Miscellaneous

Openflowplugin-extension-circuitsw

Name

OpenFlow Extensions in support of Optical Circuit Switching

Repository Name

ofextensions/circuitsw

Description

Optical Circuit Switches are used along with packet switches in many network architectures. Primarily, Data Center network architectures are evolving to include the use of Optical Circuit Switches (https://en.wikipedia.org/wiki/Optical_switch, http://www.calient.net/products/s-series-photonic-switch/). Support in centralized (OpenDaylight) controllers for programming Optical Circuit Switches using the OpenFlow protocol can help advance this change.

Using the "Extensions to the OpenFlow Protocol in support of Circuit Switching Addendum to OpenFlow Protocol Specification (v1.0) – Circuit Switch Addendum v0.3," we have built a plugin based on AD-SAL that doesn't disturb the OpenFlow 1.0 AD-SAL plugin.

A link to the specification cited in the preceding paragraph is at:

http://archive.openflow.org/wk/images/8/81/OpenFlow_Circuit_Switch_Specification_v0.3.pdf

We have new Extensions written for Optical Circuit Switch with OpenFlow 1.3 as base specification. These extensions are written based on the Optical Transport Protocol Extensions V1.0. We would like to add these extensions to the existing openflowplugin and make it available in the openflowplugin feature for Helium and future releases of OpenDaylight.

Optical Transport Protocol Extensions document is available at -

https://www.opennetworking.org/images/stories/downloads/sdn-resources/onf-specifications/openflow/Optical_Transport_Protocol_Extensions_V1.0.pdf

Calient OCS Openflow protocol Extensions document is available at -

File:OCS OF Protocol Extensions Rev. 0.4.pdf

Scope

- Optical switches support in the Opendaylight
- Design and Implementation of the OpenFlow Protocol Extensions for the Optical Circuit Switches in the openflowjava
- Design and Implementation of the Yang models for the Circuit Flows(cross-connects), Ports, Cirucit Flow and Port Statistics
- Design and Implementation of the OpenFlow Protocol Extensions for the Optical Circuit Switches in the openflowplugin

Resources Committed (developers committed to working)

- Aneesha Pailla (pailla.aneesha - apailla@calient.net)

Initial Committers

- Aneesha Pailla (pailla.aneesha - apailla@calient.net)

Vendor Neutral

Vendor agnostic

OpenFlow Plugin:Graduation Proposal

Name

OpenFlow Plugin

Creation Review History

Project was created on July 18th, 2013

OpenFlow Plugin Project Proposal

TSC Minutes For Project Creation Review

- Original Project Approval

Working Code Base

Code base can be found at: https://git.opendaylight.org/gerrit/#/q/project:openflowplugin

Code base currently builds: https://jenkins.opendaylight.org/releng/view/openflowplugin/job/openflowplugin-merge-beryllium/

Code base currently runs:

- Instructions for running code base (tutorials / how-to)
  - Running the controller with the new OpenFlow Plugin
  - OpenFlow 1.3 Enabled Software Switches / Environment
  - End to End Inventory
  - End to End Flows
  - End to End Topology
  - End to End Groups
  - End to End Meters
  - Statistics
- Other info
  - Sonar: https://sonar.opendaylight.org/dashboard/index/12170
  - Dependent projects: Numerous projects are dependent on OpenFlow Plugin:
    - OVSDB / Net Virt : Tests : : https://jenkins.opendaylight.org/releng/view/openflowplugin/job/ovsdb-integration-beryllium/
    - Circuit Switching : Tests : https://jenkins.opendaylight.org/releng/view/openflowplugin/job/circuitsw-integration-beryllium/
    - USC: Tests : https://jenkins.opendaylight.org/releng/view/openflowplugin/job/usecplugin-integration-beryllium/
    - L2 Switch : Tests : https://jenkins.opendaylight.org/releng/view/openflowplugin/job/l2switch-integration-beryllium/
    - Group Based Policy : Tests : https://jenkins.opendaylight.org/releng/view/openflowplugin/job/groupbasedpolicy-integration-beryllium/
    - Service Function Chaining : Tests : https://jenkins.opendaylight.org/releng/view/openflowplugin/job/sfc-integration-beryllium/
    - VPN Service : Tests : https://jenkins.opendaylight.org/releng/view/openflowplugin/job/vpnservice-integration-beryllium/
    - VTN : Tests : https://jenkins.opendaylight.org/releng/view/openflowplugin/job/vtn-integration-beryllium/
    - LACP : Tests : https://jenkins.opendaylight.org/releng/view/openflowplugin/job/lacp-integration-beryllium/

Active Community

Community merged commit history: https://git.opendaylight.org/gerrit/#/q/project:openflowplugin+status:merged

Community open commit history: https://git.opendaylight.org/gerrit/#/q/project:openflowplugin+status:open

Prospective new developers can learn how to get involved here:

- User Guide
- by asking questions on:

History of Releases (using Mature Release Process)

Hydrogen

Release Plan: https://wiki.opendaylight.org/view/OpenDaylight_OpenFlow_Plugin:Release_Plan

Release Review: https://wiki.opendaylight.org/view/OpenDaylight_OpenFlow_Plugin:Release_Review

Milestone Readouts:

  - No official milestone reporting was conducted during Hydrogen - there was no release mailing list

Helium

Release Plan: https://wiki.opendaylight.org/view/OpenDaylight_OpenFlow_Plugin:Helium_Release_Plan

Release Review: https://wiki.opendaylight.org/view/OpenDaylight_OpenFlow_Plugin:Helium_Release_Review

Milestone Readouts:

  - M1: No official milestone reporting was conducted at this time during Helium. There was no release mailing list at this time & "release" mail archives only go back to July 2014
  - M2: No official milestone reporting was conducted at this time during Helium. There was no release mailing list at this time & "release" mail archives only go back to July 2014
  - M3: https://lists.opendaylight.org/pipermail/release/2014-July/000033.html
  - M4: https://lists.opendaylight.org/pipermail/release/2014-August/000157.html
  - M5: https://lists.opendaylight.org/pipermail/release/2014-September/000292.html

Lithium

Release Plan: https://wiki.opendaylight.org/view/OpenDaylight_OpenFlow_Plugin:Lithium_Release_Plan

Release Review: https://wiki.opendaylight.org/view/OpenDaylight_OpenFlow_Plugin:Lithium_Release_Review

Milestone Readouts:

  - M1: https://lists.opendaylight.org/pipermail/release/2014-December/001077.html
  - M2: https://lists.opendaylight.org/pipermail/release/2015-January/001290.html
  - M3: https://lists.opendaylight.org/pipermail/release/2015-March/001557.html
  - M4: https://lists.opendaylight.org/pipermail/release/2015-April/001856.html
  - M5: https://lists.opendaylight.org/pipermail/release/2015-May/002157.html

Committers vote on seeking graduation

On Dec 16 & 17, all OpenFlow plugin committers voted to seek graduation to mature:

https://lists.opendaylight.org/pipermail/openflowplugin-dev/2015-December/004437.html

Request to TSC for graduation review

On <date after> requested graduation review from TSC: <link to email to tsc@lists.opendaylight.org asking for a graduation review>

Result of review by TSC

On <date> TSC voted to graduate <project name> <link to meeting minutes>

OpenFlow Plugin:Project Policy

Committer Status

Active Committer

Does one or more of the following:

- Commit or review patches
- Actively participate in meetings or on the mailing list
- Help OpenFlow Plugin in Carbon release logistics / documentation / test

Advisory Committer

Inactive but can provide their expertise at times if needed. Example: on rare occasions answering a question or two that the rest of the contributors /committers have no answer to. They will not vote on project related matters during the course of the release.

Emeritus committer

An ex-committer who in the past has had significant contributions to the project.

Release Committer Status Email

The PTL for the previous release will request via an email on the OpenFlow Plugin mailing list a response from all the existing committers to provide their role for the release. It is expected that the PTL will allow a reasonable time for the committers to respond. It is also expected that this process should be completed before the milestone M1 and before the PTL election.

If the PTL of the previous release is unavailable - this process can be triggered by any other committer.

PTL Election

At the beginning of each release the OpenFlow Plugin project will elect a project technical lead (PTL). The previous release PTL will solicit self nominations from the committers for the PTL election. The election shall be conducted over the OpenFlow Plugin mailing list and the active committers will vote via email either -1 (no), 0 (neutral) or +1 (yes).

Committer Promotion

An OpenFlow Plugin contributor who is not a committer can request to be considered for promotion to a committer role by letting the PTL know. The PTL may provide the contributor a non binding advice that more contributions may be needed for a successful vote. The PTL will then initiate a vote for committer promotion over the OpenFlow Plugin mailing list and the committers will vote via email either -1 (no), 0 (neutral) or +1 (yes) in favor of the committer promotion. The vote will take into account the significance of the contributions to the project in the areas of code, documentation, test, release life cycle or any other area of importance to the project. On a successful vote on the project mailing list the PTL will request the TSC to vote for the committer promotion.

Revocation of the Committer Rights

Committer role can end in one of the two ways:

- A committer can voluntarily relinquish his/her committer rights by sending an email to the project mailing list stating the intention.
- If after 2 consecutive releases of non-involvement, a committer decides to not have an active role for a third consecutive release - the PTL can decide to revoke the committer rights of the committer.

The PTL will follow up with the TSC & the helpdesk for revoking the committer's rights. At the PTL's discretion or the project's request the PTL can add the ex-committer to the list of "Emeritus committers".