



# Building a Foundation for High Availability

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VERITAS Software

THE DATA AVAILABILITY COMPANY™

# Agenda

- An overview
- Industry trends
- Solutions
- Q & A

Data  
Access

Data  
Protection

# The customers' story...

## Pfizer

- Mission critical information must be accessible even during operational changes and data migrations
- Need to reduce potential downtime while ensuring integrity of data

## Incomnet Communications

- Need to boost database performance and make the environment more manageable
- Backup is failing, recovery was taking 3 days, data was being lost

## KPMG, LLP

- Their environment is growing at an exponential rate
- Need to be able to respond to a customer's demands quickly - these demands can be quite diverse
- Heterogeneous environment but need one interface across all OSes
- Need to centralize the administration of their environment
- Complex environment - need to minimize that complexity and scale better

Data  
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# Business Challenges for Database Environments

- **Ensuring continuous information availability**
- **Environment must scale to meet increased demand**
- **Service Level Agreements**
  - Data must be always available
- **Managing IT Goals to Corporate Goals**
  - Leveraging scarce IT resources
  - Manage more with less
  - Consolidation of environments



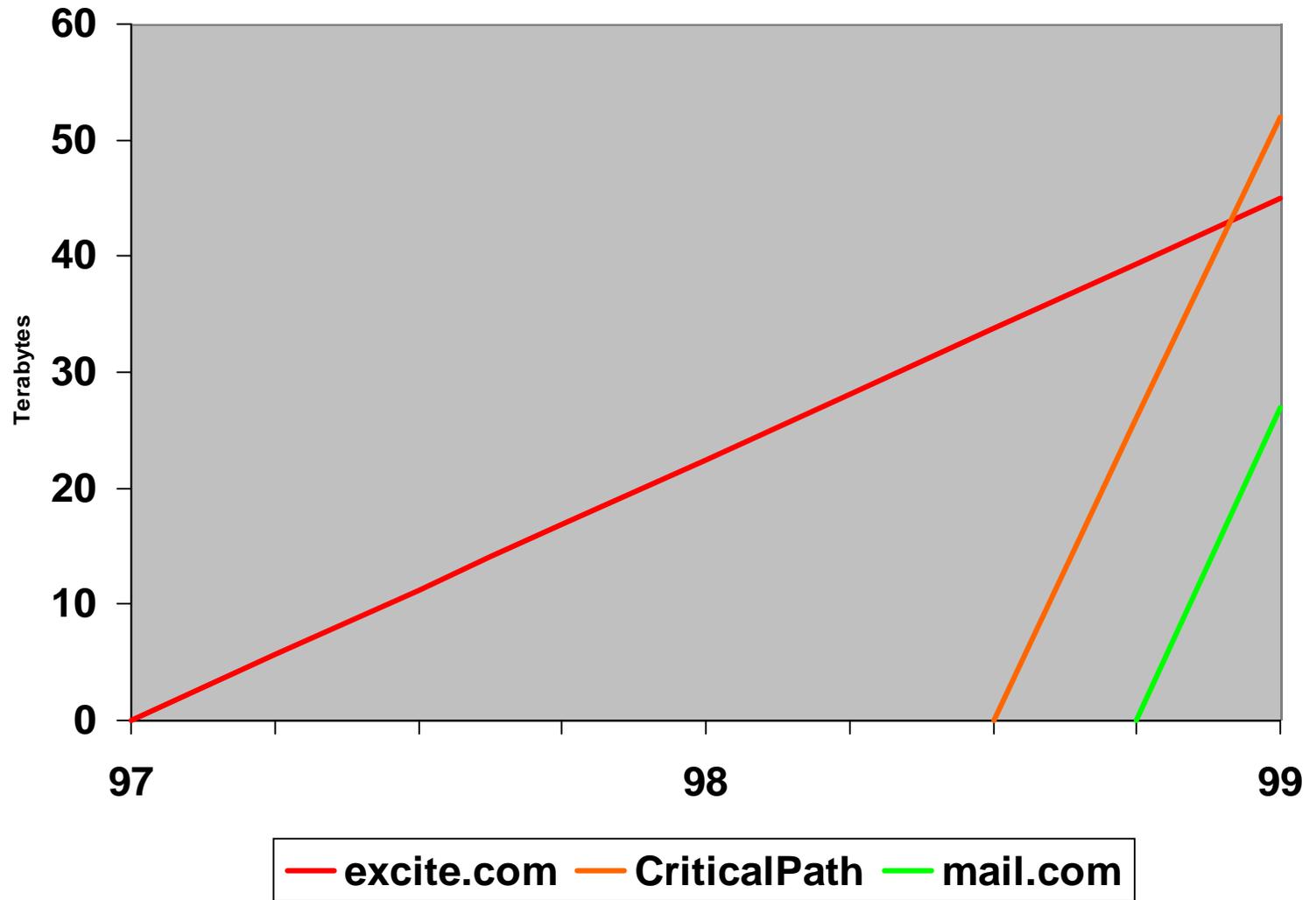
Data  
Access

Data  
Protection

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# Customer Data Growth



# Customer Data Growth

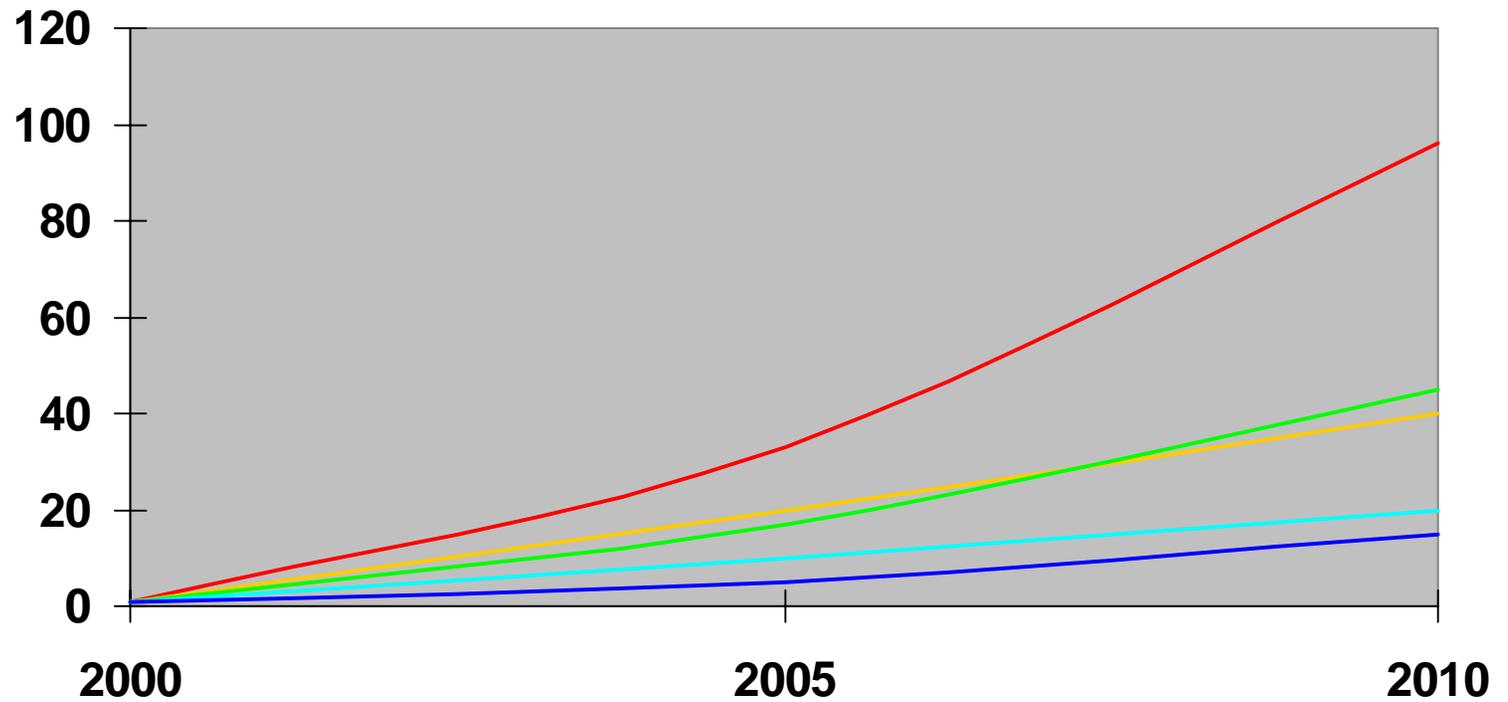
- *“On average our interviewees’ storage capacity is growing at 52% per year, with 30% of it consuming more than 6 terabytes. While 36% of our respondent's storage budgets are growing, almost half said their budgets are flat.”*
  - **“Slaying the Storage Beast” by Galen Schreck, March 2001**
- *“IS organizations currently have operational responsibility for Unix and Windows NT systems that are running business-critical applications. These organizations are being told to improve application availability, deliver operational support to a heterogeneous environment and reduce operational costs.”*
  - **“Storage Management for the Connected Enterprise” Mark Nicolett, October 16-2000 IT Symposium**

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# Application Growth

Average Application Size (TB)



- E-Medicine
- E-mail
- Video Mail
- Data Warehouse
- Electronic security

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**Data**  
Access



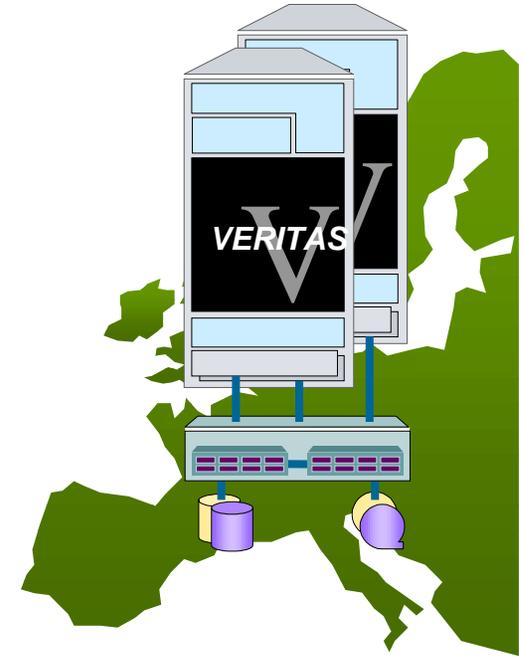
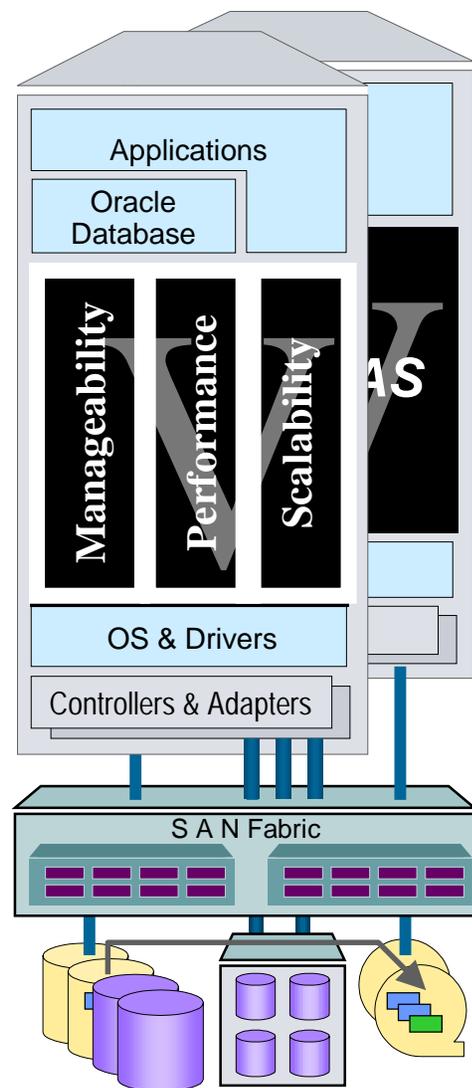
**Data**  
Protection



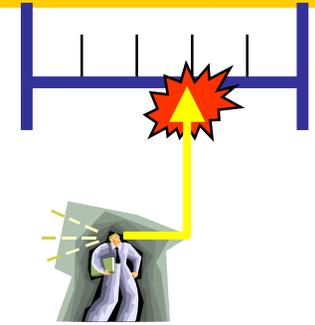
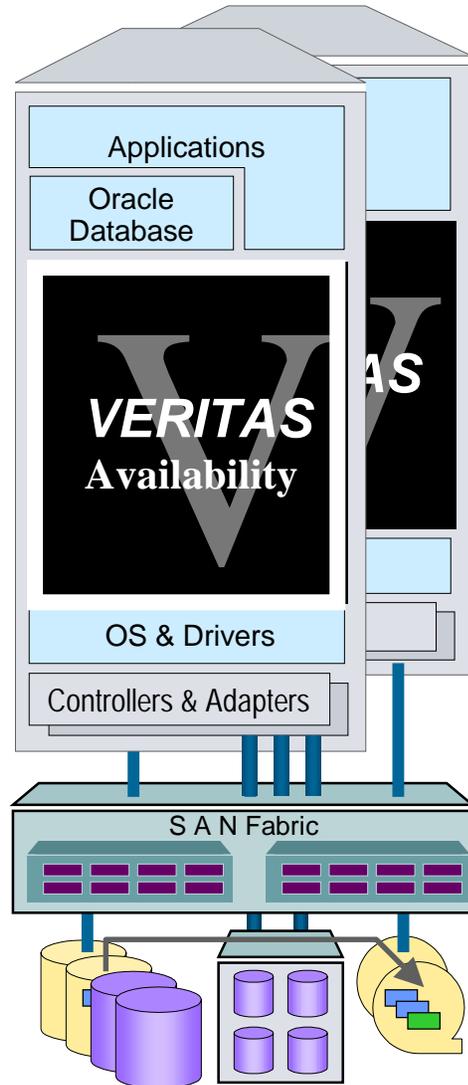
# VERITAS Solutions



# VERITAS Database Solutions



# VERITAS Solutions



**Common Infrastructure**

# The customers' story...

## How these solutions helped

### Pfizer

- Successful data migration
- Improved Oracle processing
- Allowed device independence

### Incomnet incomnet COMMUNICATIONS CORPORATION

- Online storage management increased flexibility and ease of use
- Hot backups minimized downtime, no data loss
- Performance boosted
- Failures are transparent, no data lost

### KPMG, LLP

- Able to change environment to meet needs without downtime
- Tools enabled them to identify bottlenecks as they occur
- Able to back up different operating environments and applications
- “With VERITAS Software we’re able to deliver closer to 100% availability.”, John Reina, Director IT.

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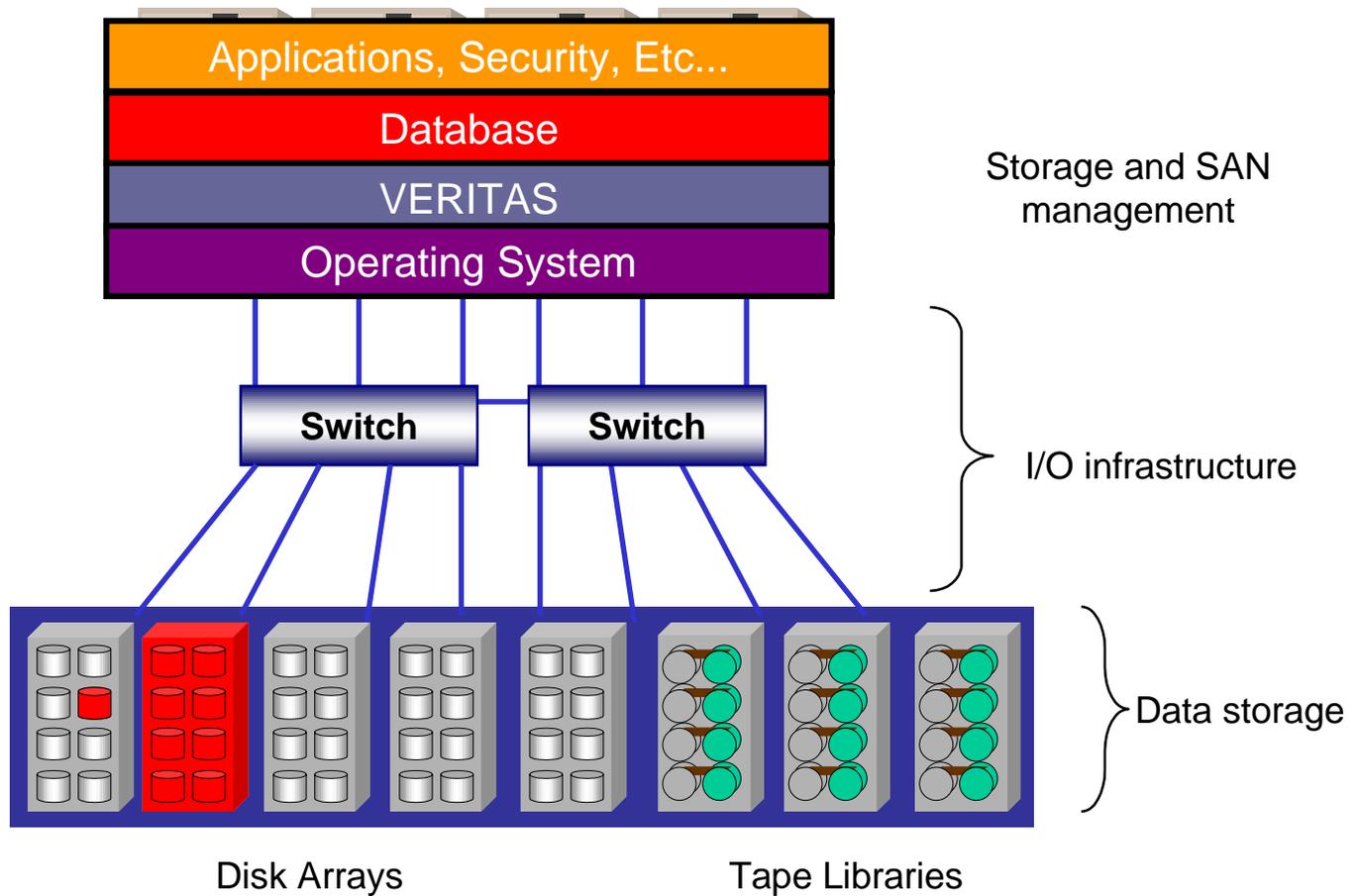


# Continuous Availability

A Solid Foundation To Build Upon

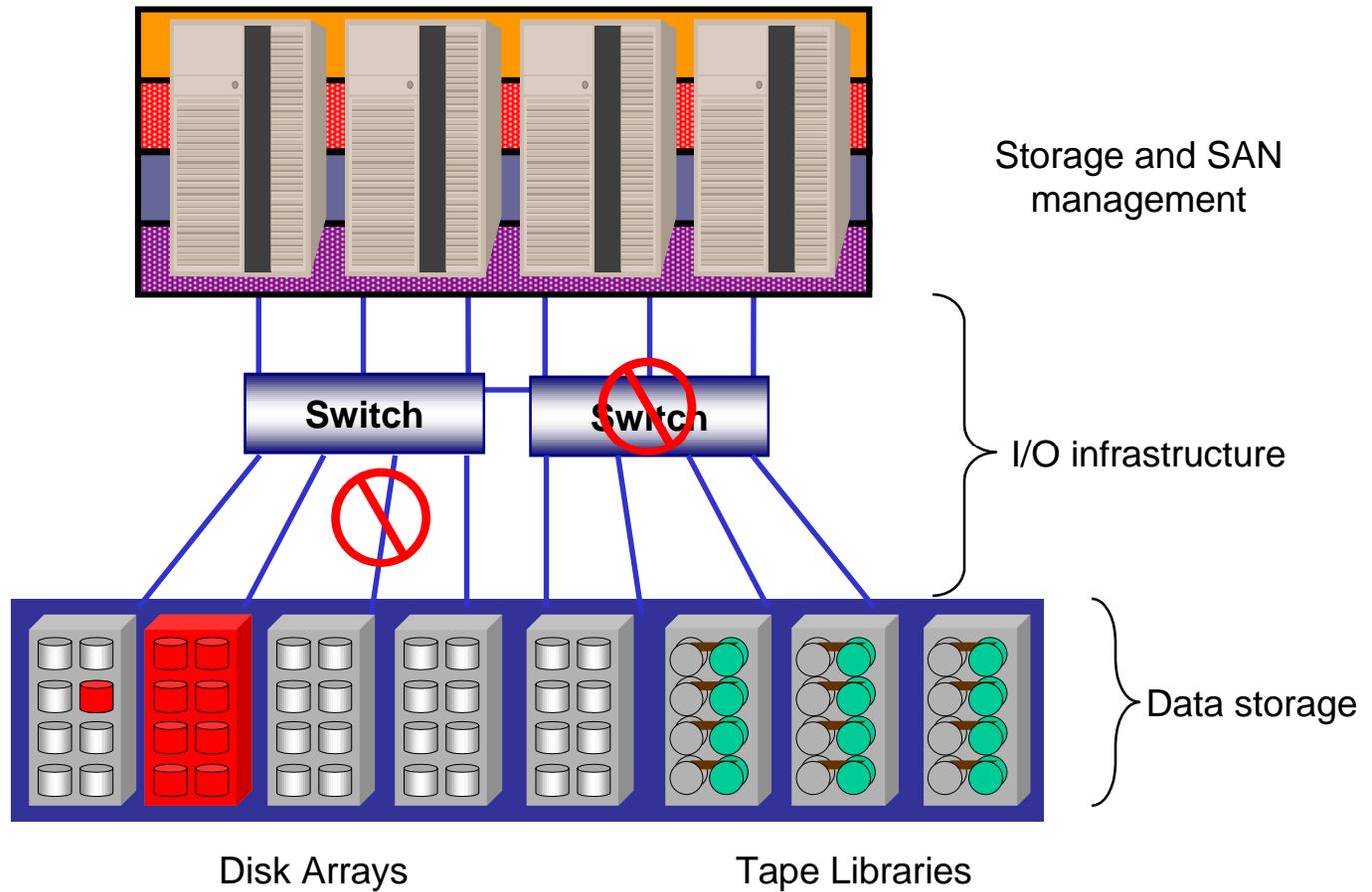


# Foundation of Availability



Objective: Eliminate points of failure

# Foundation of Availability

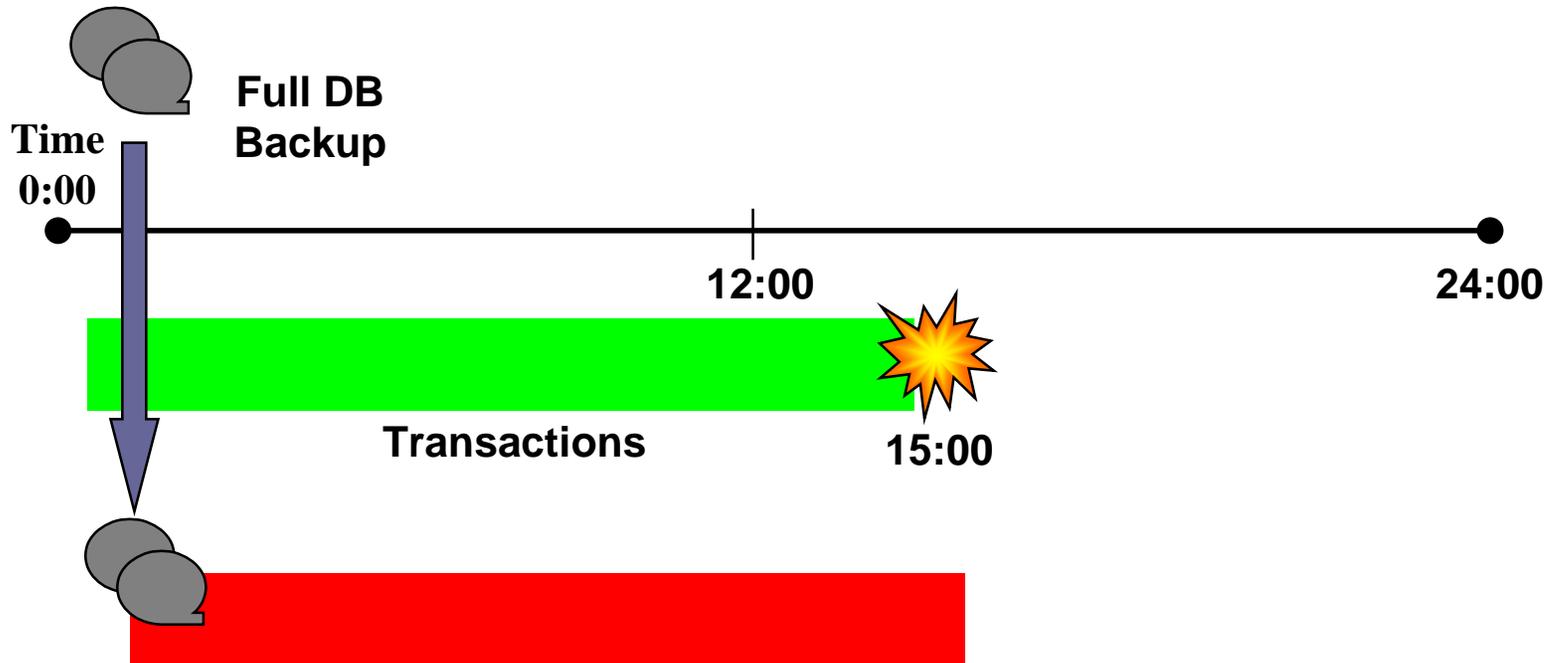


Data Access

Data Protection

Original Data, Same Location

# Standard Database Recovery

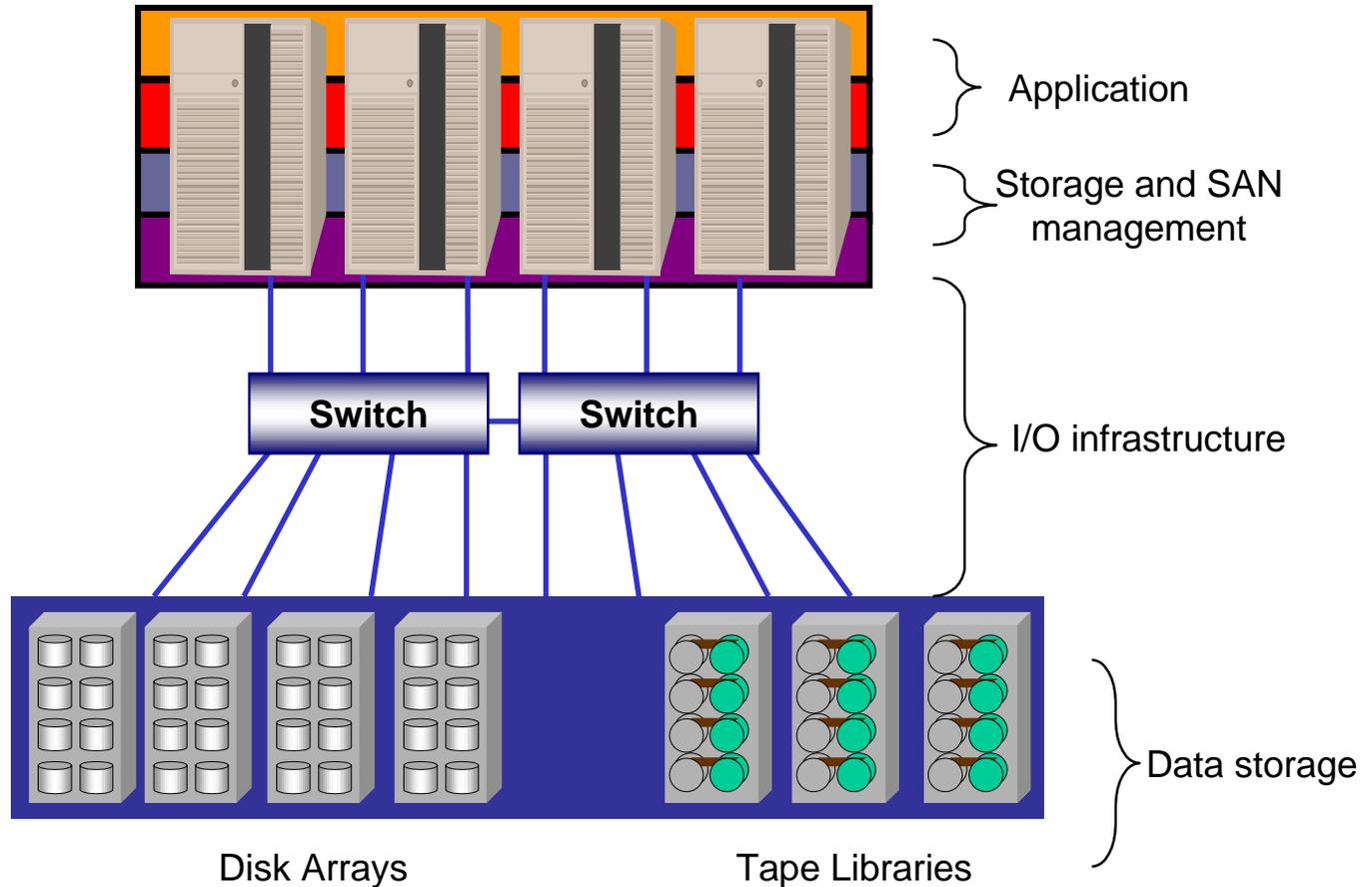


**Restore from backup**

**Reapply transactions 00:00 - 15:00**

**Back in service**

# Standard Database Recovery

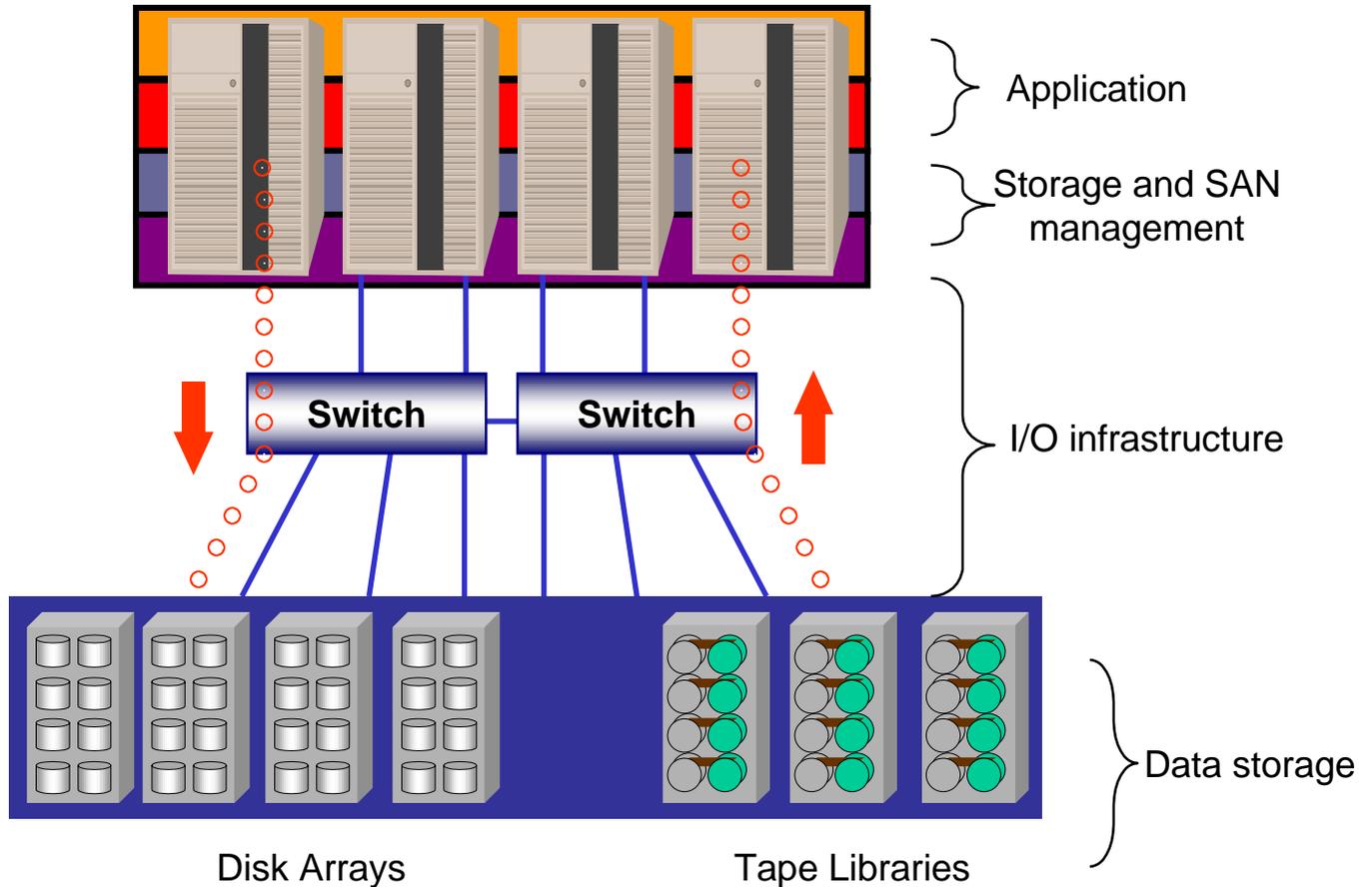


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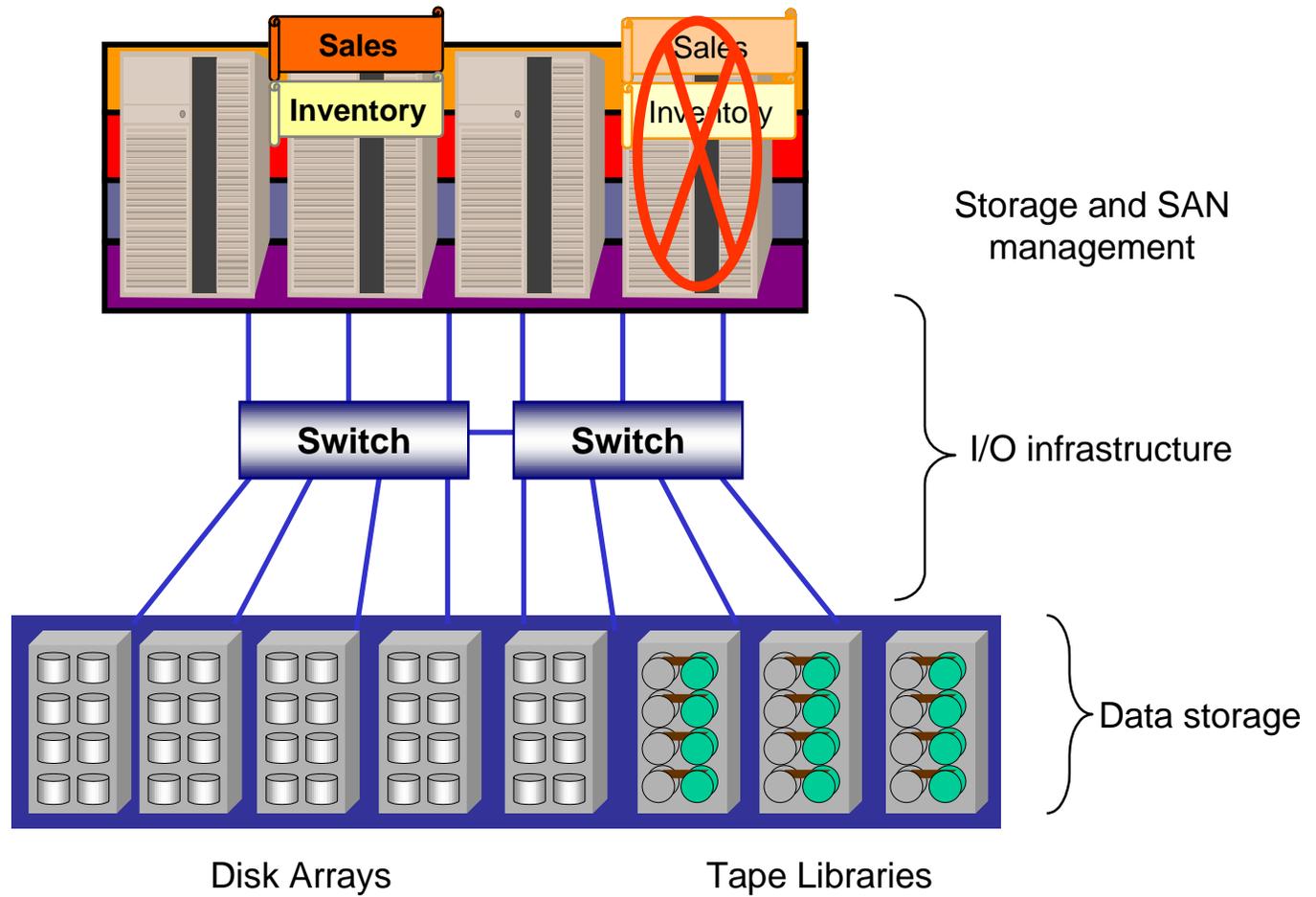


# Standard Database Recovery



## Database Backup and Recovery

# High Availability



## Transparent Failover

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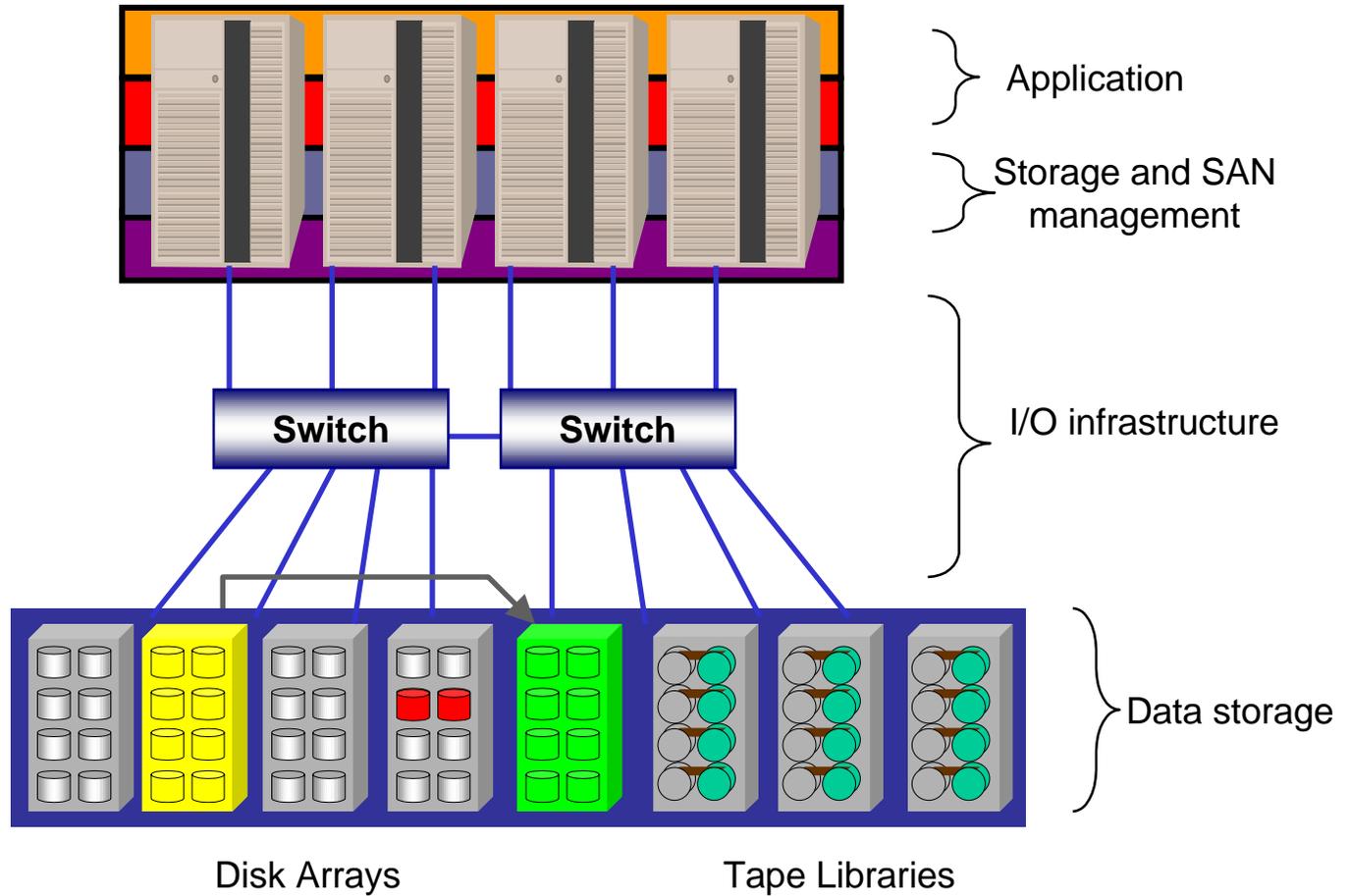


**Data**  
Protection



# Availability Management

# Online Administration



Data Access

Data Protection

Best Data Migration Options

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**Data**  
Access



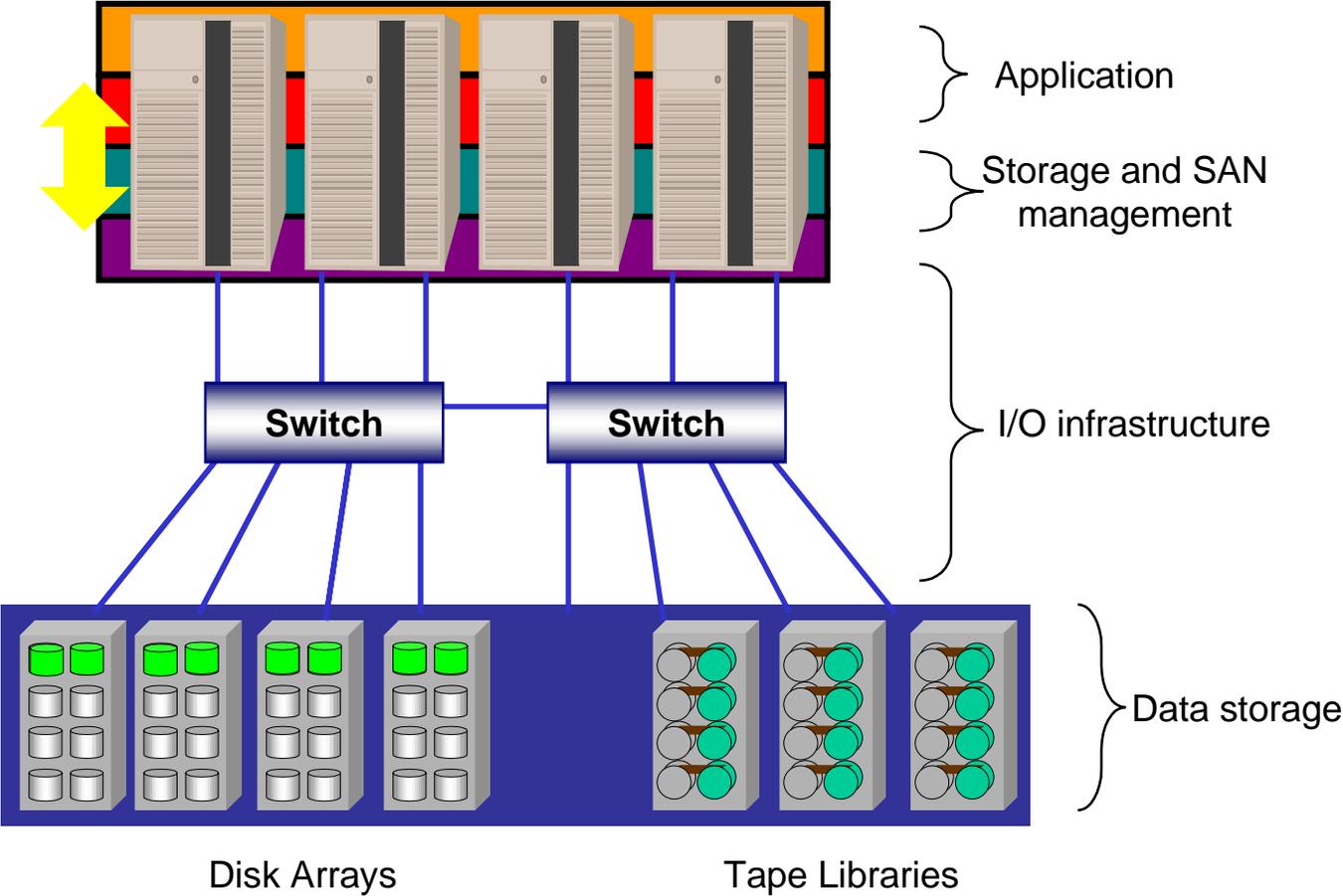
**Data**  
Protection



# High Performance



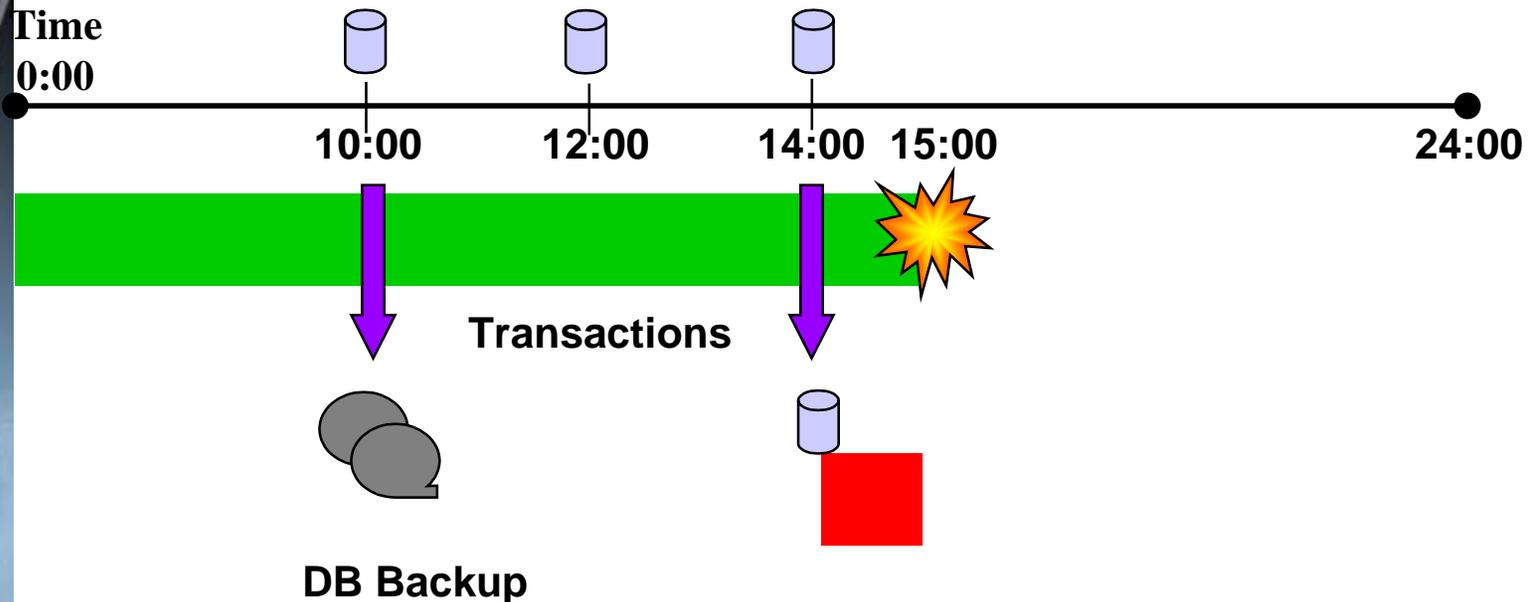
# Database Performance Management



**O/I Path / I/O Throughput**

# High Performance DB Recovery

Frozen Images - on-disk backup images



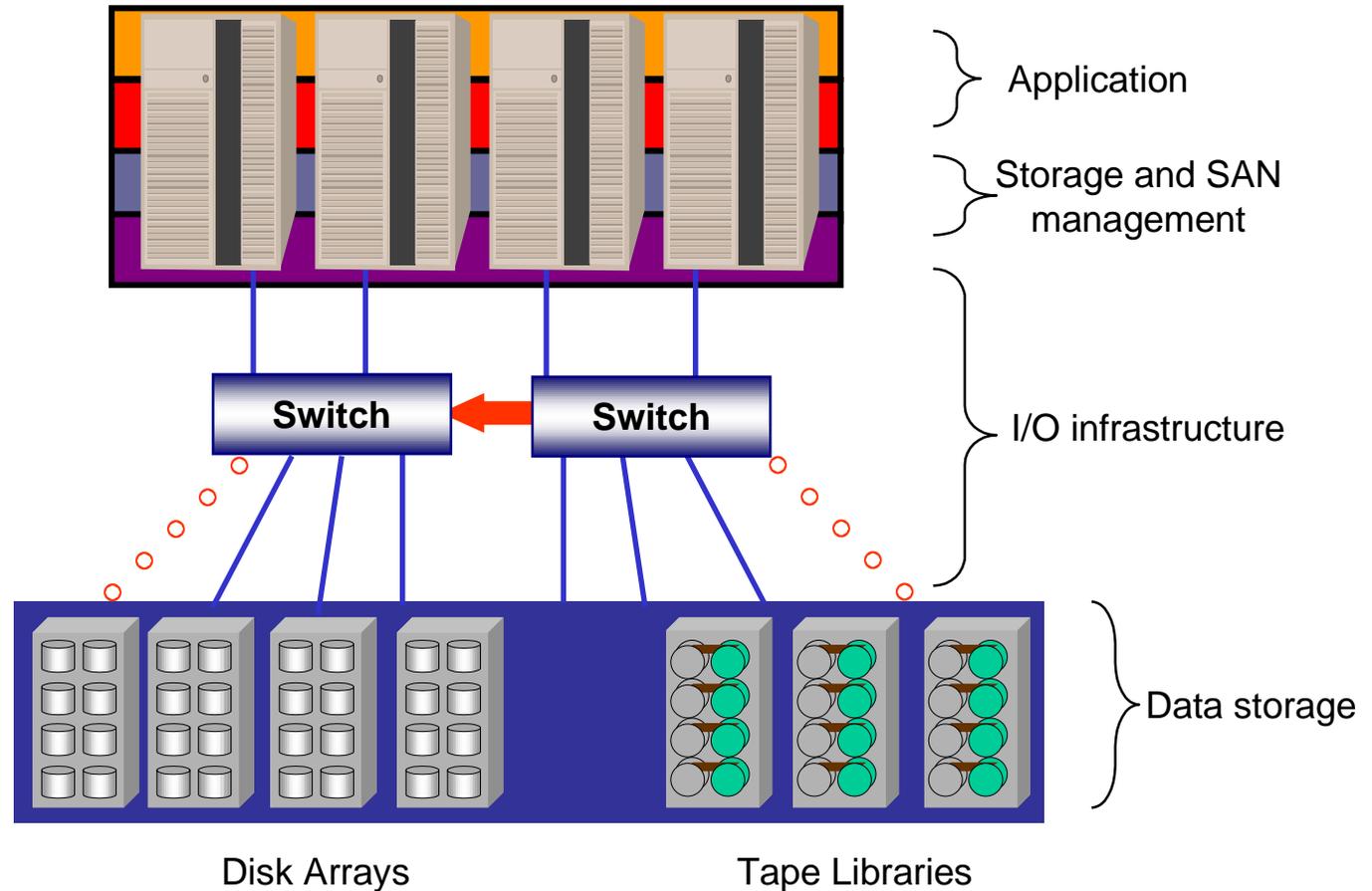
**High Availability - Parallel process to Backup from images**

**Oracle Recovery process Enhanced**

**Back in service - *fast***



# LAN-Free Database Recovery



**LAN-Free Database Recovery**

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**Data**  
Access

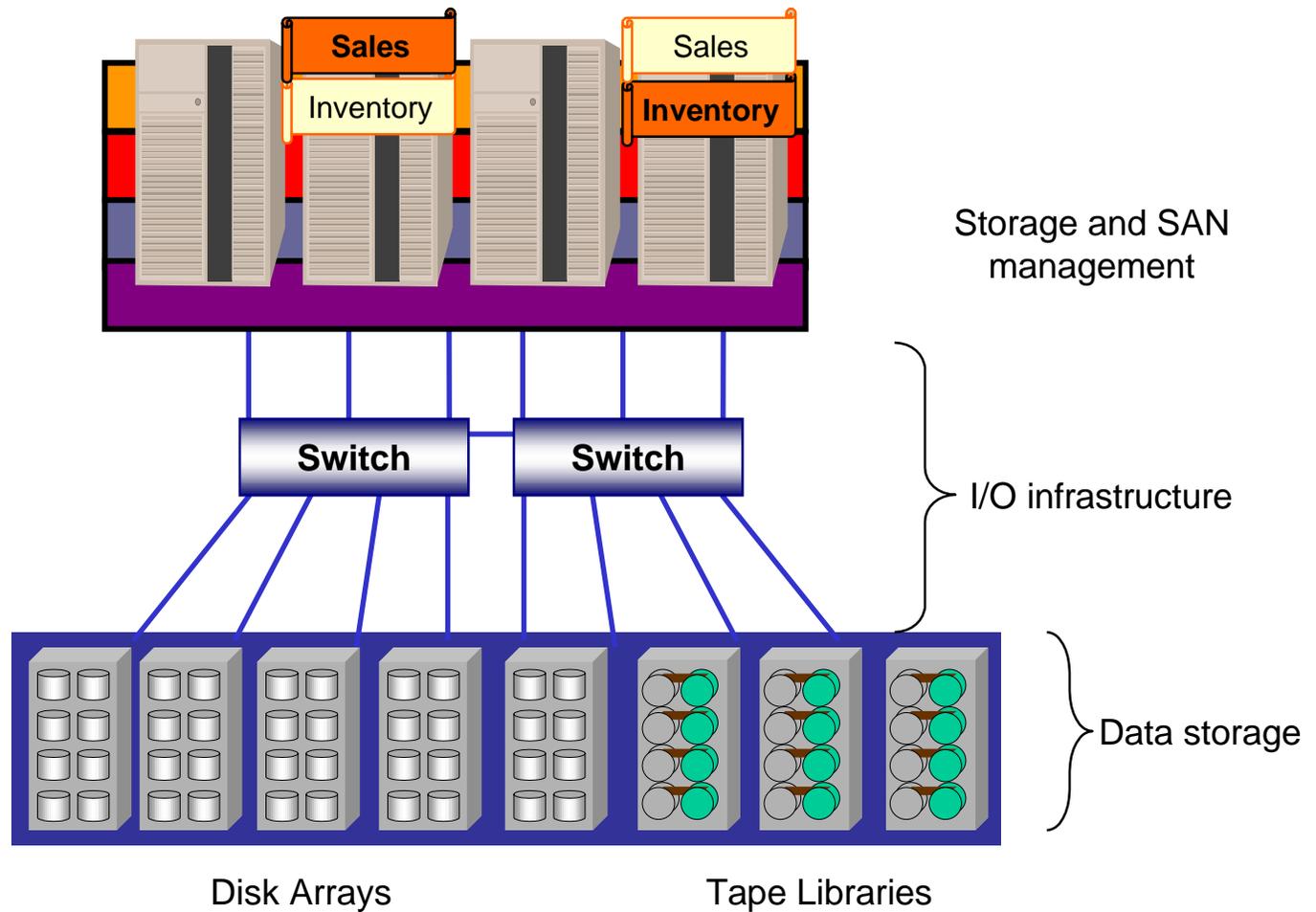


**Data**  
Protection



# Scalability

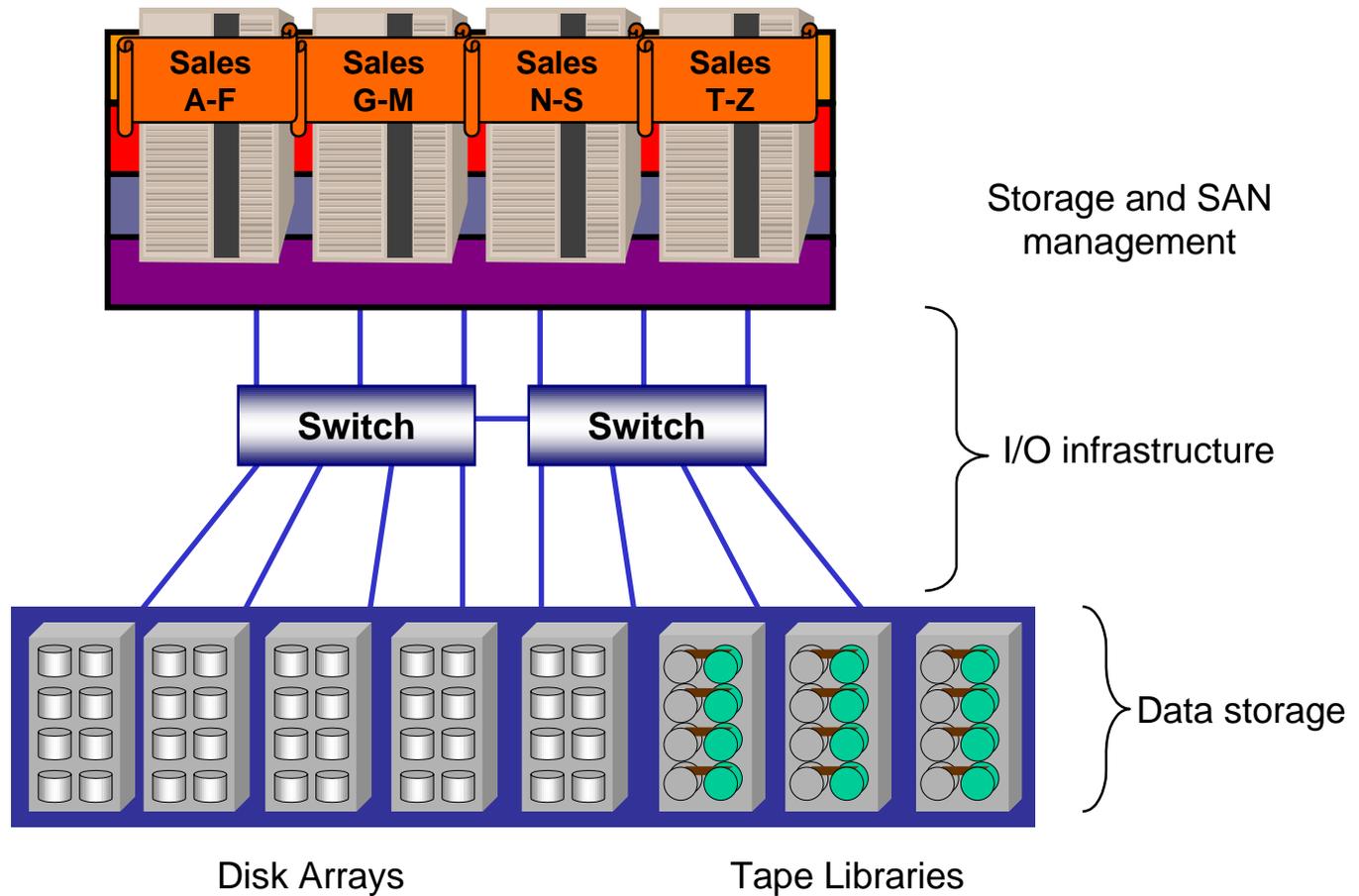
# Data Sharing



Data  
Access

Data  
Protection

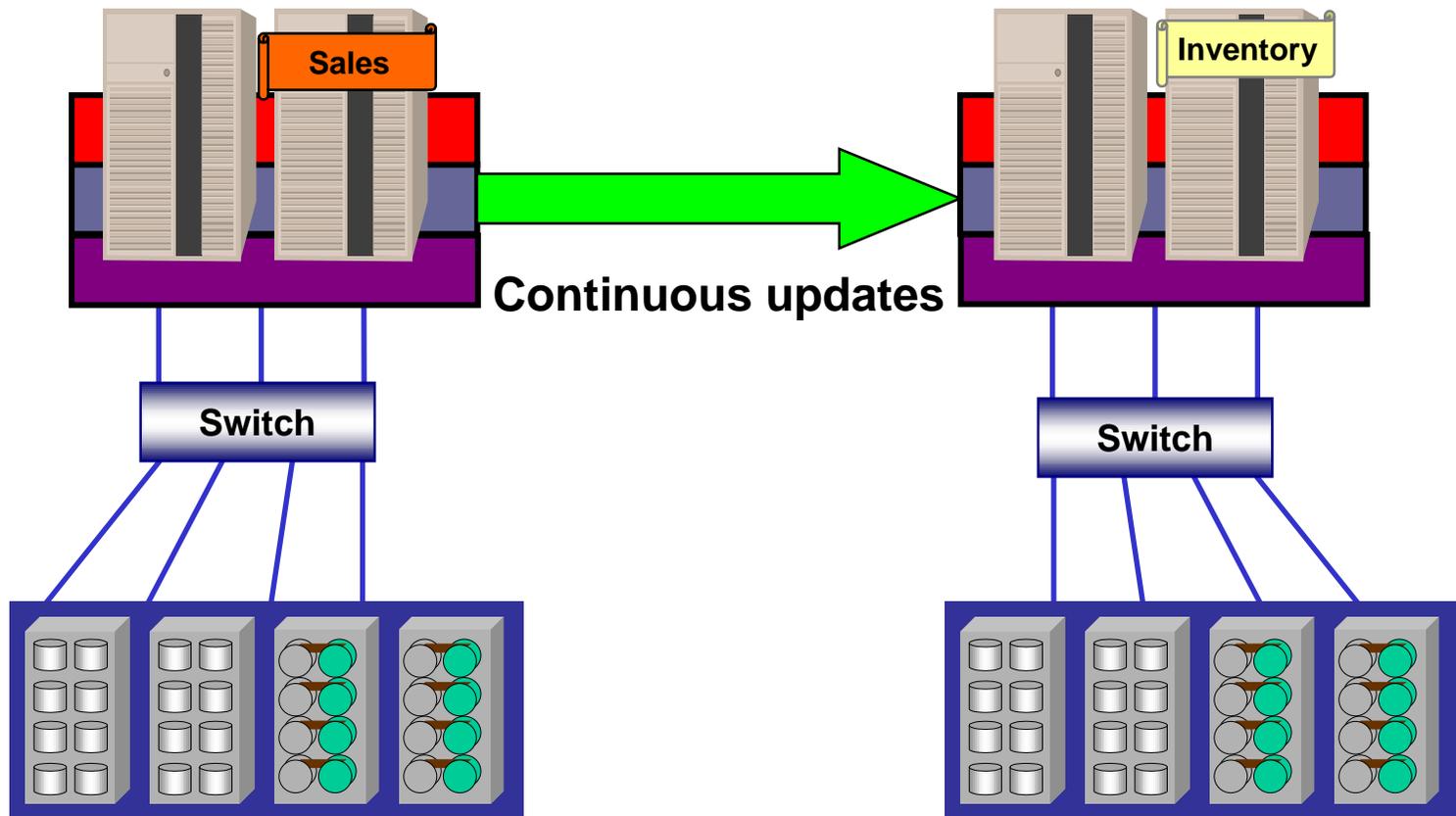
# Data Sharing



Data Access

Data Protection

# Offload Processing



Remote Data Sharing

Data  
Access

Data  
Protection

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**Data**  
Access

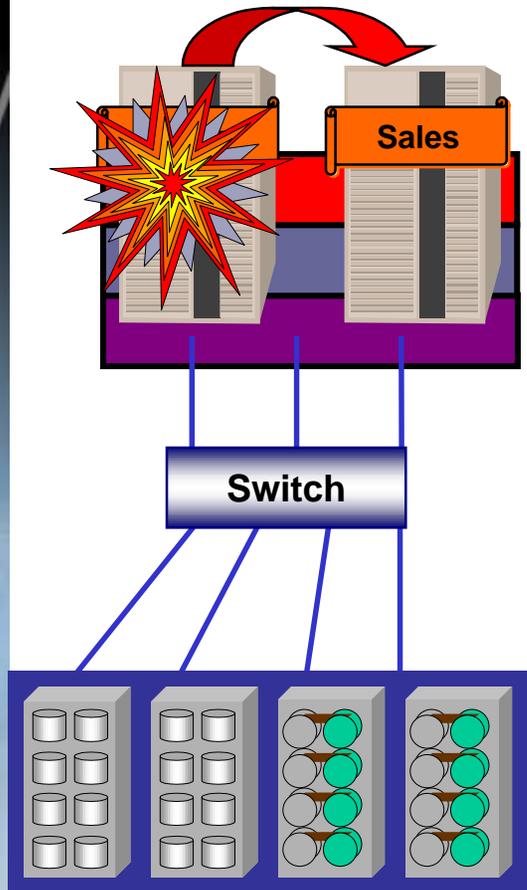


**Data**  
Protection



# Disaster Recovery: An Example

# Local Area Recovery

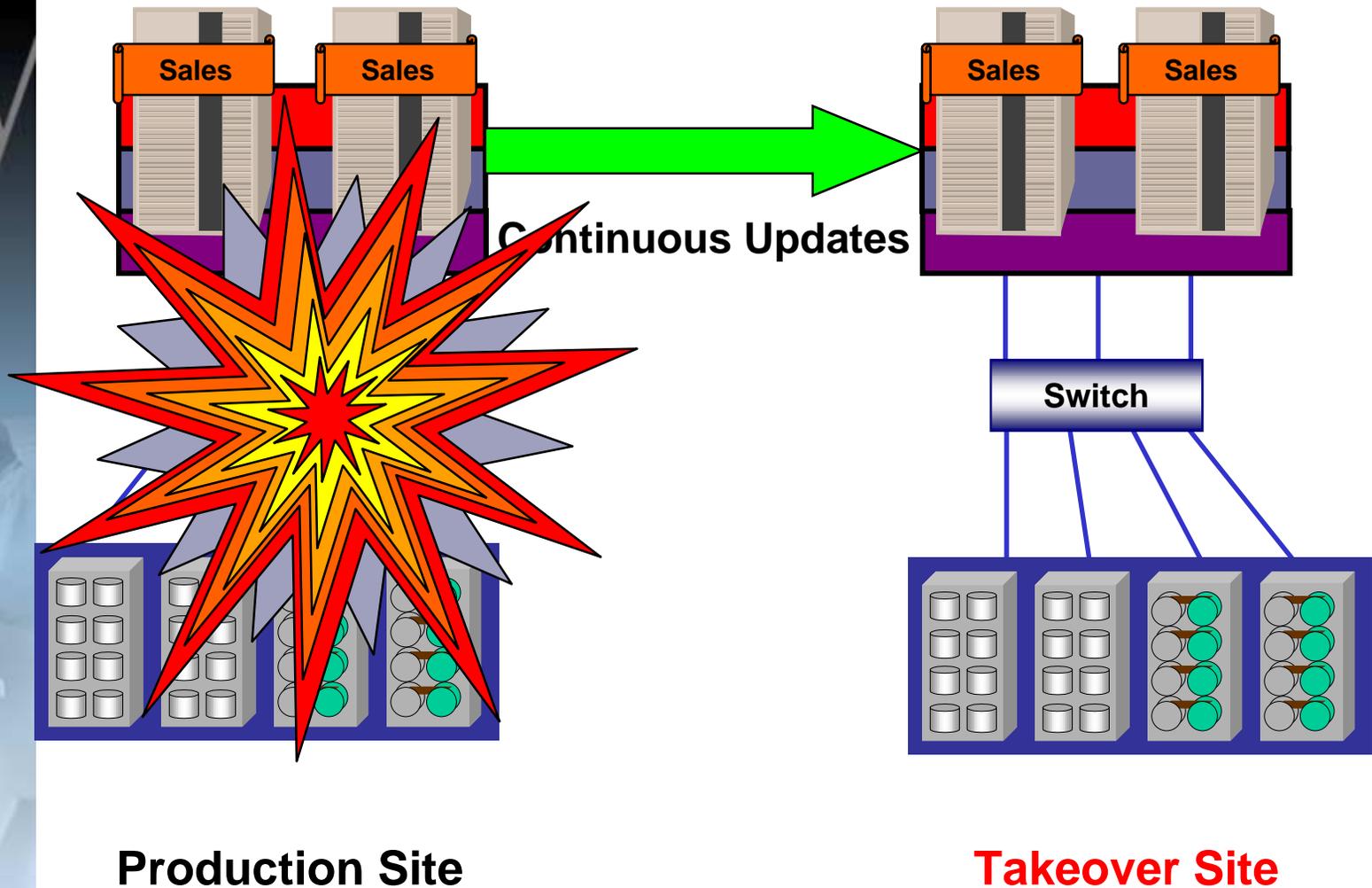


Data  
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**Production Site**

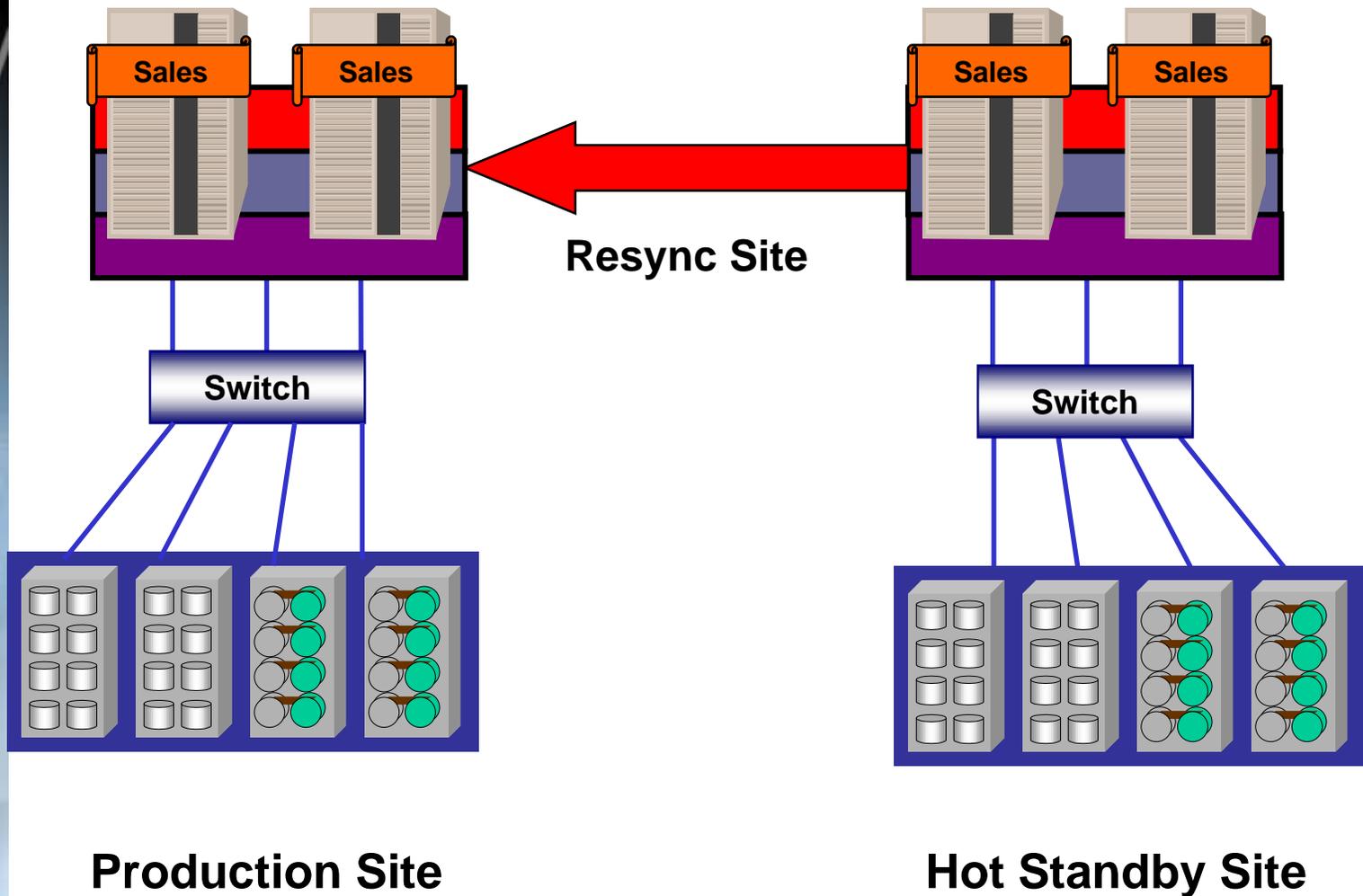
# Wide Area Disaster Recovery



Data  
Access

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# Wide Area Disaster Recovery



**Production Site**

**Hot Standby Site**

# Summary

- VERITAS provides a heterogeneous Data Availability Platform for Oracle.
- Customers need solutions that fit their needs and can change as their business needs change.
- VERITAS solutions simplify the management of database installations.
- VERITAS will continue to focus on enhancements for database applications.





# Questions?





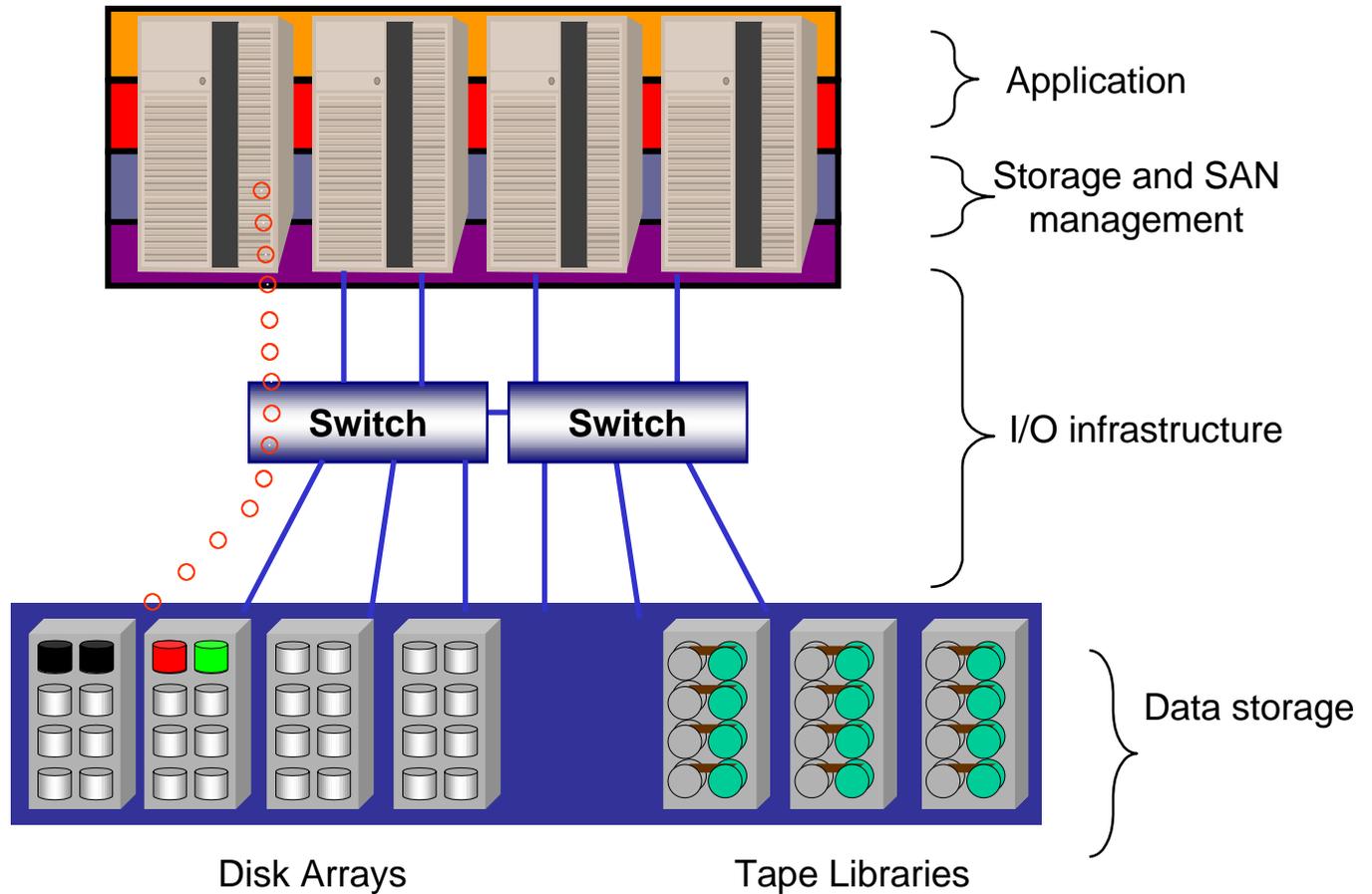
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# High Performance Database Recovery



Data Access

Data Protection

Data Protection and High Performance Recovery



# VERITAS Solutions for Oracle

Delivering continuous information  
*availability* through

Ease of management  
Increased performance  
Scaleable solutions

