Life at the Intersection
OpenPOWER, Open Compute, and the Future of
Cloud Software & Infrastructure

Aaron Sullivan – Senior Director & Distinguished Engineer, Rackspace
About Rackspace
Over 300,000 IT Shops

Over 120,000 Servers
Our Customers Run the Gamut
Our Offers: Many Hardware & Software Stacks

Public Cloud
Performance compute, databases, and storage on-demand. All built on OpenStack®

Managed Hosting
Customized hardware to help you meet your performance, security, and compliance needs.

Private Cloud
Your own secure, scalable OpenStack cloud, in your data center or ours.

Thousands of Applications

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Evolution of the Cloud

Where We Are Today. Where We’re Going. Why It’s Necessary.
What the Cloud Wants
What the Cloud Has

And if you run out of gas, it's easy to push.
What the Cloud Needs
The Journey to Get There...
OnMetal: Proof of an Evolving Cloud

Ironic & Nova

Quanta Rackgo X
OCP Platform

OnMetal

openstack
CLOUD SOFTWARE

OPEN
Compute Project

RACKSPACE
OnMetal
CLOUD SERVERS
Adoption is Accelerating

Quanta Rackgo X OCP Platform
“EVO: RACK needed partners and Open Compute is perfect for what we are trying to achieve.”

-VMWare CEO Pat Gelsinger, 2014
Open Compute & OpenPOWER
Why We’re Good for Each Other
Disaggregation, Convergence, and the ‘Systems Status Quo’
Hardware & Software Developers

Traditional Hardware Developer

Traditional Software Developer

Entrepreneurial Developer
“By pledging just one or two dollars, you are helping us in our fervent quest of not having to do stuff.”
Everyone is a genius.

But if you judge a fish on its ability to climb a tree, it will live its whole life believing it is stupid.

- Albert Einstein
Developers on Open Source
Let’s Build It, Together
Let’s Build It, Faster

Maturity | Features | Adoption
---|---|---
Typical Open Source | Proprietary | Ideal Open Source

Time
Making the Change

Re-engineering. Preserving & Enhancing the Experience.
Market Traction & Mind Share

We’ve Made an Impression

Less Than 48 Hours

More Than 20 Million Media Impressions
Value Propositions are Everywhere

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[Logos and icons of various applications]
Don’t Repeat Mistakes of the Past

I hired a consultant to help us evolve our products to cloud computing.


It’s as if you’re a technologist and a philosopher all in one!

Blah blah platform.
This Speaks Louder
The Future

Barreleye Rack

- 12X BARRELEYE SERVERS
- 1X MANAGEMENT SWITCH
- 2X 3OU POWER SHELF
- 2X DATA SWITCHES
- 12X BARRELEYE SERVERS
Barreleye Specs

- 2 SOCKETS
- 128 – 192 HW THREADS
- 32 DIMM SLOTS
- 15X2.5” HOT SWAP DRIVES
- 2X OCP MEZ

- 2X HHHL X8 PCI-E
- 1X FHFL X16 PCI-E
- HOT SWAP FAN
- MODULAR IO CAGE
Rackspace & Partners

Developer Community Takes Over Reference Stacks (e.g. TurboLAMP)

Middleware for Hetero Cloud Orchestration for Hetero

Basic Cloud Orchestration

Open Firmware (BMC / BIOS)

Fedora PowerKVM Ubuntu

Heterogeneous Compute, Alternative Memory Middleware & Cloud Fabrics

Open Software & Operating Systems Enabled for OpenPOWER

Open Compute

OpenPOWER

OpenPOWER-based OCP Server

Middleware for Hetero

Cloud Orchestration for Hetero

Reference Stacks (e.g. TurboLAMP)

Basic Cloud Orchestration

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Developer Community Takes Over

The New Cloud

OpenPOWER
THIS IS GOING TO CHANGE YOUR WORLD.
Let’s change it, together.

Photo by: Kristina Alexanderson