

Equipment Required

- Category 5 - UTP cable for connecting the system to the existing network.
- VT100 terminal or PC with VT100 emulation software.
- DB-9 (male) to DB-9 (female) straight-through serial cable for configuring the unit.

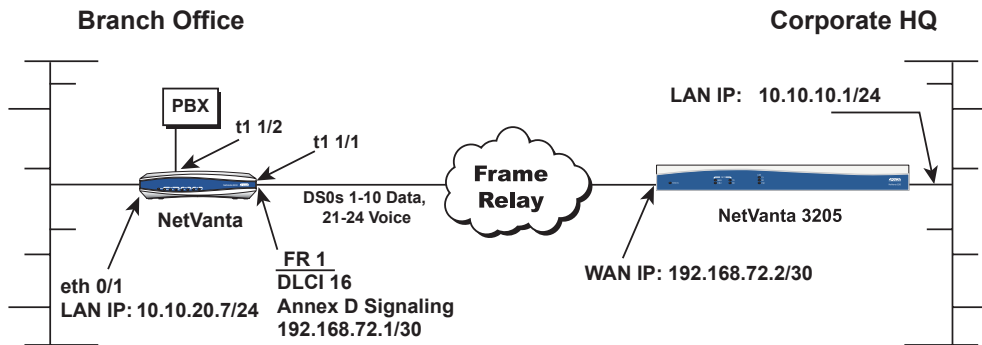
NOTE

This quick start guide provides step-by-step instructions for configuring your application. The configuration scripts are available on the ADTRAN OS System Documentation CD.

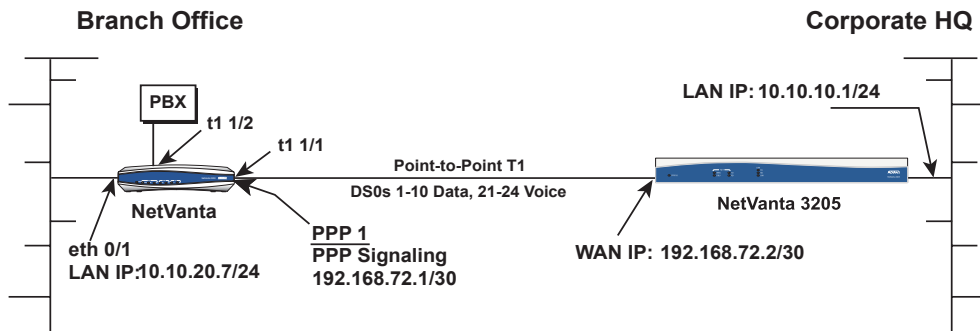
*The configuration parameters used in the example outlined in this document are for instructional purposes only. Please replace all underlined entries (**example**) with your specific parameters to configure your application*

Network Diagrams

Frame-Relay Diagram



PPP over Fractional T1 Connection Diagram



1 Configuring the Unit

The NetVanta may be initially accessed and managed either via a console session or through a Telnet session. See step 1a for console session instructions. Initiating a Telnet session requires using a hub and two Ethernet cables (one for the PC and one for the unit). The default Ethernet IP address is 10.10.10.1. Refer to step 11 to change Telnet session settings.

1a Initiating a Console Session

1. Connect a VT100 terminal (or PC with VT100 emulation software) to the NetVanta **CONSOLE** port using a DB-9 (male) to DB-9 (female) straight-through serial cable.
2. Configure the COM port with the following parameters:
Data Rate: 9600
Data Bits: 8
Parity Bits: None
Stop Bits: 1
Flow Control: None
3. Open a VT100 terminal session. (Please refer to the appropriate VT100 terminal software documentation for detailed instructions.)
4. Press the **<Enter>** key.
5. Enter **enable** at the **>** prompt.
6. Enter the password when prompted. The default password is **password**.
7. You are now at the **#** prompt. At the **#** prompt, enter **config terminal** to enter the global configuration mode.

2 Configuring the Ethernet Port Parameters

1. At the **(config)#** prompt, enter **interface eth 0/1** to access the configuration parameters for the Ethernet port located on the rear panel of the unit.
2. Enter **ip address 10.10.20.7 255.255.255.0** to assign an IP address to the Ethernet port using a 24-bit subnet mask.



If you are accessing the NetVanta via Telnet, once you change this IP address, you will lose connection to the NetVanta. You must change the IP address of your PC before you can proceed.



ADTRAN recommends that you set the Ethernet speed and duplex to match the switch or hub it is plugged in to.

*For example: (config-eth 0/1)#**speed 10**
(config-eth 0/1)#**half-duplex***

3. Enter **no shutdown** to activate the interface to pass data.
4. Enter **exit** to exit the Ethernet interface commands and return to the global configuration mode.



*The NetVanta Network Interface Modules (NIMs) use a **slot/port** notation for interface identification. All non-modular interfaces built into the base unit (e.g., the Ethernet port) are identified using **0** as the slot number.*

3 Configuring the T1 Network Interface

The following steps demonstrate configuring a T1 network connection with DS0s 1-10 for data.

1. At the **(config)#** prompt, enter **interface t1 1/1** to activate the interface configuration mode for the T1 network interface.
2. Enter **clock source line** to configure the unit to recover clocking from the T1 network connection.



*If two units are configured on a private T1 (PPP mode), set one unit to **clock source line** and the other to **clock source internal**. For frame-relay, set both ends to **clock source line**.*

4 Creating the T1 Interface TDM Group

1. At the **(config-t1 1/1) #** prompt, enter **tdm-group 1 timeslots 1-10** to create a TDM group for timeslots 1-10 (the data DS0s) on the T1 network connection (t1 1/1).
2. Enter **no shutdown** to activate the T1 interface.
3. Enter **exit** to return to the global configuration mode.



The NetVanta automatically maps DS0s 1-24 from the network connection of a T1/FT1 + DSX-1 NIM to the DSX-1 port. Creating a TDM group removes the specified DS0s from the DSX-1 map. All remaining DS0s not included in the TDM group will be passed from the network port (t1 1/1) to the DSX-1 port (t1 1/2).

5 Configuring the DSX-1 Interface (Optional)

1. Enter **interface t1 1/2** to activate the interface configuration mode for the DSX-1 interface.
2. At the **(config-t1 1/2) #** prompt, enter **signaling-mode robbed-bit** to verify the DSX-1 interface is configured for voice (robbed-bit) signaling. Alternatively, use **signaling-mode none** for PRI voice signaling.
3. Enter **no shutdown** to activate the DSX-1 interface.
4. Enter **exit** to return to the global configuration mode.



*The default t1 1/2 signaling is robbed bit and does not need to be set. To use PRI, set signaling to **none**.*



Skip to step 8 for PPP configuration.

6 Configuring the Frame-Relay Virtual Interface

The following steps outline configuring a frame-relay virtual interface (labeled 1) using a single DLCI back to the corporate router (defined as DLCI 16).

1. At the **(config)#** prompt, enter **interface fr 1** to create a frame-relay virtual interface labeled 1.
2. If the default setting of **ansi** was changed, enter **frame-relay lmi-type ansi** to configure frame-relay virtual interface 1 to use ANSI (Annex D) signaling.
3. Enter **no shutdown** to activate the virtual interface to pass data.
4. Enter **exit** to return to the global configuration mode.
5. The unit has a factory default PPP 1 interface. Enter the command **no ppp 1** to remove this interface.

7 Creating the PVC and Assigning an IP Address

1. At the **(config)#** prompt, enter **interface fr 1.16** to create a PVC assigned to frame-relay virtual interface 1. This activates the configuration parameters for the PVC. Your prompt should now display **(config-fr 1.16)#**.
2. Enter **frame-relay interface-dlci 16** to assign DLCI 16 to this PVC.
3. Enter **ip address 192.168.72.1 255.255.255.252** to assign an IP address of 192.168.72.1 for this PVC using a 30-bit subnet mask.
4. Enter **exit** to return to the global configuration mode.
5. If you are configuring the NetVanta for use in a frame-relay application and have completed this step, skip to step 9.



The default encapsulation is RFC 1490 or IETF. Make certain the remote unit uses the same encapsulation for frame-relay.

8 Configuring the Virtual PPP Interface

The following steps show how to configure a PPP virtual interface (labeled 1) to the corporate router. Skip to step 9 if you are using frame-relay.

1. At the **(config)#** prompt, enter **interface ppp 1** to create a PPP virtual interface labeled 1.
2. Enter **ip address 192.168.72.1 255.255.255.252** to assign an IP address to the PPP endpoint using a 30-bit mask.
3. Enter **no shutdown** to activate the PPP interface.
4. Enter **exit** to return to the global configuration mode.

9 Creating the Cross-Connect

1. For frame-relay applications, at the **(config)#** prompt, enter **cross-connect 1 t1 1/1 1 frame-relay 1** to connect the T1 network connection (t1 1/1) to the virtual frame-relay interface (fr 1.16).

or

2. For PPP applications, enter **cross-connect 1 t1 1/1 1 ppp 1** to connect the T1 network connection (t1 1/1) to the virtual PPP interface (ppp 1).

10 Configuring the Routes

Depending on your network setup, configure your unit in one of the following ways beginning at the **(config)#** prompt:

Scenario 1: Static Route to the Far Side/Internet Access at Local Site

1. Set up the static route: **ip route 10.10.10.0 255.255.255.0 ppp 1** (or **frame-relay 1.16**).
2. Set up the default route: **ip route 0.0.0.0 0.0.0.0 10.10.20.x** (i.e., address of internet router).

Scenario 2: No Internet Access at Local Site

1. Set up the default route: **ip route 0.0.0.0 0.0.0.0 ppp 1** (or **frame-relay 1.16**).
2. The internet router at the far side will need a route statement to send traffic back to this network through the NetVanta 3205. The information (based on the diagram shown at the beginning of this document) is as follows:
 - Destination address: 10.10.20.0 (remote LAN)
 - Subnet mask: 255.255.255.0
 - Gateway: 10.10.10.1 (NetVanta 3205's Ethernet)

11 Configuring Telnet

The following steps show how to access the Telnet configuration parameters and change the password. The default password for initializing a Telnet session is **password** (all lower-case). For security purposes, change the password to something unique. For this example, replace the underlined **word** with a password of your choosing. The NetVanta supports five Telnet sessions (0-4).

1. Verify that the prompt of your unit displays **(config)#**.
2. Enter **line telnet 0 4** to change the configuration parameters for the Telnet session.
3. Enter **password word** to change the login password for the Telnet session.
4. Enter **exit** to return to the global configuration mode.



An enable security mode password must be defined before configured Telnet sessions are activated. See the following step (Step 12) for information on password configuration.

12 Setting the Enable Security Mode Password

1. Verify that the prompt of your unit displays **(config)#**.
2. Enter **enable password word** to set the enable security mode password.

or
3. Enter **enable password md5 word** to encrypt the enable password using MD5 encryption.



The enable command security level passwords are case sensitive.

13 Saving the Configuration

1. Verify that the prompt of your unit displays **(config)#**.
2. Enter **exit** to leave configuration mode.
3. Enter **copy running-config startup-config** to save the current configuration to memory. This command may be abbreviated as **copy run start**.
4. Enter **exit** to close the configuration session.

14 Completing the Installation

The NetVanta is now configured and operational. Complete the installation by connecting the appropriate cables to the T1 and Ethernet networks. Please refer to the NetVanta Hardware Installation Guide for more details on pinouts and cabling.