



IBM Tivoli Storage Manager V6.2 products deliver additional data reduction capabilities and enhanced support for virtualized environments

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At a glance

IBM® Tivoli® Storage Manager V6.2 and IBM Tivoli Storage Manager Extended Edition V6.2 offer:

- New data reduction capabilities: More effective data management through source-side data deduplication to help conserve network bandwidth and slow the rate of data growth by eliminating redundant data.
- Simplified management of virtualized environments: Administration is simplified with auto discovery of new VMware guests and support for Microsoft® Hyper-V guest backups using Volume Shadow Copy Service (VSS), which helps reduce the overall number of agents to manage.
- Productivity enhancements: Storage administrators can automatically schedule and distribute Tivoli Storage Manager backup-archive client updates for Microsoft Windows®, which helps deliver quicker and less labor intensive software distribution.
- Performance enhancements: Simultaneous migration and storage pool backup combines windows for migration, storage pool backup, and copy active-data into one process that can help reduce the overall time for these operations, potentially freeing up Tivoli Storage Manager server resources to perform other administrative operations.

For ordering, contact your IBM representative, an IBM Business Partner, or IBM Americas Call Centers at 800-IBM-CALL (Reference: YE001).

Overview

The IBM Tivoli Storage Manager V6.2 products in this announcement deliver enhanced data management through source-side (which can also be referred to as client) data deduplication, help simplify management of virtualized environments, and schedule and automatically distribute Tivoli Storage Manager maintenance updates to Microsoft Windows systems.

The Tivoli Storage Manager V6.2 products consist of:

- Tivoli Storage Manager
- Tivoli Storage Manager Extended Edition
- Tivoli Storage Manager for Storage Area Networks
- Tivoli Storage Manager for Space Management

- IBM System Storage™ Archive Manager
- Tivoli Storage Manager for Enterprise Resource Planning

Refer to the [Description](#) section for detailed product information on the above products.

Key prerequisites

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

Planned availability date

- March 19, 2010: Electronic - English only
- April 16, 2010: Media - English only

Description

Although overall pace of business growth has slowed, the creation of digital content has continued to grow relentlessly. The enhancements delivered in the IBM Tivoli Storage V6.2 products build on the success of IBM Tivoli Storage Manager V6.1. These enhancements continue to help businesses manage data growth with data reduction and protection of virtualized environments, as well as important storage administrator productivity enhancements.

IBM Tivoli Storage Manager V6.2 and IBM Tivoli Storage Manager Extended Edition V6.2

Enhanced data reduction capabilities help conserve network bandwidth and data storage

Tivoli Storage Manager and Tivoli Storage Manager Extended Edition provide significant data reduction through progressive incremental backup, built-in data deduplication capability, and client compression. In addition, data reduction can be achieved through use of storage devices that can support compression and data deduplication. Data deduplication is defined as the elimination of redundant files and subfiles. These subfiles may also be referred to as chunks, blocks, or extents. Only one instance is stored for each common chunk. Tivoli Storage Manager V6.2 and Tivoli Storage Manager Extended Edition V6.2 extend their data reduction capabilities by adding a new, built-in source-side data deduplication. Source-side data deduplication helps conserve network bandwidth by not moving duplicate files or portions of a file over the network during backup operations. By helping to reduce the amount of data that is sent, backups can be performed faster and the amount of space required in storage pools may grow at a slower rate.

Tivoli Storage Manager V6.2 and Tivoli Storage Manager Extended Edition V6.2 source-side data deduplication is performed for file data. It is optimized to help reduce network 'chattiness' when identifying duplicate data. Tivoli Storage Manager V6.2 and Tivoli Storage Manager Extended Edition V6.2 compile statistics for the respective Tivoli Storage Manager V6.2 and Tivoli Storage Manager Extended Edition V6.2 backup-archive client to report on deduplication and data reduction savings. Examples of these statistics are:

- Deduplication reduction - the size of the duplicate chunks found and the initial file or data size.
- Total number of files deduplicated - the number of files for which deduplication took place.
- Total data reduction ratio - this ratio adds in the benefits of progressive incremental backup and data compression.

In addition, the data deduplication capability is available in Tivoli Storage Manager V6.2 and in Tivoli Storage Manager Extended Edition V6.2 at no additional charge. Previously, data deduplication was only available in Tivoli Storage Manager Extended Edition.

Enhanced support for virtualized environments

Tivoli Storage Manager V6.2 and Tivoli Storage Manager Extended Edition V6.2 deliver important enhancements for VMware ESX and ESXi and Microsoft Hyper-V virtualized environments. If you are using Tivoli Storage Manager V6.2 or Tivoli Storage Manager Extended Edition V6.2 in VMware Consolidated Backup (VCB) environments, you can automatically discover when new guests are brought online. This greatly helps simplify management and administration by eliminating the manual process to track guests. In addition, Tivoli Storage Manager V6.2 and Tivoli Storage Manager Extended Edition V6.2 leverage the VMware vStorage application programming interface (API) for file-level backup and recovery. This helps reduce the overall impact of the backup and recovery operation via LAN-free backup of virtual machines from a centralized backup server.

Tivoli Storage Manager V6.2 and Tivoli Storage Manager Extended Edition V6.2 support Microsoft Hyper-V guest backup using Volume Shadow Copy Service (VSS). This capability enables a full snapshot backup of a guest machine. The snapshots synchronize with applications and file systems inside guests with VSS. This enhancement helps simplify management and administration because there are now fewer agents to manage. Since there are fewer loads on the host systems, the overall impact of the backup and recovery operation can be reduced.

Enhanced storage administrator productivity via automatic client deployment for Tivoli Storage Manager and Tivoli Storage Manager Extended Edition backup-archive clients for Windows

The updating of backup-archive clients for Windows can be quicker and less labor intensive with Tivoli Storage Manager V6.2 or Tivoli Storage Manager Extended Edition V6.2. From the Tivoli Storage Manager V6.2 and Tivoli Storage Manager Extended Edition V6.2 Administration Center, you select a maintenance level to be distributed to a list of existing clients. The distribution and code updates are run automatically on the clients, based on a predefined policy and schedule. Also from the Administration Center, you can review the client distribution status. Tivoli Storage Manager or Tivoli Storage Manager Extended Edition backup-archive client for Windows maintenance distribution is supported for upgrade from V5.4, or later, to V6.2. A wizard is used to set the basic server configuration required for client auto deployments, including capabilities such as identification of:

- Where the deployment packages are to be stored
- The storage media on which to store deployment packages
- The retention policies for the deployment packages

Performance enhancements for selected server operations

The windows for data migration, storage pool backup, and copy active-data can be combined into a single operation. This consolidation helps to reduce the total time needed for completion of all these critical backup operations. This reduction in total time needed can then free the Tivoli Storage Manager V6.2 or Tivoli Storage Manager Extended Edition V6.2 server for other operations. Compared to the existing simultaneous write function, this new capability helps reduce the need for tape devices during client store operations {backup, archive, and client hierarchical storage management (HSM)}.

Enhanced security for data transmissions

In-flight data encryption using Secure Sockets Layer (SSL) is expanded in Tivoli Storage Manager V6.2 and Tivoli Storage Manager Extended Edition V6.2 to the following platforms (in addition to Windows and IBM AIX®, which continue to be supported):

- Linux®
- Solaris
- HP-UX

This helps to ensure secure data transmission between client and server using 256-bit AES encryption for in-flight data. Both the client and the server can use third-party certificates from a certificate authority. The ability to use third-party certificates significantly helps simplify the deployment and validation of Tivoli Storage Manager V6.2 server certificates.

Faster backup of Microsoft Windows environments

Prior to Tivoli Storage Manager V6.2 or Tivoli Storage Manager Extended Edition V6.2, during a Windows system state backup, if any system or boot file changes were detected, the entire collection of system and boot files were backed up again. However, typically, most system state-related maintenance changes very few system and boot files. Given the explosive growth in the amount of Windows 2008 system state data, backing up the entire set of system and boot files, especially across a large organization, can place an undue burden on the backup network and storage. With Tivoli Storage Manager V6.2 or Tivoli Storage Manager Extended Edition V6.2, now only system and boot files that are changed are backed up, and not the entire set of system and boot files. The result is the potential for faster backups that require less network bandwidth and less storage space. This enhancement applies to Windows 2008, Windows 2003, Windows 7, and Windows Vista families of operating systems.

Support devices via the small computer system interface (SCSI) pass-through interface on Windows

This enhancement helps improve storage administrator productivity and helps them comply with security policies that allow only signed drivers. With this enhancement, the Windows native device driver can be used instead of the Tivoli Storage Manager or Tivoli Storage Manager Extended Edition driver. When the Windows native device driver is used, it only needs to be installed once. The Windows native driver can automatically claim all devices it supports and users no longer have to manually update the driver for each device through the device manager.

IBM Tivoli Storage Manager for Enterprise Resource Planning V6.2

Tivoli Storage Manager for Enterprise Resource Planning V6.2 provides automated data protection, helps reduce the impact of data backups and restores on the SAP database server, and can reduce the administrator workload necessary to help meet data protection and storage management requirements. It seamlessly integrates with the database-specific utilities of IBM DB2® UDB and Oracle (RMAN), and with the SAP BR*Tools. Tivoli Storage Manager for Enterprise Resource Planning is specifically optimized to help protect your vital SAP data. An administration assistant helps maximize administrator productivity by helping to simplify administration, configuration, and monitoring of Tivoli Storage Manager for Enterprise Resource Planning in production environments. This powerful solution helps enable administrators to effectively, consistently, and reliably manage backup and recovery of multiple SAP systems with large volumes of data. The Tivoli Storage Manager for Enterprise Resource Planning software module allows multiple SAP database servers to share a single Tivoli Storage Manager server to automatically manage the backup data. In addition, it supports distributing the data of a single SAP database server among various Tivoli Storage Manager servers. As the intelligent interface to SAP databases, Tivoli Storage Manager for Enterprise Resource Planning V6.2 supports heterogeneous environments with large volume data backups, data recovery, redirected restore, and disaster recovery of multiple SAP database servers.

Tivoli Storage Manager for Enterprise Resource Planning V6.2 is enhanced to perform more efficient backup of very large SAP databases (for example, databases larger than one terabyte). This is accomplished by breaking up extremely large SAP database objects into multiple smaller objects. This enables more flexibility on

server-side maintenance tasks, such as backup storage pool operations, as they can now be interrupted without being required to start all over again.

IBM Tivoli Storage Manager for Storage Area Networks V6.2

Tivoli Storage Manager for Storage Area Networks works with servers and client computers to make data transfers over a Storage Area Network (SAN). It allows SAN-connected Tivoli Storage Manager servers and Tivoli Storage Manager client computers to make maximum use of their direct network connection to storage. Key benefits of Tivoli Storage Manager for Storage Area Network:

- Helps reduce the impact of data protection on the LAN and can reduce CPU utilization on both client and server
- Delivers LAN-free backup and restore that helps remove data transfer from the LAN, providing high-performance backup and restore that helps minimize network traffic and improves application performance and transaction response times on the Tivoli Storage Manager server
- Supports a SAN-connected tape library, where multiple servers can share a tape library and tape drives on a SAN

IBM Tivoli Storage Manager for Space Management V6.2

The IBM AIX and Linux components of Tivoli Storage Manager for Space Management are updated in V6.2 to exploit the enhancements in Tivoli Storage Manager V6.2. The HP-UX and Solaris components remain unchanged from V6.1.

IBM System Storage Archive Manager V6.2

IBM System Storage Archive Manager provides data retention capabilities that help meet requirements for data retention and disposition. IBM System Storage Archive Manager's existing policy-based data management capabilities use an open API. IBM System Storage Archive Manager is designed to prevent the modification of data under its control and to prevent the deletion of that data by unauthorized agents (individual or program) prior to the expiration of the retention period. This helps ensure that neither individuals nor programs can maliciously or accidentally delete data under IBM System Storage Archive Manager control.

IBM System Storage Archive Manager V6.2, based on IBM Tivoli Storage Manager V6.2, incorporates many of the same enhancements and new features described previously, such as:

- Source-side data deduplication to help conserve network bandwidth slow the rate of data growth by eliminating redundant data.
- Simplified management of virtualized environments: Administration is simplified with auto discovery of new VMware guests and support for Microsoft Hyper-V guest backups using VSS, which helps reduce the overall number of agents to manage.
- Productivity enhancements: Storage administrators can automatically schedule and distribute Tivoli Storage Manager backup-archive client updates for Microsoft Windows, which helps deliver quicker and less labor intensive software distribution.
- Performance enhancements: Backup operations, that previously had to be performed sequentially, can be combined into a single operation, helping to reduce the overall backup window.

Section 508 of the U.S. Rehabilitation Act

The IBM Tivoli Storage Manager V6.2 products in this announcement, when used in accordance with associated documentation of IBM, are capable of satisfying the applicable requirements of Section 508 of the Rehabilitation Act, provided that any assistive technology used with the product properly interoperates with it. A U.S. Section 508 Voluntary Product Accessibility Template (VPAT) can be requested via the following IBM Web site

http://www.ibm.com/able/product_accessibility/index.html

Statement of direction

IBM intends to deliver the translated version of the Tivoli Storage Manager products.

Tivoli Storage Manager server and client:

- Japanese
- Korean
- Simplified Chinese
- Traditional Chinese
- Brazilian Portuguese
- French
- German
- Italian
- Spanish
- Russian

Tivoli Storage Manager client only:

- Czech
- Hungarian
- Polish

The information on the new products is intended to outline our general product direction and it should not be relied on in making a purchasing decision. The information on the new products is for informational purposes only and may not be incorporated into any contract. The information on the new products is not a commitment, promise, or legal obligation to deliver any material, code, or functionality. The development, release, and timing of any features or functionality described for our products remains at our sole discretion.

Program number

Program Number	VR	Program Name
5608-E01	V6.2	IBM Tivoli Storage Manager
5608-E02	V6.2	IBM Tivoli Storage Manager Extended Edition
5608-E03	V6.2	IBM System Storage Archive Manager
5608-E05	V6.2	IBM Tivoli Storage Manager for Enterprise Resource Planning
5608-E07	V6.2	IBM Tivoli Storage Manager for Storage Area Networks
5608-E12	V6.2	IBM Tivoli Storage Manager for Space Management

Education support

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

Offering Information

Product information is available via the Offering Information Web site

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

Also, visit the Passport Advantage® Web site

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

Publications

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

<http://publib.boulder.ibm.com/infocenter/tsminfo/v6/index.jsp>

Title	Order Number
IBM Tivoli Storage Manager for AIX Installation Guide V6.2	GC23-9781
IBM Tivoli Storage Manager for AIX Administrator's Guide V6.2	SC23-9769
IBM Tivoli Storage Manager for AIX Administrator's Reference V6.2	SC23-9775
IBM Tivoli Storage Manager for SAN for AIX Storage Agent User's Guide V6.2	SC23-9797
IBM Tivoli Storage Manager for HP-UX Installation Guide V6.2	GC23-9782
IBM Tivoli Storage Manager for HP-UX Administrator's Guide V6.2	SC23-9770
IBM Tivoli Storage Manager for HP-UX Administrator's Reference V6.2	SC23-9776
IBM Tivoli Storage Manager for SAN for HP-UX Storage Agent User's Guide V6.2	SC23-9798
IBM Tivoli Storage Manager for Sun Solaris Installation Guide V6.2	GC23-9784
IBM Tivoli Storage Manager for Sun Solaris Administrator's Guide V6.2	SC23-9772
IBM Tivoli Storage Manager for Sun Solaris Administrator's Reference V6.2	SC23-9778
IBM Tivoli Storage Manager for SAN for Sun Solaris Storage Agent User's Guide V6.2	SC23-9800
IBM Tivoli Storage Manager for Linux Installation Guide V6.2	GC23-9783
IBM Tivoli Storage Manager for Linux Administrator's Guide V6.2	SC23-9771
IBM Tivoli Storage Manager for Linux Administrator's Reference V6.2	SC23-9777
IBM Tivoli Storage Manager for SAN for Linux Storage Agent User's Guide V6.2	SC23-9799
IBM Tivoli Storage Manager for windows Installation Guide V6.2	GC23-9785
IBM Tivoli Storage Manager for windows Administrator's Guide V6.2	SC23-9773
IBM Tivoli Storage Manager for windows Administrator's Reference V6.2	SC23-9779
IBM Tivoli Storage Manager for SAN for windows Storage Agent User's Guide V6.2	SC23-9553

IBM Tivoli Storage Manager Messages V6.2	GC23-9787
IBM Tivoli Storage Manager Performance and Tuning Guide V6.2	GC23-9788
IBM Tivoli Storage Manager Problem Determination Guide V6.2	GC23-9789
IBM Tivoli Storage Manager Integration Guide for Tivoli Storage Manager FastBack	SC27-2828
IBM Tivoli Storage Manager for UNIX® and Linux Backup-Archive Clients Installation and User's Guide V6.2	SC23-9791
IBM Tivoli Storage Manager for Windows Backup-Archive Clients Installation and User's Guide V6.2	SC23-9792
IBM Tivoli Storage Manager for Space Management for UNIX and Linux User's Guide V6.2	SC23-9794
IBM Tivoli Storage Manager Using the Application Program Interface V6.2	SC23-9793
IBM Tivoli Storage Manager for Enterprise Resource Planning Data Protection for SAP Installation and User's Guide for Oracle V6.2	SC33-6340
IBM Tivoli Storage Manager for Enterprise Resource Planning Data Protection for SAP Installation and User's Guide for DB2 V6.2	SC33-6341

The IBM 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.

Technical information

Specified operating environment

Hardware and software requirements

Tivoli Storage Manager supported devices

Refer to the following Web site 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 four drives or more than 48 tape slots require a license for Tivoli Storage Manager Extended Edition.

<http://www.ibm.com/software/sysmgmt/products/support/IBMTivoliStorageManager.html>

Hardware and software requirements for the Tivoli Storage Manager V6.2 products are available at the Web site listed with each product below.

IBM Tivoli Storage Manager V6.2¹

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

IBM Tivoli Storage Manager Extended Edition V6.2¹

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

IBM System Storage Archive Manager V6.2¹

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

IBM Tivoli Storage Manager for Enterprise Resource Planning V6.2

<http://www.ibm.com/support/docview.wss?rs=667&uid=swg21219410>

IBM Tivoli Storage Manager for Storage Area Networks V6.2

<http://www.ibm.com/support/docview.wss?rs=1018&uid=swg21321214>

IBM Tivoli Storage Manager for Space Management V6.2

<http://www.ibm.com/support/docview.wss?rs=725&uid=swg21321200>

¹Tivoli Storage Manager V6.2, Tivoli Storage Manager Extended Edition V6.2, and IBM System Storage Archive Manager V6.2 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 V6.2 customers may want to consider purchasing IBM Tivoli Storage Manager FastBack. Tivoli Storage Manager FastBack is complementary with Tivoli Storage Manager V6.2. The progressive incremental backup methodology of Tivoli Storage Manager FastBack is consistent with Tivoli Storage Manager V6.2's methodology and value proposition of helping you minimize the amount of data requiring backup by copying changed data only. In addition, if you desire to add tape to your Tivoli Storage Manager FastBack environment, you can effectively back up your Tivoli Storage Manager FastBack solution directly to Tivoli Storage Manager V6.2. Then, Tivoli Storage Manager V6.2 can take over tiered storage management of Tivoli Storage Manager FastBack data to help reduce cost and assimilate backup processing of enterprise data.

Many Tivoli Storage Manager FastBack customers have already implemented this exact scenario of supplementing their Tivoli Storage Manager environment in the data center with a Tivoli Storage Manager FastBack solution in remote branch offices, or a Tivoli Storage Manager Fastback solution for specific mission-critical servers where continuous data protection is desired.

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 for Data 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

Direct customer support

Installation and technical support is provided by Global Services. For more information call 800-IBM-4YOU (426-4968).

For technical support or assistance, contact your IBM representative or visit

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

Packaging

Tivoli Storage Manager V6.2 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 Web site, 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

Tivoli Storage Manager V6.2 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.

Software Services

IBM Software Services has the breadth, depth, and reach to manage your services needs. You can leverage the deep technical skills of our lab-based, software services team and the business consulting, project management, and infrastructure expertise of our IBM Global Services team. Also, we extend our IBM Software Services reach through IBM Business Partners to provide an extensive portfolio of capabilities. Together, we provide the global reach, intellectual capital, industry insight, and technology leadership to support a wide range of critical business needs.

To learn more about IBM Software Services or to contact a Software Services sales specialist, visit

<http://www.ibm.com/software/sw-services/>

IBM Tivoli Enhanced Value-Based Pricing

IBM Tivoli software products are priced using IBM Tivoli's Enhanced Value-Based Pricing. The Enhanced Value-Based Pricing system is based upon the IBM Tivoli Environment-Managed Licensing Model, which uses a managed-environment

approach - whereby price is determined by what is managed rather than the number and type of product components installed.

For example, all servers monitored with IBM Tivoli's monitoring product (IBM Tivoli Monitoring) require entitlements sufficient for those servers. Other Tivoli products may manage clients, client devices, agents, network nodes, users, or other items, and are licensed and priced accordingly.

Unlike typical systems management licensing models that require entitlements of specific software components to specific systems, the IBM Tivoli Environment-Managed Licensing Model provides the customer flexibility to deploy its IBM Tivoli software products within its environment in a manner that can address and respond to the customer's evolving architecture. That is, as the architecture of a customer's environment changes, the customer's implementation of IBM Tivoli software can be altered, as needed, without affecting the customer's license requirements (as long as the customer does not exceed its entitlements to the software).

Under Enhanced Value-Based Pricing, licensing and pricing of server-oriented applications are determined based upon the server's use in the customer's environment. Typically, such applications are licensed and priced in a manner that corresponds to each installed and activated processor of the server managed by the IBM Tivoli application to help correlate price to value while offering a simple solution.

Where a server is physically partitioned, this approach is modified. This partitioning technique is the approach used with systems that have either multiple cards or multiple frames, each of which can be configured independently. For servers capable of physical partitioning (for example, IBM System p® Scalable POWERparallel Systems® servers, Sun Ultra servers, and HP Superdome servers), an entitlement is required for each processor in the physical partition being managed by the Tivoli application. For example, assume that a server has 24 processors installed in aggregate. If this server is not partitioned, entitlements are required for all 24 processors. If, however, it is physically partitioned into three partitions, each containing eight processors, and Tivoli products were managing only one of the three partitions, then entitlements would be required for the eight processors on the physical partition managed by the IBM Tivoli application.

For servers with virtual or logical partitions, entitlements are required for all installed and activated processors on the server. For each IBM Tivoli application managing a clustered environment, licensing is based on the cumulative number of installed and activated processors on each server in the cluster. Where the cluster includes physically partitioned servers, the considerations described above concerning physically partitioned servers apply as well.

Enhanced Value-Based Pricing recognizes the convergence of RISC and UNIX, and Microsoft Windows and Intel® technologies, in order to simplify your licensing requirements, and to provide a smoother, more scalable model. Pricing and licensing does not differentiate between non-System z server platforms or operating systems. For some products, this platform neutrality extends to System z® and other host servers as well.

IBM Tivoli Enhanced Value-Based Pricing terminology definitions

Client device or client

A client device is a computing device that requests the execution of a set of commands, procedures, or applications from another computer system that is typically referred to as a server. Multiple client devices may share access to a common server. A client device generally has some processing capability or is programmable to allow a user to do work. Examples include, but are not limited to, notebook computers, desktop computers, desk side computers, technical workstations, appliances, automated teller machines, point-of-sale terminals, tills and cash registers, and kiosks.

Enterprise

An enterprise is a person or single entity and those subsidiaries with more than 50% ownership.

IFL

This optional facility enables additional processing capacity exclusively for Linux workload, with no effect on the model designation of a System z or OS/390® server. Consequently, executing Linux workload on the IBM IFL will not, in most cases, result in any increased IBM software charges for z/OS®, OS/390, VM, VSE, or TPF operating systems and applications. There is, as indicated, a charge associated with the IFL, and there may also be a charge for applications which run on the IFL.

The IFL may be dedicated to a single Linux-mode logical partition or it may be shared by multiple Linux-mode logical partitions. Installations should note that the Linux workspace enabled by this facility will not support any of the traditional S/390® operating systems (OS/390, TPF, VSE, or VM). Only Linux applications or Linux operating in conjunction with the Virtual Image Facility, an environment that operates within a logical partition or in native S/390 mode and provides the capability to create multiple Linux images, are supported by IBM S/390 IFL.

Managed processor (charging under full capacity in the managed environment)

Managed processor charges are based on the active processors on the machines in the computing environment affiliated with the program rather than on the server where the program is run. The managed processors which require PoEs are defined in the License Information's program-unique terms.

Notes:

1. IBM defines a physical processor in a computer as a functional unit that interprets and executes instructions. A physical processor consists of at least an instruction control unit and one or more arithmetic and logic units.
2. Multicore technology allows two or more processors (commonly called cores) to be active on a single silicon chip. With multicore technology, IBM considers each core to be a physical processor. For example, in a dual-core chip, there are two physical processors residing on the single silicon chip.
3. The program may **not run** on **some or all** of the processors for which PoEs are required by the program's valuation method.
4. In the System z IFL environment, each IFL engine is considered a single physical processor.
5. Threading, a technique which makes a single processor seem to perform as two or more, does **not** affect the count of physical processors.
6. Where blade technology is employed, each blade is considered a separate server and charging is based upon the total number of processors on the blades with which the program is affiliated.
7. Not all processors require the same number of Value Unit entitlements. To determine the number of Value Unit entitlements required, refer to the processor Value Unit conversion table on the Passport Advantage Web site

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

Processor (per processor charging under full capacity)

In full capacity charging, PoEs must be acquired for all activated processors (available for use) that are on the server where the program or a component of the program is run.

Notes:

1. IBM defines a physical processor in a computer as a functional unit that interprets and executes instructions. A physical processor consists of at least an instruction control unit and one or more arithmetic and logic units.

2. Multicore technology allows two or more processors (commonly called cores) to be active on a single silicon chip. With multicore technology, IBM considers each core to be a physical processor. For example, in a dual-core chip, there are two physical processors residing on the single silicon chip.
3. In the System z IFL environment, each IFL engine is considered a single physical processor.
4. Threading, a technique which makes a single processor seem to perform as two or more, does **not** affect the count of physical processors.
5. Where blade technology is employed, each blade is considered a separate server and charging is based upon the total number of processors on the blade on which the program is run.
6. When a server is shipped with six processors, but two of them are inactive, four processors are active for the customer.
7. Not all processors require the same number of Value Unit entitlements. To determine the number of Value Unit entitlements required, refer to the processor value unit conversion table on the Passport Advantage Web site

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

Server

A server is a computer system that executes requested procedures, commands, or applications to one or more user or client devices over a network. A PoE must be obtained for each server on which the program or a component of the program is run or for each server managed by the program. Where blade technology is employed, each blade is considered a separate server.

Standby or backup systems

For programs running or resident on backup machines, IBM defines three types of situations: cold, warm, and hot. In cold and warm situations, a separate entitlement for the copy on the backup machine is normally not required and typically no additional charge applies. In a hot backup situation, the customer needs to acquire other license or entitlements sufficient for that server. All programs running in backup mode must be solely under the customer's control, even if running at another enterprise's location.

As a practice, the following are definitions and allowable actions concerning the copy of the program used for backup purposes.

Cold: A copy of the program may reside, for backup purposes, on a machine as long as the program is not started. There is no additional charge for this copy.

Warm: A copy of the program may reside for backup purposes on a machine and is started, but is idling, and is not doing any work of any kind. There is no additional charge for this copy.

Hot: A copy of the program may reside for backup purposes on a machine, is started, and is doing work. The customer must acquire a license or entitlements for this copy and there will generally be an additional charge.

Doing work includes, for example, production, development, program maintenance, and testing. It also could include other activities such as mirroring of transactions, updating of files, synchronization of programs, data, or other resources (for example, active linking with another machine, program, database or other resource, and so on), or any activity or configurations that would allow an active hot switch or other synchronized switch over between programs, databases, or other resources to occur.

In the case of a program or system configuration that is designed to support a high availability environment by using various techniques (for example, duplexing, mirroring of files, or transactions, maintaining a heartbeat, active linking with another machine, program, database, or other resource), the program is considered to be doing work in the hot situation and a license or entitlement must be purchased.

Terabyte (T/TB)

1 TB of managed storage = 2 to the power of 40 bytes = 1,099,511,627,776 bytes, trillion bytes.

IBM System Storage Archive Manager TB capacity

IBM System Storage Archive Manager TB 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 TB.

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

Additional capacity must be added in increments of 1 TB.

Processor Value Unit (PVU)

PVU is a unit of measure by which this software product can be licensed. PVU entitlements are based on processor technology (defined within the PVU table² by processor vendor, brand, type and model number). IBM continues to define a processor, for purposes of PVU-based licensing, to be each processor core on a chip. Each software product has a unique price per PVU. To determine the total cost of deploying an individual software product in a specific hardware environment, you must take the following steps:

- 1.1. For each processor core in the hardware environment on which the software product is to be licensed, determine the PVU requirement based on its processor technology per the PVU table².
- 2.2. The PVU requirements for all processor cores in the hardware environment.
- 3.3. Multiply the software product's price per PVU by the total number of PVUs required as determined in step 2 above.

PVU entitlements are specific to a software product and may not be exchanged, interchanged, or aggregated with PVU entitlements of another software product.

² For information regarding the latest PVU table, visit

http://www.ibm.com/software/lotus/passportadvantage/pvu_licensing_for_customers.html

Value Units

A Value Unit is a pricing charge metric for program license entitlements, which is based upon the quantity of a specific designated measurement used for a given program. Each program has a designated measurement. The most commonly used designated measurements are processor cores and MSUs. However, for select programs, there are other designated measurements such as servers, users, client devices, and messages. The number of Value Unit entitlements required for your specific implementation of the given program must be obtained from a conversion table associated with the program. You must obtain a PoE for the appropriate number of Value Unit entitlements for your implementation. The

Value Unit entitlements of a given program cannot be exchanged, interchanged, or aggregated with Value Unit entitlements of another program. Whenever the designated measurement is a processor core, not all processors require the same number of Value Unit entitlements. To determine the number of Value Unit entitlements required, refer to the processor value unit conversion table on the Passport Advantage Web site

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

Product and licensing Web Sites

A complete list of IBM Tivoli products is available at

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

IBM Tivoli product licensing documents are available at

<http://www.ibm.com/software/tivoli/products/licensing.html>

Passport Advantage

Through the Passport Advantage Agreement, you may receive discounted pricing based on their total volume of eligible products, across all IBM brands, acquired worldwide. The volume is measured by determining the total Passport Advantage points value of the applicable acquisitions. Passport Advantage points are only used for calculating the Entitled Passport Advantage discount.

To determine the required IBM Tivoli product configuration under Passport Advantage, the IBM Tivoli Enhanced Value-Based Pricing Model applies. The customer's environment is evaluated on a per-product basis.

Use the following two-step process to determine the total Passport Advantage points value:

1. Analyze your environment to determine the number of charge units for a product. The quantity of each product's part numbers to be ordered is determined by that analysis.
2. Order the Passport Advantage part numbers. A Passport Advantage point value, which is the same worldwide for a specific part number regardless of where the order is placed, is assigned to each IBM Tivoli product part number. The Passport Advantage point value for the applicable part number, multiplied by the quantity for that part number, will determine the Passport Advantage points for that IBM Tivoli product part number. The sum of these Passport Advantage points determines the Passport Advantage point value of the applicable IBM Tivoli product authorizations which then may be aggregated with the point value of other applicable Passport Advantage product acquisitions to determine the total Passport Advantage points value.

The discounted pricing available through Passport Advantage is expressed in the form of Suggested Volume Prices (SVPs), which vary depending on the SVP level. Each SVP level is assigned a minimum total Passport Advantage point value, which must be achieved, in order to qualify for that SVP level.

Media packs and documentation packs do not carry Passport Advantage points and are not eligible for SVP discounting.

For additional information on Passport Advantage, refer to the following

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

The following Passport Advantage part number categories may be orderable:

- License and Software Subscription and Support 12 Months - This is the product authorization with Software subscription and Support to the first anniversary date.
- Annual Software Subscription and Support Renewal - This is the Software Subscription and Support renewal for one anniversary that applies when a

customer renews their existing coverage period prior to the anniversary date at which it expires.

- Software Subscription and Support Reinstatement 12 months - This is for customers who have allowed their Software Subscription and Support to expire, and later wish to reinstate their Software Subscription and Support.
- Media packs - These are the physical media, such as CD-ROMs, that deliver the product's code.
- Documentation packs - These contain printed documentation such as the *User's Guide* and Release Notes.

Tivoli Storage Manager pricing examples (processor and processor Value Unit based)

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. For more information refer to the Value Unit definition in the [IBMTivoli Enhanced Value-Based Pricing terminology definitions](#). To determine the number of Value Unit entitlements required per processor, refer to the processor Value Unit conversion table on the Passport Advantage Web Site

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

Notes:

- 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.
- License entitlements for IBM Tivoli Storage Manager or IBM Tivoli Storage Manager Extended Edition are required for all Client Devices being managed.
- IBM Tivoli Storage Manager supports tape libraries (including virtual tape libraries) up to and including 4 drives or 48 slots. A Proof of Entitlement for IBM Tivoli Storage Manager Extended Edition is required to use any of the following function: 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.
- Client Device entitlements for IBM Tivoli Storage Manager and IBM Tivoli Storage Manager Extended Edition are interchangeable.
- An IBM Tivoli Storage Manager server cannot be used to manage IBM Tivoli Storage Manager Extended Edition components.
- An IBM Tivoli Storage Manager Extended Edition server cannot be used to manage IBM Tivoli Storage Manager components.
- An IBM Tivoli Storage Manager server can communicate with and send data to an IBM Tivoli Storage Manager Extended Edition server.
- An IBM Tivoli Storage Manager Extended Edition server can communicate with, and send data to, an IBM Tivoli Storage Manager server.
- All NetApp Network Attached Storage (NAS) devices, that are being backed up, must be entitled.
- If the NAS device is backed up using NDMP, entitlement for IBM Tivoli Storage Manager Extended Edition is required.
- If the 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.
- 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.

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	60
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: Assume the customer in Scenario 1 has a SAN and wants to do LAN-free backup using IBM Tivoli Storage Manager for Storage Area Networks. The customer must obtain the following entitlements for IBM Tivoli Storage Manager for Storage Area Networks in addition to the entitlements required in Scenario 1:

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

Notes:

- In this scenario the managing server is also acting as the library manager and the customer wants to do LAN-free operations on all servers in their environment.
- IBM Tivoli Storage Manager for Storage Area Networks can be used with IBM Tivoli Storage Manager or IBM Tivoli Storage Manager Extended Edition. Entitlement for IBM Tivoli Storage Manager for Storage Area Networks is in addition to IBM Tivoli Storage Manager or IBM Tivoli Storage Manager Extended Edition.
- IBM Tivoli Storage Manager for Storage Area Networks includes a component called Tivoli SANergy®. The use of this component is limited to LAN-free backup and restore to disk.

Scenario 3: VMware environment with VMware Consolidated Backup (VCB) or VMware vStorage API

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 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 consolidated using VCB onto a VCB proxy server.
- Each virtual machine is assigned one processor core.
- The customer is doing file-level backup only.

Notes:

- The IBM Tivoli Storage Manager or IBM Tivoli Storage Manager Extended Edition full capacity entitlement requirement to back up the VCB (or VMware vStorage

API) environment requires that all physical system cores on the VMware ESX servers, being backed up by the proxy server, are to be entitled.

- The IBM Tivoli Storage Manager or IBM Tivoli Storage Manager Extended Edition sub-capacity entitlement requirement to back up the VCB (or VMware vStorage API) environment 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.
- The VCB (or VMware vStorage API) proxy server does not require entitlement for Tivoli Storage Manager, Tivoli Storage Manager Extended Edition, or "Tivoli Storage Manager for" products.

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 the customer is not doing application specific backup.

Scenario 4: 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
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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 5: 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 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 TBs 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

Ordering information

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 Tivoli System Storage Archive Manager		5608-E03
IBM Tivoli Storage Manager for Enterprise Resource Planning		5608-E05
IBM Tivoli Storage Manager for Storage Area Networks		5608-E07
IBM Tivoli Storage Manager for Space Management		5608-E12

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 offerings description	Maintenance Part number
IBM TSM V6.2 MP EN	BJ0UQEN
IBM TSM EE V6.2 MP EN	BJ0UREN
IBM SSAM V6.2 MP EN	BJ0USEN
IBM TSM ERP V6.2 MP EN	BJ0UTEN
IBM TSM SAN V6.2 MP EN	BJ0UJEN
IBM TSM SM V6.2 MP EN	BJ0UVEN

Current licensees

Current licensees, with support in effect, will receive instructions on how to order this update.

New licensees

Orders for new licenses will be accepted now.

Shipment will begin on the planned availability date.

Basic license

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.

The quantity to be specified for the Passport Advantage part numbers in the following table is per 10 Processor Value Units, per terabytes, and per client device. 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 ³	D56FULL
Annual SW S&S Renewal	E029KLL
SW S&S Reinstatement 12 Months	D56FWLL
Lnx on z - License and SW S&S 12 Months Months	D56Q5LL
Lnx on z - Annual SW S&S Renewal	E02B7LL
Lnx on z - SW S&S Reinstatement 12 Months	D56Q6LL
Tradeup from Tivoli Storage Manager Express License and SW S&S 12 Months	D59V5LL

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 ³	D56FELL
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
Tradeup from Tivoli Storage Manager Express License and SW S&S 12 Months	D59V6LL

Client devices:	
License and SW S&S 12 Months	D51MKLL
Annual SW S&S Renewal	E00IALL
SW S&S Reinstatement 12 Months	D51MMLL

³ Client licenses are interchangeable between IBM Tivoli Storage Manager and IBM Tivoli Storage Manager Extended Edition.

IBM Tivoli Storage Manager for Storage Area Networks

10 Processor Value Units:	
License and SW S&S 12 Months	D56FPLL
Annual SW S&S Renewal	E029ILL
SW S&S Reinstatement 12 Months	D56FQLL

Client devices:	
License and SW S&S 12 Months	D51MYLL
Annual SW S&S Renewal	E00IELL
SW S&S Reinstatement 12 Months	D51NOLL

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 Enterprise Resource Planning

10 Processor Value Units:	
License and SW S&S 12 Months	D56F7LL
Annual SW S&S Renewal	E029CLL
SW S&S Reinstatement 12 Months	D56FBLL

IBM System Storage Archive Manager

Description	Part Number
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) License and SW S&S 12 Months	D61GLLL
Per Terabyte (101-250) Annual SW S&S Renewal	E040QLL
Per Terabyte (101-250) SW S&S Reinstatement 12 Months	D61GMLL
Per Terabyte (251+) License and SW S&S 12 Months	D61GNLL
Per Terabyte (251+) Annual SW S&S Renewal	E040RLL
Per Terabyte (251+) SW S&S Reinstatement 12 Months	D61GPLL

Media packs are orderable in English only. 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 V6.2 Media Pack - English	BJ0UQEN
IBM Tivoli Storage Manager Extended Edition V6.2 Media Pack - English	BJ0UREN
IBM Tivoli Storage Manager for Storage Area Networks V6.2 Media Pack - English	BJ0UUEN
IBM Tivoli Storage Manager for Space Management V6.2 Media Pack - English ⁴	BJ0UVEN
IBM System Storage Archive Manager V6.2 Media Pack - English	BJ0USEN
IBM Tivoli Storage Manager for Enterprise Resource Planning V6.2 Media Pack - English	BJ0UTEN

The products listed in the above table are also available via Web download from Passport Advantage.

⁴ These DVDs are also included in the Tivoli Storage Manager and Tivoli Storage Manager Extended Edition packages.

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.

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

Licensing

IBM International Program License Agreement including the License Information document and Proof of Entitlement (PoE) govern your use of the program. PoEs

are required for all authorized use. Part number products only, offered outside of Passport Advantage, where applicable, are license only and do not include Software Maintenance.

These programs are licensed under the IBM Program License Agreement (IPLA) and the associated Agreement for Acquisition of Software Maintenance, which provide for support with ongoing access to releases and versions of the program. IBM includes one year of Software Subscription and Support (also referred to as Software Maintenance) with the initial license acquisition of each program acquired. The initial period of Software Subscription and Support (also referred to as Software Maintenance) can be extended by the purchase of a renewal option, if available. These programs have a one-time license charge for use of the program and an annual renewable charge for the enhanced support that includes telephone assistance (voice support for defects during normal business hours), as well as access to updates, releases, and versions of the program as long as support is in effect.

License Information form number

- IBM Tivoli Storage Manager: L-JSHW-7XXPYE
- IBM Tivoli Storage Manager Extended Edition: L-JSHW-7XXPYE
- IBM System Storage Archive Manager: L-JSHW-7XXPYE
- IBM Tivoli Storage Manager for Storage Area Networks: L-JSHW-7XXPYE
- IBM Tivoli Storage Manager for Enterprise Resource Planning: L-JSHW-7ZLM32
- IBM Tivoli Storage Manager for Space Management: L-JSHW-7ZLMWG

The program's License Information will be available for review on the IBM Software License Agreement Web site

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

Limited warranty applies

Yes

Limited warranty

IBM warrants that when the program is used in the specified operating environment, it will conform to its specifications. The warranty applies only to the unmodified portion of the program. IBM does not warrant uninterrupted or error-free operation of the program or that IBM will correct all program defects. You are responsible for the results obtained from the use of the program.

IBM provides you with access to IBM databases containing information on known program defects, defect corrections, restrictions, and bypasses at no additional charge. For further information, consult the *IBM Software Support Handbook* found at

<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 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. 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, 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.

Authorization for use on home/portable computer

You may not copy and use this program on another computer without paying additional license fees.

Volume orders (IVO)

No

IBM International Passport Advantage Agreement

Passport Advantage applies

Yes, and through the Passport Advantage Web site 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 Web site

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