

HP D2D & STOREONCE OVERVIEW

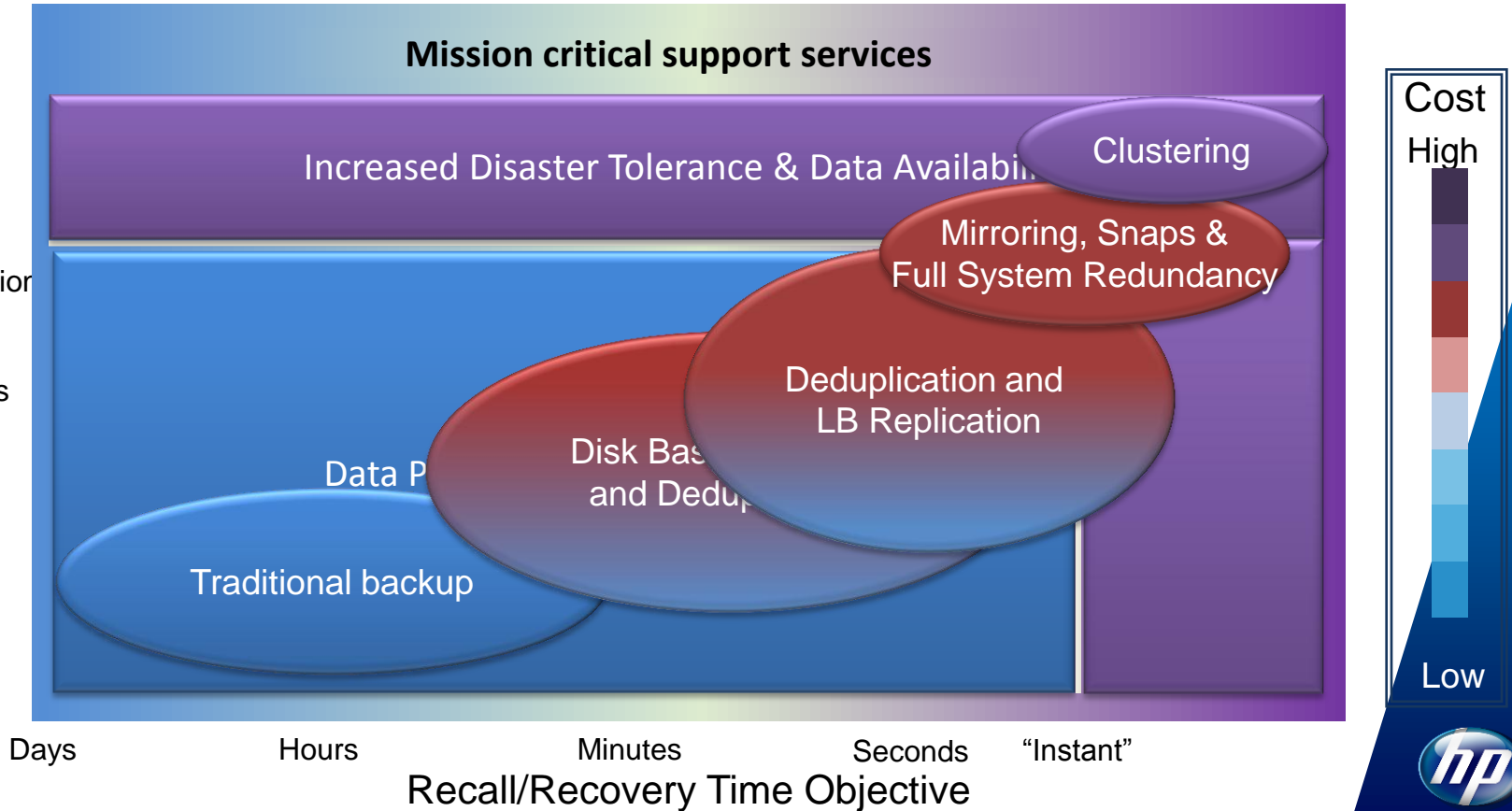
Robert Clifford

Pre-Sales Storage Consultant

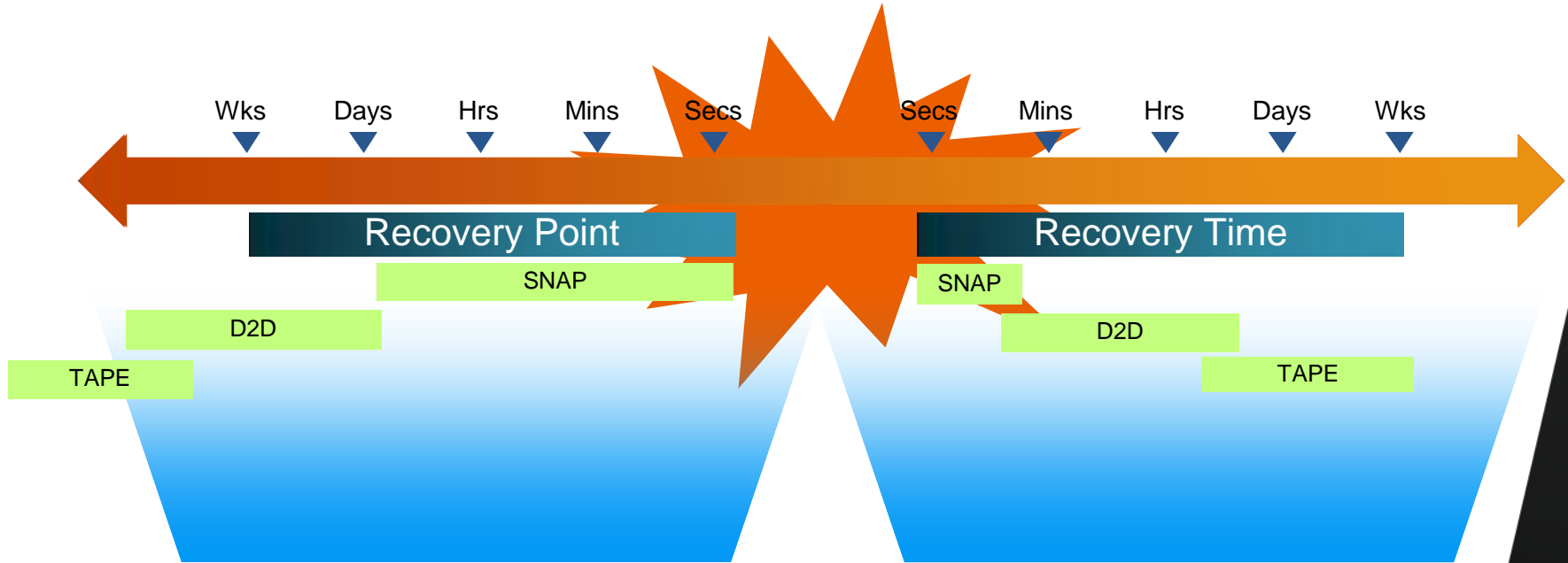


Let's put it in context..

Data loss (Recovery Point Objective)



DETERMINE YOUR RECOVERY NEEDS



RECOVERY POINT OBJECTIVE (RPO)

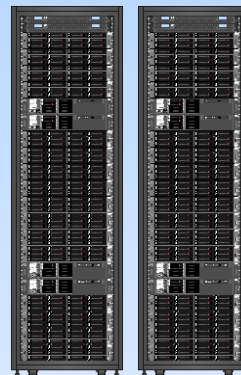
Where in the data stream you need to recover information
(How much data can you afford to lose)?

RECOVERY TIME OBJECTIVE (RTO)

How quickly you need to recover failed applications
(How long can you be offline)?

INTRO TO D2D

- Backup Appliance (Hardware with StoreOnce)
- Proliant technology
- StoreOnce is a real product with a strong futures message
- All HP IP
- Four product series 2500, 4100, 4300, 6200



STOREONCE: WHAT IS IT?

HP StoreOnce cleverly eliminates duplicate data to reduce the amount of backup data to be stored on disk by typically up to 20x

- Compares blocks of data being written to the backup device with data blocks previously stored.
- If duplicate data is found, a pointer is established to the original data.
- This removes, or “deduplicates,” the redundant blocks.
- For normal business data sets, a deduplication ratio of 20:1 might be expected after a period of > 3 months
- HP D2D Backup Systems allow unique data to be compressed following deduplication and prior to storing to disk

Backup 1



Backup 2



Backup 3



Backup 4



Backup n



Unique blocks
Stored on D2D



DATA REPLICATION THAT IS NETWORK EFFICIENT

Site A



1. Backup to D2D
Source
D2D Backup System



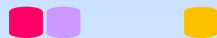
2. Deduplication



3. Replication of
changed data
blocks between
backup A and B



WAN Link

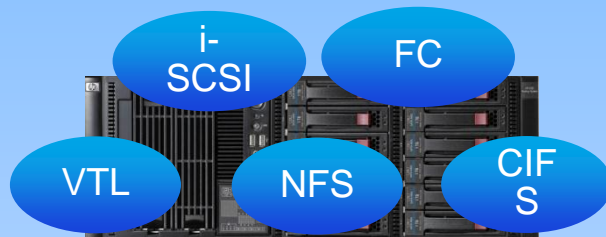


Site B

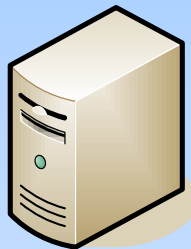
4. Replicate to target
Target D2D
D2D Backup System



DOES D2D TIE ME IN?



AIX /
Windows /
Linux / Solaris
/ HP-Ux /
Netware



CA ArcServe, &
other ISV's



Any Tape
system

Any Storage
system

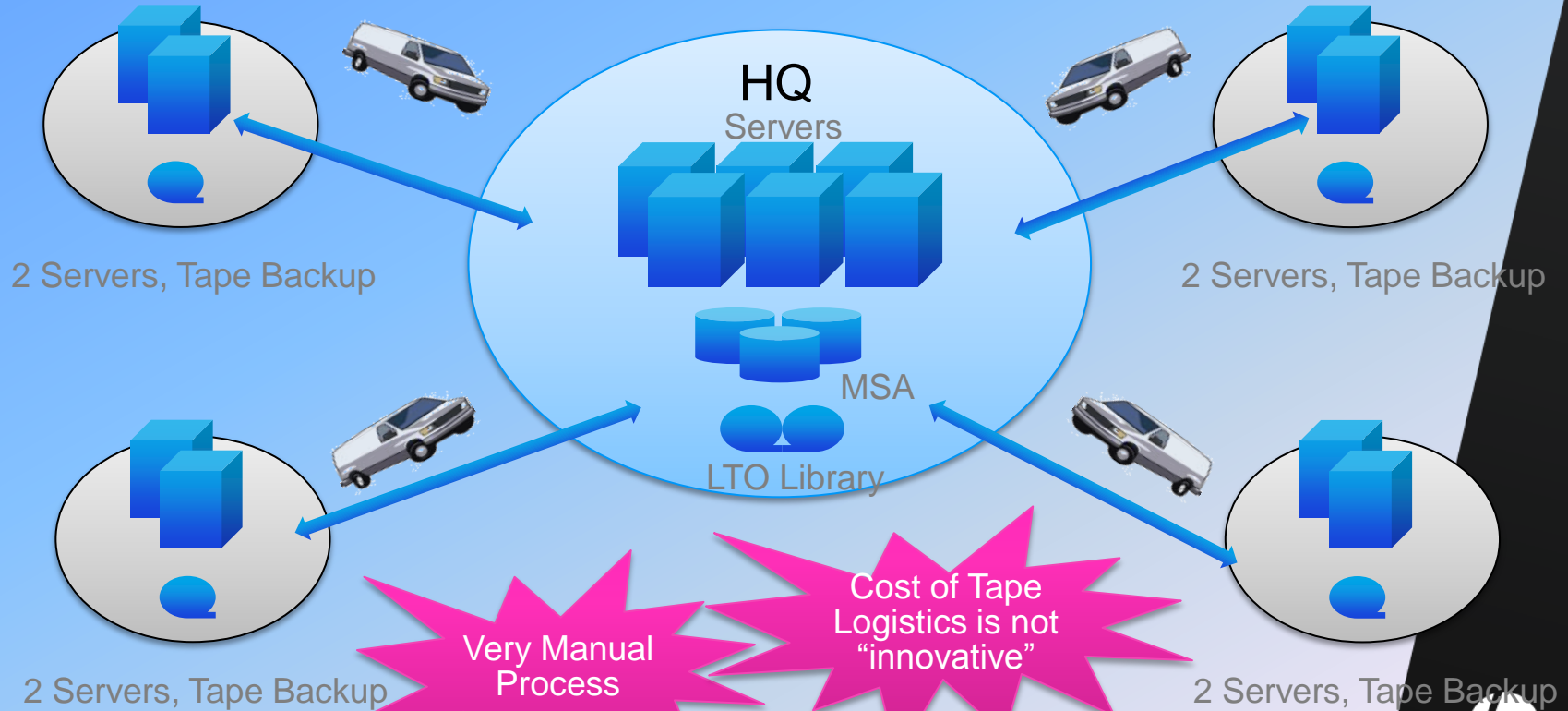


TYPICAL USES



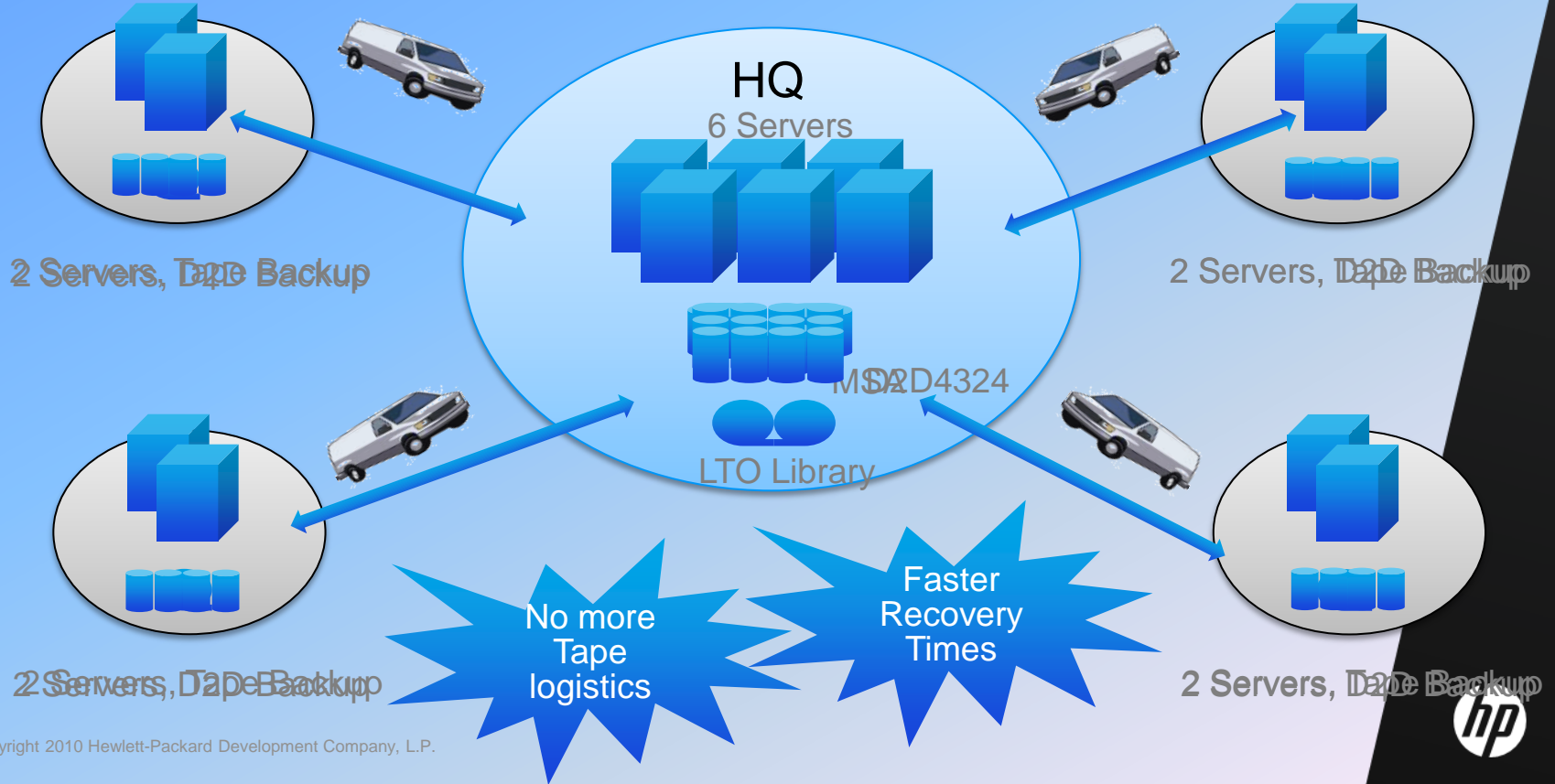
EXAMPLE ONE

– Centralised Backup



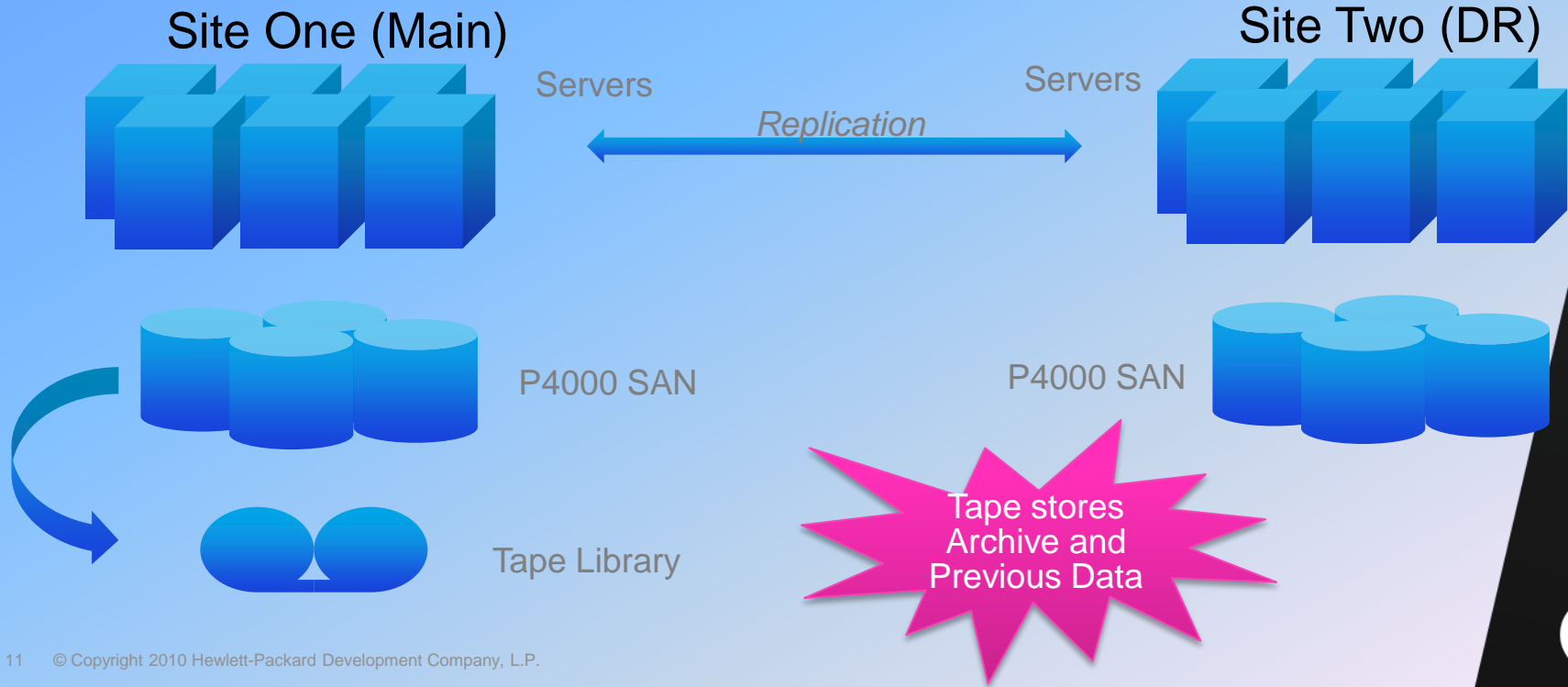
EXAMPLE ONE

– Centralised Backup



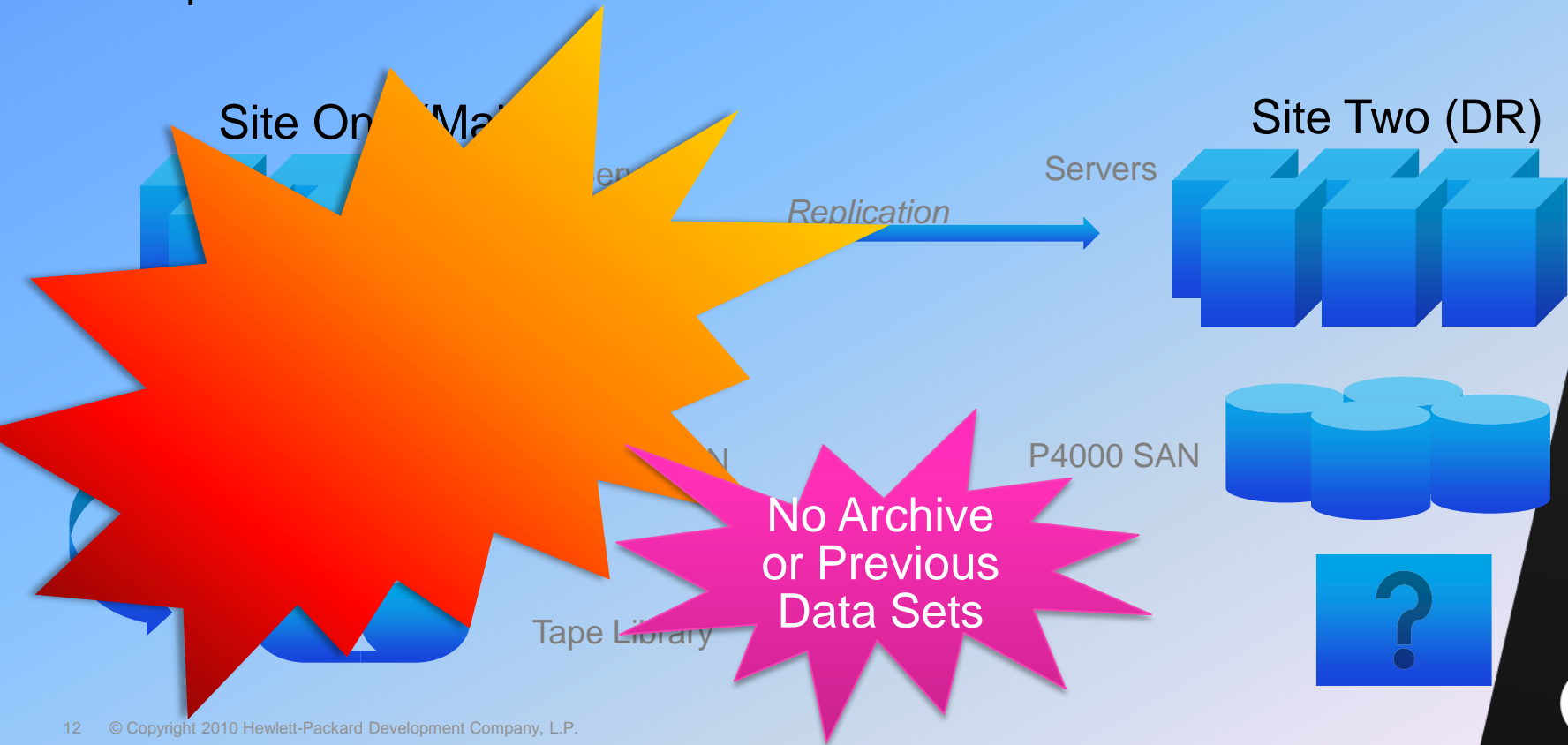
EXAMPLE TWO

– Replication



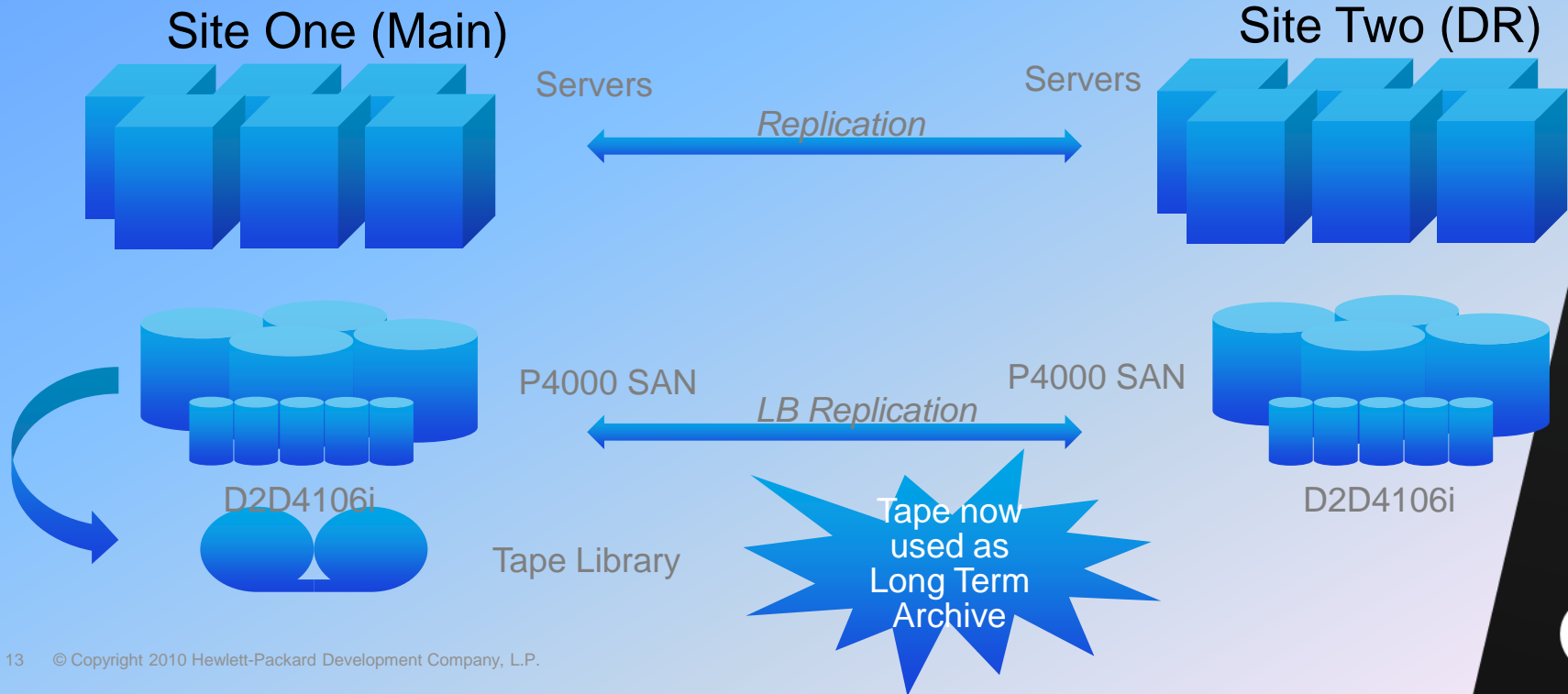
EXAMPLE TWO

– Replication



EXAMPLE TWO

– Replication



PRODUCT SPECIFICATION

<http://www.youtube.com/watch?v=fXmuXG6SBqA>

HP D2D Family Video



HP STOREONCE DISK-BASED DATA PROTECTION

Features

- HP StoreOnce Deduplication
- 64-bit architecture
- 1GbE & 10GbE & 8Gb FC
- VTL & NAS (NFS & CIFS) backup target
- D2D Replication Manager software
- HP SIM support
- OST Support

D2D2500 Series

- Entry-level - choice of 1.5 & 3 TBs usable

D2D4106 Series

- 4.5 to 9 TBs usable with upgrade

D2D4112

- 9 to 18 TBs usable with upgrade

D2D4312

- Scalable to 36 TBs usable

D2D4324

- Scalable to 72 TBs usable

B6200



- Scalable to 512 TBs usable

All feature HP StoreOnce deduplication, data replication and offer NAS or VTL targets for backup

HP D2D BACKUP SYSTEMS



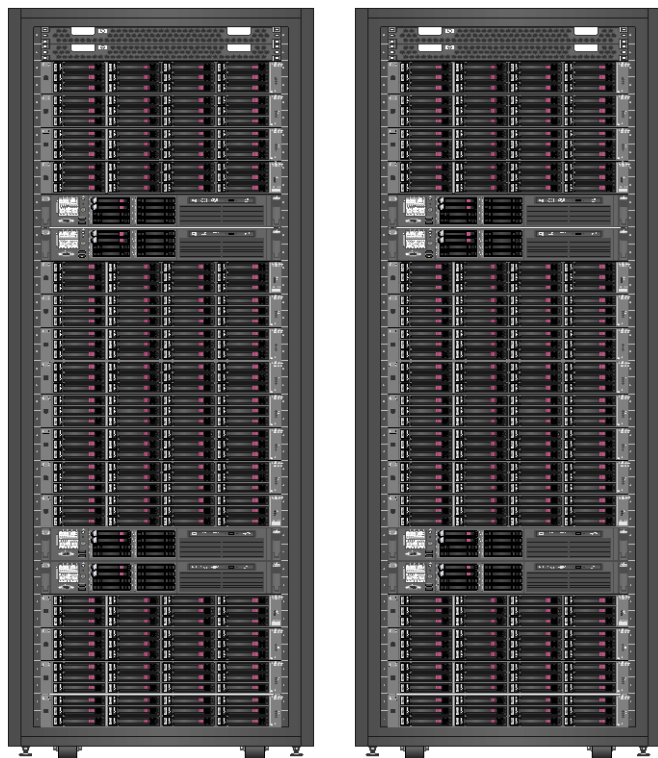
D2D2500	D2D4106	D2D4112	D2D4312	D2D4324	B6200
HP StoreOnce deduplication					
HP StoreOnce enabled data replication					
Choice of NAS (CIFS/NFS) or VTL targets for backup applications					
1U rack-mount	2U rack-mount plus 2U upgrade kit	2U rack-mount plus 2U upgrade kit	4U rack-mount plus 2U upgrade kits	4U rack-mount plus 2U upgrade kits	2U rack-mount node plus 2U upgrade kits up to a total of 84U
2 and 4 TB raw capacity	6 to 12 TB raw capacity	12 to 24 TB raw capacity	Scalable from 12 to 48 TB raw capacity	Scalable from 24 to 96 TB raw capacity	Scalable from 48 to 768 TB raw capacity
(1.5 and 3 TB usable)	(from 4.5 to 9 TB usable)	(from 9 to 18 TB usable)	(from 9 to 36 TB usable)	(from 18 to 72 TB usable)	(from 32 to 512 TB usable)
Speeds of up to 450 GB/hr*	Speeds of up to 800 GB/hr*	Speeds of up to 1.3 TB/hr*	Speeds of up to 2.4 TB/hr*	Speeds of up to 4 TB/hr*	Speeds of up to 28 TB/hr*
Two 1 GbE Ethernet interfaces	Two 1 GbE Ethernet OR	Two 1 Gb Ethernet AND	Two 10 Gb Ethernet AND	Two 10 Gb Ethernet AND	Multiple Ethernet AND
	Two FC interfaces	Two FC interfaces	Two 8 Gb FC interfaces	Two 8 Gb FC interfaces	8 Gb FC interfaces
			(also 2x1 GbE interfaces)	(also 2x1 GbE interfaces)	
Hardware RAID 5	Hardware RAID 6	Hardware RAID 6	Hardware RAID 6	Hardware RAID 6	Hardware RAID 6

*Actual performance is dependent on multiple factors – see www.hp.com/go/d2d for best practices whitepaper`

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B6200 STOREONCE BACKUP SYSTEMS – COMPONENTS



Network switches – 2 per rack
ProCurve E6600-24G-4XG (rack1)
ProCurve E6600-24XG (rack2)

System shown is a maximum configuration 8-node B6200 Backup System with maximum disk storage per node. (note consists of 2, 42U extended depth racks)

Additional storage shelves with 1TB or 2TB disks – must be added in pairs. Couplets can be of different capacity
Base couplet with 48TB of storage consists of 2 Proliant DL380G7 nodes, 2 x P2000 master controller shelves (2TB disks) and 2 x ProCurve switches

Additional storage shelves with 1TB or 2TB disks – must be added in pairs.

NEW FEATURES IN B6200 BACKUP SYSTEM

- Capacity scales to 512TB useable (up to 128TB per couplet shared between 2 nodes)
- Up to 28TB/hour throughput for maximum configuration (3.5TB/Hr per node)
- Automatic Node failover
- Bonded network connections for high availability
- Latest version of StoreOnce deduplication
- Supports fan-in of 384 in the max. configuration.



QUESTIONS

Robert Clifford

