

LANforge WebGUI Installation

Goal: Install LANforge WebGUI (also known as WebUI) on your LANforge box.

WebGUI/WebUI requires LANforge 5.4.7 and above, as well as Fedora-34 and above.

Background

Our LANforge WebGUI solution is used to support real client testing for access points. WebGUI combines with InterOp which gives the benefits of testing with real clients with customizable testing and reporting.

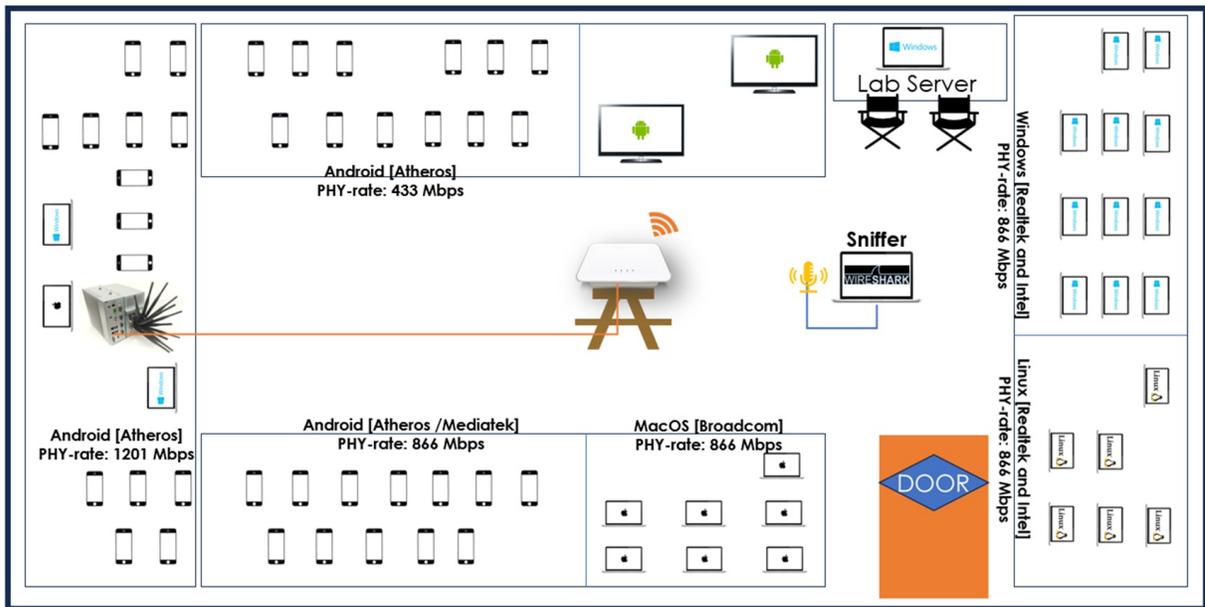
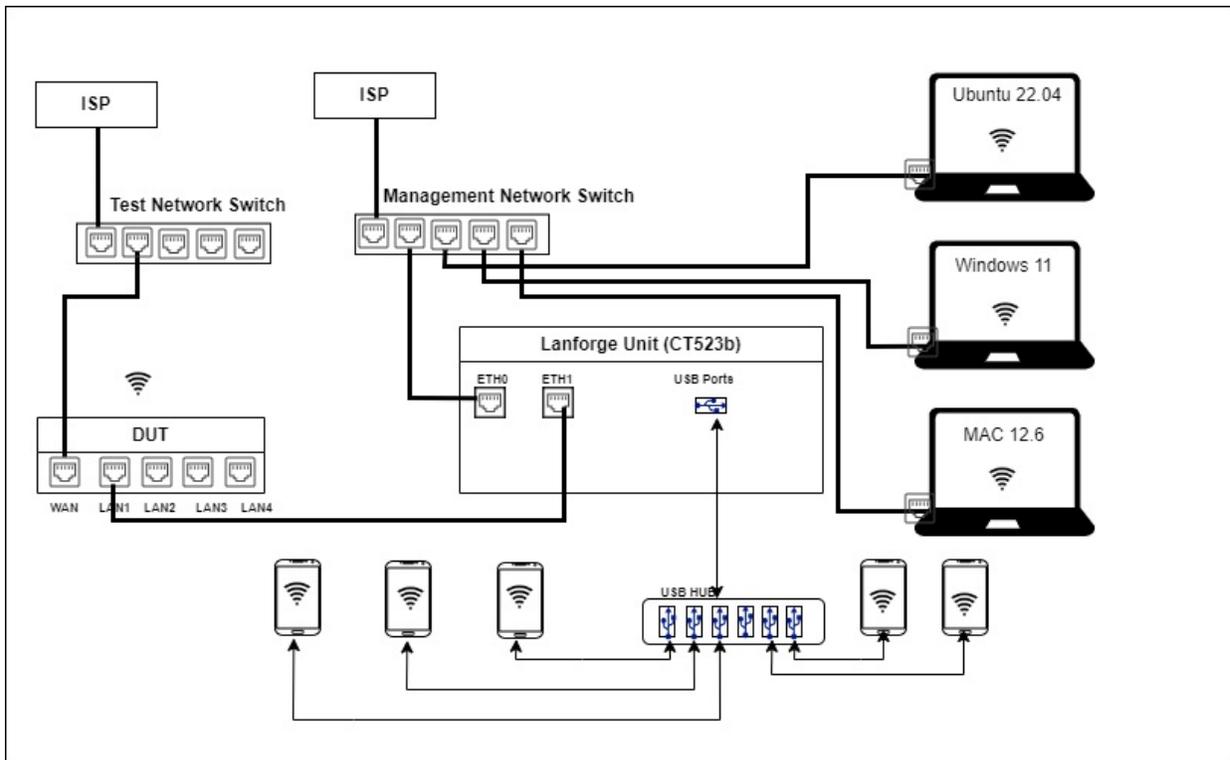
We have support for various kinds of real clients:

- Android clients.
- iOS clients.
- Windows Machines.
- Linux Machines.
- MacOS Machines.

Testbed Setup

Hardware

1. USB Cables
2. Mobile Devices[Android, iPhone], Laptops[Linux, Windows, MacOS]
3. Switches
4. AP/Routers
5. LANforge Traffic Generator (CT523c/Noah2)
6. Ethernet Cables
7. USB Hubs

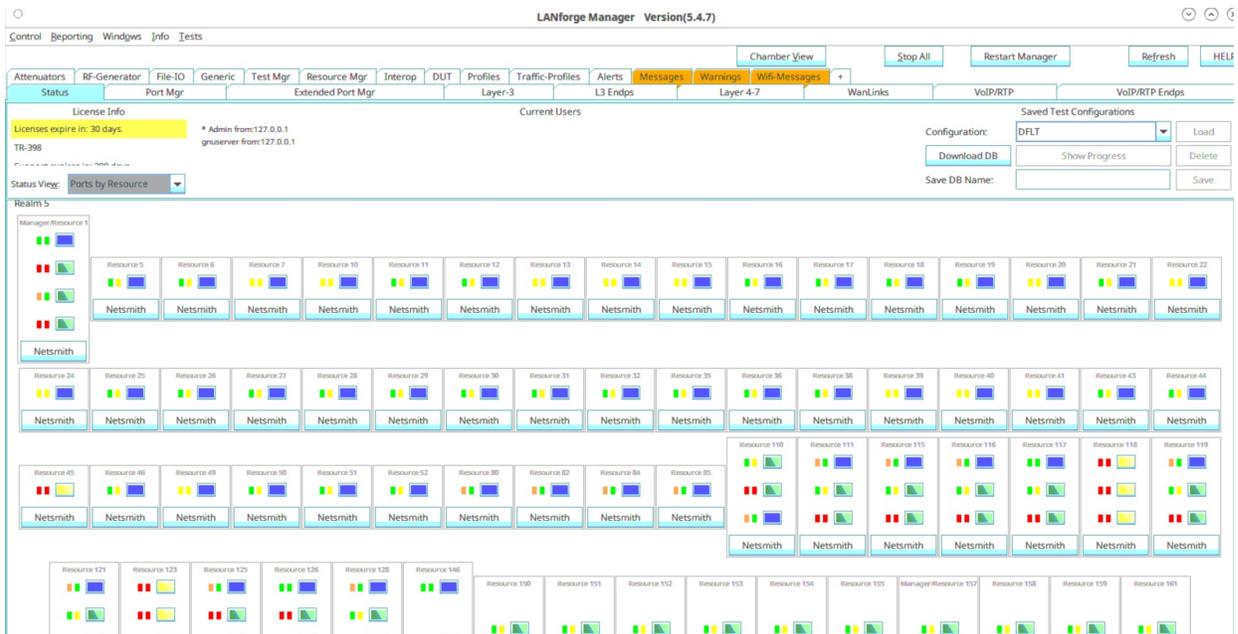


Configuration

After your testbed is configured, pick a non-existing and unique realm number, and cluster your InterOp devices by following the cookbooks below according to your device:

- Android: [InterOp Setup for Android](#)
- Linux: [Installing LANforge Server on Ubuntu or Linux Machine](#)
- Windows: [Installing LANforge Server on a Windows Machine](#)
- MacOS: [Installing LANforge Server on a MacOS Machine](#)

Once all the devices are clustered, they should show in the Status and Resource Mgr tab.

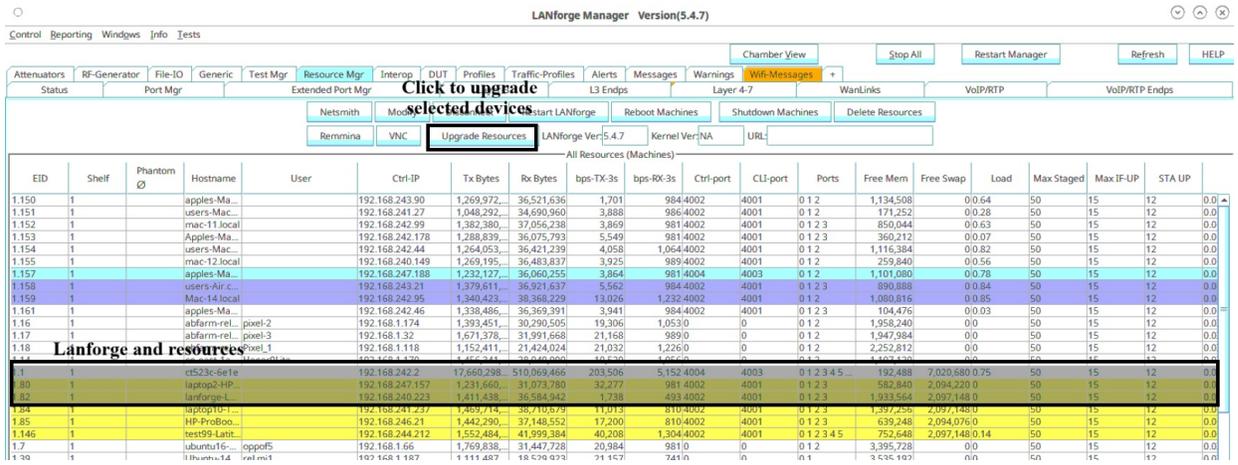


LANforge Upgrade

1. The WebGUI uses the webGUI_update_dependencies.py in the lanforge-scripts/py-scripts/ directory to install packages required for the GUI. To upgrade the scripts directory, run the command line below in the lanforge terminal.

```
sudo ./lf_kinstall.pl --do_lanforge
```

2. Upgrade the LANforge and interOp devices from the Resource Manager tab by selecting the LANforge and clustered devices. NOTE: LANforge WebGUI works after LANforge 5.4.7, Kernel version 6.2.16+.



Upgrade runtime logs can be found in the file 1. /root/var/log/lf_upgrade_stderr.txt and 2. /root/var/log/lf_upgrade_stdout.txt.

3. Once the upgrade is finished, the LANforge should auto-reboot.

WebGUI Licensing

The WebGUI needs special licensing. Check to verify correct licenses.

1. Navigate to the Control button highlighted in top left corner of LANforge Manager GUI and select Install License . The left-hand column shows the current installed license. There should be a **WEBGUI** row there.



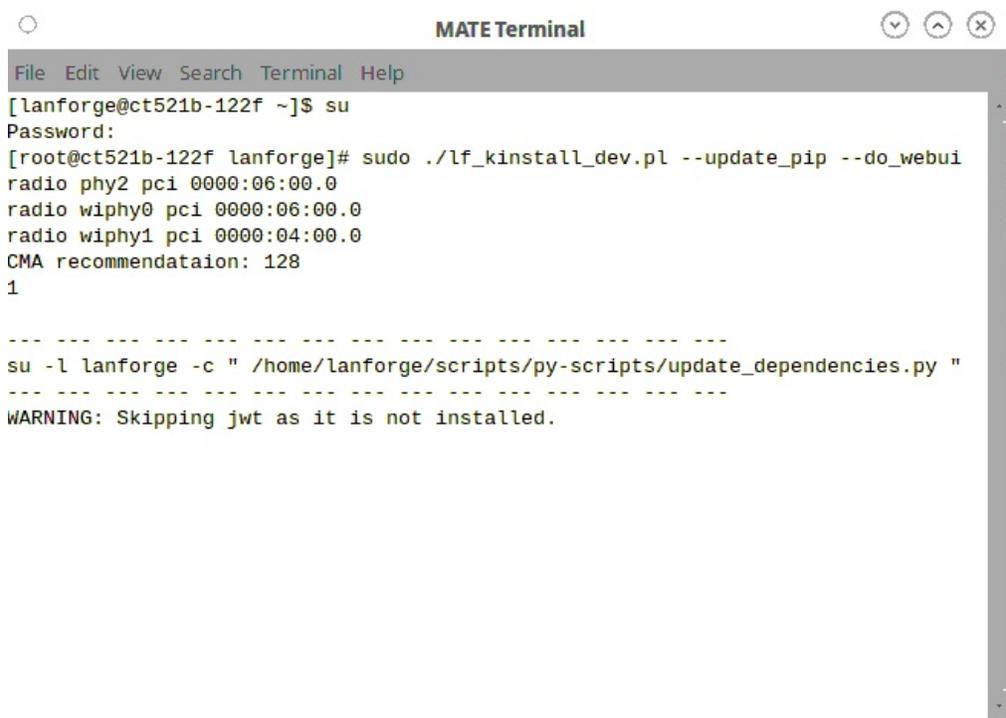
2. If **not installed** and the license is handy, paste your new license in the right-hand side, click the OK button below, and reboot the machine by opening the terminal and typing: `sudo reboot`

Installing WebGUI Dependencies

1. After reboot, open a terminal and run:

```
cd /home/lanforge
su: [ENTER]
Password: [type in password and hit ENTER]
./lf_kinstall.pl --update_pip --do_webui --lfver 5.5.2
(instead of 5.5.2, replace with your correct LANforge version)
```

This command will update the python dependencies used in WebGUI by running the python script in `/home/lanforge/scripts/py-scripts/webGUI_update_dependencies.py`.

A screenshot of a MATE Terminal window. The title bar says 'MATE Terminal'. The terminal output shows the user switching to root and running a script to update dependencies. The output includes hardware information and a warning about jwt.

```
File Edit View Search Terminal Help
[lanforge@ct521b-122f ~]$ su
Password:
[root@ct521b-122f lanforge]# sudo ./lf_kinstall_dev.pl --update_pip --do_webui
radio phy2 pci 0000:06:00.0
radio wiphy0 pci 0000:06:00.0
radio wiphy1 pci 0000:04:00.0
CMA recommendaiaon: 128
1

-----
su -l lanforge -c " /home/lanforge/scripts/py-scripts/update_dependencies.py "
-----
WARNING: Skipping jwt as it is not installed.
```

This upgrade takes approx 5-10 minutes to complete. Once completed, messages indicating completion of install should appear in the terminal.

2. Lastly, run (with your correct LANforge version, same as the one used above): `sudo ./lf_kinstall.pl --do_webui --lfver 5.5.2 .`
This command fulfills dependences related to Django and Migrations.

```
Package celery install SUCCESS Returned value: 0
Package pytest-json-report install SUCCESS Returned Value: 0
Package pytest-metadata install SUCCESS Returned Value: 0
Package python-dateutil install SUCCESS Returned Value: 0
Package requests install SUCCESS Returned Value: 0
Package pillow install SUCCESS Returned Value: 0
Package tabulate install SUCCESS Returned Value: 0
Package selenium install SUCCESS Returned Value: 0
Install Complete
Packages Installed Success: ['pandas', 'plotly', 'numpy', 'cryptography', 'paramiko', 'websocket-client', 'xlsxwriter', 'pyshark', 'influxdb', 'influxdb-client', 'matplotlib', 'pdfkit', 'pip-search', 'pyserial', 'pexpect-serial', 'scp', 'scipy', 'simple-geometry', 'kaleido', 'psutil', 'aiohttp', 'bs4', 'django', 'django-celery-beat', 'django-enum-choices', 'django-timezone-field', 'flower', 'jsonfield', 'matplotlib', 'psycpg2-binary', 'wheel', 'pytest', 'pytest-html', 'pytest-json', 'django-celery-results', 'celery', 'pytest-json-report', 'pytest-metadata', 'python-dateutil', 'requests', 'pillow', 'tabulate', 'selenium']

-----
[root@ct521b-122f lanforge]# sudo ./lf_kinstall_dev.pl --do_webui
radio phy2 pci 0000:06:00.0
radio wiphy0 pci 0000:06:00.0
radio wiphy1 pci 0000:04:00.0
```



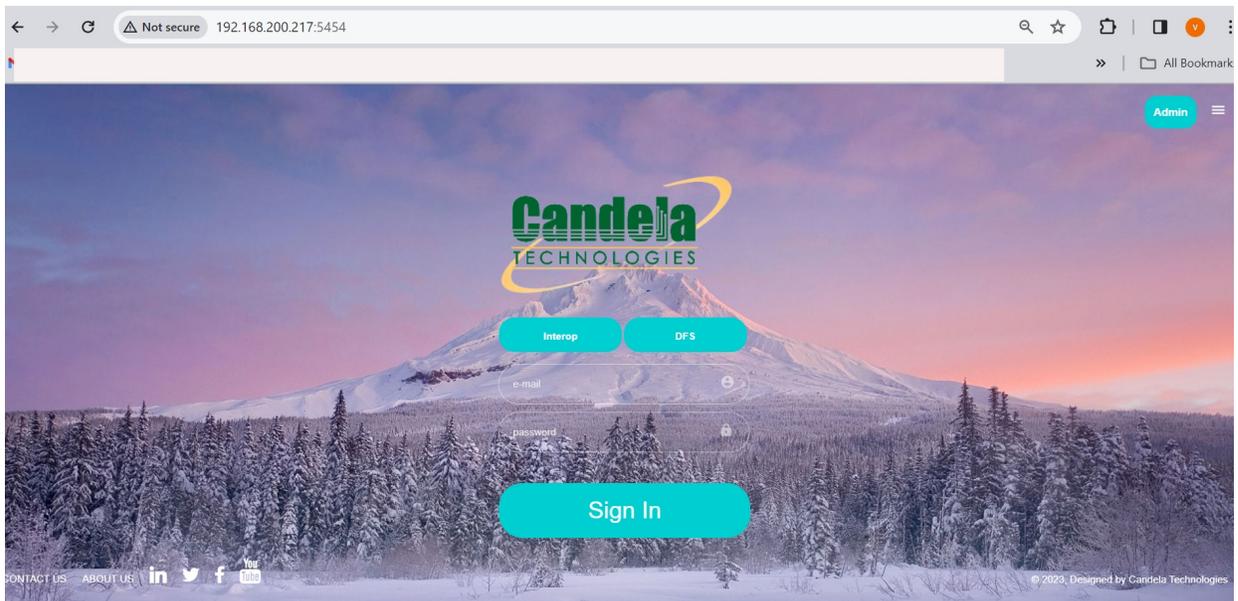
3. After the terminal looks like the above, type in sudo reboot to reboot system.

Hosting WebGUI

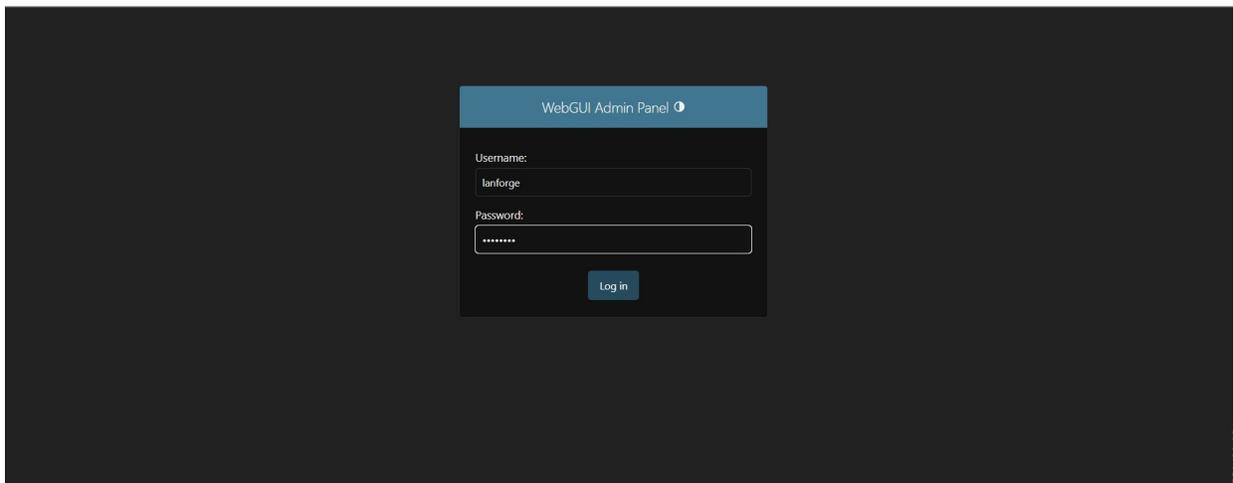
1. After reboot, the LANforge should become reachable again. Open the LANforgeGUI via VNC or RDP.
 - a. [Click here to learn how to connect to LANforge via VNC Viewer](#)
2. Open any browser (on a laptop on same network as LANforge) and type in

[Your LANforge IP]:5454. eg: '192.168.200.217:5454'

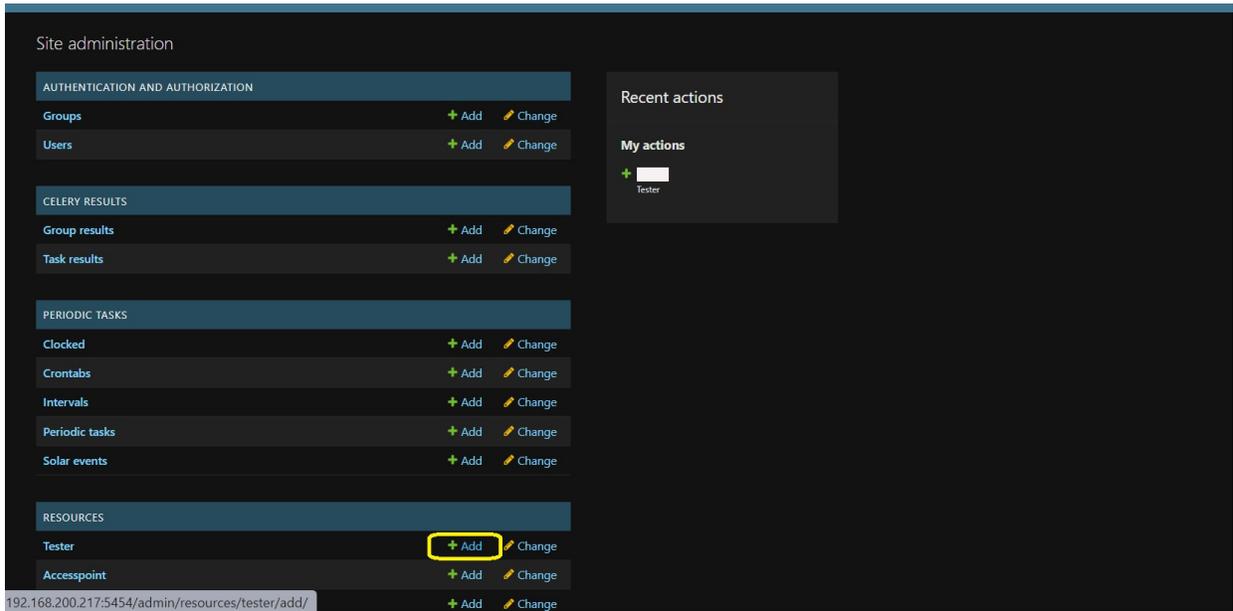
NOTE: You cannot use 'localhost' for the URL, it must be the management IP.



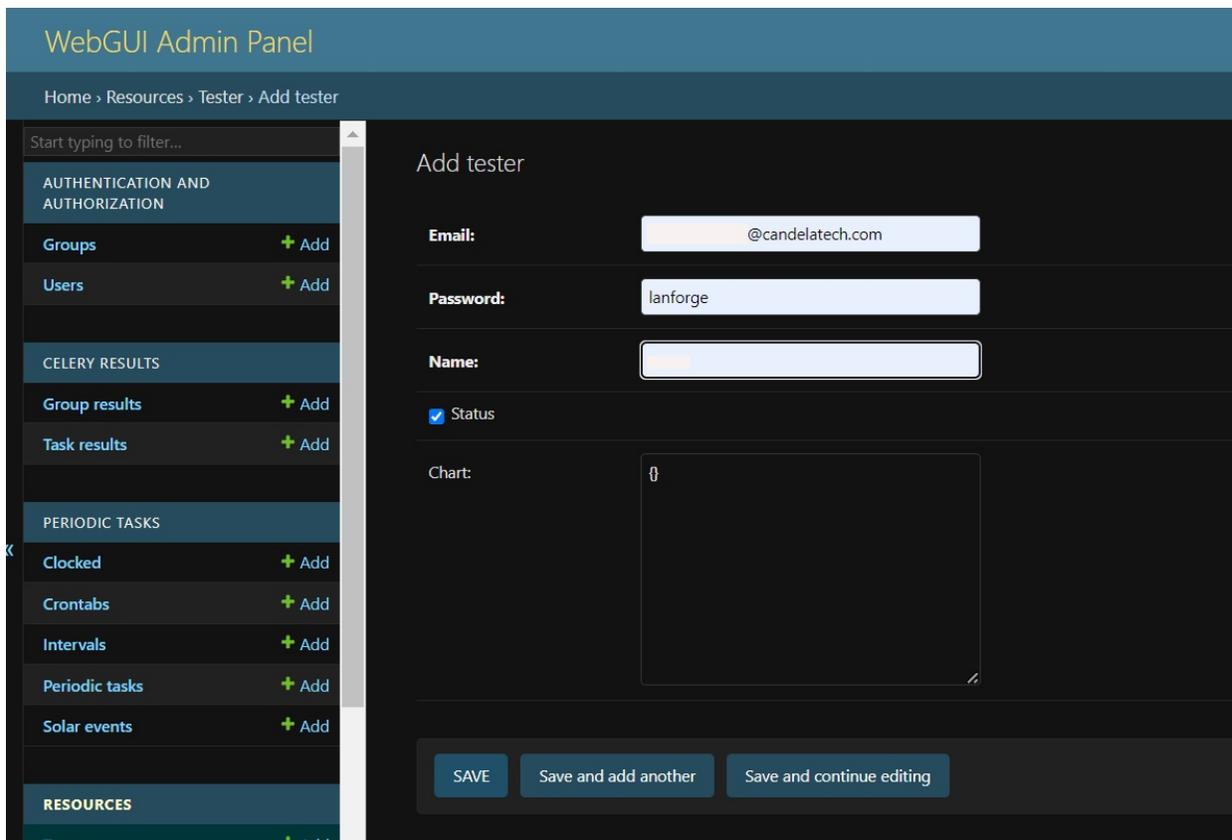
3. Click on Admin button in the top-right corner and login with user: lanforge and password: lanforge.



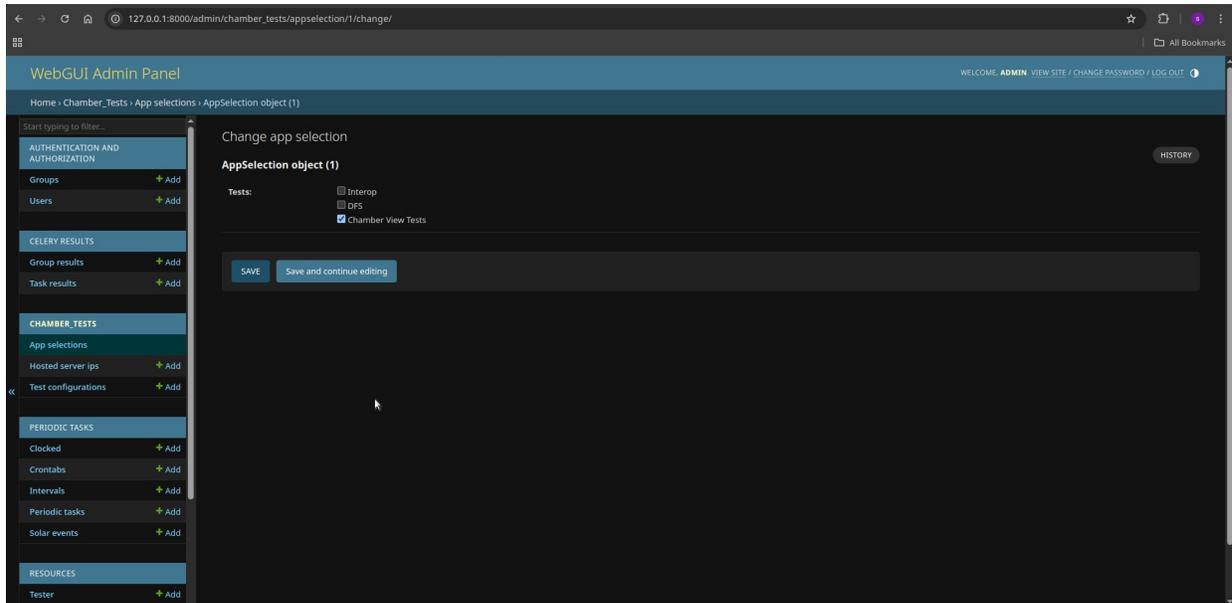
4. Add a tester if wanted. Under the RESOURCES tab, click **+ Add** to add a tester. Pick their credentials.



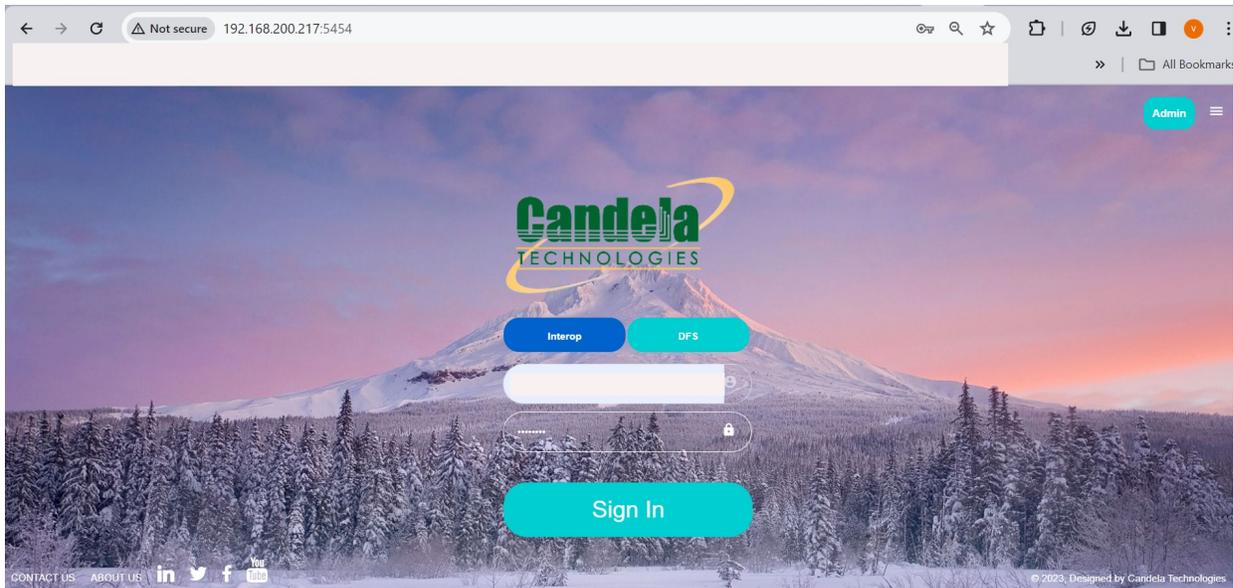
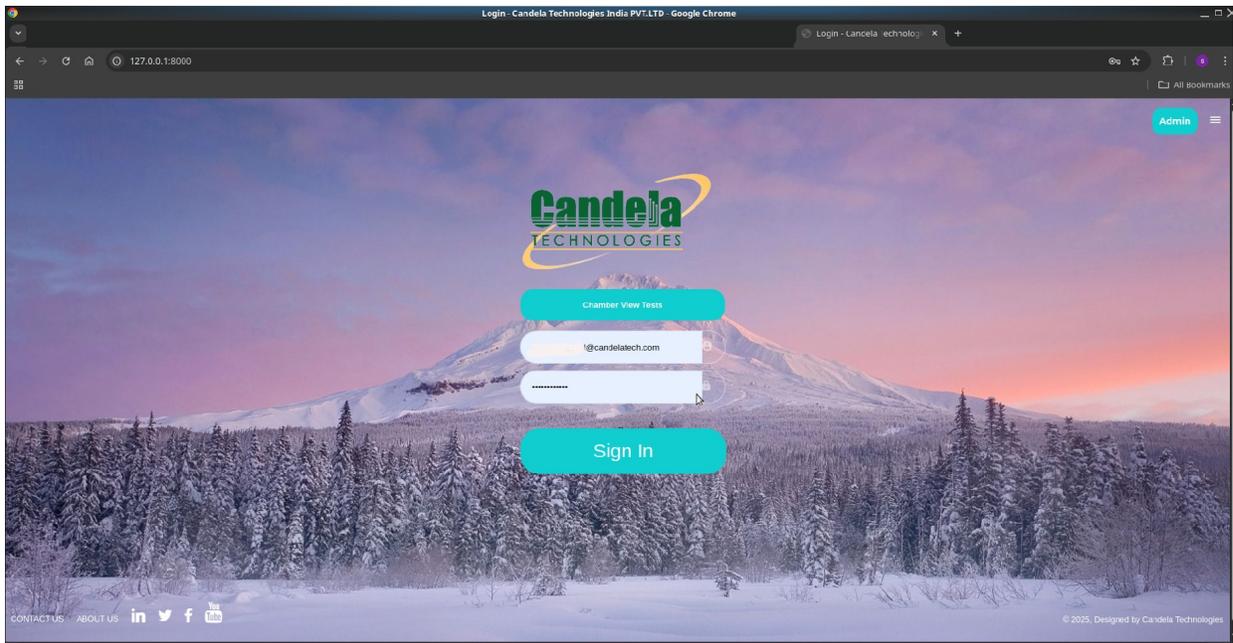
5. Input Email, Password, and Name for tester.



6. To choose which panels should show up in the WebGUI, click on CHAMBER TESTS (right hand side) and App selections . This is where to choose if the Interop , DFS or Chamber View Tests panel show up in the WebGUI.



7. Now, the WebGUI login page will only display the panels which the tester has selected, and the tester can now start using the webGUI with their credentials.



8. Once logged in, input the management IP address of the testbed to be accessed and click Connect



9. Welcome to WebGUI!!

← → ↻ ⚠ Not secure 192.168.200.217:5454

192.168.200.63 Connect

Active User: →

Device Manager

Selected Devices: [1] [A-] [W-] [L-] [M] Select All

<p>MTV_AXFRO 40527C06100036253 11 RDT_vpa2 App Running(14)</p> <p>Select</p>	<p>SM_A730F 5200aa43ea565589 11 RDT_vpa2 App Running(13)</p> <p>Select</p>	<p>Redmi_Note_5 726ee45c0095 8.1.0 App Stopped</p> <p>Select</p>	<p>STK_L22 93L4C20106020105 10 RDT_vpa2 App Running(11)</p> <p>Select</p>	<p>RMX2002 FALNGYPPQWQSX8Z 11 RDT_vpa3 App Running(10)</p> <p>Select</p>	<p>SM_X205 R9PTA8P9JY 12 RDT_vpa App Running(15)</p> <p>Select</p>	<p>SM_T505 R92RA6EDDAD 12 RDT_vpa3 App Running(16)</p> <p>Select</p>	<p>SM_A3077N R28N10VA60W 10 App Stopped</p> <p>Select</p>
<p>Redmi_Note_4 bc686849593 7.0 App Stopped</p> <p>Select</p>	<p>DESKTOP-62IBL1 192.168.220.127 5.4.7.32bit (2594Mhz)(x4)(206)</p> <p>Select</p>	<p>DESKTOP-QRLBF4E 192.168.216.246 5.4.7.32bit (2712Mhz)(x4)(211)</p> <p>Select</p>	<p>DESKTOP-QNG7LIT 192.168.222.46 5.4.7.32bit (1190Mhz)(x4)(241)</p> <p>Select</p>	<p>test40 192.168.209.140 5.4.7.64bit Intel(R) Core(TM) i7-6 5000 CPU (1500MHz) (x2)(340)</p> <p>Select</p>	<p>test 192.168.221.21 5.4.7.64bit Intel(R) Core(TM) i5-6 3000 CPU (2500MHz) (x2)(341)</p> <p>Select</p>	<p>test41 192.168.211.90 5.4.7.64bit 11th Gen Intel(R) Core (TM) i5-1 (3000MHz)(x 2)(342)</p> <p>Select</p>	<p>apple.MacBook-Air 1.local 192.168.212.250 5.4.7.64bit Intel(R) Core(TM) i5-5 350U CPU (1800MHz) (x4)(410)</p> <p>Select</p>

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