Open Networking Summit 2017

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Thank You!

2011

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SDN/NFV Journey So Far

- Closed Proprietary Integrated
- Disaggregation
- Softwarization & Virtualization
- Open Source
Disaggregation and Open Source Software

Many open & closed: VNFs and Services

Network Control & Management Applications

ONAP
Open Network Automation Platform

MANO
Open Source

ONIE, ONL, FBOSS, OVS, SONiC, P4, ...

merchant silicon

Network OS

Open Source

White boxes w/ open source

Open Compute Project

Open Daylight
Open Network Operating System

Barefoot
Disaggregation and Open Source Software

Across The Networking Industry

- Datacenter
- Inter-Datacenter
- Packet Backbone
- Enterprise

- Mobile Access & 5G
- Wired Access
- Mobile Packet Core
- Optical Transport
SDN/NFV Journey to Production Deployment

Closed Proprietary
Integrated

Disaggregation

Softwarization & Virtualization

Open Source

Harmonize

Integrated Solutions

Software Defined Standards
ONF Open Innovation Pipeline
Accelerating Innovation into Deployment

1. Disaggregated building blocks enable Open Innovation Pipelines for different use cases

2. Software Defined Standards solidify interfaces to enable components from the broader ecosystem to be plugged in

3. Innovation can be added anywhere along a pipeline without reinventing the complete solution
Open Innovation Pipeline

1. All ONF Members can bring value and introduce offerings anywhere along the Innovation Pipeline.

2. Vendor innovations then have an opportunity to ‘ride the pipeline’ into operators trials as ONF builds use case solutions for Operator members.
Investment for Production

Resources (logarithmic scale)

Open Source Resources

Other Skilled Resources

Path to Production

Resource Gap

Solution Arch/Design
Platform Enhancements
Solution/App Dev
Base HA, Perf Tuning
Base QA & OS Release
Custom Integrations
SP Hardening, QA & FOA
Merge Updates
Support
Resource Gap + Misaligned Incentives

Network Operators
- Want to adopt SDN/NFV solutions based on disaggregation and open source
- But lack dev resources and investment

Vendors
- Have established products and processes
- Want to use disaggregation & open source but it is very disruptive to existing business

System Integrators
- See disaggregation & open source as an opportunity
- But lack expertise, teams, and investment

Incentives not aligned ➔ Insufficient investments
We cannot take disaggregation and open source to production and without that we cannot succeed
SDN/NFV Journey to Production Deployment

1. Closed Proprietary Integrated
2. Disaggregation
3. Softwarization & Virtualization
4. Open Source
5. Harmonize
6. Integrated Solutions
7. Software Defined Standards

Align incentives ➔ Sufficient Investments ➔ Production Deployment