Open Networking Advancements

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Open Networking Advancement

May 2013
First OCP Networking Meeting

March 2017 OCP Summit

~ 4 Year Ecosystem Building
Open Networking HW Advancement

10G/40G Designs

100G Modular Chassis Designs

32x100G Designs

Wi-Fi Access Points

64x100G Switches

Programmable ASICs

25G Switches

Wi-Fi Access Points

DCI Switches

1G GPON vOLT
Open Networking SW Advancement

- ONIE Installer
- Open Network Linux
- Switch Abstraction Interface (SAI)
- Open Optical Monitoring (OOM)
- FlexSwitch SONiC
HW Design Contributors

BAREFOOT NETWORKS
CAVIUM
Mellanox TECHNOLOGIES
BROADCOM
INTEL
Nephos
Agema
Edge-core NETWORKS
Inventec
ALPHA Networks
Interface Masters Technologies
Innovative Network Solutions
facebook
SK telecom
AT&T
SW Ecosystem

- ONL
- SONiC
- FlexSwitch
- ONIE
- SAI
- OOM
- ADARA
- CUMULUS
- ipinfusion
- big switch networks
- PICA8
- rtbrick
- Pluribus NETWORKS
- snaproute
Edgecore Contribution AS7800-64X

- 64 x 100G QSFP28 Switch
  - Based upon Broadcom Tomahawk 2 silicon

- Single PCB board design for all 64 ports

- PHY-Less design provides reduced cost and latency

- X86 CPU options

- Optional BMC Module
Edgecore Contribution AS7300-32X

- 48 x 25G + 6 x QSFP28 Top of Rack Switch
  - Based upon Broadcom Tomahawk silicon
- PHY-Less design provides reduced cost and latency
- X86 CPU options
- Optional BMC Module
Edgecore Contributions Wi-Fi

• Wave 2 Qualcomm QCA based designs
  • 4x4 Enterprise grade Access Point
  • 2x2 Cost effective Access Point
CBW Technology Showcase Participants

- Edgecore Networks
- Agema
- SnapRoute
- AT&T
- Benu Networks
- Ubuntu/Canonical
- Mojo Networks
Technology Showcase Setup

**Internet**

- **Benu Networks**
  - CBW Linux (OpenWRT)
  - ONIE
  - CBW Linux + Snappy
  - Benu Networks, Ubuntu

- **EdgeCore H/W**
  - Broadcom Based AP
  - Netgear

- **ECW7220**
  - Live-CBW-SSID

- **ECW5410**
  - Qualcomm Based AP

- **AS4610-54P**
  - Broadcom Based AP

- **AG-6248-C**
  - Qualcomm Based AP

- **SnapRoute Flex Switch**

**WAN 1**

- **192.168.1.x**
- **192.168.1.x**
- **192.168.1.x**

**WAN 2**

- **192.168.1.x**

Demonstrates:

- Working Linux kernel on OCP H/W
- Enterprise Wi-Fi service
- User space application
- Cloud managed distributed Firewall
- Campus Wi-Fi
- Managed business Branch Networking

**ONIE**

- OCP ONIE Bootloader

**Demonstrates:**

- 5G Mobility
- Fast Mobility
- Automation / ML:
  - Wi-Fi Radio Resource Management
Open Networking Future...

- 400Gb Ethernet
- Programmability
- Optical Networking

- Cellular / Wi-Fi
- Backhaul
- Optical Networking

- CORD
- Carrier / MEF