OVSDB:Beryllium Release Notes

Contents

- Major Features
- Release Deliverables
- Experimental Deliverables
- Target Environment
- For Execution
- For Development
- Known Issues and Limitations
- ODL OVSDB L3
- Security Groups with Conntrack
- Service Function Chaining
- Known Bugs
- Changes Since Previous Releases
- Bugs Fixed in this Release
- Migration from Previous Releases
- Compatibility with Previous Releases
- Deprecated, End of Life, and/or Retired Features/APIs

Major Features

Beryllium marked the fourth release of the OVSDB NetVirt project. The release delivers increased code and testing coverage and improved network virtualization integration with OpenStack.

Release Deliverables

- Code quality, stability and usability
- Remove deprecated AD-SAL APIs
- Netvirt updates for flow optimizations and config migration
- ODL SFC and OPNFV SFC integration, application pipeline coexistence
- Increased Neutron parity by adding Security Groups and Metadata support
- Enhanced L3 DVR functionality
- Hardware VTEP southbound support
- Open_ySwitch southbound support for QoS and Queue
- Clustering/HA/Persistence support
- DPDK enhancements to the Southbound and NetVirt to support DPDK

Experimental Deliverables

Experimental support is added for the following features:

- Clustering using the OpenFlow plugin-li plugin. The feature is odl-ovsdb-openstack-clusteraware.
- Network Virtualization DLUX user interface. The feature is the odl-ovsdb-ui.

Target Environment

For Execution

Same as the usual JRE requirements for OpenDaylight

For Development

Same as the usual JDK and Maven requirements for OpenDaylight

Known Issues and Limitations

- OpenStack SFC integration requires a workaround when used with the current NSH OVS implementation as described in VTEP Workaround for OpenStack Instantiated VMs.
- The DLUX integration is considered an experimental feature. The feature works well but has not been extensively tested.
- Full ODL OVSDB L3 functionality requires a minimum OVS version of 2.3.2. The version is required for ARP responder flows in table 20.
- Stateful Security Groups support using conntrack requires a minimum OVS version of 2.5. Stateless Security Groups without conntrack is supported from OVS 2.3.2 and later.
ODL OVSDB L3

The L3 functionality is disabled by default. To enable the L3 functionality add `ovsdb.l3.fwd.enabled=yes` to the etc/custom.properties file.

Security Groups with Conntrack

Conntrack functionality is disabled by default. To enable the conntrack support add `<conntrack-enabled>true</conntrack-enabled>` to the etc/opendaylight/karaf/netvirt-impl-default-config.xml file.

Service Function Chaining

Some configuration is required due to application co-existence for the OpenFlow programming. The SFC project programs flow for the SFC overlay and NetVirt programs flow for the tenant overlay. Coexistence is achieved by each application owning a unique set of tables and providing a simple handoff between the tables.

First, configure NetVirt to use table 1 as its starting table:

```
http://localhost:8181/restconf/config/netvirt-providers-config:netvirt-providers-config
{
   "netvirt-providers-config": {
      "table-offset": 1
   }
}
```

Next, configure SFC to start at table 150 and configure the table handoff. The configuration starts SFC at table 150 and sets the handoff to table 11 which is the NetVirt SFC classification table.

```
{
   "sfc-of-renderer-config": {
      "sfc-of-app-egress-table-offset": 11,
      "sfc-of-table-offset": 150
   }
}
```

Known Bugs

Bug 5351 - Security group connection tracking flows are not getting inserted in OVS [https://bugs.opendaylight.org/show_bug.cgi?id=5351](https://bugs.opendaylight.org/show_bug.cgi?id=5351). The solution was tested against OVS 2.4.9 and pre-release patches. There has been a change in the connection tracking state bit values in the official OVS 2.5 release. The workaround is to use the OVS 2.4.9 with pre-release patches or to use a later ODL build with the current fix: [https://git.opendaylight.org/gerrit/#/c/34655/](https://git.opendaylight.org/gerrit/#/c/34655/).

Changes Since Previous Releases

New APIs for supporting SFC integration and using NetVirt as the classifier:
http://localhost:8181/restconf/config/netvirt-providers-config:netvirt-providers-config
{
    "netvirt-providers-config": {
        "table-offset": 1
    }
}

http://localhost:8181/restconf/config/ietf-access-control-list:access-lists
{
    "access-lists": {
        "acl": [
            {
                "acl-name": "http-acl",
                "access-list-entries": {
                    "ace": [
                        {
                            "rule-name": "http-rule",
                            "matches": {
                                "destination-port-range": {
                                    "lower-port": "80",
                                    "upper-port": "80"
                                },
                                "source-port-range": {
                                    "lower-port": "0",
                                    "upper-port": "0"
                                },
                                "protocol": "6"
                            },
                            "actions": {
                                "netvirt-sfc-acl:sfc-name": "SFCNETVIRT"
                            }
                        }
                    ]
                }
            }
        ]
    }
}

**Bugs Fixed in this Release**

4924        Fixed IPs of dhcp_port are not updated when a new subnet is added to the network.
5278        Service Unavailable exception when associating a Neutron router with a tenant subnet.
5331        unable to read topology after recovering a failed controller in cluster
5040        LLDP Spoofing attack warning when using Openstack with ODL Cluster (both features)
4569        Ownership changed consistently without down any node
5038        Instances are not reachable in Openstack when ODL used as cluster (using OPLugin He design)
5062        Creating Bridge in Cluster Mode returns 500 and throws exception in karaf log
5018        No Flow Entries are installed to br-int while trying the NetVirt Cluster (clusteraware)
3974        br-int is not getting created with lithium 0.3.0 snapshot
4277        Deleted Network flow entries retained in br-int, if network associated and disassociated from virtalrouter interface
4888        Ovsdb Southbound Clustering Inconsistent output for sudo ovs-vsctl list bridge br-int
4916        In OVSDB Single node clustering 2 switches registered with same manager there are two "OWNER" found in southbound, and with this two "OWNER" replication also happens
5134        Address exceptions when SG remote_group_id has both IPv4 and IPv6 addresses
5149        Enhancement: Support LLDP on ovsdb interface
5107        Flow tables mentioned in goto_table actions are not created
4904        Singleton Cluster is not happened
5149        Enhancement: Support LLDP on ovsdb interface
5161        In OVSDB 3 node cluster northbound remote ip address validation missing in configuration data store
4373        Released Floating IP (on compute node1 vm) is not reaching to external network, if reuse the floating IP to another VM (VM hosted on compute node2
4374        On Release of Floating IP doesn’t detached port on openstack external network
4280        VM Floating IP Address unable to reach the External GW when L3 routing enabled.
5107        Flow tables mentioned in goto_table actions are not created
4132        Unable to ping gateway when using L3 DVR - Lithium
5131        Hard-coded base url in Ovsdb UI
5147        Wrong logging level for ConfigProperties not found with defaults
4794        IllegalArgumentException in operational delete: unable to connect ovs to plugin
4844        GatewayMacResolverService continues to try to resolve gateway after nodes have disconnected.
4769        Security group : default ip flows fails to delete intermittently
4643        Remote Security Group - Terminating an instance fails to remove the corresponding rules
4874        distributed arp in old l3 for ovsdb is not installing rules when it should
3052        race condition between northbound and southbound events
Remaining OF 1.3 rules after full neutron resources removal
Do not delete interfaces in PortHandler
Beryllium RCO: Data did not pass validation
Data did not pass validation
ConflictingModificationAppliedException: Node was created by other transaction.
ARP request from public gateway not answered
Reenable SG IT
External Interface errors in karaf log when using Openstack with ODL Cluster (odl-ovsdb-openstack)
null pointer exceptions in ovsdb runtime
SG needs to be independent from which L3 stack is used in ovsdb netvirt
SG exception when running openstack tempest: org.opendaylight.ovsdb.netvirt.netvirtśniyatıv.portHandler.createICMPv4Match(MatchUtils.java:223) [283:org.opendaylight.ovsdb.netvirt.providers.openflow:1.1.4.SNAPSHOT]
VM delete does not remove all related flows (i.e specific to VMs)
Pipe for ConnectionInfo parsing in showMdsal tool
cannot create a bridge using northbound REST API with clustering.
Rules added by MacResolverServices in br-ex are not removed if no arp responses make it back to br-ex
flow rules for security group aren't populated on port creation
NeutronL3Adapter: missing/reordered enabled check
IllegalArgumentException in RoutingService.programRouterInterface
org.opendaylight.ovsdb.netvirt.netvirtśniyatıv.PORTABSTRACTEVENTTEST failure
ovsdb can create vxlan port in OVS, but can't delete it
missing null pointer check of getFixedIPs()
Sending non-canonical IPv4 prefix resulted in table 60 rules not getting added
IllegalArgumentException in programIpRewriteExclusion
Unreliable ERROR message as Unable to resolve Externalgateway Mac address, while unstacking one of compute node on openstack
NoClassDefFoundError and ODL doesn't allow to create network from openstack
Restack/new compute node VM doesn't communicate north-south traffic
NPEs and inability to provision SFF in SFC project via GBP between SRI and current stable lithium
northbound depends on obsolete commons.northbound and sal
SouthboundL3Adapter: isUpdateOfInterest is too inclusive
ExternalgatewayMac address keeps on trying to resolve, after cleared the GW on Openstack externalNetwork
Kara: InventoryListener Event replay code missing in Library on plugin bundle start
LbaaS OF flows are not getting installed in the switch
When large JSON responses are received by the switch in response to ODL queries, ODL's OVSDB interface becomes unusable.
Need to define OVSDB Clustering/Data Persistence Behavior
Network shared attribute should be allowed
ovsdbConfigService.getRows() returns mutable maps
Can't delete QOS from java api
flows failed to get programmed in a very random fashion
Bad openflow rules removal when VM is deleted
ODL shouldn't set the controller to every brige
ovsdb throws exception, fails to try to program flows if ovs is running already at controller startup
Add the missing apply-actions on outbound NAT table
Ingress ACL table is dropping the LLDP traffic
Typed Schema based Special handling is missing
Northbound API fails to insert/delete rows if the parentTable/parentColumn json data is missing on the POST message
Wrong status code sent if Node does not exist
arp responder periodic timer should refresh node picked for packet-out
MAC address for gateway can not be resolved, because external bridge is not connected to controller.
org.opendaylight.ovsdb.netvirt.netvirtśni yatı v.programNeutronIpRewriteExclusion(MatchUtils.java:251) [271:org.opendaylight.ovsdb.netvirt.providers.openflow:1.1.4.SNAPSHOT]
Periodic ARP resolver is missing calls to NeutronL3Adapter::updateExternalRouterMac()
NPE while programming Port Security ACL
distributed arp in old l3 for ovsdb should not install rules for arp unless tenant network exists in the compute node
Callback from neutron's router interface events should be handled via neutron port events
NPE at org.opendaylight.ovsdb.netvirt.netvirtñoıtaısırııv.providers.openflow1.3.services.IngressAclService. programPortSecurityGroup(IngressAclService.java:88)
IP ingress rule is not seen after a VM is spawned with the default Security Group
southbound fails to delete OvsdbNode from config and operational
ovsdb netvirt needs to handle cases when network/subnet contains no tenant id
NPE in SouthboundImpl
NPE in SouthboundImpl
NPE in GatewayMacResolverService
NPE in NeutronSubnetChangeListener.java
Compile errors when building openstack.netvirt
compile error of missing symbol of getSubnets
Southbound plugin throws java.lang.IllegalArgumentException while shutting down and loops forever
IllegalArgumentException when deleting router port
Periodic ARP resolver should use unicast MAC destination address whenever possible; instead of broadcast
ovsdb netvirt needs help in getting mac for a given ip in br-ex
Posting multiple OVSDB nodes with different node-id but same connection-info does not clean operational MD-SAL
Unstack and restack existing same compute unable to communicate the existing network VM's pipeline flows not performed on manually added br-int
Event dispatcher found no handler for NorthboundEvent
br-ex doesn't listing any OF flows on compute node instance
State of entries retained in br-int flow table on openstack-controller side, when VM resides on unstacked compute node
Config datastore empty on reconnect to ovsdb-node
Migration from Previous Releases

Migration from previous releases has not been tested.

Compatibility with Previous Releases

Yes, compatible with previous releases.

Deprecated, End of Life, and/or Retired Features/APIs

The OVSDB Plugin compatibility layer and related ADSAL dependencies were deprecated in Lithium and removed in Beryllium.