn1.	-+h2-01.s	ta02019-A udr	1.eth2-	01_sta02021-A	



1 Gbps) 0 bps)

Requested Parameters: 
 Download Rate:
 Per station:
 45454545 (45.455 Mbps)
 All:
 1000000000 (

 Upload Rate:
 Per station:
 0 (
 0 bps)
 All:
 0 (

Station count: 22	Connections per	r station: 1	Total: 100 Payload (PDU)	0000000 ( sizes: A	1 Gbps) UTO (AUTO)		
Observed Amount: Download Amount:	Cx Min:	0 B Cx Ave:	290.655 MB	Cx Max:	326.807 MB	All Cx:	6.245 GB
Upload Amount:	Cx Min:	0 B Cx Ave:	0 B	Cx Max:	0 B	All Cx: Total:	0 B 6.245 GB

Non-Transmitting endpoints: (2) udp--1.eth2-01.sta02019-A udp--1.eth2-01.sta02021-A

This graph shows fairness. On a fair system, each station should get about the same throughput. In the download direction, it is mostly the device-under-test that is responsible for this behavior, but in the upload direction, LANforge itself would be the source of most fairness issues unless the device-under-test takes specific actions to ensure fairness.



		sta	sta(	sta(	sta(	sta(	sta(	sta(	sta(	sta(	sta(	sta(	sta(	sta(	sta(	sta(	sta(	sta(	sta(
												Stat	ions						
								<b>=</b> L	JDP-I	Downlo	oad 🗖	UDP-	Uploa	d					
Requested Para	nete	rs:																	
Download Rate:	Per	station:	43	34782	60 (4	43.47	8 Mb	ps)	All:	10	0000	0000	( 1	Gbp	s)				
Upload Rate:	Per	station:			Θ (	Θ	bps	) Al Tota	l: l:	100	0000	0 ( 000 (	0 1	bps) Gbps	)				
Station count:	23	Connect	ions	s per	sta	tion:	1	Payl	oad	(PDU)	siz	es: A	UTO (	AUTO	)				

Observed Rate: Download Rate: Upload Rate:	Cx Min: Cx Min:	0 bps 0 bps	Cx Ave: Cx Ave:	39.278 Mbps 0 bps	Cx Max: Cx Max:	43.313 Mbps 0 bps	All Cx: 903.38 All Cx: Total: 903.388	8 Mbps 0 bps Mbps
Aggregated Rate: Non-Transmitting	Min: endpoints: (2)	0 bps udp1.	Avg: eth2-01.s	39.278 Mbps ta02021-A udp	Max: 1.eth2-	43.313 Mbps 01.sta02022-A		



Requested Parameters:					
Download Rate: Per st	tation: 43478260	(43.478 Mbps)	All: 1	000000000 (	1 Gbps)
Upload Rate: Per st	ation: 0	( 0 bps)	All:	Θ (	0 bps)
		-			

Upload Rate:	Per station:	0 ( 0 bps	) All: 0 (	0 bps)	
Station count:	23 Connections	per station: 1	Total: 1000000000 ( Payload (PDU) sizes: A	1 Gbps) JTO (AUTO)	
Observed Amoun Download Amoun	t: t: Cx Min:	0 B Cx Ave:	283.335 MB Cx Max:	312.342 MB All Cx:	6.364 GB
Upload Amount:	Cx Min:	0 B Cx Ave:	0 B Cx Max:	0 B All Cx:	0 B
Non-Transmitti	ng endpoints: (2)	udp1.eth2-01.	sta02021-A udp1.eth2-0	Iotal: 01.sta02022-A	6.364 GB

This graph shows fairness. On a fair system, each station should get about the same throughput. In the download direction, it is mostly the device-under-test that is responsible for this behavior, but in the upload direction, LANforge itself would be the source of most fairness issues unless the device-under-test takes specific actions to ensure fairness.

Combined Received bytes, for entire 1 m run 

	300,000,000										-															
(S)	250,000,000					-															-	-				
byte	200,000,000					~				~					-											
lue (	150,000,000					-					-										-	-				
Va	100,000,000	• • • • • • • • • • • • • • • • • • • •				~														~		-				
	50,000,000																				-					
	0																									
			sta02000.	sta02001 ·	sta02002.	sta02003.	sta02004.	sta02005.	sta02006 -	sta02007.	sta02008 ·	sta02009.	sta02010.	sta02011	sta02012.	sta02013.	sta02014.	sta02015.	sta02016.	sta02017.	sta02018	sta02019.	sta02020.	sta02021 -	sta02022 -	
			0,	0,	0,	07	07	0,	0,	0,	07	0,	St	atio	ns	07	0,	07	0,	0,	07	0,	0,	0,	0,	
										UDP	-Dow	nload	UD	P-Up	load											

Requested Param	nete	rs:													
Download Rate:	Per	station:	4166	5666	66 (4	1.66	7 Mbp	os) All	: 10	00000000	(	1 Gbps)			
Upload Rate:	Per	station:			0 (	6	) bps)	All: Total:	100	0 ( 0000000	(	0 bps) 1 Gbps)			
Station count:	24	Connecti	ons p	ber	stat	ion:	1	Payload	(PDU)	sizes:	AUTO	(AUTO)			
Observed Rate:															
Download Rate:		Cx Min:		0	bps	Сх	Ave:	36.177	Mbps	Cx Max:	41	.547 Mbps	All Cx:	868.242	Mbps
Upload Rate:		Cx Min:		0	bps	Сх	Ave:		9 bps	Cx Max:		0 bps	All Cx: Total: 8	68.242 M	) bps 1bps
Aggregated Rate	e:	Min:		0	bps	Avo	:	36.177	Mbps	Max:	41	.547 Mbps			•
Non-Transmittin	ng ei	ndpoints:	(3)	udp	)1.	eth2	-01.5	sta02021	-A udp	1.eth2	-01.	sta02022-A	udp1.e	th2-01.9	sta02023-A



Requested Param	nete	rs:									
Download Rate:	Per	station: 41	666666	5 (41	.667	7 Mbps	s) All:	: 100000000	9 (	1 Gbps)	
Upload Rate:	Per	station:	(	) (	0	bps)	All:	0	(	9 bps)	
						-	Total:	1000000000	(	1 Gbps)	
Station count:	24	Connections	per s	stati	on:	1 1	Payload	(PDU) sizes:	AUT0	(AUTO)	
Observed Amount	t:										

Download Amount:	Cx Min:	0 B	Cx Ave:	260.946 MB	Cx Max:	299.517 MB	All Cx:	6.116 GB
Upload Amount:	Cx Min:	0 B	Cx Ave:	0 B	Cx Max:	0 B	All Cx:	0 B
							Total:	6.116 GB
Non-Transmitting	endpoints: (3	3) udp1.	eth2-01.	sta02021-A udp	1.eth2-	01.sta02022-A	udp1.0	eth2-01.sta02023-A

This graph shows fairness. On a fair system, each station should get about the same throughput. In the download direction, it is mostly the device-under-test that is responsible for this behavior, but in the upload direction, LANforge itself would be the source of most fairness issues unless the device-under-test takes specific actions to ensure fairness.



50,000,000			-			-																
015	stan2000.	sta02001 -	sta02002-	sta02003 -	sta02004 -	sta02005 -	sta02006 -	sta02007-	sta02008 -	sta02009 -	sta02010-	stat	sta02012	sta02013-	sta02014-	sta02015-	sta02016-	sta02017-	sta02018-	sta02019-	sta02020-	
								UD	IP-Do	wnloa	ad 🔳	UDP-	Uploa	ad								
sted Paramet oad Rate: Pe	ers: r stati	on:	40000	0000	(4)	0 Mbj	os)	All:	1	.0000	0000	0 (	1 (	Gbps)	1							

Download Rate:	Per	station:	40000	000 (	40	Mbps)	) All:	10000	000000 (	1	Gbps)			
Upload Rate:	Per	station:		0 (		0 bps)	) All:		0 (	. (	) bps)			
							Total:	100	0000000	(	L Gbps)			
Station count:	25	Connecti	ons pe	r sta	tion	: 1	Payload	(PDU)	sizes:	AUT0	(AUTO)			
Observed Rate:														
Download Rate:		Cx Min:		0 bps	C X	Ave:	33.693	Mbps	Cx Max:	39	.832 Mbps	All Cx:	842.336	Mbps
Upload Rate:		Cx Min:		0 bps	C X	Ave:		0 bps	Cx Max:		0 bps	All Cx:		0 bps
												Total: 8	342.336	Mbps
Aggregated Rate	e:	Min:		0 bps	Av	g:	33.693	Mbps	Max:	39	.832 Mbps			
Non-Transmittir	ng er	ndpoints:	(3) u	dp 1	.eth	2-01.9	sta02022	-A udp	1.eth2	-01.	sta02023-A	udp1.e	eth2-01.	sta02024-A

Reque



Requested Parameters: Download Rate: Per station: 40	000000 ( 40 Mbps) All:	1000000000 ( 1 Gbps)	
Upload Rate: Per station:	0 ( 0 bps) All:	0 ( 0 bps)	
	Total:	1000000000 ( 1 Gbps)	
Station count: 25 Connections	per station: 1 Payload	(PDU) sizes: AUTO (AUTO)	
Observed Amount:			
Download Amount: Cx Min:	0 B Cx Ave: 243.04	7 MB Cx Max: 287.249 MB	All Cx: 5.934 GB
Upload Amount: Cx Min:	0 B Cx Ave:	0 B Cx Max: 0 B	All Cx: 0 B
			Total: 5.934 GB
Non-Transmitting endpoints: (3)	udp1.eth2-01.sta02022	A udp1.eth2-01.sta02023-A	udp1.eth2-01.sta02024-A

This graph shows fairness. On a fair system, each station should get about the same throughput. In the download direction, it is mostly the device-under-test that is responsible for this behavior, but in the upload direction, LANforge itself would be the source of most fairness issues unless the device-under-test takes specific actions to ensure fairness.



Requested Param	meters:						
Download Rate:	Per station:	38461538 (3	8.462 Mbp	os) All: 10	00000000	( 1 Gbps)	
Upload Rate:	Per station:	Θ (	0 bps	) All:	Θ (	0 bps)	
				Total: 100	0000000 (	1 Gbps)	
Station count:	26 Connectio	ns per stat	ion: 1	Payload (PDU)	sizes: A	UTO (AUTO)	
Observed Rate:							
Download Rate:	Cx Min:	0 bps	Cx Ave:	33.435 Mbps	Cx Max:	38.316 Mbps	All Cx: 869.311 Mbps
Upload Rate:	Cx Min:	0 bps	Cx Ave:	0 bps	Cx Max:	0 bps	All Cx: 0 bps
							Total: 869.311 Mbps
Aggregated Rate	e: Min:	0 bps	Avg:	33.435 Mbps	Max:	38.316 Mbps	
Non-Transmittir	na endpoints: (	<ol><li>udp1.</li></ol>	eth2-01.9	sta02024-A udp	1.eth2-	01.sta02025-A	



Requested Para	meters:	
Download Rate:	Per station	: 38461
Upload Rate:	Per station	:

Requested Falan	lere	15.										
Download Rate:	Per	station:	3846153	8 (	38.4	62 Mb	ps) All:	10	00000000	( 1 Gbps)		
Upload Rate:	Per	station:		0 (		0 bps	) All:		Θ (	0 bps)		
							Total:	100	0000000 (	1 Gbps)		
Station count:	26	Connecti	ons per	sta	tion	: 1	Payload	(PDU)	sizes: A	UTO (AUTO)		
							-					
Observed Amount	:											
Download Amount	:	Cx Min:		0В	Сx	Ave:	241.12	4 MB	Cx Max:	276.445 MB	All Cx:	6.122 GB
Upload Amount:		Cx Min:		0 B	Сx	Ave:		0 B	Cx Max:	0 B	All Cx:	0 B
											Total:	6.122 GB
			(2)			~ ~ ~						

Non-Transmitting endpoints: (2) udp--1.eth2-01.sta02024-A udp--1.eth2-01.sta02025-A

This graph shows fairness. On a fair system, each station should get about the same throughput. In the download direction, it is mostly the device-under-test that is responsible for this behavior, but in the upload direction, LANforge itself would be the source of most fairness issues unless the device-under-test takes specific actions to ensure fairness.



Requested Param	eters:				
Download Rate:	Per station: 37	037037 (37.037 M	bps) All: 10000000	00 ( 1 Gbps)	
Upload Rate:	Per station:	0 ( 0 bp	s) All: 0	( 0 bps)	
			Total: 100000000	) ( 1 Gbps)	
Station count:	27 Connections	per station: 1	Payload (PDU) sizes:	AUTO (AUTO)	
Observed Rate:					
Download Rate:	Cx Min:	0 bps Cx Ave	: 32.691 Mbps Cx Max	c: 36.978 Mbps	All Cx: 882.662 Mbps
Upload Rate:	Cx Min:	0 bps Cx Ave	: 0 bps Cx Max	<: 0 bps	All Cx: 0 bps
					Total: 882.662 Mbps
Aggregated Rate	e: Min:	0 bps Avg:	32.691 Mbps Max:	36.978 Mbps	
Non-Transmittir	ng endpoints: (3)	udp1.eth2-01	.sta02024-A udp1.eth	n2-01.sta02025-A	udp1.eth2-01.sta02026-A



Requested Parameters:				
Download Rate: Per station:	37037037 (37.037 Mbps)	All:	1000000000 (	1 Gbps)

Upload Rate:	Per	station:	0	(	0	bps)	All:	Θ (	0 bps)		
							Total: 10	00000000 (	1 Gbps)		
Station count:	27	Connections p	er s	tat	ion:	1	Payload (PDU	) sizes: A	UTO (AUTO)		
Observed Amount	t:										
Download Amount	t:	Cx Min:	0	В	Cx .	Ave:	235.836 MB	Cx Max:	266.623 MB	All Cx:	6.218 GB
Upload Amount:		Cx Min:	0	В	Cx .	Ave:	0 B	Cx Max:	0 B	All Cx:	0 B
										Total:	6.218 GB

Non-Transmitting endpoints: (3) udp--1.eth2-01.sta02024-A udp--1.eth2-01.sta02025-A udp--1.eth2-01.sta02026-A

This graph shows fairness. On a fair system, each station should get about the same throughput. In the download direction, it is mostly the device-under-test that is responsible for this behavior, but in the upload direction, LANforge itself would be the source of most fairness issues unless the device-under-test takes specific actions to ensure fairness.



Description Description					
Requested Paran	leters:				
Download Rate:	Per station: 35	5714285 (35.714 I	Mbps) All: 10	00000000 ( 1 Gbps)	
Upload Rate:	Per station:	0 ( 0 b	os) All:	0 ( 0 bps)	
•			Total: 100	0000000 ( 1 Gbps)	
Station count:	28 Connections	s per station: 1	Payload (PDU)	sizes: AUTO (AUTO)	
Observed Rate:					
Download Rate:	Cx Min:	0 bps Cx Av	e: 31.373 Mbps	Cx Max: 35.581 Mbps	All Cx: 878.447 Mbps
Upload Rate:	Cx Min:	0 bps Cx Av	e: 0 bps	Cx Max: 0 bps	All Cx: 0 bps
					Total: 878.447 Mbps
Aggregated Rate	e: Min:	0 bps Avg:	31.373 Mbps	Max: 35.581 Mbps	
Non-Transmittin	a endpoints: (3)	) udp1.eth2-0	1.sta02025-A udp	1.eth2-01.sta02026-	A udp1.eth2-01.sta02027-A



1000000000 (

0 (

1 Gbps)

В

0 bps)

Requested Parameters:										
Download Rate: Per station:	35714285 (35.714 Mbps) All:									
Upload Rate: Per station:	0 ( 0 bps) All:									

Observed Rate:

Station count: 28	Connections	per stat	ion: 1	Total: 100 Payload (PDU)	00000000 ( sizes: A	1 Gbps) UTO (AUTO)		
Observed Amount:								
Download Amount:	Cx Min:	0 B	Cx Ave:	226.276 MB	Cx Max:	256.705 MB	All Cx:	6.187 GB
Upload Amount:	Cx Min:	0 B	Cx Ave:	0 B	Cx Max:	0 B	All Cx:	0 B

Total: 6.187 GB Non-Transmitting endpoints: (3) udp--1.eth2-01.sta02025-A udp--1.eth2-01.sta02026-A udp--1.eth2-01.sta02027-A

This graph shows fairness. On a fair system, each station should get about the same throughput. In the download direction, it is mostly the device-under-test that is responsible for this behavior, but in the upload direction, LANforge itself would be the source of most fairness issues unless the device-under-test takes specific actions to ensure fairness.

Combined Received bytes, for entire 1 m run 275,000,000 250,000,000 225,000,000 223,000,000
 200,000,000
 175,000,000
 150,000,000
 125,000,000
 100,000,000
 75,000,000 75,000,000 50,000,000 25,000,000

	_ال																												
		sta02000-	sta02001 -	sta02002 -	sta02003-	sta02004 -	sta02005 -	sta02006 -	sta02007-	sta02008 -	sta02009 -	sta02010.	sta02011-	sta02012-	sta02013.	sta02014-	sta02015.	sta02016-	sta02017-	sta02018-	sta02019-	sta02020-	sta02021 -	sta02022 -	sta02023-	sta02024 -	sta02025 -	sta02026 -	10000-11
														5	Stat	ion	s												
										<b>.</b> L	JDP-I	Dowr	nload	d 🔳 l	JDP-	Uplo	ad												
Requested Para Download Rate: Upload Rate:	mete Per Per	rs: static static	on: on:	344	8275	58 (3 0 (	34.4	83 I 0 bj	Mbps ps) T	s) Al ota	All: l: l:	1	1000 2000	0000 0 0000	900 9 ( 90 (	( 0	1 GI ) bp: L Gbj	bps) s) ps)											
Station count:	29	Conne	cti	ons	per	stat	tion	: 1	F	Payl	oad	(PDI	J) s	izes	5: À	UT0	(AU	то)											

Download Rate:	Cx Min:	0 bps	Cx Ave:	30.315 Mbps	Cx Max:	34.343 Mbps	All Cx: 879.13	7 Mbps
Upload Rate:	Cx Min:	0 bps	Cx Ave:	0 bps	Cx Max:	0 bps	All Cx:	0 bps
							Total: 879.137	Mbps
Aggregated Rate:	Min:	0 bps	Avg:	30.315 Mbps	Max:	34.343 Mbps		
Non-Transmitting	endpoints: (	3) udp1	.eth2-01.	sta02026-A udp	1.eth2	01.sta02027-A	udp1.eth2-01	.sta02028-A



Requested Parameters: Download Rate: Per station: 34482758 (34.483 Mbps) All: 1000000000 ( 1 Gbps)

Upload Rate:	Per	station:		0	(	0	bps)	All:		0 (	(	0 bps)		
								Total:	100	0000000	(	1 Gbps)		
Station count:	29	Connections	per	st	atio	n:	1	Payload	(PDU)	sizes:	AUTO	) (AUIO)		
Observed Amount	t:													
Download Amount	t:	Cx Min:		0	B C	ĸ	Ave:	218.6	9 MB	Cx Max:	: 2	47.741 MB	All Cx:	6.193 GB
Upload Amount:		Cx Min:		0	B C	ĸ	Ave:		0 B	Cx Max:	:	0 B	All Cx:	0 B
													Total:	6.193 GB

Non-Transmitting endpoints: (3) udp--1.eth2-01.sta02026-A udp--1.eth2-01.sta02027-A udp--1.eth2-01.sta02028-A

This graph shows fairness. On a fair system, each station should get about the same throughput. In the download direction, it is mostly the device-under-test that is responsible for this behavior, but in the upload direction, LANforge itself would be the source of most fairness issues unless the device-under-test takes specific actions to ensure fairness.

Combined Received bytes, for entire 1 m run 250,000,000 

	225,000,000	)						-					-			-											-					
~	200,000,000									-																						
es	175,000,000												-																			
Ρď	150,000,000	•••••••						-		-								-														
е (	125,000,000																															
alu	100,000,000																										-					
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			000	01	002	003	004	005	006	207	008	600	010	011	012	013	014	015	016	017	018	019	020	021	022	023	024	025	026	027	028	
			02(	020	020	020	02(	02(	020	020	020	02(	020	020	020	02(	020	020	020	020	02(	020	020	020	020	02(	020	020	02(	02(	020	
			sta	sta	sta	sta	sta	sta	sta	sta	sta	sta	sta	sta	sta	sta	sta	sta	sta	sta	sta											
																St	atio	ns														
												UDP	-Doi	wnlo	ad 🛛	UD	P-Up	load	t:													
																			_													

Requested Parame	eters:									
Download Rate: F	Per station:	33333333 (33	.333 Mbp	s) All:	1000000000	( 1 Gbps)				
Upload Rate: F	Per station:	Θ (	0 bps)	All:	0 (	0 bps)				
-				Total:	1000000000	( 1 Gbps)				
Station count: 3	30 Connecti	ons per stati	on: 1	Payload (F	PDU) sizes:	AUTO (AUTO)				
Observed Rate:										
Download Rate:	Cx Min:	0 bps	Cx Ave:	28.644 Mb	ops Cx Max:	33.178 Mbps	All Cx: 859.31	5 Mbps		
Upload Rate:	Cx Min:	0 bps	Cx Ave:	0 b	ops Cx Max:	0 bps	All Cx:	0 bps		
							Total: 859.315	Mbps		
Aggregated Rate:	: Min:	0 bps	Avg:	28.644 Mb	ops Max:	33.178 Mbps				
Non-Transmitting	g endpoints:	(4) udp1.e	th2-01.s	ta02026-A	udp1.eth2	-01.sta02027-A	udp1.eth2-01	.sta02028-A	udp1.eth2-0	)1.sta02029-A



Download Rate:	Per	station:	333333333	(33.	333 Mbp	os) Al	ll: 100000000	0(	1 Gbps)	
Upload Rate:	Per	station:	Θ	(	0 bps)	All	: 0	(	0 bps)	
						Total	: 100000000	(	1 Gbps)	

|--|

Observed Amount:									
Download Amount:	Cx Min:	0 B	Cx Ave:	206.747 MB	Cx Max:	239.376 MB	All Cx:	6.057 GB	
Upload Amount:	Cx Min:	0 B	Cx Ave:	0 B	Cx Max:	0 B	All Cx:	0 B	
							Total:	6.057 GB	
Non-Transmitting e	endpoints: (4)	udp1.	eth2-01.st	a02026-A udp	1.eth2-0	01.sta02027-A	udp1.eth2	-01.sta02028-A	udp1.eth2-01.sta02029-A

This graph shows fairness. On a fair system, each station should get about the same throughput. In the download direction, it is mostly the device-under-test that is responsible for this behavior, but in the upload direction, LANforge itself would be the source of most fairness issues unless the device-under-test takes specific actions to ensure fairness.



Requested Param	neters	:											
Download Rate:	Per s	tation:	3225806	54 (3	2.25	3 Mbp	os) All	: 10	00000000	( 1 Gbps)			
Upload Rate:	Per s	tation:		0 (	0	bps)	) All:		0 (	0 bps)			
•						• •	Total:	100	0000000	( 1 Gbps)			
Station count:	31	Connectio	ons per	stat	ion:	1	Payload	(PDU)	sizes:	AUTO (AUTO)			
Observed Rate:													
Download Rate:	C	x Min:	Θ	bps	Cx /	Ave:	28.793	Mbps	Cx Max:	32.123 Mbps	5 All Cx:	892.569	) Mbps
Upload Rate:	C	x Min:	Θ	bps	Cx /	Ave:		0 bps	Cx Max:	0 bps	5 All Cx:		0 bps
								-		-	Total: 8	392.569	Mbps
Aggregated Rate	e: M	in:	0	bps	Avg		28.793	Mbps	Max:	32.123 Mbps	5		
Non-Transmittin	ng end	points:	(3) udp	o1.	eth2	-01.5	sta02028	-A udp	1.eth2	-01.sta02029	A udp1.e	eth2-01.	sta02030-A



1 Gbps)

 Requested Parameters:

 Download Rate: Per station:
 32258064 (32.258 Mbps) All:
 1000000000 (

 Upload Rate:
 Per station:
 0 (
 0 bps) All:
 0 (

Upload Rate:	Per	station:	Θ	(	0	bps) All:		0 (	0	bps)		
Station count:	31	Connections p	er s	tati	on:	Total: 1 Payload	100 (PDU)	0000000 ( sizes: AL	1 IT0	Gbps) (AUTO)		
Observed Amount	::	Cx Min:	Θ	в	Cx A	ve: 207.6	55 MB	Cx Max:	231	L.847 MB	All Cx:	6.286 GB
Upload Amount:		Cx Min:	0	В	Cx A	ve:	0 B	Cx Max:		0 B	All Cx: Total:	0 B 6.286 GB

Non-Transmitting endpoints: (3) udp--1.eth2-01.sta02028-A udp--1.eth2-01.sta02029-A udp--1.eth2-01.sta02030-A

This graph shows fairness. On a fair system, each station should get about the same throughput. In the download direction, it is mostly the device-under-test that is responsible for this behavior, but in the upload direction, LANforge itself would be the source of most fairness issues unless the device-under-test takes specific actions to ensure fairness.



Requested Param	nete	rs:												
Download Rate:	Per	station:	31250	0000 (	31.25	Mbp	s) All:	100	00000000 (	( 1	Gbps)			
Upload Rate:	Per	station:		0 (	0	bps	) All:		Θ (	Θ	bps)			
							Total:	100	00000000 (	( 1	Gbps)			
Station count:	32	Connect	lons p	er sta	tion:	1	Payload	(PDU)	sizes: A	Αυτο (	AUTO)			
Observed Rate:														
Download Rate:		Cx Min:		0 bps	Сх	Ave:	27.314	Mbps	Cx Max:	31.1	L35 Mbps	All Cx:	874.034	Mbps
Upload Rate:		Cx Min:		0 bps	Сх	Ave:		0 bps	Cx Max:		0 bps	All Cx:		0 bps
												Total: 8	874.034	Mbps
Aggregated Rate	e:	Min:		0 bps	Avg	:	27.314	Mbps	Max:	31.1	L35 Mbps			
Non-Transmittir	ng er	ndpoints:	(3)	udp 1	.eth2	-01.	sta02029	-A udp	1.eth2-	01.st	a02030-A	udp1.e	th2-01.	sta02031-A



Requested	Para	neter	<u>s</u>
Download	Pato.	Dor	•

Requested Paran	nete	rs:										
Download Rate:	Per	station:	3125000	90	(31.25	Mbp	s) All:	1000	0000000 (	1 Gbps)		
Upload Rate:	Per	station:		0	( 6	bps	) All:		Θ (	0 bps)		
							Total:	1000	0000000 (	1 Gbps)		
Station count:	32	Connecti	ons per	sta	ation:	1	Payload (	PDU)	sizes: AUT	TO (AUTO)		
Observed Amount	t:											
Download Amount	t:	Cx Min:		0 1	B Cx	Ave:	197.087	MB	Cx Max:	224.67 MB	All Cx:	6.159 GB
Upload Amount:		Cx Min:		0	B Cx	Ave:		0 B	Cx Max:	0 B	All Cx:	0 B
											Total:	6.159 GB
Non-Transmittir	ng ei	ndpoints:	(3) udp	) -  -  (	1.eth2	-01.	sta02029-A	udp-	-1.eth2-01	1.sta02030-A	udp1.eth2	-01.sta02031-A

This graph shows fairness. On a fair system, each station should get about the same throughput. In the download direction, it is mostly the device-under-test that is responsible for this behavior, but in the upload direction, LANforge itself would be the source of most fairness issues unless the device-under-test takes specific actions to ensure fairness.



Requested Param	eters:				
Download Rate:	Per station: 30	303030 (30.303 N	4bps) All: 1000	000000 ( 1 Gbps)	
Upload Rate:	Per station:	0 ( 0 bp	os) All: Total: 10000	0 ( 0 bps) 000000 ( 1 Gbps)	
Station count:	33 Connections	per station: 1	Payload (PDU) s	izes: AUTO (AUTO)	
Observed Rate:					
Download Rate:	Cx Min:	0 bps Cx Ave	e: 26.743 Mbps C	x Max: 30.308 Mbps	All Cx: 882.524 Mbps
Upload Rate:	Cx Min:	0 bps Cx Ave	e: 0 bps 0	x Max: 0 bps	All Cx: 0 bps Total: 882.524 Mbps
Aggregated Rate	: Min:	0 bps Avg:	26.743 Mbps M	lax: 30.308 Mbps	
Non-Transmittin	q endpoints: (3)	udp1.eth2-01	L.sta02030-A udp	1.eth2-01.sta02031-A	<pre>udp1.eth2-01.sta02032-A</pre>



Requested	Para	mete	r:
Download	Rate	Per	

Requested Parar	neter	rs:											
Download Rate:	Per	station:	30303030	(30	.303	Mbps	) All:	100	0000000	( 1 Gbps)			
Upload Rate:	Per	station:	Θ	(	0	bps)	All:		0 (	0 bps)			
						Т	otal:	1000	000000 (	1 Gbps)			
Station count:	33	Connecti	ons per s	tati	.on:	1 F	ayload	(PDU)	sizes: Al	JTO (AUTO)			
Observed Amount	t:												
Download Amount	t:	Cx Min:	Θ	В	Cx A	ve:	192.8	6 MB	Cx Max:	218.546 MB	All	Cx:	6.215 GB
Upload Amount:		Cx Min:	Θ	В	Cx A	ve:		0 B	Cx Max:	0 B	All	Cx:	0 B

6.215 GB Total: Non-Transmitting endpoints: (3) udp--1.eth2-01.sta02030-A udp--1.eth2-01.sta02031-A udp--1.eth2-01.sta02032-A

This graph shows fairness. On a fair system, each station should get about the same throughput. In the download direction, it is mostly the device-under-test that is responsible for this behavior, unless the device-under-test takes specific actions to ensure fairness.



0 B

Requested Param	eters:								
Download Rate:	Per station:	29411764 (29.4	412 Mbps)	All: 10	000000000	( 1 Gbps)			
Upload Rate:	Per station:	Θ (	0 bps) Al	l:	Θ (	0 bps)			
•			Tota	l: 100	0000000	( 1 Gbps)			
Station count:	34 Connectio	ons per statio	n:1 Payl	oad (PDU)	sizes: /	AUTO (AUTO)			
Observed Rate:									
Download Rate:	Cx Min:	0 bps C	x Ave: 25.	693 Mbps	Cx Max:	29.291 Mbps	All Cx: 873.54	6 Mbps	
Upload Rate:	Cx Min:	0 bps C	x Ave:	0 bps	Cx Max:	0 bps	All Cx:	0 bps	
		-		-		-	Total: 873.546	Mbps	
Aggregated Rate	: Min:	0 bps A	vg: 25.	693 Mbps	Max:	29.291 Mbps		•	
Non-Transmittin	g endpoints: (	4) udp1.et	h2-01.sta02	030-A udp	1.eth2	01.sta02031-A	udp1.eth2-01	.sta02032-A udp1.eth2-01.sta0203	33-A


## Requested Parameters: Download Rate: Per station: 29411764 (29.412 Mbps) All: 1000000000 ( Upload Rate: Per station: 0 ( 0 bps) All: 0 (

Station count: 34	Connections pe	r station: 1	Total: 100 Payload (PDU)	00000000 ( sizes: A	1 Gbps) JTO (AUTO)			
Observed Amount:								
Download Amount:	Cx Min:	0 B Cx Ave:	185.487 MB	Cx Max:	211.359 MB	All Cx:	6.159 GB	
Upload Amount:	Cx Min:	0 B Cx Ave:	0 B	Cx Max:	0 B	All Cx:	0 B	
						Total:	6.159 GB	

Non-Transmitting endpoints: (4) udp--1.eth2-01.sta02030-A udp--1.eth2-01.sta02031-A udp--1.eth2-01.sta02033-A

1 Gbps) 0 bps)

This graph shows fairness. On a fair system, each station should get about the same throughput. In the download direction, it is mostly the device-under-test that is responsible for this behavior, unless the device-under-test takes specific actions to ensure fairness.



Requested Param	meters:				
Download Rate:	Per station: 2	8571428 (28.571 Mbp	s) All: 1000000000 (	1 Gbps)	
Upload Rate:	Per station:	0 ( 0 bps)	All: 0 (	0 bps)	
			Total: 1000000000 (	1 Gbps)	
Station count:	35 Connection	s per station: 1	Payload (PDU) sizes: AU	TO (AUTO)	
Observed Rate:					
Download Rate:	Cx Min:	0 bps Cx Ave:	25.263 Mbps Cx Max:	28.53 Mbps	All Cx: 884.216 Mbps
Upload Rate:	Cx Min:	0 bps Cx Ave:	0 bps Cx Max:	0 bps	All Cx: 0 bps
					Total: 884.216 Mbps
Aggregated Rate	e: Min:	0 bps Avg:	25.263 Mbps Max:	28.53 Mbps	
Non-Transmittir	ng endpoints: (3	) udp1.eth2-01.s	ta02032-A udp1.eth2-0	1.sta02033-A	udp1.eth2-01.sta02034-A



1 Gbps)

Requested Para	nete	rs:								
Download Rate:	Per	station: 28	571428	3 (2	8.571	L Mbp	s) All	10000000	Э(	1 Gbps
Upload Rate:	Per	station:	6	) (	0	bps)	All:	0	(	0 bps)
							Total:	1000000000	(	1 Gbps)
Station count:	35	Connections	per s	stat	ion:	1	Payload	(PDU) sizes:	AUT0	(AUTO)

Observed Amount:								
Download Amount:	Cx Min:	0 B	Cx Ave:	182.479 MB	Cx Max:	206.076 MB	All Cx:	6.237 GB
Upload Amount:	Cx Min:	0 B	Cx Ave:	0 B	Cx Max:	0 B	All Cx:	0 B
							Total:	6.237 GB
Non-Transmitting	endpoints: (3)	udp1.	eth2-01.	sta02032-A udp	1.eth2-	01.sta02033-A	udp1.eth2	2-01.sta02034-A

This graph shows fairness. On a fair system, each station should get about the same throughput. In the download direction, it is mostly the device-under-test that is responsible for this behavior, but in the upload direction, LANforge itself would be the source of most fairness issues unless the device-under-test takes specific actions to ensure fairness.



	sta0	sta0	sta0	sta0	sta0	sta0	sta0	sta0	sta0	sta0	sta0	sta0	sta0		stau	sta0		sta0 sta0	sta0	sta0	sta0	sta0	sta0	sta0	sta0	sta0	sta0	sta0	sta0	sta0	cta0
															SI	ati	ioi	ns													
										<b>U</b>	JDP-	-Do	wnlo	ad		)P-L	Jpl	load													
Requested Param	neters:																														
Download Rate:	Per stati	.on:	2	77777	777 (	27.	778	8 Mb	ps	) /	Αll	:	100	000	0000	0 (		1 (	ibps	;)											
Jpload Rate:	Per stati	on:			Θ (		0	bps	) То	Al ota	l: l:		1000	000	0 0000	(		0 bp 1 Gł	os) ops)												
Station count:	36 Conr	nect	ion	s pei	r sta	atio	on:	1	Pa	ayl	oad	( P	PDU)	si	zes:	AU	JTC	) (Al	JTO)												
Observed Rate:	Cx Mi	n:		6	) bos	; (	X A	ve:		24	. 58	Mb	ops	Сx	Мах		27	7.65	Mb	ns	Al	ιc	x:	884	1.86	53 M	Mbp	s			

Downtoau Nate.	CA HITH.	0.0	P3 .	CA AVE.	24.30 1003	CA HUA.	27.031 1003	ALL CX. 004.00	5 mpp3
Upload Rate:	Cx Min:	0 b	ps	Cx Ave:	0 bps	Cx Max:	0 bps	All Cx:	0 bps
								Total: 884.863	Mbps
Aggregated Rate:	Min:	0 b	ps .	Avg:	24.58 Mbps	Max:	27.651 Mbps		
Non-Transmitting	endpoints:	(3) udp-	-1.e	th2-01.9	sta02033-A udp	1.eth2-	01.sta02034-A	udp1.eth2-01	.sta02035-A



6.239 GB 0 B

6.239 GB

Requested Paramete	rs:		
Download Rate: Per	station: 277777	77 (27.778 Mbps) All: 1000000000 ( 1 Gbps)	
Upload Rate: Per	station:	0 ( 0 bps) All: 0 ( 0 bps)	
		Total: 1000000000 ( 1 Gbps)	
Station count: 36	Connections per	station: 1 Payload (PDU) sizes: AUTO (AUTO)	
Observed Amount:			
Download Amount:	Cx Min:	0 B Cx Ave: 177.452 MB Cx Max: 199.557 M	B All Cx:
Upload Amount:	Cx Min:	0 B Cx Ave: 0 B Cx Max: 0	B All Cx:

Total: Non-Transmitting endpoints: (3) udp--1.eth2-01.sta02033-A udp--1.eth2-01.sta02034-A udp--1.eth2-01.sta02035-A

This graph shows fairness. On a fair system, each station should get about the same throughput. In the download direction, it is mostly the device-under-test that is responsible for this behavior, but in the upload direction, LANforge itself would be the source of most fairness issues unless the device-under-test takes specific actions to ensure fairness.

Combined Received bytes, for entire 1 m run 200.000.000 175,000,000 Value (bytes) 150,000,000 125,000,000 100,000,000 75,000,000 50,000,000 25,000,000 a02000. a02001. a02003. a02005. a02006. a02006. ta02010. ta02011. ta02013. ta02023. sta02023. 0

		sta02	01000	stauzi	sta02	0011																													
																	5	staf	tior	าร	;														
														0.0.0			- 1		Lini		a d														
												-	υD	P-D0	write	oau		JUP	-upi	loa	au														
Requested Parar	meters	:																																	
Download Rate:	Per s	tati	on:	2	702	702	27 (	27	.02	7 M	4bps	5)	Αl	l:	10	9000	0000	00	(	1	1 Gb	ps)													
Upload Rate:	Per s	tati	on:				0 (		0	bp	os)	Α	ιι:				0	(		0	bps	)													
											1	ot	al:		100	9000	0000	0 (		1	Gbp	s)													
Station count:	37	Conne	ect	ion	s p	er	sta	ti	on:	1	F	Pay	loa	d (F	DU)	) si	zes	: A	UTO	) (	(AUT	0)													
Observed Rate:																																			
Download Rate:	C	x Mi	n:			0	bps		Сx	Ave	е:	24	. 39	6 Mb	ps	C>	Ma	x:	26	5.9	919	Mbp	s	All	C>	c: 9	902	.65	1 M	lbps	5				
Upload Rate:	C	x Mi	n:			0	bps		Сx	Ave	e:			0 b	ps	C	Ma	x:			0	bp	s	All	C>	:			0	bps	5				

Total: 902.651 Mbps 24.396 Mbps Max: 26.919 Mbps Aggregated Rate: Min: 0 bps Ava: Non-Transmitting endpoints: (3) udp--1.eth2-01.sta02034-A udp--1.eth2-01.sta02035-A udp--1.eth2-01.sta02036-A



Requested Parameters:			
Download Rate: Per station:	27027027 (27.027 Mbps) All:	1000000000 (	1 Gbps)
Unload Dates Dec stations	0 ( 0 hpc) All.	0 (	() hpc)

optodu Nate.	iei stat	.1011.		0 (	,	o pha	) ALL.		0 (	0 0 0 0 3 /		
							Total:	100	0000000	( 1 Gbps)		
Station count:	37 Cor	nections	per	stat	ion	: 1	Payload	(PDU)	sizes: /	AUTO (AUTO)		
							-					
Observed Amount	:											
Download Amount	: Cx M	lin:		0 B	Сx	Ave:	176.45	8 MB	Cx Max:	195.044 MB	All Cx:	6.376 GB
Upload Amount:	Cx №	lin:		0 B	Сx	Ave:		0 B	Cx Max:	0 B	All Cx:	0 B
•											Total:	6.376 GB
Non-Transmittin	a endpoi	nts: (3)	udp	1.	eth	2-01.	sta02034-	a udp	1.eth2	-01.sta02035-A	udp1.eth	2-01.sta02036-A



Requested Para	meters:										
Download Rate:	Per sta	tion: 2631	5789 (	26.316 Mb	ps) All:	1000	0000000	( 1 Gbps)			
Upload Rate:	Per sta	tion:	0 (	0 bps	) All:		0 (	0 bps)			
				-	Total:	10000	000000 (	1 Gbps)			
Station count:	38 Co	nnections p	er sta	tion: 1	Payload	(PDU) s	sizes: A	JTO (AUTO)			
Observed Rate:											
Download Rate:	Cx	Min:	0 bps	Cx Ave:	22.791	Mbps (	Cx Max:	25.598 Mbps	All Cx:	866.053	Mbps
Upload Rate:	Cx	Min:	0 bps	Cx Ave:	Θ	bps (	Cx Max:	0 bps	All Cx:		0 bps
									Total: 8	66.053	Mbps
Aggregated Rate	e: Min	:	0 bps	Avg:	22.791	Mbps M	lax:	25.598 Mbps			
Non-Transmittin	ng endpo	ints: (3)	udp 1	.eth2-01.	sta02035-	A udp-·	1.eth2-0	01.sta02036-A	udp1.e	th2-01.	sta02037-A



Requested Parameters:	
Download Rate: Per station: 26315789 (26.316 Mbps) All: 1000000000 ( 1 Gbps)	
Upload Rate: Per station: 0 ( 0 bps) All: 0 ( 0 bps)	
Total: 1000000000 ( 1 Gbps)	
Station count: 38 Connections per station: 1 Payload (PDU) sizes: AUTO (AUTO)	
Observed Amount:	
Download Amount: Cx Min: 0 B Cx Ave: 164.432 MB Cx Max: 184.918 MB All Cx:	6.102 GB
Upload Amount: Cx Min: 0 B Cx Ave: 0 B Cx Max: 0 B All Cx:	0 B
Total:	6.102 GB
Non-Transmitting endpoints: (3) udp1.eth2-01.sta02035-A udp1.eth2-01.sta02036-A udp1.eth2-	01.sta02037-A

This graph shows fairness. On a fair system, each station should get about the same throughput. In the download direction, it is mostly the device-under-test that is responsible for this behavior, unless the device-under-test takes specific actions to ensure fairness.



Requested Param	neters:						
Download Rate:	Per station: 2	5641025 (2	5.641 Mbp	os) All: 10	00000000	( 1 Gbps)	
Upload Rate:	Per station:	Θ (	0 bps)	All:	Θ (	0 bps)	
			-	Total: 100	0000000 (	1 Gbps)	
Station count:	39 Connection	s per stat	ion: 1	Payload (PDU)	sizes: A	UTO (AUTO)	
Observed Rate:							
Download Rate:	Cx Min:	0 bps	Cx Ave:	23.44 Mbps	Cx Max:	25.555 Mbps	All Cx: 914.168 Mbps
Upload Rate:	Cx Min:	0 bps	Cx Ave:	0 bps	Cx Max:	0 bps	All Cx: 0 bps
				-		-	Total: 914.168 Mbps
Aggregated Rate	e: Min:	0 bps	Avg:	23.44 Mbps	Max:	25.555 Mbps	-
Non-Transmittir	ng endpoints: (2	) udp1.	eth2-01.s	ta02037-A udp	1.eth2-	01.sta02038-A	



Requested Parameters:

Download Rate:	Per	station:	25641025	6 (2	5.641 Mb	ops) All:	10	000000000	( 1 Gbps)		
Upload Rate:	Per	station:	6	) (	0 bps	) All:		Θ (	0 bps)		
						Total:	100	00000000 (	1 Gbps)		
Station count:	39	Connecti	lons per s	tat	ion: 1	Payload	(PDU)	sizes: A	UTO (AUTO)		
Observed Amount	t:										
Download Amount	t:	Cx Min:	6	) В	Cx Ave:	169.22	4 MB	Cx Max:	184.629 MB	All Cx:	6.445 GE
Upload Amount:		Cx Min:	6	) В	Cx Ave:		0 B	Cx Max:	0 B	All Cx:	0 E
										Total:	6.445 GE
Non-Transmitti	ng ei	ndpoints:	(2) udp-	-1.6	eth2-01.	sta02037-	A udp	1.eth2-	01.sta02038-A	1	

This graph shows fairness. On a fair system, each station should get about the same throughput. In the download direction, it is mostly the device-under-test that is responsible for this behavior, but in the upload direction, LANforge itself would be the source of most fairness issues unless the device-under-test takes specific actions to ensure fairness.



Requested Para	nete	rs:												
Download Rate:	Per	station:	25000	000 (	25	Mbps)	) All:	1000	000000 (	1	Gbps)			
Upload Rate:	Per	station:		0 (	(	) bps)	) All:		0 (		0 bps)			
							Total:	100	0000000	(	1 Gbps)			
Station count:	40	Connecti	ons pe	r stat	ion	: 1	Payload	(PDU)	sizes:	AUT0	(AUTO)			
Observed Rate:														
Download Rate:		Cx Min:		0 bps	Сх	Ave:	22.803	Mbps	Cx Max:	24	.912 Mbps	All Cx:	912.112	2 Mbps
Upload Rate:		Cx Min:		0 bps	Сx	Ave:		0 bps	Cx Max:		0 bps	All Cx:		0 bps
												Total: 9	12.112	Mbps
Aggregated Rate	e:	Min:		0 bps	Avg	g:	22.803	Mbps	Max:	24	.912 Mbps			
Non-Transmittin	ng er	ndpoints:	(3) u	dp1.	eth2	2-01.9	sta02037	-A udp	1.eth2	-01.	sta02038-A	udp1.e	th2-01	.sta02039-A



Requested Parameters:		
Download Rate: Per station: 25000000 ( 25 Mbps) All: 1000000000 ( 1 Gbps)		
Upload Rate: Per station: 0 ( 0 bps) All: 0 ( 0 bps)		
Total: 100000000 ( 1 Gbps)		
Station count: 40 Connections per station: 1 Payload (PDU) sizes: AUTO (AUTO)		
Observed Amount:		
Download Amount: Cx Min: 0 B Cx Ave: 164.944 MB Cx Max: 180.561 MB	All Cx:	6.443 GB
Upload Amount: Cx Min: 0 B Cx Ave: 0 B Cx Max: 0 B	All Cx:	0 B
	Total:	6.443 GB
Non-Transmitting endpoints: (3) udp1.eth2-01.sta02037-A udp1.eth2-01.sta02038-A	udp1.eth2-	01.sta02039-A

This graph shows fairness. On a fair system, each station should get about the same throughput. In the download direction, it is mostly the device-under-test that is responsible for this behavior, unless the device-under-test takes specific actions to ensure fairness.



Requested Para	mete	rs:														
Download Rate:	Per	station:	243	9024	43	(24.3	9 Mbp	s) All:	100	0000000	(	1 Gbps)				
Upload Rate:	Per	station:			0	(	0 bps	) All:		0	( (	9 bps)				
								Total:	100	0000000	(	1 Gbps)				
Station count:	41	Connecti	ons	per	sta	ation	1: 1	Payload	(PDU)	sizes:	AUT0	(AUTO)				
Observed Rate:																
Download Rate:		Cx Min:		0	bps	s Co	Ave:	22.102	Mbps	Cx Max	: 24	.365 Mbps	All Cx:	906.19	5 Mbps	
Upload Rate:		Cx Min:		0	bps	s Co	Ave:		0 bps	Cx Max	:	0 bps	All Cx:		0 bps	
									-			-	Total:	906.195	Mbps	
Aggregated Rate	e:	Min:		0	bps	5 A1	/g:	22.102	2 Mbps	Max:	24	.365 Mbps			-	
Non-Transmitti	na er	ndnoints	(3)	udi	n '	Leth	2-01	sta02038	8-A udn	1.eth	2-01	sta02039-A	udn 1	eth2-01	sta02040-A	



## Requested Parameters: Download Rate: Per station: 24390243 (24.39 Mbps) All:

nequesteu ruru		13.											
Download Rate:	Per	station:	243902	43	(24.	39	Mbps	;) All:	1000	9000000 (	1 Gbps)		
Upload Rate:	Per	station:		0	(	0	bps)	All: Total:	100	0 ( 0000000 (	0 bps) 1 Gbps)		
Station count:	41	Connecti	ons per	st	atio	on:	1	Payload (	PDU)	sizes: A	UTO (AUTO)		
Observed Amount	::												
Download Amount	::	Cx Min:		0	B	Cx A	ve:	159.532	MB	Cx Max:	175.566 MB	All Cx:	6.388 GB
Upload Amount:		Cx Min:		0	B (	Cx A	ve:		0 B	Cx Max:	0 B	All Cx:	0 B
												Total:	6.388 GB
Non-Transmittir	ng er	ndpoints:	(3) ud	р	1.et	:h2-	01.s	ta02038-A	udp	1.eth2-	01.sta02039-A	udp1.e	th2-01.sta02040-A

This graph shows fairness. On a fair system, each station should get about the same throughput. In the download direction, it is mostly the device-under-test that is responsible for this behavior, unless the device-under-test takes specific actions to ensure fairness.



Requested Param	neter	rs:												
Download Rate:	Per	station:	238	0952	23 (2	23.81	Mbps	s) All:	100	0000000	( 1	Gbps)		
Upload Rate:	Per	station:			0 (	6	) bps)	) All:		0 (		) bps)		
								Total:	100	0000000	( 1	Gbps)		
Station count:	42	Connecti	lons	per	stat	ion:	1	Payload	(PDU)	sizes:	AUT0	(AUTO)		
Observed Rate:														
Download Rate:		Cx Min:		0	bps	Сx	Ave:	21.157	Mbps	Cx Max:	23.	574 Mbps	All Cx: 88	8.605 Mbps
Upload Rate:		Cx Min:		0	bps	Сx	Ave:		0 bps	Cx Max:		0 bps	All Cx:	0 bps
													Total: 888	.605 Mbps
Aggregated Rate	e:	Min:		0	bps	Avg	J:	21.157	Mbps	Max:	23.	574 Mbps		
Non-Transmittir	ng er	ndpoints:	(3)	ud	o1	eth2	2-01.9	sta02039	-A udp	1.eth2	2-01.5	ta02040-A	udp1.eth	2-01.sta02041-A



Requested Para	noto	rc •										
Requested Taran	-											
Download Rate:	Per	station:	238095	23	(23.	81 Mb	ps) All:	100	0000000	( 1 Gbps)		
Upload Rate:	Per	station:		0	(	0 bp	s) All:		Θ (	0 bps)		
							Total:	100	0000000	( 1 Gbps)		
Station count:	42	Connect:	ions per	st	atio	n: 1	Payload	(PDU)	sizes:	AUTO (AUTO)		
Observed Amount	t:											
Download Amount	t:	Cx Min:		0	B C	x Ave	: 152.9	12 MB	Cx Max:	170.306 MB	All Cx:	6.273 GB
Upload Amount:		Cx Min:		0	B C	x Ave	:	0 B	Cx Max:	0 B	All Cx:	0 B
											Total:	6.273 GB
Non-Transmittir	ng ei	ndpoints:	(3) ud	p	1.et	h2-01	.sta02039	A udp	1.eth2	-01.sta02040-A	udp1.et	h2-01.sta02041-A

This graph shows fairness. On a fair system, each station should get about the same throughput. In the download direction, it is mostly the device-under-test that is responsible for this behavior, unless the device-under-test takes specific actions to ensure fairness.



Requested Param	eters:				
Download Rate:	Per station: 2	3255813 (23.256 Mb	ps) All: 100000000	( 1 Gbps)	
Upload Rate:	Per station:	0 ( 0 bps	) All: 0 (	0 bps)	
			Total: 100000000	( 1 Gbps)	
Station count:	43 Connection	s per station: 1	Payload (PDU) sizes:	AUTO (AUTO)	
Observed Rate:					
Download Rate:	Cx Min:	0 bps Cx Ave:	20.78 Mbps Cx Max:	23.105 Mbps	All Cx: 893.552 Mbps
Upload Rate:	Cx Min:	0 bps Cx Ave:	0 bps Cx Max:	0 bps	All Cx: 0 bps
					Total: 893.552 Mbps
Aggregated Rate	: Min:	0 bps Avg:	20.78 Mbps Max:	23.105 Mbps	
Non-Transmittin	a endpoints: (3	) udp1.eth2-01.	sta02040-A udp1.eth2	-01.sta02041-A	udp1.eth2-01.sta02042-A



Requested Parameters:

Observed Rate:

Thequested Tarameters.
Download Rate: Per station: 23255813 (23.256 Mbps) All: 1000000000 ( 1 Gbps)
Upload Rate: Per station: 0 ( 0 bps) All: 0 ( 0 bps) Total: 1000000000 ( 1 Gbps)
Station count: 43 Connections per station: 1 Payload (PDU) sizes: AUTO (AUTO)
Observed Amount:
Download Amount: Cx Min: 0 B Cx Ave: 150.391 MB Cx Max: 168.363 MB All Cx: 6.315 GB
Upload Amount: Cx Min: 0 B Cx Ave: 0 B Cx Max: 0 B All Cx: 0 B
Total: 6.315 GB
Non-Transmitting endpoints: (3) udp1.eth2-01.sta02040-A udp1.eth2-01.sta02041-A udp1.eth2-01.sta02042-A

This graph shows fairness. On a fair system, each station should get about the same throughput. In the download direction, it is mostly the device-under-test that is responsible for this behavior, but in the upload direction, LANforge itself would be the source of most fairness issues unless the device-under-test takes specific actions to ensure fairness.



sta0)	sta00 sta00 sta00 sta00 sta00 sta00	sta00 sta00 sta00 sta00 sta00 sta00 sta00	sta00 sta00 sta00 sta00 sta00 sta00 sta00
		Stations	
		UDP-Download UDP-Upload	
Requested Parameters:			
Download Rate: Per stati	ion: 22727272 (22.727 Mbps	) All: 100000000 ( 1 Gbps)	
Upload Rate: Per stati	Lon: 0 ( 0 bps)	All: 0 ( 0 bps)	
	Т	otal: 1000000000 ( 1 Gbps)	
Station count: 44 Conn	ections per station: 1 P	ayload (PDU) sizes: AUTO (AUTO)	

Download Rate:	Cx Min:	0 bps	Cx Ave:	20.794 Mbps	Cx Max:	22.789 Mbps	All Cx: 914.92	5 Mbps
Upload Rate:	Cx Min:	0 bps	Cx Ave:	0 bps	Cx Max:	0 bps	All Cx:	0 bps
							Total: 914.925	Mbps
Aggregated Rate:	Min:	0 bps	Avg:	20.794 Mbps	Max:	22.789 Mbps		
Non-Transmitting	endpoints: (3)	udp1.	eth2-01.s	sta02041-A udp	1.eth2-	01.sta02042-A	udp1.eth2-01	.sta02043-A



1 Gbps)

Requested Parameters: Download Rate: Per station: 22727272 (22.727 Mbps) All: 1000000000 ( Upload Rate: Per station: 0 ( 0 bps) All: 0 (

Upload Rate:	Per	station:	0	(	e	) bps	) All:	0 (	(	0 bps)			
<b>.</b>							Total: 100	0000000	(	1 Gbps)			
Station count:	44	Connections per	S1	tatio	on:	1	Payload (PDU)	sizes:	AUTO	(AUIO)			
Observed Amount	:												
Download Amount	::	Cx Min:	0	В (	Сx	Ave:	150.201 MB	Cx Max:	: 1	64.114 MB	All	Cx:	6.454 GB
Upload Amount:		Cx Min:	0	B (	Сx	Ave:	0 B	Cx Max:		0 B	All	Cx:	0 B
											Tota	al:	6.454 GB

Non-Transmitting endpoints: (3) udp--1.eth2-01.sta02041-A udp--1.eth2-01.sta02042-A udp--1.eth2-01.sta02043-A

This graph shows fairness. On a fair system, each station should get about the same throughput. In the download direction, it is mostly the device-under-test that is responsible for this behavior, but in the upload direction, LANforge itself would be the source of most fairness issues unless the device-under-test takes specific actions to ensure fairness.



Requested Param	neters:							
Download Rate:	Per station: 22	222222 (22	.222 Mbp	s) All: 10	00000000	( 1 Gbps)		
Upload Rate:	Per station:	0 (	0 bps)	All:	0 (	0 bps)		
				Total: 100	0000000 (	1 Gbps)		
Station count:	45 Connections	per stati	on: 1	Payload (PDU)	sizes: A	UTO (AUTO)		
Observed Rate:								
Download Rate:	Cx Min:	0 bps	Cx Ave:	19.997 Mbps	Cx Max:	21.855 Mbps	All Cx: 899.852	2 Mbps
Upload Rate:	Cx Min:	0 bps	Cx Ave:	0 bps	Cx Max:	0 bps	All Cx:	0 bps
							Total: 899.852	Mbps
Aggregated Rate	e: Min:	0 bps	Avg:	19.997 Mbps	Max:	21.855 Mbps		•
Non-Transmittir	ng endpoints: (3)	udp1.e	th2-01.s	ta02042-A udp	1.eth2-	01.sta02043-A	udp1.eth2-01	.sta02044-A



Requested Paramet	ters:						
Download Rate: Pe	er station: 2	22222222 (22.222	Mbps) All	: 1000000000 (	1 Gbps)		
Upload Rate: Pe	er station:	0 ( 0	ops) All:	Θ (	0 bps)		
			Total:	1000000000 (	1 Gbps)		
Station count: 4	5 Connection	is per station:	1 Payload	(PDU) sizes: AUT	(AUTO)		
Observed Amount:							
Download Amount:	Cx Min:	0 B Cx A	ve: 144.59	95 MB Cx Max:	158.09 MB	All Cx:	6.354 GB
Upload Amount:	Cx Min:	0 B Cx A	ve:	0 B Cx Max:	0 B	All Cx:	0 B
						Total:	6.354 GB
Non-Transmitting	endpoints: (3	3) udp1.eth2-	91.sta02042	A udp1.eth2-01	L.sta02043-A	udp1.eth	n2-01.sta02044-A

This graph shows fairness. On a fair system, each station should get about the same throughput.



In the download direction, it is mostly the device-under-test that is responsible for this behavior, but in the upload direction, LANforge itself would be the source of most fairness issues unless the device-under-test takes specific actions to ensure fairness.

Requested Para	neter	^S:									
Download Rate:	Per	station:	21739	130 (2	21.739 Mb	ps) All	: 10	00000000	( 1 Gbps)		
Upload Rate:	Per	station:		0 (	0 bps	) All: Total:	100	0 ( 0000000 (	0 bps) ( 1 Gbps)		
Station count:	46	Connecti	ons pe	r stat	tion: 1	Payload	(PDU)	sizes: A	AUTO (AUTO)		
Observed Rate:											
Download Rate:		Cx Min:		9 bps	Cx Ave:	19.786	Mbps	Cx Max:	21.782 Mbps	All Cx: 910	.154 Mbps
Upload Rate:		Cx Min:		9 bps	Cx Ave:		0 bps	Cx Max:	0 bps	All Cx: Total: 910.	0 bps 154 Mbps
Aggregated Rate	e:	Min:		9 bps	Avg:	19.786	Mbps	Max:	21.782 Mbps		
Non-Transmittir	ng er	ndpoints:	(3) u	dp 1.	.eth2-01.	sta02043	-A udp	1.eth2-	01.sta02044-A	udp1.eth2	-01.sta02045-A



Requested Parameters: Download Rate: Per station: 21739130 (21.739 Mbps) All: 1000000000 ( 1 Gbps) Uoload Rate: Per station: 0 ( 0 bps) All: 0 ( 0 bps)

optoud nate.	101 30	acron.		0 (		o pha	,		0 (	0 0000		
							Total:	100	0000000 (	1 Gbps)		
Station count:	46 C	onnections	per	stat	ion	: 1	Payload	(PDU)	sizes: A	UTO (AUTO)		
							-					
Observed Amount	t:											
Download Amount	t: Cx	Min:		0 B	Сx	Ave:	143.275	5 MB	Cx Max:	157.095 MB	All Cx:	6.436 GB
Upload Amount:	Cx	Min:		0 B	Сx	Ave:		0 B	Cx Max:	0 B	All Cx:	0 B
•											Total:	6.436 GB
Non-Transmittir	ng endp	oints: (3)	udp	o1	eth	2-01.	sta02043-/	A udp	1.eth2-	01.sta02044-A	udp1.eth2	2-01.sta02045-A

This graph shows fairness. On a fair system, each station should get about the same throughput. In the download direction, it is mostly the device-under-test that is responsible for this behavior, but in the upload direction, LANforge itself would be the source of most fairness issues unless the device-under-test takes specific actions to ensure fairness.



Requested Param	eters:				
Download Rate:	Per station: 22	L276595 (21.277 M	bps) All: 1000000	000 ( 1 Gbps)	
Upload Rate:	Per station:	0 ( 0 bp	s) All: (	) ( 0 bps)	
•			Total: 10000000	00 ( 1 Gbps)	
Station count:	47 Connections	s per station: 1	Payload (PDU) sizes	: AUTO (AUTO)	
Observed Rate:					
Download Rate:	Cx Min:	0 bps Cx Ave	: 19.083 Mbps Cx Ma	ax: 20.96 Mbps	All Cx: 896.898 Mbps
Upload Rate:	Cx Min:	0 bps Cx Ave	: 0 bps Cx Ma	ax: 0 bps	All Cx: 0 bps
					Total: 896.898 Mbps
Aggregated Rate	e: Min:	0 bps Avg:	19.083 Mbps Max:	20.96 Mbps	
Non-Transmittin	ng endpoints: (3)	udp1.eth2-01	.sta02044-A udp1.et	h2-01.sta02045-A	udp1.eth2-01.sta02046-A



1 Gbps) 0 bps)

Requested Parameters: Download Rate: Per station: 21276595 (21.277 Mbps) All: 1000000000 ( Upload Rate: Per station: 0 ( 0 bps) All: 0 (

Station count: 47	Connections	per station: 1	Total: 1000 Payload (PDU)	000000 (   1 Gb sizes: AUTO (AU	ps) TO)	
Observed Amount:						
Download Amount:	Cx Min:	0 B CX AV	e: 138.178 MB	Cx Max: 151.9	23 MB ALL C	k: 6.342 GB
Upload Amount:	Cx Min:	0 B Cx Av	e: 0 B	Cx Max:	0 B All C	k: 0 B
					Total	: 6.342 GB
Non-Transmitting	endnoints (3)	udn1_oth2_0	<pre>c+a02044_A uda_</pre>	-1 eth2-01 sta0	2045-A udn	1 eth2_01 sta02046_A

This graph shows fairness. On a fair system, each station should get about the same throughput. In the download direction, it is mostly the device-under-test that is responsible for this behavior, but in the upload direction, LANforge itself would be the source of most fairness issues unless the device-under-test takes specific actions to ensure fairness.



Requested Param	meters:				
Download Rate:	Per station: 2	208333333 (20.833 Mbp	s) All: 100000000	( 1 Gbps)	
Upload Rate:	Per station:	0 ( 0 bps)	All: 0 (	0 bps)	
			Total: 1000000000 (	1 Gbps)	
Station count:	48 Connection	ns per station: 1	Payload (PDU) sizes: A	UTO (AUTO)	
Observed Rate:					
Download Rate:	Cx Min:	0 bps Cx Ave:	19.244 Mbps Cx Max:	20.797 Mbps	All Cx: 923.734 Mbps
Upload Rate:	Cx Min:	0 bps Cx Ave:	0 bps Cx Max:	0 bps	All Cx: 0 bps
					Total: 923.734 Mbps
Aggregated Rate	e: Min:	0 bps Avg:	19.244 Mbps Max:	20.797 Mbps	
Non-Transmittir	ng endpoints: (3	3) udp1.eth2-01.s	ta02045-A udp1.eth2-	01.sta02046-A	udp1.eth2-01.sta02047-A



Requested Parameters: Download Rate: Per station: 20833333 (20.833 Mbps) All: 1000000000 ( 1 Gbps)

Upload Rate:	Per	station:	0	(	0 bp	s) All:		Θ (	0 bps)		
						Total:	100	0000000	( 1 Gbps)		
Station count:	48	Connections pe	r st	tatio	n: 1	Payload	(PDU)	sizes: /	AUTO (AUTO)		
Observed Amount	÷.										
UDServeu Allouri	ι.										
Download Amoun	t:	Cx Min:	0	B C	x Ave	: 139.2	38 MB	Cx Max:	150.237 MB	All Cx:	6.527 GB
Upload Amount:		Cx Min:	0	B C	x Ave	:	0 B	Cx Max:	0 B	All Cx:	0 B
										Total:	6.527 GB
Non-Transmitti	ng e	ndpoints: (3) u	dp-·	1.et	h2-01	.sta02045	-A udp	1.eth2	-01.sta02046-A	udp1.	eth2-01.sta02047-A

This graph shows fairness. On a fair system, each station should get about the same throughput. In the download direction, it is mostly the device-under-test that is responsible for this behavior, but in the upload direction, LANforge itself would be the source of most fairness issues unless the device-under-test takes specific actions to ensure fairness.



			ad Bropicad		
Requested Paramet	ters:				
Download Rate: Pe	er station: 20	0408163 (20.408 M	bps) All: 10	00000000 ( 1 Gbps)	
Upload Rate: Pe	er station:	0 ( 0 bp	s) All: Total: 100	0 ( 0 bps) 0000000 ( 1 Gbps)	
Station count: 49	O Connections	s per station: 1	Payload (PDU)	sizes: AUTO (AUTO)	
Observed Rate:					
Download Rate:	Cx Min:	0 bps Cx Ave	: 18.824 Mbps	Cx Max: 20.276 Mbps	s All Cx: 922.383 Mbps
Upload Rate:	Cx Min:	0 bps Cx Ave	: 0 bps	Cx Max: 0 bp	s All Cx: 0 bps Total: 922.383 Mbps
Angregated Rate:	Min		18 824 Mbns	Max: 20.276 Mbn	

Non-Transmitting endpoints: (3) udp--1.eth2-01.sta02046-A udp--1.eth2-01.sta02047-A udp--1.eth2-01.sta02048-A



Requested Parameters:			
Download Rate: Per station:	20408163 (20.408 Mbps) All:	1000000000 (	1 Gbps)
Haland Dates Dear stations	0 ( 0 h==) 411.	0 (	0   )

uptuau Rate:	Per	Station:		0 (		o pha	) ALL:		0	(	o ph2)		
							Total:	100	0000000	(	1 Gbps)		
Station count:	49	Connections	per	sta	tion	: 1	Payload	(PDU)	sizes:	AUT	D (AUTO)		
Observed Amount	t:												
Download Amount	t:	Cx Min:		0 B	Сx	Ave:	136.39	3 MB	Cx Max:		147.08 MB	All Cx:	6.527 GB
Upload Amount:		Cx Min:		0 B	Сx	Ave:		0 B	Cx Max:		0 B	All Cx:	0 B
•												Total:	6.527 GB
Non-Transmitti	na e	ndpoints: (3)	udi	01	.eth	2-01.	sta02046-	A udp	1.eth2	2-01	.sta02047-A	udp1.	eth2-01.sta02048-A



Requested Para	nete	rs:								
Download Rate:	Per	station:	200000	900 (	20 Mbps	) All:	1000	0000000 (	1 Gbps)	
Upload Rate:	Per	station:		0 (	0 bps	) All:		0 (	0 bps)	
•						Total:	100	0000000	( 1 Gbps)	
Station count:	50	Connecti	ons per	r stat	tion: 1	Payload	(PDU)	sizes:	AUTO (AUTO)	
Observed Rate:										
Download Rate:		Cx Min:	(	) bps	Cx Ave:	18.234	Mbps	Cx Max:	19.734 Mbps	All Cx: 911.689 Mbps
Upload Rate:		Cx Min:	0	) bps	Cx Ave:		0 bps	Cx Max:	0 bps	All Cx: 0 bps Total: 911.689 Mbps
Aggregated Rate	e:	Min:	(	) bps	Avg:	18.234	Mbps	Max:	19.734 Mbps	
Non-Transmittin	na er	ndpoints:	(3) uo	lp 1	eth2-01.	sta02047	-A udp	1.eth2	-01.sta02048-A	udp1.eth2-01.sta02049-A



1000000000 ( 1 Gbps)

Requested Parameters: Download Rate: Per station: 20000000 ( 20 Mbps) All: Upload Rate: Per station: 0 ( 0 bps) All:

Upload Rate:	Per	station:	(	Θ (	6	) bps	) All:	100	0 (	0 bps)		
Station count:	50	Connections p	ers	stat	ion:	1	Payload	(PDU)	sizes: A	UTO (AUTO)		
Observed Amount	t:	Cy Min.	,	ΩВ	٢v	٨٧٥٠	132 1	5 MR	Cv Max.	1/13 3// MB	A11 Cx-	6 453 GB
Upload Amount:		Cx Min:	(	0 B	Cx	Ave:	152.1	0 B	Cx Max:	0 B	All Cx:	0.453 GB 0 B
Non-Transmittir	na e	ndpoints: (3)	udp	1.	eth2	-01.	sta02047.	A udp	1.eth2-	01.sta02048-A	udp1.	6.453 GB eth2-01.sta02049-A

This graph shows fairness. On a fair system, each station should get about the same throughput. In the download direction, it is mostly the device-under-test that is responsible for this behavior, but in the upload direction, LANforge itself would be the source of most fairness issues unless the device-under-test takes specific actions to ensure fairness.



Requested Param	neter	s:									
Download Rate:	Per	station:	196078	43 (1	19.608 M	1bps) All	: 10	00000000	( 1 Gbps)		
Upload Rate:	Per	station:		0 (	0 bp	os) All:		0 (	0 bps)		
						Total:	100	0000000 (	1 Gbps)		
Station count:	51	Connecti	ons per	stat	tion: 1	Payload	(PDU)	sizes: A	UTO (AUTO)		
Observed Rate:											
Download Rate:		Cx Min:	0	) bps	Cx Ave	e: 18.001	Mbps	Cx Max:	19.518 Mbps	All Cx: 918.07	2 Mbps
Upload Rate:		Cx Min:	0	) bps	Cx Ave	e:	0 bps	Cx Max:	0 bps	All Cx:	0 bps
										Total: 918.072	Mbps
Aggregated Rate	e:	Min:	0	) bps	Avg:	18.001	Mbps	Max:	19.518 Mbps		
Non-Transmittir	ng en	dpoints:	(3) ud	lp 1	.eth2-01	L.sta02048	-A udp	1.eth2-	01.sta02049-A	udp1.eth2-01	.sta02500-A



Requested Paramet	ers:	COTO 12 (10 CO	0 141	100000000 (	1 (1 )		
Download Rate: Pe	r station: 19	607843 (19.60	8 MDDS) ALL:	1000000000 (	I GDDS)		
Upload Rate: Pe	r station:	0 ( 0	bps) All:	Θ (	0 bps)		
			Total:	1000000000 (	1 Gbps)		
Station count: 51	Connections	per station:	1 Payload	(PDU) sizes: AU	TO (AUTO)		
Observed Amount:							
Download Amount:	Cx Min:	0 B Cx	Ave: 130.43	8 MB Cx Max:	141.182 MB	All Cx:	6.496 GB
Upload Amount:	Cx Min:	0 B Cx	Ave:	0 B Cx Max:	0 B	All Cx:	0 B
						Total:	6.496 GB
Non-Transmitting	endpoints: (3)	udp1.eth2	-01.sta02048-	A udp1.eth2-0	1.sta02049-A	udp1.eth	2-01.sta02500-A



Requested Para	meters:				
Download Rate:	Per station: 19	9230769 (19.231 Mb	ps) All: 100	0000000 ( 1 Gbps)	
Upload Rate:	Per station:	0 ( 0 bps	) All:	0 ( 0 bps)	
			Total: 1000	000000 ( 1 Gbps)	
Station count:	52 Connection	s per station: 1	Payload (PDU)	sizes: AUTO (AUTO)	
Observed Rate:					
Download Rate:	Cx Min:	0 bps Cx Ave:	17.754 Mbps	Cx Max: 19.247 Mbps	All Cx: 923.217 Mbps
Upload Rate:	Cx Min:	0 bps Cx Ave:	0 bps	Cx Max: 0 bps	All Cx: 0 bps
					Total: 923.217 Mbps
Aggregated Rate	e: Min:	0 bps Avg:	17.754 Mbps	Max: 19.247 Mbps	
Non-Transmittin	na endpoints: (3	) udp1.eth2-01.	sta02049-A udp-	-1.eth2-01.sta02500-	A udp1.eth2-01.sta02501-A



Requested Param	neter	rs:										
Download Rate:	Per	station:	1923076	59 (3	19.23	31 Mb	ps) All:	100	00000000 (	1 Gbps)		
Upload Rate:	Per	station:		0 (	(	) bps	) All:		Θ (	0 bps)		
							Total:	1000	0000000 (	1 Gbps)		
Station count:	52	Connecti	ons per	stat	ion	: 1	Payload	(PDU)	sizes: AUT	0 (AUTO)		
Observed Amount	:											
Download Amount	:	Cx Min:		0 B	Сx	Ave:	128.63	6 MB	Cx Max:	138.71 MB	All Cx:	6.532 GB
Upload Amount:		Cx Min:		0 B	Сx	Ave:		0 B	Cx Max:	0 B	All Cx:	0 B
											Total:	6.532 GB
Non-Transmittin	na er	ndpoints:	(3) udr	o 1	eth	2-01.	sta02049-	A udp	1.eth2-01	.sta02500-A	udp1.eth2	-01.sta02501-A



Requested Param	neters:						
Download Rate:	Per station: 18	867924 (18.86	B Mbps) All: 1	0000000000000	( 1 Gbps)		
Upload Rate:	Per station:	0 ( 0	bps) All:	0 (	0 bps)		
•			Total: 10	000000000 (	1 Gbps)		
Station count:	53 Connections	per station:	1 Payload (PDU	J) sizes: Al	JTO (AUTO)		
Observed Rate:							
Download Rate:	Cx Min:	0 bps Cx	Ave: 17.206 Mbps	S Cx Max:	18.705 Mbps	All Cx: 911.908	3 Mbps
Upload Rate:	Cx Min:	0 bps Cx	Ave: 0 bps	Cx Max:	0 bps	All Cx:	0 bps
						Total: 911.908	Mbps
Aggregated Rate	e: Min:	0 bps Avg	: 17.206 Mbps	Max:	18.705 Mbps		
Non-Transmittir	ng endpoints: (3)	udp1.eth2	-01.sta02500-A ud	lp1.eth2-0	01.sta02501-A	udp1.eth2-01	.sta02502-A



Download Amount:	Cx Min:		0 B	Cx Ave	: 124.741 M	1B Co	<pre>K Max:</pre>	135.736 MB	All Cx:	6.456 GB
Upload Amount:	Cx Min:		0 B	Cx Ave	: 0	B C:	<pre>K Max:</pre>	0 B	All Cx:	0 B
									Total:	6.456 GB
Non-Transmitting	endpoints:	(3)	udp1.	eth2-01	.sta02500-A ι	udp 3	1.eth2-0	1.sta02501-A	udp1.	eth2-01.sta02502-A



Requested Para	meters:				
Download Rate:	Per station: 18	518518 (18.519 Mb	ops) All: 10000000	00 ( 1 Gbps)	
Upload Rate:	Per station:	0 ( 0 bps	) All: 0	( 0 bps)	
			Total: 100000000	) ( 1 Gbps)	
Station count:	54 Connections	per station: 1	Payload (PDU) sizes:	AUTO (AUTO)	
Observed Rate:					
Download Rate:	Cx Min:	0 bps Cx Ave:	16.918 Mbps Cx Max	c: 18.41 Mbps	All Cx: 913.549 Mbps
Upload Rate:	Cx Min:	0 bps Cx Ave:	0 bps Cx Max	<: 0 bps	All Cx: 0 bps
					Total: 913.549 Mbps
Aggregated Rate	e: Min:	0 bps Avg:	16.918 Mbps Max:	18.41 Mbps	
Non-Transmitti	ng endpoints: (3)	udp1.eth2-01.	sta02501-A udp1.eth	n2-01.sta02502-A	udp1.eth2-01.sta02503-A



Download Rate:	Per	station: 1	851851	.8 (	18.51	9 Mbp	os) All:	1000	0000000	1 Gbps)		
Upload Rate:	Per	station:		0 (	G	bps)	) All:		0 (	0 bps)		
							Total:	10000	000000 (	1 Gbps)		
Station count:	54	Connectior	ns per	sta	tion:	1	Payload (	PDU) :	sizes: Al	JTO (AUTO)		
Observed Amount	t:											
Download Amount	t:	Cx Min:		0 B	Сx	Ave:	122.783	MB (	Cx Max:	133.782 MB	All Cx:	6.475 GB
Upload Amount:		Cx Min:		0 B	Cx	Ave:		0В (	Cx Max:	0 B	All Cx:	0 B
											Total:	6.475 GB
Non-Transmittin	na ei	ndpoints: (3	abu (8	1	.eth2	-01.9	sta02501-A	udp-	1.eth2-0	01.sta02502-A	udp1.eth2	01.sta02503-A



Requested Param	eters:							
Download Rate:	Per station: 18	3181818 (18	.182 Mbps	) All: 100	90000000	( 1 Gbps)		
Upload Rate:	Per station:	Θ (	0 bps)	All:	Θ (	0 bps)		
			T	otal: 1000	9000000 (	1 Gbps)		
Station count:	55 Connections	s per stati	on:1 P	ayload (PDU)	sizes: Al	JTO (AUTO)		
Observed Rate:								
Download Rate:	Cx Min:	0 bps	Cx Ave:	16.73 Mbps	Cx Max:	18.117 Mbps	All Cx: 920.141	Mbps
Upload Rate:	Cx Min:	0 bps	Cx Ave:	0 bps	Cx Max:	0 bps	All Cx:	0 bps
							Total: 920.141	Mbps
Aggregated Rate	: Min:	0 bps	Avg:	16.73 Mbps	Max:	18.117 Mbps		
Non-Transmittin	g endpoints: (3)	udp1.e	th2-01.st	a02502-A udp	1.eth2-0	01.sta02503-A	udp1.eth2-01.	sta02504-A



Download Rate:	Per	station:	1818181	8 (1	8.18	2 Mbp	os) All:	10	00000000	(	1 Gbps)			
Upload Rate:	Per	station:		0 (	0	bps)	All:		Θ (	(	) bps)			
							Total:	100	0000000	( :	L Gbps)			
Station count:	55	Connecti	ons per	stat	ion:	1	Payload	(PDU)	sizes:	AUT0	(AUTO)			
Observed Amount	t:													
Download Amount	t:	Cx Min:		0 B	Cx	Ave:	121.34	4 MB	Cx Max:	13	31.064 MB	All	Cx:	6.517 GB
Upload Amount:		Cx Min:		0 B	Cx	Ave:		0 B	Cx Max:		0 B	All	Cx:	0 B
												Tota	l:	6.517 GB

Requested Parameters:

Non-Transmitting endpoints: (3) udp--1.eth2-01.sta02502-A udp--1.eth2-01.sta02503-A udp--1.eth2-01.sta02504-A

This graph shows fairness. On a fair system, each station should get about the same throughput. In the download direction, it is mostly the device-under-test that is responsible for this behavior, but in the upload direction, LANforge itself would be the source of most fairness issues unless the device-under-test takes specific actions to ensure fairness.



Requested Param	eters:				
Download Rate:	Per station: 17	857142 (17.857 N	1bps) All: 10	00000000 ( 1 Gbps)	
Upload Rate:	Per station:	0 ( 0 bp	s) All:	0 ( 0 bps)	
			Total: 100	0000000 ( 1 Gbps)	
Station count:	56 Connections	per station: 1	Payload (PDU)	sizes: AUTO (AUTO)	
Observed Rate:					
Download Rate:	Cx Min:	0 bps Cx Ave	e: 15.845 Mbps	Cx Max: 17.187 Mbps	all Cx: 887.341 Mbps
Upload Rate:	Cx Min:	0 bps Cx Ave	e: 0 bps	Cx Max: 0 bps	s All Cx: 0 bps
					Total: 887.341 Mbps
Aggregated Rate	: Min:	0 bps Avg:	15.845 Mbps	Max: 17.187 Mbps	5
Non-Transmittin	g endpoints: (3)	udp1.eth2-01	L.sta02503-A udp	1.eth2-01.sta02504	A udp1.eth2-01.sta02505-A



Download Rate:	Per	station:	1785714	12 (1	.7.857	Mbps) Al	l: 10	0000000000	( 1 Gbps)		
Upload Rate:	Per	station:		0 (	0 b	ps) All:		0 (	0 bps)		
						Total:	100	00000000 (	1 Gbps)		
Station count:	56	Connecti	ons per	stat	ion: 1	Payloa	d (PDU)	sizes: Al	JTO (AUTO)		
Observed Amoun	t:										
Download Amoun	t:	Cx Min:		0 B	Cx Av	e: 114.	775 MB	Cx Max:	124.069 MB	All Cx:	6.277 GB
Upload Amount:		Cx Min:		0 B	Cx Av	e:	0 B	Cx Max:	0 B	All Cx:	0 B
										Total:	6.277 GB
Non-Transmitti	na e	ndnoints:	(3) udr	1	eth2-0	1.sta0250	3-A udr	1.eth2-6	91.sta02504-A	udp1.et	th2-01_sta02505-A



Requested Param	neters:				
Download Rate:	Per station: 17	543859 (17.544 Mb	ps) All: 100000000	) ( 1 Gbps)	
Upload Rate:	Per station:	0 ( 0 bps	) All: 0 (	0 bps)	
			Total: 100000000	( 1 Gbps)	
Station count:	57 Connections	per station: 1	Payload (PDU) sizes:	AUTO (AUTO)	
Observed Rate:					
Download Rate:	Cx Min:	0 bps Cx Ave:	15.853 Mbps Cx Max:	17.234 Mbps	All Cx: 903.645 Mbps
Upload Rate:	Cx Min:	0 bps Cx Ave:	0 bps Cx Max:	0 bps	All Cx: 0 bps
					Total: 903.645 Mbps
Aggregated Rate	e: Min:	0 bps Avg:	15.853 Mbps Max:	17.234 Mbps	
Non-Transmittir	ng endpoints: (3)	udp1.eth2-01.	sta02504-A udp1.eth2	-01.sta02505-A	udp1.eth2-01.sta02506-A



Download Rate:	Per	station:	175438	59	(17.5	44 Mb	ps) All:	100	00000000 (	1 Gbps)		
Upload Rate:	Per	station:		0	(	0 bps	) All:		Θ (	0 bps)		
							Total:	1000	0000000 (	1 Gbps)		
Station count:	57	Connectio	ons per	sta	ation	: 1	Payload (	PDU)	sizes: AU	TO (AUTO)		
Observed Amount	t:											
Download Amount	t:	Cx Min:		0 8	B Cx	Ave:	114.137	MB	Cx Max:	124.205 MB	All Cx:	6.353 GB
Upload Amount:		Cx Min:		0 8	B Cx	Ave:		0 B	Cx Max:	0 B	All Cx:	0 B
											Total:	6.353 GB
Non-Transmittin	na ei	ndpoints:	(3) ud	n 1	l.eth	2-01.	sta02504-A	udp.	-1.eth2-0	1.sta02505-A	udp1.eth2	-01.sta02506-A



Requested Param	neters:				
Download Rate:	Per station: 172	241379 (17.241 Mb	os) All: 100000000	( 1 Gbps)	
Upload Rate:	Per station:	0 ( 0 bps	) All: 0(	0 bps)	
			Total: 1000000000 (	1 Gbps)	
Station count:	58 Connections	per station: 1	Payload (PDU) sizes: A	UTO (AUTO)	
Observed Rate:					
Download Rate:	Cx Min:	0 bps Cx Ave:	15.804 Mbps Cx Max:	17.115 Mbps	All Cx: 916.607 Mbps
Upload Rate:	Cx Min:	0 bps Cx Ave:	0 bps Cx Max:	0 bps	All Cx: 0 bps
					Total: 916.607 Mbps
Aggregated Rate	e: Min:	0 bps Avg:	15.804 Mbps Max:	17.115 Mbps	
Non-Transmittin	ng endpoints: (3)	udp1.eth2-01.	sta02505-A udp1.eth2-0	01.sta02506-A	udp1.eth2-01.sta02507-A



Requested Param	nete	rs:										
Download Rate:	Per	station:	172413	79 (	17.2	41 Mb	ps) All:	100	0000000	( 1 Gbps)		
Upload Rate:	Per	station:		0 (	( )	0 bps	) All:		0 (	0 bps)		
							Total:	1000	000000 (	1 Gbps)		
Station count:	58	Connecti	ons per	sta	ation	: 1	Payload	(PDU)	sizes: A	UTO (AUTO)		
Observed Amount	t:											
Download Amount	t:	Cx Min:		0 E	3 Cx	Ave:	114.80	9 MB (	Cx Max:	124.192 MB	All Cx:	6.503 GB
Upload Amount:		Cx Min:		0 E	B Cx	Ave:		0 B	Cx Max:	0 B	All Cx:	0 B
											Total:	6.503 GB
Non-Transmittir	na ei	ndpoints:	(3) udi	) - <i>-</i> 1	L.eth	2-01.	sta02505-	- abu A	-1.eth2-	01.sta02506-A	udp1.eth2	-01.sta02507-A



Requested Param	neters:				
Download Rate:	Per station: 16	949152 (16.949 M	bps) All: 10	00000000 ( 1 Gbps)	
Upload Rate:	Per station:	0 ( 0 bp	s) All:	0 ( 0 bps)	
			Total: 100	0000000 ( 1 Gbps)	
Station count:	59 Connections	per station: 1	Payload (PDU)	sizes: AUTO (AUTO)	
Observed Rate:					
Download Rate:	Cx Min:	0 bps Cx Ave	: 15.559 Mbps	Cx Max: 16.856 Mbps	all Cx: 917.972 Mbps
Upload Rate:	Cx Min:	0 bps Cx Ave	: 0 bps	Cx Max: 0 bps	s All Cx: 0 bps
					Total: 917.972 Mbps
Aggregated Rate	e: Min:	0 bps Avg:	15.559 Mbps	Max: 16.856 Mbps	5
Non-Transmittir	ng endpoints: (3)	udp1.eth2-01	.sta02506-A udp	1.eth2-01.sta02507	A udp1.eth2-01.sta02508-A



										•			
Upload Rate:	Per	station:		0 (		0 bps	) All:		0 (	0	bps)		
							Total:	100	0000000 (	( 1	Gbps)		
Station count:	59	Connection	s per	sta	tion	: 1	Payload	(PDU)	sizes: A	AUT0	(AUTO)		
Observed Amount	t:												
Download Amount	t:	Cx Min:		0 B	Cx	Ave:	113.25	6 MB	Cx Max:	122	2.686 MB	All Cx:	6.525 GB
Upload Amount:		Cx Min:		0 B	Сx	Ave:		0 B	Cx Max:		0 B	All Cx:	0 B
												Total:	6.525 GB
Non-Transmittir	na e	ndnoints: (3	) ud	n 1	eth	2-01	sta02506	A udn	1.eth2-	01.51	a02507-A	udn1.et	h2-01_sta02508-A



Requested Param	eters:					
Download Rate:	Per station: 16	666666 (16.667	Mbps) All: 1	.0000000000 ( 1 G	bps)	
Upload Rate:	Per station:	0 ( 0	bps) All:	0 ( 0 bp	s)	
			Total: 10	1000000000 ( 1 Gb	ps)	
Station count:	60 Connections	per station:	1 Payload (PDL	) sizes: AUTO (AU	T0)	
Observed Rate:						
Download Rate:	Cx Min:	0 bps Cx A	ve: 15.299 Mbps	Cx Max: 16.623	Mbps All Cx: 917.9	57 Mbps
Upload Rate:	Cx Min:	0 bps Cx A	ve: 0 bps	Cx Max:	0 bps All Cx:	0 bps
					Total: 917.95	57 Mbps
Aggregated Rate	: Min:	0 bps Avg:	15.299 Mbps	Max: 16.623	Mbps	
Non-Transmittin	g endpoints: (3)	udp1.eth2-	01.sta02507-A ud	lp1.eth2-01.sta0	2508-A udp1.eth2-0	1.sta02509-A



Download Amount:	Cx Min:	0 B	Cx Ave	: 111.634 MB	Cx Max:	122.258 MB	All Cx:	6.541 GB
Upload Amount:	Cx Min:	0 B	Cx Ave	: 0 B	Cx Max:	0 B	All Cx:	0 B
							Total:	6.541 GB
Non-Transmitting @	endpoints: (3	3) udp1.	eth2-01	.sta02507-A udp	1.eth2-	01.sta02508-A	udp1.eth2	-01.sta02509-A



Requested Param	eters:				
Download Rate:	Per station: 10	5393442 (16.393 Mb	ops) All: 10	00000000 ( 1 Gbps)	
Upload Rate:	Per station:	0 ( 0 bps	) All:	0 ( 0 bps)	
			Total: 100	0000000 ( 1 Gbps)	
Station count:	61 Connection	s per station: 1	Payload (PDU)	sizes: AUTO (AUTO)	
Observed Rate:					
Download Rate:	Cx Min:	0 bps Cx Ave:	15.082 Mbps	Cx Max: 16.328 Mbps	All Cx: 920.004 Mbps
Upload Rate:	Cx Min:	0 bps Cx Ave	0 bps	Cx Max: 0 bps	All Cx: 0 bps
					Total: 920.004 Mbps
Aggregated Rate	: Min:	0 bps Avg:	15.082 Mbps	Max: 16.328 Mbps	
Non-Transmittin	a endpoints: (3	udp1.eth2-01.	sta02508-A udr	1.eth2-01.sta02509-A	udp1.eth2-01.sta02510-A



Station count: 61 Connections per station: 1 Payload (PDU) sizes: AUTO (AUTO) Observed Amount:

Download Amount:	Cx Min:	Θ	B Cx	Ave	: 109.686 MB	Cx	Max:	118.705 MB	All Cx	6.534 GB
Upload Amount:	Cx Min:	Θ	B Cx	Ave	: 0 B	Cx	Max:	0 B	All Cx	0 B
									Total:	6.534 GB
Non-Transmitting	endpoints:	(3) udp	1.eth2	2-01	.sta02508-A udp	1.	eth2-01	.sta02509-A	udp 1	eth2-01.sta02510-A

This graph shows fairness. On a fair system, each station should get about the same throughput. In the download direction, it is mostly the device-under-test that is responsible for this behavior, but in the upload direction, LANforge itself would be the source of most fairness issues unless the device-under-test takes specific actions to ensure fairness.



Requested Param	neters:				
Download Rate:	Per station: 16	129032 (16.129 M	bps) All: 10000	00000 ( 1 Gbps)	
Upload Rate:	Per station:	0 ( 0 bp	s) All:	0 ( 0 bps)	
			Total: 100000	00000 ( 1 Gbps)	
Station count:	62 Connections	per station: 1	Payload (PDU) si	zes: AUTO (AUTO)	
Observed Rate:					
Download Rate:	Cx Min:	0 bps Cx Ave	: 14.775 Mbps Cx	Max: 15.98 Mbps	All Cx: 916.044 Mbps
Upload Rate:	Cx Min:	0 bps Cx Ave	: 0 bps Cx	Max: 0 bps	All Cx: 0 bps
					Total: 916.044 Mbps
Aggregated Rate	e: Min:	0 bps Avg:	14.775 Mbps Ma	x: 15.98 Mbps	
Non-Transmittir	ng endpoints: (3)	udp1.eth2-01	.sta02509-A udp1	.eth2-01.sta02510-A	udp1.eth2-01.sta02511-A



Ubserved Amount:								
Download Amount:	Cx Min:	0 B	Cx Ave:	109.873 MB	Cx Max:	119.112 MB	All Cx:	6.652 GB
Upload Amount:	Cx Min:	0 B	Cx Ave:	0 B	Cx Max:	0 B	All Cx:	0 B
							Total:	6.652 GB
Non-Transmitting e	ndpoints: (3)	udp1.	eth2-01.s	ta02509-A udp	1.eth2-0	1.sta02510-A	udp1.eth2	-01.sta02511-A



Requested Para	meters:							
Download Rate:	Per station:	15873015 (1	5.873 Mbp	os) All: 10	00000000	( 1 Gbps)		
Upload Rate:	Per station:	Θ (	0 bps)	All:	Θ (	0 bps)		
				Total: 100	0000000 (	1 Gbps)		
Station count:	63 Connectio	ns per stat:	lon: 1	Payload (PDU)	sizes: A	UTO (AUTO)		
Observed Rate:								
Download Rate:	Cx Min:	0 bps	Cx Ave:	14.509 Mbps	Cx Max:	15.764 Mbps	All Cx: 914.037	'Mbps
Upload Rate:	Cx Min:	0 bps	Cx Ave:	0 bps	Cx Max:	0 bps	All Cx:	0 bps
							Total: 914.037	Mbps
Aggregated Rate	e: Min:	0 bps	Avg:	14.509 Mbps	Max:	15.764 Mbps		
Non-Transmittin	ng endpoints: (	3) udp1.0	eth2-01.s	ta02510-A udp	1.eth2-	01.sta02511-A	udp1.eth2-01.	sta02512-A



Download Amount:	CX Min:	UB CX	Ave: 105./08	MB CX Max:	114.801 MB	ALL LX:	0.504 GB
Upload Amount:	Cx Min:	0 B Cx	Ave:	0 B Cx Max:	0 B	All Cx:	0 B
						Total:	6.504 GB
Non-Transmitting	endpoints: (3)	udp1.eth2	2-01.sta02510-A	udp1.eth2-0	1.sta02511-A	udp1.eth2	-01.sta02512-A



Requested Param	meters:						
Download Rate:	Per station: 1	5625000 (15	.625 Mbp	os) All: 10	00000000	( 1 Gbps)	
Upload Rate:	Per station:	Θ (	0 bps	) All:	Θ (	0 bps)	
-			-	Total: 100	0000000 (	1 Gbps)	
Station count:	64 Connection	s per stati	on: 1	Payload (PDU)	sizes: Al	JTO (AUTO)	
Observed Rate:							
Download Rate:	Cx Min:	0 bps	Cx Ave:	14.57 Mbps	Cx Max:	15.57 Mbps	All Cx: 932.461 Mbps
Upload Rate:	Cx Min:	0 bps	Cx Ave:	0 bps	Cx Max:	0 bps	All Cx: 0 bps
							Total: 932.461 Mbps
Aggregated Rate	e: Min:	0 bps	Avg:	14.57 Mbps	Max:	15.57 Mbps	
Non-Transmittir	ng endpoints: (2	) udp1.e	th2-01.s	sta02512-A udp	1.eth2-0	01.sta02513-A	



Observed Amount:						
Download Amount:	Cx Min:	0 B Cx Ave:	107.157 MB Cx	Max: 115.406 MB	All Cx:	6.697 GB
Upload Amount:	Cx Min:	0 B Cx Ave:	0 B Cx	Max: 0 B	All Cx:	0 B
					Total:	6.697 GB
Non-Transmitting	endpoints: (2)	udp1.eth2-01.s	ta02512-A udp1	.eth2-01.sta02513-A		



Requested Param	neters:						
Download Rate:	Per station: 1	5384615 (1	5.385 Mbp	os) All: 10	00000000	( 1 Gbps)	
Upload Rate:	Per station:	Θ (	0 bps)	All: Total: 100	0 ( 0000000 (	0 bps) 1 Gbps)	
Station count:	65 Connection	s per stat	ion: 1	Payload (PDU)	sizes: A	UTO (AUTO)	
Observed Rate:							
Download Rate:	Cx Min:	0 bps	Cx Ave:	14.201 Mbps	Cx Max:	15.235 Mbps	All Cx: 923.063 Mbps
Upload Rate:	Cx Min:	0 bps	Cx Ave:	0 bps	Cx Max:	0 bps	All Cx: 0 bps Total: 923.063 Mbps
Aggregated Rate	e: Min:	0 bps	Avg:	14.201 Mbps	Max:	15.235 Mbps	
Non-Transmittir	ng endpoints: (2	) udp1.	eth2-01.s	sta02513-A udp	1.eth2-	01.sta02514-A	



Station count: 65	Connections per	station: 1	Payload (PDU)	sizes: AU	TO (AUTO)		
Observed Amount: Download Amount: Upload Amount:	Cx Min: Cx Min:	0 B Cx Ave: 0 B Cx Ave:	105.084 MB 0 B	Cx Max: Cx Max:	113.081 MB 0 B	All Cx: All Cx: Total:	6.67 GB 0 B 6.67 GB

Non-Transmitting endpoints: (2) udp--1.eth2-01.sta02513-A udp--1.eth2-01.sta02514-A

This graph shows fairness. On a fair system, each station should get about the same throughput. In the download direction, it is mostly the device-under-test that is responsible for this behavior, but in the upload direction, LANforge itself would be the source of most fairness issues unless the device-under-test takes specific actions to ensure fairness.



Requested Para	meters:					
Download Rate:	Per station: 1	5151515 (15.15)	2 Mbps) All:	1000000000 ( 1	Gbps)	
Upload Rate:	Per station:	0 ( 0	bps) All:	0 ( 0	bps)	
•			Total: 1	000000000 ( 1	Gbps)	
Station count:	66 Connection	s per station:	1 Payload (PD	U) sizes: AUTO (	AUTO)	
Observed Rate:						
Download Rate:	Cx Min:	0 bps Cx	Ave: 14.033 Mbp	s Cx Max: 15.0	56 Mbps All Cx:	926.154 Mbps
Upload Rate:	Cx Min:	0 bps Cx	Ave: 0 bp	s Cx Max:	0 bps All Cx:	0 bps
					Total: 9	926.154 Mbps
Aggregated Rate	e: Min:	0 bps Avg	: 14.033 Mbp	s Max: 15.0	)56 Mbps	
Non-Transmittin	ng endpoints: (3	) udp1.eth2	-01.sta02513-A u	dp1.eth2-01.st	a02514-A udp1.e	eth2-01.sta02515-A



Non-Transmitting endpoints: (3) udp--1.eth2-01.sta02513-A udp--1.eth2-01.sta02514-A udp--1.eth2-01.sta02515-A

This graph shows fairness. On a fair system, each station should get about the same throughput. In the download direction, it is mostly the device-under-test that is responsible for this behavior, but in the upload direction, LANforge itself would be the source of most fairness issues unless the device-under-test takes specific actions to ensure fairness.



Requested Para	meter	s:										
Download Rate:	Per	station:	149253	373 (1	14.92	5 Mbj	ps) All	: 10	00000000	( 1 Gbps)		
Upload Rate:	Per	station:		0 (	0	bps	) All:		Θ (	0 bps)		
							Total:	100	0000000 (	( 1 Gbps)		
Station count:	67	Connecti	ons pei	- sta	tion:	1	Payload	(PDU)	sizes: A	AUTO (AUTO)		
Observed Rate:												
Download Rate:		Cx Min:	6	) bps	Cx .	Ave:	13.553	Mbps	Cx Max:	14.723 Mbps	All Cx: 908.08	1 Mbps
Upload Rate:		Cx Min:	6	) bps	Cx .	Ave:		0 bps	Cx Max:	0 bps	All Cx:	0 bps
											Total: 908.081	Mbps
Aggregated Rate	e:	Min:	6	) bps	Avg	:	13.553	Mbps	Max:	14.723 Mbps		
Non-Transmitti	ng en	dpoints:	(3) uo	ip 1	.eth2	-01.	sta02514	-A udp	1.eth2-	01.sta02515-A	udp1.eth2-01	.sta02516-A



Non-Transmitting endpoints: (3) udp--1.eth2-01.sta02514-A udp--1.eth2-01.sta02515-A udp--1.eth2-01.sta02516-A

This graph shows fairness. On a fair system, each station should get about the same throughput. In the download direction, it is mostly the device-under-test that is responsible for this behavior, but in the upload direction, LANforge itself would be the source of most fairness issues unless the device-under-test takes specific actions to ensure fairness.



Requested Para	meter	s:									
Download Rate:	Per	station:	1470	95882 (1	4.706 Mb	ps) All	: 10	00000000	( 1 Gbps)		
Upload Rate:	Per	station:		0 (	0 bps	) All:		Θ (	0 bps)		
•						Total:	100	0000000	( 1 Gbps)		
Station count:	68	Connecti	ons p	per stat	ion: 1	Payload	(PDU)	sizes: /	AUTO (AUTO)		
Observed Rate:											
Download Rate:		Cx Min:		0 bps	Cx Ave:	13.365	Mbps	Cx Max:	14.468 Mbps	All Cx: 908.7	87 Mbps
Upload Rate:		Cx Min:		0 bps	Cx Ave:		0 bps	Cx Max:	0 bps	All Cx:	0 bps
										Total: 908.78	7 Mbps
Aggregated Rate	e:	Min:		0 bps	Avg:	13.365	Mbps	Max:	14.468 Mbps		
Non-Transmitti	ng en	dpoints:	(3)	udp1.	eth2-01.	sta02515	-A udp	1.eth2	-01.sta02516-A	udp1.eth2-0	1.sta02517-A



Download Amount:	Cx Min:	0 B	Cx Ave	: 99.011 MB	Cx Max:	107.928 MB	ALL CX:	6.5/5 GB
Upload Amount:	Cx Min:	0 B	Cx Ave	: 0 B	Cx Max:	0 B	All Cx:	0 B
							Total:	6.575 GB
Non-Transmitting	endpoints:	(3) udp1	.eth2-01	.sta02515-A ud	p1.eth2-0	1.sta02516-A	udp1.eth2	-01.sta02517-A



Requested Parame	ters:				
ownload Rate: P	er station: 1	4492753 (14.493 Mbp	s) All: 100000000	( 1 Gbps)	
Jpload Rate: P	er station:	0 ( 0 bps)	All: 0 (	0 bps)	
			Total: 1000000000 (	1 Gbps)	
Station count: 6	9 Connection	ns per station: 1	Payload (PDU) sizes: A	UTO (AUTO)	
)bserved Rate:					
Oownload Rate:	Cx Min:	0 bps Cx Ave:	13.466 Mbps Cx Max:	14.429 Mbps	All Cx: 929.14 Mbps
Jpload Rate:	Cx Min:	0 bps Cx Ave:	0 bps Cx Max:	0 bps	All Cx: 0 bps
					Total: 929.14 Mbps
Aggregated Rate:	Min:	0 bps Avg:	13.466 Mbps Max:	14.429 Mbps	
Ion-Transmitting	endpoints: (3	3) udp1.eth2-01.s	ta02516-A udp1.eth2-	01.sta02517-A	udp1.eth2-01.sta02518-/



Download Amount:	Cx Min:		0 B	Cx Ave	: 100.463	MR (	Cx Max:	107.606 MB	ALL CX	: 6.//GB
Upload Amount:	Cx Min:		0 B	Cx Ave	: 6	) B (	Cx Max:	0 B	All Cx	: 0 B
									Total:	6.77 GB
Non-Transmitting	endpoints:	(3) u	dp1.	eth2-01	.sta02516-A	- abu	-1.eth2-	01.sta02517-A	udp 1	.eth2-01.sta02518-A



			BDI -Download B ODI -Opioad					
Requested Param	eters:							
Download Rate:	Per station:	14285714 (1	4.286 Mbps)	All: 10	00000000 (	1 Gbps)		
Upload Rate:	Per station:	Θ (	0 bps) Al	11:	Θ (	0 bps)		
			Tota	al: 100	0000000 (	1 Gbps)		
Station count:	70 Connect:	lons per stat	ion:1 Payl	Load (PDU)	sizes: AUT	0 (AUTO)		
Observed Rate:								
Download Rate:	Cx Min:	0 bps	Cx Ave: 13.	.357 Mbps	Cx Max: 1	4.219 Mbps	All Cx: 934.987	/ Mbps
Upload Rate:	Cx Min:	0 bps	Cx Ave:	0 bps	Cx Max:	0 bps	All Cx:	0 bps
							Total: 934.987	Mbps
Aggregated Rate	: Min:	0 bps	Avg: 13.	.357 Mbps	Max: 1	4.219 Mbps		•
Non-Transmittin	q endpoints:	(3) udp1.	eth2-01.sta02	2517-A udp	1.eth2-01	.sta02518-A	udp1.eth2-01.	sta02519-A


Observed Amount:								
Download Amount:	Cx Min:	0 B	Cx Ave:	99.862 MB	Cx Max:	106.187 MB	All Cx:	6.827 GB
Upload Amount:	Cx Min:	0 B	Cx Ave:	0 B	Cx Max:	0 B	All Cx:	0 B
							Total:	6.827 GB
Non-Transmitting	endpoints: (3)	udp1.	eth2-01.s	sta02517-A udp	1.eth2-0	l.sta02518-A	udp1.eth	2-01.sta02519-A



Requested Param	eters:				
Download Rate:	Per station: 14	4084507 (14.085 Mb	ps) All: 100	00000000 ( 1 Gbps)	
Upload Rate:	Per station:	0 ( 0 bps	) All:	0 ( 0 bps)	
			Total: 1000	0000000 ( 1 Gbps)	
Station count:	71 Connection	s per station: 1	Payload (PDU)	sizes: AUTO (AUTO)	
Observed Rate:					
Download Rate:	Cx Min:	0 bps Cx Ave:	13.026 Mbps	Cx Max: 14.032 Mbps	All Cx: 924.838 Mbps
Upload Rate:	Cx Min:	0 bps Cx Ave:	0 bps	Cx Max: 0 bps	All Cx: 0 bps
					Total: 924.838 Mbps
Aggregated Rate	: Min:	0 bps Avg:	13.026 Mbps	Max: 14.032 Mbps	
Non-Transmittin	a endpoints: (3	) udp1.eth2-01.	sta02518-A udp	-1.eth2-01.sta02519-	A udp1.eth2-01.sta02520-A



Download Amount:	Cx Min:		0 B	Cx Ave:	97.333 MB	Cx Max:	104.529 MB	All Cx:	6.749 GB
Upload Amount:	Cx Min:		0 B	Cx Ave:	0 B	Cx Max:	0 B	All Cx:	0 B
								Total:	6.749 GB
Non-Transmitting	endpoints:	(3) udi	o1.	eth2-01.s	ta02518-A udn	1.eth2-	01.sta02519-A	udp 1.	eth2-01.sta02520-A



Requested Param	neters:				
Download Rate:	Per station: 13	8888888 (13.889 Mb	ps) All: 100000000	( 1 Gbps)	
Upload Rate:	Per station:	0 ( 0 bps	) All: 0(	0 bps)	
			Total: 100000000	( 1 Gbps)	
Station count:	72 Connections	per station: 1	Payload (PDU) sizes:	AUTO (AUTO)	
Observed Rate:					
Download Rate:	Cx Min:	0 bps Cx Ave:	12.657 Mbps Cx Max:	13.671 Mbps	All Cx: 911.305 Mbps
Upload Rate:	Cx Min:	0 bps Cx Ave:	0 bps Cx Max:	0 bps	All Cx: 0 bps
					Total: 911.305 Mbps
Aggregated Rate	e: Min:	0 bps Avg:	12.657 Mbps Max:	13.671 Mbps	
Non-Transmittir	ng endpoints: (3)	udp1.eth2-01.	sta02519-A udp1.eth2	-01.sta02520-A	udp1.eth2-01.sta02521-A



Download Amount:	Cx Min:	0 B Cx Ave	: 93.19 MB	Cx Max:	100.44 MB	All Cx:	6.552 GB
Upload Amount:	Cx Min:	0 B Cx Ave	: 0 B	Cx Max:	0 B	All Cx:	0 B
						Total:	6.552 GB
Non-Transmitting	endpoints: (3)	udp1.eth2-01	.sta02519-A udp	1.eth2-	01.sta02520-A	udp1.eth	2-01.sta02521-A



Requested Param	neters:				
Download Rate:	Per station: 1	3698630 (13.699 Mb	ops) All: 100	00000000 ( 1 Gbps)	
Upload Rate:	Per station:	0 ( 0 bps	) All:	0 ( 0 bps)	
•			Total: 1000	0000000 ( 1 Gbps)	
Station count:	73 Connection	s per station: 1	Payload (PDU)	sizes: AUTO (AUTO)	
Observed Rate:					
Download Rate:	Cx Min:	0 bps Cx Ave:	12.637 Mbps	Cx Max: 13.531 Mbps	All Cx: 922.469 Mbps
Upload Rate:	Cx Min:	0 bps Cx Ave:	0 bps	Cx Max: 0 bps	All Cx: 0 bps
•		·			Total: 922.469 Mbps
Aggregated Rate	e: Min:	0 bps Avg:	12.637 Mbps	Max: 13.531 Mbps	
Non-Transmittir	ng endpoints: (3	) udp1.eth2-01.	sta02520-A udp	-1.eth2-01.sta02521-A	udp1.eth2-01.sta02522-A



Observed Amount:								
Download Amount:	Cx Min:	0 B C	x Ave:	93.26 MB	Cx Max:	99.362 MB	All Cx:	6.648 GB
Upload Amount:	Cx Min:	0 B C	x Ave:	0 B	Cx Max:	0 B	All Cx:	0 B
							Total:	6.648 GB
Non-Transmitting e	ndpoints: (3)	udp1.et	h2-01.sta0	2520-A udp	1.eth2-01	.sta02521-A	udp1.eth	2-01.sta02522-A



Requested Para	meters:				
Download Rate:	Per station: 13	513513 (13.514 Mb	ops) All: 10000000	0 ( 1 Gbps)	
Upload Rate:	Per station:	0 ( 0 bps	s) All: 0	( 0 bps)	
			Total: 100000000	( 1 Gbps)	
Station count:	74 Connections	per station: 1	Payload (PDU) sizes:	AUTO (AUTO)	
Observed Rate:					
Download Rate:	Cx Min:	0 bps Cx Ave:	12.565 Mbps Cx Max	: 13.445 Mbps	All Cx: 929.812 Mbps
Upload Rate:	Cx Min:	0 bps Cx Ave:	0 bps Cx Max	: 0 bps	All Cx: 0 bps
					Total: 929.812 Mbps
Aggregated Rate	e: Min:	0 bps Avg:	12.565 Mbps Max:	13.445 Mbps	
Non-Transmittin	ng endpoints: (3)	udp1.eth2-01.	sta02521-A udp1.eth	2-01.sta02522-A	udp1.eth2-01.sta02523-A



Download Amount:	Cx Min:	0 B	Cx Ave:	92.727 MB	Cx Max:	98.952 MB	All Cx:	6.701 GB
Upload Amount:	Cx Min:	0 B	Cx Ave:	0 B	Cx Max:	0 B	All Cx:	0 B
							Total:	6.701 GB
Non-Transmitting	endpoints: (3	) udp1.e	th2-01.	sta02521-A udp	1.eth2-	01.sta02522-A	udp1.eth	n2-01.sta02523-A

Combined Received bytes, for entire 1 m run 100,000,000 90.000.000 80,000,000 Value (bytes) 70,000,000 60,000,000 50,000,000 40,000,000 30,000,000 20,000,000 10,000,000 0 Stations UDP-Download UDP-Upload

Requested Param	neters:				
Download Rate:	Per station: 133	333333 (13.333 Mb	ps) All: 100000000	) ( 1 Gbps)	
Upload Rate:	Per station:	0 ( 0 bps	) All: 0 (	0 bps)	
			Total: 100000000	( 1 Gbps)	
Station count:	75 Connections	per station: 1	Payload (PDU) sizes:	AUTO (AUTO)	
Observed Rate:					
Download Rate:	Cx Min:	0 bps Cx Ave:	12.337 Mbps Cx Max:	13.282 Mbps /	All Cx: 925.29 Mbps
Upload Rate:	Cx Min:	0 bps Cx Ave:	0 bps Cx Max:	0 bps /	All Cx: 0 bps
					Total: 925.29 Mbps
Aggregated Rate	e: Min:	0 bps Avg:	12.337 Mbps Max:	13.282 Mbps	
Non-Transmittin	ng endpoints: (3)	udp1.eth2-01.	sta02522-A udp1.eth2	2-01.sta02523-A u	udp1.eth2-01.sta02524-A



Download Amount:	Cx Min:	Θ	B Cx	Ave:	92.41 MB	Cx M	Max:	99.063 MB	All C×	: 6.768	GB
Upload Amount:	Cx Min:	Θ	B Cx	Ave:	0 B	Cx M	Max:	0 B	All C×	:	0 B
									Total:	6.768	GB
Non-Transmitting	endpoints:	(3) udp	1.eth	2-01.	sta02522-A udp	1.6	eth2-0	1.sta02523-A	udp 1	eth2-01.st	a02524-A



Requested Param	neter	5:									
Download Rate:	Per :	station:	13157	894 (1	13.158 Mb	os) All	: 10	00000000	( 1 Gbps)		
Upload Rate:	Per :	station:		0 (	0 bps	) All:		0 (	0 bps)		
						Total:	100	0000000 (	( 1 Gbps)		
Station count:	76	Connecti	ons pe	r stat	tion: 1	Payload	(PDU)	sizes: A	AUTO (AUTO)		
Observed Rate:											
Download Rate:	(	Cx Min:		0 bps	Cx Ave:	12.134	Mbps	Cx Max:	13.031 Mbps	All Cx: 922.18	9 Mbps
Upload Rate:	(	Cx Min:		0 bps	Cx Ave:		0 bps	Cx Max:	0 bps	All Cx:	0 bps
							•			Total: 922.189	Mbps
Aggregated Rate	e: 1	1in:		0 bps	Avg:	12.134	Mbps	Max:	13.031 Mbps		•
Non-Transmittin	ng end	dpoints:	(3) u	dp 1	eth2-01.	sta02523	-A udp	1.eth2-	01.sta02524-A	udp1.eth2-01	.sta02525-A



observed Amount.						
Download Amount: Cx !	Min: 0 B	Cx Ave: 90.796	MB Cx Max:	97.823 MB	All Cx:	6.739 GB
Upload Amount: Cx M	Min: 0 B	Cx Ave:	0 B Cx Max:	0 B	All Cx:	0 B
					Total:	6.739 GB
Non-Transmitting endpo:	ints: (3) udp1.e	th2-01.sta02523-A	udp1.eth2-01	.sta02524-A	udp1.eth2	-01.sta02525-A

Combined Received bytes, for entire 1 m run 100,000,000 90,000,000 80,000,000 Value (bytes) 70,000,000 60,000,000 50,000,000 40,000,000 30,000,000 20,000,000 10,000,000 0 Stations UDP-Download UDP-Upload

Requested Parameters:			
Nownload Pate: Per station: 120	27012 (12 087 Mbns) All 1000	000000 ( 1 Chos)	
Jowincoad Nate. Tel Station. 1250	7/012 (12.307 hbp3) Att. 1000	( 1 gph3)	
Jpload Rate: Per station:	0 ( 0 bps) All:	0 ( 0 bps)	
	Total: 10000	000000 ( 1 Ghns)	
Station county 77 Connections	on stations 1 Daylord (DDU)		
Station count. // connections p	Jei Station. I Faytoau (FDO) S	51265. AUTO (AUTO)	
Observed Date:			
Jbserved Rate:			
Download Rate: Cx Min:	0 bps Cx Ave: 12.086 Mbps (	Cx Max: 12.924 Mbps	All Cx: 930.629 Mbps
Inload Rate: Cx Min:	O hns (x Ave: O hns (	`x Max: 0 hns	All Cx: 0 bos
	0 bp3 ex Ave. 0 bp3 (	o bp5	
			Total: 930.629 Mbps
Aggregated Rate: Min:	0 bps Avg: 12.086 Mbps M	lax: 12.924 Mbps	
Non-Transmitting endpoints: (3)	udp1.eth2-01.sta02524-A udp	1.eth2-01.sta02525-A	udp1.eth2-01.sta02526-A



Observed Amount: Download Amount:	Cx Min:	0 B	Cx Ave:	90.913	MB C	x Max:	97.201 MB	All Cx:	6.836 GB
Upload Amount:	Cx Min:	0 B	Cx Ave:	G	вс	x Max:	0 B	All Cx:	0 B
								Total:	6.836 GB
Non-Transmitting e	ndpoints: (3)	udp1.0	eth2-01.	sta02524-A	udp	1.eth2-01	sta02525-A	udp1.et	h2-01.sta02526-A



Requested Parame	ters:							
Download Rate: P	er station: 128	20512 (12	.821 Mbps	) All: 100	00000000	1 Gbps)		
Upload Rate: P	er station:	Θ (	0 bps)	All:	Θ (	0 bps)		
			T	otal: 1000	0000000 (	1 Gbps)		
Station count: 7	8 Connections	per stati	on: 1 P	ayload (PDU)	sizes: Al	JTO (AUTO)		
Observed Rate:								
Download Rate:	Cx Min:	0 bps	Cx Ave:	11.78 Mbps	Cx Max:	12.683 Mbps	All Cx: 918.875	Mbps
Upload Rate:	Cx Min:	0 bps	Cx Ave:	0 bps	Cx Max:	0 bps	All Cx:	0 bps
		-					Total: 918.875	Mbps
Aggregated Rate:	Min:	0 bps	Avg:	11.78 Mbps	Max:	12.683 Mbps		
Non-Transmitting	endpoints: (3)	udp1.e	th2-01.st	a02525-A udp-	-1.eth2-0	01.sta02526-A	udp1.eth2-01.	sta02527-A



Non-Transmitting endpoints: (3) udp--1.eth2-01.sta02525-A udp--1.eth2-01.sta02526-A udp--1.eth2-01.sta02527-A

This graph shows fairness. On a fair system, each station should get about the same throughput. In the download direction, it is mostly the device-under-test that is responsible for this behavior, but in the upload direction, LANforge itself would be the source of most fairness issues unless the device-under-test takes specific actions to ensure fairness.

Combined Received bytes, for entire 1 m run 100,000,000 90.000.000 80,000,000 Value (bytes) 70,000,000 60,000,000 50,000,000 40,000,000 30,000,000 20,000,000 10,000,000 0 Stations

UDP-Download UDP-Upload

Requested Parameters: 58227 (12.658 Mbps) ... 0 ( 0 bps) All: Total: Download Rate: Per station: 12658227 (12.658 Mbps) All: 1000000000 ( 1 Gbps) Upload Rate: Per station: 0 ( 0 bps) 1000000000 ( 1 Gbps) Station count: 79 Connections per station: 1 Payload (PDU) sizes: AUTO (AUTO) Observed Rate: 0 bps Cx Ave: 11.598 Mbps Cx Max: 12.394 Mbps All Cx: 916.253 Mbps Cx Min: Download Rate: 0 bps Upload Rate: Cx Min: 0 bps Cx Ave: 0 bps Cx Max: 0 bps All Cx: Total: 916.253 Mbps 12.394 Mbps Aggregated Rate: Min: 0 bps Ava: 11.598 Mbps Max: Non-Transmitting endpoints: (3) udp--1.eth2-01.sta02526-A udp--1.eth2-01.sta02527-A udp--1.eth2-01.sta02528-A



Downtoau Amount.	CX PITH.		0 0	CX AVE	. 07.200	I'ID	CA Plax.	93.733 110	ALL LA.	0.734 00
Upload Amount:	Cx Min:		0 B	Cx Ave	: 6	) В	Cx Max:	0 B	All Cx:	0 B
									Total:	6.734 GB
Non-Transmitting	endpoints:	(3)	udp1.	eth2-01	.sta02526-A	- abu	-1.eth2-01	.sta02527-A	udp1.eth2	-01.sta02528-A



Requested Parameters: Download Rate: Per station: 12500000 (12.5 Mbps) All: 1000000000 ( 1 Gbps) Upload Rate: Per station: 0 ( 0 bps) All: Total: 0 ( 0 bps) 100000000 ( 1 Gbps) Station count: 80 Connections per station: 1 Payload (PDU) sizes: AUTO (AUTO) Observed Rate: 0 bps Cx Ave: 11.546 Mbps Cx Max: 12.382 Mbps All Cx: 923.718 Mbps Cx Min: Download Rate: Upload Rate: Cx Min: 0 bps Cx Ave: 0 bps Cx Max: 0 bps All Cx: 0 bps Total: 923.718 Mbps 12.382 Mbps Aggregated Rate: Min: 0 bps Ava: 11.546 Mbps Max: Non-Transmitting endpoints: (3) udp--1.eth2-01.sta02527-A udp--1.eth2-01.sta02528-A udp--1.eth2-01.sta02529-A



Download Amount:	Cx Min:	0 B	Cx Ave:	87.023 MB	S Cx Max:	93.32 MB	ALL CX:	6.799 GB
Upload Amount:	Cx Min:	0 B	Cx Ave:	. 0 B	Cx Max:	0 B	All Cx:	0 B
							Total:	6.799 GB
Non-Transmitting	endpoints:	(3) udp1.	eth2-01.	sta02527-A ud	lp1.eth2-0	01.sta02528-A	udp1.eth	2-01.sta02529-A



Requested Param	eters:										
Download Rate:	Per stati	ion: 123	845679	9 (12	.346 Mb	ops) All	: 100	00000000	( 1 Gbps)		
Upload Rate:	Per stati	Lon:	(	Э (	0 bps	5) All:		0 (	0 bps)		
						Total:	1000	0000000 (	1 Gbps)		
Station count:	81 Conr	nections	per s	stati	on: 1	Payload	(PDU)	sizes: A	UTO (AUTO)		
Observed Rate:											
Download Rate:	Cx Mi	in:	0 H	ops	Cx Ave:	11.538	Mbps	Cx Max:	12.333 Mbps	All Cx: 934.596	۵ Mbps
Upload Rate:	Cx Mi	in:	0 H	ops	Cx Ave:		0 bps	Cx Max:	0 bps	All Cx:	0 bps
										Total: 934.596	Mbps
Aggregated Rate	: Min:		0 k	ops	Avg:	11.538	Mbps	Max:	12.333 Mbps		
Non-Transmittin	g endpoir	nts: (3)	udp∙	1.e	th2-01.	.sta02528	-A udp	1.eth2-	01.sta02529-A	udp1.eth2-01	.sta02530-A



Station count: 81	Connections	per stat	10n: 1	Payload (PDU)	sizes: Al	JIO (AUIO)			
Observed Amount:									
Download Amount:	Cx Min:	0 B	Cx Ave:	86.716 MB	Cx Max:	92.893 MB	All Cx:	6.859 GB	
Upload Amount:	Cx Min:	0 B	Cx Ave:	0 B	Cx Max:	0 B	All Cx:	0 B	
							Total	6 859 GB	

Non-Transmitting endpoints: (3) udp--1.eth2-01.sta02528-A udp--1.eth2-01.sta02529-A udp--1.eth2-01.sta02530-A

This graph shows fairness. On a fair system, each station should get about the same throughput. In the download direction, it is mostly the device-under-test that is responsible for this behavior, but in the upload direction, LANforge itself would be the source of most fairness issues unless the device-under-test takes specific actions to ensure fairness.



Requested Parameters: Download Rate: Per station: 12195121 (12.195 Mbps) All: 1000000000 ( 1 Gbps) 0 bps) 0 ( 0 bps) All: Total: Upload Rate: Per station: 0 ( 10000000000 1 Gbps) Station count: 82 Connections per station: 1 Payload (PDU) sizes: AUTO (AUTO) Observed Rate: 0 bps Cx Ave: 11.392 Mbps Cx Max: 12.097 Mbps All Cx: 934.178 Mbps Cx Min: Download Rate: 0 bps Cx Ave: Upload Rate: Cx Min: 0 bps Cx Max: 0 bps All Cx: 0 bps Total: 934.178 Mbps 0 bps Avg: 11.392 Mbps Max: 12.097 Mbps Aggregated Rate: Min: Non-Transmitting endpoints: (3) udp--1.eth2-01.sta02529-A udp--1.eth2-01.sta02530-A udp--1.eth2-01.sta02531-A



UDSELVEU AMOUNTL.							
Download Amount: Cx Min:		0 B Cx Ave:	85.636 MB	Cx Max:	91.236 MB	All Cx:	6.858 GB
Upload Amount: Cx Min:		0 B Cx Ave:	0 B	Cx Max:	0 B	All Cx:	0 B
						Total:	6.858 GB
Non-Transmitting endpoints	s: (3)	udp1.eth2-01.sta	02529-A udp-	-1.eth2-	01.sta02530-A	udp1.e	eth2-01.sta02531-A



Requested Param	neters:				
Download Rate:	Per station: 120	048192 (12.048 Mb	ps) All: 100000000	( 1 Gbps)	
Upload Rate:	Per station:	0 ( 0 bps	) All: 0 (	0 bps)	
			Total: 100000000	( 1 Gbps)	
Station count:	83 Connections	per station: 1	Payload (PDU) sizes:	AUTO (AUTO)	
Observed Rate:					
Download Rate:	Cx Min:	0 bps Cx Ave:	11.02 Mbps Cx Max:	11.869 Mbps	All Cx: 914.676 Mbps
Upload Rate:	Cx Min:	0 bps Cx Ave:	0 bps Cx Max:	0 bps	All Cx: 0 bps
					Total: 914.676 Mbps
Aggregated Rate	e: Min:	0 bps Avg:	11.02 Mbps Max:	11.869 Mbps	
Non-Transmittin	ng endpoints: (3)	udp1.eth2-01.	sta02530-A udp1.eth2	-01.sta02531-A	udp1.eth2-01.sta02532-A



Observed Amount:								
Download Amount:	Cx Min:	0 B	Cx Ave:	83 MB	Cx Max:	89.212 MB	All Cx:	6.728 GB
Upload Amount:	Cx Min:	0 B	Cx Ave:	0 B	Cx Max:	0 B	All Cx:	0 B
							Total:	6.728 GB
Non-Transmitting e	endpoints: (3)	udp1.	eth2-01.sta02	530-A udp	1.eth2-01	.sta02531-A	udp1.eth2	-01.sta02532-A

Combined Received bytes, for entire 1 m run



Requested Param	eters:				
Download Rate:	Per station: 11	904761 (11.905 Mb	os) All: 1000000000	( 1 Gbps)	
Upload Rate:	Per station:	0 ( 0 bps	) All: 0(	0 bps)	
			Total: 100000000 (	1 Gbps)	
Station count:	84 Connections	per station: 1	Payload (PDU) sizes: A	UTO (AUTO)	
Observed Rate:					
Download Rate:	Cx Min:	0 bps Cx Ave:	10.824 Mbps Cx Max:	11.77 Mbps	All Cx: 909.197 Mbps
Upload Rate:	Cx Min:	0 bps Cx Ave:	0 bps Cx Max:	0 bps	All Cx: 0 bps
					Total: 909.197 Mbps
Aggregated Rate	e: Min:	0 bps Avg:	10.824 Mbps Max:	11.77 Mbps	
Non-Transmittin	ng endpoints: (3)	udp1.eth2-01.	sta02531-A udp1.eth2-	01.sta02532-A	udp1.eth2-01.sta02533-A



Total: 6.591 GB Non-Transmitting endpoints: (3) udp--1.eth2-01.sta02531-A udp--1.eth2-01.sta02532-A udp--1.eth2-01.sta02533-A

This graph shows fairness. On a fair system, each station should get about the same throughput. In the download direction, it is mostly the device-under-test that is responsible for this behavior, but in the upload direction, LANforge itself would be the source of most fairness issues unless the device-under-test takes specific actions to ensure fairness.

Combined Received bytes, for entire 1 m run 90,000,000 0,000,000 90,000,000

UDP-Download UDP-Upload

Requested Parameters: Download Rate: Per station: 11764705 (11.765 Mbps) All: 1000000000 ( 1 Gbps) Upload Rate: Per station: 0 ( 0 bps) All: Total: 0 ( 0 bps) 10000000000 1 Gbps) Station count: 85 Connections per station: 1 Payload (PDU) sizes: AUTO (AUTO) Observed Rate: 0 bps Cx Ave: 10.712 Mbps Cx Max: 11.62 Mbps All Cx: 910.487 Mbps Cx Min: Download Rate: 0 bps Cx Ave: Upload Rate: Cx Min: 0 bps Cx Max: 0 bps All Cx: 0 bps Total: 910.487 Mbps 11.62 Mbps Aggregated Rate: Min: 10.712 Mbps Max: 0 bps Ava: Non-Transmitting endpoints: (3) udp--1.eth2-01.sta02532-A udp--1.eth2-01.sta02533-A udp--1.eth2-01.sta02534-A



optoau Amount.	CX PILLI.		0	Б	CX.	Ave.	0 0		max.	0 B	ALL	ι.	0 B	
											Tota	l:	6.72 GB	
Non-Transmitting	endpoints:	(3)	udp	1.6	eth2	2-01.sta02532-	A udp	1	.eth2-01.	sta02533-A	udp-	-1.eth2	-01.sta0253	\$4-A



Requested Param	neters:				
Download Rate:	Per station: 116	27906 (11.628 Mb	ps) All: 100000000	( 1 Gbps)	
Upload Rate:	Per station:	0 ( 0 bps	) All: 0(	0 bps)	
			Total: 100000000	( 1 Gbps)	
Station count:	86 Connections	per station: 1	Payload (PDU) sizes:	AUTO (AUTO)	
Observed Rate:					
Download Rate:	Cx Min:	0 bps Cx Ave:	10.645 Mbps Cx Max:	11.403 Mbps	All Cx: 915.48 Mbps
Upload Rate:	Cx Min:	0 bps Cx Ave:	0 bps Cx Max:	0 bps	All Cx: 0 bps
					Total: 915.48 Mbps
Aggregated Rate	e: Min:	0 bps Avg:	10.645 Mbps Max:	11.403 Mbps	
Non-Transmittir	ng endpoints: (3)	udp1.eth2-01.	sta02533-A udp1.eth2	-01.sta02534-A	udp1.eth2-01.sta02535-A



Non-Transmitting endpoints: (3) udp--1.eth2-01.sta02533-A udp--1.eth2-01.sta02534-A udp--1.eth2-01.sta02535-A

This graph shows fairness. On a fair system, each station should get about the same throughput. In the download direction, it is mostly the device-under-test that is responsible for this behavior, but in the upload direction, LANforge itself would be the source of most fairness issues unless the device-under-test takes specific actions to ensure fairness.

Combined Received bytes, for entire 1 m run



Requested Param	meters:						
Download Rate:	Per station: 1	1494252 (1)	L.494 Mbp	os) All: 10	00000000	( 1 Gbps)	
Upload Rate:	Per station:	Θ (	0 bps	) All:	Θ (	0 bps)	
			-	Total: 100	0000000 (	1 Gbps)	
Station count:	87 Connection	s per stat:	ion: 1	Payload (PDU)	sizes: A	UTO (AUTO)	
Observed Rate:							
Download Rate:	Cx Min:	0 bps	Cx Ave:	10.484 Mbps	Cx Max:	11.316 Mbps	All Cx: 912.071 Mbps
Upload Rate:	Cx Min:	0 bps	Cx Ave:	0 bps	Cx Max:	0 bps	All Cx: 0 bps
							Total: 912.071 Mbps
Aggregated Rate	e: Min:	0 bps	Avg:	10.484 Mbps	Max:	11.316 Mbps	
Non-Transmittir	ng endpoints: (2	) udp1.0	eth2-01.9	sta02535-A udp	1.eth2-	01.sta02536-A	L .



Observed Amount:								
Download Amount:	Cx Min:	0 B	Cx Ave:	80.096 MB	Cx Max:	86.796 MB	All Cx:	6.805 GB
Upload Amount:	Cx Min:	0 B	Cx Ave:	0 B	Cx Max:	0 B	All Cx:	0 B
							Total:	6.805 GB
Non-Transmitting	endpoints: (2)	udp1.	eth2-01.sta	a02535-A udp	1.eth2-0	1.sta02536-A		

This graph shows fairness. On a fair system, each station should get about the same throughput.

In the download direction, it is mostly the device-under-test that is responsible for this behavior, but in the upload direction, LANforge itself would be the source of most fairness issues

unless the device-under-test takes specific actions to ensure fairness.



Requested Parameters: 636 (11.364 Mbps) (11.364 Mbps) (11.364 Mbps) All: 0 ( 0 bps) All: Total: Download Rate: Per station: 11363636 (11.364 Mbps) All: 1000000000 ( 1 Gbps) Upload Rate: Per station: 0 ( 0 bps) 1000000000 ( 1 Gbps) Station count: 88 Connections per station: 1 Payload (PDU) sizes: AUTO (AUTO) Observed Rate: 0 bps Cx Ave: 10.399 Mbps Cx Max: 11.186 Mbps All Cx: 915.115 Mbps Cx Min: Download Rate: Upload Rate: Cx Min: 0 bps Cx Ave: 0 bps Cx Max: 0 bps All Cx: 0 bps Total: 915.115 Mbps Aggregated Rate: Min: 10.399 Mbps Max: 11.186 Mbps 0 bps Ava: Non-Transmitting endpoints: (3) udp--1.eth2-01.sta02535-A udp--1.eth2-01.sta02536-A udp--1.eth2-01.sta02537-A



Non-Transmitting endpoints: (3) udp--1.eth2-01.sta02535-A udp--1.eth2-01.sta02536-A udp--1.eth2-01.sta02537-A

This graph shows fairness. On a fair system, each station should get about the same throughput. In the download direction, it is mostly the device-under-test that is responsible for this behavior, but in the upload direction, LANforge itself would be the source of most fairness issues unless the device-under-test takes specific actions to ensure fairness.

<figure>

UDP-Download UDP-Upload

Requested Param	eter	s:									
Download Rate:	Per	station:	112359	955 (2	11.236 M	bps) All	: 100	00000000	( 1 Gbps)		
Upload Rate:	Per	station:		0 (	0 bp	s) All:		0 (	0 bps)		
						Total:	100	0000000 (	1 Gbps)		
Station count:	89	Connecti	ons pei	- sta	tion: 1	Payload	(PDU)	sizes: A	UTO (AUTO)		
Observed Rate:											
Download Rate:		Cx Min:	6	) bps	Cx Ave	: 10.333	Mbps	Cx Max:	11.067 Mbps	All Cx: 919.657	7 Mbps
Upload Rate:		Cx Min:	6	) bps	Cx Ave	:	0 bps	Cx Max:	0 bps	All Cx:	0 bps
										Total: 919.657	Mbps
Aggregated Rate	:	Min:	6	) bps	Avg:	10.333	Mbps	Max:	11.067 Mbps		
Non-Transmittin	g en	dpoints:	(3) ud	ip 1	.eth2-01	.sta02536	-A udp	1.eth2-	01.sta02537-A	udp1.eth2-01.	.sta02538-A



Download Amount:	Cx Min:	0 B Cx A	ve: 78.576 M	B Cx Max:	84.476 MB	All Cx:	6.829 GB
Upload Amount:	Cx Min:	0 B Cx A	ve: 0	B Cx Max:	0 B	All Cx:	0 B
						Total:	6.829 GB
Non-Transmitting	endpoints: (3	3) udp1.eth2-	01.sta02536-A u	dp1.eth2·	-01.sta02537-A	udp1.e	th2-01.sta02538-A



Requested Param	meters:				
Download Rate:	Per station: 111	111111 (11.111 M	bps) All: 10000000	00 ( 1 Gbps)	
Upload Rate:	Per station:	0 ( 0 bp:	s) All: 0	( 0 bps)	
			Total: 100000000	) ( 1 Gbps)	
Station count:	90 Connections	per station: 1	Payload (PDU) sizes:	AUTO (AUTO)	
Observed Rate:					
Download Rate:	Cx Min:	0 bps Cx Ave	: 10.075 Mbps Cx Max	c: 10.862 Mbps	All Cx: 906.711 Mbps
Upload Rate:	Cx Min:	0 bps Cx Ave	: 0 bps Cx Max	<: 0 bps	All Cx: 0 bps
					Total: 906.711 Mbps
Aggregated Rate	e: Min:	0 bps Avg:	10.075 Mbps Max:	10.862 Mbps	
Non-Transmittir	ng endpoints: (3)	udp1.eth2-01	.sta02537-A udp1.eth	n2-01.sta02538-A	udp1.eth2-01.sta02539-A



Non-Transmitting endpoints: (3) udp--1.eth2-01.sta02537-A udp--1.eth2-01.sta02538-A udp--1.eth2-01.sta02539-A

This graph shows fairness. On a fair system, each station should get about the same throughput. In the download direction, it is mostly the device-under-test that is responsible for this behavior, but in the upload direction, LANforge itself would be the source of most fairness issues unless the device-under-test takes specific actions to ensure fairness.

<figure>

				UDP-Downlo	ad 🔳 UDP-	Upload			
Requested Parame	ters:								
Download Rate: P	er station:	10989010 (10	.989 Mbp	s) All: 10	00000000	( 1 Gbps)			
Jpload Rate: P	er station:	Θ (	0 bps)	All: Total: 100	0 ( 0000000 (	0 bps) 1 Gbps)			
Station count: 9	1 Connecti	ons per stati	on:1 I	Payload (PDU)	sizes: A	UTO (AUTO)			
Observed Rate:									
Download Rate:	Cx Min:	0 bps	Cx Ave:	10.026 Mbps	Cx Max:	10.788 Mbps	All Cx:	912.409 Mbps	
Jpload Rate:	Cx Min:	0 bps	Cx Ave:	0 bps	Cx Max:	0 bps	All Cx:	0 bps	
		•		•		•	Total: 9	12.409 Mbps	
Aggregated Rate:	Min:	0 bps	Avg:	10.026 Mbps	Max:	10.788 Mbps			
Non-Transmitting	endnoints:	(3) udn1.e	th2-01.st	ta02538-A udn	1.eth2-	01_sta02539-A	udn1.e	th2-01_sta02540-4	4



bouncedad fundance	C/ 112111		0.0	C/ /// C/	777502		C/( 110/(1	00120 110	nee en	010// 00	
Upload Amount:	Cx Min:		0 B	Cx Ave:	6	ЭB	Cx Max:	0 B	All Cx:	0 B	
									Total:	6.877 GB	
Non-Transmitting	endpoints:	(3)	udp1.	eth2-01.	sta02538-A	udp-	-1.eth2-01	.sta02539-A	udp1.eth2	-01.sta02540-	A



Requested Param	neter	rs:												
Download Rate:	Per	station:	1086	9565	5 (10	.87	Mbps	s) All:	100	0000000	( 1	Gbps)		
Upload Rate:	Per	station:		(	9 (	0	bps)	All:		0 (	( 0	bps)		
								Total:	100	0000000	( 1	Gbps)		
Station count:	92	Connecti	ons p	er s	stati	on:	1	Payload	(PDU)	sizes:	AUT0	(AUTO)		
Observed Rate:														
Download Rate:		Cx Min:		0 ł	ops	Сх	Ave:	9.984	Mbps	Cx Max:	10.	726 Mbps	All Cx: 918.55	5 Mbps
Upload Rate:		Cx Min:		0 ł	ops	Сх	Ave:		0 bps	Cx Max:		0 bps	All Cx:	0 bps
													Total: 918.555	6 Mbps
Aggregated Rate	e:	Min:		0 ł	ops	Avg	:	9.984	Mbps	Max:	10.	726 Mbps		
Non-Transmittir	ng er	ndpoints:	(3)	udp∙	1.e	th2	-01.5	sta02539	-A udp	1.eth2	2-01.s	ta02540-A	udp1.eth2-01	.sta02541-A



observed Anounc.					
Download Amount: Cx Min:	0 B Cx Ave:	77.072 MB Cx Max:	82.36 MB	All Cx:	6.924 GB
Upload Amount: Cx Min:	0 B Cx Ave:	0 B Cx Max:	0 B	All Cx:	0 B
				Total:	6.924 GB
Non-Transmitting endpoints: (3)	udp1.eth2-01.sta	a02539-A udp1.eth2-01	.sta02540-A	udp1.eth2	-01.sta02541-A

<figure>

10,000,000 0	•								
	-BNB-01-0 20200000 20200000 20200000 20200000 20200000 20200000 20200000 20200000 20200000 20200000 20200000 20200000 20200000 20200000 202000000			- D.1+(1)		00000000000000000000000000000000000000		- EUL+11-CCM-E - 2007/00/00-00-00 - 2007/00/00-00 - 2007/00/00/00 - 2007/00/00/00/00 - 2007/00/00/00/00/00/00 - 2007/00/00/00/00/00/00/00/00/00/00/00/00/	
					Stati	ons			
				UDP-Downlo	oad 🔳 UDP-U	Jpload			
Deguasted Dara	notors.								
Download Rate:	Per station:	10752688 (1	0.753 Mbr	s) All: 10	00000000 (	1 Gbns)			
Unload Rate:	Per station:	0 (	0 hns)	A11:	0 (	0 hns)			
optoud nater			0 Bp5)	Total: 100	000000000	1 Gbps)			
Station count:	93 Connection	ns per stat	ion: 1	Payload (PDU)	sizes: AL	JTO (AUTO)			
Observed Bate:									
Download Rate:	Cx Min:	0 bps	Cx Ave:	9.351 Mbps	Cx Max:	10.21 Mbps	All Cx:	869.652 Mbps	
Upload Rate:	Cx Min:	0 bps	Cx Ave:	0 bps	Cx Max:	0 bps	All Cx:	0 bps	

Total: 869.652 Mbps Aggregated Rate: Min: 0 bps Avg: 9.351 Mbps Max: 10.21 Mbps Non-Transmitting endpoints: (3) udp--1.eth2-01.sta02540-A udp--1.eth2-01.sta02541-A udp--1.eth2-01.sta02542-A



Non-Transmitting endpoints: (3) udp--1.eth2-01.sta02540-A udp--1.eth2-01.sta02541-A udp--1.eth2-01.sta02542-A

This graph shows fairness. On a fair system, each station should get about the same throughput. In the download direction, it is mostly the device-under-test that is responsible for this behavior, but in the upload direction, LANforge itself would be the source of most fairness issues unless the device-under-test takes specific actions to ensure fairness.

Combined Received bytes, for entire 1 m run 80,000,000 60,000,000 50,000,000 20,000,000 10,000,000 0 Communication of the station of t

UDP-Download UDP-Upload

Requested Parameters: 297 (10.638 Mbps) 552 0 ( 0 bps) All: Total: Download Rate: Per station: 10638297 (10.638 Mbps) All: 1000000000 ( 1 Gbps) Upload Rate: Per station: 0 ( 0 bps) 1000000000 ( 1 Gbps) Station count: 94 Connections per station: 1 Payload (PDU) sizes: AUTO (AUTO) Observed Rate: 9.141 Mbps Cx Max: 10.104 Mbps All Cx: 859.22 Mbps Cx Min: 0 bps Cx Ave: Download Rate: Upload Rate: Cx Min: 0 bps Cx Ave: 0 bps Cx Max: 0 bps All Cx: 0 bps Total: 859.22 Mbps Aggregated Rate: Min: 9.141 Mbps Max: 10.104 Mbps 0 bps Ava: Non-Transmitting endpoints: (3) udp--1.eth2-01.sta02541-A udp--1.eth2-01.sta02542-A udp--1.eth2-01.sta02543-A



Upload Amount: CX Miln: 0 B CX AVE: 0 B CX Max: 0 B Alt CX: 0 B Total: 6.495 GB Non-Transmitting endpoints: (3) udp--1.eth2-01.sta02541-A udp--1.eth2-01.sta02542-A udp--1.eth2-01.sta02543-A

This graph shows fairness. On a fair system, each station should get about the same throughput. In the download direction, it is mostly the device-under-test that is responsible for this behavior, but in the upload direction, LANforge itself would be the source of most fairness issues unless the device-under-test takes specific actions to ensure fairness.



Requested Param	meters:							
Download Rate:	Per station:	10526315 (1	9.526 Mbp	s) All: 10	00000000	( 1 Gbps)		
Upload Rate:	Per station:	Θ (	0 bps)	All:	Θ (	0 bps)		
				Total: 100	0000000 (	1 Gbps)		
Station count:	95 Connectio	ns per stat	ion: 1	Payload (PDU)	sizes: A	UTO (AUTO)		
Observed Rate:								
Download Rate:	Cx Min:	0 bps	Cx Ave:	9.136 Mbps	Cx Max:	9.815 Mbps	All Cx: 867.91	L4 Mbps
Upload Rate:	Cx Min:	0 bps	Cx Ave:	0 bps	Cx Max:	0 bps	All Cx:	0 bps
							Total: 867.914	1 Mbps
Aggregated Rate	e: Min:	0 bps	Avg:	9.136 Mbps	Max:	9.815 Mbps		
Non-Transmittir	ng endpoints: (	2) udp1.	eth2-01.s <sup>.</sup>	ta02543-A udp	1.eth2-	01.sta02544-A		



Observed Amount:							
Download Amount:	Cx Min:	0 B Cx Ave	: 70.341 MB	Cx Max:	76.134 MB	All Cx:	6.526 GB
Upload Amount:	Cx Min:	0 B Cx Ave	: 0 B	Cx Max:	0 B	All Cx:	0 B
						Total:	6.526 GB
Non-Transmitting	endpoints: (2)	udp1.eth2-01	.sta02543-A udp	1.eth2-01	l.sta02544-A		

This graph shows fairness. On a fair system, each station should get about the same throughput.

In the download direction, it is mostly the device-under-test that is responsible for this behavior, but in the upload direction, LANforge itself would be the source of most fairness issues

unless the device-under-test takes specific actions to ensure fairness.



Requested Parameters: Download Rate: Per station: 10416666 (10.417 Mbps) All: 1000000000 ( 1 Gbps) 0 ( 0 bps) All: Total: Upload Rate: Per station: 0 ( 0 bps) 1000000000 ( 1 Gbps) Station count: 96 Connections per station: 1 Payload (PDU) sizes: AUTO (AUTO) Observed Rate: 9.517 Mbps Cx Max: 10.164 Mbps All Cx: 913.656 Mbps Cx Min: 0 bps Cx Ave: Download Rate: Upload Rate: Cx Min: 0 bps Cx Ave: 0 bps Cx Max: 0 bps All Cx: 0 bps Total: 913.656 Mbps Aggregated Rate: Min: 9.517 Mbps Max: 10.164 Mbps 0 bps Ava: Non-Transmitting endpoints: (3) udp--1.eth2-01.sta02543-A udp--1.eth2-01.sta02544-A udp--1.eth2-01.sta02545-A



Upload Amount: Cx Min: 0 B Cx Ave: 0 B Cx Max: 0 B All Cx: 0 B Total: 6.919 GB Non-Transmitting endpoints: (3) udp--1.eth2-01.sta02543-A udp--1.eth2-01.sta02544-A udp--1.eth2-01.sta02545-A

This graph shows fairness. On a fair system, each station should get about the same throughput. In the download direction, it is mostly the device-under-test that is responsible for this behavior, but in the upload direction, LANforge itself would be the source of most fairness issues unless the device-under-test takes specific actions to ensure fairness.

<figure>

UDP-Download UDP-Upload Requested Parameters: 278 (10.309 Mbps) ... 0 ( 0 bps) All: Total: Download Rate: Per station: 10309278 (10.309 Mbps) All: 1000000000 ( 1 Gbps) Upload Rate: Per station: 0 ( 0 bps) 1000000000 ( 1 Gbps) Station count: 97 Connections per station: 1 Payload (PDU) sizes: AUTO (AUTO) Observed Rate: 9.863 Mbps All Cx: 881.631 Mbps 9.089 Mbps Cx Max: Cx Min: 0 bps Cx Ave: Download Rate: Upload Rate: Cx Min: 0 bps Cx Ave: 0 bps Cx Max: 0 bps All Cx: 0 bps Total: 881.631 Mbps

Aggregated Rate: Min: 0 bps Avg: 9.089 Mbps Max: 9.863 Mbps Non-Transmitting endpoints: (3) udp--1.eth2-01.sta02544-A udp--1.eth2-01.sta02545-A udp--1.eth2-01.sta02546-A



Non-Transmitting endpoints: (3) udp--1.eth2-01.sta02544-A udp--1.eth2-01.sta02545-A udp--1.eth2-01.sta02546-A

This graph shows fairness. On a fair system, each station should get about the same throughput. In the download direction, it is mostly the device-under-test that is responsible for this behavior, but in the upload direction, LANforge itself would be the source of most fairness issues unless the device-under-test takes specific actions to ensure fairness.

Combined Received bytes, for entire 1 m run

Stations

UDP-Download UDP-Upload

Requested Parameters: 081 (10.204 Mbps) ... 0 ( 0 bps) All: Total: Download Rate: Per station: 10204081 (10.204 Mbps) All: 1000000000 ( 1 Gbps) Upload Rate: Per station: 0 ( 0 bps) 1000000000 ( 1 Gbps) Station count: 98 Connections per station: 1 Payload (PDU) sizes: AUTO (AUTO) Observed Rate: 10.04 Mbps All Cx: 911.524 Mbps 9.301 Mbps Cx Max: Cx Min: 0 bps Cx Ave: Download Rate: Upload Rate: Cx Min: 0 bps Cx Ave: 0 bps Cx Max: 0 bps All Cx: 0 bps Total: 911.524 Mbps Aggregated Rate: Min: 9.301 Mbps Max: 10.04 Mbps 0 bps Ava: Non-Transmitting endpoints: (3) udp--1.eth2-01.sta02545-A udp--1.eth2-01.sta02546-A udp--1.eth2-01.sta02547-A



Combined Received bytes, for entire 1 m run

			UDP-Download 🗖 UDP-U	Jpload	
Requested Parame	ters:				
Download Rate: P	er station:	10101010 (10.101 Mbps	) All: 100000000 (	1 Gbps)	
Upload Rate: P	er station:	0 ( 0 bps)	All: 0 (	0 bps)	
		Т	otal: 1000000000 (	1 Gbps)	
Station count: 9	9 Connecti	ions per station: 1 P	ayload (PDU) sizes: Al	ITO (AUTO)	
Observed Rate:					
Download Rate:	Cx Min:	0 bps Cx Ave:	9.048 Mbps Cx Max:	9.935 Mbps	All Cx: 895.711 Mbps
Upload Rate:	Cx Min:	0 bps Cx Ave:	0 bps Cx Max:	0 bps	All Cx: 0 bps
					Total: 895.711 Mbps
Aggregated Rate:	Min:	0 bps Avg:	9.048 Mbps Max:	9.935 Mbps	
Non-Transmitting	endpoints:	(3) udp1.eth2-01.st	a02546-A udp1.eth2-0	1.sta02547-A	udp1.eth2-01.sta02548-A



Combined Received bytes, for entire 1 m run 80,000,000 70,000,000 60,000,000 e (bytes) 50,000,000 40,000,000

alue	30,000,000	
>	20,000,000	
	10,000,000 .	
		Stations
		UDP-Download 🔳 UDP-Upload
Requ Down	uested Parameters: Noad Rate: Per sta	tion: 10000000 ( 10 Mbps) All: 1000000000 ( 1 Gbps)

Download Rate:	Per	station:	100000	)00 (	10 Mbp:	s) All:	1000000	9000 (	1 Gbps)		
Upload Rate:	Per	station:		0 (	0 bp:	s) All:		0 (	0 bps)		
						Total:	100000	00000 (	1 Gbps)		
Station count:	100	Connec	tions pe	er sta	ation: 1	Payload	(PDU) s	sizes: A	AUTO (AUTO)		
ubserved Rate:											
Download Rate:		Cx Min:	6	) bps	Cx Ave	: 9.176	Mbps Co	<pre>Max:</pre>	9.842 Mbps	All Cx: 917.63	5 Mbps
Upload Rate:		Cx Min:	6	) bps	Cx Ave	: 0	bps C	Max:	0 bps	All Cx:	0 bps
										Total: 917.635	Mbps
Aggregated Rate	e:	Min:	6	) bps	Avg:	9.176	Mbps Ma	ax:	9.842 Mbps		
Non-Transmittir	ng er	ndpoints:	(3) uc	ip1	.eth2-01	.sta02547-	A udp:	l.eth2-0	01.sta02548-A	udp1.eth2-01	.sta02549-A





Maximum Stations Connected: 100 Stations NOT connected at this time: 0 Maximum Stations with IP Address: 100 Stations without IP at this time: 0



RF stats give an indication of how well how congested is the RF environment. Channel activity is what the wifi radio reports as the busy-time for the RF environment. It is expected that this be near 100% when LANforge is running at max speed, but at lower speeds, this should be a lower percentage unless the RF environment is busy with other systems.



Link rate stats give an indication of how well the rate-control is working. For rate-control, the 'RX' link rate corresponds to what the device-under-test is transmitting. If all of the stations are on the same radio, then the TX and RX encoding rates should be similar for all stations. If there is a definite pattern where some stations do not get good RX rate, then probably the device-under-test has rate-control problems. The TX rate is what LANforge is transmitting at.



Key Performance Indicators CSV

Scan Results for SSIDs used in this test.

BSS 8c:7a:15:15:4c:ac(on sta02000) -- associated TSF: 8945230241 usec (0d, 02:29:05) freq: 5500

beacon interval: 100 TUs capability: ESS Privacy SpectrumMgmt ShortSlotTime (0x0511) signal: -81.00 dBm last seen: 153 ms ago Information elements from Probe Response frame: SSID: ruckus750-5 Power constraint: 0 dB RSN: \* Version: 1 \* Group cipher: CCMP \* Pairwise ciphers: CCMP Authentication suites: PSK Capabilities: 1-PTKSA-RC 1-GTKSA-RC (0x0000) \* BSS Load: station count: 100 \* channel utilisation: 197/255 \* available admission capacity: 0 [\*32us] HT capabilities: Capabilities: 0x9ef RX LDPC HT20/HT40 SM Power Save disabled RX HT20 SGI RX HT40 SGI TX STBC RX STBC 1-stream Max AMSDU length: 7935 bytes No DSSS/CCK HT40 Maximum RX AMPDU length 65535 bytes (exponent: 0x003) Minimum RX AMPDU time spacing: No restriction (0x00) HT TX/RX MCS rate indexes supported: 0-31 HT operation: \* primary channel: 100
\* secondary channel offset: above
\* STA channel width: any \* RIFS: 0 \* HT protection: no \* non-GF present: 1 \* OBSS non-GF present: 0 \* dual beacon: 0
\* dual CTS protection: 0 \* STBC beacon: 0 \* L-SIG TXOP Prot: 0 PCO active: 0 \* PCO phase: 0 Extended capabilities: Extended Channel Switching \* BSS Transition \* Operating Mode Notification \* 6 \* Max Number Of MSDUs In A-MSDU is unlimited VHT capabilities: VHT Capabilities (0x338bf9f2): Max MPDU length: 11454 Supported Channel Width: neither 160 nor 80+80 RX LDPC short GI (80 MHz) short GI (160/80+80 MHz) TX STBC SU Beamformer SU Beamformee MU Beamformer RX antenna pattern consistency TX antenna pattern consistency VHT RX MCS set: 1 streams: MCS 0-9 2 streams: MCS 0-9 3 streams: MCS 0-9 4 streams: MCS 0-9 5 streams: not supported 6 streams: not supported 7 streams: not supported 8 streams: not supported VHT RX highest supported: 0 Mbps VHT TX MCS set: 1 streams: MCS 0-9 2 streams: MCS 0-9 3 streams: MCS 0-9 4 streams: MCS 0-9 5 streams: not supported 6 streams: not supported 7 streams: not supported 8 streams: not supported VHT TX highest supported: 0 Mbps VHT operation: \* channel width: 1 (80 MHz) \* center freq segment 1: 106
\* center freq segment 2: 0 \* VHT basic MCS set: 0xfffc Transmit Power Envelope: \* Local Maximum Transmit Power For 20 MHz: 30 dBm \* Local Maximum Transmit Power For 40 MHz: 30 dBm \* Local Maximum Transmit Power For 80 MHz: 30 dBm \* Local Maximum Transmit Power For 160/80+80 MHz: 30 dBm HE capabilities: HE MAC Capabilities (0x010d1a080040):

+HTC HE Supported TWT Responder Dynamic BA Fragementation Level: 1 Minimum Payload size of 128 bytes: 1 BSR OM Control Maximum A-MPDU Length Exponent: 3 A-MSDU in A-MPDU HE PHY Capabilities: (0x04604c897fc3839c010800): HE40/HE80/5GHz LDPC Coding in Payload HE SU PPDU with 1x HE-LTF and 0.8us GI STBC Tx <= 80MHz STBC Rx <= 80MHz Full Bandwidth UL MU-MIMO DCM Max Constellation: 1 DCM Max Constellation Rx: 1 SU Beamformer SU Beamformee MU Beamformer Beamformee STS <= 80Mhz: 7 Beamformee STS > 80Mhz: 3 Sounding Dimensions <= 80Mhz: 3 Ng = 16 SU Feedback Ng = 16 MU Feedback Codebook Size SU Feedback Codebook Size MU Feedback PPE Threshold Present HE SU PPDU & HE PPDU 4x HE-LTF 0.8us GI Max NC: 3 STBC Rx > 80MHz HE ER SU PPDU 4x HE-LTF 0.8us GI RX 1024-QAM HE RX MCS and NSS set <= 80 MHz 1 streams: MCS 0-11 2 streams: MCS 0-11 3 streams: MCS 0-11 4 streams: MCS 0-11 5 streams: not supported 6 streams: not supported 7 streams: not supported 8 streams: not supported HE TX MCS and NSS set <= 80 MHz 1 streams: MCS 0-11 2 streams: MCS 0-11 3 streams: MCS 0-11 4 streams: MCS 0-11 5 streams: not supported 6 streams: not supported 7 streams: not supported 8 streams: not supported PPE Threshold 0x7b 0x1c 0xc7 0x71 0x1c 0xc7 0x71 0x1c 0xc7 0x71 0x1c 0xc7 0x71 WMM : Parameter version 1 \* u-APSD BE: CW 15-1023, AIFSN 3 \* BK: CW 15-1023, AIFSN 7 \* VI: CW 7-15, AIFSN 2, TXOP 3008 usec \* VO: CW 3-7, AIFSN 2, TXOP 1504 usec BSS 8c:7a:15:15:4c:ac(on sta02500) -- associated TSF: 8945615878 usec (0d, 02:29:05) freq: 5500 beacon interval: 100 TUs capability: ESS Privacy SpectrumMgmt ShortSlotTime (0x0511) signal: -33.00 dBm last seen: 153 ms ago Information elements from Probe Response frame: SID: ruckus750-5 Supported rates: 6.0\* 9.0 12.0\* 18.0 24.0\* 36.0 48.0 54.0 DS Parameter set: channel 100 Country: US Environment: Indoor/Outdoor Channels [36 - 48] @ 36 dBm Channels [52 - 64] @ 30 dBm Channels [100 - 136] @ 30 dBm Channels [149 - 161] @ 36 dBm Power constraint: 0 dB RSN: \* Version: 1 Group cipher: CCMP \* Pairwise ciphers: CCMP \* Authentication suites: PSK \* Capabilities: 1-PTKSA-RC 1-GTKSA-RC (0x0000) BSS Load: \* station count: 100 channel utilisation: 197/255 \* available admission capacity: 0 [\*32us] HT capabilities: Capabilities: 0x9ef RX LDPC HT20/HT40 SM Power Save disabled RX HT20 SGI RX HT40 SGI TX STBC RX STBC 1-stream Max AMSDU length: 7935 bytes No DSSS/CCK HT40 Maximum RX AMPDU length 65535 bytes (exponent: 0x003) Minimum RX AMPDU time spacing: No restriction (0x00) HT TX/RX MCS rate indexes supported: 0-31 HT operation: \* primary channel: 100

\* secondary channel offset: above \* STA channel width: any RIFS: 0 \* HT protection: no \* non-GF present: 1
\* OBSS non-GF present: 0 \* dual beacon: 0 dual CTS protection: 0 STBC beacon: 0 \* L-SIG TXOP Prot: 0 \* PCO active: 0
\* PCO phase: 0 Extended capabilities: Extended Channel Switching \* BSS Transition \* Operating Mode Notification \* 6 \* Max Number Of MSDUs In A-MSDU is unlimited VHT capabilities: VHT Capabilities (0x338bf9f2): Max MPDU length: 11454 Supported Channel Width: neither 160 nor 80+80 RX LDPC short GI (80 MHz) short GI (160/80+80 MHz) TX STBC SU Beamformer SU Beamformee MU Beamformer RX antenna pattern consistency TX antenna pattern consistency VHT RX MCS set: 1 streams: MCS 0-9 2 streams: MCS 0-9 3 streams: MCS 0-9 4 streams: MCS 0-9 5 streams: not supported 6 streams: not supported 7 streams: not supported 8 streams: not supported VHT RX highest supported: 0 Mbps VHT TX MCS set: 1 streams: MCS 0-9 2 streams: MCS 0-9 3 streams: MCS 0-9 4 streams: MCS 0-9 5 streams: not supported 6 streams: not supported 7 streams: not supported 8 streams: not supported VHT TX highest supported: 0 Mbps VHT operation: \* channel width: 1 (80 MHz) \* center freq segment 1: 106
\* center freq segment 2: 0
\* VHT basic MCS set: 0xfffc Transmit Power Envelope: \* Local Maximum Transmit Power For 20 MHz: 30 dBm \* Local Maximum Transmit Power For 40 MHz: 30 dBm \* Local Maximum Transmit Power For 80 MHz: 30 dBm \* Local Maximum Transmit Power For 160/80+80 MHz: 30 dBm HE capabilities: HE MAC Capabilities (0x010d1a080040): +HTC HE Supported TWT Responder Dynamic BA Fragementation Level: 1 Minimum Payload size of 128 bytes: 1 BSR OM Control Maximum A-MPDU Length Exponent: 3 A-MSDU in A-MPDU HE PHY Capabilities: (0x04604c897fc3839c010800): HE40/HE80/5GHz LDPC Coding in Payload HE SU PPDU with 1x HE-LTF and 0.8us GI STBC Tx <= 80MHz STBC Rx <= 80MHz Full Bandwidth UL MU-MIMO DCM Max Constellation: 1 DCM Max Constellation Rx: 1 SU Beamformer SU Beamformee MU Beamformer Beamformee STS <= 80Mhz: 7 Beamformee STS > 80Mhz: 3 Sounding Dimensions <= 80Mhz: 3 Ng = 16 SU Feedback Ng = 16 MU Feedback Codebook Size SU Feedback Codebook Size MU Feedback PPE Threshold Present HE SU PPDU & HE PPDU 4x HE-LTF 0.8us GI Max NC: 3 STBC Rx > 80MHz HE ER SU PPDU 4x HE-LTF 0.8us GI RX 1024-QAM HE RX MCS and NSS set <= 80 MHz 1 streams: MCS 0-11 2 streams: MCS 0-11 3 streams: MCS 0-11 4 streams: MCS 0-11 5 streams: not supported

	6 streams: not supported
	7 streams: not supported
	8 streams: not supported
	HE TX MCS and NSS set <= 80 MHz
	1 streams: MCS 0-11
	2 streams: MCS 0-11
	3 streams: MCS 0-11
	4 streams: MCS 0-11
	5 streams: not supported
	6 streams: not supported
	7 streams: not supported
	8 streams: not supported
	PPE Threshold 0x7b 0x1c 0xc7 0x71 0x1c 0xc7 0x71 0x1c 0xc7 0x71 0x1c 0xc7 0x71
WMM :	* Parameter version 1
	* u-APSD
	* BE: CW 15-1023, AIFSN 3
	* BK: CW 15-1023, AIFSN 7
	* VT. CH 7 15 ATECN 2 TYON 2008 Head

\* VI: CW 7-15, AIFSN 2, TXOP 3008 usec \* VO: CW 3-7, AIFSN 2, TXOP 1504 usec

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