

Layer-3 UDP Traffic Generator

Goal: Generate one-sided traffic to a network device with a fixed destination IP address. This scenario is useful for testing switches, firewalls and data loggers that have to handle highly varied or very fast UDP packet streams with a fixed destination. A one-sided traffic stream is used to send packets to a network device under test when round-trip reporting is not required.





1. Configure an ethernet port.

A. On the **Port Mgr** tab, select a port within the table and click the **Modify** button.

🛃 LANforge Manager Version(5.3.3)													
<u>Control</u> <u>Reporting</u> <u>Tear-Off</u> <u>Info</u>	Control Reporting Tear-Off Info Plugins												
Stop All Restart Manager Refresh HELP													
File-IO Layer-4 Generic Test Mgr Test Group Resource Mgr Event Log Alerts Port Mgr Messages													
🎽 Status 🎽 Layer-3 🎽 L3 Endp	s (VolP,	RTP Vol	P/RTP	Endps Ar	mageddon	WanL	inks [A	ttenuators	Collisior	n-Domains			
Disp: 192.168.100.133:0.0 Sniff Packets Clear Counters Reset Port Delete													
Rpt Timer: medium (8 s)	Rpt Timer: medium (8 s) ▼ Apply View Details Create Modify Batch Modify												
	All Ethernet Interfaces (Ports) for all Resources.												
Port Pha Down IP	SEC	Aliae I	Parent Dev	RX Bytes	RX Pkts	Pps RX	bps RX	TX Bytes	TX Pkts	Pps TX			
1.1.0 🔲 🗌 192.168.10	0.86 0	eth5		272,959,695	346,073	6	7,949	276,256,112	322,422	6			
1.1.1 0.0.0.0	0	eth0		0	0	0	0	2,032	22	0			
1.1.2 🗌 🔲 0.0.0.0	0	eth1		0		0	0	2,032	22	0			
1.1.3 0.0.0.0	0	eth2 🔨		0	0	0	0	0	0	0			
1.1.4 0.0.0.0	0	eth3		0		0	0	2,032		0			
1.1.5	0	eth4		0	0	0	0	2,032	22	0			
										•			
Logged in to: brent-6port:40)2 as: Ac	lmin											

A. This example will use port eth1.

B. Assign an IP and Mask as necessary.

		eth1 (b	orent-6port) Configu	ire Settings			0					
		P 1000bt-FD AUTO-N pe: Ethernet Drive		ntrol TSO GSO GRO		2.5GT/s x1 Max: 2.5GT/s x	1					
Port Configurables												
Enable Port Rates Advert Rate												
Set IF Down Set MAC	Down	Aux-Mgt				○ 10bt-HD ○ 10bt-FD ○ 100bt-HD	✓ 10bt-HD✓ 10bt-FD					
Set TX Q Len	DHCP-IPv6	DHCP Release	DHCP Vendor ID:	None	•	○ 100bt-FD ○ 1000-FD	🗹 100bt-HD					
Set MTU	DHCP-IPv4	Secondary-IPs	DHCP Client ID:	None	•	○ 10G-FD ○ 40G-FD	✓ 100bt-FD ✓ 1000-FD					
Set Rate Info		NS Servers: BLANK Peer IP: Address: 10.26.2.1 Global II Mask: 255.255.255.0 Link IPvt		NA AUTO		Autonegotiate	1000-FD					
Set PROMISC	IP Address: IP Mask:		Link IPv6:	AUTO	=	Renegotiate	40G-FD					
Set Rx-All/FCS	Gateway IP:	0.0.0.0	IPv6 GW:	AUTO			Flow-Control					
Set Bridge Info	Alias: MAC Addr:	00:90:0b:38:82:71	MTU: TX Q Len	1500 1000	-1	RX-ALL	Offload TSO Enabled					
Set CPU Mask	Br Cost:	Ignore 🔻	Priority:	Ignore	-	RX-FCS	UFO Enabled					
HTTP	Rpt Timer:	medium (8 s) 💌	Watchdog:	0	•	Bypass Power-UP	GSO Enabled					
FTP	CPU Mask:	NO-SET 🔻	WiFi Bridge:	NONE	•	Bypass Power-DOWN	GRO Enabled					
						Bypass Disconnect	1					
	Print V	iew Details	Probe Sync	Apply		OK Cancel						

- C. Click OK.
- 2. Configure the Layer-3 connection.
 - A. On the Layer-3 tab, click Create.

\$				LANforg	e Manager Versio	n(5.3.3)			- • ×
<u>Control</u> <u>R</u> epor	ting <u>T</u> ea	r-Off <u>I</u> nfo	<u>P</u> lugins						
					Stop All	Restart M	lanager	Refresh	HELP
F ¹ 1		/ .		T 1.0	V a	v = · · · · ·			
· · · · · · · · · · · · · · · · · · ·		ieneric 1 L3 Endps	VoIP/RTP	Test Group			Alerts Port Mgr Links Attenuat		omaine
	iyer-5	L3 Ellups	VUP/RTP	VOIP/RT	P Ellups Allia				
Rpt Tim	er: defau	lt (5 s)	▼ Go Te	est Manager	all 🔻	Select Al	l Start Stop	Quiesce Cle	ear
View	0 - 20	00		🔻 Go		Displ	ay Cr <u>e</u> ate M	1odify Delete	
				-Cross Con	nects for Selecte	d Test Manager			
						- · · · · · · · · · · · · · · · · · · ·			
Name	Туре	State	Pkt Rx A	Pkt Rx B	Bps Rx A	Bps Rx B	Rx Drop % A Rx Dr	op % B Drop Pkts A	Drop Pkts
•									•
P									
Logged in to	: brent-6	5port:4002	as: Admin	1					

B. Assign port eth1 to Endpoint-A.

<u>\$</u>	📓 udpgen - Create/Modify Cross Connect 🗕 🗆 🗙												
+ - All Display Sync Batch-Create Apply OK Cancel													
CX Name: CX Type:	Cross-Connect Judpgen LANforge / UDP			-									
	Endpoint A		Endpoint B										
Resource:	1 (brent-6port)	•	1 (brent-6port)	•									
Port:	2 (eth1)	T	5 (eth4)	-									
Min Tx Rate:	New Modem (56 Kbps)	-	New Modem (56 Kbps)	-									
Max Tx Rate:	Same	-	Same	-									
Min PDU Size:	AUTO	•	AUTO	-									
Max PDU Size:	Same	-	Same	-									
IP ToS:	Best Effort (0)	-	Best Effort (0)	-									
Pkts To Send:	Infinite	-	Infinite	-									

- A. You will not need to assign **Endpoint-B** because that will become unmanaged.
- C. Configure the attributes in section 1:

📓 udpgen - Create/Modify Cross Connect 🗕 🗆 🗙												
+ - All	Display Syn	С	Batch-Create	Арр	ly	ок	Cancel					
CX Name: CX Type:	Cross-Connect Judpgen LANforge / UDP			•								
Endpoint A Endpoint B												
Resource:	1 (brent-6port)	-	1 (brent-6port)	-								
Port:	2 (eth1)	•	5 (eth4)	-								
Min Tx Rate:	1G (1 Gbps)	•	Zero (0 bps)	-								
Max Tx Rate:	Same	•	Same	-								
Min PDU Size:	UDP Pld (1,472 B)	-	AUTO	-								
Max PDU Size:	Same	•	Same	-								
IP ToS:	Best Effort (0)	-	Best Effort (0)	-								
Pkts To Send:	Infinite	•	Infinite	-								

- A. Endpoint-A Min Tx Rate: 1Gbps
- B. Endpoint-**B** Min Tx Rate: Zero (0 bps)
- C. Endpoint-A Min PDU Size: UDP Pld (1,472 B)

D. Use the $\ensuremath{\text{All}}$ button at the top to expand to the last detail level.

<u>\$</u>			udpgen - Create,	/M	odify Cross Connect							
+ - All					Display Syr	nc Batch-C	reate	1	Apply O	к	Cano	el
0	Cross-Connect				9	Cross-Connec	t					_
CX Name:	udpgen				Report Timer:	default (5 s)			-			
CX Type:	LANforge / UDP			•		Endpoint A			Endpoint B			
	Endpoint A	Endpoint A Endpoint B						_				1
Resource:	1 (brent-6port)	-	1 (brent-6port)	•	Pld Pattern Min IP Port:	АЛТО			AUTO		-	i
Port:	2 (eth1)	-	5 (eth4)	•	Max IP Port:	Same		-	Same			i
Min Tx Rate:	lG (l Gbps)	-	Zero (0 bps)	•	Min Duration:	Forever		-	Forever		-	i
Max Tx Rate:	Same	•	Same	•	Max Duration:	Same	•		Same		-	ĺ
Min PDU Size:	UDP Pld (1,472 B)	•	AUTO	•	Min Reconn:	0 (0 ms)	•		0 (0 ms)		-	1
Max PDU Size:	Same	-	Same	•	Max Reconn:	Same			Same		-	i
IP ToS:	Best Effort (0)	-	Best Effort (0)	•	Multi-Conn:	Normal (0)			Normal (O)		-	1
Pkts To Send:	Infinite	✓ Infinite		•		Scrip	t	1	Scri	ipt		1
						Thresho	olds		Thres	holds		ĺ
												1
	Cross-Connect					Endpoint A			Endpoint B			
Test Manager	default_tm		,	•	Snd Buff Size:	OS Default		-	OS Default		-	
Quiesce:	3 (3 sec)			-	Rcv Buff Size:	OS Default		-	OS Default		-	j
	Endpoint A		Endpoint B		Send Bad FCS:	zero (0%)			zero (0%)		-	
IP Addr:	Αυτο	-	AUTO	•	Src MAC:	00:00:00:00:00	:00 🔻		00:00:00:00:00:0	00:00	-	
	Replay File		🗌 Replay File			Use-Proxy		[Use-Proxy			
	Loop		🗌 Lоор		Proxy Addr:							
	Dest Mac		Dest Mac		Proxy Port:							
Filename:		_			Socket Priority:	0			0			Í
Dest MAC:		-		•		Payloa	ad		Payl	oad		
	Endpoint A		Endpoint R	_		Endnoint A		- 6	Endnoint R			_

E. Configure the Layer-3 connection to the system under test (Endpoint-B) by following these steps:

📓 udpgen - Create/Modify Cross Connect 🗕 🗆 🗙												
+ - All				Di	splay Sy	nc	Batch-Create	1	Apply	Cancel		
1	Cross-Connect				2		Cross-Connect					
CX Name:	Judpgen		(Report Timer	:	slow (10 s) 🗸					
СХ Туре:	LANforge / UDP		•		Endpoint A					Endpoint B		
	Endpoint A		Endpoint B	,	Pld Pattern		increasing 🗸		increasing 🔹			
Resource:	1 (brent-6port)	•	0		Min IP Port:		Αυτο	-	9999		-	
Port:	2 (eth1)	-	0 🗸		Max IP Port:		Same	-	Same			
Min Tx Rate:	1G (1 Gbps)	-	Zero (0 bps)		Min Duration:		Forever	-	Forever		-	
Max Tx Rate:	Same	•	Same		Max Duration	1:	Same	-	Same		-	
Min PDU Size:	UDP Pld (1,472 B)	•	AUTO		Min Reconn:		0 (0 ms)	-				
Max PDU Size:	Same	•	Same 💌		Max Reconn:		Same	-	Same			
IP ToS:	Best Effort (0)	•	Best Effort (0) 🔻		Multi-Conn:		Normal (0)	-	Normal	(0)		
Pkts To Send:	Infinite	•	Infinite 💌				Script			Script		
							Thresholds		Thresholds			
2	Cross-Connect			Δ		Endpoint A	Endpoint B					
Test Manager	default_tm		•		Snd Buff Size	:	1MB (1 MB)	•	OS Defa	ult	•	
Quiesce:	3 (3 sec)		•		Rcv Buff Size	:	OS Default	-	OS Defa	ult	-	
	Endpoint A		Endpoint B		Send Bad FCS:		zero (0%) 🔻		zero (0%)		-	
IP Addr:	AUTO	•	198.105.254.11 💌		Src MAC:		00:00:00:00:00:00	-	00:00:00:00:00		0 -	
	Replay File	lay File					Use-Proxy					
	Lоор		Сьор		Proxy Addr:							
	Dest Mac		Dest Mac		Proxy Port:							
Filename:		_			Socket Priori	ty:	0		0			
Dest MAC:		-					Payload			Payload		
5	Endpoint A		Endpoint B				ndpoint A		ndpoint			
Conn Timeout:	10s (10 s)	-	10s (10 s) 🔻]			Do Checksum		Do Ch			
TCP MSS:	OS Default	-	OS Default 💌				Duration Quiesce		UnMar	iageo on Quieso		
				1			Quiesce-After-Range		_	e-After-R		
							TCP_NODELAY			ODELAY		
							Concurrent IP Addrs			rrent IP A	ddrs	
							Clear-Port-On-Start		Clear-	Port-On-S	tart	
							Linear-IP-Ports		Linear	-IP-Ports		
				-			dagaa A	1.	dagar 2			
				E	ndp Name:	l	dpgen-A		udpgen-B			

- A. In section 5, on the right side, Endpoint-B (blue), select **UnManaged**. This will gray-out most of the Endpoint-B options.
- B. In section 2, set the Report Timer to slow (10 s). Also, set the Endpoint-B Min IP port: 9999. If you have a service under test this port should match, if not, this setting still needs to be present to generate valid traffic.
- C. In section 3, set the Endpoint-B IP to the system under test IP address. Our example shows 198.105.254.11.
- D. In section 4, set the send buffer size (Snd Buff Size) to 1MB.
- E. Click \mathbf{OK} at the top to commit the changes.

3. Start generating traffic.

\$				LANforg	e Manager Versio	n(5.3.3)				- O X			
<u>Control</u> <u>R</u> epor	ting <u>T</u> ea	r-Off <u>I</u> nfo	<u>P</u> lugins										
	Stop AllRestart ManagerRefreshHELP												
File-IO Layer-4 Generic Test Mgr Test Group Resource Mgr Event Log Alerts Port Mgr Messages Status Layer-3 L3 Endps VoIP/RTP VoIP/RTP Endps Armageddon WanLinks Attenuators Collision-Domains													
	Status Layer-3 L3 Endps VolP/RIP VolP/RIP Endps Armageddon WanLinks Attenuators Collision-Domains Rpt Timer: default (5 s) Go Test Manager all Select All Start Stop Quiesce Clear												
View	0 - 20	00		🔻 Go		Displa	ay Cr <u>e</u> ate	e <u>M</u> odify	Delete				
[-Cross Con	nects for Selecte	d Test Manager-							
Name	Туре	State	Pkt Rx A	Pkt Rx B	Bps Rx A	Bps Rx B	Rx Drop % A	Rx Drop % B	Drop Pkts A	Drop Pkts			
udpgen	LF/UDP	Stopped	0	0	0	0	0	0	0				
Logged in to	: brent-6	5port:4002	2 as: Admin										

A. In the Layer-3 tab, select the connection udpgen.

B. Click Start.

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