MPSTOR

Leadership in Performance & Storage Density

Storage for disaggregated data centers

OSA-F60 All-Flash Array

- Hardware Features
- 2U Form Factor
- Total Raw Capacity: 60x16TB SSD drives = 1PB
- Hot Swap FRUs, including side mounted disks
- Controller: Intel(R) Xeon(R) CPU E5-2670 v2 with 128GB DRAM
- IO Cards support per controller:
  - x8 ports of 8GB or x4 ports of 16GB FC
  - x2 10G + x4 40G-Ethernet or x4 56G-Infiniband
  - x2 1GB management ports
- MPSTOR Orkestra SAM software inside

OSA-F60 Software Storage Features

SERVICES

- Dedup
- Compression
- Volume expansion
- Volume throttling (IO or BW)
- RAID 0,1,5,6

Protocols & Fabrics

- FC 8G, 16G
- Eth 10, 40/56G, 100G (iSCSI/iSER)

High Availability

- ALUA volumes
- Controller redundancy

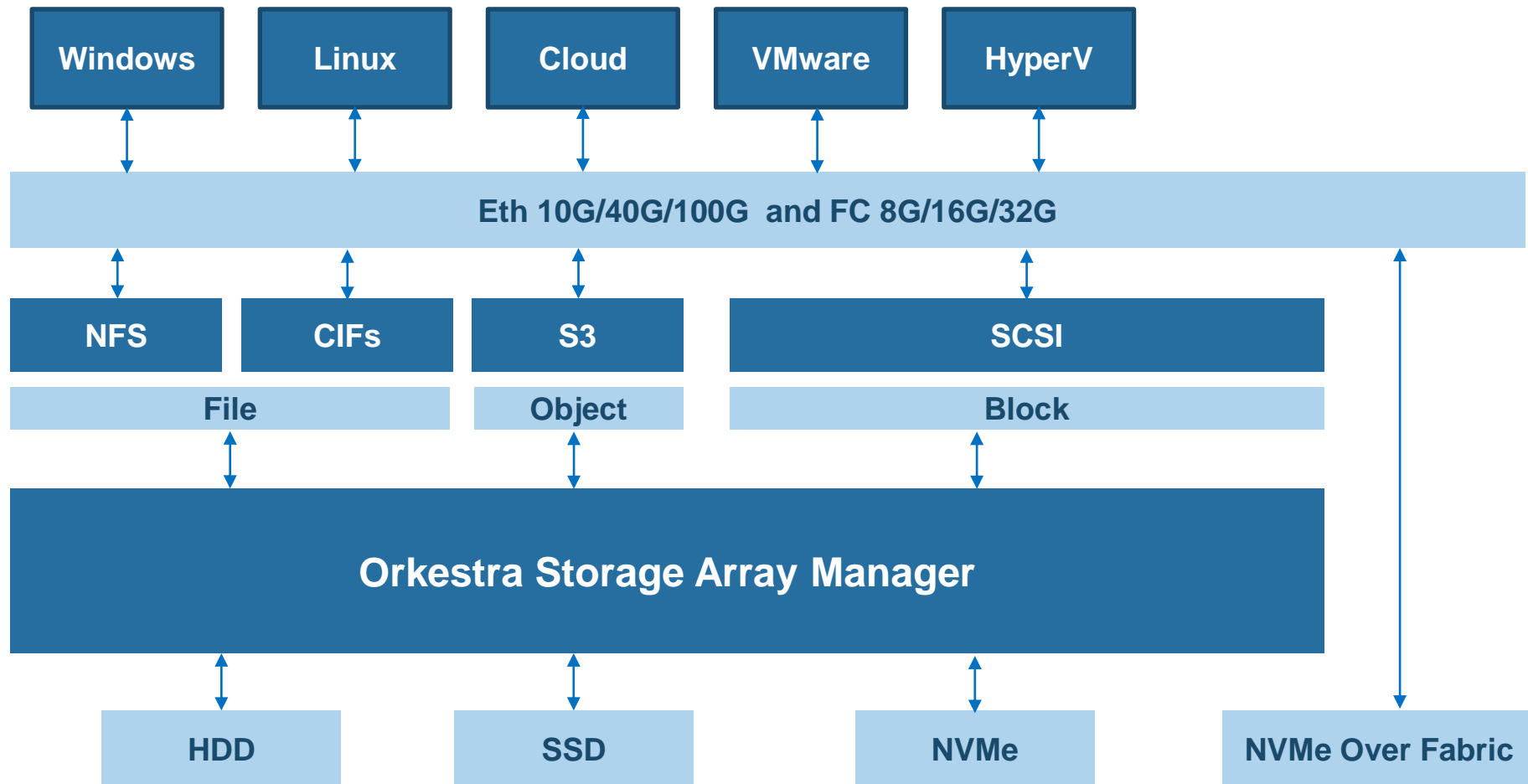**Environmental**

- Fan, Temperature, PSU, CPU monitoring

Management

- GUI or XML storage API
- Statistics/Logging of all Ios on disks, RAIDs, Volumes

Alerting

- Email/GUI alerting

OSA-F60 Software Stack

Windows	Linux	Cloud	VMware	HyperV

Eth 10G/40G/100G and FC 8G/16G/32G

NFS	CIFs	S3	SCSI
File		Object	Block

Orkestra Storage Array Manager

HDD	SSD	NVMe	NVMe Over Fabric

Roadmap Storage Software Features

SERVICES
- Dedup
- Compression
- Volume expansion
- Volume throttling (IO or BW)

RAID 0,1,5,6
- Snapshot (Q2)
- Thin provisioning (Q2)
- Replication (Q2)
- Block differential backup (to folder, Object store) (Q2)

High Availability
- ALUA volumes
- Controller redundancy

Environmental
- Fan, Temperature, PSU, CPU monitoring

Protocols & Fabrics
- FC 8G, 16G
- Eth 10, 40/56G, 100G(iSCSI/iSER)
- File (CIFS, NFS) (Q3)
- Object (S3, SWIFT) (Q4)

Management
- GUI
- XML storage API
- SDS JSON Rest API
- Statistics/Logging of all IOs on disks, RAIDs, Volumes

Alerting
- Email/GUI alerting

Management Tools

- Management tools for a range of volume services such as de-duplication, compression and multi-tenant per volume IOPS and BW rate limiting.
- Orkestra-SAM software is designed for automated environments with its storage API and CLI toolsets.

- CLI (Command Line Interface)
  - A CLI interface and a set of python tools are available to automate data center task and monitor status
- GUI
  - A GUI is available to configure, monitor and diagnose faults when they occur
- API
  - An XML API is available for 3rd party applications to control the storage Array

GUI

Hardware Road Map

- The performance results are the IOPS the hardware can deliver
- Future systems will ship with
    - x2 100G Ethernet or x4 channel 16G FC

- System Performance
- 60 SSD, 2x Single Processor **2.2M** raw HW IOPS
- 60 SSD, 2x Dual Processor **8M** raw HW IOPS
- 16 NVMe 2x Dual Processor **11M** raw IOPS
- 24 NVMe 4x Dual Processor **18M** raw IOPS
- 24 NVMe SSD expansion chassis **18M** raw IOPS
- 24 NVMe SSD over Fabric (6x 100G) **20M** IOPS

Summary

- The most efficient software stack in the industry
- The densest and highest capacity systems in the industry
- The most powerful hardware in the industry per RU
- The highest performance roadmap in the industry per RU