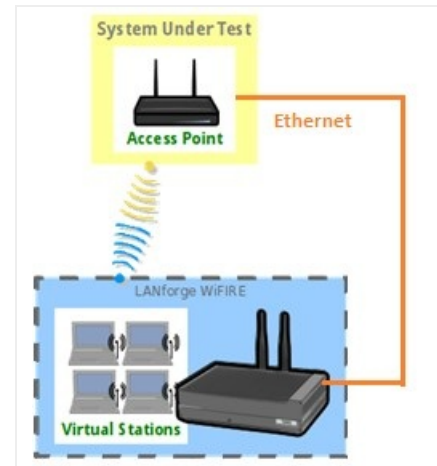


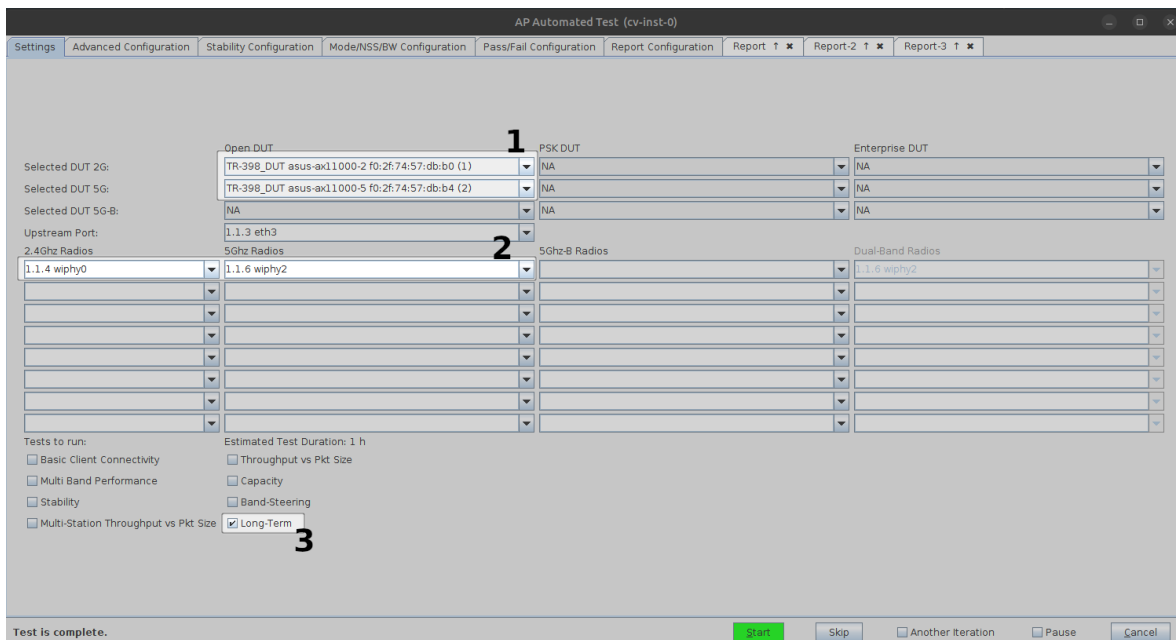
Testing AP Long-Term Performance with the AP-Auto Automated Test Suite

Goal: Run an AP-Auto test for an AP using the LANforge CT523c or similar system in order to test how well the AP can long-term traffic. The AP-Auto test is similar to the TR-398 test, but is designed to be functional with a minimum amount of test equipment. A 2-radio LANforge system and DUT is all that is required to run these tests.

In this test scenario, the LANforge CT523 is used to create stations and run the Long-Term test. This example assumes you have some experience with Chamber View, and that you have a LANforge system and a DUT AP. The AP and LANforge may be in chambers, but that is not required. This feature requires LANforge version 5.4.2 or higher.



1. If you haven't setup or performed AP-Auto tests on your LANforge system, please refer to the [AP-Auto Test Suite Setup](#) guide for quick setup.
2. Running the AP-Auto Long-Term Test:
 - A. Open the *AP-Auto Test* window.



B. In the AP-Auto *Settings* Tab:

- A. Select the **DUT 2G** and **DUT 5G** SSIDs. This test requires that Open or PSK SSIDs are filled out.
- B. Select the LANforge radios to be used in this test. You need at least one 2.4Ghz radio and one 5Ghz radio for full functionality.
- C. At the bottom, select the **Long-Term** test checkbox.

C. Your *Advanced Configuration* tab should look similar to the following:

The screenshot shows the 'AP Automated Test (cv-inst-0)' window with the 'Advanced Configuration' tab selected. The interface includes several tabs: Settings, Advanced Configuration, Stability Configuration, Mode/NSS/BW Configuration, Pass/Fail Configuration, and Report Configuration. The main configuration area contains various settings, including IP ToS, Multi-Conn, and checkboxes for skipping tests. A red box highlights the Long-Term test settings, which are: Long-Term Download Rate: 85%, Long-Term Upload Rate: 85%, Long-Term Duration: 6h, Long-Term Graph Interval: 30 (30 sec), and Long-Term Station Count: Small (32). The Start button is highlighted in green, and the status bar at the bottom indicates 'Test is complete.'

D. Highlighted are the Long-Term test settings. Note, stations are brought up on multiple bands concurrently in this test and so the **Long-Term Station Count** value will determine the sum total of stations across all bands.

- 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 tab will be created and will be updated as the test runs.

The screenshot shows the 'AP Automated Test (cv-inst-0)' interface. At the top, there are several configuration tabs: Settings, Advanced Configuration, Stability Configuration, Mode/NSS/BW Configuration, Pass/Fail Configuration, Report Configuration, and Report. Below these is a table of test results:

Mon Oct 10 14:23:54 PDT 2022	Update	STA-RSSI Data/Beacon: -28/-28 Rx-Rate: 1.089G Tx-Rate: 2.041G
Mon Oct 10 14:28:24 PDT 2022	Update	STA-RSSI Data/Beacon: -43/-34 Rx-Rate: 346.7M Tx-Rate: 208M
Mon Oct 10 14:28:24 PDT 2022	Update	STA-RSSI Data/Beacon: -28/-27 Rx-Rate: 144.1M Tx-Rate: 2.268G

Below this is a 'Long-Term: Snapshot' table:

Port	Tx-Bps 1m	Rx-Bps 1m	Tx-Fail %	Tx Link-Rate	Rx Link-Rate	Mode	Channel	Last CX-Time (ms)	RSSI (dBm)	AP	IP	MAC
1.1.12 sta00500	4.357 Mbps	5.144 Mbps	1.042	208 Mbps	346.7 Mbps	802.11bgn-AC 20 4x4	2,422	53	-43	F0:2F:74:57:DB:80	192.168.50.33	04:f0:21:66:a2:c9
1.1.13 sta00501	4.341 Mbps	5.144 Mbps	1.007	156 Mbps	346.7 Mbps	802.11bgn-AC 20 4x4	2,422	76	-43	F0:2F:74:57:DB:80	192.168.50.68	04:f0:21:66:ad:c9
1.1.14 sta00502	4.317 Mbps	5.142 Mbps	1.162	208 Mbps	346.7 Mbps	802.11bgn-AC 20 4x4	2,422	62	-42	F0:2F:74:57:DB:80	192.168.50.15	04:f0:21:66:b1:c9
1.1.15 sta00503	4.337 Mbps	5.141 Mbps	0.923	115.6 Mbps	346.7 Mbps	802.11bgn-AC 20 4x4	2,422	43	-42	F0:2F:74:57:DB:80	192.168.50.56	04:f0:21:66:b7:c9

Below the snapshot table is a 'Realtime Throughput for: Long-Term' line graph. The y-axis is 'RX (Mbps)' ranging from 0 to 150. The x-axis is 'Date' ranging from 14:23:00 to 14:28:00. The graph shows several data series: Total Upload (purple), Total Download (brown), UL + DL Sum (green), and UDP UL + DL Sum (red). The UL + DL Sum series shows the highest throughput, peaking around 150 Mbps. The UDP UL + DL Sum series shows the lowest throughput, around 25-30 Mbps. There is a yellow star icon over the 'Key Performance Indicators CS' label.

At the bottom of the interface, there is a 'Test is complete.' message and a 'Consider saving HTML or PDF reports.' prompt. A 'Verbosity' slider is set to 5, with buttons for 'Close', 'Save HTML', and 'Save PDF'. Below the slider are buttons for 'Start', 'Skip', 'Another Iteration', 'Pause', and 'Cancel'.

- F. You can change the test result verbosity level by adjusting the **Verbosity** slider. Maximizing it will show all generated figures and data. The verbosity level also affects the length of the saved report.
- G. At the end of the test, 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 AP-Auto Long-Term Report](#).