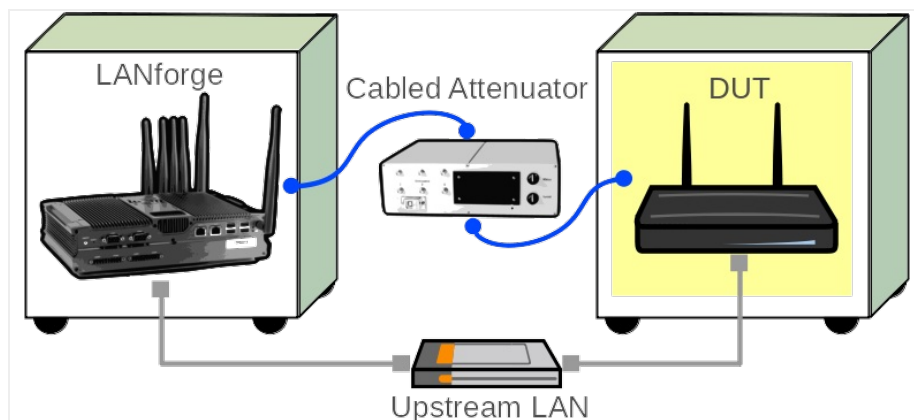


Advanced configuration options for TR-398 Issue-2/3 and Mesh on a 4-Chamber Setup

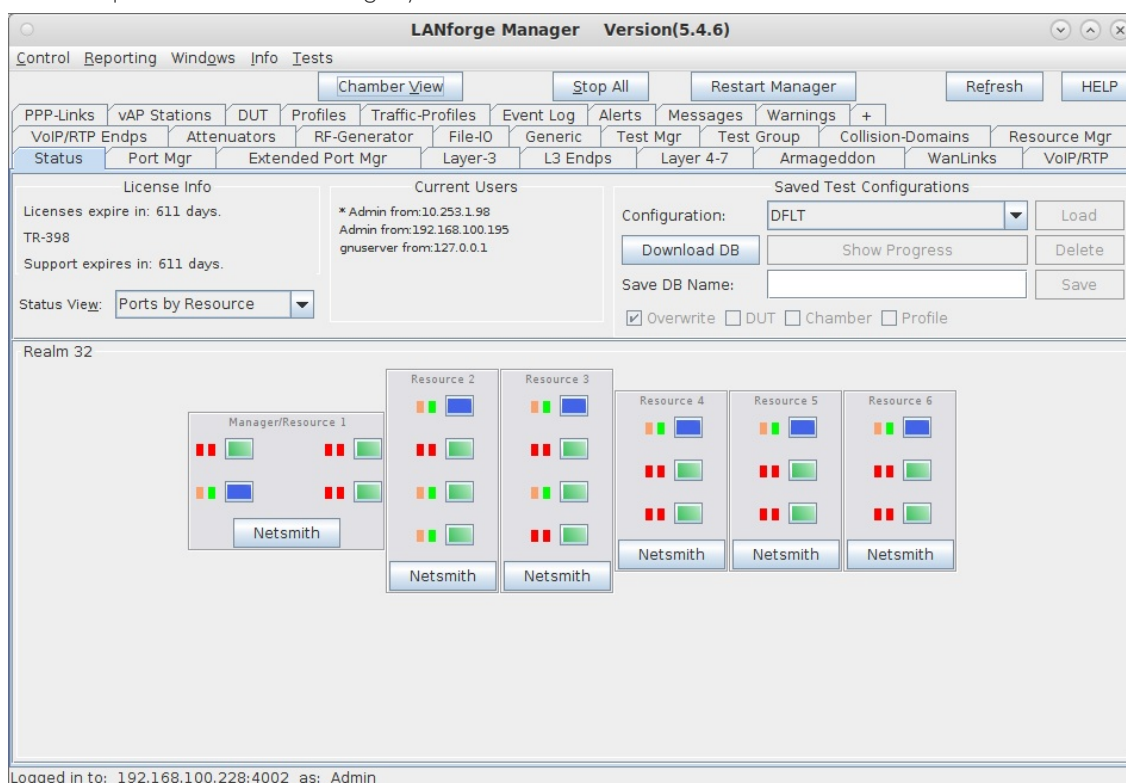
Goal: Explore advanced configuration options for a TR398 issue-3 mesh testbed. The testbed in this example supports both 32 real tri-band radios as well as 6 virtual-station dual-band radios. See the [TR398 testbed page](#) for more information.

In this test scenario, a LANforge cluster (of three 523c and 3 521b systems) is used to emulate different station and AP scenarios and generate and receive traffic with a set of 3 meshed APs. This example assumes user has some experience with Chamber View and TR398, and has an appropriate LANforge TR398 testbed. Please contact support@candelatech.com for assistance in setting up the TR-398 testbed.

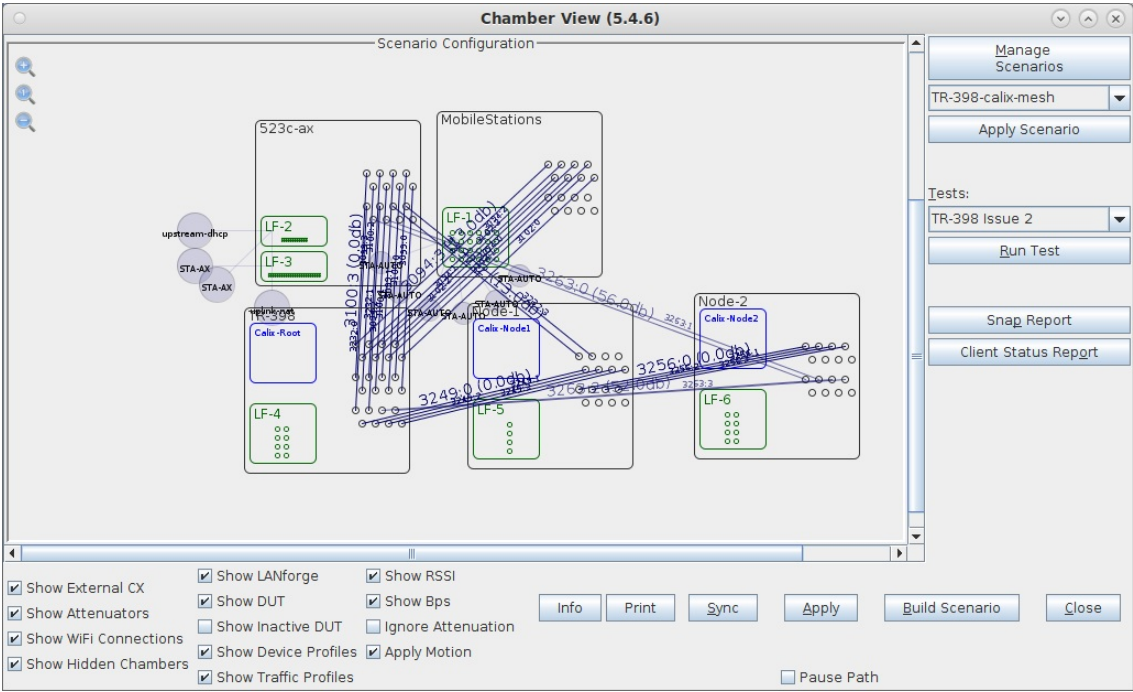


1. System configuration overview.

A. The status panel shows all 6 LANforge systems connected and available.



B. The Chamber View window shows the RF chambers, attenuated paths, APs, and LANforge systems.



C. This setup uses LANforge as the upstream (WAN) port for the APs. This allows the testbed to be isolated from the lab network, and also facilitates running the APs in either bridge or routed mode.

The screenshot shows the 'Create/Modify Scenario' window. It has a 'Scenario' tab and a 'Text Output' tab. The 'Scenario' tab is active, showing a table of resource profiles. The table has columns: 'Dup Del', 'Resource Profile', 'Amount', 'Uses-1', 'Uses-2', 'Frequency', 'VLAN-ID Maps To', and 'Traffic'. The table contains 10 rows of data. At the bottom, there are buttons for 'Build New', 'Load Scenario', 'Update and Save Scenario', 'Apply and Save Scenario', and 'Cancel'.

Dup Del	Resource Profile	Amount	Uses-1	Uses-2	Frequency	VLAN-ID Maps To	Traffic
X	1.1 STA: STA-AUTO	1 (1)	wiphy0	AUTO	AUTO (-1 Mhz)	NA DUT: Calix-Root Radio-1	NA
X	1.1 STA: STA-AUTO	1 (1)	wiphy1	AUTO	AUTO (-1 Mhz)	NA DUT: Calix-Root Radio-2	NA
X	1.1 STA: STA-AUTO	1 (1)	wiphy2	AUTO	AUTO (-1 Mhz)	NA DUT: Calix-Root Radio-1	NA
X	1.1 STA: STA-AUTO	1 (1)	wiphy3	AUTO	AUTO (-1 Mhz)	NA DUT: Calix-Root Radio-2	NA
X	1.1 STA: STA-AUTO	1 (1)	wiphy4	AUTO	AUTO (-1 Mhz)	NA DUT: Calix-Root Radio-1	NA
X	1.1 STA: STA-AUTO	1 (1)	wiphy5	AUTO	AUTO (-1 Mhz)	NA DUT: Calix-Root Radio-2	NA
X	1.2 Upstream: upstream-dhcp	1 (1)	eth2	AUTO	AUTO (-1 Mhz)	NA DUT: Calix-Root LAN	NA
X	1.2 STA: STA-AX	1 (1)	ALL-AX	AUTO	AUTO (-1 Mhz)	NA DUT: Calix-Root Radio-2	NA
X	1.3 STA: STA-AX	1 (1)	ALL-AX	AUTO	AUTO (-1 Mhz)	NA DUT: Calix-Root Radio-2	NA
X	1.2 Uplink: uplink-nat	1 (1)	eth3	eth2	AUTO (-1 Mhz)	NA DUT: upstream LAN 192.168.100.1/24	NA

2. Launch the TR398 issue 2 test. Unless otherwise specified, this test is configured for TR398 issue3. The settings may be changed to run the TR398 issue 2 tests as user prefers.

TR-398 Issue 2 Automated Test (cv-inst-0)

Per-Test Config 2 | Per-Test Config 3 | Per-Test Config 4 | Per-Test Config 5 | Advanced Configuration | Report Configuration | TR398-Issue3

Settings | Virtual Sta Radio Settings | 802.11AX Settings | 802.11AX Settings 2 | Mesh Settings | Mesh Settings 2 | Per-Test Config 1

Selected DUT 5G: :94:70:29:96:c9 (2) Upstream Port: 1.2.2 eth2

Selected DUT 2G: :94:70:29:96:c8 (1) Multicast Upstream Port: 1.3.eth2

Selected DUT 6G: :94:70:29:96:ca (3) Turn-Table-Chamber: TR-398

2.4Ghz 2m RSSI -25 (Issue-3 default) (-25) 5Ghz 2m RSSI -30 (Issue-2/3) (-30)

☐ Skip 2.4Ghz Tests ☐ Skip 5Ghz Tests ☐ Skip 6Ghz Tests ☐ Skip N/AC Tests ☐ Skip AX Tests

☒ Use Issue-3 Behaviour ☐ Allow-11w (MFP/PMF)

TR-398 Tests to Run: Estimated Test Duration: 1.083 h

☐ Verify 802.11AX Radios ☐ Verify Virt-Sta Radio ☐ Verify Group Throughput

☐ Calibrate 802.11AX Attenuators ☐ Calibrate Virt-Sta Attenuators

☐ Calibrate Mesh Root Attenuators ☐ Calibrate Mesh Node-1 Attenuators ☐ Calibrate Mesh Root to Node-1 Attenuators

☐ Calibrate Mesh Node-2 Attenuators ☐ Calibrate Mesh Node-1 to Node-2 Attenuators ☐ Calibrate Mesh Root to Node-2 Attenuators

☐ 6.1.1 Receiver Sensitivity ☐ 6.2.6 Latency ☐ 6.4.2 Multiple Assoc Stability

☒ 6.2.1 Maximum Connection ☐ 6.2.7 Quality of Service ☐ 6.4.3 Downlink MU-MIMO

☐ 6.2.2 Maximum Throughput ☐ 6.3.1 Range Versus Rate ☐ 6.4.4 Multicast

☐ 6.2.3 Airtime Fairness ☐ 6.3.2 Spatial Consistency ☐ 6.5.1 Long Term Stability

☐ 6.2.4 Dual-Band Throughput ☐ 6.3.3 AX Peak Performance ☐ 6.5.2 AP Coexistence

☐ 6.2.5 Bi-Directional Throughput ☐ 6.4.1 Multiple STAs Performance ☐ 6.5.3 Automatic Channel Selection

☐ 8.1.1 Mesh Backhaul RvR ☐ 8.1.2 Mesh Backhaul Node-2 RvR ☐ 8.2.1 Mesh Roam Time

☐ Another Iteration ☐ Pause

3. The Virtual Sta Radio settings tab is for the radios supporting virtual stations (MTK7915 4x4 dual-band AX in this example). The zero-attenuation RSSI values are calibrated during testbed configuration. See [TR398 calibration cookbook](#) for instructions on how to do this.

TR-398 Issue 2 Automated Test (cv-inst-0)

Per-Test Config 2 | Per-Test Config 3 | Per-Test Config 4 | Per-Test Config 5 | Advanced Configuration | Report Configuration | TR398-Issue3

Settings | Virtual Sta Radio Settings | 802.11AX Settings | 802.11AX Settings 2 | Mesh Settings | Mesh Settings 2 | Per-Test Config 1

Radio 2.4Ghz RSSI 0 Atten 5Ghz RSSI 0 Atten Attenuator Modules

Group: 0

5Ghz 1.1.5 wiphy1 -24 -38 1.1.3094.0

2.4Ghz 1.1.4 wiphy0 -24 -38 1.1.3094.1

6Ghz -24 -38 1.1.3094.2

-24 -38 1.1.3094.3

Group: 1

5Ghz 1.1.7 wiphy3 -24 -42 1.1.3102.0

2.4Ghz 1.1.6 wiphy2 -24 -42 1.1.3102.1

6Ghz -24 -42 1.1.3099.0

-24 -42 1.1.3099.1

Group: 2

5Ghz 1.1.9 wiphy5 -27 -43 1.1.3102.2

2.4Ghz 1.1.8 wiphy4 -27 -43 1.1.3102.3

6Ghz -27 -43

☐ Use Virtual AX Stations ☒ Use AX Radios for AC tests

☐ Another Iteration ☐ Pause

4. The 802.11AX Settings tab is for configuring non-virtual-station radios, Intel AX210 in this case.

TR-398 Issue 2 Automated Test (cv-inst-0)

Per-Test Config 2 | Per-Test Config 3 | Per-Test Config 4 | Per-Test Config 5 | Advanced Configuration | Report Configuration | TR398-Issue3

Settings | Virtual Sta Radio Settings | **802.11AX Settings** | 802.11AX Settings 2 | Mesh Settings | Mesh Settings 2 | Per-Test Config 1

The settings below apply to AX capable radios that do not support virtual stations.

Radio 2.4Ghz RSSI 0 Atten 5Ghz RSSI 0 Atten Attenuator Modules

Group: 0

1.2.wiphy0	-30	-44	1.1.3100.3
1.2.wiphy1	-30	-44	1.1.3100.2
1.2.wiphy2	-30	-44	NA
1.2.wiphy3	-30	-44	NA

Group: 1

1.2.wiphy4	-30	-42	1.1.3100.1
1.2.wiphy5	-30	-42	1.1.3100.0
1.2.wiphy6	-30	-42	
1.2.wiphy7	-30	-42	

Group: 2

1.2.wiphy8	-33	-45	1.1.3099.3
1.2.wiphy9	-33	-45	1.1.3099.2
1.2.wiphy10	-33	-45	
1.2.wiphy11	-33	-45	

Start Skip ☐ Another Iteration ☐ Pause Cancel

5. The 802.11AX Settings 2 tab is for configuring additional non-virtual-station radios, Intel AX210 in this case. Some testbeds will have different attenuators for groups 2-7. The testbed in this example uses splitter-combiners so that all radios in groups 2-7 go through the same attenuator, so there are no attenuators configured on this second AX settings tab.

TR-398 Issue 2 Automated Test (cv-inst-0)

Per-Test Config 2 | Per-Test Config 3 | Per-Test Config 4 | Per-Test Config 5 | Advanced Configuration | Report Configuration | TR398-Issue3

Settings | Virtual Sta Radio Settings | 802.11AX Settings | **802.11AX Settings 2** | Mesh Settings | Mesh Settings 2 | Per-Test Config 1

The settings below apply to AX capable radios that do not support virtual stations.

Radio Radio 2.4Ghz RSSI 0 Atten 5Ghz RSSI 0 Atten Attenuator Module

Group: 3

1.3.wiphy0	1.3.wiphy5	-25	-30	
1.3.wiphy10	1.3.wiphy15	-25	-30	

Group: 4

1.3.wiphy1	1.3.wiphy6	-25	-30	
1.3.wiphy11	1.3.wiphy16	-25	-30	

Group: 5

1.3.wiphy2	1.3.wiphy7	-25	-30	
1.3.wiphy12	1.3.wiphy17	-25	-30	

Group: 6

1.3.wiphy3	1.3.wiphy8	-25	-30	
1.3.wiphy13	1.3.wiphy18	-25	-30	

Group: 7

1.3.wiphy4	1.3.wiphy9	-25	-30	
1.3.wiphy14	1.3.wiphy19	-25	-30	

Start Skip ☐ Another Iteration ☐ Pause Cancel

6. The Mesh Settings tab has information needed to run the Mesh test cases. This includes the DUT information for the node-1 and node-2 mesh chambers, attenuator mappings between chambers, and some scanning configuration.

TR-398 Issue 2 Automated Test (cv-inst-0)

Per-Test Config 2 | Per-Test Config 3 | Per-Test Config 4 | Per-Test Config 5 | Advanced Configuration | Report Configuration | TR398-Issue3

Settings | Virtual Sta Radio Settings | 802.11AX Settings | 802.11AX Settings 2 | **Mesh Settings** | Mesh Settings 2 | Per-Test Config 1

Node-1 DUT 5G: :94:70:29:9a:d1 (2) ▼

Node-1 DUT 2G: :94:70:29:9a:d0 (1) ▼

Node-2 DUT 5G: :94:70:29:99:8d (2) ▼

Node-2 DUT 2G: :94:70:29:99:8c (1) ▼

☐ Use 2-band pass/fail

Background Scan Module: simple ▼ RSSI Threshold: -65 ▼

Short Interval: 30 ▼ Long Interval: 300 ▼

Radio 2.4Ghz RSSI 0 Atten 5Ghz RSSI 0 Atten Attenuator Modules

Group 0: Root to Node-1

Radio	2.4Ghz RSSI 0 Atten	5Ghz RSSI 0 Atten	Attenuator Modules
-43	-63	1.1.3249.0	
-43	-63	1.1.3249.1	
-43	-63	1.1.3249.2	
-43	-63	1.1.3249.3	

Group 1: Mobile Station to Root

5Ghz 1.3.18 wiphy21 ▼ -34 -60 1.1.3232.0 ▼

2.4Ghz 1.3.18 wiphy21 ▼ -34 -60 1.1.3232.1 ▼

Radio	2.4Ghz RSSI 0 Atten	5Ghz RSSI 0 Atten	Attenuator Modules
-34	-60		
-34	-60		

Group 2: Mobile Station to Node-1

Radio	2.4Ghz RSSI 0 Atten	5Ghz RSSI 0 Atten	Attenuator Modules
-33	-41	1.1.3232.2	
-33	-41	1.1.3232.3	
-33	-41		
-33	-41		

Start Skip ☐ Another Iteration ☐ Pause Cancel

7. The Mesh Settings 2 tab has additional mapping information needed for a 3-node mesh testbed.

TR-398 Issue 2 Automated Test (cv-inst-0)

Per-Test Config 2 | Per-Test Config 3 | Per-Test Config 4 | Per-Test Config 5 | Advanced Configuration | Report Configuration | TR398-Issue3

Settings | Virtual Sta Radio Settings | 802.11AX Settings | 802.11AX Settings 2 | Mesh Settings | **Mesh Settings 2** | Per-Test Config 1

2.4Ghz RSSI 0 Atten 5Ghz RSSI 0 Atten Attenuator Modules

Group 3: Mobile Station to Node-2

Radio	2.4Ghz RSSI 0 Atten	5Ghz RSSI 0 Atten	Attenuator Modules
-34	-46	1.1.3263.0	
-34	-46	1.1.3263.1	
-34	-46		
-34	-46		

Group 4: Node-1 to Node-2

Radio	2.4Ghz RSSI 0 Atten	5Ghz RSSI 0 Atten	Attenuator Modules
-52	-59	1.1.3256.0	
-52	-59	1.1.3256.1	
-52	-59	1.1.3256.2	
-52	-59	1.1.3256.3	

Group 5: Root to Node-2

Radio	2.4Ghz RSSI 0 Atten	5Ghz RSSI 0 Atten	Attenuator Modules
-38	-59	1.1.3263.2	
-38	-59	1.1.3263.3	
-38	-59		
-38	-59		

Start Skip ☐ Another Iteration ☐ Pause Cancel

8. The Per-Test Config tabs provide tunable settings for individual test cases. Each entry field will have a tool-tip to explain what it does in more detail. The sections will only be active if the respective test case is selected on the Settings tab.

TR-398 Issue 2 Automated Test (cv-inst-0)

Per-Test Config 2 | Per-Test Config 3 | Per-Test Config 4 | Per-Test Config 5 | Advanced Configuration | Report Configuration | TR398-Issue3

Settings | Virtual Sta Radio Settings | 802.11AX Settings | 802.11AX Settings 2 | Mesh Settings | Mesh Settings 2 | Per-Test Config 1

Calibrate Zero Attenuation RSSI

Calibration Mode: 802.11abg Calibration NSS: NSS-1 (1)

☒ Calibrate against LANforge AP

2.4Ghz LANforge AP Calibration Radio: 1.4.3 wiphy0

5Ghz LANforge AP Calibration Radio: 1.4.4 wiphy1

2.4Ghz Mesh Node-1 LANforge AP Calibration Radio: 1.5.3 wiphy0

5Ghz Mesh Node-1 LANforge AP Calibration Radio: 1.5.3 wiphy0

2.4Ghz Mesh Node-2 LANforge AP Calibration Radio: 1.6.3 wiphy0

5Ghz Mesh Node-2 LANforge AP Calibration Radio: 1.6.4 wiphy1

6.1.1 Receiver Sensitivity Test

☐ Stop RX-Sens at pass

RxSens Start Step: 4

RxSens-Rate: 65%

RxSens Rotation Degrees: 45

6.2.1 Maximum Connection Test (32-STA)

Max-CX Offered Load: 101% (101%) ☒ Randomize Offered Load ☐ Allow Maximum NSS ☐ Enable 6Ghz-80

☒ Use Group-0 Radios ☐ Use Group-1 Radios ☐ Use Group-2 Radios

Max-CX 2Ghz N rate: 2Mbps - Default (2 Mbps)

Max-CX 5Ghz AC rate: 8Mbps - Default (8 Mbps)

Max-CX 2Ghz AX rate: 3Mbps - Default (3 Mbps)

Max-CX 5Ghz AX rate: 10Mbps - Default (10 Mbps)

Max-CX 6Ghz AX rate: 20Mbps - Default (20 Mbps)

Ramp Duration: 45 (45 sec)

Max-CX 6Ghz-80Mhz AX rate: 10Mbps - Default (10 Mbps)

STA Count: 32 (32)

6.2.2 Maximum TCP Throughput Test

Throughput N 2Ghz rate: 100Mbps - Default (100 Mbps)

Throughput AC 5Ghz rate: 560Mbps - Default (560 Mbps)

Throughput AX 2Ghz rate: 200Mbps - Default (200 Mbps)

Throughput AX 5Ghz rate: 720Mbps - Default (720 Mbps)

Throughput AX 6Ghz rate: 1.44Gbps - Default (1.44 Gbps)

Start Skip ☐ Another Iteration ☐ Pause Cancel

9. The Per-Test Config 2 tab.

TR-398 Issue 2 Automated Test (cv-inst-0)

Per-Test Config 2 | Per-Test Config 3 | Per-Test Config 4 | Per-Test Config 5 | Advanced Configuration | Report Configuration | TR398-Issue3

Settings | Virtual Sta Radio Settings | 802.11AX Settings | 802.11AX Settings 2 | Mesh Settings | Mesh Settings 2 | Per-Test Config 1

6.2.3 Airtime Fairness Test

ATF Max NSS: 2x2 (2) ATF Attenuation: Default 0 (0)

6.2.4 Dual-Band Throughput Test

☐ Unlimited TCP Speed ☐ Enable 2.4-40 + 5G-160 ☐ Enable 2.4-40 + 6G-160 ☒ Enable 5G-80 + 6G-160

Low-Band Radio: Default (-1) High-Band Radio: Default (-1)

6.2.5 Bidirectional UDP Throughput Test

Max allowed packet loss%: 0.01 ☐ Allow Maximum NSS

☐ Enable 5g-160 ☐ Enable 6g-80

☐ Skip First Attenuation Step ☐ Skip Second Attenuation Step ☐ Skip Third Attenuation Step

6.2.6 Latency Test

☒ One-Way Download Latency

6.2.7 Quality of Service Test

☐ Pass/Fail High-Limit

Start Skip ☐ Another Iteration ☐ Pause Cancel

10. The Per-Test Config 3 tab allows setting specific attenuations and pass/fail for the RvR and spatial consistency tests.

TR-398 Issue 2 Automated Test (cv-inst-0)

Per-Test Config 2 | **Per-Test Config 3** | Per-Test Config 4 | Per-Test Config 5 | Advanced Configuration | Report Configuration | TR398-Issue3

Settings | Virtual Sta Radio Settings | 802.11AX Settings | 802.11AX Settings 2 | Mesh Settings | Mesh Settings 2 | Per-Test Config 1

6.3.1 Range Versus Rate Test

☒ RvR issue 3 ☒ Enable Custom Config ☐ Enable 5g-160 ☐ Enable 6g-20

Attenuations 2.4Ghz	0, 9, 20, 23, 26, 29, 32, 35, 38, 41, 44, 47, 50, 53, 56 (default t-13)
P/F 2.4Ghz DL /n	100, 100, 100, 100, 95, 80, 75, 50, 45, 35, 25, 14, 9, 8, 3 (default t-13)
P/F 2.4Ghz UL /n	100, 100, 100, 100, 95, 80, 75, 50, 31, 24, 17, 12, 7, 4, 3 (default t-13)
P/F 2.4Ghz DL /ax	200, 200, 180, 170, 150, 120, 90, 85, 65, 55, 30, 25, 15, 10, 4 (default t-13)
P/F 2.4Ghz UL /ax	200, 200, 180, 170, 150, 120, 90, 85, 65, 50, 25, 20, 10, 5, 4 (default t-13)
Attenuations 5Ghz	0, 9, 20, 23, 26, 29, 32, 35, 38, 41, 44, 47, 50, 53, 56 (default t-13)
P/F 5Ghz DL /ac	560, 560, 530, 420, 400, 360, 300, 220, 150, 125, 100, 45, 25, 5, 1 (default t-13)
P/F 5Ghz UL /ac	560, 560, 530, 420, 400, 360, 300, 220, 150, 125, 100, 45, 25, 5, 1 (default t-13)
P/F 5Ghz DL /ax	720, 720, 680, 540, 515, 465, 400, 350, 300, 200, 175, 150, 50, 7, 2 (default t-13)
P/F 5Ghz UL /ax	720, 720, 680, 540, 515, 465, 400, 300, 225, 175, 150, 50, 25, 5, 2 (default t-13)
P/F 5Ghz 160Mhz DL /ax	1440, 1440, 1440, 1080, 1025, 700, 400, 350, 300, 200, 175, 150, 50, 7, 2 (default t-13)
P/F 5Ghz 160Mhz UL /ax	1440, 1440, 1440, 1080, 1025, 700, 400, 300, 225, 175, 150, 50, 25, 5, 2 (default t-13)
Attenuations 6Ghz	0, 10, 21, 24, 27, 30, 33, 36, 39, 42, 45, 48 (default t-13)
P/F 6Ghz DL /ax	1440, 1080, 1025, 700, 400, 350, 300, 200, 175, 150, 50, 7 (default t-13)
P/F 6Ghz UL /ax	1440, 1080, 1025, 700, 400, 300, 225, 175, 150, 50, 25, 5 (default t-13)
P/F 6Ghz 20Mhz DL /ax	200, 160, 140, 100, 80, 60, 40, 30, 20, 10, 5, 2 (default t-13)
P/F 6Ghz 20Mhz UL /ax	200, 160, 140, 100, 80, 60, 40, 30, 20, 10, 5, 2 (default t-13)

6.3.2 Spatial Consistency Test

☒ Spatial issue 3 ☐ Skip First Attenuation Step ☐ Skip Second Attenuation Step ☐ Skip Third Attenuation Step

Spatial Rotation Degrees: 30 ☐ Pause on zero throughput

Start **Skip** ☐ Another Iteration ☐ Pause **Cancel**

11. The Per-Test Config 4 tab allows tuning the peak-performanc tests and others.

TR-398 Issue 2 Automated Test (cv-inst-0)

Per-Test Config 2 | Per-Test Config 3 | **Per-Test Config 4** | Per-Test Config 5 | Advanced Configuration | Report Configuration | TR398-Issue3

Settings | Virtual Sta Radio Settings | 802.11AX Settings | 802.11AX Settings 2 | Mesh Settings | Mesh Settings 2 | Per-Test Config 1

6.3.3 AX Peak Performance TCP Throughput Test

☒ Skip 4x4 5Ghz test ☒ Skip 2.4g-40 ☒ Skip 5g-160 ☐ Skip 6g-160

Throughput AX 2Ghz rate: 300Mbps - Default (300 Mbps) Throughput AX 2x2 5Ghz rate: 1.1Gbps - Default (1.1 Gbps)

Throughput AX 4x4 5Ghz rate: 1.1Gbps - Default (1.1 Gbps) ☐ Enable 2.4g-20 ☐ Enable 5g-20 ☐ Enable 5g-80

☒ Enable 5g-80 ☐ Enable 6g-20 ☐ Enable 6g-40 ☐ Enable 6g-80

6.4.1 Multiple STAs Performance Test

☒ Multiple STA issue 3

6.4.2 Multiple Association / Disassociation Stability Test

Assoc/Disassoc Traffic %: 99

6.4.3 Downlink MU-MIMO Performance Test

☒ User Interaction Multiplier: 45% (default) (45%)

Start **Skip** ☐ Another Iteration ☐ Pause **Cancel**

12. The Per-Test Config 5 tab.

TR-398 Issue 2 Automated Test (cv-inst-0)

Per-Test Config 2 | Per-Test Config 3 | Per-Test Config 4 | **Per-Test Config 5** | Advanced Configuration | Report Configuration | TR398-Issue3

Settings | Virtual Sta Radio Settings | 802.11AX Settings | 802.11AX Settings 2 | Mesh Settings | Mesh Settings 2 | Per-Test Config 1

6.5.1 Long Term Stability Test

Duration-180: 1-min (1 min) | Stability UDP Duration: 2-min (2 min)

Stability Iterations: 2

6.5.2 AP Coexistence Test

☒ LANforge-AP is Interferer

Upstream Alien Port: 1.2.2 eth2

2Ghz Alien STA Radio: 1.4.4 wiphy1

2Ghz Alien AP Radio: 1.4.3 wiphy0

Alien AP TxPower: 20 dBm (20)

☐ Use 40MHz DUT to Avoid DFS ☐ Calibrate Alien with DUT Down ☒ Auto-Calibrate Interferer

Interferer AC 5G-80MHz: Default (195 Mbps) | Interferer AC 5G-40MHz: Default (90 Mbps)

Interferer AC 2.4G-20MHz: Default (32 Mbps) | Interferer AX 5G-80MHz: Default (195 Mbps)

Interferer AX 5G-40MHz: Default (90 Mbps) | Interferer AX 2.4G-20MHz: Default (32 Mbps)

6.5.3 Automatic Channel Selection

☒ Use AP-Coex Alien radios ☒ Use AP-Coex Alien Tx-Power

Testbed Calibration Settings

☒ Calibrate NSS 1 ☒ Calibrate NSS 2 ☐ Calibrate NSS 3 ☐ Calibrate NSS 4

Radios:

Warning Threshold: 4 dBm (4) | Fail Threshold: 5 dBm (5)

AP TxPower: 10 dBm (10)

Start **Skip** ☐ Another Iteration ☐ Pause **Cancel**

13. The Advanced Configuration tab has settings that apply to many tests. The top section is for saving and loading test configurations. The Import Config window will let one paste in a full or partial test configuration file to apply those changes easily. The Rotation fields at the bottom allow the user to specify optimal rotations to run tests which do not explicitly control the turntable. Use the Rate vs Orientation test to find optimal rotations.

TR-398 Issue 2 Automated Test (cv-inst-0)

Per-Test Config 2 | Per-Test Config 3 | Per-Test Config 4 | Per-Test Config 5 | **Advanced Configuration** | Report Configuration | TR398-Issue3

Settings | Virtual Sta Radio Settings | 802.11AX Settings | 802.11AX Settings 2 | Mesh Settings | Mesh Settings 2 | Per-Test Config 1

Show Config **Import Config**

Save DEFAULT

Load DEFAULT

Delete DEFAULT

IP ToS: Best Effort (0) | Multi-Conn: Ten (10)

Multiple Endpoints: 4 (4)

2.4Ghz Channel: 6 (2437 Mhz) | 5Ghz Channel: 36 (5180 Mhz)

Duration-60: 30 | Duration-120: 30

Attenuation Adjustment: 0 | Test Retries: 0

Extra Download Path-loss: 0 (0)

STA TX Power: 20 dBm (20)

DUT AP Expected TX Power-2.4G: 23 dBm (23) | DUT AP Expected TX Power-5G: 23 dBm (Issue-2) (23)

Opposite-Speed: 20kbps (20 Kbps) | 1Gbps Throughput Limit: 925Mbps (925 Mbps)

Virt-Sta Rotation 2.4Ghz: 30 | Virt-Sta Rotation 5Ghz: 0

AX Rotation 2.4Ghz: 220 (220) | AX Rotation 5Ghz: 180

Start **Skip** ☐ Another Iteration ☐ Pause **Cancel**

14. The Report Configuration tab allows customizing the report generated by the TR398 test cases..

TR-398 Issue 2 Automated Test (cv-inst-0)

Per-Test Config 2 | Per-Test Config 3 | Per-Test Config 4 | Per-Test Config 5 | Advanced Configuration | **Report Configuration** | TR398-Issue3

Settings | Virtual Sta Radio Settings | 802.11AX Settings | 802.11AX Settings 2 | Mesh Settings | Mesh Settings 2 | Per-Test Config 1

☒ Show Events ☒ Show Log Entries ☐ Auto Save Report ☐ Print Logs to Terminal

☒ Collect CSV Data

Graph Background Color: Test Rig ID: Instance Name: cv-inst-0

Test Tag: KPI Test Id:

Operator Information:

DUT Information Override:

Report Location:

Test Folder Prefix:

Notes to be added near the top of the report:

 ☐ Another Iteration ☐ Pause

15. The Issue-3 page is for experimental test cases. At time of writing, this tab is not needed. The ATF test case will be executed if the 'Use Issue-3 Behaviour' checkbox is selected on the Settings page.

TR-398 Issue 2 Automated Test (cv-inst-0)

Per-Test Config 2 | Per-Test Config 3 | Per-Test Config 4 | Per-Test Config 5 | Advanced Configuration | Report Configuration | **TR398-Issue3**

Settings | Virtual Sta Radio Settings | 802.11AX Settings | 802.11AX Settings 2 | Mesh Settings | Mesh Settings 2 | Per-Test Config 1

Proposed and in-development TR398-issue3 test cases.

☐ Issue-3 Airtime Fairness

 ☐ Another Iteration ☐ Pause