



**OPEN**  
Compute Project

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Santa Clara, CA



# ENG. WORKSHOP: OpenSwitch (OPX) Introduction

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Chair

OPEN HARDWARE.



OPEN SOFTWARE.



OPEN FUTURE.





**Open. Modular. Scalable.  
Performance-Optimized.**

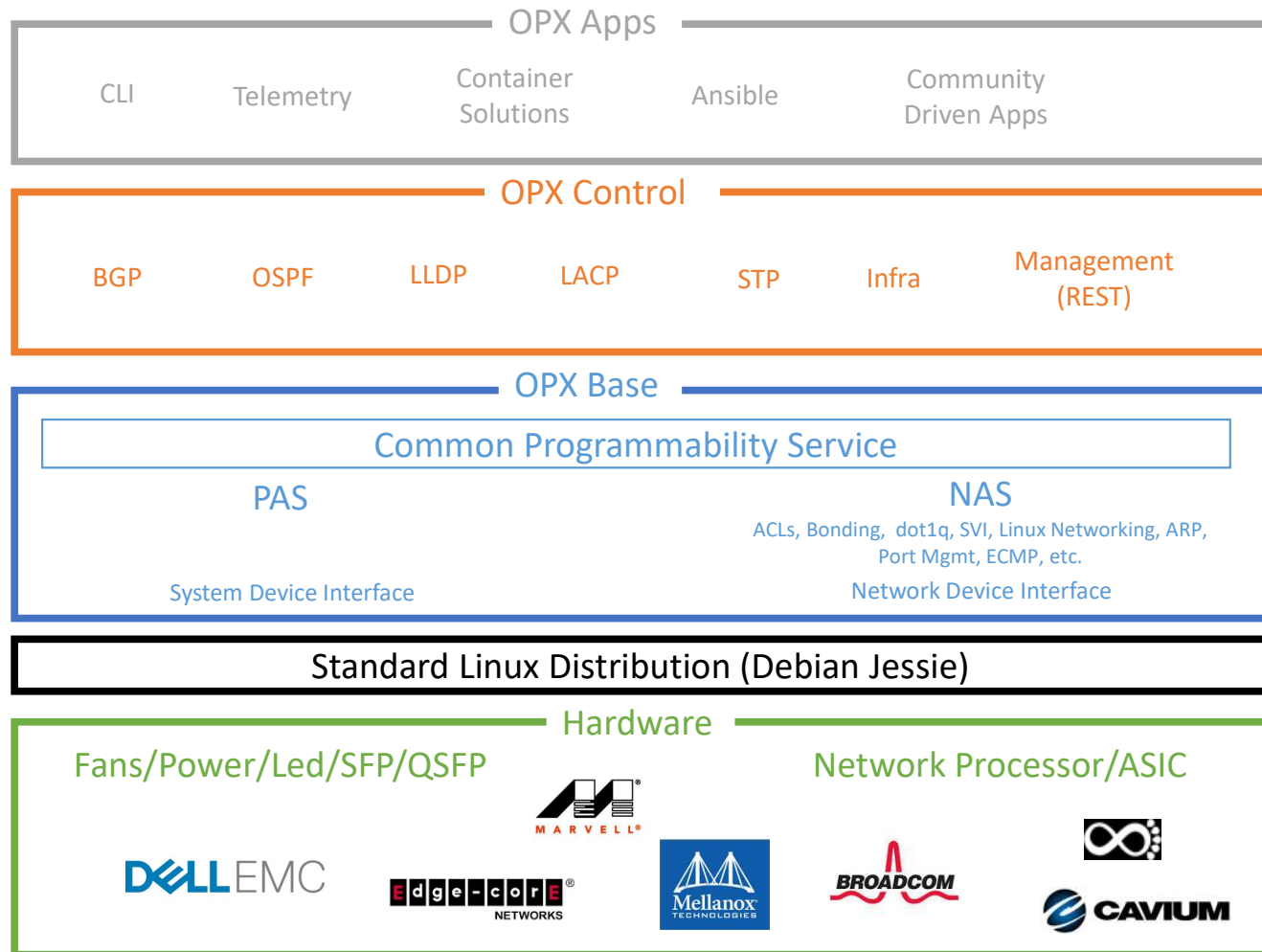
# What is OpenSwitch Today

- Full-Featured Linux-based platform for Open Networking
- Fully open source support by the Linux Foundation
- Modular design: Protocol and application choice of software components
- Runs a fully-open, unmodified Linux distribution
- Rich programming model through C/C++/Python/Go/REST
- Supports a variety of automation tools
- Based on open software already deployed: Dell EMC OS10 Open Edition & SnapRoute's network stack
- Choice of network processor (Broadcom, Cavium, Mellanox, others)
- Hardware choice of multiple ODM Platforms

**Time To Reshuffle Your Software Deck:  
Open Fully-Featured Deployable NOS Becomes A Reality**



# OpenSwitch Architecture



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# Introducing the OpenSwitch Contributors

- OPX Applications

- Linux community provided applications through the distribution (eg. Dockers, )
- Application echo-system evolving by OpenSwitch community

- OPX Control

- Contributed and supported by SnapRoute
- REST interfaces for providing API based configuration
- Routing protocols written entirely in Go

- OPX Base

- Contributed and supported by Dell EMC
- Provides the layered base with plugins for NPU and platform components
- Rich programming through the Centralized Programming System in C/C++/Python and Go

- NPU/ODM/Platform Providers

- Providing drivers and SDKs



# Why OpenSwitch



## Designed for Operators Usability

- Modular, Designed for Scale and Performance Open-Source Fully-Featured Modern NOS



## Network Agility

- Application-Focused Control allows tailoring the networks and accelerating features velocity



## TCO Savings

- CapEx Savings via Open-Source OpEx Savings via Automation & DevOps Tools Integration



## Use with Confidence

- Based on Field-Deployed Code from Dell EMC and SnapRoute with Major Silicon Vendors Support



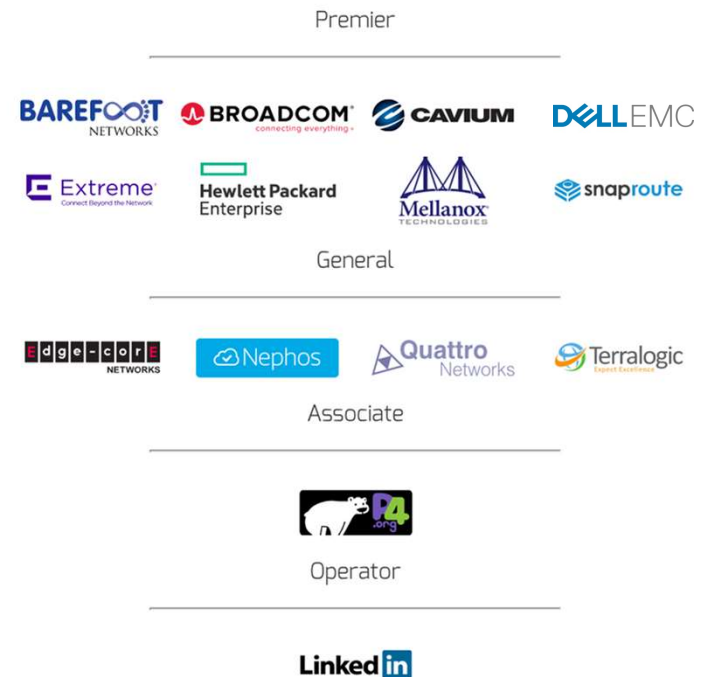
# OpenSwitch Industry Leaders Driven Community

- **Linux Foundation Project:** vendor-neutral



- **Echo-system contributions by some of the networking industry leaders**

- Operators
- Solutions and Systems Providers
- ASIC Vendors
- ODMs
- Technical Services Providers
- Systems Integrators
- Academic Institutions





# OpenSwitch Roadmap - 2017

- First Quarter
  - Initial delivery of a NOS platform for a data center environment
  - Initial VM for application development purposes with basic networking support
  - Initial delivery on Dell EMC S6000
- Second Quarter
  - Focus on ODM platforms and silicon vendors including Mellanox, Marvell, Cavium and Broadcom
  - Focus on application development
  - Testing Infrastructure
- Third Quarter
  - To be published



# Github and Documentation

- OpenSwitch Github

- <https://github.com/open-switch> - contains the code

- Want help? Email [ops-dev@lists.openswitch.net](mailto:ops-dev@lists.openswitch.net)

- All new REPOS have the “opx” prefix indicating OpenSwitch 2.0

- Eg.. opx-build

- Working to integrate documentation – Existing documentation at:

- OPX Base Documentation - <https://github.com/open-switch/opx-docs/wiki>

- OPX Snaproute - <https://open-switch.github.io/flx-docs/>

- How to start - <https://github.com/open-switch/opx-build>





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