

# Netvirt:Lithium:Release\_Review

## Contents

- 1 [Project Name](#)
- 2 [Features](#)
  - 2.1 [OpenDaylight Features](#)
  - 2.2 [Standards](#)
- 3 [Non-Code Aspects \(user docs, examples, tutorials, articles\)](#)
- 4 [Architectural Issues](#)
- 5 [Security Considerations](#)
- 6 [Quality Assurance \(test coverage, etc\)](#)
- 7 [End-of-life \(API/Features EOled in Release\)](#)
- 8 [Bugzilla \(summary of bug situation\)](#)
- 9 [Standards \(summary of standard compliance\)](#)
- 10 [Schedule \(initial schedule and changes over the release cycle\)](#)

## Project Name

Open vSwitch Database Integration Project

## Features

Lithium marked the third release of the OVSDb project. The release delivers increased code and testing coverage, improved network virtualization integration with OpenStack and an MDSAL-based OVSDb plugin.

- better parity with OpenStack Neutron
- native DVR service including SNAT, external gateway and floating IP support
- more robust and stable solution
- increased code quality, unit, integration and system test coverage
- MDSAL OVSDb southbound plugin

## OpenDaylight Features

- odl-ovsdb-schema-openvswitch: Schema wrapper that represents <http://openvswitch.org/ovs-vsitchd.conf.db.5.pdf>
- odl-ovsdb-schema-hardwarevtep: Schema wrapper that represents <http://openvswitch.org/docs/vtep.5.pdf>
- odl-ovsdb-library: Contains Schema-independent library that is a reference implementation for [RFC 7047](#).
- odl-ovsdb-openstack: OpenDaylight and OpenStack integration using OVSDb and Neutron to support network virtualization.
- odl-ovsdb-southbound-api: YANG model for OVSDb
- odl-ovsdb-southbound-impl: Implementation for the OVSDb YANG model

## Standards

- [OpenFlow v1.3](#)
- [RFC7047](#): The Open vSwitch Database Management Protocol
- [OpenStack Neutron ML2 Plugin](#)

## Non-Code Aspects (user docs, examples, tutorials, articles)

- [Getting Started Guide](#)
- [Developer Guide](#)
- [odl with openstack](#)

## Architectural Issues

- There is a very steep learning curve to use OpenStack that is further complicated when integrating with OpenDaylight.
- There is a compatibility layer to support VTN since they required the deprecated ADSAL interface and could not migrate to the newer MDSAL-based southbound.

## Security Considerations

No known issues.

## Quality Assurance (test coverage, etc)

Almost every module in the OVSDB project has UT, IT and system test coverage.

- Sonar: UT: 29.8%, IT:16.3%
- The UT coverage is actually better since 30% of the missing UT is from deprecated ADSAL components. The larger openstack component is probably 80% covered along with the library at 50% coverage. The southbound has barely any UT coverage.
- The IT coverage is actually better also for the same reason as 30% of the code is deprecated ADSAL components. Also the majority of the southbound and openstack code is MDSAL-based which the Sonar IT inspection does not handle well. The majority of the code paths in the southbound are covered by IT and 50% of the code paths in openstack are covered.
- System test is covered mainly via the OpenStack upstream which runs tempest tests against the latest OpenDaylight Lithium release.
- There are limited southbound and openstack integration tests within the integration CSIT.

## End-of-life (API/Features EOled in Release)

All the ADSAL related components are deprecated: plugin and northbound

## Bugzilla (summary of bug situation)

No major bugs exist. Most remaining bugs for supported code are for new features or minor fixes.

- library: 2 bugs on scaling
- openstack: 2 bugs for new features, 3 for updates to I3 and 3 for updates to LBaaS
- southbound: 2 bugs
- deprecated code: 22 bugs from helium, most likely to be marked as resolved, wont fix

## Standards (summary of standard compliance)

- [OpenFlow v1.3](#)
- [RFC7047](#): The Open vSwitch Database Management Protocol
- [OpenStack Neutron ML2 Plugin](#)

## Schedule (initial schedule and changes over the release cycle)

Code hardening was a primary driver for this release but the introduction of the MDSAL to OVSDB impacted that deliverable as resources were diverted to the new MDSAL southbound. Also the instability of a reliable OpenStack and ODL integration test framework impacted testing coverage.