The Library of Congress
Storage Architectures for Digital Preservation

Module 2: Storage Directions
Data Center Evolution Path
Cisco Unified Data Center Architecture

Unified Computing
- Location Freedom
- HW Freedom
- Provisioning Freedom

Consolidation → Virtualization → Automation → Utility → Cloud

Inter-Cloud
Enterprise
Unified Computing
Unified Fabric
Data Center Networking
"From Silos to Services": Network-Based DC Infrastructure Transformation

**Consolidation**
- Regain Asset Control
- Reduce Cap Expense
- Increase Utilization

**Virtualization**
- Improve Flexibility
- Fast Reconfiguration
- P&C Efficiencies

**Automation**
- Discover Services
- Automate Provisioning
- Ensure Compliance

Network Connected Assets
Network Hosted Services
Network Orchestrated Services
Data Center Evolution: A *Unified Fabric*

**Today**
- Multiple I/O
- Higher Capex
- Higher Opex
- Multiple Mgmt mechanisms

**With Unified I/O**
- Single Transport
- Unified & Virtualized I/O
- Built-in Interoperability
- Less parts/power/space
- Cost effective Service consistency
Cisco Unified Fabric:

- Cisco UF enhancements are standards-based
- Enables the unified fabric to accommodate LAN, storage and clustering application
- 30% Power Reduction in the server
- Eliminates additional switches and ports for additional power savings
- UF Features
  - Lossless transport
  - Bandwidth management
  - L2 Multipathing
  - Data Center Bridging Exchange Protocol