Candela TECHNOLOGIES Network Testing and Emulation Solutions

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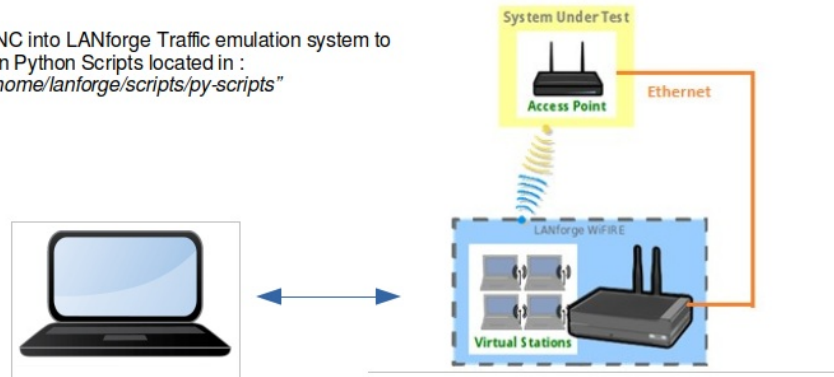support@candelatech.com
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Start Here: Introduction to Executing Python Script on LANforge

Goal: Run First Python Script on LANforge

Each LANforge system has Python scripts preinstalled at `/home/lanforge/scripts` to configure the LANforge and run Traffic Emulation. Goal is to execute sta_connect2.py, one of the pre-installed python scripts located at
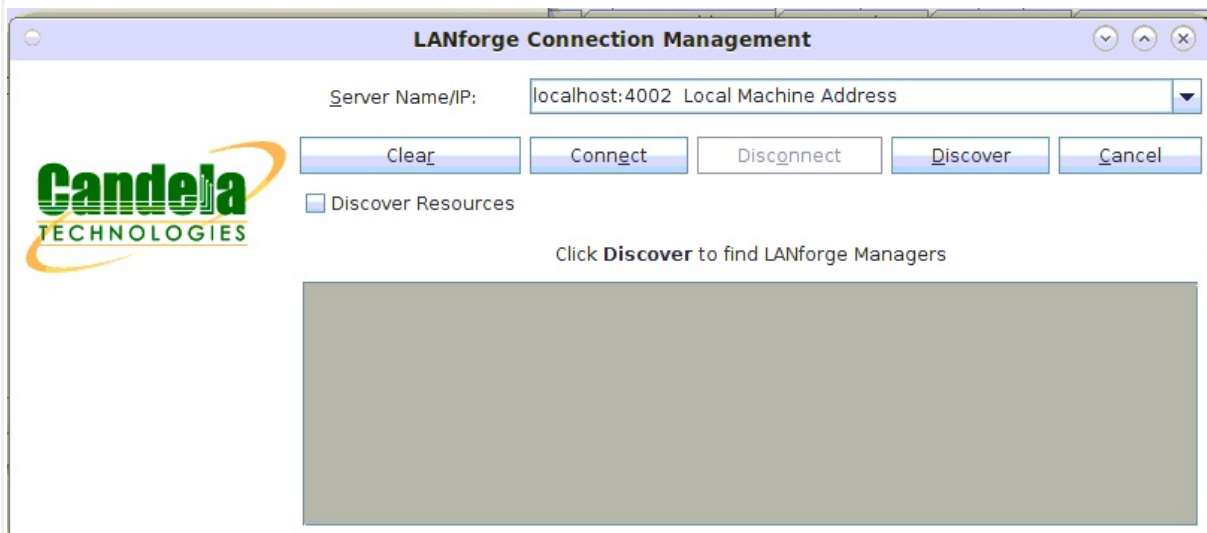
VNC into LANforge Traffic emulation system to run Python Scripts located in :
"/home/lanforge/scripts/py-scripts"

System Under Test

Access Point

Ethernet

LANforge WiFIRE

Virtual Stations

`/home/lanforge/scripts/py-script/sta_connect2.py`

The Script sta_connect2.py will create a station, create TCP and UDP traffic, run traffic for a short amount of time, and verify whether traffic was sent and received. It also verifies the station connected to the requested BSSID if bssid is specified as an argument. The script will clean up the station and connections at the end of the test. An html and pdf or the results will be generated and placed in /home/lanforge/html-reports directory The script will clean up the station and connections at the end of the test.

1. **Start the LANforgeGUI if GUI not running:**
   To start the LANforgeGUI navigate to : `/home/lanforge/LANforgeGUI_5.4.5`
   Execute : `./lfclient.bash`
   Select 'Connect' to connect to: `localhost:4002 Local Machine Address`

LANforge Connection Management

Server Name/IP: localhost:4002 Local Machine Address

Clear   Connect   Disconnect   Discover   Cancel

☐ Discover Resources

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Click **Discover** to find LANforge Managers

2. Where Do I Find Scripts?
Preinstalled Python Scripts Location on LANforge: `/home/lanforge/scripts/py-scripts`
Example script sta_connect2.py location: `/home/lanforge/scripts/py-scripts/sta_connect2.py`

3. Initial Information to gather as input to sta_connect2.py script:
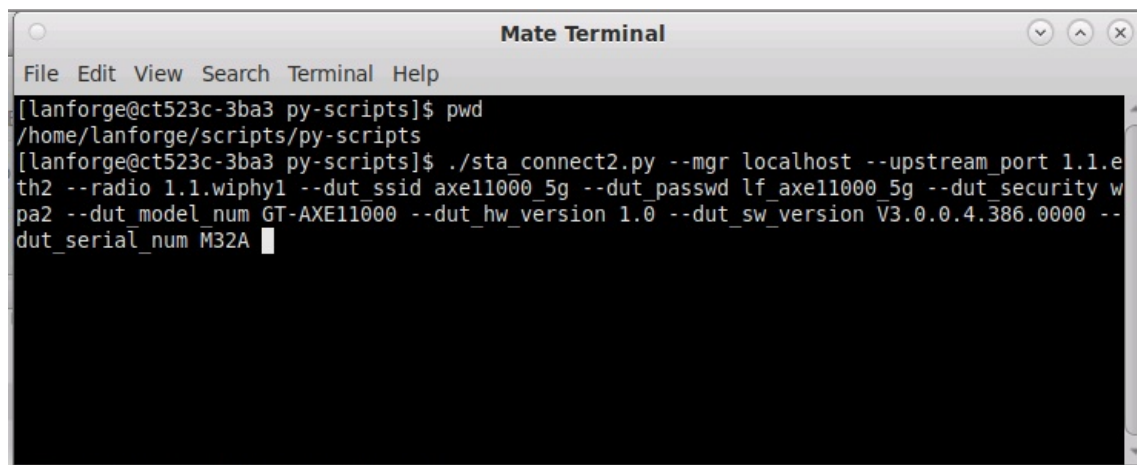Note: An example of a Device Under Test is an Access Point
        The DUT information is used in report generation. The DUT information may be optional.

  A. The LANforge manager IP address: --mgr [localhost]

  B. The LANforge upstream port: --upstream_port [eth port]

  C. The LANforge radio: --radio [radio]

  D. The Device Under Test ssid: --dut_ssid [ssid]

  E. The Device Under Test passwd: --dut_passwd [passwd]

  F. The Device Under Test security: --dut_security [security]

  G. The Device Under Test Model Number: --dut_model_num [model]

  H. The Device Under Test Hardware Version: --dut_hw_version [hw version]

  I. The Device Under Test Software Version: --dut_sw_version [sw version]

  J. The Device Under Test Serial Number: --dut_serial_num [serial number]

4. Example Command for sta_connect2.py:
```
./sta_connect2.py --mgr locahost --upstream_port 1.1.eth2
      --radio 1.1.wiphy1 --dut_ssid axe11000_5g --dut_passwd lf_axe11000_5g --dut_security wpa2
      --dut_model_num GT-AXE11000 --dut_hw_version 1.0 --dut_sw_version V3.0.0.4.386.0000
      --dut_serial_num M32A
```

Mate Terminal

File Edit View Search Terminal Help
```
[lanforge@ct523c-3ba3 py-scripts]$ pwd
/home/lanforge/scripts/py-scripts
[lanforge@ct523c-3ba3 py-scripts]$ ./sta_connect2.py --mgr localhost --upstream_port 1.1.e
th2 --radio 1.1.wiphy1 --dut_ssid axe11000_5g --dut_passwd lf_axe11000_5g --dut_security w
pa2 --dut_model_num GT-AXE11000 --dut_hw_version 1.0 --dut_sw_version V3.0.0.4.386.0000 --
dut_serial_num M32A
```

5. Results for sta_connect2.py located in /home/lanforge/html-reports:
```
1655813768.675400 INFO     PASSED: 1.1.sta0000 connected to AP: FC:34:97:2B:38:94  With IP: 192.168.50.152
PASSED: udpsta0000-0-A 1936800 bps
PASSED: udpsta0000-0-A 1936500 bps
PASSED: udpsta0000-0-B 1936500 bps
PASSED: udpsta0000-0-B 1935600 bps
PASSED: tcpsta0000-0-A 1892400 bps
PASSED: tcpsta0000-0-A 1893000 bps
PASSED: tcpsta0000-0-B 1893000 bps
PASSED: tcpsta0000-0-B 1892400 bps sta_connect2.py 1109
1655813769.016487 INFO     Test Results HTML located: /home/lanforge/html-reports/2022-06-21-05-14-39_sta_connect2/2022-06-21-05-14-39-sta_c
onnect2.html sta_connect2.py 1117
1655813769.016640 INFO     Test Results PDF located: /home/lanforge/html-reports/2022-06-21-05-14-39_sta_connect2/2022-06-21-05-14-39-sta_co
nnect2.pdf sta_connect2.py 1120
1655813769.016695 INFO     PASS:  All tests pass sta_connect2.py 1128
[lanforge@ct523c-3ba3 py-scripts]$
```

6. Results for sta_connect2.py located in /home/lanforge/html-reports:
Script produces both html and pdf results
Sample sta_connect2.py Script HTML Output: example of html output
Sample sta_connect2.py Script pdf Output: example of pdf output
Other script options may be show by typing `./sta_connect2.py --help`