Troubleshooting an IP Routing over PPP Application with the TSU Router Module

Introduction

This note will describe how to troubleshoot an IP routing over PPP application.

Before You Begin

This note assumes that the TSU Router Module is configured correctly. For more information, see kb article # 1571.

Layer One

- Confirm that the correct DS0s are mapped to the TSU Router Module. For more information, see kb article # 1663.
- Verify that there are no T1 alarms or errors on the CSU. If there are, see kb article # 1607.

Establish a console session

Establish a console session to the TSU Router Module using a VT-100 terminal. Terminal parameters are as follows:

Baud : 9600
Data Bits : 8
Parity : None
Stop Bit : 1
Flow Control : None

After a connection is established, a **LOGIN** prompt will be displayed. There is no default login or password. Press **ENTER** to open the main menu. **CTRL-R** refreshes the display.

TSU Router Module Mode

Locate the status bar at the bottom of the terminal screen (see Figure 1).

- Verify that **MODE** is set for **IP**. If not, then see kb article # 1571.
- Verify that **LOOP** indicates **Connected**. If not, there is a configuration problem between the TSU Router Module and the ISP's router. Contact your ISP and verify that your IP Address and Subnet Mask are correct.

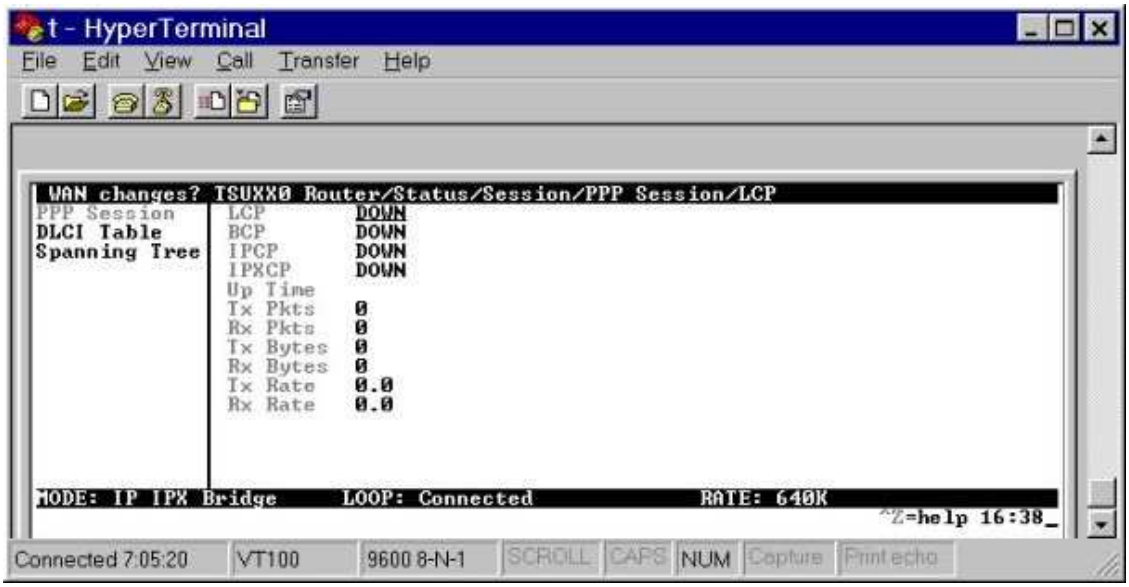

Figure 1

Module Status

In the console session, go to **TSUXX0 Router/Status/Session/PPP** (see Figure 1) and verify that **LCP** and **IPCP** indicate **UP**. If **LCP** and **IPCP** do not indicate **UP**, verify that **Rx Bytes** and **Rx Pkts** are incrementing. If these are not incrementing, then the TSU Router Module is not receiving data from the ISP. Contact your ISP and verify that their router is working correctly.

Pinging

If **LCP** and **IPCP** indicate **UP**, the TSU Router Module should be able to ping the ISP's router. From the **Utilities** menu of the Console session (see Figure 2):

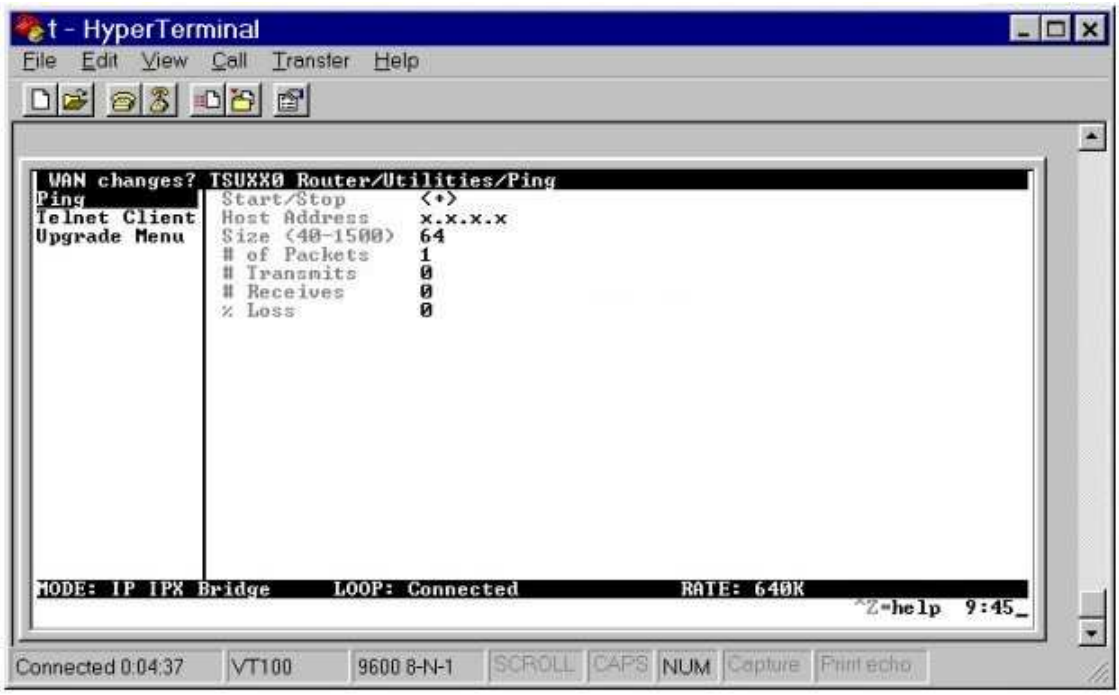

Figure 2

1. Go to **TSUXX0 Router/Utilities/Ping**.
2. In the **Host Address** field, enter the IP address of the ISP's router.
3. Choose **Start/Stop** <+> and then press **ENTER**.

- If there is no response from the ISP's router, contact your ISP and confirm that their router can ping the TSU Router Module.
- If there is a response, then the data channel from the TSU Router Module to the ISP's router is working.

If the TSU Router Module can successfully ping the ISP's router, the next step is to go "outside" the TSU Router Module and attempt to ping the ISP's router "through" it. To do this you will need a computer that is configured for the same LAN as the TSU Router Module and attached to it through a 10baseT hub or Ethernet crossover cable.

1. Attempt to ping the Ethernet Address of the TSU Router Module. If there is no response, verify that the connection between the computer and the TSU Router Module is correct.
2. Once the computer can successfully ping the TSU Router Module, attempt to ping the ISP's router. If there is no response, try resetting the TSU Router Module:

    1. In the Console session, go to **TSUXX0 Router/Configuration/Terminal Mode** <+> and then press **ENTER**.
    2. Type **reset** at the > prompt.
    3. The TSU Router Module will ask you to confirm the reset; press **Y** for yes.

Once the TSU Router Module has reset, attempt to ping it again; then attempt to ping the ISP's router. If you still can't ping the ISP's router, contact ADTRAN Tech Support.

If the computer can successfully ping the ISP's router through the TSU Router Module, everything is working properly and you should be able to browse the web.