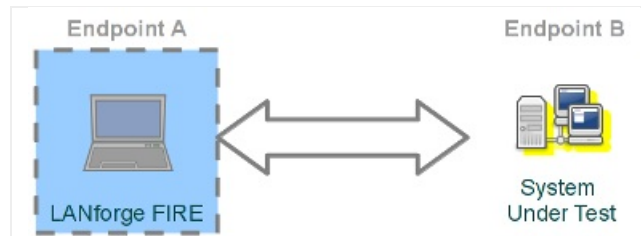


Layer-3 UDP Traffic Generator

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.

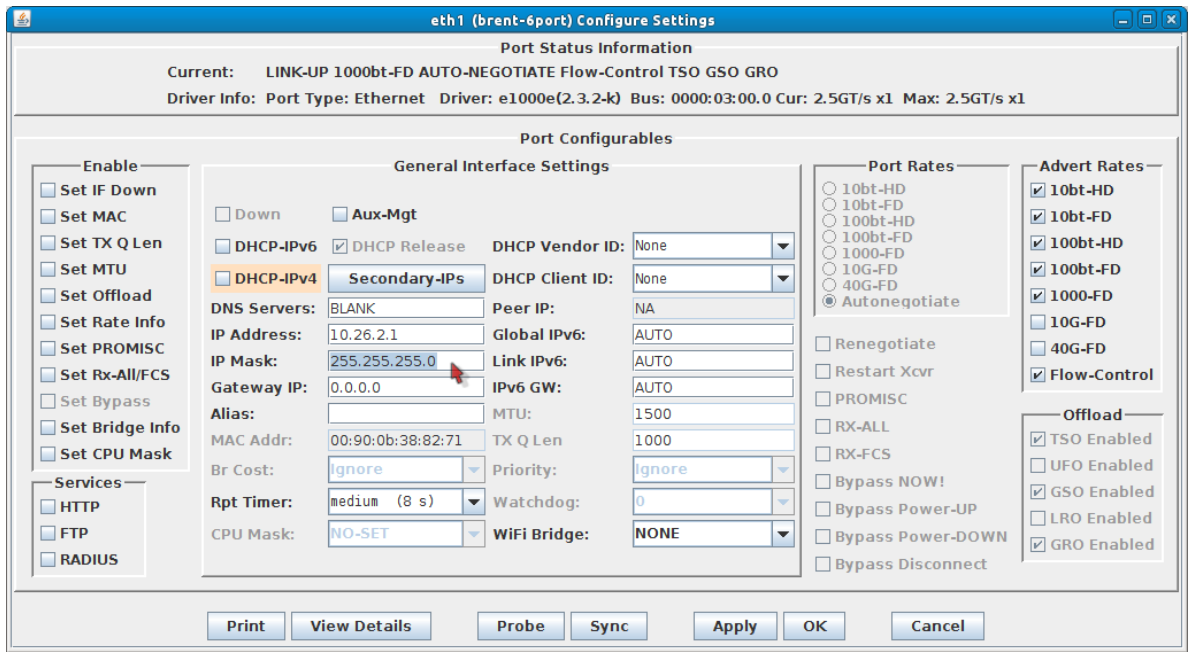
The screenshot shows the LANforge Manager software interface. The 'Port Mgr' tab is selected, displaying a table of Ethernet interfaces. The table has columns for Port, Phase, Down status, IP, SEC, Alias, Parent Dev, RX Bytes, RX Pkts, Pps RX, bps RX, TX Bytes, TX Pkts, and Pps TX. The row for 'eth1' (Port 1.1.2) is highlighted. The 'Modify' button is visible in the bottom right of the table area.

Port	Pha...	Down	IP	SEC	Alias	Parent Dev	RX Bytes	RX Pkts	Pps RX	bps RX	TX Bytes	TX Pkts	Pps TX
1.1.0			192.168.100.86	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	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	0	2,032	22	0
1.1.5			0.0.0.0	0	eth4		0	0	0	0	2,032	22	0

Logged in to: brent-6port:4002 as: Admin

- A. This example will use port **eth1**.

B. Assign an IP and Mask as necessary.

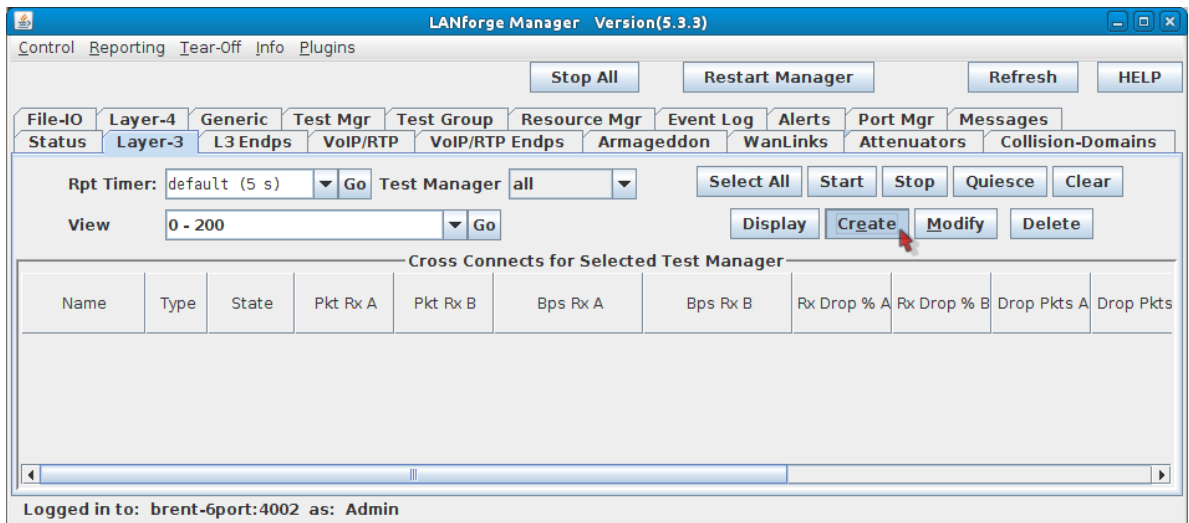


The screenshot shows the 'eth1 (brent-6port) Configure Settings' window. The 'Port Status Information' section indicates the current status is 'LINK-UP 1000bt-FD AUTO-NEGOTIATE Flow-Control TSO GSO GRO' and the driver info is 'Port Type: Ethernet Driver: e1000e(2.3.2-k) Bus: 0000:03:00.0 Cur: 2.5GT/s x1 Max: 2.5GT/s x1'. The 'Port Configurables' section is divided into three main areas: 'General Interface Settings', 'Port Rates', and 'Advert Rates'. In 'General Interface Settings', the 'DHCP-IPv4' tab is selected, showing fields for IP Address (10.26.2.1), IP Mask (255.255.255.0), Gateway IP (0.0.0.0), and others. The 'Port Rates' section has 'Autonegotiate' selected. The 'Advert Rates' section has '1000-FD' and 'Flow-Control' selected. The 'Offload' section has 'TSO Enabled', 'GSO Enabled', and 'GRO Enabled' checked. At the bottom, there are buttons for 'Print', 'View Details', 'Probe', 'Sync', 'Apply', 'OK', and 'Cancel'.

C. Click **OK**.

2. Configure the Layer-3 connection.

A. On the **Layer-3** tab, click **Create**.



The screenshot shows the 'LANforge Manager Version(5.3.3)' interface. The 'Control' tab is selected, and the 'Layer-3' sub-tab is active. The 'Test Manager' section shows a table with columns: Name, Type, State, Pkt Rx A, Pkt Rx B, Bps Rx A, Bps Rx B, Rx Drop % A, Rx Drop % B, Drop Pkts A, and Drop Pkts. The 'Create' button is highlighted with a red arrow. The 'View' dropdown is set to '0 - 200'. The 'Rpt Timer' is set to 'default (5 s)'. The 'Test Manager' dropdown is set to 'all'. The 'Display' button is also visible. At the bottom, it says 'Logged in to: brent-6port:4002 as: Admin'.

B. Assign port `eth1` to **Endpoint-A**.

udpqgen - Create/Modify Cross Connect

+ - All Display Sync Batch-Create Apply OK Cancel

1 Cross-Connect

CX Name: udpqgen

CX Type: LANforge / UDP

	Endpoint A	Endpoint B
Resource:	1 (brent-6port)	1 (brent-6port)
Port:	2 (eth1)	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:

udpqgen - Create/Modify Cross Connect

+ - All Display Sync Batch-Create Apply OK Cancel

1 Cross-Connect

CX Name: udpqgen

CX Type: 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 **All** button at the top to expand to the last detail level.

udpgen - Create/Modify Cross Connect

1 Cross-Connect

CX Name:

CX Type:

Resource:

Port:

Min Tx Rate:

Max Tx Rate:

Min PDU Size:

Max PDU Size:

IP ToS:

Pkts To Send:

2 Report Timer:

Report Timer:

Pld Pattern:

Min IP Port:

Max IP Port:

Min Duration:

Max Duration:

Min Reconn:

Max Reconn:

Multi-Conn:

3 Test Manager

Test Manager:

Quiesce:

IP Addr:

☐ Replay File ☐ Replay File

☐ Loop ☐ Loop

☐ Dest Mac ☐ Dest Mac

Filename:

Dest MAC:

4 Snd Buff Size:

Snd Buff Size:

Rcv Buff Size:

Send Bad FCS:

Src MAC:

☐ Use-Proxy ☐ Use-Proxy

Proxy Addr:

Proxy Port:

Socket Priority:

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

udpgen - Create/Modify Cross Connect

Display Sync Batch-Create Apply OK Cancel

1 CX Name: udpgen
CX Type: LANforge / UDP

Resource: 1 (brent-6port) 0
Port: 2 (eth1) 0
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

2 Report Timer: slow (10 s)

Pld Pattern: increasing increasing
Min IP Port: AUTO 9999
Max IP Port: Same Same
Min Duration: Forever Forever
Max Duration: Same Same
Min Reconn: 0 (0 ms) 0 (0 ms)
Max Reconn: Same Same
Multi-Conn: Normal (0) Normal (0)

Script Thresholds Script Thresholds

3 Test Manager: default_tm
Quiesce: 3 (3 sec)

IP Addr: AUTO 198.105.254.11
☐ Replay File ☐ Replay File
☐ Loop ☐ Loop
☐ Dest Mac ☐ Dest Mac

Filename:
Dest MAC:

4 Snd Buff Size: 1MB (1 MB) OS Default
Rcv Buff Size: OS Default OS Default
Send Bad FCS: zero (0%) zero (0%)
Src MAC: 00:00:00:00:00:00 00:00:00:00:00:00
☐ Use-Proxy ☐ Use-Proxy
Proxy Addr: 0.0.0.0 0.0.0.0
Proxy Port: 0 0
Socket Priority: 0 0

Payload Payload

5 Conn Timeout: 10s (10 s) 10s (10 s)
TCP MSS: OS Default OS Default

Endpoint A Endpoint B
☐ Do Checksum ☐ Do Checksum
☐ Duration Quiesce ☒ UnManaged ☐ Duration Quiesce
☐ Quiesce-After-Range ☐ Quiesce-After-Range
☐ TCP_NODELAY ☐ TCP_NODELAY
☐ Concurrent IP Addr ☐ Concurrent IP Addr
☐ Clear-Port-On-Start ☐ Clear-Port-On-Start
☐ Linear-IP-Ports ☐ Linear-IP-Ports

Endp Name: udpgen-A udpgen-B

- In section 5, on the right side, Endpoint-B (blue), select **UnManaged**. This will gray-out most of the Endpoint-B options.
- 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.
- In section 3, set the Endpoint-B IP to the *system under test* IP address. Our example shows **198.105.254.11**.
- In section 4, set the send buffer size (Snd Buff Size) to **1MB**.
- Click **OK** at the top to commit the changes.

3. Start generating traffic.

LANforge Manager Version(5.3.3)

Control Reporting Tear-Off Info Plugins

Stop All Restart Manager Refresh HELP

File-I/O 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

Rpt Timer: default (5 s) Go Test Manager all Select All Start Stop Quiesce Clear
View 0 - 200 Go Display Create Modify Delete

Cross Connects for Selected Test Manager

Name	Type	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	0

Logged in to: brent-6port:4002 as: Admin

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

B. Click **Start**.

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