



Holistic Storage Architecture

Integrating Tiered Storage Solutions

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Agenda

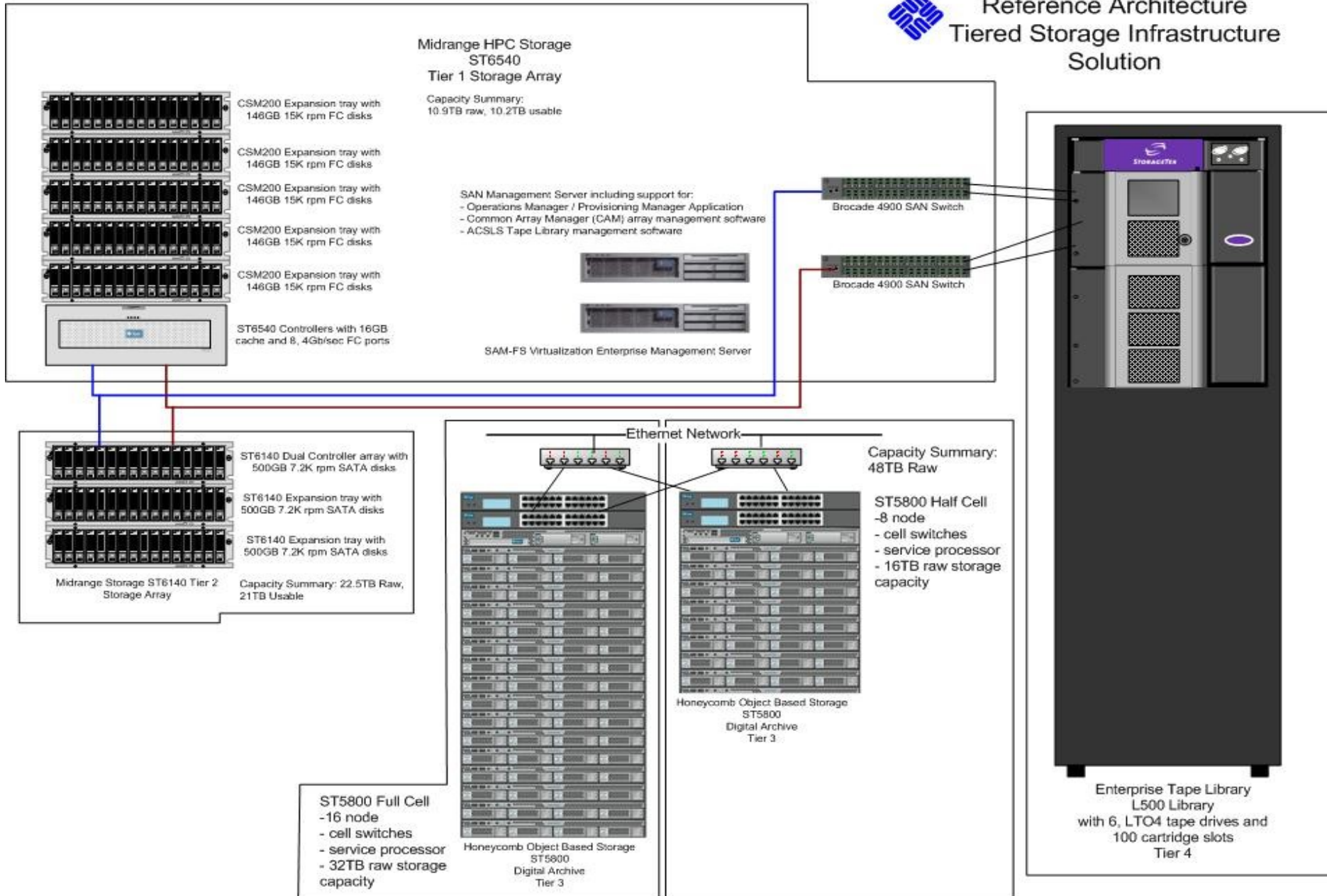
- Open discussion around:
 - > Tiered Storage Architectures
 - > Data Migration
 - > Storage Architecture example

What's the problem

- Both business and technological issues
 - > Customers are facing business growth and expansion characterized by:
 - Increase user demand
 - Eco concerns around space, power, and cooling
 - Cost effective, lower TCO
 - Need to provide service in many more creative ways
 - > Technological pressures included:
 - Outdated technology, lack of expansion ability
 - Demand to meet or exceed business initiatives quickly
 - Infrastructure used beyond ability to provided service
 - Limited skilled staff able to manage environment

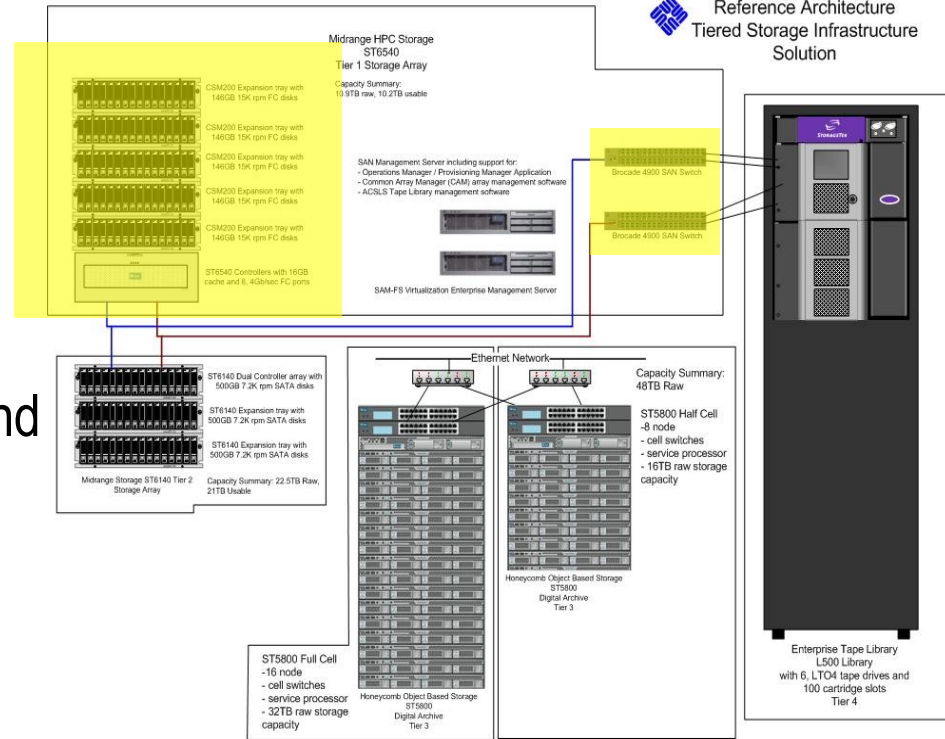


Reference Architecture Tiered Storage Infrastructure Solution



Tier 1 Storage Layer

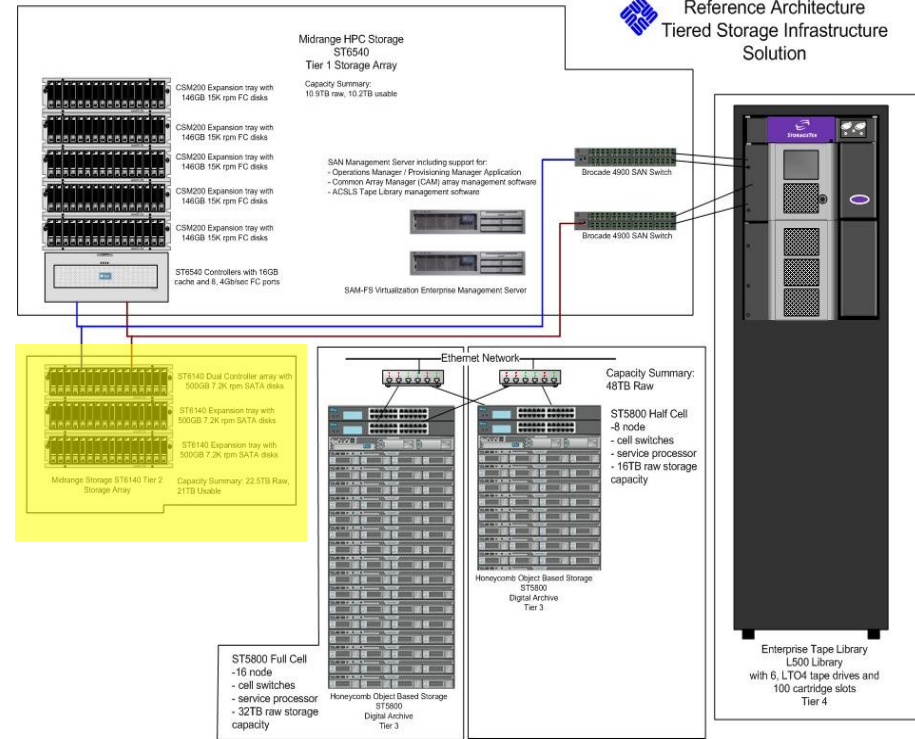
- Composed of Sun ST6540 Array including:
 - > ST6540 Controller with dual RAID controllers, 8, 4Gbps host ports, and 16GB of cache memory
 - > 11TB of raw capacity
 - > Populated with 146GB 15K rpm Fibre Channel disk drives
 - > Array software includes:
 - Common Array Manager
 - Snapshot
 - Volume Copy
 - Remote Replication



- Redundant SAN
 - Dual fabric SAN provides redundant data path from storage arrays to all application hosts

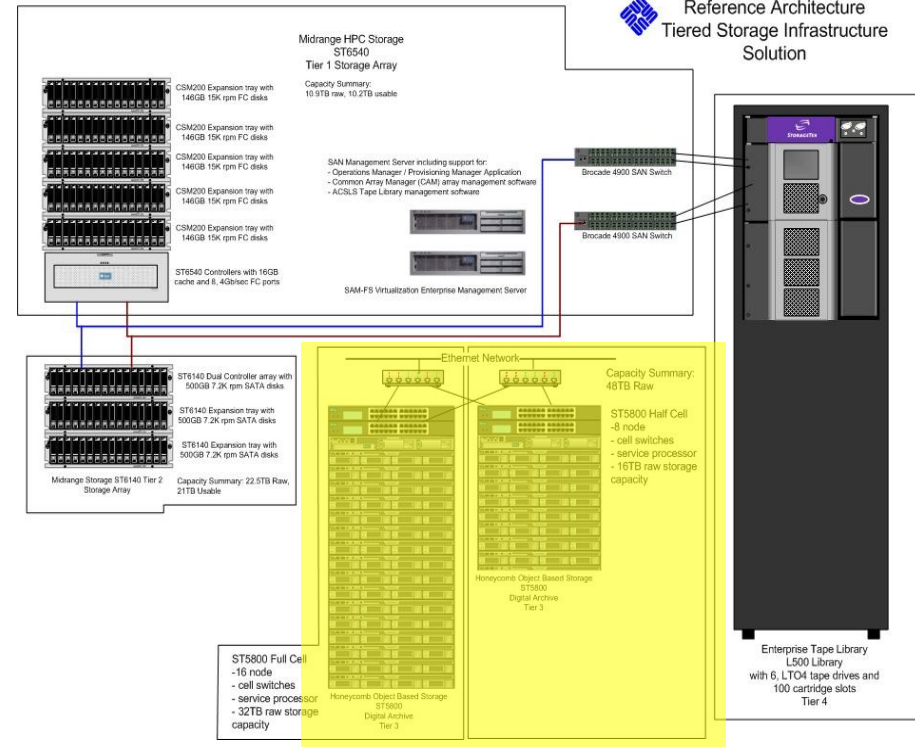
Tier 2 Storage Layer

- Composed of Sun ST6140 Array including:
 - > ST6140 Controller with dual RAID controllers, 4, 4Gbps host ports, and 4GB of cache memory
 - > 23TB of raw capacity
 - > Populated with 500GB 7.2K rpm SATA disk drives
 - > Array software includes:
 - Common Array Manager
 - Snapshot
 - Volume Copy
 - Remote Replication



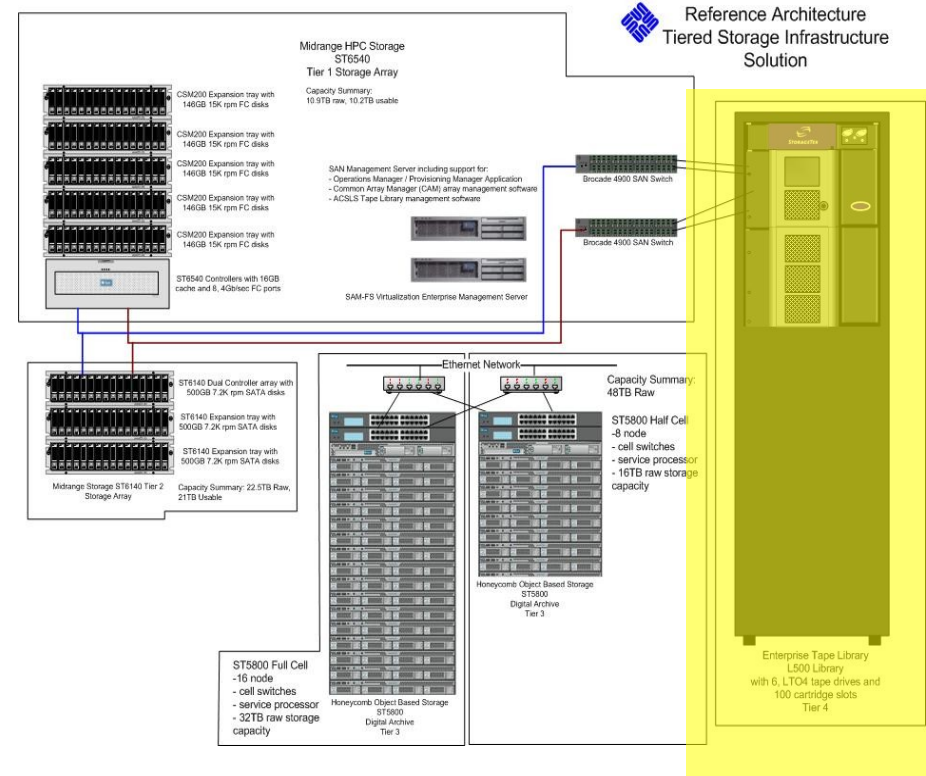
Tier 3 Storage Layer

- Composed of Sun ST5800 Storage Solution including:
 - > One ST5800 (Honeycomb) Storage Solution
 - > 32TB of raw capacity
 - > Populated with 16 servers each with 500GB 7.2K rpm SATA disk drives providing both storage and compute resources
 - > Array software includes:
 - ST5800 Management GUI
 - ST5800 SDK (Software Development Kit)
 - Converting from Dspace to Fedora Archiving application



Tier 4 Storage Layer

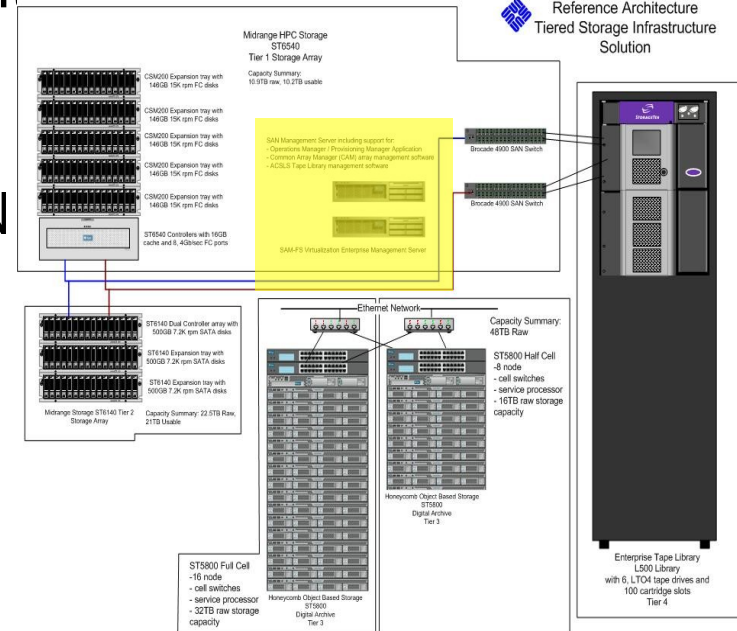
- Composed of Sun SL500 Tape Library including:
 - > Six, LTO4 tape drives
 - > Capacity for 100 tape slots
 - > Array software includes:
 - ACSLS management software
 - Integrated with both SAM and CommVault backup application



Architecture Management Software

- Operations Manager SAN Management Application

- > Simplify Infrastructure management
- > Provides overview management of entire SAN infrastructure
- > Allows for provisioning of all SAN attached devices from storage array to host servers
- > Single “pane of glass” for all reporting and provisioning of SAN components



- Storage Archive Manager - SAM

- > Provides data movement of files throughout the entire storage infrastructure
- > Uses advanced metadata characteristics and customer defined policy to trigger data movement
- > Includes SAM Migrator clients for integrating multiple file types from multiple Operating systems platforms
- > Allows for alternate archiving methods

Start the discussion

- Is it time to review / redefine the meaning of Tiered Storage?
- Where does Tiered Storage management best fit?
 - > Application layer
 - > Network layer
 - > Storage components
 - > Combination of all
- Considerations for migrating data from legacy systems to a Tiered Storage Model?



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