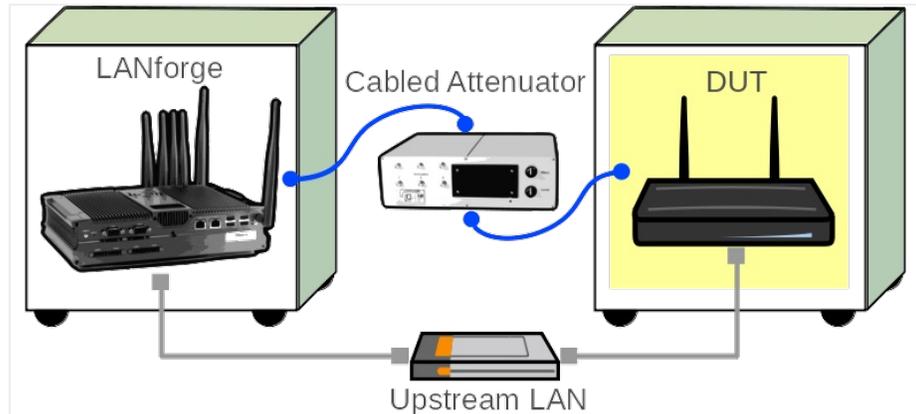


## Testing Latency at different packet sizes using the Hunt test

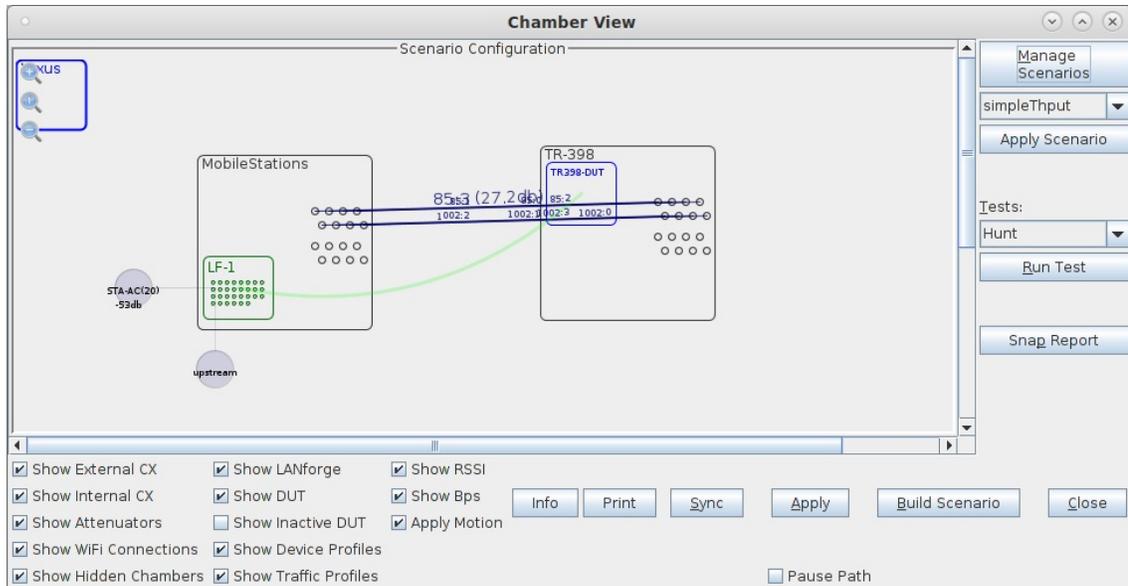
**Goal:** Setup and run a Hunt test for an AP using the LANforge CT523c or similar system in order to test Latency at the highest throughput rate supported by the DUT.

In this test scenario, the LANforge CT523c is used to generate packets of different sizes in the downstream direction through an AP. The test hunts to find the best throughput, and then re-runs the traffic test configured to a percentage of the best actual throughput. Latency graphs show how well the DUT performs. This guide assumes you have some experience with Chamber View, and that you have a LANforge system, a programmable attenuator like the CT704b and two isolation chambers like the CT820a. The AP should be in one chamber, the LANforge system is in the other chamber, and the attenuator is cabled between them. In this example, the Attenuator is left at an optimal configuration, but you can also use this same Hunt test to generate a report at different RF signal levels using the Attenuator. This feature requires LANforge version 5.4.2 or higher.

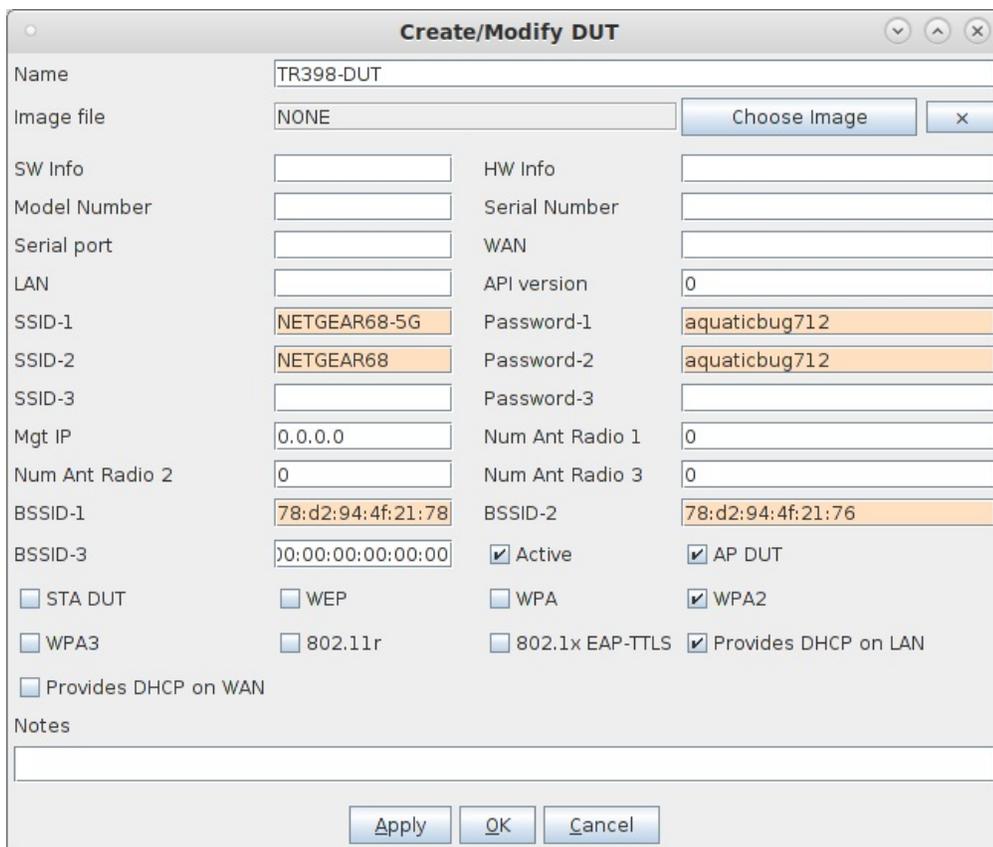


1. Configure Chamber View for Hunt and Similar Tests.

- A. Open Chamber View by clicking on the 'Chamber View' button in the LANforge-GUI. If you have an appropriate scenario already created, then skip to the next section, otherwise you will need to build a scenario that matches your system. You can right-click in Chamber View to create various objects.

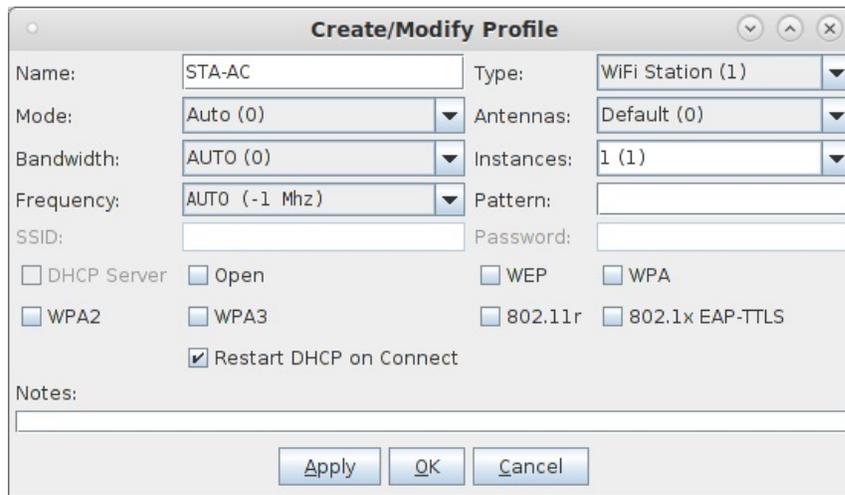


- B. Create a Device Under Test (DUT) Profile that matches your AP. The BSSID is important to be configured so that LANforge knows when it is connected to the correct AP.

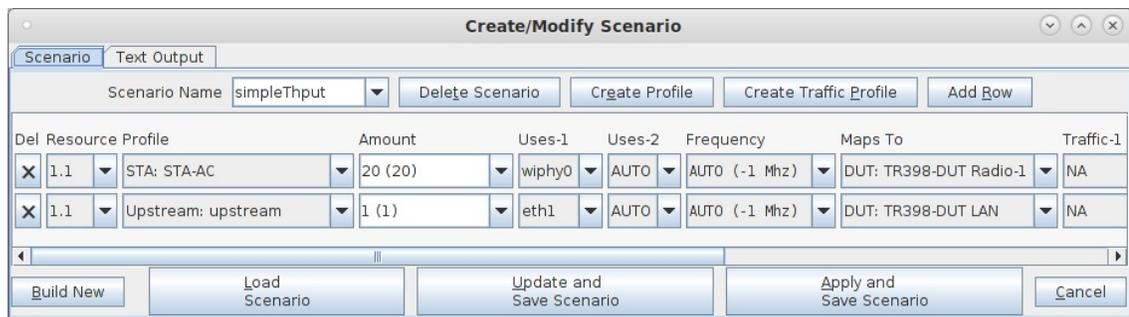




F. Configure an STA profile on the LANforge system.

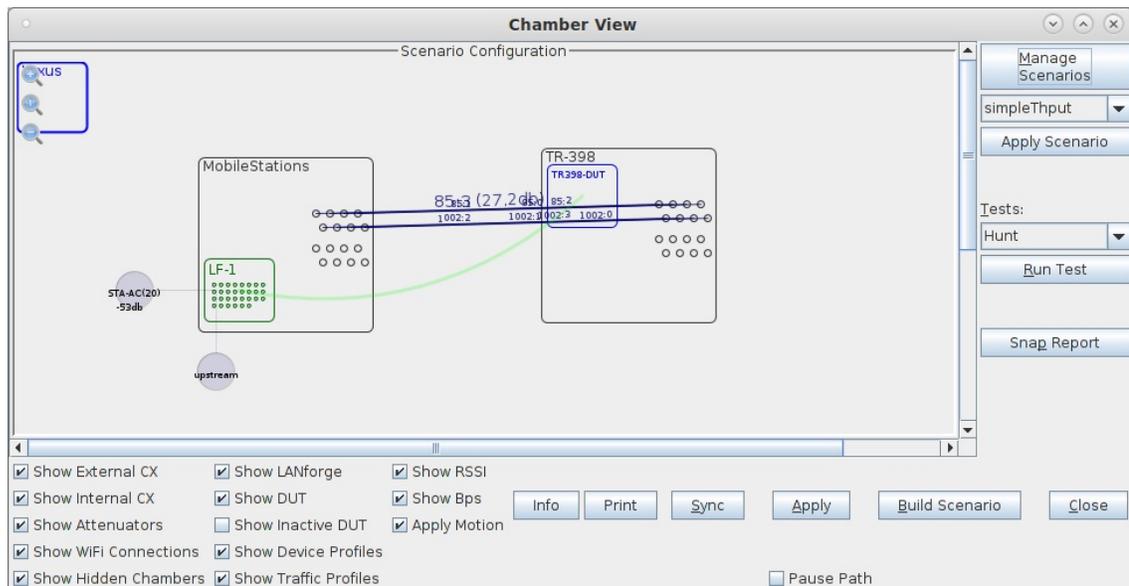


G. Configure a Chamber View Scenario and add the STA profile (mapped to desired wiphyX radio and DUT). Add an upstream profile mapped to DUT LAN side (or possibly WAN side if that is more appropriate for your DUT).



2. Use Chamber View for Hunt test.

A. Open Chamber View by clicking on the 'Chamber View' button in the LANforge-GUI. Load appropriate scenario. Apply the Scenario, then Build the scenario.



- B. Select the **Hunt** test and click **Run Test**. You should see the Hunt Test configuration window pop up. It will remember the last configuration for most fields. Select the DUT and WiFi station device, and select the combinations of traffic types and packet sizes you wish to send.

The screenshot shows the 'Hunt Test' configuration window with the 'Settings' tab selected. The configuration is as follows:

- Selected DUT:** TR398-DUT
- Duration:** 15 sec (15 s)
- Downstream/WiFi Port:** 1.1.10 sta00000
- Upstream Port:** 1.1.1 eth1
- Initial Rate:** 85%
- Opposite Rate:** 56kbps
- Path Loss:** 25
- Packet Size:** A list of sizes is shown: 60, 142, 256, 512, 1024, MTU, 4000, 9000. The '256' and '512' options are highlighted.
- Custom Packet Sizes:** An empty text input field.
- Traffic Type:** A list with 'UDP' selected, and 'TCP' and 'Arm-UDP' below it.
- Attenuator 1:** NONE (0). Below it are checkboxes for 1-8, all of which are checked.
- Attenuator 2:** NONE (0). Below it are checkboxes for 1-8, all of which are checked.
- Turntable:** NONE (0). Below it is a text input field containing '0..+45..359'.
- Direction:** A list with 'DUT Transmit' selected and 'DUT Receive' below it.

At the bottom of the window are buttons for 'Start', 'Another Iteration', 'Pause', and 'Cancel'.

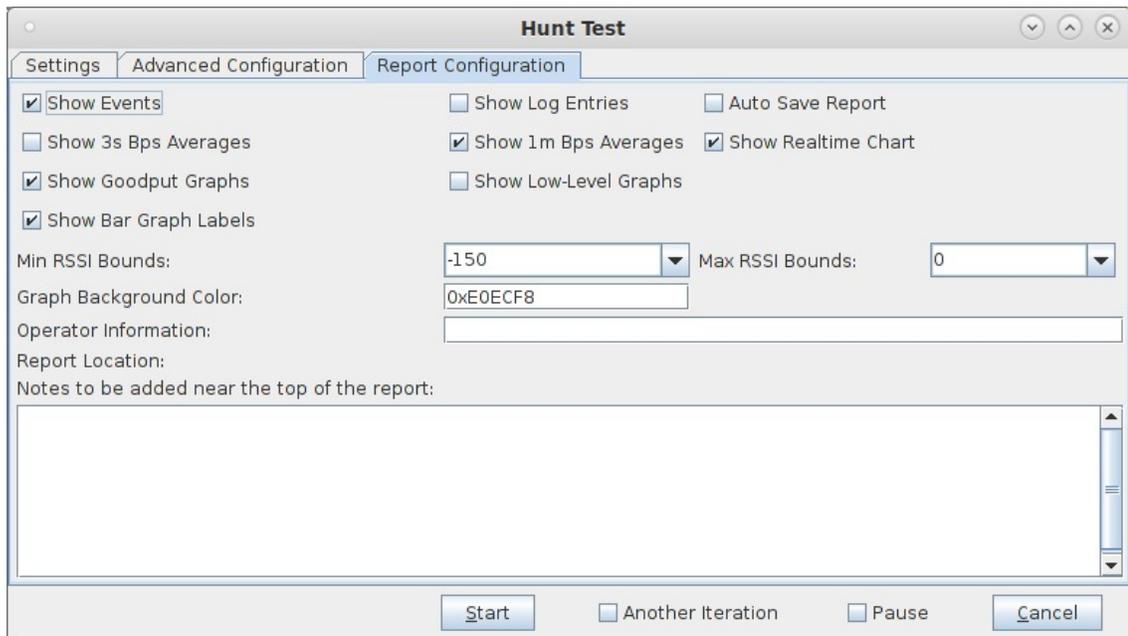
- C. The Advanced Configuration screen can tune the hunt criteria, save/restore configuration and other options.

The screenshot shows the 'Hunt Test' configuration window with the 'Advanced Configuration' tab selected. The configuration is as follows:

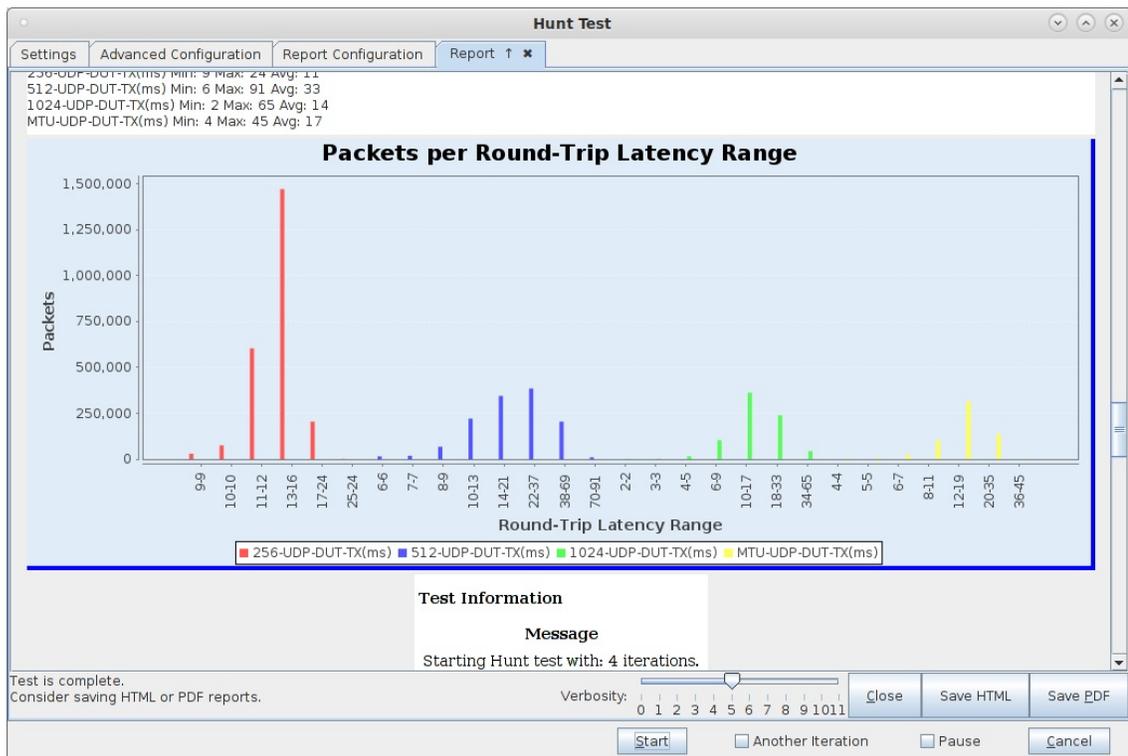
- Save:** A button next to a text input field containing 'DEFAULT'.
- Load:** A button next to a dropdown menu set to 'DEFAULT'.
- Delete:** A button next to a dropdown menu set to 'DEFAULT'.
- IP ToS:** A dropdown menu set to 'Best Effort (0)'.
- Loop Iterations:** A dropdown menu set to 'Single (1)'.
- Pause After Each Iteration:** An unchecked checkbox.
- Multi-Conn:** A dropdown menu set to 'One (1)'.
- Multi-Pkt:** A dropdown menu set to '1000'.
- Hunt Rate Precision:** A dropdown menu set to '5% (5%)'.
- Adjust Calculated Tx Speed:** A dropdown menu set to '95% (95%)'.
- Allowed Overdrive Percentage:** A dropdown menu set to '5% (5%)'.

At the bottom of the window are buttons for 'Start', 'Another Iteration', 'Pause', and 'Cancel'.

D. The Report Configuration screen can tune how the reports are generated.



E. When the configuration is complete, click the **Start** button (which will change to 'Stop' once start is clicked) to start the test. An interactive report window will be created and will be updated as the test runs.



F. When the test is complete, click the **Save HTML** button to save an HTML report and generate the PDF. The PDF file will be linked from the HTML page. You can also click 'Save PDF' and the browser will be directed to open the pdf file directly. Please see this [example Hunt Report](#).