Debugging and Troubleshooting Host Only Networking

If you're having trouble getting VMs to communicate on the Host Only network, you can use this process for troubleshooting:

1. The first step is to check the Host Only Network settings in Virtual Box.
   a. Check the IP address for the Host Only Network, and ensure that DHCP is NOT selected. You might want to note the IP address of the Host Only Network here _____

   b. Check the Network Settings for both VMs, and make sure the 2nd Network Adapter is enabled, is connected to the Host-Only network, and the Cable Connected box is checked.

2. In each VM create the network configuration file for the 2nd network card, `/etc/sysconfig/network-scripts/ifcfg-enp0s8`/ and add the required lines:
   a. Ensure that the IP address uses the network portion of the IP address set in step 1a.
   b. Ensure the IP address is different than the IP address for the other VM. That is, use something like .10 for the NFS server and .20 for the NFS client.
   c. Ensure the BOOTPROTO setting is set to static
   d. Ensure the NETMASK is set to 255.255.255.0

   ```
   TYPE="Ethernet"
   BOOTPROTO="static"
   IPADDR="192.168.NNN.HHH"
   NETMASK="255.255.255.0"
   NAME="enp0s8"
   DEVICE="enp0s8"
   ONBOOT="yes"
   ```

3. In each VM restart the network service.
   ```
   systemctl restart network.service
   ```

4. In each VM, check the 2nd network card to ensure the correct IP address and netmask have been assigned:
   ```
   nmcli device status
   or
   ip add
   ```

You should see the IP address you assigned in step 2. If not, then you made a mistake in steps 2 or 3. Go back and check your work.

5. Check the 2nd network connection in both VMs.
   a. From the NFS server, try and ping the IP address of the NFS client

b.   From the NFS client, try and ping the IP address of the NFS server

If this fails, then something is wrong with the network configuration on one or both of the VMs. The first thing I would check is to ensure the IP addresses. Make sure they all use the same network portion, that they are NOT set to DHCP, and that the host portion is different. For example, if the Host Only Network address is **192.168.73**.1 then the network portion is: **192.168.73**

This means the IP address for both VMs must start with **192.168.73**, but use different host numbers. For example, the NFS server could be 192.168.73.**20** and the NFS client could be 192.168.73.**30**