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## 2 -

controller

```
[root@controller ~]# yum install openstack-neutron openstack-neutron-ml2 \
openstack-neutron-linuxbridge ebttables
```

### 1. /etc/neutron/neutron.conf

- [database]

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

### NEUTRON\_DBPASS

*[database] connection*

- [DEFAULT]

2 (ML2) , IP

:

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

- [DEFAULT]

RabbitMQ

:

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

### RABBIT\_PASS

- [DEFAULT] [keystone\_auth\_token]

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

[keystone_auth-token]
# ...
www_authenticate_uri = http://controller:5000
auth_url = http://controller:5000
memcached_servers = controller:11211
auth_type = password
project_domain_name = default
user_domain_name = default
project_name = service
username = neutron
password = NEUTRON_PASS
```

NEUTRON\_PASS . [keystone\_auth-token]

- [DEFAULT] [nova] compute

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

[nova]
# ...
auth_url = http://controller:5000
auth_type = password
project_domain_name = default
user_domain_name = default
region_name = RegionOne
project_name = service
username = nova
password = NOVA_PASS
```

NOVA\_PASS

- [oslo\_concurrency]

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

## 2 (ML2)

ML2

Linux

2 (

) 가

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

- [ml2] FLAT, VLAN, VXLAN

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

- [ml2] VXLAN

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

- [ml2] Linux bridge L2-population

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

ML2

type\_drivers

가

. Linux bridge agent VXLAN

- [ml2]

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

- [ml2\_type\_flat] FLAT provider 가

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

- [ml2\_type\_vxlan] VXLAN

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

- [securitygroup] ipset :

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

## Linux bridge agent

Linux bridge agent 2 ( ) 가

1. ./etc/neutron/plugins/ml2/linuxbridge\_agent.ini

- [linux\_bridge] 가 :

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

**PROVIDER\_INTERFACE\_NAME** **Provider**

- [vxlan] VXLAN ,  
IP , L2-population

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

**OVERLAY\_INTERFACE\_IP\_ADDRESS**

IP

OVERLAY\_INTERFACE\_IP\_ADDRESS

IP

- [securitygroup] iptables

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

- sysctl 1 Linux

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

br\_nf  
filter

sysctl Kernel parameter

```
[root@controller ~]# lsmod | grep "br_nf"
br_nf 22256 0
bridge 151336 1 br_nf
```

```
[root@controller ~]# modprobe br_nf
```

/etc/modules-load.d/br\_nf.conf

```
br_nf
```

## Layer-3

Layer-3 (L3) 가 NAT

1. /etc/neutron/l3\_agent.ini

- [DEFAULT]

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

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## DHCP

DHCP 가 DHCP

1. /etc/neutron/dhcp\_agent.ini

- [DEFAULT]  
Provider 가

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

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