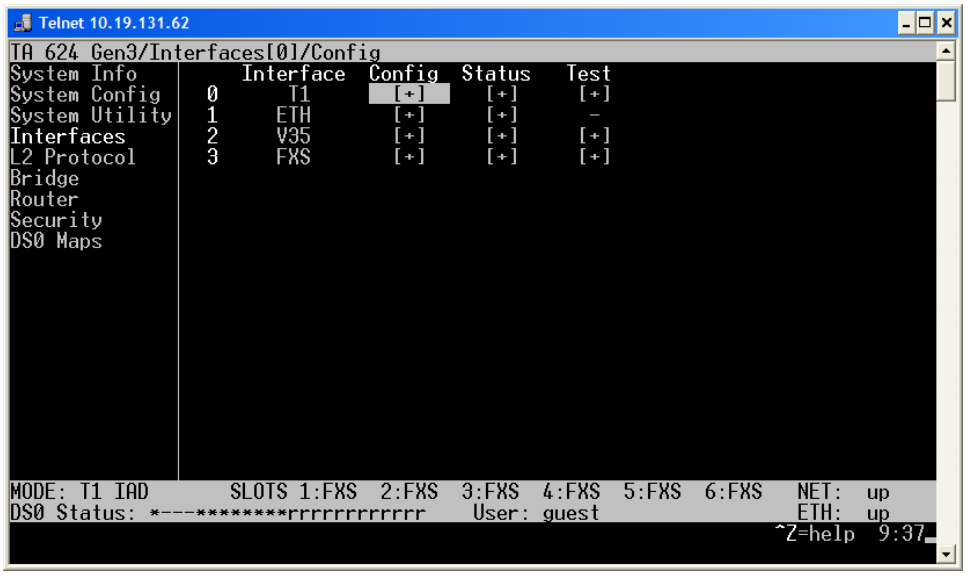
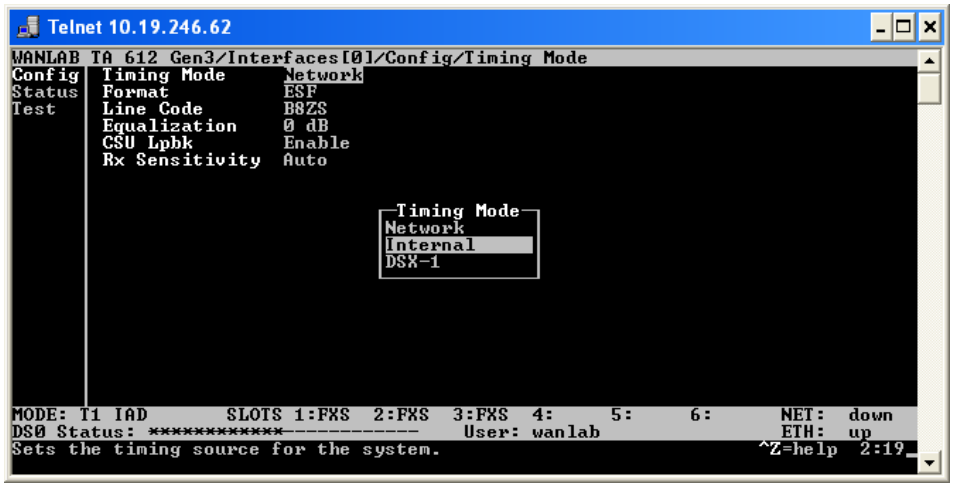
Configuring an ADTRAN Total Access 6xx Series for a full T1 data P2P connection “Host Router”:

This document will walk you through the basic setup for a Total Access 6xx series. The process will follow the OSI model in that we begin with Layer 1 and work our way up to the router at Layer 3. The application is that we are using the full bandwidth of a T1 to connect and route two locations in a point-to-point configuration. Although there is no voice traffic in this application, simply changing the DS0 map would be all that is necessary for adding some voice channels.

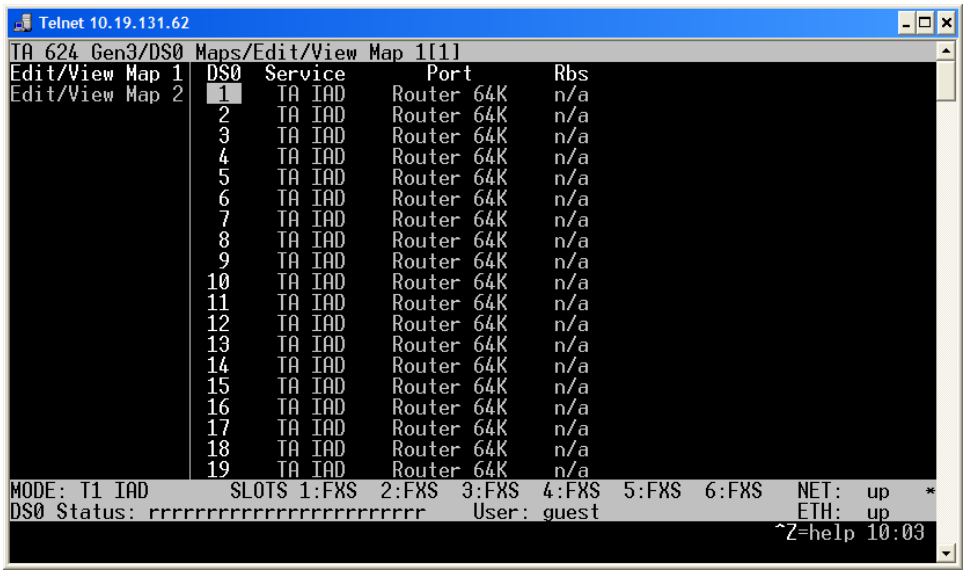
1. From the Interfaces menu, select Config for the T1 Interface and hit Enter.



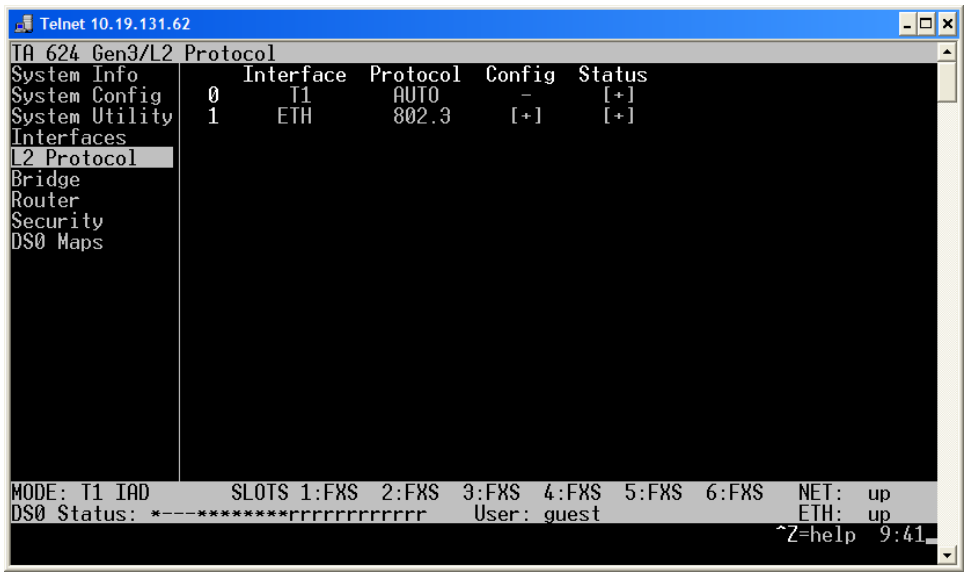
2. This is where you configure the frame format, line coding, and T1 timing. We are going to use ESF/B8ZS (which are the defaults). Now we need to set the T1 clocking. T1 clocking is extremely important. There can be one and only one clock source on a T1 circuit. In this example we are going to set the main side router to be the clocking for the T1 circuit. Set the Timing Mode to Internal.



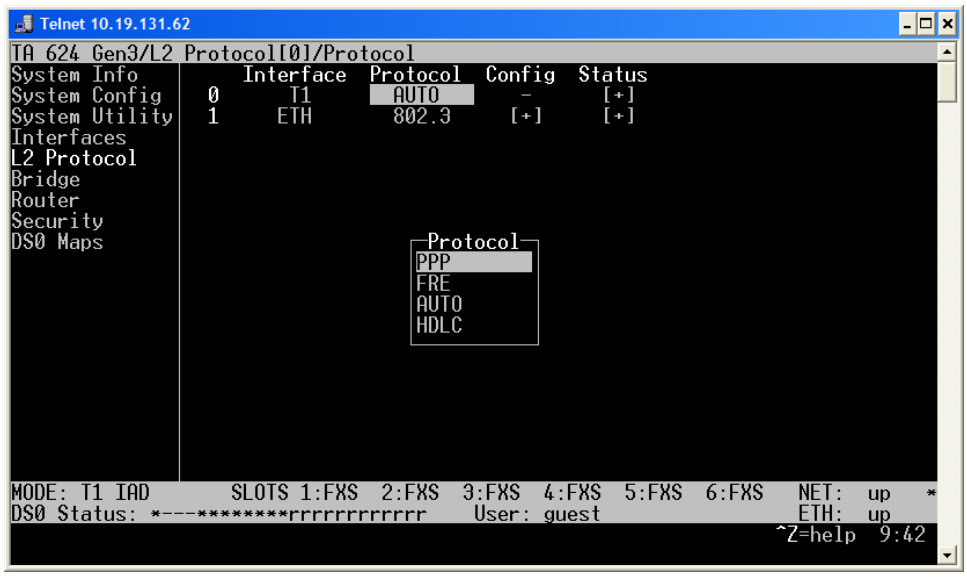
3. Hit H to return to the main menu, then from the DS0 Maps menu, select Edit/View Map 1 and hit Enter. What you will see is a list of all 24 channels of the T1. Since this is a full T1 for data, we will set all 24 DS0s to TA IAD and Router 64K. To set these options, arrow over to the Service column for the first DS0. Hit Enter and select TA IAD. Do the same for the Port column. This must be done for all 24 DS0s.



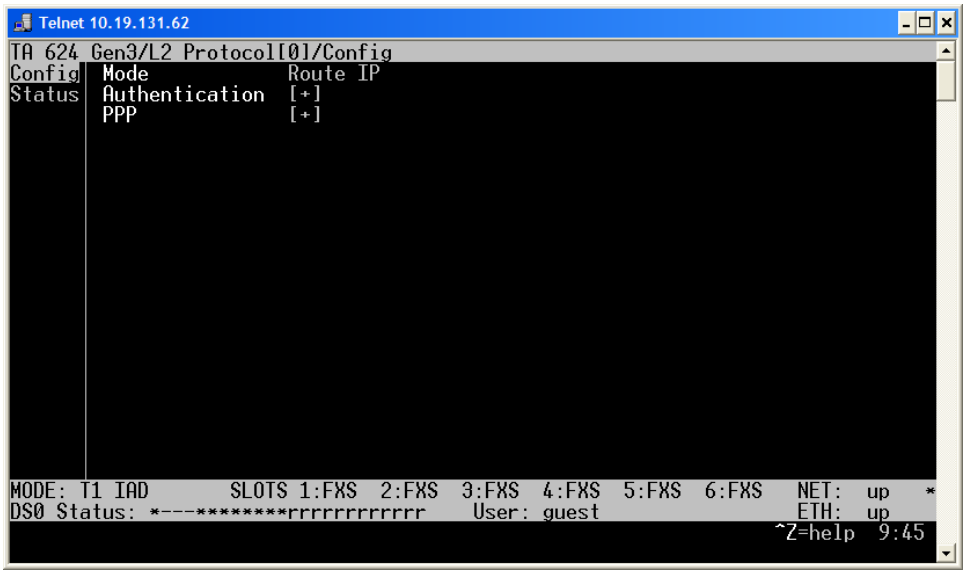
4. Hit H to return to the main menu, and then arrow down to the L2 Protocol menu.



5. Arrow over to the Protocol column for the T1 interface. Hit Enter and select the appropriate protocol. For this example, we are setting up a PPP connection. When asked to confirm, hit Y.



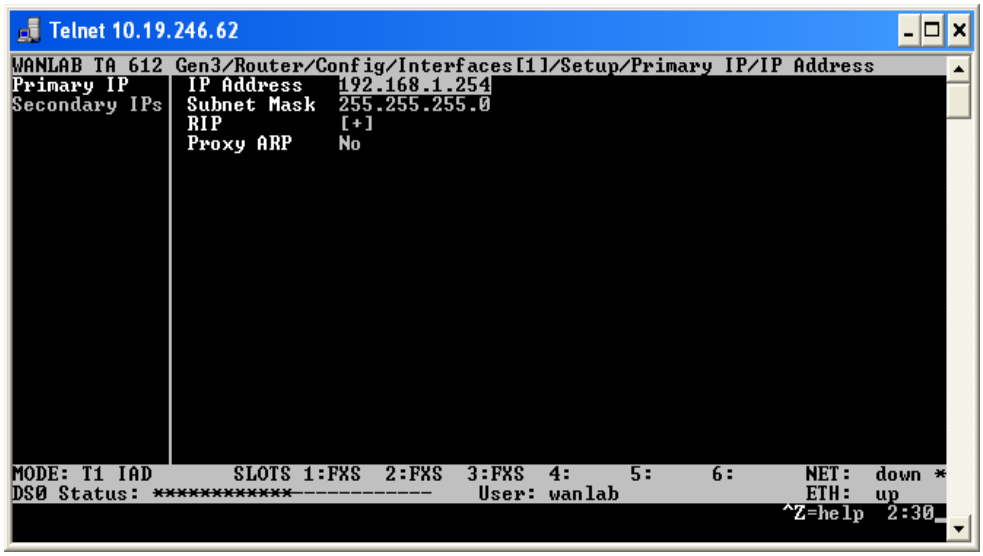
6. Arrow over to the Config column for the T1 interface. Hit Enter. Confirm that the Mode is set to Route IP as shown.



7. Arrow back to the left one time and down to Config for the Ethernet interface. Hit Enter and confirm that the Mode is set to Route IP. Hit H to return to the main menu.

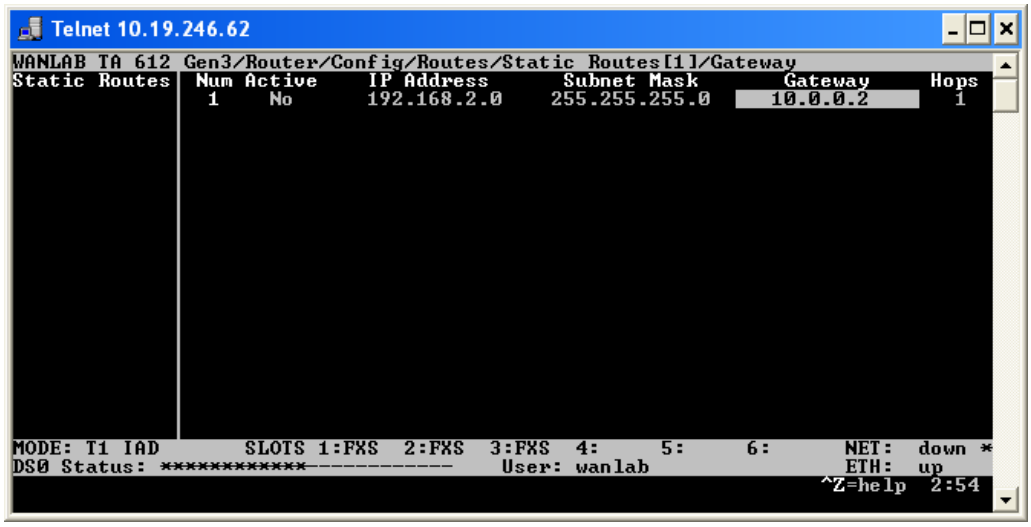
8. From the Router menu, select Config and then Interfaces. Now select Setup for the T1 Interface. On this screen, you will enter the IP addresses you will be using as your WAN addresses. These are the addresses for the point-to-point link. The local IP is your end of the link. Typical settings are shown here.

9. Return to the Router/Config/Interfaces menu and select Setup for the Ethernet interface. Select Primary IP and then enter the IP address that you have allocated from your LAN to be the routers IP address. Hit H to return to the main menu.



Note: If you are telnetting to the unit and you choose to change the Ethernet IP address, you will need to change the IP address of your workstation to an address on the same network as the Total Access to continue configuring the unit.

10. Now, you will need to configure the route table. Go to Router > Config > Routes. If this is just a point-to-point setup then you can set the Default Gateway as the remote side's WAN IP address. If there is a different Default Gateway (such as an Internet router), then you will need to set that as the Default Gateway and configure static routes. Fill in 192.168.2.0 for the "IP Address" and 255.255.255.0 for the "Subnet Mask." For Gateway type 10.0.0.2 because this is the next hop to get to the remote side network. Hit H to return to the main menu.



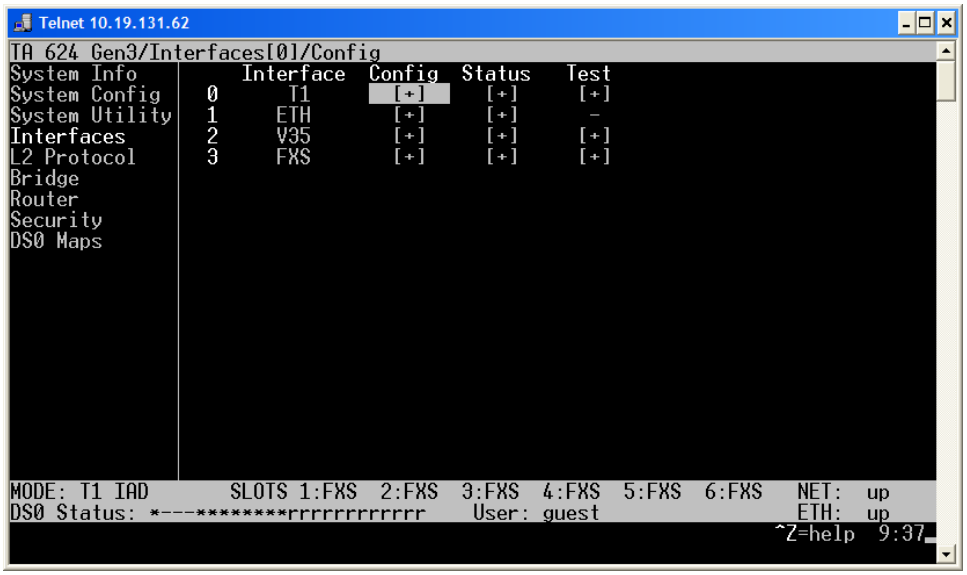
11. At this point, you should have a working configuration for the "Host Router." All 24 DS0s are being routed to the internal router of the Total Access. Connecting a switch to the 10/100 Base-T interface of the Total Access will allow your LAN to communicate to the remote location. *If you do not have the "Remote Router" configured see below.

12. For some initial troubleshooting, you can check the Interfaces/T1/Status menu. The Performance/Current numbers should be ZERO. Checking the Alarms menu should reveal no alarms (dashes are good, asterisks indicate alarms).

13. For further troubleshooting help, please call 1-888-423-8726 or email support@adtran.com.

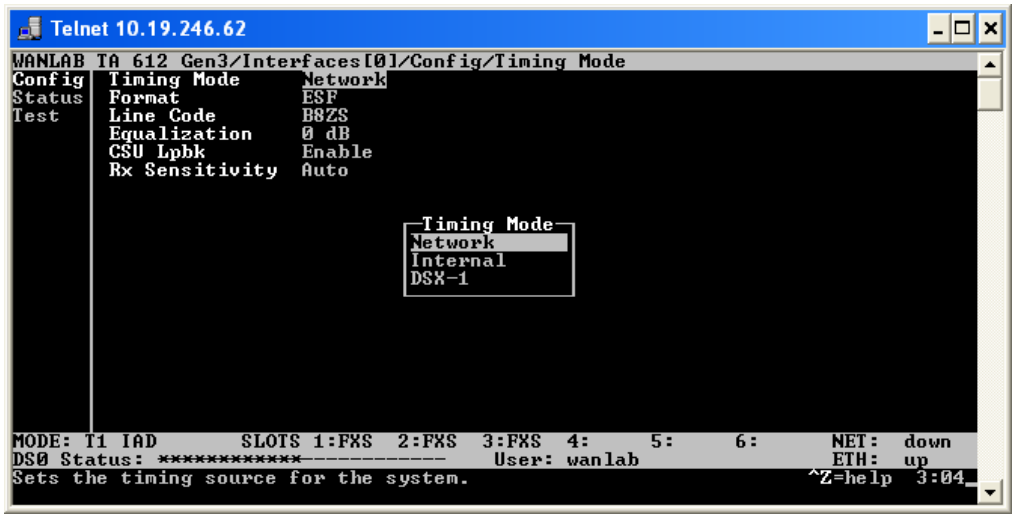
Configuring an ADTRAN Total Access 6xx Series for a full T1 data P2P connection "Remote Router":

1. From the Interfaces menu, select Config for the T1 Interface and hit Enter.

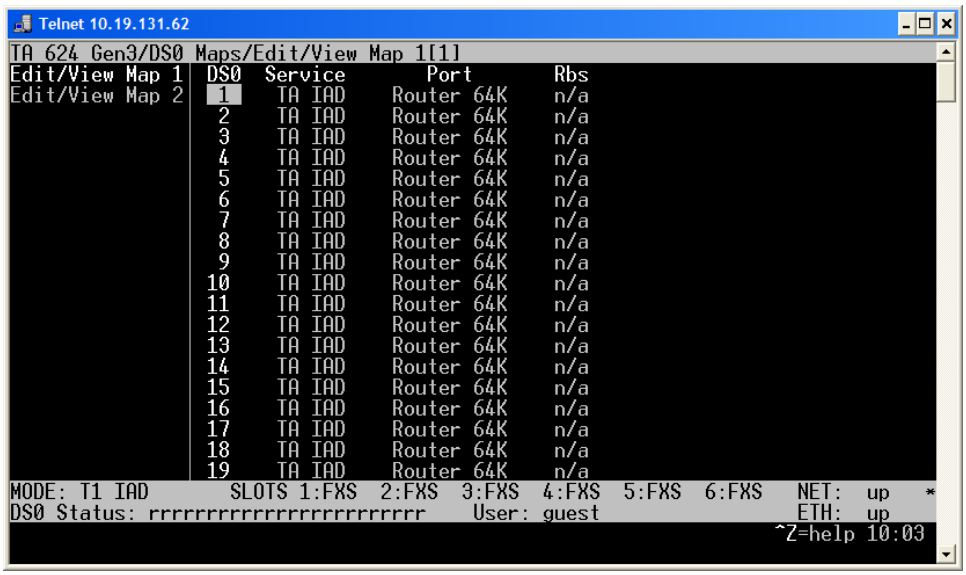


2. This is where you configure the frame format, line coding, and T1 timing. We are going to use ESF/B8ZS (which are the defaults). Now we need to set the T1 clocking. T1 clocking is extremely important. There can be one and only one clock source on a T1 circuit. In this example we are

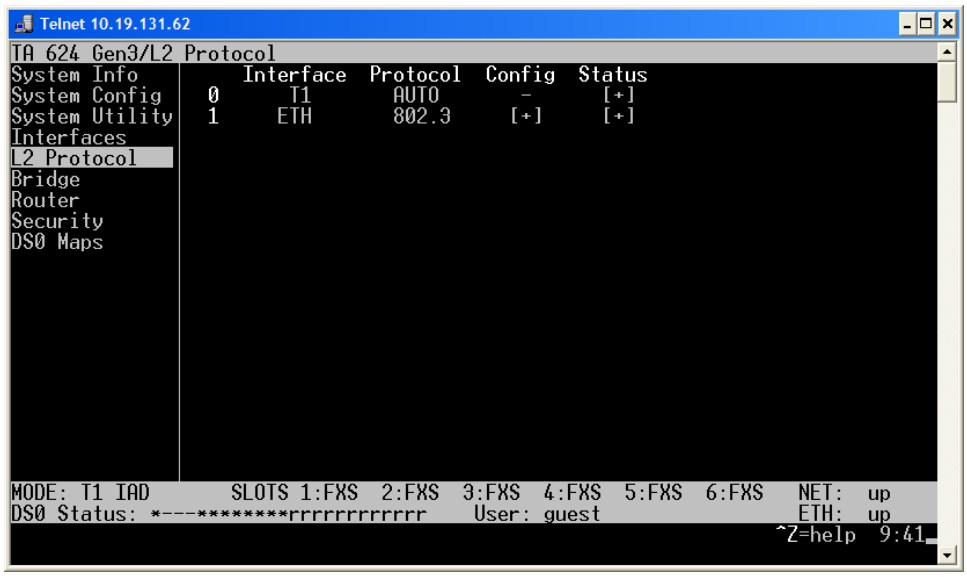
going to set the main side router to be the clocking for the T1 circuit. Therefore, set the Timing Mode to Network (This is a default setting).



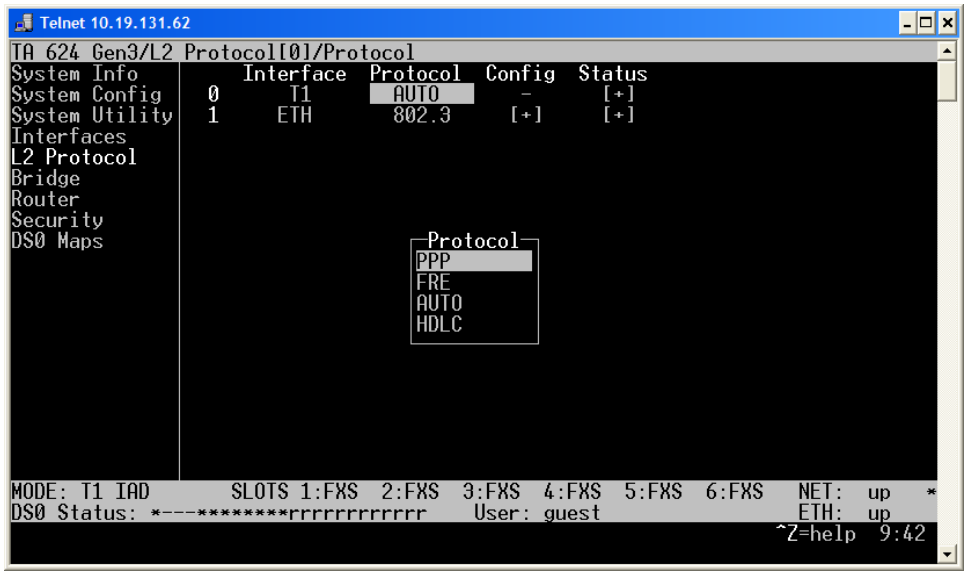
2. Hit H to return to the main menu, then from the DS0 Maps menu, select Edit/View Map 1 and hit Enter. What you will see is a list of all 24 channels of the T1. Since this is a full T1 for data, we will set all 24 DS0s to TA IAD and Router 64K. To set these options, arrow over to the Service column for the first DS0. Hit Enter and select TA IAD. Do the same for the Port column. This must be done for all 24 DS0s.



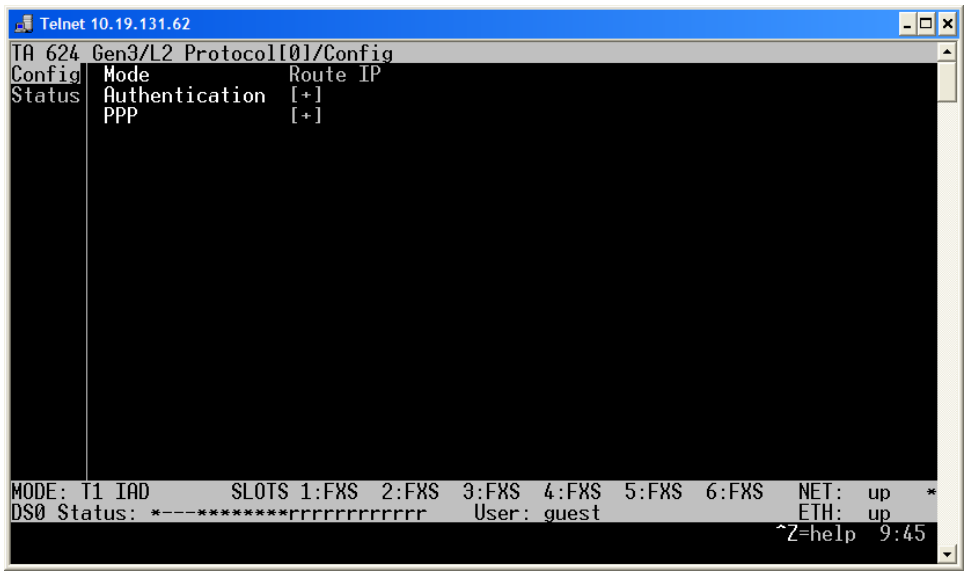
3. Hit H to return to the main menu, and then arrow down to the L2 Protocol menu.



4. Arrow over to the Protocol column for the T1 interface. Hit Enter and select the appropriate protocol. For this example, we are setting up a PPP connection. When asked to confirm, hit Y.



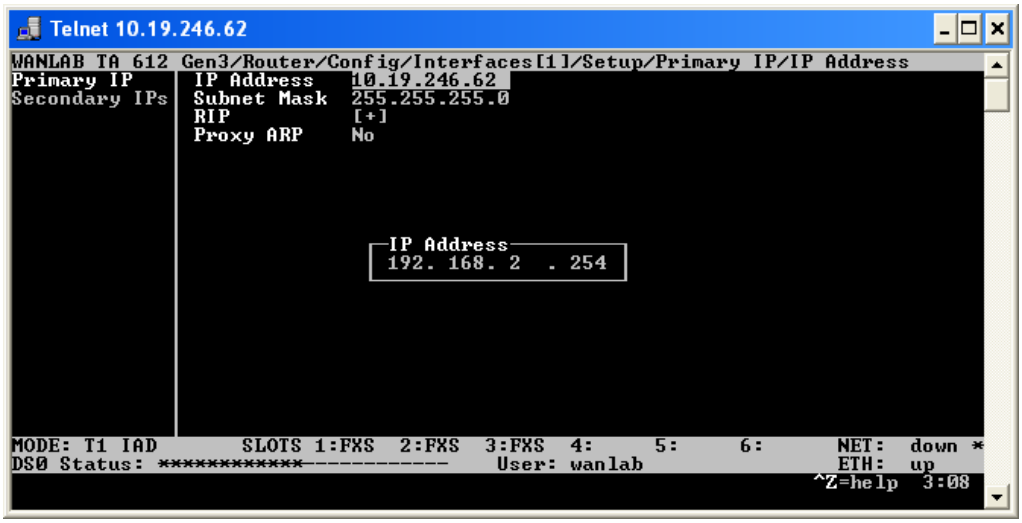
5. Arrow over to the Config column for the T1 interface. Hit Enter. Confirm that the Mode is set to Route IP as shown.



6. Arrow back to the left one time and down to Config for the Ethernet interface. Hit Enter and confirm that the Mode is set to Route IP. Hit H to return to the main menu.

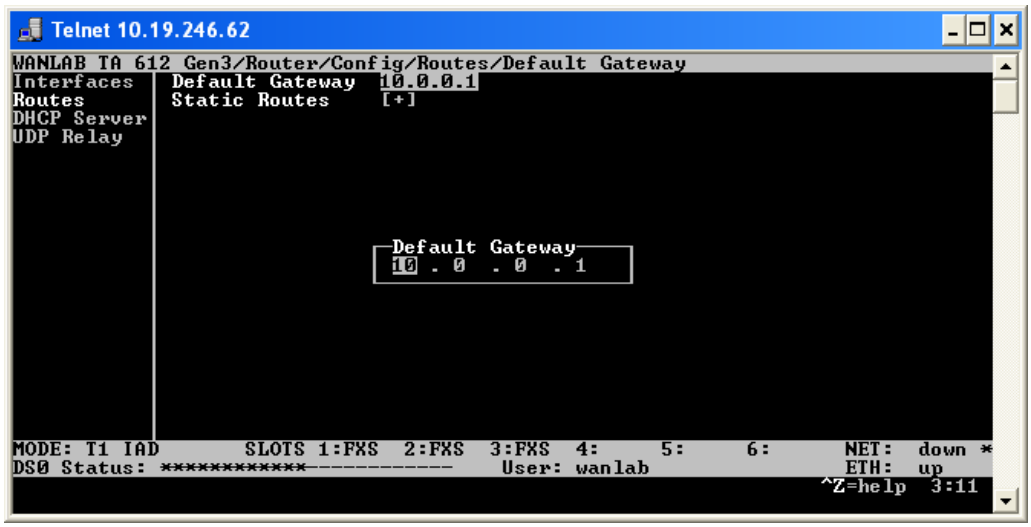
7. From the Router menu, select Config and then Interfaces. Now select Setup for the T1 Interface. On this screen, you will enter the IP addresses you will be using as your WAN addresses. These are the addresses for the point-to-point link. The local IP is your end of the link. Typical settings are shown here. *They should be the opposite of the "Host Router."

8. Return to the Router/Config/Interfaces menu and select Setup for the Ethernet interface. Select Primary IP and then enter the IP address that you have allocated from your LAN to be the routers IP address. Hit H to return to the main menu.



Note: If you are telnetting to the unit and you choose to change the Ethernet IP address, you will need to change the IP address of your workstation to an address on the same network as the Total Access to continue configuring the unit.

9. Now, you will need to configure the Default Gateway. Go to Router > Config > Routes. Since this is just a point-to-point setup then you can set the Default Gateway as the remote side's WAN IP address. Hit H to return to the main menu.



10. At this point, you should have a working configuration for the Total Access Point-to-Point T1 configuration. All 24 DS0s are being routed to the internal router of the Total Access. Connecting a switch to the 10/100 Base-T interface of the Total Access will allow your LAN to communicate to the host location.

11. For some initial troubleshooting, you can check the Interfaces/T1/Status menu. The Performance/Current numbers should be ZERO. Checking the Alarms menu should reveal no alarms (dashes are good, asterisks indicate alarms).

12. For further troubleshooting help, please call 1-888-423-8726 or email support@adtran.com.