

# UNIMgr Proposal

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## Name

User Network Interface Manager plugin

## Repo Name

unimgr

## Description

The User Network Interface (UNI) Manager plugin project is proposed to enable physical and virtual network elements to be remotely configured with Service Level Agreement (SLA) parameters and layer-2 connectivity to enable delivery of business services between two network elements. Specifically, the UNI Manager plugin will enable configuration of UNI functionality in network elements, and connectivity between the network elements for Ethernet Private Line (EPL) services as defined by Metro Ethernet Forum (MEF), as the initial use case. Other use cases such as Ethernet Virtual Private Line (EVPL) service and Ethernet LAN (ELAN) service provide opportunity for future extension.

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### Figure 1 OpenDaylight Lithium Architecture with Proposed UNI Manager Service Plugin

Management of EPL service, Ethernet Virtual Connections (EVC) and Class of Service will be the responsibility of APIs and applications north of OpenDaylight. The following diagram illustrates the UNI Manager plugin in relation to the northbound APIs and the endpoint devices to be configured to provide EPL service.

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### Figure 2 UNI Manager Plugin with Northbound APIs

The initial UNI Manager plugin code, developed with a simplified YANG model for EPL, EVC and EPL, will be contributed as a proof of concept to initiate the project. MEF has published a much more comprehensive YANG model recommended to be used for a more full featured UNI Manager plugin.

The UNI Manager plugin provides a REST interface to the northbound APIs and performs the following tasks based upon the details of the call from the EVC Manager API:

- Handle EVC CRUD requests (Create Read Update Delete)
- Interact with Class of Service Manager to obtain SLA parameters corresponding to the assigned Class of Service
- Generate UNI service attributes
- Manipulate the ODL UNI framework created using the YANG model
- Store instances of created UNIs

The UNI Manager Plugin project is being submitted upstream from Open Platform for NFV (OPNFV), where the related project is called Connectivity Services LSO. The UNI Manager Plugin is to be developed in compliance with MEF specifications as are the northbound APIs being developed within the Connectivity Services LSO project in OPNFV. The Connectivity Services LSO project has been reviewed and approved by MEF members active in MEF projects related to the Connectivity Services LSO project.

## Scope

The initial phase of the project will be creation of a User Network Interface Manager plugin that will provide an interface for northbound APIs and use OpenDaylight southbound APIs to configure and provision physical or virtual network elements for connectivity and Service Level Agreement (SLA) parameters enabling Ethernet Private Line service between two customer locations, within a single service provider's domain. Opportunity for future work includes evolving the UNI Manager plugin to support provisioning additional business services such as Ethernet Virtual Private Line service, Ethernet LAN Service and layer 3 services; to support services spanning multiple services providers; and to support additional SLA parameters.

## Project Contact

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## Resources Committed (developers committed to working)

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## Vendor Neutral

The project is coming from a nonproprietary, vendor neutral codebase. It includes no vendor trademarks, logos or product names. CableLabs is a not-for-profit research and development consortium of major telecommunications service providers worldwide. <http://www.cablelabs.com/about-cablelabs/>

## Meets Board Policy (including IPR)

## Resources

- Beryllium Release
  - [Release Plan for Beryllium](#)
  - [Release Review](#)
  - [Release Notes](#)
- BoronRelease
  - [Release Plan for Boron](#)
  - [Release Review](#)
  - [Release Notes](#)

## References

- Open Platform for NFV (OPNFV) project Connectivity Services LSO Cross-references
  - [Connectivity Services LSO project wiki page](#)
  - [Connectivity Services LSO project meetings wiki page](#)

- Metro Ethernet Forum (MEF) Cross-references

The preliminary Ethernet Private Line service information model shown on the OPNFV Connectivity Services LSO project page was contributed by CableLabs to MEF Common Information Model project for inclusion in the MEF Common Information Model the project is developing.

- - [MEF Common Information Model project wiki page](#) (MEF login required)
  - The preliminary Ethernet Private Line service information model contributed by CableLabs to MEF is posted on the [Common Information Model project's Information Model Contributions wiki page](#) (MEF login required)
  - [Copy of the CableLabs-contributed preliminary Ethernet Private Line service information model](#)
- UNI Manager Feature Plug-in Project Proposal Presentation
  - [UNI Manager Project Proposal Presentation](#)