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Using The "New NetVirt" with OpenStack

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This wiki documents an approach for using The new NetVirt, which is based on the VPN Service code. This document is essentially a way to run the OVSDB Tutorial using the odl-netvirt-openstack feature as a replacement for the odl-ovsdb-openstack feature. These instructions currently assume an external OpenDaylight controller as opposed to an all-in-one config.

NOTE: I started with the instructions given on the NetVirt: L2Gateway HowTo, but I'm not using the L2Gatway feature, and these instructions include a few more details.

Prerequisites (Getting the Environment)

1. Use the NetVirt Demo VMs from here:

Getting Started with OpenDaylight OVSDB Plugin Network Virtualization

Use the following:

ovsdbtutorial_mitaka_boron_external.ova OpenStack Mitaka, OpenDaylight Boron (160630), external:

2. Import the ova file into VirtualBox

3. Get a version of the OpenDaylight controller with the vpnservice NetVirt code

- Pull the latest Netvirt code and compile it.

```
git clone https://git.opendaylight.org/gerrit/netvirt.git
cd netvirt
mvn clean install
```

Running VPN Service NetVirt

1. Launch karaf

```
~/git/netvirt/vpnservice/distribution/karaf/target/assembly/bin/karaf
(Update path based on where you cloned the netvirt repo above.)
```

2. Install the feature

```
feature:install odl-netvirt-openstack
```

3. Start router, odl31 and odl32 VMs you got above (if you haven't already)

IMPORTANT: When using odl-netvirt-openstack with devstack, you must modify the local.conf files in both odl31 and odl32 by commenting out the following line:

```
#ODL_L3=True
```

4. Stack both odl31 and odl32

```
cd /opt/devstack
./stack.sh
```

5. Transport Zone

Originally, it was necessary to manually create "transport zones" to carry the traffic between nodes. For VXLAN, a transport zone essentially defines a set of tunnels connecting the appropriate nodes. However, support has been added to automatically create transport zones as needed. By default, "use-transport-zone" is set to true.

NOTE: As of 8/11/16, I have not been able to verify the auto transport zone/tunnel creation.

5.1 Optional Manual Transport Zone Configuration

TODO: Define steps to disable auto transport zone creation.

See L2Gateway HowTo for instrucitons and/or use postman collection in netvirt/resources/commons/VPN-Service-NetVirt.postman_collection.json

If using the postman collection, use "Get DPID's" to get the datapath ids.

You can figure out which dpid is which by running the following command on each vm:

```
sudo ovs-vsctl show
```

Then compare the UUID at the top of the command output to the UUID's associated with the DPID's from the Get DPID's request.

Then, use the DPIDs for the br-int's in the "Create TZA" request.

6. Run os_doitall.sh (https://github.com/shague/odl_tools/blob/master/os_doitall.sh)

```
../tools/os_doitall.sh
```

7. Test It

ssh to one of the vms created

```
source openrc admin admin
../tools/os_ssh.sh 10.100.5.3
```

ping the other:

```
ping 10.100.5.4
```

ping an external address to test floating IP support:

```
ping www.google.com  (Note: this isn't working as of the writing of this wiki).
```

Note: To cleanup state between runs, do the following:

On odl31 and odl32: osreset.sh (https://github.com/shague/odl_tools/blob/master/osreset.sh)

shutdown karaf

```
shutdown -f
```

reset karaf

```
rm -rf ~/git/netvirt/vpnservice/distribution/karaf/target/assembly/data/* ~/git/netvirt/vpnservice/distribution
/karaf/target/assembly/snapshots/* ~/git/netvirt/vpnservice/distribution/karaf/target/assembly/journal/*
(Update path based on where you cloned the netvirt repo above.)
```