

## Record the results of a test as an Excel file from the REALM monitor script

**Goal:** Record the results of a LANForge test as an Excel file.

Some scripts in the LANForge library have a monitor function built in.

We are going to be using the `test_ipv4_variable_time` script for this demonstration.

This is useful for running a test and then analyzing the results afterwards.

1. Start LANForge GUI. It is recommended to run this script on a fresh LANForge configuration with no stations loaded.
2. Make sure you have `lanforge-scripts` on your device.  
If `lanforge-scripts` is already installed on your device, skip this step  
Navigate to `py-scripts` in the `lanforge-scripts` folder. If your LANForge device doesn't have this open source software yet you can clone them from [Github](#)  
To install `lanforge-scripts` paste `git clone https://github.com/greearb/lanforge-scripts` into your terminal.
3. Type the following command into your command line  

```
./test_ipv4_variable_time.py --radio wiphy0 --security wpa2 --ssid lanforge --password password --output_format excel
```

Replace the `security`, `ssid`, and `password` variables with the settings for the network you are testing.  
This will create 2 `wiphy` stations by default, connect them to the network you are testing, and report the results to an Excel file.
4. This creates a default file in your `report-data` folder under your home directory. The name will be in the format with today's timestamp and the name of the test you ran. It's a normal Excel file which you can use however you want..
5. There are multiple commands you can use with this function, here is a list of the flag and what each of them mean:
  - A. `report_file`: Name the full path of the file you want to save results to. Default will save to your `report-data` folder.
  - B. `duration_sec`: how long you want to run the test
  - C. `output_format`: The output format you want your file in. The following formats are supported:
    - A. `xlsx` DEFAULT
    - B. `pickle`  
HINT: `pickle` is recommended if you are going to be manipulating data in python since it preserves formatting and can be quickly loaded into a Pandas DataFrame without any manipulation required
    - C. `csv`
    - D. `json`
    - E. `pdf`  
WARNING: PDF is hard to export data from without an Adobe Acrobat license
    - F. `png`  
WARNING: `png` is going to export an image, do not use this if you are planning on manipulating your data because it does not preserve the numbers recorded
    - G. `html`
    - H. `hdf`
    - I. `parquet`
    - J. `stata`
  - D. `ssid`: REQUIRED Name of the network you are connecting to
  - E. `password`: REQUIRED Password to the network
  - F. `radio`: REQUIRED The radio which you are going to create stations from.
  - G. `security`: Match the security protocol of your router.

- H. `test_duration`: Default is 60 seconds, write in a any number if you need. You can also use minutes or hours notation in this command, so for 42 minutes write 42m and for 8 hours write 8h.
- I. `upstream_port`: Most users won't need to use this option, but it tells the program where to connect to the router
- J. `created_cx`: List of the cross connects you are going to be analyzing. If you are starting with no stations created, you won't need to use this option.

Candela Technologies, Inc., 2417 Main Street, Suite 201, Ferndale, WA 98248, USA  
[www.candelatech.com](http://www.candelatech.com) | [sales@candelatech.com](mailto:sales@candelatech.com) | +1.360.380.1618