ADTRAN

NetVanta 2000 Series Technical Note

Configuring an Interface (LAN, DMZ, etc.) in Transparent Mode in SonicOS Enhanced

> **NOTE** *This document is applicable to NetVanta 2600 series, 2700 series, and 2800 series units.*

Feature/Application:

Transparent mode simulates the bridging of WAN-side IP addresses/subnets onto internal interfaces, such as the LAN or DMZ interface, by means of controlling the ARP and routing behavior for the affected addresses. Transparent Mode allocations are extremely flexible, allowing for multiple internal interfaces in different zones to simultaneously operate in Transparent Mode, as long as the address assignments remain unique and non-overlapping. Transparent mode can be useful in environments where it is not possible to change existing internal IP addressing, or where it is necessary to deploy a NetVanta 2000 Series appliance in a non-interruptive, in-line fashion.

Transparent Mode works on a NetVanta 2000 Series appliance by defining a "Transparent Range" address object associated with the WAN subnet. The "Transparent Range" defines which external (WAN side) IP addresses the NetVanta 2000 Series will consider to be attached to an internal interface. The Transparent Range object can be a Host, Range, or group of Host or Range Address Objects. Addresses within the Transparent Range will not be NAT'd on egress from the WAN interface, instead, they will retain their original source IP addresses.
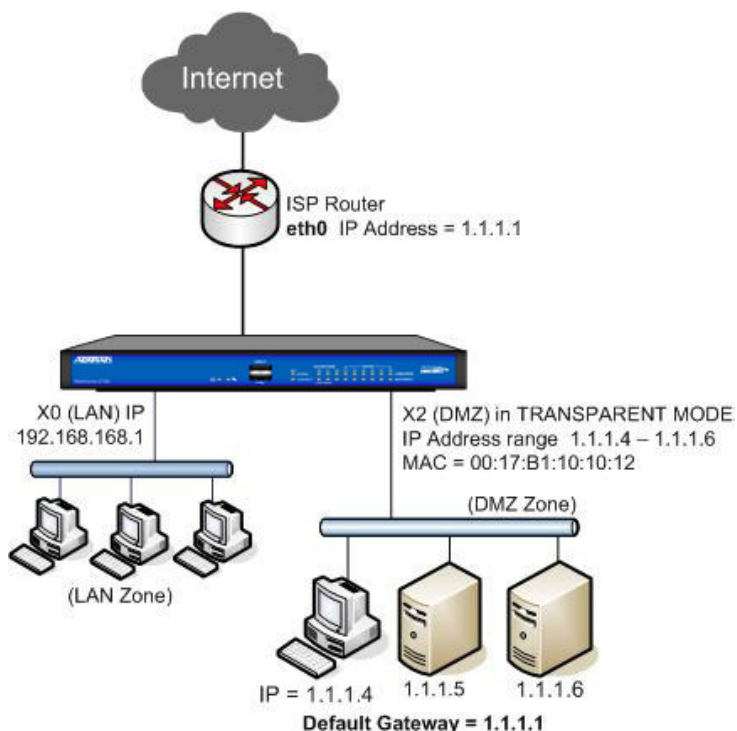
Procedure:

Configuring Interfaces in Transparent Mode

Transparent Mode enables the NetVanta 2000 Series security appliance to bridge the WAN subnet onto an internal interface. To configure an interface for transparent mode, complete the following steps:

Step 1 Click on the **Configure** icon in the **Configure** column for **Unassigned** Interface you want to configure. The **Edit Interface** window is displayed.

Step 2 Select an interface.

•If you select a configurable interface, select LAN or DMZ for Zone.

•If you want to create a new zone for the configurable interface, select Create a new zone. The Add Zone window is displayed.

Step 3 Select **Transparent Mode** from the **IP Assignment** menu.

Step 4 From the **Transparent Range** menu, select an address object that contains the range of IP addresses you want to have access through this interface. The address range must be within the WAN zone and must not include the WAN interface IP address. If you do not have an address object configured that meets your needs:

a. In the **Transparent Range** menu, select Create New Address Object.

b. In the **Add Address Object** window, enter a name for the address range.

    a. For **Zone Assignment**, select WAN.

    b. For **Type**, select:

        o Host if you want only one network device to connect to this interface.

        o Range to specify a range of IP addresses by entering beginning and ending value of the range.

        o Network to specify a subnet by entering the beginning value and the subnet mask. The subnet must be within the WAN address range and cannot include the WAN interface IP address.

c. Enter the IP address of the host, the beginning and ending address of the range, or the IP address and subnet mask of the network.

d. Click **OK** to create the address object and return to the **Edit Interface** window.

Step 5 Enter any optional comment text in the **Comment** field. This text is displayed in the **Comment** column of the **Interface** table.

Step 6 If you want to enable remote management of the NetVanta 2000 Series security appliance from this interface, select the supported management protocol(s): **HTTP**, **HTTPS**, **SSH**, **Ping**, **SNMP**, and/or **SSH**. To allow access to the WAN interface for management from another zone on the same appliance, access rules must be created.

Step 7 If you want to allow selected users with limited management rights to log directly into the security appliance through this interface, select **HTTP** and/or **HTTPS** in **User Login**.

Step 8 Click **OK**.

> NOTE   *The administrator password is required to regenerate encryption keys after changing the NetVanta 2000 Series security appliance's address.*

Configuring Advanced Settings for the Interface

If you need to force an Ethernet speed, duplex and/or MAC address, click the **Advanced** tab. The **Ethernet Settings** section allows you to manage the Ethernet settings of links connected to the NetVanta 2000 Series. **Auto Negotiate** is selected by default as the **Link Speed** because the Ethernet links automatically negotiate the speed and duplex mode of the Ethernet connection. If you want to specify the forced Ethernet speed and duplex, select one of the following options from the **Link Speed** menu:

- 1000 Mbps - Full Duplex ()

- 100 Mbps - Full Duplex

- 100 Mbps - Half Duplex

- 10 Mbps - Full Duplex

- 10 Mbps - Half Duplex

You can choose to override the **Default MAC Address** for the Interface by selecting **Override Default MAC Address** and entering the MAC address in the field. Check **Enable Multicast Support** to allow multicast reception on this interface.

> CAUTION   *If you select a specific Ethernet speed and duplex, you must force the connection speed and duplex from the Ethernet card to the NetVanta 2000 Series security appliance as well.*

Configuring the hosts connected to the Transparent interface:

The hosts connected to the X2 interface should be configured with the IP addresses within the **Transparent Range**. The default gateway could either be the upstream ISP router address or the NetVanta 2000 Series WAN interface IP. Once the hosts are configured appropriately they will be able to go online with the IP address assigned to them without being NAT'ed. Conversely, the hosts can be reached from the WAN side of the NetVanta 2000 Series with the IP address assigned to them provided a **WAN > DMZ** Allow rule exists.