Connecting SMA Cables to LANforge

Goal: Connect the antennas of your device under test to LANforge using SMA cables and a fixed attenuator.

Many WiFi testing scenarios benefit from some amount of WiFi isolation. Connecting the radios of the Device Under Test (DUT) to LANforge’s radios using SMA cables can improve connection quality. Using a fixed attenuator can reduce a direct signal so that it is heard by the radios without distortion.

1. The polarities of the cables must match

2. Begin by connecting the SMA Female end of the fixed attenuator to the SMA adapter.
3. We see that the exposed end of the sma_adapter is RP-SMA-Male. RP means Reverse Polarity.
RP-SMA-Male connects to SMA-Male radio mount on LANforge

4. Connect the attached attenuator and adapter to the LANforge radio antenna. This exposes the SMA Male end of the attenuator. Your DUT might not have adequate space to mount a fixed attenuator to it, so we suggested connecting it to the LANforge.
Mounted adapter exposes SMA-Male end of attenuator

5. The polarities of the cable end must match the end of the fixed attenuator. The cable end for this side is SMA-Female.

SMA-Female cable end attaches to SMA-Male end of attenuator

6. See how the cable connected to the lanforge has both the adapter and the attenuator. It should be safe to use the
attenuator and adapter anywhere along a SMA path.

SMA Cable attached to attenuator connected to LANforge

7. Connect the other end of the cable to the Device Under Test (DUT). Your DUT might use different antennas so you might need to use another adapter.
8. We have connected one antenna of our DUT to the one antenna of our LANforge. Repeat this for multiple antennas.

SMA-RP-Male cable end attaches to SMA-Male DUT radio

SMA cable connecting DUT to LANforge with 30dB fixed attenuator