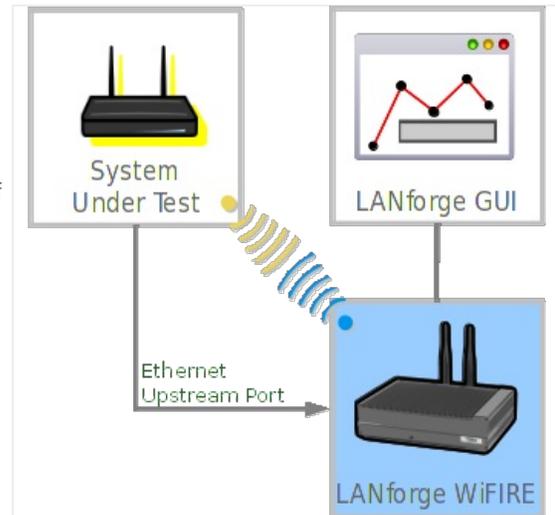


Using iperf3 to Generate Traffic

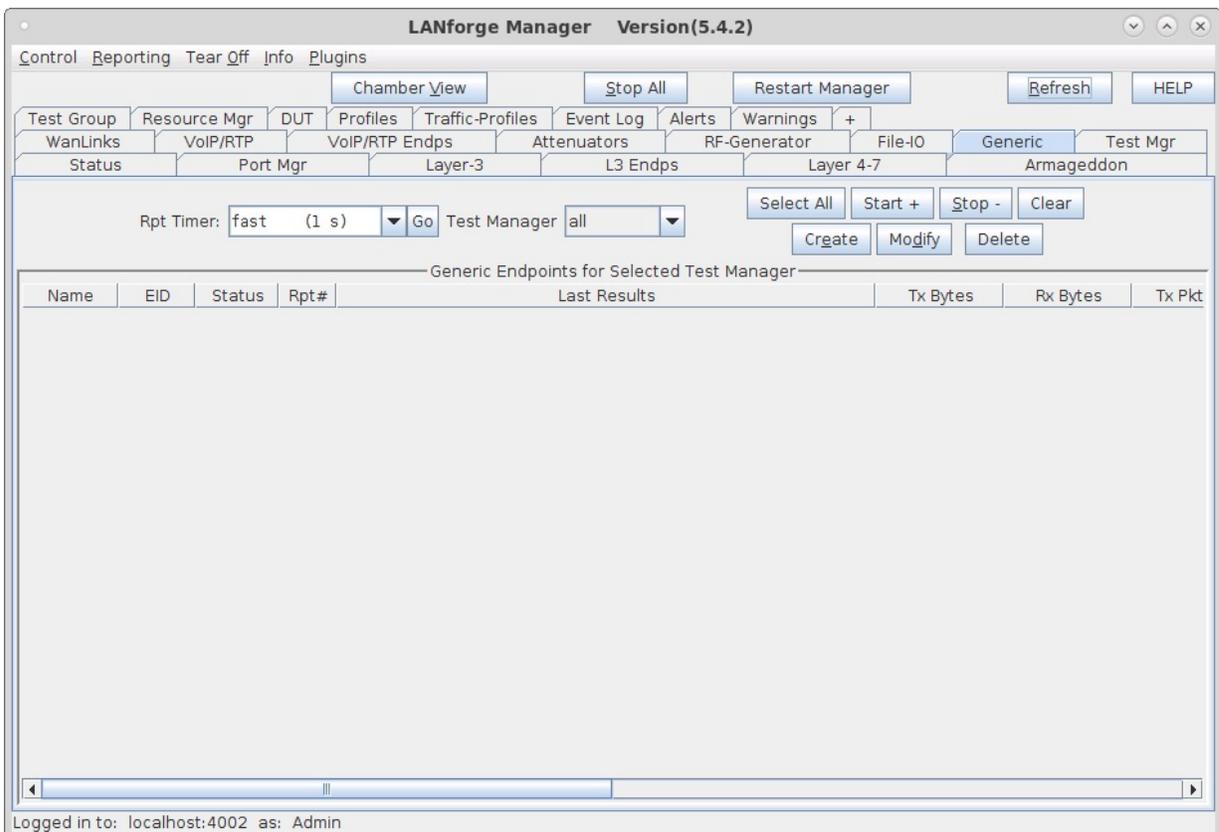
Goal: Set up virtual stations using a LANforge system, connect them to an AP under test, set up iperf3, and run tests.

In this test scenario a LANforge system is used to create both the wireless stations and iperf3 server. The test is then configured to use iperf3 to generate traffic in both the download and upload directions.

Although LANforge Generic endpoints prompt the use of iperf3, iperf2 could be used instead with a manual configuration. This example however, focuses on how to use iperf3.



1. Select the Generic tab from the main GUI window.



2. Select the Create button to create the iperf3 server.

- A. Use the top section to name the connection and choose the port/interface, then use the Command Builder for iperf3 to choose the Server option. The command line will be filled in when the Apply button is selected.

Create/Modify Generic Endpoint

Name: iperf3-server Rpt Timer: fast (1 s) Test Manager: default_tm

Shelf: 1 Resource: 1 (ct523c-0b29) Port: 2 (eth2) Endp ID: 71

Command Builders: iperf3

Server Client UDP TCP

Transmit Receive

Run Time: 60 Target:

Pkts To Send: Infinite Write-Size: AUTO

Tx Rate: 1000 (1 Kbps) IP ToS: Best Effort (0)

Additional options:

Command:

Command Output

Sync Apply OK Cancel

- B. For a single iperf3 test at a time setup one server.

Create/Modify Generic Endpoint

Name: iperf3-server Rpt Timer: fast (1 s) Test Manager: default_tm

Shelf: 1 Resource: 1 (ct523c-0b29) Port: 2 (eth2) Endp ID: 71

Command Builders: iperf3

Server Client UDP TCP

Transmit Receive

Run Time: 60 Target:

Pkts To Send: Infinite Write-Size: AUTO

Tx Rate: 1000 (1 Kbps) IP ToS: Best Effort (0)

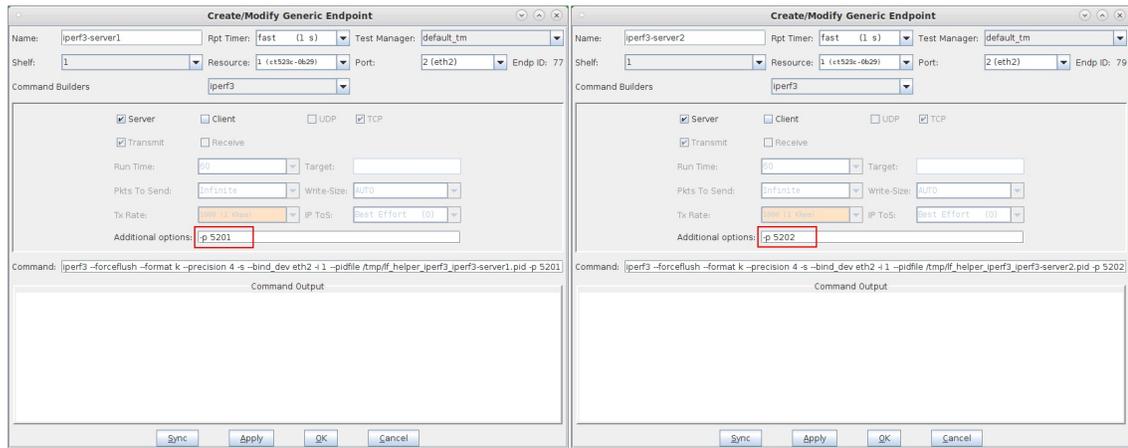
Additional options:

Command: iperf3 --forceflush --format k --precision 4 -s --bind_dev eth2 -i 1 --pidfile /tmp/lf_helper_iperf3_iperf3-server.pid

Command Output

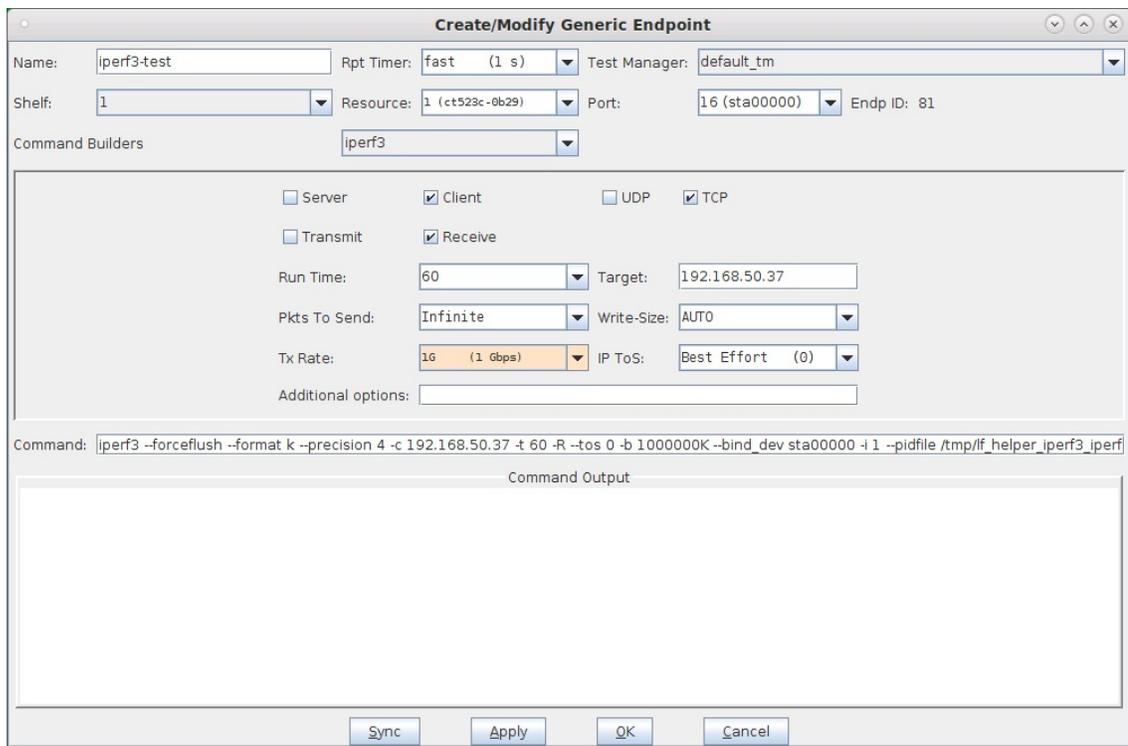
Sync Apply OK Cancel

- C. For multiple iperf3 tests at a time, setup multiple servers, each with a unique IP port number by using the -p option.

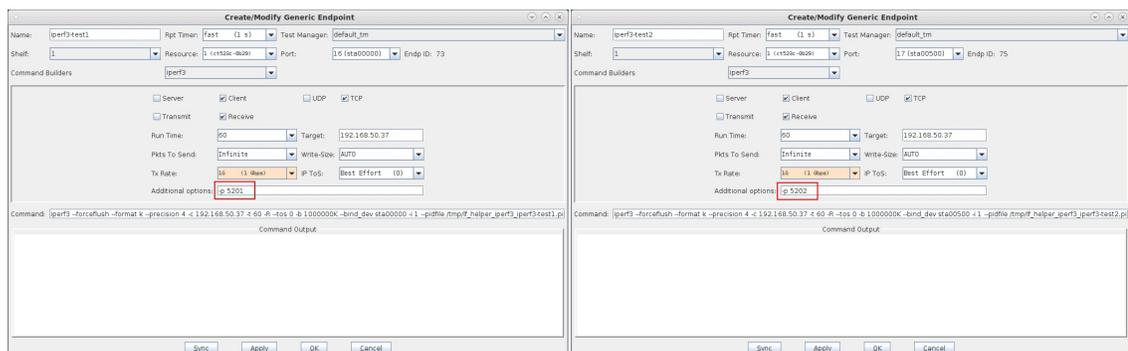


3. Create the iperf3 client.

- A. For a single iperf3 test at a time setup one client.

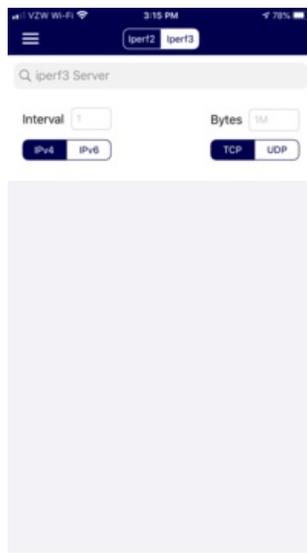


- B. For multiple iperf3 tests at a time, setup multiple clients using the corresponding IP ports as the servers.

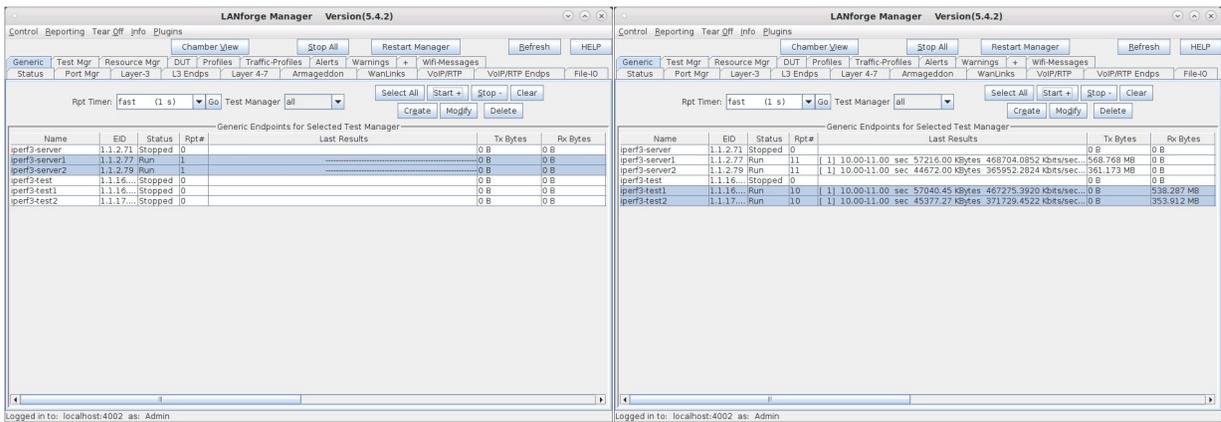


4. If you want to run iperf3 on a mobile device, run it in server mode.

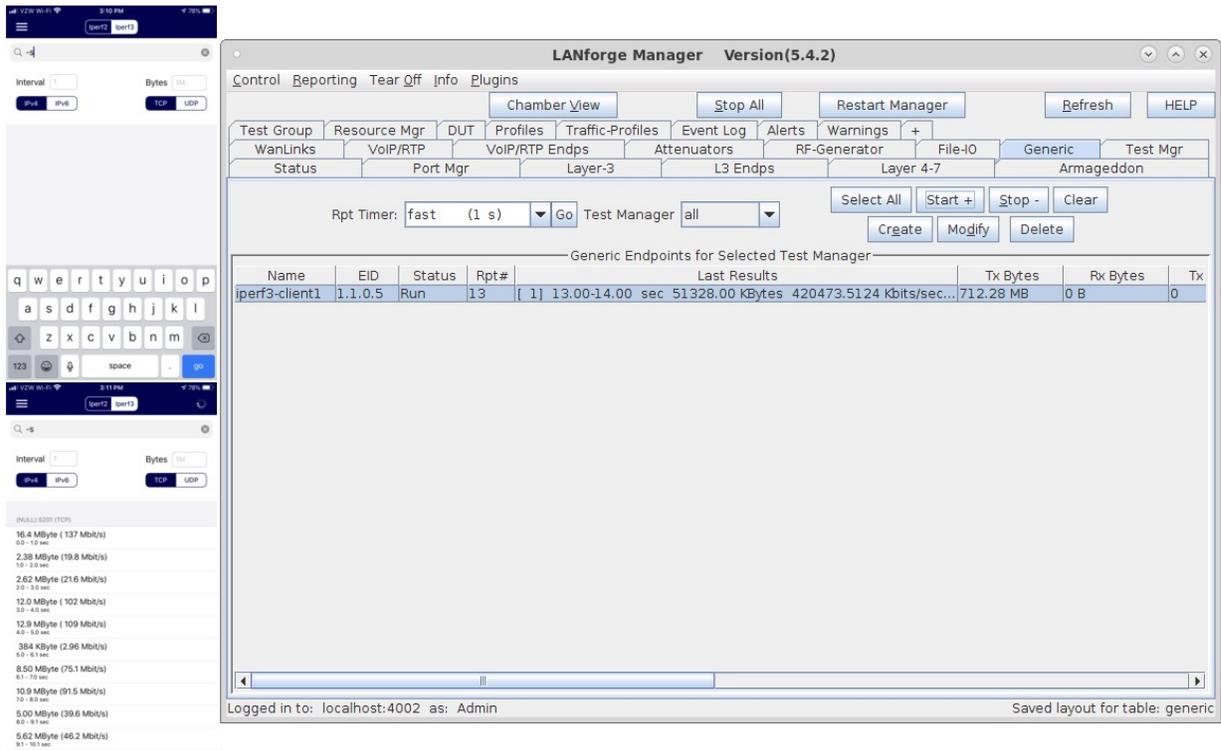
One free and simple mobile application for iperf3 is provided by he.net



5. To start any iperf3 test, start the server or servers first, then start the clients.



6. For mobile devices, start the iperf3 server on the mobile devices first, then start the clients.



7. Modify the endpoint to view the per iteration text results.

Create/Modify Generic Endpoint

Name: Rpt Timer: Test Manager:

Shell: Resource: Port: Endp ID: 73

Command Builders:

Server Client UDP TCP
 Transmit Receive

Run Time: Target:

Pkts To Send: Write Size:

Tx Rate: IP ToS:

Additional options:

Command: `iperf3 -forceflush -format k -precision 4 -c 192.168.50.37 -t 60 -R -tos 0 -b 1000000K -bind_dev sta00000 -i 1 -pidfile tmpdir_helper_iperf3_iperf3-test1.pid -p 5202`

Command Output

```

I 11 45:00:46:00 sec 65422 23 Pkts/sec 32296 9999 Multisec
I 11 45:00:47:00 sec 35112 28 Pkts/sec 41505 1830 Multisec
I 11 45:00:48:00 sec 35624 35 Pkts/sec 41976 1550 Multisec
I 11 45:00:49:00 sec 35852 33 Pkts/sec 41975 1705 Multisec
I 11 45:00:50:00 sec 35958 43 Pkts/sec 42504 4283 Multisec
I 11 45:00:51:00 sec 41778 49 Pkts/sec 42448 1480 Multisec
I 11 45:00:52:00 sec 41798 49 Pkts/sec 42448 1440 Multisec
I 11 45:00:53:00 sec 41847 48 Pkts/sec 42448 1380 Multisec
I 11 45:00:54:00 sec 41867 48 Pkts/sec 42448 1400 Multisec
I 11 45:00:55:00 sec 41928 23 Pkts/sec 42575 4212 Multisec
I 11 45:00:56:00 sec 41975 24 Pkts/sec 42544 3792 Multisec
I 11 45:00:57:00 sec 42021 24 Pkts/sec 42528 3744 Multisec
I 11 45:00:58:00 sec 42123 24 Pkts/sec 42438 3744 Multisec
I 11 45:00:59:00 sec 42181 49 Pkts/sec 42438 3744 Multisec

```

Buttons: Sync Apply OK Cancel

Create/Modify Generic Endpoint

Name: Rpt Timer: Test Manager:

Shell: Resource: Port: Endp ID: 75

Command Builders:

Server Client UDP TCP
 Transmit Receive

Run Time: Target:

Pkts To Send: Write Size:

Tx Rate: IP ToS:

Additional options:

Command: `iperf3 -forceflush -format k -precision 4 -c 192.168.50.37 -t 60 -R -tos 0 -b 1000000K -bind_dev sta00500 -i 1 -pidfile tmpdir_helper_iperf3_iperf3-test2.pid -p 5202`

Command Output

```

I 11 45:00:46:00 sec 32742 23 Pkts/sec 27648 9248 Multisec
I 11 45:00:47:00 sec 32748 28 Pkts/sec 30768 9248 Multisec
I 11 45:00:48:00 sec 32853 38 Pkts/sec 31716 9248 Multisec
I 11 45:00:49:00 sec 32958 38 Pkts/sec 32664 9248 Multisec
I 11 45:00:50:00 sec 33063 38 Pkts/sec 33612 9248 Multisec
I 11 45:00:51:00 sec 33168 38 Pkts/sec 34560 9248 Multisec
I 11 45:00:52:00 sec 33273 38 Pkts/sec 35508 9248 Multisec
I 11 45:00:53:00 sec 33378 38 Pkts/sec 36456 9248 Multisec
I 11 45:00:54:00 sec 33483 38 Pkts/sec 37404 9248 Multisec
I 11 45:00:55:00 sec 33588 38 Pkts/sec 38352 9248 Multisec
I 11 45:00:56:00 sec 33693 38 Pkts/sec 39300 9248 Multisec
I 11 45:00:57:00 sec 33798 38 Pkts/sec 40248 9248 Multisec
I 11 45:00:58:00 sec 33903 38 Pkts/sec 41196 9248 Multisec
I 11 45:00:59:00 sec 34008 38 Pkts/sec 42144 9248 Multisec

```

Buttons: Sync Apply OK Cancel

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