CORD Perspective

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CORD from a Historical Perspective

The Original Cases

– Residential

– Mobility

– Enterprise

The Add-Ons

– Platform

– XOS

– Analytics

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CORD from a Historical Perspective

First Relationship to OCP

– Servers

– Switches
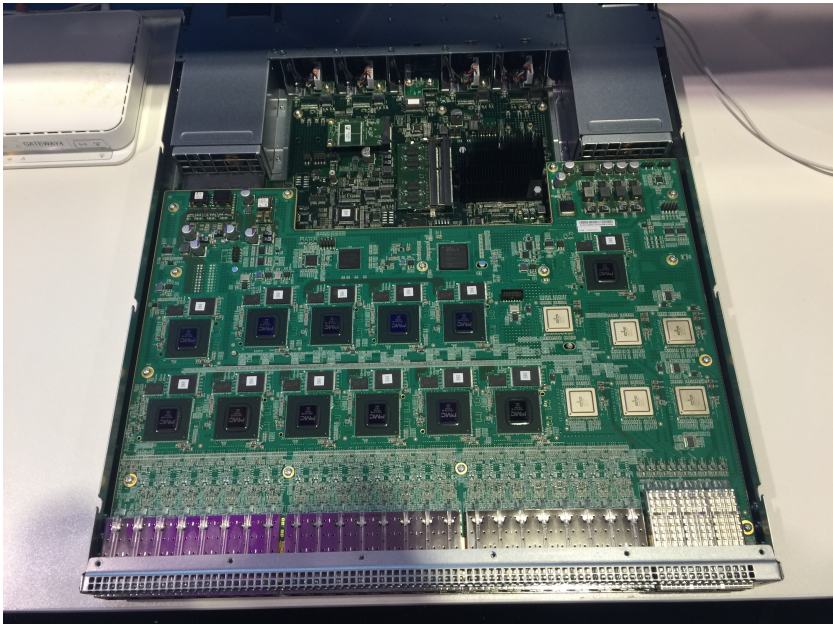
– New Specs

The AT&T Field Trial

– Foundry
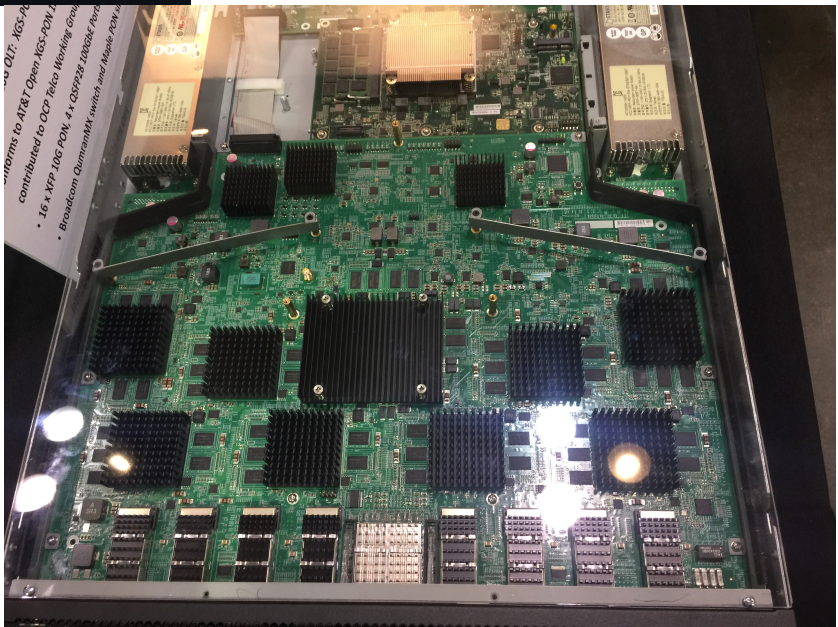
– vBNG

– Birth of VOLTHA

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Hardware Peripherals

GPON OLT

G.Fast DPU

XGS-PON OLT

Economies of a datacenter

Infrastructure built with a few commodity building blocks using open source software and white boxes

Agility of a cloud provider

Software platforms that enable rapid creation of new services

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CORD After the First Year

Carrier Desires:	CORD Delivers:
Commodity NFV Infrastructure	Open Compute Project (OCP) Servers
Robust Switching and Aggregation	Fabric from OCP Switches and OVS
Simple IO Modules that work with Fabric	vOLT, vG.Fast, vCE (MEF), (vNB)
Flexible, Scalable, Available Control Plane	Open Network Operating System (ONOS)
Diverse types of Virtual Network Functions	KVM, Docker
Re-useable VNFs	vSG, vRouter, Fabric, vOLT
3rd Party Services	CDN, Parental Controls
Multi-Tenancy	Cloud Tenants and Network Slicing
Open Orchestration	Open Stack
High-Level Service Composition Environment	XOS
Community Ecosystem	Open CORD community
Optional Vendor Support, Maintenance, Customization	Multiple Vendor support for CORD and extensions

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AT&T's Current Engagement in CORD

AT&T Open Sources ONAP

R-CORD
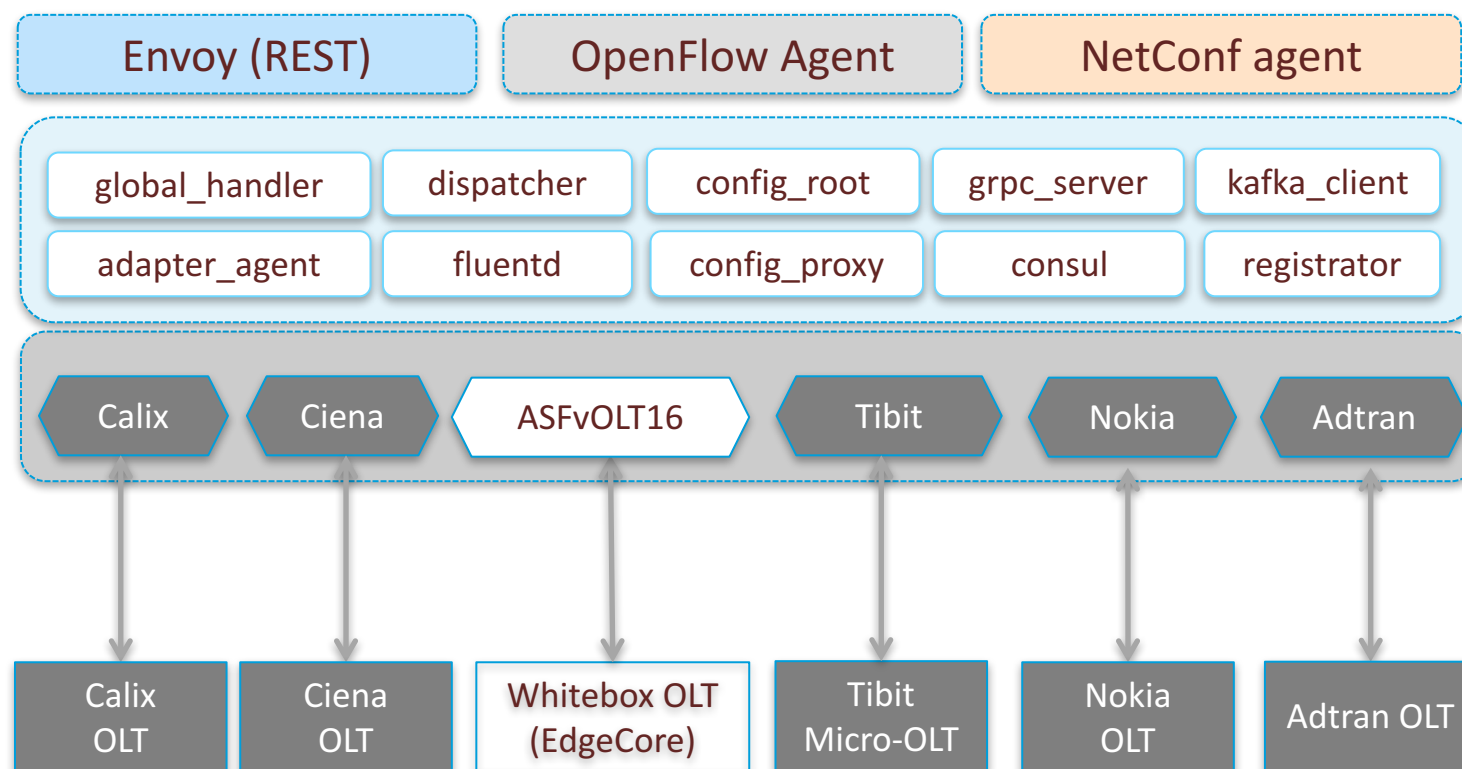
M-CORD

Right and Light Infrastructure

VOLTHA

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Virtual OLT Hardware Abstraction (VOLTHA): One Microservice for Many Peripherals

VOLTHA northbound

Envoy (REST)   OpenFlow Agent   NetConf agent

VOLTHA core

global_handler	dispatcher	config_root	grpc_server	kafka_client
adapter_agent	fluentd	config_proxy	consul	registrator

Common control and management framework shared by all OLTs &ONUs

VOLTHA southbound adapters

Calix   Ciena   ASFvOLT16   Tibit   Nokia   Adtran

G.fast in V2.0

| Calix OLT | Ciena OLT | Whitebox OLT (EdgeCore) | Tibit Micro-OLT | Nokia OLT | Adtran OLT |

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Where Should CORD Go?

Flexibility for Adopting Environments

Focus more on Community

Form Stronger Relations with Others

– OCP, ONAP, OPNFV,

Shepherd Commercial Support

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