



IBM Tivoli Storage FlashCopy Manager V3.2 extends application-aware snapshot management to IBM N series and NetApp devices and enables seamless disaster recovery

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At a glance

Highlights of IBM® Tivoli® Storage FlashCopy® Manager V3.2 include:

- Integration with Metro Mirror and Global Mirror functionality on AIX® , HP-UX, Linux™ , and Solaris with IBM System Storage® SAN Volume Controller and IBM XIV® Storage Systems to provide application consistent backup and restore at a remote facility for improved disaster recovery
- Integration with N series and NetApp snapshot functionality to provide application consistent backup and restore on AIX , HP-UX, Linux , Solaris, and Windows™ platforms.
- Advanced data protection and recovery features for VMware vSphere environments
- Import VSS Snapshots only when needed to improve backup performance and management of flashcopies
- Enhanced data protection capabilities for Microsoft™ Exchange 2010 Database Availability Groups (DAG)
- Tivoli Storage Manager integration for File System and Custom Application support on Windows
- Usability, scalability, and performance improvements in Microsoft Windows graphical user interfaces (GUIs)

For ordering, contact Your IBM representative or an IBM Business Partner.
For more information contact the Americas Call Centers at
800-IBM-CALL (426-2255).

Reference: YE001

Overview

IBM Tivoli Storage FlashCopy Manager is designed to deliver high levels of data protection for business-critical applications via integrated application snapshot backup and restore capabilities. The applications supported by Tivoli Storage FlashCopy Manager V3.2 are IBM DB2® , Oracle, Microsoft Exchange, Microsoft SQL Server, and the VMware vSphere platform. In addition, IBM DB2 and Oracle databases are supported for use either with or without SAP environments. Other applications can be supported on IBM AIX , HP-UX, Linux , Solaris, and Microsoft Windows platforms via script customization.

These capabilities are achieved through the utilization of advanced storage specific hardware snapshot technology to help create a high performance, low impact application data protection solution. Tivoli Storage FlashCopy Manager is easy to install, configure, deploy, and seamlessly integrates with various storage systems such as IBM Storwize® V7000, IBM System Storage SAN Volume Controller (SVC), IBM System Storage DS8000® , and IBM XIV Storage System products.

In addition to the above devices, Tivoli Storage FlashCopy Manager V3.2 on Windows supports any storage system that is VSS capable, by using the Microsoft Volume Shadow Copy Services (VSS) system provider or a VSS Hardware Provider that strictly adheres to the Microsoft VSS Provider interface.

What is new in V3.2:

- Integration with Metro Mirror and Global Mirror functionality on AIX , HP-UX, Linux , and Solaris with IBM System Storage SVC, IBM System Storage Storwize V7000, and IBM XIV Storage Systems to provide application consistent backup and restore at a remote facility for improved disaster recovery.
- Integration with IBM N series and NetApp snapshot functionality to provide application consistent backup and restore on AIX , HP-UX, Linux , and Solaris platforms for SAN attached filers. Support is also provided for VMware environments for both NFS and SAN attached filers.
- Advanced data protection and recovery features for VMware vSphere environments.
- Import VSS snapshots only when needed to improve backup performance and management of flashcopies.
- Enhanced data protection capabilities for Microsoft Exchange 2010 Database Availability Groups (DAG).
- Tivoli Storage Manager integration with file system and custom application support on Microsoft Windows .
- Usability, scalability, and performance improvements in the Tivoli Storage FlashCopy Manager graphical user interfaces (GUIs) on Microsoft Windows .

Key prerequisites

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

Planned availability date

- November 16, 2012: Electronic
- December 14, 2012: DVD media

Description

In today's business world, where application servers are operational 24 hours a day, the data on these servers should be protected to ensure compliance with even the most stringent Service Level Agreements (SLAs). With the rapid increase in the amount of data on these servers, the critical business needs they meet, and the shrinking backup windows, traditional backup and restore methods may be reaching their limit in meeting these challenging requirements. Snapshot operations can help minimize the impact caused by backups and provide near-instant restore capabilities. Since a snapshot operation typically takes much less time than the time for a more traditional disk to tape (D2T) or disk to disk (D2D) backup, the window during which the data is being backed up can be significantly reduced. Shrinking the backup window helps increase the flexibility of backup scheduling and administration, and facilitates more frequent backups, which in turn can reduce the time spent for forward recovery through transaction logs or other means.

IBM Tivoli Storage FlashCopy Manager V3.2 utilizes storage snapshot capabilities to provide high speed, low impact application data backup and restore functionality

for the applications and storage environments. Application data availability can be significantly improved due to the possible reduction of the load on the production servers while the data in these snapshots can be retained as backups on storage systems and with optional integration with IBM Tivoli Storage Manager, sent to Tivoli Storage Manager server storage pools for purposes such as data reduction by using deduplication, longer retention, disaster recovery, or for compliance with regulations.

- **Integration with Metro Mirror and Global Mirror functionality:** Provides integration for disaster recovery configurations and supports disaster recovery scenarios by allowing creation of application consistent snapshots from Metro Mirror and Global Mirror targets with IBM XIV Storage System, IBM System Storage SAN Volume Controller (SVC), and IBM Storwize V7000 systems on AIX , HP-UX, Linux , and Solaris. This capability allows the application to be quickly restored using Tivoli Storage FlashCopy Manager to an application consistent recovery point in disaster recovery scenarios.
- **Integration with IBM N series and NetApp snapshot functionality:** Provides application consistent backup and restore on AIX , HP-UX, Linux , and Solaris platforms. Support is provided for SAN and iSCSI attached NetApp Storage. Support is also provided for VMware environments for NFS, iSCSI and SAN attached filers.
- **Enhanced support for VMware environments:**
 - Enables concurrent attachment of VMDKs from multiple virtual machines on the same datastore backup and also provides the ability to detach the attached VMDKs for a single virtual machine. The Tivoli Storage FlashCopy Manager V3.2 attachment support allows attachment of VMDKs from a single virtual machine at a time per backup.
 - Allows concurrent mount of different datastores from the same backup to different ESX hosts.
 - Allows backup and restore of virtual machines with raw disk maps excluding the raw disk maps disks.
 - Supports backup, restore, attachment, detachment, and offload of a virtual machine in a vApp.
 - Supports backup, restore, and offload of virtual machine templates.
- **Import of VSS snapshots only when needed:** Enable the ability to change current behavior whereby VSS snapshots are automatically imported to the Windows system where the snapshot was created. VSS snapshots will remain masked from the host systems until needed by Tivoli Storage FlashCopy Manager or explicitly mounted by the user. This masking avoids potential problems as you exploit Tivoli Storage FlashCopy Manager management of large numbers of snapshots. Large numbers of mapped volumes increase time required for certain system processes (including reboot) and can also cause limits for maximum number of mapped volumes to be reached (255 on Linux hosts). This issue is magnified in VMware environments where SCSI ID and disk pathing limits on an ESX host can be quickly reached when multiple virtual machines are creating persistent VSS snapshots. This support also enables snapshots to be mounted on alternate hosts for data mining or other offloading purposes such as tape backups.
- **Enhanced support for Exchange Server 2010 Database Availability Groups (DAG) and support for SQL Server 2012:** Fully integrates the management and automation of Exchange Server 2010 DAG active or passive database backups and restores. If you have deployed Exchange Server 2010 servers in a DAG, the server (DAG node) that performs the backups of databases can change from server to server depending on the workload and maintenance procedures going on. Tivoli Storage FlashCopy Manager coordinates the backups between DAG members so that only one copy is backed up per backup cycle.
- **IBM Tivoli Storage Manager integration for file system and custom application support on Windows** provides the following capabilities:
 - Integrated volume level (image) backup to Tivoli Storage Manager from VSS snapshots
 - Offload backup to Tivoli Storage Manager to a secondary server
 - Restore from Tivoli Storage Manager at volume level (image restore)

- Unified view of available file system backup versions whether on a local snapshot or in Tivoli Storage Manager storage
- **Usability, scalability, and performance improvements in Microsoft Windows graphical user interfaces (GUIs)**
 - Improved Microsoft Management Console (MMC) GUI for enhanced and unified user experience for Microsoft Exchange, Microsoft SQL Server, and file system operations

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

Section 508 of the US Rehabilitation Act

The product in this announcement is capable, when used in accordance with associated IBM documentation, 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.

Reference information

Functions previously announced for Tivoli Storage FlashCopy Manager continue to be offered in Tivoli Storage FlashCopy Manager V3.2. For more information, refer to Software Announcement [210-156](#), dated June 01, 2010 .

Business Partner information

If you are a Direct Reseller - System Reseller acquiring products from IBM , you may link directly to Business Partner information for this announcement. A PartnerWorld® ID and password are required (use IBM ID).

<https://www.ibm.com/partnerworld/mem/sla.jsp?num=212-372>

Program number

Program number	VR	Program name
5724-x94	3.2	IBM Tivoli Storage FlashCopy Manager (for Passport Advantage)
5608-w07	3.2	IBM Tivoli Storage FlashCopy Manager

Product identification number

Program	SW Subscription and Support 1 Year PID no charge registration
PID number	number
5608-w07	5608-FCY
	SW Subscription and Support 2 Year PID registration number
	5608-R16
	SW Subscription and Support 3 Year PID

registration number

5608-R13

SW Subscription and
Support 4 Year PID
registration number

5608-R17

SW Subscription and
Support 5 Year PID
registration number

5608-R18

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

<http://www-306.ibm.com/software/tivoli/education/>

Offering Information

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>

Publications

The publications listed below will be available in English and can be downloaded from the following website on the general availability date.

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

Translated copies in selected languages will be available for download from the above website within 60 days of the general availability date.

Title of publications that support	Order number
IBM Tivoli Storage FlashCopy Manager V3.2 products	
IBM Tivoli Storage FlashCopy Manager Installation and User's Guide for UNIX™ and Linux	SC27-4005-01
IBM Tivoli Storage FlashCopy Manager Installation and User's Guide for Windows	SC27-4006-01
IBM Tivoli Storage FlashCopy Manager for VMware Installation and User's Guide	SC27-4007-01
IBM Tivoli Storage FlashCopy Manager Messages	GC27-4008-01

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 requirements and software requirements

Hardware and software requirements for Tivoli Storage FlashCopy Manager V3.2 are available at

<http://www.ibm.com/support/docview.wss?uid=swg21427692>

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.

Planning information

Software Subscription and Support (also referred to as Software Maintenance) is included with licenses purchased through Passport Advantage and Passport Advantage Express®. Product upgrades and technical support are provided by the Software Subscription and Support (Software Maintenance) offering as described in the Agreements. Product upgrades provide the latest versions and releases to entitled software, and technical support provides voice and electronic access to IBM support organizations, worldwide.

IBM includes one year of Software Subscription and Support (also referred to as Software Maintenance) with each program license acquired. The initial period of Software Subscription and Support (Software Maintenance) can be extended by the purchase of a renewal option, if available.

Packaging

Tivoli Storage FlashCopy Manager V3.2 is distributed with:

- International Program License Agreement (Z125-3301)
- License Information document
- DVD media (for Passport Advantage)
- 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

Tivoli Storage FlashCopy Manager V3.2 uses 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/>

Licensing metric definition and pricing example

Licensing metric definition

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 this program sufficient to cover the storage managed by the program. The storage managed is the total allocated size of all volumes managed by the program.

Pricing example

The following example is provided to illustrate your licensing requirements.

Tivoli Storage FlashCopy Manager V3.2

Tivoli Storage FlashCopy Manager performs snapshots at the storage volume level. Entitlement for Tivoli Storage FlashCopy Manager is on a per terabyte (TB) basis. The storage capacity that requires entitlement is the total allocated size of all volumes managed by Tivoli Storage FlashCopy Manager.

Scenario 1

The customer wants to have application data snapshot capability on a 100 TB pool of storage capacity on their Oracle database. Tivoli Storage FlashCopy Manager entitlements are required on the total allocated size of all volumes managed by Tivoli Storage FlashCopy Manager. Therefore, the customer will require the following entitlements for Tivoli Storage FlashCopy Manager.

TB tiers	Number of TB entitlements required
1-12	12
13-32	20
33-64	32
65-100	36
101-250	0
251 +	0
Total entitlements required	100

Notes for Scenario 1

In environments where an application replicates production data to create a replica copy, Tivoli Storage FlashCopy Manager entitlement is only required on the capacity of the total allocated size of all volumes managed by Tivoli Storage FlashCopy Manager for the source volumes of the production application data.

When Tivoli Storage FlashCopy Manager is used in an IBM Tivoli Storage Manager environment and it sends data to an IBM Tivoli Storage Manager server to be managed, you are required to have entitlement for IBM Tivoli Storage Manager or IBM Tivoli Storage Manager Extended Edition for the application server for which Tivoli Storage FlashCopy Manager manages data. In addition, you are required to have entitlement for the appropriate Tivoli Storage Manager application agent (the agent for Microsoft SQL and Oracle is IBM Tivoli Storage Manager for Databases, the agent for Microsoft Exchange is IBM Tivoli Storage Manager for Mail, and the agent for underlying IBM DB2 or Oracle databases for SAP applications is IBM Tivoli Storage Manager for Enterprise Resource Planning). The Tivoli Storage Manager agent for IBM DB2 is included with DB2, so an additional Tivoli Storage Manager application agent entitlement is not required in that case.

Scenario 2

If the customer in Scenario 1 sends that 100 TB of Oracle database data to a Tivoli Storage Manager server to be backed up, then the customer will need to entitle the server that is running the Oracle database for IBM Tivoli Storage Manager for Databases, which also requires entitlement for Tivoli Storage Manager or Tivoli Storage Manager Extended Edition. The Tivoli Storage Manager server needs to be entitled with either Tivoli Storage Manager or Tivoli Storage Manager Extended Edition.

For Scenario 2, the following entitlements are required in addition to the requirements from Scenario 1. In this example, the Oracle database server and the Tivoli Storage Manager server are both dual quad core servers, with a total of eight processor cores on each server.

Tivoli Storage Manager environment	Processor core entitlements required
Tivoli Storage Manager for Databases	8
Tivoli Storage Manager or Tivoli Storage Manager Extended Edition	16
Total processor core entitlements required	24

Changes to Tivoli Storage Manager and Tivoli Storage Manager Extended Edition licensing

When Tivoli Storage Manager or Tivoli Storage Manager Extended Edition are used in conjunction with Tivoli Storage FlashCopy Manager, the following licensing requirement changes apply for Tivoli Storage Manager and Tivoli Storage Manager Extended Edition. For the purpose of offloaded proxy backup of Tivoli Storage FlashCopy Manager managed data to Tivoli Storage Manager or Tivoli Storage Manager Extended Edition, you are entitled to install on a secondary machine at no additional charge:

- A second copy of Tivoli Storage FlashCopy Manager.
- A second copy of Tivoli Storage Manager or Tivoli Storage Manager Extended Edition.
- A second copy of the Tivoli Storage Manager application agent (the agent for Microsoft SQL and Oracle is Tivoli Storage Manager for Databases, the agent for Microsoft Exchange is IBM Tivoli Storage Manager for Mail, and the agent for underlying IBM DB2 or Oracle databases for SAP applications is IBM Tivoli Storage Manager for Enterprise Resource Planning). The secondary machine is

intended for offloaded data backup to Tivoli Storage Manager or Tivoli Storage Manager Extended Edition.

Refer to the Tivoli Storage FlashCopy Manager License Information document for applicable terms.

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 FlashCopy Manager

Product identifier description	PID number
IBM Tivoli Storage FlashCopy Manager (for Passport Advantage)	5724-x94
IBM Tivoli Storage FlashCopy Manager	5608-w07

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 offering description	Part number
TSM FLSHCPY MGR 3.2 DVD MPACK	BJ11KML

Current licensees

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 (Software Maintenance).

The quantity to be specified for the Passport Advantage part numbers in the following table is per terabyte. To order for Passport Advantage , specify the desired part number and quantity.

Description	Part number
IBM Tivoli Storage FlashCopy Manager	
Per Terabyte (1-12) License and SW S&S 12 Months	D0B5GLL
Per Terabyte (1-12) Annual SW S&S Renewal	E07TXLL
Per Terabyte (1-12) SW S&S Reinstatement 12 Months	D0B83LL
Per Terabyte (13-32) License and SW S&S 12 Months	D0B6YLL
Per Terabyte (13-32) Annual SW S&S Renewal	E07UBLL
Per Terabyte (13-32) SW S&S Reinstatement 12 Months	D0B84LL
Per Terabyte (33-64) License and SW S&S 12 Months	D0B85LL
Per Terabyte (33-64) Annual SW S&S Renewal	E07UTLL
Per Terabyte (33-64) SW S&S Reinstatement 12 Months	D0B86LL
Per Terabyte (65-100) License and SW S&S 12 Months	D0B87LL
Per Terabyte (65-100) Annual SW S&S Renewal	E07UULL
Per Terabyte (65-100) SW S&S Reinstatement 12 Months	D0B88LL
Per Terabyte (101-250) License and SW S&S 12 Months	D0B8CLL
Per Terabyte (101-250) Annual SW S&S Renewal	E07UXLL
Per Terabyte (101-250) SW S&S Reinstatement 12 Months	D0B8DLL
Per Terabyte (251+) License and SW S&S 12 Months	D0B8ELL
Per Terabyte (251+) Annual SW S&S Renewal	E07UYLL
Per Terabyte (251+) SW S&S Reinstatement 12 Months	D0B8FLL

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 FlashCopy Manager V3.2 DVD media pack - multilingual	BJ11KML

Ordering information for non-Passport Advantage

Order handling

IBM Tivoli Storage FlashCopy Manager V3.2 (5608-W07) may be ordered through existing channels using the existing configurator and ordering tools. However, the fulfillment processes have been modified to improve customer records management associated with Software Subscription and Support (SW S&S), often referred to as Software Maintenance. SW S&S will be entitled through Passport Advantage .

5608-W07, when selected during configuration process with each hardware system, will be enabled for electronic download for the system unit for which the product

was ordered. Optionally, software and license only configurations can be created for 5608-W07 based on existing supported hardware system units in your business environment. 5608-W07 is available exclusively via electronic download.

After receipt of an order, you will be required to register for, and accept, Passport Advantage or Passport Advantage Express terms and conditions. Upon registration, you will be provided with a website for the electronic download.

Passport Advantage allows greater flexibility to help you manage software licenses and Subscription and Support renewals. You can now have a common anniversary date for Subscription and Support renewals. The anniversary date, established at the order ship date for the initial product acquisition, will remain unchanged while your Passport Advantage or Passport Advantage Express agreement remains in effect.

To order a basic license, specify the program number and the one-time charge feature number in the quantity desired (maximum quantity of 250).

The program is available via electronic download only. Physical media can be ordered via Passport Advantage once entitled.

The quantity to be specified for the feature numbers in the following tables is per terabyte.

Product number	Product name	Feature number
5608-W07	IBM Tivoli Storage FlashCopy Manager V3.2	
	Per Terabyte (1-12) with 1 Year SW S&S	0001
	Per Terabyte (13-32) with 1 Year SW S&S	0002
	Per Terabyte (33-64) with 1 Year SW S&S	0003
	Per Terabyte (65-100) with 1 Year SW S&S	0004
	Per Terabyte (101-250) with 1 Year SW S&S	0005
	Per Terabyte (251+) with 1 Year SW S&S	0006
	Per 250 Terabyte (251+) with 1 Year SW S&S	0007

Rapid Application Software bundle

To order a Rapid Application Storage Manager (RASM) or a Rapid Application Backup (RAB) bundle for program numbers 5608-W07, 5608-FCY, 5608-R16, 5608-R13, 5608-R17, and 5608-R18, specify the desired no charge feature number below, where feature number 6398 applies only to RASM and feature number 6399 applies only to RAB.

Feature number	Description
6398	Unlimited users entitlement
6399	Unlimited external users entitlement

Software Subscription and Support (SW S&S)

This software license includes SW S&S, also referred to as Software Maintenance, for a period of 12 months from the date of acquisition. Extending coverage from two to five years from date of acquisition may be elected.

To order, specify the SW S&S program number and the desired registration feature number. With the exception of SW S&S 1 Year No Charge Registration, a one-time charge applies.

IBM Tivoli Storage FlashCopy Manager SW S&S Registration

SW S&S PID 1 Year: 5608-FCY

Description	Feature number
Per Terabyte (1-12)	
-- SW S&S 1 Year No Charge Registration	0001

Per Terabyte (13-32)	
-- SW S&S 1 Year No Charge Registration	0002
Per Terabyte (33-64)	
-- SW S&S 1 Year No Charge Registration	0003
Per Terabyte (65-100)	
-- SW S&S 1 Year No Charge Registration	0004
Per Terabyte (101-250)	
-- SW S&S 1 Year No Charge Registration	0005
Per Terabyte (251+)	
-- SW S&S 1 Year No Charge Registration	0006
Per 250 Terabyte (251+)	
-- SW S&S 1 Year No Charge Registration	0007

SW S&S PID 2 Year: 5608-R16

Description	Feature number
Per Terabyte (1-12)	
-- SW S&S 2 Year Registration	0001
Per Terabyte (13-32)	
-- SW S&S 2 Year Registration	0002
Per Terabyte (33-64)	
-- SW S&S 2 Year Registration	0003
Per Terabyte (65-100)	
-- SW S&S 2 Year Registration	0004
Per Terabyte (101-250)	
-- SW S&S 2 Year Registration	0005
Per Terabyte (251+)	
-- SW S&S 2 Year Registration	0006
Per 250 Terabyte (251+)	
-- SW S&S 2 Year Registration	0007

SW S&S PID 3 Year: 5608-R13

Description	Feature number
Per Terabyte (1-12)	
-- SW S&S 3 Year Registration	0001
Per Terabyte (13-32)	
-- SW S&S 3 Year Registration	0002
Per Terabyte (33-64)	
-- SW S&S 3 Year Registration	0003
Per Terabyte (65-100)	
-- SW S&S 3 Year Registration	0004
Per Terabyte (101-250)	
-- SW S&S 3 Year Registration	0005
Per Terabyte (251+)	
-- SW S&S 3 Year Registration	0006
Per 250 Terabyte (251+)	
-- SW S&S 3 Year Registration	0007

SW S&S PID 4 Year: 5608-R17

Description	Feature number
Per Terabyte (1-12)	
-- SW S&S 4 Year Registration	0001
Per Terabyte (13-32)	
-- SW S&S 4 Year Registration	0002
Per Terabyte (33-64)	
-- SW S&S 4 Year Registration	0003
Per Terabyte (65-100)	
-- SW S&S 4 Year Registration	0004
Per Terabyte (101-250)	
-- SW S&S 4 Year Registration	0005
Per Terabyte (251+)	
-- SW S&S 4 Year Registration	0006
Per 250 Terabyte (251+)	
-- SW S&S 4 Year Registration	0007

SW S&S PID 5 Year: 5608-R18

Description	Feature number
Per Terabyte (1-12)	
-- SW S&S 5 Year Registration	0001
Per Terabyte (13-32)	
-- SW S&S 5 Year Registration	0002
Per Terabyte (33-64)	
-- SW S&S 5 Year Registration	0003
Per Terabyte (65-100)	
-- SW S&S 5 Year Registration	0004
Per Terabyte (101-250)	
-- SW S&S 5 Year Registration	0005
Per Terabyte (251+)	
-- SW S&S 5 Year Registration	0006
Per 250 Terabyte (251+)	
-- SW S&S 5 Year Registration	0007

Subscription and Support

Subscription and Support must be ordered to receive voice technical support via telephone during normal business hours, and future releases and versions, at no additional charge. The capacity of Subscription and Support (for example, terabytes) must be the same as the capacity ordered for the product licenses.

To order, specify the Subscription and Support program product number and the appropriate license or charge option.

IBM is also providing Subscription and Support for these products, via a separately purchased offering, under the terms of the IBM International Agreement for Acquisition of Support Maintenance. This offering:

- Includes and extends the support services provided in the base support to include technical support via telephone during normal business hours.
- Entitles you to future releases and versions, at no additional charge. Note that you are not entitled to new products.

When Subscription and Support is ordered, the charges will automatically renew annually unless cancelled by you.

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.

This software license includes Software Subscription and Support (also referred to as Software Maintenance).

Agreement for Acquisition of Software Maintenance

The IBM Agreement for Acquisition of Software Maintenance (Z125-6011) agreement applies for Subscription and Support (also referred to as Software Maintenance) and does not require customer signatures.

This program is 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.

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