Disaggregated Storage for Enterprise & CPS

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Storage Evolution

• Disaggregated storage improves efficiency

• NVMe over Fabric provides the ability to implement storage at very low latency

• Scale-up and Scale-out architecture required

• Requires storage management capabilities that match today’s methodology
Real World Requirements

• Management at scale
  • Multi node and client management in large numbers
  • Security for access
    • OOB management

• To manage at scale
  • New methodology
    • RESTful based, Swordfish-like APIs are needed to enable automation of storage administrative tasks
  • May also require management to match existing environment
    • Enclosure Health Management
    • Security
    • Error Monitoring
    • FW Management
Implementation Example

~50 μsec
Standard NVMe
Scale up and Scale Out example (Spectrum Scale)

Clustered Filesystem

NVMe Optane Drives

Bandwidth: 600GBps (75GBps)

NFS client

Single name space.
Usable Capacity (after RAID6 8+2)
55TB-277TB
Latency to clients: ~90 microseconds
What we make, makes a difference™

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