CORD: Central Office Re-architected as a Datacenter

Extract from slides by Larry Peterson
Open Networking Lab

CORD
Central Office Re-architected as a Datacenter

http://www.opencord.org

CORD Aims to Deliver

Economies of a datacenter

Infrastructure built with a few commodity building blocks using open source software and white-box switches

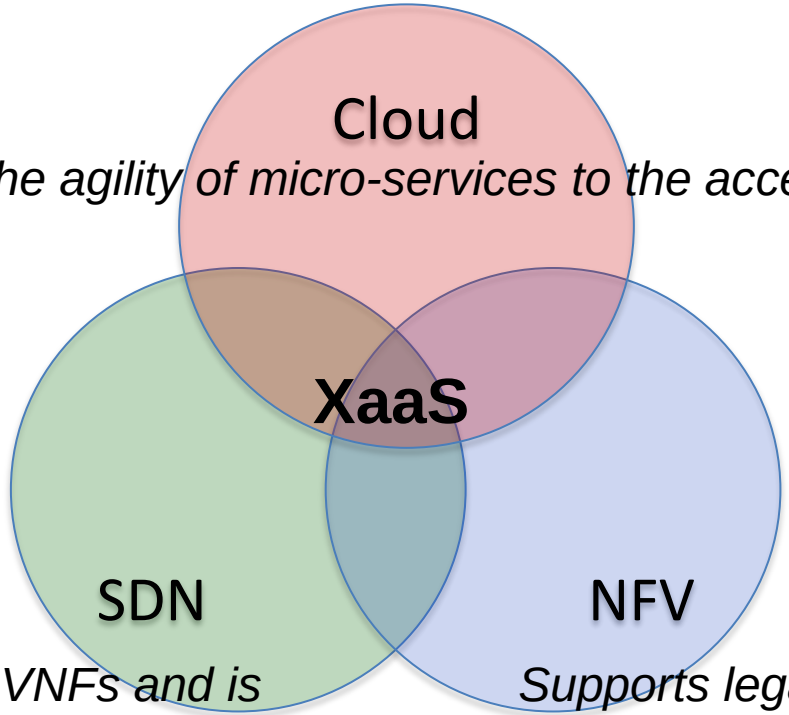
Agility of a cloud provider

Software platforms that enable rapid creation of new services

↓

From Access-as-a-Service to Software-as-a-Service

Design Philosophy → Tangible Value

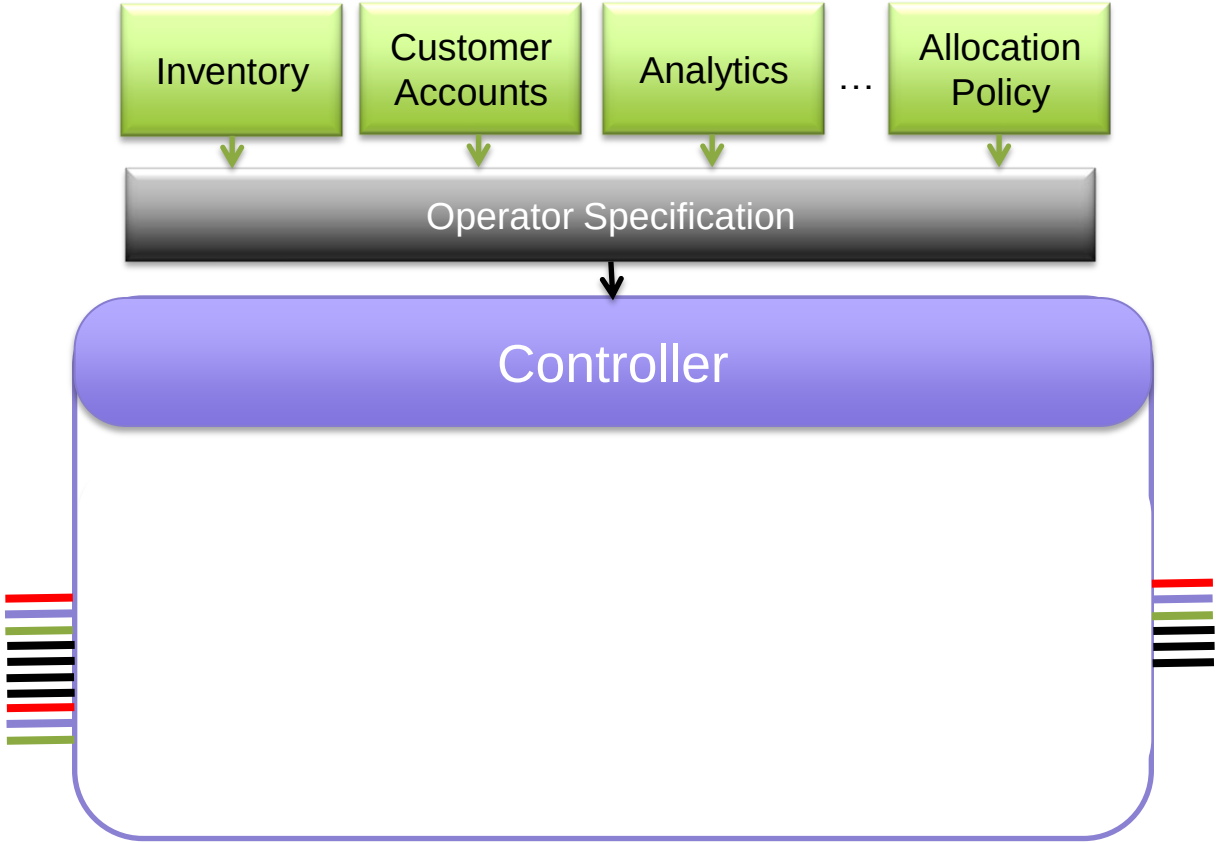


Extends the agility of micro-services to the access network

Interconnects VNFs and is a source of innovative services

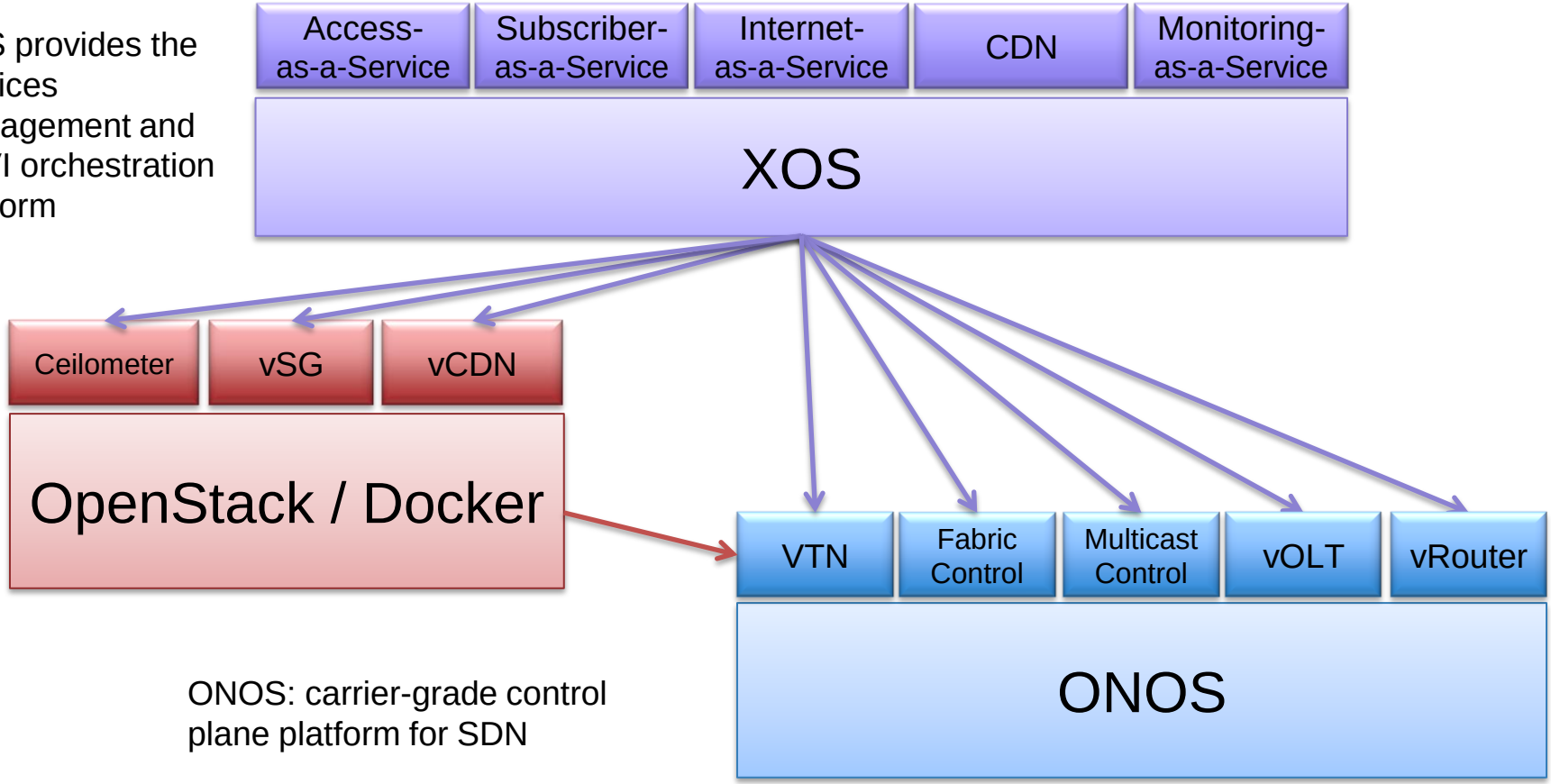
Supports legacy VNFs and pushes the limits of disaggregation

CORD – Software Architecture



CORD Software Stack

XOS provides the services management and NFVI orchestration platform



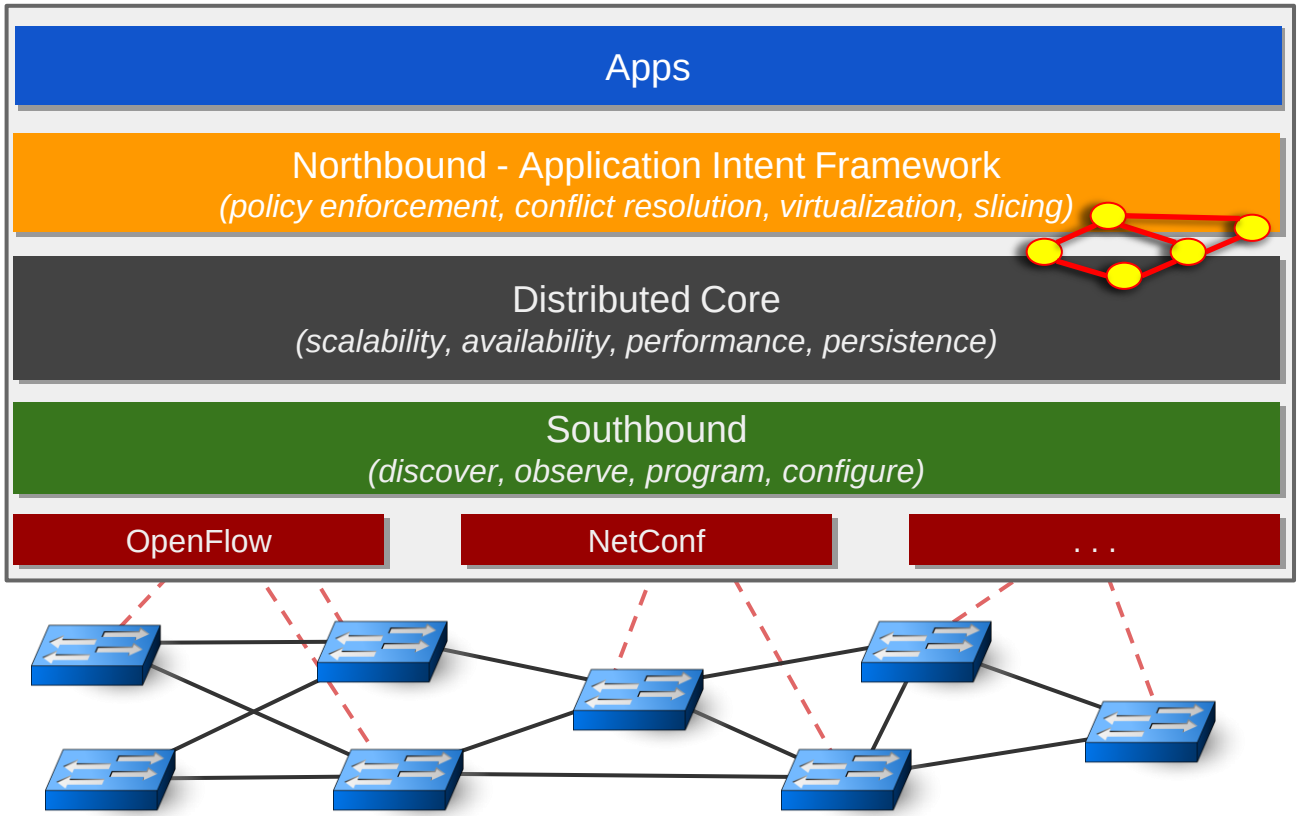
ONOS: carrier-grade control plane platform for SDN

ONOS Internals – Architectural Tiers

Northbound Abstraction:
- network graph
- application intents
- virtualization & slicing

Core:
- distributed
- protocol independent

Southbound Abstraction:
- generalized OpenFlow
- pluggable & extensible

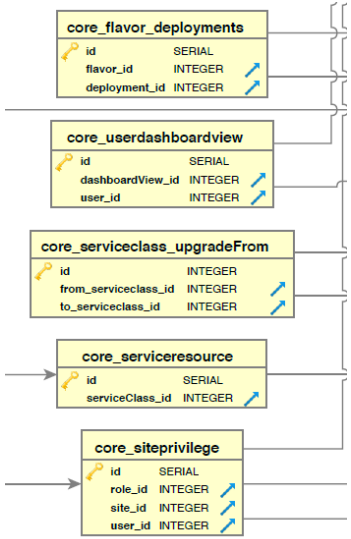


Data Model Notes

Brief analysis by Nigel Davis

XOS Model

- Model development is organic
- Focus is on agile deployment of critical capability
- Model deals with
  - Network including slicing
  - Services
  - Users
  - Tenants
  - Invoicing
  - Etc



Observations

- ON.Lab - ONF combination: Ideally positioned to tackle the Standards – Open Source interaction challenge… as it is a necessity for the combination
- Over the next few months there are bound to be significant challenges as we all know how hard this is
  - Mindset
  - Terminology
  - Etc (as discussed in the NSM workshop
- ONF already has a combined opensource-standards mindset with the Core model, tooling and Tapi so some of the hurdles are already jumped…
- There will not be one Eureka moment… this will be a long hard slog… but we are forced to tackle the challenge