



OPEN

Compute Project





REIMAGINING OPEN HARDWARE INNOVATION AT CLOUD SPEED

Kushagra Vaid

General Manager and Distinguished Engineer

Azure Hardware Infrastructure

Microsoft

OPEN HARDWARE.

OPEN SOFTWARE.

OPEN FUTURE.



MICROSOFT & OCP



2014

Joined Open Compute Foundation
Open Cloud Server (OCS) Spec
Cloud SSD M.2 Spec



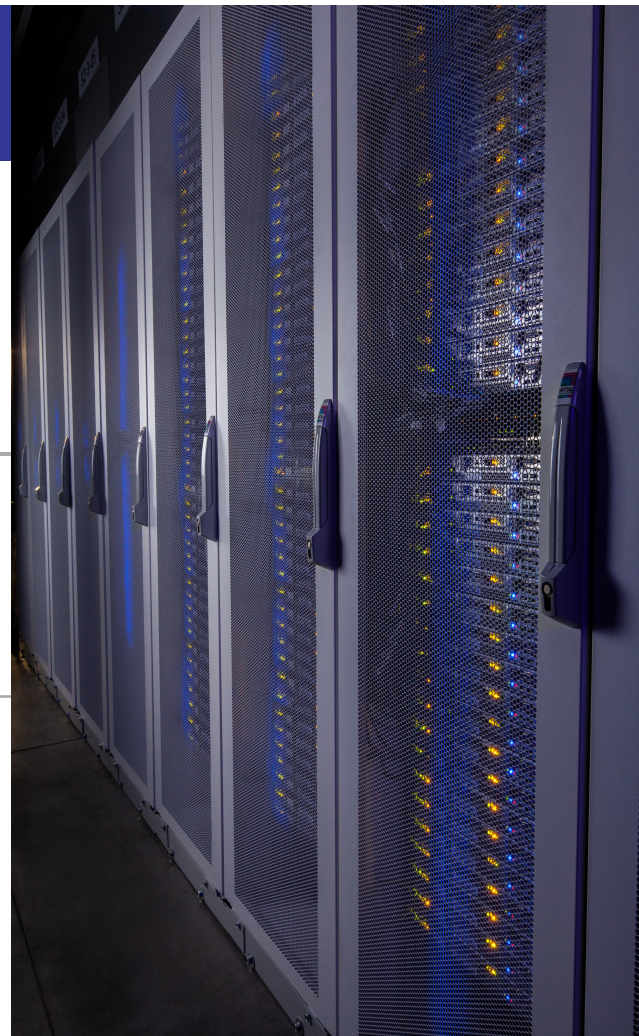
2015

Local Energy Storage – Server UPS
Switch Abstraction Interface (SAI)



2016

SONiC Network Switch Software
Project Olympus Spec



PROJECT OLYMPUS RECAP



Next-gen Cloud Hardware

Open sourced cutting-edge Hyperscale cloud hardware developed at Microsoft



Development Model

New collaboration model with OCP community - co-develop open hardware at cloud speed

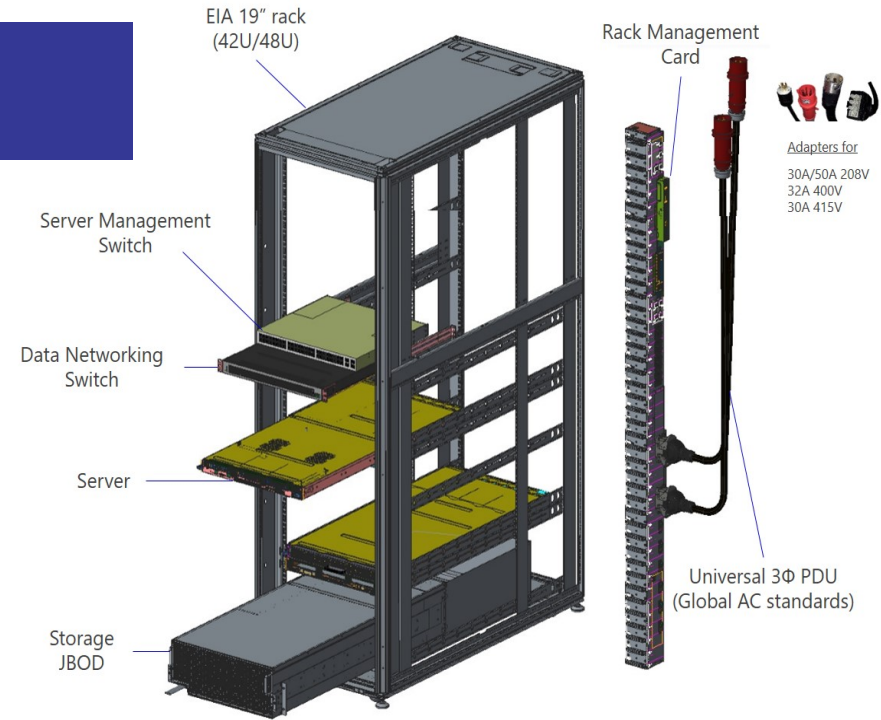
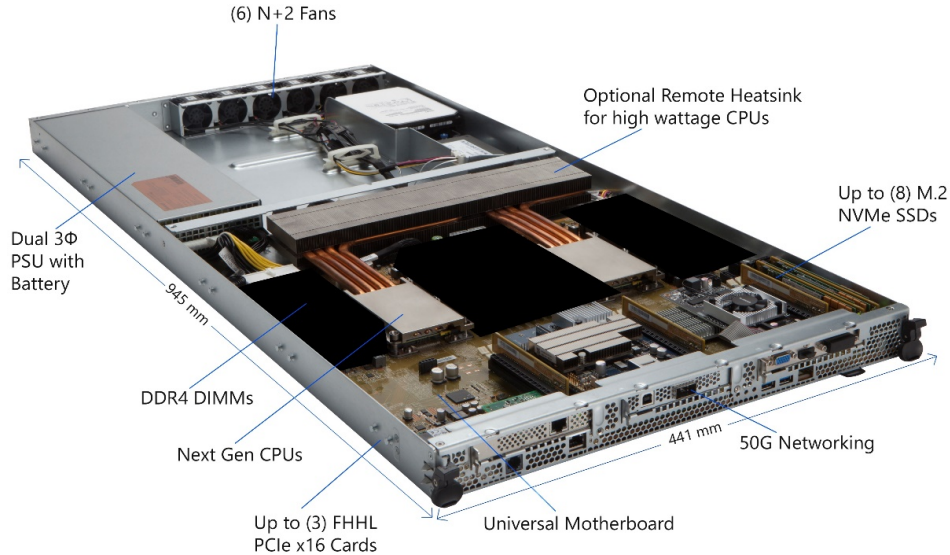


Industry Ecosystem

Bootstrap a vibrant ecosystem in OCP for the next generation of datacenter hardware



PROJECT OLYMPUS DESIGN



Modular
building
blocks

High Power
Efficiency

Cost
Optimized

Global
Datacenter
Standards

Solution
delivery agility

PLACEHOLDER FOR VIDEO EMBED

PROJECT OLYMPUS ECOSYSTEM PARTNERS

CPU



COMPONENTS



SYSTEMS



ANNOUNCING HGX-1: HYPERSCALE GPU ACCELERATOR FOR AI



New industry standard design on
Project Olympus for machine learning

Extreme performance scalability -
Interconnectivity for up to 32 GPUs



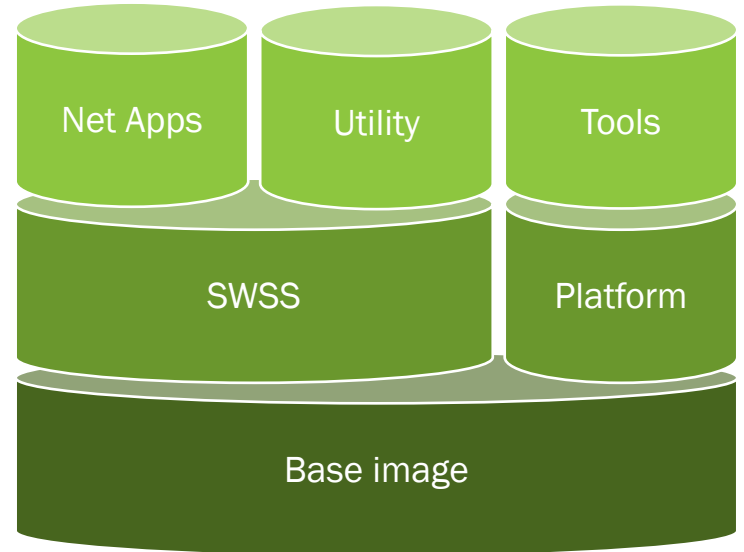
Powered by NVIDIA Pascal and NVLINK

OPEN NETWORKING IN THE CLOUD



SONiC – Fully Open Sourced Software for building network switching

- ✓ Born in Cloud Powering Microsoft Azure at scale
- ✓ Unique containerized approach
- ✓ Rich Monitoring and diagnostics capabilities
- ✓ Fully open ecosystem enables customer choices



OPEN NETWORKING IN THE CLOUD



SONiC – Fully Open Sourced Software for building network switching

- ✓ Broadly supported by the OCP community
- ✓ Ecosystem rapidly growing
- ✓ ASICs, Switches, App/Tooling

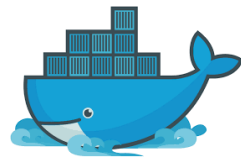
ARISTA

BAREFOOT
NETWORKS

BROADCOM®

CANONICAL

CAVIUM



centec
networks



ingrasys®

Edge-core®
NETWORKS

Mellanox®
TECHNOLOGIES

metaswitch

MARVELL®

Microsoft

Nephos



Leendert van Doorn

Distinguished Engineer, Azure





OPTIMIZING ARM64 SERVERS FOR MICROSOFT'S CLOUD SERVICES



Evaluating multiple ARM64 servers
(Qualcomm, Cavium and others)

Ported Windows Server for Azure
internal use only

Easy deployment with *Project
Olympus* compliant motherboards

MICROSOFT IS COMMITTED TO OCP AND OPEN SOURCE



Significant OCP momentum for *Project Olympus* and SONiC



HGX-1: New Hyperscale industry standard for GPU acceleration on AI



ARM64 servers enabled for OCP community with *Project Olympus*



Learn More



Attend Exec Talk

2:35pm

Leendert Van Doorn

*Enabling Cloud
Workloads Through
Innovations in Silicon*

Visit Microsoft
booth for demos

Project Olympus

SONiC
ARM64

Get specs and
collateral at
OCP Github
repo





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