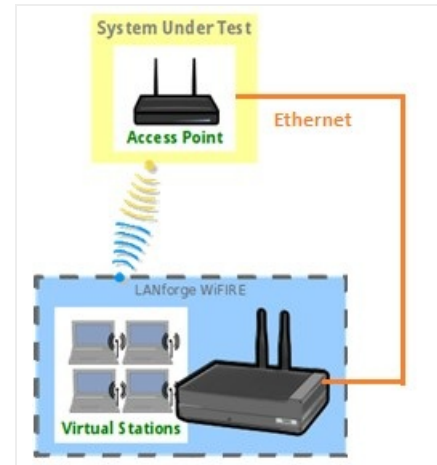


Automate WiFi Capacity and other GUI tests.

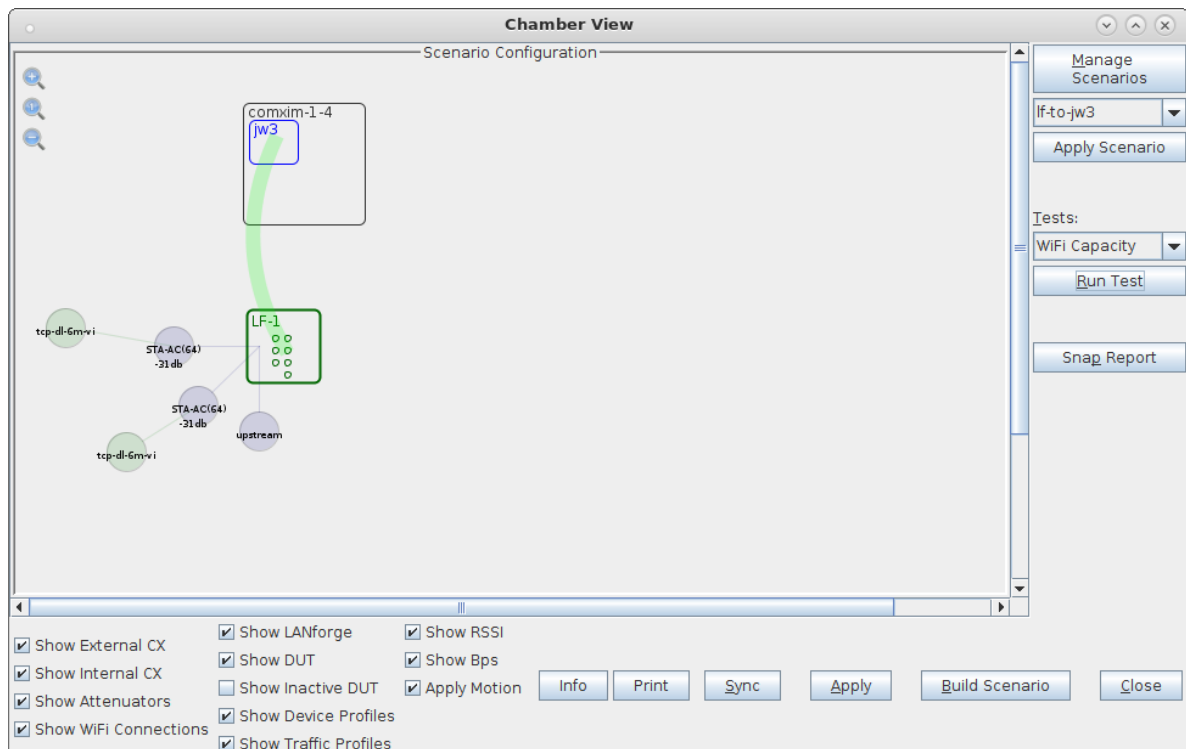
Goal: Use a command-line script to have the LANforge-GUI run the WiFi Capacity test and generate a pdf automatically.

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'. Each button has a corresponding text field to its right, all currently showing 'DEFAULT'. At the very bottom right, there 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 now containing the text 'udp-dl-120'. The 'Load' and 'Delete' fields still show 'DEFAULT'. The 'Start' button is now disabled, and the 'Pause' and 'Cancel' buttons are visible at the bottom right. The configuration settings remain the same as in the previous screenshot.

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

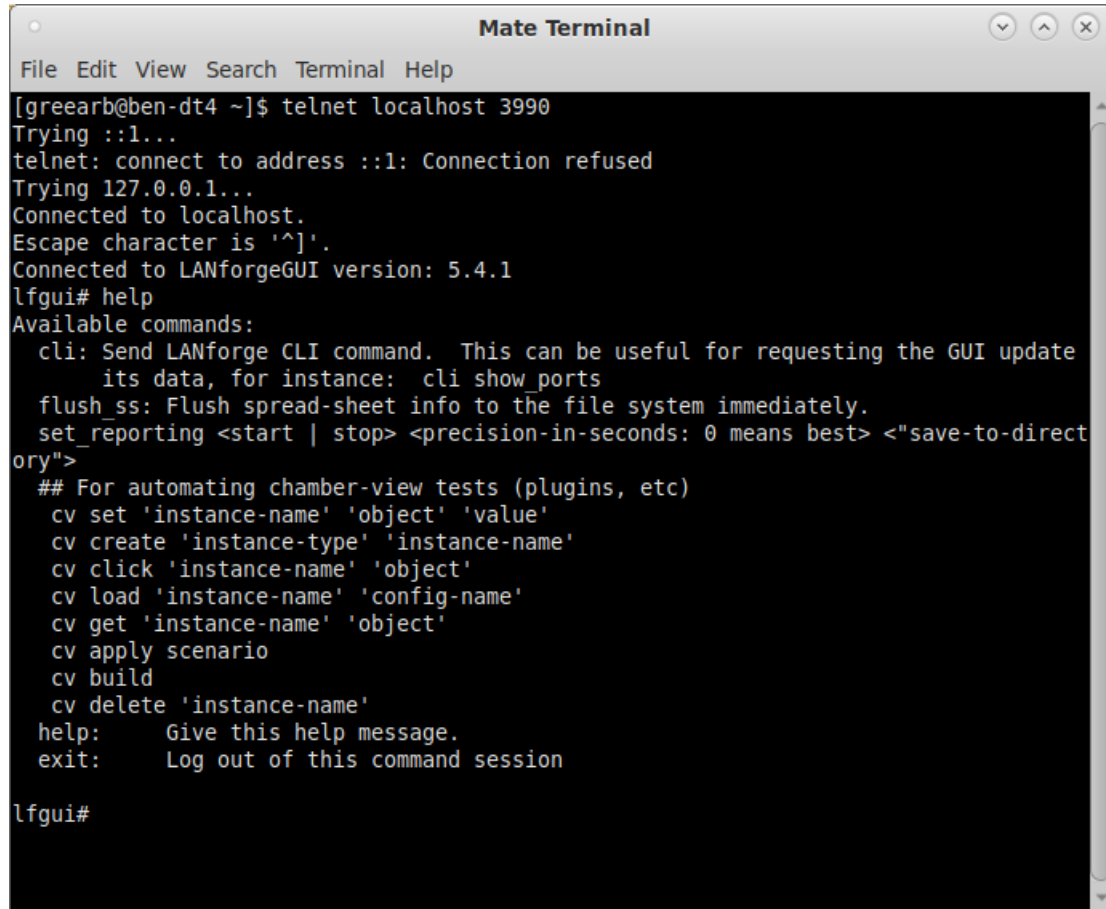
- A. Open an ssh session or terminal window and log into the LANforge system, or some other system with the LANforge scripts/ repository. On a LANforge system, this will usually be /home/lanforge/scripts In this case, the directory name is called lf_scripts

```

greearb@ben-t530:~/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_endp_script.pl        lf_staggered_dl.sh       README.md
attenuator_series_example.csv lf_firedmod.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
imix.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_mcast.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]$

```

- 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#
```