

Openflowplugin-extension-circuitsw Proposal

- [Name](#)
- [Repo Name](#)
- [Description](#)
- [Scope](#)
- [Resources Committed \(developers committed to working\)](#)
- [Initial Committers](#)
- [Vendor Neutral](#)
- [Meets Board Policy \(including IPR\)](#)

Name

OpenFlow Extensions in support of Optical Circuit Switching

Repo 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, Circuit 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

Meets Board Policy (including IPR)