

DIMM-connected Flash integration through storage abstraction

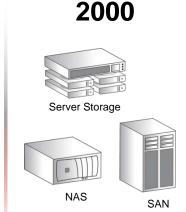
Sushant Rao Sr. Director of Product & Solutions Marketing DataCore Software

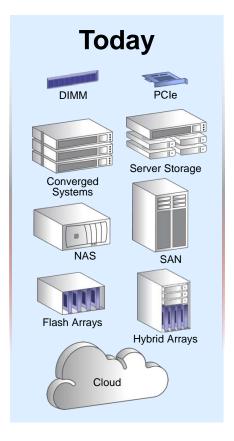


Storage Market in Midst of Disruption

1985







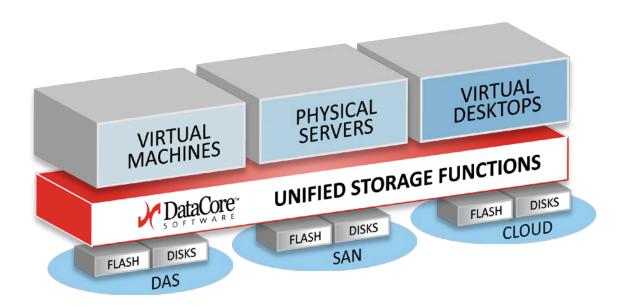
CHALLENGES

- Too many incompatible devices
- Management silos
- Innovation Speed



Using Software to Abstract Hardware

Software Defined Storage



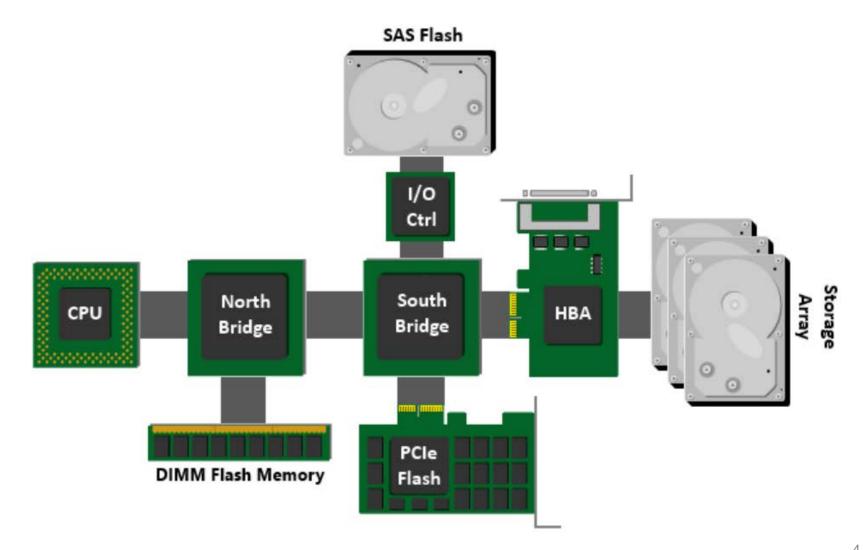
POSSIBILITIES

- Free Data
- Make incompatible technologies work together
- Centralize & Simplify Management
- Don't Hold Innovation Back



Storage Choices

Distance from CPU

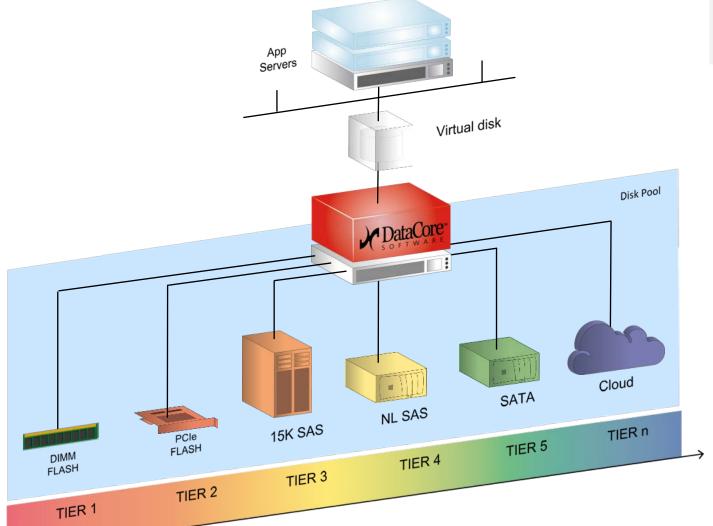




Storage Choices

Tiers



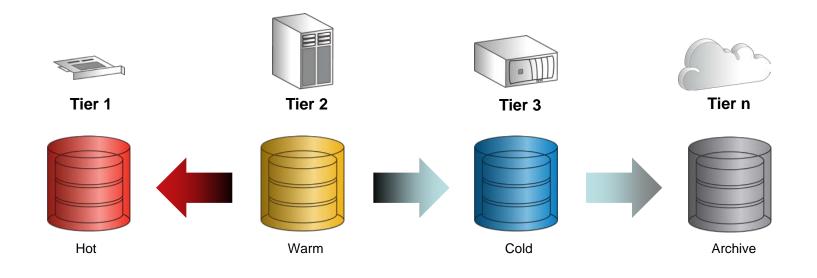




Dynamically Optimizes Resources

Auto-Tiering Inside and Outside the Box





Below average moves down a tier

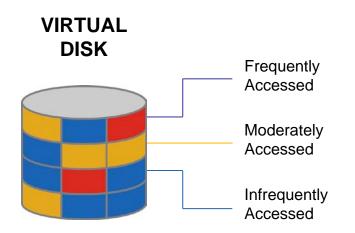
Above average moves up a tier

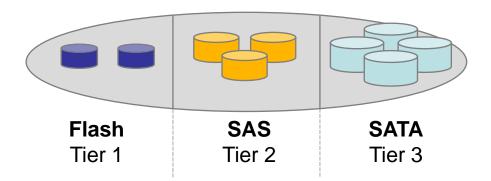


Sub-lun Auto-tiering Across Devices/Vendors/Media



 Heaviest hit blocks take advantage of Tier 1 performance Other blocks moved to lower cost tiers







Memory Automatic Fine Tuning



Blocks spread across storage resources in same tier

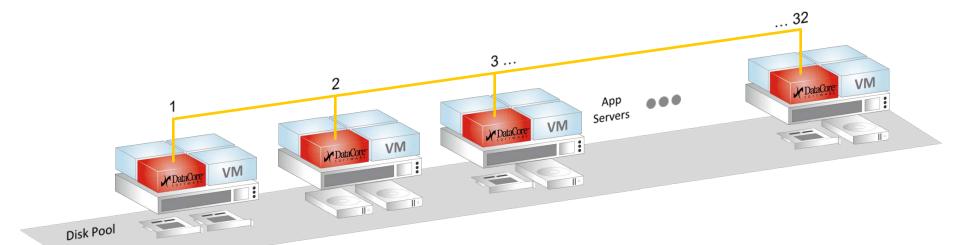
→ Local Disk Pool - VSA01 on SSV-VSA01. 💌		
Disk Pool Local Disk Pool - VSA01		
Description:		
50e: 463 GB		
Running Allocated: 7 % Firee: 93 %		
Info Settings Physical Disks Vartual Disks Allocation Ylew Performance Events		
The Allocation View is a visual representation of storage usage and temperature (frequency of data access) of allocated storage in pool tiers. Sto disk in the drop-down list to display only the amount of storage used by the virtual disk in the pool.	ar ar	
Select a virtual disk: - None -		
Tier 1		
Heat map reveals ——	High activity	ممر المال
Flash 3 (1) Flash 4 (1) distribution	High activity Low activity	MAMMA
92.62 GB	Low activity	Munum
Tier 2		
5A5 Disk - 15k (1)		
278.88 GB		

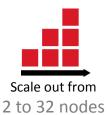


Virtual SAN

Enabling DIMM Flash in the Enterprise









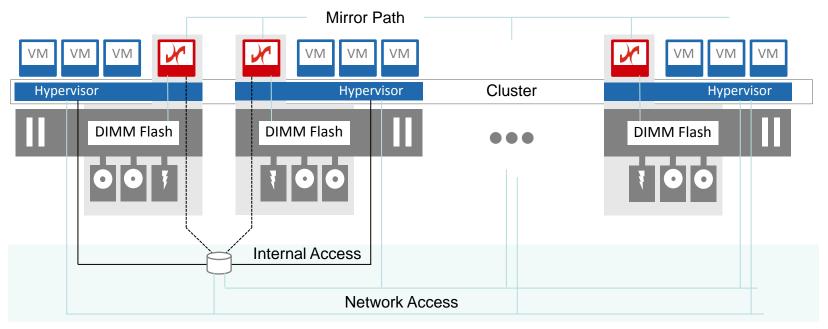




Virtual SAN

Provision with High Availability

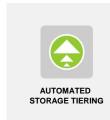


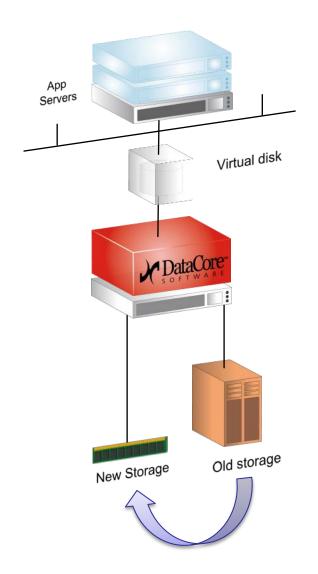


Shared Storage Pool



Migration Alternatives





- Software abstracts hardware
- Applications run at full speed
- Migration takes place in background

- Migrate "now" and decommission old, or
- Auto-tier and extend life of existing investments

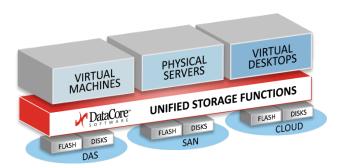




One Storage Services Platform



enabling flash across the entire infrastructure



- Enables the all-flash datacenter
- On the customer's timeframe
- Cost efficient, seamless and flexible
- Proven 25,000+ deployments worldwide
- Most comprehensive hardware-agnostic storage stack in the industry

Cross-device Storage Services Auto-tiering Sync Mirroring Async Replication Adaptive Caching Thin Provisioning Storage Pooling Data Migration Storage Load Balancing Centralized Management Continuous Data Protection Analysis & Reporting NAS/SAN (Unified Storage)