

XOS metro-net Service

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Overview

The XOS metro-net Service is a dynamically onboarded XOS Service used for creating/managing/deleting Ethernet Services at the XOS level. The intended use of this function with ECORD is to provide Ethernet 'pipe' management at the Metro Network Level, connecting one or more Central Office CORD systems into a wider network architecture.

It is noted that this area is still under active development.

Prerequisites

The metro-net service depends on an underlying MEF SCA API - for end-to-end Ethernet connection management at the network level. Theoretically any implementation of this API is suitable. We have used the ONOS application provided by the [Carrier Ethernet](#) project (another part of the ECORD) for development and testing.

Tutorial

Installing and activating the Service

Procedure:

There is one 'root' repo of interest, from it, scripts will download the base repo and a series of 'service' repos. Here is how you setup them up, generate containers and activate the system.

Service Profile Repo:

- git clone <https://gerrit.opencord.org/service-profile>

Create Containers

- cd service-profile/metronetwork
- make local_containers
- make

Open the GUI:

- In your browser: <http://myhostname:9999> (Note: substitute myhostname as per local setup).
- Account and credentials are typical XOS default

Creating a Eline

Procedure:

- Create MetroNetwork System Singleton

- Navigate to <http://localhost:9999/admin/metronetwork/metronetworksystem/> (Note: Replace localhost with IP or localized hostname)
 - Select '+ Add Metro Network Systems'
 - Provide a name
 - Set the state to 'Enabled'
 - Save
- Create Network Device - corresponds to the underlying ONOS controller
 - Navigate to <http://localhost:9999/admin/metronetwork/networkdevice/> (Note: Replace localhost with IP or localized hostname)
 - Select '+ Add network device'
 - Provide ElementId, could be anything
 - Provide URL of the ONOS instance you are using (Example: <http://10.10.10:8181/onos>)
 - Set the Administrative State to 'Sync Requested'
 - Provide ONOS User/Password Credentials (same ones you would use on the ONOS GUI)
 - GUI Basic Option via forms:
 - Navigate to <http://localhost:9999/admin/metronetwork/networkedgetoedgepointconnection/> (Note: Replace localhost with IP or localized hostname)
 - Select '+ Add Eline Service'
 - Give it a Name, could be anything
 - Set Type to 'Point to Point', this is the only option currently supported
 - Give it a VLAN ID (0 to 4095)
 - Select UNI Endpoints
 - Set the Administrative state to 'ActivationRequested' if you want it connected immediately, or set it to 'Disabled' and connect it later.
 - Save
 - At this point the Eline will be created in XOS and reflected into ONOS and the underlying network - bits will be flowing
 - GUI ECORD GUI Dashboard Option: Navigate to GUI Base: <http://localhost:9999> (Note: Replace localhost with IP or localized hostname)
 - Note: As of Nov 20/2016 this part is under renovation, it should be available again shortly
 - Select the 'ECord' Dashboard View
 - Select 'Create E-LINE'
 - Select Endpoints
 - Provide a Name
 - Save
 - At this point the Eline will be created in XOS and reflected into ONOS and the underlying network - bits will be flowing

Metronetwork Video Demo

Virtual Network on Demand (VnoD):

VNoD is a new feature we are working on that brings together Metro level backbone networks with Enterprise Access Points from Local CORD Pods.

VnoD Video Presentation and Demo:

Archive

Preview: [XOSVnodDemoNov11.pdf](#)