OPEN
FOR BUSINESS
WHAT’S IN STORE

Bill Carter, Chief Technology Officer
Open Compute Project
EXECUTIVE TRACKS

Inspur
Samsung
Facebook
ZT Systems
Microsoft
IHS Markit
ITRenew
wiyynn
Hewlett Packard Enterprise
OCP Adoption Stories

ING
Booking.com
kpn
Nerim
...about Open Compute Project

OCP PRIMER - Archna Haylock

OCP Marketplace – Rajeev Sharma

Advanced Cooling Solutions

Special Guest - Octave Klaba, CEO, OVH
DAY 2 Workshops

SERVER
STORAGE
NETWORKING
RACK & POWER
SECURITY
MANAGEMENT
HPC
Advanced Cooling
TELCO
DATA CENTER FACILITIES
OPEN SYSTEMS FIRMWARE

OPEN. FOR BUSINESS
SERVER & STORAGE WORKSHOP

YAHOO! JAPAN

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DATA CENTER FACILITIES

OPEN
Compute Project

COLO SOLUTION PROVIDER™

OCP READY™

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Day2- EUROPEAN FOCUS TRACK

EU Policies affecting DATA CENTERS
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Virtual Central Office
Looking Ahead to the 5G Edge

Heather Kirksey, VP Ecosystem & Community
Linux Foundation Networking
What is VCO?

- Cloud Native approach to deploying NFV closest to subscriber
- One of the Edge Blueprints as discussed in the community
- Based on OpenStack and Kubernetes
- Massive Scale => Large Number of sites

Virtual Central Office

Define a cloud native approach for a virtualized central office leveraging NFV and open source technologies

- Service Agility – End to End
- Operational Efficiency
- Improved Customer Experience
- Lower Costs

- >10,000 Central Offices in US Alone
- Primary Gateway to Customers for a Telco Operator

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COs Serve Residential, Business & Mobile Customers

Telco CO - Traditional Status
- Closed, Rigid and Complex
- Variety of Access & Speeds
- Wide variety of hardware – routers, switches, gateways, servers etc
- Lack of standard interfaces => lack of programmability

Telco COs - Modernization
- Virtualization
- Reduction in CAPEX and OPEX by >30%
- Open and Flexible & Standardized
- Software Defined
  - Network
  - Orchestration
- Programmability

Telco COs - Cloud Native
- Fully Software Defined
- Further Reduction in CAPEX and OPEX
- Disaggregated and flexible
- Massive Scale
- Edge Blueprint

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Telecom Provider Requirements

- Massive Scale → “Distributed Hyperscale”
- Common deployment model for Data Center and CO locations
- OpenStack and/or Kubernetes
- Flexible and Agile
- LTE and 5G Radio with vEPC & NG-Core
- Centralized Management and Troubleshooting
- Service assurance - Metrics and Events
- End-to-End Orchestration

VCO Demo Checklist

- vRAN/CRAN for LTE
- vRAN LTE low layer split (RoE)
- vRAN LTE high layer split (F1-like)
- Low latency service
- Network slicing*
- Single LTE vEPC
- IMS and VoLTE*
- Ansible based orchestration
- Service assurance & monitoring
- Mix of bare metal, VMs, (containers*)

* Goal for future VCO demo
VCO 2.0 Stack

ONAP Orchestrator

NFV Orchestrator, Service Assurance (Met Mon)

VNF Manager

Element Manager

Element Manager

Element Manager

VNF(s) vBNG

VNF(s) vRouter

VNF(s) FW

VNF(s) FW

SDN Controller

NFVI

Servers/HW

White Box Switch Fabric

OPEN DAYLIGHT
Deploying Open Hardware

- July 20
- August 9
- August 20
- September 1
- TODAY
Lab Physical Topology

- Switching
- Controllers
- Compute
- Storage
- Jumphost/provisioner/gateway
- Software defined radio
- Faraday cage
Virtual Branch Hardware Rack

- Wifi Access Point
- 10Gb Switch
- Open RACK Compute Sled
- Open RACK Compute Sled
- Empty bay
- Empty bay
- Empty bay
- Shared Power: 230VAC to 12VDC
Off the shelf OpenRACK Server Sleds

MITAC and MCT provided 4 Open RACK servers

• CPU: Dual Intel Xeon Gold 6130 (Skylake), 16 cores, 22M cache
• Memory: 16x16GB, 256GB
• Storage: 1 Intel M.2 SSD 1TB for boot drive
• NIC Card: 1 Intel OCP X520-DA2 Dual 10Gig network
ESA Chassis and Network card

- MITAC provided ESA Chassis
- Uses OCP Open Rack sleds into an EIA-310 19” rack.
- Ideal for Telecom and Enterprise with legacy requirements
- Includes the rail kit, shelves and 12V DC bus bar.
- Power shelf with power supplies to convert 230V AC to 12V DC

- Edgecore AS-6712 (32 X 40Gig) provided by CIRCLE B Revolutionary IT Infrastructures

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Demo Topology

SDR
SGW
MME
HSS
PGW
PGW
SD
VPN
Internet
GiLAN
PGW
PGW

Baremetal Nodes
Managed by OpenStack

Jumphost

Internet

Amsterdam Stage

OpenStack

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VCO Demo
A Cross-Community Open Source Collaboration
Don’t miss the 2019 OCP Global Summit!

14 – 15 March, 2019
San Jose, CA, USA
Thank you to our sponsors!
HAPPY HOUR!

17:00 - 18:00

Expo Hall Area
EXPO HALL OPEN

Monday, October 1\textsuperscript{st} 9:00 - 18:00
Tuesday, October 2\textsuperscript{nd} 8:00 – 15:00
EUROPEAN OCP EXPERIENCE CENTRE TOUR

Date – October 2\textsuperscript{nd}
Time – 16:00 – 17:00
Location: Lemelerbergweg 28, 1101 AH Amsterdam-Zuidoost

Contact - OCP@circleb.eu
Check out the new OCP Marketplace!

Welcome to the OCP Marketplace, where you can research and find out how to purchase OCP-Accepted™ and OCP-Inspired™ products.

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How can I become an OCP Solution Provider and feature my products here?
Build your personal Summit schedule at: https://2018ocpregionalsummit.sched.com/
HAVE A GREAT SUMMIT!