17、网络（Neutron）服务

OpenStack Networking（Neutron）允许您创建和附加由其他OpenStack服务到网络。插件可以实现，以适应不同的网络设备和软件，为OpenStack架构和部署提供灵活性。

Neutron下的子类组件：

neutron-server ：将API请求接受并路由到相应的OpenStack Networking插件以进行操作。

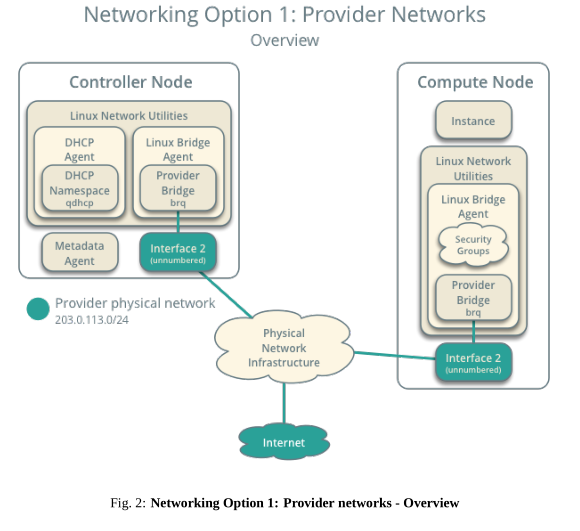
OpenStack Networking plug-ins and agents：插拔端口，创建网络或子网，并提供IP寻址。这些插件和代理因使用的供应商和技术而异特定的云。

Messaging queue ：大多数OpenStack网络安装用于在信息之间路由信息neutron-server和各种代理商。还充当数据库来存储特定插件的网络状态

加入OpenStack Networking主要与OpenStack Compute进行交互，为其提供网络和连接

实例。

本次实验使用的网络架构（请忽略图中IP地址）：



创建该服务的数据库和数据库管理账户

controller#

mysql -u root -p123

CREATE DATABASE neutron;

GRANT ALL PRIVILEGES ON neutron.\* TO 'neutron'@'localhost' \

IDENTIFIED BY 'neutron';

GRANT ALL PRIVILEGES ON neutron.\* TO 'neutron'@'%' \

IDENTIFIED BY 'neutron';

exit

创建nova用户、服务、API

controller#

openstack user create --domain default --password-prompt neutron

#此处需要输入密码

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://controller:9696

openstack endpoint create --region RegionOne \

network internal http://controller:9696

openstack endpoint create --region RegionOne \

network admin http://controller:9696

配置neutron各个组件的配置文件（备份配置文件，删除配置文件里的所有数据，使用提供的配置）：

controller#

cp /etc/neutron/neutron.conf /etc/neutron/neutron.conf.bak

vi /etc/neutron/neutron.conf

[database]

connection = mysql+pymysql://neutron:neutron@controller/neutron

[DEFAULT]

core\_plugin = ml2

service\_plugins =

transport\_url = rabbit://openstack:openstack@controller

auth\_strategy = keystone

notify\_nova\_on\_port\_status\_changes = true

notify\_nova\_on\_port\_data\_changes = true

[keystone\_authtoken]

auth\_uri = http://controller:5000

auth\_url = http://controller:35357

memcached\_servers = controller:11211

auth\_type = password

project\_domain\_name = default

user\_domain\_name = default

project\_name = service

username = neutron

password = neutron

[nova]

auth\_url = http://controller:35357

auth\_type = password

project\_domain\_name = default

user\_domain\_name = default

region\_name = RegionOne

project\_name = service

username = nova

password = nova

[oslo\_concurrency]

lock\_path = /var/lib/neutron/tmp

cp /etc/neutron/plugins/ml2/ml2\_conf.ini /etc/neutron/plugins/ml2/ml2\_conf.ini.bak

vi /etc/neutron/plugins/ml2/ml2\_conf.ini

[linux\_bridge]

physical\_interface\_mappings = provider:ens33

[vxlan]

enable\_vxlan = false

[securitygroup]

enable\_security\_group = true

firewall\_driver = neutron.agent.linux.iptables\_firewall.IptablesFirewallDriver

cp /etc/neutron/dhcp\_agent.ini /etc/neutron/dhcp\_agent.ini.bak

vi /etc/neutron/dhcp\_agent.ini

[DEFAULT]

interface\_driver = linuxbridge

dhcp\_driver = neutron.agent.linux.dhcp.Dnsmasq

enable\_isolated\_metadata = true

cp /etc/neutron/metadata\_agent.ini /etc/neutron/metadata\_agent.ini.bak

vi /etc/neutron/metadata\_agent.ini

[DEFAULT]

nova\_metadata\_ip = controller

metadata\_proxy\_shared\_secret = meta

修改nova配置（加上neutron的配置信息）：

controller#

vi /etc/nova/nova.conf

[neutron]

url = http://controller:9696

auth\_url = http://controller:35357

auth\_type = password

project\_domain\_name = default

user\_domain\_name = default

region\_name = RegionOne

project\_name = service

username = neutron

password = neutron

service\_metadata\_proxy = true

metadata\_proxy\_shared\_secret = meta

网络服务初始化脚本期望指向/etc/neutron/plugin.ini的符号链接，指向ML2插件配置文件

controller#

ln -s /etc/neutron/plugins/ml2/ml2\_conf.ini /etc/neutron/plugin.ini

同步数据库

controller#

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

开机自启动和启动服务

controller#

systemctl enable neutron-server.service \

neutron-linuxbridge-agent.service neutron-dhcp-agent.service \

neutron-metadata-agent.service

systemctl start neutron-server.service \

neutron-linuxbridge-agent.service neutron-dhcp-agent.service \

neutron-metadata-agent.service openstack-nova-api.service