

IBM TotalStorage Virtual Tape Server Model B20



Highlights

- **Can help reduce “real” tape mounts, because many mount requests are satisfied from the Tape Volume Cache (TVC)**
- **Can reduce physical tape cartridges required because of higher utilization of cartridge capacity**
- **Can help reduce operating costs such as power, maintenance, operations and support staff**
- **Peer-to-Peer configuration supports business continuity for IBM System z™ environments**

Overview

The IBM TotalStorage® Virtual Tape Server Model B20 (B20 VTS) is an enterprise tape solution designed to enhance performance and provide the capacity needed for today’s backup requirements. Adoption of this solution can help reduce batch processing time, total cost of ownership and management overhead. Automation of a larger portion of a company’s data storage may also be facilitated in a shorter period of time.

The B20 VTS has been designed to reduce or eliminate the number of bottlenecks that may be present in a given tape environment, depending on the characteristics of installed equipment

and processor workloads. For example, if more drives are needed, up to 256 virtual drives may be configured to meet this need. If cartridge capacity is not fully utilized, the B20 VTS can alleviate this problem by filling physical cartridges.

The B20 VTS initially creates a virtual volume in a buffer known as the Tape Volume Cache (TVC), a RAID-5 disk array. If these virtual volumes are re-referenced, they are accessed in most instances from the TVC, which helps to eliminate many of the physical delays associated with tape I/O and improves the performance of the tape process.

The virtual volume is also written to an attached IBM System Storage™ TS1120 Tape Drive or IBM TotalStorage 3592 Tape Drive Model J1A in an IBM TotalStorage 3494 Tape Library or an IBM System Storage 3500 Tape Library. The virtual volume remains in the cache, which may support fast access if it is re-referenced by subsequent jobs.

Drives can be dedicated to a specific server or shared in supported environments. This flexibility helps to maximize the efficiency of data transfer operations by allocating sufficient drives for a specific task.

A VTS provides significant automated storage management capabilities. Migration and reclamation functions are dynamically managed whenever VTS internal thresholds are reached and necessary resources such as two idle tape drives are available.

Advanced Policy Management

Advanced Policy Management features are available to optimize the storage management for specific needs.

- *Cache management provides the ability to manage virtual volume retention or deletion from the tape volume cache.*
- *Volume Pooling provides the ability to group selected logical volumes on physically separate cartridges or cartridge pools.*
- *Selected Logical Volume Dual Copy provides the ability to create a second copy of the volume on a separate cartridge.*
- *Import/Export enables volumes to be moved for disaster recovery, workload balancing or volume archiving.*

IBM TotalStorage Tape Library Specialist

IBM TotalStorage Tape Library Specialist is available to monitor the B20 VTS. The IBM TotalStorage 3494 Tape Library Specialist is a Web-based user interface to the Library Manager. Using the Specialist, information such as current VTS status and statistics can be accessed from a Web browser by connecting to the Web server on the Library Manager PC.

Server attachment

The B20 VTS may be attached to supported IBM and non-IBM servers using FICON® and ESCON® connections. A VTS can be supported at distances of up to 250 km using channel directors or switches. Even greater distances are supported with WAN or ATM connections that use supported channel extension products.

Peer-to-Peer VTS

Two B20 VTSs can be coupled to participate in an IBM TotalStorage Peer-to-Peer Virtual Tape Server (PtP VTS) environment. The PtP VTS is supported in an IBM z/OS® Geographically Dispersed Parallel Sysplex (GDPS®) environment to help minimize downtime in the event of an outage. The PtP VTS complements this environment by providing similar function to the IBM TotalStorage Metro/Global Mirror. Since one of the VTS models can reside in a remote location, data can

remain available even if one of the sites experiences an outage. This can enhance availability during planned maintenance, service or system upgrades and avoids the transportation of cartridges in the event of a disaster.

IBM TS3000 System Console

VTS and PtP VTS support the IBM TS3000 System Console (TSSC). The TSSC is designed to allow IBM Technical Service to download new microcode, remotely monitor the installation, and automatically dispatch a service representative when required.

Implementation services

In addition to the Installation Guides and Redbooks available for customer use to install this solution, IBM also provides a set of service offerings designed to expedite implementation. For further details, please visit

ibm.com/storage

Competitive financing options

IBM Global Financing offers some of the industry's most competitive rates for a wide range of IBM products and services, including the VTS, for the duration of the financing term. For more information, please visit

ibm.com/financing

Virtual Tape Server Model B20 at a glance

Specifications	Minimum	Maximum
Tape volume cache (GB)	2,592 ¹	5,184 ¹
Virtual drives	128	256
TS1120 or 3592 tape drives	4	12
3590/3592 tape drives	4/4	6/12
Virtual volumes	250,000	500,000
FICON-only channels	4	8
ESCON-only channels	8	16
FICON/ESCON channels	4/4	4/8
Warranty	1 year	

Supported environments²

z/OS v1 or later

z/VM® v3 or later

— VSE/ESA™ v2.2 plus PTFs+ is supported as a z/VM guest

TPF v4.1 plus PTFs or later

VM/ESA® v2.2 or later

— VSE/ESA v2.2 plus PTFs+ is supported as a VM/ESA guest

z/VSE™ V3.1

AIX® v4.32+ or later

Sun™ Solaris™ v2.6+ or later

Microsoft® Windows NT®/Windows® 2000

HP-UX R11

B20 Peer-to-Peer Virtual Tape Server at a glance

Virtual Tape Controller Features	4/8
Tape Volume Cache (TB):	5.2/10.4 ³
Virtual drives	128/256 ³
Physical tape drives	8/24 ³
Virtual volumes	250,000
ESCON channels	8/16 ³
FICON channels	8/16 ³
FICON/ESCON channels	4/4 to 8/8 ³
Supported environments	z/OS, z/VM and VM/ESA environments
Warranty	1 year

For more information

Contact your IBM representative or
IBM Business Partner or visit

ibm.com/storage/tape



MB, GB and TB equal 1,000,000, 1,000,000,000 and 1,000,000,000,000 bytes, respectively, where referring to storage capacity. Actual storage capacity will vary based upon many factors and may be less than stated. Some numbers given for storage capacities give capacity in native mode followed by capacity using data compression technology.

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Data provided is for information only and does not constitute a warranty of performance. Actual processing time achieved with the Virtual Tape Server B20 is a function of components such as system processor, the associated tape drive configuration, data block size, data compressibility, dependencies on other I/O such as disk, and the system and application software used.

¹ At a data compression factor of 3:1

² Lists the minimum software level requirements for the basic VTS support. Please refer to the technical documentation for specific function or feature support.

³ Indicates minimum/maximum configurations

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