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## Generating Traffic to a Switched Network

Goal: Set up and run traffic on a flat network.

In this test scenario, LANforge-FIRE is used to generate traffic between two ports on the same subnet (switch) in order to test throughput.



- 1. Connect two available data generating ports of your LANforge server to the DUT. In this example, the DUT is a switch.
- 2. Set up the LANforge ports so that they have valid IP addresses. This example uses static IP addresses, but you can also use DHCP if your network supports that.
  - A. Go to the Port Manager

| ontrol  | Repor   | ting ] | ear-Off  | Info <u>P</u> lu | gins |            |               |                |                |          |            |                 |                     |         |
|---------|---------|--------|----------|------------------|------|------------|---------------|----------------|----------------|----------|------------|-----------------|---------------------|---------|
|         |         |        |          |                  |      |            |               | Stop           | All            | Restart  | Manager    |                 | Refresh             | HELP    |
| _ayer-4 | Ger     | eric   | Test M   | gr Test          | Grou | Resou      | Irce Mgr      | Event Log      | Alerts         | Port Mgr | vAP Static | ons Maessag     | es                  |         |
| Status  | 5       | Layer- | 3        | L3 Endps         | 1    | VoIP/RTP   | Vo            | IP/RTP Endps   | Arma           | igeddon  | WanL       | inks Att        | enuators            | File-IO |
|         | Disp:   | 192.1  | 58.100.2 | 239:0            | S    | niff Packe | ts            | 1 Clear        | r Counters     | Reset    | Port       | Delete          |                     |         |
|         | Rpt Tir | ner: m | edium    | (8 s) 🔻          |      | Apply      |               | ↓ <u>V</u> ier | w Details      | Crea     | ate        | Mo <u>d</u> ify | <u>B</u> atch Modif | iy 🛛    |
|         |         |        |          |                  |      | All Et     | hernet Ir     | nterfaces (Por | ts) for all Re | sources  |            |                 |                     |         |
| Port    | Pha     | Down   |          | IP               | SEC  | Alias      | Parent<br>Dev | RX Bytes       | RX Pkts        | Pps RX   | bps RX     | TX Bytes        | TX Pkts             | Pps TX  |
| .1.0    |         |        | 192.16   | 8.100.103        | 0    | eth0       |               | 49,388         | 412            | 4        | 4,192      | 184,397         | 233                 | 2       |
| .1.1    |         |        | 0.0.0.0  |                  | 0    | ethl       |               | 0              | 0              | 0        | 0          | 0               | 0                   | 0       |
| .1.2    |         |        | 0.0.0.0  |                  | 0    | eth2       |               | 0              | 0              | 0        | 0          | 70              | 1                   | 0       |
| .1.3    |         |        | 0.0.0.0  |                  | 0    | eth3       |               | 70             | 1              | 0        | 5          | 0               | 0                   | 0       |
| .1.4    |         |        | 0.0.0.0  |                  | 0    | eth4       |               | 70             | 1              | 0        | 5          | 0               | 0                   | C       |
| .1.5    |         |        | 0.0.0.0  |                  | 0    | eth5       |               | 0              | 0              | 0        | 0          | 70              | 1                   | 0       |
| 4       |         |        |          |                  |      |            |               |                |                |          |            |                 |                     |         |

## B. Modify port for Endpoint A (eth2)

|                 |                   | eth2              | (jw2) Configure       | e Settings         |          |                         | $\odot$        |
|-----------------|-------------------|-------------------|-----------------------|--------------------|----------|-------------------------|----------------|
|                 |                   |                   | Port Status Info      | ormation           |          | \$                      |                |
|                 | Current: LINK-    | UP 1000bt-FD AUTO | -NEGOTIATE TSO GS     | O GRO              |          |                         |                |
|                 | Driver Info: Port | Type: Ethernet Dr | iver: igb(5.4.0-k) Bu | Is: 0000:0a:00.0 ( | Cur: 2.5 | GT/s x1 Max: 2.5GT/s x1 |                |
|                 |                   |                   | Port Configu          | rables             |          |                         |                |
| Enable          |                   | General           | Interface Settings    |                    |          | Port Rates              | -Advert Rates- |
| Set IF Down     |                   |                   |                       |                    |          | O 10bt-HD               | ■ 10bt-HD      |
| Set MAC         | Down              | Aux-Mgt           |                       |                    |          | O 10bt-FD               | ■ 10bt-FD      |
| Set TX Q Len    | DHCP-IPv6         | DHCP Release      | DHCP Vendor ID:       | None               | -        | 0 100bt-FD              | ☑ 100bt-HD     |
| Set MTU         |                   | Secondary IPs     | DHCR Client ID:       | Nono               |          | 0 1000-FD<br>0 10G-FD   | 🖌 100bt-FD     |
| Set Offload     | DHCF-IFV4         | secondary-ins     |                       | None               |          | O 40G-FD                | ₽ 1000-FD      |
| Set Rate Info   | DNS Servers:      | BLANK             | Peer IP:              | NA                 |          | Oraconogociaco          | 10G-FD         |
| Set PROMISC     | IP Address:       | 10.1.1.102        | Global IPv6:          | AUTO               |          | Renegotiate             | 40G-FD         |
| Set Bx-All/ECS  | IP Mask:          | 255.255.255.0     | Link IPv6:            | AUTO               |          | Restart Xcvr            | Flow-Control   |
| Set Purpass     | Gateway IP:       | 0.0.0.0           | IPv6 GW:              | AUTO               |          |                         |                |
| Cet Bridge Jafe | Alias:            |                   | MTU:                  | 1500               |          |                         | Offload -      |
|                 | MAC Addr:         | 00:30:18:cc:5b:d2 | TX Q Len              | 1000               |          |                         | TS0 Enabled    |
| Set CPU Mask    | Br Cost:          | Ignore            | Priority:             | Ignore             | -        | RX-FCS                  | UF0 Enabled    |
| - Services      | Pot Timor         | medium (8 s)      | Watchdog              | 0                  |          | Bypass NOW!             | GS0 Enabled    |
|                 | type timer.       | medium (0 3)      | · wateridog.          |                    |          | Bypass Power-UP         | LRO Enabled    |
| FTP             | CPU Mask:         | NO-SET            | WiFi Bridge:          | NONE               |          | Bypass Power-DOWN       | GRO Enabled    |
| RADIUS          |                   |                   |                       |                    |          | Bypass Disconnect       | 1              |
|                 |                   |                   |                       |                    |          |                         |                |
|                 | Print Vi          | ew Details        | Probe Svnc            | Apply              |          | K Cancel                |                |
|                 |                   |                   |                       |                    |          |                         |                |

C. Modify port for Endpoint B (eth3)

|                 |                   | eth3                | (jw2) Configure     | e Settings       |          |                         | $\odot$      |
|-----------------|-------------------|---------------------|---------------------|------------------|----------|-------------------------|--------------|
|                 |                   |                     | Port Status Info    | ormation         |          |                         | \$           |
|                 | Current: LINK-    | UP 1000bt-FD AUTO-  | NEGOTIATE PROMIS    | iC               |          |                         |              |
|                 | Driver Info: Port | Type: Ethernet Driv | er: igb(5.4.0-k) Bu | Is: 0000:0b:00.0 | Cur: 2.5 | GT/s xl Max: 2.5GT/s xl |              |
|                 |                   |                     | Port Configu        | rables           |          |                         |              |
|                 |                   | General In          | terface Settings    |                  | 1        | Port Rates              | Advert Rates |
| Set IF Down     |                   |                     |                     |                  |          | O 10bt-HD               | ₽ 10bt-HD    |
| Set MAC         | Down              | Aux-Mgt             |                     |                  |          | 0 10bt-HD               | ≥ 10bt-FD    |
| Set TX Q Len    | DHCP-IPv6         | DHCP Release        | DHCP Vendor ID:     | None             | -        | O 100bt-FD              | 🗾 100bt-HD   |
| Set MTU         | DHCP-IPv4         | Secondary-IPs       | DHCP Client ID:     | None             |          | 0 10G-FD                | 🗹 100bt-FD   |
| Set Offload     | DNS Servers:      | BLANK               | Peer IP:            | NA               |          | Autonegotiate           | 🗹 1000-FD    |
| Set Rate Info   | IP Address:       | 10.1.1.103          | Global IPv6:        | DELETED          |          |                         | 🔲 10G-FD     |
| Set PROMISC     | IP Mask:          | 255.255.255.0       | Link IPv6:          | DELETED          |          | Renegotiate             | 40G-FD       |
| Set Rx-All/FCS  | Gateway IP:       | 0.0.0.0             | IPv6 GW:            | DELETED          |          | Restart Xcvr            | Flow-Contro  |
| Set Bypass      | Alias:            |                     | MTU:                | 1500             |          | PROMISC                 | Offload      |
| Set Bridge Info | MAC Addr:         | 00:30:18:cc:5b:d3   | TX Q Len            | 1000             |          | RX-ALL                  | TS0 Enable   |
| Set CPU Mask    | Br Cost:          | Ignore 🗸            | Priority:           | Ignore           | -        | RX-FCS                  | UF0 Enable   |
| - Services -    | Bot Timer         | medium (8 s) 💌      | Watchdog            | 0                |          | Bypass NOW!             | GS0 Enable   |
|                 | opu Maala         |                     | wist pridee         | NONE             |          | Bypass Power-UP         | LRO Enable   |
|                 | CPU Mask:         |                     | wiFi Bridge:        | INDINE           |          | U Bypass Power-DOWN     | GRO Enable   |
| 100003          |                   |                     |                     |                  |          | 🔲 Bypass Disconnect     |              |
|                 |                   |                     |                     |                  |          |                         |              |
|                 | Print Vi          | ew Details          | Probe Sync          | App              | y o      | K <u>C</u> ancel        |              |

D. Verify the port configuration

|           |         |       |   |       | LANfo       | orge M        | anager Ve      | rsion(5.3.    | 6)       |           | N               |             | $\odot$ |
|-----------|---------|-------|---|-------|-------------|---------------|----------------|---------------|----------|-----------|-----------------|-------------|---------|
| ontrol !  | Report  | ting  | <u>[</u> ear-Off <u>I</u> nfo <u>P</u> lu | igins |             |               |                |               |          |           | 3               |             |         |
|           |         |       |   |       |             |               | Stop           | All           | Restart  | Manager   |                 | Refresh     | HELP    |
| Layer-4   | Gen     | neric | Test Mgr Test                             | Grou  | Resou       | rce Mgr       | Event Log      | Alerts        | Port Mgr | vAP Stati | ons Messag      | jes         |         |
| Status    |         | Layer | 3 L3 Endps                                | 1     | VoIP/RTP    | Vo            | DIP/RTP Endps  | Arma          | ageddon  | WanL      | inks Att        | enuators    | File-IO |
| [         | Disp:   | 192.1 | 68.100.239:0                              | S     | niff Packet | s             | 1 Clear        | Counters      | Reset    | Port      | Delete          |             |         |
| F         | Rpt Tir | mer:  | edium (8 s) 🔻                             | ·     | Apply       |               | Į <u>V</u> ie  | w Details     | Crea     | ate       | Mo <u>d</u> ify | Batch Modif | у       |
|           |         |       |   |       | All Eth     | nernet I      | nterfaces (Por | s) for all Re | esources |           |                 |             |         |
| Port      | Pha     | Dowr  | IP  | SEC   | Alias       | Parent<br>Dev | RX Bytes       | RX Pkts       | Pps RX   | bps RX    | TX Bytes        | TX Pkts     | Pps TX  |
| 1.1.0     |         |       | 192.168.100.103                           | 0     | eth0        |               | 219,724        | 1,956         | 6        | 5,163     | 735,937         | 1,044       | 2       |
| 1.1.1     |         |       | 0.0.0.0                                   | 0     | ethl        |               | 0              | 0             | 0        | 0         | 0               | 0           | 0       |
| 1.1.2     |         |       | 10.1.1.102                                | 0     | eth2        |               | 0              | 0             | 0        | 0         | 998             | 13          | 0       |
| 1.1.3     |         |       | 10.1.1.103                                | 0     | eth3        |               | 998            | 13            | 0        | 9         | 528             | 6           | 0       |
| 1.1.4     |         |       | 0.0.0.0                                   | 0     | eth4        |               | 140            | 2             | 0        | 0         | 0               | 0           | 0       |
| 1.1.5     |         |       | 0.0.0.0                                   | 0     | eth5        |               | 0              | 0             | 0        | 0         | 140             | 2           | 0       |
|           |         |       |   |       |             |               |                |               |          |           |                 |             |         |
| •         |         | 1     |   |       |             |               |                |               |          |           |                 |             | )       |
| Logged in | n to:   | 192.1 | 58.100.103:4002                           | as: A | dmin        |               |                |               |          |           |                 |             |         |

For more information see LANforge User's Guide: Ports (Interfaces)

3. Create a Layer-3 connection using the two configured ports.

## A. Go to the Layer-3 tab

| LANforge Manager Version(5.3.6)  | $\sim \propto$ |
|--|----------------|
| Control Reporting Tear-Off Info Plugins  |                |
| Stop All Restart Manager Refresh   | HELP           |
| Layer-4 Generic Test Mgr Test Group Resource Mgr Event Log Alerts Port Mgr VAP Stations Messages   Status Layer-3 L3 Endps VolP/RTP VolP/RTP Armageddon WanLinks Attenuators I | -ile-IO        |
| Rpt Timer: fast (1 s) ▼ Go Test Manager all ▼ Select All Start <u>S</u> top Quiesce Clear  |                |
| View 0 - 500 Toget 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  | rop Pkt:       |
|  |                |
|  |                |
|  | •              |
| L'<br>Logged in to: 192.168.100.103:4002 as: Admin   |                |

B. Create a new Cross-Connect

| 0                    | eth2-eth3 - Cre                               | ate | /Modify Cross Conne  | ct | $\odot$ $\sim$ $\times$ |
|----------------------|---|-----|----------------------|----|-------------------------|
| + - All              | Display                                       | Syn | c Batch-Create       | Ap | oply OK Cancel          |
| CX Name:<br>CX Type: | Cross-Connect<br>Jeth2-eth3<br>LANforge / UDP |     |                      | •  |                         |
|                      | Endpoint A                                    |     | Endpoint B           |    | 3                       |
| Resource:            | l (jw2)                                       | -   | 1 (jw2)              | -  |                         |
| Port:                | 2 (eth2)                                      | -   | 3 (eth3)             | -  |                         |
| Min Tx Rate:         | T3/DS3 (44.736 Mbps)                          | -   | T3/DS3 (44.736 Mbps) | -  |                         |
| Max Tx Rate:         | Same  | -   | Same                 | -  |                         |
| Min PDU Size:        | UDP Pld (1,472 B)                             | -   | UDP Pld (1,472 B)    | -  |                         |
| Max PDU Size:        | Same  | •   | Same                 | -  |                         |
| IP ToS:              | Best Effort (0)                               | -   | Best Effort (0)      | -  |                         |
| Pkts To Send:        | Infinite                                      | -   | Infinite             | -  |                         |
|                      |   |     |                      |    |                         |

C. Verify the new Cross-Connect

|                       |                    |                     |           | LANforge N  | lanager Versi                         | on(5.3.6)                    |                         |                      |             | $\odot$ |
|-----------------------|--------------------|---------------------|-----------|-------------|---------------------------------------|------------------------------|-------------------------|----------------------|-------------|---------|
| ontrol <u>R</u> epor  | ting <u>T</u> ea   | ar-Off Info         | Plugins   |             |                                       |                              |                         |                      |             |         |
|                       |                    |                     |           | 3           | Stop Al                               | Restart                      | Manager                 |                      | Refresh     | HELP    |
| Layer-4 Ger<br>Status | ieric T<br>Layer-3 | est Mgr T<br>L3 End | est Group | Resource Mg | r Event Log A<br>oIP/RTP Endps        | lerts Port Mgr<br>Armageddon | vAP Stations<br>WanLink | s Message<br>cs Atte | nuators     | File-I0 |
| Rpt 1                 | Timer: fa          | ast (1 s            | ) 🔻 Go    | Test Manage | r all 🔻                               | Select All                   | Start <u>S</u> t        | op <u>Q</u> uiesc    | clear       |         |
| View                  | 0                  | - 500               |           | ▼ Go        |                                       | Display                      | Cr <u>e</u> ate         | Mo <u>d</u> ify      | Delete      |         |
|                       | 1                  |                     |           | -Cross Cor  | nects for Selected                    | d Test Manager               |                         | 1                    |             |         |
| 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 Pl |
| eth2-eth3             | LF/UDP             | Stopped             | 0         | 0           | 0                                     | 0                            | 0                       | 0                    | 0           |         |
|                       |                    |                     |           |             |                                       |                              |                         |                      |             |         |
| 4                     |                    |                     |           |             |                                       |                              |                         |                      |             |         |
|                       |                    |                     |           |             | · · · · · · · · · · · · · · · · · · · |                              |                         |                      |             |         |

- 4. Run traffic and observe results.
  - A. Select the cross-connect on the Layer-3 tab, click Start and then Display

| 0                             |                   |                     |                 | LANforge M            | lanager Versi                  | on(5.3.6)                    |                         |                      |              | $\odot$ $\land$ $\times$ |
|-------------------------------|-------------------|---------------------|-----------------|-----------------------|--------------------------------|------------------------------|-------------------------|----------------------|--------------|--------------------------|
| <u>Control</u> <u>R</u> eport | ting <u>T</u> ea  | ar-Off <u>I</u> nfo | <u>P</u> lugins | Ν                     |                                |                              |                         | _                    |              |                          |
|                               |                   |                     |                 | M2                    | Stop Al                        | I Restart                    | Manager                 |                      | Refresh      | HELP                     |
| Layer-4 Gen<br>Status I       | eric T<br>Layer-3 | est Mgr T<br>L3 End | est Group       | Resource Mg<br>/RTP V | r Event Log A<br>oIP/RTP Endps | lerts Port Mgr<br>Armageddon | vAP Stations<br>WanLink | s Message<br>cs Atte | s<br>nuators | File-I0                  |
| Rpt T                         | Fimer: fa         | ast (1 s            | ) 🔻 Go          | Test Manage           | r all 🔻                        | Select All                   | Start <u>S</u> t        | op <u>Q</u> uiesc    | e Clear      |                          |
| View                          | 0                 | - 500               |                 | ▼ Go                  |                                | Display                      | Cr <u>e</u> ate         | Mo <u>d</u> ify      | Delete       |                          |
|                               | 1                 |                     | 1               | -Cross Cor            | nects for Selected             | d Test Manager —             | 1                       | 1                    |              |                          |
| 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 Pkt:                |
| eth2-eth3                     | LF/UDP            | Run                 | 72,605          | 73,384                | 44,729,086                     | 44,731,610                   | 0                       | 0                    | 0            |                          |
| 4                             |                   |                     |                 | Ш                     |                                |                              |                         |                      |              |                          |
| Logged in to: 1               | 192 168           | 100 103-40          | 02 as: Admir    | n                     |                                |                              |                         |                      |              |                          |
| Logged in to.                 |                   | 100.100.40          | as. Admin       |                       |                                |                              |                         |                      |              |                          |

B. View the Layer-3 cross-connect display

| 0                         | Cross C              | onnect: e                    | eth2-eth3    | Manager               | : 192.168.            | 100.103  | Ν         |                |           | $\odot$  | × |
|---------------------------|----------------------|------------------------------|--------------|-----------------------|-----------------------|----------|-----------|----------------|-----------|----------|---|
|                           | Endpoint: eth2-      | eth3-A                       |              |                       |                       |          | N         |                |           | Endpoir  | - |
| Port                      | Endpoint             | 1: 326419                    | RT-Lat       | 1: 326729             | 1W-Lat                |          |           | Port           | E         | ndpoint  |   |
| Resource: jw2             | EID: 1.1.2.19        | 4: 79<br>8: 7                | Avg:0<br>041 | 4: 12<br>8: 2         | Avg:0                 | Packets: | Resource  | jw2            | EID:      | 1.1.3.20 |   |
| Port: eth2                | Min TX: 44.736 Mbps  | 16: 0<br>32: 0               | 01112        | 16: 0<br>32: 0        | 0.100                 | 325252   | Port:     | eth3           | Min TX:   | 44.736 1 |   |
| IP: 10.1.1.102            | Max TX: 44.736 Mbps  | 128:0                        |              | 128:0                 |                       |          | IP:       | 10.1.1.103     | Max TX:   | 44.736 1 |   |
| bps TX: 39.478 Mbps       | RX Rate: 44.735 Mbps | 512: 0<br>1024: 0            | 2^20         | 512:0<br>1024:0       | 2^20                  |          | bps TX:   | 34.266 Mbps    | RX Rate:  | 44.752 1 |   |
| Pps Tx: 3259              | RX Pkts: 324478      | 2048: 0                      | -2^15        | 2048: 0               | -2^15                 | Dropped: | Pps Tx:   | 2829           | RX Pkts:  | 325252   |   |
| bps RX: 39.477 Mbps 1     | RX Drop: 0           | L                            | -1024        |                       | -1024                 | 7        | bps RX:   | 34.267 Mbps    | RX Drop:  | 7        |   |
| Pps RX: 3259              | TX Pkts: 324485      |                              | 0            | h                     | 0                     |          | Pps RX:   | 2829           | TX Pkts:  | 325245   | = |
| Errors: 0                 | Type: LF/UDP         | 1: 0<br>2: 0                 | Drops        | 1: 310690<br>2: 16012 | Rx Gap                | 4        | Errors:   | 0              | Type:     | LF/UDP   |   |
| 65.536 Kpps               |                      | 4:0<br>8:0                   | AVg:0<br>00  | 4: 70<br>8: 13        | AVG: U<br>01503950542 | 4        |           |                |           | L e      |   |
| 0 pps                     |                      | 32: 0                        |              | 32: 0<br>64: 2        |                       | Packets: |           |                |           |          |   |
| 256 pps -                 |                      | 128: 0<br>256: 0             |              | 128: 0<br>256: 0      |                       | 324478   |           |                |           | - 2      |   |
| 0 pps<br>17.18 Gbps       |                      | 512: 0<br>1024: 0<br>2049: 0 | 2^20         | 512: 0<br>1024: 0     | 2^20                  |          | -         |                |           | 0        |   |
| 33.554 Mbps               |                      | 2048. 0                      | -2^15        | 2048. 0               | -2^15                 | Dropped  |           |                |           | - 3      |   |
| 256 bps -                 |                      |                              | -1024        | II.                   | -1024                 | bropped: |           |                |           | - 2      | - |
| RX-Error-Pkts RX-Dropped- | Pkts Rx Throughput   |                              | 0            | llh                   | 0                     | 0        | RX-Error- | Pkts RX-Droppe | ed-Pkts F | x Throu  | • |
|                           |                      |                              |              |                       |                       |          |           |                |           |          | _ |
| Pause Display             | Print Stop           |                              | Sync         | Dyn                   | amic Report           | M        | odify     | Clear          | Close     | 9        |   |

For more information see LANforge User's Guide: Layer-3 Cross-Connect Display

5. In this case, the overall throughput of the DUT is approximately 76Mbps. The Report Manager can also be used to record the throughput over time.

A. Select Reporting Manager from the Reporting pull-down menu

| 0  | LANforge M              | lanager Versi      | on(5.3.6)        |                  |                   |             | $\odot$ $\land$ $\times$ |
|--|-------------------------|--------------------|------------------|------------------|-------------------|-------------|--------------------------|
| <u>Control</u> <u>Reporting</u> <u>Tear-Off</u> <u>I</u> | nfo <u>P</u> lugins     |                    |                  |                  |                   |             |                          |
| Print (Fit to Page)                                      |                         | Stop Al            | Restart          | Manager          |                   | Refresh     | HELP                     |
| Print ( <u>M</u> ulti Page)                              | V =                     |                    |                  |                  |                   |             |                          |
| Layer-4 Dynamic Reports                                  | Test Group Resource Mgr | Event Log A        | lerts   Port Mgr | VAP Stations     | Message           | S           | File IO                  |
| Statul Reporting Manager                                 | enaps voie/kie vi       | oir/Kir Eliaps     | Armageddon       | WariLink         | as Atte           | nuators     | File-IU                  |
| Table Report Builder                                     | (1 s) 🔻 Go Test Manager | r all 🔻            | Select All       | Start <u>S</u> t | op <u>Q</u> uiesc | e Clear     |                          |
| View 0 - 500   | ▼ Go                    | ]                  | Display          | Cr <u>e</u> ate  | Mo <u>d</u> ify   | Delete      |                          |
|  | Cross Con               | nects for Selected | Test Manager     |                  |                   |             |                          |
| Name Type Stat   | e Pkt Rx A Pkt Rx B     | Bps Rx A           | Bps Rx B         | Rx Drop % A      | Rx Drop % B       | Drop Pkts A | Drop Pkt:                |
| eth2-eth3 LF/UDP Run                                     | 1,125,730 1,126,994     | 44,700,324         | 44,701,076       | 0                | 0                 | 0           |                          |
|  |                         |                    |                  |                  |                   |             |                          |
|  |                         |                    |                  |                  |                   |             | •                        |
| Logged in to: 192.168.100.10                             | 3:4002 as: Admin        |                    |                  |                  |                   |             |                          |

B. Record test data by following these steps:

| •          |                | Reporting Manager                              | $\odot$ $\sim$ $\times$ |
|------------|----------------|--|-------------------------|
| Overview   | Generate Repo  | ort Server Data Collection GUI Data Collection |                         |
| GUI Data C | ollection Dir: | /home/lanforge/Elliotts_test                   | Choose Directory        |
| Report Dat | a Frequency:   | Best Precision                                 |                         |
| Collection | Status:        | Saving Reporting Data to CSV files.            | Saving Stop             |
|            |                |  | ₽                       |
|            |                |  |                         |
|            |                | Close  |                         |

- A. Select the GUI Data Collection tab.
- B. Choose a directory to save raw (.csv) data.
- C. Click  $\ensuremath{\textit{Save}}$  to start the data collection.
- D. After desired test duration, click **Stop**.
- E. NOTE: Your report will look cleaner if you stop traffic about 2 minutes before you stop saving data.
- C. In the Generate Report tab, choose a directory to save the HTML report. **NOTE:** Make sure your directory name does not include any special charicters such as apostrophes.

| Reporting Manager                                   | r                  |                  |
|---|--------------------|------------------|
| Overview Generate Report Server Data Collection GU  | JI Data Collection |                  |
| Report Input Data Dir: /home/lanforge/Elliotts_test |                    | Choose Directory |
| Save Reports to Dir: /home/lanforge/Elliotts_test   |                    | Choose Directory |
| <u>Generate Report</u>                              | t                  |                  |
| <u></u> lose  |                    |                  |

A. Click Generate Report.

D. Select the entities to be included

| 🛓 Report Generator 🔶 🗖   |                     |                     |                 |           |                                  |  |  |  |  |
|--|---------------------|---------------------|-----------------|-----------|----------------------------------|--|--|--|--|
| Choose Directory Report Raw Data Dir: /home/jreynolds/Documents/lf-data    |                     |                     |                 |           |                                  |  |  |  |  |
| Choose Directory Save Reports to Dir: /home/jreynolds/Documents/lf-reports |                     |                     |                 |           |                                  |  |  |  |  |
| Report Name: report-1381182882449 Sample Interval: 0                       |                     |                     |                 |           |                                  |  |  |  |  |
| Width: 640   | Height: 480         | 0 Start 1           | Time Offset: A1 | l (O sec) | ▼ Duration: All (0 sec) ▼        |  |  |  |  |
| Available Data Files   |                     |                     |                 |           |                                  |  |  |  |  |
| Owner  | Owner Entity        |                     | Report Durati   | Entity ID | Report File Name                 |  |  |  |  |
| Global-Stats   | Global-Stats GLOBAL |                     | 0:0:35          |           | GLOBAL 1381182839.csv            |  |  |  |  |
|  | lanforge-VirtualBox | 2013-10-07 14:54:00 | 0:0:28          | 1.0       | resource_lanforge-VirtualBox_1.0 |  |  |  |  |
| eth2-eth3  | eth2-eth3-A         | 2013-10-07 14:54:01 | 0:0:33          | 1.1.2.1.1 | eth2-eth3-A_1381182839.csv       |  |  |  |  |
| eth2-eth3  | eth2-eth3-B         | 2013-10-07 14:54:02 | 0:0:33          | 1.1.3.2.1 | eth2-eth3-B_1381182839.csv       |  |  |  |  |
| lanforge-VirtualBox  | eth0                | 2013-10-07 14:54:03 | 0:0:21          | 1.1.1     | eth0_1.1.1_1381182839.csv        |  |  |  |  |
| lanforge-VirtualBox  | ethl                | 2013-10-07 14:54:03 | 0:0:21          | 1.1.0     | eth1_1.1.0_1381182839.csv        |  |  |  |  |
| lanforge-VirtualBox  | eth2                | 2013-10-07 14:54:03 | 0:0:21          | 1.1.2     | eth2_1.1.2_1381182839.csv        |  |  |  |  |
| lanforge-VirtualBox  | eth3                | 2013-10-07 14:54:03 | 0:0:21          | 1.1.3     | eth3_1.1.3_1381182839.csv        |  |  |  |  |
|  | lanforge-VirtualBox | 203-10-07 14:54:04  | 0:0:21          | 1.1       | resource_lanforge-VirtualBox_1.1 |  |  |  |  |
|  |                     |                     |                 |           |                                  |  |  |  |  |
|  |                     |                     |                 |           |                                  |  |  |  |  |
| Delete Refresh Flush SS Generate Report Cancel Report Close                |                     |                     |                 |           |                                  |  |  |  |  |

E. Click Generate Report to start the report generation

| 差 Report Generator 🔶 🕫 🗙                                    |   |                 |                                |               |           |                       |                 |  |  |  |
|---|---|-----------------|--------------------------------|---------------|-----------|-----------------------|-----------------|--|--|--|
| Choose Directory  | Choose Directory Report Raw Data Dir: /home/jreynolds/Documents/lf-data |                 |                                |               |           |                       |                 |  |  |  |
| Choose Directory  | y Save Reports to Dir: /home/jreynolds/Documents/lf-reports             |                 |                                |               |           |                       |                 |  |  |  |
| Report Name: report-1381182882449 Sample Interval: 0        |   |                 |                                |               |           |                       |                 |  |  |  |
| width: 640  | vidth: 640 Height: 480  |                 | Start Time Offset: All (0 sec) |               |           | Duration: All         | l (0 sec) 🔻     |  |  |  |
| Available Data Files  |   |                 |                                |               |           |                       |                 |  |  |  |
| Owner   | Entity  | Report Start    |                                | Report Durati | Entity ID | Report File Name      |                 |  |  |  |
| Global-Stats  | GLOBAL  | 2013-10-07 14:5 | 3:57                           | 0:0:35        |           | GLOBAL 1381182839.csv |                 |  |  |  |
|   | lanforge-VirtualBox   | 2013-10-07 14:5 | 4:00                           | 0:0:28        | 1.0       | resource_lanforge     | -VirtualBox_1.0 |  |  |  |
| eth2-eth3   | eth2-eth3-A   | 2013-10-07 14:5 | 4:01                           | 0:0:33        | 1.1.2.1.1 | eth2-eth3-A_1381      | 182839.csv      |  |  |  |
| eth2-eth3   | eth2-eth3-B   | 2013-10-07 14:5 | 4:02                           | 0:0:33        | 1.1.3.2.1 | eth2-eth3-B_1381      | 182839.csv      |  |  |  |
| lanforge-VirtualBox   | eth0  | 2013-10-07 14:5 | 4:03                           | 0:0:21        | 1.1.1     | eth0_1.1.1_13811      | 82839.csv       |  |  |  |
| lanforge-VirtualBox   | eth1  | 2013-10-07 14:5 | 4:03                           | 0:0:21        | 1.1.0     | eth1_1.1.0_13811      | 82839.csv       |  |  |  |
| lanforge-VirtualBox   | eth2  | 2013-10-07 14:5 | 4:03                           | 0:0:21        | 1.1.2     | eth2_1.1.2_13811      | 82839.csv       |  |  |  |
| lanforge-VirtualBox   | eth3  | 2013-10-07 14:5 | 4:03                           | 0:0:21        | 1.1.3     | eth3_1.1.3_13811      | 82839.csv       |  |  |  |
|   | lanforge-VirtualBox   | 2013-10-07 14:5 | 4:04                           | 0:0:21        | 1.1       | resource_lanforge     | -VirtualBox_1.1 |  |  |  |
|   |   |                 |                                |               |           |                       |                 |  |  |  |
|   |   |                 |                                |               |           |                       |                 |  |  |  |
|   |   |                 |                                |               |           |                       |                 |  |  |  |
| Delete Refresh Flush SS Generate Report Cancel Report Close |   |                 |                                |               |           |                       |                 |  |  |  |

F. This window lists all the reports being generated. The last line indicates the location of the HTML report.

| *  | Report Generation Progress. 🔶 – 1                                | = × |  |  |  |  |
|--|--|-----|--|--|--|--|
| Mon Oct 07 14:57:35 PDT 2013:  | Armageddon latency distribution Charts.                          | -   |  |  |  |  |
| Mon Oct 07 14:57:35 PDT 2013:  | Creating Laver-4 URLs processed Charts.                          |     |  |  |  |  |
| Mon Oct 07 14:57:35 PDT 2013:  | Creating VOIP Call Charts.                                       |     |  |  |  |  |
| Mon Oct 07 14:57:35 PDT 2013:  | Creating VOIP Call Failed Charts.                                |     |  |  |  |  |
| Mon Oct 07 14:57:35 PDT 2013:  | Creating Non-Layer-3 packet errors Charts.                       |     |  |  |  |  |
| Mon Oct 07 14:57:35 PDT 2013:  | Creating jitter distribution Charts (VOIP Only).                 |     |  |  |  |  |
| Mon Oct 07 14:57:35 PDT 2013:  | Creating WanLink Packet Impairment Charts.                       |     |  |  |  |  |
| Mon Oct 07 14:57:35 PDT 2013:  | Creating Port packet errors charts.                              |     |  |  |  |  |
| Mon Oct 07 14:57:36 PDT 2013:  | Creating Resource charts.  |     |  |  |  |  |
| Mon Oct 07 14:57:36 PDT 2013:  | Creating GLOBAL TX/RX Charts.                                    |     |  |  |  |  |
| Mon Oct 07 14:57:36 PDT 2013:  | Creating GLOBAL UDP TX/RX Charts.                                |     |  |  |  |  |
| Mon Oct 07 14:57:36 PDT 2013:  | Creating GLOBAL L4 TX/RX Charts.                                 |     |  |  |  |  |
| Mon Oct 07 14:57:36 PDT 2013:  | 4on Oct 07 14:57:36 PDT 2013: Creating GLOBAL VOIP TX/RX Charts. |     |  |  |  |  |
| Mon Oct 07 14:57:36 PDT 2013:  | Creating GLOBAL TCP TX/RX Charts.                                |     |  |  |  |  |
| Mon Oct 07 14:57:36 PDT 2013:  | Creating GLOBAL Endpoints Running Charts.                        | =   |  |  |  |  |
| Mon Oct 07 14:57:36 PDT 2013:  | The report has been saved in the                                 |     |  |  |  |  |
| /home/jreynolds/Documents/If-reports/report-1381182882449 directory. Please open index.html with your web browser to |  |     |  |  |  |  |
| view the report:   |  |     |  |  |  |  |
|  |  |     |  |  |  |  |
| ile:///home/jreynoids/Documents/if-reports/report-1381182882449/index.html   |  |     |  |  |  |  |
|  |  |     |  |  |  |  |
|  | Close Save File  |     |  |  |  |  |

G. View the HTML report



For more information see LANforge User's Guide: Reporting

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