网络选项2：自助服务网络

« (controller-install-option1-rdo.html) » (compute-install-rdo.html) (https://bugs.launchpad.net/neutron/+filebug?field.title=Networking%20Option%202%3A%20Self-service%20networks%20in%20Neutron&field.comment=%0A%0A%0AThis bug tracker is for errors with the documentation, use the following as a template and remove or add fields as you see fit. Convert [ ] into [x] to check boxes:%0A%0A- [ ] This doc is inaccurate in this way: _____%0A- [ ] This is a doc addition request.%0A- [ ] I have a fix to the document that I can paste below including example: input and output. %0A%0AIf you have a troubleshooting or support issue, use the following resources:%0A%0A - Ask OpenStack: http://ask.openstack.org%0A - The mailing list: http://lists.openstack.org%0A - IRC: 'openstack' channel on Freenode%0A%0A----------%0ARelease:%2012.0.1.dev11%20on%202018-03-07%2021:05%0ASHA:%2043df2709acbdce86686a40b75fd34e96880427d0%0ASource:%20https://git.openstack.org/cgit/openstack/neutron/tree/doc/source/install/controller-install-option2-rdo.rst%0AURL: https://docs.openstack.org/neutron/queens/install/controller-install-option2-rdo.html&field.tags=doc)

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在*控制器*节点上安装并配置网络组件。

安装组件¶

```
# 百胜安装OpenStack的中子的OpenStack -中子ML2 \
  openstack-neutron-linuxbridge ebtables
```

配置服务器组件¶

- 编辑**/etc/neutron/neutron.conf**文件并完成以下操作：
  - 在该**[database]**部分中，配置数据库访问：

```
[database]
#...
connection  =  mysql + pymysql：// neutron：NEUTRON_DBPASS @ controller / neutron
```

替换**NEUTRON_DBPASS**为您为数据库选择的密码。

> **注意**
>
> 注释掉或删除**connection**该**[database]**部分中的其他选项 。

  - 在本**[DEFAULT]**节中，启用Modular Layer 2（ML2）插件，路由器服务和重叠的IP地址：

```
[DEFAULT]
#...
core_plugin  =  ml2
service_plugins  =  router
allow_overlapping_ips  =  true
```

  - 在该**[DEFAULT]**部分中，配置**RabbitMQ** 消息队列访问：

```
[DEFAULT]
#...
transport_url  =  rabbit：// openstack：RABBIT_PASS @ controller
```

替换**RABBIT_PASS**为您**openstack**在RabbitMQ中为帐户选择的密码 。

  - 在**[DEFAULT]**和**[keystone_authtoken]**部分中，配置身份服务访问：

```
[DEFAULT]
# ...
auth_strategy = keystone

[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_PASS
```

Replace **NEUTRON_PASS** with the password you chose for the **neutron** user in the Identity service.

> **Note**
>
> Comment out or remove any other options in the **[keystone_authtoken]** section.

- In the **[DEFAULT]** and **[nova]** sections, configure Networking to notify Compute of network topology changes:

```
[DEFAULT]
# ...
notify_nova_on_port_status_changes = true
notify_nova_on_port_data_changes = true

[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_PASS
```

Replace **NOVA_PASS** with the password you chose for the **nova** user in the Identity service.

- In the **[oslo_concurrency]** section, configure the lock path:

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

Configure the Modular Layer 2 (ML2) plug-in¶

The ML2 plug-in uses the Linux bridge mechanism to build layer-2 (bridging and switching) virtual networking infrastructure for instances.

- Edit the **/etc/neutron/plugins/ml2/ml2_conf.ini** file and complete the following actions:
  - In the **[ml2]** section, enable flat, VLAN, and VXLAN networks:

```
[ml2]
# ...
type_drivers = flat,vlan,vxlan
```

  - In the **[ml2]** section, enable VXLAN self-service networks:

```
[ml2]
# ...
tenant_network_types = vxlan
```

  - In the **[ml2]** section, enable the Linux bridge and layer-2 population mechanisms:

```
[ml2]
# ...
mechanism_drivers = linuxbridge,l2population
```

> **Warning**
>
> After you configure the ML2 plug-in, removing values in the **type_drivers** option can lead to database inconsistency.

> **Note**
>
> The Linux bridge agent only supports VXLAN overlay networks.

  - In the **[ml2]** section, enable the port security extension driver:

```
[ml2]
# ...
extension_drivers = port_security
```

  - In the **[ml2_type_flat]** section, configure the provider virtual network as a flat network:

```
[ml2_type_flat]
# ...
flat_networks = provider
```

- In the **[ml2_type_vxlan]** section, configure the VXLAN network identifier range for self-service networks:

```
[ml2_type_vxlan]
# ...
vni_ranges = 1:1000
```

- In the **[securitygroup]** section, enable ipset to increase efficiency of security group rules:

```
[securitygroup]
# ...
enable_ipset = true
```

Configure the Linux bridge agent¶

The Linux bridge agent builds layer-2 (bridging and switching) virtual networking infrastructure for instances and handles security groups.

- Edit the **/etc/neutron/plugins/ml2/linuxbridge_agent.ini** file and complete the following actions:
  - In the **[linux_bridge]** section, map the provider virtual network to the provider physical network interface:

```
[linux_bridge]
physical_interface_mappings = provider:PROVIDER_INTERFACE_NAME
```

Replace **PROVIDER_INTERFACE_NAME** with the name of the underlying provider physical network interface. See Host networking (environment-networking-rdo.html) for more information.

  - In the **[vxlan]** section, enable VXLAN overlay networks, configure the IP address of the physical network interface that handles overlay networks, and enable layer-2 population:

```
[vxlan]
enable_vxlan = true
local_ip = OVERLAY_INTERFACE_IP_ADDRESS
l2_population = true
```

Replace **OVERLAY_INTERFACE_IP_ADDRESS** with the IP address of the underlying physical network interface that handles overlay networks. The example architecture uses the management interface to tunnel traffic to the other nodes. Therefore, replace **OVERLAY_INTERFACE_IP_ADDRESS** with the management IP address of the controller node. See Host networking (environment-networking-rdo.html) for more information.

  - In the **[securitygroup]** section, enable security groups and configure the Linux bridge iptables firewall driver:

```
[securitygroup]
# ...
enable_security_group = true
firewall_driver = neutron.agent.linux.iptables_firewall.IptablesFirewallDriver
```

  - Ensure your Linux operating system kernel supports network bridge filters by verifying all the following **sysctl** values are set to **1**:

```
net.bridge.bridge-nf-call-iptables
net.bridge.bridge-nf-call-ip6tables
```

To enable networking bridge support, typically the **br_netfilter** kernel module needs to be loaded. Check your operating system's documentation for additional details on enabling this module.

Configure the layer-3 agent¶

The Layer-3 (L3) agent provides routing and NAT services for self-service virtual networks.

- Edit the **/etc/neutron/l3_agent.ini** file and complete the following actions:
  - In the **[DEFAULT]** section, configure the Linux bridge interface driver and external network bridge:

```
[DEFAULT]
# ...
interface_driver = linuxbridge
```

Configure the DHCP agent¶

The DHCP agent provides DHCP services for virtual networks.

- Edit the **/etc/neutron/dhcp_agent.ini** file and complete the following actions:
  - In the **[DEFAULT]** section, configure the Linux bridge interface driver, Dnsmasq DHCP driver, and enable isolated metadata so instances on provider networks can access metadata over the network:

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

返回到*网络控制器节点配置*。

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Neutron 12.0.1

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