Finding LANforge Report Data

Goal: Properly configured, the LANforge server or the LANforge GUI can collect connection performance information in CSV format.

Network Testing and Emulation Solutions

By default, your LANforge server and your LANforge client do not save the data on connection and port performance. When you configure the save destination for this data, you can use it with any other tool that can read a CSV file.



Finding LANforge Report Data Select your Save Location

You can tell the LANforge server to save data to a directory locally on the management machine, and you can configure your workstation running the the LANforge GUI to save data to a local desktop folder. First, find the Reporting Manager dialog by in the *Reporting* menu, and select *Report Manager* the client.

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•	_	L	ANforge M	anager V	ersion(5.3.6)		\odot \otimes
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tcp200	p200 LF/TCP Run		22,276	22,279	999,993	999,958	0
udp200	200 LF/UDP Run 69,913 69,970		1,999,993	1,999,979	0		
						•	
Logged in to: localhost:4002 as: Admin							

GUI Data Collection (Desktop Folder)

Collecting data on your local workstation is very convenient if you can leave the GUI running for the duration of your test scenario. The format of the data here should be similar to the format of the data saved to the server directory. The folders for collecting data are relative to the folder you start your GUI from. If you type in <code>lf_data</code> that probably means <code>C:\Users\mumble\AppData\Local\LANforge-GUI\lf_data</code>. You probably want to put in a fully qualified path thats more intuitive, like <code>C:\Users\mumble\Documents\lf_data</code>.

🕌 Reporting Manager		_	. 🗆	×	
Overview Generate	Report Server Data Collection GUI Data Collection				
GUI Data Collection Di	r: C:\Users\Jed Reynolds\Documents\If_data	Choos	Choose Directory		
Report Data Frequenc	y: Best Precision	•			
Collection Status:	NOT saving reporting data.	Save	Stopped		
	Close				

Generate Report

The Report Generator uses the local data files. In that dialog shows the *Report Input Directory* field is a local folder where the CSV files collect. The *Save Reports to Directory* field is where HTMI and PDF files should collect.

Reporting Manager	\odot \sim \times					
Overview Generate Report Server Data Collection GUI Data Collection						
Report Input Data Dir: /home/lanforge/lf_data Choose Dire						
Save Reports to Dir: /home/lanforge/lf_reports Choose Directory						
Generate Report						
Close						

Server Data Collection (Server Directory)

If your test scenario runs longer than your GUI can be up, you can configure the LANforge server to collect the data. The directory is relative to the **/home/lanforge** directory, so if you enter **lf_data**, you would find the CSV files in **/home/lanforge/lf_data**.

Reporting Manager					
Overview Generate Report Server Data Collection GUI Data Collection					
Manager Data Dir: If_data Apply					
🗹 Save Endpoint Reports 🔽 Save Port Reports 🗹 Save Resource Reports					
Collection Status: Saving Reporting Data to CSV files. Saving Stop					
Refresh Configuration					
Close					

You can take a look at the data files easily. Here is a server data collection directory:

lanforge@jedt	test -	~/1f_(data				
total 2628							
-rw-rr 1	root	root	31465	Mar	1	16:52	w]an2 1.1.7 1488414451.csv
-rw-rr 1	root	root	31465	Mar	1	16:52	w]an1 1.1.6 1488414451.csv
-rw-rr 1	root	root	31465	Mar	1	16:52	w]an0 1.1.5 1488414451.csv
-rw-rr 1	root	root	90889	Mar	1	16:52	wiphv2 1.1.4 1488414451.csv
-rw-rr 1	root	root	125299	Mar	1	16:52	wiphy1_1.1.3_1488414451.csv
-rw-rr 1	root	root	101801	Mar	1	16:52	wiphy0_1.1.2_1488414451.csv
-rw-rr 1	root	root	138049	Mar	1	16:52	udp200-B_1488414451.csv
-rw-rr 1	root	root	137626	Mar	1	16:52	udp200-A_1488414451.csv
-rw-rr 1	root	root	160328	Mar	1	16:52	tcp200-B_1488414451.csv
-rw-rr 1	root	root	158351	Mar	1	16:52	tcp200-A_1488414451.csv
-rw-rr 1	root	root	26376	Mar	1	16:52	resource_jedtestcandelatechcom_1.1_1488414451.csv
-rw-rr 1	root	root	114505	Mar	1	16:52	eth1_1.1.1_1488414451.csv
-rw-rr 1	root	root	43937	Mar	1	16:52	eth0_1.1.0_1488414451.csv
-rw-rr 1	root	root	168161	Mar	1	16:52	c201-B_1488414451.csv
-rw-rr 1	root	root	169329	Mar	1	16:52	c201-A_1488414451.csv
-rw-rr 1	root	root	27937	Mar	1	16:52	wlan2_1.2.7_1488414451.csv
-rw-rr 1	root	root	27937	Mar	1	16:52	wlan1_1.2.6_1488414451.csv
-rw-rr 1	root	root	27937	Mar	1	16:52	wlan0_1.2.5_1488414451.csv
-rw-rr 1	root	root	83629	Mar	1	16:52	wiphy2_1.2.4_1488414451.csv
-rw-rr 1	root	root	114613	Mar	1	16:52	wiphy1_1.2.3_1488414451.csv
-rw-rr 1	root	root	100485	Mar	1	16:52	wiphy0_1.2.2_1488414451.csv
-rw-rr 1	root	root	327241	Mar	1	16:52	vap0_1.1.8_1488414451.csv
-rw-rr 1	root	root	40057	Mar	1	16:52	sta205_1.2.10_1488414451.csv
-rw-rr 1	root	root	48097	Mar	1	16:52	sta200_1.2.8_1488414451.csv
-rw-rr 1	root	root	39289	Mar	1	16:52	sta100_1.2.9_1488414451.csv
-rw-rr 1	root	root	21691	Mar	1	16:52	resource_kedtest_1.2_1488414451.csv
-rw-rr 1	root	root	105065	Mar	1	16:52	eth1_1.2.1_1488414451.csv
-rw-rr 1	root	root	40789	Mar	1	16:52	eth0_1.2.0_1488414451.csv

And using a utility like notepad, vi, more or less you can look at the file contents:

lanforge@jedtest:~/lf_data TimeStamp,Name,EID,CX-Name,IS_RUNNING,tx_rate,bps_tx_rate_3s,rx_rate,bps_rx_rate_3s,rx_drop%x1000,tx_pkts,rx_pkts,tx_bytes, rx_bytes,rx_dropped_pkts,rx_dup_pkts,rx_ooo_pkts,rx_wrong_dev,rx_crc_failed,rx_bit_errors,TCP-RTX,conn_timeouts,conn_establ ished,tcp_CWND,min_conn_duration_ms,max_conn_duration_ms,min_reconn_pause_ms,max_reconn_pause_ms,pattern,min_pkt_size,max_p kt_size,min_tx_rate,max_tx_rate,running_for,last_report,destination_addr,source_addr,min_latency,avg_latency,max_latency,bo x_width,lat_0,lat_1,lat_2,lat_3,lat_4,lat_5,lat_6,lat_7,lat_8,lat_9,lat_10,lat_11,lat_12,lat_13,lat_14,lat_15,min_rt_latency y,avg_rt_latency,max_rt_latency,rt_box_width,rt_lat_0,rt_lat_1,rt_lat_2,rt_lat_3,rt_lat_4,rt_lat_5,rt_lat_6,rt_lat_7,rt_lat 8,rt_lat_9,rt_lat_10,rt_lat_11,rt_lat_12,rt_lat_13,rt_lat_14,drop_amt_5,drop_amt_ay_drop_amt,awg_drop_amt_ax_drop_amt_drop_box_wid th,drop_amt_1,drop_amt_2,drop_amt_3,drop_amt_4,drop_amt_5,drop_amt_6,drop_amt_7,drop_amt_8,drop_amt_9,drop_amt_1 0,drop_amt_11,drop_amt_12,drop_amt_14,drop_amt_15,RptTimer,files_played,Avg_Jitter, rx_pkts_11, rx_pkts_11, rx_ gap_5,gap_6,gap_7,gap_8,gap_9,gap_10,gap_11,gap_12,gap_13,gap_14,gap_15, 1488414454125,c201-A,1.2.8.21.2,c201,1,351397,351397,527098,527098,0258236,516474,16923754496,33847640064,0,0,0,0,0,13,0 ,7,47,4294967295,0,0,0,NCREASING,65536,65536,056000,256000,530813,0,10.26.0.2:33028,10.26.2.23:33027,6,7.746,14,114,163669,1 80254,152069,18998,1216,244,21,3,0,0,0,0,0,0,0,2336426,11878870,35109310212,17565213476,0,887418670,125.108,1021,1,295 1845,675627,328822,2693,397,6,11,2,0,0,433449,83017,0,2,2,0,:

Using Libre Office

Importing the file into a spreadsheet like LibreOffice Calc is simple:

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The timestamp column

Libre Office does not have a builtin formula to do this, but it has been discussed here. And the solution is a formula that looks like this:

and then you format the column as Date.

Scripting with Bash

There are a number of ways to collect an dort the data with shell utilities. The first utility to consider is **cut**, then **awk**. The first column of the endpoint file we are going to read is the timestamp, the 14th is the rx bytes.

Reading the Data and RX Bytes

Converting Unix Date

```
$ head -n2 c201-A_1488414451.csv | cut -d, -f1
TimeStamp
1488414454125
$ date -d @1488414454125
Mon Dec 23 19:28:45 PST 49135
```

Using bash

```
$ head -n2 c201-A_1488414451.csv | (while IFS=, read -a L; do echo ${L[13]}; done)
rx_bytes
33847640064
```

Using cut

```
$ head -n2 c201-A_1488414451.csv | cut -d, -f14
rx_bytes
33847640064
```

Using awk

```
$ head -n2 c201-A_1488414451.csv | awk -F, '{print $14}'
rx_bytes
33847640064
head -n2 c201-A_1488414451.csv | awk -F, '{print $1 "\t" $14}'
TimeStamp rx_bytes
1488414454125 33847640064
```

Scripting with Perl

It is a lot easier to do math with a perl script than a bash or an awk script. You can pipe things into perl or perl will read the last argument of the -ne switches as an input file.

Not everthing you do in perl is going to be a one-liner. Here's an example of the same script as a more properly formatted perl file:

```
#!/usr/bin/perl
my $tt=0;
my @tstamps=();
my @rxb=();
```

```
while(<>) {
  @v = split(/,/, $_);
  push(@tstamps, $v[0]);
  push(@rxb, $v[13]);
}
$dt = $tstamps[$#tstamps] - $tstamps[1];
$db = $rxb[$#rxb] - $rxb[1];
print "Time: $dt, Total:$db\n";
```

Candela Technologies, Inc., 2417 Main Street, Suite 201, Ferndale, WA 98248, USA www.candelatech.com | sales@candelatech.com | +1.360.380.1618