



**Driving Innovation
Through the Information
Infrastructure**

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Unified IT Managing Storage and DR Environments to Accommodate Growth

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Univita Health

Dedicated to helping people live and age with independence. By providing a single place to find and manage resources which support independent living, Univita makes it easier to access care and to age safely at home.

Services Provided

- **Accountable Home Care** - skilled nursing services, home infusion therapies, specialty pharmacy and durable medical equipment
- **Univita Living** - offers an Independence Assessment to help determine if anything is needed by you to continue to live independently
- **Transition Care** – provides the integration of personal and clinical care along with caregiver support following a hospitalization or nursing home stay
- **Insurance Administration** - provides all front end application processing and data entry functions, including the utilization of a fully integrated image and workflow system
- **Nation's CareLink** – Mental health assessment services

Technology Needs at Univita

- The organization's complex, with diverse business environment
 - Infusion Pharmacy Division needed timely delivery of orders and faxes
 - Durable Medical Goods required real-time data for inventory tracking
 - Nursing needed uninterrupted data availability while also adhering to intensified Health Insurance Portability and Accountability Act (HIPAA) requirements
 - Third-party administration of long-term insurance also placed new demands on storage and availability of data for insurance companies and customers



Application Environment

- Clinical and Operations Applications
 - Records management applications
 - Pharmacy management
 - Durable Medical Equipment management
 - Assessment services
- Business Applications
 - A/P and Payroll
 - ERM
 - Data Warehouse



Challenges

- Aggressive storage growth
- Reduce storage costs
- Utilize lower cost storage to provide majority of storage needs
- Reduce RTO for DR environments
- Ability to consolidate multivendor storage environment into a unified storage infrastructure
- Manage environment with limited resources
- Reduce system deployment time for servers and virtual desktops

Requirements

- Find a storage vendor with a 5 year storage plan
- Technology partner that must align with our business objectives
- Solid Technical Support
- Achieve enhanced Disaster Recovery
- Meet HIPAA and HiTrust compliance demands
- Reduce current RTO's for business critical applications
- Select a fully functional system that provides enhanced management and capabilities

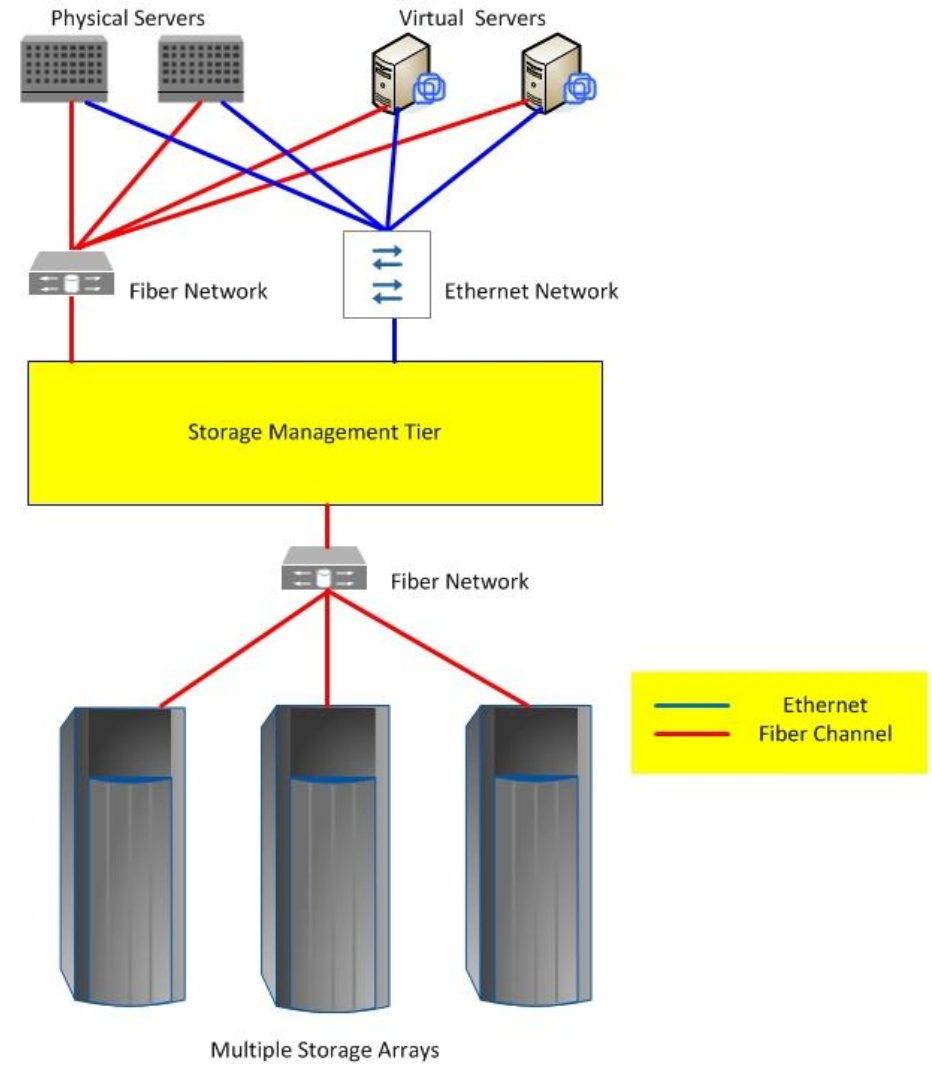
The Solution

- Consolidated multivendor storage into a unified storage infrastructure
- Identified a vendor that aligned technology with our business objectives
- Expanded our virtual environment to accommodate server growth and virtual desktop deployments
- Utilized systems tool to improve processing and support functions
- Utilized SAN mirroring and cloning technology for site replication and data restores
- Utilized memory cards on SAN to provide performance to Tier 3 storage

Technical Environment

- Servers
 - 150 Physical Servers (HP/IBM)
 - 650 Virtual Servers
 - VMware vSphere 4.0 and 4.1
 - VMware View 4.1 Virtual Desktop Interface
 - Microsoft Windows 2000-08 R2
 - Microsoft SQL 2000-08 over 2000 instances
- SAN
 - Qlogic Switches
 - NetApp 3160's, 2020's, and 2040
 - Compellent Series 30's
- Network
 - Core Cisco 6509's
- Tools
 - Solarwinds Orion
 - Virtual Center
 - NetApp Management Console

Storage Architecture





Benefits for Server Environment

- Reduced server deployment times from 2 to 3 weeks to 4 hours
 - Deploying 95% of new systems on virtual servers and providing systems and storage with 4 hours
- Decreased database restore time from 8 hours to approx. 40 minutes
 - Utilizing SAN tools for SQL we have reduced the time to provide database copies
- Reduced RTO for application recovery
 - Restored an application in 8 hours which normally took 48 hours to restore

Benefits for Virtual Desktop Environment

- Reduced virtual desktop deployments by 75% utilizing SAN cloning tools
 - Deployed 75 Virtual desktops in 90 minutes instead of 10 desktops in 90 minutes
- Utilizing deduplication technology; achieved a 50% reduction in virtualized server space
 - Deduplication reduced the foot print of 150 virtual desktop images which consumed 1.8TB of storage into 800GB of storage capacity

Benefits of Tool Enhancements

- Enhanced management tools for reduced administration time
 - Reduced number of PowerShell commands required to perform functions on the SAN – one function went from over 40 lines of code to just 5 lines of code to perform the same operation
- Centralized management tool for all storage layers
 - Utilizing single system manager tool, have been able to consolidate down to one management tool for all storage devices from the large FAS systems to the smaller NSA boxes

Benefits of Storage Technology

- Cache memory modules offers performance comparable to Fiber Channel disk in environment
 - Read intensive production environments have been migrated to Tier 3 storage utilizing cache technology
- Remote site replication – utilized for DFS, backups and recovery
 - Remote site systems have been introduced into the environment to provide DFS capabilities so that data is provided to the user based on the location that they are working out of
 - Data is replicated back to the data centers and rolled off to tape – not typical in remote offices

Lessons Learned

- Map the technology to the requirement of the business
- Simply the solution as much as possible
- Challenge your vendors to provide solutions that meet your needs and don't take no for an answer
- Make sure that the product you are looking at will progress with options and capabilities that you are looking for
- Utilize every tool that is available to you – with limited budgets and resources you must get the most out of your investment



Questions?

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