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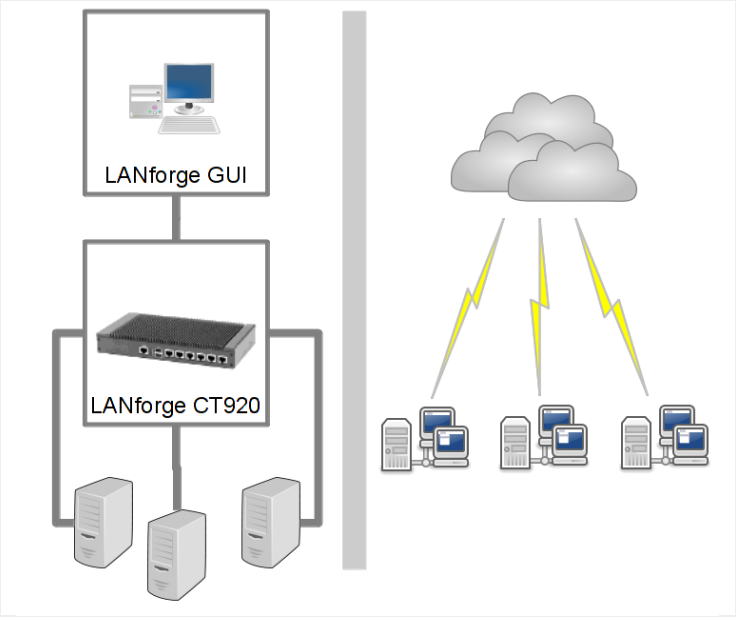
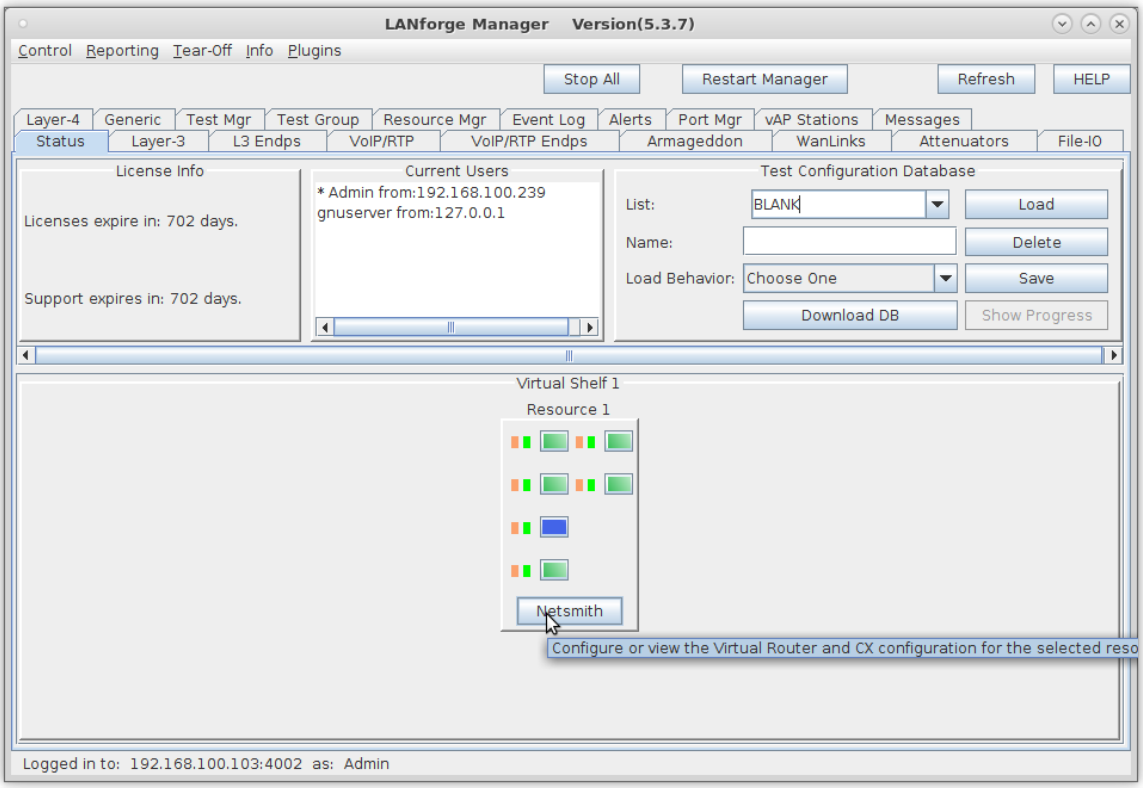
Bridging Multiple WAN-links

Goal: Create a star topology network similar to a central VPN server with remote offices.

Using LANforge Netsmith, we connect three ethernet ports with WAN-links. Each WAN-link has an ethernet port on one side and a virtual redirect on the other. The redirects are then bridged. We can then model the WAN environment by changing the latency (and other parameters) of the WANlinks. In this example, we are using ports `eth2, eth3` and `eth4` This emulates a bridged network, but it is also possible to do a similar configuration using a Virtual Router instead of a bridge to emulate a routed network.

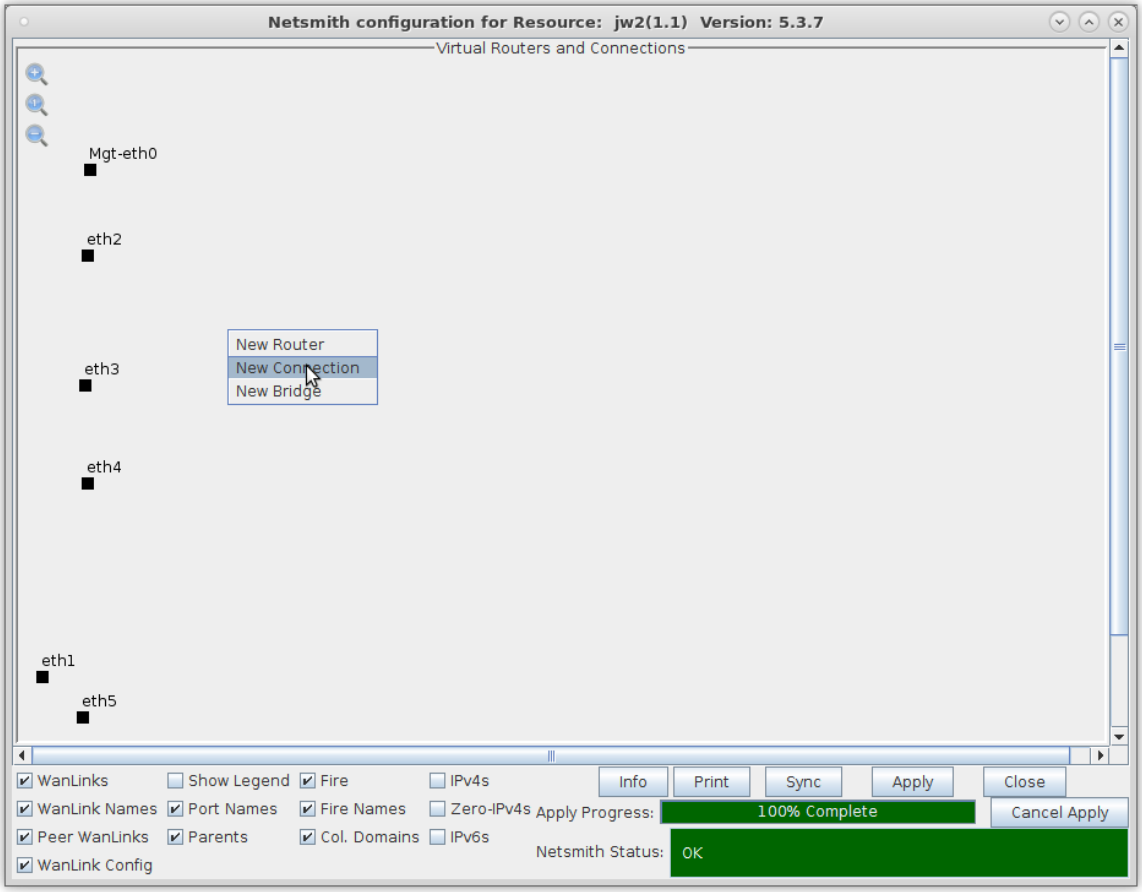


1. Use Netsmith to create three WAN links
   A. In the **Status** tab, click the **Netsmith** button

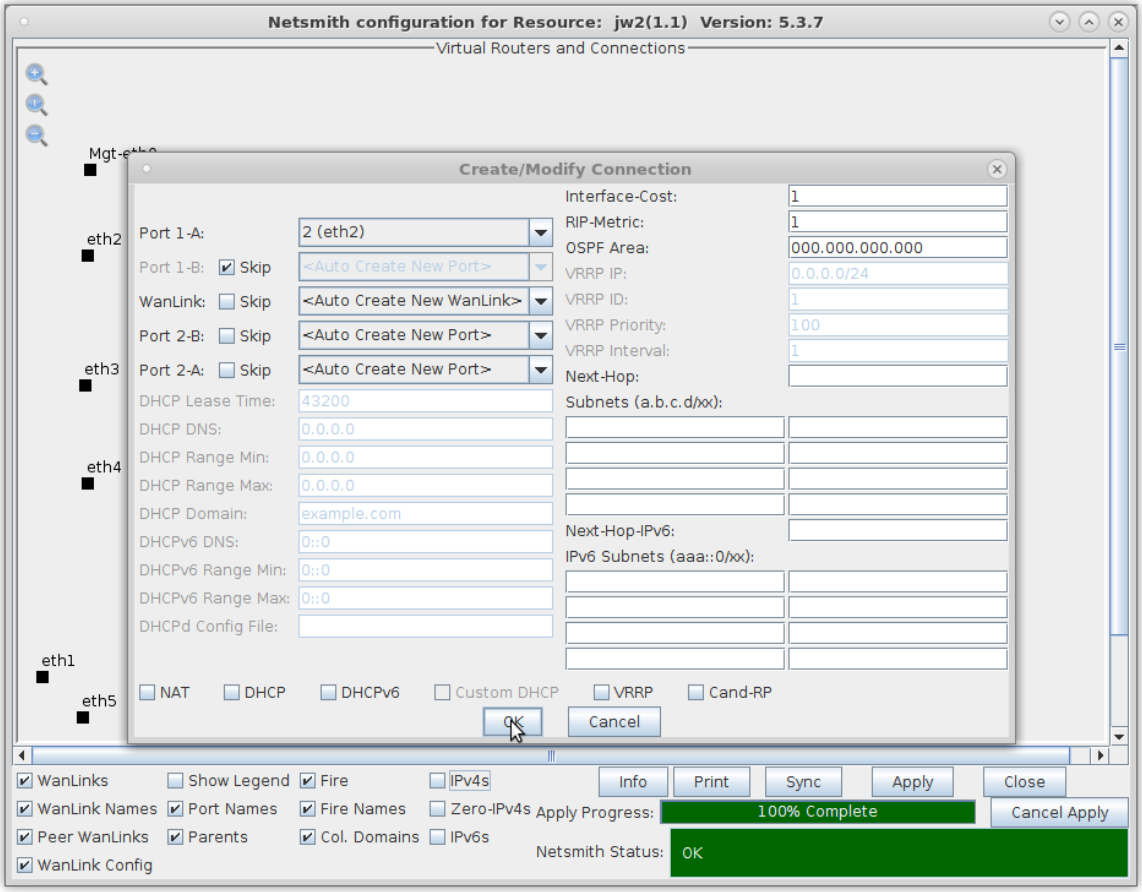


   B. *Right click* in the Netsmith window

C. Select **New Connection**



D. Create new WAN link connection

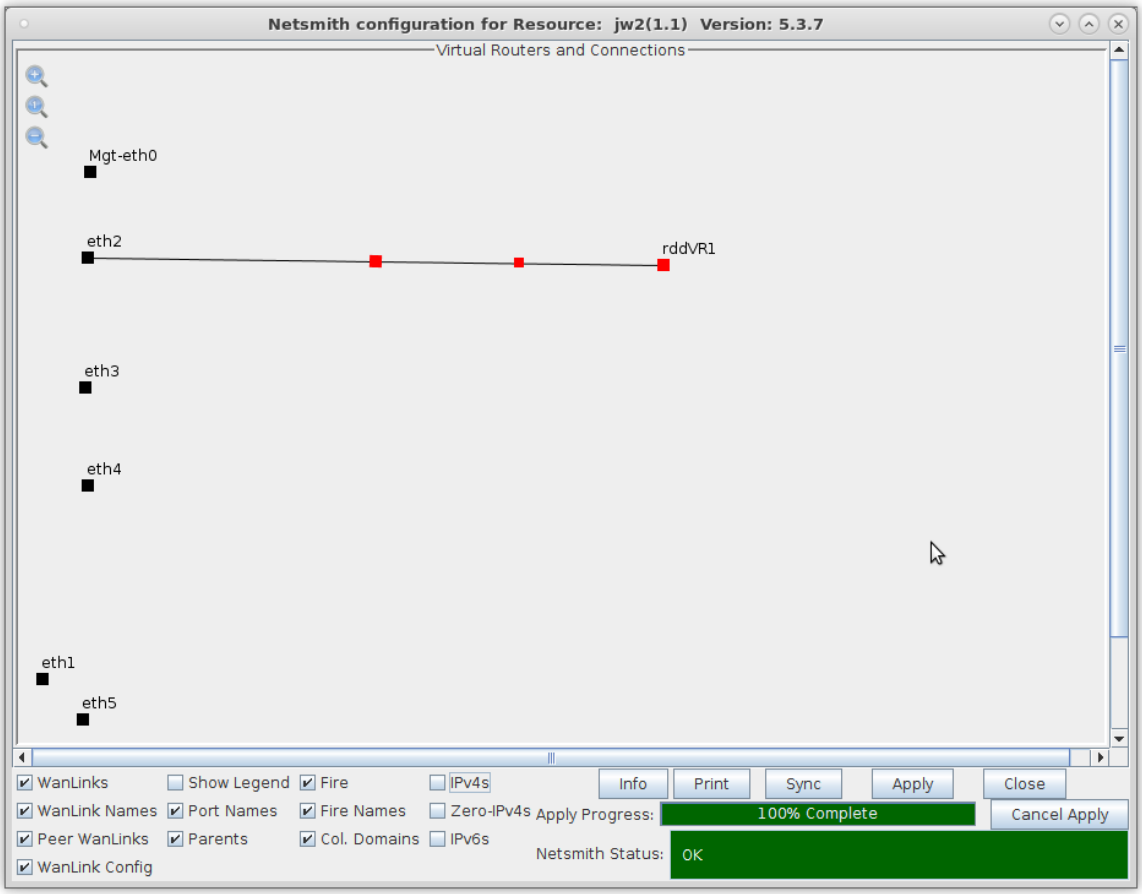


A. Select Port 1-A: `eth2`

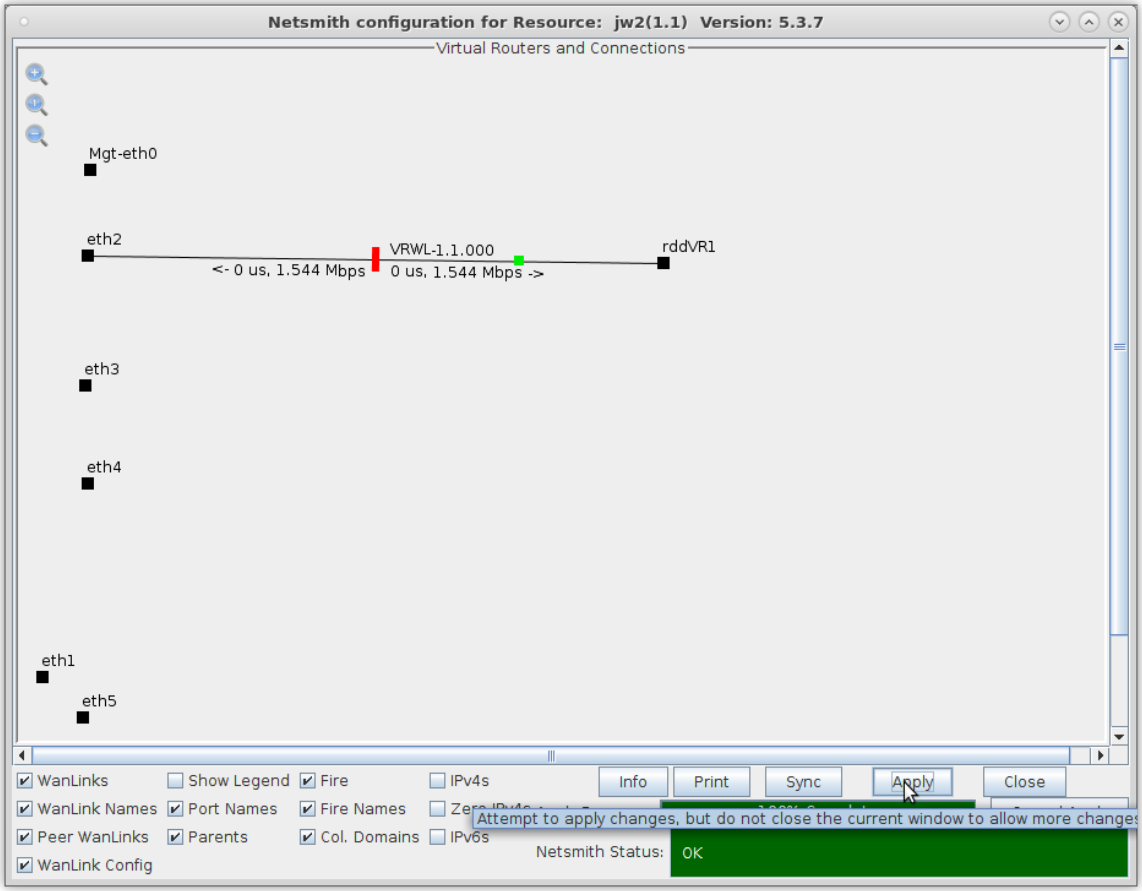
B. Select Port 1-B:Skip

C. Click **OK**

E. A tentative WAN link is displayed

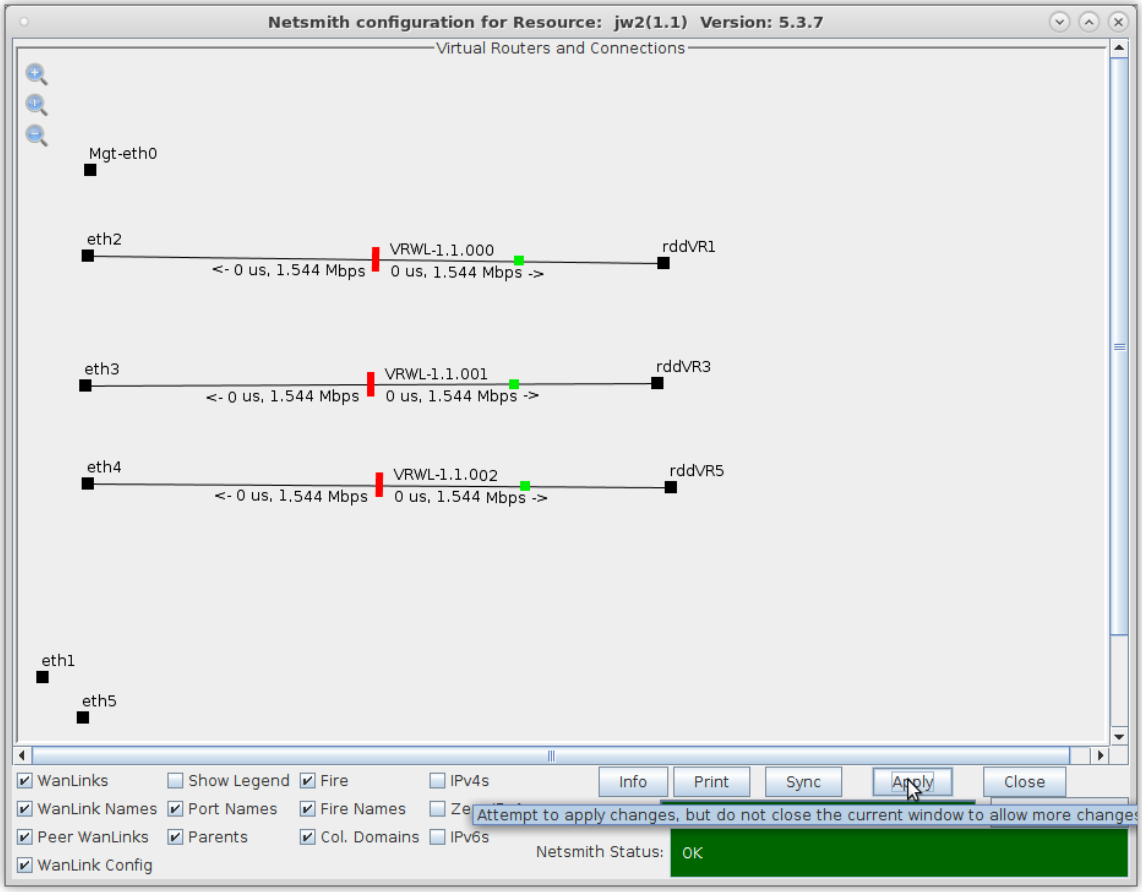


F. Click the **Apply** button at the bottom of the Netsmith window. This commits the WAN link to the resource.



G. Creating two more WAN links is a similar process

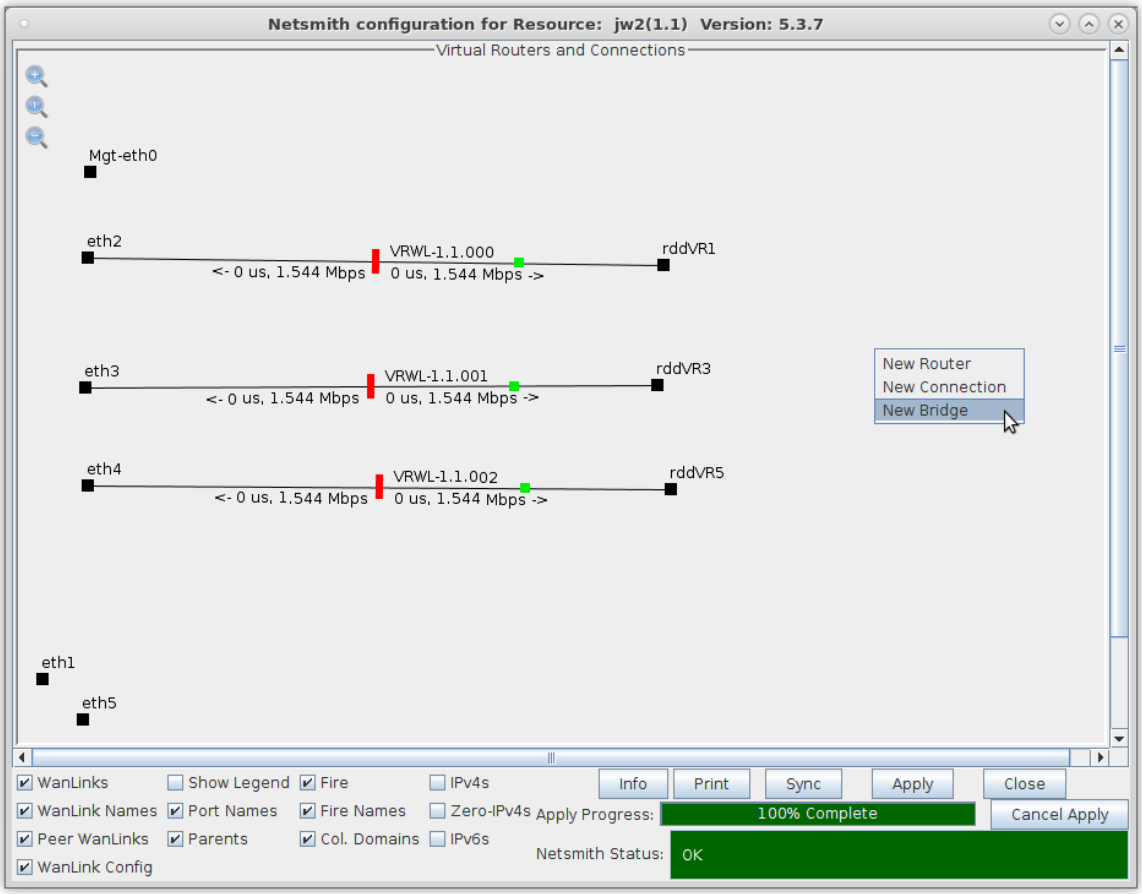
H. Repeat these steps:



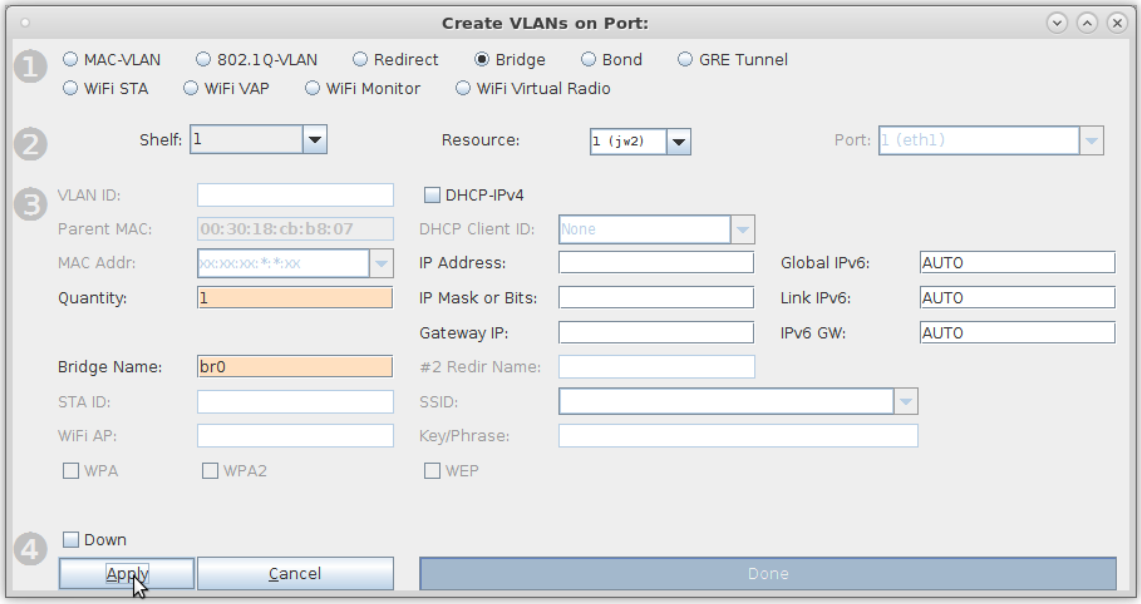
A. *Right click,* **New Connection**
B. Choose `eth3` for port 1-A and **Skip** for port 1-B, then **OK**
C. Click Netsmith **Apply** to commit connection.
D. *Right click,* **New Connection**
E. Choose `eth4` for port 1-A and **Skip** for port 1-B, then **OK**
F. Click Netsmith **Apply** to commit connection.

2. Use Netsmith to create a bridge port

A. *Right click,* Select **New Bridge**



B. Create the bridge with the following attributes:

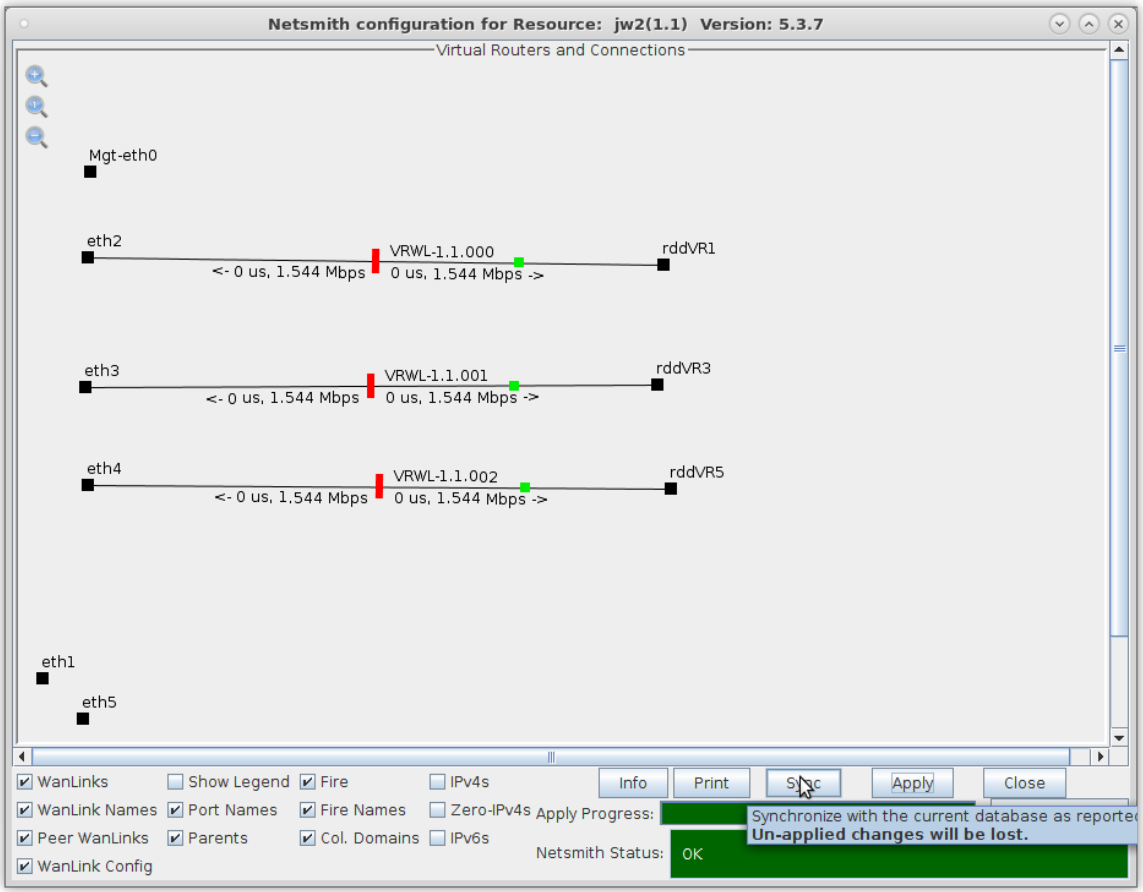


A. Select **Bridge**

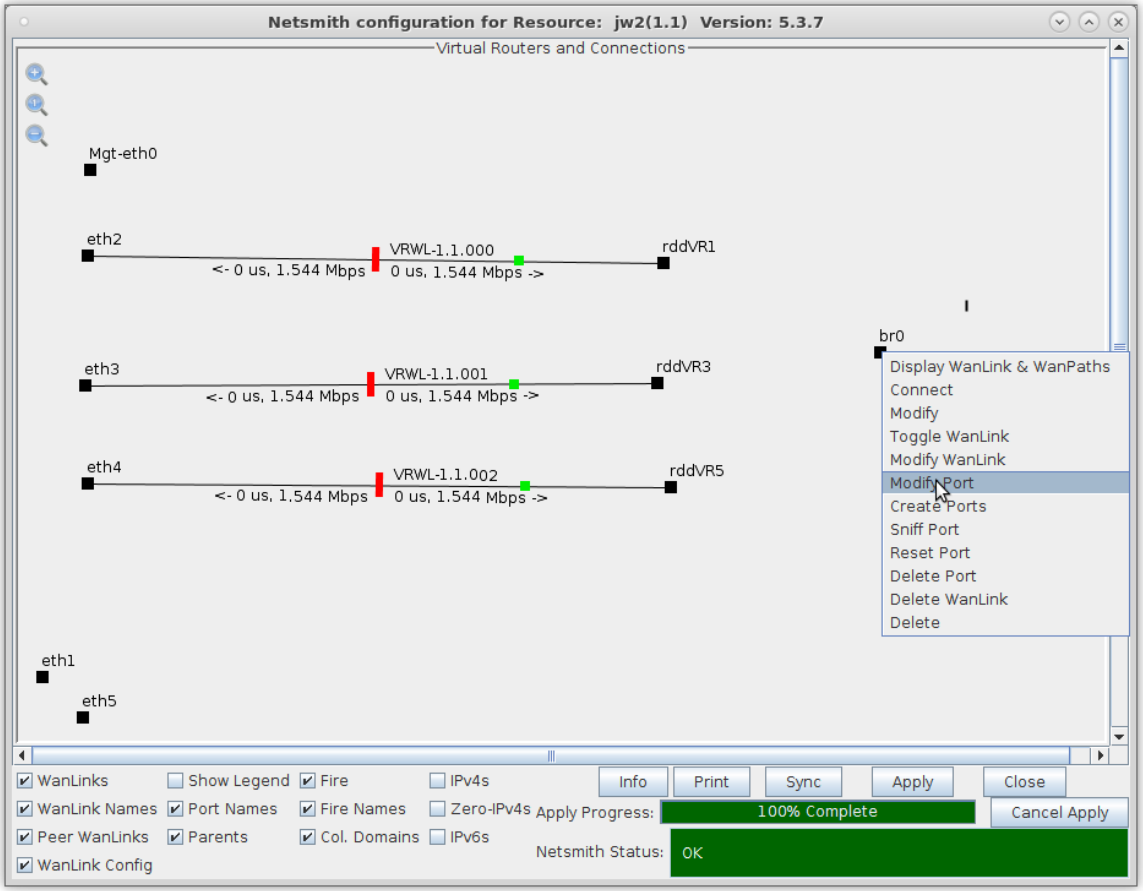
B. Quantity: 1

C. Bridge Name: `br0`

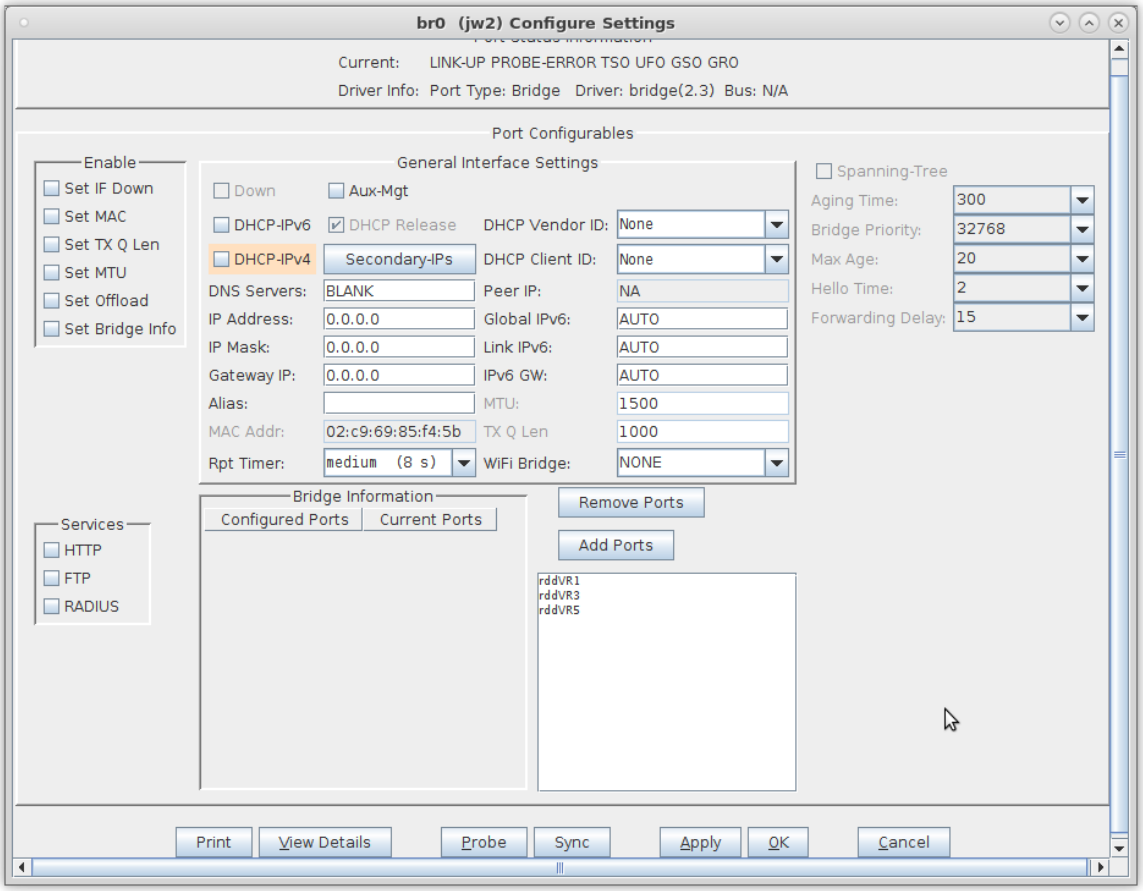
C. Click Netsmith **Sync** to bring the `br0` port onto the Netsmith screen



D. *Right click* the br0 port and select **Modify Port**



E. In the text area below the **Add Ports** button, add the three virtual WAN link endpoints:

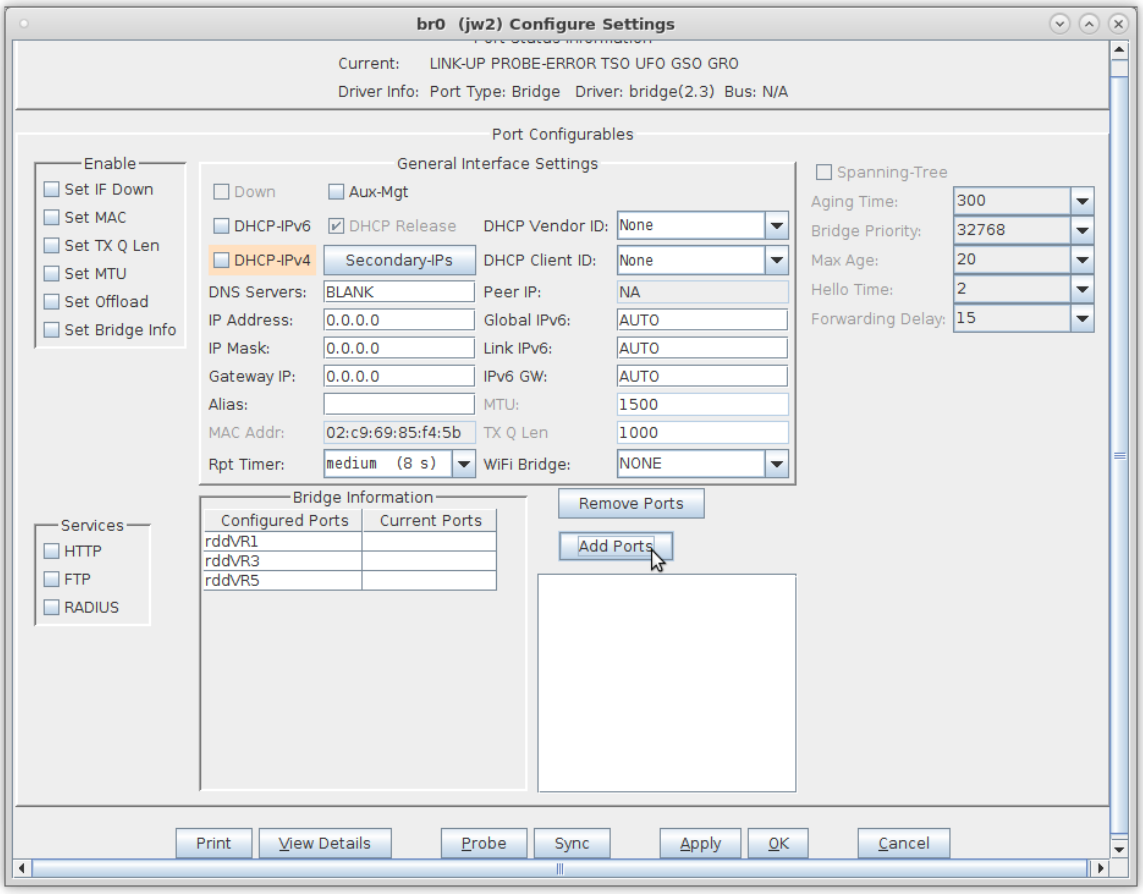


A. rddVR1

B. rddVR3

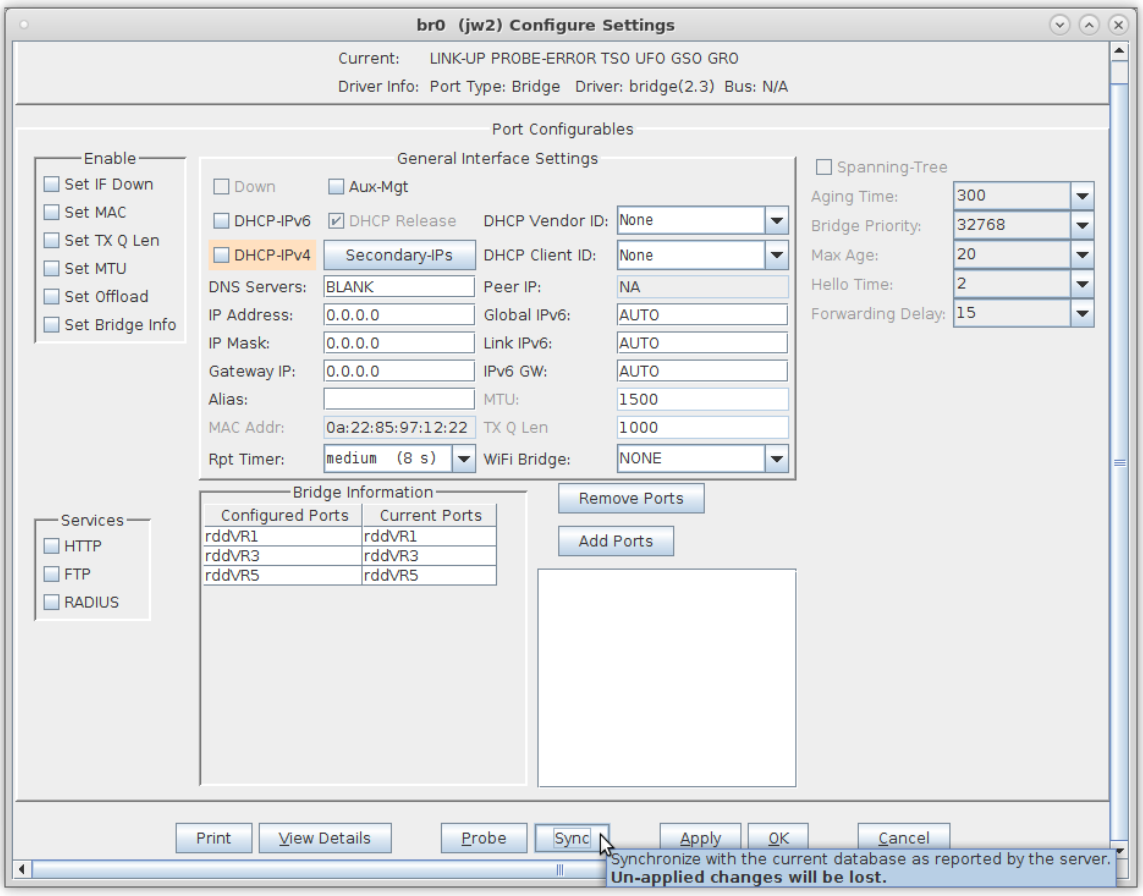
C. rddVR5

F. Click **Add Ports** to enter the selection. You will see them show up in the *Bridge Information* table.



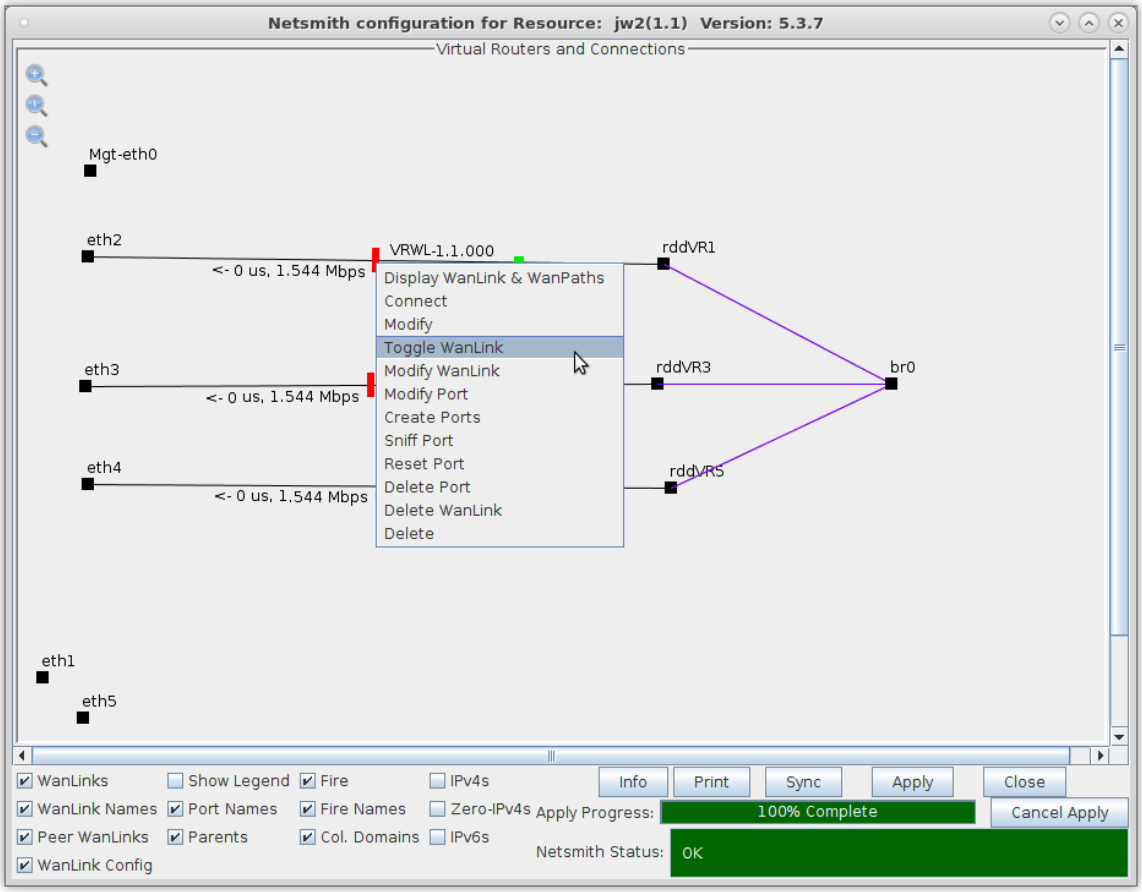
G. Click **Apply** to commit the change.

H. Click **Sync** to read-in the ports to the screen. You will see them show up in the *Bridge Information* table.



I. Click **Cancel** to close the window.

3. Enable the WAN links in Netsmith
   A. In the Netsmith window, click **Sync** to bring the changes into view



   B. *Right click* on `VRWL-1.1` and select **Toggle WanLink**

C. Repeat the toggle for the next two WanLinks