NetVanta 2000 Series Technical Note

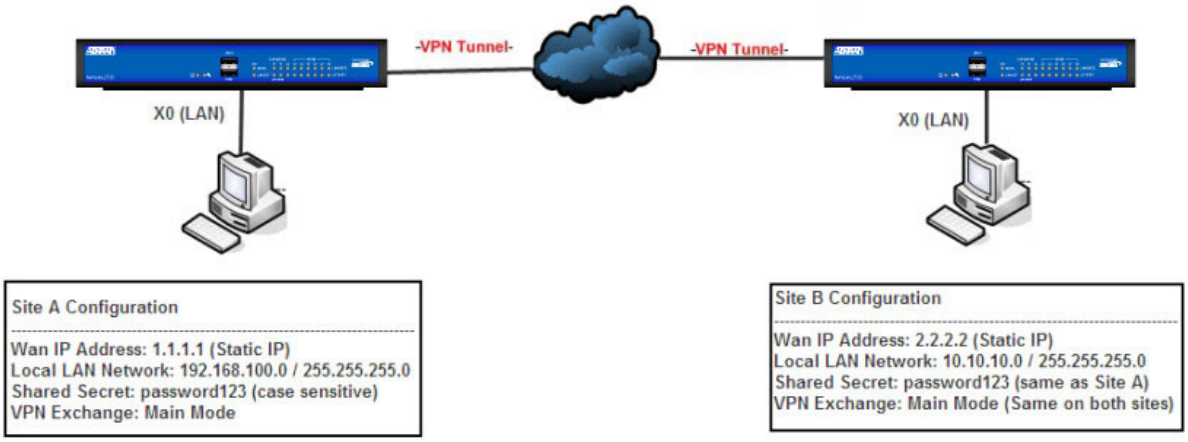
Configuring a Site to Site VPN Policy using Main Mode (Static IP address on both sites) in SonicOS Enhanced

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

Overview / Scenario:

When configuring a Site-to-Site VPN tunnel in SonicOS Enhanced firmware using Main Mode both the NetVanta 2000 Series appliances (Site A and Site B) must have a routable Static WAN IP address.

Network Setup:



Deployment Steps:

Step 1: Creating Address Objects for VPN subnets.

Step 2: Configuring a VPN policy on Site A ADTRAN.

Step 3: Configuring a VPN policy on Site B ADTRAN

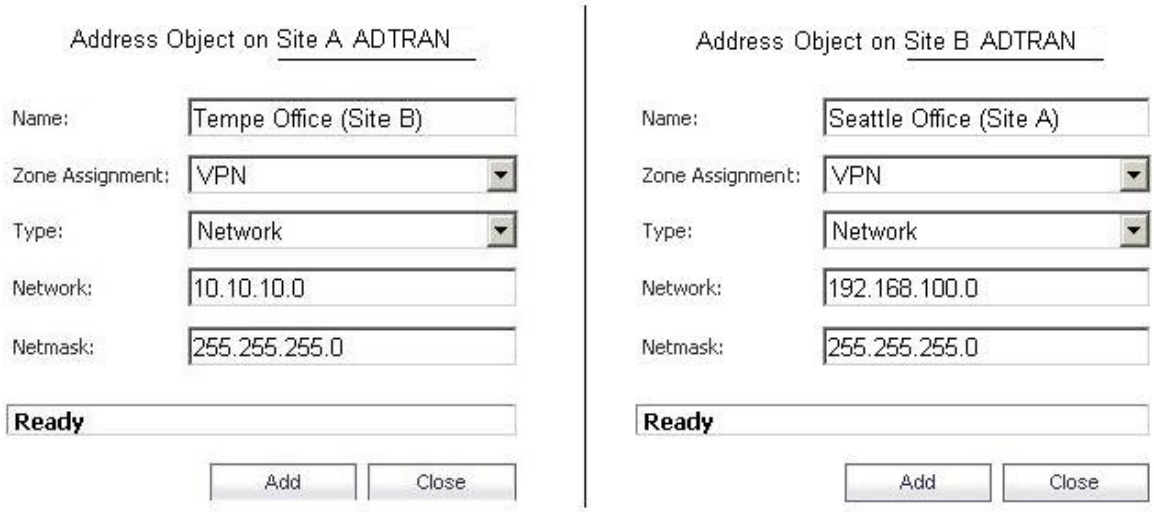
Step 4: How to test this scenario.

Procedure:

To manually configure a VPN Policy using IKE with Preshared Secret, follow the steps below:

Step 1: Creating Address Objects for VPN subnets:

1. Login to the NetVanta 2000 Series Management Interface

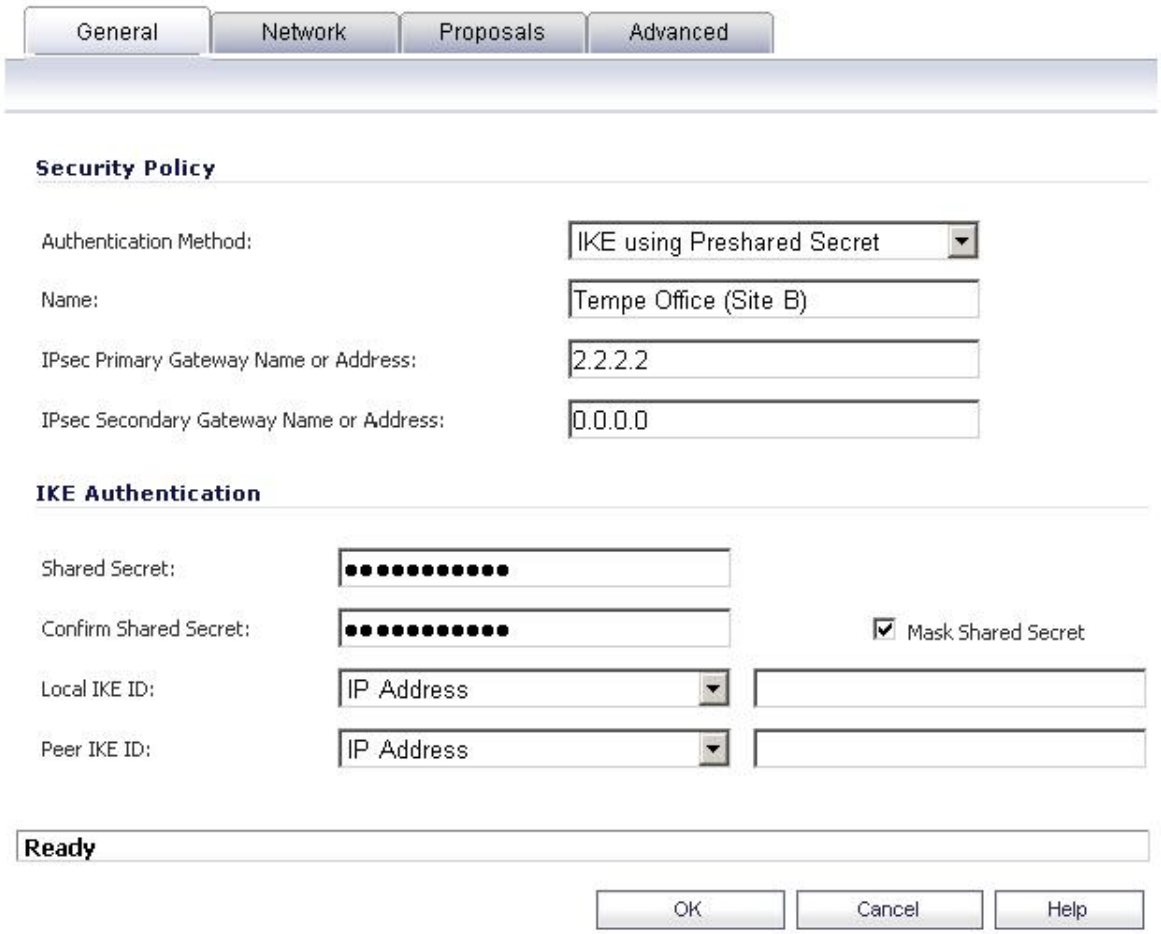


2. Navigate to **Network > Address Objects**, scroll down to the bottom of the page and click on the **ADD** button.

3. Configure the Address Objects as mentioned in the figure above, click **Add** and click **Close** when finished.

Step 2: Configuring a VPN policy on Site A ADTRAN

1. Navigate to **VPN > Settings** page and Click the **Add** button. The VPN Policy window is displayed.



2. Click the **General** tab

- Select **IKE using Preshared Secret** from the **Authentication Method** menu.

- Enter a name for the policy in the Name field.

- Enter the **WAN IP address** of the remote connection in the **IPsec Primary Gateway Name or Address** field (Enter Site B's WAN IP address).

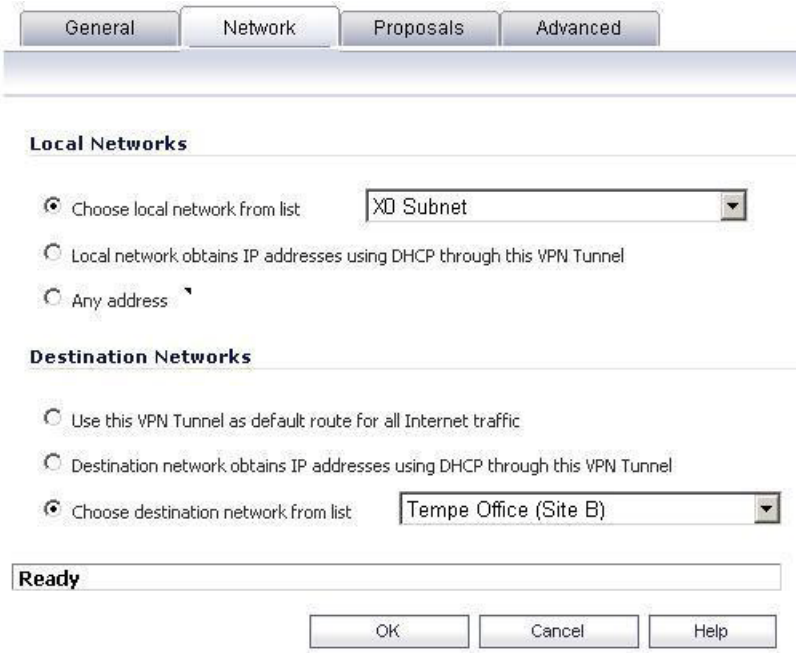
- If the Remote VPN device supports more than one endpoint, you may optionally enter a second host name or IP address of the remote connection in the **IPsec Secondary Gateway Name or Address** field.

> NOTE *Secondary gateways are not supported with IKEv2.*

- Enter a **Shared Secret** password to be used to setup the Security Association the Shared Secret and Confirm Shared Secret fields. The Shared Secret must be at least 4 characters long, and should comprise both numbers and letters.

- Optionally, you may specify a **Local IKE ID** (optional) and **Peer IKE ID** (optional) for this Policy. By default, the IP Address (ID_IPv4_ADDR) is used for Main Mode negotiations, and the NetVanta 2000 Series Identifier (ID_USER_FQDN) is used for Aggressive Mode.

3. Click the **Network** tab

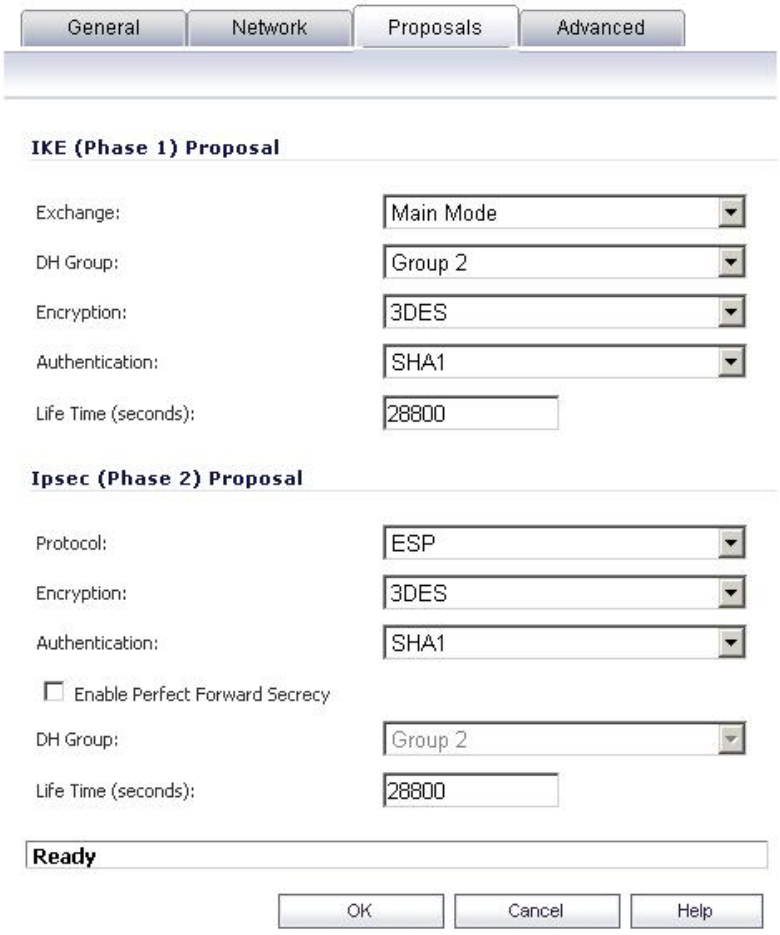


- Under **Local Networks**, select a local network from **Choose local network from list**: and select the address object **X0 Subnet** (LAN Primary Subnet)

DHCP over VPN is not supported with IKEv2.

- Under **Destination Networks**, select **Choose destination network from list**: and select the address object **Tempe Office** (Site B network)

4. Click the **Proposals** tab



- Under **IKE (Phase 1) Proposal**, select **Main Mode** from the Exchange menu. Aggressive Mode is generally used when WAN addressing is dynamically assigned. IKEv2 causes all the negotiation to happen via IKE v2 protocols, rather than using IKE Phase 1 and Phase 2. If you use IKE v2, both ends of the VPN tunnel must use IKE v2.

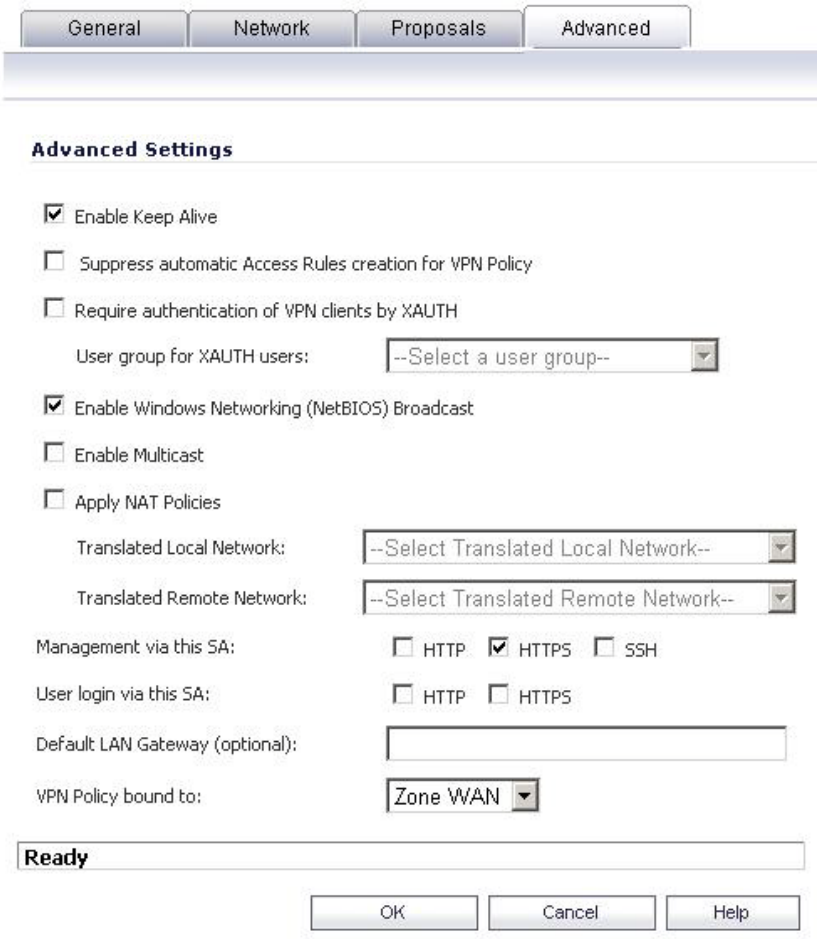
- Under **IKE (Phase 1) Proposal**, the default values for DH Group, Encryption, Authentication, and Life Time are acceptable for most VPN configurations. Be sure the Phase 1 values on the opposite side of the tunnel are configured to match. You can also choose AES-128, AES-192, or AES-256 from the Authentication menu instead of 3DES for enhanced authentication security.

NOTE

The Windows 2000 L2TP client and Windows XP L2TP client can only work with DH Group 2. They are incompatible with DH Groups 1 and 5.

- **Under IPsec (Phase 2) Proposal**, the default values for Protocol, Encryption, Authentication, Enable Perfect Forward Secrecy, DH Group, and Lifetime are acceptable for most VPN SA configurations. Be sure the Phase 2 values on the opposite side of the tunnel are configured to match.

5. Click the **Advanced** tab



- Select **Enable Keep Alive** to use heartbeat messages between peers on this VPN tunnel. If one end of the tunnel fails, using Keepalives will allow for the automatic renegotiation of the tunnel once both sides become available again without having to wait for the proposed Life Time to expire.

- Select **Enable Windows Networking (NetBIOS) Broadcast** to allow access to remote network resources by browsing the Windows® Network Neighborhood.

- To manage the local NetVanta 2000 Series appliance through the VPN tunnel, select **HTTP**, **HTTPS**, or both from **Management via this SA**. Select **HTTP, HTTPS, or both** in the **User login via this SA** to allow users to login using the SA.

- If you wish to use a router on the LAN for traffic entering this tunnel destined for an unknown subnet, for example, if you configured the other side to Use this VPN Tunnel as default route for all Internet traffic, you should enter the IP address of your router into the **Default LAN Gateway (optional)** field.

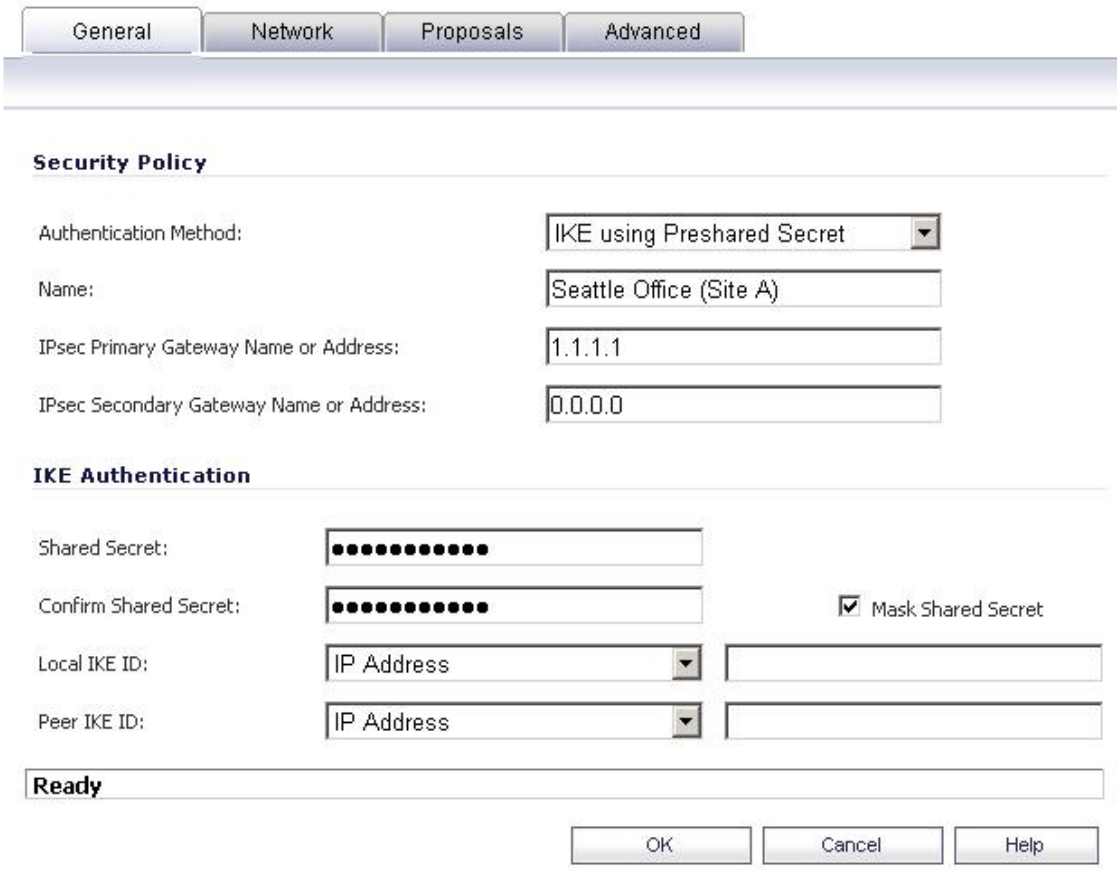
- Select an interface or zone from the **VPN Policy bound to** menu. A **Zone WAN** is the preferred selection if you are using WAN Load Balancing and you wish to allow the VPN to use either WAN interface.

- Click **OK** to apply the settings.

Step 3: Configuring a VPN policy on Site B ADTRAN

1. Login to the Site B ADTRAN appliance and navigate to **VPN > Settings** page and Click the **Add** button. The VPN Policy window is displayed.

2. Click the **General** tab.



- Select **IKE using Preshared Secret** from the **Authentication Method** menu.

- Enter a name for the policy in the **Name** field.

- Enter the **WAN IP address** of the remote connection in the **IPsec Primary Gateway Name or Address** field (Enter Site A's WAN IP address).

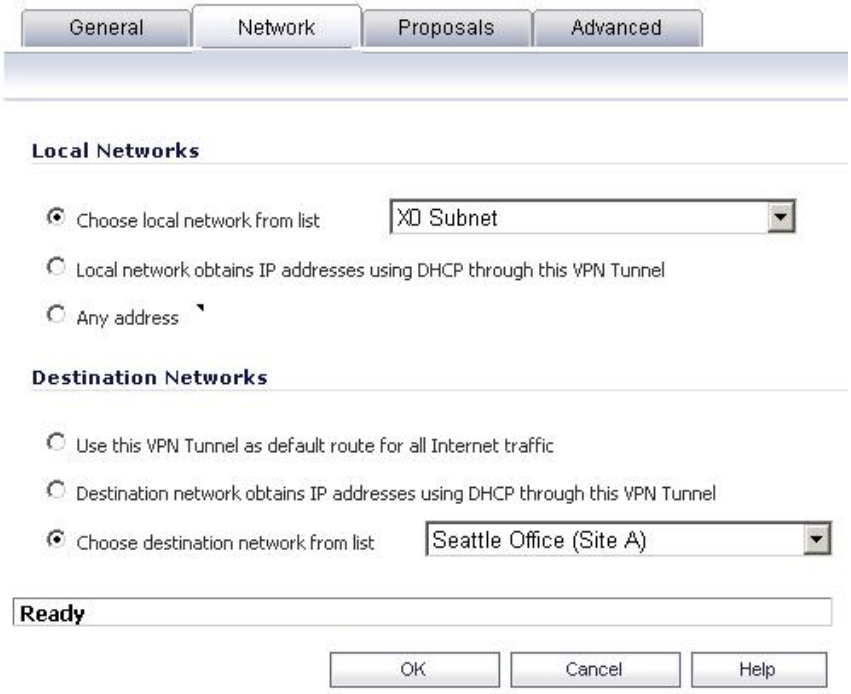
- If the Remote VPN device supports more than one endpoint, you may optionally enter a second host name or IP address of the remote connection in the **IPsec Secondary Gateway Name or Address** field.

> NOTE *Secondary gateways are not supported with IKEv2.*

- Enter a **Shared Secret** password to be used to setup the Security Association the Shared Secret and Confirm Shared Secret fields. The Shared Secret must be at least 4 characters long, and should comprise both numbers and letters.

- Optionally, you may specify a **Local IKE ID** (optional) and **Peer IKE ID** (optional) for this Policy. By default, the IP Address (ID_IPv4_ADDR) is used for Main Mode negotiations, and the NetVanta 2000 Series Identifier (ID_USER_FQDN) is used for Aggressive Mode.

3. Click the **Network** tab.



- Under **Local Networks**, select a local network from **Choose local network from list**: and select the address object **X0 Subnet** (LAN Primary Subnet)

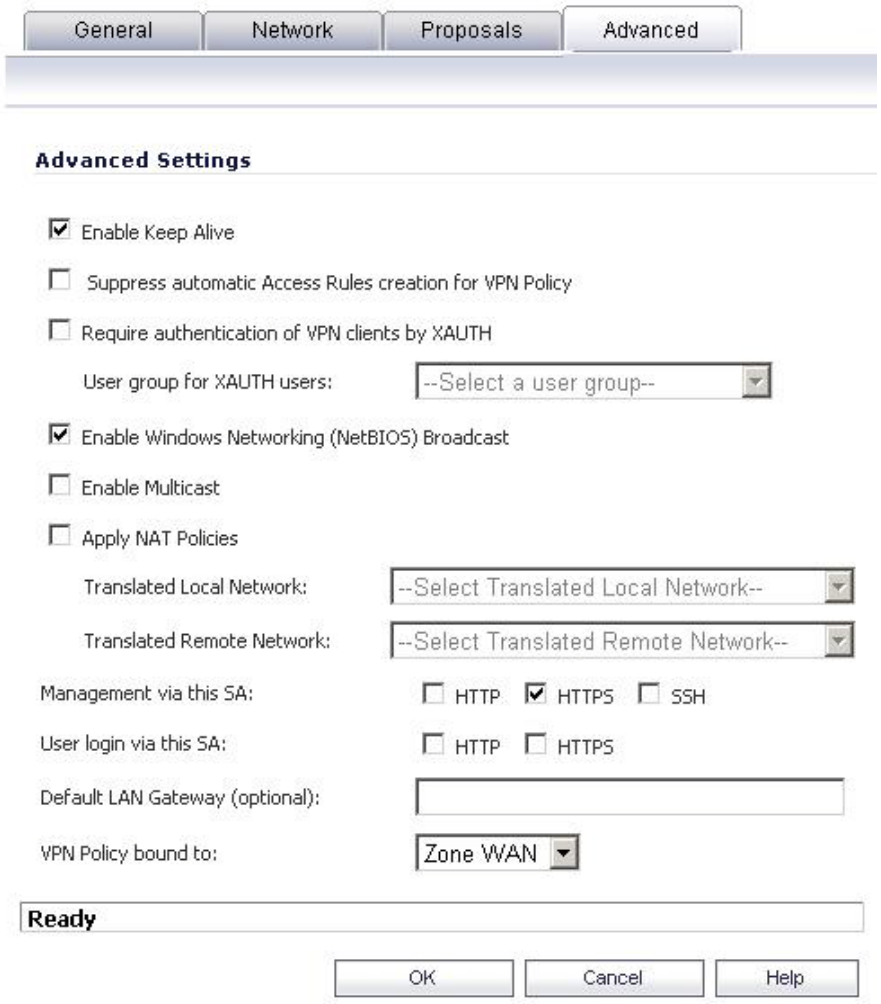
NOTE *DHCP over VPN is not supported with IKEv2.*

- Under **Destination Networks**, select **Choose destination network from list**: and select the address object **Seattle Office** (Site A network)

4. Click the **Proposals** tab:

NOTE *Settings must be same as Site A.*

5. Click the **Advanced** tab



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- Select an interface or zone from the **VPN Policy bound to** menu. A **Zone WAN** is the preferred selection if you are using WAN Load Balancing and you wish to allow the VPN to use either WAN interface.

- Click **OK** to apply the settings.

How to Test this Scenario:

Try to ping an IP address from Site A to Site B or Vise Versa.

Before receiving successful replies, you might see couple of "Request Timed Out" messages while the VPN tunnel is still establishing.