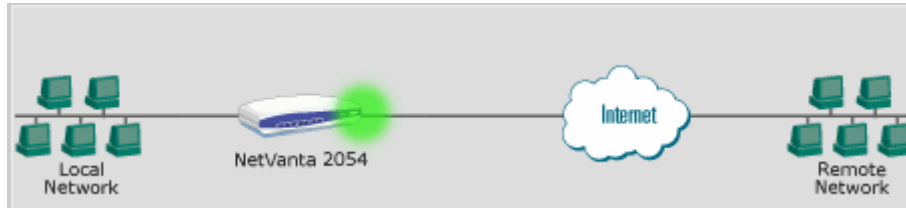


## Configuring NetVanta 2054 for Internet Access

The NetVanta 2054 provides all of the functionality required for servicing Internet Access to a private network, including Ethernet Connectivity, built-in Switch, Firewall, and Network Address Translation (NAT).



### Overview

The NetVanta 2054 is a standalone Internet Access device for small private networks. The NetVanta 2054's Public interface is connected to an Internet Access Ethernet connection. The NetVanta 2054's four port switch provides connectivity for the private network. The four port switch can be directly connected to hosts in the private network, or to an external switch (such as the NetVanta 1224) to expand the number of available switch ports.

### Requirements

The NetVanta 2054 requires an Ethernet interface connection; T1 and other non-Ethernet interfaces cannot be connected directly to the NetVanta 2054.

#### *Software Requirements*

- Modern Web Browser for access to the Web Interface
  - Examples: Internet Explorer 5 or Higher, Mozilla Fire-Fox 1.0 or Higher

#### *Hardware Requirements*

- NetVanta 2054 and Power Adapter
- Two Ethernet Straight Through Cables
- Ethernet Internet Access Point
  - Example: ADSL Modem, Cable Modem or Ethernet Fiber Converter
  - ADSL Modems must be set to "Bridge Mode" before configuring the NetVanta 2054; NetVanta 2054 will Terminate the PPPoE Connection

#### *Information Requirements*

- Public IP Type
  - Static or Dynamically Assigned?
- Private Network Subnet

- Example: 10.10.10.0/24

## Network Diagram

This example uses an external ADSL Modem for Internet Access. The ADSL Modem is set for “Bridge Mode”; please consult the ADSL Modem’s documentation or your service provider for information explaining ADSL bridge mode. The ADSL Modem’s private Ethernet interface is connected to the NetVanta 2054’s Public Interface. The NetVanta’s first switch port (Eth 0/2) is connected to a computer that will be used for configuration.

The following settings will be used for this example. You should evaluate your own needs, and apply your own settings as necessary.

Option	Setting	Note
Public IP Address (Mask)	5.5.5.5 (255.255.255.252)	Your ISP Will Assign
Private IP Address (Mask)	10.10.10.1 (255.255.255.0)	Your LAN Network
Public Interface Mode	PPPoE	Example for ADSL

## Configuring via the Web Interface

The NetVanta 2054 has a Web Interface that can be used to complete Internet Access configuration. The NetVanta 2054’s factory default configuration has an IP Address of 10.10.10.1 applied to its Private interface. You can connect a computer with an IP Address of 10.10.10.2 to any of four switch ports. To access the Web Interface, connect a computer with an IP Address of 10.10.10.2 to any of the four switch ports, and enter the following URL in the address bar of a web browser.

*Web Interface Access URL:* <http://10.10.10.1>

Username: **admin**

Password: **password**

### Resetting the NetVanta 2054:

If you are unable to connect to the Web Interface using the instructions above, the NetVanta can be reset to its factory default configuration. To reset the NetVanta follow these instructions:

- 1) Power on the NetVanta 2054 and let sit for 60 seconds
- 2) Using a Ball Point Pin, press the reset button
  - a. Located between the Eth 0/1 and Console Port
- 3) Hold the button for exactly 45 seconds
- 4) After 45 seconds the unit should reboot
  - a. Indicated by flashing all lights on the front of the unit
- 5) Release the button immediately after reboot

The NetVanta 2054 is now reset to its factory default configuration, with an IP Address of 10.10.10.1 on its Private Interface.

Configuring the Public Interface:

- 1) Click '**Public Interface**' to access the configuration page for the Public Interface.
- 2) Set '**Speed/Duplex**' to 'Auto'.
- 3) Set '**Interface Mode**' as needed. If you are using an ADSL line, or your provider informs you that the NetVanta 2054 will terminate a PPPoE connection, choose 'PPPoE'. Otherwise choose 'IP Routing'.
  - a. For *PPPoE*, set '**Sent Authentication Type**' as necessary. Only your provider can tell you the correct type. Your provider may refer to this as the "Authentication Method". If your provider does not require authentication for PPPoE, choose '*None*'.
  - b. For *PPPoE*, set '**Sent Username**' and '**Sent Password**' as necessary. Only your provider can tell the correct settings.
- 4) Set '**Address Type**' as necessary. Choose '*Negotiated*' or '*DHCP*' if your provider will dynamically assign you an address. Choose '*Static*' if your provider has given you a Public IP address that will never change, and the provider is not going to dynamically assign that address.
  - a. For *Static*, enter the appropriate '**IP Address**' and '**Subnet Mask**' as given to you by your ISP.
  - b. For *Static*, enter the appropriate '**Default Gateway**'. Your provider may refer this to as the 'ISPs Address'.
  - c. For *Negotiated*, check the '**Default Route**' option.
- 5) If you have multiple Public IP Addresses that you would like to use, add them as **Secondary IP Addresses**. Click "Add a New Secondary IP Address" and enter the settings for a single secondary address. Repeat for additional addresses.
- 6) Click '**Apply**'

Configuring the Private Interface:

If you are establishing a new private network, or you do not have a preference for the IP Subnet used in your Private network, skip to "Configuring the Firewall and NAT".

- 7) Click '**Private Interface**'.
- 8) Set '**Address Type**' to '*Static*'.
- 9) Enter the appropriate '**IP Address**' and '**Subnet Mask**'.

*This IP Address will be the Default Gateway for all hosts on your Private Network.*

- 10) Click '**Apply**'.

### Configuring the Firewall and NAT

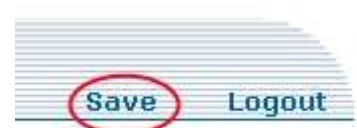
*Note:* running the 'Firewall Wizard' completely erases all prior Firewall and NAT settings. For more information about 'Port Forwarding' please consult the guide titled "Configuring Port Forwarding in AOS".

- 11) Click '**Firewall Wizard**'. This wizard will establish all firewall and NAT settings required to access the Internet from your Private LAN via the NetVanta 2054.
- 12) Read the 'Welcome' Message and click '**Next**'.
- 13) Select the '**Public Interface**' and click '**Next**'.
- 14) Select '**No, I do not ...**' and click '**Next**'. For more information about Port Forwarding, consult the guide "Configuring Port Forwarding in AOS".
- 15) Review the 'Confirm Settings' page, and click '**Finish**'.

### Saving the Configuration:

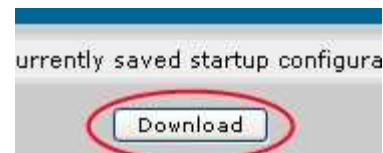
**It is important that you save your configuration!**

- 16) After you have completed configuring your AOS router, click the '**Save**' button in the top right corner.



- 17) You should also consider downloading the configuration to your desktop. This ensures that you will always have a backup copy of the configuration for your router.

- 18) Click '**Configuration**' in the left hand menu.



- 19) Click '**Download Configuration**'. Save this file on your computer, and create backup copies. You can use this file to restore your router to its current settings.

*Note:* Your configuration is now complete. Please consult the section titled “Testing Internet Access” if you experience difficulties accessing the Internet.

## **Configuring via the Command Line Interface:**

*Note:* Please follow the instructions in the section ‘Resetting the NetVanta 2054’, before following the command line interface instructions. This will ensure that the configuration of your NetVanta 2054 is ready for the commands in this section.

### Accessing the Command Line Interface:

The command line interface is available via the Console Port and via Telnet through the Ethernet interface.

#### *Using the Console Port*

You will need a 9 Pin Male to 9 Pin Female straight through cable and a VT100 emulator (Example: HyperTerminal) to access the Console Port. Use the following settings in the VT100 emulator.

- 9600 Baud
- 8 Data Bits
- 1 Stop Bit
- No Parity Bits
- No Flow Control

#### *Using Telnet*

Telnet is a service that can be accessed via an Ethernet connection to the NetVanta 2054. Configure a computer with an IP Address in the same subnet as the NetVanta’s private interface. From the factory the NetVanta uses 10.10.10.1; your computer can be 10.10.10.2. Use the section titled “Resetting the NetVanta 2054” to return your NetVanta 2054 to the factory default settings.

### Gaining Administrative Access via the Command Line Interface:

- 1) Type ‘**enable**’ to gain access to privileged mode.
- 2) Type ‘**configure terminal**’ to access configuration mode.

### Configuring the Public Interface:

- 3) Type ‘**interface eth 0/1**’ to access the Public Interface.
- 4) Type ‘**no shutdown**’ to enable the Public Interface.

- 5) If your connection will use PPPoE (Example: ASDSL), skip to step 8.
  - a. Type '**ip address dhcp**' to set the interface to receive a dynamically assigned address from your provider.
  - b. Type '**ip address 5.5.5.5 255.255.255.252**' to set a statically assigned address, given to you by your provider. You should use your own public IP Address and Subnet Mask.
- 6) Type '**access-policy Public**' to assign the Public policy-class to the Public Interface.
- 7) If your connection will **not** use PPPoE (Example: Fiber, Cable Modem or Metro Ethernet), skip to the section titled 'Configuring the Private Interface'.
- 8) Type '**interface ppp 1**' to create the PPP interface.
- 9) Type '**no shutdown**' to enable the PPP interface.
- 10) Type '**cross-connect 1 eth 0/1 ppp 1**' to associate this PPP interface with the Public Ethernet Interface.
- 11) Type '**access-policy Public**' to assign the Public policy-class to the Public Interface.
- 12) Identify the correct Address Setting, and use the appropriate step below.
  - a. Type '**ip address negotiated**' to set the interface to receive a dynamically assigned address from your provider.
  - b. Type '**ip address 5.5.5.5 255.255.255.252**' to set a statically assigned address, given to you by your provider. You should use your own public IP Address and Subnet Mask.

Configuring the Private Interface:

- 13) Type '**interface vlan 1**' to access the Private Interface.
- 14) Type '**no shutdown**' to enable the Private Interface.
- 15) *Note:* Perform this step only if you want to change the IP Address of the private interface. Type '**ip address 10.10.10.1 0.0.0.0**' to assign the Private Interface an IP Address.
- 16) Type '**access-policy Private**' to assign the Private Policy-Class to the Private Interface.
- 17) Type '**exit**' to leave the Private Interface configuration and return to global configuration mode.

Configuring the Firewall and NAT:

- 18) Type '**ip access-list standard MATCHALL**' to create an access-list that will match all traffic. This will be referenced by the NAT rule in the Private Policy-Class.
- 19) Type '**permit ip any**' to match all traffic.
- 20) Type '**exit**' to exit the access list configuration.
- 21) Type '**ip policy-class Private**' to create the Private Policy-Class. This is referenced in the configuration of the private interface with 'access-policy Private'.
- 22) The next statement will define what Public address to use in the NAT.
  - a. For non-PPP connections, where you entered the public IP Address on the Public Ethernet Interface, type '**nat source list MATCHALL interface eth 0/1 overload**'.
  - b. For PPP connections, where you entered the public IP Address on the PPP interface, type '**nat source list MATCHALL interface ppp 1 overload**'.
- 23) Type '**exit**' to exit the Private policy class configuration.
- 24) Type '**ip policy-class Public**' to create the Public Policy class. This policy class will remain empty. An empty policy class denies the initiating of sessions from that interface.
- 25) Type '**exit**' to leave the Public Policy-Class configuration.

Saving the Configuration:

***It is important that you save the configuration!***

- 26) Type '**end**' to return to enable mode.
- 27) Type '**write**' to permanently store the configuration on the NetVanta 2054.

*Note:* You can copy the output of the command "show run" into a text file and save that file as a backup copy on your computer.

## Testing Internet Access

Before testing Internet Access, verify the following information:

- Your computer's IP Address should be in the same IP Subnet as the NetVanta's Private Interface
- Your computer's default gateway should be the NetVanta's Private IP Address.
- Your computer's DNS settings should be set to those given by your ISP.

You should now be able to access the Internet. If you are unable to do so, please reset your NetVanta 2054, using the instructions in "Resetting the NetVanta 2054" and re-execute this document. If you are still unable to do so, follow these instructions to prepare for calling your ISPs technical support.

- 1) Attempt to ping the NetVanta's Private IP
- 2) Attempt to ping the ISPs Gateway IP Address from your computer.
- 3) If that works, attempt to ping 4.2.2.2 (a root internet server).

If you are able to ping 4.2.2.2, double check your computer's DNS settings.

If you are able to ping your ISPs gateway, but unable to ping 4.2.2.2, please call your ISP and report a network outage.

If you are unable to ping your ISPs gateway, please verify with your ISP that your Internet Service has been activated, and then call AdTran Tech. Support.

If you are unable to ping the NetVanta's Private IP, please Reset the NetVanta, and reuse this guide. If you are still unable to ping the NetVanta, please call AdTran Tech. Support.

*Note:* AdTran Technical Support provides Walk Through and Remote Installation assistance as a paid service through ACES Service Contracts. If you are interested in having AdTran configure your NetVanta 2054, please call ACES at 1-888-874-ACES.