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Install LANforge on ESXi Server (Version 8)

Goal: Install LANforge on an ESXI Server, and confirm DHCP can be served over VLANs.

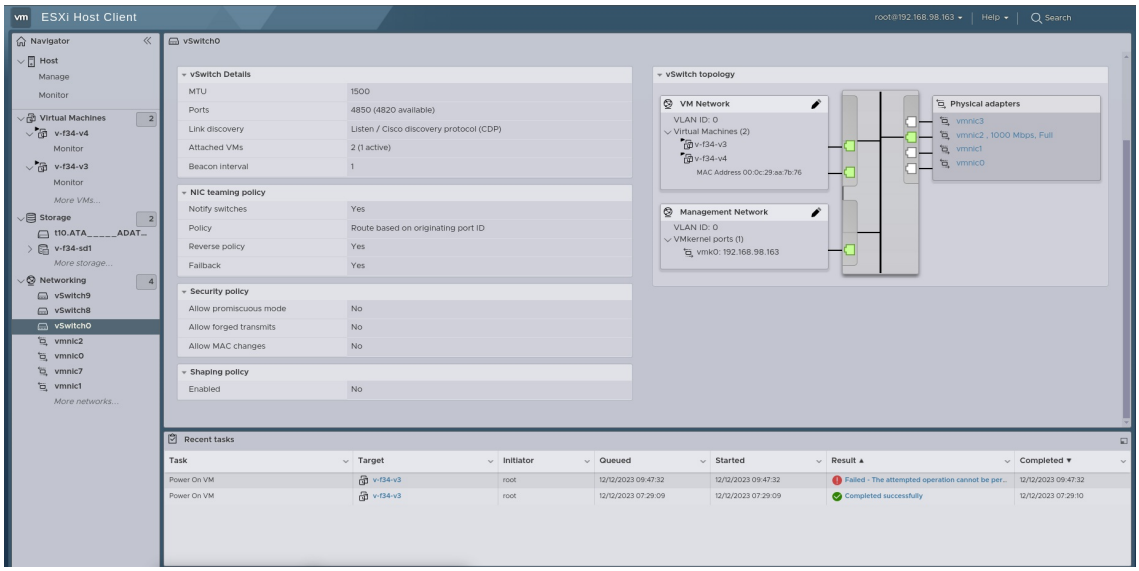
In this test scenario, we use a system compatible with ESXi version 8. ESXi version 8 can run 2 lanforge VMs on 2 different VLANs, host DHCP on one VLAN, and acquire DHCP leases on the other VLAN through a wanlink. This outlines expected behavior and uses cases for VLANs and wanlinks between LANforge and ESXi version 8. Requires LANforge version 5.3.5 or higher.

1. Configuring ESXi Server ver. 8.02
   A. This scenario was built upon ESXi 8.02 build 23305546, using a CT-525 with a 4 port 1g nic as well as an accompanying TPLink SG105E Smart Switch.

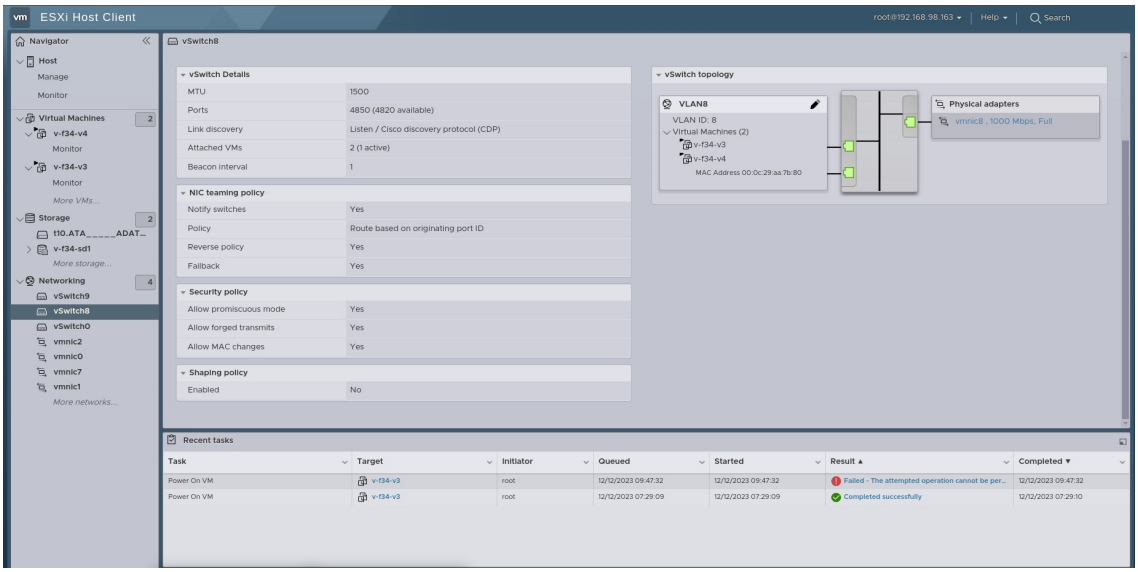
   B. Log into TPLink SG105E 5 port Smart Switch (usually defaults to 192.168.0.1). Assign ports 2 and 3 to a VLAN, name 8 with ID 8. Assign ports 4 and 5 to a VLAN, name 9 with ID 9. No need for a trunk port at this time.

   C. In ESXi, create 3 vSwitches. vSwitch0, vSwitch8, vSwitch9. vSwitch0 should have been created and configured by default as the management switch. vSwtich8 connects to ports 1 and 2 on the physical NIC, this corresponds to vmnic8 and vmnic9. vSwtich9 connects to ports 3 and 4 on the physical nic, which corresponds to vmnic 10 and 11. Vmnic numbers may vary.

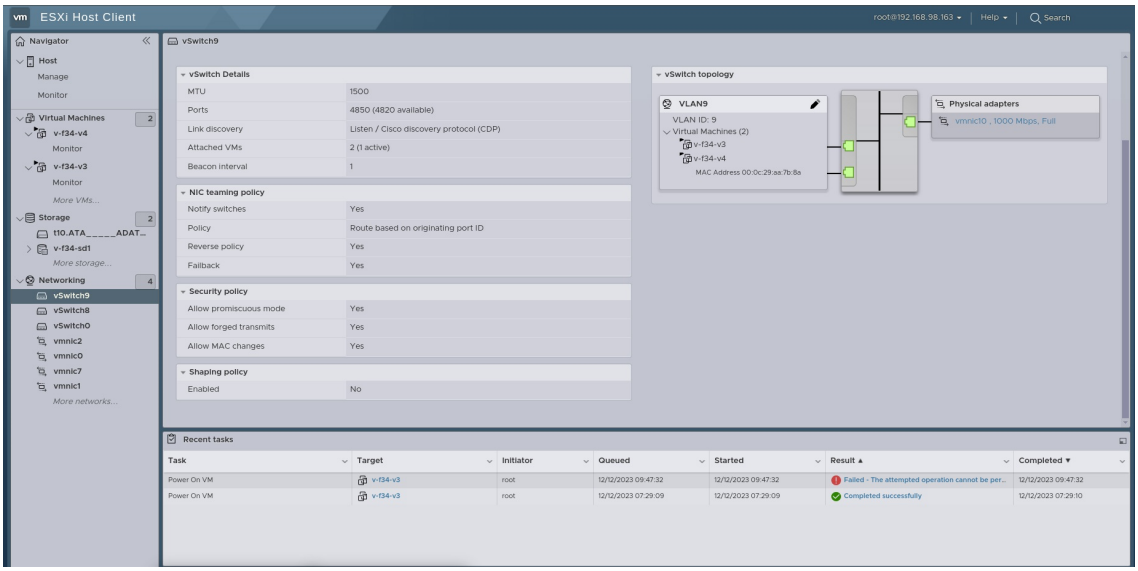
   D. vSwitch0



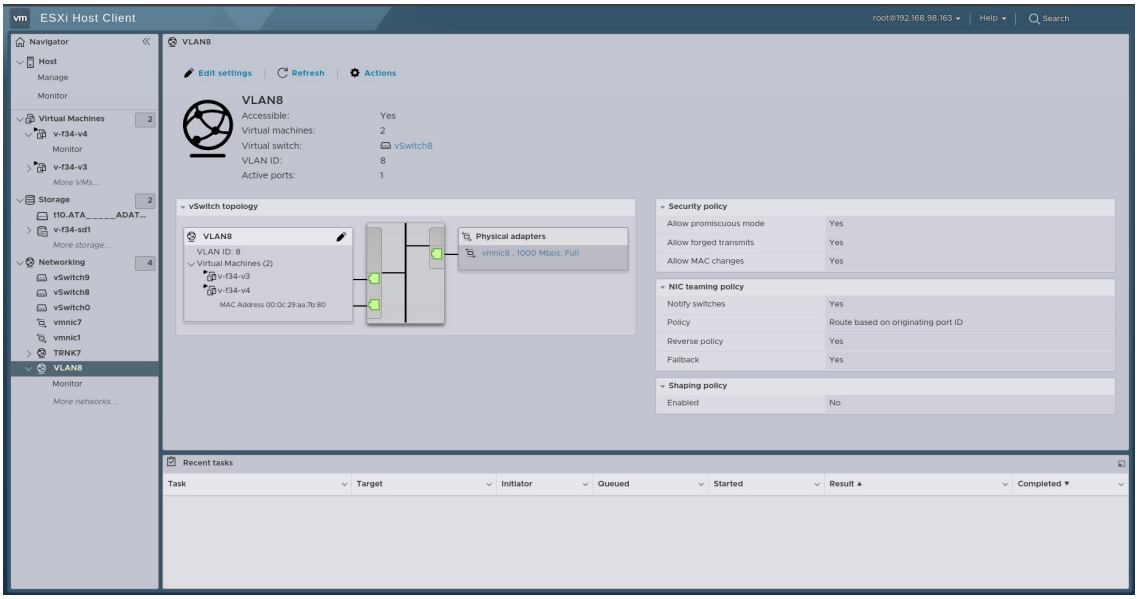
E. vSwitch8



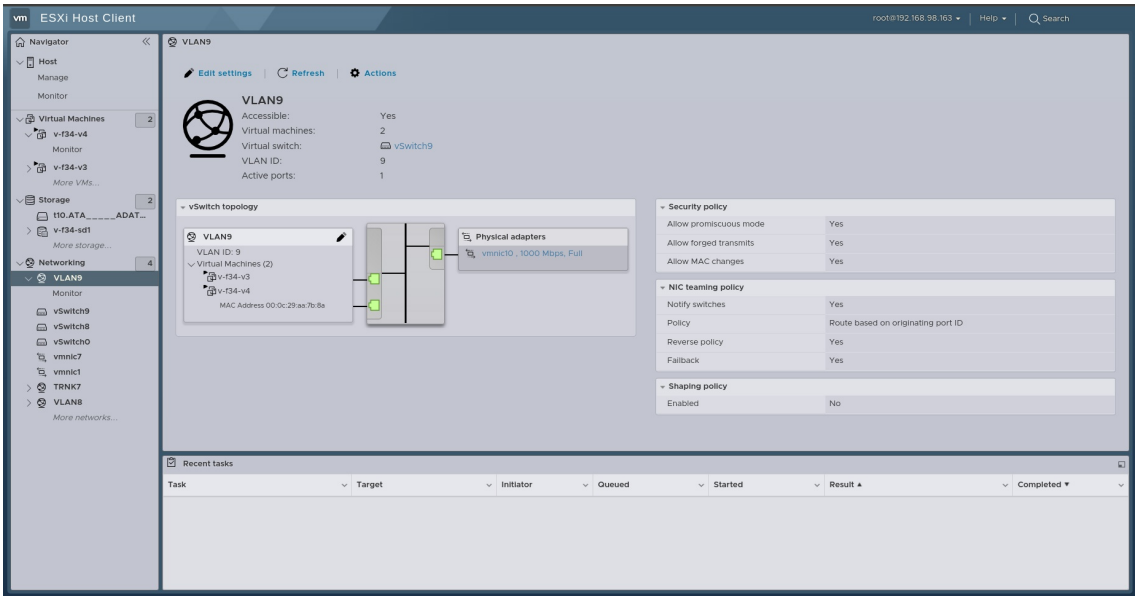
F. vSwitch9



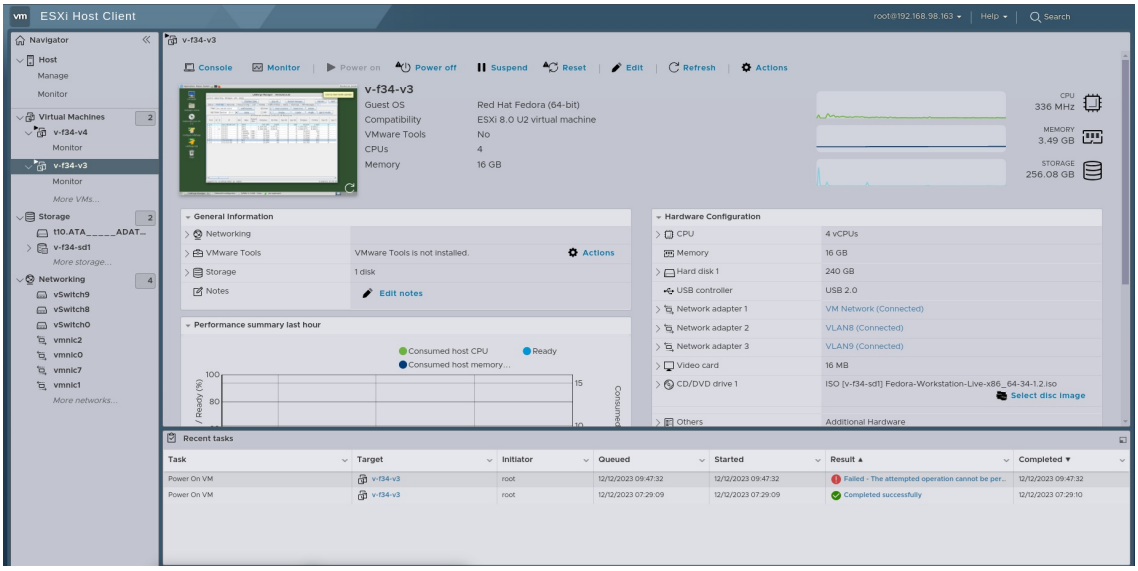
G. Next, create 2 port groups. First port group named VLAN8 with an ID of 8, assign vSwitch8 to it, inherit all settings from vSwitch8.



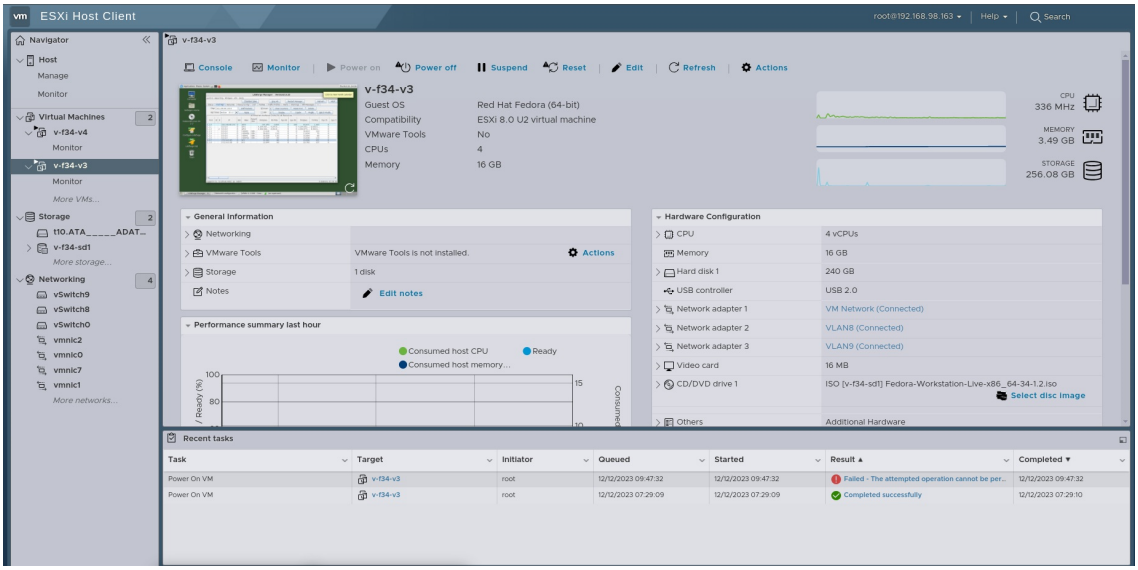
H. Create another port group named VLAN9, with an ID of 9, assign vSiwtch9 to it as well, inherit all settings from vSwitch9.



I. Create 2 VMs named v-f34-v3



J. and v-f34-v4.



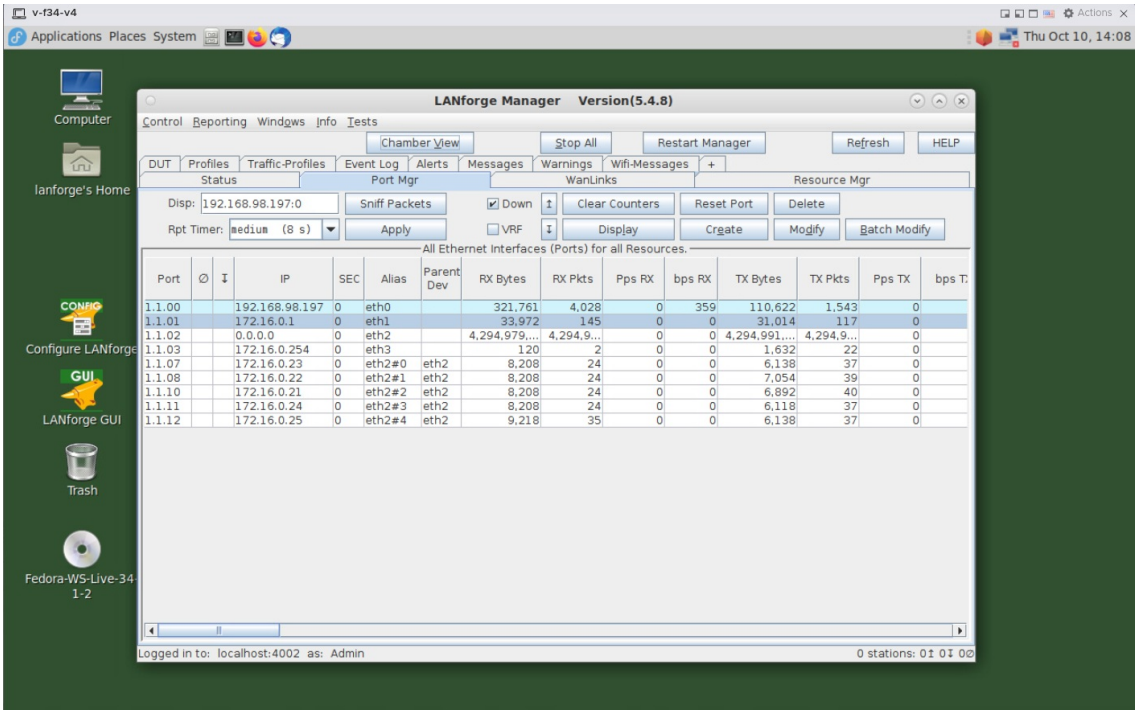
K. Install Fedora 34 on both VMs.

L. After successful VM creation and Fedora 34 install, power off and add Network Adapters for VLAN8 and VLAN9 respectively.

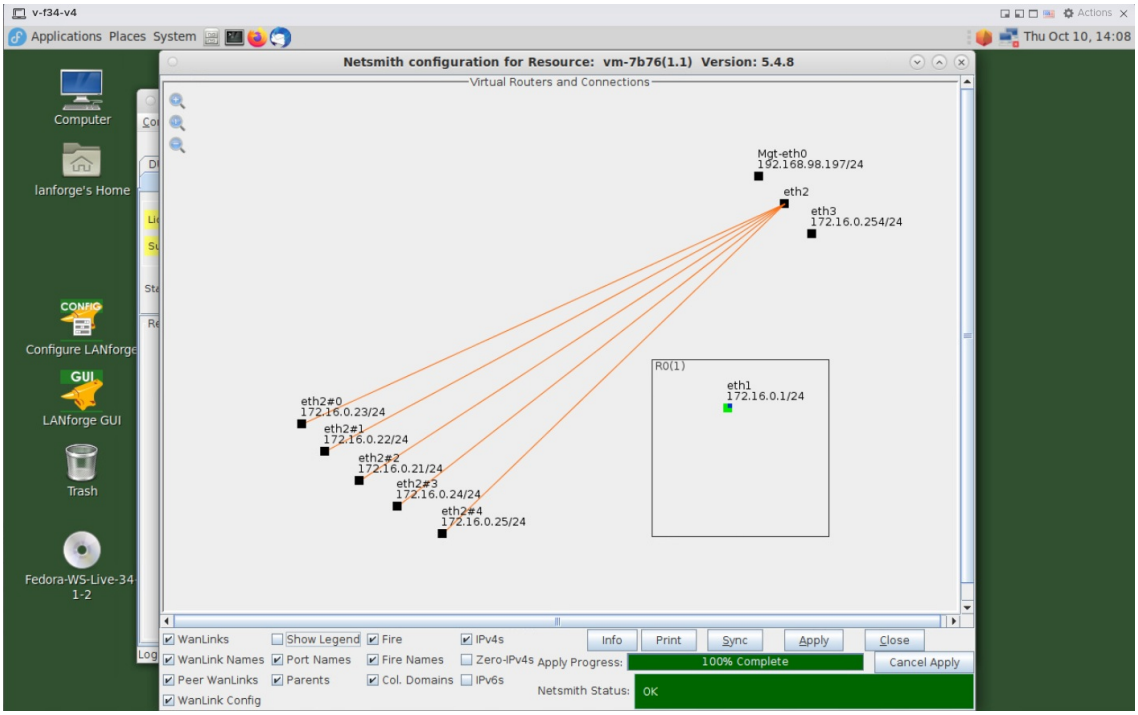
M. Install LANforge on both VMs with ./lf_kinstall.pl

N. In both LANforge VMs, map eth1 to VLAN8 and eth2 to VLAN9.

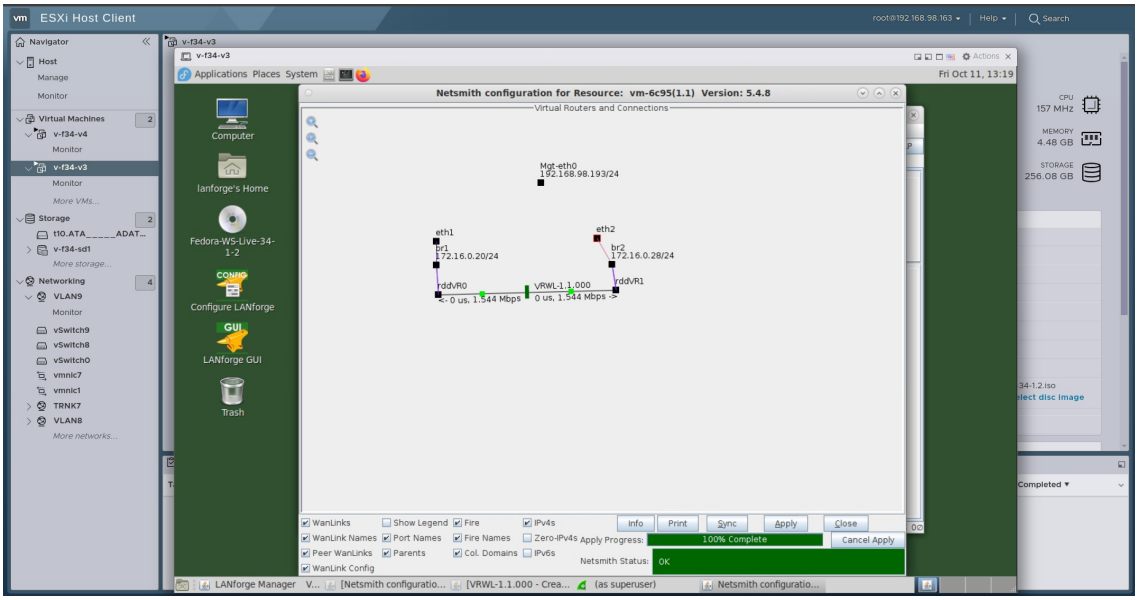
O. In netsmith on LANforge VM v-f34-v4 (traffic generator), create a virtual router, this will be referred to as VR. Place eth1 into VR. In Port Mgr, modify eth1 to have the ip: 172.16.0.1/24.



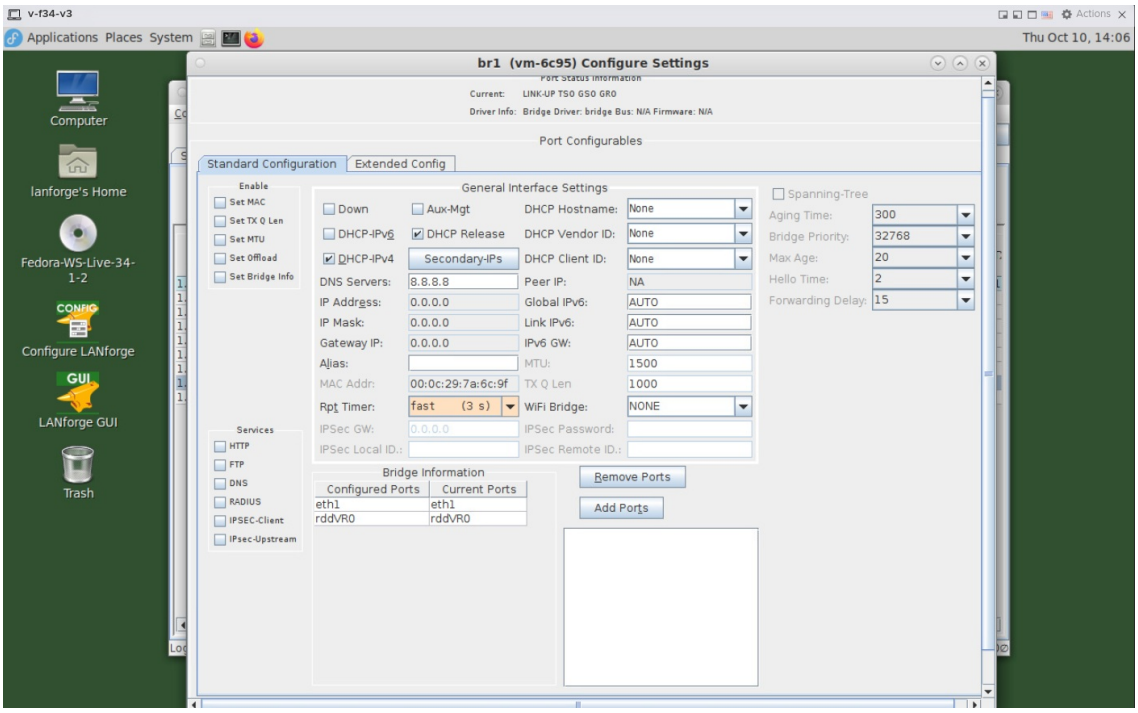
P. Back in netsmith, right-click and modify eth1 and edit the dhcp range from 172.16.0.20 to 172.16.0.99. Tick the box labled DHCP.



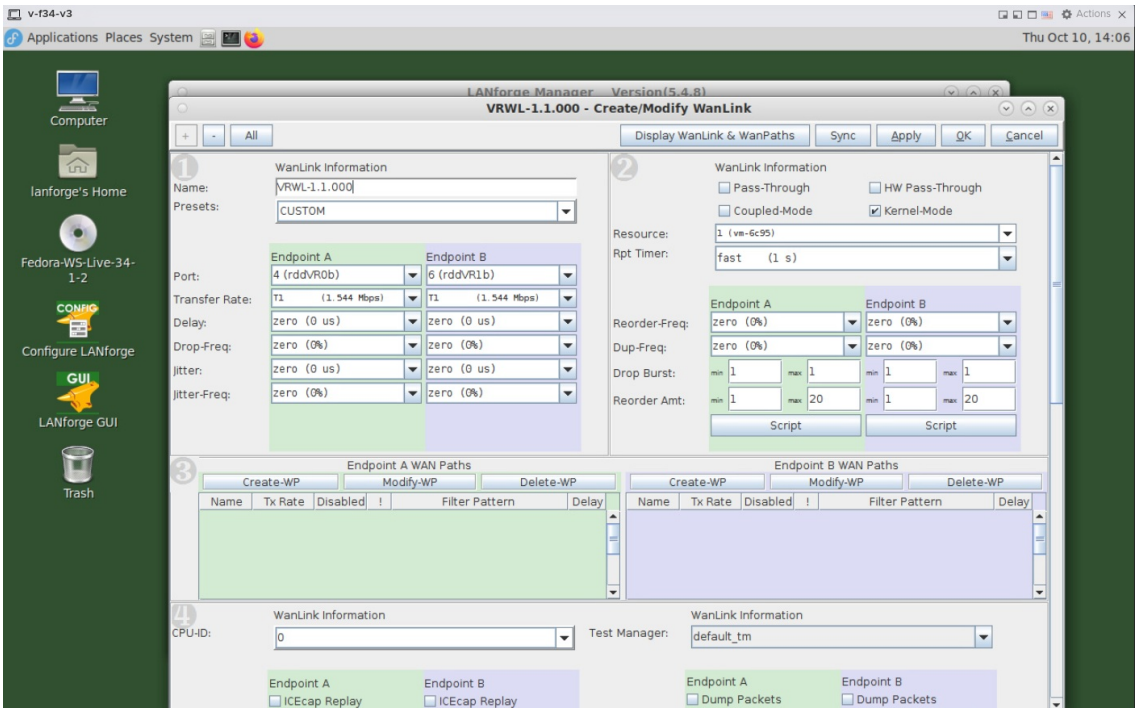
Q. On LANforge VM v-f34-v3 (wanlink), in netsmith create a new connction (rddVR0 <--> rddVR1). Right-click, select new connection, select bridge, and name it br1 (bridge 1). Select get DHCP.



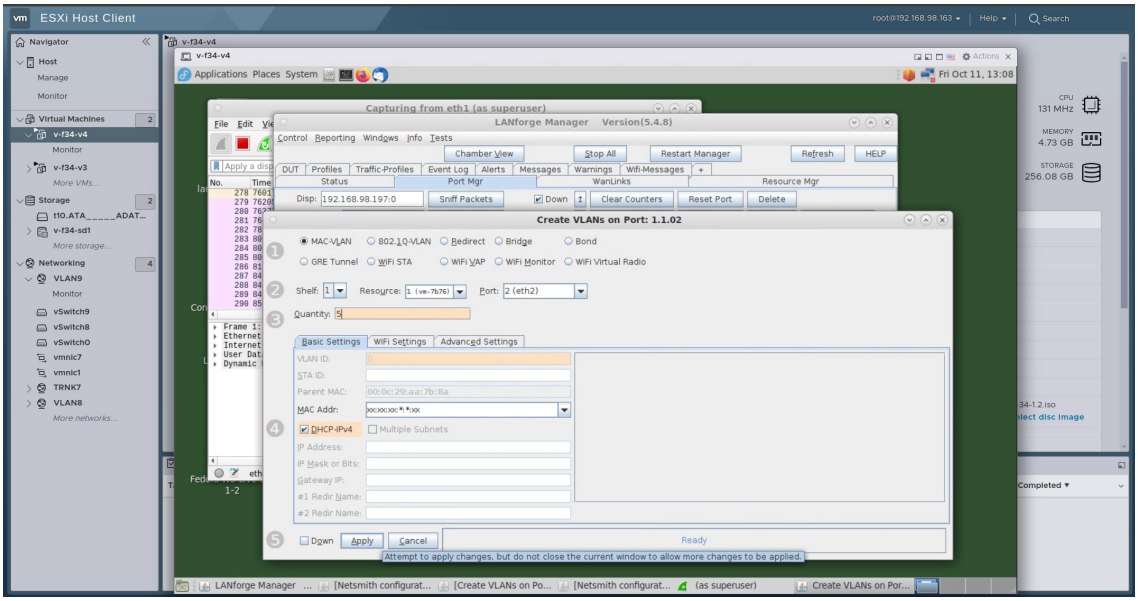
R. In Port Mgr modify br1 to add ports: eth1 and rddVR0. Repeat steps for br2 (bridge 2). Add ports eth2 and rddVR1 to br2.



S. On LANforge v-f34-v3 (wanlink): navigate to the Wanlinks tab and start the wanlink.

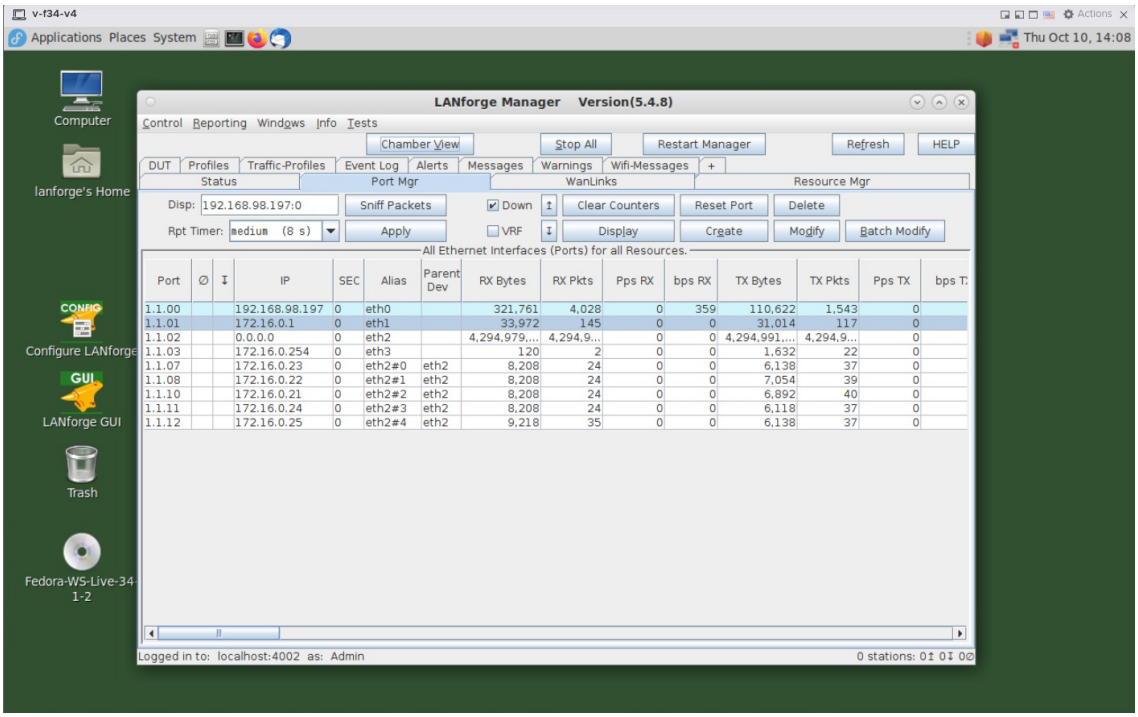


T. On LANforge v-f34-v4 (traffic generator): navigate to Port Mgr, create a MAC-VLAN (quantity 5), with DHCP.



U. On LANforge v-f34-v3: Down and up br1 while packet sniffing br1, br1 should now have DHCP.

V. On LANforge v-f34-v4: Confirm that eth2#0-4 received DHCP.



W. On LANforge v-f34-v3: Down and up br2 after confirming step 17. Br2 should also receive DHCP.