NTGVE

Installation Guide

VMware Walkthrough

APPOSITE
TECHNOLOGIES

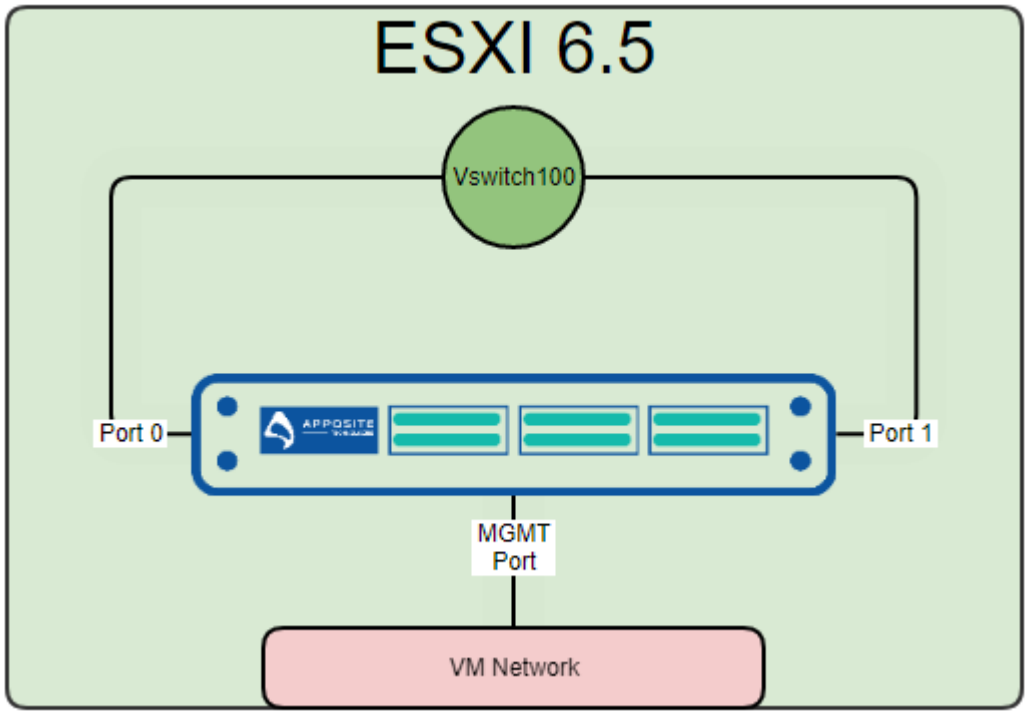
1 OVERVIEW

Objective: To install the NTGVE product on ESXI 6.5 or higher through an example with the steps to connect the NTGVE in a loopback configuration in a single ESXI server.

Assumptions: The reader of the document is familiar with ESXI environment and terminology.

This Example: This document will show how to provision an NTGVE instance and connect through a virtual switch in a "loopback" configuration. Port 0 will send to port 1. This configuration is recommended for beginner users to validate environment and configurations.

Example Diagram:

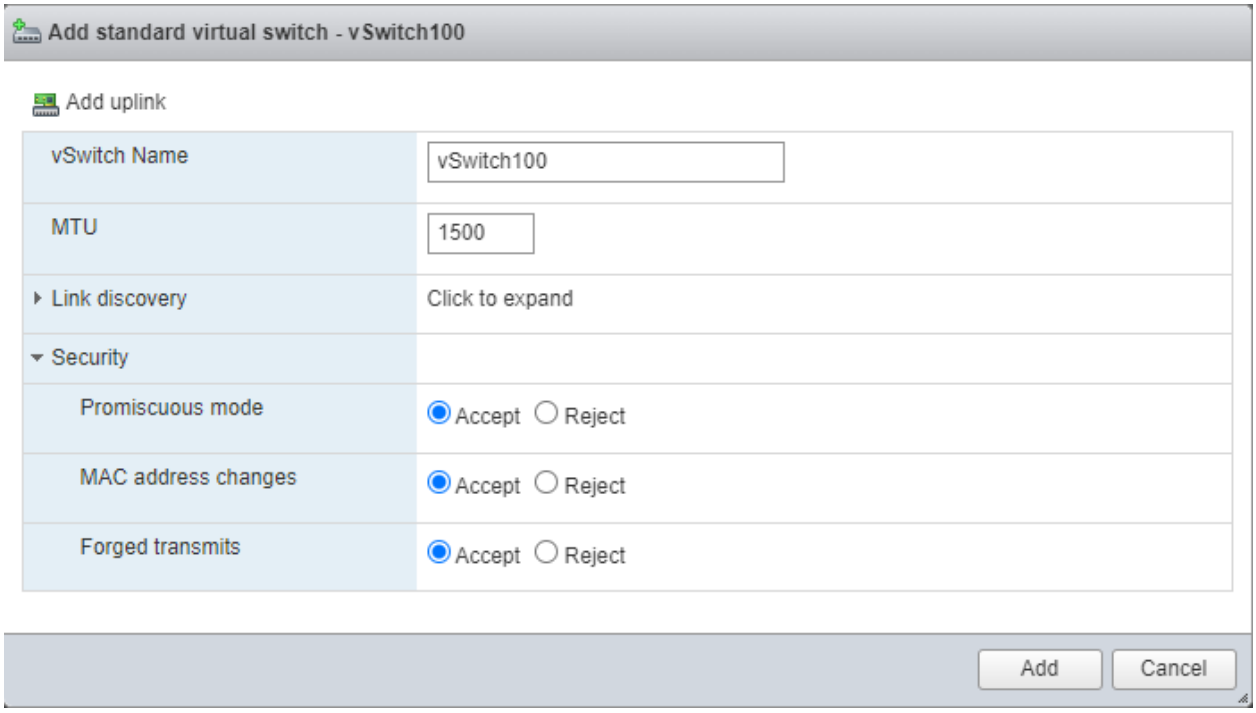


2 STEPS

Step 1: Add Virtual Switches

NTGVE will require 1 virtual switch to send and receive generated traffic.

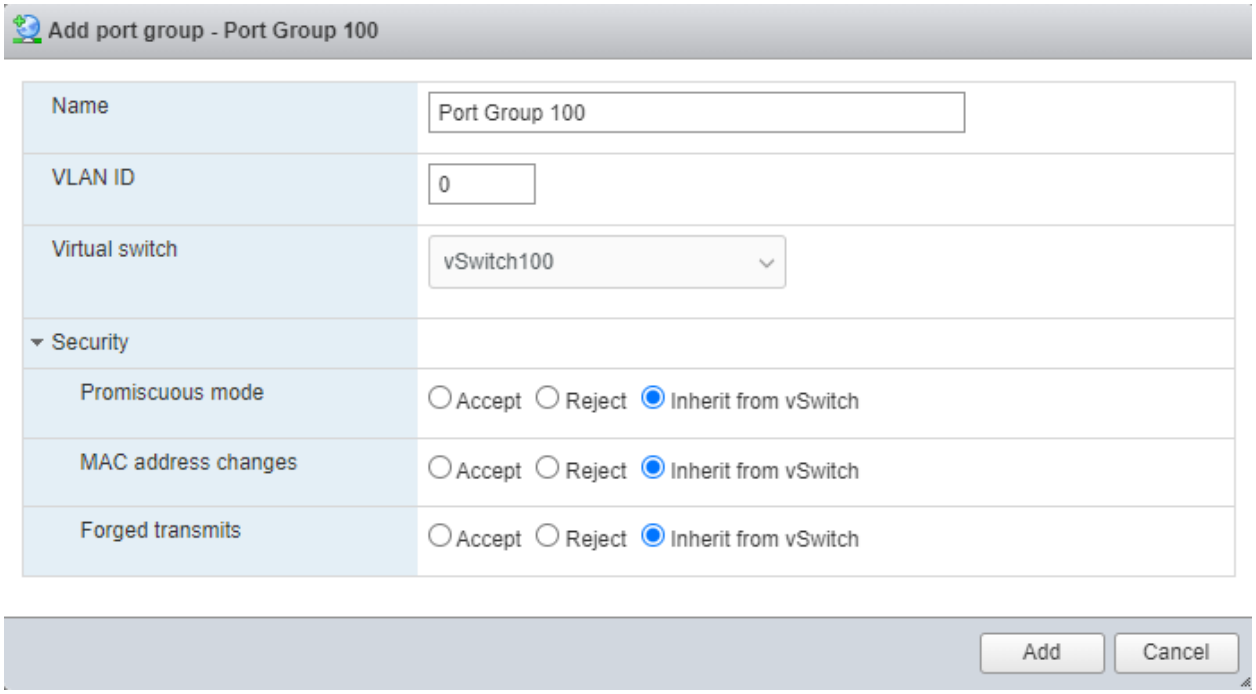
- Log in to your ESXI server and choose “Networking” in the Navigator pane
- Choose the “Virtual Switches” tab
- Then “Add a standard virtual switch”
    - Give the switch a name (VSwitch100 in this example)
    - Remove the uplink port
    - Click the security arrow
        - Accept “Promiscuous mode” “Mac address changes” & “Forged Transmits” ***VERY IMPORTANT ***
    - Click “Add”



Step 2: Create Port Group

Assign the port groups to the new vSwitches you just created.

- In the Navigator pane click on “Networking”
- Choose the “Port Group” tab
- Then “Add Port Group”
    - Name the port group (“Port Group 100” in this example)
    - Virtual Switch: vSwitch100
    - Click Add

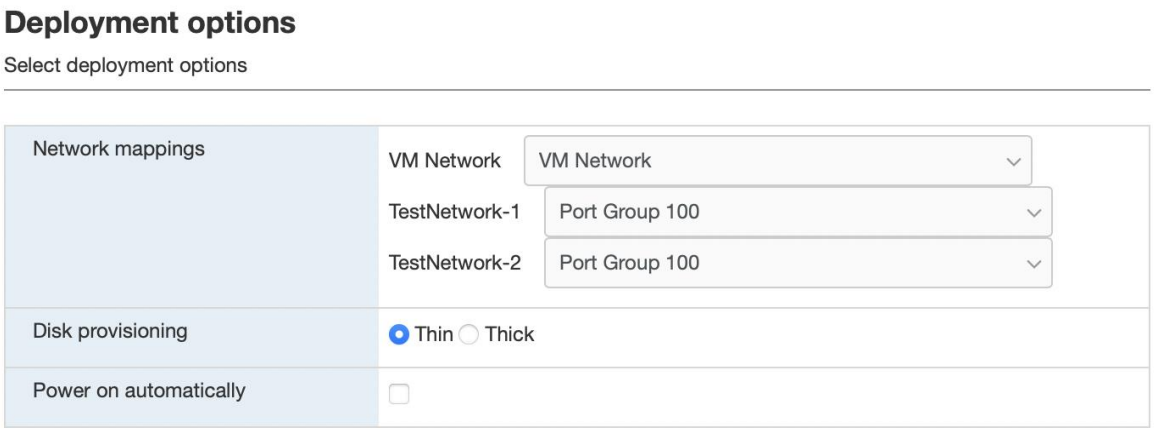


Step 3: Install NTGVE

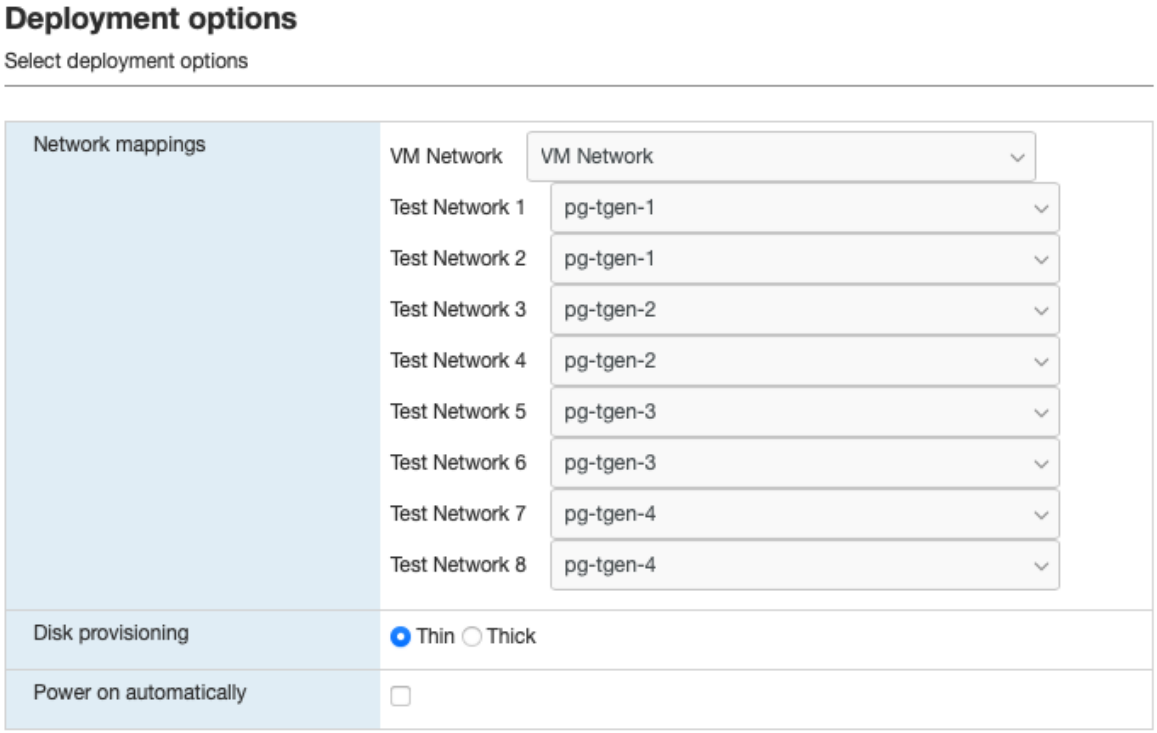
You must have a valid OVA file provided by Apposite Technologies.

- In the Navigator pane choose “Virtual Machines”
- Then “Create / Register VM”
    - Choose “Deploy a virtual machine from an OVA file”
    - Then click “Next”
        - Enter a name (In this example we use “NTGVE”)
        - Click or “Drag/Drop” the .ova supplied by Apposite
        - Then click “Next”
        - Select the datastore you wish to run the NTGVE from
        - Then click “Next”
            - Under Network mapping ***VERY IMPORTANT ***
            - VM Network – Choose the Network for management IPs

- Test Network A – Choose “Port Group 100”
- Test Network B – Choose “Port Group 100”
- Click Next
- Please ensure the “Power on automatically” check box in unchecked
- Now click Finish
- Add a second hard disk (greater than 32GB) to save configuration data. The size of the disk needed depends on the features being used and can be increased later.



For NTG4VE, assign a port group to all 8 network interfaces under network mappings.



Step 4: Set the IP on the NTGVE

By default, the NTGVE acquires its management IP address via DHCP. You can set the NTGVE to a static IP address. You will need console access to configure the TCP/IP settings.

- In the Navigator pane choose “Virtual Machines”
- Choose the “NTGVE” virtual machine
- Click on console
    - Login: admin
    - Password: admin

Find IP Address:

mgmt show

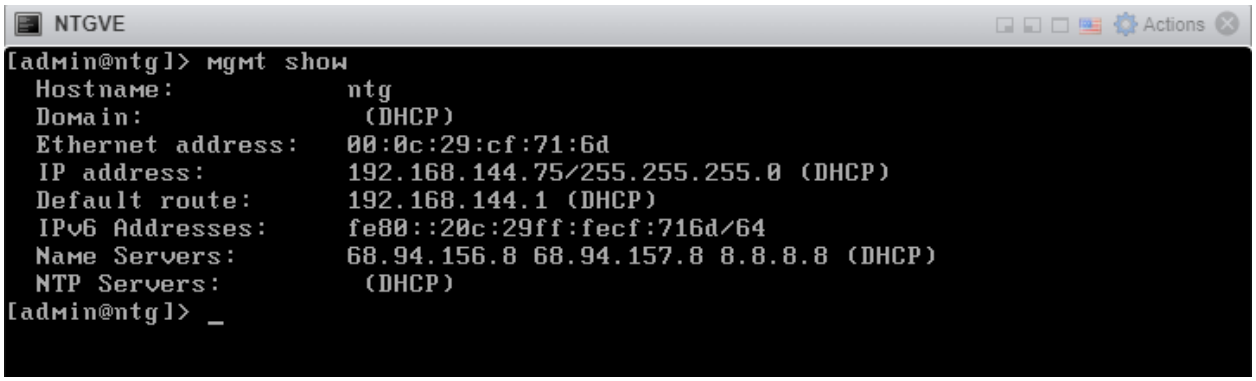
To set Static IP/route type in:

mgmt set addr 192.168.170.33 netmask 255.255.255.0

mgmt set gw 192.168.170.1

To see that the settings have taken effect type

mgmt show



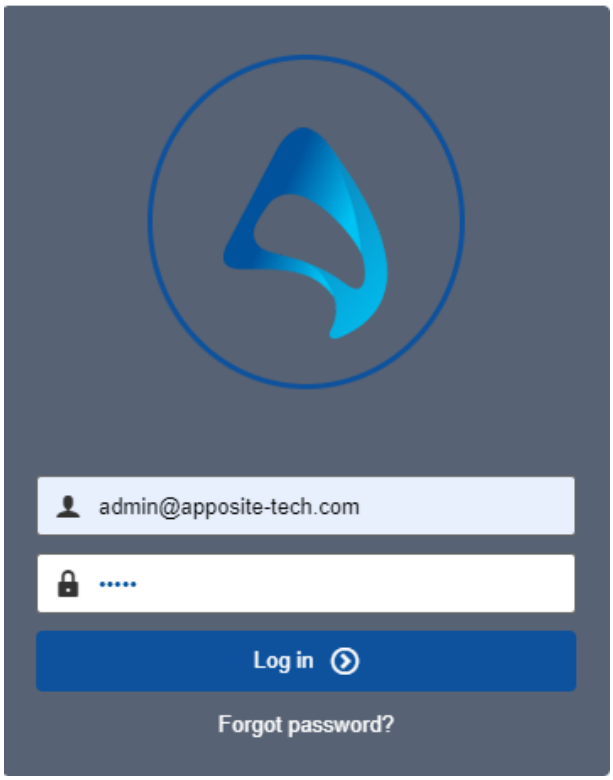
You should now be able access the NTGVE GUI interface by typing the IP address into a browser.

Type “logout” to log out of the console.

Step 5: NTGVE Licensing

Open a web browser; in the navigation window enter the IP address from the “mgmt show” command above.

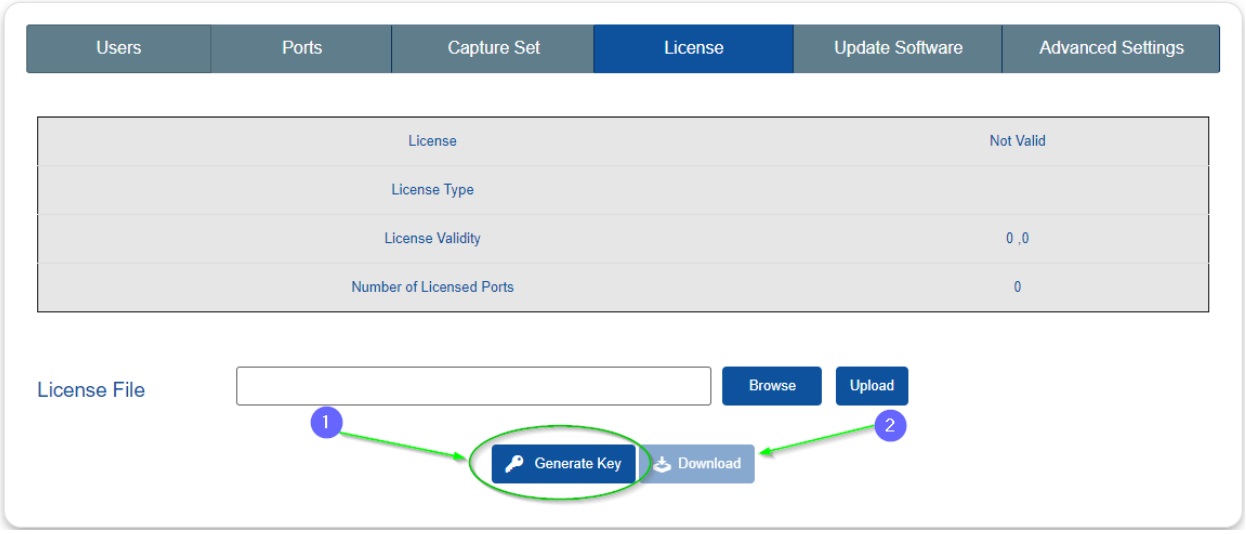
You will be prompted for a login:



Authenticate using:

User: admin@apposite-tech.com
Password: admin

Navigate to: Management -> License -> click “Generate key” at the bottom



Then download the key file

Please send the key file to support@apposite-tech.com to obtain a valid license.

Once you have obtained the license file from Apposite, save it, and use the “Upload” button to load the license.

*You may need to refresh the page to see the license has taken effect.

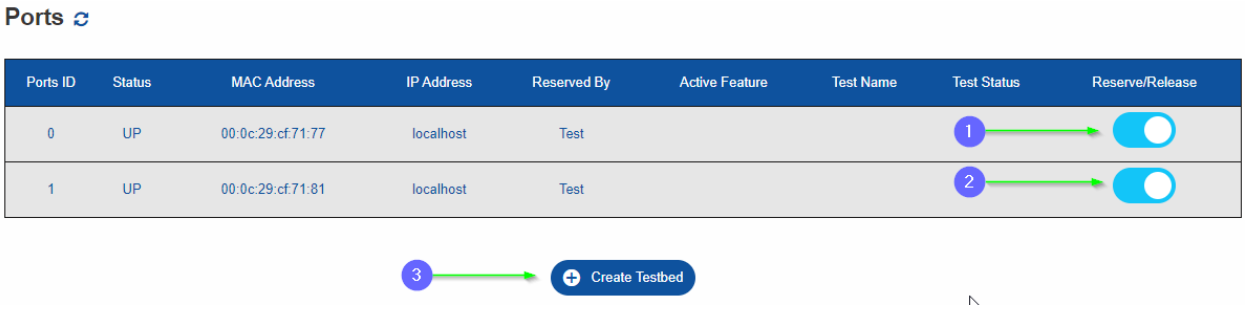
Log out of the Admin account by clicking on the Admin icon on the upper right side of your screen and choosing “Logout”.

Step 6: Configuring and Testing NTGVE for a Simple TrafficEngine Test

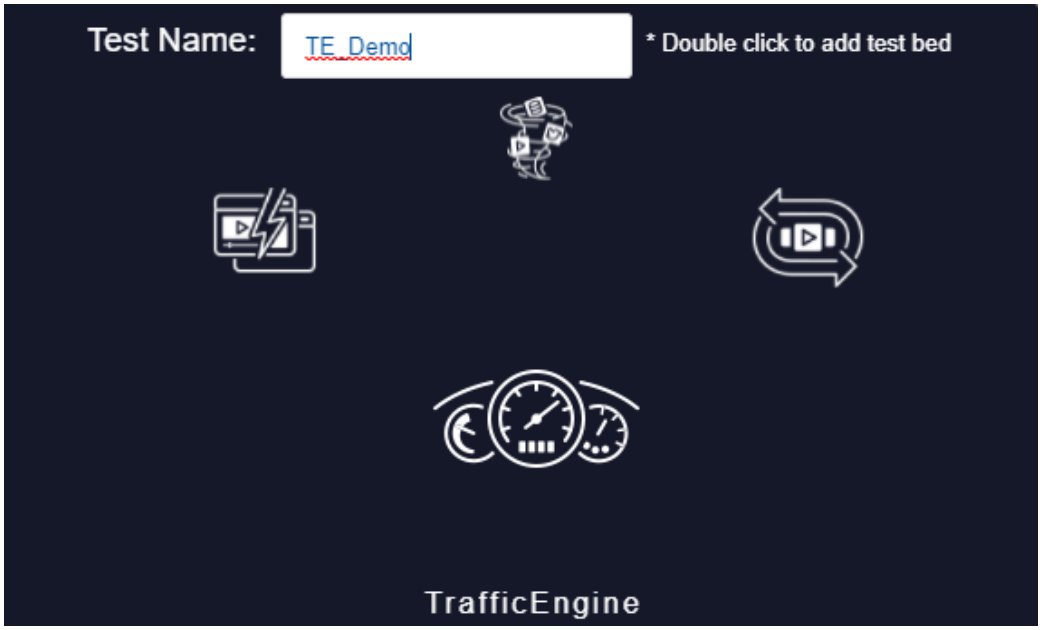
The easiest way to test the NTGVE is with a simple UDP test using TrafficEngine.

- Log in to the NTGVE
    - User: test@apposite-tech.com
    - Password: test123

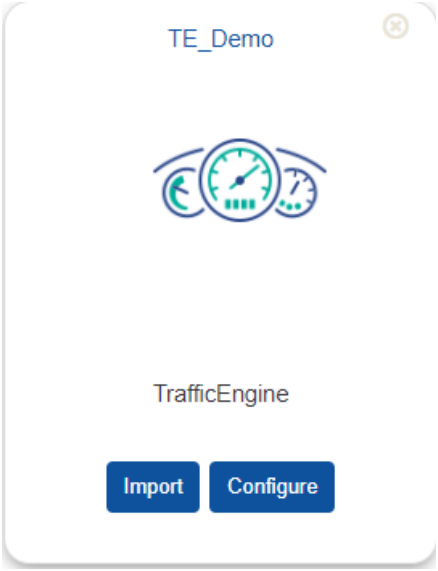
- Reserve port 0 and 1 for your tests
- Create Testbed



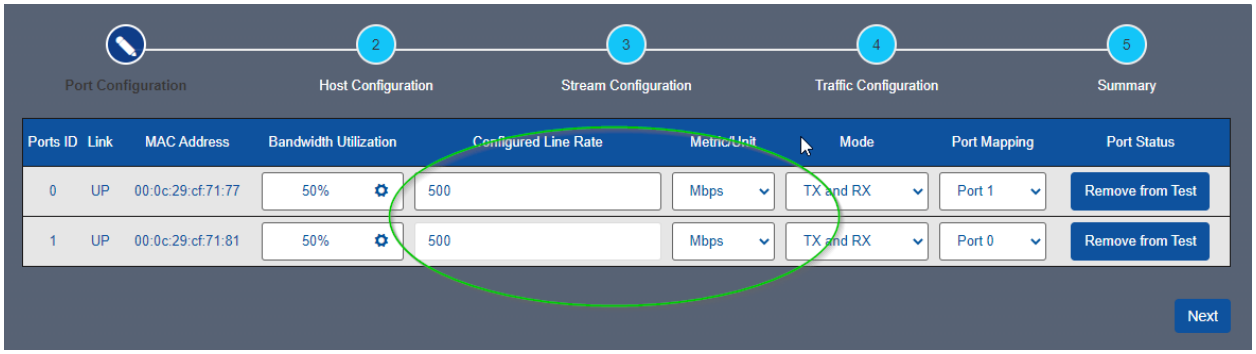
- Give your testbed a name (this example “TE_Test”)
- DoubleClick on the “TrafficEngine” icon to create a testbed



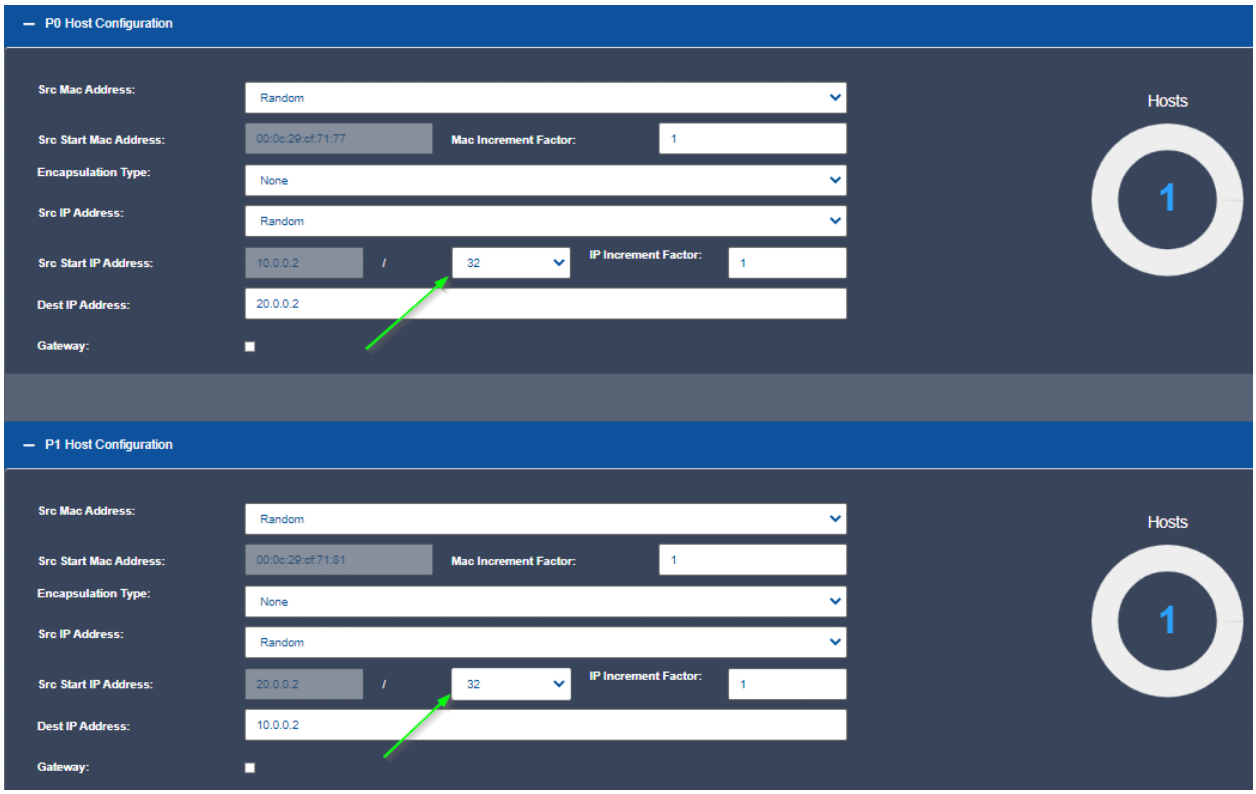
- Click “Configure” on the Testbed you just created



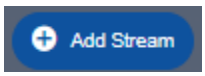
- Add the two ports to your tests
- It is recommended you bring the bandwidth down to 500Mbps on your first test



- Click next
- Set the CIDR block to /32 for both ports

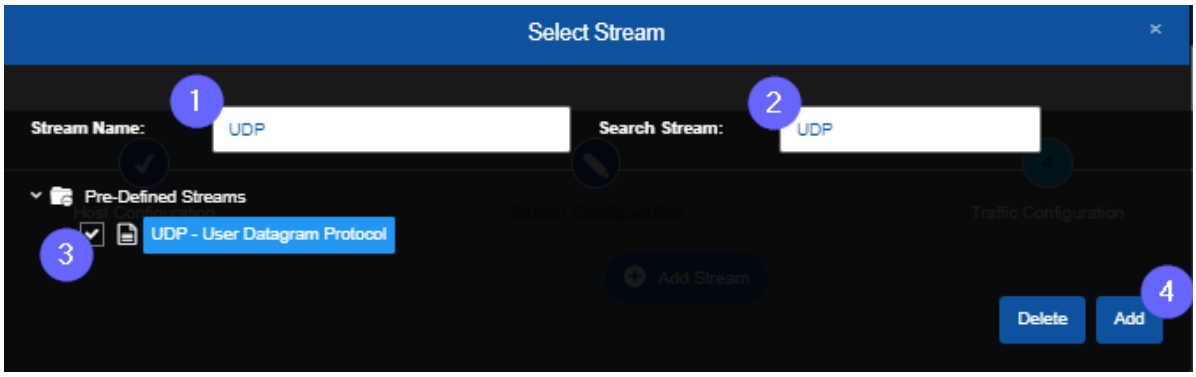


- Click Next
- Click “Add Stream”

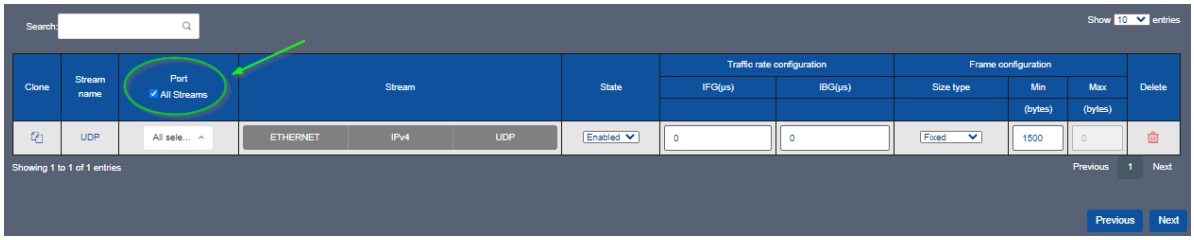


- Stream Name: UDP
- Search: UDP
- Checkmark: UDP

- Add



- Checkmark “Port All Streams”
- Then click “Next”



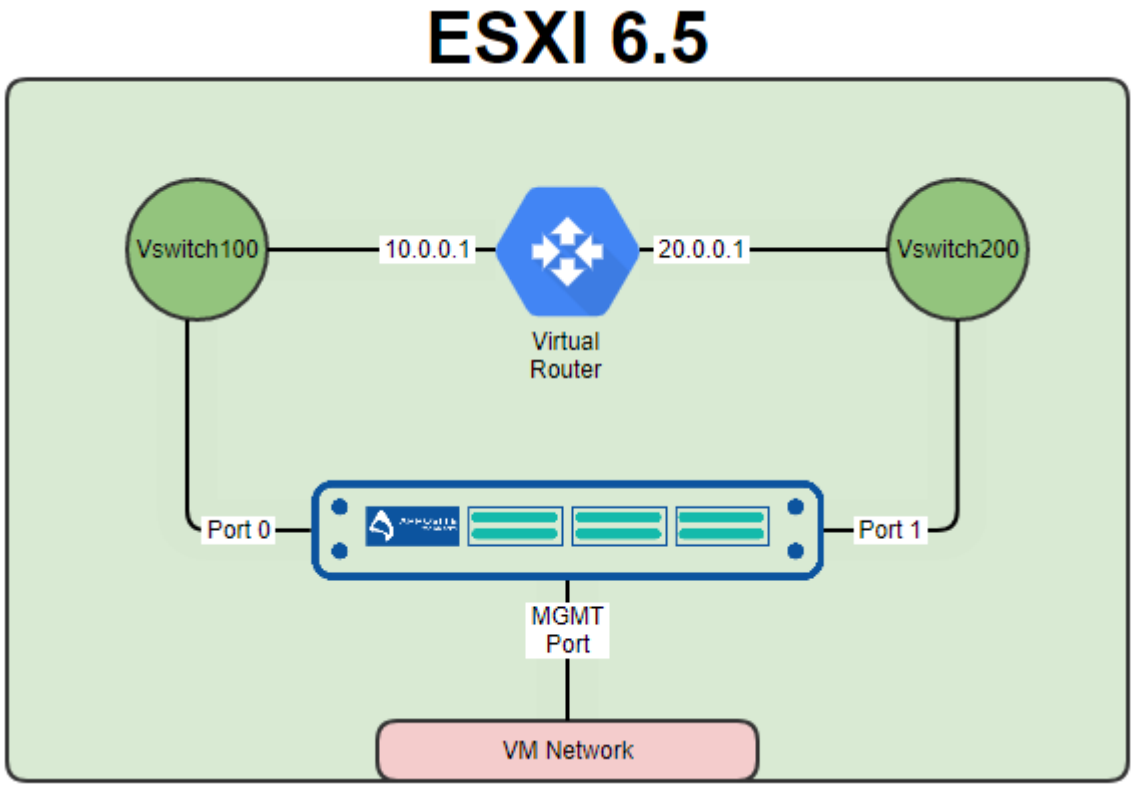
- Click “Next” in the Traffic Configuration
- Click “Start Test” in the Summary

If all is configured correctly you should see traffic sending and receiving on both ports. Verify stats are increasing:

3 Adding a Virtual Router

Assumptions: The reader has already completed steps 1-6 documented above. Reader has access and can configure virtual routers.

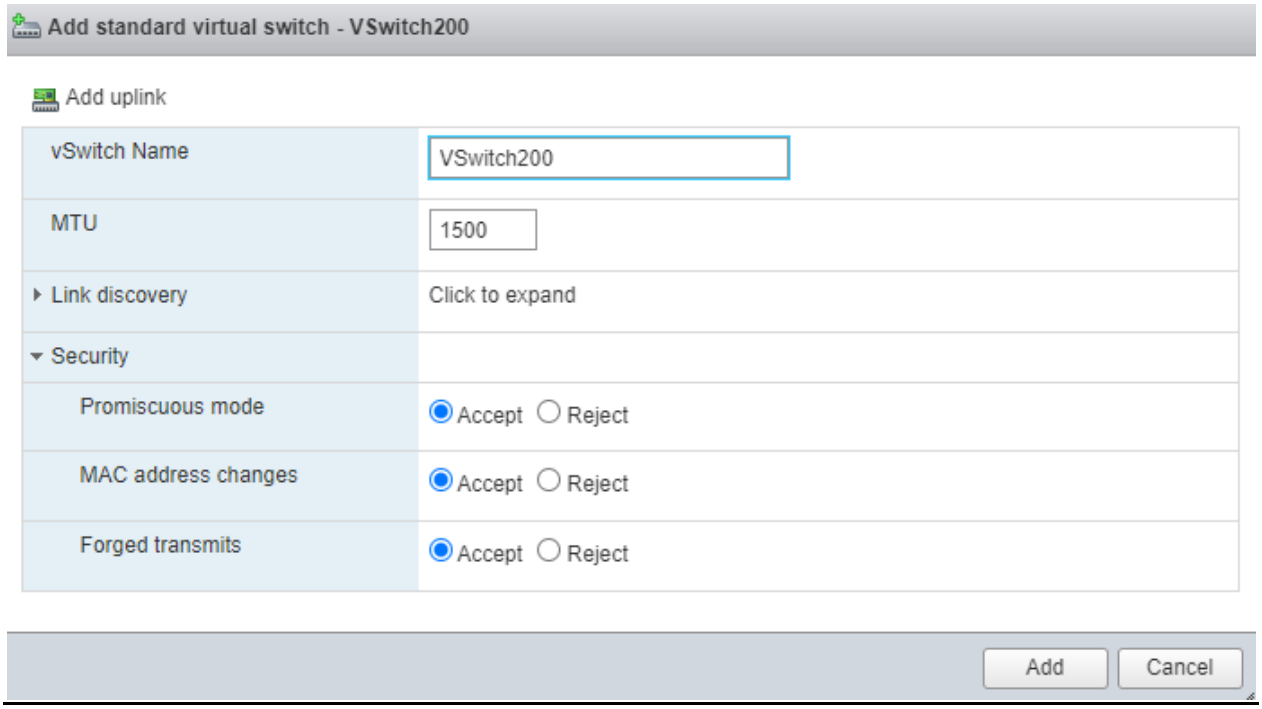
Example Diagram:



4 STEPS

Step 1: Add Another Virtual Switch

- Log in to your ESXI server and choose “Networking” in the Navigator pane
- Choose the “Virtual Switches” tab
- Then “Add a standard virtual switch”
    - Give the switch a name (VSwitch200 in this example)
    - Remove the uplink port
    - Click the security Arrow
        - Accept “Promiscuous mode” “Mac address changes” & “Forged Transmits” ***VERY IMPORTANT ***
    - Click “Add”

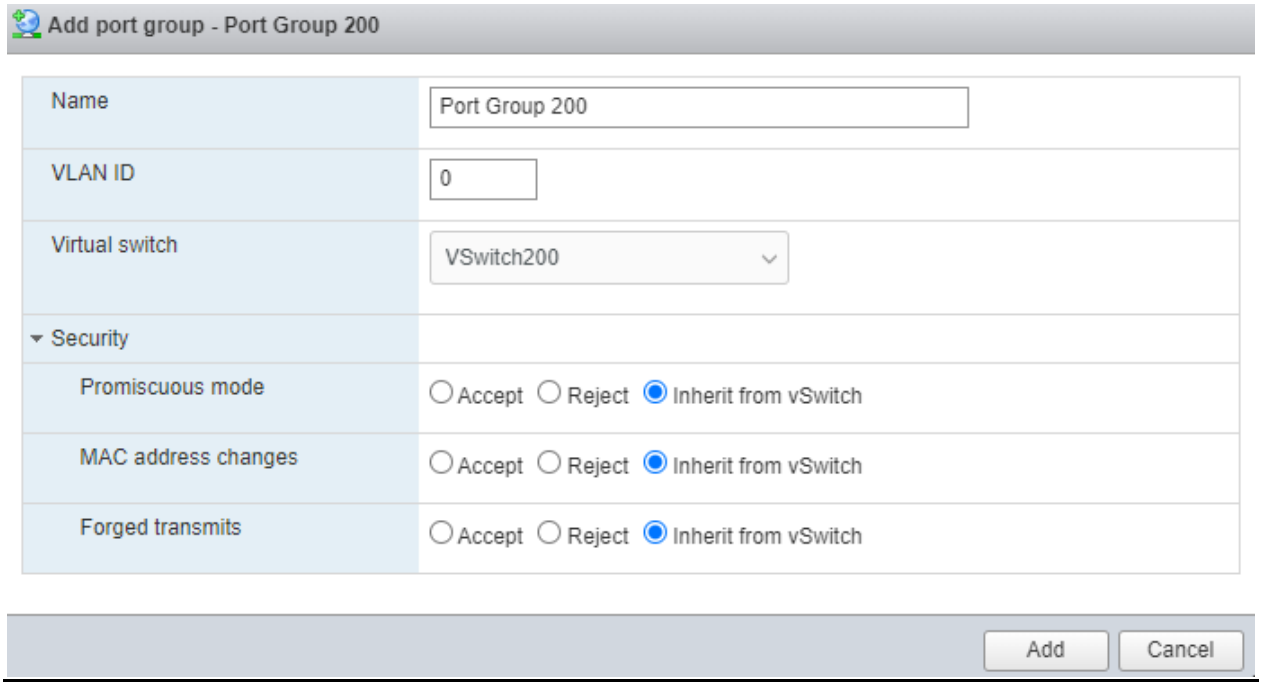


Step 2: Create Port Group

Assign the port groups to the new vSwitches you just created.

- In the Navigator pane click on “Networking”
- Choose the “Port Group” tab

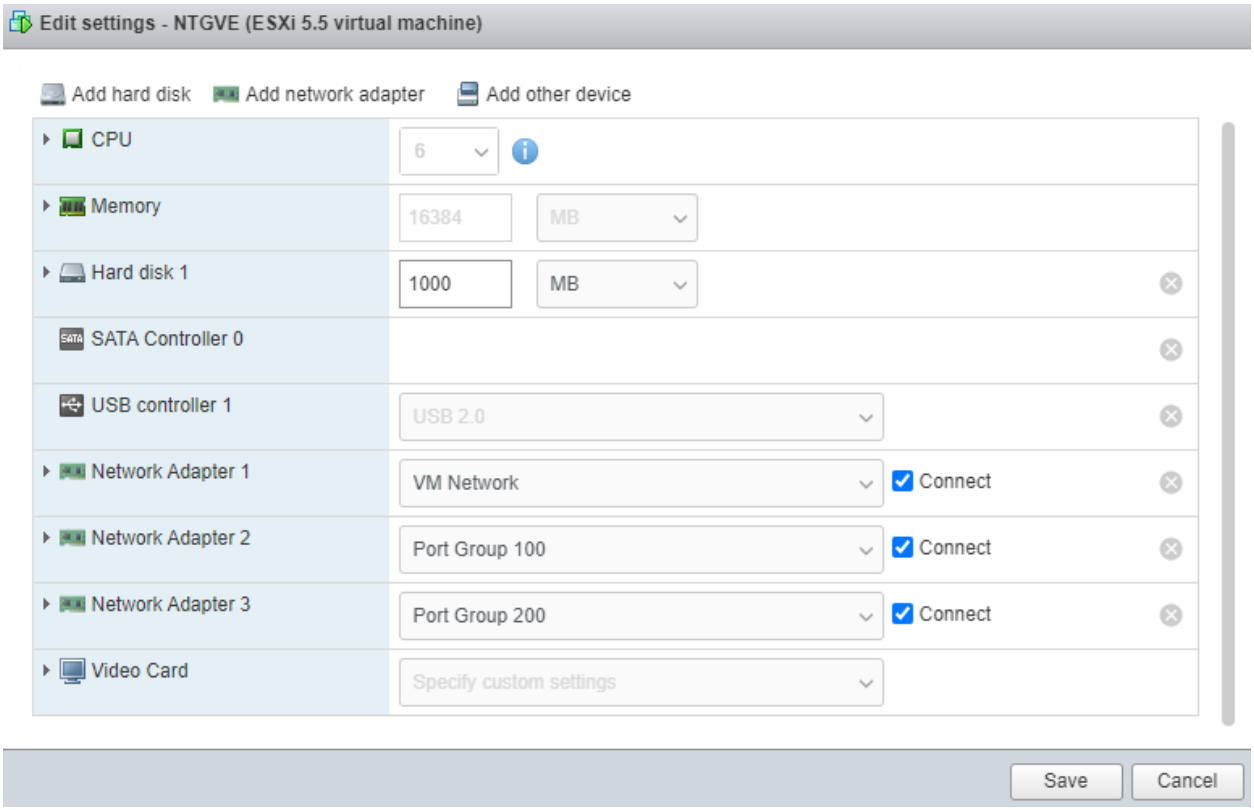
- Then “Add Port Group”
    - Name the port group (“Port Group 200” in this example)
    - Assign to the Virtual switch “vSwitch200”
    - Click Add



Step 3: Move NTGVE Ports to Use the New Switch

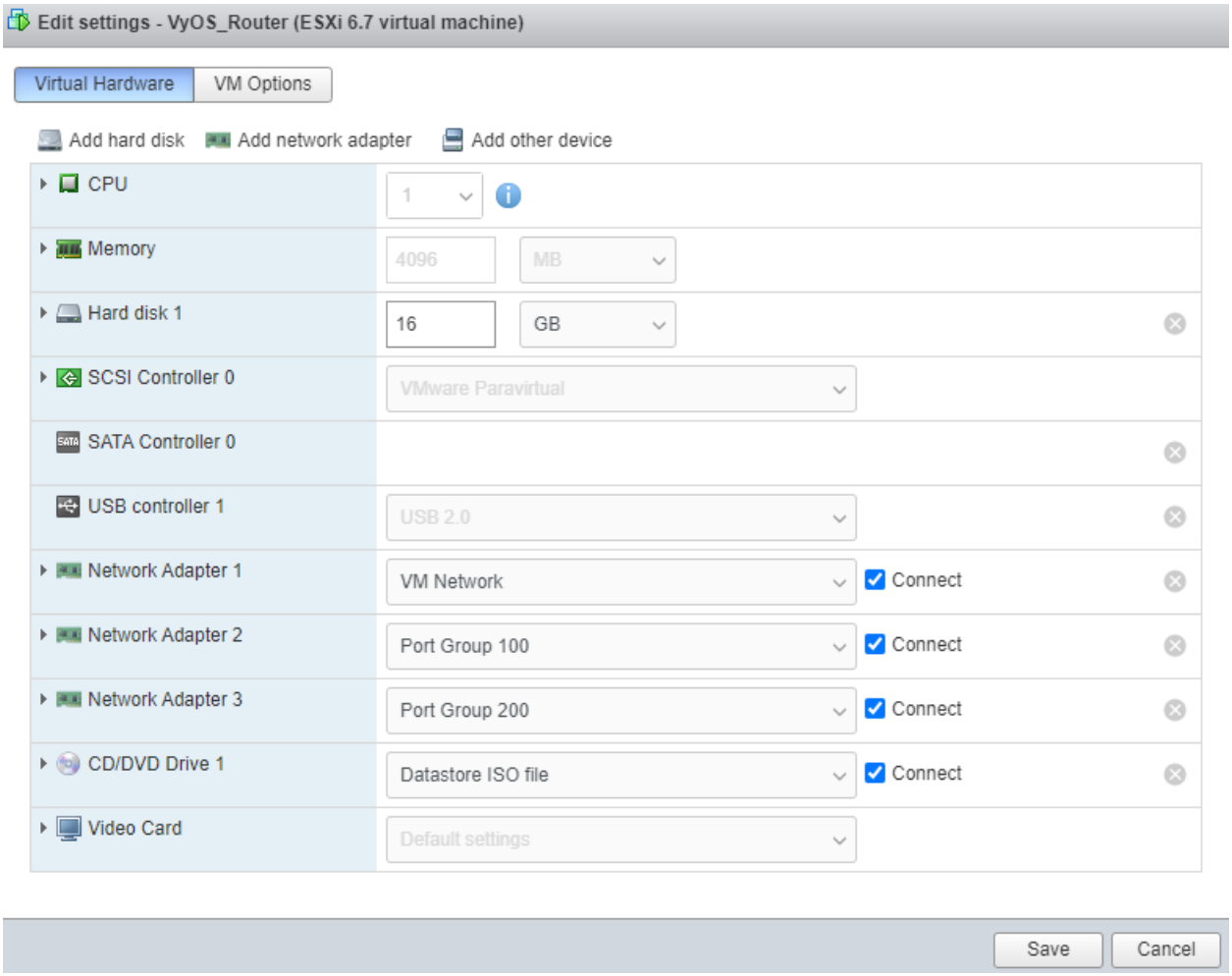
NTGVE needs to have port 1 moved to VSwitch200/Port Group 200.

- In the “Navigator” pane choose “Virtual Machines”
    - Choose NTGVE
        - Right click and select “Edit Settings”
    - Set Network Adapter 3 to “Port Group 200”
    - Save



Step 4: Assign Your Virtual Router Ports

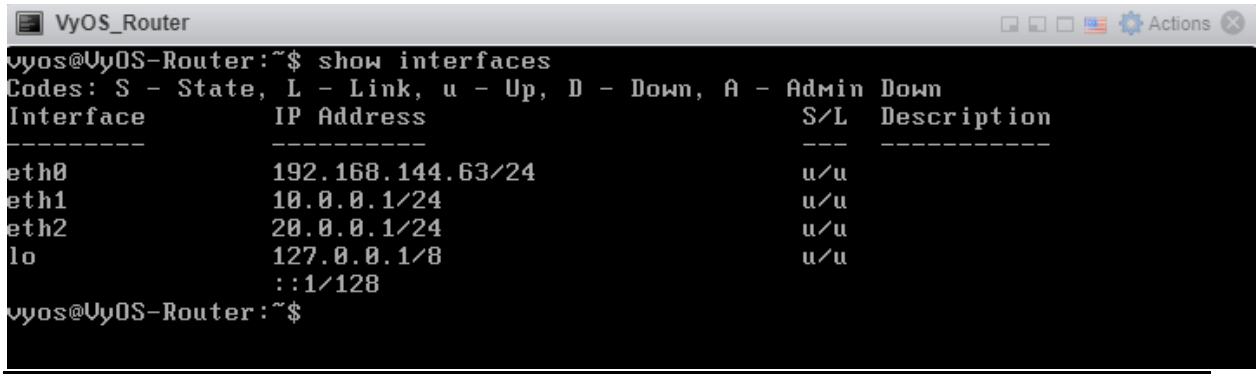
- In the “Navigator” pane choose “Virtual Machines”
  - Choose <Your Virtual Router> instance (This example is “VyOS_Router")
  - Right click and select “Edit Settings”
  - Assign the ports on your virtual router you wish to route your NTGVE traffic to “Port Group 100” and “Port Group 200”
  - Save



Step 5: Configure Your Router So It Can Route Traffic

In this example we are using VyOS_Router with the following configuration

Eth0: 192.168.144.63 – VM Network
Eth1: 10.0.0.1/24 - Port Group 100
Eth2: 20.0.0.1/24 - Port Group 200

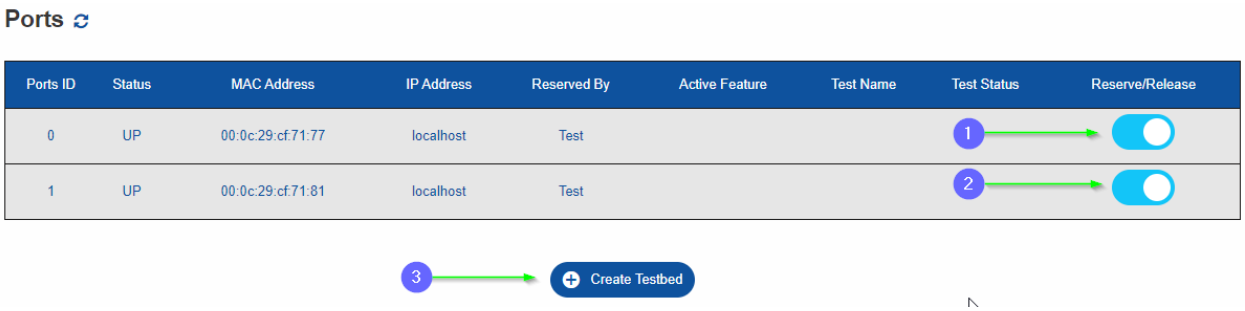


Step 6: Configure the NTGVE TrafficEngine Test to Use the Virtual Router

Log in to the NTGVE

- User: test@apposite-tech.com
- Pass: test123

- Reserve port 0 and 1 for your tests
- Create Testbed



- Give your testbed a name (this example “TE_Test)
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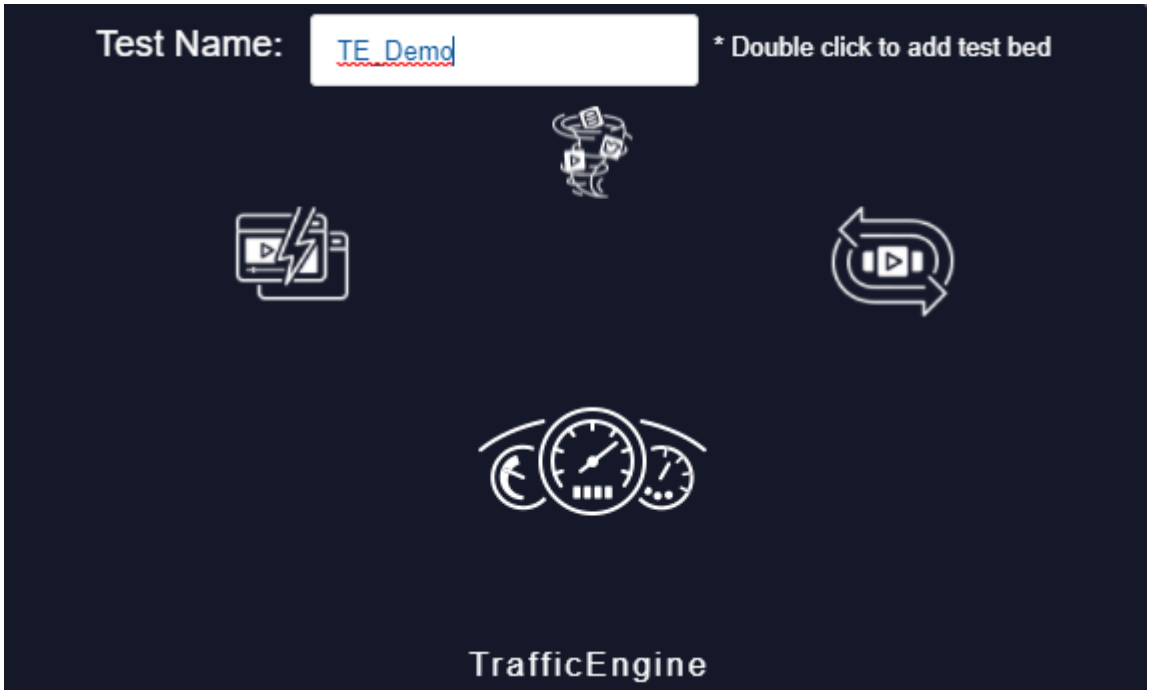
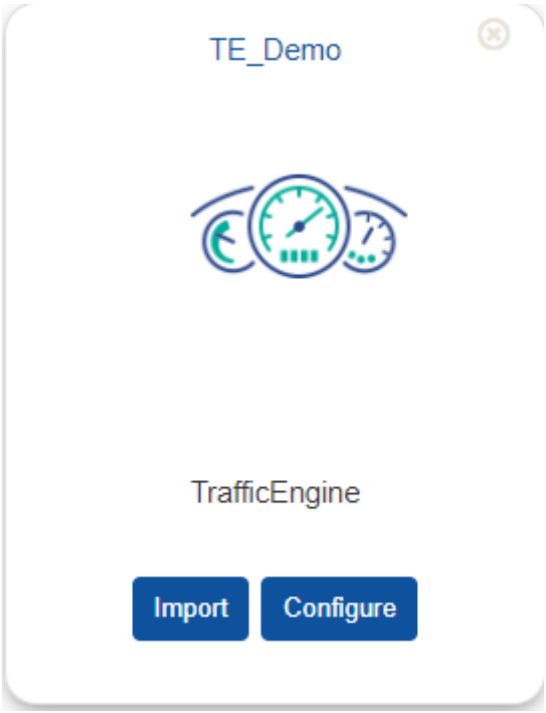


- Click “Configure” on the Testbed you just created



- Add the two ports to your test
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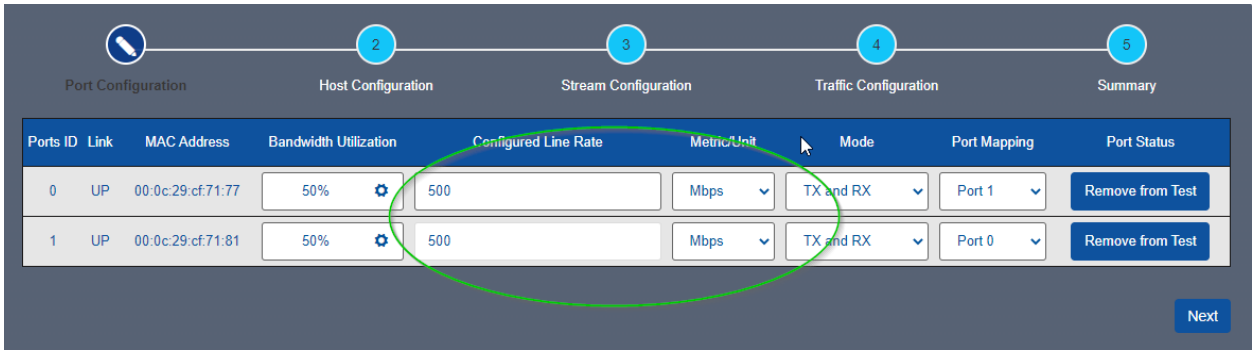
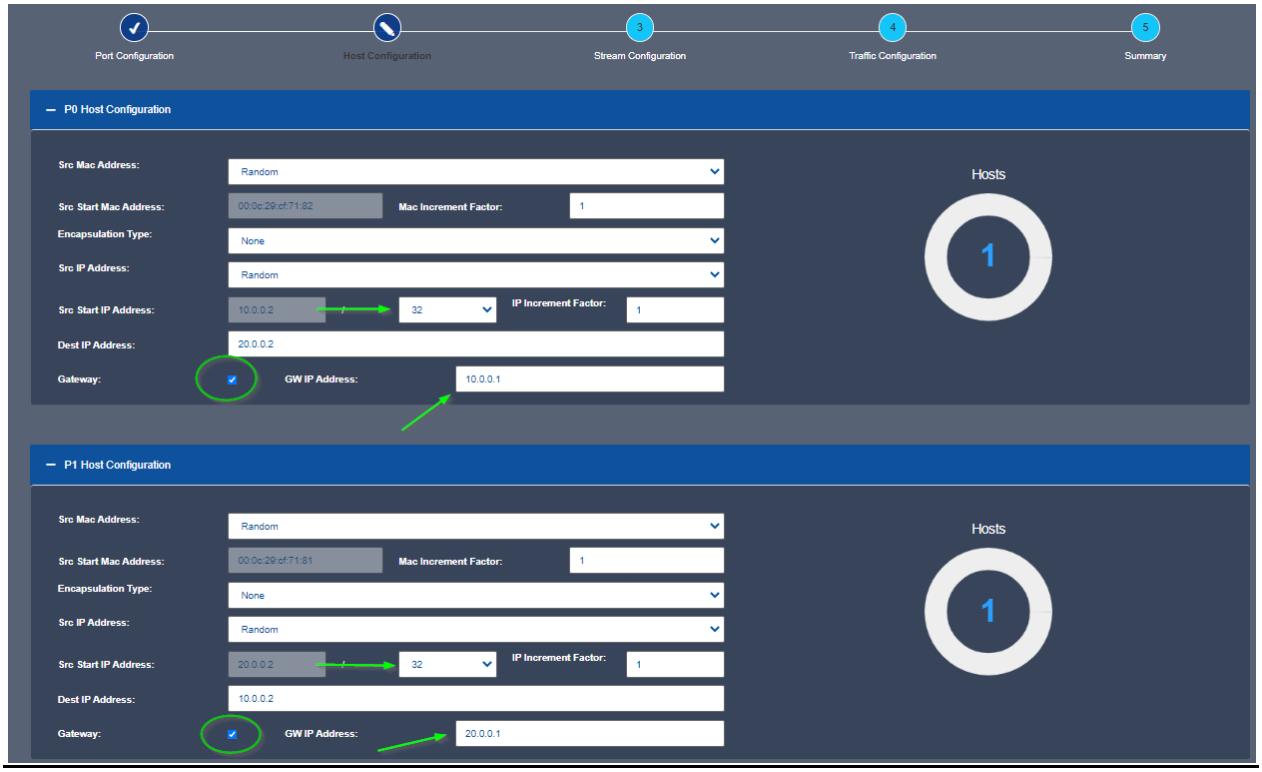
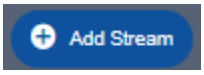


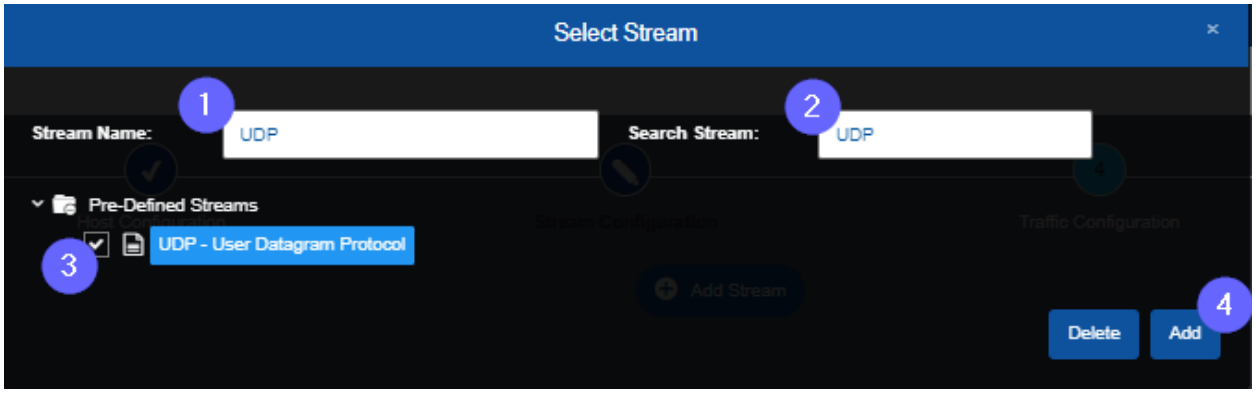
- Click next
- Set the CIDR block to /32 for both ports
- Check the Gateway Box
    - Set the Gateway for port 0 to be 10.0.0.1
    - Set the Gateway for port 1 to be 20.0.0.1



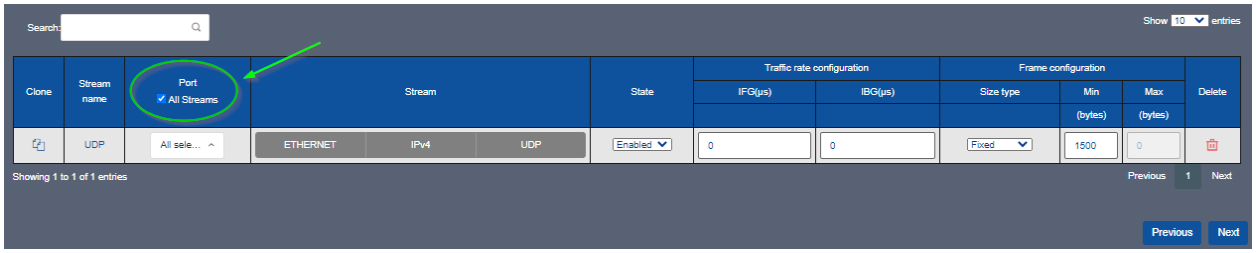
- Click Next
- Click “Add Stream”



- Stream Name: UDP
- Search: UDP
- Checkmark: UDP
- Add



- Checkmark “Port All Streams”
- Then click “Next”



- Click “Next” in the Traffic Configuration
- Click “Start Test” in the Summary

If everything is configured correctly, you should see traffic sending and receiving on both ports. Verify stats are increasing:

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