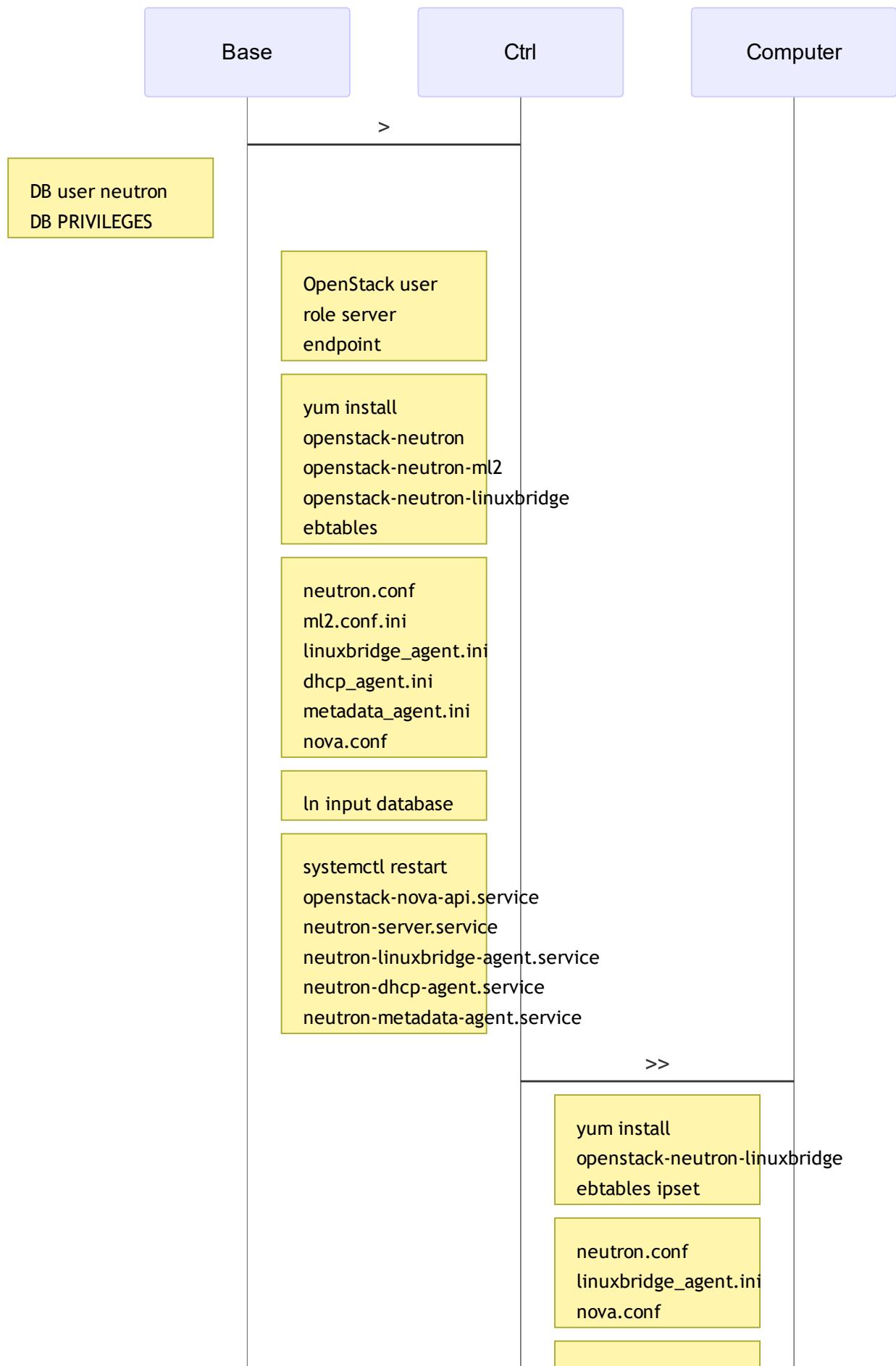
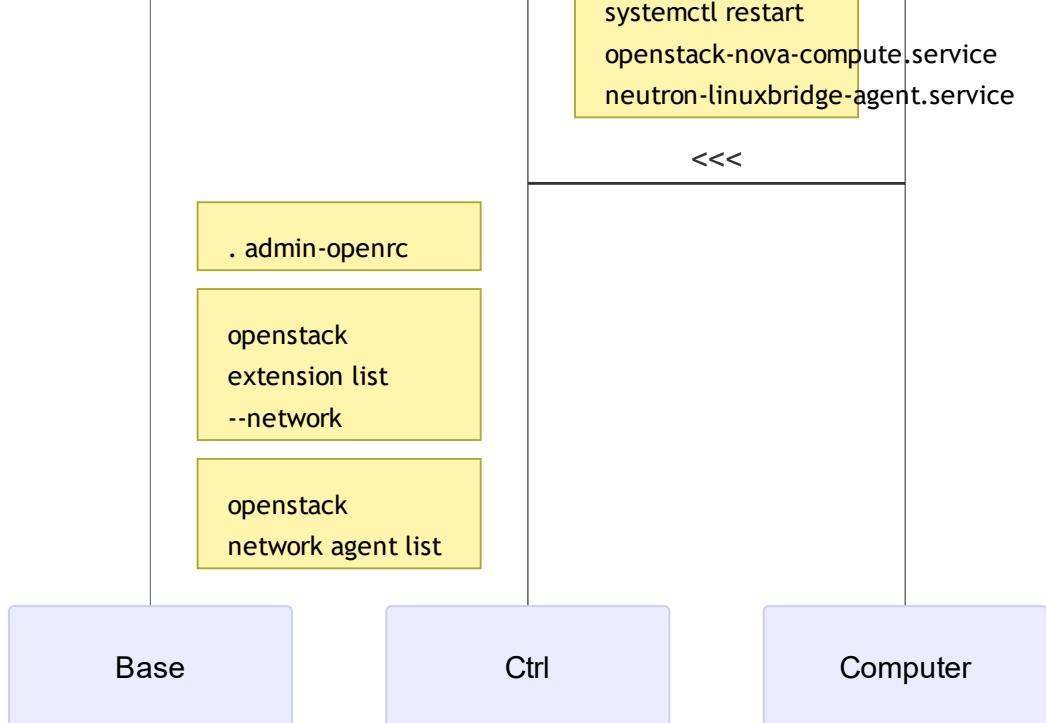


- Neutron Software install

- Base Node
- Ctrl Node

Neutron Software install





Ctrl	Provider	VXLAN
software	openstack-neutron openstack-neutron-ml2 openstack-neutron-linuxbridge ebtables	openstack-neutron openstack-neutron-ml2 openstack-neutron-linuxbridge ebtables
config-file	/etc/neutron/neutron.conf /etc/neutron/plugins/ml2/ml2_conf.ini /etc/neutron/plugins/ml2/linuxbridge_agent.ini /etc/neutron/dhcp_agent.ini . /etc/neutron/metadata_agent.ini	/etc/neutron/neutron.conf /etc/neutron/plugins/ml2/ml2_conf.ini /etc/neutron/plugins/ml2/linuxbridge_agent.ini /etc/neutron/dhcp_agent.ini /etc/neutron/l3_agent.ini /etc/neutron/metadata_agent.ini
input DB	ln -s /etc/neutron/plugins/ml2/ml2_conf.ini /etc/neutron/plugin.ini su -s /bin/sh -c "neutron-db-manage --config-file /etc/neutron/neutron.conf --config-file /etc/neutron/plugins/ml2/ml2_conf.ini upgrade head" neutron	ln -s /etc/neutron/plugins/ml2/ml2_conf.ini /etc/neutron/plugin.ini su -s /bin/sh -c "neutron-db-manage --config-file /etc/neutron/neutron.conf --config-file /etc/neutron/plugins/ml2/ml2_conf.ini upgrade head" neutron
server	openstack-nova-api.service neutron-server.service neutron-linuxbridge-agent.service neutron-dhcp-agent.service neutron-metadata-agent.service .	openstack-nova-api.service neutron-server.service neutron-linuxbridge-agent.service neutron-dhcp-agent.service neutron-metadata-agent.service
Verify	. admin-openrc openstack extension list --network openstack network agent list	. admin-openrc openstack extension list --network openstack network agent list

Base Node

```
mysql -uroot -proot
CREATE DATABASE neutron;
GRANT ALL PRIVILEGES ON neutron.* TO 'neutron'@'localhost' IDENTIFIED BY 'NEUTRON_DBPA
SS';
GRANT ALL PRIVILEGES ON neutron.* TO 'neutron'@'%' IDENTIFIED BY 'NEUTRON_DBPA
SS';
```

Ctrl Node

```
. admin-openrc

openstack user create --domain default --password NEUTRON_PASS neutron
openstack role add --project service --user neutron admin
openstack service create --name neutron --description "OpenStack Networking" network

openstack endpoint create --region RegionOne network public http://ctrl.blue.edu:969
6
openstack endpoint create --region RegionOne network internal http://ctrl.blue.edu:969
6
openstack endpoint create --region RegionOne network admin http://ctrl.blue.edu:969
6
```

```
yum install \
openstack-neutron \
openstack-neutron-ml2 \
openstack-neutron-linuxbridge \
ebtables
```

```
/etc/neutron/neutron.conf
```

```
[database]
connection = mysql+pymysql://neutron:NEUTRON_DBPASS@base.blue.edu/neutron

[DEFAULT]
core_plugin = ml2
service_plugins =
& service_plugins = router
& allow_overlapping_ips = true

[DEFAULT]
transport_url = rabbit://openstack:RABBIT_PASS@base.blue.edu

[DEFAULT]
auth_strategy = keystone

[keystone_auth_token]
auth_uri = http://ctrl.blue.edu:5000
auth_url = http://ctrl.blue.edu:35357
memcached_servers = base.blue.edu:11211
auth_type = password
project_domain_name = default
user_domain_name = default
project_name = service
username = neutron
password = NEUTRON_PASS

[DEFAULT]
notify_nova_on_port_status_changes = true
notify_nova_on_port_data_changes = true

[nova]
auth_url = http://ctrl.blue.edu:35357
auth_type = password
project_domain_name = default
user_domain_name = default
region_name = RegionOne
project_name = service
username = nova
password = NOVA_PASS

[oslo_concurrency]
lock_path = /var/lib/neutron/tmp
```

```
cp /etc/neutron/neutron.conf /etc/neutron/neutron.conf.ds.bak
cat /etc/neutron/neutron.conf.ds.bak | grep -v ^# | uniq > /etc/neutron/neutron.conf

sed -i '/^[\[database\]]$/a\connection = mysql+pymysql://neutron:NEUTRON_DBPASS@base.blue.edu/neutron' /etc/neutron/neutron.conf
sed -i '/^[\[DEFAULT\]]$/a\core_plugin = ml2\nservice_plugins =\ntransport_url = rabbit://openstack:RABBIT_PASS@base.blue.edu\nauth_strategy = keystone\nnotify_nova_on_port_status_changes = true\nnotify_nova_on_port_data_changes = true\n' /etc/neutron/neutron.conf
sed -i '/^[\[keystone_auth_token\]]$/a\auth_uri = http://ctrl.blue.edu:5000\nauth_url = http://ctrl.blue.edu:35357\nmemcached_servers = base.blue.edu:11211\nauth_type = password\nproject_domain_name = default\nuser_domain_name = default\nproject_name = service\nusername = neutron\npassword = NEUTRON_PASS\n' /etc/neutron/neutron.conf
sed -i '/^[\[nova\]]$/a\auth_url = http://ctrl.blue.edu:35357\nauth_type = password\nproject_domain_name = default\nuser_domain_name = default\nregion_name = RegionOne\nproject_name = service\nusername = nova\npassword = NOVA_PASS\n' /etc/neutron/neutron.conf
sed -i '/^[\[oslo_concurrency\]]$/a\lock_path = /var/lib/neutron/tmp' /etc/neutron/neutron.conf
```

```
sed -i '/^[\[DEFAULT\]]$/a\core_plugin = ml2\nservice_plugins = router\nallow_overlapping_ips = true\ntransport_url = rabbit://openstack:RABBIT_PASS@base.blue.edu\nauth_strategy = keystone\nnotify_nova_on_port_status_changes = true\nnotify_nova_on_port_data_changes = true\n' /etc/neutron/neutron.conf
```

/etc/neutron/plugins/ml2/ml2_conf.ini

```
[ml2]
type_drivers = flat,vlan,gre,vxlan,geneve
& type_drivers = flat,vlan,vxlan
tenant_network_types = flat,vlan,gre,vxlan,geneve
& tenant_network_types = vxlan
mechanism_drivers = linuxbridge
& mechanism_drivers = linuxbridge,l2population
extension_drivers = port_security
```

```
[ml2_type_flat]
flat_networks = provider
```

```
[securitygroup]
enable_ipset = true
```

```
& [ml2_type_vxlan]
& vni_ranges = 1:1000
```

```
cp /etc/neutron/plugins/ml2/ml2_conf.ini /etc/neutron/plugins/ml2/ml2_conf.ini.ds.bak
cat /etc/neutron/plugins/ml2/ml2_conf.ini.ds.bak | grep -v ^# | uniq > /etc/neutron/plugins/ml2/ml2_conf.ini
```

```
sed -i '/^\\[ml2\\]$/a\\type_drivers = flat,vlan,gre,vxlan,geneve\\ntenant_network_type  
s = flat,vlan,gre,vxlan,geneve\\nmechanism_drivers = linuxbridge\\nextension_drivers = p  
ort_security' /etc/neutron/plugins/ml2/ml2_conf.ini  
sed -i '/^\\[ml2_type_flat\\]$/a\\flat_networks = provider' /etc/neutron/plugins/ml2/ml2_  
conf.ini  
sed -i '/^\\[securitygroup\\]$/a\\enable_ipset = true' /etc/neutron/plugins/ml2/ml2_conf.  
ini
```

```
sed -i '/^\\[ml2\\]$/a\\type_drivers = flat,vlan,vxlan\\ntenant_network_types = vxlan\\nmec  
hanism_drivers = linuxbridge,l2population\\nextension_drivers = port_security' /etc/neu  
tron/plugins/ml2/ml2_conf.ini  
sed -i '/^\\[ml2_type_flat\\]$/a\\flat_networks = provider' /etc/neutron/plugins/ml2/ml2_  
conf.ini  
sed -i '/^\\[securitygroup\\]$/a\\enable_ipset = true' /etc/neutron/plugins/ml2/ml2_conf.  
ini  
sed -i '/^\\[ml2_type_vxlan\\]$/a\\vni_ranges = 1:1000' /etc/neutron/plugins/ml2/ml2_con  
f.ini
```

```
/etc/neutron/plugins/ml2/linuxbridge_agent.ini
```

```
[linux_bridge]  
physical_interface_mappings = provider:eth0  
  
[vxlan]  
enable_vxlan = false  
& enable_vxlan = true  
& local_ip = 192.168.1.91  
& l2_population = true  
  
[securitygroup]  
enable_security_group = true  
firewall_driver = neutron.agent.linux.iptables_firewall.IptablesFirewallDriver
```

```
cp /etc/neutron/plugins/ml2/linuxbridge_agent.ini /etc/neutron/plugins/ml2/linuxbridge_  
_agent.ini.ds.bak  
cat /etc/neutron/plugins/ml2/linuxbridge_agent.ini.ds.bak | grep -v ^# | uniq > /etc/n  
eutron/plugins/ml2/linuxbridge_agent.ini
```

```
sed -i '/^\\[linux_bridge\\]$/a\\physical_interface_mappings = provider:eth0' /etc/neutro  
n/plugins/ml2/linuxbridge_agent.ini  
sed -i '/^\\[vxlan\\]$/a\\enable_vxlan = false' /etc/neutron/plugins/ml2/linuxbridge_agen  
t.ini  
sed -i '/^\\[securitygroup\\]$/a\\enable_security_group = true\\nfirewall_driver = neutro  
n.agent.linux.iptables_firewall.IptablesFirewallDriver' /etc/neutron/plugins/ml2/linux  
bridge_agent.ini
```

```
sed -i '/^\\[linux_bridge\\]$/.a\\physical_interface_mappings = provider:eth0' /etc/neutron/plugins/ml2/linuxbridge_agent.ini
sed -i '/^\\[vxlan\\]$/.a\\enable_vxlan = true\\nlocal_ip = 192.168.1.91\\nl2_population = true' /etc/neutron/plugins/ml2/linuxbridge_agent.ini
sed -i '/^\\[securitygroup\\]$/.a\\enable_security_group = true\\nfirewall_driver = neutron.agent.linux.iptables_firewall.IptablesFirewallDriver' /etc/neutron/plugins/ml2/linuxbridge_agent.ini
```

&

```
/etc/neutron/l3_agent.ini

[DEFAULT]
interface_driver = linuxbridge
```

```
cp /etc/neutron/l3_agent.ini /etc/neutron/l3_agent.ini.ds.bak
cat /etc/neutron/l3_agent.ini.ds.bak | grep -v ^# | uniq > /etc/neutron/l3_agent.ini
```

```
sed -i '/^\\[DEFAULT\\]$/.a\\interface_driver = linuxbridge' /etc/neutron/l3_agent.ini
```

```
/etc/neutron/dhcp_agent.ini

[DEFAULT]
interface_driver = linuxbridge
dhcp_driver = neutron.agent.linux.dhcp.Dnsmasq
enable_isolated_metadata = true
```

```
cp /etc/neutron/dhcp_agent.ini /etc/neutron/dhcp_agent.ini.ds.bak
cat /etc/neutron/dhcp_agent.ini.ds.bak | grep -v ^# | uniq > /etc/neutron/dhcp_agent.ini
```

```
sed -i '/^\\[DEFAULT\\]$/.a\\interface_driver = linuxbridge\\ndhcp_driver = neutron.agent.linux.dhcp.Dnsmasq\\nenable_isolated_metadata = true' /etc/neutron/dhcp_agent.ini
```

```
/etc/neutron/metadata_agent.ini

[DEFAULT]
nova_metadata_ip = ctrl.blue.edu
metadata_proxy_shared_secret = METADATA_SECRET
```

```
cp /etc/neutron/metadata_agent.ini /etc/neutron/metadata_agent.ini.ds.bak  
cat /etc/neutron/metadata_agent.ini.ds.bak | grep -v ^# | uniq > /etc/neutron/metadata_agent.ini
```

```
sed -i '/^\\[DEFAULT\\]$/{a\\nova_metadata_ip = ctrl.blue.edu\\nmetadata_proxy_shared_secre  
t = METADATA_SECRET' /etc/neutron/metadata_agent.ini
```

```
/etc/nova/nova.conf
```

```
[neutron]  
url = http://ctrl.blue.edu:9696  
auth_url = http://ctrl.blue.edu:35357  
auth_type = password  
project_domain_name = default  
user_domain_name = default  
region_name = RegionOne  
project_name = service  
username = neutron  
password = NEUTRON_PASS  
service_metadata_proxy = true  
metadata_proxy_shared_secret = METADATA_SECRET
```

```
sed -i '/^\\[neutron\\]$/{a\\url = http://ctrl.blue.edu:9696\\nauth_url = http://ctrl.blue.  
edu:35357\\nauth_type = password\\nproject_domain_name = default\\nuser_domain_name = def  
ault\\nregion_name = RegionOne\\nproject_name = service\\nusername = neutron\\npassword  
= NEUTRON_PASS\\nservice_metadata_proxy = true\\nmetadata_proxy_shared_secret = METADA  
TA_SECRET' /etc/nova/nova.conf
```

```
ln -s /etc/neutron/plugins/ml2/ml2_conf.ini /etc/neutron/plugin.ini
```

```
su -s /bin/sh -c "neutron-db-manage --config-file /etc/neutron/neutron.conf --config-f  
ile /etc/neutron/plugins/ml2/ml2_conf.ini upgrade head" neutron
```

```
systemctl restart openstack-nova-api.service

systemctl enable \
neutron-server.service \
neutron-linuxbridge-agent.service \
neutron-dhcp-agent.service \
neutron-metadata-agent.service

systemctl restart \
neutron-server.service \
neutron-linuxbridge-agent.service \
neutron-dhcp-agent.service \
neutron-metadata-agent.service
```

```
& systemctl enable neutron-l3-agent.service
& systemctl restart neutron-l3-agent.service
```

Verify

```
. admin-openrc
openstack extension list --network
openstack network agent list
```