Virtualizing Storage to Accelerate Performance of Tier-1 Apps

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How do you improve on this?
Will it slow me down?
On the Contrary!

Up to 10x Performance increase with DataCore

72% of surveyed IT organizations improved performance by 3x or more since virtualizing their storage with DataCore.

Source: Survey of 512 users of DataCore Software SANsymphony-V

www.techvalidate.com/product-research/datacore-sansymphony-v

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Two Perspectives

- **Technology**
  - Magic responsible for speeding up apps

- **End-user experiences**
  - Immediate
  - Long-term
    - Life-critical scenario
Layered Software Between Apps & Storage

- Operates in the data path
- Pools resources
- Controls access
- Caches I/Os
- Regulates quality of service
- Self-tunes
- Replicates data leaving no single point of failure
In-line Turbo-charger

- Dedicated x86-64 CPUs and DRAM provide powerful, inexpensive “mega caches”
- Low-latency response from memory vs. slower disk access
- Intelligently anticipates reads & streamlines writes to optimize performance
Auto-tiering Dynamically Optimizes Resources

Create up to 15 tiers of storage

- Tier 0: Hot
- Tier 1: Warm
- Tier 2: Cold
- Tier n: Archive

Above average moves up a tier ➤ ➤ Below average moves down a tier

Evaluates data at the block level so data from a single application can reside on multiple storage tiers
One Storage Services Platform
Across your entire infrastructure

Virtual Machines
Physical Servers
Virtual Desktops

Unified Storage Functions

Internal
Flash Disks

SAN
Flash Disks

Cloud
Flash Disks

Accelerate
Centralize & Automate
Pool & Protect
Case Study

Mission Community Hospital
MCH’s Clinical Objectives

- Provide high quality professional healthcare
  - Around the clock

- Reach more patients in northwest L.A.
Reasons for Change

- Elevate responsiveness & reliability
- Consolidate resources from numerous disjointed projects
- Expand IT services to newly acquired facilities
Life-Critical Applications

- Paragon Integrated Clinical & Financial
  - Hospital Information System
  - Electronic Health Records (EHR)
- Horizon Patient Folder
  - Document management system
- Claims Administrator
  - Billing
- PACS (Picture Archiving & Communication System)
Common Pain Point: I/O Bottlenecks
Modernized Environment

- 800 Employees +
- 600 Physicians
- Citrix XenApp
- 200 Virtual Machines
- 20 Physical servers
- 20% Annual growth rate
- Managed by Director of IT & Network Admin
Supercharged Performance

- Database Restores
- PACS
- Screen Refresh
- SQL Server

Response Time

Before
After
Real-time & Historical Performance Charting
Straightforward Transition

- Migrate apps from physical to virtual machines
- Reconnect drives behind DataCore
  - “Pass-through” disks
- Incorporate additional storage arrays
SAN Wiring
Other Performance Advantages

- Non-disruptive maintenance
  - Clinical services / staff unaffected

- Shareable resource
  - Test new versions of apps against current snapshots
  - Migrate VMs live (vMotion)
  - Fully utilize capacity (no waste)
What’s Next

- Move sync mirror copy to co-lo
  - 20 miles away
  - Safeguard against facility outages
- Incorporate additional arrays under DataCore
  - Dell Equallogic
  - Dell MSA
- Expand capacity for Document archiving
Long-term Investment Protection

- Easily take advantage of advances in hardware technology
- Complete set of cross-platform storage services
- Avoid vendor lock-in and costly forklift upgrades
- Centralize storage management
- Repurpose aging storage systems
- Leverage whitebox or JBOD devices
When to get started

Before your next storage purchase
Using or considering flash/SSDs
Expanding Server/Desktop Virtualization
Developing your Business Continuity Plan
Special thanks to

www.thinclient.net
QUESTIONS?

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www.datacore.com
One Storage Services Platform
Across your entire infrastructure

Comprehensive Feature Set

- Auto-tiering
- Async Replication
- Virtual SAN
- Storage Pooling
- Flash Optimization
- Centralized Management
- Analysis & Reporting
- Sync Mirroring
- Adaptive Caching
- Thin Provisioning
- Data Migration
- Snapshots
- Continuous Data Protection (CDP)
- Unified Storage (NAS/SAN)

- 25,000+ deployments worldwide
- 10th generation product
- 16 Years of R&D
- Most comprehensive hardware-agnostic storage stack in the industry