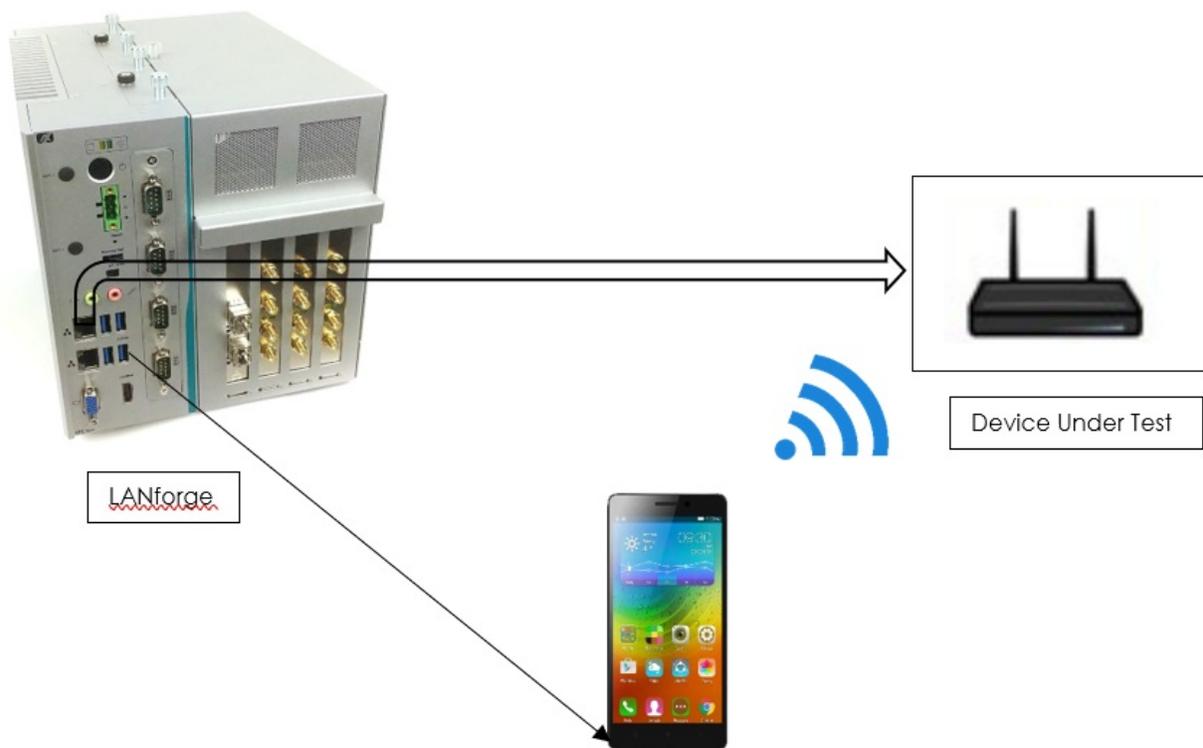


Real-Browser Test on Android

Goal: In LANforge, Layer 4-7 Traffic is used to emulate Web-Browsing. Web-browsing can be offline or online. This cookbook demonstrates how to emulate web-browsing with the real client Android phone.

This cookbook requires LANforge GUI version 5.4.6 and above.

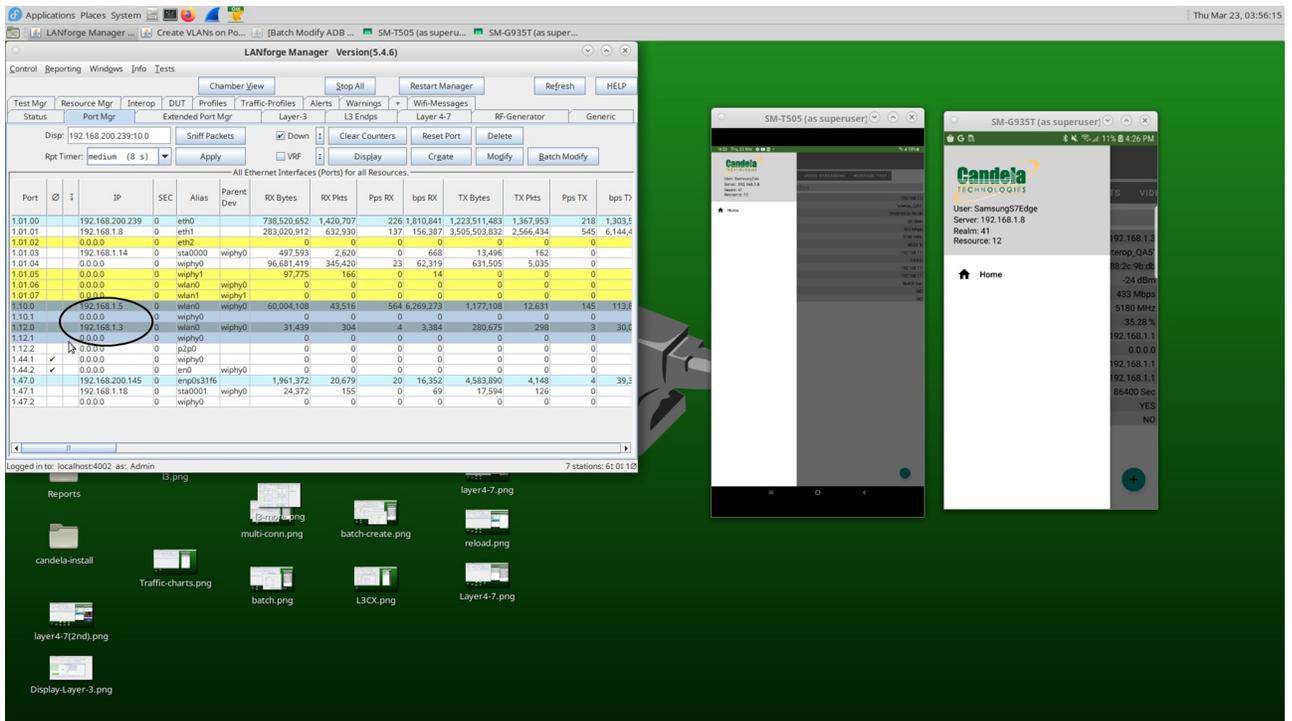
Test Setup



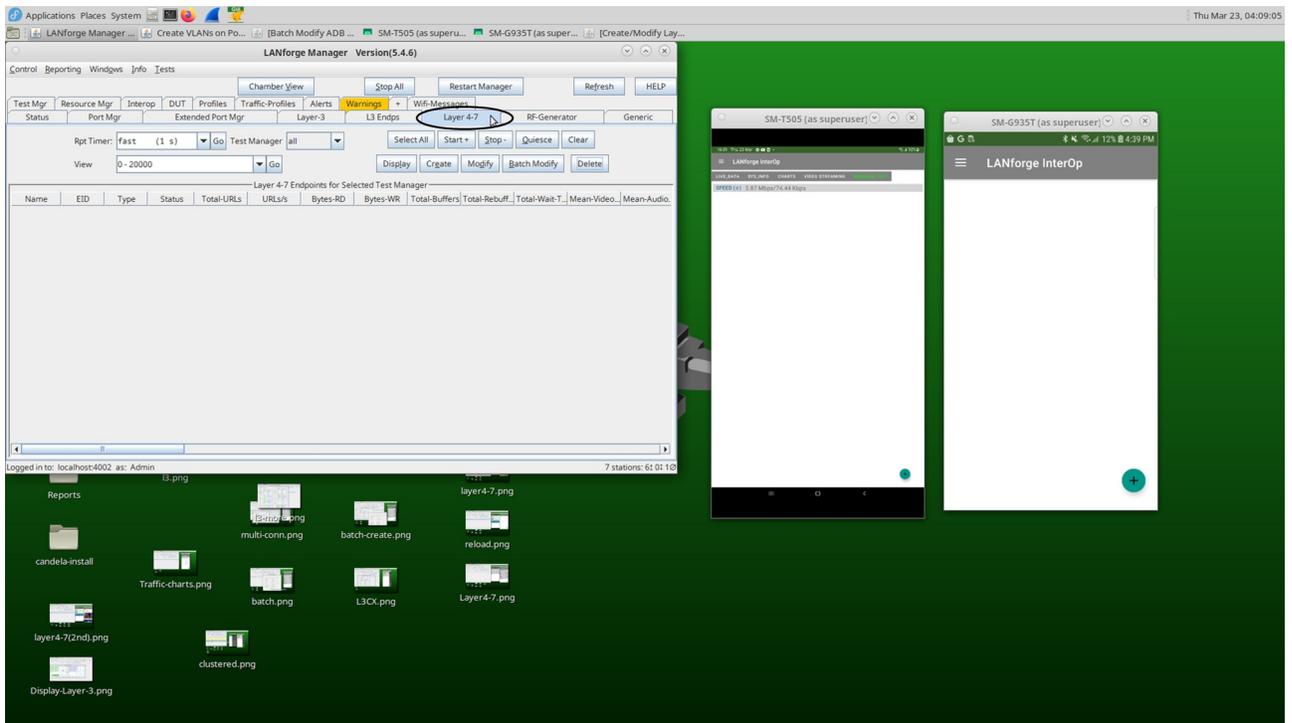
Online Real-Browsing Test

1. Make sure that the DUT is connected to the internet. Initial Android interop setup can be done using the following [link](#).
2. The below picture is an example of two android phones (resource IDs 10 and 12) clustered to the LANforge in the *Port Mgr* tab. This is both the radios and mgr port of the phones.

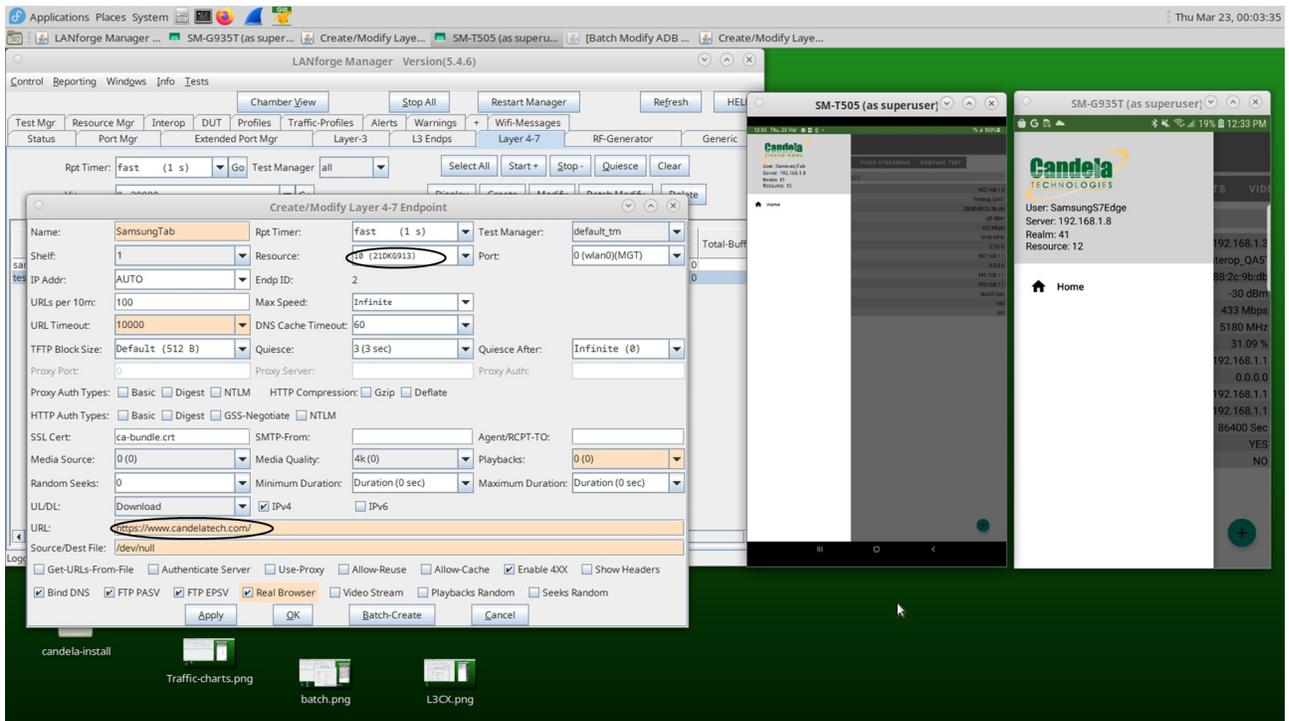
Make sure that the mobile phone devices appear in the *Port Mgr* tab after initial Android InterOp setup.



3. Click on the *Layer 4-7* tab in LANforge and *Webpage Test* tab in the InterOp app on the phone.

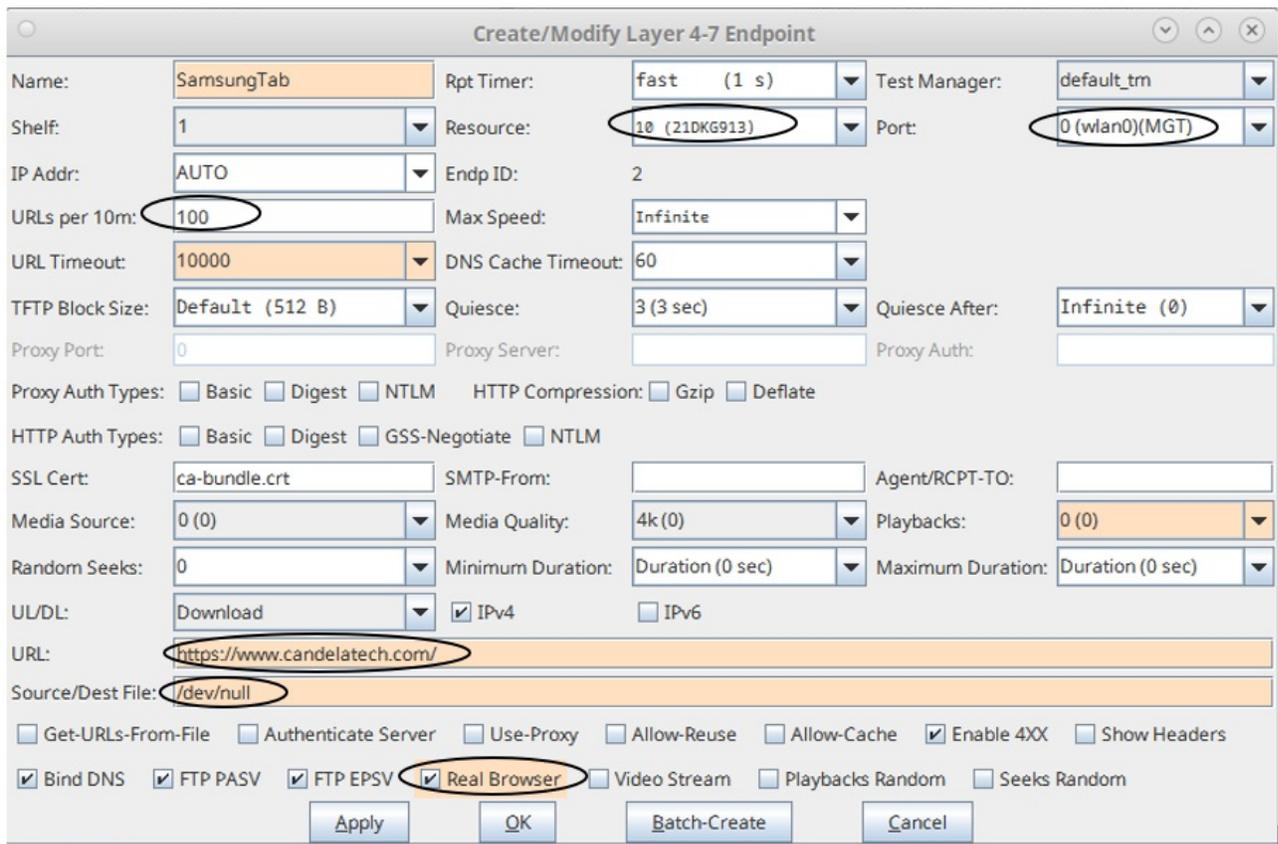


4. Create a Layer4-7 cross-connect in the LANforge *Layer 4-7* tab using your phone (and resource ID). Add the details below.



Enter URL to be browsed, source/dest file, select the resource-ID of the phone, and enable the Real Browser option, mention URLs per 10minutes.

Below are examples of creating cross-connects using resource IDs 10 and 12.



LANforge Manager Version(5.4.6)

Control Reporting Windgws Info Tests

Status Port Mgr Extended Port Mgr Layer-3 L3 Endps Layer 4-7 RF-Generator Generic Test Mgr Resource Mgr Interop DUT Profiles Traffic-Profiles Alerts Warnings + Wifi-Messages

Rpt Timer: Fast (1 s) Go Test Manager all

Select All Start + Stop - Quiesce Clear

View 0 - 20000 Go

Display Crgate Modify Batch Modify Delete

Layer 4-7 Endpoints for Selected Test Manager

| Name | EID | Type | Status | Total-URLs | URLs/s | UC-Min | UC-Avg | UC-Max | Bytes-RD | Bytes-WR | Total-Buffers | Total-Rebuff. | Total-Wait-T. | Mean-Video. | Mean-Audio. | Tx Rate | Tx Rate (1 min) | Rx Rate | Rx Rate (1 min) |
|-------------|----------|--------|--------|------------|--------|--------|-----------|--------|----------|----------|---------------|---------------|---------------|-------------|-------------|---------|-----------------|---------|-----------------|
| SamsungS... | 1.12.0.6 | L4/Gen | Run | 19 | 0.429 | 522 | 1,192.894 | 7,286 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SamsungT... | 1.10.0.7 | L4/Gen | Run | 19 | 0.434 | 580 | 708.736 | 2,650 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Logged in to: localhost:4002 as: Admin

7 stations: 61 01 10

Total-URLs: URLs processed and in process. This includes passed and failed URLs.

URLs/s: URLs processed per second over the last minute.

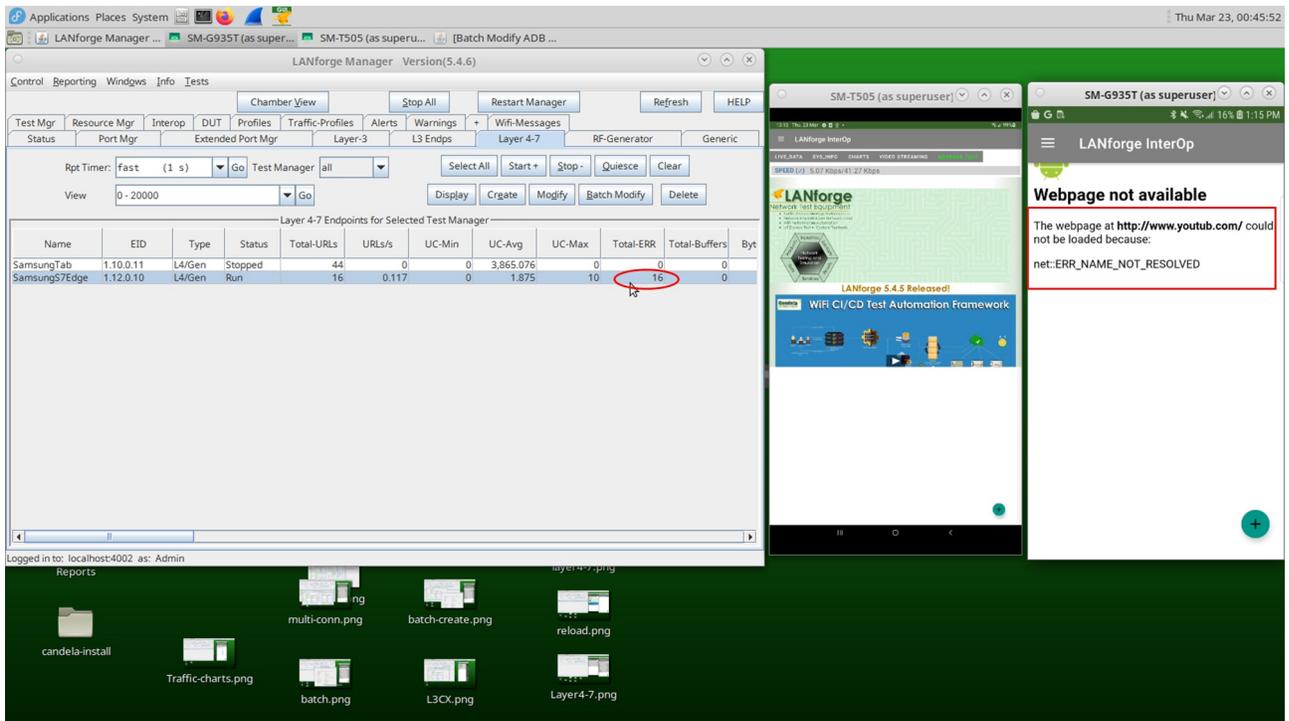
UC-Min: Minimum time in milliseconds to complete processing of the URL for requests made in the last 30 seconds.

UC-Avg: Average time in milliseconds to complete processing of the URL for the last 100 requests.

UC-Max: Maximum time in milliseconds to complete processing of the URL for requests made in the last 30 seconds.

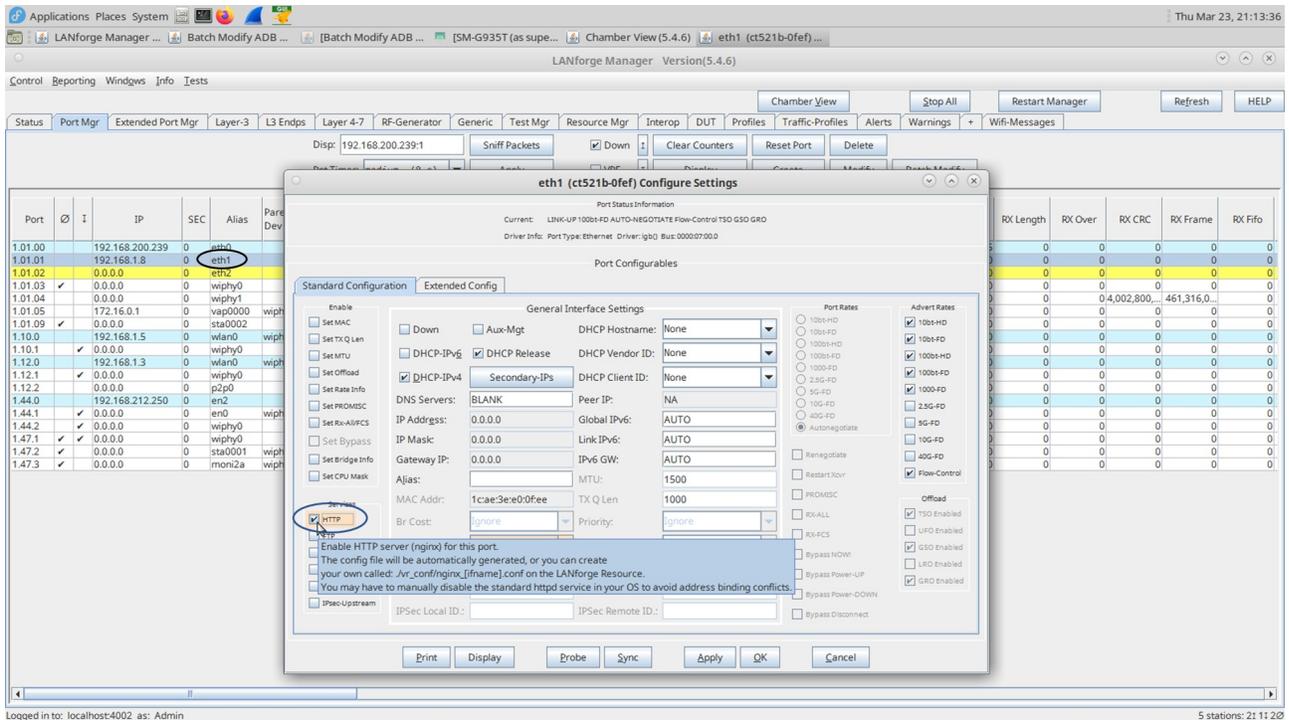
Total ERR: Total failed URLs.

- Next, enter a wrong URL and start the cross-connect to observe Total-ERR (Total number of failed URLs). Observed below are 16 failed URLs.



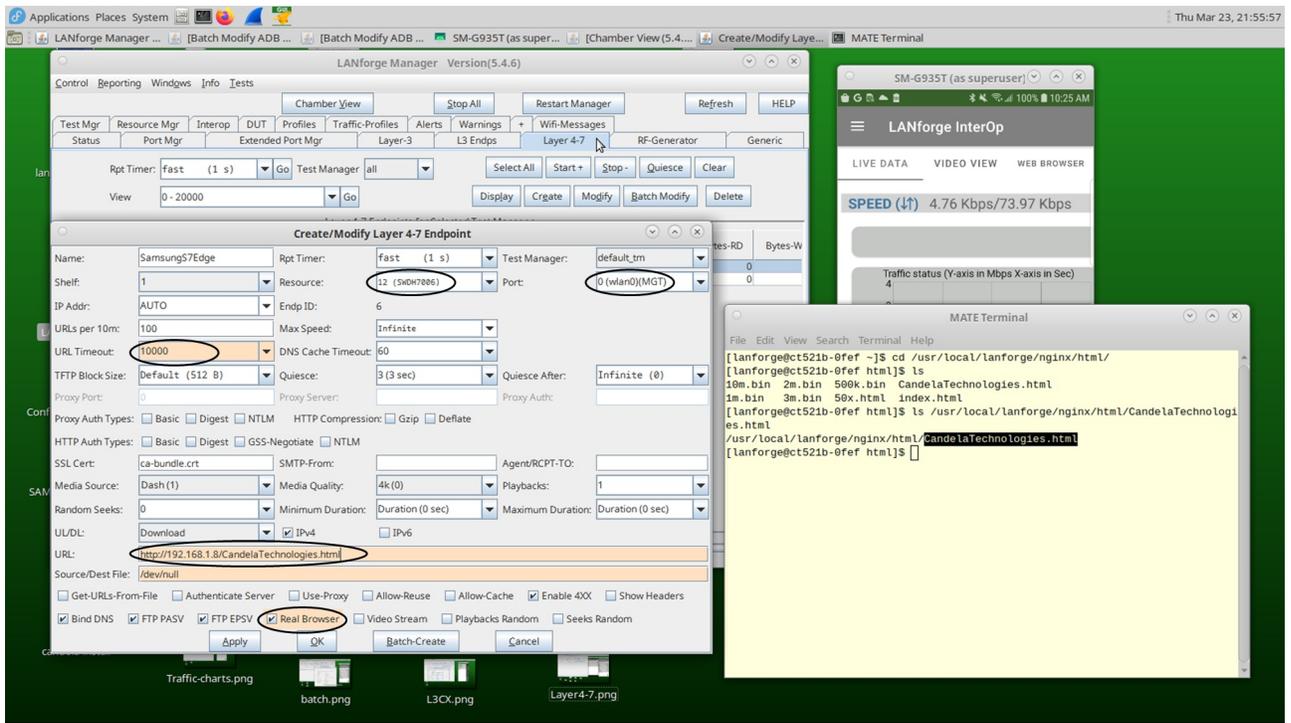
Offline Real-Browser Test

1. In the offline browsing test, there is no need have internet enabled on the DUT. First, run nginx on eth1. Double click on the port, click the *HTTP* check-box on the left hand side, and *Apply* the settings.



2. Download any HTML page and place the .html page in the html directory: `/usr/local/lanforge/nginx/html/`.
3. As you can see from the image below, CandelaTechnologies.html was placed in the `/usr/local/lanforge/nginx/html/` path.

Next, create a Layer4-7 cross-connect and fill out the boxes with the information given below.



4. Start the cross-connect and view the *Web Browser* tab in the app see the web page load. Statistics will also start to populate in the *Layer 4-7* tab after the cross-connect has started.

