How to Create a TINA VPN Tunnel between CloudGen Firewalls

https://campus.barracuda.com/doc/79462893/

As the TINA protocol offers significant advantages over IPsec, it is the main protocol that is used for VPN connections between CloudGen Firewalls. Many of the advanced VPN features, such as SD-WAN or WAN Optimization, are only supported for TINA site-to-site tunnels.

You must complete this configuration on both the local and the remote Barracuda CloudGen Firewall by using the respective values below:

Setting	Example values for the local firewall	Example values for the remote firewall
VPN local networks	10.0.10.0/25	10.0.81.0/24
VPN remote networks	10.0.81.0/24	10.0.10.0/25
External IP address (listener VPN service)	62.99.0.40	212.86.0.10

The following sections use the default transport, encryption, and authentication settings. For more detailed information, see TINA Tunnel Settings.

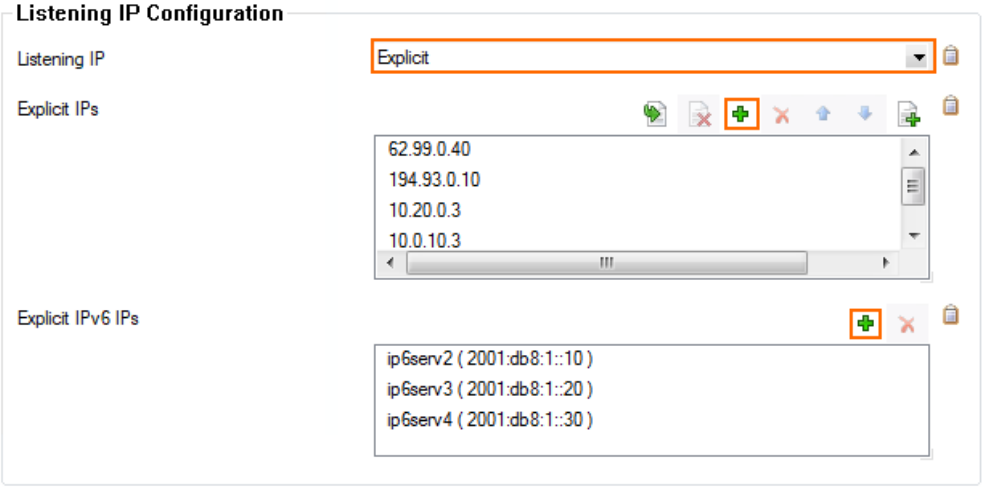
Before You Begin

If not already present, configure the **Default Server Certificate** in **CONFIGURATION > Configuration Tree > Box > Assigned Services > VPN > VPN Settings**. For more information, see VPN Settings

Step 1. Configure the VPN Service Listeners

Configure the IPv4 and IPv6 listener addresses for the VPN service.

1. Go to **CONFIGURATION > Configuration Tree > Box > Assigned Services > VPN > Service Properties**.
2. Click **Lock**.
3. From the **Listening IP** list, select the source for the IPv4 listeners:
   - **First+Second-IP** – The VPN service listens on the first and second virtual server IPv4 address.
   - **First-IP** – The VPN service listens on the first virtual server IPv4 address.
   - **Second-IP** – The VPN service listens on the second virtual server IPv4 address.
   - **Explicit** – For each IP address, click **+** and enter the IPv4 addresses in the **Explicit IPs** list.
4. Click **+** to add an entry to the **Explicit IPv6 IPs**.
5. Select an IPv6 listener from the list of configured explicit IPv6 virtual server IP addresses.

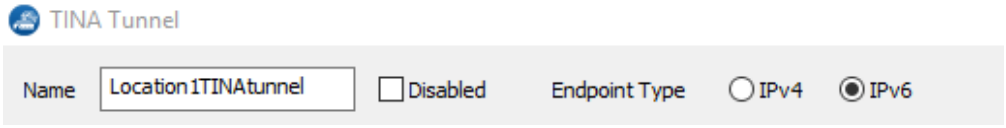


6. Click **Send Changes** and **Activate**.

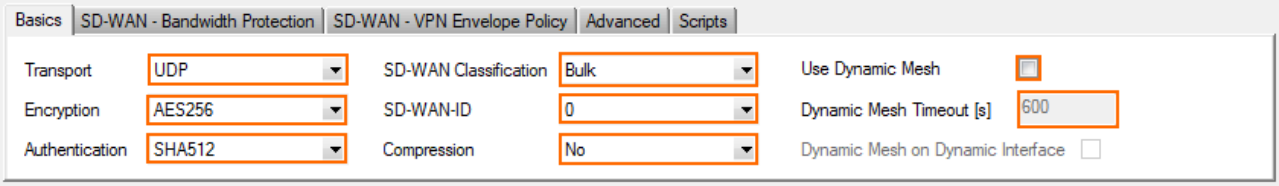
Step 2. Configure the TINA Tunnel at Location 1

For the firewall at Location 1, configure the network settings and export the public key. For more information on specific settings, see TINA Tunnel Settings

1. Log into the firewall at Location 1.
2. Go to **CONFIGURATION > Configuration Tree > Box > Assigned Services > VPN > Site to Site**.
3. Click **Lock**.
4. Click the **TINA Tunnels** tab.
5. Right-click the table, and select **New TINA tunnel**.
6. In the **Name** field, enter the name for the new VPN tunnel.
7. (IPv6 only). Select **IPv6**.

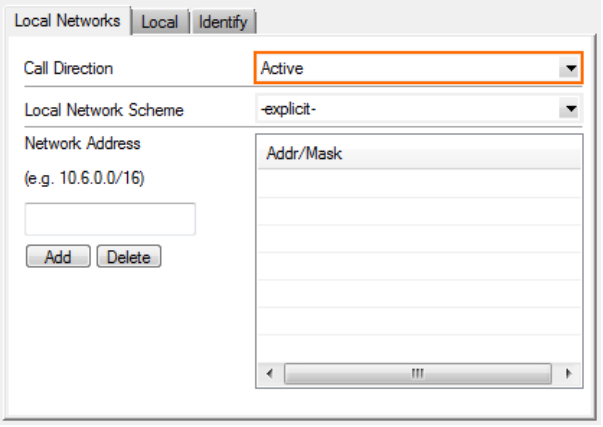


8. Configure the **Basic** TINA tunnel settings. For more information, see TINA Tunnel Settings.
   - **Transport** – Select the transport encapsulation: **UDP** (recommended), **TCP**, **TCP&UDP**, **ESP**, or **Routing**.
   - **Encryption** – Select the encryption algorithm: **AES**, **AES256**, **3DES**, **CAST**, **Blowfish**, **DES**, or **Null**.
   - **Authentication** – Select the hashing algorithm: **MD5**, **SHA**, **SHA256**, **SHA512**, **NOHASH**, **RIPEMD160**, or **GCM**.
   - **(optional) SD-WAN Classification / SD-WAN-ID** – For more information, see SD-WAN.
   - **(optional) Compression** – Select **yes** to enable VPN compression. Do not use in combination with WAN Optimization.
   - **(optional) Use Dynamic Mesh / Dynamic Mesh Timeout** – For more information, see Dynamic Mesh VPN Networks.

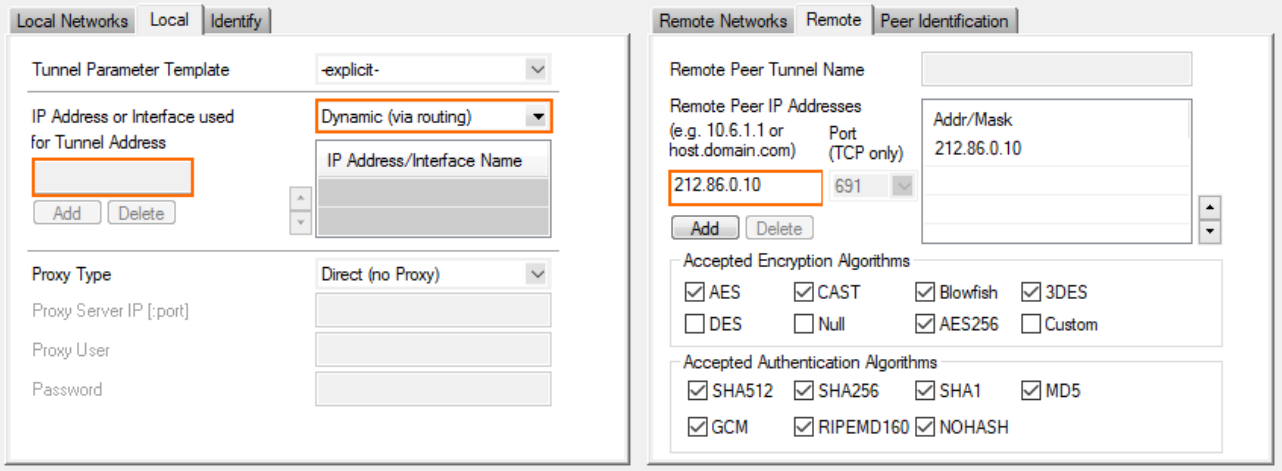


9. In the **Local Networks** tab, select the **Call Direction**. At least one of the firewalls must be active.

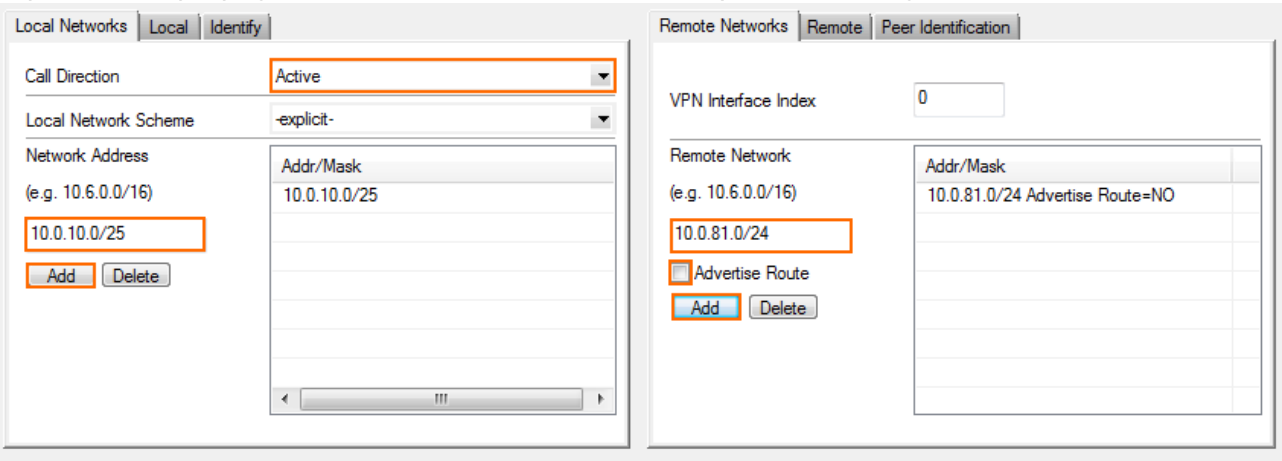
   Configure the CloudGen Firewall with a dynamic IP address to be the active peer. If both firewalls use dynamic IP addresses, a DynDNS service must be used. For more information, see How to Configure VPN Access via a Dynamic WAN IP Address.



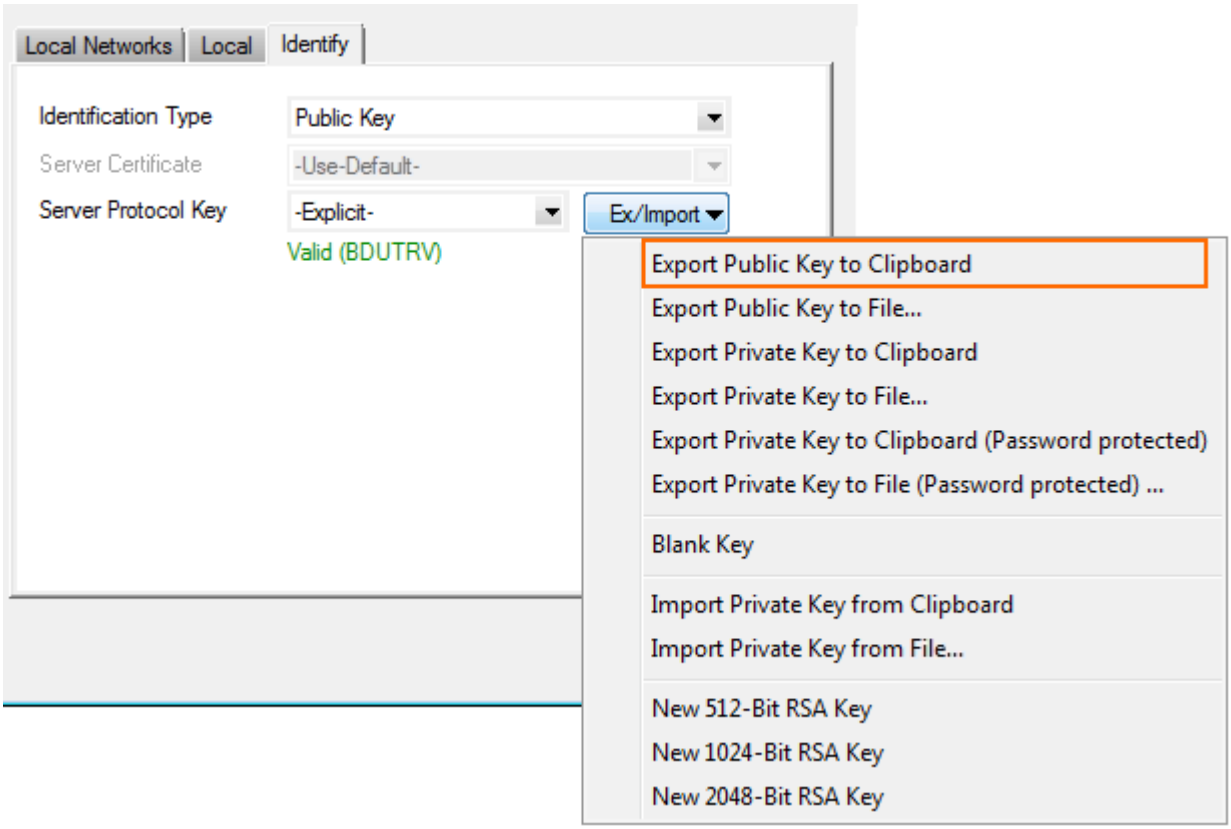
10. Click the **Local** tab, and configure the **IP address or Interface used for Tunnel Address**:
    - **(IPv4 only) First Server IP** – First IP address of the virtual server the VPN service is running on.
    - **(IPv4 only) Second Server IP** – Second IP address of the virtual server the VPN service is running on.
    - **Dynamic (via routing)** – The firewall uses a routing table lookup to determine the IP address.
    - **Explicit List (ordered)** – Enter one or more explicit IP addresses. Multiple IP addresses are tried in the listed order.
    - In the **Remote** tab, enter one or more IPv4 or IPv6 addresses or an FQDN as the **Remote Peer IP Addresses,** and click **Add**.



11. In the **Remote** tab, select the **Accepted Algorithms**. To use a cipher, the list must match the **Encryption** settings previously configured.
12. For each local network, enter the **Network Address** in the **Local Networks** tab and click **Add**. E.g., `10.0.10.0/25`
13. For each remote network enter the **Network Address** in the **Remote Networks** tab and click **Add**. E.g., `10.0.81.0/24`
14. (optional) To propagate the remote VPN network via dynamic routing enable **Advertise Route**.



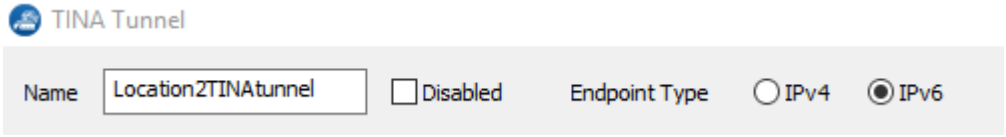
15. Click on the **Identity** tab.
16. From the **Identification Type** list, select **Public Key**.
17. Click **Ex/Import** and select **Export Public Key to Clipboard**.



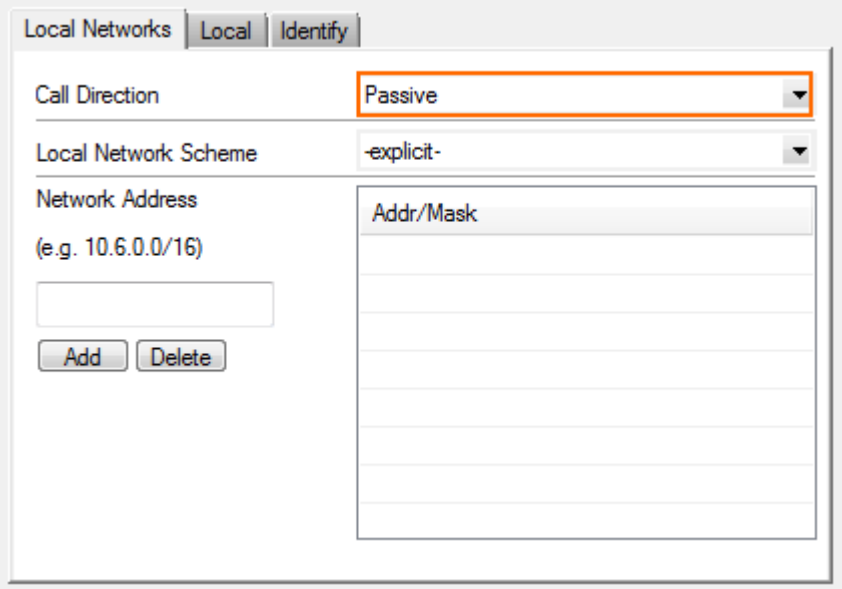
18. Click **OK**.
19. Click **Send Changes** and **Activate**.

Step 3. Create the TINA Tunnel at Location 2

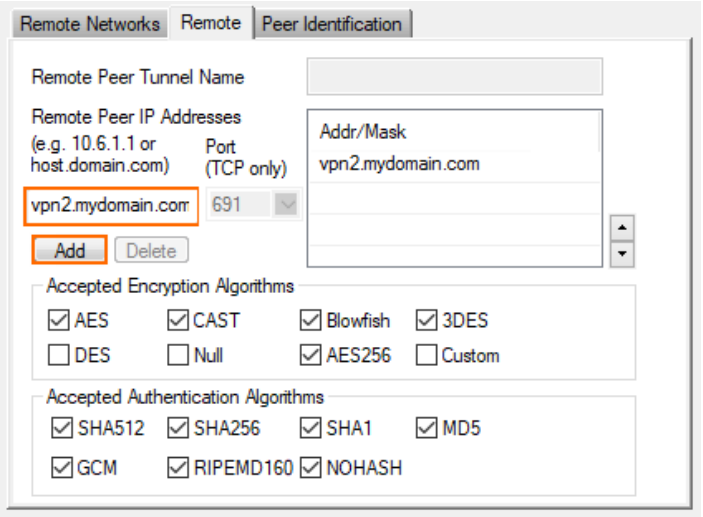
1. Log into the firewall at Location 2.
2. Go to **CONFIGURATION > Configuration Tree > Box > Assigned Services > VPN > Site to Site** .
3. Click **Lock**.
4. Click the **TINA Tunnels** tab.
5. Right-click the table, and select **New TINA tunnel**.
6. In the **Name** field, enter the name for the new VPN tunnel.
7. (IPv6 only) Click the **IPv6** check box.



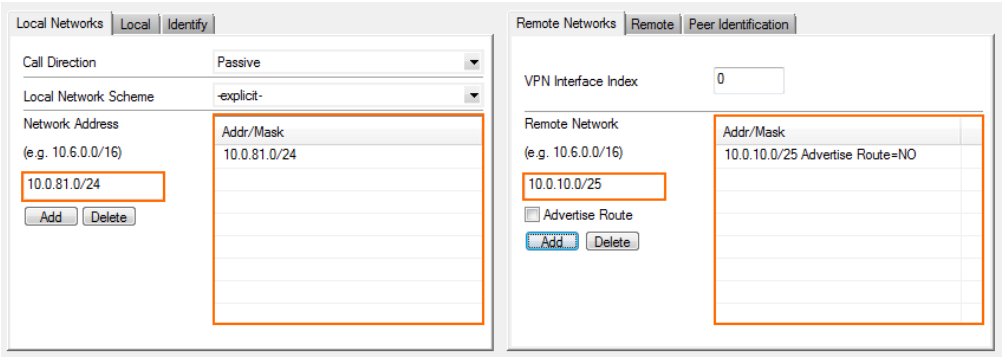
8. Configure the **Basic** TINA tunnel settings to match the settings configured for the Location 1
9. In the **Local Networks** tab, select the **Call Direction**. Make sure that one or both firewalls are set to **active**.



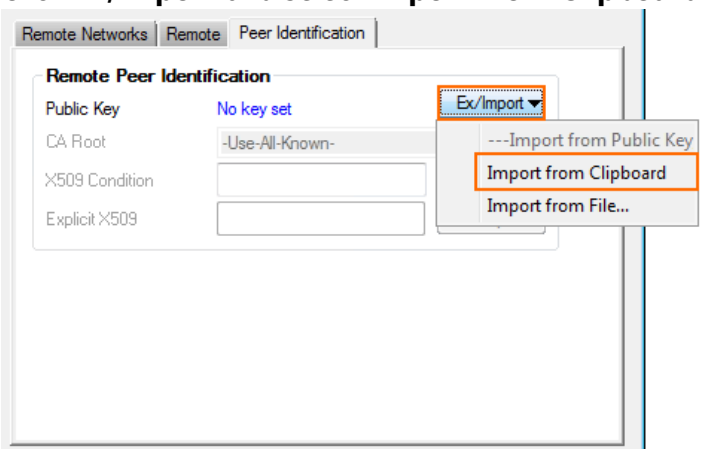
10. Click the **Local** tab, and configure the **IP address or Interface used for Tunnel Address**:
    - **(IPv4 only) First Server IP** – First IP address of the virtual server the VPN service is running on.
    - **(IPv4 only) Second Server IP** – Second IP address of the virtual server the VPN service is running on.
    - **Dynamic (via routing)** – The firewall uses a routing table lookup to determine the IP address.
    - **Explicit List (ordered)** – Enter one or more explicit IP addresses. Multiple IP addresses are tried in the listed order.
11. Click the **Remote** tab, enter one or more IP addresses or a FQDN as the **Remote Peer IP Addresses,** and click **Add**.



12. In the **Remote** tab, select the **Accepted Algorithms**. To use a cipher, the list must match the **Encryption** settings previously configured.
13. For each local network, enter the **Network Address** in the **Local Networks** tab and click **Add**. E.g., `10.0.81.0/24` behind Location 2 CloudGen Firewall.
14. For each remote network, enter the **Network Address** in the **Remote Networks** tab and click **Add**. E.g., `10.0.10.0/25` behind Location1 CloudGen Firewall.



15. Click on the **Peer Identification** tab.
16. Click **Ex/Import** and select **Import from Clipboard**.

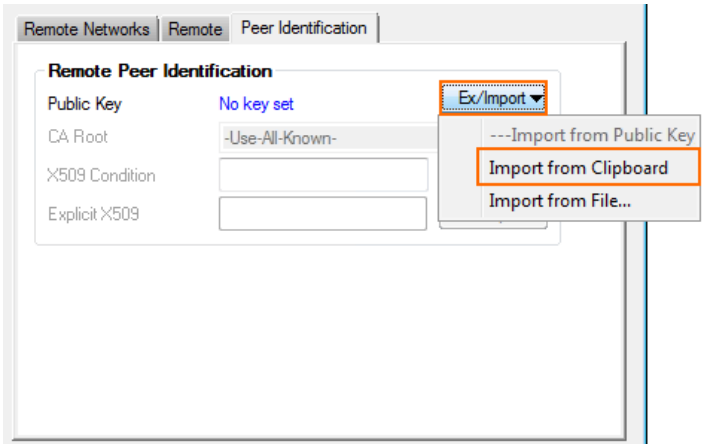


17. Click on the **Identity** tab.
18. From the **Identification Type** list, select **Public Key**.
19. Click **Ex/Import** and select **Export Public Key to Clipboard**.
20. Click **OK**.
21. Click **Send Changes** and **Activate**.

Step 4. Import the Public Key for Location 1

The VPN tunnel is not activated until the public key of Location 2 is imported to Location 1.

1. Log into the firewall at Location 1.
2. Go to **CONFIGURATION > Configuration Tree > Box > Assigned Services > VPN-Service > Site to Site** .
3. Click **Lock**.
4. Open the configuration for the site-to-site tunnel created in Step 1.
5. Click the **Peer Identification** tab.
6. Click **Ex/Import** and select **Import from Clipboard**.



7. Click **OK**.
8. Click **Send Changes** and **Activate**.

After configuring the TINA VPN tunnel on both firewalls, you must also create an access rule on both systems to allow access to the remote networks through the VPN tunnel.

Next Step

Create access rules to allow traffic in and out of your VPN tunnel: How to Create Access Rules for Site-to-Site VPN Access.

Figures

1. tina_tunnel.png
2. vpn_service_listeners.png
3. TINA_00.png
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