NetVanta 2000 Series

Quick Start Guide

61200361L2-13C

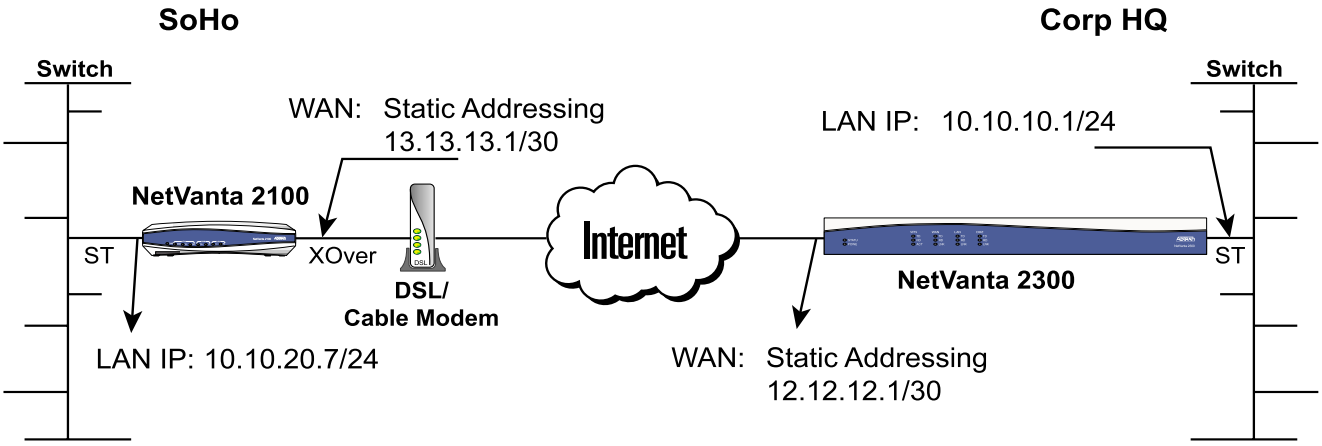
April 2003

Tools Required

- Category 5 - UTP crossover and/or straight-through (ST) cables, as required, for connection to existing network
- A PC with an internet browser (IE 5.5 or greater) for configuring the unit

In this document, the term "NetVanta 2000" means any router in the NetVanta 2000 series (e.g., NetVanta 2100, NetVanta 2300, etc). If a statement only applies to one particular router, the text refers to the router individually.

Network Diagram

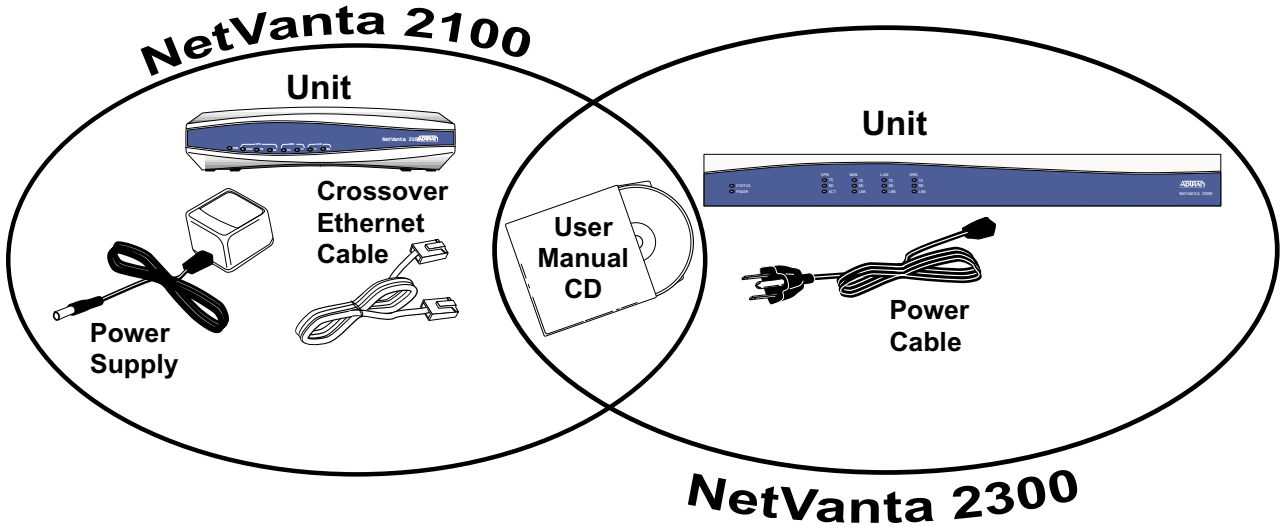


STEPS 1-2, 3-4d — Provide the stateful inspection firewall configuration.

STEPS 1-2, 5-6 — Configure a VPN connection between the NetVanta 2100 and the Corporate office (for the above network diagram).

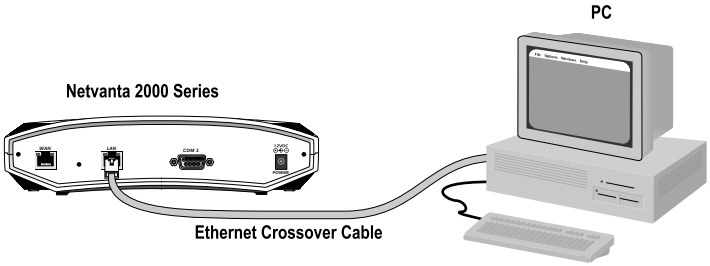
1 Unpacking and Inspecting the System

Each NetVanta 2000 is shipped in its own cardboard shipping carton. Open each carton carefully and avoid deep penetration into the carton with sharp objects.

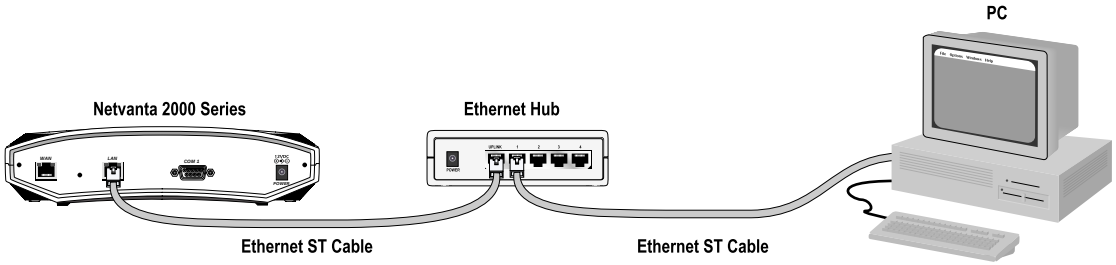


2 Connecting to the NetVanta

The NetVanta 2000 can be accessed and managed via the LAN interface using an Ethernet crossover cable (provided with the NetVanta 2100). Alternately, the NetVanta 2000 may be accessed using a hub and two Ethernet cables (one for the PC and one for the NetVanta). Using a PC with an installed browser (Internet Explorer 5.5 for optimal viewing), the NetVanta can be configured using the web GUI. WAN connections are made in the same manner and with the same cabling considerations as LAN connections.



Direct Connection to PC or DSL/Cable Modem



Connection through Hub

3 Configuring the System

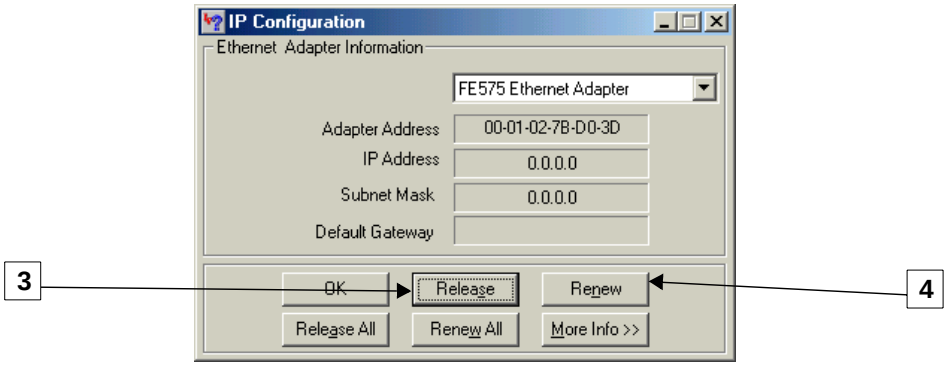
1. Connect the NetVanta 2000 LAN interface to the PC using the appropriate Ethernet cable.
2. Supply power to the PC and the NetVanta 2000 and begin the operating system boot up process. During boot up, the PC obtains an IP address from the NetVanta 2000 DHCP server. Alternately, you could manually change your IP address to 10.10.10.10/24. Refer to your specific operating system's documentation for details on that process.
3. Open your installed browser, and enter 10.10.10.1 in the URL field. The NetVanta 2000 login screen appears.
4. Enter **admin** as the username, enter your admin password (if set), and click the **Login** button. When connecting to the NetVanta for the first time, there is no set password.

> NOTE *For security purposes, it is important to set up an **admin** password immediately. Refer to the NetVanta 2000 System Manual (PN 61200361L1-1) for details.*

5. After logging in to the NetVanta 2000, the welcome screen appears.

3b Changing the IP Address to Your PC

If you wish to obtain a new IP address from the NetVanta 2000 DHCP server, you must release and renew your system's captured IP addresses. Refer to your specific operating system's documentation for details on that process if it differs from the procedure provided below.



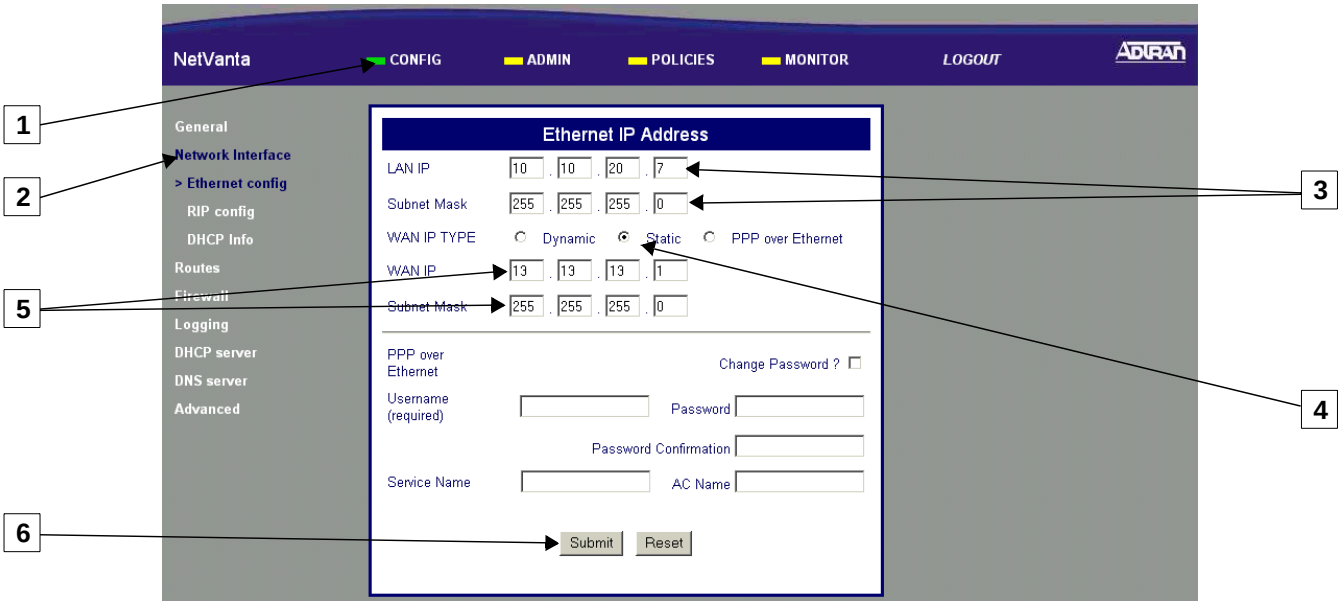
1. Click **Start** on the task bar.
2. Choose **Run**; then type **WINIPCFG** in the text field.
3. Click **Release** to reset all IP parameters.
4. Click **Renew** to obtain new IP parameters.

4 Configuring the LAN and WAN IP Parameters

The NetVanta 2000 comes factory-programmed with a LAN IP address of 10.10.10.1 (24-bit subnet mask) and no pre-programmed WAN IP address. The procedures outlined in this step include changing both the LAN and WAN IP parameters.

The NetVanta 2000 supports three types of WAN IP addresses: Dynamic, Static, and PPPoE (PPP over Ethernet). The IP parameters for your WAN interface must be supplied by your Internet Service Provider (ISP). If your ISP is performing DHCP for IP address assignment (which is common in cable modems), configure the NetVanta 2000 for Dynamic addressing. Use PPPoE when your ISP has supplied you with the configuration parameters for PPPoE (including a username and password).

NOTE *Changing the LAN IP parameters through the LAN interface results in a loss of management connectivity. Follow the correct procedure for your operating system to change the IP address of the managing PC to match the new NetVanta LAN IP parameters.*



1. Select **CONFIG**.
2. Select **Network Interface**.
3. Enter the assigned **LAN IP** address and associated **Subnet Mask**.
4. Enable the **Static** radio button for static addressing.

   NOTE *Your WAN IP address scheme is supplied by your provider. Static addressing is used above only as an example.*

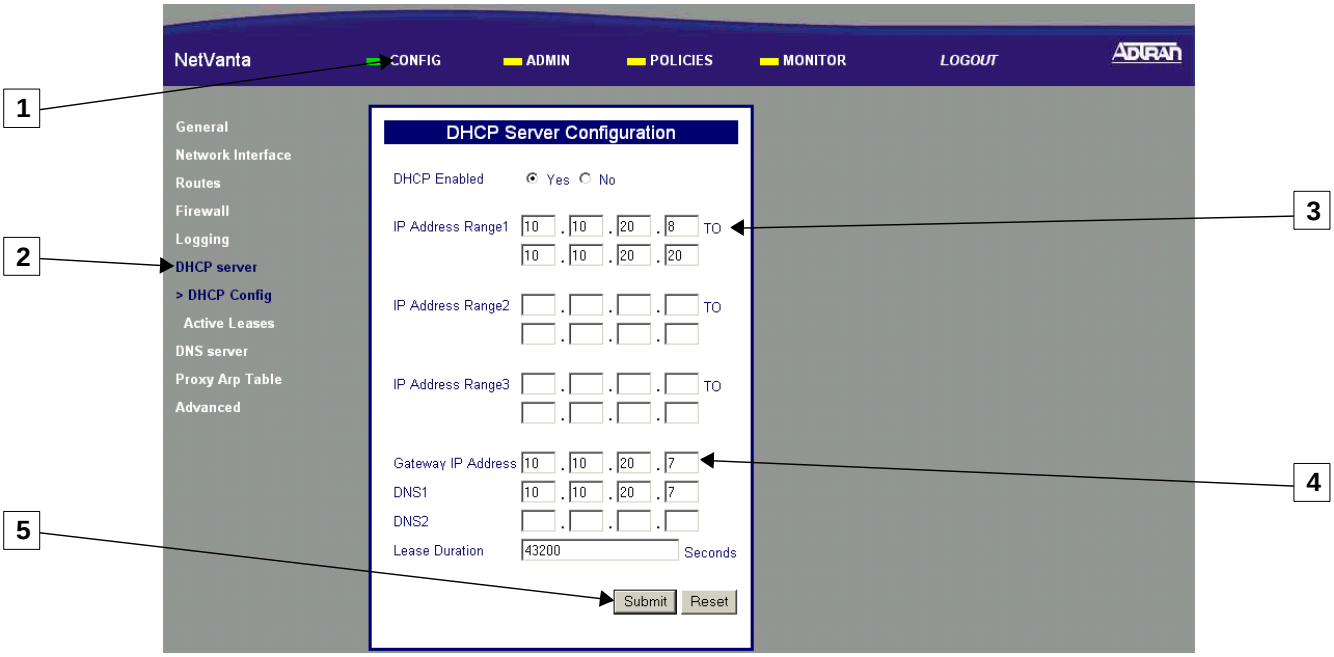
5. Enter the assigned **WAN IP** address and associated **Subnet Mask**.

   NOTE *The WAN IP parameters are set by the service provider. Contact your ISP before configuring the unit.*

6. Click **Submit** to register the changes.

4b Configuring the DHCP Server IP Parameters - Optional

The NetVanta 2000 automatically populates the DHCP **IP Address Range 1** with ten addresses based on your assigned LAN network address.



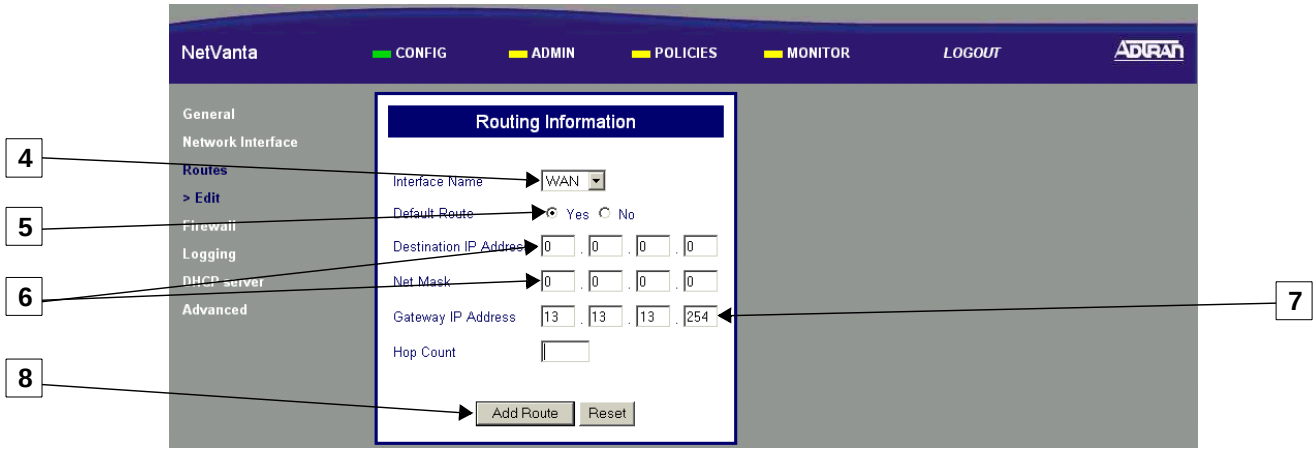
1. Select **CONFIG**.
2. Select **DHCP server**.
3. Enter an IP address range that is on the same subnet as the assigned LAN IP address of the unit.
4. Enter the assigned LAN IP address of the unit.
5. Click **Submit** to register the changes.

4c Adding a Default Route

Skip this step when configuring the NetVanta for Dynamic addressing on the WAN interface.

1. Select **CONFIG**.
2. Select **Routes**.
3. Click **AddRoute**.

4c Adding a Default Route (continued)

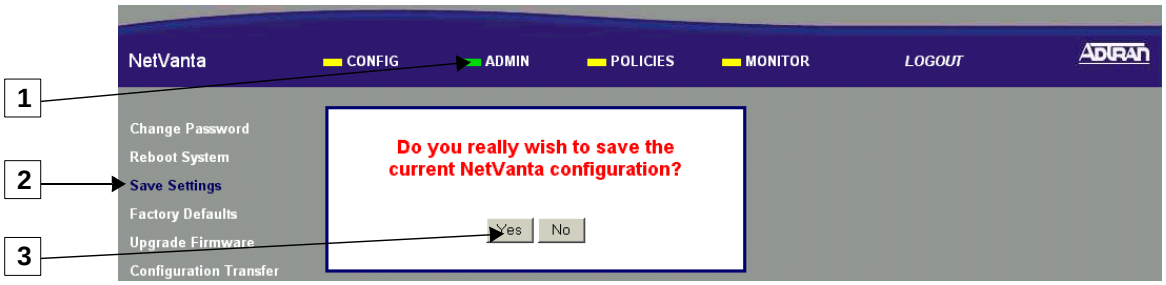


4. Select **WAN** to associate this default route with the WAN interface.
5. Select **Yes** to configure this as the default.
6. Enter all zeros.
7. Enter the next hop IP address for the **Gateway IP Address**.

> *The Gateway IP Address is supplied by your provider.*

8. Click **Add Route** to submit this route to the route table.

4d Saving the Settings

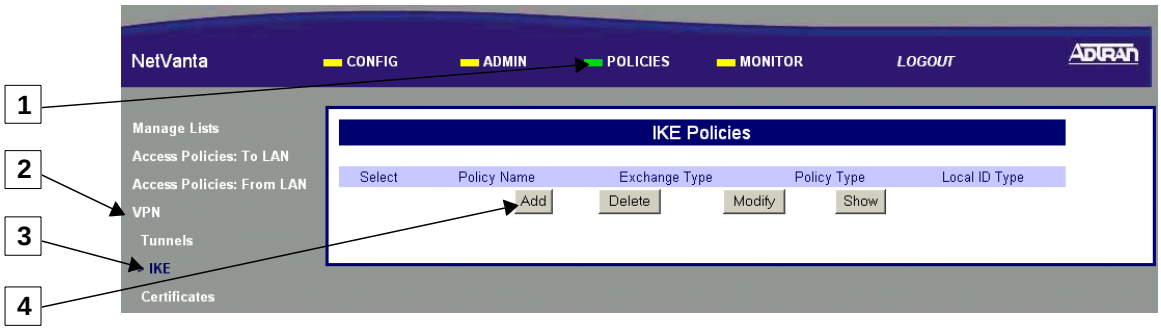


1. Select **ADMIN**.
2. Select **Save Settings**.
3. Select **Yes** to confirm.

> *The NetVanta is now configured for use as a stateful inspection firewall. To configure VPN, proceed to **Step 5**.*

5 Defining a VPN Policy

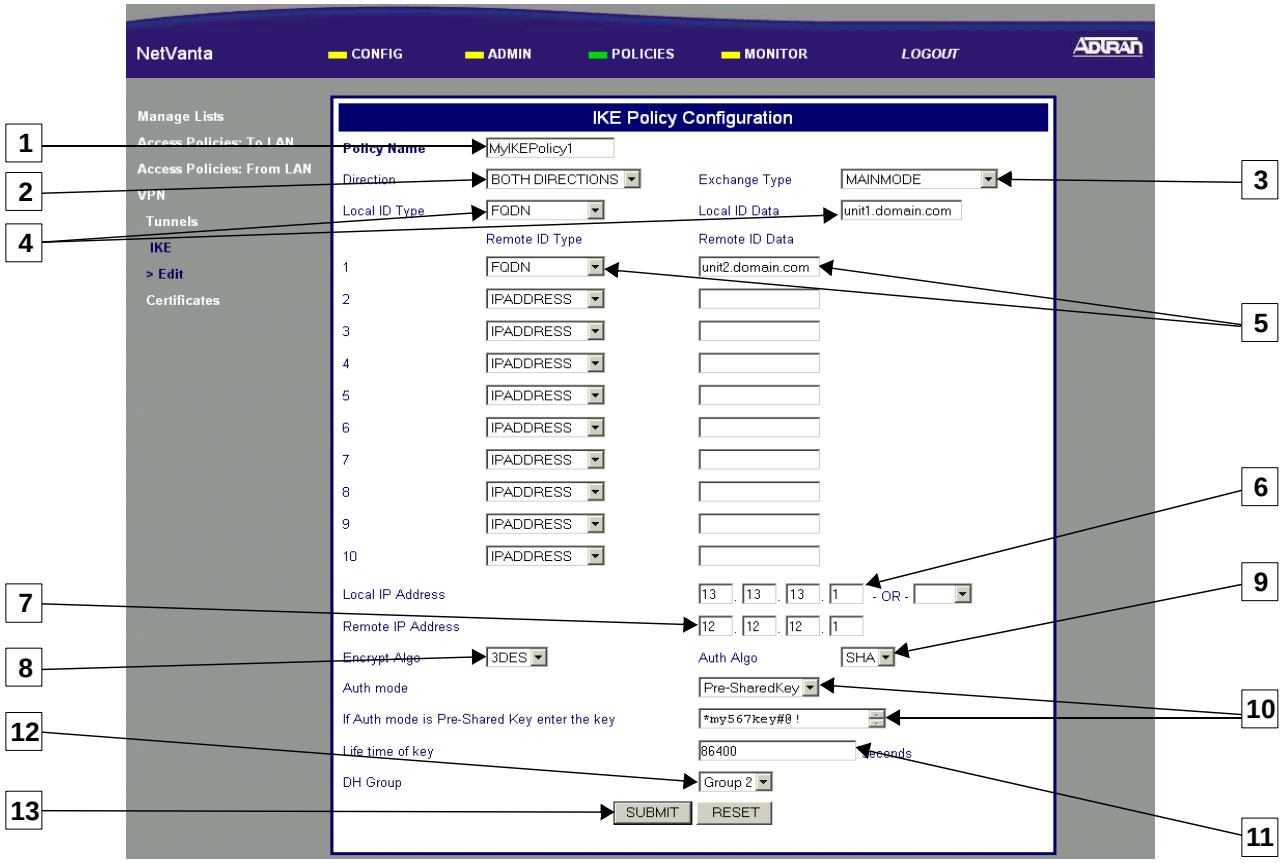
IKE Policy Configuration



1. Select **POLICIES**.
2. Select **VPN**.
3. Select **IKE**.
4. Click the **Add** button.

NOTE *This example assumes the NetVanta 2300 is already similarly configured for a VPN connection to this NetVanta 2100.*

IKE Policy Configuration (continued)



1. Enter an alphanumeric string (spaces are not valid characters) used to identify this policy.
2. Select **BOTH DIRECTIONS** to allow IKE to be initiated by either the local or remote NetVanta.
3. Select **MAINMODE** as the **Exchange Type**.

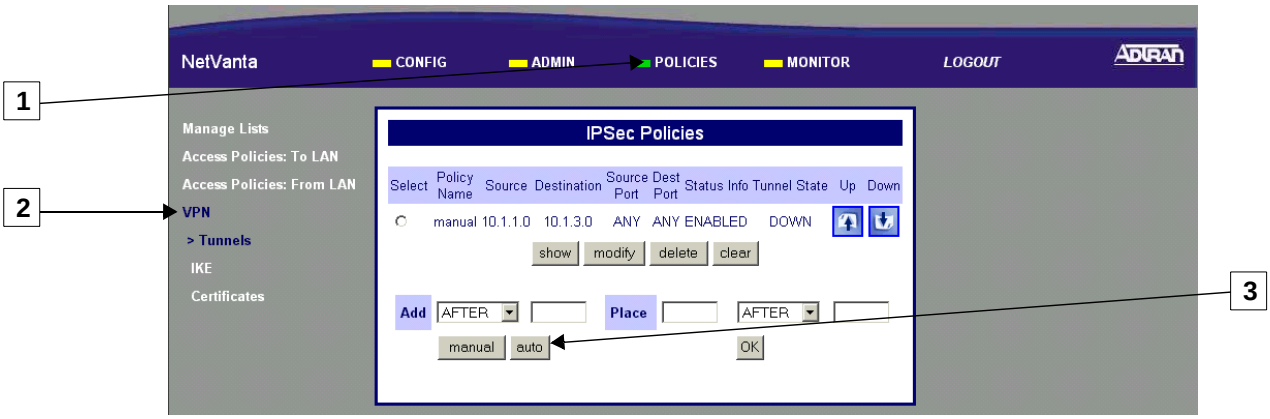
   NOTE *If both sides do not have permanent IP addresses, see the Aggressive Mode tech note on www.adtran.com.*

4. Use the unique Fully Qualified Domain Name (**FQDN**) for the local NetVanta 2000 and enter the identification data (these need not be registered names).
5. Use the unique **FQDN** for the remote users and enter the identification data (these need not be registered names).
6. Enter the local NetVanta 2000's assigned WAN IP address.
7. Enter the remote NetVanta 2000's assigned WAN IP address.
8. Select **3DES** to invoke Triple DES encryption.
9. Select **SHA** to use the secure hash authentication algorithm #1.
10. Select **Pre-SharedKey** and enter the key as a 12-character (minimum) alphanumeric string (spaces are not valid characters). This key MUST be the same for both the local and remote units.
11. Set the **Life time of key** to **86400** seconds (this is the ADTRAN suggested value).

    NOTE *When determining the appropriate value for your application, typical usage contains a 3:1 ratio between the IKE and IPSec key lifetime values. This ratio provides for key negotiation overhead.*

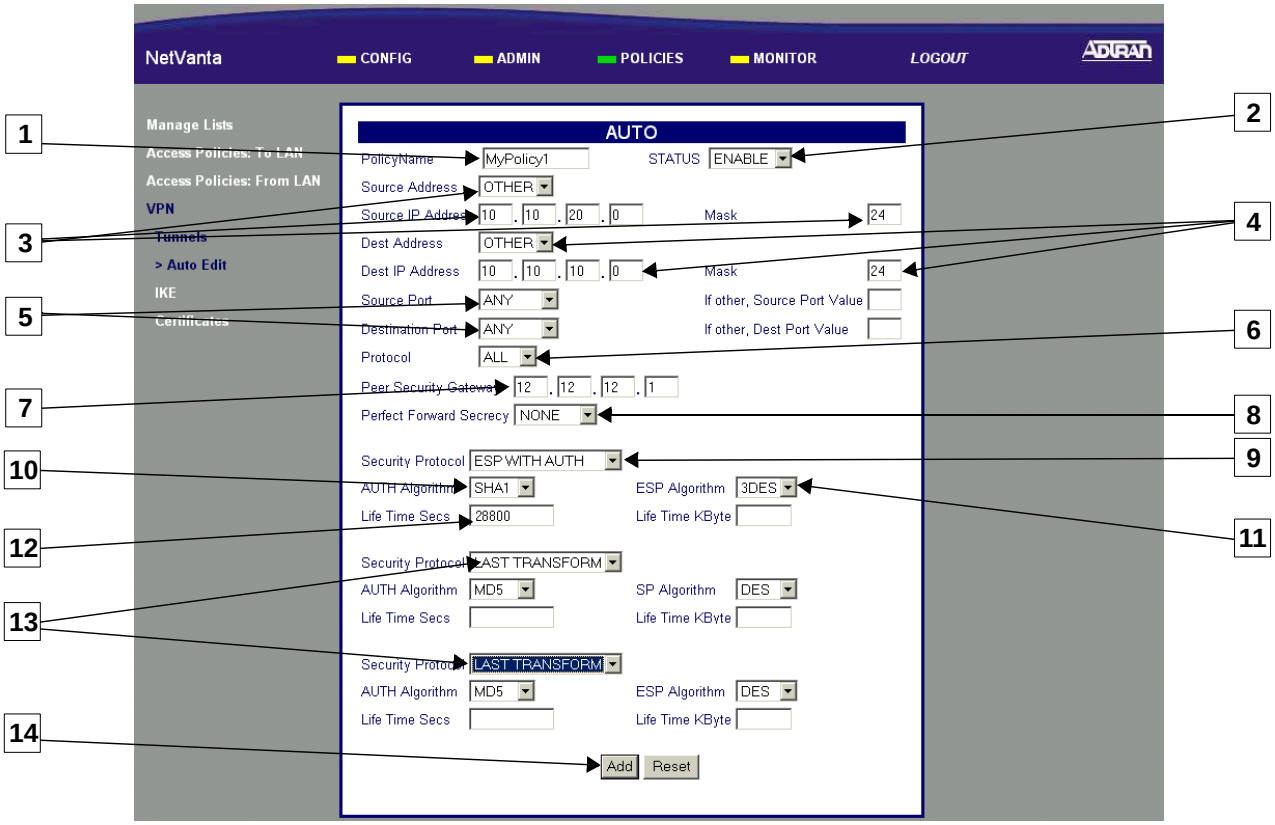
12. Select **Group 2** to invoke Diffie-Hellman Group 2.
13. Click **SUBMIT** to register the changes.

IPSec Policy Configuration



1. Select **POLICIES**.
2. Select **VPN**.
3. Click the **auto** button.

IPSec Policy Configuration (continued)



1. Enter an alphanumeric string (spaces are not valid characters) to identify this policy (this is usually the same as the IKE name).
2. Select **ENABLE** to configure this as an active policy.
3. Select **OTHER** and enter the local NetVanta 2000's assigned LAN network address (e.g., 10.10.20.0) and associated subnet mask.
4. Select **OTHER** and enter the remote NetVanta 2000's assigned LAN network address (e.g., 10.10.10.0) and associated subnet mask.
5. Select **ANY** (for both the **Source Port** and **Destination Port**) to apply this policy to all data ports.
6. Select **ALL** to apply this policy to all data protocols.
7. Enter the remote NetVanta 2000's assigned WAN IP address.

   NOTE *If the remote NetVanta 2000 is configured for dynamic addressing on the WAN interface, enter 0.0.0.0 here.*

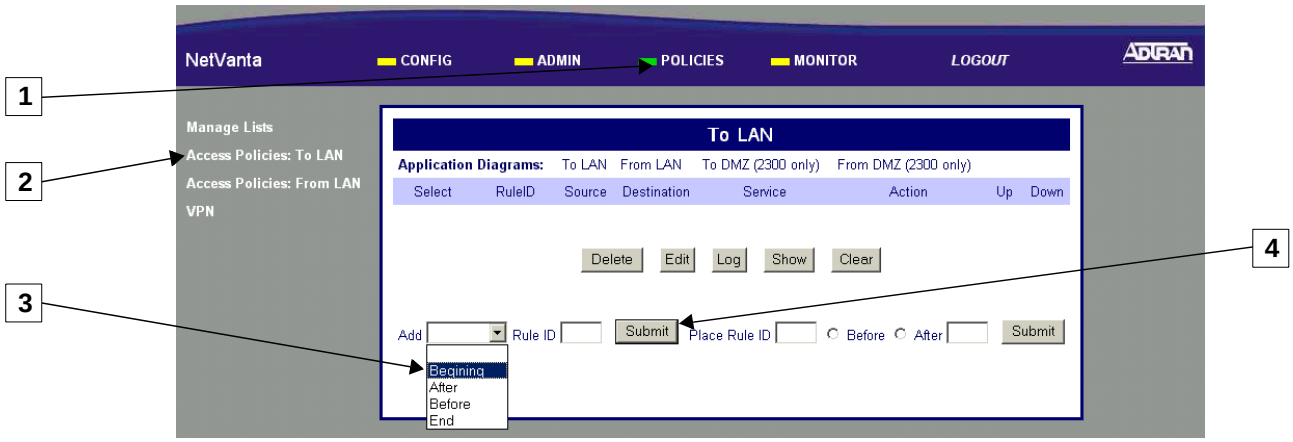
8. Select **NONE**.
9. Select **ESP WITH AUTH**.
10. Select **SHA1** to invoke secure hash algorithm #1.
11. Select **3DES** to use Triple-DES encryption algorithm.
12. Set the key lifetime value to **28800** seconds (this is the ADTRAN suggested value).

    NOTE *When determining the value for your application, typical usage contains a 3:1 ratio between the IKE and IPSec key lifetime values. This ratio provides minimal key negotiation overhead.*

13. Select **LAST TRANSFORM** for both **Security Protocol** settings.
14. Click the **Add** button to register this policy.

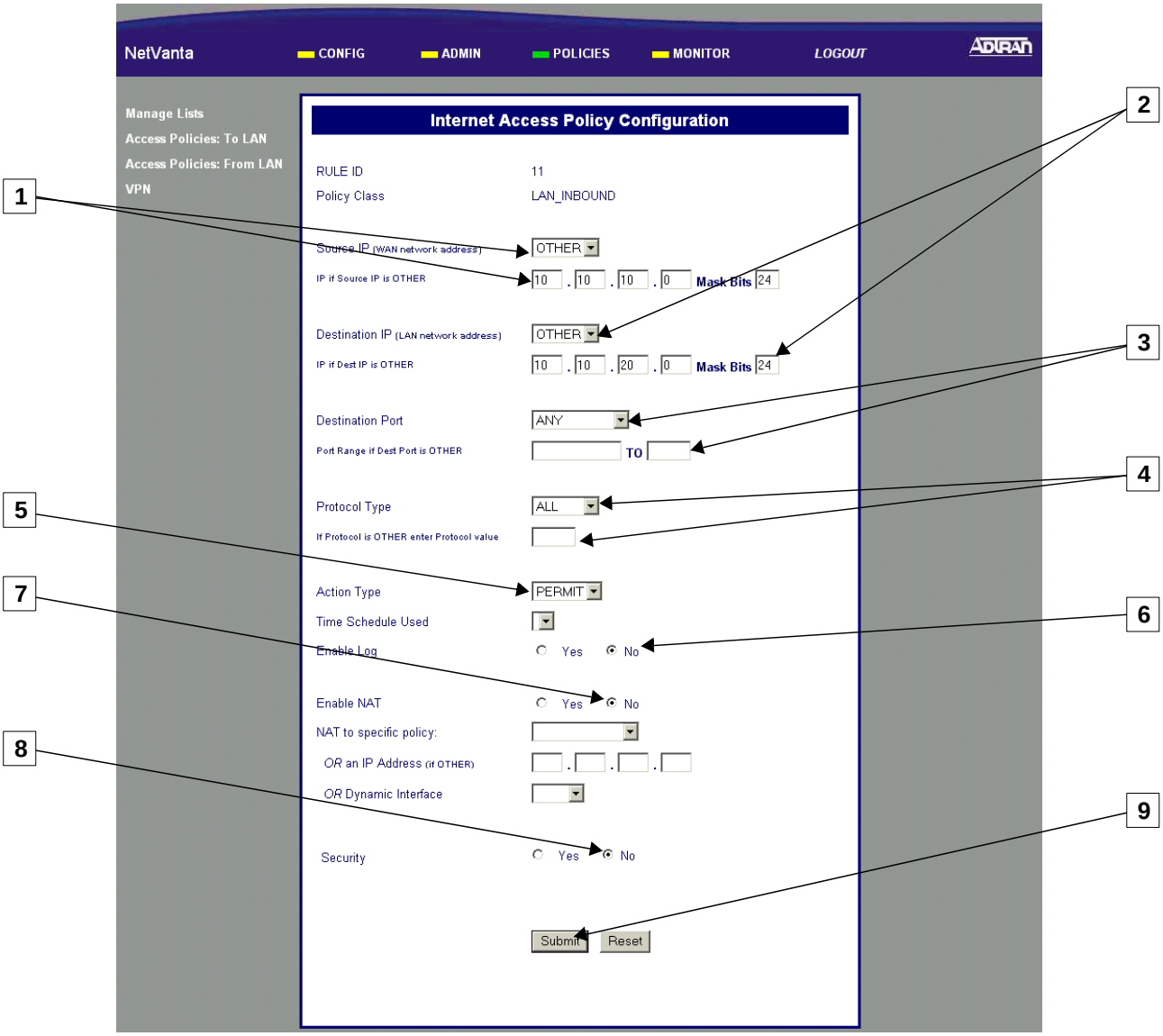
5b Defining LAN Access Policies

To LAN Access Policy Configuration (Inbound Traffic)



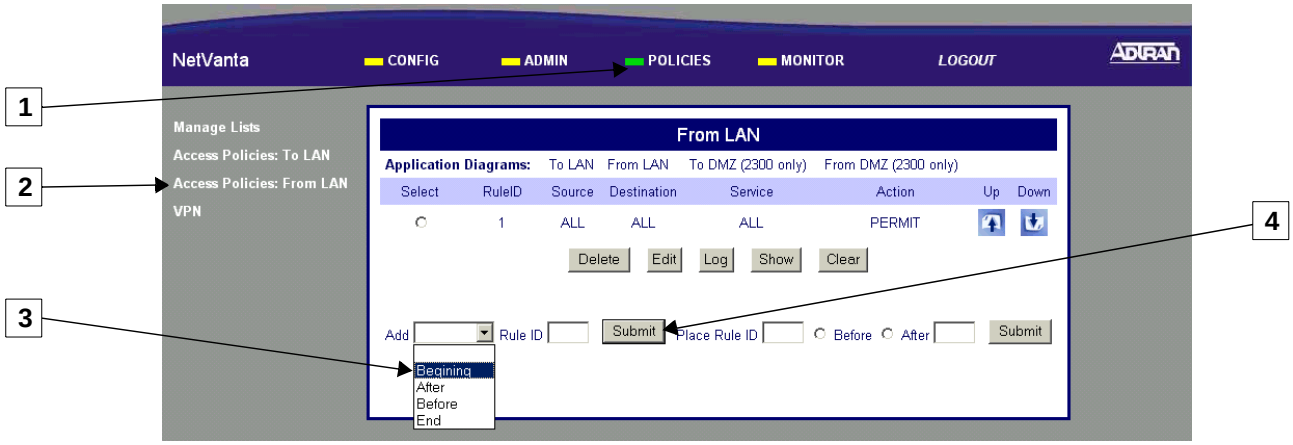
1. Select **POLICIES**.
2. Select **Access Policies: To LAN** (incoming traffic).
3. Select **Beginning** to place the new access policy at the beginning of the table.
4. Click **Submit** to begin the policy configuration.

To LAN Access Policy Configuration (continued)



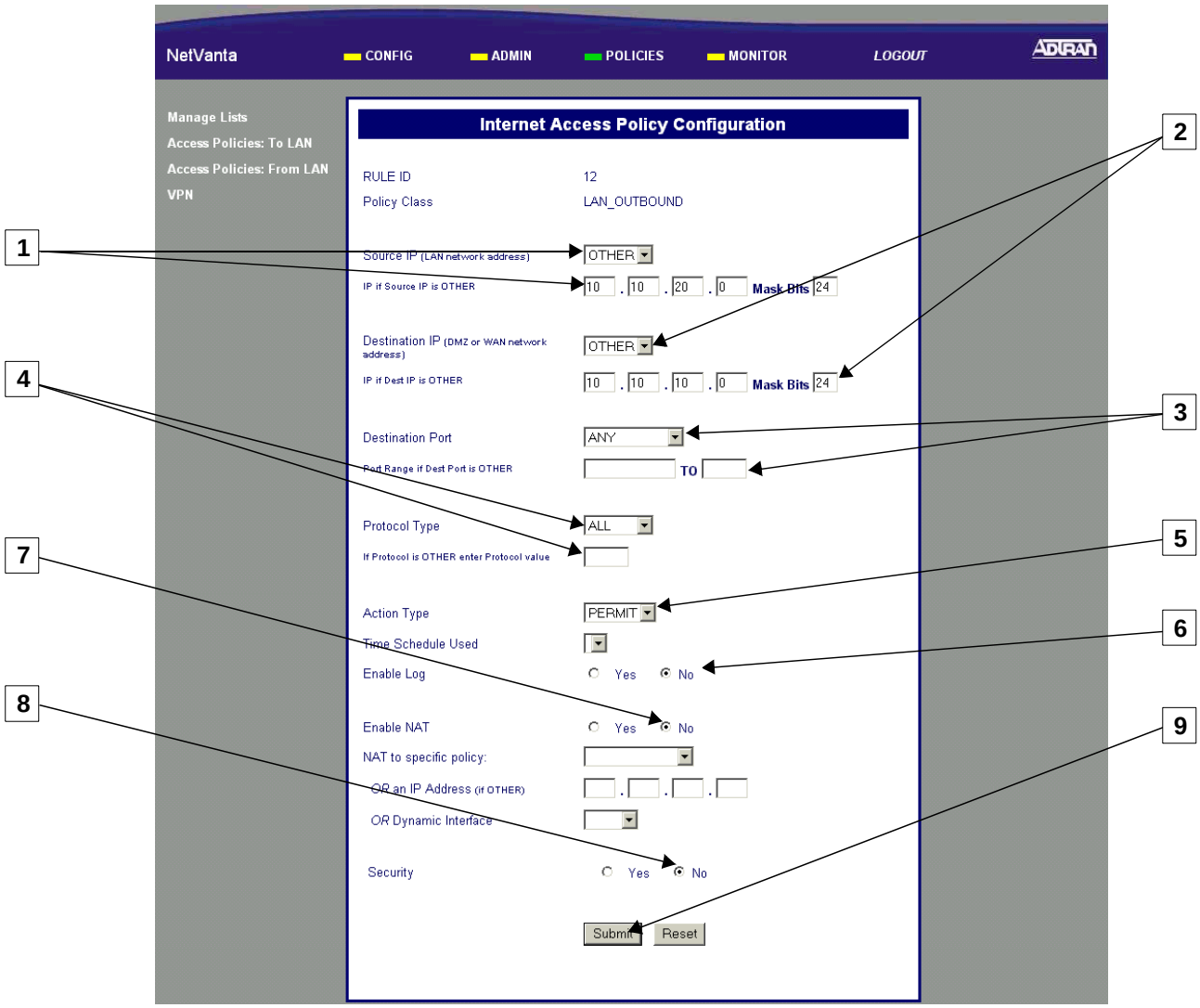
1. Select **OTHER** and enter the remote unit's assigned LAN IP network address and associated mask bits.
2. Select **OTHER** and enter the local NetVanta 2000's assigned LAN IP network address and associated mask bits.
3. Select **ANY** to forward all TCP/UDP ports, or select **OTHER** and enter the port (or port range) in the field below it.
4. Select **ALL** to forward all data protocols, or select **OTHER** and enter the protocol value (using decimal notation) in the field below it.
5. Select **PERMIT** to configure this policy to permit only the specified data.
6. Set **Enable Log** to **No**.
7. Set **Enable NAT** to **No**.
8. For **Security**, select **No**.
9. Click **Submit** to register this policy.

From LAN Access Policy Configuration (Outbound Traffic)



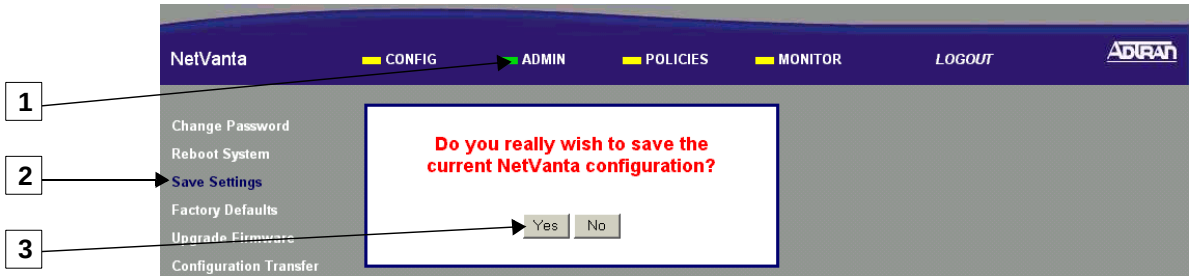
1. Select **POLICIES**.
2. Select **Access Policies: From LAN**.
3. Select **Beginning** to place the new access policy at the beginning of the table.
4. Click **Submit** to begin the policy configuration.

From LAN Access Policy Configuration (continued)



1. Select **OTHER** and enter the local NetVanta 2000's assigned LAN IP network address and associated mask bits.
2. Select **OTHER** and enter the remote NetVanta 2000's assigned LAN IP network address and associated mask bits.
3. Select **ANY** to forward all TCP/UDP ports, or select **OTHER** and enter the port (or port range) in the field below it.
4. Select **ALL** to forward all data protocols, or select **OTHER** and enter the protocol value (using decimal notation) in the field below it.
5. Select **PERMIT** to configure this policy to permit only the specified data.
6. Set **Enable Log** to **No**.
7. Set **Enable NAT** to **No**.
8. For **Security**, select **No.**
9. Click **Submit** to register this policy.

5c Saving the Settings



1. Select **ADMIN**.
2. Select **Save Settings**.
3. Select **Yes** to confirm.

6 Testing the New Tunnel

1. Ping the LAN IP address of the corporate NetVanta 2300 (10.10.10.1) to test the new tunnel.
2. If the ping is not successful, have the administrator recheck the values and key configured on the NetVanta 2300 for this tunnel (as well as all the policies).