Open vSwitch for NFV

Release draft (b95dd46)

OPNFV

July 12, 2016

Welcome to OVSNFV's documentation!

OVSNFV is an OPNFV collaborative development project.

The OVSNFV project proposes:

- To modify the OPNFV build to include a deployment option for the software-accelerated userspace Open vSwitch build. This change will significantly improve the performance of the NFVI for network I/O.

- Future work to encompass collaborative development within the Open vSwitch project to improve the performance of the software-accelerated userspace Open vSwitch and increasing its suitability for Telco NFV deployments.

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OVSNFV GUIDES AND INSTALLATION

1.1 Installing OVSNFV Fuel Plugin

- On the Fuel UI, create a new environment.
- In Settings > Userspace OVS support, check "Userspace OVS support".
- Continue with environment configuration and deployment as normal.
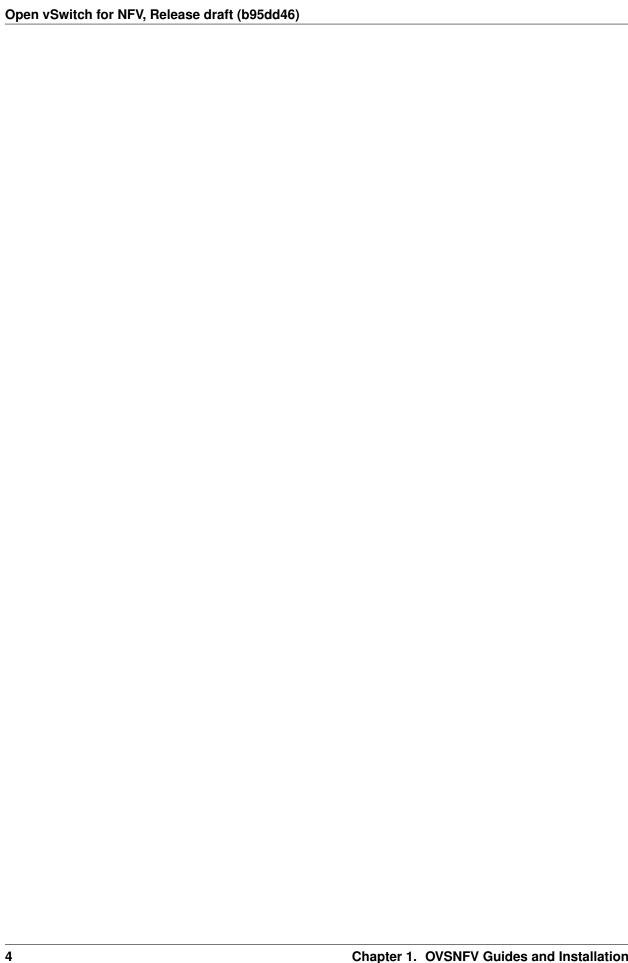
1.1.1 Upgrading the plugin

From time to time new versions of the plugin may become available.

The plugin cannot be upgraded if an active environment is using the plugin.

In order to upgrade the plugin:

- Copy the updated plugin file to the fuel-master.
- On the Fuel UI, reset the environment.
- On the Fuel CLI "fuel plugins –update <fuel-plugin-file>"
- On the Fuel UI, re-deploy the environment.

OVSNFV GUIDES AND INSTALLATION

2.1 Open vSwitch

Open vSwtich (OVS) is a software switch commonly used in OpenStack deployments to replace Linux bridges as it offers advantages in terms of mobility, hardware integration and use by network controllers.

2.1.1 Supported OPNFV Installers

Currently not all installers are supported.

Fuel Installer

OVSNFV project supplies a Fuel Plugin to upgrades Open vSwitch on an OPNFV installation to use user-space datapath.

As part of the upgrade the following changes are also made:

- change libvirt on compute node to 1.2.12
- change qemu on compute node to 2.2.1
- installs DPDK 2.0.0
- installs OVS 2.1 (specifically git tag 1e77bbe)
- removes existing OVS neutron plugin
- installs new OVS plugin as part of networking_ovs_dpdk OpenStack plugin version stable/kilo
- work around _set_device_mtu issue

Limitations

This release should be considered experimental. In particular:

- performance will be addressed specifically in subsequent releases.
- OVS and other components are updated only on compute nodes.

Bugs

- There may be issues assigning floating and public ip address to VMs.

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