



IBM Storwize Family Software for Storwize V7000 V7.1.0 delivers performance enhancements

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At a glance

The IBM® Storwize® V7000 disk system delivers high performance, advanced function, high availability, and modular and scalable storage capacity through the following enhancements:

- Larger drives increase the maximum internal capacity of all Storwize family systems by 33% (1.2 TB versus 900 GB SFF and 4 TB versus 3 TB LFF)
- The ability to use Real-time Compression™ and Easy Tier® together enables users to get high performance and high efficiency together at the same time
- Scalability enhancements that allow the Storwize Software family to handle larger configurations with more hosts using more volumes with more virtual machines
- 512 hosts per I/O group: Two times previous limit
- 2048 volumes per host: Four times previous number
- 2048 WWPNs per I/O group: Four times previous number

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

Overview

IBM Storwize Family Software for Storwize V7000 disk system helps address midrange or departmental storage requirements. Each IBM Storwize V7000 disk system operates using IBM Storwize Family Software for Storwize V7000 software V7.1. IBM Storwize Family Software for Storwize V7000 V7. IBM Storwize V7000 supports RAID levels 0, 1, 5, 6, and 10. The IBM Storwize V7000 disk system is designed to deliver up to two times the IOP performance increase over competitive offerings. It also leverages SAN Volume Controller (SVC) technology and represents a new generation architecture within the midrange disk family.

IBM Storwize Family Software for Storwize V7000 software V7 features the same functionality and capabilities of the IBM Storwize Family Software for SVC V7. For further information about the new software capabilities introduced on the IBM Storwize Family Software for SVC, refer to the announcements listed in the [Reference information](#) section.

IBM Storwize Family Software for Storwize V7000 Unified delivers enhanced file storage capabilities for this advanced midrange disk system. Storwize V7000 Unified is a block and file storage system with tightly integrated management that helps

simplify storage administration with a single user interface and common command-line interface (CLI). Customers can benefit from greater flexibility for provisioning of storage resources with its support of NFS, CIFS, FTP, HTTPS, and SCP file protocols, and greater overall capacity utilization with the existing block functions of the Storwize V7000. Storwize V7000 Unified provides file replication and file-level snapshots for business continuity and disaster recovery. Customers are able to deploy a broader set of applications from within a single storage system, especially in shared storage environments.

IBM Storwize V7000 Unified is designed to improve storage efficiency by including real-time compression of data. Compression on Storwize V7000 Unified volumes enables storing up to five times as much data in the same physical disk space, depending on the type of application data stored.

Refer to the announcements listed in the [Reference information](#) section for more information about IBM Storwize V7000 Unified.

In addition to the basic IBM Storwize V7000 software V7, the following licensed products are also available:

- IBM Storwize Family Software for Storwize V7000 Remote Mirroring software to license the use of remote copy
- IBM Storwize Family Software for Storwize V7000 External Virtualization software to license the use of IBM Storwize Family Software for Storwize V7000 virtualization capabilities (like SVC) for external storage devices
- IBM Storwize Family Software for Storwize V7000 Real-time Compression software to license the use of IBM Storwize Family Software for Storwize V7000 compression capabilities, like SVC

Refer to the [Description](#) section for details about each.

Key prerequisites

Software requirements

IBM Storwize V7000 V7.1 (5639-VM7, 5639-EV7, 5639-RM7, and 5639-CP7) has the same software prerequisites as IBM Storwize V7000 V6.4. Refer to the [Description](#) section and the announcements listed in the [Reference information](#) section for more information.

Hardware requirements

This program requires at least one IBM Storwize V7000 Control Enclosure (2076-112, 2076-124, 2076-312, or 2076-324) for installation. Current support summaries, including specific software, hardware, and firmware levels supported, are maintained at the IBM Storwize V7000 Support website

<http://www.ibm.com/storage/support/storwize/v7000>

For information on the IBM Storwize V7000 hardware, refer to the announcements listed in the [Reference information](#) section.

Planned availability date

June 14, 2013

Description

IBM Storwize Family Software for Storwize V7000

IBM Storwize Family Software for Storwize V7000 software V7 features the same functionality and capabilities of IBM SAN Volume Controller software V7. For further

information about the new software capabilities introduced on the SVC Storage Software, refer to the [Reference information](#) section for more information.

IBM Storwize Family Software for Storwize V7000 Base Software (5639-VM7)

Each IBM Storwize V7000 (2076-112/124/312/324) Disk Control Enclosure and each IBM Storwize V7000 Disk Expansion Enclosure (2076-212/224) uses the IBM Storwize Family Software for Storwize V7000 Base Software, 5639-VM7. A 5639-VM7 IBM Storwize Family Software for Storwize V7000 Base software license is required for each enclosure, whether control or expansion enclosure. For example, an IBM Storwize Family Software for Storwize V7000 order consisting of one control enclosure and three expansion enclosures requires a quantity of four enclosures of the IBM Storwize Family Software for Storwize V7000 Base software license, 5639-VM7.

IBM Storwize Family Software for Storwize V7000 External Virtualization Software (5639-EV7)

Each IBM Storwize V7000 (2076-112/124/312/314) Disk Control Enclosure has the ability to attach and manage external storage devices on the SAN in the same way as the SVC. The IBM Storwize Family Software for Storwize V7000 External Virtualization Software, 5639-EV7, must be licensed to authorize use of this function. This licensed feature must be purchased for each storage enclosure that is attached to and externally managed by the Storwize V7000. IBM Storwize V7000 (2076-112/124/312/314) Disk Control Enclosures and IBM Storwize V7000 Disk Expansion Enclosures (2076-212/224) are not included in this External Virtualization license.

A storage enclosure externally managed by the Storwize V7000 is defined as an independently powered, channel-attached device that stores data on magnetic disks or solid state drives, such as disk controllers and their respective expansion units, each constituting separate enclosures. Therefore, an enclosure can be either the main controller housing disk or solid-state drives, or the expansion chassis that house additional disk or solid-state drives for the purpose of expanding the total capacity of the storage system. Consult an IBM sales representative with any questions regarding storage controllers.

For example, adding an IBM System Storage® DS5020 consisting of two enclosures to an IBM Storwize Family Software for Storwize V7000 consisting of one control enclosure and three expansion enclosures, requires the purchase of the external virtualization licensed feature for two enclosures.

IBM Storwize Family Software for Storwize V7000 Remote Mirroring Software (5639-RM7)

To authorize use of Remote Copy capabilities of the IBM Storwize Family Software for Storwize V7000, a license for IBM Storwize V7000 Remote Mirroring Software (5639-RM7) must be purchased for each licensed enclosure managed by the IBM Storwize V7000 Disk System, including each internal enclosure licensed with the IBM Storwize V7000 Base Software (5639-VM7) and each external enclosure licensed with the IBM Storwize V7000 External Virtualization Software (5639-EV7).

For example, if a DS5020 consisting of two enclosures managed by an IBM Storwize Family Software for Storwize V7000 consisting of one control enclosure and three expansion enclosures, then in order to authorize remote mirroring for this configuration, a license to the IBM Storwize Family Software for Storwize V7000 Remote Mirroring Software, 5639-RM7, for six enclosures will be needed.

Rather than purchasing licenses for IBM Storwize Family Software for Storwize V7000 Remote Mirroring for every licensed enclosure (internal and external) managed by the IBM Storwize V7000 Disk System at both the primary and the secondary systems, the following licensing rules apply:

- For primary and secondary systems with differing numbers of enclosures using Remote Mirroring, the number of 5639-RM7 Remote Mirroring licenses needed for each system is the number of enclosures on the smaller of the two systems (refer to scenarios 1 and 2 below)
- When multiple production systems replicate to a single disaster recovery system, the number of 5639-RM7 Remote Mirroring licenses licensed at the disaster recovery system must equal the sum of the 5639-RM7 Remote Mirroring licenses licensed at the production systems (refer to scenario 3 below)

This feature code quantity can be applied against any one or more of the IBM Storwize Family Software for Storwize V7000 Base Software (5639-VM7) licensed products.

The following are examples of how to license Remote Mirroring Software features under these licensing rules:

Scenario 1: The primary system is a Storwize V7000 with four enclosures and nothing externally virtualized, therefore it has four 5639-VM7 licenses. The secondary system is a Storwize V7000 with two enclosures and nothing externally virtualized, therefore it has two 5639-VM7 licenses. The Storwize V7000 Remote Mirroring licensing would be two 5639-RM7 Remote Mirroring licenses licensed for the primary system plus two 5639-RM7 Remote Mirroring licenses licensed for the secondary system, for a total of four 5639-RM7 Remote Mirroring licenses required.

Scenario 2: The primary system is a Storwize V7000 with one enclosure managing a DS5020 consisting of three enclosures, therefore it has one 5639-VM7 license plus three 5639-EV7 External Virtualization licenses. The secondary system is a Storwize V7000 with three enclosures and nothing externally virtualized, therefore it has three 5639-VM7 licenses. The Storwize V7000 Remote Mirroring licensing would be three 5639-RM7 Remote Mirroring licenses licensed for the primary system plus three 5639-RM7 Remote Mirroring licenses licensed for the secondary system, for a total of six 5639-RM7 Remote Mirroring features required.

Scenario 3: There are three primary systems replicating to a central disaster recovery system. The three primary systems are as follows:

- A one-enclosure Storwize V7000 with nothing externally virtualized, therefore it has one 5639-VM7 license
- A one-enclosure Storwize V7000 managing a DS5020 consisting of one enclosure, therefore it has one 5639-VM7 license plus one 5639-EV7 External Virtualization licenses licensed
- A one-enclosure Storwize V7000 with nothing externally virtualized, therefore it has one 5639-VM7 license

The central disaster recovery system is a Storwize V7000 with five enclosures and nothing externally virtualized, therefore it has five 5639-VM7 licenses. The Storwize V7000 Remote Mirroring licensing would be a sum of four 5639-RM7 Remote Mirroring licenses licensed for the primary systems plus four 5639-RM7 Remote Mirroring licenses licensed for the central disaster recovery system, for a total of eight 5639-RM7 Remote Mirroring licenses required.

Interoperability

For interoperability information, refer to

<http://www.ibm.com/storage/support/storwize/v7000>

IBM Storwize Family Software for Storwize V7000 IBM Tivoli Storage Manager FastBack®

IBM Tivoli Storage Manager FastBack is an excellent complimentary feature for use with IBM Storwize V7000. IBM Tivoli Storage Manager FastBack provides IP-based replication of Microsoft™ Windows™ and Linux™ data, as well as advanced data protection and near-instant recovery for critical Windows and Linux servers and applications when used with the IBM Storwize V7000 system.

IBM Tivoli Storage Manager FastBack enables protection, replication, and recovery of data for critical applications, including Microsoft Exchange, SQL, SAP, DB2® and Oracle. It delivers the power to quickly recover any Windows or Linux server data, anywhere in the organization, from any point in time. IBM Tivoli® Storage Manager FastBack provides a cost-effective, comprehensive data protection and disaster recovery solution for small and midsized organizations.

IBM Tivoli Storage Manager FastBack combines a number of leading-edge and patented technologies to deliver a data protection and recovery solution for servers and applications. It helps eliminate the need for traditional backup windows by continuously tracking data changes at the block level, with extremely low overhead on the systems it protects. Its flexible policy engine helps improve recovery service levels and meet stringent data protection and retention requirements.

The IP-based replication technology in IBM Tivoli Storage Manager FastBack allows administrators to select which volumes to replicate and schedule when to send the data over the wide area network (WAN) or Internet, enabling IP replication capabilities for IBM Storwize V7000 and effective disaster recovery capabilities without straining existing bandwidth.

IBM Tivoli Storage Manager FastBack excels in its recovery capabilities with the ability to extract any file or application object (such as an email) from the stored data blocks of any stored snapshot. Administrators can mount a snapshot virtually to a drive letter or mount point, allowing validation of the backup data and file-level and folder-level restore. IBM Tivoli Storage Manager FastBack even makes volume restore more efficient by providing several ways to restore data. In addition to traditional volume restores, IBM Tivoli Storage Manager FastBack has a near instant restore feature that can dramatically reduce recovery times. Near instant restore enables data to be used on the same disk where the volume is being restored while the restore operation is still in progress. This means the administrator can allow instant access to data for users, while the restore occurs in the background. Users can see and access information, which signals to the restore process to make this information a priority, while data not being used is restored later in the process.

Highlights

IP-based replication:

- Asynchronous, policy-based, block-level transmission over WAN Internet
- Cost-effective disaster recovery solution as compared to Fibre Channel alternatives

Block-level incremental forever snapshots:

- Very low impact on application servers
- Ideal for virtual machines
- Eliminates the need for backup windows
- Superior performance with both large numbers of small files and very large files such as databases
- Dramatically reduces backup disk requirements as compared to traditional full backup methods

Target-side data deduplication:

- Further reduces the amount of disk capacity required
- Post-processing does not impact backup or application server performance

Data deduplication across the WAN:

- Eliminates redundant blocks of backup data being sent from primary site to central or disaster recovery site
- Helps reduce costs of WAN bandwidth and supports remote office backup consolidation

- Replicates deduplicated data across a WAN or local area network (LAN) connection directly to a IBM Tivoli Storage Manager server with seamless API integration
- Offers superior restore capabilities:
 - Restore individual files, folders, databases, emails, disk volumes, and entire systems
 - File system view into the backup repository allows click drag drop recovery of any file or folder
 - Instant restore enables full access to any volume in seconds, while recovery occurs in the background

Central management:

- Centrally manage all backup and recovery operations
- Single web-based interface

Application aware offers support for almost all Windows and Linux-based applications, including IBM DB2, Microsoft Exchange and SQL, Oracle and mySAP

Granular recovery of Microsoft Exchange email objects:

- Restore individual messages, attachments, calendar entries, contacts, notes, tasks, and journals through a simple drag-and-drop operation
- Advanced search capabilities to help in e-discovery processes
- Support for Microsoft Exchange 2003, 2007, and 2010

Auto renewal registration of software maintenance for Storwize V7000 5639-VM7 (Feature number 9000)

Software maintenance renewals in the AAS ordering system for Storwize V7000 5639-VM7 software are now available via a services contract. Selecting feature number 9000 with the software maintenance registration ordered with 5639-VM7 indicates that the customer wishes to continue their software maintenance on a services contract at the end of the initial software maintenance term. Feature number 9000 is available on the following Storwize V7000 base software maintenance registration product IDs:

- 5639-SM1 - 1 Year Software Maintenance Registration
- 5639-SM6 - 2 Year Software Maintenance Registration
- 5639-SM3 - 3 Year Software Maintenance Registration
- 5639-SM7 - 4 Year Software Maintenance Registration
- 5639-SM8 - 5 Year Software Maintenance Registration

Note: Auto renewal services are not available in all countries or for all initial software maintenance contract terms. Refer to the services announcement found in the [Reference information](#) section for more details.

Auto renewal registration of software maintenance for Storwize V7000 Real-time compression 5639-CP7 (Feature number 9000)

Software maintenance renewals in the AAS ordering system for Storwize V7000 Real-time compression 5639-CP7 software are available via a services contract. Selecting feature number 9000 with the software maintenance registration ordered with 5639-CP7 indicates the desire to continue software maintenance on a services contract at the end of the initial software maintenance term. Feature number 9000 is available on the Storwize V7000 Real-time compression software maintenance registration products 5639-CS1 (1 Year Software Maintenance Registration), 5639-CS3 (3 Year Software Maintenance Registration), and 5639-CS6 (2 Year Software Maintenance Registration).

Note: Auto renewal services are not available in all countries or for all initial software maintenance contract terms. Refer to the services announcement found in the [Reference information](#) section for more details.

Accessibility by people with disabilities

A US 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

Product positioning

The IBM Storwize Family Software for Storwize V7000 is a midrange disk system that is targeted to meet the storage and storage virtualization needs of midmarket and large enterprise customers.

Statement of direction

IBM intends to enhance Storwize V7000, in addition to IBM SAN Volume Controller and IBM XIV®, with SmartCloud Storage Access and support for self-service provisioning of cloud block storage. SmartCloud Storage Access would also provide storage data consumption information for chargeback and other purposes, and would enable Independent Software Vendor (ISV) integration through a storage cloud API (REST).

IBM's statements regarding its plans, directions, and intent are subject to change or withdrawal without notice at IBM's sole discretion. Information regarding potential future products is intended to outline our general product direction and it should not be relied on in making a purchasing decision. The information mentioned regarding potential future products is not a commitment, promise, or legal obligation to deliver any material, code, or functionality. Information about potential future products may not be incorporated into any contract. The development, release, and timing of any future features or functionality described for our products remains at our sole discretion.

Reference information

For information on IBM Storwize V7000, refer to Hardware Announcement [110-220](#), dated October 07, 2010, and Hardware Announcement [111-085](#), dated May 09, 2011.

For information on IBM Storwize V7000 Unified, refer to Hardware Announcement [111-180](#), dated October 11, 2011.

For the current IBM System Storage SAN Volume Controller Software V7 announcement, refer to Software Announcement [213-217](#), dated June 10, 2013.

Program number

Program number	VRM	Program name
5639-VM7	7.1.0	IBM Storwize Family Software for Storwize v7000
5639-EV7	7.1.0	IBM Storwize Family Software for Storwize v7000 External virtualization software
5639-RM7	7.1.0	IBM Storwize Family Software for Storwize v7000

Remote Mirroring software

5639-CP7 7.1.0 IBM Storwize Family Software for Storwize V7000
Real-time Compression software

Product identification number

IBM Storwize Family Software for Storwize V7000 V7

Program PID number	Maintenance 1 year PID number	Maintenance 3 year PID number
5639-VM7	5639-SM1 reg/ren 5639-SM2 afl	5639-SM3 reg 5639-SM4 renewal 5639-SM5 afl
Maintenance 2 year PID number	Maintenance 4 year PID number	Maintenance 5 year PID number
5639-SM6 reg	5639-SM7 reg	5639-SM8 reg

IBM Storwize Family Software for Storwize V7000 External Virtualization software V7

Program PID number	Maintenance 1 year PID number	Maintenance 3 year PID number
5639-EV7	5639-EVA reg/ren 5639-EVB afl	5639-EVD reg 5639-EVE renewal 5639-EVF afl
Maintenance 2 year PID number	Maintenance 4 year PID number	Maintenance 5 year PID number
5639-EVC reg	5639-EVG reg	5639-EVH reg

IBM Storwize Family Software for Storwize V7000 Remote Mirroring software V7

Program PID number	Maintenance 1 year PID number	Maintenance 3 year PID number
5639-RM7	5639-RMA reg/ren 5639-RMB afl	5639-RMD reg 5639-RME ren 5639-RMF afl
Maintenance 2 year PID number	Maintenance 4 year PID number	Maintenance 5 year PID number
5639-RMC reg	5639-RMG reg	5639-RMH reg

IBM Storwize Family Software for Storwize V7000 Real-time Compression software V7

Program PID number	Maintenance 1 year PID number	Maintenance 3 year PID number
5639-CP7	5639-CS1 reg/ren 5639-CS2 afl	5639-CS3 reg 5639-CS4 renewal 5639-CS5 afl
Maintenance 2 year PID number	Maintenance 4 year PID number	Maintenance 5 year PID number
5639-CS6 reg	5639-CS7 reg	5639-CS8 reg

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=213-231>

Education support

Classroom courses available to IBM, Business Partners, and customers

A classroom hands-on course is available worldwide to all audiences for this product with sessions:

Course number	Course title
SSE1	IBM System Storage Storwize V7000 Implementation workshop

For more information and course schedules, visit

http://www-304.ibm.com/jct03001c/services/learning/ites.wss/zz/en?pageType=tp_search_ne w

Search on the course number 'SSE1'

IBM Global Services, IT Education Services, provides education to support many IBM offerings. Descriptions of courses for IT professionals and managers are on the IBM IT Education Services website

<http://www.ibm.com/services/learning/>

Refer to the IBM IT Education Services website for information on course locations and availability dates.

Offering Information

Product information is available via the Offering Information website

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

Publications

No publications are shipped with these programs.

The following publications can be downloaded in PDF format from the websites that follow this list:

Title	Order number
IBM Storwize V7000 CIM Agent Developer's Guide	GC27-2292-02
IBM Storwize V7000 Read First	GC27-2293-01
IBM Storwize V7000 Quick Installation Guide	GC27-2290-02
IBM Storwize V7000 Troubleshooting, Recovery, and Maintenance Guide	GC27-2291-02

IBM System Storage SAN Volume Controller GC27-2287-02
and Storwize V7000 Command-Line Interface
User's Guide

IBM System Storage Multipath Subsystem GC52-1309
Device Driver User's Guide

IBM Storwize V7000 Safety Notices GC27-3924-00

Additional copies of the above listed publications will be available on June 15, 2012.

Use the following options to order or download additional copies:

- To view online information and link to a download site, visit the IBM Storwize V7000 Information Center
<http://publib.boulder.ibm.com/infocenter/storwize/ic/index.jsp>
- To order additional selected hardcopy publications for a fee or download free PDF format publications, visit the IBM Publications Center website
<http://www.ibm.com/shop/publications/order>
- To directly download publications in PDF format, visit the IBM product support website
<http://www.ibm.com/storage/support/storwize/v7000>
- Call the Publications Support Group at 800-879-2755, and select option 1.
- Contact your IBM representative.

The IBM Publications Center

Hardcopies of selected IBM Storwize Family Software for Storwize V7000 publications are available for a fee from the IBM Publications Center, as well as free softcopy publications. 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 or customer number. A large number of publications are available online in various file formats, and they can all be downloaded free of charge.

Technical information

Specified operating environment

Hardware requirements

IBM Storwize Family Software for Storwize V7000 requires at least one IBM Storwize V7000 Control Enclosure (2076-112, 2076-124, 2076-312, or 2076-324) for installation.

Current support summaries, including specific software, hardware, and firmware levels supported, are maintained at the IBM Storwize V7000 Support website

<http://www.ibm.com/storage/support/storwize/v7000>

For information on the IBM Storwize V7000 hardware and software, refer to the announcements listed in the [Reference information](#) section.

Software requirements

For all current storage systems and host environments supported, refer to the support website

<http://www.ibm.com/storage/support/storwize/v7000>

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.

Compatibility

For further information regarding currently supported environments and operating guidelines, visit the IBM Storwize Family Software for Storwize V7000 support website at

<http://www.ibm.com/storage/support/storwize/v7000>

Limitations

Storwize V7000 software operates on specified IBM Storwize V7000 hardware only, currently defined by IBM 2076-112, 2076-124, 2076-212, 2076-224, 2076-312, and 2076-324.

For hardware associated limitations, refer respectively to Hardware Announcements [111-085](#), dated May 09, 2011, and [110-220](#), dated October 07, 2010.

For additional information, refer to "Usage restriction" in the [Terms and conditions](#) section of this announcement, and to the License Information document that is available on the IBM Software License Agreement website

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

Additional information on configuration limitations and configuration guidelines is further documented in the README file accompanying the IBM Storwize Family Software for Storwize V7000 V6, in furnished publications for this product, or under the Plan/Upgrade tab in the IBM Storwize Family Software for Storwize V7000 restrictions document at

<http://www.ibm.com/storage/support/storwize/v7000>

Planning information

Planning considerations required for IBM Storwize Family Software for Storwize V7000 apply. Refer to the announcements listed in the [Reference information](#) section and to the IBM Storwize Family Software for Storwize V7000 information center at the IBM Support website for publications

<http://www.ibm.com/support/publications/us/library/>

Fee-based storage services are also available. For details, refer to the **Storage services** section

Customers with 5639-VM7 licenses are responsible to ensure the total enclosures managed are within license entitlement. Similarly, for optional 5639-EV7 (External Virtualization), 5639-RM7 (Remote Mirroring), and 5639-CP7 (Compression) software, customers are also responsible to use these functions only to within the total number of enclosures (storage devices) licensed. If compression is used, Real-time Compression license must be purchased for all enclosures managed by the controller.

Customer responsibilities

Planning for and provision of the power and environmental support required for IBM Storwize Family Software for Storwize V7000 is a customer responsibility.

Refer to the announcements listed in the [Reference information](#) section, or to the IBM Storwize V7000 information center at the IBM Support website for publications

<http://www.ibm.com/support/publications/us/library/>

Service support for the server and its operating system which houses the browser from which the IBM Storwize Family Software for Storwize V7000 console is accessed is a customer responsibility (and is separately ordered).

Customers with any 5639-EV7, 5639-RM7, and 5639-CP7 enclosure licenses are responsible for combining the total number of enclosures managed for each function to ensure they are within the enterprise license entitlement (within that country) for each function.

Direct customer support

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

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

Packaging

New order packaging

IBM Storwize Family Software for Storwize V7000 V7, (5639-VM7, 5639-EV7, 5639-RM7, and 5639-CP7) is preinstalled on and shipped with the required IBM 2076 IBM Storwize Family Software for Storwize V7000 Disk Systems.

For code updates, refer to the IBM Storwize Family Software for Storwize V7000 product support website at

<http://www.ibm.com/storage/support/storwize/v7000>

License Information documents for IBM Storwize Family Software for Storwize V7000 programs ship with the hardware on which they are preloaded.

The paid invoice acts as Proof of Entitlement (PoE) for all orders of IBM Storwize Family Software for Storwize V7000 Software V7. All associated media listed in the [Publications](#) section are also shipped with the new hardware order. One media set per IBM Storwize Family Software for Storwize V7000 Disk System will be shipped. Refer to the hardware announcements listed in the [Reference information](#) section for correlated hardware order features.

Subsequent media orders

For additional available publications, refer to the [Publications](#) section.

For assistance in placing orders with or without media features, contact your IBM representative.

Publications are in English. 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

Use of supplementary antivirus software is recommended, but not required. The customer is responsible for evaluation, selection, and implementation of security features, administrative procedures, and appropriate controls in application systems and communication facilities. 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/>

Ordering information

Program name: IBM Storwize Family Software for Storwize V7000 V7
 PID: 5639-VM7

Use-based OTC with One-year Software Maintenance

Description	Program number	Feature number
IBM Storwize V7000 BSW+1YRSWM/enc1 IBM Storwize V7000 Base SW Per Storage Device with 1 Year SW Maintenance	5639-VM7	0001

Physical Delivery Charge		3437
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No-Charge Features:

Media Supply		5809
Serial number only		3444
Electronic SW Delivery		3450
ESD-only US		3453
Unlimited users entitlement		6398
Unlimited external users entitlement		6399

Program name: IBM Storwize Family Software for Storwize V7000
 External Virtualization Software V7
 PID: 5639-EV7

Use-based OTC with One-year Software Maintenance

Description	Program number	Feature number
IBM Storwize V7000 EV+1YRSWM/enc1 IBM Storwize V7000 Ext. Virt. SW Per Storage Device with 1 Year SW Maintenance	5639-EV7	0001

No-Charge Features:

Unlimited users entitlement		6398
Unlimited external users entitlement		6399

Program name: IBM Storwize Family Software for Storwize V7000
 Remote Mirroring software V7
 PID: 5639-RM7

Use-based OTC with One-year Software Maintenance

Description	Program number	Feature number
IBM Storwize V7000 RM+1YRSWM/enc1 IBM Storwize V7000 Remote Mirror Per Storage Device with 1 Year SW Maintenance	5639-RM7	0001

No-Charge Features:

Unlimited users entitlement	6398
Unlimited external users entitlement	6399

Program name: IBM Storwize Family Software for Storwize V7000
Real-time Compression software V7

PID: 5639-CP7

Use-based OTC with One-year Software Maintenance

Description	Program number	Feature number
IBM Storwize V7000 RtC+1YRSWM/enc1 IBM Storwize V7000 Real-time Compression SW Per Storage Device with 1 Year SW Maintenance	5639-CP7	0001

IBM Storwize V7000 RtC+1YRSWM/enc1 IBM Storwize V7000 Real-time Compression SW Per 250 Storage Device with 1 Year SW Maintenance		0002
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Program name: IBM Storwize Family Software for Storwize V7000
Software maintenance - One-year Registration and Renewal

PID: 5639-SM1

One-year No Charge Registration

Program Description	Feature number	Feature number
IBM Storwize V7000 BSW+1YRSWM/enc1 IBM Storwize V7000 Base SW One-year NC Registration per Storage Device	5639-SM1	0001

No-Charge Features:

ESD-only US	3453
Unlimited users entitlement	6398
Unlimited external users entitlement	6399
SWMA Auto Renewal Registration	9000

One-year Renewal:

Program Feature

Description	number	number
IBM Storwize V7000 1Yr BSW RNL/enc1 IBM Storwize V7000 Base SW One-year Renewal One-time charge per Storage Device	5639-SM1	0002

Program name: IBM Storwize Family Software for Storwize V7000
Software maintenance - One-year After License
PID: 5639-SM2

Description	Program number	Feature number
IBM Storwize V7000 1Yr BSW AFL/enc1 IBM Storwize V7000 Base SW One-year After License One-time charge per Storage Device	5639-SM2	0001

Program name: IBM Storwize Family Software for Storwize V7000
Software maintenance - Three-year Registration
PID: 5639-SM3

Description	Program number	Feature number
IBM Storwize V7000 3Yr BSW Reg/enc1 IBM Storwize V7000 Base SW Three-year Registration One-time charge per Storage Device	5639-SM3	0001

No-Charge Features:

ESD-only US	3453
Unlimited users entitlement	6398
Unlimited external users entitlement	6399
SWMA Auto Renewal Registration	9000

Program name: IBM Storwize Family Software for Storwize V7000
Software maintenance - Three-year Renewal
PID: 5639-SM4

Description	Program number	Feature number
IBM Storwize V7000 3Yr BSW RNL/enc1 IBM Storwize V7000 Base SW Three-year Renewal One-time charge per Storage Device	5639-SM4	0001

Program name: IBM Storwize Family Software for Storwize V7000
Software maintenance - Three-year After License
PID: 5639-SM5

Description	Program number	Feature number
IBM Storwize V7000 3Yr BSW AFL/enc1 IBM Storwize V7000 Base SW	5639-SM5	0001

Three-year After License
One-time charge
per Storage Device

Program name: IBM Storwize Family Software for Storwize V7000
Software maintenance - Two-year Registration
PID: 5639-SM6

Description	Program number	Feature number
IBM Storwize V7000 2Yr BSW Reg/enc1 IBM Storwize V7000 Base SW Two-year Registration One-time charge per Storage Device	5639-SM6	0001

No-Charge Features:

ESD-only US	3453
Unlimited users entitlement	6398
Unlimited external users entitlement	6399
SWMA Auto Renewal Registration	9000

Program name: IBM Storwize Family Software for Storwize V7000
Software maintenance - Four-year Registration
PID: 5639-SM7

Description	Program number	Feature number
IBM Storwize V7000 4Yr BSW Reg/enc1 IBM Storwize V7000 Base SW Four-year Registration One-time charge per Storage Device	5639-SM7	0001

No-Charge Features:

ESD-only US	3453
Unlimited users entitlement	6398
Unlimited external users entitlement	6399
SWMA Auto Renewal Registration	9000

Program name: IBM Storwize Family Software for Storwize V7000
Software maintenance - Five-year Registration
PID: 5639-SM8

Description	Program number	Feature number
IBM Storwize V7000 5Yr BSW Reg/enc1 IBM Storwize V7000 Base SW Five-year Registration One-time charge per Storage Device	5639-SM8	0001

No-Charge Features:

ESD-only US	3453
Unlimited users entitlement	6398
Unlimited external users entitlement	6399
SWMA Auto Renewal	9000

Registration

Program name: IBM Storwize Family Software for Storwize V7000
External Virtualization
Software Maintenance
PID: 5639-EVA

One-year No Charge Registration

Description	Program number	Feature number
IBM Storwize V7000 EV+1YRSWM/enc1 IBM Storwize V7000 Ext. Virt. SW One-year NC Registration per Storage Device	5639-EVA	0002

No-Charge Features:

Unlimited users entitlement	6398
Unlimited external users entitlement	6399

One-year Renewal:

IBM Storwize V7000 EV+1YRSWM RNL/enc1 IBM Storwize V7000 Ext. Virt. SW One-year Renewal One-time charge per Storage Device		0001
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Program name: IBM Storwize Family Software for Storwize V7000
External Virtualization
Software maintenance - One-year After License
PID: 5639-EVB

Description	Program number	Feature number
IBM Storwize V7000 EV+1YRSWM AFL/enc1 IBM Storwize V7000 Ext. Virt. SW One-year After License One-time charge per Storage Device	5639-EVB	0001

Program name: IBM Storwize Family Software for Storwize V7000
External Virtualization
Software Maintenance - Three-year Registration
PID: 5639-EVD

Description	Program number	Feature number
IBM Storwize V7000 3Yr EV Reg/enc1 IBM Storwize V7000 Ext. Virt. SW Three-year Registration One-time charge per Storage Device	5639-EVD	0001

No-Charge Features:

Unlimited users entitlement	6398
Unlimited external users entitlement	6399

Program name: IBM Storwize Family Software for Storwize V7000

External Virtualization
Software Maintenance - Three-year Renewal
PID: 5639-EVE

Description	Program number	Feature number
IBM Storwize V7000 3Yr EV RNL/enc1 IBM Storwize V7000 Ext. Virt. SW Three-year Renewal One-time charge per Storage Device	5639-EVE	0001

Program name: IBM Storwize Family Software for Storwize V7000
External Virtualization
Software Maintenance - Three-year After License
PID: 5639-EVF

Description	Program number	Feature number
IBM Storwize V7000 3Yr EV AFL/enc1 IBM Storwize V7000 Ext. Virt. SW Three-year After License One-time charge per Storage Device	5639-EVF	0001

Program name: IBM Storwize Family Software for Storwize V7000
External Virtualization
Software maintenance - Two-year Registration
PID: 5639-EVC

Description	Program number	Feature number
IBM Storwize V7000 2Yr EV Reg/enc1 IBM Storwize V7000 Ext. Virt. SW Two-year Registration One-time charge per Storage Device	5639-EVC	0001

No-Charge Features:

Unlimited users entitlement	6398
Unlimited external users entitlement	6399

Program name: IBM Storwize Family Software for Storwize V7000
External Virtualization
Software maintenance - Four-year Registration
PID: 5639-EVG

Description	Program number	Feature number
IBM Storwize V7000 4Yr EV Reg/enc1 IBM Storwize V7000 Ext. Virt. SW Four-year Registration One-time charge per Storage Device	5639-EVG	0001

No-Charge Features:

Unlimited users entitlement	6398
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Unlimited external users entitlement 6399

Program name: IBM Storwize Family Software for Storwize v7000
External Virtualization
Software maintenance - Five-year Registration
PID: 5639-EVH

Description	Program number	Feature number
IBM Storwize v7000 5Yr EV Reg/enc1 IBM Storwize v7000 Ext. Virt. SW Five-year Registration One-time charge per Storage Device	5639-EVH	0001

No-Charge Features:

Unlimited users entitlement	6398
Unlimited external users entitlement	6399

Program name: IBM Storwize Family Software for Storwize v7000
Remote Mirroring
Software maintenance
PID: 5639-RMA

One-year No Charge Registration

Description	Program number	Feature number
IBM Storwize v7000 RM+1YRSWM/enc1 IBM Storwize v7000 Remote Mirror SW One-year NC Registration per Storage Device	5639-RMA	0002

No-Charge Features:

Unlimited users entitlement	6398
Unlimited external users entitlement	6399

One-year Renewal:

IBM Storwize v7000 RM+1YRSWM RNL/enc1 IBM Storwize v7000 Remote Mirror SW One-year Renewal per Storage Device		0001
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Program name: IBM Storwize Family Software for Storwize v7000
Remote Mirroring
Software maintenance - One-year After License
PID: 5639-RMB

Description	Program number	Feature number
IBM Storwize v7000 RM+1YRSWM AFL/enc1 IBM Storwize v7000 Remote Mirror SW One-year After License	5639-RMB	0001

per Storage Device

Program name: IBM Storwize Family Software for Storwize V7000
Remote Mirroring
Software maintenance - Three-year Registration
PID: 5639-RMD

Description	Program number	Feature number
IBM Storwize V7000 3Yr RM Reg/enc1 IBM Storwize V7000 Remote Mirror Three-year Registration One-time charge per Storage Device	5639-RMD	0001

No-Charge Features:

Unlimited users entitlement	6398
Unlimited external users entitlement	6399

Program name: IBM Storwize Family Software for Storwize V7000
Remote Mirroring
Software maintenance - Three-year Renewal
PID: 5639-RME

Description	Program number	Feature number
IBM Storwize V7000 3Yr RM RNL/enc1 IBM Storwize V7000 Remote Mirror Three-year Renewal One-time charge per Storage Device	5639-RME	0001

Program name: IBM Storwize Family Software for Storwize V7000
Remote Mirroring
Software maintenance - Three-year After License
PID: 5639-RMF

Description	Program number	Feature number
IBM Storwize V7000 3Yr RM AFL/enc1 IBM Storwize V7000 Remote Mirror Three-year After License One-time charge per Storage Device	5639-RMF	0001

Program name: IBM Storwize Family Software for Storwize V7000
Remote Mirroring
Software maintenance - Two-year Registration
PID: 5639-RMC

Description	Program number	Feature number
IBM Storwize V7000 2Yr RM Reg/enc1 IBM Storwize V7000 Remote Mirror Two-year Registration	5639-RMC	0001

One-time charge
per Storage Device

No-Charge Features:

Unlimited users entitlement 6398
Unlimited external users entitlement 6399

Program name: IBM Storwize Family Software for Storwize V7000
Remote Mirroring
Software maintenance - Four-year Registration
PID: 5639-RMG

Description	Program number	Feature number
IBM Storwize V7000 4Yr RM Reg/encl IBM Storwize V7000 Remote Mirror Four-year Registration One-time charge per Storage Device	5639-RMG	0001

No-Charge Features:

Unlimited users entitlement 6398
Unlimited external users entitlement 6399

Program name: IBM Storwize Family Software for Storwize V7000
Remote Mirroring
Software maintenance - Five-year Registration
PID: 5639-RMH

Description	Program number	Feature number
IBM Storwize V7000 5Yr RM Reg/encl IBM Storwize V7000 Remote Mirror Five-year Registration One-time charge per Storage Device	5639-RMH	0001

No-Charge Features:

Unlimited users entitlement 6398
Unlimited external users entitlement 6399

Program name: IBM Storwize Family Software for Storwize V7000
Real-time Compression

Software Maintenance - One-year Registration and Renewal

PID: 5639-CS1

One-year No Charge Registration

Description	Program number	Feature number
IBM Storwize V7000 RtC+1YRSWM/enc1 IBM Storwize V7000 RtC SW One-year NC Registration per Storage Device	5639-CS1	0001
IBM Storwize V7000 RtC+1YRSWM/enc1 IBM Storwize V7000 RtC SW One-year NC Registration per 250 Storage Device		0002

One-year Renewal

Description	Program number	Feature number
IBM Storwize V7000 Rtc+1YRSWM/enc1 IBM Storwize V7000 RtC SW One-year Renewal One-time charge per Storage Device	5639-CS1	0003
IBM Storwize V7000 Rtc+1YRSWM/enc1 IBM Storwize V7000 RtC SW One-year Renewal One-time charge per 250 Storage Device		0004
Registration for Auto-Renewal		9000

Program name: IBM Storwize Family Software for Storwize V7000
Real-time Compression
Software Maintenance - One-year After License

PID: 5639-CS2

Description	Program number	Feature number
IBM Storwize V7000 1Yr RtC AFL/enc1 IBM Storwize V7000 RtC SW One-year After License One-time charge per Storage Device	5639-CS2	0001
IBM Storwize V7000 1Yr RtC AFL/enc1 IBM Storwize V7000 RtC SW One-year After License One-time charge per 250 Storage Device		0002

Program name: IBM Storwize Family Software for Storwize V7000
Real-time Compression
Software Maintenance - Three-year Registration

PID: 5639-CS3

Description	Program number	Feature number
IBM Storwize V7000 1Yr RtC Reg/enc1 IBM Storwize V7000 RtC SW Three-year Registration One-time charge per Storage Device	5639-CS3	0001
IBM Storwize V7000 1Yr RtC Reg/enc1 IBM Storwize V7000 RtC SW Three-year Registration One-time charge per 250 Storage Device		0002
Registration for Auto-Renewal		9000

Program name: IBM Storwize Family Software for Storwize V7000
Real-time Compression
Software Maintenance - Three-year Renewal

PID: 5639-CS4

Description	Program number	Feature number
IBM Storwize V7000 3Yr RtC RNL/enc1 IBM Storwize V7000 RtC SW Three-year Renewal One-time charge per Storage Device	5639-CS4	0001
IBM Storwize V7000 3Yr RtC RNL/enc1 IBM Storwize V7000 RtC SW Three-year Renewal One-time charge per 250 Storage Device		0002

Program name: IBM Storwize Family Software for Storwize V7000
Real-time Compression
Software Maintenance - Three-year After License

PID: 5639-CS5

Description	Program number	Feature number
IBM Storwize V7000 3Yr RtC AFL/enc1 IBM Storwize V7000 RtC SW Three-year After License One-time charge per Storage Device	5639-CS5	0001
IBM Storwize V7000 3Yr RtC AFL/enc1 IBM Storwize V7000 RtC SW Three-year After License One-time charge per 250 Storage Device		0002

Program name: IBM Storwize Family Software for Storwize V7000
Real-time Compression
Software Maintenance - Two-year Registration

PID: 5639-CS6

Description	Program number	Feature number
IBM Storwize V7000 2Yr Rtc Reg/enc1 IBM Storwize V7000 Rtc SW Two-year Registration One-time charge per Storage Device	5639-CS6	0001
IBM Storwize V7000 2Yr Rtc Reg/enc1 IBM Storwize V7000 Rtc SW Two-year Registration One-time charge per 250 Storage Device		0002
Registration for Auto-Renewal		9000

Program name: IBM Storwize Family Software for Storwize V7000
Real-time Compression
Software Maintenance - Four-year Registration

PID: 5639-CS7

Description	Program number	Feature number
IBM Storwize V7000 4Yr Rtc Reg/enc1 IBM Storwize V7000 Rtc SW Four-year Registration One-time charge per Storage Device	5639-CS7	0001
IBM Storwize V7000 4Yr Rtc Reg/enc1 IBM Storwize V7000 Rtc SW Four-year Registration One-time charge per 250 Storage Device		0002

Program name: IBM Storwize Family Software for Storwize V7000
Real-time Compression
Software Maintenance - Five-year Registration

PID: 5639-CS8

Description	Program number	Feature number
IBM Storwize V7000 5Yr Rtc Reg/enc1 IBM Storwize V7000 Rtc SW Five-year Registration One-time charge per Storage Device	5639-CS8	0001
IBM Storwize V7000 5Yr Rtc Reg/enc1 IBM Storwize V7000 Rtc SW Five-year Registration		0002

One-time charge
per 250 Storage Device

Charge metric

Order handling

The IBM Storwize Family Software for Storwize V7000 software for products **5639-EV7 and 5639-RM7** will continue to be ordered through existing channels using the existing configurator and ordering tools.

Starting with this announcement, the products **5639-EV7 and 5639-RM7** 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 5639-EV7 and 5639-RM7 based on existing supported hardware system units in your business environment. Offerings are available exclusively via electronic download.

Program name	Part number or PID number	Charge metric
IBM Storwize Family Software for Storwize V7000 V7	5639-VM7	Per Storage Device
IBM Storwize Family Software for Storwize V7000 External Virtualization software V7	5639-EV7	Per Storage Device
IBM Storwize Family Software for Storwize V7000 Remote Mirroring software V7	5639-RM7	Per Storage Device
IBM Storwize Family Software for Storwize V7000 Real-time Compression software V7	5639-CP7	Per Storage Device

Customers requesting electronic software delivery

Downloading from the electronic software delivery website requires an active SW Maintenance Agreement for each product to be downloaded and registration with the ESS website. Visit

<http://www.ibm.com/servers/eserver/ess>

Website registration requires:

- A valid customer number
- A software order number associated with the customer number

If you do not have and cannot obtain the customer number or software order number pair by any other means, you can process a 5639-VM1 upgrade order specifying electronic software delivery.

The following is the list of participating PID product for which upgrades and refreshes are available via ESD download:

Program name: IBM Storwize V7000 Software V6

Program number	Description	Feature number
5639-VM7	Media Feature Charge	3437
	Electronic SW Delivery	3450

The 3450 Electronic Delivery feature is for upgrades only. It is not available for new orders.

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.

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.

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) applies for Subscription and Support (also referred to as Software Maintenance) and does not require customer signatures.

License Information form number

GI13-2841

License Information for:

- 5641-VC7 - IBM Storwize Family SAN Volume Controller Software V7.1
- 5641-CP7 - IBM Storwize Family SAN Volume Controller Compression Software V7.1
- 5639-VM7 - IBM Storwize Family V7000 Software V7.1
- 5639-EV7 - IBM Storwize Family V7000 External Virtualization Software V7.1
- 5639-RM7 - IBM Storwize Family V7000 Remote Mirroring Software V7.1
- 5639-CP7 - IBM Storwize Family V7000 Compression Software V7.1

On or near the planned availability date, the current License Information documents will be available for review on the IBM Software License Agreement website

<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).

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 for programs acquired under any of IBM's On/Off Capacity on Demand (On/Off CoD) software offerings, this term does not apply since these offerings apply to programs already acquired and in use by you.

Other terms

Volume orders (IVO)

Yes. Contact your IBM representative.

Passport Advantage applies

No

Software Subscription and Support applies

Yes. All distributed software licenses include Software Subscription and Support (also referred to as Software Maintenance) for a period of 12 months from the date of acquisition, providing a streamlined way to acquire IBM software and assure technical support coverage for all licenses. Extending coverage for a total of three years from date of acquisition may be elected.

While your Software Subscription and Support is in effect, IBM provides you assistance for your routine, short duration installation and usage (how-to) questions, and code-related questions. IBM provides assistance via telephone and, if available, electronic access, only to your information systems (IS) technical support personnel during the normal business hours (published prime shift hours) of your IBM support center. (This assistance is not available to your end users.) IBM provides Severity 1 assistance 24 hours a day, every day of the year. For additional details, consult your IBM Software Support Handbook at

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

Software Subscription and Support does not include assistance for the design and development of applications, your use of programs in other than their specified operating environment, or failures caused by products for which IBM is not responsible under this agreement.

IBM Operational Support Services - SoftwareXcel

No

System i® Software Maintenance applies

No

Variable charges apply

No

Educational allowance available

Yes. A 15% education allowance applies to qualified education institution customers.

Statement of good security practices

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

Prices

Information on charges is available at

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

Choose the option entitled Purchase/upgrade tools.

Program name: IBM Storwize Family Software for Storwize v7000 v7
PID: 5639-VM7

Use-based OTC with One-year Software Maintenance

Description	Program number	Feature number
IBM Storwize v7000 BSW+1YRSWM/enc1 IBM Storwize v7000 Base SW Per Storage Device with 1 Year SW Maintenance	5639-VM7	0001
Physical Delivery Charge		3437
No-Charge Features:		
Media Supply		5809
Serial number only		3444
Electronic SW Delivery		3450
ESD-only US		3453
Unlimited users entitlement		6398
Unlimited external users entitlement		6399

Program name: IBM Storwize Family Software for Storwize v7000
External virtualization Software v7

PID: 5639-EV7

Use-based OTC with One-year Software Maintenance

Description	Program number	Feature number
IBM Storwize V7000 EV+1YRSWM/enc1 IBM Storwize V7000 Ext. Virt. SW Per Storage Device with 1 Year SW Maintenance	5639-EV7	0001

No-Charge Features:

Unlimited users entitlement	6398
Unlimited external users entitlement	6399

Program name: IBM Storwize Family Software for Storwize V7000
Remote Mirroring software V7

PID: 5639-RM7

Use-based OTC with One-year Software Maintenance

Description	Program number	Feature number
IBM Storwize V7000 RM+1YRSWM/enc1 IBM Storwize V7000 Remote Mirror Per Storage Device with 1 Year SW Maintenance	5639-RM7	0001

No-Charge Features:

Unlimited users entitlement	6398
Unlimited external users entitlement	6399

Program name: IBM Storwize Family Software for Storwize V7000
Software maintenance - One-year Registration and Renewal

PID: 5639-SM1

One-year No Charge Registration

Description	Program number	Feature number
IBM Storwize V7000 BSW+1YRSWM/enc1 IBM Storwize V7000 Base SW One-year NC Registration per Storage Device	5639-SM1	0001

No-Charge Features:

ESD-only US	3453
Unlimited users entitlement	6398
Unlimited external users entitlement	6399
SWMA Auto Renewal Registration	9000

One-year Renewal:

Description	Program number	Feature number
IBM Storwize V7000 1Yr BSW RNL/enc1 IBM Storwize V7000 Base SW One-year Renewal One-time charge per Storage Device	5639-SM1	0002
Program name: IBM Storwize Family Software for Storwize V7000 Software maintenance - One-year After License		
PID: 5639-SM2		

Description	Program number	Feature number
IBM Storwize V7000 1Yr BSW AFL/enc1 IBM Storwize V7000 Base SW One-year After License One-time charge per Storage Device	5639-SM2	0001
Program name: IBM Storwize Family Software for Storwize V7000 Software maintenance - Three-year Registration		
PID: 5639-SM3		

Description	Program number	Feature number
IBM Storwize V7000 3Yr BSW Reg/enc1 IBM Storwize V7000 Base SW Three-year Registration One-time charge per Storage Device	5639-SM3	0001
No-Charge Features:		
ESD-only US		3453
Unlimited users entitlement		6398
Unlimited external users entitlement		6399
SWMA Auto Renewal Registration		9000
Program name: IBM Storwize Family Software for Storwize V7000 Software maintenance - Three-year Renewal		
PID: 5639-SM4		

Description	Program number	Feature number
IBM Storwize V7000 3Yr BSW RNL/enc1 IBM Storwize V7000 Base SW Three-year Renewal One-time charge per Storage Device	5639-SM4	0001
Program name: IBM Storwize Family Software for Storwize V7000 Software maintenance - Three-year After License		
PID: 5639-SM5		

Description	Program number	Feature number
IBM Storwize V7000	5639-SM5	0001

3Yr BSW AFL/enc1
IBM Storwize V7000 Base SW
Three-year After License
One-time charge
per Storage Device

Program name: IBM Storwize Family Software for Storwize V7000
Software maintenance - Two-year Registration
PID: 5639-SM6

Description	Program number	Feature number
IBM Storwize V7000 2Yr BSW Reg/enc1 IBM Storwize V7000 Base SW Two-year Registration One-time charge per Storage Device	5639-SM6	0001

No-Charge Features:

ESD-only US	3453
Unlimited users entitlement	6398
Unlimited external users entitlement	6399
SWMA Auto Renewal Registration	9000

Program name: IBM Storwize Family Software for Storwize V7000
Software maintenance - Four-year Registration
PID: 5639-SM7

Description	Program number	Feature number
IBM Storwize V7000 4Yr BSW Reg/enc1 IBM Storwize V7000 Base SW Four-year Registration One-time charge per Storage Device	5639-SM7	0001

No-Charge Features:

ESD-only US	3453
Unlimited users entitlement	6398
Unlimited external users entitlement	6399
SWMA Auto Renewal Registration	9000

Program name: IBM Storwize Family Software for Storwize V7000
Software maintenance - Five-year Registration
PID: 5639-SM8

Description	Program number	Feature number
IBM Storwize V7000 5Yr BSW Reg/enc1 IBM Storwize V7000 Base SW Five-year Registration One-time charge per Storage Device	5639-SM8	0001

No-Charge Features:

ESD-only US	3453
Unlimited users entitlement	6398
Unlimited external users	6399

entitlement
SWMA Auto Renewal 9000
Registration

Program name: IBM Storwize Family Software for Storwize V7000
External Virtualization
Software Maintenance
PID: 5639-EVA

One-year No Charge Registration

Description	Program number	Feature number
IBM Storwize V7000 EV+1YRSWM/enc1 IBM Storwize V7000 Ext. Virt. SW One-year NC Registration per Storage Device	5639-EVA	0002

No-Charge Features:

Unlimited users entitlement	6398
Unlimited external users entitlement	6399

One-year Renewal:

IBM Storwize V7000 EV+1YRSWM RNL/enc1 IBM Storwize V7000 Ext. Virt. SW One-year Renewal One-time charge per Storage Device		0001
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Program name: IBM Storwize Family Software for Storwize V7000
External Virtualization
Software maintenance - One-year After License
PID: 5639-EVB

Description	Program number	Feature number
IBM Storwize V7000 EV+1YRSWM AFL/enc1 IBM Storwize V7000 Ext. Virt. SW One-year After License One-time charge per Storage Device	5639-EVB	0001

Program name: IBM Storwize Family Software for Storwize V7000
External Virtualization
Software Maintenance - Three-year Registration
PID: 5639-EVD

Description	Program number	Feature number
IBM Storwize V7000 3Yr EV Reg/enc1 IBM Storwize V7000 Ext. Virt. SW Three-year Registration One-time charge per Storage Device	5639-EVD	0001

No-Charge Features:

Unlimited users entitlement	6398
Unlimited external users entitlement	6399

Program name: IBM Storwize Family Software for Storwize V7000
 External Virtualization
 Software Maintenance - Three-year Renewal
 PID: 5639-EVE

Description	Program number	Feature number
IBM Storwize V7000 3Yr EV RNL/enc1 IBM Storwize V7000 Ext. Virt. SW Three-year Renewal One-time charge per Storage Device	5639-EVE	0001

Program name: IBM Storwize Family Software for Storwize V7000
 External Virtualization
 Software Maintenance - Three-year After License
 PID: 5639-EVF

Description	Program number	Feature number
IBM Storwize V7000 3Yr EV AFL/enc1 IBM Storwize V7000 Ext. Virt. SW Three-year After License One-time charge per Storage Device	5639-EVF	0001

Program name: IBM Storwize Family Software for Storwize V7000
 External Virtualization
 Software maintenance - Two-year Registration
 PID: 5639-EVC

Description	Program number	Feature number
IBM Storwize V7000 2Yr EV Reg/enc1 IBM Storwize V7000 Ext. Virt. SW Two-year Registration One-time charge per Storage Device	5639-EVC	0001

No-Charge Features:

Unlimited users entitlement	6398
Unlimited external users entitlement	6399

Program name: IBM Storwize Family Software for Storwize V7000
 External Virtualization
 Software maintenance - Four-year Registration
 PID: 5639-EVG

Description	Program number	Feature number
IBM Storwize V7000 4Yr EV Reg/enc1 IBM Storwize V7000 Ext. Virt. SW Four-year Registration One-time charge per Storage Device	5639-EVG	0001

No-Charge Features:

Unlimited users entitlement 6398
Unlimited external users entitlement 6399

Program name: IBM Storwize Family Software for Storwize V7000
External Virtualization
Software maintenance - Five-year Registration
PID: 5639-EVH

Description	Program number	Feature number
IBM Storwize V7000 5Yr EV Reg/enc1 IBM Storwize V7000 Ext. Virt. SW Five-year Registration One-time charge per Storage Device	5639-EVH	0001

No-Charge Features:

Unlimited users entitlement 6398
Unlimited external users entitlement 6399

Program name: IBM Storwize Family Software for Storwize V7000
Remote Mirroring
Software maintenance
PID: 5639-RMA

One-year No Charge Registration

Description	Program number	Feature number
IBM Storwize V7000 RM+1YRSWM/enc1 IBM Storwize V7000 Remote Mirror SW One-year NC Registration per Storage Device	5639-RMA	0002

No-Charge Features:

Unlimited users entitlement 6398
Unlimited external users entitlement 6399

One-year Renewal:

IBM Storwize V7000 RM+1YRSWM RNL/enc1 IBM Storwize V7000 Remote Mirror SW One-year Renewal per Storage Device		0001
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Program name: IBM Storwize Family Software for Storwize V7000
Remote Mirroring
Software maintenance - One-year After License
PID: 5639-RMB

Description	Program number	Feature number
IBM Storwize V7000	5639-RMB	0001

RM+1YRSWM AFL/enc1
IBM Storwize V7000
Remote Mirror SW
One-year After License
per Storage Device

Program name: IBM Storwize Family Software for Storwize V7000
Remote Mirroring
Software maintenance - Three-year Registration
PID: 5639-RMD

Description	Program number	Feature number
IBM Storwize V7000 3Yr RM Reg/enc1 IBM Storwize V7000 Remote Mirror Three-year Registration One-time charge per Storage Device	5639-RMD	0001

No-Charge Features:

Unlimited users entitlement	6398
Unlimited external users entitlement	6399

Program name: IBM Storwize Family Software for Storwize V7000
Remote Mirroring
Software maintenance - Three-year Renewal
PID: 5639-RME

Description	Program number	Feature number
IBM Storwize V7000 3Yr RM RNL/enc1 IBM Storwize V7000 Remote Mirror Three-year Renewal One-time charge per Storage Device	5639-RME	0001

Program name: IBM Storwize Family Software for Storwize V7000
Remote Mirroring
Software maintenance - Three-year After License
PID: 5639-RMF

Description	Program number	Feature number
IBM Storwize V7000 3Yr RM AFL/enc1 IBM Storwize V7000 Remote Mirror Three-year After License One-time charge per Storage Device	5639-RMF	0001

Program name: IBM Storwize Family Software for Storwize V7000
Remote Mirroring
Software maintenance - Two-year Registration
PID: 5639-RMC

Description	Program number	Feature number
IBM Storwize V7000	5639-RMC	0001

2Yr RM Reg/encl
IBM Storwize V7000
Remote Mirror
Two-year Registration
One-time charge
per Storage Device

No-Charge Features:

Unlimited users entitlement 6398
Unlimited external users
entitlement 6399

Program name: IBM Storwize Family Software for Storwize V7000
Remote Mirroring
Software maintenance - Four-year Registration
PID: 5639-RMG

No-Charge Features:

Unlimited users entitlement 6398
Unlimited external users
entitlement 6399

Description	Program number	Feature number
IBM Storwize V7000 4Yr RM Reg/encl IBM Storwize V7000 Remote Mirror Four-year Registration One-time charge per Storage Device	5639-RMG	0001

No-Charge Features:

Unlimited users entitlement 6398
Unlimited external users
entitlement 6399

Program name: IBM Storwize Family Software for Storwize V7000
Remote Mirroring
Software maintenance - Five-year Registration
PID: 5639-RMH

Description	Program number	Feature number
IBM Storwize V7000 5Yr RM Reg/encl IBM Storwize V7000 Remote Mirror Five-year Registration One-time charge per Storage Device	5639-RMH	0001

No-Charge Features:

Unlimited users entitlement 6398
Unlimited external users
entitlement 6399

Program name: IBM Storwize Family Software for Storwize V7000
Real-time Compression software V7
PID: 5639-CP7

Use-based OTC with One-year Software Maintenance

Description	Program number	Feature number
IBM Storwize V7000 RtC+1YRSWM/enc1 IBM Storwize V7000 Real-time Compression SW Per Storage Device with 1 Year SW Maintenance	5639-CP7	0001
IBM Storwize V7000 RtC+1YRSWM/enc1 IBM Storwize V7000 Real-time Compression SW Per 250 Storage Device with 1 Year SW Maintenance		0002

Program name: IBM Storwize V7000 Real-time Compression Software
Maintenance - One-year Registration and Renewal

PID: 5639-CS1

One-year No Charge Registration

Description	Program number	Feature number
IBM Storwize V7000 RtC+1YRSWM/enc1 IBM Storwize V7000 RtC SW One-year NC Registration per Storage Device	5639-CS1	0001
IBM Storwize V7000 RtC+1YRSWM/enc1 IBM Storwize V7000 RtC SW One-year NC Registration per 250 Storage Device		0002

One-year Renewal

Description	Program number	Feature number
IBM Storwize V7000 RtC+1YRSWM/enc1 IBM Storwize V7000 RtC SW One-year Renewal One-time charge per Storage Device	5639-CS1	0003
IBM Storwize V7000 RtC+1YRSWM/enc1 IBM Storwize V7000 RtC SW One-year Renewal One-time charge per 250 Storage Device		0004

No-Charge Features:

SWMA Auto Renewal 9000
Registration

Program name: IBM Storwize V7000 Real-time Compression Software
Maintenance - One-year After License

PID: 5639-CS2

Description	Program number	Feature number
IBM Storwize V7000 1Yr RtC AFL/enc1 IBM Storwize V7000 RtC SW One-year After License One-time charge per Storage Device	5639-CS2	0001
IBM Storwize V7000 1Yr RtC AFL/enc1 IBM Storwize V7000 RtC SW One-year After License One-time charge per 250 Storage Device		0002

Program name: IBM Storwize V7000 Real-time Compression Software
Maintenance - Three-year Registration

PID: 5639-CS3

Description	Program number	Feature number
IBM Storwize V7000 1Yr RtC Reg/enc1 IBM Storwize V7000 RtC SW Three-year Registration One-time charge per Storage Device	5639-CS3	0001
IBM Storwize V7000 1Yr RtC Reg/enc1 IBM Storwize V7000 RtC SW Three-year Registration One-time charge per 250 Storage Device		0002

No-Charge Features:

SWMA Auto Renewal 9000
Registration

Program name: IBM Storwize V7000 Real-time Compression Software
Maintenance - Three-year Renewal

PID: 5639-CS4

Description	Program number	Feature number
IBM Storwize V7000 3Yr RtC RNL/enc1 IBM Storwize V7000 RtC SW Three-year Renewal One-time charge per Storage Device	5639-CS4	0001
IBM Storwize V7000		0002

3Yr RtC RNL/enc1
 IBM Storwize V7000 RtC SW
 Three-year Renewal
 One-time charge
 per 250 Storage Device

Program name: IBM Storwize V7000 Real-time Compression Software
 Maintenance - Three-year After License

PID: 5639-CS5

Description	Program number	Feature number
IBM Storwize V7000 3Yr RtC AFL/enc1 IBM Storwize V7000 RtC SW Three-year After License One-time charge per Storage Device	5639-CS5	0001
IBM Storwize V7000 3Yr RtC AFL/enc1 IBM Storwize V7000 RtC SW Three-year After License One-time charge per 250 Storage Device		0002

Program name: IBM Storwize V7000 Real-time Compression Software
 Maintenance - Two-year Registration

PID: 5639-CS6

Description	Program number	Feature number
IBM Storwize V7000 2Yr RtC Reg/enc1 IBM Storwize V7000 RtC SW Two-year Registration One-time charge per Storage Device	5639-CS6	0001
IBM Storwize V7000 2Yr RtC Reg/enc1 IBM Storwize V7000 RtC SW Two-year Registration One-time charge per 250 Storage Device		0002

No-Charge Features:

SWMA Auto Renewal Registration		9000
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Program name: IBM Storwize V7000 Real-time Compression Software
 Maintenance - Four-year Registration

PID: 5639-CS7

Description	Program number	Feature number
IBM Storwize V7000 4Yr RtC Reg/enc1 IBM Storwize V7000 RtC SW Four-year Registration One-time charge	5639-CS7	0001

per Storage Device

IBM Storwize V7000 0002
4Yr RtC Reg/enc1
IBM Storwize V7000 RtC SW
Four-year Registration
One-time charge
per 250 Storage Device

Program name: IBM Storwize V7000 Real-time Compression Software
Maintenance - Five-year Registration

PID: 5639-CS8

Description	Program number	Feature number
IBM Storwize V7000 5Yr RtC Reg/enc1 IBM Storwize V7000 RtC SW Five-year Registration One-time charge per Storage Device	5639-CS8	0001
IBM Storwize V7000 5Yr RtC Reg/enc1 IBM Storwize V7000 RtC SW Five-year Registration One-time charge per 250 Storage Device		0002

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Corrections

(Corrected on February 5, 2014)

The product information listed for 5639-RM7 in the Description section has been updated.

(Corrected on September 6, 2013)

The hosts per I/O group has been corrected to 512 in the At a glance.

(Corrected on July 31, 2013)

The feature numbers for 5639-EVA and 5639-RMA have been updated in the Ordering information and Prices sections.

(Corrected on June 28, 2013)

The statement referring to the Cloud Data Management Interface (CDMI) software feature was erroneously included in the At a glance section and has been removed. Refer to Statement of Direction [112-106](#), dated June 04, 2012, for further information.