



IBM Storwize V7000 software V6.4.0 introduces Real-time Compression

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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:

- Supports RAID 0, 1, 5, 6, and 10
- Provides SAN-attached 8 Gbps Fibre Channel (FC), 1 Gigabit Ethernet(GbE), and 10 GbE iSCSI host connectivity
- Accommodates up to twenty-four 2.5-inch disk drives or twelve 3.5-inch disk drives installed within the IBM Storwize V7000 Control Enclosure
- Includes attachment support for up to nine IBM Storwize V7000 Expansion Enclosures, providing modular and highly scalable storage solutions that range up to 240 TB physical storage capacity, and 480 TB physical storage capacity in a clustered system
- Supports intermixing of SAS drives, nearline SAS drives, and solid-state drives within the IBM Storwize V7000 Control Enclosures and the IBM Storwize V7000 Expansion Enclosures
- Includes IBM Easy Tier® technology for automatically moving heavily used data extents onto high-performance storage devices
- Supports attachment of other storage devices via the FC interface just as the SAN Volume Controller (SVC)
- Supports a complete set of SVC functions, including FlashCopy® , RemoteCopy, volume mirroring, and thin provisioning

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

Overview

IBM Storwize V7000 is designed to improve storage efficiency by compressing data by as much as 80% through supported real-time compression for block storage, enabling up to five times as much data to be stored in the same physical disk space. Unlike other approaches to compression, IBM Real-time Compression is designed to be used with active primary data such as production databases and email systems, dramatically expanding the range of candidate data that can benefit from compression. As its name implies, IBM Real-time Compression operates as data is written to disk avoiding the need to store uncompressed data while awaiting compression.

Data mobility has been enhanced with greater flexibility for nondisruptive volume moves. Previous versions of Storwize V7000 provided the ability to move volumes

nondisruptively within the dual controllers in one enclosure. Storwize V7000 now supports moving volumes anywhere within a clustered system while avoiding disruption of host access to storage.

IBM Storwize V7000 provides increased scalability and performance with four-way clustered systems. Storwize V7000 now supports clustered systems with up to four control enclosures, nearly doubling maximum capacity and performance of a Storwize V7000 system.

Storwize V7000 systems with 10Gbps Ethernet ports now support attachment to next-generation Converged Enhanced Ethernet (CEE) networks using Fiber Channel over Ethernet (FCoE). This support enables connecting Storwize V7000 to servers for host attachment and to other Storwize V7000 systems for clustering or for mirroring using FC or FCoE interfaces using these networks. The same ports may also be used for iSCSI server connections.

Key prerequisites

Software requirements

IBM Storwize V7000 Software V6.4 (5639-VM1, 5639-EV1, 5639-RM1, and 5639-CP1) has the same software prerequisites as IBM Storwize V7000 V6.1. 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 15, 2012

Description

IBM Storwize V7000 highlights include support for real-time compression of block volumes, nondisruptive volume moves within clustered systems, FCoE connectivity on existing 10Gb Ethernet hardware, and four way clustering of control enclosures. The following functions, features, and support options help increase the benefits of the SVC.

Real-time compression

IBM Storwize V7000 is designed to improve storage efficiency by supporting real-time compression for block storage to improve efficiency by compressing data by as much as 80%, enabling storage of up to five times as much data in the same physical disk space. Unlike other approaches to compression, IBM Real-time Compression is designed to be used with active primary data such as production databases and email systems, dramatically expanding the range of candidate data that can benefit from compression. IBM Real-time Compression operates as data is written to disk to eliminate wasted space storing uncompressed data awaiting post-processing.

To authorize use of Real-time Compression capabilities of the IBM Storwize V7000, you must purchase a license for IBM Storwize V7000 Real-time Compression (5639-CP1) 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-VM1) and each external enclosure licensed with the IBM Storwize V7000 External Virtualization Software (5639-EV1).

For example, if you have a IBM Storwize V7000 consisting of one control enclosure and three expansion enclosures (four 5639-VM1 licenses), managing a DS5020 consisting of two enclosures (two 5639-EV1 licenses) then in order to authorize Real-time Compression for this configuration, you will need a quantity of six enclosure license for the IBM Storwize V7000 Real-time Compression (5639-CP1).

Nondisruptive volume moves across clustered systems

Data mobility has been enhanced with greater flexibility for nondisruptive volume moves. Previous versions of Storwize V7000 provided the ability to move volumes nondisruptively between the dual controllers within one enclosure. Storwize V7000 now supports moving volumes anywhere within a clustered system without disruption of host access to storage.

Four way clustering of Storwize V7000 control enclosures

IBM Storwize V7000 provides increased scalability and performance with four-way clustered systems. Storwize V7000 now supports clustered systems with up to four control enclosures, essentially doubling maximum capacity and performance of a Storwize V7000 system.

Fibre Channel over Ethernet (FCoE) on current 10 GbE hardware

Storwize V7000 systems with 10Gbps Ethernet ports now support attachment to next-generation CEE networks using FCoE. This support enables connecting Storwize V7000 to servers for host attachment and to other Storwize V7000 systems for clustering or for mirroring using FC or FCoE interfaces using these networks. The same ports may also be used for iSCSI server connections.

Auto renewal registration of software maintenance for Storwize V7000 Real-time compression 5639-CP1 (Feature number 9000)

Software maintenance renewals in the AAS ordering system for Storwize V7000 Real-time compression 5639-CP1 software are available via a services contract. Selecting feature number 9000 with the software maintenance registration ordered with 5639-CP1 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.

Real-time Compression allowance

IBM authorizes existing Storwize V7000 and SVC customers to evaluate the new Real-time Compression capability at no cost. Customers who wish to take advantage of this opportunity are encouraged to download the Storwize V7000 version 6.4 software and enable the Real-time Compression function to help evaluate the potential benefits they can obtain based on their own specific environment and application workloads. The evaluation period is for up to forty-five days and it begins when customers enable the compression function. At the end of the evaluation period, customers must either purchase the required licenses for Real-time Compression or disable the function. If, during the course of the evaluation an issue arises, IBM recommends contacting their local technical sales specialist for assistance.

Customers taking advantage of this opportunity must work with their local IBM Business Partner or their IBM sales representative through the evaluation process to ensure the version 6.4 software is downloaded from a designated IBM site, the evaluation period allowance is maintained, and to resolve any issues or questions related to the use of the compression capabilities. It is the customer's responsibility to ensure that they are properly licensed for the Real-time Compression function should they choose to use it after the evaluation period is over.

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

Section 508 of the US Rehabilitation Act

IBM Storwize V7000 Software V6.4 is capable, as of June 15, 2012, when used in accordance with IBM's associated 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. A US Section 508 Voluntary Product Accessibility Template (VPAT) can be requested on the following website

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

Product positioning

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

Statements of direction

IBM intends to extend IBM Active Cloud Engine™ capabilities to:

- Allow files on selected NAS devices to be virtualized by SONAS and Storwize V7000 Unified. Virtualization capabilities provide access across a unified global namespace, while facilitating transparent file migrations in parallel with normal operations. This capability will help provide customer investment protection as clients continue to leverage their existing NAS assets while exploiting the capabilities of IBM Active Cloud Engine .
- Enable file collaboration globally via IBM Active Cloud Engine . This capability will help enhance productivity where users at geographically dispersed locations can both share and modify the same file.

IBM intends to deliver Cloud features to SONAS and Storwize V7000 Unified to support:

- Web Storage Services, a standards-based object store and API that implements the Cloud Data Management Interface (CDMI) standard from Storage Networking Industry Association (SNIA) to support the implementation of storage cloud services.
- Self-service portal designed to speed storage provisioning, monitoring, and reporting.

IBM intends to extend NAS data retention enhancements for IBM Storwize V7000 Unified and IBM SONAS to provide file "immutability" to help support file integrity from the time the file is designated as immutable through its lifecycle. Immutability is intended to secure files from inadvertent or malicious change or deletion.

IBM intends to enable Real-time Compression for block and file workloads on Storwize V7000 Unified systems. This enhancement is designed to help clients experience the same high-performance compression for active primary block and file workloads on Storwize V7000 Unified that is being announced for block workloads on Storwize V7000. IBM Storwize V7000 Real-time Compression is designed to deliver enhanced storage efficiency with potential benefits including lower storage acquisition cost (because of the ability to purchase less hardware), reduced storage growth, and lower rack space, power, and cooling requirements.

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 Storwize V7000 hardware machine type 2076, refer to Hardware Announcement [111-085](#), dated May 09, 2011 , and Hardware Announcement [110-220](#), dated October 07, 2010 .

For information on System Storage® Productivity Center, refer to Hardware Announcement [110-255](#), dated November 23, 2010 .

For information on the previous IBM Storwize V7000 Software, refer to Storwize V7000 (V6.3) Software Announcement [211-426](#), dated October 11, 2011 , Storwize V7000 (V6.2) Software Announcement [211-184](#), dated May 09, 2011 , and Storwize V7000 (V6.1) Software Announcement [210-356](#), dated October 07, 2010 .

For information on the software maintenance auto renewal registration services offering, refer to Services Announcement [611-010](#), dated April 05, 2011 .

Program number

Program number	VRM	Program name
5639-VM1	6.4.0	IBM Storwize v7000 Software V6
5639-EV1	6.4.0	IBM Storwize v7000 External virtualization Software V6
5639-RM1	6.4.0	IBM Storwize v7000 Remote Mirroring Software V6
5639-CP1	6.4.0	IBM Storwize v7000 Real-time Compression Software V6

Product identification number

IBM Storwize v7000 Software V6

Program PID number	Maintenance 1 year PID number	Maintenance 3 year PID number
5639-VM1	5639-SM1 reg/ren 5639-SM2 af1	5639-SM3 reg 5639-SM4 renewal 5639-SM5 af1

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 V7000 External Virtualization Software V6

Program PID number	Maintenance 1 year PID number	Maintenance 3 year PID number
5639-EV1	5639-VVA reg	5639-VVC reg
Maintenance 2 year PID number	Maintenance 4 year PID number	Maintenance 5 year PID number
5639-VVF reg	5639-VVG reg	5639-VVH reg

IBM Storwize V7000 Remote Mirroring Software V6

Program PID number	Maintenance 1 year PID number	Maintenance 3 year PID number
5639-RM1	5639-MMA reg	5639-MMC reg
Maintenance 2 year PID number	Maintenance 4 year PID number	Maintenance 5 year PID number
5639-MMF reg	5639-MMG reg	5639-MMH reg

IBM Storwize V7000 Real-time Compression Software V6

Program PID number	Maintenance 1 year PID number	Maintenance 3 year PID number
5639-CP1	5639-CS1 reg/ren 5639-CS2 af1	5639-CS3 reg 5639-CS4 renewal 5639-CS5 af1
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=212-180>

Education support

Web lecture courses available to IBM and Business Partners

Storage Technical Online Education courses on the IBM Storwize V7000 product will be available to IBM and Business Partners on the IBM Systems College (formerly STG SMART Zone) site on the announcement date.

IBM access

<http://lt.be.ibm.com/smartzone/storagetech>

Business Partners access

<http://www.ibm.com/services/weblectures/dlv/smartzone/storagetech>

Classroom courses available to IBM , Business Partners, and Customers

Classroom hands-on courses are available worldwide to all audiences for this product with sessions:

Course number	Course title
SSE0	IBM System Storage Storwize v7000 Implementation Workshop

For more information and course schedules, visit

http://www.ibm.com/services/learning/ites.wss/zz/en?pageType=tp_search

Search on the course number 'SSE0'

Or link to course offering information directly.

SSE0 course information

http://www.ibm.com/services/learning/ites.wss/tp/en?pageType=tp_search_results&rowStart=0&rowsToReturn=20&searchString=sse0

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 and Storwize v7000 Command-Line Interface User's Guide	GC27-2287-02
IBM System Storage Multipath Subsystem	GC52-1309

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 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 V7000 software 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 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 V7000 V6, in furnished publications for this product, or under the Plan/Upgrade tab in the IBM Storwize V7000 restrictions document at

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

Planning information

Planning considerations required for IBM Storwize V7000 apply. Refer to the announcements listed in the [Reference information](#) section and to the IBM 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-VM1 licenses are responsible to ensure the total enclosures managed are within license entitlement. Similarly, for optional 5639-EV1 (External Virtualization), 5639-RM1 (Remote Mirroring), and 5639-CP1 (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 V7000 is a customer responsibility.

Refer to the announcements listed in the [Reference information](#) section, or to the 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 V7000 console is accessed is a customer responsibility (and is separately ordered).

Customers with any 5639-EV1, 5639-RM1, and 5639-CP1 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.

Packaging

New order packaging

IBM Storwize V7000 V6, (5639-VM1, 5639-EV1, 5639-RM1, and 5639-CP1) is preinstalled on and shipped with the required IBM 2076 IBM Storwize V7000 Disk Systems.

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

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

After receipt of an order for 5639-EV1, and 5639-RM1, the Business Partner or customer will be required to register and accept Passport Advantage® or Passport Express® terms and conditions. Upon registration, the customer will be authorized for the electronic download of software code updates. The product includes the license and one year of Subscription and Support. Up to four additional years of support can be purchased with the initial order.

Note: This does not apply to 5639-VM1, IBM Storwize V7000 Base Software, nor to 5639-CP1, IBM Storwize V7000 Real-time Compression Software.

License Information documents for IBM 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 V7000 Software V6. All associated media listed in the [Publications](#) section are also shipped with the new hardware order. One media set per IBM 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

Charge metric

Program name	Part number or PID number	Charge metric
IBM Storwize V7000 Base Software V6	5639-VM1	Per Storage Device
IBM Storwize V7000 External Virtualization Software V6	5639-EV1	Per Storage Device
IBM Storwize V7000 Remote Mirroring Software V6	5639-RM1	Per Storage Device
IBM Storwize V7000 Compression Software V6	5639-CP1	Per Storage Device

Program name: IBM Storwize V7000 Real-time Compression Software V6
PID: 5639-CP1

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-CP1	0001
IBM Storwize V7000 RtC+1YRSWM/enc1 IBM Storwize V7000 Real-time Compression SW Per 250 Storage Device with 1 Year SW Maintenance		0002

The only new PID offering in this announcement is 5639-CP1 (Storwize V7000 Real-time Compression Software).

This section does not repeat the software maintenance order tables for 5639-EV1 (Storwize V7000 External Virtualization Software) and 5639-RM1 (Storwize V7000 Remote Mirroring Software) and their respective software maintenance because they have not changed from previously announced order tables. See the [Reference information](#) section for the prior Storwize V7000 (V6.1) announcement which contains the 5639-EV1 and 5639-RM1 order tables.

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

PID: 5639-CS3

Description	Program number	Feature number
IBM Storwize V7000	5639-CS3	0001

1Yr RtC Reg/enc1
IBM Storwize V7000 RtC SW
Three-year Registration
One-time charge
per Storage Device

IBM Storwize V7000 0002
1Yr RtC Reg/enc1
IBM Storwize V7000 RtC SW
Three-year Registration
One-time charge
per 250 Storage Device

Registration for 9000
Auto-Renewal

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 3Yr RtC RNL/enc1 IBM Storwize V7000 RtC SW Three-year Renewal One-time charge per 250 Storage Device		0002

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
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Terms and conditions

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

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

License Information form number

LC23-5059 License Information for IBM System Storage SAN Volume Controller 6.2.0, IBM Storwize V7000 6.3.0, and IBM Storwize V7000 6.4.0

LC23-5098 License information for IBM System Storage SAN Volume Controller, IBM Storwize V7000 Information Center 6.3.0, and IBM Storwize V7000 Information Center 6.4.0

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.

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 up to five 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

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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

The only new PID offering in this announcement is 5639-CP1 (Storwize V7000 Real-time Compression Software).

This section does not repeat the information for 5639-VM1 (IBM Storwize V7000 Software), 5639-EV1 (Storwize V7000 External Virtualization Software), 5639-RM1 (Storwize V7000 Remote Mirroring Software), and their respective software maintenance because they have not changed from previously announced price list. See the [Reference information](#) section for the prior Storwize V7000 announcements.

Information on charges is available at

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

Choose the option entitled Purchase/upgrade tools.

Program name: IBM Storwize V7000 Real-time Compression Software V6
PID: 5639-CP1

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-CP1	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
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IBM Storwize V7000 0002
 1Yr RtC Reg/enc1
 IBM Storwize V7000 RtC SW
 Three-year Registration
 One-time charge
 per 250 Storage Device

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 3Yr RtC RNL/enc1 IBM Storwize V7000 RtC SW Three-year Renewal One-time charge per 250 Storage Device		0002

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		0002

2Yr RtC Reg/enc1
IBM Storwize V7000 RtC SW
Two-year Registration
One-time charge
per 250 Storage Device

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 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 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

Passport Advantage

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