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

I want the network now!!

quantum enabled

I want the network now!!
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 Nicra platform - related to Nicra 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
Thanks for listen