When failure is not an option
HP NonStop BackBox VTC

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Agenda

• Data Protection is not optional
• HP NonStop BackBox VTC
• How HP NonStop BackBox VTC works
Today’s world – data protection is not optional

- Today data protection is simply the requirement of any business to survive
- Failures can result from:
  - human error
  - criminal intent
  - disaster (fire, earthquake)
- You must always be able to retrieve your data
Latest trends in Data Protection

• Improve Efficiency
  – Are you still hanging tapes?
  – The industry is moving away from Tape only
  – Data is more quickly recovered from disk
  – Backup automation is easier to perform.
  – Set it and forget it.

• Share resources
  – Are you still searching for the right tape to mount for data recovery?
  – Centralize backup storage provides a single easy location where you can retrieve your data. HP StoreOnce can hold data for you whole data center or enterprise
  – Deduplication and other modern technologies allow you to compress massive amounts of data into less disk space, avoiding data space upgrades for years.
Mission Critical NonStop

Solutions for industries that never stop

• You know and depend on NonStop systems already.
• Designed for fault tolerance, scalability, security from day one
• Now NonStop can integrate with your enterprise or data center’s data protection infrastructure through HP NonStop’s BackBox Virtual Tape Controllers
• NonStop can backup data to virtually any data storage solution you wish to use in your data center.
Host-Based Control with Context-Free Controllers

BackBox Host Software
- Domain Manager
- Event Extractor
- Metadata Catalog

Native NonStop Tools
- Mediacom, DSM/TC
- Backup/Restore
- TMFCOM
- BRCOM

HP NonStop BackBox VTC

HP StoreOnce
HP NonStop BackBox VTC
How it works

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BackBox – NonStop Integration

Integrated with DSM/TC & TMFCOM
• Virtual tapes are automatically cataloged & labeled
• Interlocks prevent accidental media deletion if not SCRATCH
• Captures catalog updates for DR
• Knows difference between volumes for TMF Online Dumps vs. Audit Dumps

Integrated with NonStop EMS
• All events logged there
• Tape mount requests intercepted
• Checks for missed requests

Integrated with NonStop I/O subsystem
• Automatically discovers devices defined in SCF during VTC config
Common Solution for Small to Large Configuration

One-to-N NonStop Dual Controllers

NonStop
Parallelism = High Performance

NonStop

Control Path
TCP/IP to NonStop

HP NonStop BackBox
VTC

HP StoreOnce
Fault-Tolerant without complexity

NonStop

Control Path
TCP/IP to NonStop

HP NonStop BackBox
VTC

HP StoreOnce
Backup Replication and Catalog Synchronization
Automatic between Primary and Secondary Data Stores
Automatic between DSM/TC instances

DC 1

Control Path
TCP/IP to NonStop

Catalog
Synchronization

Replication
With Data Deduplication

DC 2

Control Path
TCP/IP to NonStop

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Advanced Data Store
Spare Pool - Stand-in storage when main storage is not available

If Corporate storage is not available, Backup automatically store to an alternate StoreOnce storage

Catalog Synchronization

Replication
Advanced Data Store
Copy Pool - Restoring a file from remote storage

DC 1
Control Path
TCP/IP to NonStop

DC 2
Control Path
TCP/IP to NonStop

Catalog
Synchronization

Replication
Storage Integration
Integrating NonStop with Corporate HP StoreOnce

NonStop ENVIRONMENT

DC 1

OPEN ENVIRONMENT

DC 2

Corporate Backup Server

NetBackup Corporate Backup Server

Replication

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Integration with Corporate Backup
Central archiving, encryption, tape vaulting

NonStop

Control Path
TCP/IP to NonStop

Corporate Backup Server

Data Protector Client

Data Protector Client
Data Deduplication: A Simple Example

Store more backups in a smaller footprint

<table>
<thead>
<tr>
<th>BACKUP DATA</th>
<th>LOGICAL ESTIMATED REDUCTION</th>
<th>PHYSICAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>FRIDAY FULL</td>
<td>1 TB</td>
<td>2-4x</td>
</tr>
<tr>
<td>Monday Incr</td>
<td>100 GB</td>
<td>7-10x</td>
</tr>
<tr>
<td>Tuesday Incr</td>
<td>100 GB</td>
<td>7-10x</td>
</tr>
<tr>
<td>Wednesday Incr</td>
<td>100 GB</td>
<td>7-10x</td>
</tr>
<tr>
<td>Thursday Incr</td>
<td>100 GB</td>
<td>7-10x</td>
</tr>
<tr>
<td>2nd FRI FULL</td>
<td>1 TB</td>
<td>50-60x</td>
</tr>
<tr>
<td>TOTAL</td>
<td>2.4 TB</td>
<td>7.8x</td>
</tr>
</tbody>
</table>
StoreOnce helps reduce complexity and cost of DR

- StoreOnce dedupe-enabled replication provides cost-effective disaster recovery
- StoreOnce can eliminate off site tape services associated with DR.
- StoreOnce provides a flexible solution to restore data either centrally or remotely – depending on the need.
- StoreOnce provides an automated, efficient way to quickly recover from a disaster.
HP NonStop BackBox VTC
Three Configuration Options
NonStop BackBox VTC – 3 Configurations

Option 1: StoreOnce as the backup storage

- StoreOnce 2700: 5.5 TB, Single-node
- StoreOnce 4500: 16-36TB, Single-node
- StoreOnce 4700: 20-160TB, Single-node
- StoreOnce 4900: 36-432TB, Single-node
- StoreOnce 6500: 72-1,728TB, Multi-Node

Option 2: Accommodates your preferred storage product

- Pair of BackBox hosts

Option 3: BackBox Server with internal storage as part of the VTC

- Pair of BackBox VTC servers
Fault Tolerance in your Virtual Tape environment

Configurations with at least two Virtual Tape controllers and a multiple StoreOnce solution
- Data replicated and stored in two locations
- All products from one trusted vendor, HP
- No single point of failure
- Fastest data recovery

Highest Level of Fault Tolerance

VS

Less / lowest Fault Tolerance

Single configurations with internal storage and no replication
- For situations where it’s okay if recovery takes days to accomplish
- Secondary backup needed to protect data

Secondary backup required to avoid data loss in the event of a failure
HP NonStop BackBox VTC Models

HP NonStop BackBox VTC
Small to Medium Model
1U Proliant DL360p Gen8 server
• Supports 2 NonStop systems
• 1 GbE IP to StoreOnce standard (10 GbE optional)

For use with HP StoreOnce for a state of the art data center solution

HP NonStop BackBox VTC
Large to Enterprise Model
2U Proliant DL380p Gen8 server
• Supports 4 NonStop systems standard (scales up to 16)
• 10 GbE IP to StoreOnce standard

HP NonStop BackBox VTC
Internal Storage Model
2U Proliant DL380e Gen8 server
• Supports 2 NonStop systems standard (scales up to 4)
• Internal RAID 6 disk storage: 10.8TB, 19.5TB or 27.3TB usable
BackBox - Summary

Designed for fault-tolerance and linear expandability

Scales to the largest NonStop installations

Enables use of StoreOnce data deduplication on NonStop
  • Extreme compression = cost-effective disk storage
  • Extremely efficient WAN use for DR replication

Integrates with customers’ existing storage & EBS systems

Options for physical tape access or production

Encryption with choice of secure key manager use

Field-proven reliability and ease of use
HP NonStop BackBox VTC Backup Review and Design Service
HP NonStop BackBox
NonStop Backup Review and Design Service

NonStop Backup Review Workshop

- Customer meeting:
  ✓ Review the current NonStop backup environment;
  ✓ Review existing corporate backup environment;
  ✓ Identify the customer future backup requirements
  ✓ Present the HP BackBox solution;
  ✓ Discuss and review HP BackBox options available for the customer requirements.
  ✓ Customer selects the preferred option.
- Typically on-site with the customer take around two hours.
- This is part of the Presales process and will not be a paid service.
For more information

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Thank you