



SEBA with Microplug OLT

Presenters

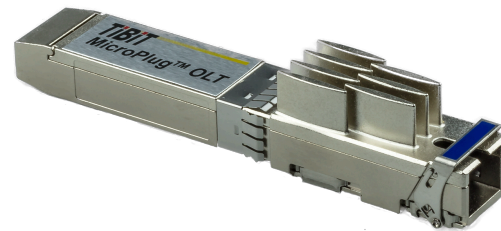
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Microplug OLT

- 10 Gigabit OLT implemented in a single SFP+ Optical Transceiver
 - ITU-T G.987 XGS-PON compliant
 - 10G Ethernet-to-PON (XGS-PON or EPON) MAC Bridge (L2/L3 switching, traffic shaping, ...)
 - 32-bit RISC CPU
 - Boot Loader + Firmware
- Control plane external to OLT (VOLTHA)
 - Interfaces with Microplug firmware via IEEE 1904.2 Layer 2 protocol



Saving Boxes in SEBA

- plug OLT directly into leaf switches
- no additional OLT boxes
- single leaf switch with 48 ports can take up to 6K subscribers



Problem: Leaf switch is part of fabric *and* vOLTHA

- Fabric control (trellis) works on top of ONOS
- OLT control is done in vOLTHA
 - no BAL here, no OLT aggregation
- need control interface to both ONOS and vOLTHA adapter

Solution: create **second control interface** on switch

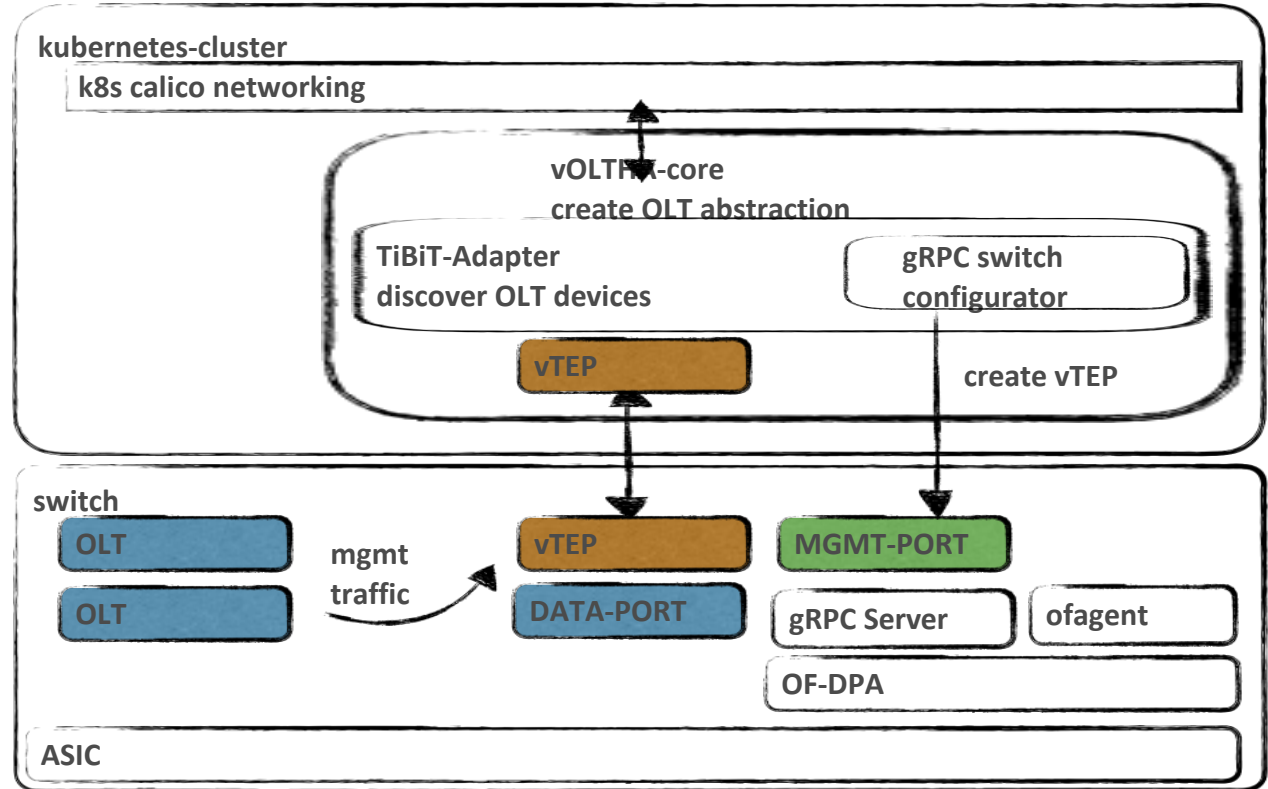
gRPC interface from vOLTHA adapter, OpenFlow from ONOS

no real control virtualization, no 'flowvisor'



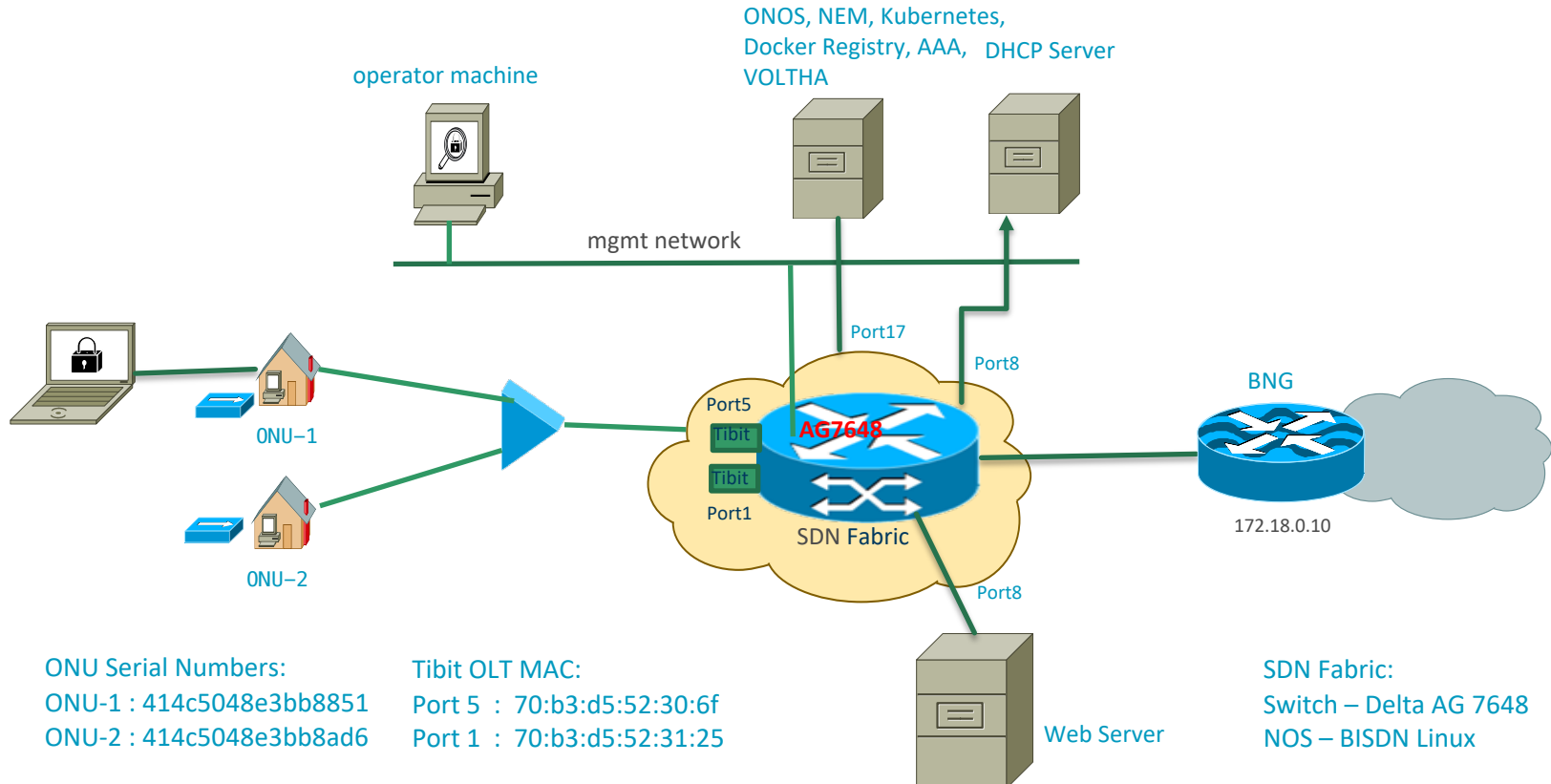
Schematic of grpc/OF coexistence in k8s

- currently working on vOLTHA 1.6





SEBA POD Topology


























- Slices
- Nodes
- Instances
- Att workflow driver ▾
- Fabric crossconnect ▾
- Fabric ▾
 - Fabric Port Interfaces
 - Fabric Services
 - Fabric Switch Ports
 - Fabric Switches**
 - IP addresses
 - Node to switch ports
- Volt ▾
- Onos ▾
- Rcord ▾



Fabric Switches

Add

Type to search..

Actions:	Backend status	Driver	Id	Ipv4 loopback	Ipv4 node sid	Is edge router	Name	Of id	Policy status	Router mac
  	 	 		 	 	 	 	 	 	 
		ofdpa3	1	192.168.0.201	16	true	AGG_SWITCH	of:000000182330d7fa		00:18:23:30:d7:fa

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- Fabric ▾
- Volt ▾
 - ANI Ports
 - NNI Ports
 - OLT Devices**
 - ONU Devices
 - PON Ports
 - UNI Ports
 - vOLT Service Instances
 - vOLT Services
- Onos ▾



OLT Devices

Represents a physical OLT device

Add

Type to search..

Actions:	Admin state	Backend status	Device id	Device type	Dp id	Driver	Host	Id	Mac address	Name	Nas id	Of id
🔍 ✖	ENABLED	✓	00014f7573735992	tibit_olt	of:000070b3d5523125	voltha		2	70:b3:d5:52:31:25	My OLT	NAS_ID	000170b3



Slices

Nodes

Instances

Att workflow driver ▾

Fabric crossconnect ▾

Fabric ▾

Volt ▾

ANI Ports

NNI Ports

OLT Devices

ONU Devices

PON Ports

UNI Ports

vOLT Service

Instances

vOLT Services

Onos ▾

**CORD**

Your VNF orchestrator



Logout



ONU Devices

Represents a physical ONU device

Add

Type to search..

Actions:	Admin state	Backend status	Connect status	Device id	Device type	Id	Oper status	Policy status	Pon port id	Serial number	Vendor
	ENABLED		REACHABLE	0001d9318f6048dd	brcm_openomci_onu	1	DISCOVERED		PON port	ALPHE3BB8AD6	Broadcom



Thank You