ASO Lab 1 update

For the following steps, I've used VirtualBox virtualization software.

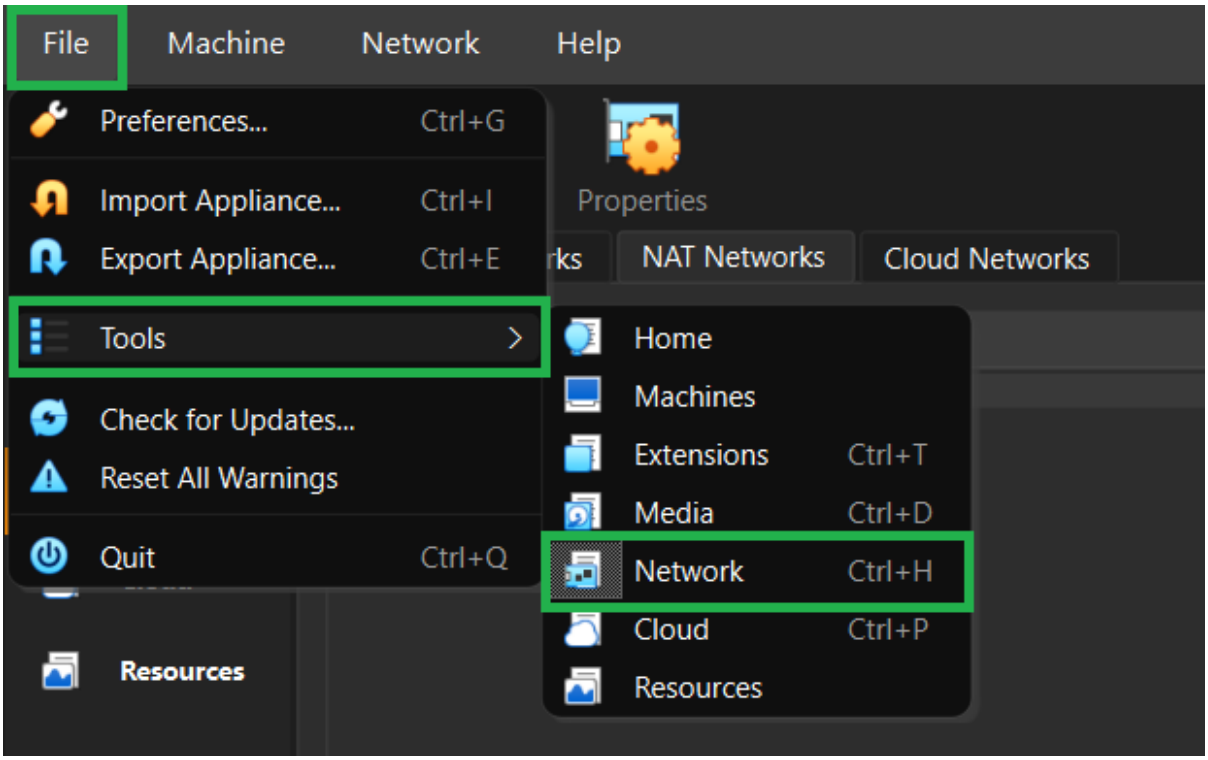
VirtualBox network setup

Besides the default NAT network set on each virtual machine, we need to configure the virtual LAN that enables the communication between machines. The NAT network represents the private network for each VM itself.

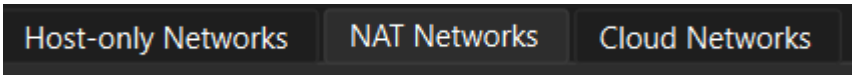
There are a few options that can be applied to set the VLAN. For this lab, I've set a separate NAT Network option.

1. Create a NAT Network that is available for both machines.

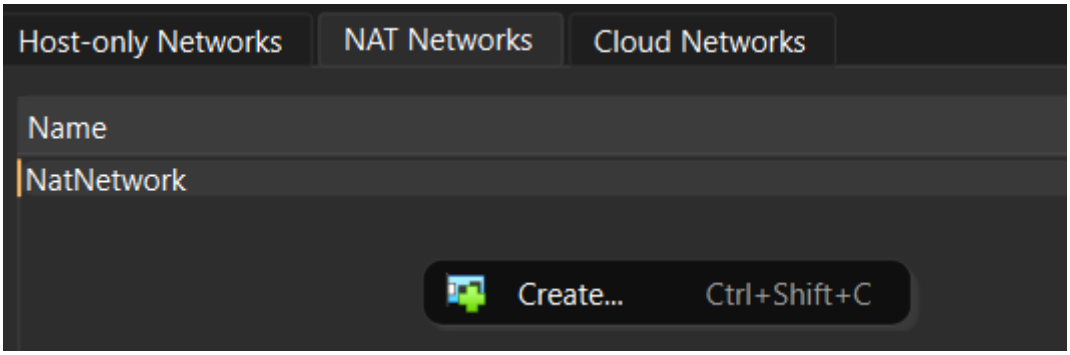
    1. VirtualBox → File → Tools → Network



    2. Select the **NAT Network** tab

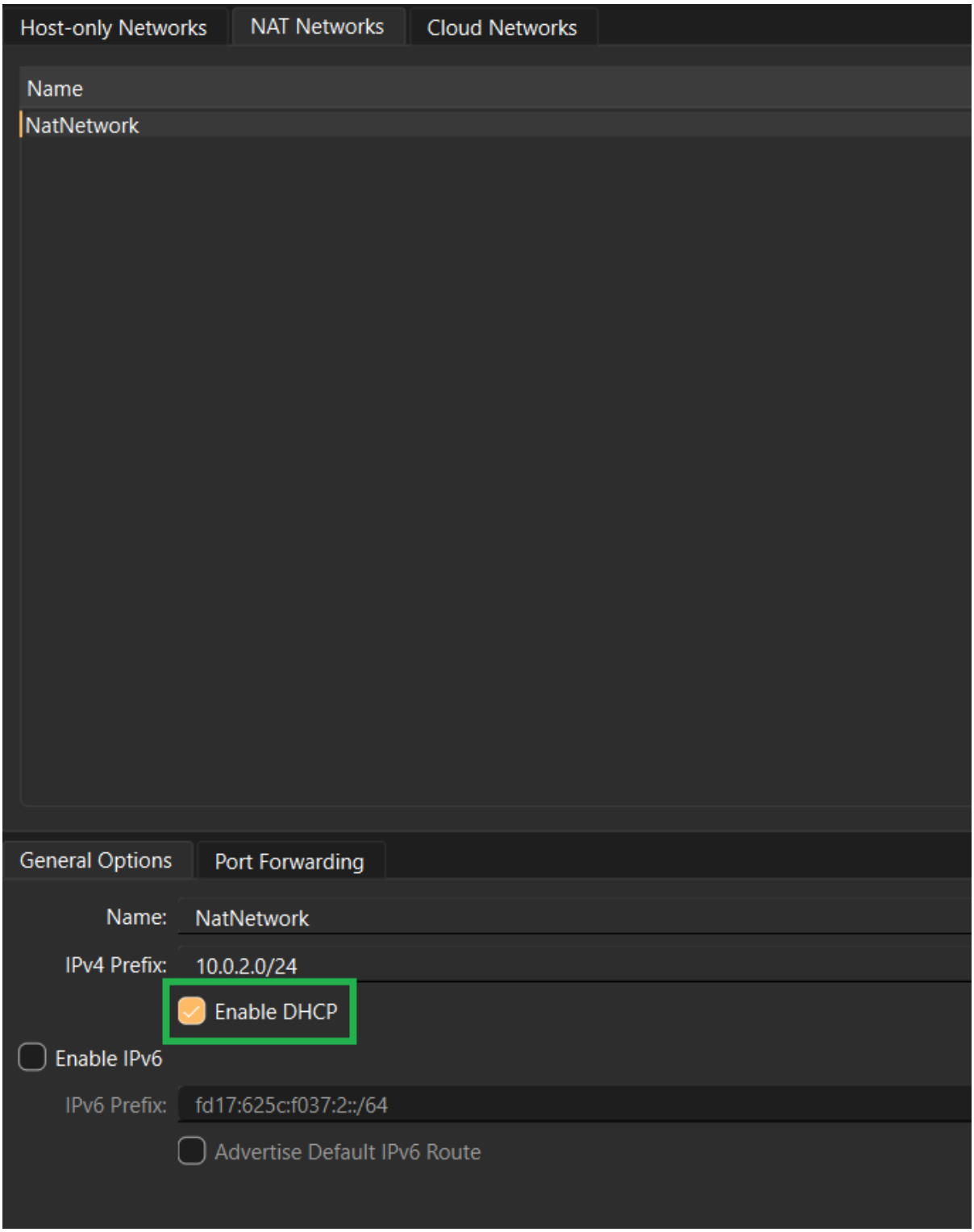


    3. Right-click on the free area → Create



By default, a network named **NatNetwork** will be created. Once it's created, make sure that DHCP is enabled. For that:

4. Right-click on the NatNetwork and select **Properties**

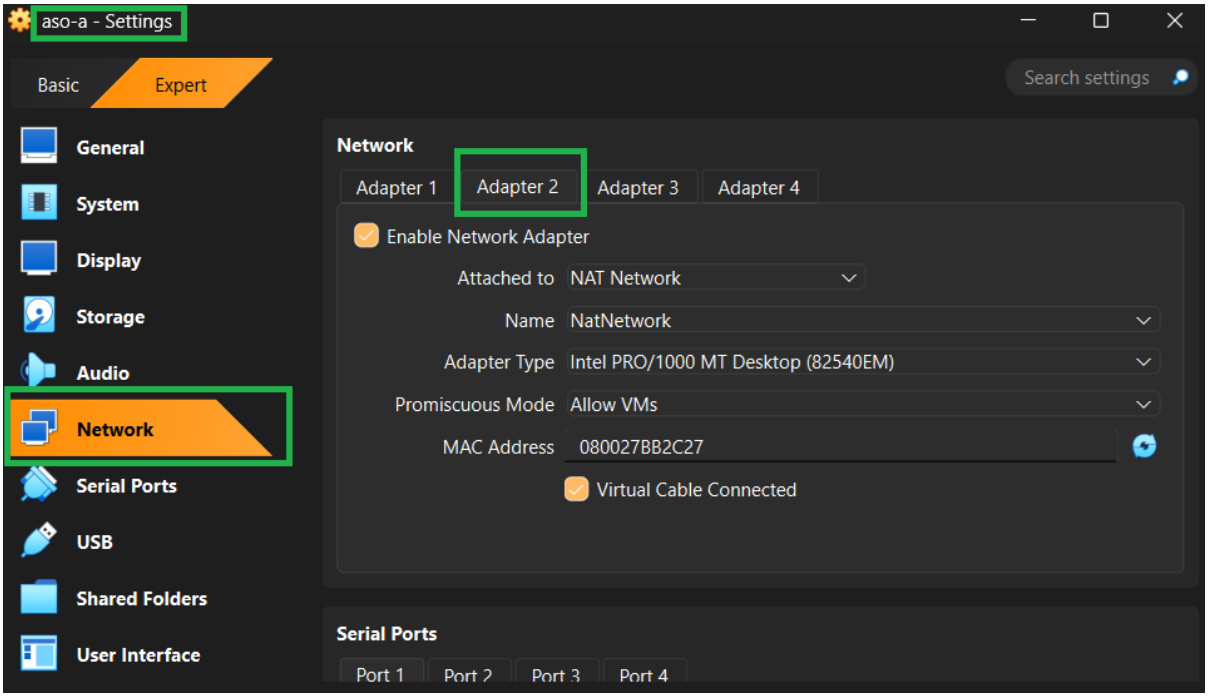


Its IP address should be 10.0.2.0 or 10.0.3.0 with a bitmask of 24 bits.

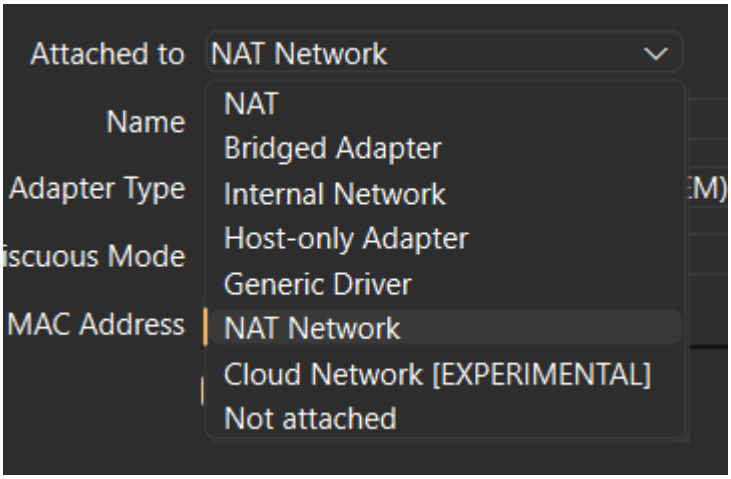
2. Set the adapters for each VM to connect to this network.

    1. Go to the machines menu (VirtualBox → File → Tools → Machines)

2. Go to the VM settings, on the Network tab, to the second adapter



3. Choose the network type (the **Attached to** option) to be **NAT Network**



It should automatically set the network that you created earlier. The Adapter type can be left as it is, as long as it's the same on both machines.

The **Promiscuous Mode** option should be set to **Allow VMs** (or **Allow All**).

The option **Virtual Cable Connected** should also be enabled.

Check if the aso-a machine is connected to this network

To check if the **aso-a** is available in this network, start the machine, open a terminal, and run the command `ip addr show`. It's all good if you see an interface like `enp0s8` with an IP like `10.0.2.x` or `10.0.3.x`.

aso-b network configuration

We will need to open the VM with GUI for this time and we need to **wait** for the machine to boot. It should look like this after it's booted.

Here introduce the credentials `aso` (username), `aso` (password)

Now if we run `ip addr show`, we'll see that the interface `enp0s8` has an IP address that is not in the range of the NatNetwork that we have created. That's because we need to set DHCP rules from a certain configuration file (found at path /etc/netplan/50-cloud-init.yaml)

- Edit this file with `sudo nano 50-cloud-init.yaml`
- Set the DHCP rule on `true` for `enp0s8` interface and remove other settings (there should be hardcoded an IP address that needs to be removed)
- After that apply the changes running `sudo netplan apply`
- Check if the changes are applied by running `ip addr show`. Now the `enp0s8` interface should have an IP address like `10.0.2.x` or `10.0.3.x`. Remember this address because we need to connect to it from `aso-a` machine. Let's call it `ASO_B_IP_ADDR`

Verify if the connection between machines works as the lab specifies (Go to the aso-a machine, open a terminal or use an existent one and run `ssh aso@<ASO_B_IP_ADDR>` (without port spec)). It should open a

connection that looks like this: