Deployment Models for Flash in the Enterprise

John Shirley

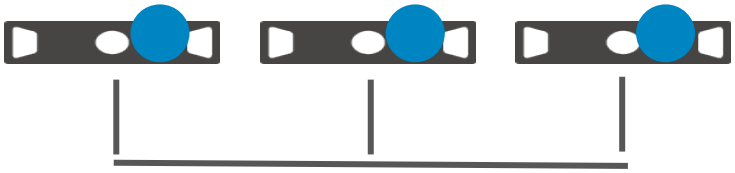
Sr Product Strategist

Dell Storage

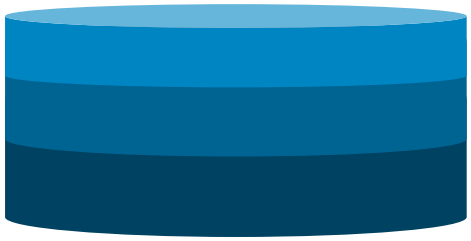
Deployment Models

DAS

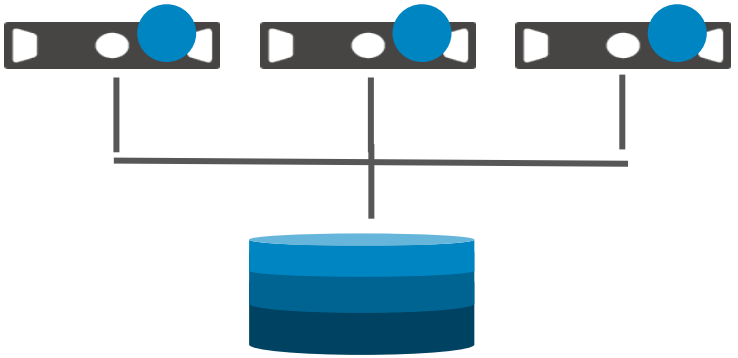
Scale-out



SAN

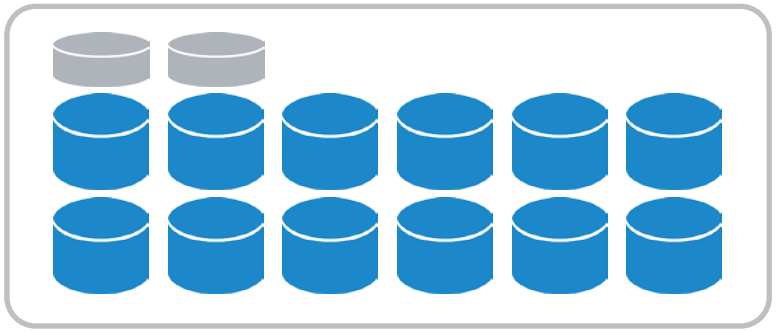


Server cache

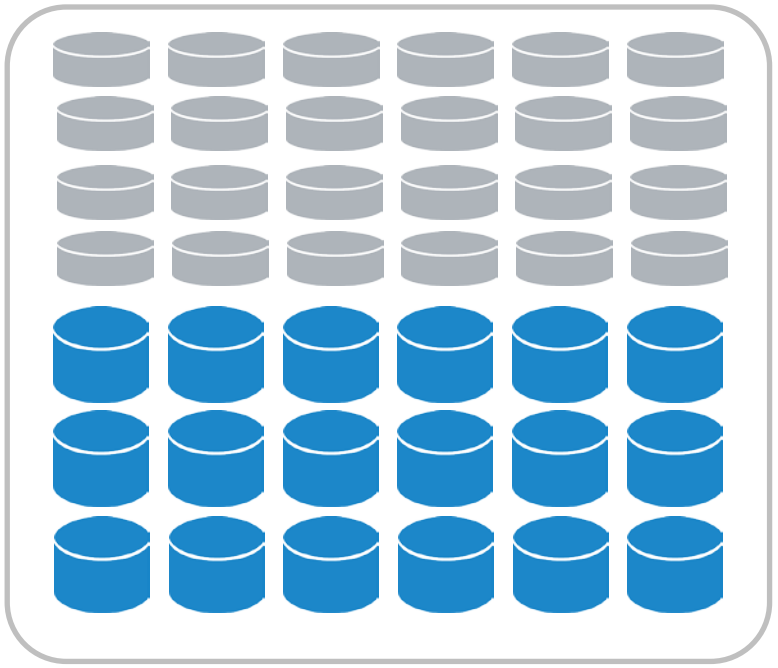


Evolution of Flash deployments in SANs

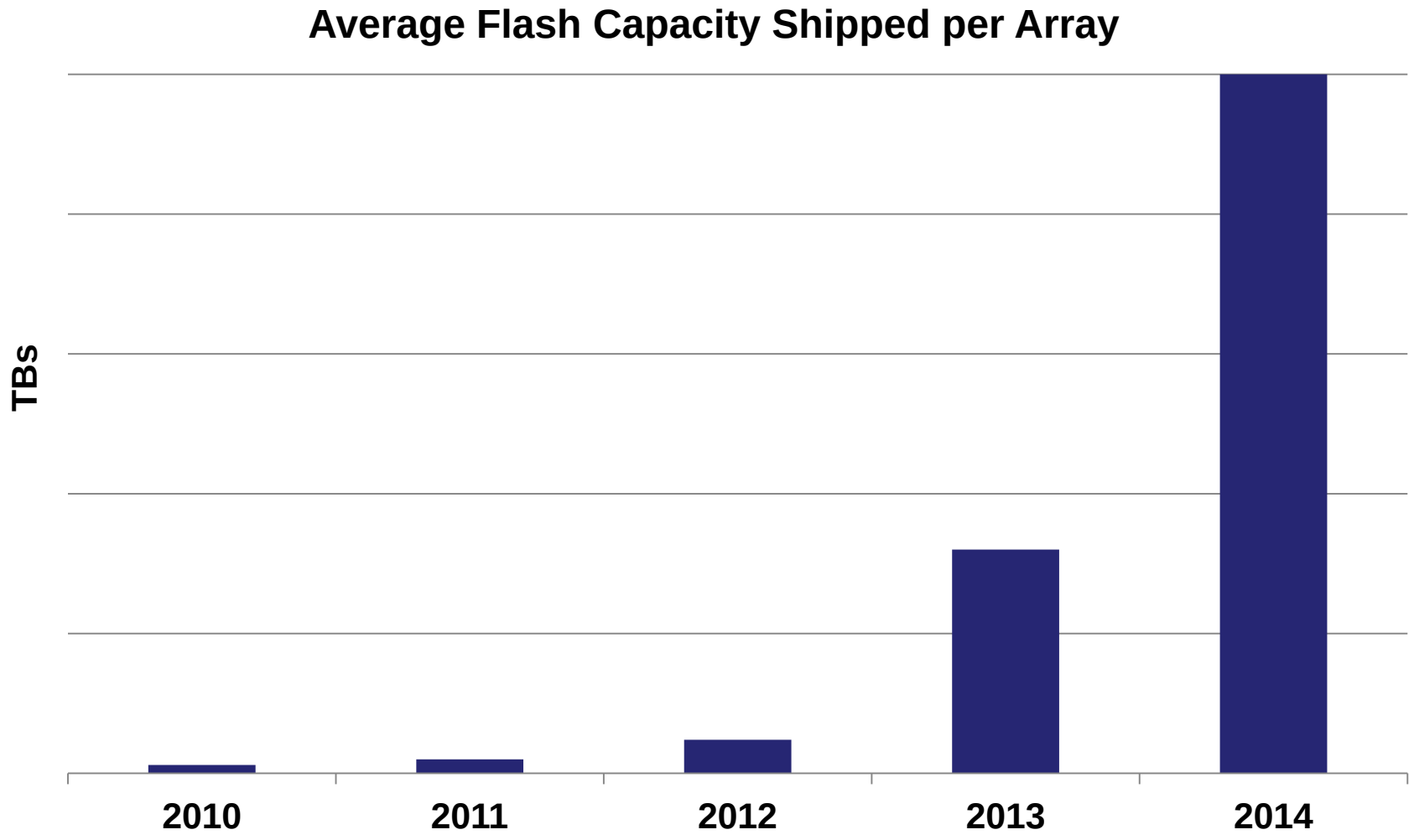
Flash as a Cache

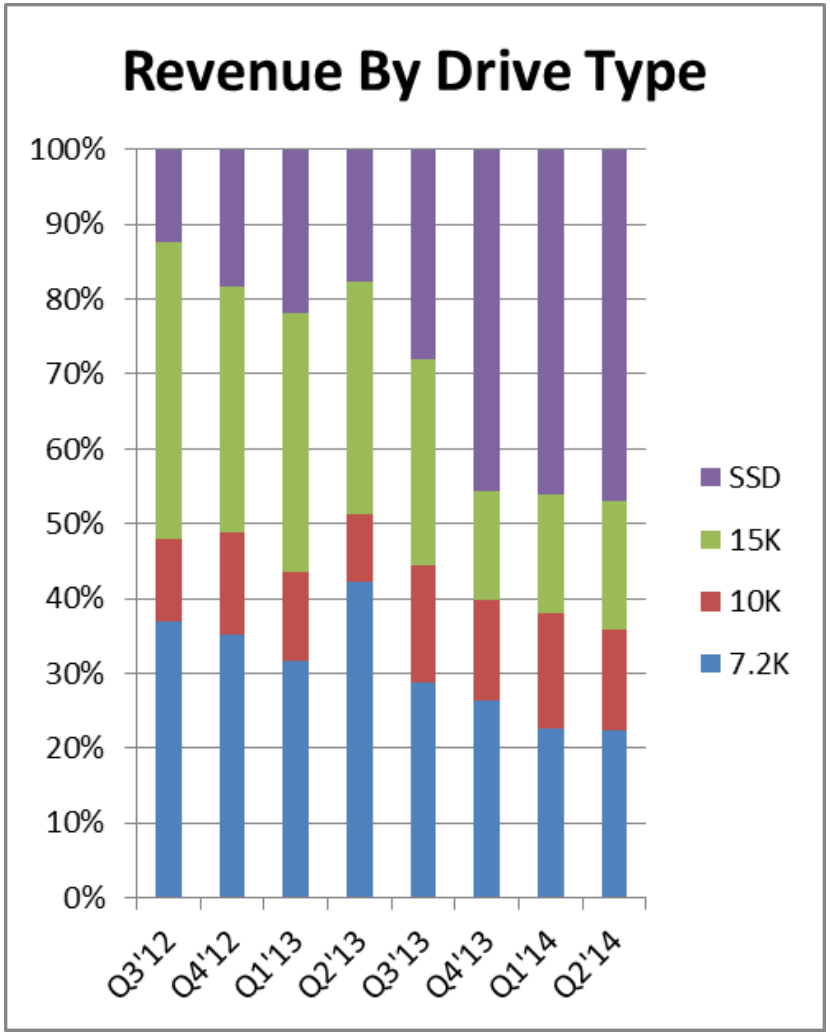


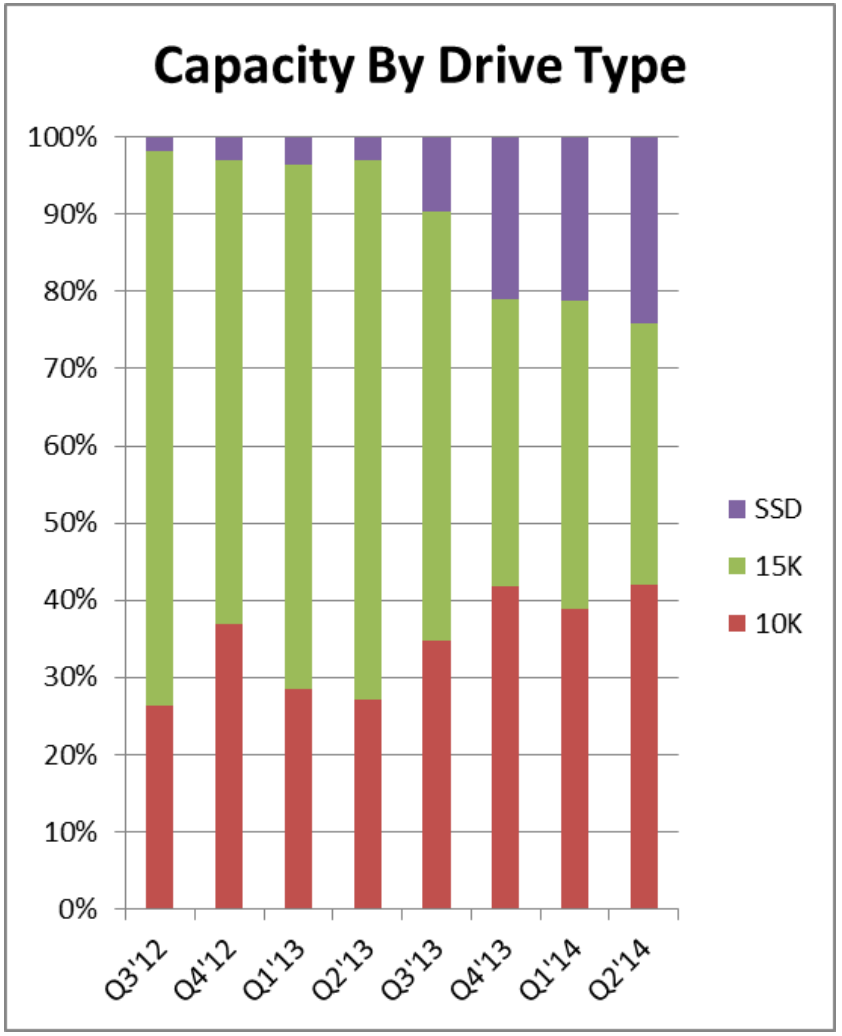
Flash as a Tier



Flash Capacity Growth in SANs





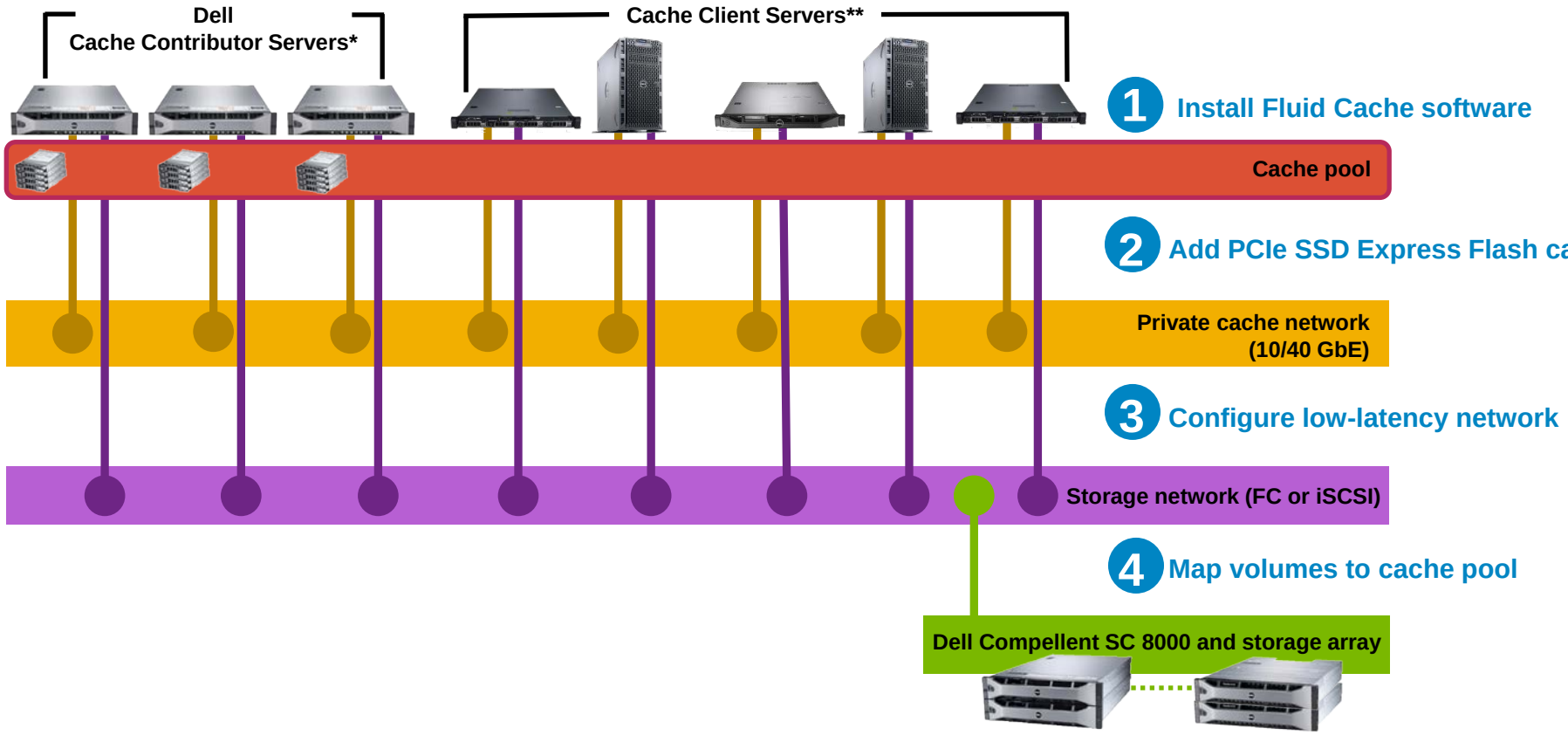


Numbers are from new system sales of Compellent SANs

Server Side Caching

Bring data closer to compute

Dell Fluid Cache software + Dell Compellent = Accelerated application response



*A minimum of 3 validated Dell servers are required to establish the cache pool.
**Cache client servers can be a mix of Dell and other servers that run a supported OS and have an available PCIe slot.

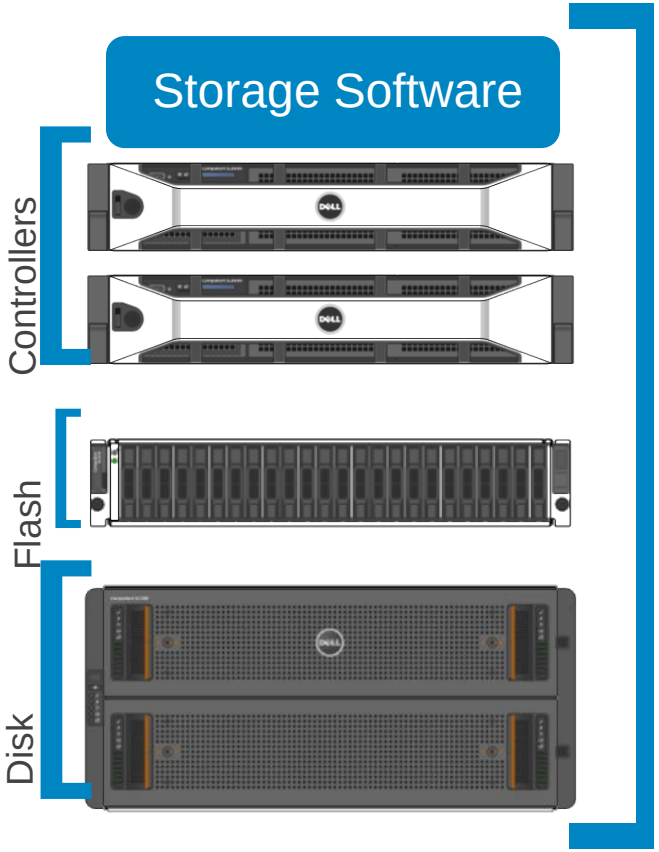
Software-defined storage is an emerging paradigm

- **a technology that decouples the basic elements of a storage system**

Multiple Implementations

- Hyper Converged
- Physical Appliance
- Software-only
- Virtual Appliance

Traditional / Physical



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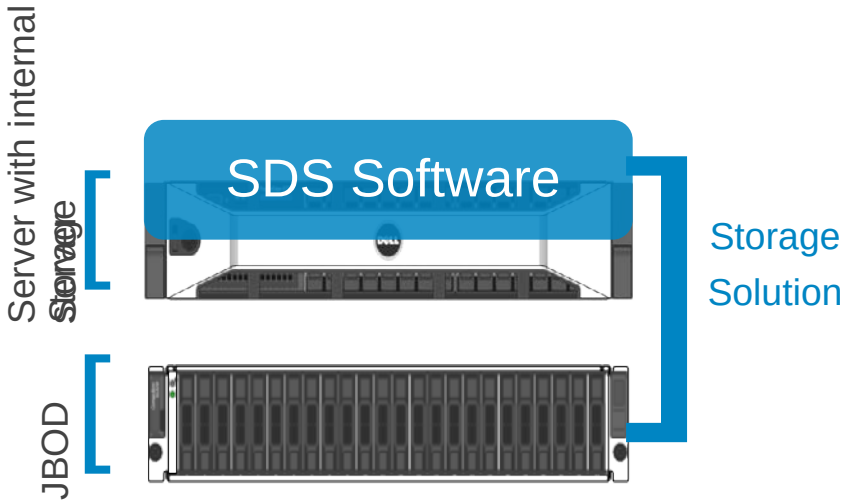
Software-only



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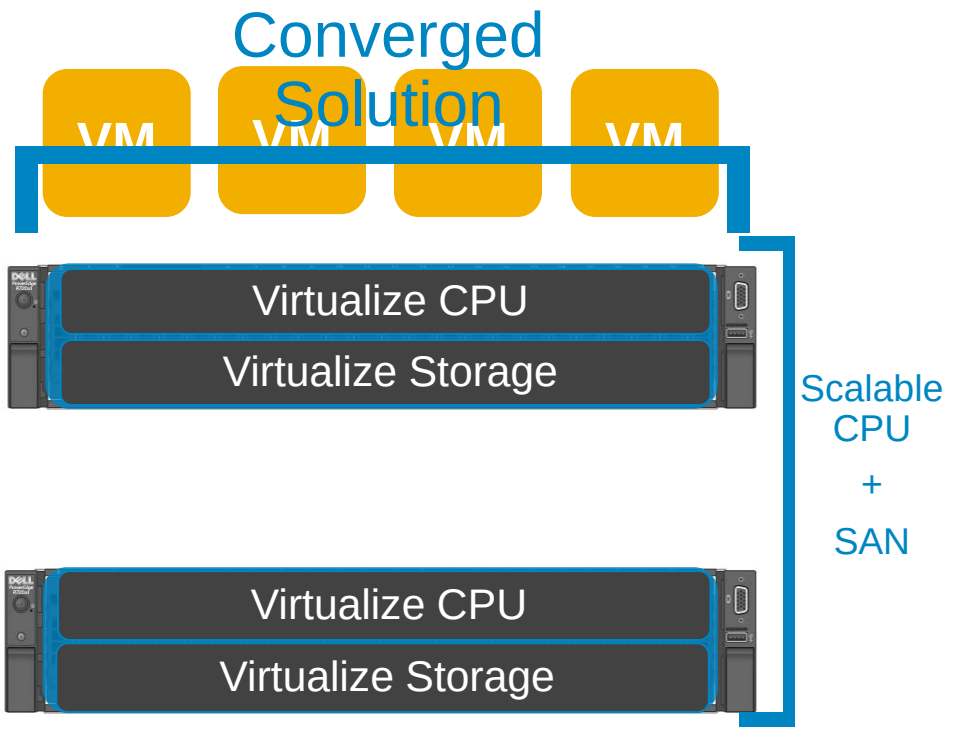
Hyper Converged



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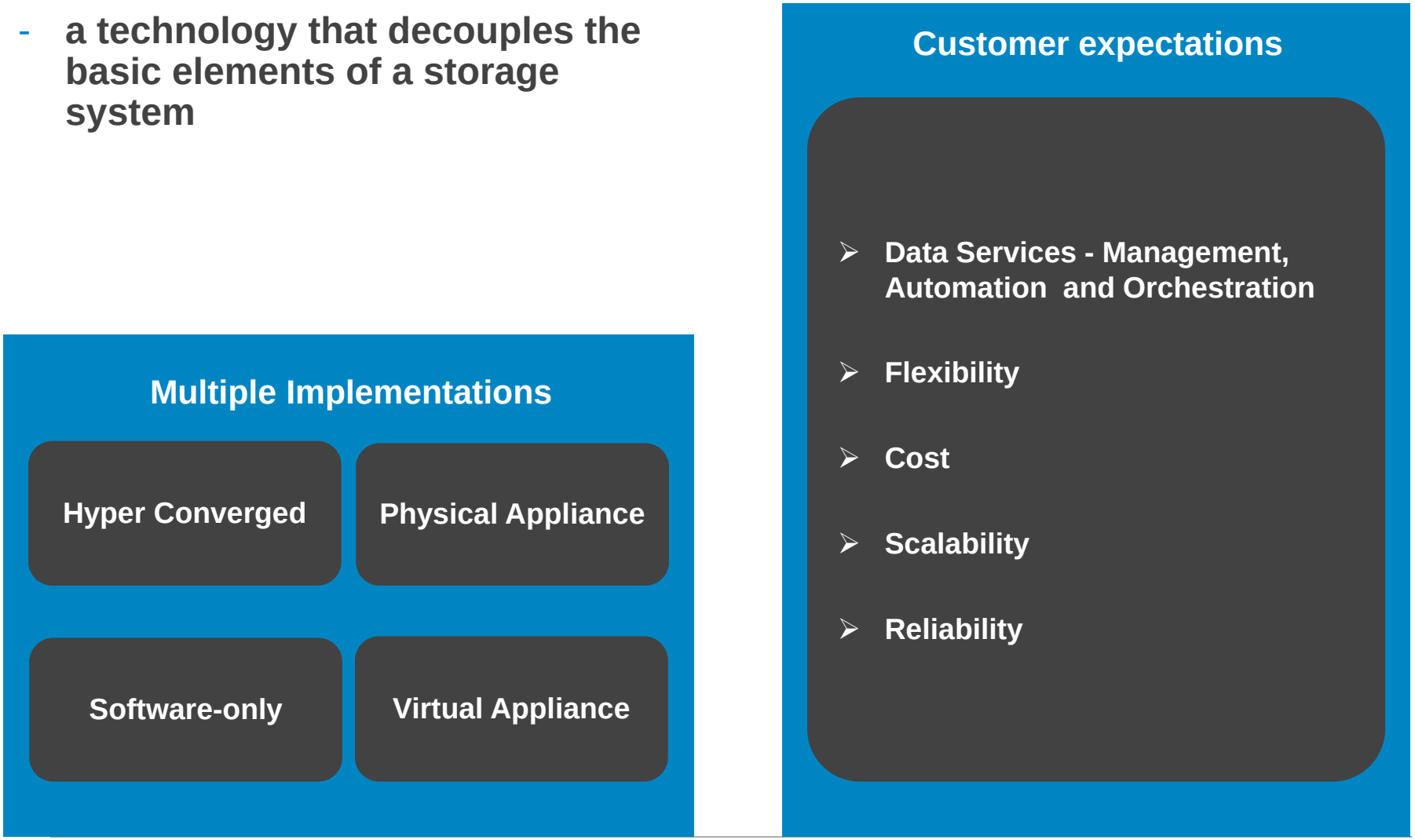
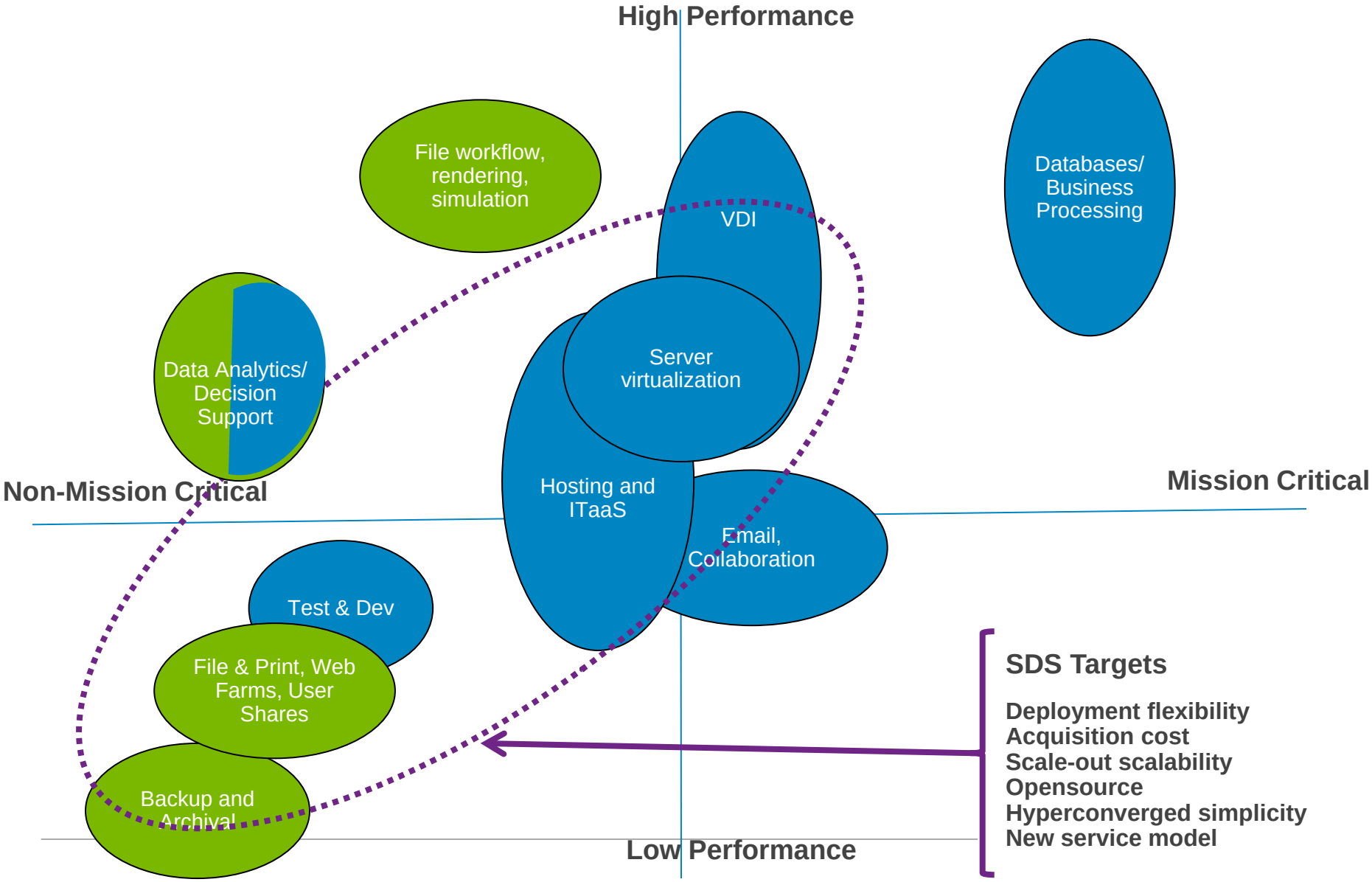


Workload-based positioning

Based on workload profile



Interface's in the Future

SAN

Serial Attached SCSI

SERIAL ATA 6Gb/s

Server Attach

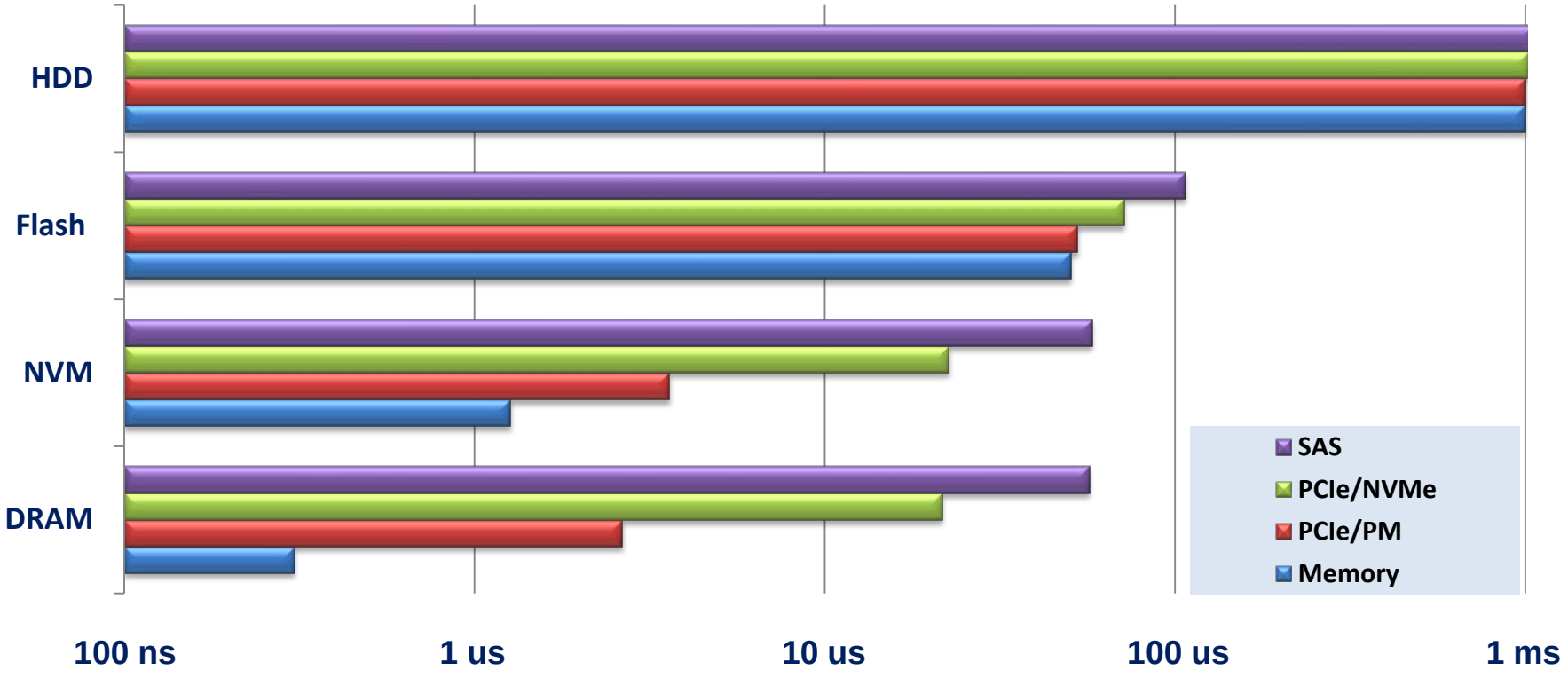
Serial Attached SCSI

SERIAL ATA 6Gb/s

PCI EXPRESS

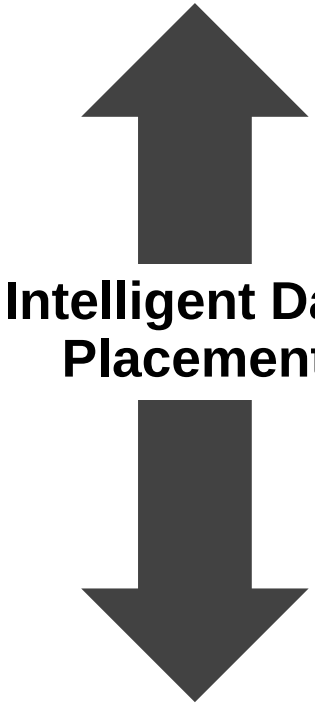
nvm EXPRESS

Interface Latency Compares



Flash Memory SUMMIT

Dell now builds on key Data Progression advantages to optimize enterprise storage at all levels



Server	Fluid Cache for SAN
High-Performance Storage Tiers	Industry-leading flash optimization
Cold Storage	Intelligent compression Business continuity Secure storage

DELL