OVSDB: Hydrogen: Release Review

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Project Name

OVSDB Integration

Features

OVSDB Major Features Include

- Implements [RFC 7047] Open vSwitch (OVS) Database Protocol (OVSDB)
- Allows for the configuration of any Open vSwitch software schema implementation.
- OVSDB uses JSON RFC4627 for the schema and wire protocol presentation.
- · Supports up to the latest experimental OVS version 2.0.9 and is fullly backwards compatable with all older version including schema support.
- The OVSDB configuration manager residing in OpenDaylight can be used as a listener that waits for an OVS element to attach to it and then be configured once the JSON/RPC channel is negotiated.
- The OVSDB configuration manager can also be configured as an initiator to attach to OVS elements and remotely configure them in that direction.
- Create, modify, delete ports and all the various attributes of a port.
- Create, modify, delete encapsulated tunnels supporting CAPWAP, GRE and VXLAN framing.
- OVSDB can remotely setup the OpenFlow controller target and any details in handle the management plane functions supporting the control and data planes.
- OVSDB Library using Bidirectional JSON-RPC implementation
- OVSDB OpenVswitch plugin to support OpenVswitch OVSDB Schema
- REST APIs for OVSDB Server Table Management (CRUD)
- Support for OpenStack Neutron ML2 Plugin using the OpenDaylight Mechanism Driver
- Integration with Openflow1.0 and Openflow1.3 plugins.
- Both per flow and per bridge tunnel keying
- API Support for all combinations of OVSDB transactions.
- Full support for the AD-SAL

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

- OVSDB Installation Guide
- OVSDB User Guide
- OVSDB Developer Guide
- OpenDaylight-OVSDB Youtube Channel
- Postman scripts
- DevStack local.conf files
- Tutorial: OVSDB OpenFlow v1.3 Neutron ML2 Integration

Architectural Issues

- Due to the NODE-TYPE issues between MD-SAL & AD-SAL, OVSDB Neutron cannot use MD-SAL for Openflow1.0 (even with AD-SAL Adapters).
- · Clustering service not available when using MD-SAL based NSF bundles like Forwarding Rules Manager.

Security Considerations

Quality Assurance (test coverage, etc)

• Functional test support for bridge, port, and tunnel creation

End-of-life (API/Features EOLed in Release)

Bugzilla (summary of bug situation)

• Open bugs

Standards (summary of standard compliance)

• The Open vSwitch Database Management Protocol

Schedule (initial schedule and changes over the release cycle)

The project roughly followed its release plan but failed on the code-freeze deadline due to the OpenFlow1.3 integration issues. But finally delivered on all of the set goals & features.

User Documentation

- OVSDB Installation Guide
 - OVSDB User Guide
 - OVSDB Developer Guide