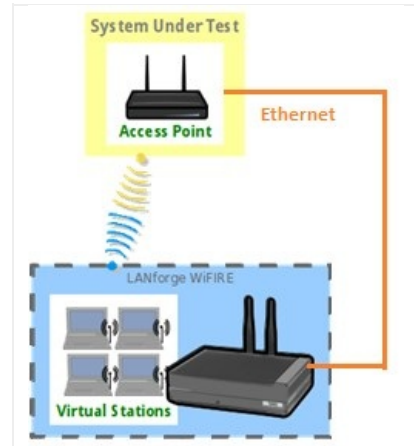


## Automate WiFi Capacity and other GUI tests.

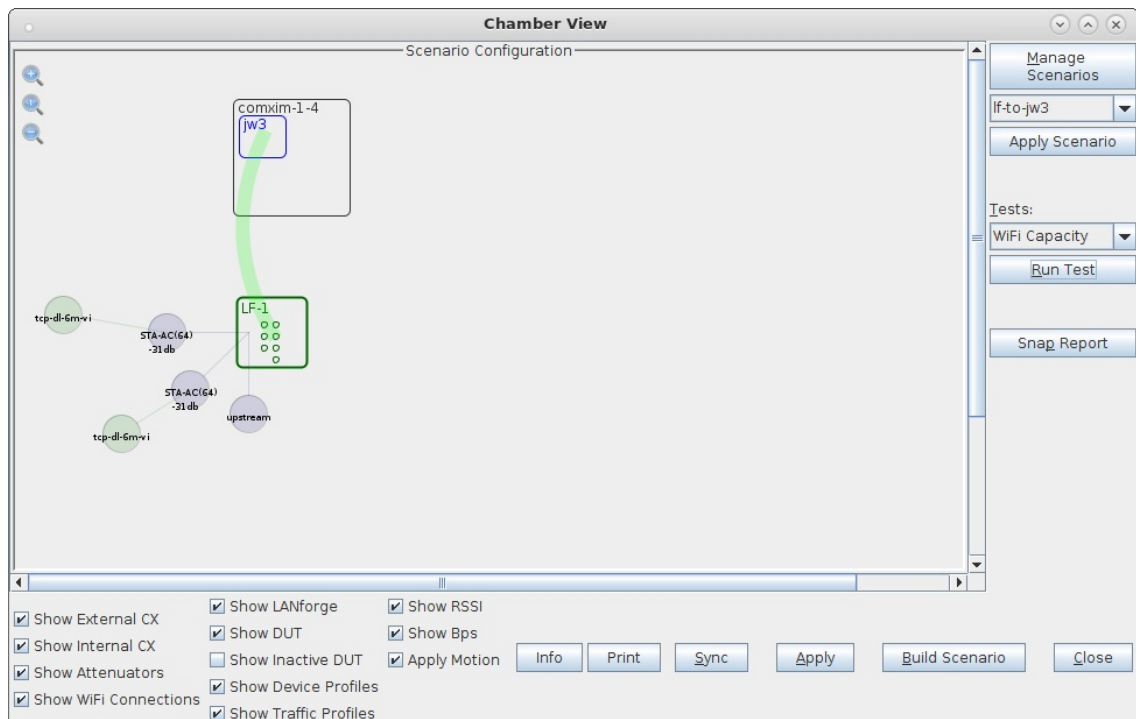
**Goal:** Use a command-line script to have the LANforge-GUI run the WiFi Capacity test and generate a pdf automatically.

In this test scenario, a script is used to bring up the WiFi Capacity test with a pre-configured configuration. The capacity test is then started and a report is generated. All of this is automated, and other tests such as Dataplane are also supported. This feature requires LANforge version 5.4.1 or higher.



### 1. Configure WiFi Capacity Test for automated run.

- A. For this to work, the LANforge GUI must be started with the **-cli-socket 3990** argument. This causes it to open a socket to listen for text commands.
- B. Open Chamber View by clicking on the 'Chamber View' button in the LANforge-GUI. Create an appropriate scenario and DUT if you have not already done so. Other cookbook examples have more details of how to do this, please see those if you are unfamiliar with Chamber View.



C. Select WiFi Capacity test, and click **Run Test** to configure it as desired.

WiFi Capacity Test

Settings | Select Ports | Test Groups | PDU Mix Settings | **Advanced Settings** | Select Output | Notes

Station Increment: 1,10,120 [?] Loop Iterations: Single (1)

Duration: 20 sec (20 s)  Use Test Groups  Subset of Test Group

Protocol: UDP-IPv4 Layer 4-7 Endpoint: NONE

Payload Size: AUTO MSS: AUTO

Total Download Rate: 1G (1 Gbps)

Total Upload Rate: Zero (0 bps)

Percentage TCP Rate: 10% (10%)

Station-Down Quiesce period: 0 (0 sec)

Save | DEFAULT

Load | DEFAULT

Delete | DEFAULT

Start  Pause Cancel

D. Enter a name in the 'Save' field, click save, and make sure it shows up as a loadable configuration. In this case, we are saving the configuration as 'udp-dl-120'

WiFi Capacity Test

Settings | Select Ports | Test Groups | PDU Mix Settings | **Advanced Settings** | Select Output | Notes

Station Increment: 1,10,120 [?] Loop Iterations: Single (1)

Duration: 20 sec (20 s)  Use Test Groups  Subset of Test Group

Protocol: UDP-IPv4 Layer 4-7 Endpoint: NONE

Payload Size: AUTO MSS: AUTO

Total Download Rate: 1G (1 Gbps)

Total Upload Rate: Zero (0 bps)

Percentage TCP Rate: 10% (10%)

Station-Down Quiesce period: 0 (0 sec)

Save | udp-dl-120

Load | DEFAULT

Delete | layer-4

testme

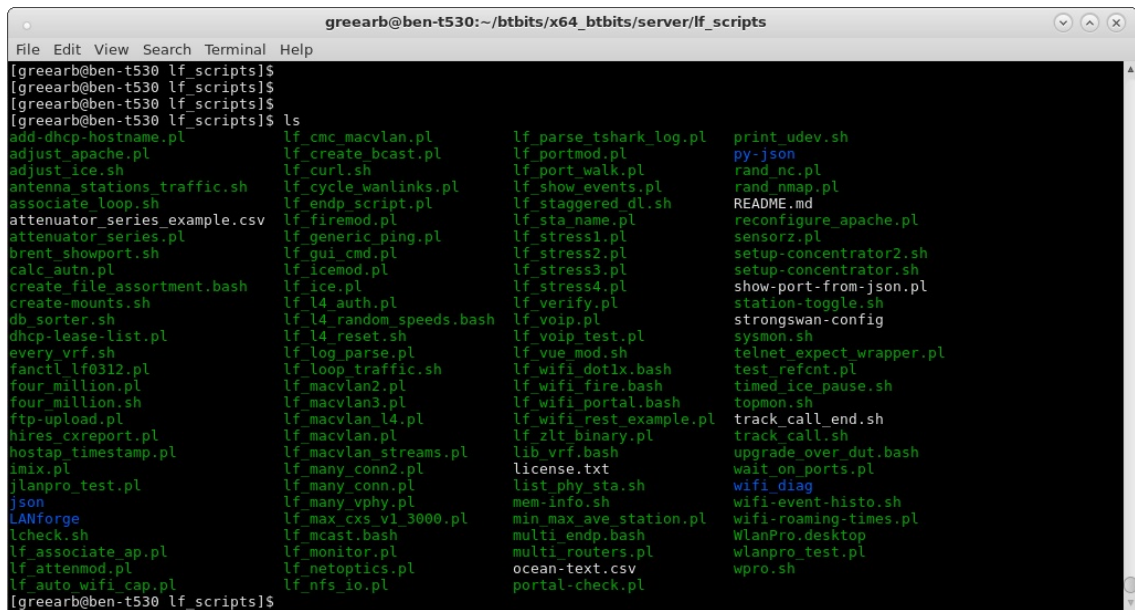
udp-dl-128

udp-dl-120

Pause Cancel

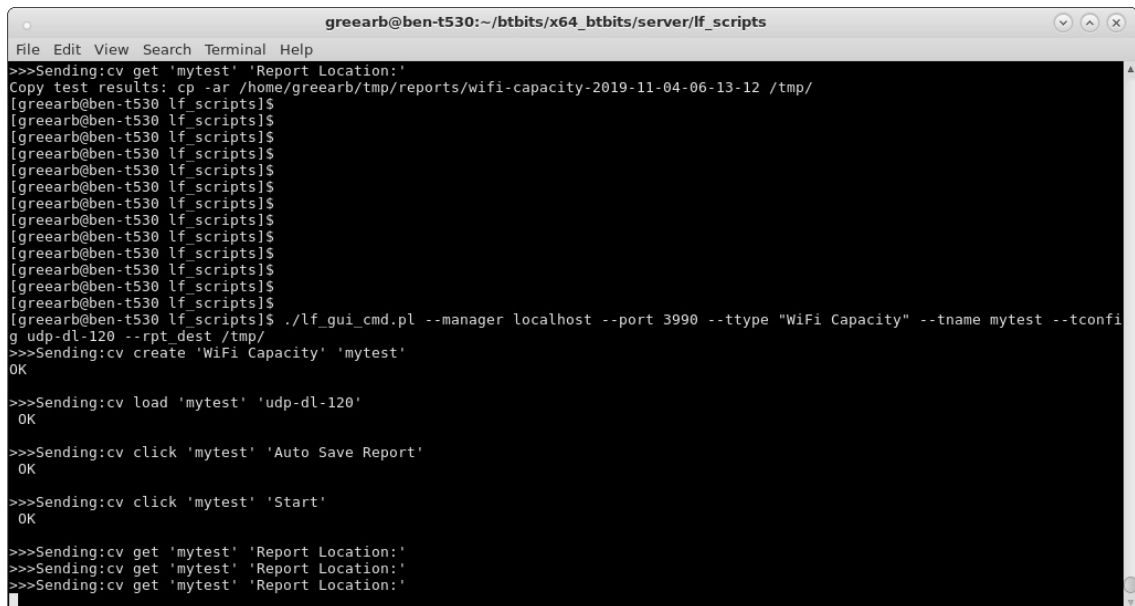
2. Use the `lf_gui_cmd.pl` script to launch the WiFi Capacity Test.

- A. Open an ssh session or terminal window and log into the LANforge system, or some other system with the LANforge scripts/ repository. On a LANforge system, this will usually be /home/lanforge/scripts In this case, the directory name is called lf\_scripts



```
greearb@ben-t530:~/btbits/x64_btbits/server/lf_scripts
File Edit View Search Terminal Help
[greearb@ben-t530 lf_scripts]$
[greearb@ben-t530 lf_scripts]$
[greearb@ben-t530 lf_scripts]$
[greearb@ben-t530 lf_scripts]$ ls
add-dhcp-hostname.pl      lf_cmc_macvlan.pl         lf_parse_tshark_log.pl   print_udev.sh
adjust_apache.pl         lf_create_bcast.pl       lf_portmod.pl            py-json
adjust_ice.sh            lf_curl.sh               lf_port_walk.pl         rand_nc.pl
antenna_stations_traffic.sh lf_cycle_wanlinks.pl     lf_show_events.pl       rand_nmap.pl
associate_loop.sh        lf_endp_script.pl        lf_staggered_dl.sh      README.md
attenuator_series_example.csv lf_firemod.pl            lf_sta_name.pl          reconfigure_apache.pl
attenuator_series.pl     lf_generic_ping.pl       lf_stress1.pl           sensorz.pl
brent_showport.sh       lf_gui_cmd.pl            lf_stress2.pl           setup-concentrator2.sh
calc_autn.pl             lf_icemod.pl             lf_stress3.pl           setup-concentrator.sh
create_file_assortment.bash lf_ice.pl                lf_stress4.pl           show-port-from-json.pl
create-mounts.sh         lf_l4_auth.pl            lf_verify.pl            station-toggle.sh
db_sorter.sh             lf_l4_random_speeds.bash lf_voip.pl               strongswan-config
dhcp-lease-list.pl      lf_log_parse.pl          lf_voip_test.pl        sysmon.sh
every_vrf.sh             lf_loop_traffic.sh      lf_vue_mod.sh           telnet_expect_wrapper.pl
fancctl_lf0312.pl        lf_macvlan2.pl           lf_wifi_dot1x.bash     test_refcnt.pl
four_million.pl          lf_macvlan3.pl           lf_wifi_fire.bash     timed_ice_pause.sh
four_million.sh          lf_macvlan_l4.pl         lf_wifi_portal.bash    topmon.sh
ftp-upload.pl            lf_macvlan.pl            lf_wifi_rest_example.pl track_call_end.sh
hires_cxreport.pl        lf_many_conn.pl          lf_zlt_binary.pl       track_call.sh
hostap_timestamp.pl      lf_max_cxs_v1_3000.pl    lib_vrf.bash            upgrade_over_dut.bash
imix.pl                  lf_many_conn2.pl         license.txt              wait_on_ports.pl
jlanpro_test.pl          lf_many_vphy.pl          list_phy_sta.sh         wifi_diag
json                     lf_monitor.pl            mem-info.sh             wifi-event-histo.sh
LANforge                 lf_mcast.bash            min_max_ave_station.pl wifi-roaming-times.pl
lcheck.sh                lf_monitor.pl            multi_endp.bash         wlanPro.desktop
lf_associate_ap.pl       lf_netoptics.pl          multi_routers.pl        wlanpro_test.pl
lf_attenmod.pl           lf_nfs_io.pl             ocean-text.csv           wpro.sh
lf_auto_wifi_cap.pl      lf_nfs_io.pl             portal-check.pl
[greearb@ben-t530 lf_scripts]$
```

- B. Run the lf\_gui\_cli\_cmd.pl script with appropriate arguments. Use --help for details. Once you run this, the WiFi Capacity test should be automatically opened and the test will be started. The script will end when the capacity test has completed. You may copy the results to some easily found location, such as a web server directory.



```
greearb@ben-t530:~/btbits/x64_btbits/server/lf_scripts
File Edit View Search Terminal Help
>>>Sending:cv get 'mytest' 'Report Location:'
Copy test results: cp -ar /home/greearb/tmp/reports/wifi-capacity-2019-11-04-06-13-12 /tmp/
[greearb@ben-t530 lf_scripts]$
[greearb@ben-t530 lf_scripts]$
[greearb@ben-t530 lf_scripts]$
[greearb@ben-t530 lf_scripts]$
[greearb@ben-t530 lf_scripts]$
[greearb@ben-t530 lf_scripts]$
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[greearb@ben-t530 lf_scripts]$
[greearb@ben-t530 lf_scripts]$
[greearb@ben-t530 lf_scripts]$
[greearb@ben-t530 lf_scripts]$
[greearb@ben-t530 lf_scripts]$
[greearb@ben-t530 lf_scripts]$
[greearb@ben-t530 lf_scripts]$ ./lf_gui_cli_cmd.pl --manager localhost --port 3990 --ttype "WiFi Capacity" --name mytest --confg
udp-dl-120 --rpt dest /tmp/
>>>Sending:cv create 'WiFi Capacity' 'mytest'
OK

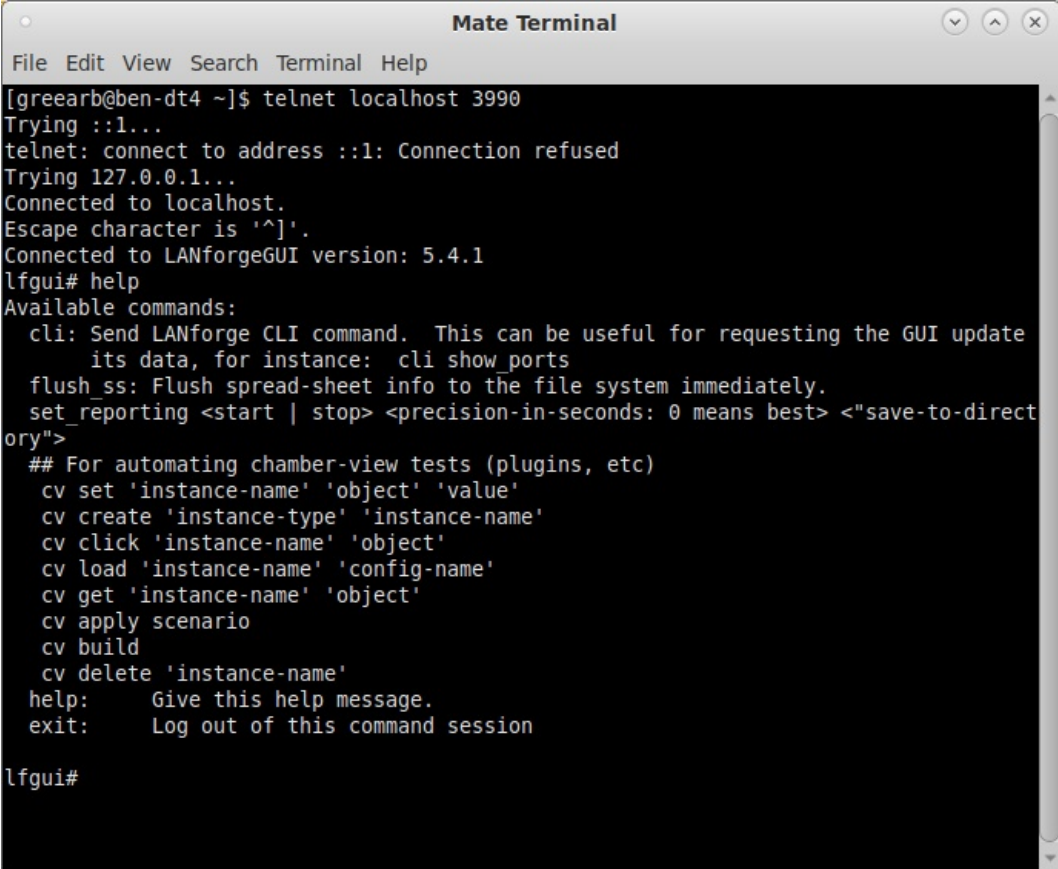
>>>Sending:cv load 'mytest' 'udp-dl-120'
OK

>>>Sending:cv click 'mytest' 'Auto Save Report'
OK

>>>Sending:cv click 'mytest' 'Start'
OK

>>>Sending:cv get 'mytest' 'Report Location:'
>>>Sending:cv get 'mytest' 'Report Location:'
>>>Sending:cv get 'mytest' 'Report Location:'
```

- C. For details on what GUI-CLI commands are supported, please see the screen-shot below and look at the contents of the `lf_gui_cmd.pl` script.



```
Mate Terminal
File Edit View Search Terminal Help
[greearb@ben-dt4 ~]$ telnet localhost 3990
Trying ::1...
telnet: connect to address ::1: Connection refused
Trying 127.0.0.1...
Connected to localhost.
Escape character is '^]'.
Connected to LANforgeGUI version: 5.4.1
lfgui# help
Available commands:
  cli: Send LANforge CLI command. This can be useful for requesting the GUI update
       its data, for instance: cli show_ports
  flush_ss: Flush spread-sheet info to the file system immediately.
  set_reporting <start | stop> <precision-in-seconds: 0 means best> <"save-to-direct
ory">
## For automating chamber-view tests (plugins, etc)
cv set 'instance-name' 'object' 'value'
cv create 'instance-type' 'instance-name'
cv click 'instance-name' 'object'
cv load 'instance-name' 'config-name'
cv get 'instance-name' 'object'
cv apply scenario
cv build
cv delete 'instance-name'
help: Give this help message.
exit: Log out of this command session

lfgui#
```