



IBM Storwize Family Software V7.3.0 delivers enhancements to Real-time Compression on the latest Storwize hardware platforms

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At a glance

Are your storage requirements growing too fast? Are the costs of managing this growth taking more and more of your IT budget? IBM® Storwize® Family Software V7.3 can help solve these problems and get you on the road towards a more flexible, responsive, and efficient storage environment. IBM Storwize Family Software capabilities are offered across a variety of platforms including SAN Volume Controller, Storwize V7000 (Unified), Storwize V5000, and Storwize V3700 and V3500. The Storwize Family of products are designed to deliver the benefits of storage virtualization and advanced storage capabilities, including FlashCopy®, replication, Real-time Compression™, and Easy Tier®, in environments from large enterprises to small businesses and midmarket companies.

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 V7.3 provides software-defined storage capabilities across a variety of platforms, including SAN Volume Controller, Storwize V7000 (Unified), Storwize V5000, and Storwize V3700 and V3500. These offerings help customers reduce the complexities and cost of managing their storage by:

- Centralizing management of storage volumes to enable administrators to manage storage volumes from a single point
- Improving utilization of storage capacity with virtual volumes to enable businesses to tap into previously unused disk capacity
- Avoiding downtime for backups, maintenance, and upgrades
- Performing data migration without disruption to applications
- Enabling all storage devices to be organized into storage pools from which virtual volumes, whether standard, compressed, or thin-provisioned, are created with the desired characteristics
- Delivering automation of storage management with Virtual Storage Center, Tivoli® Storage Productivity Center (as applicable by platform), and Tivoli Storage FlashCopy Manager (as applicable by platform)
- Increasing the performance efficiency of storage pools that use SSDs with Easy Tier

- Restoring data access quickly with near and remote copy capabilities across Fibre Channel, Fibre Channel over Ethernet (FCoE), and IP networks

IBM Storwize Family Software V7.3 improves Easy Tier capabilities to allow for up to three tiers of storage. Easy Tier users can now define their tiers making it possible to turn on Easy Tier between more than just solid-state devices and hard disk drives. These Easy Tier capabilities offer more alternatives for optimizing the storage you use. As you expand storage pools, Storwize Family Software V7.3 also now provides automation to re-stripe data across the pools for optimal performance.

Real-time Compression has been enhanced to provide improvements in performance with the delivery of new SAN Volume Controller and Storwize V7000 hardware platforms, including use of the compression accelerator card feature. Updates to the cache architecture provide further improvements to overall performance.

IBM Storwize Family Software V7.3 allows the use of up to nine expansion enclosures for both the Storwize V5000 and the Storwize V3700.

IBM Storwize Family Software V7.3 also introduces new software licenses for Storwize V7000 and Storwize V5000. This new license structure and pricing provides intuitive licensing based on the functions customers wish to enable and use the most.

IBM Storwize V7000 Unified File Module Software V1.5 supports newer protocol versions to deliver higher levels of security with support of Network File System version 4 (NFSv4) and greater performance with Server Message Block (SMB) 2.1. File Module Software V1.5 provides departmental multitenancy allowing administrators to provision file sets to different departmental administrators. An external ID mapping server is no longer required for replication with the addition of deterministic ID mapping. IBM Active Cloud Engine™ now has multiwriter capability which allows multiple users at different locations to be able to write to the same file set at a particular site. Security is further enhanced by configurable password policies, session policies, and hardened boot and SSH configurations.

Key prerequisites

Software requirements

IBM SAN Volume Controller V7.3 (5641-VC7 and 5641-CP7) has the same software prerequisites as IBM SAN Volume Controller V7.2.

IBM Storwize V7000 V7.3 (5339-CB7, 5639-XB7, 5639-EB7, 5639-VM7, 5639-EV7, 5639-RM7, and 5639-CP7) has the same software prerequisites as IBM Storwize V7000 V7.2.

Storwize Family Software V7.3 is not available for the IBM Flex System® V7000. IBM Flex System V7000 V7.2 (5639-NZ7, 5639-EX7, 5639-RE7, and 5639-CM7) has the same software prerequisites as IBM Flex System V7000 V7.1.

IBM Storwize V5000 V7.3 (5639-CT7, 5639-XT7, 5639-ET7, and 5639-ST7) has the same software prerequisites as IBM Storwize V5000 V7.2.

Refer to the [Description](#) section and the announcements listed in the [Reference information](#) section for more information.

Hardware requirements

IBM Storwize Family Software for SAN Volume Controller requires at least one pair of IBM System Storage® SAN Volume Controller (2145-DH8) storage engines with integrated battery backup units, or at least one pair of IBM System Storage SAN Volume Controller (2145-CG8, 2145-CF8, 2145-8A4, 2145-8G4, 2145-8F4, or 2145-8F2) storage engines with dual uninterruptible power supplies for installation.

IBM Storwize Family Software for Storwize V7000 requires at least one IBM Storwize V7000 Control Enclosure (2076-524, 2076-112, 2076-124, 2076-312, or 2076-324) for installation.

Storwize Family Software V7.3 is not available for the IBM Flex System V7000. IBM Storwize Family Software for Flex System V7000 V7.2 requires at least one IBM Flex System V7000 (4939-A49, 4939-H49, or 4939-X49) Control Enclosure for installation.

IBM Storwize Family Software for Storwize V5000 requires at least one IBM Storwize V5000 control enclosure (2077-12C, 2077-24C, 2078-12C, or 2078-24C) for installation.

Current support summaries, including specific software, hardware, and firmware levels supported, are maintained at their respective support websites.

- For SAN Volume Controller
<http://www.ibm.com/storage/support/2145>
- For Storwize V7000
<http://www.ibm.com/storage/support/storwize/v7000>
- For Storwize V5000
<http://www.ibm.com/storage/support/storwize/v5000>
- For Storwize V3700
<http://www.ibm.com/storage/support/storwize/v3700>
- For Storwize V3500
<http://www.ibm.com/storage/support/storwize/v3500>

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

Planned availability date

- June 6, 2014: IBM Storwize Family Software V7.3
- June 20, 2014: IBM Storwize V7000 File Module Software V1.5

Description

Storwize Family Software V7.3

Storwize Family Software V7.3 provides software-defined storage capabilities across a variety of platforms, including SAN Volume Controller, Storwize V7000 (Unified), Storwize V5000, and Storwize V3700 and V3500. The following new capabilities are available with V7.3:

Easy Tier for use on multiple tiers

Storwize Family Software V7.3 improves Easy Tier capabilities to provide more possibilities for efficiency with a wider range of storage tiers. Easy Tier now allows for up to three tiers of storage. For example, you can set up a storage pool intended for Easy Tier volumes where the pool is comprised of solid-state devices such as SystemFlash, 15K RPM Fibre Channel disk drives, and SAS disk drives. The movement of *hot* or *cold* extents between three tiers is performed in the same manner as the movement between two tiers today. Easy Tier users can now also now define a two-tier storage pool using a variety of combinations for those two tiers, and one of those tiers does not necessarily need to include solid-state devices. For example, you can turn on Easy Tier to operate with a tier of 15K RPM Fibre Channel disk drives and the other tier as SAS disk drives.

Automatic re-striping of data across storage pools

When growing a storage pool by adding more storage to it, Storwize Family Software V7.3 now has the ability to re-stripe your data on pools of storage without having to implement any manual or scripting steps. This helps grow storage environments with greater ease while retaining the performance benefits that come from striping the data across the disk systems in a storage pool.

Real-time Compression enhancements

Real-time Compression in Storwize Family Software V7.3 has been enhanced to provide improvements in performance with the delivery of new SAN Volume Controller and Storwize V7000 hardware platforms, including use of the compression accelerator card optional hardware feature.

Cache architecture improvements

Changes in the cache architecture enhance overall system performance with Storwize Family Software V7.3.

Nine Expansion Enclosures with Storwize V5000 and Storwize V3700

IBM Storwize Family Software V7.3 enables use of up to nine expansion enclosures for both Storwize V5000 and Storwize V3700 systems. Ensure you are running at software level V7.3 before adding additional expansion enclosures. When running prior version levels, enclosures are limited to up to six for Storwize V5000, and up to four for Storwize V3700.

Storwize V7000 and Storwize V5000 new software licenses

IBM Storwize Family Software V7.3 introduces new software licenses for Storwize V7000 and Storwize V5000. This new license and pricing structure provides intuitive licensing based on the functions customers wish to enable and use the most.

While Storwize V7000 used to provide additional licenses for purchase in order to enable additional functionality, the new structure and pricing model will tie the software licenses closely to the enclosure and provide the capability to enable additional functionality by purchasing feature codes under that license. The original Storwize V5000 license structure was set up in a similar way, but it does not differentiate software licenses by the types of hardware it is licensed for.

Each Storwize Family Software for Storwize V7000 5639-CB7, 5639-XB7, and 5639-EB7 license has the following feature codes:

- Base software
- Full Feature Set
- Easy Tier
- FlashCopy
- Remote Mirroring
- Compression

Each Storwize Family Software for Storwize V5000 5639-CT7, 5639-XT7, and 5639-ET7 license has the following feature codes:

- Base software
- Full Feature Set
- Easy Tier
- FlashCopy
- Remote Mirroring

Compression is not currently supported on the Storwize V5000.

The following sections describes each new software license in detail, when and where it applies, and provides examples.

IBM Storwize Family Software for Storwize V7000 Controller V7 (5639-CB7)

Each IBM Storwize V7000 (2076-524) Disk Control Enclosure uses IBM Storwize Family Software for Storwize V7000 Controller Software, 5639-CB7. A 5639-CB7 IBM Storwize Family Software for Storwize V7000 Controller software license is required for each control enclosure. In addition to this control enclosure license, advanced functions are available for purchase as feature codes of the software. For example, if you are running a Storwize V7000 system and want to improve performance efficiencies with Easy Tier, you may purchase that feature code to use Easy Tier across all the control enclosures, expansion enclosures, and externally virtualized enclosures configured with that system, and proceed to use Easy Tier for that Storwize V7000 system. Alternatively, you can enable Easy Tier and all other optional advanced functions available by purchasing the single feature code labeled: **Full Feature Set.**

IBM Storwize Family Software for Storwize V7000 Expansion V7 (5639-XB7)

Each IBM Storwize V7000 (2076-12F/24F) Expansion Enclosure uses IBM Storwize Family Software for Storwize V7000 Expansion Software, 5639-XB7. A 5639-XB7 IBM Storwize Family Software for Storwize V7000 Expansion software license is required for each expansion enclosure. In addition to this expansion enclosure license, advanced functions are available for purchase as feature codes of the software. For example, if you are running a Storwize V7000 system and want to improve performance efficiencies with Easy Tier, you may purchase that feature code to use Easy Tier across all the control enclosures, expansion enclosures, and externally virtualized enclosures configured with that system, and proceed to use Easy Tier for that Storwize V7000 system. Alternatively, you can enable Easy Tier and all other optional advanced functions available by purchasing the single feature code labeled: **Full Feature Set.**

IBM Storwize Family Software for V7000 External Data Virtualization V7 (5639-EB7)

Each IBM Storwize V7000 (2076-524) Disk Control Enclosure has the ability to attach and manage external storage devices. IBM Storwize Family Software for Storwize V7000 External Data Virtualization Software, 5639-EB7, must be licensed to authorize use of this function. This license must be purchased for each storage enclosure that is attached to and externally managed by the Storwize V7000. IBM Storwize V7000 (2076-524) Disk Control Enclosures and IBM Storwize V7000 (2076-12F/24F) Disk Expansion Enclosures 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 houses 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 V7000 consisting of one control enclosure and three expansion enclosures requires the purchase of the external virtualization license with a feature code quantity of two enclosures.

In addition to this external enclosure license, advanced functions are available for purchase as feature codes of the software. For example, if you are running a Storwize V7000 system and want to improve performance efficiencies with Easy Tier, you may purchase that feature code for Easy Tier across all the control enclosures, expansion enclosures, and externally virtualized enclosures configured with that system, and proceed to use Easy Tier for that Storwize V7000 system. Alternatively, you can enable Easy Tier and all other optional advanced functions available by purchasing the single feature code labeled: **Full Feature Set.**

IBM Storwize V7000 License examples

Scenario 1:

You are managing a clustered Storwize V7000 system consisting of two 2076-524 Disk Control enclosures, one which has two 2076-12F Expansion enclosures attached, and the other which has four 2076-24F Expansion enclosures attached. In addition, this Storwize V7000 system is managing an IBM System Storage DS5020 consisting of four enclosures. You want to use all advanced functions through the Full Feature Set feature code. This configuration requires:

- A quantity of two IBM Storwize Family Software for Storwize V7000 Controller Software licenses (5639-CB7), each with the Full Feature Set feature code selected.
- A quantity of six IBM Storwize Family Software for Storwize V7000 Expansion Software licenses (5639-XB7), each with the Full Feature Set feature code selected.
- A quantity of one IBM Storwize Family Software for Storwize V7000 External Data Virtualization Software license (5639-EB7), with a quantity of four of the Base software feature code, as well as a quantity of four of the Full Feature Set feature code.

Scenario 2:

At the primary site, you are managing a clustered Storwize V7000 system consisting of one 2076-124 Disk Control enclosure which has two 2076-224 Expansion enclosures attached, and a 2076-524 Disk Control enclosure which has four 2076-24F Expansion enclosures attached. In addition, this Storwize V7000 system is managing an IBM System Storage DS5020 consisting of four enclosures. You want to use the Remote Mirroring features in this configuration. At the secondary site, you have the exact same configuration set up. This configuration requires:

- A quantity of three IBM Storwize Family Software for Storwize V7000 Software licenses (5639-VM7).
- A quantity of three IBM Storwize Family Software for Storwize V7000 Remote Mirroring Software licenses (5639-RM7).
- A quantity of one IBM Storwize Family Software for Storwize V7000 Controller Software license (5639-CB7), each with the Remote Mirroring feature code selected.
- A quantity of four IBM Storwize Family Software for Storwize V7000 Expansion Software licenses (5639-XB7), each with the Remote Mirroring feature code selected.
- **One** of the following:
 - A quantity of one IBM Storwize Family Software for Storwize V7000 External Data Virtualization Software license (5639-EB7), with a feature code quantity of four of the Base software, as well as a feature code quantity of four of the Remote Mirroring feature code.
 - A quantity of four IBM Storwize Family Software for Storwize V7000 External Virtualization licenses (5639-EV7), plus an additional four IBM Storwize Family Software for Storwize V7000 Remote Mirroring Software licenses (5639-RM7), in order to properly license Remote Mirroring for the externally managed DS5020.

IBM Storwize Family Software for Storwize V5000 Controller V7 (5639-CT7)

Each IBM Storwize V5000 (2077-12C/24C, 2078-12C/24C) Disk Control Enclosure now uses IBM Storwize Family Software for Storwize V5000 Controller Software, 5639-CT7. A 5639-CT7 IBM Storwize Family Software for Storwize V7000 Controller software license is required for each control enclosure. In addition to this control enclosure license, advanced functions are available for purchase as feature codes of the software. For example, if you are running a Storwize V5000 system and want to improve performance efficiencies with Easy Tier, you may purchase that feature code for Easy Tier across all the control enclosures, expansion enclosures, and externally virtualized enclosures configured with that system, and continue to use Easy Tier for

that Storwize V5000 system. Alternatively, you can enable Easy Tier and all other optional advanced functions available by purchasing the single feature code labeled: **Full Feature Set.**

IBM Storwize Family Software for Storwize V5000 Expansion V7 (5639-XT7)

Each IBM Storwize V5000 (2077-12E/24E, 2078-12E/24E) Expansion Enclosure uses IBM Storwize Family Software for Storwize V5000 Expansion Software, 5639-XT7. A 5639-XT7 IBM Storwize Family Software for Storwize V7000 Expansion software license is required for each expansion enclosure. In addition to this expansion enclosure license, advanced functions are available for purchase as feature codes of the software. For example, if you are running a Storwize V7000 system and want to improve performance efficiencies with Easy Tier, you may purchase that feature code for Easy Tier across all the control enclosures, expansion enclosures, and externally virtualized enclosures configured with that system, and continue to use Easy Tier for that Storwize V5000 system. Alternatively, you can enable Easy Tier and all other optional advanced functions available by purchasing the single feature code labeled: **Full Feature Set.**

IBM Storwize Family Software for V5000 External Data Virtualization V7 (5639-ET7)

Each IBM Storwize V5000 (2077-12C/24C, 2078-12C/24C) Disk Control Enclosure has the ability to attach and manage external storage devices. IBM Storwize Family Software for Storwize V5000 External Data Virtualization Software, 5639-ET7, must be licensed to authorize use of this function. This license must be purchased for each storage enclosure that is attached to, and externally managed by, the Storwize V5000. IBM Storwize V7000 (2077-12C/24C, 2078-12C/24C) Disk Control Enclosures and IBM Storwize V5000 Disk Expansion Enclosures (2077-12E/24E, 2078-12E/24E) are not included in this External Virtualization license.

A storage enclosure externally managed by the Storwize V5000 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 houses 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 V5000 consisting of one control enclosure and three expansion enclosures, requires the purchase of the external virtualization license with a feature code quantity of two enclosures.

In addition to this external enclosure license, advanced functions are available for purchase as feature codes of the software. For example, if you are running a Storwize V5000 system and want to improve performance efficiencies with Easy Tier, you may purchase that feature code for Easy Tier across all the control enclosures, expansion enclosures, and externally virtualized enclosures configured with that system, and continue to use Easy Tier for that Storwize V5000 system. Alternatively, you can enable Easy Tier and all other optional advanced functions available by purchasing the single feature code labeled: **Full Feature Set.**

IBM Storwize V5000 License examples

Scenario 1:

You are managing a clustered Storwize V5000 system consisting of two 2078-24C Disk Control enclosures, one which has two 2078-12E Expansion enclosures attached, and the other which has four 2078-24E Expansion enclosures attached. In addition, this Storwize V5000 system is managing an IBM System Storage DS5020 consisting of four enclosures. You want to use all advanced functions via the Full Feature Set feature code. This configuration requires:

- A quantity of two IBM Storwize Family Software for Storwize V5000 Controller Software licenses (5639-CT7), each with the Full Feature Set feature code selected.
- A quantity of six IBM Storwize Family Software for Storwize V5000 Expansion Software licenses (5639-XT7), each with the Full Feature Set feature code selected.
- A quantity of one IBM Storwize Family Software for Storwize V7000 External Data Virtualization Software license (5639-ET7), with a quantity of four of the Base software feature code, as well as a quantity of four of the Full Feature Set feature code.

Auto renewal registration of software maintenance for Storwize V7000 Controller Software 5639-CB7, Storwize V7000 Expansion Software 5639-XB7, and Storwize V7000 External Data Virtualization Software 5639-EB7 (Feature number 9000)

Software maintenance renewals in the AAS ordering system for Storwize V7000 Controller software 5639-CB7, Storwize V7000 Expansion software 5639-XB7, and Storwize V7000 External Data Virtualization software 5639-EB7 are now available through a services contract. Selecting feature number 9000 with the software maintenance registration ordered with 5639-CB7, 5639-XB7, or 5639-EB7, 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 Controller, Storwize V7000 Expansion, and Storwize V7000 External Data Virtualization base software maintenance registration product IDs:

- 5639-CBA - 1 Year Software Maintenance Registration
- 5639-CBF - 2 Year Software Maintenance Registration
- 5639-CBC - 3 Year Software Maintenance Registration
- 5639-CBG - 4 Year Software Maintenance Registration
- 5639-CBH - 5 Year Software Maintenance Registration
- 5639-XBA - 1 Year Software Maintenance Registration
- 5639-XBF - 2 Year Software Maintenance Registration
- 5639-XBC - 3 Year Software Maintenance Registration
- 5639-XBG - 4 Year Software Maintenance Registration
- 5639-XBH - 5 Year Software Maintenance Registration
- 5639-EBA - 1 Year Software Maintenance Registration
- 5639-EBF - 2 Year Software Maintenance Registration
- 5639-EBC - 3 Year Software Maintenance Registration
- 5639-EBG - 4 Year Software Maintenance Registration
- 5639-EBH - 5 Year Software Maintenance Registration

Auto renewal registration of software maintenance for Storwize V5000 Controller Software 5639-CT7, Storwize V5000 Expansion Software 5639-XT7, and Storwize V5000 External Data Virtualization Software 5639-ET7 (Feature number 9000)

Software maintenance renewals in the AAS ordering system for Storwize V5000 Controller software 5639-CT7, Storwize V5000 Expansion software 5639-XT7, and Storwize V5000 External Data Virtualization software 5639-ET7 are now available through a services contract. Selecting feature number 9000 with the software maintenance registration ordered with 5639-CT7, 5639-XT7, or 5639-ET7, 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 V5000 Controller, Storwize V5000 Expansion, and Storwize V5000 External Data Virtualization base software maintenance registration product IDs:

- 5639-CTA - 1 Year Software Maintenance Registration

- 5639-CTF - 2 Year Software Maintenance Registration
- 5639-CTC - 3 Year Software Maintenance Registration
- 5639-CTG - 4 Year Software Maintenance Registration
- 5639-CTH - 5 Year Software Maintenance Registration
- 5639-XTA - 1 Year Software Maintenance Registration
- 5639-XTF - 2 Year Software Maintenance Registration
- 5639-XTC - 3 Year Software Maintenance Registration
- 5639-XTG - 4 Year Software Maintenance Registration
- 5639-XTH - 5 Year Software Maintenance Registration
- 5639-ETA - 1 Year Software Maintenance Registration
- 5639-ETF - 2 Year Software Maintenance Registration
- 5639-ETC - 3 Year Software Maintenance Registration
- 5639-ETG - 4 Year Software Maintenance Registration
- 5639-ETH - 5 Year Software Maintenance Registration

Note: Auto renewal services are not available in all countries or for all initial software maintenance contract terms.

Storwize V7000 Unified File Module Software V1.5

IBM Storwize V7000 Unified V1.5 software delivers file storage to the Storwize V7000 midrange disk system. Storwize V7000 Unified is a block and file storage system with a tightly integrated management console. The new capabilities available with V1.5 include:

- **Network File System version 4 (NFSv4):** Storwize V7000 Unified File Module Software V1.5 provides NFSv4 support which includes Access Control List support, mandatory Kerberos Security support, more caching, extended locking, and share reservations. This delivers higher levels of security, faster performance, no orphaned locks, and better Microsoft™ Windows™ operating system compatibility.
- **Server Message Block (SMB) 2.1:** SMB 2.1 basic support brings important performance enhancements to the communications protocol in Microsoft Windows Server 2008 R2 and Windows 7 systems. The enhancements also include large maximum transmission unit support (increased from 64 kilobytes to 1 megabyte), Samba asynchronous I/O (read, write), and Access Control List (ACL) improvements, for example 100% Windows ACL compatibility for CIFS-only share. In addition to improved security, SMB 2.1 support delivers more efficient use of 10 GbE network bandwidth, improving the performance of tasks such as copying large files.

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 Family Software V7.3.0, is capable, as of July 11, 2014, when used in accordance with associated IBM documentation, of satisfying the applicable requirements of Section 508 of the Rehabilitation Act provided that any assistive technology used with the product properly interoperates with it. A US Section 508 Voluntary Product Accessibility Template (VPAT) can be requested on the following website

http://www-03.ibm.com/able/product_accessibility/index.html

Product positioning

Customers today face a challenging business environment. There is a need to store more information to make their business more competitive and for IT to be responsive and support initiatives, all while controlling IT costs and limiting the amount of staff required to support IT.

The IBM Storwize Family of storage virtualization systems provides management of storage from entry and midrange up to enterprise disk systems, and enables hosts to attach through SAN, FCoE, or iSCSI to existing Ethernet networks. The Storwize Family is designed to be easy to use, enabling existing staff to start working with it rapidly. The Storwize Family uses virtualization, thin provisioning, and compression technologies to improve storage utilization and meet changing needs quickly and easily. In this way, Storwize Family products are the ideal complement to server virtualization strategies.

The Storwize Family of products also enables migration of data from existing storage systems to new ones, simplifying implementation and minimizing disruption. These are offerings for customers with existing SAN or FCoE networks who seek to reduce the complexities and costs of managing their storage.

The Storwize Family of products are a cross-industry offering for customers who are mainly focused on cost savings while dealing with complexity and increasing storage requirements. These customers also focus on scaling capability with reasonable costs, including disaster recovery functions (Remote Mirroring, FlashCopy, Stretched clusters) and performance features (SSD and Easy Tier).

Reference information

For more information about Storwize Family Software V7.2, refer to Software Announcement [213-482](#), dated October 08, 2013.

For more information about IBM SAN Volume Controller Storage Engine, refer to Hardware Announcement [114-077](#), dated May 06, 2014.

For more information about IBM Storwize V7000, refer to Hardware Announcement [114-046](#), dated May 06, 2014.

Program number

Program number	VRM	Program name
5641-VC7	7.3.0	IBM Storwize Family Software for SAN volume Controller v7
5641-CP7	7.3.0	IBM Storwize Family Software for SAN volume Controller Real-time Compression Software v7
5639-VM7	7.3.0	IBM Storwize Family Software for Storwize v7000
5639-EV7	7.3.0	IBM Storwize Family Software for Storwize v7000 External Virtualization Software
5639-RM7	7.3.0	IBM Storwize Family Software for Storwize v7000 Remote Mirroring Software
5639-CP7	7.3.0	IBM Storwize Family Software for Storwize v7000 Real-time Compression Software
5639-ST7	7.3.0	IBM Storwize Family Software for Storwize v5000
5639-CB7	7.3.0	IBM Storwize Family Software for Storwize v7000 Controller Software
5639-XB7	7.3.0	IBM Storwize Family Software for Storwize v7000

		Expansion Software
5639-EB7	7.3.0	IBM Storwize Family Software for Storwize V7000 External Data Virtualization Software
5639-CT7	7.3.0	IBM Storwize Family Software for Storwize V5000 Controller Software
5639-XT7	7.3.0	IBM Storwize Family Software for Storwize V5000 Expansion Software
5639-ET7	7.3.0	IBM Storwize Family Software for Storwize V5000 External Data Virtualization Software
5639-VF1	1.5.0	IBM Storwize V7000 File Module Software V1

Product identification number

IBM Storwize Family Software for SAN Volume Controller V7

	Maintenance	Maintenance
Program PID number	1-year PID number	3-year PID number
5641-VC7	5641-VCA reg	5641-VCC reg
Maintenance	Maintenance	Maintenance
2-year PID number	4-year PID number	5-year PID number
5641-VCB reg	5641-VCD reg	5641-VCE reg

IBM Storwize Family Software for SAN Volume Controller Real-time Compression Software V7

	Maintenance	Maintenance
Program PID number	1-year PID number	3-year PID number
5641-CP7	5641-CS1 reg	5641-CS3 reg
Maintenance	Maintenance	Maintenance
2-year PID number	4-year PID number	5-year PID number
5641-CS2 reg	5641-CS4 reg	5641-CS5 reg

IBM Storwize Family Software for Storwize V7000 V7

	Maintenance	Maintenance
Program PID number	1 year PID number	3 year PID number
5639-VM7	5639-SM1 reg/ren 5639-SM2 af1	5639-SM3 reg 5639-SM4 renewal 5639-SM5 af1
Maintenance	Maintenance	Maintenance
2 year PID number	4 year PID number	5 year PID number
5639-SM6 reg	5639-SM7 reg	5639-SM8 reg

IBM Storwize Family Software for Storwize V7000 External Virtualization Software V7

	Maintenance	Maintenance
Program PID number	1 year PID number	3 year PID number
5639-EV7	5639-EVA reg/ren 5639-EVB af1	5639-EVD reg 5639-EVE renewal 5639-EVF af1
Maintenance	Maintenance	Maintenance
2 year PID number	4 year PID number	5 year PID number
5639-EVC reg	5639-EVG reg	5639-EVH reg

IBM Storwize Family Software for Storwize V7000 Remote Mirroring Software V7

Maintenance	Maintenance
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Program PID number 1 year PID number 3 year PID number

5639-RM7 5639-RMA reg/ren 5639-RMD reg
5639-RMB afl 5639-RME ren
5639-RMF afl

Maintenance Maintenance Maintenance
2 year PID number 4 year PID number 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-CS3 reg
5639-CS2 afl 5639-CS4 renewal
5639-CS5 afl

Maintenance Maintenance Maintenance
2 year PID number 4 year PID number 5 year PID number

5639-CS6 reg 5639-CS7 reg 5639-CS8 reg

IBM Storwize Family Software for Storwize V5000 V7

Program PID number Maintenance 1 year PID number Maintenance 3 year PID number

5639-ST7 5639-S13 reg/ren 5639-S15 reg
5639-S14 afl 5639-S16 renewal
5639-S17 afl

Maintenance Maintenance Maintenance
2 year PID number 4 year PID number 5 year PID number

5639-S18 reg 5639-S19 reg 5639-S20 reg

IBM Storwize Family Software for Storwize V7000 Controller Software V7

Program PID number Maintenance 1 year PID number Maintenance 3 year PID number

5639-CB7 5639-CBA reg/ren 5639-CBC reg
5639-CBB afl 5639-CBD renewal
5639-CBE afl

Maintenance Maintenance Maintenance
2 year PID number 4 year PID number 5 year PID number

5639-CBF reg 5639-CBG reg 5639-CBH reg

IBM Storwize Family Software for Storwize V7000 Expansion Software V7

Program PID number Maintenance 1 year PID number Maintenance 3 year PID number

5639-XB7 5639-XBA reg/ren 5639-XBC reg
5639-XBB afl 5639-XBD renewal
5639-XBE afl

Maintenance Maintenance Maintenance
2 year PID number 4 year PID number 5 year PID number

5639-XBF reg 5639-XBG reg 5639-XBH reg

IBM Storwize Family Software for Storwize V7000 External Data Virtualization Software V7

Program PID number Maintenance 1 year PID number Maintenance 3 year PID number

5639-EB7 5639-EBA reg/ren 5639-EBC reg
5639-EBB afl 5639-EBD renewal
5639-EBE afl

Maintenance Maintenance Maintenance
2 year PID number 4 year PID number 5 year PID number

5639-EBF reg 5639-EBG reg 5639-EBH reg

IBM Storwize Family Software for Storwize V5000 Controller Software V7

Program PID number Maintenance Maintenance
1 year PID number 3 year PID number

5639-CT7 5639-CTA reg/ren 5639-CTC reg
5639-CTB afl 5639-CTD renewal
5639-CTE afl

Maintenance Maintenance Maintenance
2 year PID number 4 year PID number 5 year PID number

5639-CTF reg 5639-CTG reg 5639-CTH reg

IBM Storwize Family Software for Storwize V5000 Expansion Software V7

Program PID number Maintenance Maintenance
1 year PID number 3 year PID number

5639-XT7 5639-XTA reg/ren 5639-XTC reg
5639-XTB afl 5639-XTD renewal
5639-XTE afl

Maintenance Maintenance Maintenance
2 year PID number 4 year PID number 5 year PID number

5639-XTF reg 5639-XTG reg 5639-XTH reg

IBM Storwize Family Software for Storwize V5000 External Data Virtualization Software V7

Program PID number Maintenance Maintenance
1 year PID number 3 year PID number

5639-ET7 5639-ETA reg/ren 5639-ETC reg
5639-ETB afl 5639-ETD renewal
5639-ETE afl

Maintenance Maintenance Maintenance
2 year PID number 4 year PID number 5 year PID number

5639-ETF reg 5639-ETG reg 5639-ETH reg

IBM Storwize V7000 File Module Software V1

Program PID number Maintenance Maintenance
1 year PID number 3 year PID number

5639-VF1 5639-SF1 reg/ren 5639-SF3 reg
5639-SF2 afl 5639-SF4 renewal
5639-SF5 afl

Maintenance Maintenance Maintenance
2 year PID number 4 year PID number 5 year PID number

5639-SF6 reg 5639-SF7 reg 5639-SF8 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=214-235>

Education support

Web lecture courses are available to IBM and Business Partners.

Storage Technical Online Education courses on the IBM Storwize Family Software products are available to IBM and Business Partners on the IBM Systems College (formerly STG SMART Zone) site

- IBM
<http://lt.be.ibm.com/smartzone/storagetech>
- Business Partners
<http://www.ibm.com/services/weblectures/dlv/smartzone/storagetech>

Classroom courses are available to IBM, Business Partners, and customers.

Hands-on courses are available worldwide to all audiences for SVC:

course number	Course title
SNV0	SAN volume Controller (SVC) Planning and implementation
SNV1	SAN volume Controller (SVC) Planning and implementation workshop

For more information and course schedules, visit the IBM training website

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

Search on the course number **SNV0** for lectures only, or **SNV1** for lectures and labs.

SNV0 for IBM

<https://w3.ibm.com/learning/lms/Saba/Web/Main/goto/learningActivity?deepLinkRedirect=false&courseNum=SNV0G>

SNV0 for Business Partners (worldwide)

http://www.ibm.com/services/learning/ites.wss/tp/en?pageType=tp_search_results&rowStart=0&rowsToReturn=20&searchString=snv0

SNV0 for Business Partners (US)

http://www.ibm.com/services/learning/ites.wss/us/en?pageType=course_description&courseCode=snv00

SNV1 for IBM

<https://w3.ibm.com/learning/lms/Saba/Web/Main/goto/learningActivity?deepLinkRedirect=false&courseNum=SNV1G>

SNV1 for Business Partners (worldwide)

http://www.ibm.com/services/learning/ites.wss/tp/en?pageType=tp_search_results&rowStart=0&rowsToReturn=20&searchString=snv1

SNV1 for Business Partners (US)

http://www.ibm.com/services/learning/ites.wss/us/en?pageType=course_description&courseCode=snv10

More information is available at

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

or

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

IBM Global Services, IT Education Services, supports many IBM offerings. Visit

<http://www.ibm.com/training/us>

For descriptions of courses for IT professionals and managers, visit

<http://www-03.ibm.com/services/learning/training.html>

Questions? Contact 800-IBM-TEACH (426-8322)

For catalogs, schedules, and enrollments visit

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

Offering Information

Product information is available through the Offering Information website

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

For more information, visit the Passport Advantage® website

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

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 Family Software for SAN Volume Controller Read First Flyer	GA32-0843
IBM System Storage SAN Volume Controller Model 2145-DH8 Hardware Installation Guide	GC27-3923
IBM System Storage SAN Volume Controller Hardware Maintenance Guide	GC27-2283
IBM System Storage SAN Volume Controller Troubleshooting Guide	GC27-2284
IBM System Storage SAN Volume Controller Software Installation and Configuration Guide	GC27-2286
IBM System Storage SAN Volume Controller and Storwize V7000 Command-Line Interface User's Guide	GC27-2287
IBM System Storage SAN Volume Controller CIM Agent Developer's Guide	SG27-2288
IBM System Storage SAN Volume Controller Safety Notices	GA32-0844
IBM System Storage Multipath Subsystem Device Driver User's Guide	GC52-1309
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 Storwize V7000 Safety Notices	GC27-3924-00
IBM Storwize V5000 Quick Installation Guide	GI13-2861-00
IBM Storwize V5000 Installation Poster	SC27-5923-00
IBM Storwize V5000 Read First Flyer	GI13-2860-00
IBM Systems Safety Notices	G229-9054-06

To view online information and link to a download site, visit IBM Knowledge Center.

- For SAN Volume Controller
http://www.ibm.com/support/knowledgecenter/STPVGU/com.ibm.storage.svc.console.640.doc/m_l_t_relatedinfo_224agr.html
- For IBM Storwize V7000
http://www.ibm.com/support/knowledgecenter/ST3FR7/com.ibm.storwize.v7000.641.doc/v7000W_elcome_641.htm?lang=en
- For all other Storwize Family products, visit
<http://www-01.ibm.com/support/knowledgecenter/search/storwize%20family>
- To order additional selected hardcopy publications for a fee or to 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.

- For SAN Volume Controller
<http://www.ibm.com/storage/support/2145>
- For Storwize V7000
<http://www.ibm.com/storage/support/storwize/v7000>
- For Storwize V5000
<http://www.ibm.com/storage/support/storwize/v5000>
- For Storwize V3700
<http://www.ibm.com/storage/support/storwize/v3700>
- For Storwize V3500
<http://www.ibm.com/storage/support/storwize/v3500>
- Call the Publications Support Group at 800-879-2755, and select option 1.
- Contact your IBM representative.

The IBM Publications Center

Hardcopies of selected 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 SAN Volume Controller (SVC) requires at least one pair of IBM System Storage SAN Volume Controller 2145-DH8, 2145-CG8, 2145-CF8, 2145-8A4, 2145-8G4, 2145-8F4, or 2145-8F2 storage engines with dual uninterruptible power supplies.

As with SVC V5 and later versions, Storwize Family Software for SAN Volume Controller V7 software cannot be loaded or run on SVC hardware engine model 2145-4F2.

IBM Storwize Family Software for Storwize V7000 requires at least one IBM Storwize V7000 Control Enclosure (2076-524, 2076-112, 2076-124, 2076-312, or 2076-324) for installation.

IBM Storwize Family Software for Storwize V5000 requires at least one IBM Storwize V5000 control enclosure (2077-12C, 2077-24C, 2078-12C, or 2078-24C) for installation.

Current support summaries, including specific software, hardware, and firmware levels supported, are maintained at the respective support website.

- For SAN Volume Controller
<http://www.ibm.com/storage/support/2145>
- For Storwize V7000
<http://www.ibm.com/storage/support/storwize/v7000>
- For Storwize V5000
<http://www.ibm.com/storage/support/storwize/v5000>
- For Storwize V3700
<http://www.ibm.com/storage/support/storwize/v3700>
- <http://www.ibm.com/storage/support/storwize/v3500>

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

Software requirements

Installation of Storwize Family Software V7.2 can be done directly from systems running Storwize Family Software V7.1.

For current hardware and software interoperability dependencies, and other product environment and configuration information, refer to the respective support website.

- For SAN Volume Controller
<http://www.ibm.com/storage/support/2145>
- For Storwize V7000
<http://www.ibm.com/storage/support/storwize/v7000>
- For Storwize V5000
<http://www.ibm.com/storage/support/storwize/v5000>
- For Storwize V3700
<http://www.ibm.com/storage/support/storwize/v3700>
- For Storwize V3500
<http://www.ibm.com/storage/support/storwize/v3500>

IBM includes one year of software maintenance with each program license acquired. The initial period of software maintenance can be extended by the purchase of a renewal option when ordered through Passport Advantage or Passport Advantage Express®.

Note: Only Storwize Family Software for SVC can be ordered through Passport Advantage.

When ordering using the program number with feature codes, software maintenance can be extended by selecting the applicable two-, three-, four-, or five-year software maintenance registration program number and features.

There are no software licenses required nor available for the IBM Storwize V3500 and IBM Storwize V3700.

For the Storwize Family Software for SVC software only, all Software Maintenance renewals will be managed and invoiced through Passport Advantage.

Refer to the [Description](#) section for new storage system and host environment support added by this release. For all current storage systems and host environments supported, refer to the respective support website.

- For SAN Volume Controller
<http://www.ibm.com/storage/support/2145>
- For Storwize V7000
<http://www.ibm.com/storage/support/storwize/v7000>
- For Storwize V5000
<http://www.ibm.com/storage/support/storwize/v5000>
- For Storwize V3700
<http://www.ibm.com/storage/support/storwize/v3700>
- For Storwize V3500
<http://www.ibm.com/storage/support/storwize/v3500>

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 respective support website.

- For SAN Volume Controller
<http://www.ibm.com/storage/support/2145>
- For Storwize V7000
<http://www.ibm.com/storage/support/storwize/v7000>
- For Storwize V5000
<http://www.ibm.com/storage/support/storwize/v5000>
- For Storwize V3700
<http://www.ibm.com/storage/support/storwize/v3700>
- For Storwize V3500
<http://www.ibm.com/storage/support/storwize/v3500>

Limitations

This program only operates on specified storage hardware as detailed in the [Hardware requirements](#) section.

For hardware-associated limitations, refer to the announcements listed in the [Reference information](#) section.

For additional information, refer to [Usage restriction](#) section 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 Storwize Family Software or in furnished publications for this product available at the support website.

- For SAN Volume Controller
<http://www.ibm.com/storage/support/2145>
- For Storwize V7000
<http://www.ibm.com/storage/support/storwize/v7000>
- For Storwize V5000
<http://www.ibm.com/storage/support/storwize/v5000>
- For Storwize V3700
<http://www.ibm.com/storage/support/storwize/v3700>
- For Storwize V3500
<http://www.ibm.com/storage/support/storwize/v3500>

Planning information

Customer responsibilities

Planning for, and provision of, the power and environmental support of the required IBM Storwize Family of products, including its storage engines, is a customer responsibility.

Refer to the announcements listed in the [Reference information](#) section.

Planning considerations for IBM Storwize Family Software are listed in the respective product's IBM Knowledge Center, which is available at

<http://www.ibm.com/support/knowledgecenter/search/storwize%20family>

Customers with a 5641-VC7 or 5641-CP7 license are responsible to combine the total terabytes managed for each function from individual SVC License Manager (cluster) reports to ensure they are within the enterprise license entitlement (within that country) for each function.

Customers with enclosure licenses for optional functions, such as Easy Tier and FlashCopy, are responsible to combine the total number of enclosures managed for each function to ensure they are within the enterprise license entitlement (within that country) for each function.

Installability

Refer to the [Software requirements](#) section.

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

IBM includes one year of Software Subscription and Support (also referred to as Software Maintenance) with each program license acquired. The initial period of Software Subscription and Support (Software Maintenance) can be extended by the purchase of a renewal option when ordered through Passport Advantage or Passport Advantage Express. When ordering using the program number with feature codes,

software maintenance can be extended by selecting the applicable two, three, four, or five year software maintenance registration program number and features.

Packaging

New order packaging

License information documents for Storwize Family Software programs ship with the hardware on which these programs are preloaded.

The IBM Agreement for Acquisition of Support and Addendum for Support, Z125-6011, is shipped with each new Storwize Family Software order.

SVC

IBM Storwize Family Software for SVC V7 (5641-VC7, 5641-CP7) is preinstalled on, and shipped with, the required IBM 2145 SVC Storage Engines.

After receipt of an order for Storwize Family Software for SVC 5641-VC7, the Business Partner or end 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 support, with up to four additional years available for purchase with the product.

In addition to the IBM Agreement for Acquisition of Software Maintenance, the following are shipped with each new IBM System Storage SVC order:

- License Information for IBM System Storage SAN Volume Controller V7.2, GI13-2841
- IBM System Storage SAN Volume Controller Read First file, GA32-0843
- License Information for IBM System Storage SAN Volume Controller Storage Replication Adapter for VMware SRM, GA76-0431

Storwize V7000

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 Storwize V7000 Disk Systems.

In addition to the IBM Agreement for Acquisition of Software Maintenance, the License Information for IBM System Storage SVC and IBM Storwize V7000 Version 7, GI13-2841, is shipped with each new IBM Storwize V7000 Controller order.

Storwize V5000

IBM Storwize Family Software for Storwize V5000 (5639-ST7) is preinstalled on, and shipped with, the required IBM 2077 or 2078 IBM Storwize V5000 Disk Systems.

The paid invoice acts as Proof of Entitlement (PoE) for all orders of IBM Storwize Family 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 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

Storwize Family Software can use an existing LDAP for authentication (for example, interfacing with Microsoft Active Directory).

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.

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

Order handling

The IBM Storwize Family Software for SAN Volume Controller products identified in this announcement (5641-VC7 and 5641-CP7) will be ordered through existing channels using existing configurator and ordering tools. However, the fulfillment processes have been modified to improve customer records management associated with Software Subscription and Support, often referred to as Software Maintenance. Software Subscription and Support will be entitled through Passport Advantage or Passport Advantage Express.

The products 5641-VC7 and 5641-CP7, when selected during the configuration process with each hardware system, will be enabled for the system unit for which the product was ordered. Optionally, software and license only configurations can be created for 5641-VC7 and 5641-CP7 based on existing supported hardware system units in the customer business environment. Offerings in this announcement are available exclusively through electronic download.

Passport Advantage customer: Media pack entitlement details

A Passport Advantage media pack will not be generated. Read first information, will be available with downloaded code updates from Passport Advantage.

Media pack information can be found on the Passport Advantage website

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

Passport Advantage (PPA) allows greater flexibility to help customers manage their software licenses and Subscription and Support renewals. Customers can now have a common anniversary date for Subscription and Support renewals for all IBM software, under a PPA agreement, including IBM Storage software. The anniversary date, established at the order ship date for the initial product acquisition, will

remain unchanged while their Passport Advantage or Passport Advantage Express agreement remains in effect.

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

The program is available via electronic download only.

Program name: IBM Storwize Family Software for Storwize V7000 Controller Software V7

PID: 5639-CB7

Use-based OTC with One-year Software Maintenance

Description	Program number	Feature number
IBM Storwize V7000 Controller Base SW Per Storage Device with 1 Year SW Maintenance	5639-CB7	0001
IBM Storwize V7000 Controller Compression SW Per Storage Device with 1 Year SW Maintenance		0002
IBM Storwize V7000 Controller Easy Tier SW Per Storage Device with 1 Year SW Maintenance		0003
IBM Storwize V7000 Controller FlashCopy SW Per Storage Device with 1 Year SW Maintenance		0004
IBM Storwize V7000 Controller Full Feature Per Storage Device with 1 Year SW Maintenance		0005
IBM Storwize V7000 Controller Remote Mirroring Per Storage Device with 1 Year SW Maintenance		0006
Physical Delivery Charge		3437

No-Charge Features:

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 Expansion Software V7

PID: 5639-XB7

Use-based OTC with One-year Software Maintenance

Description	Program number	Feature number
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IBM Storwize V7000 Expansion Base SW Per Storage Device with 1 Year SW Maintenance	5639-XB7	0001
IBM Storwize V7000 Expansion Compression SW Per Storage Device with 1 Year SW Maintenance		0002
IBM Storwize V7000 Expansion Easy Tier SW Per Storage Device with 1 Year SW Maintenance		0003
IBM Storwize V7000 Expansion FlashCopy SW Per Storage Device with 1 Year SW Maintenance		0004
IBM Storwize V7000 Expansion Full Feature Per Storage Device with 1 Year SW Maintenance		0005
IBM Storwize V7000 Expansion Remote Mirroring Per Storage Device with 1 Year SW Maintenance		0006
Physical Delivery Charge		3437

No-Charge Features:

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
Data Virtualization Software V7

PID: 5639-EB7

Use-based OTC with One-year Software Maintenance

Description	Program number	Feature number
IBM Storwize V7000 External Data Virtualization Base SW Per Storage Device with 1 Year SW Maintenance	5639-EB7	0001
IBM Storwize V7000 External Data Virtualization Compression SW Per Storage Device with 1 Year SW Maintenance		0002
IBM Storwize V7000 External Data Virtualization Easy Tier SW Per Storage Device with 1 Year SW Maintenance		0003

IBM Storwize V7000 External Data Virtualization FlashCopy SW Per Storage Device with 1 Year SW Maintenance	0004
IBM Storwize V7000 External Data Virtualization Full Feature Per Storage Device with 1 Year SW Maintenance	0005
IBM Storwize V7000 External Data Virtualization Remote Mirroring Per Storage Device with 1 Year SW Maintenance	0006
Physical Delivery Charge	3437

No-Charge Features:

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 V5000 Controller
Software V7

PID: 5639-CT7

Use-based OTC with One-year Software Maintenance

Description	Program number	Feature number
IBM Storwize V5000 Controller Base SW Per Storage Device with 1 Year SW Maintenance	5639-CT7	0001
IBM Storwize V5000 Controller Easy Tier SW Per Storage Device with 1 Year SW Maintenance		0003
IBM Storwize V5000 Controller FlashCopy SW Per Storage Device with 1 Year SW Maintenance		0004
IBM Storwize V5000 Controller Full Feature Per Storage Device with 1 Year SW Maintenance		0005
IBM Storwize V5000 Controller Remote Mirroring Per Storage Device with 1 Year SW Maintenance		0006
Physical Delivery Charge		3437

No-Charge Features:

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 V5000 Expansion Software V7

PID: 5639-XT7

Use-based OTC with One-year Software Maintenance

Description	Program number	Feature number
IBM Storwize V5000 Expansion Base SW Per Storage Device with 1 Year SW Maintenance	5639-XT7	0001
IBM Storwize V5000 Expansion Easy Tier SW Per Storage Device with 1 Year SW Maintenance		0003
IBM Storwize V5000 Expansion FlashCopy SW Per Storage Device with 1 Year SW Maintenance		0004
IBM Storwize V5000 Expansion Full Feature Per Storage Device with 1 Year SW Maintenance		0005
IBM Storwize V5000 Expansion Remote Mirroring Per Storage Device with 1 Year SW Maintenance		0006
Physical Delivery Charge		3437

No-Charge Features:

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 V5000 External Data Virtualization Software V7

PID: 5639-ET7

Use-based OTC with One-year Software Maintenance

Description	Program number	Feature number
IBM Storwize V5000 External Data Virtualization Base SW Per Storage Device with 1 Year SW Maintenance	5639-ET7	0001

IBM Storwize V5000 External Data Virtualization Easy Tier SW Per Storage Device with 1 Year SW Maintenance	0003
IBM Storwize V5000 External Data Virtualization FlashCopy SW Per Storage Device with 1 Year SW Maintenance	0004
IBM Storwize V5000 External Data Virtualization Full Feature Per Storage Device with 1 Year SW Maintenance	0005
IBM Storwize V5000 External Data Virtualization Remote Mirroring Per Storage Device with 1 Year SW Maintenance	0006
Physical Delivery Charge	3437

No-Charge Features:

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

Software Maintenance

Program name: IBM Storwize Family Software for Storwize V7000 Controller
Software maintenance - One-year Registration and Renewal
PID: 5639-CBA

One-year No Charge Registration

Description	Program number	Feature number
IBM Storwize V7000 Controller Base SW One-year NC Registration per Storage Device	5639-CBA	0002
IBM Storwize V7000 Controller Compression SW One-year NC Registration per Storage Device		0004
IBM Storwize V7000 Controller Easy Tier SW One-year NC Registration per Storage Device		0006
IBM Storwize V7000 Controller FlashCopy SW One-year NC Registration per Storage Device		0008
IBM Storwize V7000 Controller Full Feature One-year NC Registration per Storage Device		0010

IBM Storwize V7000 Controller Remote Mirroring One-year NC Registration per Storage Device	0012
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No-Charge Features:

Serial number only	3444
Electronic Delivery only	3453
Ship Media Only	3470
Ship Publication Only	3471
SWMA Auto Renewal Registration	9000

One-year Renewal:

Description	Program number	Feature number
IBM Storwize V7000 Controller Base SW One-year Renewal One-time charge per Storage Device	5639-CBA	0001
IBM Storwize V7000 Controller Compression SW One-year Renewal One-time charge per Storage Device		0003
IBM Storwize V7000 Controller Easy Tier SW One-year Renewal One-time charge per Storage Device		0005
IBM Storwize V7000 Controller Flashcopy SW One-year Renewal One-time charge per Storage Device		0007
IBM Storwize V7000 Controller Full Feature One-year Renewal One-time charge per Storage Device		0009
IBM Storwize V7000 Controller Remote Mirroring One-year Renewal One-time charge per Storage Device		0011

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

Description	Program number	Feature number
IBM Storwize V7000 Controller Base SW One-year After License One-time charge per Storage Device	5639-CBB	0001

IBM Storwize V7000 Controller Compression SW One-year After License One-time charge per Storage Device	0002
IBM Storwize V7000 Controller Easy Tier SW One-year After License One-time charge per Storage Device	0003
IBM Storwize V7000 Controller Flashcopy SW One-year After License One-time charge per Storage Device	0004
IBM Storwize V7000 Controller Full Feature One-year After License One-time charge per Storage Device	0005
IBM Storwize V7000 Controller Remote Mirroring One-year After License One-time charge per Storage Device	0006

Program name: IBM Storwize Family Software for Storwize V7000 Controller
Software maintenance - Two-years Registration
PID: 5639-CBF

Description	Program number	Feature number
IBM Storwize V7000 Controller Base SW Two-years Registration One-time charge per Storage Device	5639-CBF	0001
IBM Storwize V7000 Controller Compression SW Two-years Registration One-time charge per Storage Device		0002
IBM Storwize V7000 Controller Easy Tier SW Two-years Registration One-time charge per Storage Device		0003
IBM Storwize V7000 Controller Flashcopy SW Two-years Registration One-time charge per Storage Device		0004
IBM Storwize V7000 Controller Full Feature Two-years Registration One-time charge per Storage Device		0005
IBM Storwize V7000 Controller Remote Mirroring Two-years Registration		0006

One-time charge
per Storage Device

No-Charge Features:

Serial number only	3444
Electronic Delivery only	3453
Ship Media Only	3470
Ship Publication Only	3471
SWMA Auto Renewal Registration	9000

Program name: IBM Storwize Family Software for Storwize V7000 Controller
Software maintenance - Three-years Registration
PID: 5639-CBC

Description	Program number	Feature number
IBM Storwize V7000 Controller Base SW Three-years Registration One-time charge per Storage Device	5639-CBC	0001
IBM Storwize V7000 Controller Compression SW Three-years Registration One-time charge per Storage Device		0002
IBM Storwize V7000 Controller Easy Tier SW Three-years Registration One-time charge per Storage Device		0003
IBM Storwize V7000 Controller Flashcopy SW Three-years Registration One-time charge per Storage Device		0004
IBM Storwize V7000 Controller Full Feature Three-years Registration One-time charge per Storage Device		0005
IBM Storwize V7000 Controller Remote Mirroring Three-years Registration One-time charge per Storage Device		0006

No-Charge Features:

Serial number only	3444
Electronic Delivery only	3453
Ship Media Only	3470
Ship Publication Only	3471
SWMA Auto Renewal Registration	9000

Program name: IBM Storwize Family Software for Storwize V7000 Controller
Software maintenance - Three-years Renewal
PID: 5639-CBD

Description	Program number	Feature number
IBM Storwize V7000 Controller Base SW Three-years Renewal One-time charge per Storage Device	5639-CBD	0006
IBM Storwize V7000 Controller Compression SW Three-years Renewal One-time charge per Storage Device		0001
IBM Storwize V7000 Controller Easy Tier SW Three-years Renewal One-time charge per Storage Device		0002
IBM Storwize V7000 Controller Flashcopy SW Three-years Renewal One-time charge per Storage Device		0003
IBM Storwize V7000 Controller Full Feature Three-years Renewal One-time charge per Storage Device		0004
IBM Storwize V7000 Controller Remote Mirroring Three-years Renewal One-time charge per Storage Device		0005

Program name: IBM Storwize Family Software for Storwize V7000 Controller
Software maintenance - Three-years After License
PID: 5639-CBE

Description	Program number	Feature number
IBM Storwize V7000 Controller Base SW Three-years After License One-time charge per Storage Device	5639-CBE	0001
IBM Storwize V7000 Controller Compression SW Three-years After License One-time charge per Storage Device		0002
IBM Storwize V7000 Controller Easy Tier SW Three-years After License One-time charge per Storage Device		0003
IBM Storwize V7000 Controller Flashcopy SW Three-years After License One-time charge per Storage Device		0004
IBM Storwize V7000 Controller Full Feature		0005

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

IBM Storwize V7000 0006
 Controller Remote Mirroring
 Three-years After License
 One-time charge
 per Storage Device

Program name: IBM Storwize Family Software for Storwize V7000 Controller
 Software maintenance - Four-years Registration

PID: 5639-CBG

Description	Program number	Feature number
IBM Storwize V7000 Controller Base SW Four-years Registration One-time charge per Storage Device	5639-CBG	0001
IBM Storwize V7000 Controller Compression SW Four-years Registration One-time charge per Storage Device		0002
IBM Storwize V7000 Controller Easy Tier SW Four-years Registration One-time charge per Storage Device		0003
IBM Storwize V7000 Controller Flashcopy SW Four-years Registration One-time charge per Storage Device		0004
IBM Storwize V7000 Controller Full Feature Four-years Registration One-time charge per Storage Device		0005
IBM Storwize V7000 Controller Remote Mirroring Four-years Registration One-time charge per Storage Device		0006

No-Charge Features:

Serial number only	3444
Electronic Delivery only	3453
Ship Media Only	3470
Ship Publication Only	3471
SWMA Auto Renewal Registration	9000

Program name: IBM Storwize Family Software for Storwize V7000 Controller
 Software maintenance - Five-years Registration

PID: 5639-CBH

Description	Program number	Feature number
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IBM Storwize V7000 Controller Base SW Five-years Registration One-time charge per Storage Device	5639-CBH	0001
IBM Storwize V7000 Controller Compression SW Five-years Registration One-time charge per Storage Device		0002
IBM Storwize V7000 Controller Easy Tier SW Five-years Registration One-time charge per Storage Device		0003
IBM Storwize V7000 Controller Flashcopy SW Five-years Registration One-time charge per Storage Device		0004
IBM Storwize V7000 Controller Full Feature Five-years Registration One-time charge per Storage Device		0005
IBM Storwize V7000 Controller Remote Mirroring Five-years Registration One-time charge per Storage Device		0006

No-Charge Features:

Serial number only	3444
Electronic Delivery only	3453
Ship Media Only	3470
Ship Publication Only	3471
SWMA Auto Renewal Registration	9000

Program name: IBM Storwize Family Software for Storwize V7000 Expansion
Software maintenance - One-year Registration and Renewal
PID: 5639-XBA

One-year No Charge Registration

Description	Program number	Feature number
IBM Storwize V7000 Expansion Base SW One-year NC Registration per Storage Device	5639-XBA	0002
IBM Storwize V7000 Expansion Compression SW One-year NC Registration per Storage Device		0004
IBM Storwize V7000 Expansion Easy Tier SW One-year NC Registration per Storage Device		0006
IBM Storwize V7000 Expansion FlashCopy SW		0008

One-year NC Registration per Storage Device	
IBM Storwize V7000 Expansion Full Feature One-year NC Registration per Storage Device	0010
IBM Storwize V7000 Expansion Remote Mirroring One-year NC Registration per Storage Device	0012

No-Charge Features:

Serial number only	3444
Electronic Delivery only	3453
Ship Media Only	3470
Ship Publication Only	3471
SWMA Auto Renewal Registration	9000

One-year Renewal:

Description	Program number	Feature number
IBM Storwize V7000 Expansion Base SW One-year Renewal One-time charge per Storage Device	5639-XBA	0001
IBM Storwize V7000 Expansion Compression SW One-year Renewal One-time charge per Storage Device		0003
IBM Storwize V7000 Expansion Easy Tier SW One-year Renewal One-time charge per Storage Device		0005
IBM Storwize V7000 Expansion Flashcopy SW One-year Renewal One-time charge per Storage Device		0007
IBM Storwize V7000 Expansion Full Feature One-year Renewal One-time charge per Storage Device		0009
IBM Storwize V7000 Expansion Remote Mirroring One-year Renewal One-time charge per Storage Device		0011

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

Program	Feature
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Description	number	number
IBM Storwize V7000 Expansion Base SW One-year After License One-time charge per Storage Device	5639-XBB	0001
IBM Storwize V7000 Expansion Compression SW One-year After License One-time charge per Storage Device		0002
IBM Storwize V7000 Expansion Easy Tier SW One-year After License One-time charge per Storage Device		0003
IBM Storwize V7000 Expansion Flashcopy SW One-year After License One-time charge per Storage Device		0004
IBM Storwize V7000 Expansion Full Feature One-year After License One-time charge per Storage Device		0005
IBM Storwize V7000 Expansion Remote Mirroring One-year After License One-time charge per Storage Device		0006

Program name: IBM Storwize Family Software for Storwize V7000 Expansion
Software maintenance - Two-years Registration
PID: 5639-XBF

Description	Program number	Feature number
IBM Storwize V7000 Expansion Base SW Two-years Registration One-time charge per Storage Device	5639-XBF	0001
IBM Storwize V7000 Expansion Compression SW Two-years Registration One-time charge per Storage Device		0002
IBM Storwize V7000 Expansion Easy Tier SW Two-years Registration One-time charge per Storage Device		0003
IBM Storwize V7000 Expansion Flashcopy SW Two-years Registration One-time charge per Storage Device		0004
IBM Storwize V7000 Expansion Full Feature		0005

Two-years Registration
 One-time charge
 per Storage Device

IBM Storwize V7000	0006
Expansion Remote Mirroring	
Two-years Registration	
One-time charge	
per Storage Device	

No-Charge Features:

Serial number only	3444
Electronic Delivery only	3453
Ship Media Only	3470
Ship Publication Only	3471
SWMA Auto Renewal	9000
Registration	

Program name: IBM Storwize Family Software for Storwize V7000 Expansion
 Software maintenance - Three-years Registration
 PID: 5639-XBC

Description	Program number	Feature number
IBM Storwize V7000 Expansion Base SW Three-years Registration One-time charge per Storage Device	5639-XBC	0001
IBM Storwize V7000 Expansion Compression SW Three-years Registration One-time charge per Storage Device		0002
IBM Storwize V7000 Expansion Easy Tier SW Three-years Registration One-time charge per Storage Device		0003
IBM Storwize V7000 Expansion Flashcopy SW Three-years Registration One-time charge per Storage Device		0004
IBM Storwize V7000 Expansion Full Feature Three-years Registration One-time charge per Storage Device		0005
IBM Storwize V7000 Expansion Remote Mirroring Three-years Registration One-time charge per Storage Device		0006

No-Charge Features:

Serial number only	3444
Electronic Delivery only	3453
Ship Media Only	3470
Ship Publication Only	3471
SWMA Auto Renewal	9000

Registration

Program name: IBM Storwize Family Software for Storwize V7000 Expansion
 Software maintenance - Three-years Renewal
 PID: 5639-XBD

Description	Program number	Feature number
IBM Storwize V7000 Expansion Base SW Three-years Renewal One-time charge per Storage Device	5639-XBD	0001
IBM Storwize V7000 Expansion Compression SW Three-years Renewal One-time charge per Storage Device		0002
IBM Storwize V7000 Expansion Easy Tier SW Three-years Renewal One-time charge per Storage Device		0003
IBM Storwize V7000 Expansion Flashcopy SW Three-years Renewal One-time charge per Storage Device		0004
IBM Storwize V7000 Expansion Full Feature Three-years Renewal One-time charge per Storage Device		0005
IBM Storwize V7000 Expansion Remote Mirroring Three-years Renewal One-time charge per Storage Device		0006

Program name: IBM Storwize Family Software for Storwize V7000 Expansion
 Software maintenance - Three-years After License
 PID: 5639-XBE

Description	Program number	Feature number
IBM Storwize V7000 Expansion Base SW Three-years After License One-time charge per Storage Device	5639-XBE	0001
IBM Storwize V7000 Expansion Compression SW Three-years After License One-time charge per Storage Device		0002
IBM Storwize V7000 Expansion Easy Tier SW Three-years After License One-time charge		0003

per Storage Device

IBM Storwize V7000 0004
Expansion Flashcopy SW
Three-years After License
One-time charge
per Storage Device

IBM Storwize V7000 0005
Expansion Full Feature
Three-years After License
One-time charge
per Storage Device

IBM Storwize V7000 0006
Expansion Remote Mirroring
Three-years After License
One-time charge
per Storage Device

Program name: IBM Storwize Family Software for Storwize V7000 Expansion
Software maintenance - Four-years Registration
PID: 5639-XBG

Description	Program number	Feature number
IBM Storwize V7000 Expansion Base SW Four-years Registration One-time charge per Storage Device	5639-XBG	0001
IBM Storwize V7000 Expansion Compression SW Four-years Registration One-time charge per Storage Device		0002
IBM Storwize V7000 Expansion Easy Tier SW Four-years Registration One-time charge per Storage Device		0003
IBM Storwize V7000 Expansion Flashcopy SW Four-years Registration One-time charge per Storage Device		0004
IBM Storwize V7000 Expansion Full Feature Four-years Registration One-time charge per Storage Device		0005
IBM Storwize V7000 Expansion Remote Mirroring Four-years Registration One-time charge per Storage Device		0006

No-Charge Features:

Serial number only	3444
Electronic Delivery only	3453
Ship Media Only	3470
Ship Publication Only	3471
SWMA Auto Renewal	9000

Registration

Program name: IBM Storwize Family Software for Storwize V7000 Expansion
Software maintenance - Five-years Registration
PID: 5639-XBH

Description	Program number	Feature number
IBM Storwize V7000 Expansion Base SW Five-years Registration One-time charge per Storage Device	5639-XBH	0001
IBM Storwize V7000 Expansion Compression SW Five-years Registration One-time charge per Storage Device		0002
IBM Storwize V7000 Expansion Easy Tier SW Five-years Registration One-time charge per Storage Device		0003
IBM Storwize V7000 Expansion Flashcopy SW Five-years Registration One-time charge per Storage Device		0004
IBM Storwize V7000 Expansion Full Feature Five-years Registration One-time charge per Storage Device		0005
IBM Storwize V7000 Expansion Remote Mirroring Five-years Registration One-time charge per Storage Device		0006

No-Charge Features:

Serial number only	3444
Electronic Delivery only	3453
Ship Media Only	3470
Ship Publication Only	3471
SWMA Auto Renewal Registration	9000

Program name: IBM Storwize Family Software for Storwize V7000
External Data Virtualization
Software maintenance - One-year Registration and Renewal
PID: 5639-EBA

One-year No Charge Registration

Description	Program number	Feature number
IBM Storwize V7000 External Data Virtualization Base SW	5639-EBA	0002

One-year NC Registration per Storage Device	
IBM Storwize V7000 External Data Virtualization Compression SW One-year NC Registration per Storage Device	0004
IBM Storwize V7000 External Data Virtualization Easy Tier SW One-year NC Registration per Storage Device	0006
IBM Storwize V7000 External Data Virtualization FlashCopy SW One-year NC Registration per Storage Device	0008
IBM Storwize V7000 External Data Virtualization Full Feature SW One-year NC Registration per Storage Device	0010
IBM Storwize V7000 External Data Virtualization Remote Mirroring SW One-year NC Registration per Storage Device	0012

No-Charge Features:

Serial number only	3444
Electronic Delivery only	3453
Ship Media Only	3470
Ship Publication Only	3471
SWMA Auto Renewal Registration	9000

One-year Renewal:

Description	Program number	Feature number
IBM Storwize V7000 External Data Virtualization Base SW One-year Renewal One-time charge per Storage Device	5639-EBA	0001
IBM Storwize V7000 External Data Virtualization Compression SW One-year Renewal One-time charge per Storage Device		0003
IBM Storwize V7000 External Data Virtualization Easy Tier SW One-year Renewal One-time charge per Storage Device		0005
IBM Storwize V7000 External Data Virtualization FlashCopy SW		0007

One-year Renewal
One-time charge
per Storage Device

IBM Storwize V7000 0009
External Data Virtualization
Full Feature SW
One-year Renewal
One-time charge
per Storage Device

IBM Storwize V7000 0011
External Data Virtualization
Remote Mirroring SW
One-year Renewal
One-time charge
per Storage Device

Program name: IBM Storwize Family Software for Storwize V7000
External Data Virtualization
Software maintenance - One-year After License
PID: 5639-EBB

Description	Program number	Feature number
IBM Storwize V7000 External Data Virtualization Base SW One-year After License One-time charge per Storage Device	5639-EBB	0001
IBM Storwize V7000 External Data Virtualization Compression SW One-year After License One-time charge per Storage Device		0002
IBM Storwize V7000 External Data Virtualization Easy Tier SW One-year After License One-time charge per Storage Device		0003
IBM Storwize V7000 External Data Virtualization FlashCopy SW One-year After License One-time charge per Storage Device		0004
IBM Storwize V7000 External Data Virtualization Full Feature SW One-year After License One-time charge per Storage Device		0005
IBM Storwize V7000 External Data Virtualization Remote Mirroring SW One-year After License One-time charge per Storage Device		0006

Program name: IBM Storwize Family Software for Storwize V7000

External Data Virtualization
 Software maintenance - Two-years Registration
 PID: 5639-EBF

Description	Program number	Feature number
IBM Storwize V7000 External Data Virtualization Base SW Two-years Registration One-time charge per Storage Device	5639-EBF	0006
IBM Storwize V7000 External Data Virtualization Compression SW Two-years Registration One-time charge per Storage Device		0001
IBM Storwize V7000 External Data Virtualization Easy Tier SW Two-years Registration One-time charge per Storage Device		0002
IBM Storwize V7000 External Data Virtualization FlashCopy SW Two-years Registration One-time charge per Storage Device		0003
IBM Storwize V7000 External Data Virtualization Full Feature SW Two-years Registration One-time charge per Storage Device		0004
IBM Storwize V7000 External Data Virtualization Remote Mirroring SW Two-years Registration One-time charge per Storage Device		0005

No-Charge Features:

Serial number only	3444
Electronic Delivery only	3453
Ship Media Only	3470
Ship Publication Only	3471
SWMA Auto Renewal Registration	9000

Program name: IBM Storwize Family Software for Storwize V7000
 External Data Virtualization
 Software maintenance - Three-years Registration
 PID: 5639-EBC

Description	Program number	Feature number
IBM Storwize V7000 External Data Virtualization Base SW	5639-EBC	0001

Three-years Registration One-time charge per Storage Device	
IBM Storwize V7000 External Data Virtualization Compression SW Three-years Registration One-time charge per Storage Device	0002
IBM Storwize V7000 External Data Virtualization Easy Tier SW Three-years Registration One-time charge per Storage Device	0003
IBM Storwize V7000 External Data Virtualization FlashCopy SW Three-years Registration One-time charge per Storage Device	0004
IBM Storwize V7000 External Data Virtualization Full Feature SW Three-years Registration One-time charge per Storage Device	0005
IBM Storwize V7000 External Data Virtualization Remote Mirroring SW Three-years Registration One-time charge per Storage Device	0006

No-Charge Features:

Serial number only	3444
Electronic Delivery only	3453
Ship Media Only	3470
Ship Publication Only	3471
SWMA Auto Renewal Registration	9000

Program name: IBM Storwize Family Software for Storwize V7000
External Data Virtualization
Software maintenance - Three-years Renewal
PID: 5639-EBD

Description	Program number	Feature number
IBM Storwize V7000 External Data Virtualization Base SW Three-years Renewal One-time charge per Storage Device	5639-EBD	0001
IBM Storwize V7000 External Data Virtualization Compression SW Three-years Renewal One-time charge per Storage Device		0002

IBM Storwize V7000 External Data Virtualization Easy Tier SW Three-years Renewal One-time charge per Storage Device	0003
IBM Storwize V7000 External Data Virtualization FlashCopy SW Three-years Renewal One-time charge per Storage Device	0004
IBM Storwize V7000 External Data Virtualization Full Feature SW Three-years Renewal One-time charge per Storage Device	0005
IBM Storwize V7000 External Data Virtualization Remote Mirroring SW Three-years Renewal One-time charge per Storage Device	0006

Program name: IBM Storwize Family Software for Storwize V7000
External Data Virtualization
Software maintenance - Three-years After License
PID: 5639-EBE

Description	Program number	Feature number
IBM Storwize V7000 External Data Virtualization Base SW Three-years After License One-time charge per Storage Device	5639-EBE	0002
IBM Storwize V7000 External Data Virtualization Compression SW Three-years After License One-time charge per Storage Device		0001
IBM Storwize V7000 External Data Virtualization Easy Tier SW Three-years After License One-time charge per Storage Device		0003
IBM Storwize V7000 External Data Virtualization FlashCopy SW Three-years After License One-time charge per Storage Device		0004
IBM Storwize V7000 External Data Virtualization Full Feature SW Three-years After License One-time charge per Storage Device		0005

IBM Storwize V7000 0006
 External Data Virtualization
 Remote Mirroring SW
 Three-years After License
 One-time charge
 per Storage Device

Program name: IBM Storwize Family Software for Storwize V7000
 External Data Virtualization
 Software maintenance - Four-years Registration
 PID: 5639-EBG

Description	Program number	Feature number
IBM Storwize V7000 External Data Virtualization Base SW Four-years Registration One-time charge per Storage Device	5639-EBG	0001
IBM Storwize V7000 External Data Virtualization Compression SW Four-years Registration One-time charge per Storage Device		0002
IBM Storwize V7000 External Data Virtualization Easy Tier SW Four-years Registration One-time charge per Storage Device		0003
IBM Storwize V7000 External Data Virtualization FlashCopy SW Four-years Registration One-time charge per Storage Device		0004
IBM Storwize V7000 External Data Virtualization Full Feature SW Four-years Registration One-time charge per Storage Device		0005
IBM Storwize V7000 External Data Virtualization Remote Mirroring SW Four-years Registration One-time charge per Storage Device		0006

No-Charge Features:

Serial number only	3444
Electronic Delivery only	3453
Ship Media Only	3470
Ship Publication Only	3471
SWMA Auto Renewal Registration	9000

Program name: IBM Storwize Family Software for Storwize V7000
 External Data Virtualization

Software maintenance - Five-years Registration
PID: 5639-EBH

Description	Program number	Feature number
IBM Storwize V7000 External Data Virtualization Base SW Five-years Registration One-time charge per Storage Device	5639-EBH	0001
IBM Storwize V7000 External Data Virtualization Compression SW Five-years Registration One-time charge per Storage Device		0002
IBM Storwize V7000 External Data Virtualization Easy Tier SW Five-years Registration One-time charge per Storage Device		0003
IBM Storwize V7000 External Data Virtualization FlashCopy SW Five-years Registration One-time charge per Storage Device		0004
IBM Storwize V7000 External Data Virtualization Full Feature SW Five-years Registration One-time charge per Storage Device		0005
IBM Storwize V7000 External Data Virtualization Remote Mirroring SW Five-years Registration One-time charge per Storage Device		0006

No-Charge Features:

Serial number only	3444
Electronic Delivery only	3453
Ship Media Only	3470
Ship Publication Only	3471
SWMA Auto Renewal Registration	9000

Program name: IBM Storwize Family Software for Storwize V5000 Controller
Software maintenance - One-year Registration and Renewal
PID: 5639-CTA

One-year No Charge Registration

Description	Program number	Feature number
IBM Storwize V5000	5639-CTA	0002

Controller Base SW One-year NC Registration per Storage Device	
IBM Storwize V5000 Controller Easy Tier SW One-year NC Registration per Storage Device	0006
IBM Storwize V5000 Controller FlashCopy SW One-year NC Registration per Storage Device	0008
IBM Storwize V5000 Controller Full Feature One-year NC Registration per Storage Device	0010
IBM Storwize V5000 Controller Remote Mirroring One-year NC Registration per Storage Device	0012

No-Charge Features:

Serial number only	3444
Electronic Delivery only	3453
Ship Media Only	3470
Ship Publication Only	3471
SWMA Auto Renewal Registration	9000

One-year Renewal:

Description	Program number	Feature number
IBM Storwize V5000 Controller Base SW One-year Renewal One-time charge per Storage Device	5639-CTA	0001
IBM Storwize V5000 Controller Easy Tier SW One-year Renewal One-time charge per Storage Device		0005
IBM Storwize V5000 Controller Flashcopy SW One-year Renewal One-time charge per Storage Device		0007
IBM Storwize V5000 Controller Full Feature One-year Renewal One-time charge per Storage Device		0009
IBM Storwize V5000 Controller Remote Mirroring One-year Renewal One-time charge per Storage Device		0011

Program name: IBM Storwize Family Software for Storwize V5000 Controller

PID: Software maintenance - One-year After License
5639-CTB

Description	Program number	Feature number
IBM Storwize V5000 Controller Base SW One-year After License One-time charge per Storage Device	5639-CTB	0006
IBM Storwize V5000 Controller Easy Tier SW One-year After License One-time charge per Storage Device		0002
IBM Storwize V5000 Controller Flashcopy SW One-year After License One-time charge per Storage Device		0003
IBM Storwize V5000 Controller Full Feature One-year After License One-time charge per Storage Device		0004
IBM Storwize V5000 Controller Remote Mirroring One-year After License One-time charge per Storage Device		0005

Program name: IBM Storwize Family Software for Storwize V5000 Controller
Software maintenance - Two-years Registration
PID: 5639-CTF

Description	Program number	Feature number
IBM Storwize V5000 Controller Base SW Two-years Registration One-time charge per Storage Device	5639-CTF	0006
IBM Storwize V5000 Controller Easy Tier SW Two-years Registration One-time charge per Storage Device		0002
IBM Storwize V5000 Controller Flashcopy SW Two-years Registration One-time charge per Storage Device		0003
IBM Storwize V5000 Controller Full Feature Two-years Registration One-time charge per Storage Device		0004
IBM Storwize V5000 Controller Remote Mirroring Two-years Registration		0005

One-time charge
per Storage Device

No-Charge Features:

Serial number only	3444
Electronic Delivery only	3453
Ship Media Only	3470
Ship Publication Only	3471
SWMA Auto Renewal Registration	9000

Program name: IBM Storwize Family Software for Storwize V5000 Controller
Software maintenance - Three-years Registration
PID: 5639-CTC

Description	Program number	Feature number
IBM Storwize V5000 Controller Base SW Three-years Registration One-time charge per Storage Device	5639-CTC	0001
IBM Storwize V5000 Controller Easy Tier SW Three-years Registration One-time charge per Storage Device		0003
IBM Storwize V5000 Controller Flashcopy SW Three-years Registration One-time charge per Storage Device		0004
IBM Storwize V5000 Controller Full Feature Three-years Registration One-time charge per Storage Device		0005
IBM Storwize V5000 Controller Remote Mirroring Three-years Registration One-time charge per Storage Device		0006

No-Charge Features:

Serial number only	3444
Electronic Delivery only	3453
Ship Media Only	3470
Ship Publication Only	3471
SWMA Auto Renewal Registration	9000

Program name: IBM Storwize Family Software for Storwize V5000 Controller
Software maintenance - Three-years Renewal
PID: 5639-CTD

Description	Program number	Feature number
IBM Storwize V5000	5639-CTD	0001

Controller Base SW Three-years Renewal One-time charge per Storage Device	
IBM Storwize V5000 Controller Easy Tier SW Three-years Renewal One-time charge per Storage Device	0003
IBM Storwize V5000 Controller Flashcopy SW Three-years Renewal One-time charge per Storage Device	0004
IBM Storwize V5000 Controller Full Feature Three-years Renewal One-time charge per Storage Device	0005
IBM Storwize V5000 Controller Remote Mirroring Three-years Renewal One-time charge per Storage Device	0006

Program name: IBM Storwize Family Software for Storwize V5000 Controller
Software maintenance - Three-years After License
PID: 5639-CTE

Description	Program number	Feature number
IBM Storwize V5000 Controller Base SW Three-years After License One-time charge per Storage Device	5639-CTE	0001
IBM Storwize V5000 Controller Easy Tier SW Three-years After License One-time charge per Storage Device		0003
IBM Storwize V5000 Controller Flashcopy SW Three-years After License One-time charge per Storage Device		0004
IBM Storwize V5000 Controller Full Feature Three-years After License One-time charge per Storage Device		0005
IBM Storwize V5000 Controller Remote Mirroring Three-years After License One-time charge per Storage Device		0006

Program name: IBM Storwize Family Software for Storwize V5000 Controller
Software maintenance - Four-years Registration
PID: 5639-CTG

Description	Program number	Feature number
IBM Storwize V5000 Controller Base SW Four-years Registration One-time charge per Storage Device	5639-CTG	0001
IBM Storwize V5000 Controller Easy Tier SW Four-years Registration One-time charge per Storage Device		0003
IBM Storwize V5000 Controller Flashcopy SW Four-years Registration One-time charge per Storage Device		0004
IBM Storwize V5000 Controller Full Feature Four-years Registration One-time charge per Storage Device		0005
IBM Storwize V5000 Controller Remote Mirroring Four-years Registration One-time charge per Storage Device		0006

No-Charge Features:

Serial number only	3444
Electronic Delivery only	3453
Ship Media Only	3470
Ship Publication Only	3471
SWMA Auto Renewal Registration	9000

Program name: IBM Storwize Family Software for Storwize V5000 Controller
Software maintenance - Five-years Registration
PID: 5639-CTH

Description	Program number	Feature number
IBM Storwize V5000 Controller Base SW Five-years Registration One-time charge per Storage Device	5639-CTH	0001
IBM Storwize V5000 Controller Easy Tier SW Five-years Registration One-time charge per Storage Device		0003
IBM Storwize V5000 Controller Flashcopy SW Five-years Registration One-time charge per Storage Device		0004
IBM Storwize V5000		0005

Controller Full Feature
 Five-years Registration
 One-time charge
 per Storage Device

IBM Storwize V5000 0006
 Controller Remote Mirroring
 Five-years Registration
 One-time charge
 per Storage Device

No-Charge Features:

Serial number only 3444
 Electronic Delivery only 3453
 Ship Media Only 3470
 Ship Publication Only 3471
 SWMA Auto Renewal 9000
 Registration

Program name: IBM Storwize Family Software for Storwize V5000 Expansion
 Software maintenance - One-year Registration and Renewal
 PID: 5639-XTA

One-year No Charge Registration

Description	Program number	Feature number
IBM Storwize V5000 Expansion Base SW One-year NC Registration per Storage Device	5639-XTA	0002
IBM Storwize V5000 Expansion Easy Tier SW One-year NC Registration per Storage Device		0004
IBM Storwize V5000 Expansion FlashCopy SW One-year NC Registration per Storage Device		0006
IBM Storwize V5000 Expansion Full Feature One-year NC Registration per Storage Device		0008
IBM Storwize V5000 Expansion Remote Mirroring One-year NC Registration per Storage Device		0010

No-Charge Features:

Serial number only 3444
 Electronic Delivery only 3453
 Ship Media Only 3470
 Ship Publication Only 3471
 SWMA Auto Renewal 9000
 Registration

One-year Renewal:

Description	Program number	Feature number
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IBM Storwize V5000 Expansion Base SW One-year Renewal One-time charge per Storage Device	5639-XTA	0001
IBM Storwize V5000 Expansion Easy Tier SW One-year Renewal One-time charge per Storage Device		0003
IBM Storwize V5000 Expansion Flashcopy SW One-year Renewal One-time charge per Storage Device		0005
IBM Storwize V5000 Expansion Full Feature One-year Renewal One-time charge per Storage Device		0007
IBM Storwize V5000 Expansion Remote Mirroring One-year Renewal One-time charge per Storage Device		0009

Program name: IBM Storwize Family Software for Storwize V5000 Expansion
Software maintenance - One-year After License
PID: 5639-XTB

Description	Program number	Feature number
IBM Storwize V5000 Expansion Base SW One-year After License One-time charge per Storage Device	5639-XTB	0001
IBM Storwize V5000 Expansion Easy Tier SW One-year After License One-time charge per Storage Device		0003
IBM Storwize V5000 Expansion Flashcopy SW One-year After License One-time charge per Storage Device		0004
IBM Storwize V5000 Expansion Full Feature One-year After License One-time charge per Storage Device		0005
IBM Storwize V5000 Expansion Remote Mirroring One-year After License One-time charge per Storage Device		0006

Program name: IBM Storwize Family Software for Storwize V5000 Expansion

Software maintenance - Two-years Registration
 PID: 5639-XTF

Description	Program number	Feature number
IBM Storwize V5000 Expansion Base SW Two-years Registration One-time charge per Storage Device	5639-XTF	0001
IBM Storwize V5000 Expansion Easy Tier SW Two-years Registration One-time charge per Storage Device		0003
IBM Storwize V5000 Expansion Flashcopy SW Two-years Registration One-time charge per Storage Device		0004
IBM Storwize V5000 Expansion Full Feature Two-years Registration One-time charge per Storage Device		0005
IBM Storwize V5000 Expansion Remote Mirroring Two-years Registration One-time charge per Storage Device		0006

No-Charge Features:

Serial number only	3444
Electronic Delivery only	3453
Ship Media Only	3470
Ship Publication Only	3471
SWMA Auto Renewal Registration	9000

Program name: IBM Storwize Family Software for Storwize V5000 Expansion
 Software maintenance - Three-years Registration
 PID: 5639-XTC

Description	Program number	Feature number
IBM Storwize V5000 Expansion Base SW Three-years Registration One-time charge per Storage Device	5639-XTC	0001
IBM Storwize V5000 Expansion Easy Tier SW Three-years Registration One-time charge per Storage Device		0003
IBM Storwize V5000 Expansion Flashcopy SW Three-years Registration One-time charge per Storage Device		0004

IBM Storwize V5000 0005
 Expansion Full Feature
 Three-years Registration
 One-time charge
 per Storage Device

IBM Storwize V5000 0006
 Expansion Remote Mirroring
 Three-years Registration
 One-time charge
 per Storage Device

No-Charge Features:

Serial number only 3444
 Electronic Delivery only 3453
 Ship Media Only 3470
 Ship Publication Only 3471
 SWMA Auto Renewal 9000
 Registration

Program name: IBM Storwize Family Software for Storwize V5000 Expansion
 Software maintenance - Three-years Renewal
 PID: 5639-XTD

Description	Program number	Feature number
IBM Storwize V5000 Expansion Base SW Three-years Renewal One-time charge per Storage Device	5639-XTD	0001
IBM Storwize V5000 Expansion Easy Tier SW Three-years Renewal One-time charge per Storage Device		0003
IBM Storwize V5000 Expansion Flashcopy SW Three-years Renewal One-time charge per Storage Device		0004
IBM Storwize V5000 Expansion Full Feature Three-years Renewal One-time charge per Storage Device		0005
IBM Storwize V5000 Expansion Remote Mirroring Three-years Renewal One-time charge per Storage Device		0006

Program name: IBM Storwize Family Software for Storwize V5000 Expansion
 Software maintenance - Three-years After License
 PID: 5639-XTE

Description	Program number	Feature number
IBM Storwize V5000	5639-XTE	0001

Expansion Base SW
Three-years After License
One-time charge
per Storage Device

IBM Storwize V5000 0003
Expansion Easy Tier SW
Three-years After License
One-time charge
per Storage Device

IBM Storwize V5000 0004
Expansion Flashcopy SW
Three-years After License
One-time charge
per Storage Device

IBM Storwize V5000 0005
Expansion Full Feature
Three-years After License
One-time charge
per Storage Device

IBM Storwize V5000 0006
Expansion Remote Mirroring
Three-years After License
One-time charge
per Storage Device

Program name: IBM Storwize Family Software for Storwize V5000 Expansion
Software maintenance - Four-years Registration
PID: 5639-XTG

Description	Program number	Feature number
IBM Storwize V5000 Expansion Base SW Four-years Registration One-time charge per Storage Device	5639-XTG	0001
IBM Storwize V5000 Expansion Easy Tier SW Four-years Registration One-time charge per Storage Device		0003
IBM Storwize V5000 Expansion Flashcopy SW Four-years Registration One-time charge per Storage Device		0004
IBM Storwize V5000 Expansion Full Feature Four-years Registration One-time charge per Storage Device		0005
IBM Storwize V5000 Expansion Remote Mirroring Four-years Registration One-time charge per Storage Device		0006

No-Charge Features:

Serial number only 3444
Electronic Delivery only 3453

Ship Media Only	3470
Ship Publication Only	3471
SWMA Auto Renewal Registration	9000

Program name: IBM Storwize Family Software for Storwize V5000 Expansion
Software maintenance - Five-years Registration
PID: 5639-XTH

Description	Program number	Feature number
IBM Storwize V5000 Expansion Base SW Five-years Registration One-time charge per Storage Device	5639-XTH	0001
IBM Storwize V5000 Expansion Easy Tier SW Five-years Registration One-time charge per Storage Device		0003
IBM Storwize V5000 Expansion Flashcopy SW Five-years Registration One-time charge per Storage Device		0004
IBM Storwize V5000 Expansion Full Feature Five-years Registration One-time charge per Storage Device		0005
IBM Storwize V5000 Expansion Remote Mirroring Five-years Registration One-time charge per Storage Device		0006

No-Charge Features:

Serial number only	3444
Electronic Delivery only	3453
Ship Media Only	3470
Ship Publication Only	3471
SWMA Auto Renewal Registration	9000

Program name: IBM Storwize Family Software for Storwize V5000
External Data Virtualization
Software maintenance - One-year Registration and Renewal
PID: 5639-ETA

One-year No Charge Registration

Description	Program number	Feature number
IBM Storwize V5000 External Data Virtualization Base SW One-year NC Registration per Storage Device	5639-ETA	0012

IBM Storwize V5000 External Data Virtualization Easy Tier SW One-year NC Registration per Storage Device	0004
IBM Storwize V5000 External Data Virtualization FlashCopy SW One-year NC Registration per Storage Device	0006
IBM Storwize V5000 External Data Virtualization Full Feature SW One-year NC Registration per Storage Device	0008
IBM Storwize V5000 External Data Virtualization Remote Mirroring SW One-year NC Registration per Storage Device	0010

No-Charge Features:

Serial number only	3444
Electronic Delivery only	3453
Ship Media Only	3470
Ship Publication Only	3471
SWMA Auto Renewal Registration	9000

One-year Renewal:

Description	Program number	Feature number
IBM Storwize V5000 External Data Virtualization Base SW One-year Renewal One-time charge per Storage Device	5639-ETA	0011
IBM Storwize V5000 External Data Virtualization Easy Tier SW One-year Renewal One-time charge per Storage Device		0003
IBM Storwize V5000 External Data Virtualization FlashCopy SW One-year Renewal One-time charge per Storage Device		0005
IBM Storwize V5000 External Data Virtualization Full Feature SW One-year Renewal One-time charge per Storage Device		0007
IBM Storwize V5000 External Data Virtualization Remote Mirroring SW One-year Renewal One-time charge		0009

per Storage Device

Program name: IBM Storwize Family Software for Storwize V5000
External Data Virtualization
Software maintenance - One-year After License
PID: 5639-ETB

Description	Program number	Feature number
IBM Storwize V5000 External Data Virtualization Base SW One-year After License One-time charge per Storage Device	5639-ETB	0001
IBM Storwize V5000 External Data Virtualization Easy Tier SW One-year After License One-time charge per Storage Device		0003
IBM Storwize V5000 External Data Virtualization FlashCopy SW One-year After License One-time charge per Storage Device		0004
IBM Storwize V5000 External Data Virtualization Full Feature SW One-year After License One-time charge per Storage Device		0005
IBM Storwize V5000 External Data Virtualization Remote Mirroring SW One-year After License One-time charge per Storage Device		0006

Program name: IBM Storwize Family Software for Storwize V5000
External Data Virtualization
Software maintenance - Two-years Registration
PID: 5639-ETF

Description	Program number	Feature number
IBM Storwize V5000 External Data Virtualization Base SW Two-years Registration One-time charge per Storage Device	5639-ETF	0001
IBM Storwize V5000 External Data Virtualization Easy Tier SW Two-years Registration One-time charge per Storage Device		0003
IBM Storwize V5000		0004

External Data Virtualization
FlashCopy SW
Two-years Registration
One-time charge
per Storage Device

IBM Storwize V5000 0005
External Data Virtualization
Full Feature SW
Two-years Registration
One-time charge
per Storage Device

IBM Storwize V5000 0006
External Data Virtualization
Remote Mirroring SW
Two-years Registration
One-time charge
per Storage Device

No-Charge Features:

Serial number only 3444
Electronic Delivery only 3453
Ship Media Only 3470
Ship Publication Only 3471
SWMA Auto Renewal 9000
Registration

Program name: IBM Storwize Family Software for Storwize V5000
External Data Virtualization
Software maintenance - Three-years Registration
PID: 5639-ETC

Description	Program number	Feature number
IBM Storwize V5000 External Data Virtualization Base SW Three-years Registration One-time charge per Storage Device	5639-ETC	0001
IBM Storwize V5000 External Data Virtualization Easy Tier SW Three-years Registration One-time charge per Storage Device		0003
IBM Storwize V5000 External Data Virtualization FlashCopy SW Three-years Registration One-time charge per Storage Device		0004
IBM Storwize V5000 External Data Virtualization Full Feature SW Three-years Registration One-time charge per Storage Device		0005
IBM Storwize V5000 External Data Virtualization Remote Mirroring SW Three-years Registration One-time charge		0006

per Storage Device

No-Charge Features:

Serial number only	3444
Electronic Delivery only	3453
Ship Media Only	3470
Ship Publication Only	3471
SWMA Auto Renewal Registration	9000

Program name: IBM Storwize Family Software for Storwize V5000
External Data Virtualization
Software maintenance - Three-years Renewal
PID: 5639-ETD

Description	Program number	Feature number
IBM Storwize V5000 External Data Virtualization Base SW Three-years Renewal One-time charge per Storage Device	5639-ETD	0001
IBM Storwize V5000 External Data Virtualization Easy Tier SW Three-years Renewal One-time charge per Storage Device		0003
IBM Storwize V5000 External Data Virtualization FlashCopy SW Three-years Renewal One-time charge per Storage Device		0004
IBM Storwize V5000 External Data Virtualization Full Feature SW Three-years Renewal One-time charge per Storage Device		0005
IBM Storwize V5000 External Data Virtualization Remote Mirroring SW Three-years Renewal One-time charge per Storage Device		0006

Program name: IBM Storwize Family Software for Storwize V5000
External Data Virtualization
Software maintenance - Three-years After License
PID: 5639-ETE

Description	Program number	Feature number
IBM Storwize V5000 External Data Virtualization Base SW Three-years After License One-time charge	5639-ETE	0001

per Storage Device

IBM Storwize V5000 0003
 External Data Virtualization
 Easy Tier SW
 Three-years After License
 One-time charge
 per Storage Device

IBM Storwize V5000 0004
 External Data Virtualization
 FlashCopy SW
 Three-years After License
 One-time charge
 per Storage Device

IBM Storwize V5000 0005
 External Data Virtualization
 Full Feature SW
 Three-years After License
 One-time charge
 per Storage Device

IBM Storwize V5000 0006
 External Data Virtualization
 Remote Mirroring SW
 Three-years After License
 One-time charge
 per Storage Device

Program name: IBM Storwize Family Software for Storwize V5000
 External Data Virtualization
 Software maintenance - Four-years Registration
 PID: 5639-ETG

Description	Program number	Feature number
IBM Storwize V5000 External Data Virtualization Base SW Four-years Registration One-time charge per Storage Device	5639-ETG	0001
IBM Storwize V5000 External Data Virtualization Easy Tier SW Four-years Registration One-time charge per Storage Device		0003
IBM Storwize V5000 External Data Virtualization FlashCopy SW Four-years Registration One-time charge per Storage Device		0004
IBM Storwize V5000 External Data Virtualization Full Feature SW Four-years Registration One-time charge per Storage Device		0005
IBM Storwize V5000 External Data Virtualization Remote Mirroring SW Four-years Registration One-time charge		0006

per Storage Device

No-Charge Features:

Serial number only	3444
Electronic Delivery only	3453
Ship Media Only	3470
Ship Publication Only	3471
SWMA Auto Renewal Registration	9000

Program name: IBM Storwize Family Software for Storwize V5000
External Data Virtualization
Software maintenance - Five-years Registration
PID: 5639-ETH

Description	Program number	Feature number
IBM Storwize V5000 External Data Virtualization Base SW Five-years Registration One-time charge per Storage Device	5639-ETH	0001
IBM Storwize V5000 External Data Virtualization Easy Tier SW Five-years Registration One-time charge per Storage Device		0003
IBM Storwize V5000 External Data Virtualization FlashCopy SW Five-years Registration One-time charge per Storage Device		0004
IBM Storwize V5000 External Data Virtualization Full Feature SW Five-years Registration One-time charge per Storage Device		0005
IBM Storwize V5000 External Data Virtualization Remote Mirroring SW Five-years Registration One-time charge per Storage Device		0006

No-Charge Features:

Serial number only	3444
Electronic Delivery only	3453
Ship Media Only	3470
Ship Publication Only	3471
SWMA Auto Renewal Registration	9000

Charge metric

Program name	Part number or PID number	Charge metric
IBM Storwize Family	5641-VC7	Per terabyte

Software for SAN Volume Controller V7		increments
IBM Storwize Family Software for SAN Volume Controller V7 (for Passport Advantage)	5725-M19	Per terabyte increments
IBM Storwize Family Software for SAN Volume Controller Real-time Compression Software V7	5641-CP7	Per terabyte increments
IBM Storwize Family Software for SAN Volume Controller Real-time Compression Software V7 (for Passport Advantage)	5725-H04	Per terabyte increments
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
IBM Storwize Family Software for Storwize V5000	5639-ST7	Per Storage Device
IBM Storwize Family Software for Storwize V7000 Controller software V7	5639-CB7	Per Storage Device
IBM Storwize Family Software for Storwize V7000 Expansion software V7	5639-XB7	Per Storage Device
IBM Storwize Family Software for Storwize V7000 External data virtualization software V7	5639-EB7	Per Storage Device
IBM Storwize Family	5639-CT7	Per Storage Device

Software for
Storwize V5000
Controller software V7

IBM Storwize Family Software for Storwize V5000 Expansion software V7	5639-XT7	Per Storage Device
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IBM Storwize Family Software for Storwize V5000 External data virtualization software V7	5639-ET7	Per Storage Device
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IBM Storwize V7000 File Module Software V1	5639-VF1	Per Storage Device
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New orders for Storwize Family Software

For new Storwize Family Software V7 program number orders, first order the appropriate hardware for the initial system or cluster, then order the Storwize Family Software license.

Note: Real-time Compression, External Virtualization, Remote Mirroring software product identifiers are optional, and are ordered along with or where there is already a complete Storwize Family system, like the SAN Volume Controller 2145 or the Storwize V7000 2076 hardware, in place with the appropriate required Storwize Family software license for that system.

License metric definition

For SVC:

Terabyte (T/TB)

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

For Storwize V7000 and Storwize V5000:

Storage Device

Storage Device is a unit of measure by which the Program can be licensed. A Storage Device is an independently powered, channel-attached device that stores or controls the storage of data on magnetic disks or solid state drives, such as disk controllers and their respective expansion units, each constituting separate Storage Devices. Licensee must obtain entitlements for every Storage Device which runs, uses services provided by, or otherwise accesses the Program and for every Storage Device on which the Program is installed. Instead of the entitlements required for the Program directly, Licensee must obtain entitlements for this Program sufficient to cover the Storage Devices managed by the Program.

A storage device is equivalent to an enclosure, the term used most often when describing the Storwize Family Software product licensing and usage.

Customers requesting ESD

Downloading from the electronic software delivery website requires an active Software 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 v7

Program number	Description	Feature number
5639-VM7	Media Feature Charge Electronic SW Delivery	3437 3450
5639-CB7	Media Feature Charge Electronic SW Delivery	3437 3450
5639-XB7	Media Feature Charge Electronic SW Delivery	3437 3450
5639-EB7	Media Feature Charge Electronic SW Delivery	3437 3450
5639-CT7	Media Feature Charge Electronic SW Delivery	3437 3450
5639-XT7	Media Feature Charge Electronic SW Delivery	3437 3450
5639-ET7	Media Feature Charge Electronic SW Delivery	3437 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. Part number products only, offered outside of Passport Advantage, where applicable, are license only and do not include Software Maintenance.

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

Agreement for Acquisition of Software Maintenance

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

These programs are licensed under the IBM Program License Agreement (IPLA) and the associated Agreement for Acquisition of Software Maintenance, which

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

The customer is responsible for ensuring they renew their SWMA coverage for all licensed features and capacities before expiration. Restarting SWMA after expiration will incur a higher charge for that renewal.

These programs have a one-time license charge for use of the program and an annual renewable charge for the enhanced support that includes telephone assistance (voice support for defects during normal business hours), as well as access to updates, releases, and versions of the program as long as support is in effect.

License Information number

GI13-2841 License Information for:

- 5641-VC7 - IBM Storwize Family SAN Volume Controller Software V7.3
- 5641-CP7 - IBM Storwize Family SAN Volume Controller Compression Software V7.3
- 5639-VM7 - IBM Storwize Family V7000 Software V7.3
- 5639-EV7 - IBM Storwize Family V7000 External Virtualization Software V7.3
- 5639-RM7 - IBM Storwize Family V7000 Remote Mirroring Software V7.3
- 5639-CP7 - IBM Storwize Family V7000 Compression Software V7.3
- 5639-ST7 - IBM Storwize Family V5000 Software V7.3
- 5639-CB7 - IBM Storwize Family V7000 Controller Software V7.3
- 5639-XB7 - IBM Storwize Family V7000 Expansion Software V7.3
- 5639-EB7 - IBM Storwize Family V7000 External Data Virtualization Software V7.3

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

Volume orders (IVO)

Yes. Contact your IBM representative.

Passport Advantage applies

Yes, and through the Passport Advantage website at

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

Usage restriction

Yes

SVC standard software (5641-VC7):

This program (5641-VC7) is licensed on a per-terabyte (with cumulative tiers) site-wide capacity basis. (Refer to the [Ordering information](#) section for information on charges for this program.) Users may only install this program on IBM System Storage SAN Volume Controller 2145-CF8, 2145-8G4, 2145-8A4, 2145-8F4, and 2145-8F2 Storage Engines, or subsequent IBM replacements of these.

Customers are licensed to use this program only to manage storage capacity within a single site, and only for the amount of storage capacity within that site for which they have received proper authorization from IBM. Customers must obtain a separate license for any additional sites within which they want to use SAN Volume Controller Software V7 (5641-VC7) and obtain separate capacity authorizations for each such site. The 5641-VC7 site license subsumes and supersedes all individual 5639-VC1, 5639-VC2, 5639-VCT, 5639-VC3, 5639-VC4, 5639-VC5, and 5639-VC6 licenses previously in effect at that site.

A customer's right to use the IBM FlashCopy for SAN Volume Controller and Metro/Global Mirror for SAN Volume Controller features of this program is also limited to the amount of authorizations obtained from IBM. The authorizations for FlashCopy and for Metro/Global Mirror cannot exceed the total capacity authorization for the amount of managed storage on all clusters within the site. Use of FlashCopy features requires license authorizations for only the FlashCopy sources, not the targets.

Use of Metro/Global Mirror features requires license authorizations for both the Metro/Global Mirror source and target capacities in use. Use of the Metro/Global Mirror feature between clusters located in different sites requires separate authorization for each site.

This program is only supported for use with host servers, storage sub-systems, and SAN configurations identified by IBM as being supported for attachment to the IBM System Storage SAN Volume Controller. This program is provided together with code provided under separate license agreements, including, but not limited to, open source license agreements.

Storwize V7000

The following Program Unique Terms apply. This program is licensed for use with the IBM Storwize V7000 system with which the program was delivered, and only to manage the capacity specified in the proof of entitlement document for that license.

A separate license is required for each IBM Storwize V7000 storage enclosure. The following paragraph titled "Disabling device" applies to the use of the IBM Storwize V7000 Software components. The term "Program" in these paragraphs shall mean the IBM Storwize V7000 Software components.

Disabling device: The Program may include a disabling device that will prevent certain features from being used. You will not tamper with such disabling device or otherwise change the Program.

Transferability: The Program 5639-VM7, 5639-CB7, or 5639-XB7 are nontransferable between IBM Storwize V7000 systems and are only to be used on the IBM Storwize V7000 system for which it was purchased. If the system is transferred to a new owner, the program license transfers with the system. However, Software Maintenance does not transfer, and a new maintenance agreement must be purchased by the new owner.

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

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

Storwize V5000

The following Program Unique Terms apply. This program is licensed for use with the IBM Storwize V5000 with which the program was delivered and only to manage the capacity specified in the proof of entitlement document for that license. A separate license is required for each IBM Storwize V5000 storage enclosure. The following paragraph titled "Disabling device" applies to the use of the IBM Storwize V5000 Software components. The term "Program" in these paragraphs shall mean the IBM Storwize V5000 Software components.

Disabling device: The Program may include a disabling device that will prevent certain features from being used. You will not tamper with such disabling device or otherwise change the Program.

Transferability: The Programs 5639-ST7, 5639-CT7, or 5639-XT7 are non-transferable between IBM Storwize V5000 systems and are only to be used on the IBM Storwize V5000 system for which it was purchased. If the system is transferred to a new owner, the program license transfers with the system. However, Software Maintenance does not transfer, and a new maintenance agreement must be purchased by the new owner.

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

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

Software Subscription and Support applies

Yes. Software Subscription and Support (also referred to as Software Maintenance), is now included in the Passport Advantage Agreement. Installation and technical support for the products announced in this announcement is provided by the Software Subscription and Support offering of the IBM International Passport Advantage Agreement. This fee service enhances customer productivity by providing voice or electronic access into the IBM support organizations.

IBM includes one year of Software Subscription and Support with the initial license acquisition of each program acquired. The initial period of Software Subscription and Support can be extended by the purchase of a renewal option.

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.

For additional information about the Passport Advantage Agreement, visit the Passport Advantage website at

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

All distributed software licenses include Software Subscription and Support 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.

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

Business Partner information

If you are an IBM Business Partner -- Distributor for Workstation Software acquiring products from IBM, you may link to Passport Advantage Online for resellers where you can obtain Business Partner pricing information. An IBM ID and password are required.

<https://www.ibm.com/software/howtobuy/passportadvantage/paoreseller>

SVC Passport Advantage

For Passport Advantage information and charges, contact your IBM representative or authorized IBM Business Partner.

Additional information is also available on the following Passport Advantage website

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

Passport Advantage

For Passport Advantage information and charges, contact your IBM representative or authorized IBM Business Partner for Software Value Plus. Additional information is also available at

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

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 Controller Software v7

PID: 5639-CB7

Use-based OTC with One-year Software Maintenance

Description	Program number	Feature number
IBM Storwize v7000 Controller Base SW Per Storage Device with 1 Year SW Maintenance	5639-CB7	0001
IBM Storwize v7000 Controller Compression SW Per Storage Device with 1 Year SW Maintenance		0002
IBM Storwize v7000 Controller Easy Tier SW Per Storage Device with 1 Year SW Maintenance		0003
IBM Storwize v7000 Controller FlashCopy SW Per Storage Device with 1 Year SW Maintenance		0004
IBM Storwize v7000 Controller Full Feature Per Storage Device with 1 Year SW Maintenance		0005
IBM Storwize v7000 Controller Remote Mirroring Per Storage Device with 1 Year SW Maintenance		0006
Physical Delivery Charge		3437

No-Charge Features:

Serial number only	3444
Electronic SW Delivery	3450
Electronic Delivery only	3453
Unlimited users entitlement	6398
Unlimited external users entitlement	6399

Program name: IBM Storwize Family Software for Storwize v7000 Expansion Software v7

PID: 5639-XB7

Use-based OTC with One-year Software Maintenance

Description	Program number	Feature number
IBM Storwize V7000 Expansion Base SW Per Storage Device with 1 Year SW Maintenance	5639-XB7	0001
IBM Storwize V7000 Expansion Compression SW Per Storage Device with 1 Year SW Maintenance		0002
IBM Storwize V7000 Expansion Easy Tier SW Per Storage Device with 1 Year SW Maintenance		0003
IBM Storwize V7000 Expansion FlashCopy SW Per Storage Device with 1 Year SW Maintenance		0004
IBM Storwize V7000 Expansion Full Feature Per Storage Device with 1 Year SW Maintenance		0005
IBM Storwize V7000 Expansion Remote Mirroring Per Storage Device with 1 Year SW Maintenance		0006
Physical Delivery Charge		3437

No-Charge Features:

Serial number only	3444
Electronic SW Delivery	3450
Electronic Delivery only	3453
Unlimited users entitlement	6398
Unlimited external users entitlement	6399

Program name: IBM Storwize Family Software for Storwize V7000 External
Data Virtualization Software V7

PID: 5639-EB7

Use-based OTC with One-year Software Maintenance

Description	Program number	Feature number
IBM Storwize V7000 External Data Virtualization Base SW Per Storage Device with 1 Year SW Maintenance	5639-EB7	0001
IBM Storwize V7000 External Data Virtualization Compression SW Per Storage Device with 1 Year SW Maintenance		0002
IBM Storwize V7000 External Data Virtualization		0003

Easy Tier SW Per Storage Device with 1 Year SW Maintenance	
IBM Storwize V7000 External Data Virtualization FlashCopy SW Per Storage Device with 1 Year SW Maintenance	0004
IBM Storwize V7000 External Data Virtualization Full Feature Per Storage Device with 1 Year SW Maintenance	0005
IBM Storwize V7000 External Data Virtualization Remote Mirroring Per Storage Device with 1 Year SW Maintenance	0006
Physical Delivery Charge	3437

No-Charge Features:

Serial number only	3444
Electronic SW Delivery	3450
Electronic Delivery only	3453
Unlimited users entitlement	6398
Unlimited external users entitlement	6399

Program name: IBM Storwize Family Software for Storwize V5000 Controller
Software V7

PID: 5639-CT7

Use-based OTC with One-year Software Maintenance

Description	Program number	Feature number
IBM Storwize V5000 Controller Base SW Per Storage Device with 1 Year SW Maintenance	5639-CT7	0001
IBM Storwize V5000 Controller Easy Tier SW Per Storage Device with 1 Year SW Maintenance		0003
IBM Storwize V5000 Controller FlashCopy SW Per Storage Device with 1 Year SW Maintenance		0004
IBM Storwize V5000 Controller Full Feature Per Storage Device with 1 Year SW Maintenance		0005
IBM Storwize V5000 Controller Remote Mirroring Per Storage Device with 1 Year SW Maintenance		0006
Physical Delivery Charge		3437

No-Charge Features:

Serial number only	3444
Electronic SW Delivery	3450
Electronic Delivery only	3453
Unlimited users entitlement	6398
Unlimited external users entitlement	6399

Program name: IBM Storwize Family Software for Storwize V5000 Expansion Software V7

PID: 5639-XT7

Use-based OTC with One-year Software Maintenance

Description	Program number	Feature number
IBM Storwize V5000 Expansion Base SW Per Storage Device with 1 Year SW Maintenance	5639-XT7	0001
IBM Storwize V5000 Expansion Easy Tier SW Per Storage Device with 1 Year SW Maintenance		0003
IBM Storwize V5000 Expansion FlashCopy SW Per Storage Device with 1 Year SW Maintenance		0004
IBM Storwize V5000 Expansion Full Feature Per Storage Device with 1 Year SW Maintenance		0005
IBM Storwize V5000 Expansion Remote Mirroring Per Storage Device with 1 Year SW Maintenance		0006
Physical Delivery Charge		3437

No-Charge Features:

Serial number only	3444
Electronic SW Delivery	3450
Electronic Delivery only	3453
Unlimited users entitlement	6398
Unlimited external users entitlement	6399

Program name: IBM Storwize Family Software for Storwize V5000 External Data Virtualization Software V7

PID: 5639-ET7

Use-based OTC with One-year Software Maintenance

Description	Program number	Feature number
IBM Storwize V5000 External Data Virtualization Base SW Per Storage Device	5639-ET7	0001

with 1 Year SW Maintenance	
IBM Storwize V5000 External Data Virtualization Easy Tier SW Per Storage Device with 1 Year SW Maintenance	0003
IBM Storwize V5000 External Data Virtualization FlashCopy SW Per Storage Device with 1 Year SW Maintenance	0004
IBM Storwize V5000 External Data Virtualization Full Feature Per Storage Device with 1 Year SW Maintenance	0005
IBM Storwize V5000 External Data Virtualization Remote Mirroring Per Storage Device with 1 Year SW Maintenance	0006
Physical Delivery Charge	3437

No-Charge Features:

Serial number only	3444
Electronic SW Delivery	3450
Electronic Delivery only	3453
Unlimited users entitlement	6398
Unlimited external users entitlement	6399

Software Maintenance

Program name: IBM Storwize Family Software for Storwize V7000 Controller
Software maintenance - One-year Registration and Renewal
PID: 5639-CBA

One-year No Charge Registration

Description	Program number	Feature number
IBM Storwize V7000 Controller Base SW One-year NC Registration per Storage Device	5639-CBA	0002
IBM Storwize V7000 Controller Compression SW One-year NC Registration per Storage Device		0004
IBM Storwize V7000 Controller Easy Tier SW One-year NC Registration per Storage Device		0006
IBM Storwize V7000 Controller FlashCopy SW One-year NC Registration per Storage Device		0008
IBM Storwize V7000 Controller Full Feature One-year NC Registration per Storage Device		0010

IBM Storwize V7000 Controller Remote Mirroring One-year NC Registration per Storage Device	0012
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No-Charge Features:

Serial number only	3444
Electronic Delivery only	3453
Ship Media Only	3470
Ship Publication Only	3471
SWMA Auto Renewal Registration	9000

One-year Renewal:

Description	Program number	Feature number
IBM Storwize V7000 Controller Base SW One-year Renewal One-time charge per Storage Device	5639-CBA	0001
IBM Storwize V7000 Controller Compression SW One-year Renewal One-time charge per Storage Device		0003
IBM Storwize V7000 Controller Easy Tier SW One-year Renewal One-time charge per Storage Device		0005
IBM Storwize V7000 Controller Flashcopy SW One-year Renewal One-time charge per Storage Device		0007
IBM Storwize V7000 Controller Full Feature One-year Renewal One-time charge per Storage Device		0009
IBM Storwize V7000 Controller Remote Mirroring One-year Renewal One-time charge per Storage Device		0011

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

Description	Program number	Feature number
IBM Storwize V7000 Controller Base SW One-year After License One-time charge per Storage Device	5639-CBB	0001

IBM Storwize V7000 Controller Compression SW One-year After License One-time charge per Storage Device	0002
IBM Storwize V7000 Controller Easy Tier SW One-year After License One-time charge per Storage Device	0003
IBM Storwize V7000 Controller Flashcopy SW One-year After License One-time charge per Storage Device	0004
IBM Storwize V7000 Controller Full Feature One-year After License One-time charge per Storage Device	0005
IBM Storwize V7000 Controller Remote Mirroring One-year After License One-time charge per Storage Device	0006

Program name: IBM Storwize Family Software for Storwize V7000 Controller
Software maintenance - Two-years Registration
PID: 5639-CBF

Description	Program number	Feature number
IBM Storwize V7000 Controller Base SW Two-years Registration One-time charge per Storage Device	5639-CBF	0001
IBM Storwize V7000 Controller Compression SW Two-years Registration One-time charge per Storage Device		0002
IBM Storwize V7000 Controller Easy Tier SW Two-years Registration One-time charge per Storage Device		0003
IBM Storwize V7000 Controller Flashcopy SW Two-years Registration One-time charge per Storage Device		0004
IBM Storwize V7000 Controller Full Feature Two-years Registration One-time charge per Storage Device		0005
IBM Storwize V7000 Controller Remote Mirroring Two-years Registration One-time charge		0006

per Storage Device

No-Charge Features:

Serial number only	3444
Electronic Delivery only	3453
Ship Media Only	3470
Ship Publication Only	3471
SWMA Auto Renewal Registration	9000

Program name: IBM Storwize Family Software for Storwize V7000 Controller
Software maintenance - Three-years Registration
PID: 5639-CBC

Description	Program number	Feature number
IBM Storwize V7000 Controller Base SW Three-years Registration One-time charge per Storage Device	5639-CBC	0001
IBM Storwize V7000 Controller Compression SW Three-years Registration One-time charge per Storage Device		0002
IBM Storwize V7000 Controller Easy Tier SW Three-years Registration One-time charge per Storage Device		0003
IBM Storwize V7000 Controller Flashcopy SW Three-years Registration One-time charge per Storage Device		0004
IBM Storwize V7000 Controller Full Feature Three-years Registration One-time charge per Storage Device		0005
IBM Storwize V7000 Controller Remote Mirroring Three-years Registration One-time charge per Storage Device		0006

No-Charge Features:

Serial number only	3444
Electronic Delivery only	3453
Ship Media Only	3470
Ship Publication Only	3471
SWMA Auto Renewal Registration	9000

Program name: IBM Storwize Family Software for Storwize V7000 Controller
Software maintenance - Three-years Renewal
PID: 5639-CBD

Description	Program number	Feature number
IBM Storwize V7000 Controller Base SW Three-years Renewal One-time charge per Storage Device	5639-CBD	0006
IBM Storwize V7000 Controller Compression SW Three-years Renewal One-time charge per Storage Device		0001
IBM Storwize V7000 Controller Easy Tier SW Three-years Renewal One-time charge per Storage Device		0002
IBM Storwize V7000 Controller Flashcopy SW Three-years Renewal One-time charge per Storage Device		0003
IBM Storwize V7000 Controller Full Feature Three-years Renewal One-time charge per Storage Device		0004
IBM Storwize V7000 Controller Remote Mirroring Three-years Renewal One-time charge per Storage Device		0005

Program name: IBM Storwize Family Software for Storwize V7000 Controller
Software maintenance - Three-years After License
PID: 5639-CBE

Description	Program number	Feature number
IBM Storwize V7000 Controller Base SW Three-years After License One-time charge per Storage Device	5639-CBE	0001
IBM Storwize V7000 Controller Compression SW Three-years After License One-time charge per Storage Device		0002
IBM Storwize V7000 Controller Easy Tier SW Three-years After License One-time charge per Storage Device		0003
IBM Storwize V7000 Controller Flashcopy SW Three-years After License One-time charge per Storage Device		0004

IBM Storwize V7000 0005
 Controller Full Feature
 Three-years After License
 One-time charge
 per Storage Device

IBM Storwize V7000 0006
 Controller Remote Mirroring
 Three-years After License
 One-time charge
 per Storage Device

Program name: IBM Storwize Family Software for Storwize V7000 Controller
 Software maintenance - Four-years Registration
 PID: 5639-CBG

Description	Program number	Feature number
IBM Storwize V7000 Controller Base SW Four-years Registration One-time charge per Storage Device	5639-CBG	0001
IBM Storwize V7000 Controller Compression SW Four-years Registration One-time charge per Storage Device		0002
IBM Storwize V7000 Controller Easy Tier SW Four-years Registration One-time charge per Storage Device		0003
IBM Storwize V7000 Controller Flashcopy SW Four-years Registration One-time charge per Storage Device		0004
IBM Storwize V7000 Controller Full Feature Four-years Registration One-time charge per Storage Device		0005
IBM Storwize V7000 Controller Remote Mirroring Four-years Registration One-time charge per Storage Device		0006

No-Charge Features:

Serial number only	3444
Electronic Delivery only	3453
Ship Media Only	3470
Ship Publication Only	3471
SWMA Auto Renewal Registration	9000

Program name: IBM Storwize Family Software for Storwize V7000 Controller
 Software maintenance - Five-years Registration
 PID: 5639-CBH

Description	Program number	Feature number
IBM Storwize V7000 Controller Base SW Five-years Registration One-time charge per Storage Device	5639-CBH	0001
IBM Storwize V7000 Controller Compression SW Five-years Registration One-time charge per Storage Device		0002
IBM Storwize V7000 Controller Easy Tier SW Five-years Registration One-time charge per Storage Device		0003
IBM Storwize V7000 Controller Flashcopy SW Five-years Registration One-time charge per Storage Device		0004
IBM Storwize V7000 Controller Full Feature Five-years Registration One-time charge per Storage Device		0005
IBM Storwize V7000 Controller Remote Mirroring Five-years Registration One-time charge per Storage Device		0006

No-Charge Features:

Serial number only	3444
Electronic Delivery only	3453
Ship Media Only	3470
Ship Publication Only	3471
SWMA Auto Renewal Registration	9000

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

PID: 5639-XBA

One-year No Charge Registration

Description	Program number	Feature number
IBM Storwize V7000 Expansion Base SW One-year NC Registration per Storage Device	5639-XBA	0002
IBM Storwize V7000 Expansion Compression SW One-year NC Registration per Storage Device		0004
IBM Storwize V7000 Expansion Easy Tier SW One-year NC Registration		0006

per Storage Device	
IBM Storwize V7000 Expansion FlashCopy SW One-year NC Registration per Storage Device	0008
IBM Storwize V7000 Expansion Full Feature One-year NC Registration per Storage Device	0010
IBM Storwize V7000 Expansion Remote Mirroring One-year NC Registration per Storage Device	0012

No-Charge Features:

Serial number only	3444
Electronic Delivery only	3453
Ship Media Only	3470
Ship Publication Only	3471
SWMA Auto Renewal Registration	9000

One-year Renewal:

Description	Program number	Feature number
IBM Storwize V7000 Expansion Base SW One-year Renewal One-time charge per Storage Device	5639-XBA	0001
IBM Storwize V7000 Expansion Compression SW One-year Renewal One-time charge per Storage Device		0003
IBM Storwize V7000 Expansion Easy Tier SW One-year Renewal One-time charge per Storage Device		0005
IBM Storwize V7000 Expansion Flashcopy SW One-year Renewal One-time charge per Storage Device		0007
IBM Storwize V7000 Expansion Full Feature One-year Renewal One-time charge per Storage Device		0009
IBM Storwize V7000 Expansion Remote Mirroring One-year Renewal One-time charge per Storage Device		0011

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

Description	Program number	Feature number
IBM Storwize V7000 Expansion Base SW One-year After License One-time charge per Storage Device	5639-XBB	0001
IBM Storwize V7000 Expansion Compression SW One-year After License One-time charge per Storage Device		0002
IBM Storwize V7000 Expansion Easy Tier SW One-year After License One-time charge per Storage Device		0003
IBM Storwize V7000 Expansion Flashcopy SW One-year After License One-time charge per Storage Device		0004
IBM Storwize V7000 Expansion Full Feature One-year After License One-time charge per Storage Device		0005
IBM Storwize V7000 Expansion Remote Mirroring One-year After License One-time charge per Storage Device		0006

Program name: IBM Storwize Family Software for Storwize V7000 Expansion
Software maintenance - Two-years Registration
PID: 5639-XBF

Description	Program number	Feature number
IBM Storwize V7000 Expansion Base SW Two-years Registration One-time charge per Storage Device	5639-XBF	0001
IBM Storwize V7000 Expansion Compression SW Two-years Registration One-time charge per Storage Device		0002
IBM Storwize V7000 Expansion Easy Tier SW Two-years Registration One-time charge per Storage Device		0003
IBM Storwize V7000 Expansion Flashcopy SW Two-years Registration One-time charge per Storage Device		0004
IBM Storwize V7000		0005

Expansion Full Feature
 Two-years Registration
 One-time charge
 per Storage Device

IBM Storwize V7000 0006
 Expansion Remote Mirroring
 Two-years Registration
 One-time charge
 per Storage Device

No-Charge Features:

Serial number only 3444
 Electronic Delivery only 3453
 Ship Media Only 3470
 Ship Publication Only 3471
 SWMA Auto Renewal 9000
 Registration

Program name: IBM Storwize Family Software for Storwize V7000 Expansion
 Software maintenance - Three-years Registration
 PID: 5639-XBC

Description	Program number	Feature number
IBM Storwize V7000 Expansion Base SW Three-years Registration One-time charge per Storage Device	5639-XBC	0001
IBM Storwize V7000 Expansion Compression SW Three-years Registration One-time charge per Storage Device		0002
IBM Storwize V7000 Expansion Easy Tier SW Three-years Registration One-time charge per Storage Device		0003
IBM Storwize V7000 Expansion Flashcopy SW Three-years Registration One-time charge per Storage Device		0004
IBM Storwize V7000 Expansion Full Feature Three-years Registration One-time charge per Storage Device		0005
IBM Storwize V7000 Expansion Remote Mirroring Three-years Registration One-time charge per Storage Device		0006

No-Charge Features:

Serial number only 3444
 Electronic Delivery only 3453
 Ship Media Only 3470
 Ship Publication Only 3471
 SWMA Auto Renewal 9000

Registration

Program name: IBM Storwize Family Software for Storwize V7000 Expansion
 Software maintenance - Three-years Renewal
 PID: 5639-XBD

Description	Program number	Feature number
IBM Storwize V7000 Expansion Base SW Three-years Renewal One-time charge per Storage Device	5639-XBD	0001
IBM Storwize V7000 Expansion Compression SW Three-years Renewal One-time charge per Storage Device		0002
IBM Storwize V7000 Expansion Easy Tier SW Three-years Renewal One-time charge per Storage Device		0003
IBM Storwize V7000 Expansion Flashcopy SW Three-years Renewal One-time charge per Storage Device		0004
IBM Storwize V7000 Expansion Full Feature Three-years Renewal One-time charge per Storage Device		0005
IBM Storwize V7000 Expansion Remote Mirroring Three-years Renewal One-time charge per Storage Device		0006

Program name: IBM Storwize Family Software for Storwize V7000 Expansion
 Software maintenance - Three-years After License
 PID: 5639-XBE

Description	Program number	Feature number
IBM Storwize V7000 Expansion Base SW Three-years After License One-time charge per Storage Device	5639-XBE	0001
IBM Storwize V7000 Expansion Compression SW Three-years After License One-time charge per Storage Device		0002
IBM Storwize V7000 Expansion Easy Tier SW Three-years After License One-time charge per Storage Device		0003

IBM Storwize V7000 Expansion Flashcopy SW Three-years After License One-time charge per Storage Device	0004
IBM Storwize V7000 Expansion Full Feature Three-years After License One-time charge per Storage Device	0005
IBM Storwize V7000 Expansion Remote Mirroring Three-years After License One-time charge per Storage Device	0006

Program name: IBM Storwize Family Software for Storwize V7000 Expansion
Software maintenance - Four-years Registration
PID: 5639-XBG

Description	Program number	Feature number
IBM Storwize V7000 Expansion Base SW Four-years Registration One-time charge per Storage Device	5639-XBG	0001
IBM Storwize V7000 Expansion Compression SW Four-years Registration One-time charge per Storage Device		0002
IBM Storwize V7000 Expansion Easy Tier SW Four-years Registration One-time charge per Storage Device		0003
IBM Storwize V7000 Expansion Flashcopy SW Four-years Registration One-time charge per Storage Device		0004
IBM Storwize V7000 Expansion Full Feature Four-years Registration One-time charge per Storage Device		0005
IBM Storwize V7000 Expansion Remote Mirroring Four-years Registration One-time charge per Storage Device		0006

No-Charge Features:

Serial number only	3444
Electronic Delivery only	3453
Ship Media Only	3470
Ship Publication Only	3471
SWMA Auto Renewal Registration	9000

Program name: IBM Storwize Family Software for Storwize V7000 Expansion
 Software maintenance - Five-years Registration
 PID: 5639-XBH

Description	Program number	Feature number
IBM Storwize V7000 Expansion Base SW Five-years Registration One-time charge per Storage Device	5639-XBH	0001
IBM Storwize V7000 Expansion Compression SW Five-years Registration One-time charge per Storage Device		0002
IBM Storwize V7000 Expansion Easy Tier SW Five-years Registration One-time charge per Storage Device		0003
IBM Storwize V7000 Expansion Flashcopy SW Five-years Registration One-time charge per Storage Device		0004
IBM Storwize V7000 Expansion Full Feature Five-years Registration One-time charge per Storage Device		0005
IBM Storwize V7000 Expansion Remote Mirroring Five-years Registration One-time charge per Storage Device		0006

No-Charge Features:

Serial number only	3444
Electronic Delivery only	3453
Ship Media Only	3470
Ship Publication Only	3471
SWMA Auto Renewal Registration	9000

Program name: IBM Storwize Family Software for Storwize V7000
 External Data Virtualization
 Software maintenance - One-year Registration and Renewal
 PID: 5639-EBA

One-year No Charge Registration

Description	Program number	Feature number
IBM Storwize V7000 External Data Virtualization Base SW One-year NC Registration per Storage Device	5639-EBA	0002
IBM Storwize V7000 External Data Virtualization		0004

Compression SW One-year NC Registration per Storage Device	
IBM Storwize V7000 External Data Virtualization Easy Tier SW One-year NC Registration per Storage Device	0006
IBM Storwize V7000 External Data Virtualization FlashCopy SW One-year NC Registration per Storage Device	0008
IBM Storwize V7000 External Data Virtualization Full Feature SW One-year NC Registration per Storage Device	0010
IBM Storwize V7000 External Data Virtualization Remote Mirroring SW One-year NC Registration per Storage Device	0012

No-Charge Features:

Serial number only	3444
Electronic Delivery only	3453
Ship Media Only	3470
Ship Publication Only	3471
SWMA Auto Renewal Registration	9000

One-year Renewal:

Description	Program number	Feature number
IBM Storwize V7000 External Data Virtualization Base SW One-year Renewal One-time charge per Storage Device	5639-EBA	0001
IBM Storwize V7000 External Data Virtualization Compression SW One-year Renewal One-time charge per Storage Device		0003
IBM Storwize V7000 External Data Virtualization Easy Tier SW One-year Renewal One-time charge per Storage Device		0005
IBM Storwize V7000 External Data Virtualization FlashCopy SW One-year Renewal One-time charge per Storage Device		0007
IBM Storwize V7000 External Data Virtualization		0009

Full Feature SW
 One-year Renewal
 One-time charge
 per Storage Device

IBM Storwize V7000 0011
 External Data Virtualization
 Remote Mirroring SW
 One-year Renewal
 One-time charge
 per Storage Device

Program name: IBM Storwize Family Software for Storwize V7000
 External Data Virtualization
 Software maintenance - One-year After License
 PID: 5639-EBB

Description	Program number	Feature number
IBM Storwize V7000 External Data Virtualization Base SW One-year After License One-time charge per Storage Device	5639-EBB	0001
IBM Storwize V7000 External Data Virtualization Compression SW One-year After License One-time charge per Storage Device		0002
IBM Storwize V7000 External Data Virtualization Easy Tier SW One-year After License One-time charge per Storage Device		0003
IBM Storwize V7000 External Data Virtualization FlashCopy SW One-year After License One-time charge per Storage Device		0004
IBM Storwize V7000 External Data Virtualization Full Feature SW One-year After License One-time charge per Storage Device		0005
IBM Storwize V7000 External Data Virtualization Remote Mirroring SW One-year After License One-time charge per Storage Device		0006

Program name: IBM Storwize Family Software for Storwize V7000
 External Data Virtualization
 Software maintenance - Two-years Registration
 PID: 5639-EBF

Description	Program number	Feature number
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IBM Storwize V7000 External Data Virtualization Base SW Two-years Registration One-time charge per Storage Device	5639-EBF	0006
IBM Storwize V7000 External Data Virtualization Compression SW Two-years Registration One-time charge per Storage Device		0001
IBM Storwize V7000 External Data Virtualization Easy Tier SW Two-years Registration One-time charge per Storage Device		0002
IBM Storwize V7000 External Data Virtualization FlashCopy SW Two-years Registration One-time charge per Storage Device		0003
IBM Storwize V7000 External Data Virtualization Full Feature SW Two-years Registration One-time charge per Storage Device		0004
IBM Storwize V7000 External Data Virtualization Remote Mirroring SW Two-years Registration One-time charge per Storage Device		0005

No-Charge Features:

Serial number only	3444
Electronic Delivery only	3453
Ship Media Only	3470
Ship Publication Only	3471
SWMA Auto Renewal Registration	9000

Program name: IBM Storwize Family Software for Storwize V7000
External Data Virtualization
Software maintenance - Three-years Registration
PID: 5639-EBC

Description	Program number	Feature number
IBM Storwize V7000 External Data Virtualization Base SW Three-years Registration One-time charge per Storage Device	5639-EBC	0001
IBM Storwize V7000 External Data Virtualization Compression SW Three-years Registration One-time charge		0002

per Storage Device	
IBM Storwize V7000	0003
External Data Virtualization	
Easy Tier SW	
Three-years Registration	
One-time charge	
per Storage Device	
IBM Storwize V7000	0004
External Data Virtualization	
FlashCopy SW	
Three-years Registration	
One-time charge	
per Storage Device	
IBM Storwize V7000	0005
External Data Virtualization	
Full Feature SW	
Three-years Registration	
One-time charge	
per Storage Device	
IBM Storwize V7000	0006
External Data Virtualization	
Remote Mirroring SW	
Three-years Registration	
One-time charge	
per Storage Device	

No-Charge Features:

Serial number only	3444
Electronic Delivery only	3453
Ship Media Only	3470
Ship Publication Only	3471
SWMA Auto Renewal	9000
Registration	

Program name: IBM Storwize Family Software for Storwize V7000
 External Data Virtualization
 Software maintenance - Three-years Renewal
 PID: 5639-EBD

Description	Program number	Feature number
IBM Storwize V7000	5639-EBD	0001
External Data Virtualization		
Base SW		
Three-years Renewal		
One-time charge		
per Storage Device		
IBM Storwize V7000		0002
External Data Virtualization		
Compression SW		
Three-years Renewal		
One-time charge		
per Storage Device		
IBM Storwize V7000		0003
External Data Virtualization		
Easy Tier SW		
Three-years Renewal		
One-time charge		
per Storage Device		
IBM Storwize V7000		0004
External Data Virtualization		
FlashCopy SW		

Three-years Renewal
One-time charge
per Storage Device

IBM Storwize V7000 0005
External Data Virtualization
Full Feature SW
Three-years Renewal
One-time charge
per Storage Device

IBM Storwize V7000 0006
External Data Virtualization
Remote Mirroring SW
Three-years Renewal
One-time charge
per Storage Device

Program name: IBM Storwize Family Software for Storwize V7000
External Data Virtualization
Software maintenance - Three-years After License
PID: 5639-EBE

Description	Program number	Feature number
IBM Storwize V7000 External Data Virtualization Base SW Three-years After License One-time charge per Storage Device	5639-EBE	0002
IBM Storwize V7000 External Data Virtualization Compression SW Three-years After License One-time charge per Storage Device		0001
IBM Storwize V7000 External Data Virtualization Easy Tier SW Three-years After License One-time charge per Storage Device		0003
IBM Storwize V7000 External Data Virtualization FlashCopy SW Three-years After License One-time charge per Storage Device		0004
IBM Storwize V7000 External Data Virtualization Full Feature SW Three-years After License One-time charge per Storage Device		0005
IBM Storwize V7000 External Data Virtualization Remote Mirroring SW Three-years After License One-time charge per Storage Device		0006

Program name: IBM Storwize Family Software for Storwize V7000
External Data Virtualization

Software maintenance - Four-years Registration
 PID: 5639-EBG

Description	Program number	Feature number
IBM Storwize V7000 External Data Virtualization Base SW Four-years Registration One-time charge per Storage Device	5639-EBG	0001
IBM Storwize V7000 External Data Virtualization Compression SW Four-years Registration One-time charge per Storage Device		0002
IBM Storwize V7000 External Data Virtualization Easy Tier SW Four-years Registration One-time charge per Storage Device		0003
IBM Storwize V7000 External Data Virtualization FlashCopy SW Four-years Registration One-time charge per Storage Device		0004
IBM Storwize V7000 External Data Virtualization Full Feature SW Four-years Registration One-time charge per Storage Device		0005
IBM Storwize V7000 External Data Virtualization Remote Mirroring SW Four-years Registration One-time charge per Storage Device		0006

No-Charge Features:

Serial number only	3444
Electronic Delivery only	3453
Ship Media Only	3470
Ship Publication Only	3471
SWMA Auto Renewal Registration	9000

Program name: IBM Storwize Family Software for Storwize V7000
 External Data Virtualization
 Software maintenance - Five-years Registration
 PID: 5639-EBH

Description	Program number	Feature number
IBM Storwize V7000 External Data Virtualization Base SW Five-years Registration One-time charge per Storage Device	5639-EBH	0001

IBM Storwize V7000 External Data Virtualization Compression SW Five-years Registration One-time charge per Storage Device	0002
IBM Storwize V7000 External Data Virtualization Easy Tier SW Five-years Registration One-time charge per Storage Device	0003
IBM Storwize V7000 External Data Virtualization FlashCopy SW Five-years Registration One-time charge per Storage Device	0004
IBM Storwize V7000 External Data Virtualization Full Feature SW Five-years Registration One-time charge per Storage Device	0005
IBM Storwize V7000 External Data Virtualization Remote Mirroring SW Five-years Registration One-time charge per Storage Device	0006

No-Charge Features:

Serial number only	3444
Electronic Delivery only	3453
Ship Media Only	3470
Ship Publication Only	3471
SWMA Auto Renewal Registration	9000

Program name: IBM Storwize Family Software for Storwize V5000 Controller
Software maintenance - One-year Registration and Renewal
PID: 5639-CTA

One-year No Charge Registration

Description	Program number	Feature number
IBM Storwize V5000 Controller Base SW One-year NC Registration per Storage Device	5639-CTA	0002
IBM Storwize V5000 Controller Easy Tier SW One-year NC Registration per Storage Device		0006
IBM Storwize V5000 Controller FlashCopy SW One-year NC Registration per Storage Device		0008
IBM Storwize V5000 Controller Full Feature One-year NC Registration		0010

per Storage Device

IBM Storwize V5000 Controller Remote Mirroring One-year NC Registration per Storage Device	0012
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No-Charge Features:

Serial number only	3444
Electronic Delivery only	3453
Ship Media Only	3470
Ship Publication Only	3471
SWMA Auto Renewal Registration	9000

One-year Renewal:

Description	Program number	Feature number
IBM Storwize V5000 Controller Base SW One-year Renewal One-time charge per Storage Device	5639-CTA	0001
IBM Storwize V5000 Controller Easy Tier SW One-year Renewal One-time charge per Storage Device		0005
IBM Storwize V5000 Controller Flashcopy SW One-year Renewal One-time charge per Storage Device		0007
IBM Storwize V5000 Controller Full Feature One-year Renewal One-time charge per Storage Device		0009
IBM Storwize V5000 Controller Remote Mirroring One-year Renewal One-time charge per Storage Device		0011

Program name: IBM Storwize Family Software for Storwize V5000 Controller
Software maintenance - One-year After License
PID: 5639-CTB

Description	Program number	Feature number
IBM Storwize V5000 Controller Base SW One-year After License One-time charge per Storage Device	5639-CTB	0006
IBM Storwize V5000 Controller Easy Tier SW One-year After License One-time charge per Storage Device		0002

IBM Storwize V5000 Controller Flashcopy SW One-year After License One-time charge per Storage Device	0003
IBM Storwize V5000 Controller Full Feature One-year After License One-time charge per Storage Device	0004
IBM Storwize V5000 Controller Remote Mirroring One-year After License One-time charge per Storage Device	0005

Program name: IBM Storwize Family Software for Storwize V5000 Controller
Software maintenance - Two-years Registration
PID: 5639-CTF

Description	Program number	Feature number
IBM Storwize V5000 Controller Base SW Two-years Registration One-time charge per Storage Device	5639-CTF	0006
IBM Storwize V5000 Controller Easy Tier SW Two-years Registration One-time charge per Storage Device		0002
IBM Storwize V5000 Controller Flashcopy SW Two-years Registration One-time charge per Storage Device		0003
IBM Storwize V5000 Controller Full Feature Two-years Registration One-time charge per Storage Device		0004
IBM Storwize V5000 Controller Remote Mirroring Two-years Registration One-time charge per Storage Device		0005

No-Charge Features:

Serial number only	3444
Electronic Delivery only	3453
Ship Media Only	3470
Ship Publication Only	3471
SWMA Auto Renewal Registration	9000

Program name: IBM Storwize Family Software for Storwize V5000 Controller
Software maintenance - Three-years Registration
PID: 5639-CTC

Program	Feature
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Description	number	number
IBM Storwize V5000 Controller Base SW Three-years Registration One-time charge per Storage Device	5639-CTC	0001
IBM Storwize V5000 Controller Easy Tier SW Three-years Registration One-time charge per Storage Device		0003
IBM Storwize V5000 Controller Flashcopy SW Three-years Registration One-time charge per Storage Device		0004
IBM Storwize V5000 Controller Full Feature Three-years Registration One-time charge per Storage Device		0005
IBM Storwize V5000 Controller Remote Mirroring Three-years Registration One-time charge per Storage Device		0006

No-Charge Features:

Serial number only	3444
Electronic Delivery only	3453
Ship Media Only	3470
Ship Publication Only	3471
SWMA Auto Renewal Registration	9000

Program name: IBM Storwize Family Software for Storwize V5000 Controller
Software maintenance - Three-years Renewal
PID: 5639-CTD

Description	Program number	Feature number
IBM Storwize V5000 Controller Base SW Three-years Renewal One-time charge per Storage Device	5639-CTD	0001
IBM Storwize V5000 Controller Easy Tier SW Three-years Renewal One-time charge per Storage Device		0003
IBM Storwize V5000 Controller Flashcopy SW Three-years Renewal One-time charge per Storage Device		0004
IBM Storwize V5000 Controller Full Feature Three-years Renewal One-time charge		0005

per Storage Device

IBM Storwize V5000 0006
Controller Remote Mirroring
Three-years Renewal
One-time charge
per Storage Device

Program name: IBM Storwize Family Software for Storwize V5000 Controller
Software maintenance - Three-years After License
PID: 5639-CTE

Description	Program number	Feature number
IBM Storwize V5000 Controller Base SW Three-years After License One-time charge per Storage Device	5639-CTE	0001
IBM Storwize V5000 Controller Easy Tier SW Three-years After License One-time charge per Storage Device		0003
IBM Storwize V5000 Controller Flashcopy SW Three-years After License One-time charge per Storage Device		0004
IBM Storwize V5000 Controller Full Feature Three-years After License One-time charge per Storage Device		0005
IBM Storwize V5000 Controller Remote Mirroring Three-years After License One-time charge per Storage Device		0006

Program name: IBM Storwize Family Software for Storwize V5000 Controller
Software maintenance - Four-years Registration
PID: 5639-CTG

Description	Program number	Feature number
IBM Storwize V5000 Controller Base SW Four-years Registration One-time charge per Storage Device	5639-CTG	0001
IBM Storwize V5000 Controller Easy Tier SW Four-years Registration One-time charge per Storage Device		0003
IBM Storwize V5000 Controller Flashcopy SW Four-years Registration One-time charge per Storage Device		0004

IBM Storwize V5000 0005
 Controller Full Feature
 Four-years Registration
 One-time charge
 per Storage Device

IBM Storwize V5000 0006
 Controller Remote Mirroring
 Four-years Registration
 One-time charge
 per Storage Device

No-Charge Features:

Serial number only 3444
 Electronic Delivery only 3453
 Ship Media Only 3470
 Ship Publication Only 3471
 SWMA Auto Renewal 9000
 Registration

Program name: IBM Storwize Family Software for Storwize V5000 Controller
 Software maintenance - Five-years Registration
 PID: 5639-CTH

Description	Program number	Feature number
IBM Storwize V5000 Controller Base SW Five-years Registration One-time charge per Storage Device	5639-CTH	0001
IBM Storwize V5000 Controller Easy Tier SW Five-years Registration One-time charge per Storage Device		0003
IBM Storwize V5000 Controller Flashcopy SW Five-years Registration One-time charge per Storage Device		0004
IBM Storwize V5000 Controller Full Feature Five-years Registration One-time charge per Storage Device		0005
IBM Storwize V5000 Controller Remote Mirroring Five-years Registration One-time charge per Storage Device		0006

No-Charge Features:

Serial number only 3444
 Electronic Delivery only 3453
 Ship Media Only 3470
 Ship Publication Only 3471
 SWMA Auto Renewal 9000
 Registration

Program name: IBM Storwize Family Software for Storwize V5000 Expansion
 Software maintenance - One-year Registration and Renewal
 PID: 5639-XTA

One-year No Charge Registration

Description	Program number	Feature number
IBM Storwize V5000 Expansion Base SW One-year NC Registration per Storage Device	5639-XTA	0002
IBM Storwize V5000 Expansion Easy Tier SW One-year NC Registration per Storage Device		0004
IBM Storwize V5000 Expansion FlashCopy SW One-year NC Registration per Storage Device		0006
IBM Storwize V5000 Expansion Full Feature One-year NC Registration per Storage Device		0008
IBM Storwize V5000 Expansion Remote Mirroring One-year NC Registration per Storage Device		0010

No-Charge Features:

Serial number only	3444
Electronic Delivery only	3453
Ship Media Only	3470
Ship Publication Only	3471
SWMA Auto Renewal Registration	9000

One-year Renewal:

Description	Program number	Feature number
IBM Storwize V5000 Expansion Base SW One-year Renewal One-time charge per Storage Device	5639-XTA	0001
IBM Storwize V5000 Expansion Easy Tier SW One-year Renewal One-time charge per Storage Device		0003
IBM Storwize V5000 Expansion Flashcopy SW One-year Renewal One-time charge per Storage Device		0005
IBM Storwize V5000 Expansion Full Feature One-year Renewal One-time charge per Storage Device		0007

IBM Storwize V5000 0009
 Expansion Remote Mirroring
 One-year Renewal
 One-time charge
 per Storage Device

Program name: IBM Storwize Family Software for Storwize V5000 Expansion
 Software maintenance - One-year After License
 PID: 5639-XTB

Description	Program number	Feature number
IBM Storwize V5000 Expansion Base SW One-year After License One-time charge per Storage Device	5639-XTB	0001
IBM Storwize V5000 Expansion Easy Tier SW One-year After License One-time charge per Storage Device		0003
IBM Storwize V5000 Expansion Flashcopy SW One-year After License One-time charge per Storage Device		0004
IBM Storwize V5000 Expansion Full Feature One-year After License One-time charge per Storage Device		0005
IBM Storwize V5000 Expansion Remote Mirroring One-year After License One-time charge per Storage Device		0006

Program name: IBM Storwize Family Software for Storwize V5000 Expansion
 Software maintenance - Two-years Registration
 PID: 5639-XTF

Description	Program number	Feature number
IBM Storwize V5000 Expansion Base SW Two-years Registration One-time charge per Storage Device	5639-XTF	0001
IBM Storwize V5000 Expansion Easy Tier SW Two-years Registration One-time charge per Storage Device		0003
IBM Storwize V5000 Expansion Flashcopy SW Two-years Registration One-time charge per Storage Device		0004
IBM Storwize V5000 Expansion Full Feature		0005

Two-years Registration
One-time charge
per Storage Device

IBM Storwize V5000 0006
Expansion Remote Mirroring
Two-years Registration
One-time charge
per Storage Device

No-Charge Features:

Serial number only 3444
Electronic Delivery only 3453
Ship Media Only 3470
Ship Publication Only 3471
SWMA Auto Renewal 9000
Registration

Program name: IBM Storwize Family Software for Storwize V5000 Expansion
Software maintenance - Three-years Registration
PID: 5639-XTC

Description	Program number	Feature number
IBM Storwize V5000 Expansion Base SW Three-years Registration One-time charge per Storage Device	5639-XTC	0001
IBM Storwize V5000 Expansion Easy Tier SW Three-years Registration One-time charge per Storage Device		0003
IBM Storwize V5000 Expansion Flashcopy SW Three-years Registration One-time charge per Storage Device		0004
IBM Storwize V5000 Expansion Full Feature Three-years Registration One-time charge per Storage Device		0005
IBM Storwize V5000 Expansion Remote Mirroring Three-years Registration One-time charge per Storage Device		0006

No-Charge Features:

Serial number only 3444
Electronic Delivery only 3453
Ship Media Only 3470
Ship Publication Only 3471
SWMA Auto Renewal 9000
Registration

Program name: IBM Storwize Family Software for Storwize V5000 Expansion
Software maintenance - Three-years Renewal
PID: 5639-XTD

Description	Program number	Feature number
IBM Storwize V5000 Expansion Base SW Three-years Renewal One-time charge per Storage Device	5639-XTD	0001
IBM Storwize V5000 Expansion Easy Tier SW Three-years Renewal One-time charge per Storage Device		0003
IBM Storwize V5000 Expansion Flashcopy SW Three-years Renewal One-time charge per Storage Device		0004
IBM Storwize V5000 Expansion Full Feature Three-years Renewal One-time charge per Storage Device		0005
IBM Storwize V5000 Expansion Remote Mirroring Three-years Renewal One-time charge per Storage Device		0006

Program name: IBM Storwize Family Software for Storwize V5000 Expansion
Software maintenance - Three-years After License
PID: 5639-XTE

Description	Program number	Feature number
IBM Storwize V5000 Expansion Base SW Three-years After License One-time charge per Storage Device	5639-XTE	0001
IBM Storwize V5000 Expansion Easy Tier SW Three-years After License One-time charge per Storage Device		0003
IBM Storwize V5000 Expansion Flashcopy SW Three-years After License One-time charge per Storage Device		0004
IBM Storwize V5000 Expansion Full Feature Three-years After License One-time charge per Storage Device		0005
IBM Storwize V5000 Expansion Remote Mirroring Three-years After License One-time charge per Storage Device		0006

Program name: IBM Storwize Family Software for Storwize V5000 Expansion
 Software maintenance - Four-years Registration
 PID: 5639-XTG

Description	Program number	Feature number
IBM Storwize V5000 Expansion Base SW Four-years Registration One-time charge per Storage Device	5639-XTG	0001
IBM Storwize V5000 Expansion Easy Tier SW Four-years Registration One-time charge per Storage Device		0003
IBM Storwize V5000 Expansion Flashcopy SW Four-years Registration One-time charge per Storage Device		0004
IBM Storwize V5000 Expansion Full Feature Four-years Registration One-time charge per Storage Device		0005
IBM Storwize V5000 Expansion Remote Mirroring Four-years Registration One-time charge per Storage Device		0006

No-Charge Features:

Serial number only	3444
Electronic Delivery only	3453
Ship Media Only	3470
Ship Publication Only	3471
SWMA Auto Renewal Registration	9000

Program name: IBM Storwize Family Software for Storwize V5000 Expansion
 Software maintenance - Five-years Registration
 PID: 5639-XTH

Description	Program number	Feature number
IBM Storwize V5000 Expansion Base SW Five-years Registration One-time charge per Storage Device	5639-XTH	0001
IBM Storwize V5000 Expansion Easy Tier SW Five-years Registration One-time charge per Storage Device		0003
IBM Storwize V5000 Expansion Flashcopy SW Five-years Registration One-time charge per Storage Device		0004

IBM Storwize V5000 0005
 Expansion Full Feature
 Five-years Registration
 One-time charge
 per Storage Device

IBM Storwize V5000 0006
 Expansion Remote Mirroring
 Five-years Registration
 One-time charge
 per Storage Device

No-Charge Features:

Serial number only 3444
 Electronic Delivery only 3453
 Ship Media Only 3470
 Ship Publication Only 3471
 SWMA Auto Renewal 9000
 Registration

Program name: IBM Storwize Family Software for Storwize V5000
 External Data Virtualization
 Software maintenance - One-year Registration and Renewal
 PID: 5639-ETA

One-year No Charge Registration

Description	Program number	Feature number
IBM Storwize V5000 External Data Virtualization Base SW One-year NC Registration per Storage Device	5639-ETA	0012
IBM Storwize V5000 External Data Virtualization Easy Tier SW One-year NC Registration per Storage Device		0004
IBM Storwize V5000 External Data Virtualization FlashCopy SW One-year NC Registration per Storage Device		0006
IBM Storwize V5000 External Data Virtualization Full Feature SW One-year NC Registration per Storage Device		0008
IBM Storwize V5000 External Data Virtualization Remote Mirroring SW One-year NC Registration per Storage Device		0010

No-Charge Features:

Serial number only 3444
 Electronic Delivery only 3453
 Ship Media Only 3470
 Ship Publication Only 3471
 SWMA Auto Renewal 9000

Registration

One-year Renewal:

Description	Program number	Feature number
IBM Storwize V5000 External Data Virtualization Base SW One-year Renewal One-time charge per Storage Device	5639-ETA	0011
IBM Storwize V5000 External Data Virtualization Easy Tier SW One-year Renewal One-time charge per Storage Device		0003
IBM Storwize V5000 External Data Virtualization FlashCopy SW One-year Renewal One-time charge per Storage Device		0005
IBM Storwize V5000 External Data Virtualization Full Feature SW One-year Renewal One-time charge per Storage Device		0007
IBM Storwize V5000 External Data Virtualization Remote Mirroring SW One-year Renewal One-time charge per Storage Device		0009

Program name: IBM Storwize Family Software for Storwize V5000
 External Data Virtualization
 Software maintenance - One-year After License
 PID: 5639-ETB

Description	Program number	Feature number
IBM Storwize V5000 External Data Virtualization Base SW One-year After License One-time charge per Storage Device	5639-ETB	0001
IBM Storwize V5000 External Data Virtualization Easy Tier SW One-year After License One-time charge per Storage Device		0003
IBM Storwize V5000 External Data Virtualization FlashCopy SW One-year After License One-time charge per Storage Device		0004

IBM Storwize V5000 0005
 External Data Virtualization
 Full Feature SW
 One-year After License
 One-time charge
 per Storage Device

IBM Storwize V5000 0006
 External Data Virtualization
 Remote Mirroring SW
 One-year After License
 One-time charge
 per Storage Device

Program name: IBM Storwize Family Software for Storwize V5000
 External Data Virtualization
 Software maintenance - Two-years Registration
 PID: 5639-ETF

Description	Program number	Feature number
IBM Storwize V5000 External Data Virtualization Base SW Two-years Registration One-time charge per Storage Device	5639-ETF	0001
IBM Storwize V5000 External Data Virtualization Easy Tier SW Two-years Registration One-time charge per Storage Device		0003
IBM Storwize V5000 External Data Virtualization FlashCopy SW Two-years Registration One-time charge per Storage Device		0004
IBM Storwize V5000 External Data Virtualization Full Feature SW Two-years Registration One-time charge per Storage Device		0005
IBM Storwize V5000 External Data Virtualization Remote Mirroring SW Two-years Registration One-time charge per Storage Device		0006

No-Charge Features:

Serial number only	3444
Electronic Delivery only	3453
Ship Media Only	3470
Ship Publication Only	3471
SWMA Auto Renewal Registration	9000

Program name: IBM Storwize Family Software for Storwize V5000
 External Data Virtualization
 Software maintenance - Three-years Registration

PID: 5639-ETC

Description	Program number	Feature number
IBM Storwize V5000 External Data Virtualization Base SW Three-years Registration One-time charge per Storage Device	5639-ETC	0001
IBM Storwize V5000 External Data Virtualization Easy Tier SW Three-years Registration One-time charge per Storage Device		0003
IBM Storwize V5000 External Data Virtualization FlashCopy SW Three-years Registration One-time charge per Storage Device		0004
IBM Storwize V5000 External Data Virtualization Full Feature SW Three-years Registration One-time charge per Storage Device		0005
IBM Storwize V5000 External Data Virtualization Remote Mirroring SW Three-years Registration One-time charge per Storage Device		0006

No-Charge Features:

Serial number only	3444
Electronic Delivery only	3453
Ship Media Only	3470
Ship Publication Only	3471
SWMA Auto Renewal Registration	9000

Program name: IBM Storwize Family Software for Storwize V5000
External Data Virtualization
Software maintenance - Three-years Renewal
PID: 5639-ETD

Description	Program number	Feature number
IBM Storwize V5000 External Data Virtualization Base SW Three-years Renewal One-time charge per Storage Device	5639-ETD	0001
IBM Storwize V5000 External Data Virtualization Easy Tier SW Three-years Renewal One-time charge per Storage Device		0003

IBM Storwize V5000 External Data Virtualization FlashCopy SW Three-years Renewal One-time charge per Storage Device	0004
IBM Storwize V5000 External Data Virtualization Full Feature SW Three-years Renewal One-time charge per Storage Device	0005
IBM Storwize V5000 External Data Virtualization Remote Mirroring SW Three-years Renewal One-time charge per Storage Device	0006

Program name: IBM Storwize Family Software for Storwize V5000
 External Data Virtualization
 Software maintenance - Three-years After License
 PID: 5639-ETE

Description	Program number	Feature number
IBM Storwize V5000 External Data Virtualization Base SW Three-years After License One-time charge per Storage Device	5639-ETE	0001
IBM Storwize V5000 External Data Virtualization Easy Tier SW Three-years After License One-time charge per Storage Device		0003
IBM Storwize V5000 External Data Virtualization FlashCopy SW Three-years After License One-time charge per Storage Device		0004
IBM Storwize V5000 External Data Virtualization Full Feature SW Three-years After License One-time charge per Storage Device		0005
IBM Storwize V5000 External Data Virtualization Remote Mirroring SW Three-years After License One-time charge per Storage Device		0006

Program name: IBM Storwize Family Software for Storwize V5000
 External Data Virtualization
 Software maintenance - Four-years Registration
 PID: 5639-ETG

Description	Program number	Feature number
IBM Storwize V5000 External Data Virtualization Base SW Four-years Registration One-time charge per Storage Device	5639-ETG	0001
IBM Storwize V5000 External Data Virtualization Easy Tier SW Four-years Registration One-time charge per Storage Device		0003
IBM Storwize V5000 External Data Virtualization FlashCopy SW Four-years Registration One-time charge per Storage Device		0004
IBM Storwize V5000 External Data Virtualization Full Feature SW Four-years Registration One-time charge per Storage Device		0005
IBM Storwize V5000 External Data Virtualization Remote Mirroring SW Four-years Registration One-time charge per Storage Device		0006
No-Charge Features:		
Serial number only		3444
Electronic Delivery only		3453
Ship Media Only		3470
Ship Publication Only		3471
SWMA Auto Renewal Registration		9000

Program name: IBM Storwize Family Software for Storwize V5000
External Data Virtualization
Software maintenance - Five-years Registration
PID: 5639-ETH

Description	Program number	Feature number
IBM Storwize V5000 External Data Virtualization Base SW Five-years Registration One-time charge per Storage Device	5639-ETH	0001
IBM Storwize V5000 External Data Virtualization Easy Tier SW Five-years Registration One-time charge per Storage Device		0003

IBM Storwize V5000	0004
External Data Virtualization	
FlashCopy SW	
Five-years Registration	
One-time charge	
per Storage Device	

IBM Storwize V5000	0005
External Data Virtualization	
Full Feature SW	
Five-years Registration	
One-time charge	
per Storage Device	

IBM Storwize V5000	0006
External Data Virtualization	
Remote Mirroring SW	
Five-years Registration	
One-time charge	
per Storage Device	

No-Charge Features:

Serial number only	3444
Electronic Delivery only	3453
Ship Media Only	3470
Ship Publication Only	3471
SWMA Auto Renewal	9000
Registration	

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Corrections

(Corrected on July 16, 2014)

The feature numbers for machine type-model 5639-ETG have been updated.