5G NR Discovery

This document outlines how to use the T-BERD/MTS 5800 to discover and display MAC Addresses, VLAN IDs, IPv6 Addresses, and protocols for single or cascaded 5G NR radios. At the end of the test the T-BERD/MTS will ping all discovered IPv6 addresses.

- T-BERD/MTS 5800 equipped with the following:
  - BERT software release V29.2 or greater
  - Ethernet test options:
    - C510M1GE and C5LSCAPTURE for 1 Gigabit Optical
    - C510GELAN and C510GCAPTURE for 10 Gigabit Ethernet
    - C525GELAN and C5100GCAPTURE for 25 Gigabit Ethernet
  - SFP optical transceiver to match the line under test
- Patch Cables to match the optical transceiver and line under test (Single mode or Multimode fiber)
- Fiber optic inspection microscope (VIAVI P5000i or FiberChek Probe)
- Fiber Optic Cleaning supplies

Figure 1: Equipment Requirements

- Use the VIAVI P5000i or FiberChek Probe microscope to inspect both sides of every connection being used (OCC Port, Launch Cable, bulkhead connectors, patch cables, etc.)
- Focus fiber on the screen. If dirty, clean the end-face.
- If it appears clean, run inspection test.
- If it fails, clean the fiber and re-run inspection test. Repeat until it passes.

Figure 2: Inspect Before You Connect

QUICK CARD

CONNECT TO LINE UNDER TEST

1. Insert optics into the **Port 1** slot on the top of the T-BERD/MTS 5800.

Figure 3: T-BERD/MTS 5800v2

2. After inspecting the fiber end faces, connect the SFP/SFP+/SFP28 to the radio under test using an LC-LC patch cable.

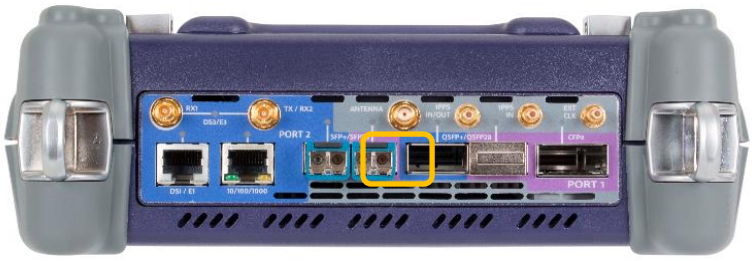

Figure 4: T-BERD/MTS 5800-100G

LAUNCH TEST

1. Press the Power button to turn on the test set and view the startup screen.
2. Using the **Select Test** menu, **Quick Launch** menu, or **Job Manager**, launch an **Ethernet**, **5G NR Discovery** test on **Port 1** as follows:
   - For 1GigE:
     Ethernet►1GigE Optical►
     5G NR Discovery►P1 Terminate
   - For 10GigE:
     Ethernet►10GigE LAN►
     5G NR Discovery►P1 Terminate
   - For 25GigE:
     Ethernet►25GigE►
     5G NR Discovery►P1 Terminate

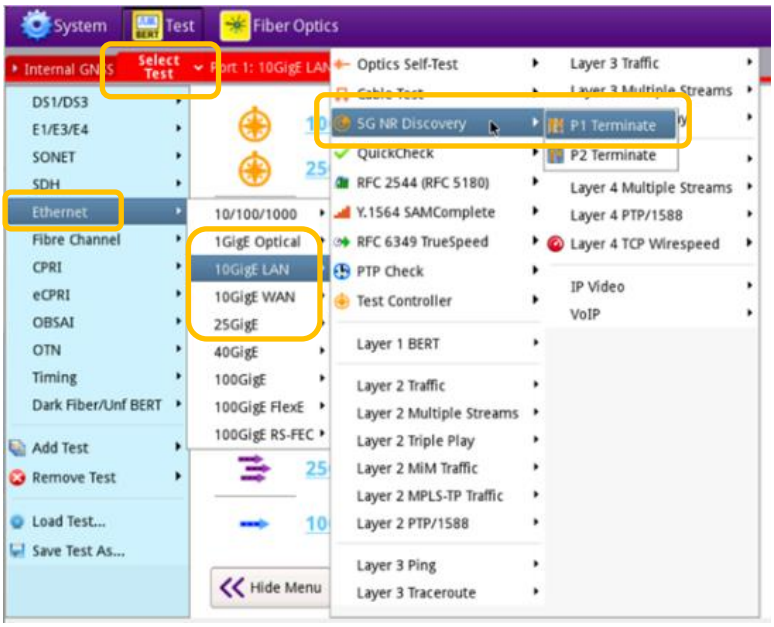

Figure 5: Select Test

RUN TEST

1. Tap the □ **Save capture file** check box if you wish to save captured packets to a PCAP file for analysis with WireShark™.

2. Tap Run Test to start discovery.

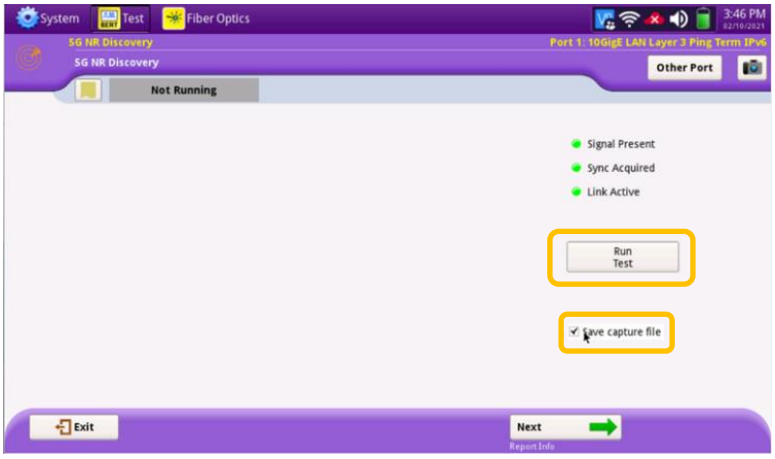

Figure 6: Run Test

3. The T-BERD/MTS will listen for 5G NR radios, analyze frames, and display IPv6 addresses, MAC addresses, and VLAN IDs for discovered radios.

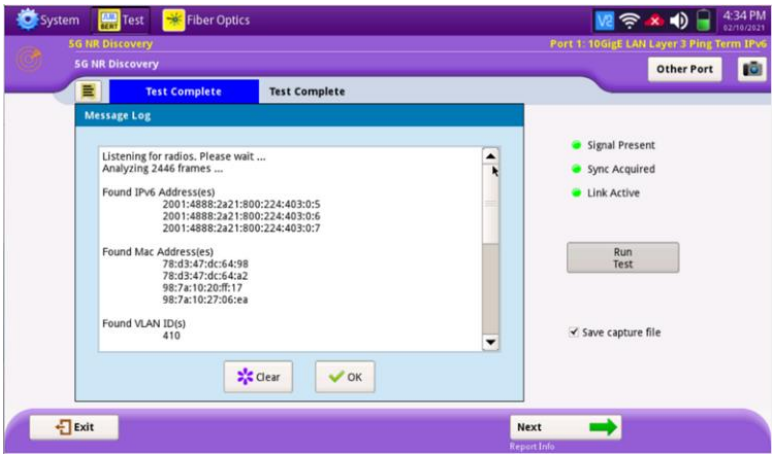

Figure 7: 5G NR Discovery

4. The T-BERD/MTS will also display discovered protocols (well-known TCP/UDP Ports) and ping all discovered IPv6 addresses.

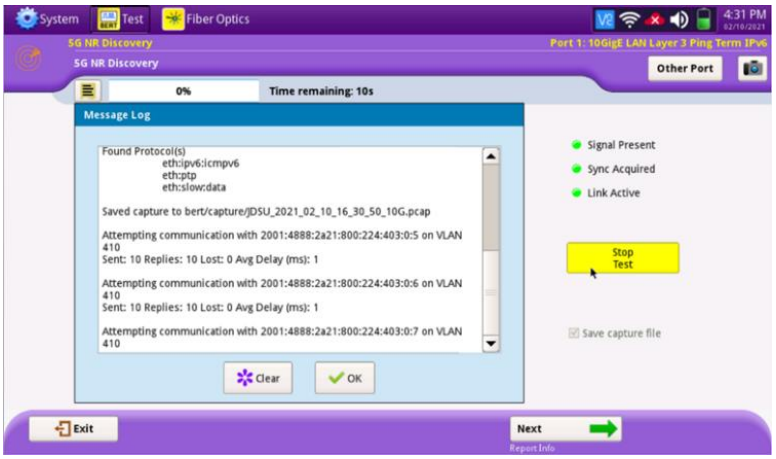

Figure 8: Protocol Discovery and Ping results

QUICK CARD

CREATE REPORT

1. If you wish to save a report, tap Next to proceed to the **Test Report Information** screen.

2. Enter test report information and comments/notes.

3. Tap Next to proceed to the **Report** screen.

4. Tap and check the
   □ **View report after creation** and
   □ **Include message log** check boxes.

5. Tap Create Report to generate a test report in .pdf format.

6. After viewing the report, tap Exit twice to exit the 5G NR Discovery test.

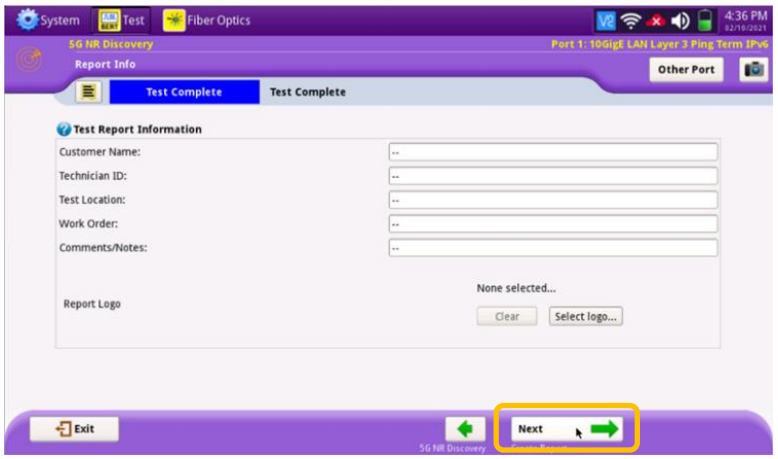

Figure 9: Test Report Information

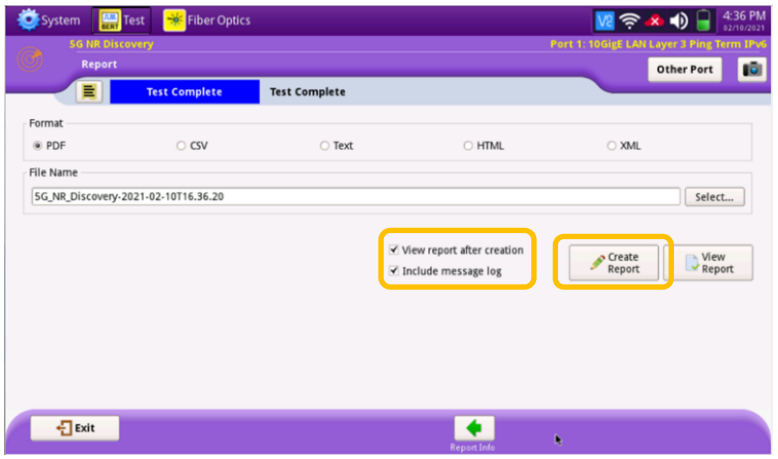

Figure 10: Create Report

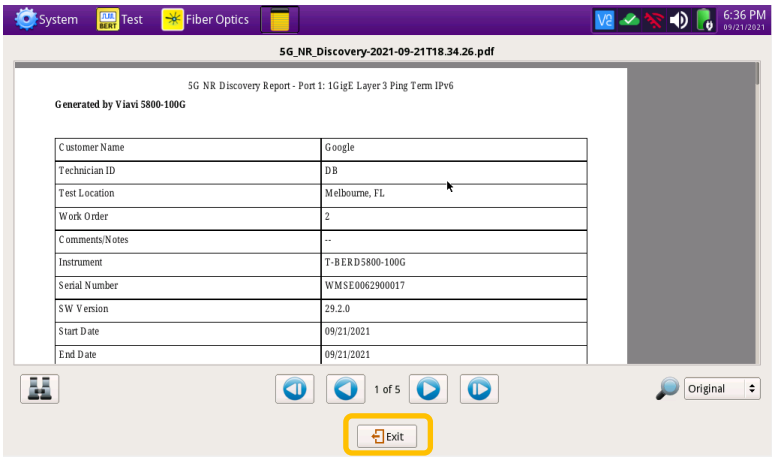

Figure 11: 5G NR Discovery Report

Contact Us **+1 844 GO VIAVI (+1 844 468-4284)**

To reach the VIAVI office nearest you, visit viavisolutions.com/contact