

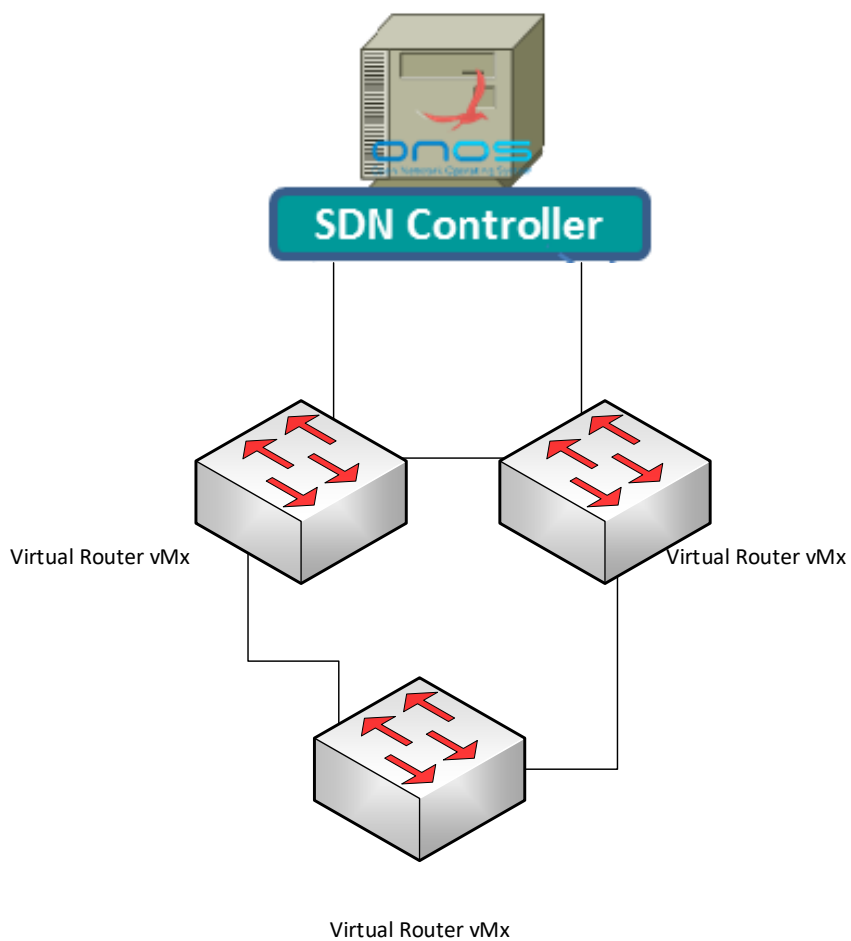


Juniper Virtual Router (vMx) managed by Open Network Operating System (ONOS) SDN Controller

Abstract:

Open Network Operating System (ONOS) is an innovative and rapidly growing open source project that already enable service providers to build real Software Defined Networks (SDN). The deployment of SDN will require ONOS to manage Virtual Routers.

The Juniper vMX Virtual Router maintains complete feature and operational consistency with physical MX Series 3D Universal Edge Juniper Routers. It runs the Junos operating system.





Goals:

ONOS SDN controller will be able to manage Juniper vMx. It should discover it and be able to get its ports statistics. The management is done using NetConf Protocol.

Project Steps:

1. Get familiar with SDN, Open Flow – start with <https://www.opennetworking.org>
2. Get familiar with ONOS Open Source project - <https://wiki.onosproject.org/display/ONOS/Wiki+Home>
3. Get familiar with ONOS and Mininet and understand how ONOS is interacting via OpenFlow with the devices that are supported by Mininet in order to get port statistics/metering.
4. Understand NetConf Protocol and how ONOS manages devices using NetConf - <https://wiki.onosproject.org/display/ONOS/NETCONF>
5. Raise ONOS & vMx environment
6. Implement in ONOS Get Ports Statistics from vMx using NetConf

Collaborate with:



Perquisite Requirements:

Internet Networking Course, Java