

HP VersaStor and Brocade Fabric Application Platform Simplify Storage Management

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Solutioneer

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Storage strategy

- Begin building the adaptive infrastructure today
 - Modular approach grows with you while protecting your investment
 - Install an HP Storage Area Network (SAN)—use OpenView Storage Area Manager as the consolidated management console
 - Add CASA today, providing storage services for heterogeneous environments
 - Next, achieve enterprise scale by implementing VersaStor technology on both CASA and intelligent switches
 - In the future, easily integrate new storage networking technologies

ENSA *extended* Architecture

Active intelligent management

Application integration

Data services

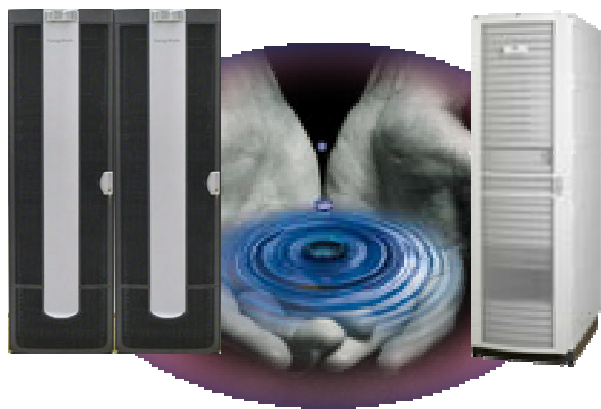
Virtualization

Networked
storage

Manage it all with HP OpenView SAM!

HP OpenView Continuous Access Storage Appliance

- A replication appliance leveraging a foundation of virtualization to deliver cost effective replication across heterogeneous storage and server environments
- Increased utilization of storage assets
- Consolidated, standardized, and simpler management
- Reduction/elimination of application downtime due to storage maintenance activities
- Snapshots, mirroring, data migration, and data replication across heterogeneous devices



HP CASA benefits

- Increased operational efficiency
- Increased data availability and data recovery
- Increased flexibility and agility for change

A new economy of scale for storage



Storage utilization

- Poor utilization is the major cause of high storage costs
- CASA and Brocade switches provide an architecture for greater operational efficiency

Common method:

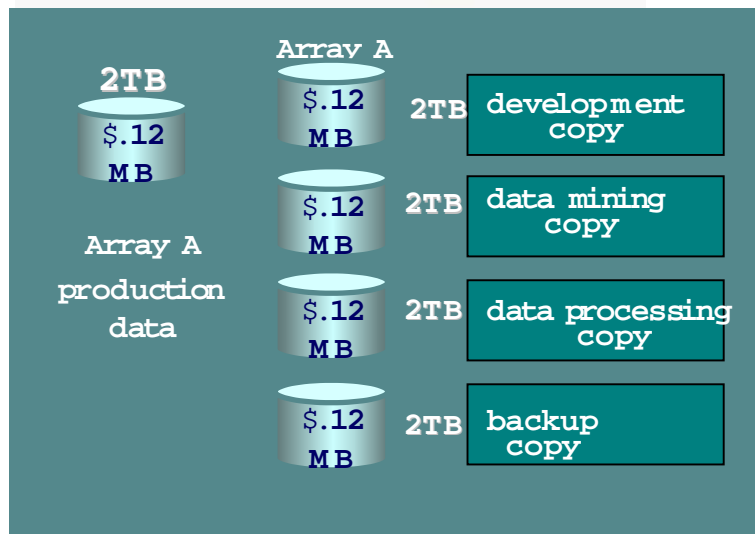
Total capacity:	20TB
Storage efficiency:	40%
Growth rate:	50%
New Storage:	10TB
Costs (\$.10/MB):	\$ 1M
End of year free space	18TB

Better method:

Total capacity:	20TB
Storage efficiency:	40%
Free capacity:	12TB
Growth rate:	50%
Data growth:	4TB
	8TB

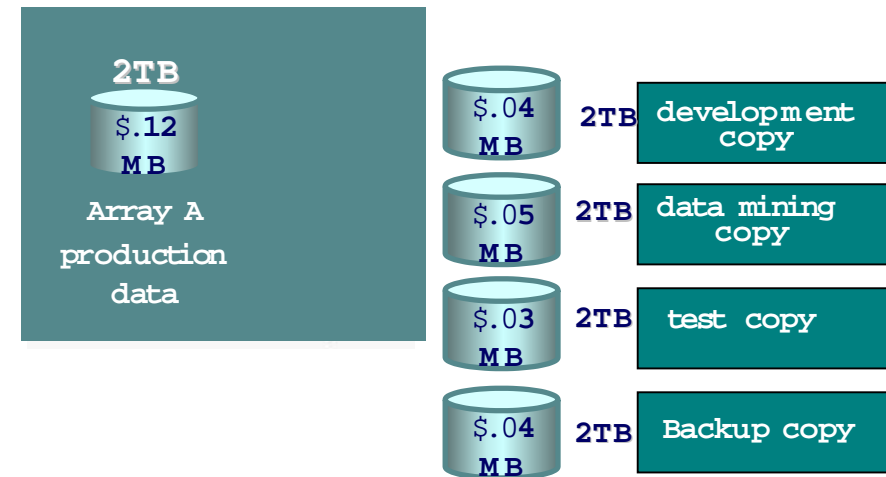
Improving storage spend

- CASA and Brocade switches enable a diverse storage environment to:
 - Improve space efficiency
 - Align data requirements to storage attributes



**\$ 1.2 Million
for 10 TB**

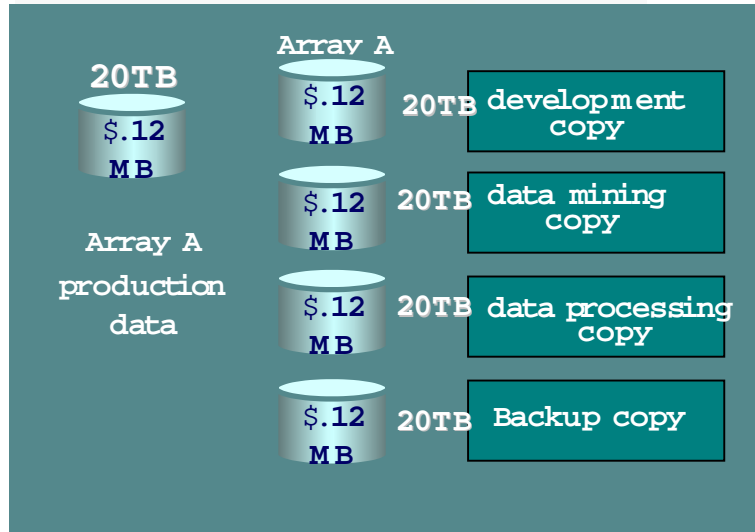
**Over \$1/2M
savings**



**\$ 685 Thousand
for 10 TB**

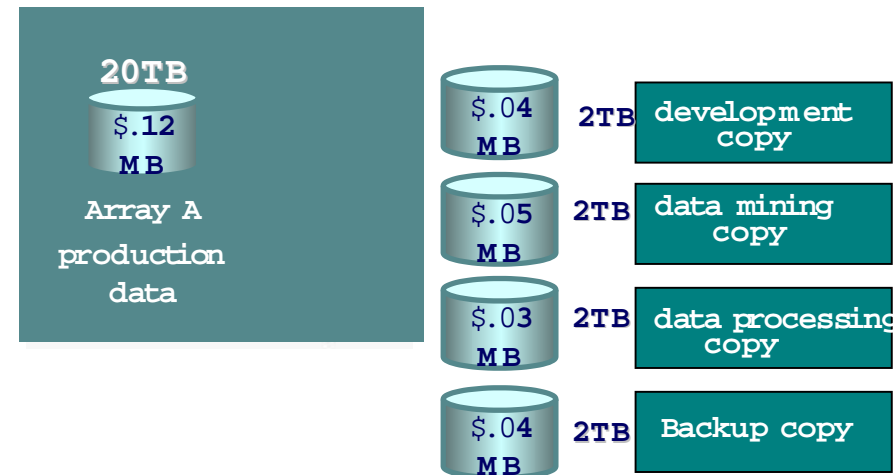
Value of CASA vsnap

- Snapshot technology further improves capacity requirements for database copies



**\$ 12 Million
for 100 TB**

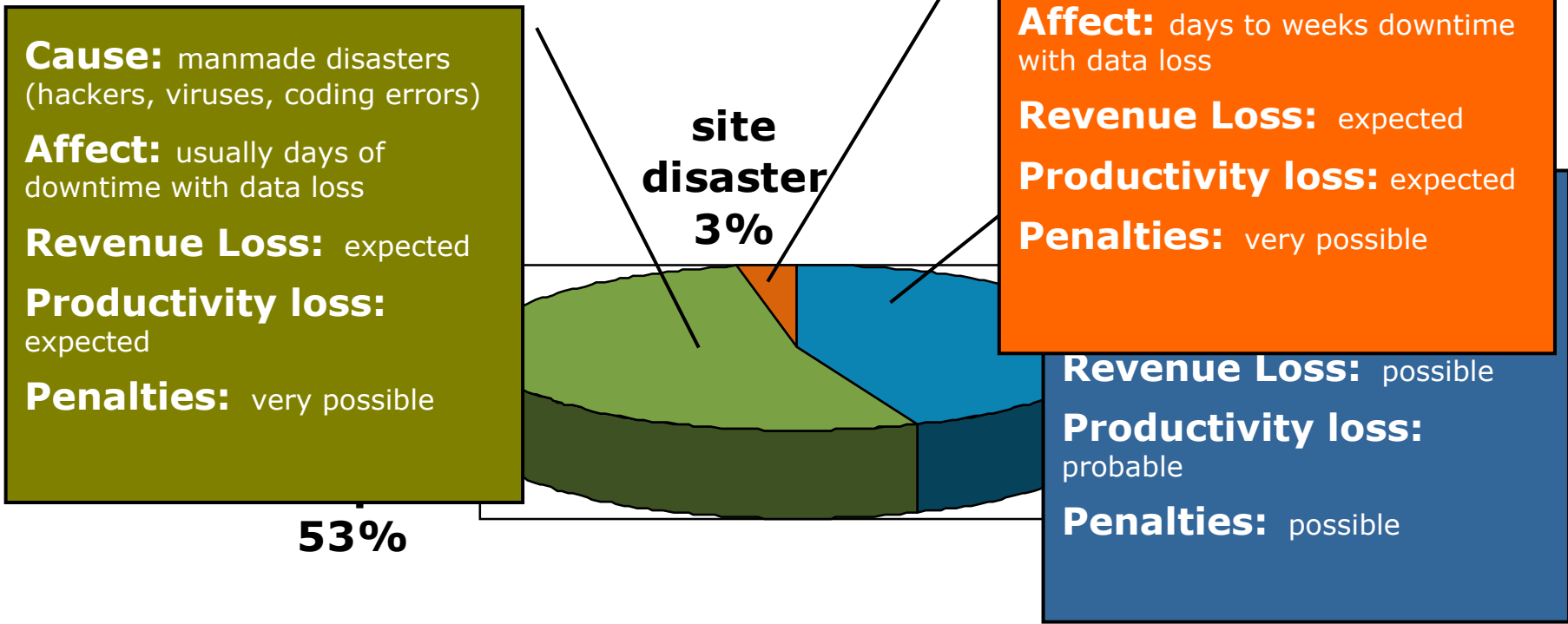
**Over \$ 9M
savings**



**\$ 2.7 Million
for 28 TB**

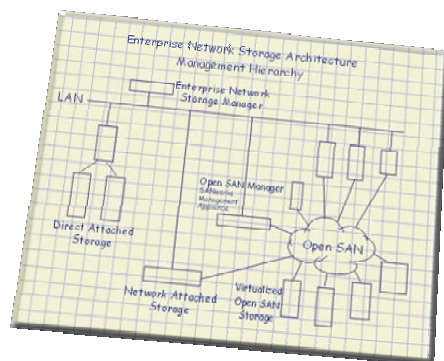
Cause of downtime

- Manmade disasters represent over 50% of downtime
- In most cases, mirroring will not provide a data recovery from a manmade disasters



HP and Brocade: Agility and flexibility

- Business requirements are not static
- Response to changes in business requirements must be more dynamic
- Most businesses are planning to evolve to a Utility model in the future



SilkWorm Fabric Application Platform

- Line-rate storage application processing— nearly 1 million Virtual I/O's per system, 60K per port
- Multi-protocol at every port
- Fully interoperable and manageable with existing SilkWorm family of products



Industry's first intelligent platform for fabric-based applications

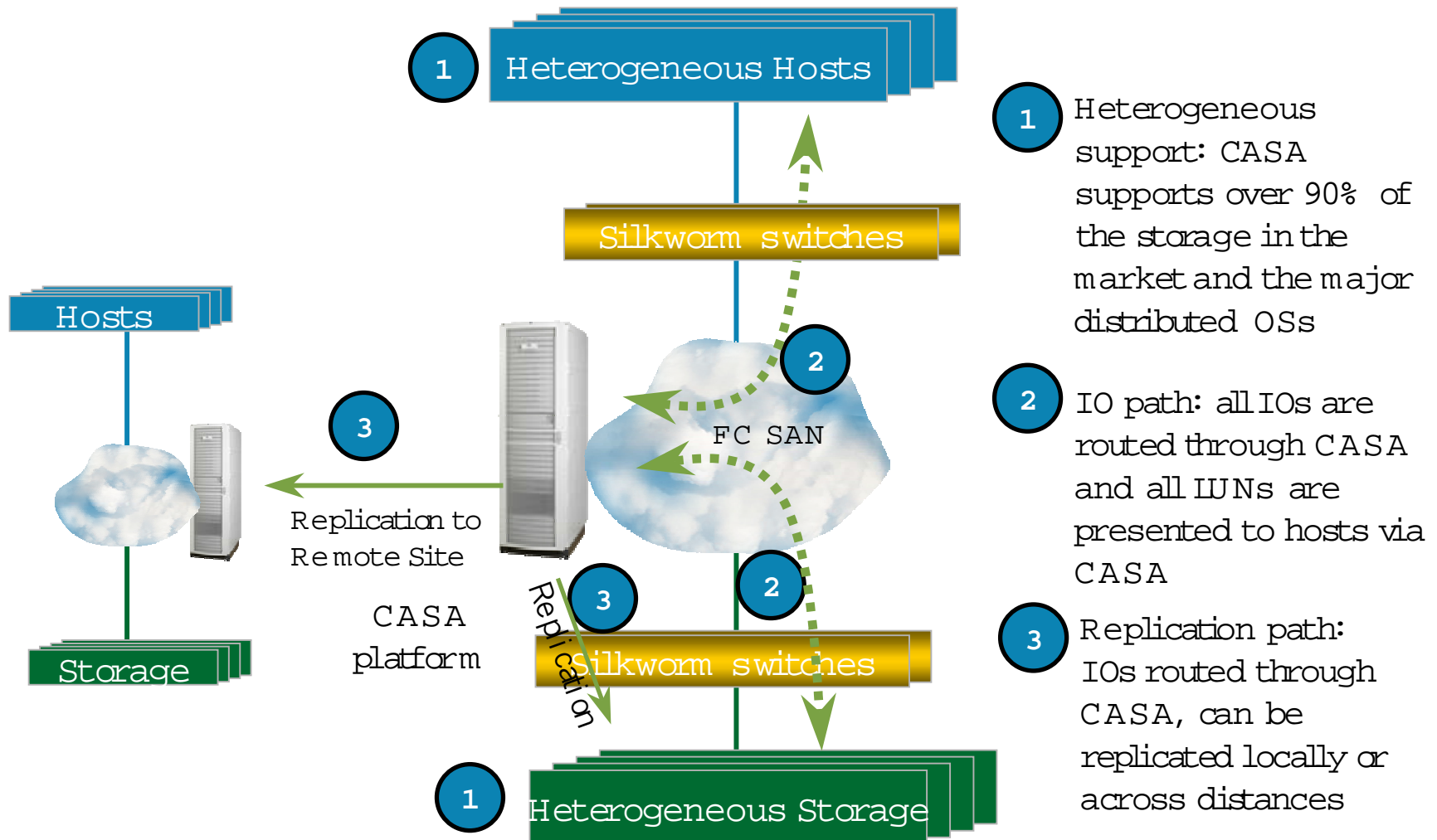


**16-port SilkWorm
Application Platform (AP)
SW 7420**

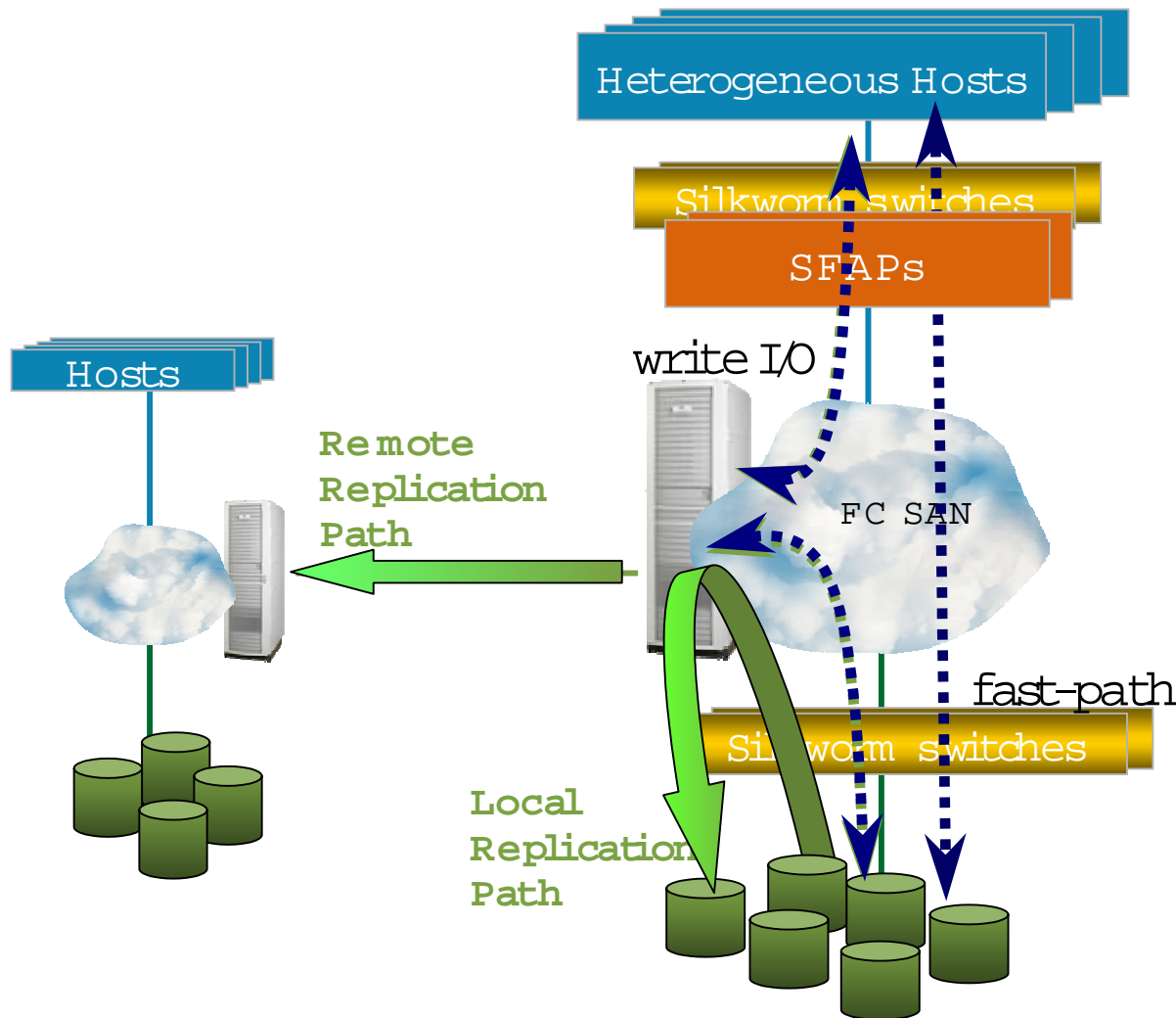
**AP Blade for
SilkWorm 12000**
•FCIP/iSCSI option
•I-Switch option



CASA implementation



Agility and flexibility



- Connect heterogeneous storage into a consolidated storage domain
- Dynamically adapt data availability within the storage environment
- SFAPs integrated into storage architecture to provide 3x scale
- Protect performance by intelligently directing traffic based on services applied

Summary



HP leads the industry in storage virtualization

HP and Brocade are delivering solutions today

HP and Brocade are actively working on a future
that protects current investments



Interex, Encompass and HP bring you a powerful new HP World.

