Free Guide to **FLEXiBLE**

Powered by

SPHiNX

5 hacks about FLEXiBLE

① **Need to reduce data storage footprint or optimize replication? Go FLEXiBLE-Dedup!**

Optimization Engine accelerates data replication and reduces storage footprint by deduplicating data, without slowing down the replication or backup processes

② **Disparate storage files and slow replication process? Use FLEXiBLE TiERiNG!**

Data management technique that optimizes data distribution across the storage network

③ **Paying too much for data storage and archiving? Store your data with FLEXiBLE Deduplication!**

Revolutionary content-aware compression process that optimizes storage usage and replication performance with variable block comparison.

④ **Plan on shrinking your backup replication time? Enhance data replication!**

The complex and flexible structure of the system enhances the replication performance, reduces the replication time and lower network bandwidth throughput usage by 85%

⑤ **Need the most reliable data protection against data loss? Export data with Direct-to-Tape feature!**

Unique on the market to export data directly to tape, offers reliable protection against data loss and data integrity attacks

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Why you need FLEXiBLE technology?

Saves Money

- **Reduces** Capital (CapEx) and Operational expenses (OpEX)
- **Consolidates** number of tape devices and **shrinks** media usage
- **Deduplicates data** to decrease storage footprint

Improves Efficiency

- **Minimizes** tape drive and tape media errors
- **Reduces** human intervention with automated task handling
- **Leverages** existing backup and network infrastructure
- **Integrates** with all leading backup applications with no disruptions to backup processes
- WAN Acceleration option **maximizes transfer speed** across existing network connection
- **Converts** old tape formats offline without impact on host server
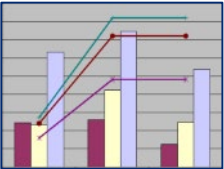
Reduces Risk

- **Reliable** disk based data protection for your data center
- Data Encryption option helps to **secure data** and satisfy regulatory compliance
- **Data Replication** for disaster recovery to an offsite location
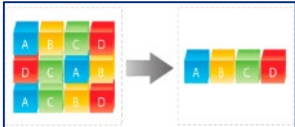- **Scales** to meet specific data growth within your business

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Data-centric FLEXiBLE Structure
Functionality / Features

Host System Connectivity

Disk-based Backups

Backup Application Seamless Support

Event based Automation

Remote Replication

Streamlined Performance

Physical Tape Integration

Scalable Storage& Capacity Licensing

Data Reduction & WAN Optimization

WAN

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ANY G-SERIES

SPHiNX

Standard Storage

ENHANCED REPLICATION

G400 & G800

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Deduped Storage

Standard Storage

CLOUD OE

Rehydrating Data

External Storage
SAN, NAS, SAS

Standard Storage

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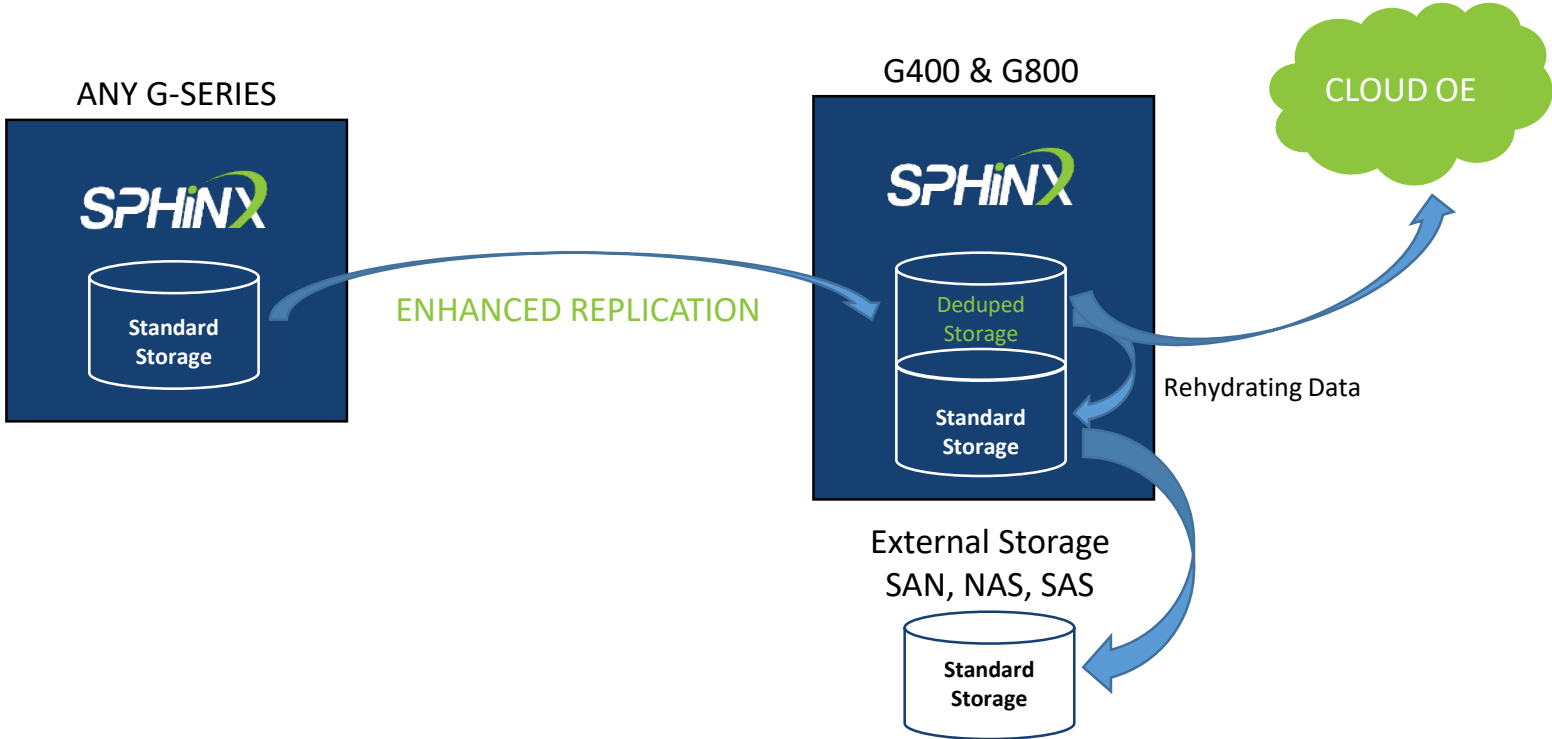
CLOUD OE = Cloud Optimization Engine

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FLEXiBLE Replication

SPHiNX   →   SPHiNX

SPHiNX to SPHiNX
Standard replication using compression

SPHiNX   →   SPHiNX OE

SPHiNX to Optimization Engine SPHiNX
Optimized replication using deduplication

SPHiNX OE   →   SPHiNX OE

Optimization Engine SPHiNX to Optimization Engine SPHiNX
Optimized replication using deduplication

SPHiNX   →   Cloud OE

SPHiNX to Cloud OE
Optimized replication using deduplication

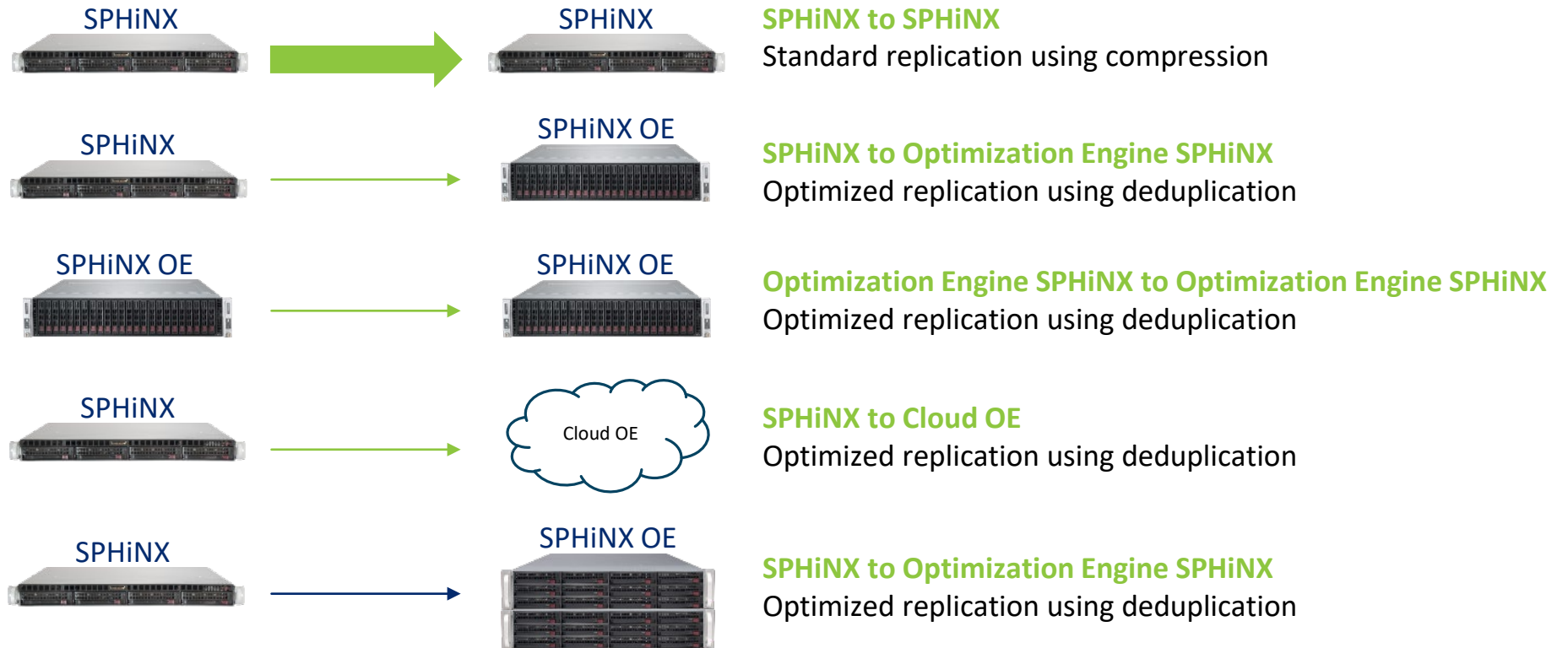SPHiNX   →   SPHiNX OE

SPHiNX to Optimization Engine SPHiNX
Optimized replication using deduplication

Any **Legacy** SPHiNX will replicate to **Legacy** (no optimization) or **Optimized** SPHiNX (with optimization)
Any **Optimized** SPHiNX will replicate to **Optimized** SPHiNX (with optimization)
Any **Optimized** SPHiNX will replicate to **Legacy** SPHiNX (no optimization)
Any SPHiNX will replicate to cloud. Restoring from the cloud does not use enhanced replication.

Optimized SPHiNX also reduces the storage by using deduplication

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Flexible Data Management

Media Pool(s) Creation

- Virtual cartridges can be assigned to a media pool with retention periods
- Tape Thin Provisioning reduces space requirements
- Provides IT separation of data to meet compliance requirements
- Pools of virtual cartridges can be exported to physical media

Easy to Use, Secure Interface

- Network accessible using any standard web based browser
- Role-based user privileges and access
- Username and password protected

Audit-friendly Logging, Alerts

- Critical event logging and messages
- Email alert notification
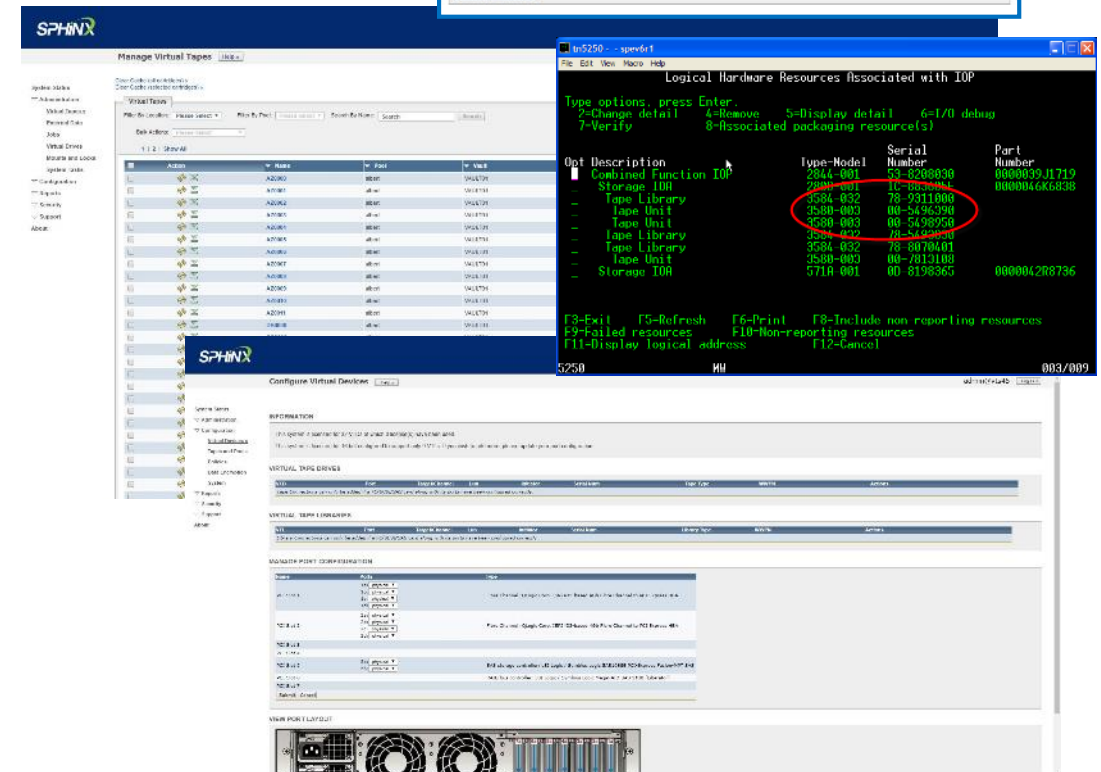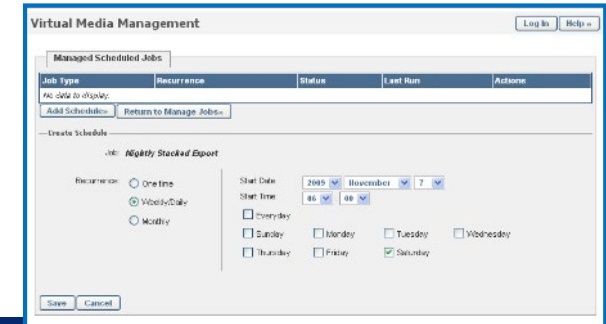
Extensible and Scalable Connectivity

Extend System Connectivity

- Supports Multiple host systems with different OS types and multiple partitions

Manage Growth

- Dynamic virtual tape sizing eliminates wasted storage
- Creates an unlimited number of virtual cartridges
- Single cartridge can virtually be an unlimited length

Expand Capacity with Multi-options

- License additional managed capacity on demand
- Supports leading SAS or FC disk arrays for external storage from IBM, Dell, HP, EMC, Hitachi, Xyratex, and many others

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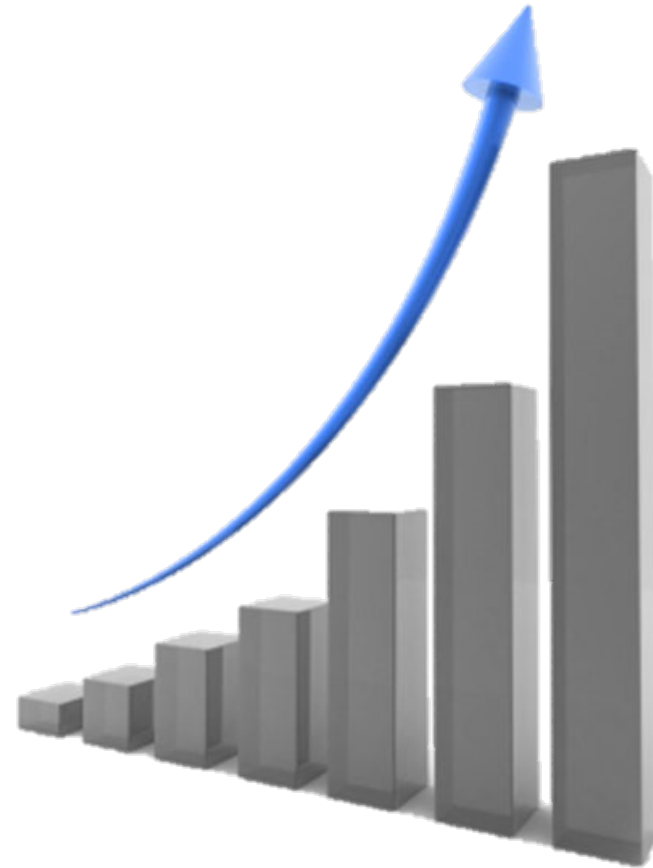
Built-in Data Reduction with FLEXiBLE Licensing

Capacity Optimization

- Built-in data compression expands the effective disk storage
- Functions transparently in-line with transfer to disk
- Automatic detection of data compressibility, shutting off reduction for non-compressible data sets

Optimization Engine

- Use optimization engine to optimize replication and data storage
- Achievable reduction ratios average up to 20:1

Improved Network Utilization

- Bandwidth limit settings (% of bandwidth)
- Bandwidth maximization (multi-stream)
- WAN Acceleration (licensed option)

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Streamlined Backup/Restore Processes

Improved Backup

- Leverages disk for efficient data store
- Multiple virtual drives and backup streams per host system
- Mixed target modes per appliance

Improved Data Restore

- Immediate access to data
- Multi-stream restores

Consolidated Resources

- Multiple host systems per appliance
- Tape device/library consolidation
- More efficient tape usage

Automated processes

- Automates typical physical tape tasks
- Optional offsite Data Replication

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Disk based Backup
## for IBM Power Systems

Dedicated Appliance

- Disk storage virtualized as tape library, or direct attach tape drives
- Supports IBM i, AIX, Windows, and Linux
- No software or agents on Power System

Seamless Integration

- Presents FC emulated tape devices to host server
- Emulates IBM drives and libraries
- Integrates with HelpSystems Robot/SAVE
- Supports BRMS and native IBM i Save commands

Improves Uptime / Reduces Risk

- Provides an alternate IPL device
- Immediate restore from disk system
- Optional replication for optimal disaster recovery operation
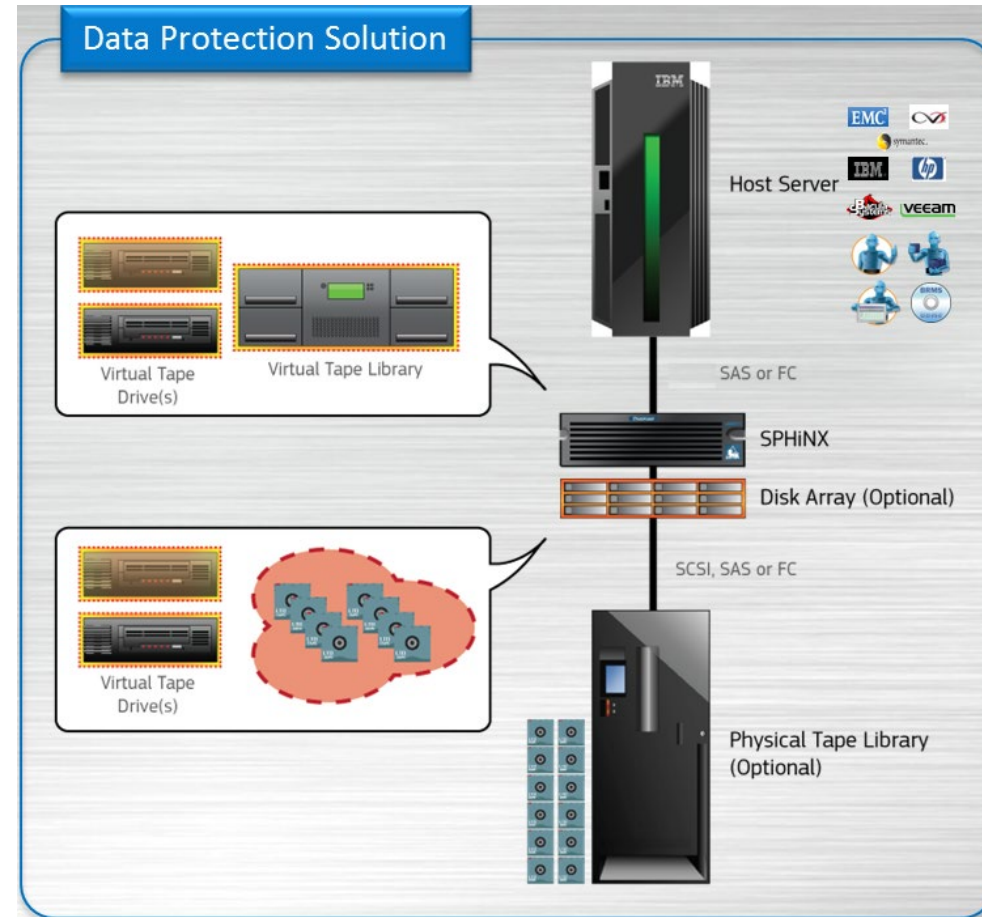
Seamless Integration

Leverage existing policies and assets

- Supports most leading Backup Management Applications
- Emulates standard IBM/HP tape drives & IBM 3100/3584, HP MSL6000 libraries, etc.

No software agents required

- Appears as physical tape library or drive
- Works with native system commands

Optimized Tape Operations

- Tape-Tape Export: 1 to 1 mapping of virtual cartridge label to physical cartridge label
  - Native Format: exact data set/format
  - Virtual Format: includes metadata

Dynamic Import

- Creates virtual tape image of imported tape
- Can then be mounted in a supported emulation drive type for restore to host

Virtual Tape Integration

1 Backup to "Tape"
- Plug-n-play with existing process
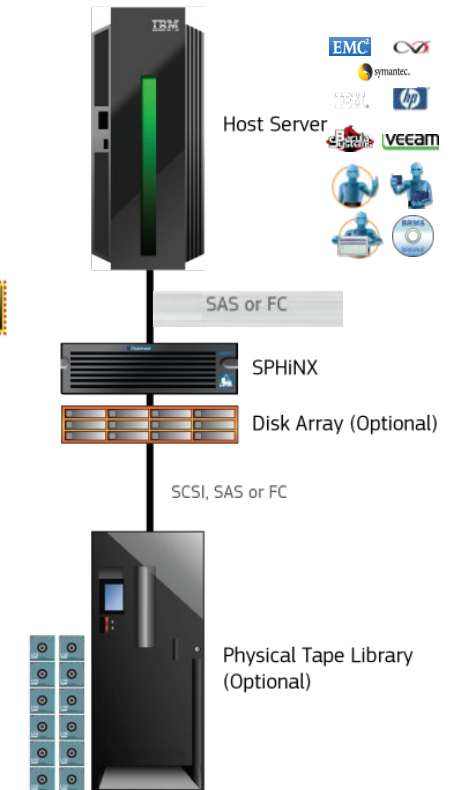- Utilize existing backup application/process
- Emulates standard LTO drives

LTO 1   LTO 2   LTO 3

2 Data stored on disk
- Internal disks
- Expands with existing volumes in SAN

3 Transfer to Tape
- Native tape creation to read in standard tape drives

Host Server

SAS or FC

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Disk Array (Optional)

SCSI, SAS or FC

Physical Tape Library (Optional)

Microsoft Windows

Flexible Emulation Types

- Virtual Tape Library
- Virtual Tape Drive/Autoloader

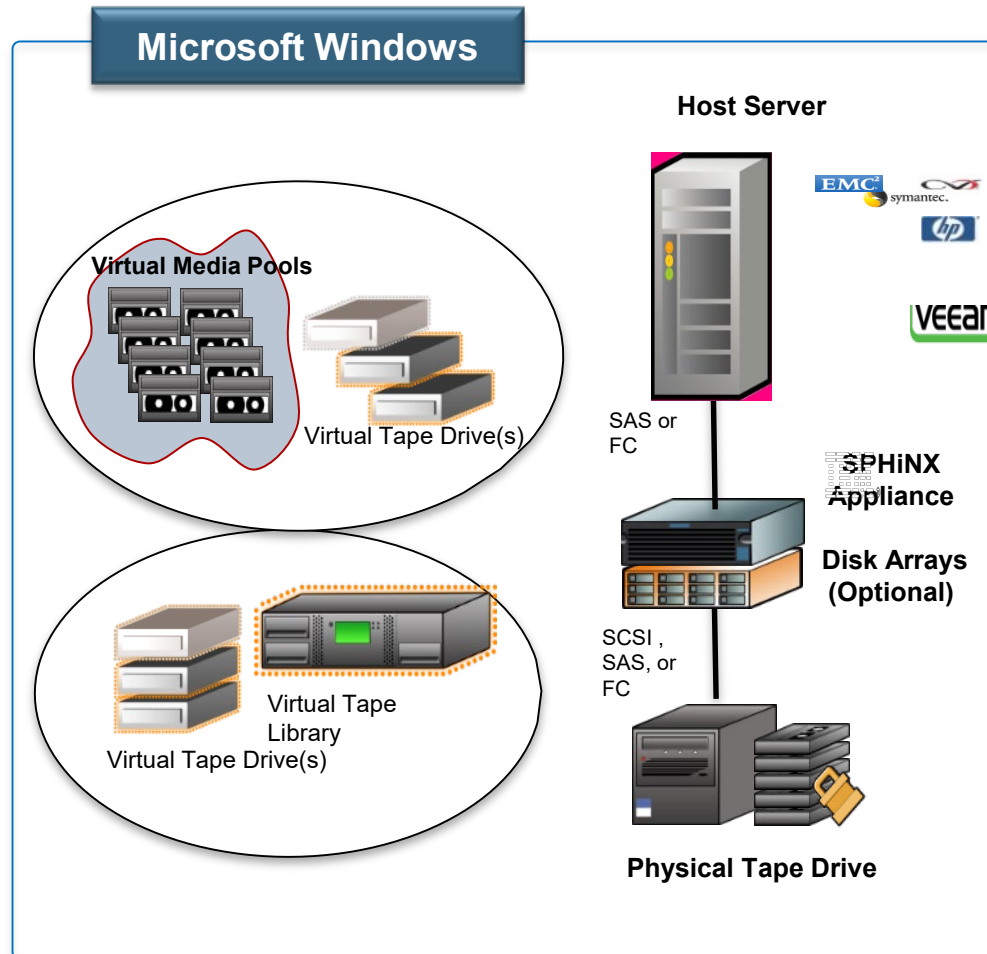## Flexible Host Connectivity

- Microsoft Windows
  - Physical Server or Virtualized Server environments

Virtual Tape Library or Drive

- Consolidates the number of tape devices managed for backups
- Virtual tape data is available for immediate restore
- Drastically reduces the amount of experienced downtime

Microsoft Windows

Host Server

Virtual Media Pools

Virtual Tape Drive(s)

Virtual Tape Library
Virtual Tape Drive(s)

SAS or FC

SPHiNX Appliance

Disk Arrays (Optional)

SCSI , SAS, or FC

Physical Tape Drive

Go **FLEXiBLE**!

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