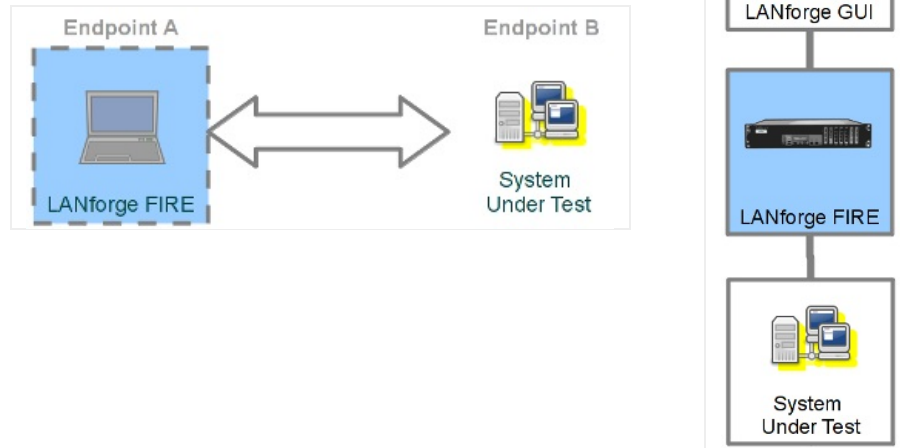


Layer-3 UDP Traffic Generator

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.

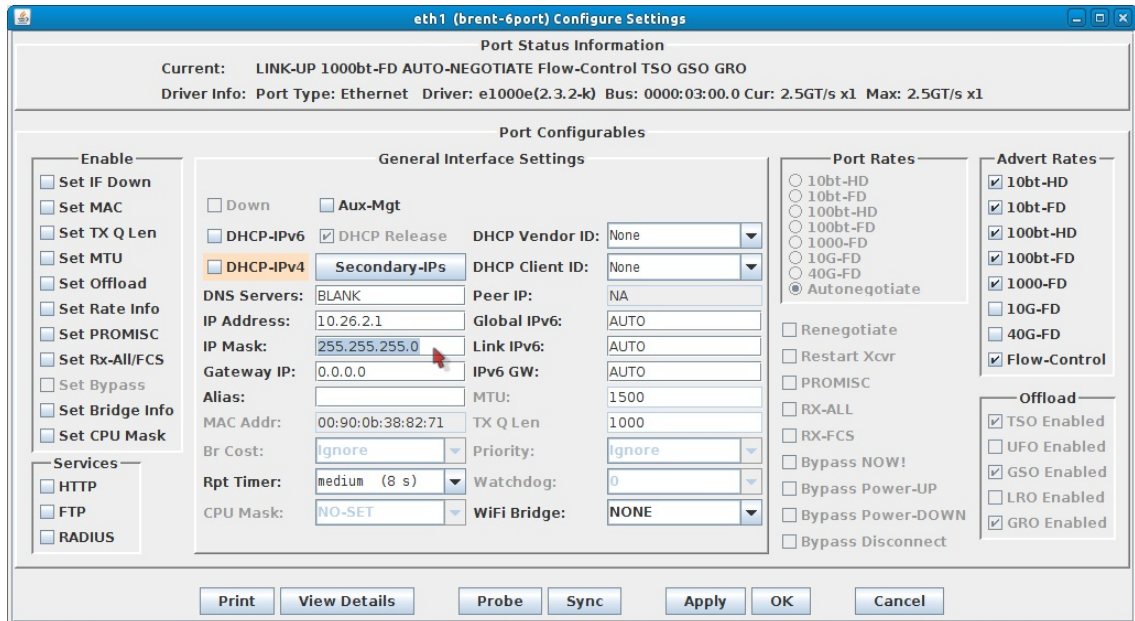
The screenshot shows the LANforge Manager interface. The 'Port Mgr' tab is active, displaying a table of ethernet interfaces. The table has columns for Port, Phase, Down, IP, SEC, Alias, Parent Dev, RX Bytes, RX Pkts, Pps RX, bps RX, TX Bytes, TX Pkts, and Pps TX. The row for 'eth1' is highlighted, and a mouse cursor is over the 'Modify' button.

| 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 | <input type="checkbox"/> | <input type="checkbox"/> | 192.168.100.86 | 0 | eth5 | | 272,959,695 | 346,073 | 6 | 7,949 | 276,256,112 | 322,422 | 6 |
| 1.1.1 | <input type="checkbox"/> | <input type="checkbox"/> | 0.0.0.0 | 0 | eth0 | | 0 | 0 | 0 | 0 | 2,032 | 22 | 0 |
| 1.1.2 | <input type="checkbox"/> | <input type="checkbox"/> | 0.0.0.0 | 0 | eth1 | | 0 | 0 | 0 | 0 | 2,032 | 22 | 0 |
| 1.1.3 | <input type="checkbox"/> | <input type="checkbox"/> | 0.0.0.0 | 0 | eth2 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1.1.4 | <input type="checkbox"/> | <input type="checkbox"/> | 0.0.0.0 | 0 | eth3 | | 0 | 0 | 0 | 0 | 2,032 | 22 | 0 |
| 1.1.5 | <input type="checkbox"/> | <input type="checkbox"/> | 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.

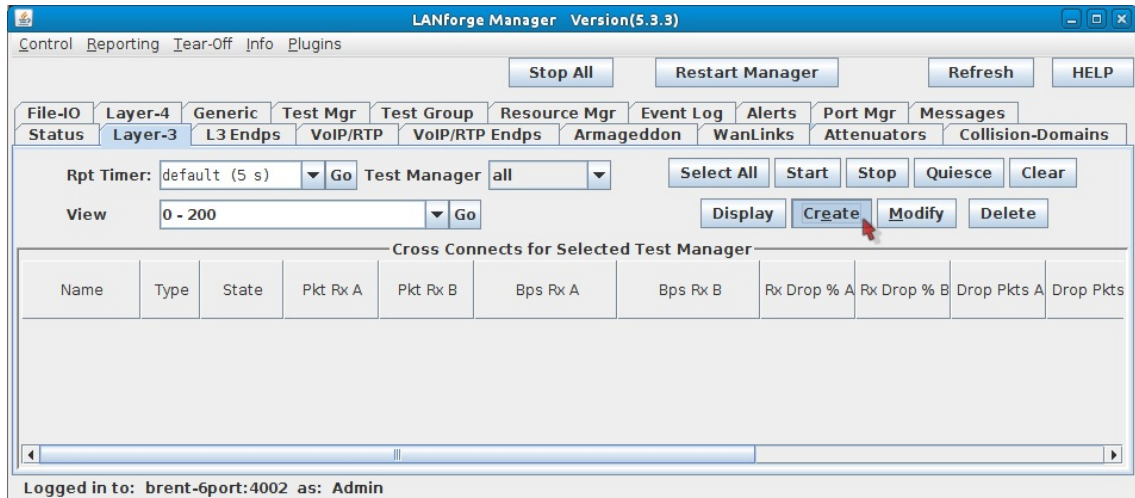
B. Assign an IP and Mask as necessary.



C. Click **OK**.

2. Configure the Layer-3 connection.

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



B. Assign port eth1 to Endpoint-A.

udpgen - Create/Modify Cross Connect

+ - All Display Sync Batch-Create Apply OK Cancel

1

Cross-Connect

CX Name: judpaen

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:

udpgen - Create/Modify Cross Connect

+ - All Display Sync Batch-Create Apply OK Cancel

1

Cross-Connect

CX Name: judpaen

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.

udpqen - Create/Modify Cross Connect

1 Cross-Connect

CX Name: udpqen
CX Type: LANforge / UDP

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

2 Cross-Connect

Report Timer: default (5 s)

| Endpoint A | Endpoint B |
|-------------------------|------------|
| Pld Pattern: increasing | increasing |
| Min IP Port: AUTO | AUTO |
| 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

3 Cross-Connect

Test Manager: default_tm
Quiesce: 3 (3 sec)

| Endpoint A | Endpoint B |
|--------------------------------------|--------------------------------------|
| IP Addr: AUTO | AUTO |
| <input type="checkbox"/> Replay File | <input type="checkbox"/> Replay File |
| <input type="checkbox"/> Loop | <input type="checkbox"/> Loop |
| <input type="checkbox"/> Dest Mac | <input type="checkbox"/> Dest Mac |
| Filename: | |
| Dest MAC: | |

4 Cross-Connect

| Endpoint A | Endpoint B |
|------------------------------------|------------------------------------|
| Snd Buff Size: OS Default | 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 |
| <input type="checkbox"/> Use-Proxy | <input type="checkbox"/> Use-Proxy |
| Proxy Addr: 0.0.0.0 | 0.0.0.0 |
| Proxy Port: 0 | 0 |
| Socket Priority: 0 | 0 |

Payload

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

- 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 to **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 **OK** at the top to commit the changes.

3. Start generating traffic.

| 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 B |
|--------|--------|---------|----------|----------|----------|----------|-------------|-------------|-------------|-------------|
| udpgen | LF/UDP | Stopped | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

- A. In the **Layer-3** tab, select the connection **udpgen**.
- B. Click **Start**.

