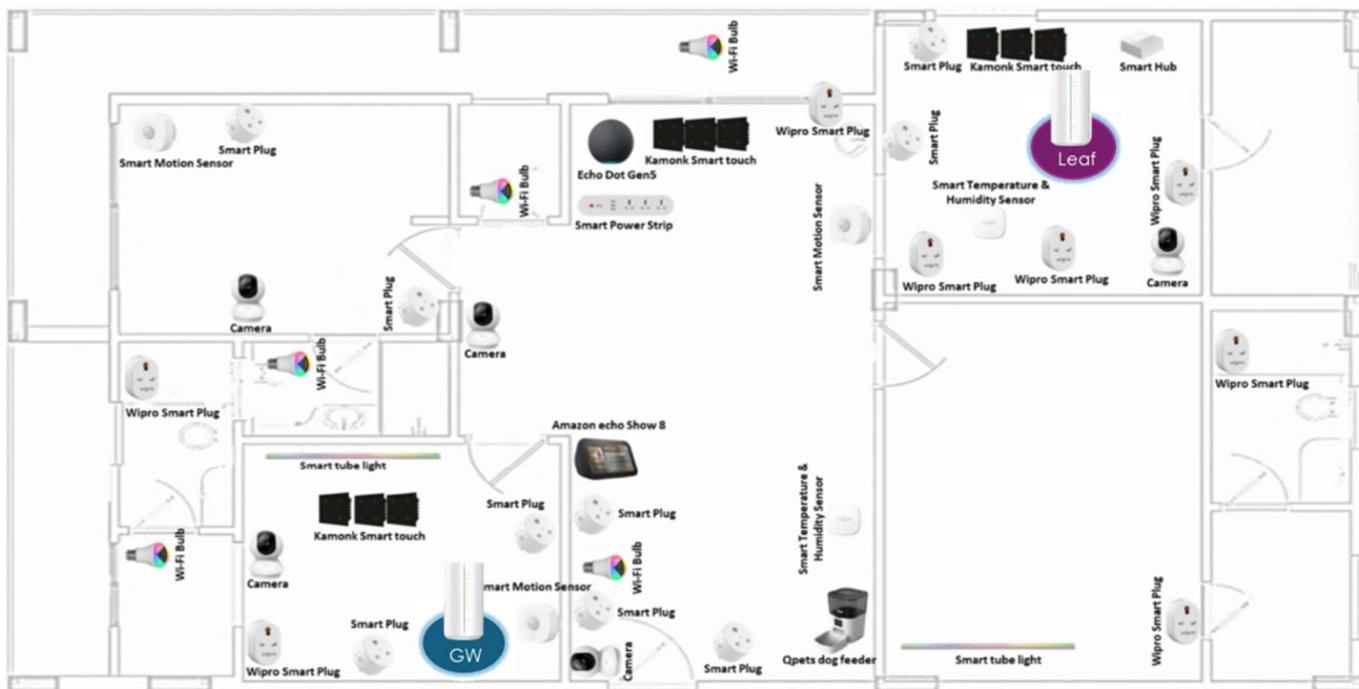


10. IoT Stress Testing:

Test Description:

- Power on GW and Leaf nodes.
- Connect 50 IoT devices (smart plugs, bulbs, switches, etc.) to the nodes.
- Initiate an automated script or control application to continuously toggle all IoT devices ON/OFF at defined intervals.
- Monitor AP connection stability and device responsiveness.
- Observe for any device disconnections, command delays, or failures to respond.
- Maintain the toggling process for a sustained duration (e.g., 8 hours).
- After the test, verify that all devices reconnect automatically if disconnected during stress.
- Record any AP crashes, reboots, or performance degradation.

IoT Devices Placement:

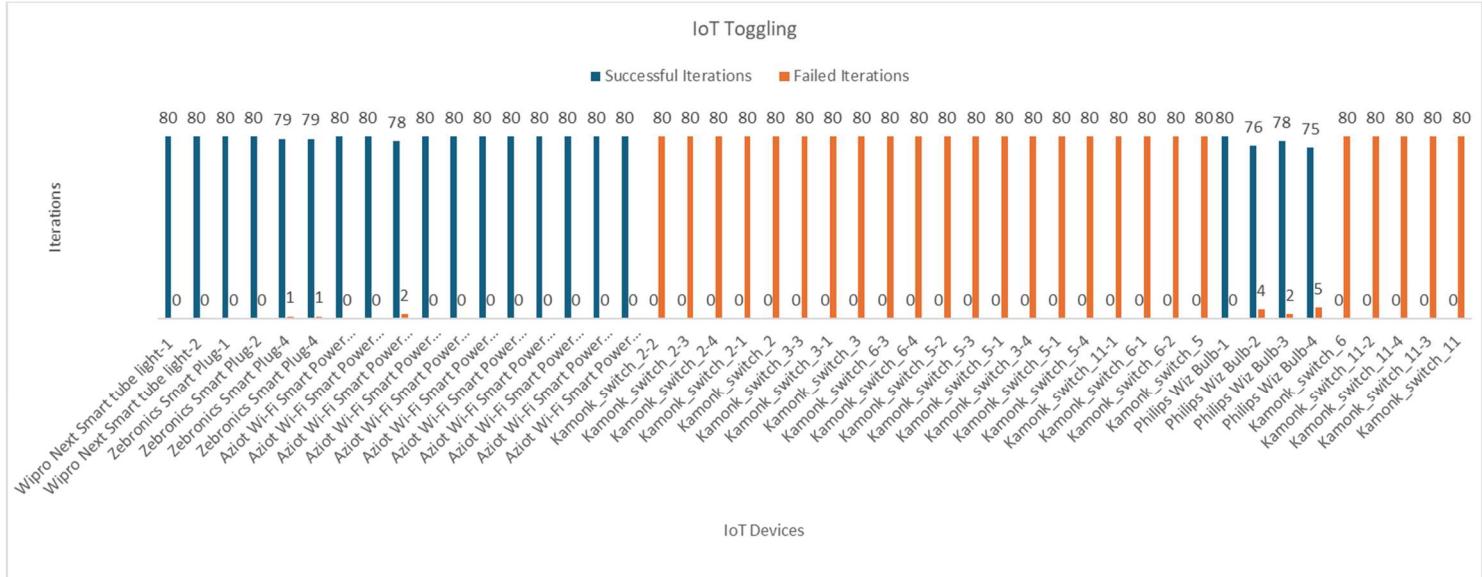


IoT devices List:

S No	Device category	Device Type	Device Model	Band (GHz)
1	Multimedia	Amazon Echo	Amazon Echo Show 8 Gen 2	5
2	Smart home	Switch	Kamonk Smart Touch-1	2.4
3	Smart home	Switch	Kamonk Smart touch-2	2.4
4	Smart home	Switch	Kamonk Smart Touch-3	2.4
5	Smart home	Switch	Kamonk Smart touch-4	2.4
6	Smart home	Switch	Kamonk Smart Touch-5	2.4
7	Smart home	Switch	Kamonk Smart touch-6	2.4
8	Smart home	Switch	Kamonk Smart touch-7	2.4
9	Smart home	Switch	Kamonk Smart touch-8	2.4
10	Smart home	Switch	Kamonk Smart touch-9	2.4
11	Smart home	Plug	Wipro 16A Smart Plug-1	2.4
12	Smart home	Plug	Wipro 16A Smart Plug-2	2.4
13	Smart home	Plug	Wipro 16A Smart Plug-3	2.4
14	Smart home	Plug	Wipro 16A Smart Plug-4	2.4
15	Smart home	Plug	Wipro 16A Smart Plug-5	2.4
16	Smart home	Plug	Wipro 16A Smart Plug-6	2.4
17	Smart home	Plug	Wipro 16A Smart Plug-7	2.4
18	Smart home	Plug	Wipro 16A Smart Plug-8	2.4
19	Smart home	Plug	Wipro 16A Smart Plug-9	2.4

20	Surveillance	Camera	TP-Link Tapo 360-1	2.4
21	Surveillance	Camera	TP-Link Tapo 360-2	2.4
22	Surveillance	Camera	TP-Link Tapo 360-3	2.4
23	Surveillance	Camera	TP-Link Tapo 360-4	2.4
24	Surveillance	Camera	TP-Link Tapo 360-5	2.4
25	Surveillance	Camera	TP-Link Tapo 360-6	2.4
26	Smart home	Plug	Zebronics Smart Plug-1	2.4
27	Smart home	Plug	Zebronics Smart Plug-2	2.4
28	Smart home	Plug	Zebronics Smart Plug-3	2.4
29	Smart home	Plug	Zebronics Smart Plug-4	2.4
30	Smart home	Plug	Zebronics Smart Plug-5	2.4
31	Smart home	Plug	Zebronics Smart Plug-6	2.4
32	Smart home	Plug	Zebronics Smart Plug-7	2.4
33	Smart home	Plug	Zebronics Smart Plug-8	2.4
34	Smart home	Plug	Zebronics Smart Plug-9	2.4
35	Smart home	Dog feeder	Qpets dog feeder	2.4
36	Smart home	Echo Dot	Echo DOT gen5	5
37	Surveillance	Sensor	Tapo TP-Link T100 120° Pir Smart Motion Sensor-1	2.4
38	Surveillance	Sensor	Tapo TP-Link T100 120° Pir Smart Motion Sensor-2	2.4
39	Surveillance	Sensor	Tapo TP-Link T100 120° Pir Smart Motion Sensor-3	2.4
40	Smart home	Bulb	Philips Wiz-1	2.4
41	Smart home	Bulb	Philips Wiz-2	2.4
42	Smart home	Bulb	Philips Wiz-3	2.4
43	Smart home	Bulb	Philips Wiz-4	2.4
44	Smart home	Bulb	Philips Wiz-5	2.4
45	Smart home	Light	Wipro Next Smart tube light-1	2.4
46	Smart home	Light	Wipro Next Smart tube light-2	2.4
47	Smart home	Smart Hub	Tapo TP-Link H200 Smart Hub	2.4
48	Smart home	Power Strip	Aziot Wi-Fi Smart Power Strip	2.4
49	Smart home	Thermostat	Tapo TP-Link Smart Temperature & Humidity Sensor-1	2.4
50	Smart home	Thermostat	Tapo TP-Link Smart Temperature & Humidity Sensor-2	2.4

Test Results:



Device	Successful Iterations	Failed Iterations
Wipro Next Smart tube light-1	80	0
Wipro Next Smart tube light-2	80	0
Zebronics Smart Plug-1	80	0
Zebronics Smart Plug-2	80	0
Zebronics Smart Plug-4	79	1
Zebronics Smart Plug-4	79	1
Aziot Wi-Fi Smart Power Strip_socket_1	80	0
Aziot Wi-Fi Smart Power Strip_socket_1	80	0
Aziot Wi-Fi Smart Power Strip_socket_1	78	2
Aziot Wi-Fi Smart Power Strip_socket_1	80	0
Aziot Wi-Fi Smart Power Strip_socket_1	80	0
Aziot Wi-Fi Smart Power Strip_socket_1	80	0
Aziot Wi-Fi Smart Power Strip_socket_1	80	0
Aziot Wi-Fi Smart Power Strip_socket_1	80	0
Aziot Wi-Fi Smart Power Strip_socket_1	80	0
Aziot Wi-Fi Smart Power Strip_socket_1	80	0
Aziot Wi-Fi Smart Power Strip_socket_1	80	0
Aziot Wi-Fi Smart Power Strip_socket_1	80	0
Aziot Wi-Fi Smart Power Strip_socket_1	80	0
Aziot Wi-Fi Smart Power Strip_socket_1	80	0
Aziot Wi-Fi Smart Power Strip_socket_1	80	0
Aziot Wi-Fi Smart Power Strip_socket_1	80	0
Kamonk_switch_2-2	0	80
Kamonk_switch_2-3	0	80
Kamonk_switch_2-4	0	80
Kamonk_switch_2-1	0	80
Kamonk_switch_2	0	80
Kamonk_switch_3-3	0	80
Kamonk_switch_3-1	0	80
Kamonk_switch_3	0	80
Kamonk_switch_6-3	0	80
Kamonk_switch_6-4	0	80
Kamonk_switch_5-2	0	80
Kamonk_switch_5-3	0	80
Kamonk_switch_5-1	0	80
Kamonk_switch_3-4	0	80
Kamonk_switch_5-1	0	80
Kamonk_switch_5-4	0	80
Kamonk_switch_11-1	0	80
Kamonk_switch_6-1	0	80
Kamonk_switch_6-2	0	80
Kamonk_switch_5	0	80
Philips Wiz Bulb-1	80	0
Philips Wiz Bulb-2	76	4
Philips Wiz Bulb-3	78	2

Philips Wiz Bulb-4	75	5
Kamonk_switch_6	0	80
Kamonk_switch_11-2	0	80
Kamonk_switch_11-4	0	80
Kamonk_switch_11-3	0	80
Kamonk_switch_11	0	80

Observations for IoT Stress Testing:

- The APs did not crash or reboot while continuously toggling Wipro Next Smart tube lights, Philips Wiz Bulbs, Zebronics Smart Plugs, Wipro 16A Smart Plugs, and the remaining IoT devices are in a connected state.
- Though some of the devices failed to toggle but they are still in connected state to the APs.