

Networking: Software



Leveraging Open Compute Technologies to Build a Portable NOS for Telco Networks

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Networking Software Solutions













Open & Disaggregated Networking Moving outside of the Data Center

AT&T is Deploying White Box Hardware in Cell Towers to Power Mobile 5G Era

Over 60,000 White Box Routers Will Be Installed Over the Next Several Years, Enabling New Customer Experiences at Lower Cost

AT&T* plans to be the first to mobile 5G in the United States. To power our new network this year and beyond, we're building our towers and small cells in a radically new way.







Architecture of a Portable Telco NOS







NOS Cookbook

Step-by-Step guide to building a Portable NOS for Telcos
Leverages OCP Technologies
ONIE, ONL, SAI etc.
Standard, Flexible Architecture
Portability built-in from inception
Provides modern and open interfaces

Automation, Orchestration etc.

Supports open & closed source components





Slide 8

PC6 May overlay front page of the cookbook on this slide once available.

Paul Carter, 27/02/2019



NETWORKING

Case Study -MPLS Forwarding

Metaswitch NOS Toolkit components integrated with ONL running on Edgecore AS5712

PoC only - supporting MPLS packet forwarding

Only ~3 months effort to build this.



Architecture of Case Study system





Summary

- Disaggregation Networking has brought undeniable benefits to the Data Centers
- Telco Networks want to have the same benefits
- The requirements for Telco Networks are much greater than those for Data Centers
- OCP Technologies meet some but not all of those requirements

- Metaswitch are contributing the NOS Cookbook to help guide the creation of Portable, Disaggregated Network Operating Systems for Telco networks.
- The Metaswitch NOS toolkit provides many of the components required to create a NOS for Telcos.







OCP SAI –

Join the project & help add MPLS support

Download NOS Cookbook today from http://www.metaswitch.com/cookbook

Metaswitch NOS Toolkit info: <u>www.metaswitch.com/networking-software</u>



31



 To be completed but likely to include: Push silicon vendors to extend SAI to support Service Provider use cases (e.g. MPLS) NOS toolkit availability == today Also, links for more information (e.g. NOS cookbook) via MSw website. Paul Carter, 16/01/2019

3 Are there any issues with providing the toolkit/spec/ref design without "approval?" Refer back to their statement on slide #2 Joseph Skinner, 16/01/2019