OPEN POSSIBILITIES.

Zion Modular System Architecture Overview
Zion Modular System Architecture Overview

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AI in Meta

AI is used extensively in Meta

- Ranking
- Content Understanding
- Pattern Detection
- Speech Recognition
- Translation

Powerful AI Models need Powerful Hardware!
Zion System Overview

Zion is designed to support AI workload.

Presented in 2019 OCP Summit
Zion System Overview

2-socket Modular Server

2 or 4 Socket Host

2 or 4 Socket Host

Zion system

OCP NIC + Storage Modules

Expander Box

Open Accelerator Module

8 Accelerator Shelf

OPEN POSSIBILITIES.
Zion System Overview

Zion is designed to support AI workload.
Angels Landing

- Up to 4 socket Intel Cooperlake CPUs
- 4x 100G OCP3.0 NICs
- 1.5TB DDR4 RAMs
- Fully connected UPI through backplane
Clear Creek

- 4x PCIe Gen4 Switch
- 8x 200G NICs for scale out
- 16x E1.S/M.2 SSDs
Emerald Pools

- 8x Open Accelerator Modules
- OAM interconnections support high speed communications between accelerators
Flexible Configurations

Modular system designs enable hardware to be tailored for each AI use case.
Designed for Field Service

1. All field replaceable units (FRUs) with significant failure rates are accessible without removing cabling
2. PCIE cabling is routed from the back of each board, around the sides and to the front of each system
3. The OAMs are accessible from a sliding rail kit
4. CPUs, DIMMs, and storage modules are accessible on front accessible trays
BMC Overview

NIÇI  NCSI  AL0 BMC  AL1 BMC  NCSI  NIÇI
IP: Host
IP: AL0 BMC
IP: EP BMC

EoUSB  I2C  EoUSB  I2C

SPI  I2C  SPI  I2C

PCIE SW

OPEN POSSIBILITIES.

SERVER
Crash Dump

1. CATERR/MSMI pin triggered, SEL created in AL0 BMC
2. AL0 BMC starts crash dump collection
3. MC Banks collected, sensors recorded
4. Crash dump log saved into BMC flash
5. Logging service extracts crash dump to database
Call to Action

• Meta are contributing Zion system, Angels Landing, Clear Creek and Emerald Pools Specification to OCP Server/OAI group.
• QCI will contribute the design collaterals soon.
• Zion System is already in MP stage.

Where to buy: https://www.opencompute.org/products

Project Wiki with latest specification: http://www.opencompute.org/wiki/Server/OAI

Mailing list: http://lists.opencompute.org/mailman/listinfo/opencompute-server
Thank you!