

Virtual Tape Library Solutions by Hitachi Data Systems

Demands for data availability are on the rise, and increasing data volume is pushing enterprise data center infrastructures beyond their capabilities. Virtual Tape Library Solutions by Hitachi Data Systems make it easier to push back.

The Benefits of Tape. The Performance and Reliability of Disk.

Disk-based data protection has emerged as a sure way to improve backup and recovery operations. But adding disk to the data protection infrastructure can be expensive. As data volumes expand, the required capital expenditures grow dramatically. In just three years, most organizations will need over 12 times their current data protection capacity in their production environments.

Virtual Tape Library Solutions by Hitachi Data Systems comprise high-performance, high-availability Hitachi storage systems; industry-leading software from Diligent™ Technologies; plus planning and implementation services. Each enterprise-class Virtual Tape Library Solution delivers the speed, reliability, and availability of disk-to-backup operations, emulating tape libraries, but enabling existing backup applications to use disk as their backup medium. Employ these solutions to:

- ∴ Obtain the benefits of disk without altering existing operations.
- ∴ Dramatically improve backup and recovery times.
- ∴ Increase backup reliability.
- ∴ Improve data center productivity.

Powered by Diligent™ Technologies Software

Working seamlessly with all major computer platforms and operating systems, including UNIX, Microsoft Windows, and

mainframe systems, each Virtual Tape Library Solution features software from Diligent Technologies:

- ∴ VTF™ Mainframe—a Virtual Tape Library Solution for mainframe systems
- ∴ VTF Open—a Virtual Tape Library Solution for open systems
- ∴ ProtecTIER™ VT—a Virtual Tape Library Solution for open systems featuring HyperFactor™ advanced data de-duplication technology for capacity optimization

VTF Mainframe and Hitachi Storage Systems— a Powerful Combination

The combination of VTF Mainframe software and robust storage systems from Hitachi Data Systems ensure unmatched recoverability, availability, scalability, and performance. VTF Mainframe software transparently directs tape data onto disk. There is no need to change code or applications. Additionally, VTF Mainframe provides electronic vaulting when coupled with advanced Hitachi TrueCopy™ Remote Replication software or Hitachi Universal Replicator software.

VTF Mainframe Technical Requirements

- ∴ IBM® MVS™ SP 5.1 or higher, IBM OS/390® or z/OS®
- ∴ IBM DFSMS Version 1.2 or higher
- ∴ TSO/ISPF access
- ∴ Supports MVS-compatible disk storage systems: 3380 or 3390 format

How Does a Virtual Tape Library Solution Work?

The combination of software, server, and storage creates a Virtual Tape Library Solution that appears to the backup application as one or many real tape libraries. There's no need to change existing backup policies, practices, or procedures. The backup application accesses drives, robotics, and cartridges just as it would a physical tape library.

Reducing Storage Needs

- ∴ Typical virtual tape library solutions: 2-to-1 data compression
- ∴ Virtual Tape Library Solutions by Hitachi Data Systems, powered by Diligent Technologies software: up to 25-to-1 (or better) data compression

VTF Mainframe Specifications

- Maximum number of virtual tape drives supported: 256 per server
- Maximum number of servers running in one logical partition: unlimited
- Maximum number of virtual tapes: no limit
- Drive types emulated: IBM 3480, 3490, and 3590
- Library type emulated: not required
- Tape management supported: BrightStor CA-1, BrightStor CA-Dynam TLMS, BMC Control-T, IBM RMM, and AutoMedia ZARA
- DASD space management software supported: IBM DFSMS/HSM, Innovation ABR, and BrightStor CA-Disk
- Tape stacking applications supported: CopyCat, Zela, Tape/Copy, Carts, FATS/FATAR, and Control-T batch stacker

For Open Systems: Two Virtual Tape Library Solution Options

VTF Open is an enterprise-class solution that emulates tape libraries without changing the practices, policies, or procedures of your backup application and provides native 2-to-1 data compression to reduce storage needs. By using disk storage, operations achieve much greater data-throughput performance, high-availability data protection, reduced mechanical and human errors, and rapid recovery.

ProtectTIER VT is the first enterprise-class disk-based data protection technology that enables you to increase the capacity of disk systems by up to 25 times or more. Powered by Diligent's breakthrough HyperFactor technology, ProtectTIER VT eliminates redundant data, radically reducing the amount and cost of physical storage required. This disk-based solution costs less than a tape-based solution, without compromising performance, capacity, or 100 percent data integrity.

VTF Open Server Specifications and Requirements

VTF Open runs on a standard Linux server with the following minimum configuration:

- Two 32-bit or 64-bit CPUs, 2.6GHz or better
- Minimum of 2GB memory
- Minimum number of ports with Fibre Channel host bus adapters: 2

- Maximum number of total ports: 8
- Maximum number of virtual tape libraries: 16
- Maximum number of virtual tape drives: 128
- Maximum number of virtual cartridges: 8192

Note: Up to four servers can be configured to work in a group, sharing virtual devices and storage systems.

ProtectTIER VT Server Specifications and Requirements

ProtectTIER VT runs on a standard Linux server with the following minimum configuration:

- Four 64-bit dual core AMD CPUs, 3.0GHz or better
- Minimum of 16GB memory
- Approved Emulex front-end host bus adapters (HBAs), such as the LP10000DC Channel
- Approved QLogic back-end HBAs, such as the QLA2342
- Maximum number of total ports: 8
- Maximum number of virtual tape libraries: 16
- Maximum number of virtual tape drives: 256
- Maximum number of virtual cartridges: 8192

Note: Please consult your Hitachi Data Systems Sales Representative or your Reseller Representative for the latest ProtectTIER specifications and requirements.

Need Help Meeting Your Backup and Recovery Objectives? We're at Your Service.

The Hitachi Data Systems Global Solution Services team combines advanced virtual tape library technology with assessment, planning, design, and implementation services in custom solutions that allow you to balance increasing volumes of data with shrinking IT budgets and meet recovery-point and recovery-time objectives.

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