STORAGE ARCHITECTURE Changes with Flash

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Current Storage Architecture.
Current Storage Challenges

- Too many arrays for Management and support
- Too much space and Power Consumption
- Tons of capacity for desired Performance
- NFS volumes and NFS datastore.
- FC infrastructure barely used.
- Limited HA.
- Application tied to NFS.
How to overcome Challenges

- Improve hardware utilization.
- Build Heterogeneous Environment (multiple storage vendors)
- VMDK datastore over FC
- Improve Monitoring, Capacity Planning
- Reduce RPO, RTO, ROI, OPEX, CAPEX
- Minimize application integration with backend storage
- Newer Storage Technologies (All Flash, Tiering, Storage virtualization)
- Storage hardware Refresh/Migration
Storage Architecture (Moving Forward)

Collapse Existing Arch with better architecture and start moving vmdk workload.

So 126u space will drop to 36u

Block Storage-3par 8u
Pros and Cons.

• Pros
  o Storage Virtualization
  o Efficient utilization of storage resources (better ROI)
  o Tiering (SSD, SAS, SATA)
  o Storage VMotion between arrays still exist (for individual instances)
  o Data Mobility – Transparent to Compute (VMDK level)
  o Enhanced HA with certain configurations
  o Storage Hardware refresh made easy

• Cons
  o Heavy Write workloads are still tricky.
Power Savings.

- Power Savings ~70%
Space Savings.

- Space Savings ~71%

![Bar chart showing space savings comparison between old and new architectures.](image-url)
$$ Savings.

$Savings 34%