



# IBM Tivoli Storage Manager V6.4 products deliver significant enhancements to manage data protection in virtual environments

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## At a glance

IBM® Tivoli® Storage Manager V6.4 family of products offers:

- Performance enhancements with progressive incremental backup for virtual environments, removing the requirement to perform periodic full backups in a VMware environment for Data Protection
- Self-contained, application-consistent backup for Microsoft™ Exchange and Structured Query Language (SQL) running on VMware
- Simplified deployment and configuration when integrating with VMware vCenter for Data Protection
- Enhanced recovery performance and reporting of VMware environments
- NetApp SnapMirror and virtual controller support for NetApp snapshot-assisted progressive incremental backup
- Complex password support and improved user authentication and management by integration with Lightweight Directory Access Protocol (LDAP)
- Enhanced Cognos® reporting to monitor backup and archive environments
- New support of data protection and recovery for SAP HANA in-memory databases

## Overview

The IBM Tivoli Storage Manager V6.4 products consist of:

- IBM Tivoli Storage Manager
- IBM Tivoli Storage Manager Extended Edition
- IBM Tivoli Storage Manager for Enterprise Resource Planning
- IBM Tivoli Storage Manager for Mail
- IBM Tivoli Storage Manager for Space Management
- IBM Tivoli Storage Manager HSM for Windows™
- IBM Tivoli Storage Manager for Databases
- IBM Tivoli Storage Manager for Virtual Environments
- IBM Tivoli Storage Manager Suite for Unified Recovery
- IBM Tivoli Storage Manager Suite for Unified Recovery Entry
- IBM System Storage® Archive Manager

The ability to successfully manage information and data has become an imperative. IBM Tivoli Storage Manager family of products (referred to as Tivoli Storage Manager) helps businesses successfully gain better control and efficiently manage their data in increasingly complex IT environments with significant enhancements in multiple facets of data protection.

From its inception, Tivoli Storage Manager has been a highly scalable and available data protection solution. Tivoli Storage Manager V6.4 introduces both new and improved data protection and management capabilities and provides IT administrators with the tools required to help meet more stringent service level requirements and reduce the overall costs of maintaining and protecting the data in these complex environments.

IBM Tivoli Storage Manager V6.4 family of products offers:

- Performance enhancements with progressive incremental backup for virtual environments, removing the requirement to perform periodic full backups in a VMware environment for data protection
- Optimized and simplified backup and recovery and reporting of VMware environments
- Self-contained, application-consistent backup for Microsoft Exchange and Microsoft SQL Server running on VMware
- Simplified deployment and configuration when integrating with VMware vCenter for Data Protection
- NetApp SnapMirror and vFiler support for NetApp snapshot-assisted progressive incremental backup
- Complex password support and improved user authentication and management because of integration with Lightweight Directory Access Protocol (LDAP)
- Enhanced IBM Cognos reporting to monitor backup and archive environments
- Support of data protection and recovery for SAP HANA in-memory databases

Note: This Tivoli Storage Manager V6.4 release is delivered with the Tivoli Storage Manager V6.4.0 Client component and the Tivoli Storage Manager V6.3.3 Server component.

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## Key prerequisites

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Refer to the [Technical information](#) section.

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## Planned availability date

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- November 16, 2012: Electronic
- December 07, 2012: DVD media

Refer to the complete letter for national language availability.

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## Description

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### **IBM Tivoli Storage Manager V6.4 family of products (referred to as Tivoli Storage Manager V6.4)**

Tivoli Storage Manager V6.4 helps businesses manage and control their business data by delivering a single point of control and administration for storage management backup and recovery. This advanced, highly scalable product helps increase the efficiency of your IT operations and helps cut costs related to storage management by providing a wide range of data protection, recovery management, movement, retention, reporting, and monitoring capabilities using policy-based automation.

Tivoli Storage Manager V6.4 provides key enhancements for the following:

- IBM Tivoli Storage Manager
- IBM Tivoli Storage Manager Extended Edition
- IBM Tivoli Storage Manager for Virtual Environments
- IBM Tivoli Storage Manager for Enterprise Resource Planning
- IBM Tivoli Storage Manager for Mail
- IBM Tivoli Storage Manager for Databases
- IBM Tivoli Storage Manager for Space Management
- IBM Tivoli Storage Manager HSM for Windows
- IBM Tivoli Storage Manager Suite for Unified Recovery
- IBM Tivoli Storage Manager Suite for Unified Recovery Entry
- IBM System Storage Archive Manager

#### **Enhancements common to all Tivoli Storage Manager V6.4 offerings**

- Improved access control for administrators.
- Transparent management and complex password support of accounts and passwords by integrating Tivoli Storage Manager Server with LDAP directories.

#### **Key enhancements for Tivoli Storage Manager V6.4, Tivoli Storage Manager Extended Edition V6.4**

Out-of-the-box IBM Cognos reporting: Utilization of the IBM Cognos Business Intelligence reporting suite to help enable exploration and interaction with data routinely collected by Tivoli Storage Manager. The new reporting engine was introduced with Tivoli Storage Manager V6.3 but key enhancements are delivered in Tivoli Storage Manager V6.4:

- Quicker time to value with additional out-of-the-box Cognos reports.
- Users can customize existing Cognos reports or rapidly create reports with intuitive drag and drop function.
- Reports can be generated on schedule or on demand.

NetApp SnapMirror and vFiler support for NetApp snapshot-assisted progressive incremental backup

- NetApp SnapMirror support for snapshot-assisted progressive incremental backup: NetApp snapshot-assisted progressive incremental backup process works in conjunction with NetApp's SnapMirror replication. The most typical use case is to take backups from the target (remote) SnapMirror site, allowing Tivoli Storage Manager to exploit snapshot-assisted progressive incremental backup operations at the SnapMirror target
- NetApp vFiler support for snapshot-assisted progressive incremental backup: NetApp MultiStore software allows you implement secure multitenancy on a shared storage infrastructure. MultiStore creates multiple virtual controllers within a single storage system that you can enable multiple users to share the same storage resource without compromise to privacy and security. The virtual controller is referred to generically as a vFiler, for example, a virtual filer. Tivoli Storage Manager will support snapshot-assisted progressive incremental backup operations for vFilers, allowing users to manage the multi-tenancy nature of the data on the Tivoli Storage Manager server in the context of the vFiler.

#### **Key enhancements for Tivoli Storage Manager for Virtual Environments V6.4**

One of the fundamental principles on which Tivoli Storage Manager is based is the progressive incremental or incremental forever backup. This approach can significantly reduce backup workloads compared to solutions that require regular full backups regardless of whether data has changed. Now the progressive incremental

capability is added to support backups for VMware hypervisors. This removes the requirement for periodic full on VMware backup and simplifies the scheduling operations.

Tivoli Storage Manager for Virtual Environments compliments Tivoli Storage Manager by offering additional improvements for backup efficiencies and advanced recovery capabilities for VMware hypervisors. Using Tivoli Storage Manager for Virtual Environments, the burden of running backups on a virtual machine can be eliminated by offloading backup workloads from a VMware ESX or ESXi-based server to a centralized vStorage backup server and taking progressive incremental backups of virtual machines.

Other significant improvements introduced include:

- Optimized performance and simplified backup: Increased managed entities to simplify backup and restore operations (host cluster, datastore, specific VM and improved performance with multiple backup processes in parallel.
- New configuration wizard: The new and easy-to-use GUI can help automate most of the configuration and deployment steps to make protecting VMware more consumable. For the configuration not automated, configuration status will be checked to make sure all components are ready for backup operation.
- Protection of applications and databases running on VMware: Self-contained, application-consistent backup for Microsoft Exchange and SQL with log truncation; more granular control for backup and recovery of individual disks; support for virtual machines in a vApp.
- Reporting: VM backup coverage reporting from vCenter plugin and TCR and improved data in activity log and summary table.
- Performance: Improved recovery agent performance; deduplication and expiration scalability enhancements for VMware data.
- Enhanced support of VMware environment; preserve additional attribute information upon restore; support backup and recovery of VM templates.

#### **Key enhancements for IBM Tivoli Storage Manager for Enterprise Resource Planning V6.4**

New data protection for in memory SAP HANA in-memory databases is provided via a new component in the Tivoli Storage Manager for Enterprise Resource Planning product called Data Protection for SAP HANA. It automates the backup process into a single step and helps users to manage all files as a logical entity in SAP HANA protection. Tivoli Storage Manager V6.4 support for SAP HANA enables simple, scalable data protection and recovery for one of the key growth areas in SAP environments - business analytics.

IBM offers preconfigured appliances that provide single node and scale-out solutions for SAP HANA applications, and have been verified by IBM to work with Tivoli Storage Manager for Enterprise Resource Planning. Go to the [Reference information](#) section for more information about IBM System x® Workload Optimized Solutions for SAP HANA.

#### **Key enhancements for IBM Tivoli Storage Manager for Mail V6.4**

Tivoli Storage Manager for Mail improves Exchange 2012 Data Base Availability Group (DAG) support by fully integrating the management and automation of Exchange DAG active and passive database backups and restores.

#### **Key enhancement for IBM Tivoli Storage Manager for Databases V6.4**

Tivoli Storage Manager for Databases supports Microsoft SQL 2012 with AlwaysOn Availability Group. Tivoli Storage Manager for Databases automates database backups and restores for a high availability configuration.

**IBM Tivoli Storage Manager Suite for Unified Recovery V6.4 and IBM Tivoli Storage Manager Suite for Unified Recovery Entry V6.4** deliver a feature-rich storage management software suite that consists of:

- IBM Tivoli Storage Manager Extended Edition V6.4
- IBM Tivoli Storage Manager for Databases V6.4
- IBM Tivoli Storage Manager for Enterprise Resource Planning V6.4
- IBM Tivoli Storage Manager for Mail V6.4
- IBM Tivoli Storage Manager for Space Management V6.4
- IBM Tivoli Storage Manager for Storage Area Networks V6.3
- IBM Tivoli Storage Manager for Virtual Environments V6.4
- IBM Tivoli Storage Manager FastBack® V6.1
- IBM Tivoli Storage Manager FastBack for Microsoft Exchange V6.1
- IBM Tivoli Storage Manager FastBack for Bare Machine Recovery V6.1

Tivoli Storage Manager Suite for Unified Recovery V6.4 offers simplified pricing and licensing based on a per terabyte charge metric for data stored within Tivoli Storage Manager primary storage pools and Tivoli Storage Manager FastBack repositories.

For information about the products in this suite, refer to information shown above for each individual product. For information about the Tivoli Storage Manager FastBack products in this suite and more detail about Tivoli Storage Manager Suite for Unified Recovery, refer to the announcement letters in the [Reference information](#) section.

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### **Accessibility by people with disabilities**

A U.S. Section 508 Voluntary Product Accessibility Template (VPAT) containing details on accessibility compliance can be requested at

[http://www.ibm.com/able/product\\_accessibility/index.html](http://www.ibm.com/able/product_accessibility/index.html)

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### **Reference information**

For more information about support for IBM Tivoli Storage Manager for Storage Area Networks V6.3 platform, refer to Software Announcement [ZP11-0463](#), dated October 11, 2011 .

For more information about support for IBM Tivoli Storage Manager on the z/OS® platform, refer to Software Announcement [ZP11-0465](#), dated October 11, 2011 .

For more information about Tivoli Storage Manager Suite for Unified Recovery, refer to Software Announcement [ZP11-0249](#), dated May 31, 2011 .

For more information about Tivoli Storage Manager Suite for Unified Recovery Entry, refer to Software Announcement [ZP12-0301](#), dated June 12, 2012

For more information about Tivoli Storage Manager FastBack V6.1, Tivoli Storage Manager Fastback for Microsoft Exchange V6.1, and Tivoli Storage Manager FastBack for Bare Machine Recovery V6.1, refer to Software Announcement [ZP09-0419](#), dated December 15, 2009 .

For more information about IBM System x Workload Optimized Solutions for SAP HANA, refer to Software Announcement [ZG12-0234](#), dated October 03, 2012 .

For more information about IBM System x Workload Optimized Solutions for SAP HANA, refer to Software Announcement [ZG12-0233](#), dated October 03, 2012 .

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## Availability of national languages

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The Tivoli Storage Manager V6.4 products are enabled to support all language environments and are translated into the following languages on the dates shown below (refer to Notes 1 and 2).

| Language   | Electronic availability date | Media availability date |
|--|------------------------------|-------------------------|
| French, German, Italian, Spanish, Russian, and English | 11/16/12                     | 12/14/12                |

Note 1: The following are also available in Czech, Hungarian, and Polish:

- The client component of Tivoli Storage Manager V6.4
- The client component of Tivoli Storage Manager Extended Edition V6.4
- The client component of IBM System Storage Archive Manager V6.4
- Tivoli Storage Manager HSM for Windows V6.4
- Tivoli Storage Manager for Space Management V6.4
- Tivoli Storage Manager for Virtual Environments V6.4

Note 2: Russian is not supported by the following:

- Tivoli Storage Manager for Databases V6.4
- Tivoli Storage Manager for Enterprise Resource Planning V6.4

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## Program number

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| Program number | VRM | Program name  |
|----------------|-----|---|
| 5608-E01       | 6.4 | IBM Tivoli Storage Manager                                  |
| 5608-E02       | 6.4 | IBM Tivoli Storage Manager Extended Edition                 |
| 5608-E03       | 6.4 | IBM System Storage Archive Manager                          |
| 5608-E04       | 6.4 | IBM Tivoli Storage Manager for Databases                    |
| 5608-E05       | 6.4 | IBM Tivoli Storage Manager for Enterprise Resource Planning |
| 5608-E06       | 6.4 | IBM Tivoli Storage Manager for Mail                         |
| 5608-E12       | 6.4 | IBM Tivoli Storage Manager for Space Management             |
| 5608-E13       | 6.4 | IBM Tivoli Storage Manager HSM for windows                  |
| 5725-A44       | 6.4 | IBM Tivoli Storage Manager for Virtual Environments         |
| 5724-Z12       | 6.4 | IBM Tivoli Storage Manager Suite for Unified Recovery       |
| 5725-H25       | 6.4 | IBM Tivoli Storage Manager suite for Unified Recovery Entry |

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## Education support

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Comprehensive education for IBM Tivoli products is offered through Worldwide Tivoli Education Delivery Services. A wide range of training options are available, including classes led by instructors, learning on demand, on-site training, and blended learning solutions.

For additional information, visit

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## Offering Information

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Product information is available via the Offering Information website

<http://www.ibm.com/common/ssi>

Also, visit the Passport Advantage® website

<http://www.ibm.com/software/passportadvantage>

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## Publications

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The publications listed below will be available in English and can be downloaded from the following website on the general availability unless otherwise stated. Translated copies in selected languages will be available for download within 60 days of the general availability date unless otherwise stated.

<http://pic.dhe.ibm.com/infocenter/tsminfo/v6r4/index.jsp>

| Order number | Title of publications that support IBM Tivoli Storage Manager V6.4 products                                      |
|--------------|--|
| GC27-4017-01 | IBM Tivoli Storage Manager Upgrade and Migration Guide for V5 Servers  |
| GC23-9781-04 | IBM Tivoli Storage Manager for AIX® Installation Guide   |
| GC23-9782-04 | IBM Tivoli Storage Manager for HP-UX Installation Guide  |
| GC23-9783-04 | IBM Tivoli Storage Manager for Linux™ Installation Guide   |
| GC23-9784-04 | IBM Tivoli Storage Manager for Oracle Solaris Installation Guide   |
| GC23-9785-04 | IBM Tivoli Storage Manager for Windows Installation Guide  |
| SC23-9769-04 | IBM Tivoli Storage Manager for AIX Administrator's Guide   |
| SC23-9770-04 | IBM Tivoli Storage Manager for HP-UX Administrator's Guide   |
| SC23-9771-04 | IBM Tivoli Storage Manager for Linux Administrator's Guide   |
| SC23-9772-04 | IBM Tivoli Storage Manager for Oracle Solaris Administrator's Guide  |
| SC23-9773-04 | IBM Tivoli Storage Manager for Windows Administrator's Guide   |
| SC23-9775-04 | IBM Tivoli Storage Manager for AIX Administrator's Reference   |
| SC23-9776-04 | IBM Tivoli Storage Manager for HP-UX Administrator's Reference   |
| SC23-9777-04 | IBM Tivoli Storage Manager for Linux Administrator's Reference   |
| SC23-9778-04 | IBM Tivoli Storage Manager for Oracle Solaris Administrator's Reference  |
| SC23-9779-04 | IBM Tivoli Storage Manager for Windows Administrator's Reference   |
| SC23-9793-03 | IBM Tivoli Storage Manager: Using the Application Programming Interface Guide                                    |
| SC23-9791-06 | IBM Tivoli Storage Manager for UNIX™ and Linux: Backup-Archive Clients Installation and User's Guide             |
| SC23-9792-06 | IBM Tivoli Storage Manager for Windows: Backup-Archive Clients Installation and User's Guide                     |
| SC23-9794-04 | IBM Tivoli Storage Manager for Space Management for UNIX and Linux User's Guide                                  |
| SC23-9795-03 | IBM Tivoli Storage Manager HSM for Windows Administration Guide  |
| GC27-4010-01 | IBM Tivoli Storage Manager for Databases: Data Protection for Microsoft SQL Server Installation and User's Guide |

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|--------------|--|
| GC27-4009-01 | IBM Tivoli Storage Manager for Mail: Data Protection for Microsoft Exchange Server Installation and User's Guide |
| SC27-2898-03 | IBM Tivoli Storage Manager for Virtual Environments Data Protection for VMware Installation and User's Guide     |
| SC27-2877-03 | IBM Tivoli Storage Manager Server Messages and Error Codes   |
| SC27-2878-02 | IBM Tivoli Storage Manager Client Messages and Application Programming Interface Return Codes                    |
| GC27-4012-01 | IBM Tivoli Storage Manager for Databases: Data Protection for Microsoft SQL Server Messages                      |
| GC27-4011-01 | IBM Tivoli Storage Manager for Mail: Data Protection for Microsoft Exchange Server Messages                      |
| GC23-9789-05 | IBM Tivoli Storage Manager Problem Determination Guide   |

The Publications Center

<http://www.ibm.com/shop/publications/order>

The Publications Center is a worldwide central repository for IBM product publications and marketing material with a catalog of 70,000 items. Extensive search facilities are provided. Payment options for orders are via credit card (in the U.S.) or customer number for 20 countries. A large number of publications are available online in various file formats, and they can all be downloaded by all countries, free of charge, where IBM does business.

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## Technical information

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### Specified operating environment

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#### **Hardware and software requirements**

#### **Tivoli Storage Manager supported devices**

Refer to the following websites for the list of devices that are supported by Tivoli Storage Manager (5608-E01), Tivoli Storage Manager Extended Edition (5608-E02), and IBM System Storage Archive Manager (5608-E03). Libraries that have more than 4 drives or more than 48 tape slots require a license for Tivoli Storage Manager Extended Edition.

For Tivoli Storage Manager supported devices for AIX , HP-UX, Solaris, and Windows , visit

[http://www.ibm.com/software/sysmgmt/products/support/IBM\\_TSM\\_Supported\\_Devices\\_for\\_AIXHPSUNWIN.html](http://www.ibm.com/software/sysmgmt/products/support/IBM_TSM_Supported_Devices_for_AIXHPSUNWIN.html)

For Tivoli Storage Manager supported devices for Linux , visit

[http://www.ibm.com/software/sysmgmt/products/support/IBM\\_TSM\\_Supported\\_Devices\\_for\\_Linux.html](http://www.ibm.com/software/sysmgmt/products/support/IBM_TSM_Supported_Devices_for_Linux.html)

#### **Hardware and software requirements for the Tivoli Storage Manager V6.4 products are available at the website listed with each product below.**

IBM Tivoli Storage Manager V6.4 (refer to Note 1)

<http://www.ibm.com/support/docview.wss?uid=swg21243309>

IBM Tivoli Storage Manager Extended Edition V6.4 (refer to Note 1)

<http://www.ibm.com/support/docview.wss?uid=swg21243309>

IBM System Storage Archive Manager V6.4 (refer to Note 1)

<http://www.ibm.com/support/docview.wss?uid=swg21243309>



IBM Tivoli Storage Manager for Mail V6.4

<http://www.ibm.com/support/docview.wss?uid=swg21219345>

IBM Tivoli Storage Manager for Space Management V6.4

<http://www.ibm.com/support/docview.wss?uid=swg21321200>

IBM Tivoli Storage Manager for HSM for Windows V6.4

<http://www.ibm.com/support/docview.wss?uid=swg21319299>

IBM Tivoli Storage Manager for Enterprise Resource Planning

<http://www.ibm.com/support/docview.wss?uid=swg21219410>

IBM Tivoli Storage Manager for Databases V6.4

<http://www.ibm.com/support/docview.wss?uid=swg21218747>

IBM Tivoli Storage Manager for Virtual Environments V6.4

<http://www.ibm.com/support/docview.wss?uid=swg21505139>

For technical requirements for Tivoli Storage Manager Suite for Unified Recovery V6.4 and Tivoli Storage Manager Suite for Unified Recovery Entry V6.4, refer to the individual product websites listed above.

Note 1: Tivoli Storage Manager V6.4, Tivoli Storage Manager Extended Edition V6.4, and IBM System Storage Archive Manager V6.4 have the same hardware, software, and supported device requirements.

The program's specifications and specified operating environment information may be found in documentation accompanying the program, if available, such as a readme file, or other information published by IBM, such as an announcement letter. Documentation and other program content may be supplied only in the English language.

### ***Companion products***

Tivoli Storage Manager customers may consider purchasing IBM Tivoli Storage Manager FastBack for Workstations. Tivoli Storage Manager FastBack for Workstations is a real-time, continuous data protection solution specifically designed for laptops and desktops. Tivoli Storage Manager can be used with Tivoli Storage Manager FastBack for Workstations to provide off-machine protection when a user is connected, so real-time backups still occur. Tivoli Storage Manager provides off-site copies of backup data for vaulting, auditable disaster recovery plan, and tape and media management.

Customers who have a SAN environment may consider purchasing IBM Tivoli Storage Productivity Center in addition to Tivoli Storage Manager. The customer can benefit from the ability to more fully manage their storage environment, including backup and recovery, management of disk performance, management of the physical network of the SAN, logical connections between the devices, and capacity management of file systems and databases. Additionally, IBM Tivoli Storage Productivity Center complements Tivoli Storage Manager. The customer who leverages these products can benefit from the ability to extend policies and file reports to directly initiate a Tivoli Storage Manager's backup or archive when certain threshold conditions are met, or in the case of file reports, if conditions deem it necessary.

### ***Performance considerations***

The Tivoli Storage Manager product's performance will vary depending upon your particular configuration, the client and server options, and customization.

## **Planning information**

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### **Packaging**

Tivoli Storage Manager V6.4 products are distributed with:

- International Program License Agreement (Z125-3301)
- License Information document
- DVD media
- Publications (refer to the Publications section)

This program, when downloaded from a website, contains the applicable IBM license agreement and License Information, if appropriate, and will be presented for acceptance at the time of installation of the program. For future reference, the license and License Information will be stored in a directory such as LICENSE.TXT.

### **Security, auditability, and control**

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Tivoli Storage Manager V6.4 products use the security and auditability features of the operating system software. The customer is responsible for evaluation, selection, and implementation of security features, administrative procedures, and appropriate controls in application systems and communication facilities.

### **Global Technology Services**

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Contact your IBM representative for the list of selected services available in your country, either as standard or customized offerings for the efficient installation, implementation, or integration of this product.

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## **Licensing metric definitions and pricing examples**

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### **Licensing metric definitions**

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#### **Client Device**

Client Device is a unit of measure by which the Program can be licensed. A Client Device is a single user computing device or special purpose sensor or telemetry device that requests the execution of or receives for execution a set of commands, procedures, or applications from or provides data to another computer system that is typically referred to as a server or is otherwise managed by the server. Multiple Client Devices may share access to a common server. A Client Device may have some processing capability or be programmable to allow a user to do work. Examples include, but are not limited to actuators, appliances, automated teller machines, automatic meter readers, cash registers, disk drives, desktop computers, kiosks, notebook computers, personal digital assistant, point-of-sale terminals, sensors, smart meters, tape drives, and technical workstations. Licensee must obtain entitlements for every Client Device which runs, provides data to, uses services provided by, or otherwise accesses the Program and for every other computer or server on which the Program is installed.

#### **Processor Value Unit (PVU)**

PVU is a unit of measure by which the Program can be licensed. The number of PVU entitlements required is based on the processor technology defined within the PVU table by processor vendor, brand, type and model number at

[http://www.ibm.com/software/lotus/passportadvantage/pvu\\_licensing\\_for\\_customers.html](http://www.ibm.com/software/lotus/passportadvantage/pvu_licensing_for_customers.html)

and the number of processors made available to the program. IBM continues to define a processor, for the purpose of PVU-based licensing, to be each processor core on a chip. A dual-core processor chip, for example, has two processor cores.

Licensee can deploy the program using either full capacity licensing or virtualization capacity (Sub-Capacity) licensing according to the Passport Advantage Sub-Capacity Licensing Terms (see webpage below). If using full capacity licensing, licensee must obtain PVU entitlements sufficient to cover all activated processor cores\* in the physical hardware environment made available to or managed by the program, except for those servers from which the program has been permanently removed. If using virtualization capacity licensing, licensee must obtain entitlements sufficient to cover all activated processor cores made available to or managed by the program, as defined according to the Virtualization Capacity License Counting Rules at (

[http://www.ibm.com/software/lotus/passportadvantage/Counting\\_Software\\_licenses\\_using\\_specific\\_virtualization\\_technologies.html](http://www.ibm.com/software/lotus/passportadvantage/Counting_Software_licenses_using_specific_virtualization_technologies.html)

\* An activated processor core is a processor core that is available for use in a physical or virtual server, regardless of whether the capacity of the processor core can be or is limited through virtualization technologies, operating system commands, BIOS settings, or similar restrictions.

Instead of the entitlements required for the program directly, Licensee must obtain PVU entitlements for this program sufficient to cover the processor cores for the systems on which the resources managed or processed by the program reside.

## **Terabyte**

Terabyte is a unit of measure by which the program can be licensed. A terabyte is 2 to the 40th power bytes. Licensee must obtain an entitlement for each terabyte of storage available to the program.

### **IBM System Storage Archive Manager terabyte capacity**

IBM System Storage Archive Manager terabyte capacity includes primary disk storage pool size combined with the amount of utilized primary removable media storage used by the IBM System Storage Archive Manager server.

Capacity does not include:

- Copy storage pools for the space-managed data that reside on disk.
- Copy storage pools for the space-managed data that reside on removable media.
- Space used on the IBM Tivoli Storage Manager server for any purpose other than the primary storage of space-managed data.
- Disk on the host being space managed.

A virtual tape library (VTL) is considered a removable media device, so capacity is based on utilization.

The minimum amount of capacity that can be purchased is 1 terabyte.

Partial capacity will be rounded up to the next whole number of terabytes.

Additional capacity must be added in increments of 1 terabyte.

### **Tiered terabytes (1-12), (13-32), (33-64), (65-100), (101-250), (251+)**

Terabyte (1-12), Terabyte (13-32), Terabyte (33-64), Terabyte (65-100), Terabyte (101-250), and Terabyte (251+) is a unit of measure by which the Program can be licensed. Proofs of Entitlement (PoEs) are based on the number of terabytes available to the program. A terabyte is 2 to the 40th power bytes. Licensee must obtain sufficient entitlements required for licensee's environment. The entitlements are specific to the program and may not be exchanged, interchanged, or aggregated with entitlements of another program.

Instead of the entitlements required for the program directly, licensee must obtain terabyte entitlements for the program sufficient to cover the storage managed by the program.

### **IBM Tivoli Storage Manager Suite for Unified Recovery terabyte capacity**

#### **Tiered terabytes (1-100), (101-250), (251-500), (501-750), (751-1,250), (1,251-2,000), (2001+)**

Terabyte (1-100), Terabyte (101-250), Terabyte (251-500), Terabyte (501-750), Terabyte (751-1,250), Terabyte (1,251-2,000), Terabyte (2,001+) is a unit of measure by which the program can be licensed. PoEs are based on the number of terabytes available to the program. A terabyte is 2 to the 40th power bytes. Licensee must obtain sufficient entitlements required for licensee's environment. The entitlements are specific to the program and may not be exchanged, interchanged, or aggregated with entitlements of another program.

Instead of the entitlements required for the program directly, licensee must obtain terabyte entitlements for the program sufficient to cover the storage managed by the program.

For Tivoli Storage Manager Suite for Unified Recovery, licensee must obtain sufficient entitlements required for all data stored in the designated Tivoli Storage Manager primary storage pool volumes and for all data stored in the designated Tivoli Storage Manager FastBack repository volumes.

### **Pricing examples**

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#### **Pricing examples for Tivoli Storage Manager**

The following examples are provided to illustrate the customer's licensing requirements.

References to processor-based licensing **do not** represent the actual number of entitlements required. Entitlement requirements are Value Unit-based. Processors referenced in these examples represent the designated measurement on which the required number of Value Unit entitlements will be calculated. The number of Value Units required per processor will depend on the processor type.

Notes :

- A PoE for IBM Tivoli Storage Manager Extended Edition is required to use any of the following function: node replication (and the use of REPLICATE NODE command as a target server), disaster recovery manager, Network Data Management Protocol (NDMP), support of tape libraries (including virtual tape libraries) with more than 4 drives or more than 48 slots.
- An IBM Tivoli Storage Manager Extended Edition server can only be used to manage IBM Tivoli Storage Manager Extended Edition components or clients.
- A Tivoli Storage Manager Extended Edition server can act as a target server for disaster recovery purposes for Tivoli Storage Manager servers.
- The use of node replication (REPLICATE NODE command) requires the same end-user entitlements for both the server that sends the data (source server) and the server that receives the data (target server).
- Tivoli Storage Manager licensing requirements for SONAS require entitlements for the interface nodes that perform the data movement.
- Tivoli Storage Manager licensing requirements for GPFS™ require entitlements for the nodes that perform the data movement.
- Entitlement conversions to Tivoli Storage Manager Suite for Unified Recovery require entitlement of Tivoli Storage Manager Extended Edition. If there is entitlement of Tivoli Storage Manager, then a trade up to Tivoli Storage Manager Extended Edition is required as a precondition to the entitlement conversion.
- If a NetApp Network Attached Storage (NAS) device is backed up using Common Internet File System (CIFS) or Network File System (NFS), entitlement for either

IBM Tivoli Storage Manager or IBM Tivoli Storage Manager Extended Edition is required for that NAS device.

- An IBM Tivoli Storage Manager for Storage Area Networks entitlement is required for each IBM Tivoli Storage Manager server that is sharing a library where an IBM Tivoli Storage Manager acts as the library manager. An entitlement is required for each library client and library manager. An IBM Tivoli Storage Manager for Storage Area Networks license entitlement is required for each system that performs LAN-free operations.

Go to the [Reference information](#) section for more information about IBM Tivoli Storage Manager for Storage Area Networks.

- When using Processor Value Unit based licensing, license entitlements for IBM Tivoli Storage Manager or IBM Tivoli Storage Manager Extended Edition are required for all managed servers including the managing server. Licensing entitlement is Processor Value Unit based and both full capacity and sub-capacity licensing is offered.
- Client Device entitlements for IBM Tivoli Storage Manager and IBM Tivoli Storage Manager Extended Edition are interchangeable.

Scenario 1: The customer wants to do basic archiving and retrieval for all of the LAN-connected servers in its network. The customer environment consists of the following:

- 20 Client devices (laptops)
- 10 4-way servers
- Five 8-way mail servers
- Five 16-way database servers
- One 32-way server
- One 8-way managing server

The customer must obtain the following entitlements for IBM Tivoli Storage Manager or IBM Tivoli Storage Manager Extended Edition:

| Systems managed                  | Quantity in customer environment | Total client device entitlements required |
|----------------------------------|----------------------------------|---|
| Client devices                   | 20                               | 20  |
| Total client device entitlements |                                  | 20  |

| Systems managed              | Quantity in customer environment | Processor entitlements required |
|------------------------------|----------------------------------|---------------------------------|
| 4-way                        | 10                               | 40                              |
| 8-way                        | 5                                | 40                              |
| 16-way                       | 5                                | 80                              |
| 32-way                       | 1                                | 32                              |
| 8-way (managing server)      | 1                                | 8                               |
| Total processor entitlements |                                  | 200                             |

The customer must obtain the following additional entitlements for IBM Tivoli Storage Manager for Databases:

| Systems managed              | Quantity in customer environment | Processor entitlements required |
|------------------------------|----------------------------------|---------------------------------|
| 16-way                       | 5                                | 80                              |
| Total processor entitlements |                                  | 80                              |

Note: This example is valid for any database application supported by IBM Tivoli Storage Manager for Databases. IBM Tivoli Storage Manager or IBM Tivoli Storage Manager Extended Edition is required for each system with a database managed by IBM Tivoli Storage Manager for Databases.

The customer must obtain the following additional entitlements for IBM Tivoli Storage Manager for Mail:

| Systems managed              | Quantity in customer environment | Processor entitlements required |
|------------------------------|----------------------------------|---------------------------------|
| 8-way                        | 5                                | 40                              |
| Total processor entitlements |                                  | 40                              |

Note: This example is valid for any mail application supported by IBM Tivoli Storage Manager for Mail. IBM Tivoli Storage Manager or IBM Tivoli Storage Manager Extended Edition is required for each system with a mail server managed by IBM Tivoli Storage Manager for Mail.

#### Scenario 2: VMware environment with VMware vStorage APIs for Data Protection

The customer environment consists of the following:

- ESX server 1 with four virtual servers, three running as file servers, and the fourth running as a Microsoft SQL Server.
- ESX server 2 with four virtual servers, three running as file servers, and the fourth running as a Microsoft Exchange server.
- Both ESX servers are backed up using the vStorage APIs from a proxy server.
- Each virtual machine is assigned one processor core.
- The customer is backing up only the file servers.

Notes :

- IBM Tivoli Storage Manager or IBM Tivoli Storage Manager Extended Edition full capacity entitlement requires that all physical system cores on the VMware ESX servers, being backed up by the proxy server, are to be entitled.
- IBM Tivoli Storage Manager or IBM Tivoli Storage Manager Extended Edition sub-capacity entitlement requires that the virtual cores, assigned to virtual machines on the VMware ESX servers being backed up by the proxy server, are to be entitled.
- VMware vStorage API for Data Protection proxy server does not require entitlement for Tivoli Storage Manager, Tivoli Storage Manager Extended Edition, or Tivoli Storage Manager for Virtual Environments.

Full capacity requirement

| Quantity of processor core entitlements required | ESX 1 (4 way) | ESX 2 (4 way) | Proxy server (4 way) | Total |
|--|---------------|---------------|----------------------|-------|
|  |               |               |                      |       |

|  |               |               |                      |       |
|--|---------------|---------------|----------------------|-------|
| TSM or TSM Extended Edition                      | 4             | 4             | 0                    | 8     |
| Sub-capacity requirement                         |               |               |                      |       |
| Quantity of processor core entitlements required | ESX 1 (4 way) | ESX 2 (4 way) | Proxy server (4 way) | Total |
| TSM or TSM Extended Edition                      | 3             | 3             | 0                    | 6     |

Note: Only the virtual machines running as file servers require entitlement. Since these are the only machines being backed up, the customer does not back up the fourth virtual machine.

Scenario 3: VMware environment with IBM Tivoli Storage Manager or IBM Tivoli Storage Manager Extended Edition backup agent installed inside a virtual machine and the customer is backing up Oracle and Microsoft Exchange

The customer environment consists of the following:

- ESX server 1 with four virtual servers, three running as file servers, and the fourth running as an Oracle server.
- ESX server 2 with four virtual servers, three running as file servers, and the fourth running as a Microsoft Exchange server.
- Each virtual machine is assigned one processor core.

Notes :

- The full capacity IBM Tivoli Storage Manager or IBM Tivoli Storage Manager Extended Edition entitlement requirement is based on physical system cores and not virtual cores.
- The sub-capacity IBM Tivoli Storage Manager or IBM Tivoli Storage Manager Extended Edition entitlement requirement is based on virtual cores.

Full capacity requirements

|  |               |               |       |
|--|---------------|---------------|-------|
| Quantity of processor core entitlements required | ESX 1 (4 way) | ESX 2 (4 way) | Total |
| TSM or TSM Extended Edition                      | 4             | 4             | 8     |
| TSM for Databases                                | 4             | 0             | 4     |
| TSM for Mail                                     | 0             | 4             | 4     |

Note: If VMware vMotion is running across all ESX servers, enabling migration of virtual machines between the two ESX servers, then the ESX cluster is treated as the server at full capacity, which requires all cores on all ESX servers to be entitled. If vMotion is running in the above scenario, then IBM Tivoli Storage Manager Extended Edition, IBM Tivoli Storage Manager for Databases, and IBM Tivoli Storage Manager for Mail will each require eight cores to be entitled.

Sub-capacity requirements

|  |               |               |       |
|--|---------------|---------------|-------|
| Quantity of processor core entitlements required | ESX 1 (4 way) | ESX 2 (4 way) | Total |
| TSM or TSM Extended Edition                      | 4             | 4             | 8     |
| TSM for Databases                                | 1             | 0             | 1     |
| TSM for Mail                                     | 0             | 1             | 1     |

Note: If VMware vMotion is running across all ESX servers, enabling migration of virtual machines between the two ESX servers, entitlement requirements would not change from the above required entitlements.

Scenario 4: VMware environment with IBM Tivoli Storage Manager or IBM Tivoli Storage Manager Extended Edition backup agent running inside a virtual machine

The customer environment consists of the following:

- ESX server 1 with four virtual servers, three running as file servers, and the fourth running as an Oracle server.

Notes :

- The full capacity IBM Tivoli Storage Manager or IBM Tivoli Storage Manager Extended Edition entitlement requirement is based on physical system cores and not virtual cores.
- The sub-capacity IBM Tivoli Storage Manager or IBM Tivoli Storage Manager Extended Edition entitlement requirement is based on virtual cores.

Full capacity requirements

| Quantity of processor core entitlements required | ESX 1 (4 way) | Total |
|--|---------------|-------|
| TSM or TSM Extended Edition                      | 4             | 4     |
| TSM for Databases                                | 4             | 4     |

Sub-capacity requirements

| Quantity of processor core entitlements required | ESX 1 (4 way) | Total |
|--|---------------|-------|
| TSM or TSM Extended Edition                      | 4             | 4     |
| TSM for Databases                                | 1             | 1     |

## Pricing examples for IBM System Storage Archive Manager

### Scenario 1

A customer has an IBM System Storage Archive Manager server with a 5 terabytes (TB) primary disk storage pool and a removable media storage pool that will store 4 TB of data within the next 12 months. The data in the primary storage pools will be copied for off-site protection to a copy pool. The customer has designated 10 TB of removable media for a copy storage pool.

The customer needs to purchase 9 TB of IBM System Storage Archive Manager.

| Primary disk Storage Pool | Removable media storage pool | Capacity | Required entitlements                                  |
|---------------------------|------------------------------|----------|--|
| 5 TB                      | 4 TB                         | 9 TB     | 9 TB of IBM System Storage Archive Manager for windows |

### Scenario 2 (additional capacity)

A customer had purchased 9 TB of IBM System Storage Archive Manager. 12 months after that initial purchase, the customer is managing 9 TB of data. Over the next



12 months, the customer estimates they will need to manage an additional 2.4 TB worth of data.

The customer should purchase an additional 3 TB of IBM System Storage Archive Manager.

| Primary disk Storage Pool | Removable media storage pool | Capacity | Required entitlements                                   |
|---------------------------|------------------------------|----------|---|
| 5 TB                      | 6.4 TB                       | 11.4 TB  | 12 TB of IBM System Storage Archive Manager for windows |

### Pricing examples for Tivoli Storage Manager HSM for Windows

Entitlement for Tivoli Storage Manager HSM for Windows is based on the TB capacity being space managed (migrated). Capacity is defined as the primary HSM disk storage pool size combined with the amount of utilized HSM removable media storage pool. Storage pools are configured on the IBM Tivoli Storage Manager server. The minimum amount of capacity that can be purchased is 1 TB. Partial capacity will be rounded up to the next whole number of TB. Additional capacity must be added in multiples of 1 TB. Capacity does not include:

- Copy storage pools for the space-managed data that reside on disk
- Copy storage pools for the space-managed data that reside on removable media

#### Scenario 1

A customer wants to space manage 4.25 TB of files from six Microsoft Windows file servers. This means 4.25 TB of files will be migrated from their current location to the Tivoli Storage Manager server's primary HSM storage pools. The migrated files will be replaced with references to the original file. The data in the primary HSM storage pools will be copied for off-site protection to a copy pool. The customer has designated 0.25 TB of disk for an HSM disk storage pool, 4 TB for a HSM removable media storage pool, and 6 TB of removable media for a copy storage pool.

The customer needs to purchase 5 TB of Tivoli Storage Manager HSM for Windows .

| HSM disk storage pool | HSM removable media storage pool | Capacity | Required entitlements                          |
|-----------------------|----------------------------------|----------|--|
| 0.25 TB               | 4 TB                             | 4.25 TB  | 5 TB of Tivoli Storage Manager HSM for windows |

#### Scenario 2 (additional capacity)

A customer had purchased 5 TB of Tivoli Storage Manager HSM for Windows . Over the last 12 months, the customer consumed the 5 TB of HSM capacity they purchased initially in addition to an additional 1 TB. Over the next 12 months, they expect the amount of space managed data will grow to 9 TB total. They will continue to keep the 0.25 TB for the HSM disk storage pool and thus store the remaining 8.75 TB in the removable media storage pool.

The customer should purchase an additional 4 TB of Tivoli Storage Manager HSM for Windows .

| HSM disk storage pool | HSM removable media storage pool | Capacity | Required entitlements              |
|-----------------------|----------------------------------|----------|------------------------------------|
| 0.25 TB               | 8.75 TB                          | 9 TB     | 9 TB of Tivoli Storage Manager HSM |

## Pricing examples for Tivoli Storage Manager for Virtual Environments

### Protecting VMware environments using Tivoli Storage Manager for Virtual Environments

The customer environment consists of the following:

- vSphere (host) 1 with 12 virtual machines (guests).
- vSphere (host) 2 with 19 virtual machines (guests).
- All of the guests on both vSphere servers (hosts) are protected using Tivoli Storage Manager for Virtual Environments V6.2.

Notes :

- Either IBM Tivoli Storage Manager or IBM Tivoli Storage Manager Extended Edition are prerequisite products for Tivoli Storage Manager for Virtual Environments and require entitlement on all physical system cores on the vSphere hosts. This entitlement applies only to the vSphere hosts protected by Tivoli Storage Manager for Virtual Environments.
- Tivoli Storage Manager for Virtual Environments is physically installed on a centralized vStorage backup server, which is a secondary or proxy machine that is used to perform the backup using the vStorage application programming interface (API). This secondary or proxy machine can be either a physical machine or a virtual machine. A single vStorage backup server can be used to protect one or more virtual machines that reside on one or more vSphere servers. The customer can use one or more vStorage backup servers.
- Entitlements for Tivoli Storage Manager for Virtual Environments, Tivoli Storage Manager, and Tivoli Storage Manager Extended Edition are not required on the vStorage backup server. Tivoli Storage Manager for Virtual Environment, Tivoli Storage Manager, and Tivoli Storage Manager Extended Edition entitlements are only required for the managed environment, which is the processor cores on the vSphere hosts running the virtual machines being protected.
- Tivoli Storage Manager for Virtual Environments can also be licensed under sub-capacity software licensing terms, if required. Processor Value Unit (PVU) sub-capacity licensing lets you license an eligible software product for less than the full capacity (or total number of processors) of your server or group of servers. It provides the licensing granularity needed to leverage various multicore chip and virtualization technologies. The sub-capacity software licensing terms are documented in the International Passport Advantage Agreement (IPAA) Attachment for Sub-capacity Licensing Terms (Sub-capacity Licensing Attachment).

Full capacity requirement

Scenario 1 - use a single vStorage backup server to protect both vSphere hosts

| Quantity of processor core entitlements required                  | vSphere host 1 (4 way) | vSphere host 2 (8 way) | vStorage backup server (2 way) | Total |
|---|------------------------|------------------------|--------------------------------|-------|
| Tivoli Storage Manager or Tivoli Storage Manager Extended Edition | 4                      | 8                      | 0                              | 12    |
| Tivoli Storage Manager for Virtual Environments                   | 4                      | 8                      | 0                              | 12    |

Scenario 2 - use two (2 way) vStorage backup servers to protect only the larger vSphere host

| Quantity of processor core entitlements required | vSphere host 1 (4 way) | vSphere host 2 (8 way) | vStorage backup server (2 way) | vStorage backup server (2 way) |
|--|------------------------|------------------------|--------------------------------|--------------------------------|
|--|------------------------|------------------------|--------------------------------|--------------------------------|

| core entitlements<br>required  | host 1<br>(4 way) | host 2<br>(8 way) | server 1<br>(2 way) | server 2<br>(2 way) | Total |
|--|-------------------|-------------------|---------------------|---------------------|-------|
| Tivoli Storage Manager<br>or Tivoli Storage<br>Manager Extended<br>Edition | 0                 | 8                 | 0                   | 0                   | 8     |
| Tivoli Storage Manager<br>for Virtual<br>Environments                      | 0                 | 8                 | 0                   | 0                   | 8     |

### Pricing example for Tivoli Storage Manager Suite for Unified Recovery

Tivoli Storage Manager Suite for Unified recovery uses a tiered TB pricing model. The model consists of seven tiers that are to be used cumulatively. All tiers must be used in order (begin with the first tier and move on to the second tier, and so on) to arrive at the desired total amount of TB.

Based on the actual TB tiers, the following example is an illustration, using variables for prices, that shows how to calculate the prices:

| Tier TB range<br>(actual) | \$K/TB |
|---------------------------|--------|
| 1-100                     | x      |
| 101-250                   | y      |
| 251-500                   | z      |
| 501-750                   | a      |
| 751-1,250                 | b      |
| 1,251-2,000               | c      |
| 2,001+                    | d      |

  

| Total TB<br>ordered | How it is charged  |
|---------------------|--|
| 50 TB               | (x * 50 TB)  |
| 150 TB              | (x * 100 TB) + (y * 50 TB)   |
| 500 TB              | (x * 100 TB) + (y * 150 TB) + (z * 250 TB)   |
| 1,200 TB            | (x * 100 TB) + (y * 150 TB) + (z * 250 TB) +<br>(a * 250 TB) + (b * 450 TB)                                  |
| 1,800 TB            | (x * 100 TB) + (y * 150 TB) + (z * 250 TB) +<br>(a * 250 TB) + (b * 500 TB) + (c * 550 TB)                   |
| 2,500 TB            | (x * 100 TB) + (y * 150 TB) + (z * 250 TB) +<br>(a * 250 TB) + (b * 500 TB) + (c * 750 TB) +<br>(d * 500 TB) |

### Pricing example for Tivoli Storage Manager Suite for Unified Recovery Entry

Tivoli Storage Manager Suite for Unified Recovery Entry supports a combined maximum of 100 TB per enterprise in the designated Tivoli Storage Manager primary storage pool volumes and for all data stored in the designated Tivoli Storage Manager FastBack repository volumes. In addition, a maximum of two Tivoli Storage Manager servers are supported per enterprise.

If a customer has 10 TB in their Tivoli Storage Manager primary storage pool and 10 TB in their Tivoli Storage Manager FastBack repository, the customer requires PoEs of 20 TB of Tivoli Storage Manager Suite for Unified Recovery Entry.

If a customer reaches the maximum of 100 TB under management and foresees the need for more licenses, the customer will require a trade up to Tivoli Storage Manager Suite for Unified Recovery (5724-Z12).

If a customer requires more than two Tivoli Storage Manager servers, the customer will require a trade up to Tivoli Storage Manager Suite for Unified Recovery (5724-Z12).

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## Ordering information

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This product is only available via Passport Advantage . It is not available as shrinkwrap.

Product group: Tivoli Storage Management

Product category: Tivoli Storage Manager

| Product Identifier Descriptions                             | PID number |
|---|------------|
| IBM Tivoli Storage Manager                                  | 5608-E01   |
| IBM Tivoli Storage Manager Extended Edition                 | 5608-E02   |
| IBM System Storage Archive Manager                          | 5608-E03   |
| IBM Tivoli Storage Manager for Databases                    | 5608-E04   |
| IBM Tivoli Storage Manager for Enterprise Resource Planning | 5608-E05   |
| IBM Tivoli Storage Manager for Mail                         | 5608-E06   |
| IBM Tivoli Storage Manager for Space Management             | 5608-E12   |
| IBM Tivoli Storage Manager HSM for Windows                  | 5608-E13   |
| IBM Tivoli Storage Manager for Virtual Environments         | 5725-A44   |
| IBM Tivoli Storage Manager Suite for Unified Recovery       | 5724-Z12   |
| IBM Tivoli Storage Manager Suite for Unified Recovery Entry | 5725-H25   |

For ordering information, consult your IBM representative or authorized IBM Business Partner, or visit

<http://www-306.ibm.com/software/support/pa.html>

### Passport Advantage customer: Media pack entitlement details

Customers with active maintenance or subscription for the products listed are entitled to receive the corresponding media pack.

| Media pack description and entitled Maintenance offerings description                                    | Part number |
|--|-------------|
| IBM Tivoli Storage Manager V6.4 Multiplatform, ML Media Pack (5608-E01)                                  | BJ11PML     |
| IBM Tivoli Storage Manager Extended Edition V6.4 Multiplatform, ML Media Pack (5608-E02)                 | BJ11QML     |
| IBM System Storage Archive Manager V6.4 Multiplatform, ML Media Pack (5608-E03)                          | BJ11RML     |
| IBM Tivoli Storage Manager for Databases V6.4 Multiplatform, ML Media Pack (5608-E04)                    | BJ11SML     |
| IBM Tivoli Storage Manager for Enterprise Resource Planning V6.4 Multiplatform, ML Media Pack (5608-E05) | BJ11TML     |
| IBM Tivoli Storage Manager for Mail V6.4 Multiplatform, ML Media Pack (5608-E06)                         | BJ11UML     |
| IBM Tivoli Storage Manager for Space Mgmt V6.4 Multiplatform, ML Media Pack (5608-E12)                   | BJ11WML     |
| IBM Tivoli Storage Manager for HSM Windows V6.4 Multiplatform, ML Media Pack (5608-E13)                  | BJ11XML     |
| IBM Tivoli Storage Manager for Virtual Environments V6.4 Multiplatform, ML Media Pack (5725-A44)         | BJ11YML     |
| IBM Tivoli Storage Manager Suite for Unified Recovery V6.4 Multiplatform, ML Media Pack (5724-Z12)       | BJ11ZML     |
| IBM Tivoli Storage Manager Suite for Unified Recovery Entry V6.4 Multiplatform, ML Media                 | BJ120ML     |

## Current licensees

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Current licensees, with support in effect, will automatically be shipped the update.

## New licensees

Orders for new licenses will be accepted now.

Shipment will begin on the planned availability date.

## Basic license

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### Ordering information for Passport Advantage

Passport Advantage allows you to have a common anniversary date for Software Subscription and Support (SW S&S) renewals, which can simplify management and budgeting for eligible new versions and releases (and related technical support) for your covered products. The anniversary date, established at the start of your Passport Advantage Agreement, will remain unchanged while your Passport Advantage Agreement remains in effect. New software purchases will initially include twelve full months of Software Subscription and Support (also referred to as Software Maintenance). Software Subscription and Support in the second year (the first year of renewal) can be prorated to be coterminous with your common anniversary date. Thereafter, all Software Subscription and Support (Software Maintenance) will renew at the common anniversary date for twelve full months of Software Subscription and Support (Software Maintenance).

Refer to the IBM International Passport Advantage Agreement and to the *IBM Software Support Handbook* for specific terms relating to, and a more complete description of, technical support provided through Software Subscription and Support (Software Maintenance).

The quantity to be specified for the Passport Advantage part numbers in the following tables is per 10 Processor Value Units, per client device, and per terabyte. To order for Passport Advantage, specify the desired part number and quantity.

| Description                                 | Part number |
|---|-------------|
| IBM Tivoli Storage Manager                  |             |
| 10 Processor Value Units:                   |             |
| License and SW S&S 12 Months                | D56FULL     |
| (Refer to Note 1)                           |             |
| Annual SW S&S Renewal                       | E029KLL     |
| SW S&S Reinstatement 12 Months              | D56FWLL     |
| Lnx on z - License and SW S&S 12 Months     | D56Q5LL     |
| Lnx on z - Annual SW S&S Renewal            | E02B7LL     |
| Lnx on z - SW S&S Reinstatement 12 Months   | D56Q6LL     |
| Client devices:                             |             |
| License and SW S&S 12 Months                | D5158LL     |
| Annual SW S&S Renewal                       | E00AJLL     |
| SW S&S Reinstatement 12 Months              | D515ALL     |
| IBM Tivoli Storage Manager Extended Edition |             |
| 10 Processor Value Units:                   |             |
| License and SW S&S 12 Months                | D56FELL     |
| (Refer to Note 1)                           |             |
| Annual SW S&S Renewal                       | E029ELL     |
| SW S&S Reinstatement 12 Months              | D56FFLL     |
| Lnx on z - License and SW S&S 12 Months     | D56FJLL     |
| Lnx on z - Annual SW S&S Renewal            | E029GLL     |
| Lnx on z - SW S&S Reinstatement 12 Months   | D56FKLL     |
| Tradeup from Tivoli Storage Manager         |             |
| License and SW S&S 12 Months                | D56FILL     |
| Client devices:                             |             |
| License and SW S&S 12 Months                | D51MKLL     |
| Annual SW S&S Renewal                       | E00IALL     |

SW S&S Reinstatement 12 Months D51MMLL

Note 1: Client licenses are interchangeable between IBM Tivoli Storage Manager and IBM Tivoli Storage Manager Extended Edition.

IBM Tivoli Storage Manager for Space Management

10 Processor Value Units:

License and SW S&S 12 Months D56FLLL  
Annual SW S&S Renewal E029HLL  
SW S&S Reinstatement 12 Months D56FMLL

IBM Tivoli Storage Manager for Mail

10 Processor Value Units:

License and SW S&S 12 Months D56Q3LL  
Annual SW S&S Renewal E02B6LL  
SW S&S Reinstatement 12 Months D56Q4LL  
Lnx on z - License and SW S&S 12 Months D56Q1LL  
Lnx on z - Annual SW S&S Renewal E02B5LL  
Lnx on z - SW S&S Reinstatement 12 Months D56Q2LL

IBM Tivoli Storage Manager HSM for windows

Per terabytes:

License and SW S&S 12 Months D55H5LL  
Annual SW S&S Renewal E01ZBLL  
SW S&S Reinstatement 12 Months D55H6LL

IBM Tivoli Storage Manager for Enterprise Resource Planning

10 Processor Value Units:

License and SW S&S 12 Months D56F7LL  
Annual SW S&S Renewal E029CCL  
SW S&S Reinstatement 12 Months D56FBLL

IBM Tivoli Storage Manager for Virtual Environments

10 Processor Value Units:

License and SW S&S 12 Months D0I2SLL  
Annual SW S&S Renewal E0BI0LL  
SW S&S Reinstatement 12 Months D0I2TLL

IBM Tivoli Storage Manager for Databases

10 Processor Value Units:

License and SW S&S 12 Months D56D9LL  
Annual SW S&S Renewal E028WLL  
SW S&S Reinstatement 12 Months D56DALL

IBM System Storage Archive Manager

Per Terabyte (1-12)

License and SW S&S 12 Months D61H2LL

Per Terabyte (1-12)

Annual SW S&S Renewal E040YLL

Per Terabyte (1-12)

SW S&S Reinstatement 12 Months D61H3LL

Per Terabyte (13-32)

License and SW S&S 12 Months D61G7LL

Per Terabyte (13-32)

Annual SW S&S Renewal E040ILL

Per Terabyte (13-32)

SW S&S Reinstatement 12 Months D61G8LL

Per Terabyte (33-64)

License and SW S&S 12 Months D61GHLL

Per Terabyte (33-64)

Annual SW S&S Renewal E040NLL

Per Terabyte (33-64)

SW S&S Reinstatement 12 Months D61GILL

Per Terabyte (65-100)

License and SW S&S 12 Months D61GJLL

Per Terabyte (65-100)

Annual SW S&S Renewal E040PLL

Per Terabyte (65-100)

|   |         |
|---|---------|
| SW S&S Reinstatement 12 Months  | D61GKLL |
| Per Terabyte (101-250)<br>License and SW S&S 12 Months                              | D61GLLL |
| Per Terabyte (101-250)<br>Annual SW S&S Renewal                                     | E040QLL |
| Per Terabyte (101-250)<br>SW S&S Reinstatement 12 Months                            | D61GMLL |
| Per Terabyte (251+)<br>License and SW S&S 12 Months                                 | D61GNLL |
| Per Terabyte (251+)<br>Annual SW S&S Renewal  | E040RLL |
| Per Terabyte (251+)<br>SW S&S Reinstatement 12 Months                               | D61GPLL |
| IBM Tivoli Storage Manager Suite for Unified Recovery                               |         |
| Per Terabyte (1-100)<br>License and SW S&S 12 Months                                | D0BM1LL |
| Per Terabyte (1-100)<br>Annual SW S&S Renewal                                       | E084XLL |
| Per Terabyte (1-100)<br>SW S&S Reinstatement 12 Months                              | D0BM2LL |
| Per Terabyte (101-250)<br>License and SW S&S 12 Months                              | D0BM9LL |
| Per Terabyte (101-250)<br>Annual SW S&S Renewal                                     | E0851LL |
| Per Terabyte (101-250)<br>SW S&S Reinstatement 12 Months                            | D0BMALL |
| Per Terabyte (251-500)<br>License and SW S&S 12 Months                              | D0BMBLL |
| Per Terabyte (251-500)<br>Annual SW S&S Renewal                                     | E0852LL |
| Per Terabyte (251-500)<br>SW S&S Reinstatement 12 Months                            | D0BMCLL |
| Per Terabyte (501-750)<br>License and SW S&S 12 Months                              | D0BMJLL |
| Per Terabyte (501-750)<br>Annual SW S&S Renewal                                     | E0856LL |
| Per Terabyte (501-750)<br>SW S&S Reinstatement 12 Months                            | D0BMLLL |
| Per Terabyte (751-1,250)<br>License and SW S&S 12 Months                            | D0BMKLL |
| Per Terabyte (751-1,250)<br>Annual SW S&S Renewal                                   | E0857LL |
| Per Terabyte (751-1,250)<br>SW S&S Reinstatement 12 Months                          | D0BMMLL |
| Per Terabyte (1,251-2,000)<br>License and SW S&S 12 Months                          | D0BMULL |
| Per Terabyte (1,251-2,000)<br>Annual SW S&S Renewal                                 | E085BLL |
| Per Terabyte (1,251-2,000)<br>SW S&S Reinstatement 12 Months                        | D0BMWLL |
| Per Terabyte (2,001+)<br>License and SW S&S 12 Months                               | D0BMVLL |
| Per Terabyte (2,001+)<br>Annual SW S&S Renewal                                      | E085CLL |
| Per Terabyte (2,001+)<br>SW S&S Reinstatement 12 Months                             | D0BMXLL |
| IBM Tivoli Storage Manager Suite for Unified Recovery -<br>Archive Option           |         |
| Per Terabyte<br>License and Software Subscription and<br>Support (SW S&S) 12 months | D0PCMLL |
| Per Terabyte  |         |

|                                       |         |
|---------------------------------------|---------|
| Annual SW S&S Renewal<br>Per Terabyte | E0DMPLL |
| SW S&S Reinstatement 12 Months        | D0PCNLL |

IBM Tivoli Storage Manager Suite for Unified Recovery Entry

|  |         |
|--|---------|
| Per Terabyte (1-100)<br>License and SW S&S 12 Months   | D0Q3XLL |
| Per Terabyte (1-100)<br>Annual SW S&S Renewal          | E0DYELL |
| Per Terabyte (1-100)<br>SW S&S Reinstatement 12 Months | D0Q3YLL |

To order a media pack for Passport Advantage , specify the part number in the desired quantity from the following table:

| Description  | Part number |
|--|-------------|
| IBM Tivoli Storage Manager V6.4 DVD Media Pack - Multilingual  | BJ11PML     |
| IBM Tivoli Storage Manager Extended Edition V6.4 DVD Media Pack - Multilingual                       | BJ11QML     |
| IBM Tivoli Storage Manager for Space Management V6.4 DVD Media Pack - Multilingual (refer to Note 2) | BJ11WML     |
| IBM Tivoli Storage Manager for Enterprise Resource Planning V6.4 DVD Media Pack - Multilingual       | BJ11TML     |
| IBM Tivoli Storage Manager for Mail V6.4 DVD Media Pack - Multilingual                               | BJ11UML     |
| IBM Tivoli Storage Manager HSM for windows V6.4 DVD Media Pack - Multilingual (refer to Note 2)      | BJ11XML     |
| IBM Tivoli Storage Manager for Virtual Environments V6.4 DVD Media Pack - Multilingual               | BJ11YML     |
| IBM Tivoli Storage Manager for Databases V6.4 DVD Media Pack - Multilingual                          | BJ11SML     |
| IBM System Storage Archive Manager V6.4 DVD Media Pack - Multilingual                                | BJ11RML     |
| IBM Tivoli Storage Manager Suite for Unified Recovery V6.4 DVD Media Pack - Multilingual             | BJ11ZML     |
| IBM Tivoli Storage Manager Suite for Unified Recovery Entry V6.4 DVD Media Pack - Multilingual       | BJ120ML     |

The products listed in the above tables are also available via web download from Passport Advantage .

Note 2: These DVDs are also included in the Tivoli Storage Manager and Tivoli Storage Manager Extended Edition packages.

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## Terms and conditions

The information provided in this announcement letter is for reference and convenience purposes only. The terms and conditions that govern any transaction with IBM are contained in the applicable contract documents such as the IBM International Program License Agreement, IBM International Passport Advantage Agreement, and the IBM Agreement for Acquisition of Software Maintenance.





<http://www.ibm.com/support/handbook>

IBM will maintain this information for at least one year after the original licensee acquires the program (warranty period).

### ***Program technical support***

Technical support of a program product version or release will be available for a minimum of five years from the general availability date, as long as your Software Subscription and Support (also referred to as Software Maintenance) is in effect.

Technical support for IBM Tivoli Storage Manager HSM for Windows will be available for a minimum of three years from the general availability date, as long as your Software Subscription and Support (also referred to as Software Maintenance) is in effect. This technical support allows you to obtain assistance (via telephone or electronic means) from IBM for product-specific, task-oriented questions regarding the installation and operation of the program product. Software Subscription and Support (Software Maintenance) also provides you with access to updates (modifications or fixes), releases, and versions of the program. You will be notified, via announcement letter, of discontinuance of support with 12 months' notice. If you require additional technical support from IBM, including an extension of support beyond the discontinuance date, contact your IBM representative or IBM Business Partner. This extension may be available for a fee.

### ***Money-back guarantee***

If for any reason you are dissatisfied with the program and you are the original licensee, you may obtain a refund of the amount you paid for it, if within 30 days of your invoice date you return the program and its PoE to the party from whom you obtained it. If you downloaded the program, you may contact the party from whom you acquired it for instructions on how to obtain the refund.

For clarification, note that (1) for programs acquired under the IBM International Passport Advantage offering, this term applies only to your first acquisition of the program and (2) for programs acquired under any of IBM's On/Off Capacity on Demand (On/Off CoD) software offerings, this term does not apply since these offerings apply to programs already acquired and in use by you.

### ***Other terms***

#### ***Volume orders (IVO)***

No

#### ***IBM International Passport Advantage Agreement***

#### ***Passport Advantage applies***

Yes, and through the Passport Advantage website at

<http://www.ibm.com/software/passportadvantage>

#### ***Usage restriction***

Yes. Usage is limited to the quantity of Processor Value Units, client devices, and terabytes licensed.

For additional information, refer to the License Information document that is available on the IBM Software License Agreement website

<http://www.ibm.com/software/sla/sladb.nsf>

#### ***Software Subscription and Support applies***

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***System i Software Maintenance applies***

No

***Variable charges apply***

No

***Educational allowance available***

Education allowance does not apply.

Education software allowance does not apply.

Special education prices are available for qualified customers through Passport Advantage .

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## **Statement of good security practices**

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IT system security involves protecting systems and information through prevention, detection, and response to improper access from within and outside your enterprise. Improper access can result in information being altered destroyed or misappropriated or can result in misuse of your systems to attack others. Without a comprehensive approach to security, no IT system or product should be considered completely secure and no single product or security measure can be completely effective in preventing improper access. IBM systems and products are designed to be part of a comprehensive security approach, which will necessarily involve additional operational procedures, and may require other systems, products, or services to be most effective. IBM does not warrant that systems and products are immune from the malicious or illegal conduct of any party.

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To learn how Electronic Services can work for you, visit

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## Prices

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### **Passport Advantage**

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## Announcement countries

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## **Corrections**

### **(Corrected on October 9, 2012)**

Made changes in the Description section.