Preservation Archiving Solutions

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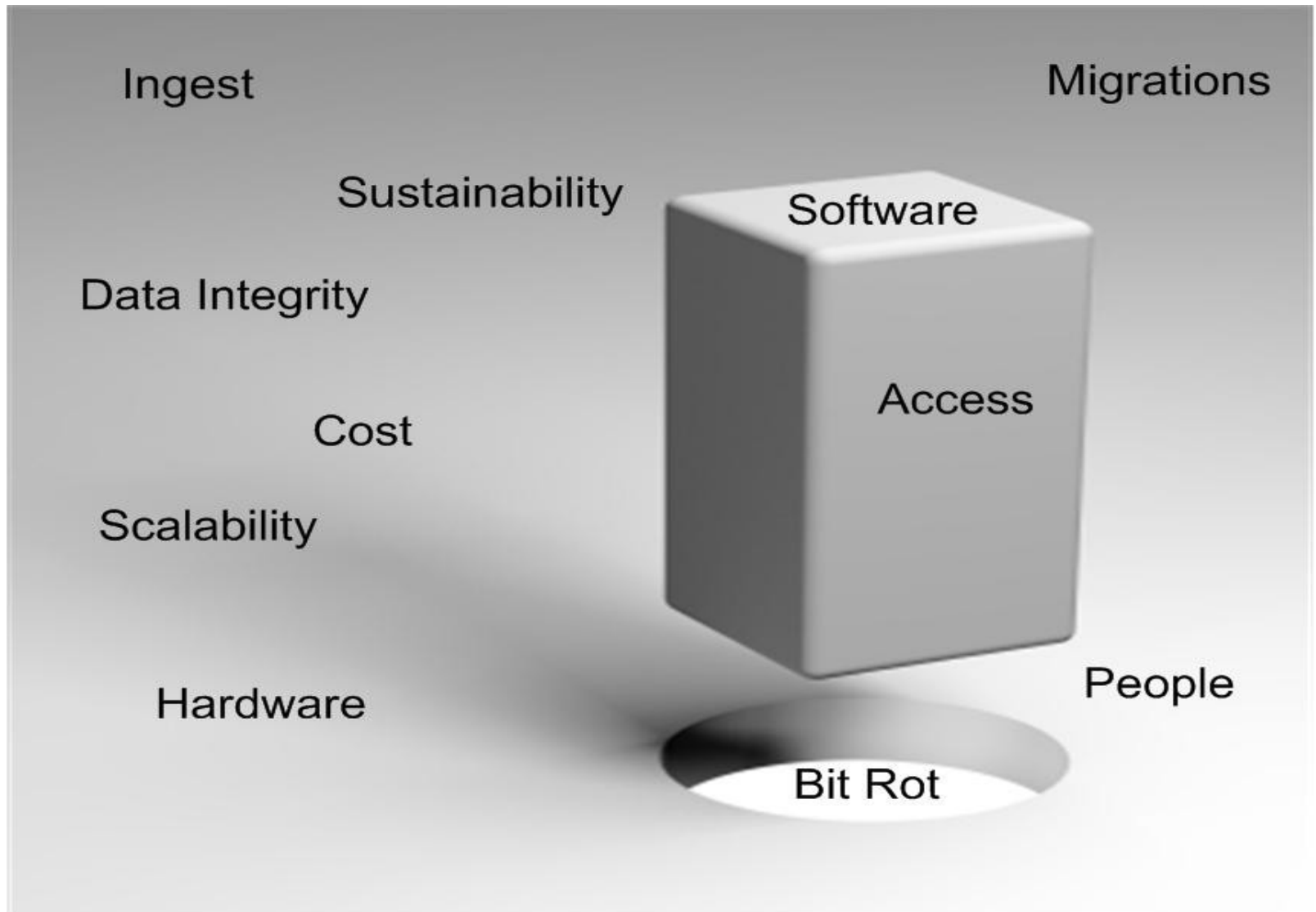### Solutions Specialist
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Agenda

- Challenges
- Requirements and Design Criteria
- Physical Architecture
- Sun Storage Solutions Archive
- References

Challenges

Business Drivers

- Change in data management practices
- Compliance
- New services – Web services
- Historical Preservation
- Support increasing amounts of data
- Centralization of institutional data

Requirements and Design Criteria

- Access Requirements
- Performance Requirements (Ingest, Search, Retrieval)
- Compliance
- Manageability
- Scalability
- Security
- Interoperability

Reference Architectures

Develop Collaborative, Replicable Reference Architectures

- Fedora
- Fedora/Drupal (Islandora)
- DSpace
- EPrints
- Duraspace (Cloud)
- Ex Libris Rosetta
- VTLS VITAL
- SAM/QFS

Value of Integrated Solutions

- Minimizes cost, complexity and deployment time
  - Lowers administrative costs via automated data management and migration across storage tiers
  - Cost-effectively matches the value of data with the appropriately priced media
  - Economical and power-friendly cost of operation
- Flexibility to build performance, economy or mixed archive repository
  - Infinitely scalable archive management

Open Storage

StorageTek 7410

- Digital repositories for data and metadata storage
- Fedora, EPrints, and D-Space communities
- Ex Libris Rosetta and VTLS VITAL applications

SAM/QFS

- Large scale preservation projects needing policy based storage

StorageTek7210

- Digital asset management
- eResearch databases

Identity Management and SOA

- Federated repositories

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Virtualized Repository Appliance

Digital Objects

Single Virtualized Server
Virtual Machine 1:

- Repository
- Entity Preservation
- Index Creation
- Metadata Management
- Security
- Search Engine

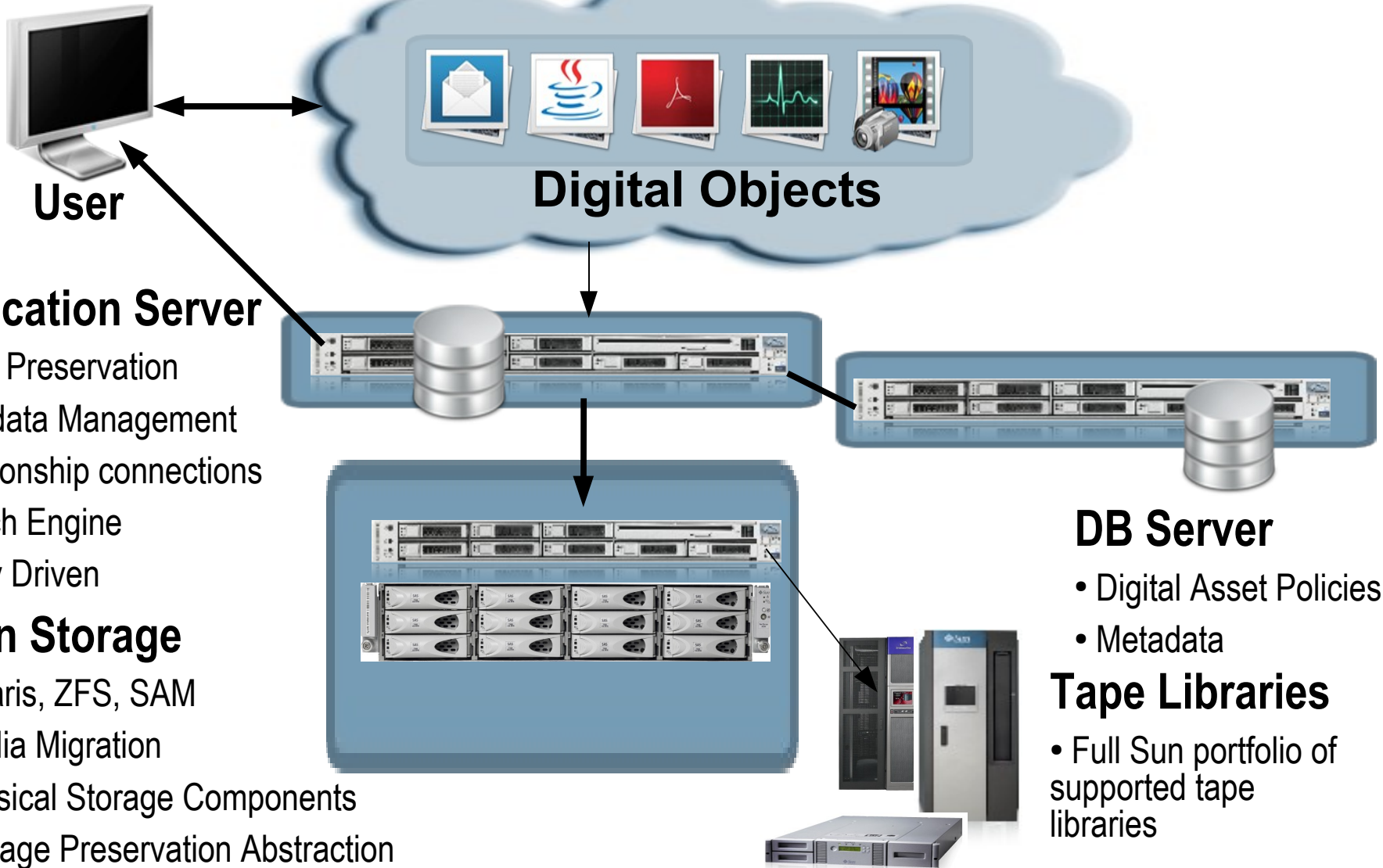| Repository	Oracle, MySQL
Solaris + ZFS	

Physical Storage

Virtual Machine 2:

- Archive DB
- Policies
- Metadata

Virtual Machine 3:

- Open Storage Mgmt
- Storage Preservation
- Physical Storage

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Open Repository Tiered Components

Digital Objects

User

Application Server

- Entity Preservation
- Metadata Management
- Relationship connections
- Search Engine
- Policy Driven

Open Storage

- Solaris, ZFS, SAM
- Media Migration
- Physical Storage Components
- Storage Preservation Abstraction

DB Server

- Digital Asset Policies
- Metadata

Tape Libraries

- Full Sun portfolio of supported tape libraries

Tiered Storage Architecture

QFS
Solaris

SAM-QFS
Solaris

Copy 5

Copy 6

Copy 3

NFS File System or

Appliance

Copy 4

TCP/IP

Copy 2

SAM-QFS

Solaris

Copy 1

Preservation Archiving Solution

1. **Create and Share** Information

Digital Assets

2. **Manage** Achive Applications

Index - Search - Share

Database Server

3. **Preserve** Storage Preservation

ZFS solaris opensolaris SAM Integrity Protect Longevity

4. **Store** Storage Devices

Flash   Disk   Cloud   Tape
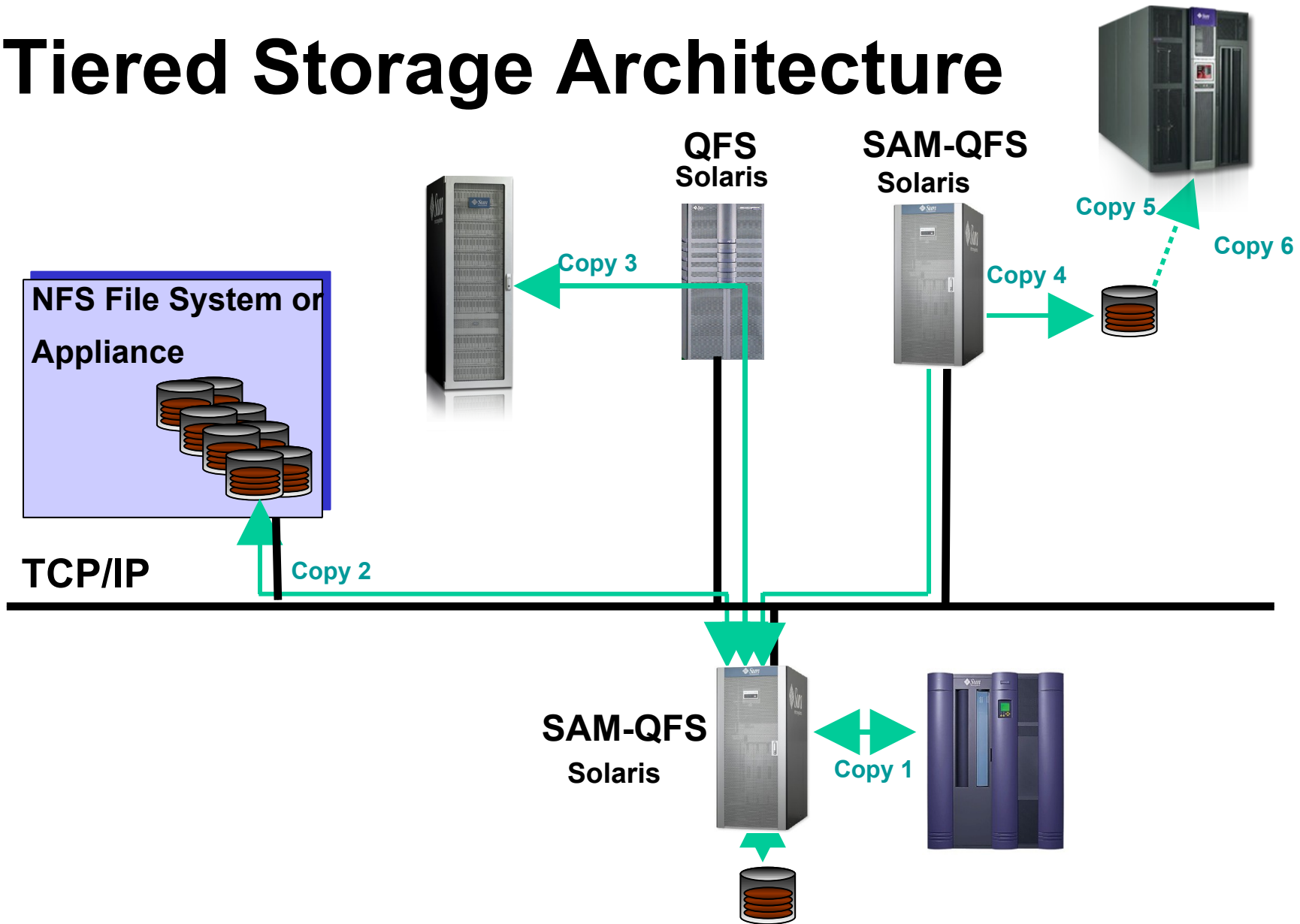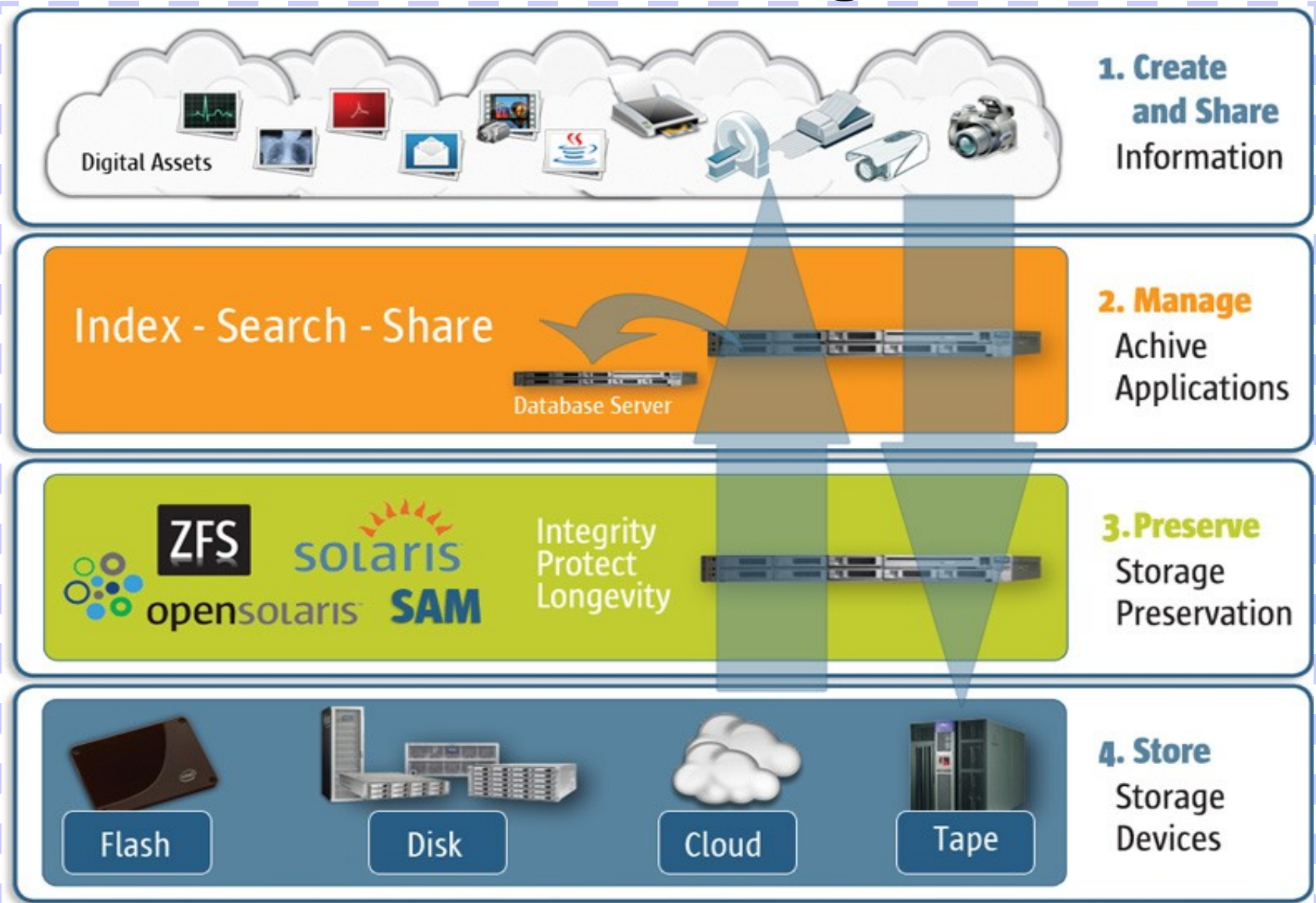
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Solution Benefits

- *Higher service levels* — The architecture is designed to optimize service levels with redundant components and automated failover using storage virtualization and cluster technologies.

- *Reduced cost* — Virtualization technologies enable consolidated solutions with higher resource utilization and tiered storage avoids overprovisioning or underprovisioning system resources. Best practices for management can also reduce the cost of maintaining the solution environment.

- *Faster time to delivery* — Accelerates deployment by providing proven and tested configurations with simplified installation to be up and running almost immediately.

- *Reduced risk* — Validated hardware and software configurations greatly reduce the risk of unforeseen problems in a production implementation.

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Thank You

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