

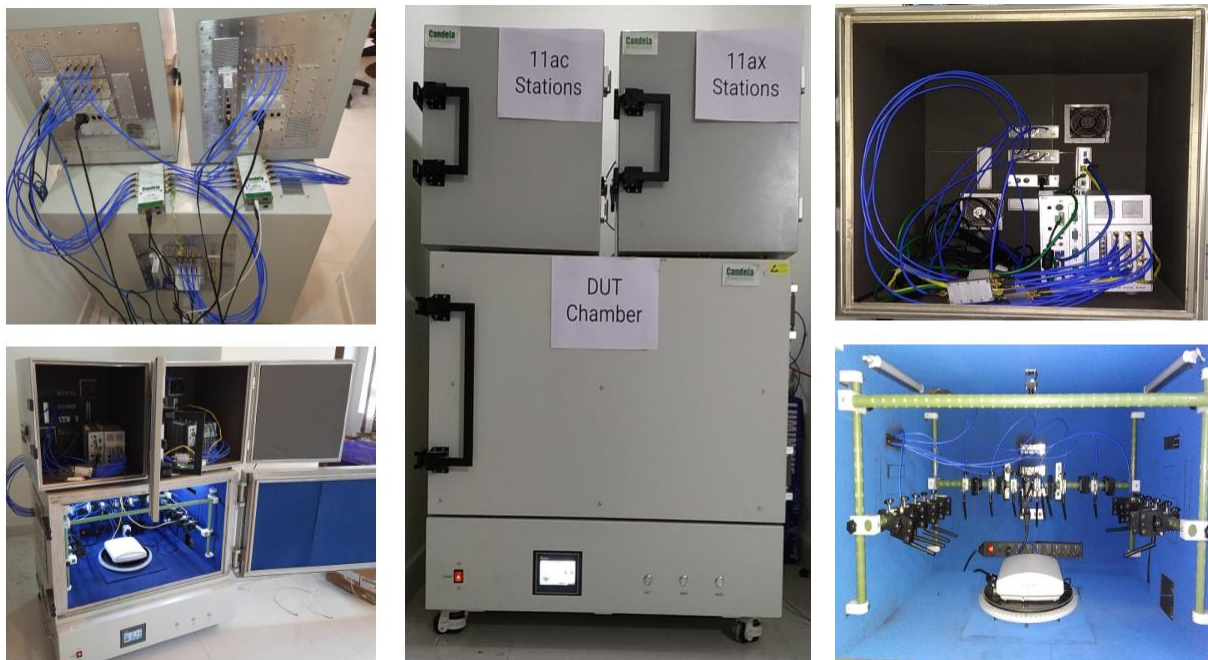
TR-398 Issue 2 WiFi Testing with LANforge: Virtual STA

The TR-398 WiFi Issue 2 Performance test plan by the Broadband forum provides a comprehensive set of tests to qualify the performance of WiFi access points (APs) to be deployed in residential and small office indoor environments. The TR-398 Issue 2 includes new test cases as compared to TR-398 Issue 1. The new test cases included in TR-398 Issue 2 are Dual Band Throughput, Bi-directional Throughput, 802.11ax-Peak performance and Automatic Channel Selection Tests. TR-398 Issue 2 includes 802.11ax station mode for all the test cases along with the existing 802.11n/ac modes.

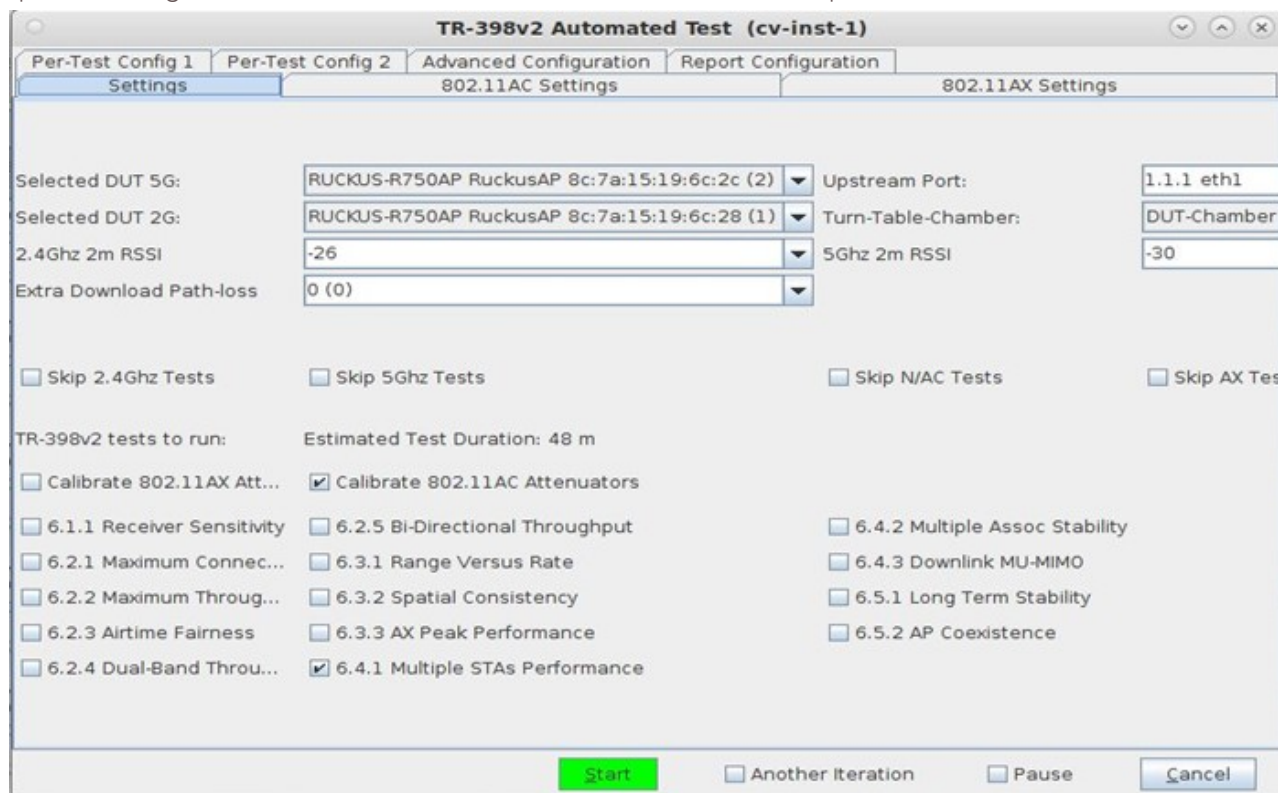
See example reports auto-generated by this testbed:

- 6.1.1 RX Sensitivity at different angles and encodings.
- 6.2.1 Max Connection 32 station throughput
- 6.2.2 Max TCP Throughput
- 6.2.3 Airtime Fairness
- 6.2.4 Dual Band Throughput
- 6.2.5 TCP Bi-directional Throughput
- 6.2.6 Latency under Load Test
- 6.2.7 Quality of Service
- 6.3.1 Rate vs Range
- 6.3.2 Spatial Consistency
- 6.3.3 Peak Performance
- 6.4.1 Multiple Stations Performance
- 6.4.2 Multiple Association Stability
- 6.4.3 Downlink MU-MIMO, implemented but need example reports. Requires that AP must be able to disable/enable MU-MIMO.
- 6.4.4 Multicast Multi-Station
- 6.5.1 Long Term Stability.
- 6.5.2 AP Coexistence
- 6.5.3 Automatic channel selection.
- 8.1.1 Mesh Roam
- 8.2.1 Mesh Backhaul Rate vs Range
- 8.2.2 2-hop Mesh Backhaul Rate vs Range

The test setup, testbed components and environment are all created as per the requirements in Section 5 of the TR-398 Issue 2 test plan document. Some of the components may be different than pictured depending on the options purchased. Please ask your sales representative for details.



The LANforge GUI provides integrated configuration and automation control for all the components of the testbed including the station emulators, traffic generator, attenuators, and turntables. The entire set of TR-398 Issue 2 tests, or optionally a subset of these tests, can be run with a single push of a button. An HTML and PDF report can be generated with a second button click when the test completes.



Includes these Building Blocks

- Hardware
 - LANforge Multi station Emulation and Traffic Generation Hardware – minimum 6 4x4 dual-band AX capable radios, dual 1/2.5/5/10g Eth ports.
 - CT820a-Medium RF Chamber.

- CT840a Large RF Chamber with Programmable Turntable.
- CT714b 4 Port Programmable Attenuators.
- RF Splitters/Combiners.
- Directional Antennas (optional).
- RF Cables.
- **Software**
 - TR-398 Issue 2 Automation Software
 - Normal LANforge WiFi testing features are included at no additional charge.

Key Tests from TR-398 Issue 2 Document

- 6.1 RF capability
 - 6.1.1 Receiver Sensitivity Test
- 6.2 Baseline performance
 - 6.2.1 Maximum Connection Test
 - 6.2.2 Maximum Throughput Test
 - 6.2.3 Airtime Fairness Test
 - 6.2.4 Dual-band Throughput Test
 - 6.2.5 Bidirectional Throughput Test
 - 6.2.6 Airtime Fairness Test
- 6.3 Coverage
 - 6.3.1 Range Versus Rate Test
 - 6.3.2 Spatial Consistency Test
 - 6.3.3 802.11ax Peak Performance Test
- 6.4 Multiple Stations Performance
 - 6.4.1 Multiple Stations Performance Test.
 - 6.4.2 Multiple Association/Disassociation Stability Test.
 - 6.4.3 Downlink MU-MIMO Performance Test.
- 6.5 Stability/Robustness
 - 6.5.1 Long Term Stability Test
 - 6.5.2 AP Coexistence Test
 - 6.5.3 Automatic Channel Selection Test
- 8 Mesh test cases (TR398 issue-3) Requires additional testbed components.
 - 8.1.1 Mesh Roaming Test
 - 8.2.1 Mesh Backhaul Rate vs Ranget
 - 8.2.2 2-hop Mesh Backhaul Rate vs Ranget

Lead Times and Support:

 Please contact support@candelatech.com if you need any assistance.

Lead Times: Four to six weeks.

TaaS/Onsite Support: Customers with only occasional test needs can use our Test as a Service option. Candela engineers can do the testing for you in our fully equipped test lab and provide a detailed test report with recommendations.

For more information, please contact sales@candelatech.com or give us a call at: 1-360-380-1618

