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 WAN links. 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**

![Netsmith configuration for Resource: jw2(1.1) Version: 5.3.7](image)

B. Create the bridge with the following attributes:

![Create VLANs on Port](image)

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

   ![Netsmith configuration for Resource: jw2(1.1) Version: 5.3.7](image)

   B. Right click on VRWL-1.1 and select **Toggle WanLink**
C. Repeat the toggle for the next two WanLinks