Yosemite V3: The Next Generation of Modular Servers
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Agenda

3rd Generation Improvements
Current YV3 OCP solutions
Future YV3 Contributions
Overview of Yosemite V3

- Blade: Single socket CPU server board
- Sled: 4 blades + shared management board + shared NIC
- Chassis: enclosure for 3 sleds
- Rack: 8 chassis + power + TOR switch
3rd Generation Improvements

• All systems are independently front serviceable
• Larger blade is full chassis length, 1/3 OU width, 1OU height
• Expansion available while keeping the same blade quantity
• Reduction from 16 -> 12 Blades for thermal/power optimization
Compute Only Server

Vertical Power Distribution Board

Medusa Board

Multi-Host NIC

Front IO Boards

Delta Lake 1S Servers
Compute Only Server in Sled
Future YV3 Contributions

- Multiple Storage Expansion Options
- Single Host NIC options available
- Dual M.2 Accelerator configuration available
- CEM card adapter for Head Node usage
YV3 + Vernal Falls (1OU E1.S)

4x 1OU E1.S Storage Sled Configuration

Vernal Falls
YV3 + Vernal Falls (1OU E1.S)

4x 1OU E1.S Storage Sled Front View

Vernal Falls expansion card
YV3 + Sierra Point + NIC Expansion(2OU E1.S)

2x 2OU E1.S Storage Sled Configuration

Nic Expansion + SH NIC

Sierra Point
YV3 + Sierra Point + NIC Expansion (2OU E1.S)

Server with NIC Expansion card and Sierra point with 6 E1.S drives

2x 2OU E1.S Storage Sled Front View

OPEN POSSIBILITIES.
YV3 + Glacier Point V3 (2OU M.2)

2x 2OU M.2 Accelerator Sled Configuration

Glacier Point V3

OPEN POSSIBILITIES.
Kings Canyon Gen2
YV3 + Switch+2x Glacier Point V3 (4OU M.2)

1x 4OU dual M.2
Accelerator Sled
Configuration
YV3 + Discovery Point (2OU CEM adapter)

2U PCIe CEM cards with Discovery Point

Front View
Yosemite V3 Summary

• Versatile, flexible platform for multiple use cases
• Leverage of design and ease of service
• Shared BMC and NIC for better TCO
• Improved airflow per blade
Call to Action

• Product Specifications located here:
  • Yosemite V3 Specification
  • Delta Lake 1S Server Specification
• Additional Yosemite V3 Information is located on the FB Engineering Blog:
  • https://engineering.fb.com/
• Where to Buy
  • https://www.opencompute.org/products (Wiwynn submission in process)
Thank you!