



Q&A

Troubleshooting an Alarm Condition on the ADTRAN TSU IQ

Q:

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A:

Introduction

An alarm condition on the ADTRAN TSU IQ indicates a problem on the frame relay circuit. This condition must be cleared before the application can operate.

Troubleshooting the Alarm Condition

Question: My alarm light is on. What should I do?

Check the physical layer first. Under network port statistics, check the TSU state. There are seven possible states:

Open Loop: No RX signal.

Test From TELCO: Loopback code received from the service provider.

AIS Alarm: Unframed all ones received.

Red Alarm: Loss of frame synchronization.

Yellow Alarm: Telco side loss of frame synchronization.

ESF Normal: Normal condition for ESF link.

D4 Normal: Normal condition for D4 link.

If the TSU state is anything other than ESF normal or D4 normal, that is the cause of the alarm light. The network port statistics should show the T1 UA time and port UA time incrementing.

Question: What do I try to fix the TSU state?

- If the TSU IQ is located at an extended demarc, try moving the unit to the demarc in order to eliminate an in-house wiring problem.

- Try replacing the cable between the TSU IQ and the service provider jack.
- Connect the TSU IQ to the ADTRAN provided T1 loopback plug. Set the network clock source to internal and the network signal type to none. If the alarm light goes off, the unit is functioning properly.

If none of these efforts eliminate the alarm light, contact the service provider.

Question: Now the TSU state says normal, but the alarm light is still on. What do I try next?

Check layer two. Under network port statistics, check the signaling state. If it says down, this is the cause of the alarm light. Check the following network port statistics: RX Full Status, TX Full Status, RX LI only, and TX LI only. If you see TX, but no RX, the service provider's frame relay switch is not sending the TSU IQ signaling. Try changing the network signal type. Try all four options (ANSI, ITU-T, LMI, and auto) one at a time. Wait at least a full minute after each change to see if the signal state changes to up. This will allow the TSU IQ and frame relay switch to trade sufficient polls to determine if the circuit is up. If you have tried each signaling type and the signal state remains down, contact the service provider.

If you experience any problems using your ADTRAN product, please contact ADTRAN Technical Support @ 888-423-8726

1.

Plug in the analog phone line to the modem and dial into the unit. If you can press <Ctrl + R> and get a password prompt, then everything should be working properly.

2. If the call doesn't work, you can connect via VT100 or telnet into the Atlas and go into the **System Config** menu. From there, press <Enter> on the [+] sign next to **Chain Port**. Change the **Port Type** from **Direct** to **Dial** and try to make the call again.

IMPORTANT: If you change you chain port type to **Dial**, you will no longer be able to access the Chain Port with a Console connection from a computer. To reset this, hold down the ACO button on the front of the Atlas for 5 to 10 seconds.

Troubleshooting

- Problem: The modem is not answering the call.

Verify that the modem has **Auto Answer** set to **Enabled**.

- Problem: The modem is answering the call but I'm not getting an ATLAS login prompt.
 - a. Depending on the brand of modem you are using, you may need to enter an initialization string in the ATLAS to initialize the modem and configure the settings listed previously in step 3. Go to **System Config/Chain Port/Modem Initialization String**. The default string is **ATE0V1&D2&C1S0=1&W** and

should initialize the appropriate configuration for most modems. If necessary, change the initialization string to work with your particular modem. The initialization string must be changed through telnet or VT100 since it cannot be accessed from the front panel.

Note: A US Robotics modem should have switches 3, 5, 8 up and the initialization string set to **AT&N3**. Consult your modem user manual for additional settings and initialization strings.

- b. Verify that the **Chain Port Type** is set to **Dial** as discussed in step 2 previously.
 - c. Verify you are using a straight-through 8-pin RJ45 cable to connect the **Chain In** port of the ATLAS to the RJ45 end of the null modem adapter. Make sure you are using the ADTRAN adapter that is provided with the ATLAS.
 - d. Verify that you are connecting at 9600 baud. This is the default speed of the **Chain In** port of the ATLAS.
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