

OpenStack - quantum - Floodlight

SDN in OpenStack

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1st Swiss OpenStack user group meeting

Why do we need quantum in OpenStack

without quantum



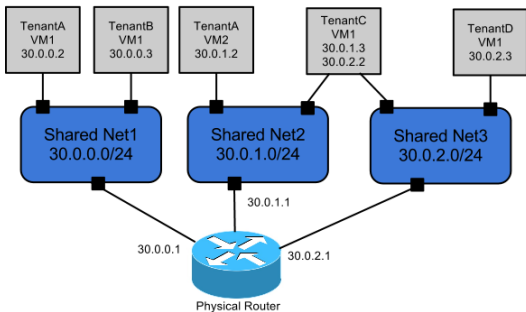
quantum enabled



Quantum in general

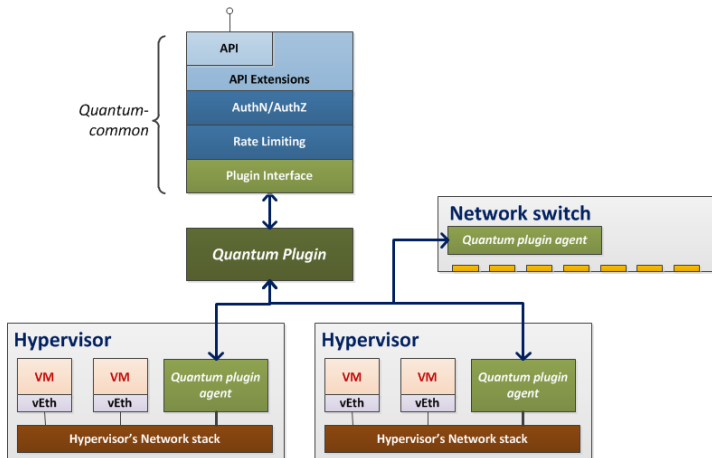
One Use Case

- Multiple Flat Network



Quantum in general

What is it and where is it



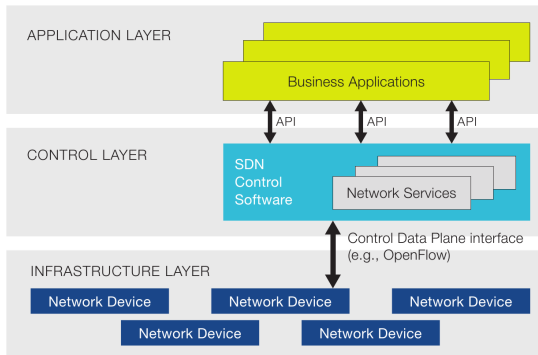
Quantum in general

What's the question - Which Plugin shall I use?

- Open vSwitch** Isolated networks with OVS and L2 in L3 tunneling
- Cisco UCS** Isolation is realized by VLAN and net-profiles - related to the Cisco UCS products
- LinuxBridge** Isolation with VLAN interfaces and linux bridge - pure Linux solution
- Nicira NVP** Proxy for the Nicira platform - related to Nicira products
- RYU** Proxy for the RYU network OS - uses OpenFlow and RYU controller
- Floodlight Plugin** REST Proxy for Floodlight - uses OpenFlow and Floodlight controller

SDN in general

- Look at it as a paradigm like OOP



Quantum and SDN

Why SDN and not a well known technology

- It's all about the creation and management of virtual networks
 - create (define) virtual network
 - slicing and partitioning of the network
 - provisioning the virtual network
- What offers SDN
 - The network is software defined (it's programmable)
 - Slicing the network is easy (native or made by FlowVisior)
 - good scaling by using e.g. SDN-VLAN (not the classic ones)
- Perfect match

Want to see it in action?

- An OpenStack in a virtual machine
- Independent floodlight controller
- one open vSwitch managed by floodlight
- Quantum REST-Proxy plugin

