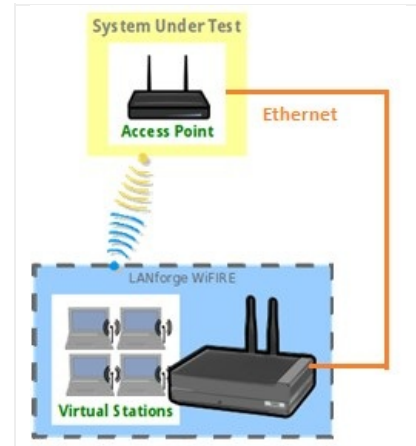


Automate WiFi Capacity and other GUI tests.

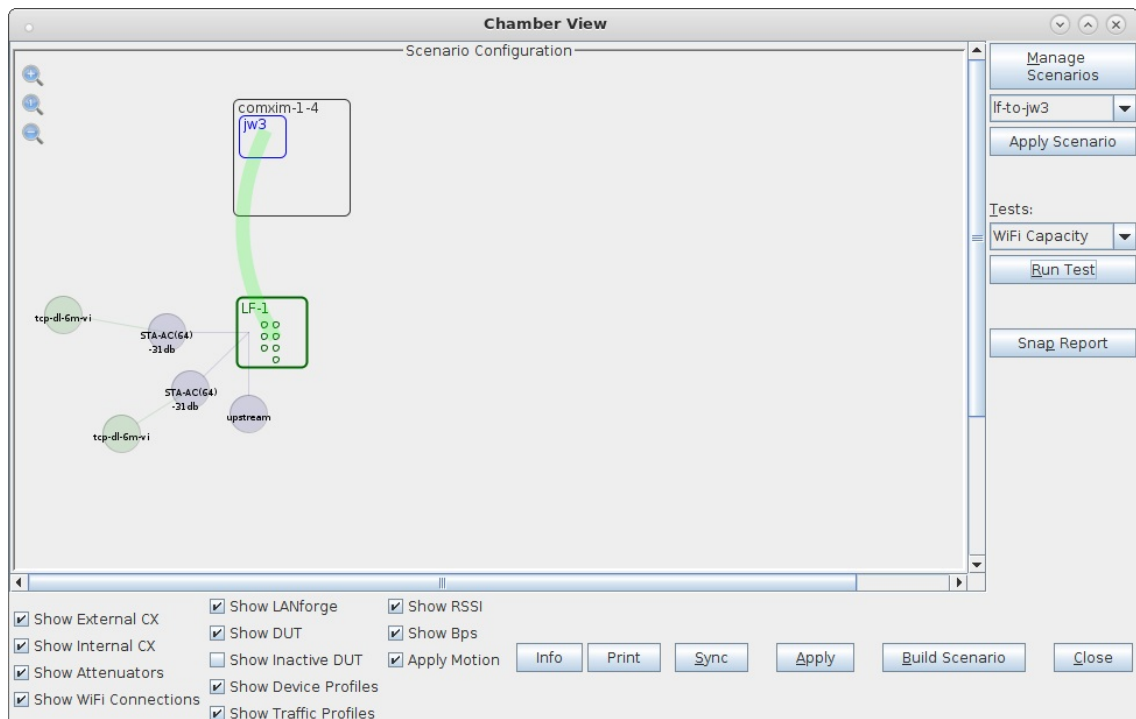
Goal: Use a command-line script to have the LANforge-GUI run the WiFi Capacity test and generate a pdf automatically.

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.

The screenshot shows the 'WiFi Capacity Test' configuration window. The 'Settings' tab is active. The configuration includes the following fields and values:

- 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)

At the bottom, there are three buttons: 'Save', 'Load', and 'Delete'. To the right of these buttons are three text input fields, all containing the text 'DEFAULT'. At the bottom right of the window are 'Start', 'Pause', and 'Cancel' buttons.

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'

This screenshot shows the same 'WiFi Capacity Test' configuration window, but with the 'Save' field populated with the text 'udp-dl-120'. The 'Load' dropdown menu is open, showing a list of available configurations: 'DEFAULT', 'DEFAULT', 'layer-4', 'testme', 'udp-dl-128', and 'udp-dl-120'. The 'udp-dl-120' option is highlighted. The 'Delete' button is also visible.

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

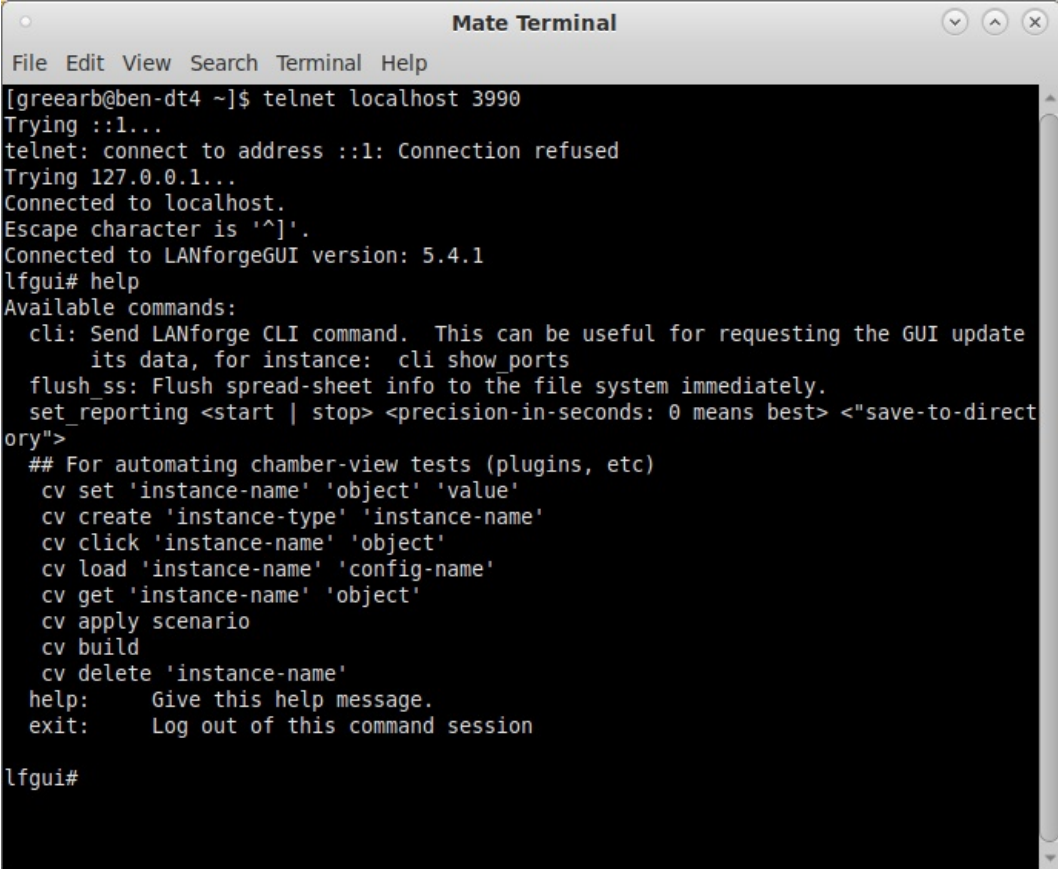
- ```

greearb@ben-t530:~/bttbits/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_end_script.pl lf_staggered_dl.sh README.md
attenuator_series_example.csv lf_firedom.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_l4_reset.sh lf_voip_test.pl sysmon.sh
every_vrf.sh lf_log_parse.pl lf_vue_mod.sh telnet_expect_wrapper.pl
fancctl_lf0312.pl lf_loop_traffic.sh lf_wifi_dot1x.bash test_refcnt.pl
four_million.pl lf_macvlan2.pl lf_wifi_fire.bash timed_ice_pause.sh
four_million.sh lf_macvlan3.pl lf_wifi_portal.bash topmon.sh
ftp-upload.pl lf_macvlan_l4.pl lf_wifi_rest_example.pl track_call_end.sh
hires_cxreport.pl lf_macvlan.pl lf_zlt_binary.pl track_call.sh
hostap_timestamp.pl lf_macvlan_streams.pl lib_vrf.bash upgrade_over_dut.bash
lmix.pl lf_many_conn2.pl license.txt wait_on_ports.pl
jlanpro_test.pl lf_many_conn.pl list_phy_sta.sh wifi_diag
json lf_many_vphy.pl mem-info.sh wifi-event-histo.sh
LANforge lf_max_cxs_v1_3000.pl min_max_ave_station.pl wifi-roaming-times.pl
lcheck.sh lf_max_test.bash multi_endp.bash wlanPro.desktop
lf_associate_ap.pl lf_monitor.pl multi_routers.pl wlanpro_test.pl
lf_attenmod.pl lf_netoptics.pl ocean-text.csv wpro.sh
lf_auto_wifi_cap.pl lf_nfs_io.pl portal-check.pl
[greearb@ben-t530 lf_scripts]$

```

- ```
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]$
[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]$
[greearb@ben-t530 lf_scripts]$ ./lf_gui_cmd.pl --manager localhost --port 3990 --ttype "WiFi Capacity" --tname mytest --tconfi
g 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#
```