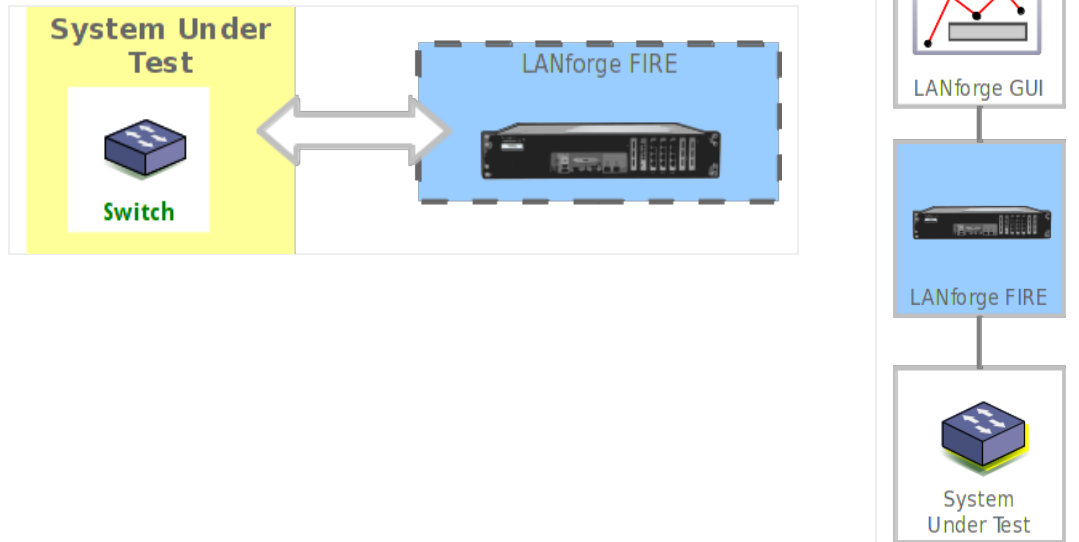


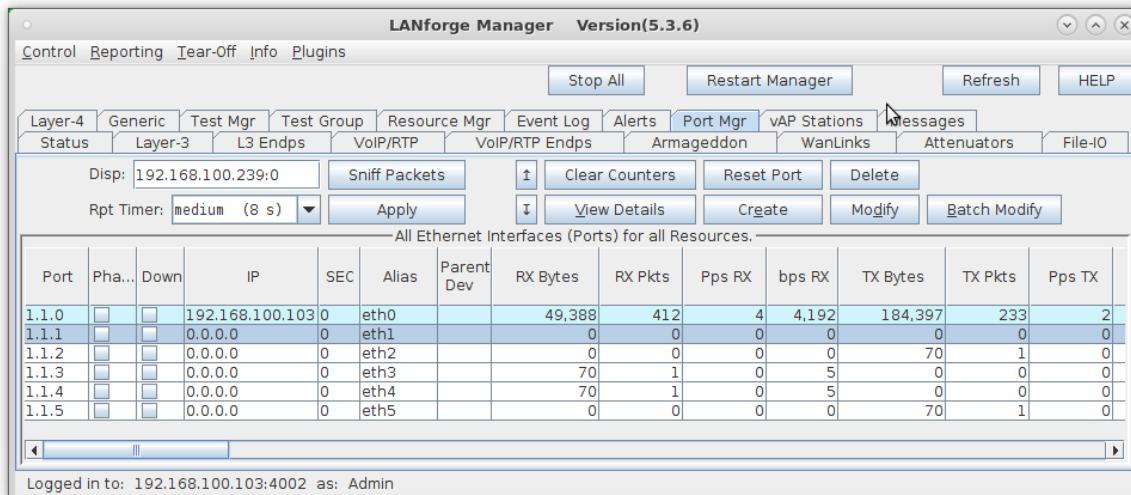
## Generating Traffic to a Switched Network

**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



- B. Modify port for Endpoint A (eth2)

**eth2 (jw2) Configure Settings**

---

Port Status Information

Current: LINK-UP 1000bt-FD AUTO-NEGOTIATE TSO GSO GRO  
 Driver Info: Port Type: Ethernet Driver: igb(5.4.0-k) Bus: 0000:0a:00.0 Cur: 2.5GT/s x1 Max: 2.5GT/s x1

---

Port Configurables

**Enable**

- Set IF Down
- Set MAC
- Set TX Q Len
- Set MTU
- Set Offload
- Set Rate Info
- Set PROMISC
- Set Rx-All/FCS
- Set Bypass
- Set Bridge Info
- Set CPU Mask

**Services**

- HTTP
- FTP
- RADIUS

General Interface Settings

Down     Aux-Mgt

DHCP-IPv6     DHCP Release    DHCP Vendor ID:

DHCP-IPv4        DHCP Client ID:

DNS Servers:     Peer IP:

IP Address:     Global IPv6:

IP Mask:     Link IPv6:

Gateway IP:     IPv6 GW:

Alias:

MAC Addr:     MTU:

Br Cost:     TX Q Len:

Rpt Timer:     Priority:

CPU Mask:     Watchdog:

WiFi Bridge:

**Port Rates**

- 10bt-HD
- 10bt-FD
- 100bt-HD
- 100bt-FD
- 1000-FD
- 10G-FD
- 40G-FD
- Autonegotiate

Renegotiate

Restart Xcvr

PROMISC

RX-ALL

RX-FCS

Bypass NOW!

Bypass Power-UP

Bypass Power-DOWN

Bypass Disconnect

**Advert Rates**

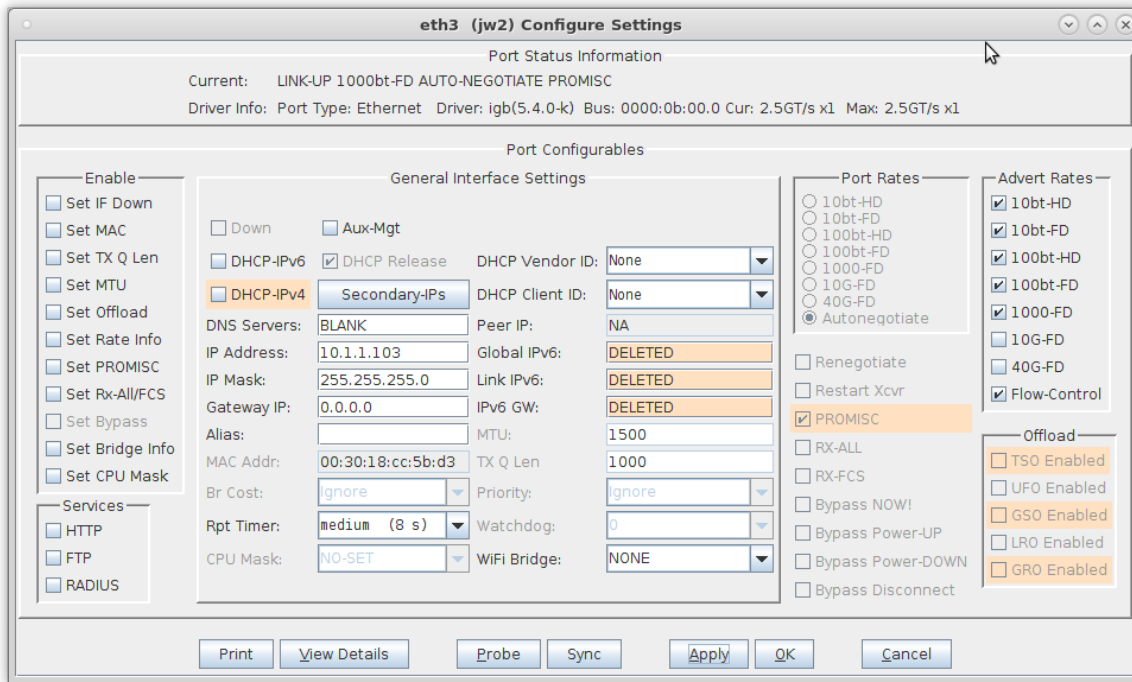
- 10bt-HD
- 10bt-FD
- 100bt-HD
- 100bt-FD
- 1000-FD
- 10G-FD
- 40G-FD
- Flow-Control

**Offload**

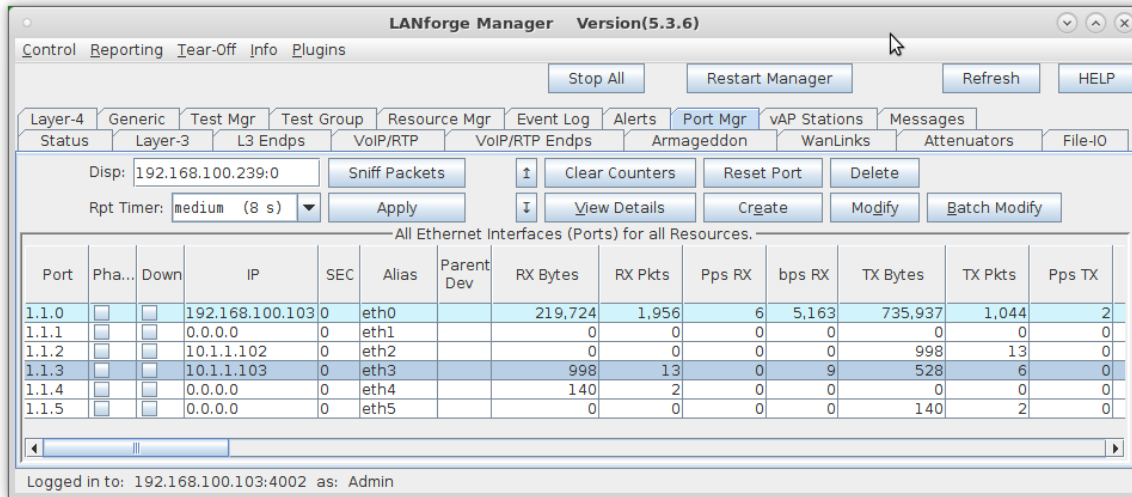
- TSO Enabled
- UFO Enabled
- GSO Enabled
- LRO Enabled
- GRO Enabled

---

C. Modify port for Endpoint B (eth3)



D. Verify the port configuration



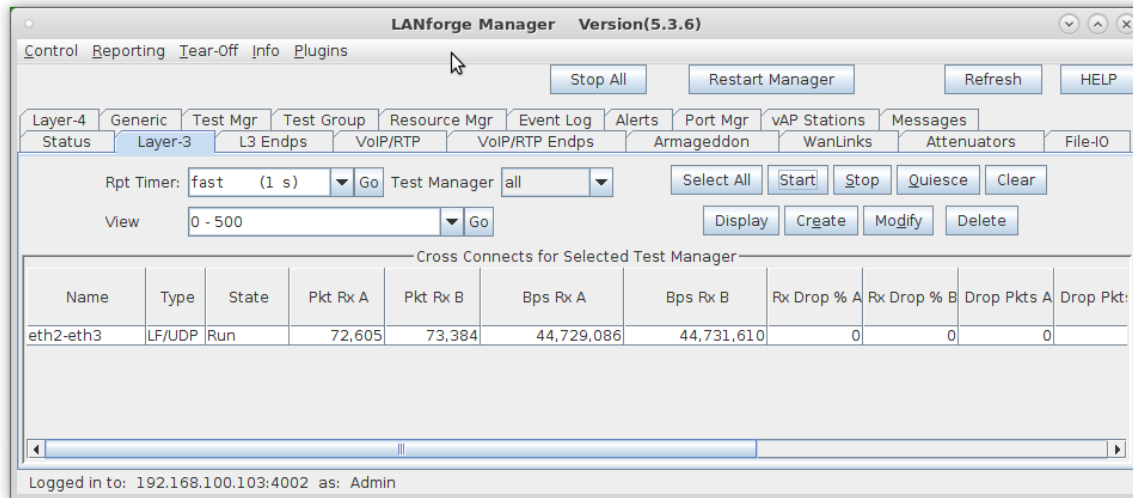
For more information see [LANforge User's Guide: Ports \(Interfaces\)](#)

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

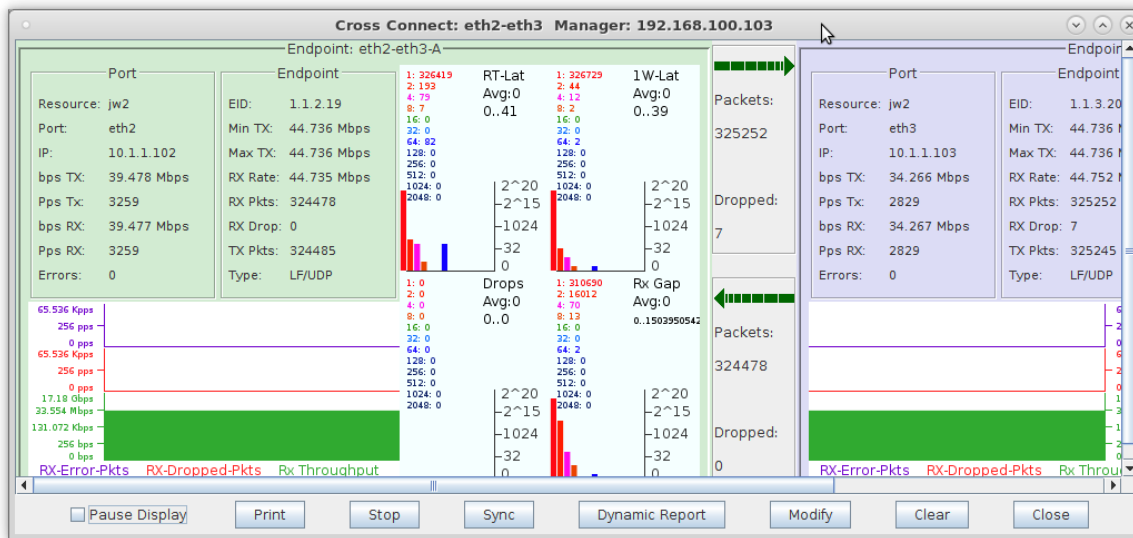


For more information see [LANforge User's Guide: Layer-3 Cross-Connects \(FIRE\)](#)

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



- B. View the Layer-3 cross-connect display



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

LANforge Manager Version(5.3.6)

Control Reporting Tear-Off Info Plugins

Print (Fit to Page) Stop All Restart Manager Refresh HELP

Print (Multi Page)

Layer-4 Dynamic Reports Test Group Resource Mgr Event Log Alerts Port Mgr vAP Stations Messages

Status Reporting Manager Endps VoIP/RTP VoIP/RTP Endps Armageddon WanLinks Attenuators File-IO

Table Report Builder (1 s) Go Test Manager all Select All Start Stop Quiesce Clear

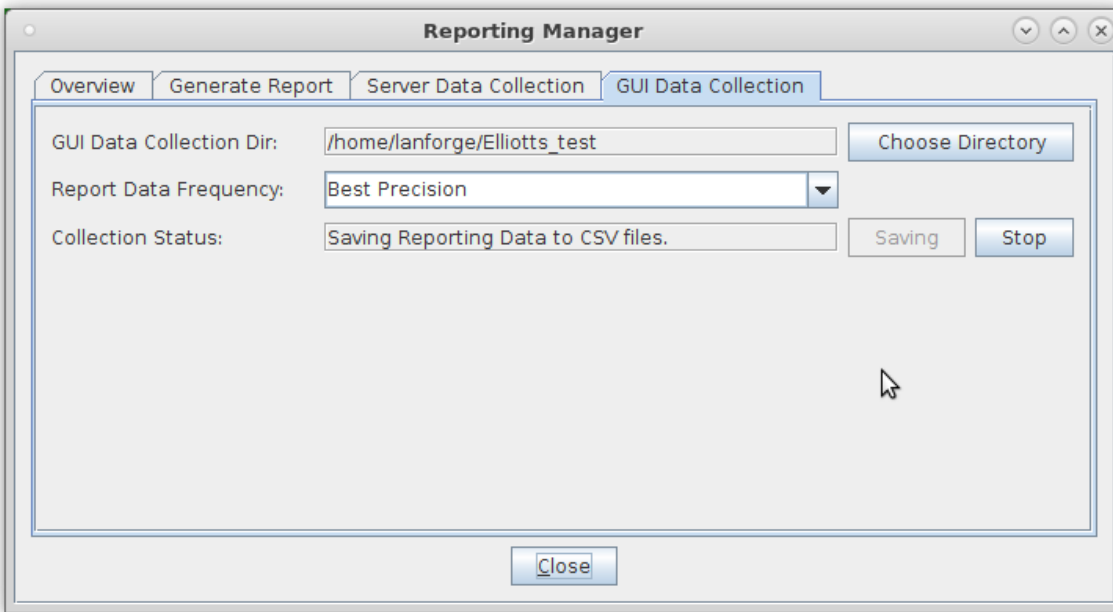
View 0 - 500 Go Display Create Modify Delete

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 Pkt:
eth2-eth3	LF/UDP	Run	1,125,730	1,126,994	44,700,324	44,701,076	0	0	0	

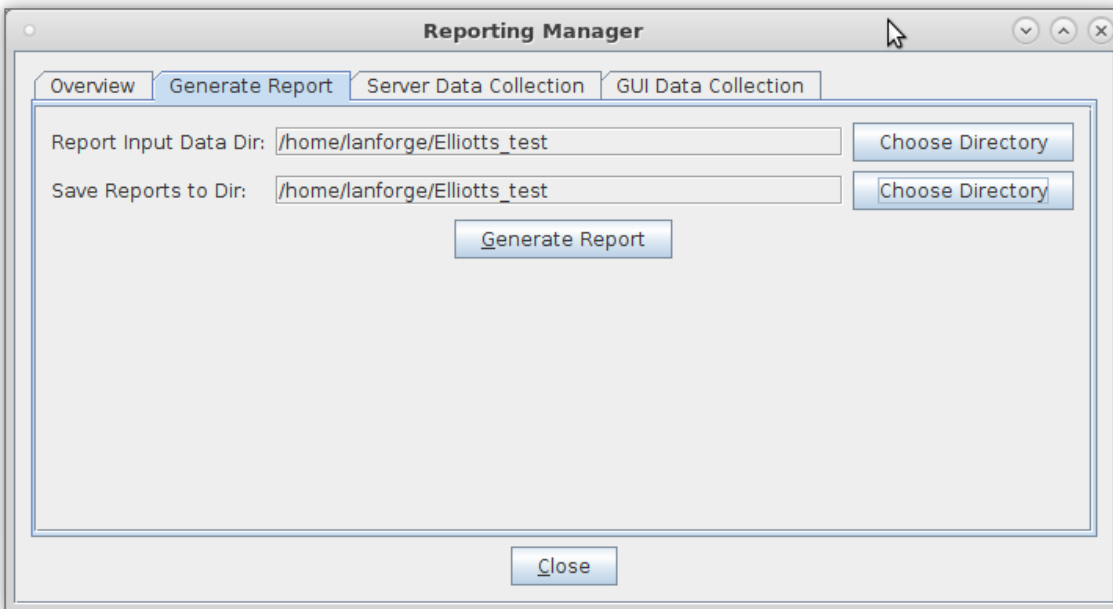
Logged in to: 192.168.100.103:4002 as: Admin

B. Record test data by following these steps:



- A. Select the **GUI Data Collection** tab.
- B. Choose a directory to save raw (.csv) data.
- C. Click **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 characters such as apostrophes.



- 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 Start Time Offset: All (0 sec) Duration: All (0 sec)

**Available Data Files**

Owner	Entity	Report Start Time	Report Durati...	Entity ID	Report File Name
Global-Stats	GLOBAL	2013-10-07 14:53:57	0:0:35		GLOBAL_1381182839.csv
lanforge-VirtualBox	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	eth1	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	lanforge-VirtualBox	2013-10-07 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

The screenshot shows the 'Report Generator' window with the following configuration:

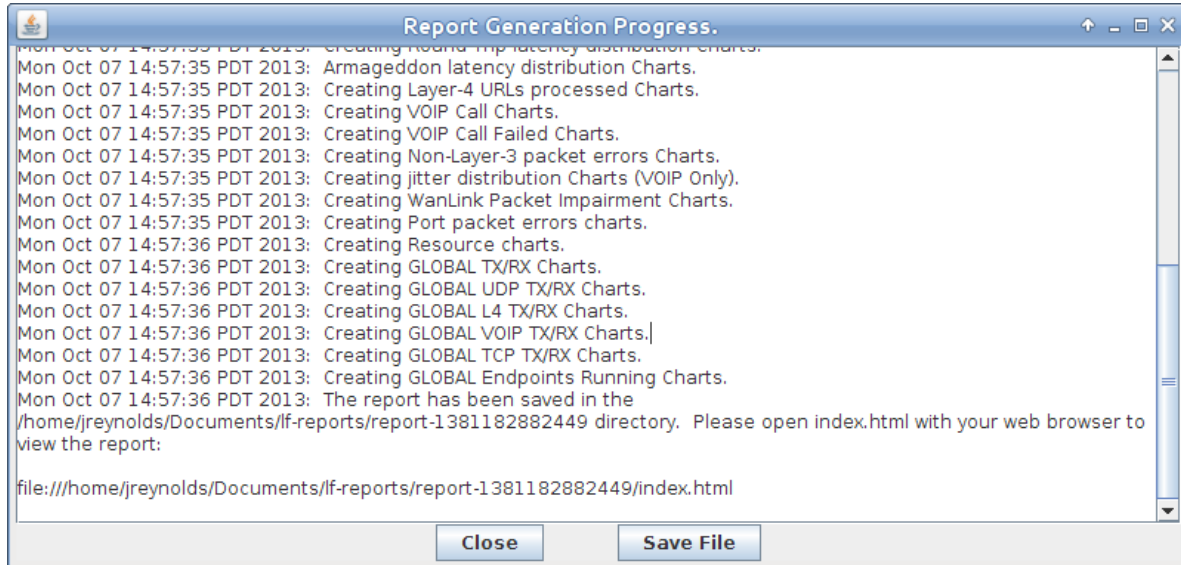
- Choose Directory** (Report Raw Data Dir): /home/jreynolds/Documents/lf-data
- Choose Directory** (Save Reports to Dir): /home/jreynolds/Documents/lf-reports
- Report Name:** report-1381182882449
- Sample Interval:** 0
- Width:** 640
- Height:** 480
- Start Time Offset:** All (0 sec)
- Duration:** All (0 sec)

**Available Data Files**

Owner	Entity	Report Start Time	Report Durati...	Entity ID	Report File Name
Global-Stats	GLOBAL	2013-10-07 14:53:57	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	eth1	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	2013-10-07 14:54:04	0:0:21	1.1	resource_lanforge-VirtualBox_1.1

Buttons at the bottom: 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.



G. View the HTML report



For more information see [LANforge User's Guide: Reporting](#)