

**Oracle[®] Virtual Networking ML2 Mechanism
Driver for OpenStack Neutron**

Security Guide



VIRTUAL
NETWORKING

Part No.: E59912-01
February 2015

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Oracle Virtual Networking ML2 Mechanism Driver for OpenStack Neutron Security

This guide is intended for experienced network administrators and provides guidelines and specific instructions to enhance security for the Oracle Virtual Networking ML2 Mechanism Driver for OpenStack Neutron.

This guide does not provide security guidance for OpenStack, OpenStack Neutron, any specific host operating systems (OSs) running in an OpenStack Neutron deployment, or Oracle Fabric Manager.

- [“Install the Oracle Fabric Interconnect Securely”](#) on page 2
- [“Comply With Software Security Requirements”](#) on page 2
- [“Keep Software Up to Date”](#) on page 3
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General Security Principles

The following principles are fundamental to using the Oracle Virtual Networking ML2 Mechanism Driver for OpenStack Neutron.

Install the Oracle Fabric Interconnect Securely

Though the Oracle Virtual Networking ML2 Mechanism Driver for OpenStack Neutron is software, it requires Oracle Fabric Interconnect hardware, as well as other hardware elements.

Make sure that the Oracle Fabric Interconnect is installed securely. Refer to the *Oracle Fabric Interconnect Security Guide*.

Comply With Software Security Requirements

Because the Oracle Virtual Networking ML2 Mechanism Driver for OpenStack Neutron is one component of a software system, ensuring security also requires you to comply with the security requirements of each individual software component.

Read and follow the security requirements for OpenStack, individual operating systems, and Oracle Fabric Manager:

- OpenStack documentation is available in the public domain. Refer to:
 - OpenStack project home page: <http://www.openstack.org/>
 - OpenStack Neutron wiki: <https://wiki.openstack.org/wiki/Neutron>
 - OpenStack ML2 plugin wiki:
<https://wiki.openstack.org/wiki/Neutron/ML2>
- Security guides for the respective operating systems, such as Oracle VM:
http://docs.oracle.com/cd/E35328_01/
- The *Oracle Fabric Manager Security Guide* and the *Oracle Fabric Interconnect Security Guide*: http://docs.oracle.com/cd/E38500_01/index.html

Keep Software Up to Date

Stay current with the version of Oracle Virtual Networking ML2 Mechanism Driver for OpenStack Neutron that you run.

You can find current versions of the software for download at:

<http://support.oracle.com>

Note – Additional software, for example, Oracle Fabric Manager, must be kept up to date.

Create a Unique OpenStack User in Oracle Fabric Manager

In Oracle Fabric Manager, create a unique user for OpenStack operations, and use this user for tasks related to OpenStack. For example, you might make an openstack user and use that for the Oracle Fabric Manager configuration in the `/etc/neutron/plugins/ml2/ml2_conf_ovn.ini` file.

When OpenStack-related tasks in Oracle Fabric Manager occur through this user, you have a level of auditing in Oracle Fabric Manager.

Follow the Principle of Least Privilege

Grant the user or administrator the least privilege that is required to accomplish the task to be performed. Oracle Fabric Manager has various roles that can be granted to users. These roles grant varying types and amounts of privilege.

Use the Security Manager functions, which are available in the navigation panel of the interface, to configure user roles for Oracle Fabric Manager. The Security Manager functions also enable you to configure fabric devices in specific network domains. For details on using Security Manager, refer to the *Oracle Fabric Manager User's Guide*.

Use SSL Certificates

Edit the `/etc/neutron/plugins/ml2/ml2_conf_ovn.ini` file to set the `ofm_verify_certificate` environment variable to `True`, as shown:

```
ofm_verify_certificate=True
```

The variable might be set to `True` by default, but verify that it is enabled.

Install a properly signed SSL Certificate for Oracle Fabric Manager. For further details, refer to the topic about configuring a certificate for Oracle Fabric Manager in the *Oracle Fabric Manager User's Guide*.