NetropyVE 4.0

Installation Guide

KVM using Virt-Manager

APPOSITE
TECHNOLOGIES

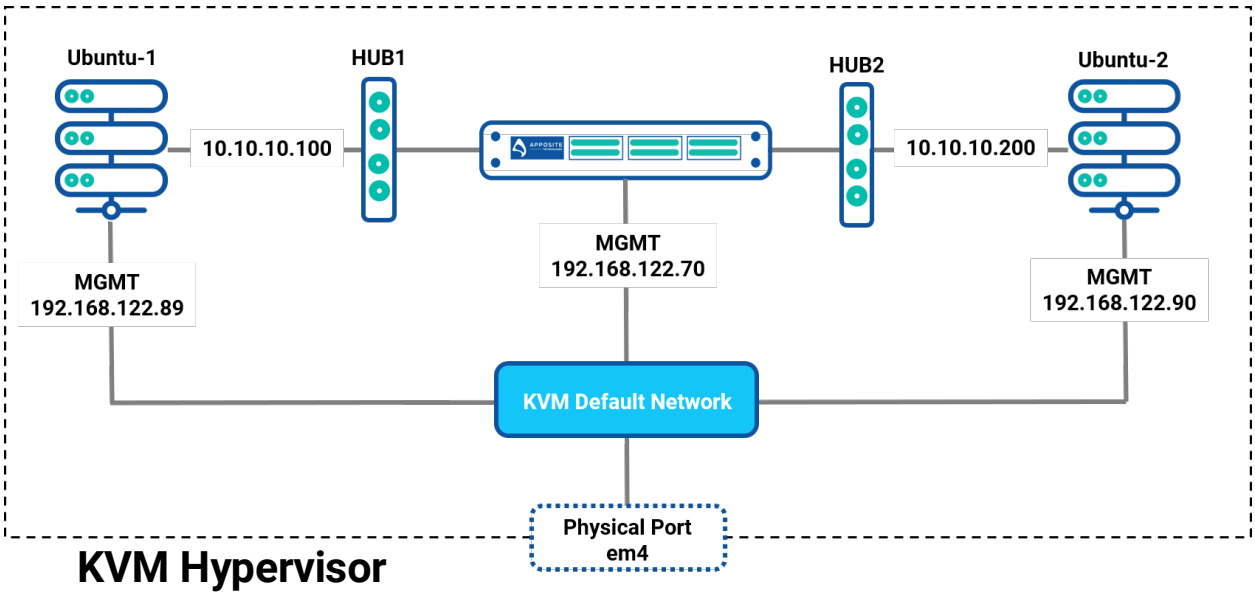
1 OVERVIEW

Objective: To install the NetropyVE product on KVM (qemu version 1.5.3 and above) with the steps to connect the NetropyVE to two virtual machines contained within a single KVM server.

Assumptions: The reader of the document is familiar with KVM, qemu, and virt-manager. The reader already has two virtual machines built and ready to be integrated with the NetropyVE.

This Example: This document will show how to connect two virtual machines to the NetropyVE using the 2nd network cards configured to the virtual machines. The example virtual machines will be called "LA" and "NYC" and be running Ubuntu16 server.

Example Diagram

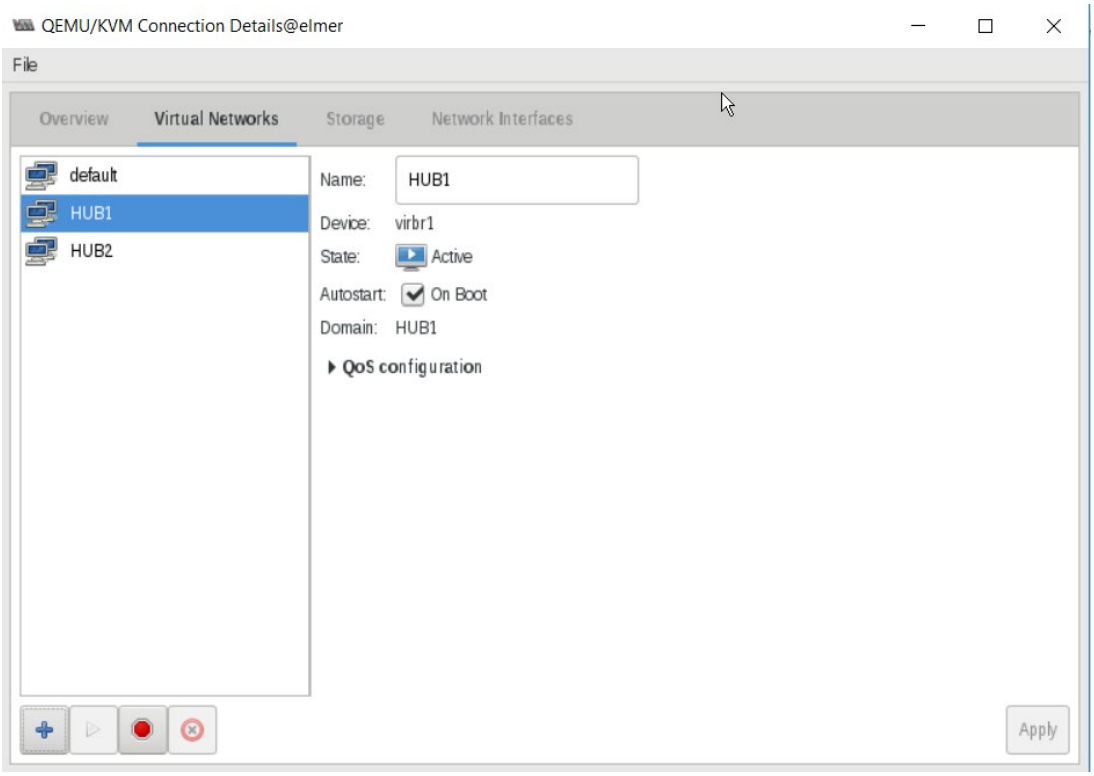


In this example Ubuntu-1 and Ubunt-2 have second Nic cards that are connected through the NetropyVE. All traffic on the 10.10.10.x network will be impaired.

2 Steps

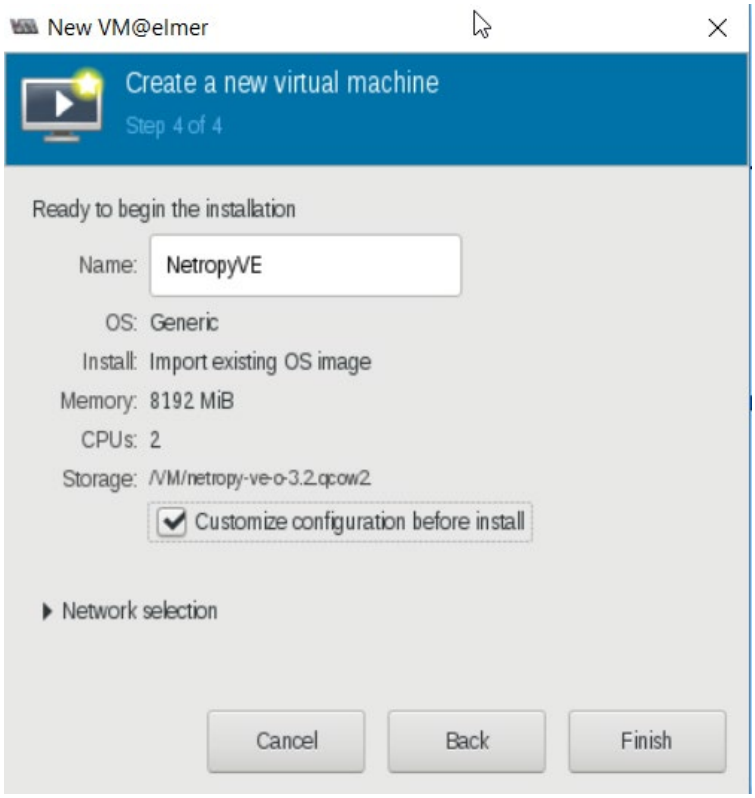
Step 1: Create Virtual networks

- Open virt-manager
- Click on "edit"
    - Connection details
    - Virtual Networks tab
        - Click the "+" at the bottom left of the window
        - Give the network a name. This example we use "HUB1"
        - Click "Forward"
        - Uncheck "Enable IPv4 network address space definition"
        - Click "Forward"
        - Uncheck "Enable IPv6 network address space definition"
        - Click "Forward"
        - Make sure "Isolated virtual network" is checked
        - Click "Finish"
- Repeat the above process and create "HUB2"
- Close the "connection details" window



Step 2: Add the qcow Image

- File -> New Virtual Machine
- Import existing disk image
- Click "Forward"
- Provide the existing path click "Browse"
- Browse local
- Navigate and choose the NetropyVE qcow2 image
- Click "Open"
- Click "Forward"
    - RAM = 8192
    - CPUs = 2
- Click "Forward"
- Name = NetropyVE (or any name you would like to give)
- Check "Customize configuration before install"



- Click Finish

  This will open the VM hardware configuration screen for the qcow2 image

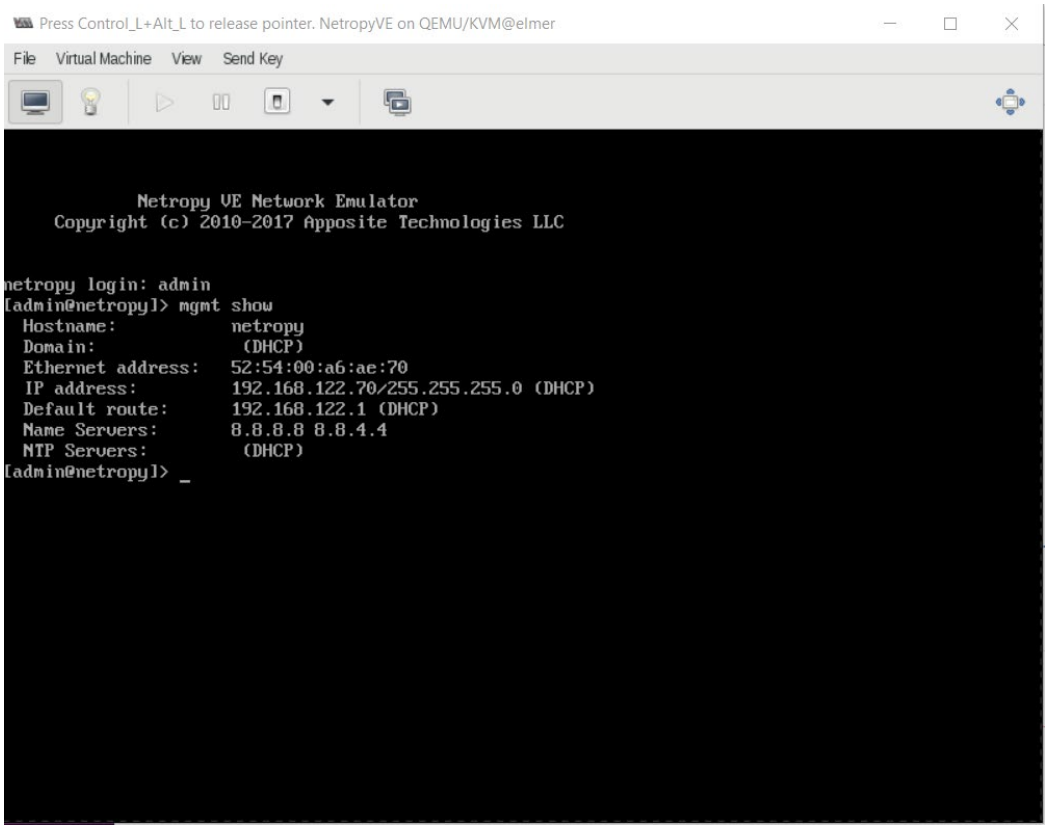
- Highlight NIC card and verify it is set to "Virtual Network 'default': NAT"
- Verify the device model is "virtio" ****IMPORTANT**
- Add Hardware
    - Network
    - Network source = "Virtual Network HUB1: Isolated Network, internal and host routing only"
    - Device Model "virtio" ****IMPORTANT**

    - Finish
- Add Hardware
    - Network
    - Network source = “Virtual Network HUB2: Isolated Network, internal and host routing only”
    - Device Model “virtio” ****IMPORTANT**
    - Finish
- Upper left corner click “Begin Installation”

  You will see the NetropyVE boot up and give you a login screen

Step 3: Configure the NetropyVE

- Login to the NetropyVE with the username “admin”
- Verify the NetropyVE management port gets a DHCP address
    - mgmt show



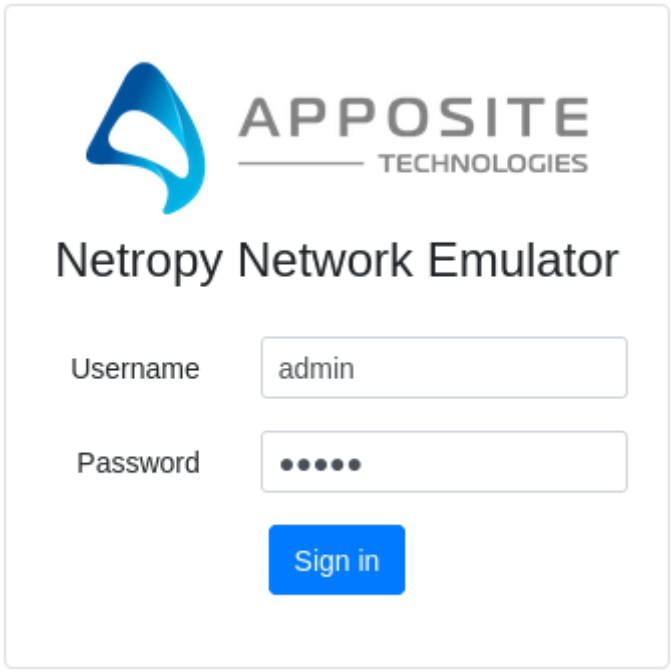
- If you want to configure a static IP you can do so by typing
    - mgmt set addr *192.168.122.70* netmask *255.255.255.0*
    - mgmt set gw *192.168.122.1*

Step 4: License the Netropy

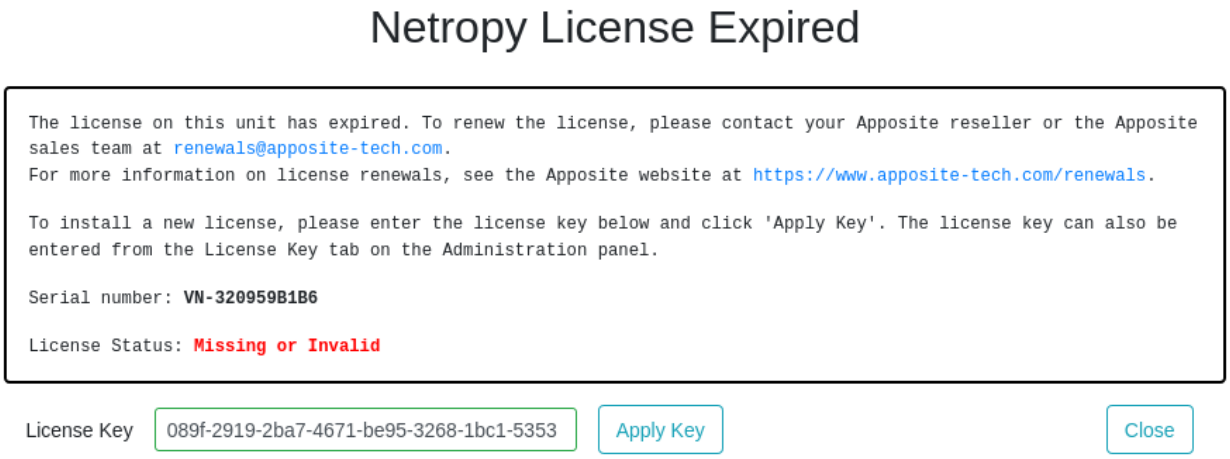
- Using a web browser type the IP address of the NetropyVE you configured above into the URL
- You will be prompted to login.

  User: admin

  Pass: admin



- Click "I Accept" to accept the License Agreement
- Click "I Accept" on the Netropy Warning
- Enter the license key provided and click "Apply key"

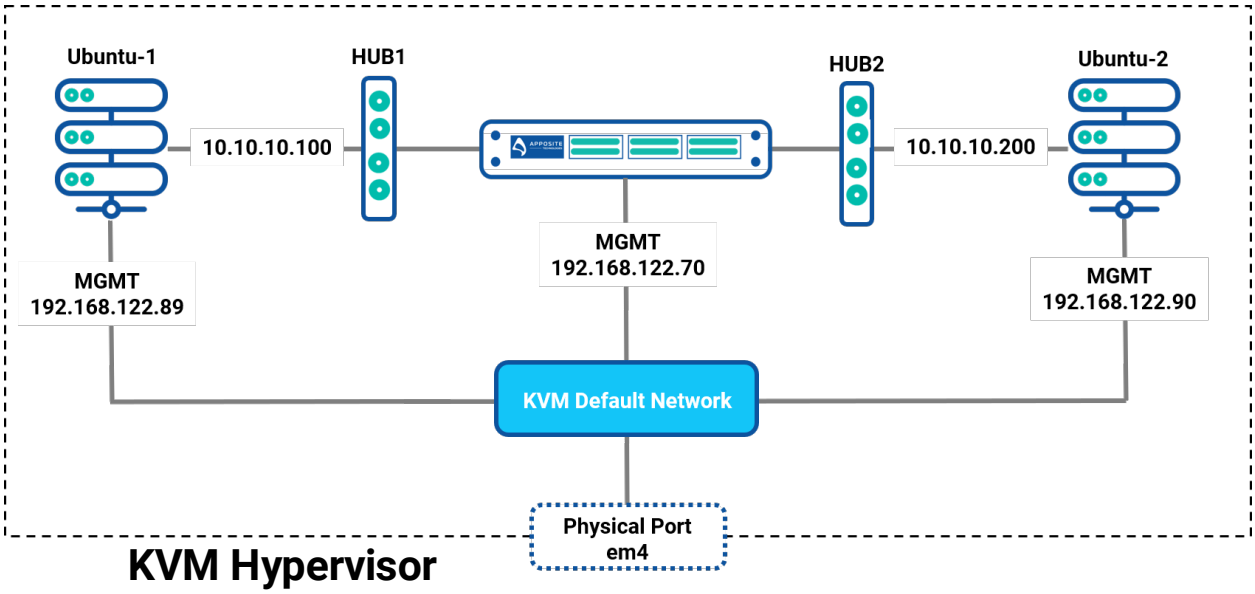


If you do not have a Key please contact your Apposite Sales rep or sales@apposite-tech.com.

In the diagram below the following is configured:

Ubuntu-1
ens3=192.168.122.89
Network: NAT
ens9=10.10.10.100
Network: HUB1

Ubuntu-2
ens3=192.168.122.90
Network: NAT
ens9=10.10.10.200
Network: HUB2

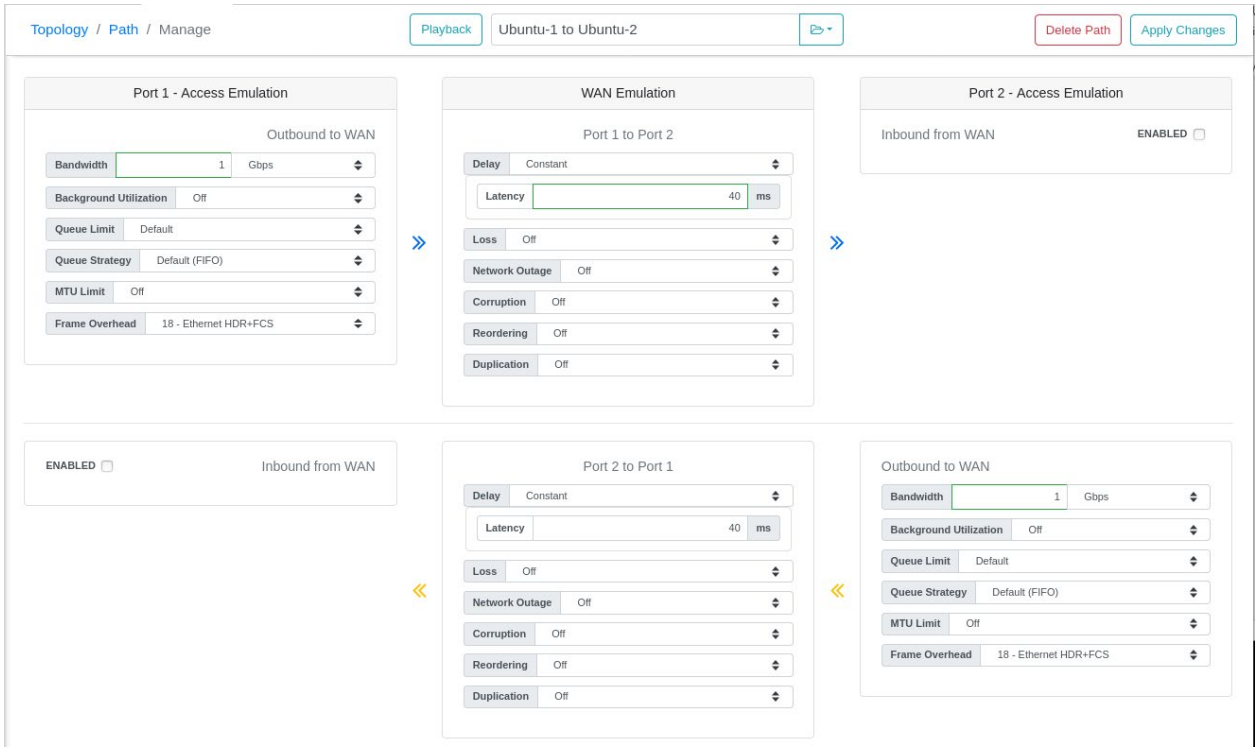


This means anything that runs through 10.10.10.x will travers through the NetropyVE and can be impaired.

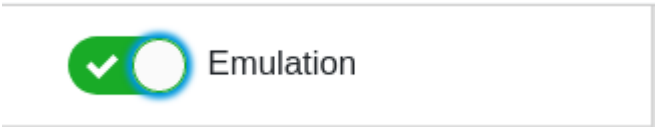
Step 5. Test Emulation

Login to the NetropyVE via http

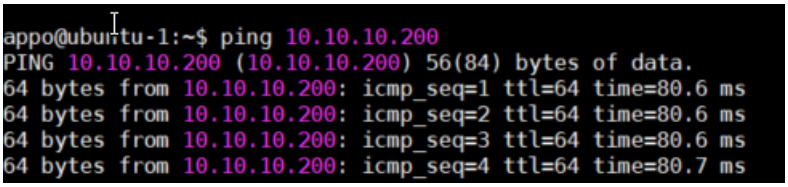
- Click on the ⚙ icon next to "Default Path"
  - At the top change the name at the top (this example "Ubuntu-1 to Ubuntu-2")
  - Set the "Bandwidth" of "Port 1 – Outbound to WAN" (this example is 1Gbps)
  - Under "WAN Port 1 to Port 2" set the Delay to constant (in this example 40ms)
  - Set the "Bandwidth" of "Port 2 – Outbound to WAN" (this example is 1Gbps)
  - Apply Changes



Close the window and turn emulation on



Emulation should now be on. If you ping from Ubuntu-1 to Ubuntu 2 using the 10.10.10.x network



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