Highlights of Open Compute Project and Open Spec. Hardware

Bill Carter – CTO OCP
Tom Anschutz – IC Co-chair OCP (AT&T)

Community Driven, open-source hardware for Data Center & beyond -

Efficiency: Platform Performance, Infrastructure Cost, Power Conversion & Delivery, Cooling

Scale: Fast, Simple, Tool-less Maintenance, OCP Compliant, Management Tools, Documentation

Openness: Open Source, Open Interfaces, OCP Compatible

Impact: Efficiency Gains, New Technology, Leverage/Empower Prior Contributions, Supply Chain
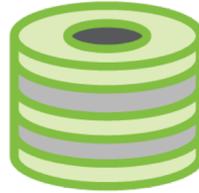
OCP COMMUNITY: PROJECTS & SUB-PROJECTS

NETWORKING
ONL, ONIE, SAI, SONiC

RACK & POWER
ADV COOLING SOLUTIONS
POWER SHELF INTEROP
OPENRACK V3

STORAGE
CLOUD FAST FAIL
ARCHIVAL

SERVER
PCI 3.0 MEZZ
OPEN ACCELERATOR I/F
OPEN DOMAIN SPECIFIC ARCH

DC FACILITY
MODULAR DC

HPC

TELCO
OPENEDGE

HW MGMT
OPENRMC

OPEN SYS FW

SECURITY

WHAT IS SHARED?

SPECIFICATIONS

PRODUCT/FACILITY RECOGNITION

TESTED CONFIGURATIONS

CASE STUDIES

WORKSHOPS SUMMITS

DESIGN FILES

REFERENCE ARCHITECTURE

EMBEDDED SOFTWARE

WHITE PAPERS

TESTIMONIALS SEMINARS

VIDEOS

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OPEN

OCP PRODUCT RECOGNITION PROGRAM

PRODUCTS VALIDATED BY OCP CARRY THE OCP MARK

OCP ACCEPTED

Products that comply 100% with an existing approved specification and the design files are open sourced and available. All levels are eligible.

OCP INSPIRED

Products that comply 100% with an existing approved specification and are available. OCP Silver, Gold or Platinum Members are eligible.

For Adopters
- Are they truly open?
- Look for the OCP Cert Marks
- Include them in your RFP

For Suppliers
- Apply for the Cert Mark @ OCP
- It is FREE
- Get the Logo and advertise!

OCP FACILITY RECOGNITION

Facilities that are compliant with the OCP's Colo Guidelines will receive an OCP Ready Mark. This means that they are ready for OCP Solutions.

OCP MARKETPLACE

The OCP Marketplace is a listing of the OCP Products and Facilities available through OCP Solution Providers. If you are interesting in listing your products or facilities on the Marketplace, sign up to be an OCP Solution Provider.

Cumulus Express 32-port 100GbE Switch - FRONT TO BACK

Cumulus Express offers turnkey solution featuring an open networking switch, which is preloaded with the Cumulus Linux operating system, inst...

Solution Providers: Cumulus Networks, Circle B
Part #: CX-8032-S-F-B
Specifications

OCP ACCEPTED

QCT 19" Full-Featured Energy Efficient 2-Socket 1U Server - 1G - 2.5" HDD - SASEXP

Designed for demanding storage and computing workload this server is ideal for a Mail-server, Database, E-commerce and High-performance Co...

Solution Provider: Quanta Cloud Technology
Part #: D51B-1U -1S2BZZZ000H
Specifications

OCP INSPIRED

Kao Data London DC1 (KLONDC1)

Designed for optimal data center co-location requirements, focused on reducing Total Cost of Ownership through efficiency and adhering to OCP ...

Solution Provider: Kao Data
Part #: KLON DC1 – TS01 to TS04
Specifications

OCP READY

ADOPTING OCP GEAR

Go to the OCP Solution Provider Directory and find your local OCP SPs.
https://www.opencompute.org/sp/open-compute-project-solution-providers

Go to the OCP Marketplace to find OCP Solutions
https://www.opencompute.org/products

Something New For Telco!

Introducing OpenEdge

OCP Accepted Chassis:

- All aspects of the design are open and contributed
- Multiple OCP members are interested in supplying or integrating

Edge Chassis:
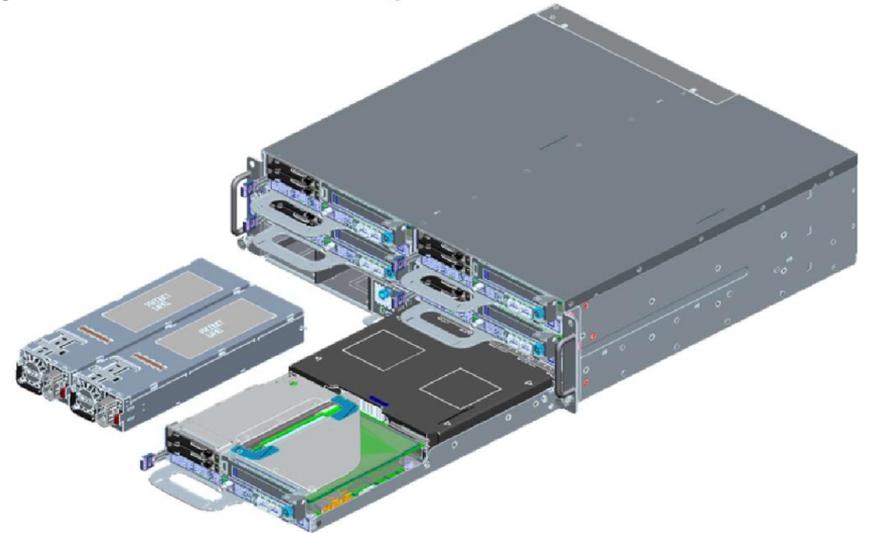
- Does NOT try to extend a complex bus among computers ~~ATCA~~
- Power and management LAN are shared through RMC
- Meets requirements for CO and CS deployments
- Provides a way to adopt OCP without deploying a whole rack

With 1RU and 2RU Server Sleds:

- Modest compute in 1RU x ½ width
- Compute + GPU in 2RU x ½ width

But with the chassis providing power and management to 5 slots …

What is OpenEdge?

OpenEdge is a General Purpose Chassis for Edge Cloud and…

OpenEdge is well specified to provide Edge Cloud Infrastructure

- Can be deployed in existing places and spaces without facility retrofits
- Provides 2 kinds of server types today

But Edge Cloud can gain from more than just servers

- Common chassis solves scale down
- very small deployments can be encumbered from minimum necessities
- Switching is also desired – both traditional as well as new "fronthaul switches"
- Wireline has peripheral requirements in OLTs
- Wireless has peripheral requirements in eNB and gNB components

All these additional components need power and management connections

- Operations simplification, as power and chassis remain in place through server and switch refresh cycles.
- Since management is plug+play, automated discovery and onboarding is well enabled.
- OpenRMC provides RedFish compatibility at the chassis level, simplifies node integration & provides pass-through access

What's Next
for OpenEdge?

**What Else
Could I Do?**

- Compute
- GPU + Accelerators
- Switches
- Access
- Other?

What's Next for OpenEdge?

Open Programmable PON

- Adopts OpenEdge 1RU sled
- 16 ports 10/25G PON
- 4 x 100G uplinks
- System is non-blocking

Fronthaul Switch

- Again in the OpenEdge 1RU sled
- 16 Ports 10/25 GE
- 4 x 100G uplinks
- Timing
- System is non-blocking

"TOR" Switch

- 16 Ports 40/100GE
- 10/25 breakout to servers
- Flexible uplinks

Consume. Collaborate. Contribute.

What's Next for OpenEdge?

Open Spec Servers

- Nokia Open Edge Server Spec
- OCP Open Edge Base Spec
  - Meet ONF SEBA use case
  - Meet both O-RAN and OTII use cases
- Single Socket
- Focus on Power Efficiency
- Scale up and Down
- CPU variety
- Focus on common operations "surface"
  - Open BMC
  - Open BIOS
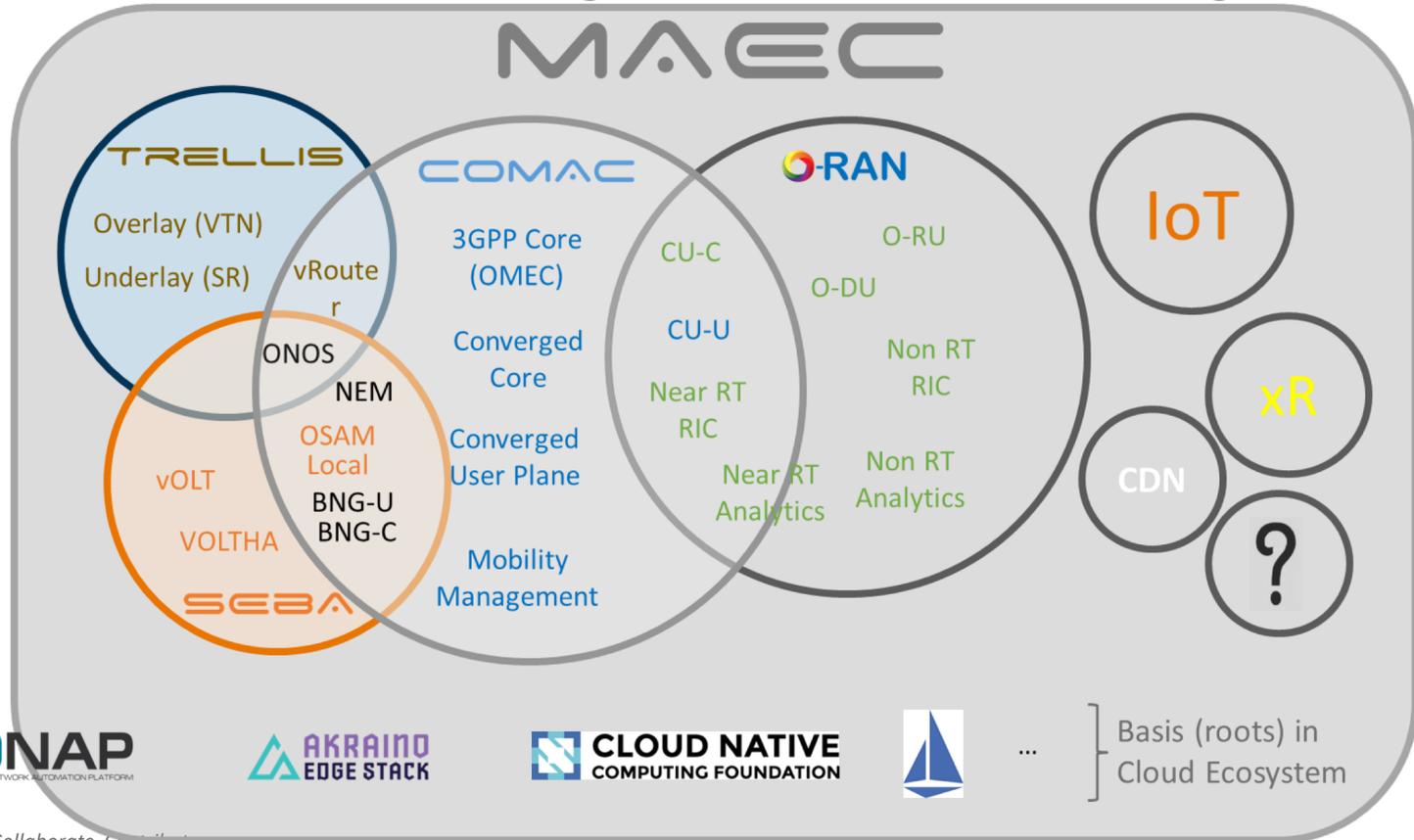 - TPM
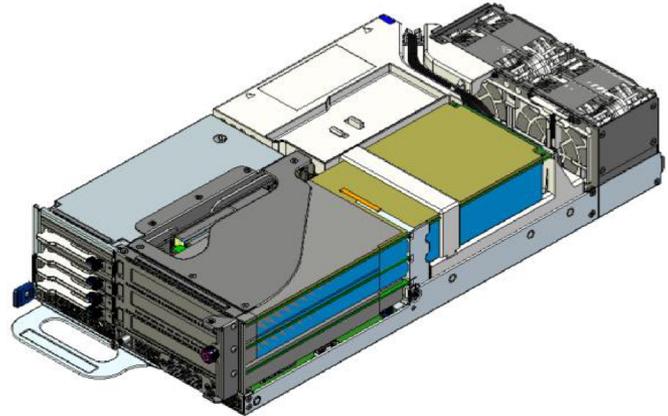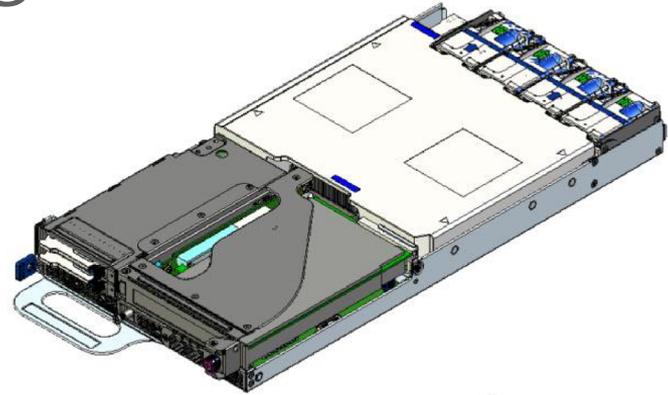
How Does OpenEdge enable Convergence?

MAEC

Multi-Access Edge Cloud
- White Box Infrastructure
- Disaggregation
- Virtualization
- Cloudification
- Orchestration

How Does OpenEdge lead to Convergence?

Consume. Collaborate. Contribute.

Open Edge Requirements

To be a vibrant Ecosystem …

- Multiple Suppliers for the Chassis

- Multiple sleds with different functions

- System Integrators that can compose multi-supplier solutions

- Open, Common RMC – Common BMC on like products

- Common physical "UI" like lamp colors and meanings

- It must also meet your needs…

We Need Your Contributions!

Thank You

Follow Up Links:
opencompute.org