T-BERD®/MTS-5800 Network Tester
Ethernet RFC 6349 TrueSpeed Test to Fusion VNF

This document outlines how to configure and execute the RFC 6349 TrueSpeed test from a T-BERD/MTS 5800 test instrument to a Fusion VNF test agent at rates up to 2 Gbps.

Equipment Requirements:
- T-BERD/MTS-5800 equipped with the following:
  - BERT software release V27.0 or greater
  - Test options:
    - C510M1GE for 1 Gigabit interface or less
    - C510GELAN for 10 Gigabit interface
    - C5LSLAYER4 for TrueSpeed testing at 1G
  - SFP or SFP+ optical transceiver to match the line under test
- Patch Cords to match the T-BERD/MTS optics and the line under test
- Fiber optic inspection microscope (VIAVI P5000i or FiberChek Probe)
- Fiber Optic Cleaning supplies

Figure 1: Equipment Requirements

The following information is required to complete the test:
- Physical Interface (10/100/1000BASE-T, 1000BASE-SX, 1000BASE-LX, 10GBASE-LR, etc.)
- Source IP Address, Subnet mask, and Default Gateway for the local T-BERD/MTS
- IP Address for the remote Fusion Truespeed VNF Test Agent
- TOS Type and TOS/DSCP values, if IP Class of Service is used
- Upstream and Downstream Committed Information Rates (CIR) of the end to end connection

Fiber Inspection Guidelines:
- All fiber end-faces must be clean and pass an inspection test prior to connection.
- Use the VIAVI P5000i or FiberChek Probe microscope to inspect both sides of every connection being used (SFP Port, bulkhead connectors, patch cords, etc.)
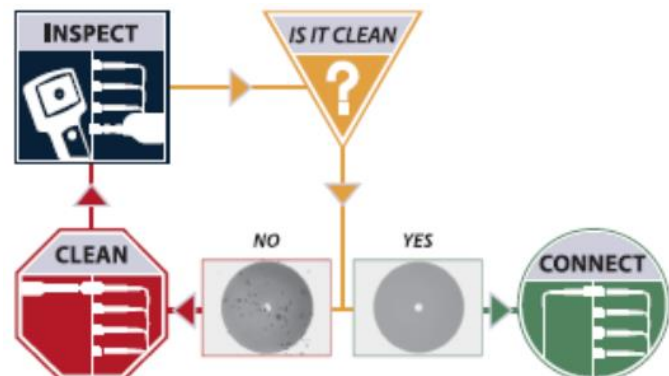
Figure 2: Inspect Before You Connect

Connect to Line Under Test:

1. For copper 10/100/1000BASE-T interface testing with the T-BERD/MTS 5800v2, connect the Port 1 10/100/1000 RJ-45 jack to the port under test using CAT 5E or better cable.

2. For copper 10/100/1000BASE-T interface testing with the T-BERD/MTS 5800-100G, insert a copper SFP into the Port 1 SFP+/SFP28 slot and connect to the port under test using CAT 5E or better cable.

3. For optical interfaces:

   - Insert SFP or SFP+ compatible with your physical interface into the Port 1 slot on the top of the test set.

   - Inspect and, if necessary, clean all fibers and bulkheads, as described on page 1.

   - Connect the SFP or SFP+ to the port under test using a Single Mode or Multimode jumper cable compatible with the interface under test.
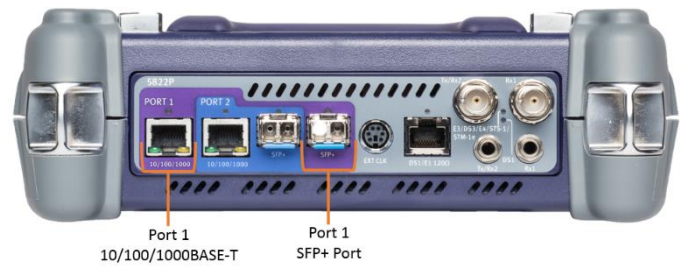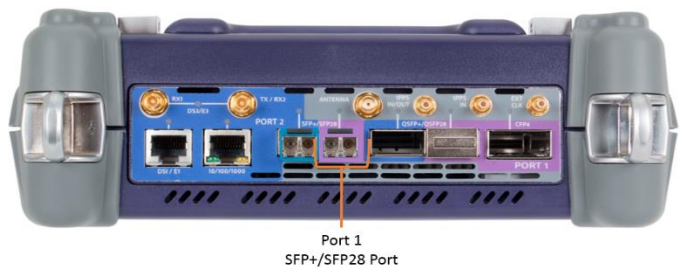

Figure 3: T-BERD 5800v2 Dual Port mainframe

Figure 4: T-BERD 5800-100G mainframe

Launch Test:
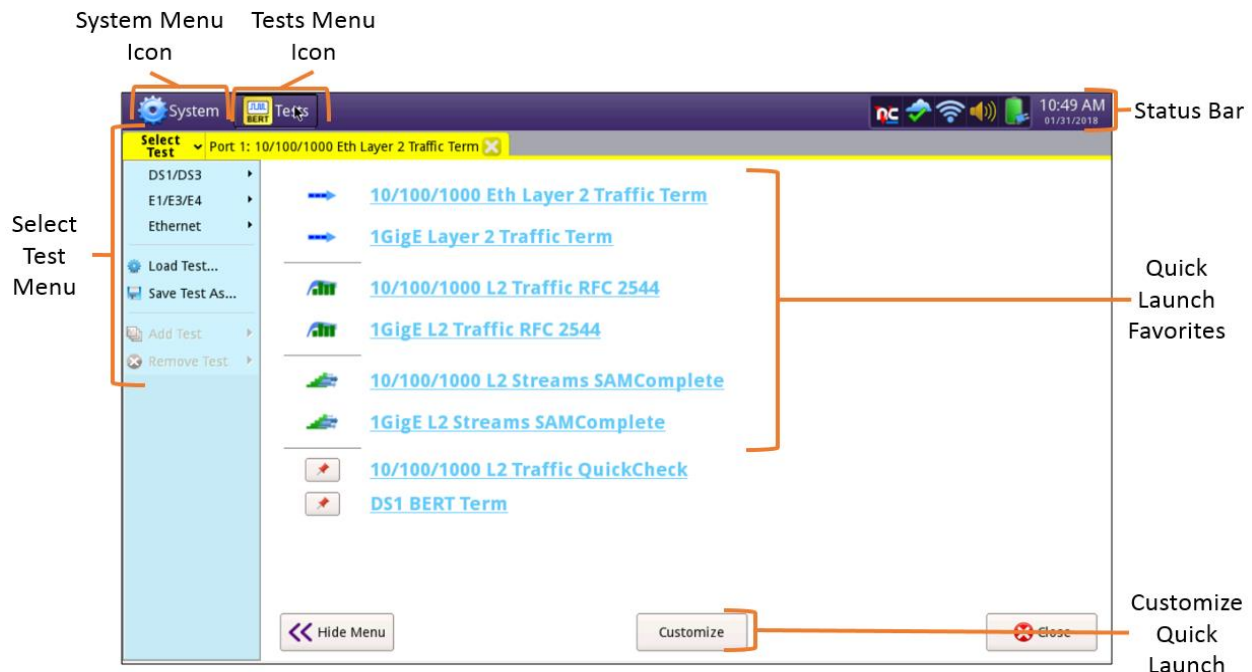
1. Press the Power button ⏻ to turn on the test set.

Figure 5: Startup screen

2. Using the **Select Test** menu or **Quick Launch** menu launch an **Ethernet, RFC 6349 TrueSpeed, VNF** test on port 1 for the desired physical interface. For example:

   Ethernet►10/100/1000►RFC 6349 TrueSpeed ►P1 VNF Test

Configure RFC 6349 TrueSpeed Test:

1. Select **Configure Test Settings Manually** and tap the **Go** button to advance to the **Local Settings** screen.
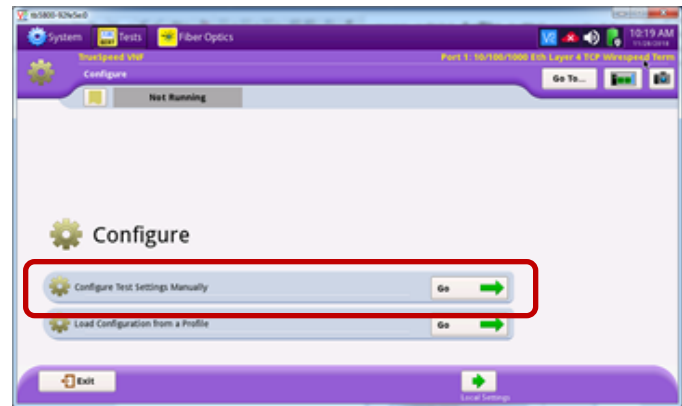

Figure 6: Configure

2. Fill in the local T-BERD/MTS **IP Type**, **IP Address**, **Default Gateway** and **Subnet Mask**. Leave all other settings at defaults. Tap the **Next** button to advance to the **Connect** screen.
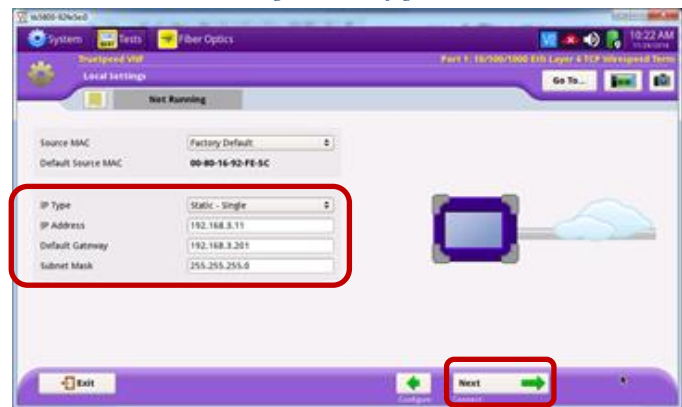

Figure 7: Local Settings

3. Fill in the remote Fusion Test Agent IP address in the **Server IP** field. You can then tap the **Ping** and **Identify** buttons to verify connectivity to and retrieve the software version of the Fusion Test Agent. Tap on the **Connect** button to connect to the Fusion Test Agent.
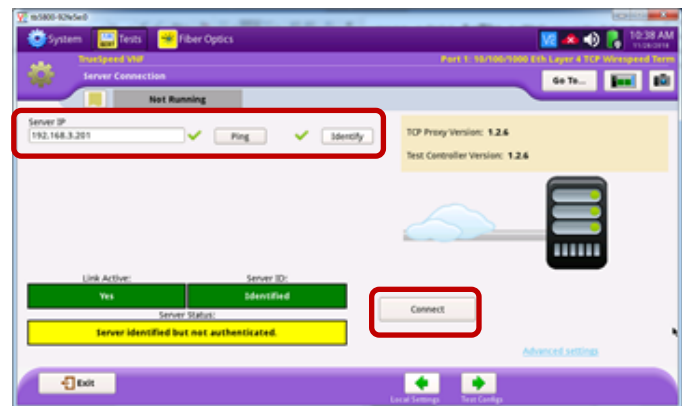

Figure 8: Server Connection

4. Verify that the **Server Status** field is green and shows "**Server authenticated and available for testing**". Tap the **Next** button to advance to the **Test Configs** screen.
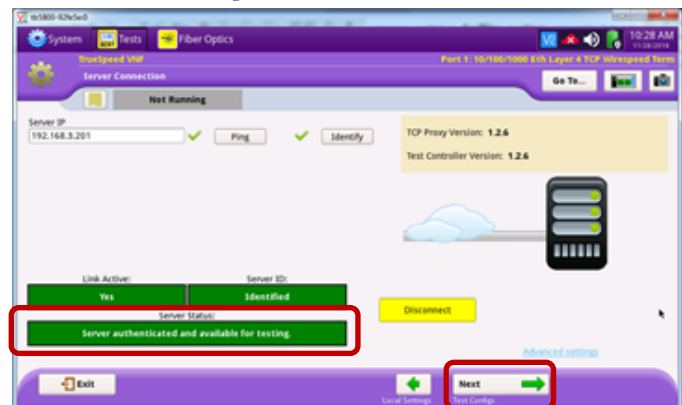

Figure 9: Server Connected

5. Set the **Downstream CIR** and **Upstream CIR** values to the Committed Information Rates. If IP Class of Service is used on the circuit, select the appropriate **TOS Type** (TOS or DSCP) and enter the TOS/DSCP values for local TBERD/MTS unit and/or remote Fusion Test Agent. Once done tap the **Next** button to advance to the **Save Profiles** screen.
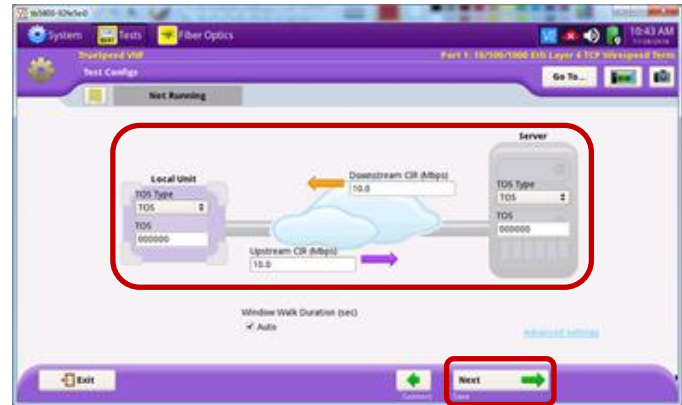

Figure 10: Test Configs

6. If desired, provide a name for the created test configuration and tap the **Save Profiles** button to save it for later re-use. Tap the **Next** button or **Skip Save Profiles** button to advance to the **Run Tests** screen.
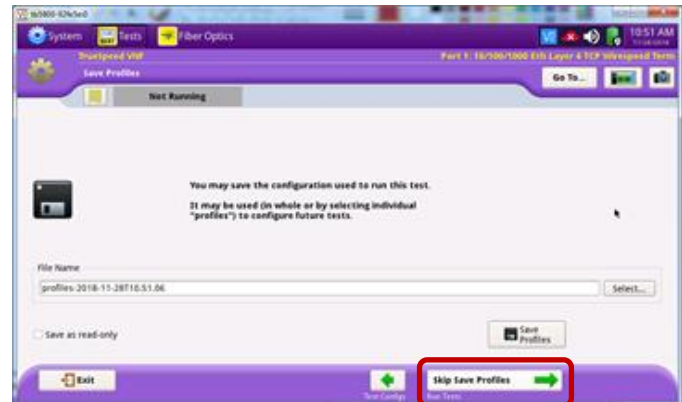

Figure 11: Save Profiles

Run RFC 6349 TrueSpeed Tests:

1. Tap the **Start** button to execute the RFC 6349 TrueSpeed tests. Wait for all tests to complete as indicated by the progress bar at the top of the screen.
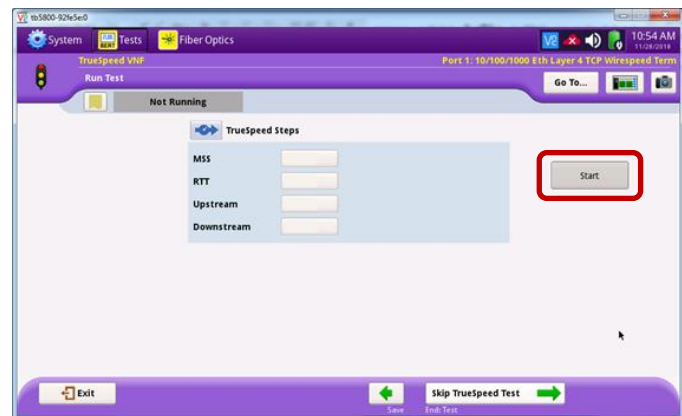

Figure 12: Run Test

2. Verify that all RFC 6349 TrueSpeed tests passed as indicated by green check marks.
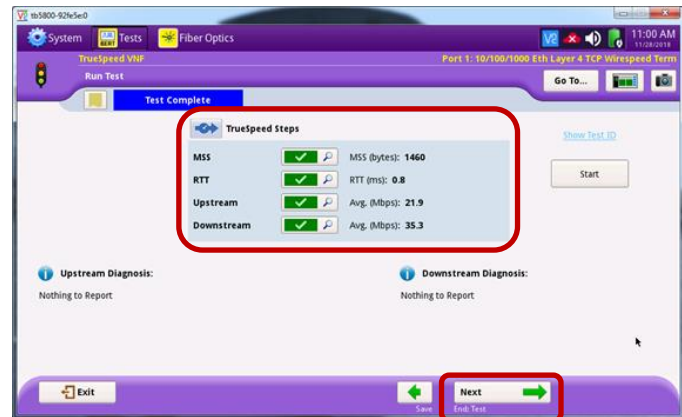   Tap the **Next** button three times to advance to the **Report** screen.

Figure 13: Test Complete

3. Provide a desired report file name and tap the **Create Report** button to create and display the test report.
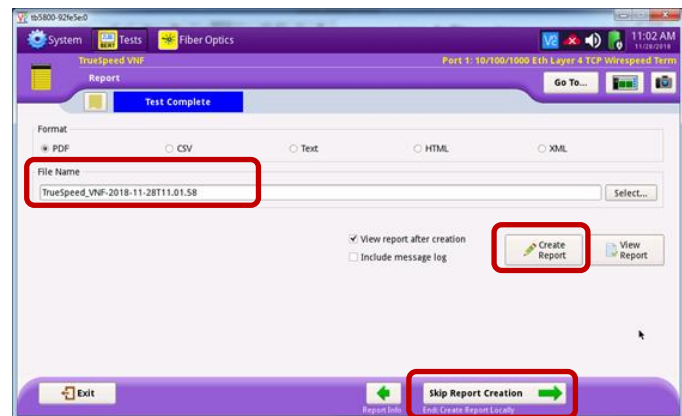

Figure 14: Report

4. Tap the **Exit** buttons to close the report and exit the RFC 6349 TrueSpeed test.
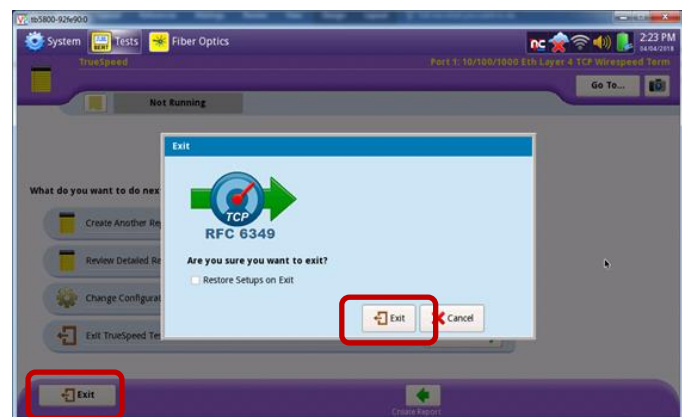

Figure 15:Exit