

The Veritas logo features the word "VERITAS" in a bold, blue, serif font. The letters are set against a background of a large, stylized red arrow pointing downwards. The background of the entire slide is a complex, abstract composition of various elements: a computer monitor with a grid pattern, a keyboard, binary code (0s and 1s), and various geometric shapes and colors in shades of blue, purple, and red.

# VERITAS

## **Alternate Backup Methods for HP/UX**

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An Overview of Alternative  
Backup & Rapid Recovery Solutions

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# Agenda

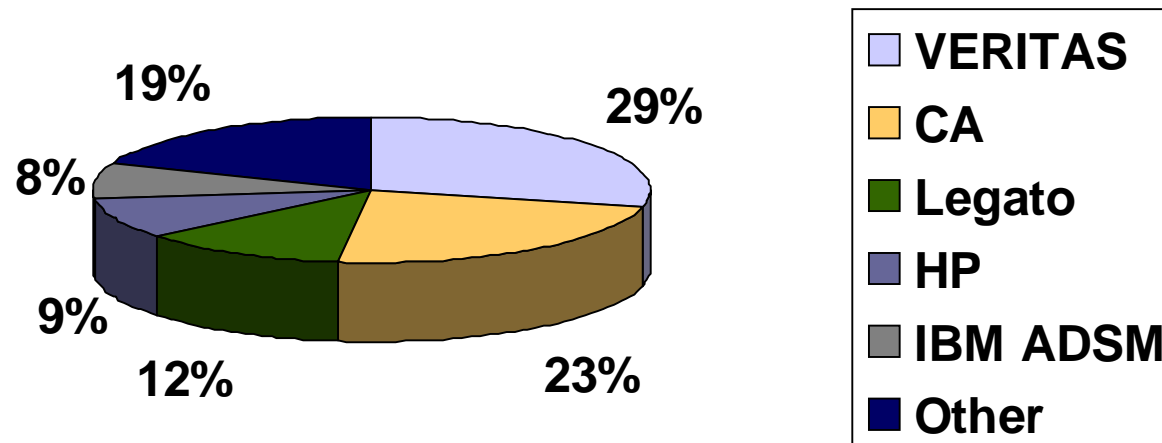
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- ▼ **VERITAS Overview**
- ▼ **Storage Issues**
- ▼ **Alternate Backup Methods**
- ▼ **Questions and Answers**

# VERITAS

- ✓ The only end-to-end application storage management software company in the world
- ✓ The #1 backup software company in the world
- ✓ Core technology embedded in Windows NT, HP/UX, etc.

## UNIX/NT Backup and Recovery Market



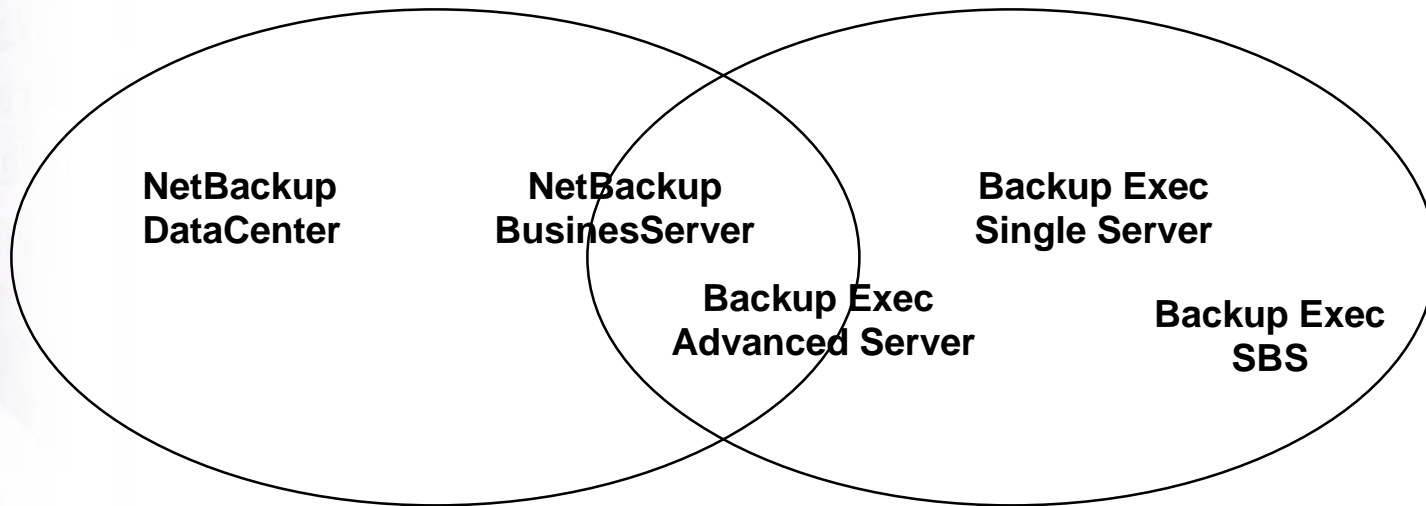
# VERITAS Backup Solutions



← Large Server (UNIX/NT)

Mid-size Server  
(UNIX/NT/NetWare)

Desktop to Small Server  
(Mostly NT/NetWare)



Telebackup



The background is a complex, abstract composition. It features a central computer monitor displaying a stack of three floppy disks. To the right, another monitor shows a grid of four circular icons. Below these, a keyboard is depicted in a perspective view. The entire scene is overlaid with a pattern of binary code (0s and 1s) and several large, semi-transparent arrows in shades of red and orange, pointing in various directions. The overall color palette is dominated by purples, blues, and greys, with the red/orange arrows providing a focal point.

# VERITAS

## Storage Issues

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# Storage Issues

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## Backup Window:

- ✓ **Non-existent - 24 by forever**
  - ✓ UNIX, Windows NT, NetWare
  - ✓ Oracle, Informix, Sybase, DB2, SQL Server, etc.

## Recovery:

- ✓ **Non-existent - 24 by forever**
  - ✓ Speeds and feeds
  - ✓ Simplification

## New hardware

- ✓ **New technologies such as SAN, NAS, Appliances**

## Amount of data:

- ✓ **Current technology cannot keep up**
  - ✓ Traditional backup to tape
  - ✓ Database transaction log recovery

# Storage Issues

Application	Industry	Average Hourly Loss
Brokerage Operations	Finance	\$7,840,000
Credit Card/Sales Auth.	Finance	\$3,160,000
Pay-Per-View	Media	\$183,000
Home Shopping (TV)	Retail	\$137,000
Catalog Sales	Retail	\$109,000
Airline Reservations	Transportation	\$108,000
Tele-Ticket Sales	Media	\$83,000
Package Shipping	Transportation	\$34,000
ATM Fees	Finance	\$18,000

Sources: Contingency Planning Research; Datamation



The background is a collage of digital and legal symbols. At the top center, a scale of justice is visible, with a red arrow pointing down from its top. Below the scale, the word "VERITAS" is written in a large, blue, serif font. The background also features a computer keyboard in the lower right, a large red arrow pointing up and to the right, and various binary code (0s and 1s) scattered throughout. The overall color palette is dominated by purples, blues, and reds.

# VERITAS

**The Solution:**

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**Alternate Backup/Recovery Methods**



# Alternate Backup Methods

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## Today

### ▼ SAN

- Being implemented by 20% of IT today

### ▼ NDMP

- Growing to \$5 billion market

### ▼ Frozen Image

- Hardware & software based

## Around the corner

### ▼ Virtual

- Light backup footprint, addresses recovery

### ▼ 3PC

- The next big thing or big hype?

# SAN

# SAN

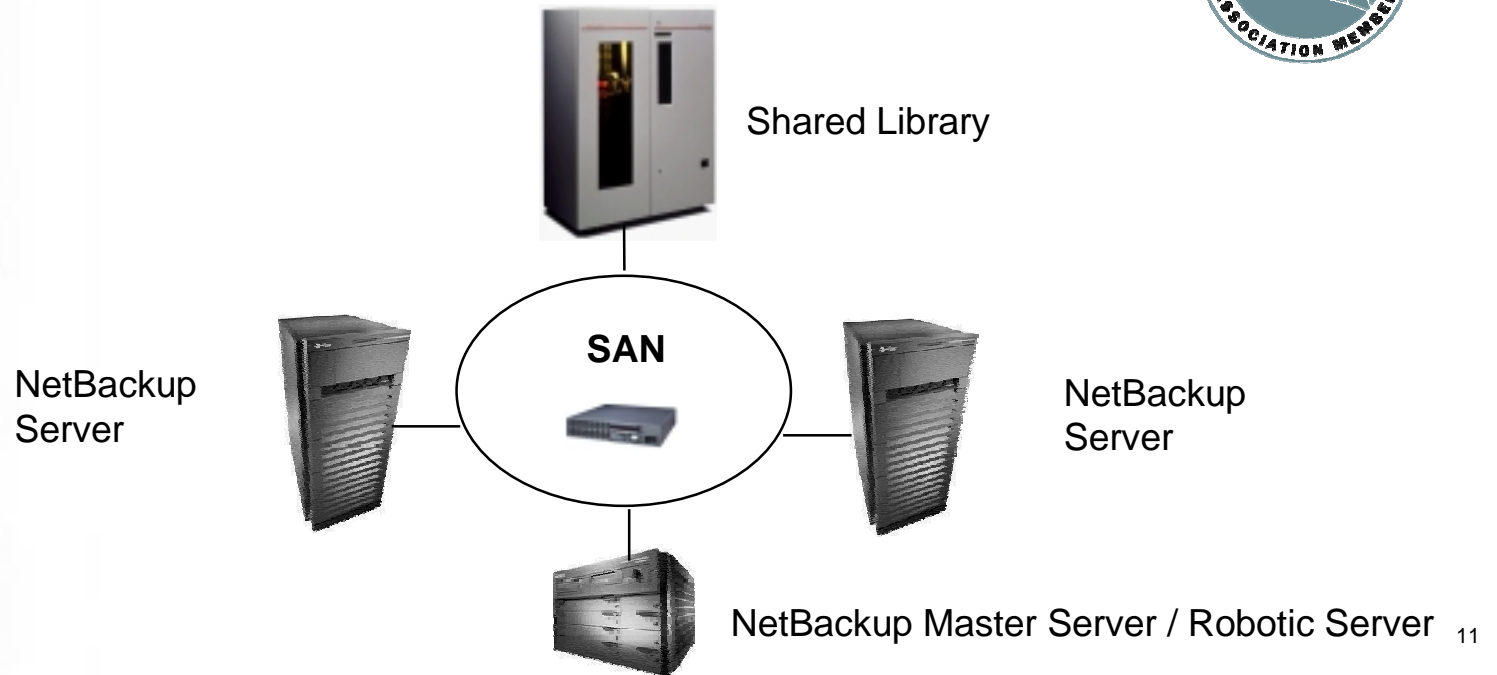
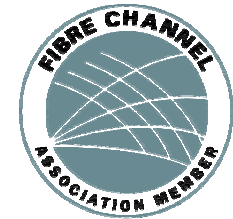
## SAN - NetBackup Shared Storage Option

▼ Support for switched fibre environments

- Heterogeneous support
- Dynamic tape drive sharing
  - Via SAN and switched SCSI environments



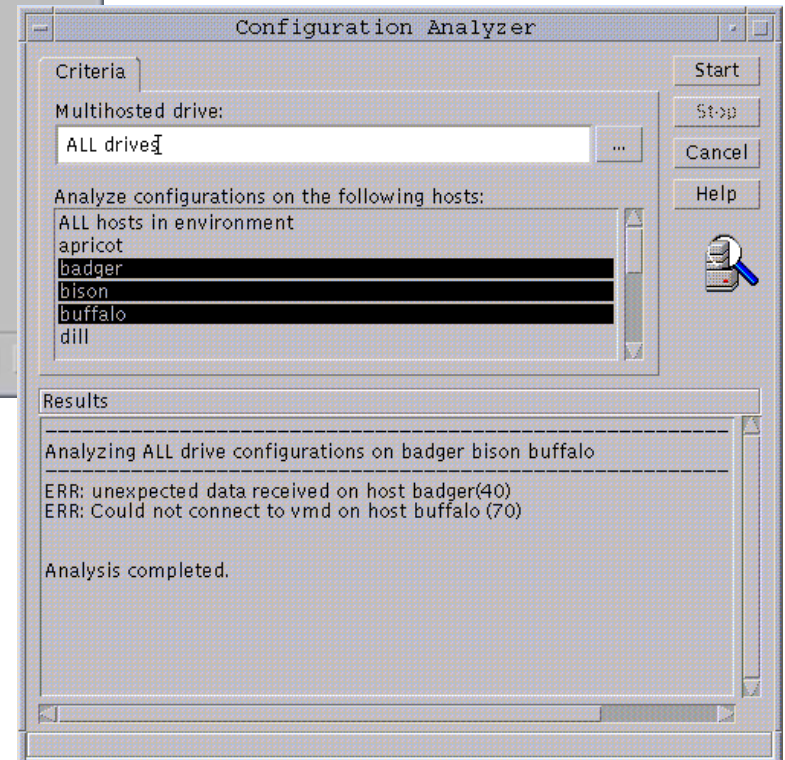
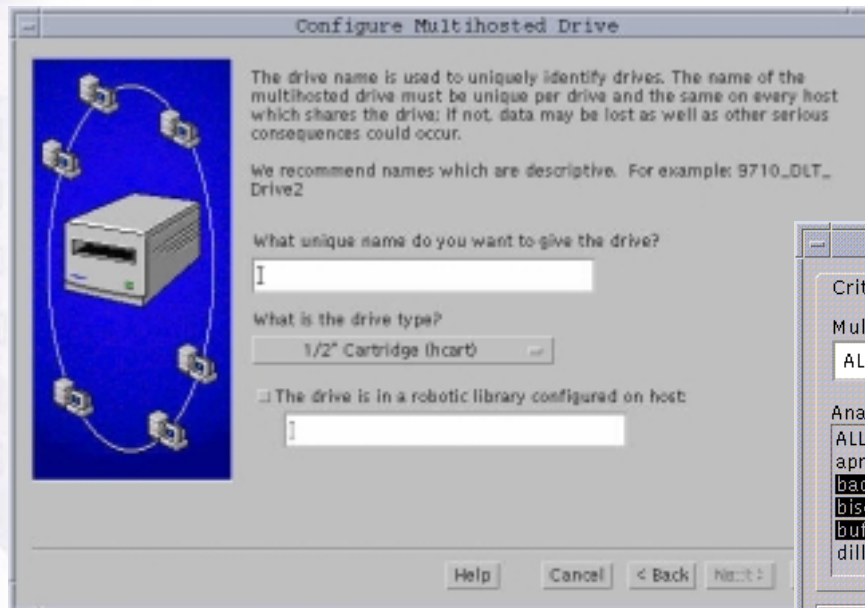
SNIA  
Storage Networking Industry Association





# SAN

## SSO's intuitive administration interface



# NDMP

# NDMP

## Backup and Restore Flexibility



Local Area Network





# Frozen Image

# Frozen Image

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## Software

- ▼ NetBackup FlashBackup
- ▼ NetBackup for Oracle Advanced Agent
- ▼ NetBackup and VxVM

## Hardware

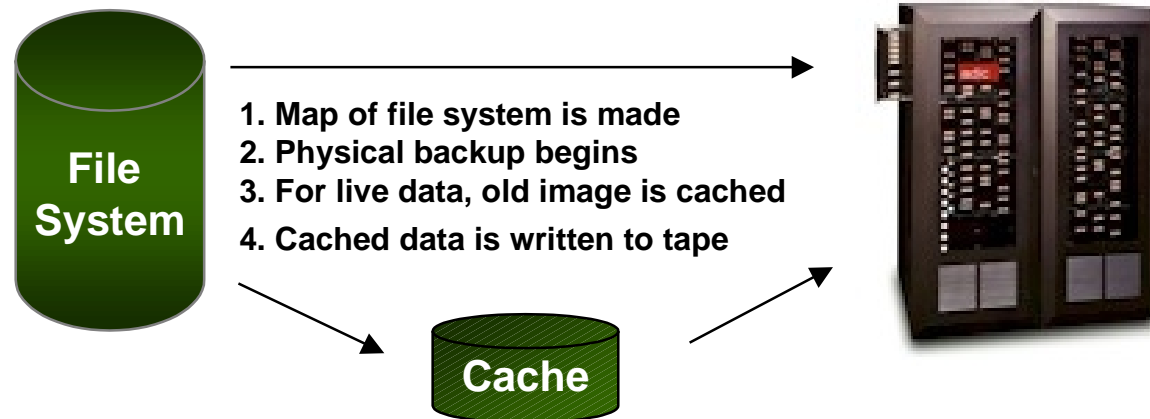
- ▼ EMC Timefinder
- ▼ HP xp256

# FlashBackup

## Backup and Restore Flexibility

### ▼ FlashBackup for HP-UX

- Full or incremental “Snapshot” backup of live file system
- Physical backup, low overhead
  - Ideal for backing up thousands or millions of small files
- Supports JFS or VERITAS File System (VxFS)
- Restore individual files or directories
- Remote or local file system



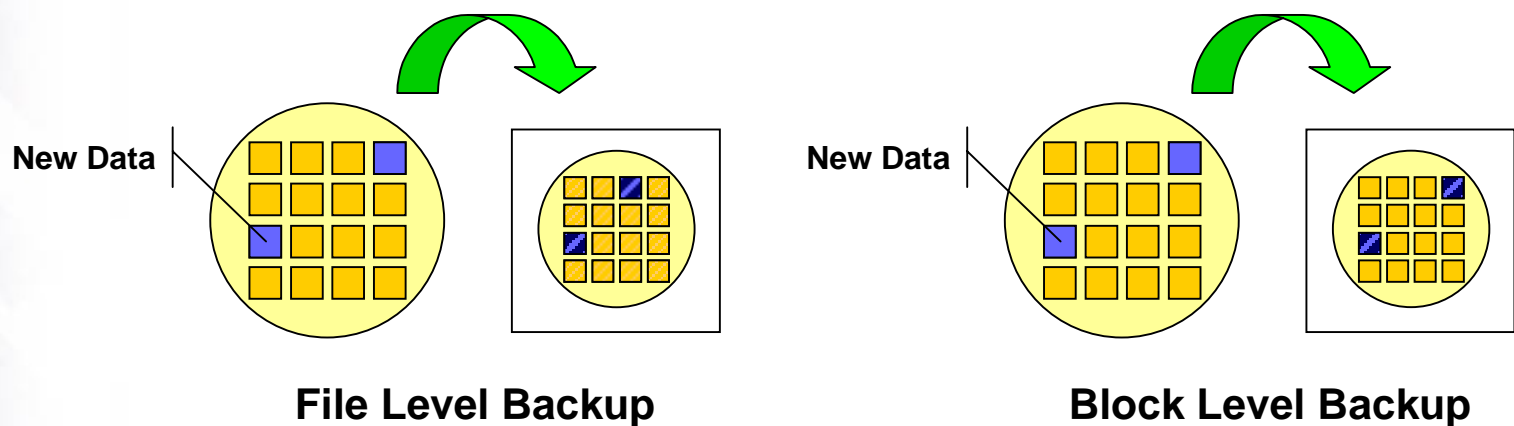


# NetBackup for Oracle

## Block Level Incremental Backup

*Breakthrough technology that redefines database backup*

- ▼ FAST - 10-100X faster than File Level backup
- ▼ HIGH CAPACITY - Protects the largest multi-terabyte databases.
- ▼ EFFICIENT - Backs up changed blocks only, min. disk I/O & server overhead.
- ▼ SAFE - Non-disruptive. Tested and endorsed by Oracle.
- ▼ EASY - Simple as file backup, only faster. Integrated with Oracle8 recovery manager.
- ▼ INEXPENSIVE - Fraction the cost of alternatives. Use any disks and less of them.



# Hardware

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## EMC Timefinder

### ▼ No-impact backup

- Expensive
- Does little to help recovery

## HP xp256

### ▼ No-impact backup

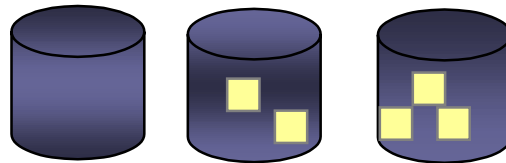
- Proven
- Does little to help recovery

# Virtual Backup

# Virtual Backup

## NetBackup & VxFS for HP/UX

### ▼ Very light backup footprint



12:00    12:15    12:30    .....

### ▼ Greatly improves recovery

- Fewer transaction logs
- Checkpoint “registered” as backup
- Tape backup taken at user defined intervals
- No learning curve



# 3PC

# 3PC

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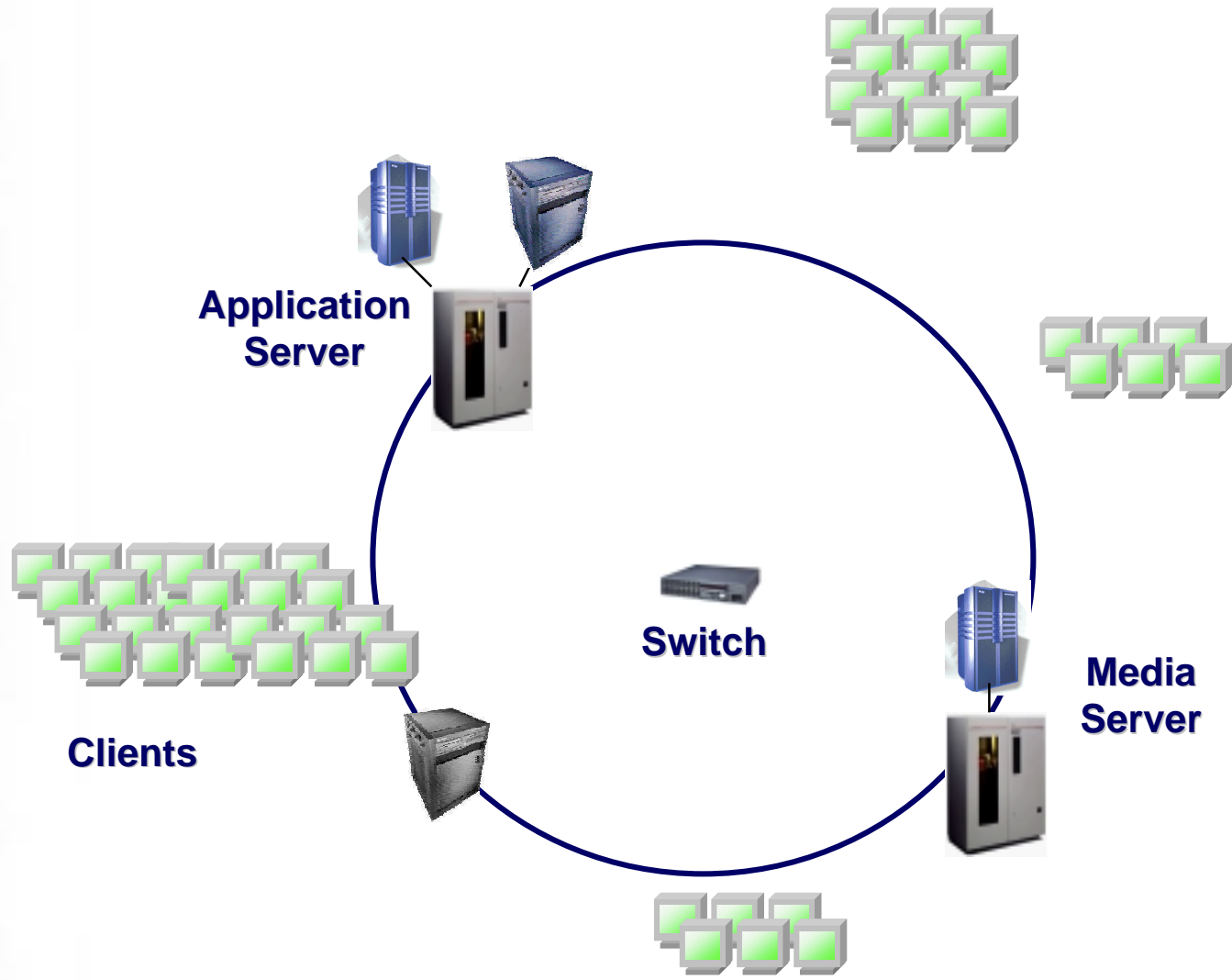
## Benefits:

- ✓ No backup foot print
- ✓ Leverages SAN

## Disadvantages:

- ✓ Limited platforms
- ✓ Limited applications
- ✓ Complexity
- ✓ Chicken & egg (e.g. hardware)

# 3PC



# Summary

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## SAN:

- ✓ LAN Free backup and recovery
- ✓ Cost, expertise

## NDMP:

- ✓ Fast, server to tape
- ✓ Limited scalability

## Frozen Image:

- ✓ Hardware or software?
- ✓ Doesn't really address recovery

## Virtual:

- ✓ Light backup footprint, fast recovery
- ✓ Requires VxFS

## 3PC:

- ✓ Light backup footprint, no benefit to recovery



# Questions?

**partners**

**vision**

**solutions**

PARTNERS

VISION

SOLUTIONS