

IBM Spectrum Virtualize Software V8.2 delivers new functionality for the IBM Spectrum Virtualize family of offerings

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At a glance

IBM Spectrum Virtualize™ V8.2 delivers support for IBM FlashSystem® 9100 hardware enclosures and iSCSI Extensions for RDMA (iSER) host support.

Overview

IBM Spectrum Virtualize software delivers a powerful solution for storage virtualization and offers advanced storage capabilities.

IBM Spectrum Virtualize V8.2 adds support for the new IBM FlashSystem 9100 systems and clustering with IBM® Storwize® V7000.

Key prerequisites

Software requirements

Installation of IBM Spectrum Virtualize Software V8.2 can be done directly from systems running IBM Spectrum Virtualize Software V7.8.1, or later.

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

- [Storwize V7000](#)
- [FlashSystem 9100](#)

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 the applicable two-, three-, four-, or five-year software maintenance registration program number and features.

Hardware requirements

IBM Spectrum Virtualize Software for Storwize V7000 Controller Software (5639-CB8) requires at least one IBM Storwize V7000 control enclosure (2076-AF6, 2076-624, or 2076-524) for installation.

IBM Spectrum Virtualize Software for Storwize V7000 Expansion Software (5639-XB8) requires at least one IBM Storwize V7000 expansion enclosure (2076-A9F, 2076-92F, 2076-AFF, 2076-12F, or 2076-24F) for installation. The high-density

enclosure (2076-A9F or 2076-92F) requires four of the base software charge codes to support the number of drive slots in the system.

IBM Spectrum Virtualize Software for Storwize V7000 External Data Virtualization Software (5639-EB8) requires at least one IBM Storwize V7000 enclosure (2076-AF6, 2076-624, or 2076-524) for installation.

IBM Spectrum Virtualize Software for FlashSystem 9110 Controller (5639-FA2) requires at least one IBM FlashSystem 9110 control enclosure (9846-AF7 or 9848-AF7) for installation.

IBM Spectrum Virtualize Software for FlashSystem 9150 Controller (5639-FA3) requires at least one IBM FlashSystem 9150 control enclosure (9846-AF8 or 9848-AF8) for installation.

IBM Spectrum Virtualize Software for FlashSystem 9100 Expansions (5639-FA1) requires at least one IBM FlashSystem 9100 expansion enclosure (9846-AFF, 9846-A9F, 9848-AFF, or 9848-A9F) for installation. The high-density enclosures (9846-A9F and 9848-A9F) require four of the base software charge codes to support the number of drive slots in the system.

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

- [Storwize V7000](#)
- [FlashSystem 9100](#)

Planned availability date

August 28, 2018

See the [Availability of national languages](#) section for national language availability.

Description

IBM Spectrum Virtualize V8.2 builds upon the already robust tools and functionality of IBM Spectrum Virtualize V8.1 to add support for the new FlashSystem 9100 systems and clustering with the Storwize V7000. Additionally, these two platforms now support iSER protocol host attachment.

Lower latencies and higher bandwidth requirements can be addressed by using RDMA to implement iSCSI. iSER is a new interconnect protocol that allows iSCSI to run on top of RDMA technology. RDMA can be implemented by using RoCE (RDMA over Converged Ethernet) or iWARP (Internet Wide-area RDMA Protocol). iSER enables iSCSI to run on top of it regardless of which of these technologies is used underneath.

Section 508 of the US Rehabilitation Act

IBM Spectrum Virtualize software V8.2 is capable as of August 28, 2018, when used in accordance with IBM's associated documentation, of satisfying the applicable requirements of Section 508 of the Rehabilitation Act, provided that any assistive technology used with the product properly interoperates with it. A US Section 508 Accessibility Conformance Statement can be requested on the [Product accessibility information](#) website.

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.

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

IBM Spectrum Virtualize 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, FCoE, or iSCSI networks who seek to reduce the complexities and costs of managing their storage.

IBM Spectrum Virtualize software delivers a cross-industry offering for customers who are dealing with levels of complexity and increasing storage requirements. It has been enhanced with flash optimizations to support workloads demanding low latencies. These customers are also focused on scaling capacity and performance (scale up and scale out), data efficiency capabilities (deduplication, compression, thin provisioning, iSCSI Unmap), high availability functionalities (stretched cluster, HyperSwap^(R), and mirrored volumes), disaster recovery functions (Global and Metro Mirror), local copy services (FlashCopy^(R)), and performance features (flash drives and Easy Tier^(R)) at a reasonable cost.

Availability of national languages

Planned and supported geography translations will be available for download by August 28, 2018, at the following product websites:

- [IBM Storwize V7000](#)
- [IBM FlashSystem 9100](#)

Translation information, if available, can be found at the [Translation Reports](#) website.

Program number

Program number	VRM	Program name
5639-CB8	8.2.0	IBM Spectrum Virtualize Software for Storwize V7000 Controller Software V8
5639-XB8	8.2.0	IBM Spectrum Virtualize Software for Storwize V7000 Expansion Software V8
5639-EB8	8.2.0	IBM Spectrum Virtualize Software for Storwize V7000 External Data Virtualization Software V8
5639-FA2	8.2.0	IBM Spectrum Virtualize Software for FlashSystem 9110 Controller V8
5639-FA3	8.2.0	IBM Spectrum Virtualize Software for FlashSystem 9150 Controller V8
5639-FA1	8.2.0	IBM Spectrum Virtualize Software for FlashSystem 9100 Expansions V8

Product identification number**IBM Spectrum Virtualize Software for Storwize V7000 Controller Software V8**

Program number	Maintenance 1 year PID number	Maintenance 2 year PID number	Maintenance 3 year PID number	Maintenance 4 year PID number	Maintenance 5 year PID number
5639-CB8	5639-CBA	5639-CBF	5639-CBC	5639-CBG	5639-CBH
	5639-CBB		5639-CBD		
			5639-CBE		

IBM Spectrum Virtualize Software for Storwize V7000 Expansion Software V8

Program number	Maintenance 1 year PID number	Maintenance 2 year PID number	Maintenance 3 year PID number	Maintenance 4 year PID number	Maintenance 5 year PID number
5639-XB8	5639-XBA	5639-XBF	5639-XBC	5639-XBG	5639-XBH
	5639-XBB		5639-XBD		
			5639-XBE		

IBM Spectrum Virtualize Software for Storwize V7000 External Data Virtualization Software V8

Program number	Maintenance 1 year PID number	Maintenance 2 year PID number	Maintenance 3 year PID number	Maintenance 4 year PID number	Maintenance 5 year PID number
5639-EB8	5639-EBA	5639-EBF	5639-EBC	5639-EBG	5639-EBH
	5639-EBB		5639-EBD		
			5639-EBE		

IBM Spectrum Virtualize Software for FlashSystem 9110 Controller V8

Program number	Maintenance 1-year PID number	Maintenance 2-year PID number	Maintenance 3-year PID number	Maintenance 4-year PID number	Maintenance 5-year PID number
5639-FA2	5639-FAJ	5639-FAP	5639-FAL	5639-FAQ	5639-FAR
	5639-FAK		5639-FAM		
			5639-FAN		

IBM Spectrum Virtualize Software for FlashSystem 9150 Controller V8

Program number	Maintenance 1-year PID number	Maintenance 2-year PID number	Maintenance 3-year PID number	Maintenance 4-year PID number	Maintenance 5-year PID number
5639-FA3	5639-FAS	5639-FAX	5639-FAU	5639-FAY	5639-FAZ
	5639-FAT		5639-FAV		
			5639-FAW		

IBM Spectrum Virtualize Software for FlashSystem 9100 Expansions V8

Program number	Maintenance 1-year PID number	Maintenance 2-year PID number	Maintenance 3-year PID number	Maintenance 4-year PID number	Maintenance 5-year PID number
5639-FA1	5639-FAA	5639-FAF	5639-FAC	5639-FAG	5639-FAH
	5639-FAB		5639-FAD		
			5639-FAE		

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^(R) ID and password are required (use IBMid).

[BP Attachment for Announcement Letter 218-268](#)

Education support

IBM training provides education to support many IBM offerings. Descriptions of courses for IT professionals and managers can be found on the [IBM Training and Skills](#) website.

Call IBM training at 800-IBM-TEACH (426-8322) for catalogs, schedules, and enrollments.

Offering Information

Product information is available on the [IBM Offering Information](#) website.

Publications

The following publications can be downloaded in PDF format from the websites below:

Title	Order number
<i>ENUG</i>	Z125-5823
<i>IBM Systems Safety Notices</i>	G229-9054

To download these free PDF format publications, go to the [IBM Publications Center](#) website.

To access IBM Knowledge Center and to directly download any publications in PDF format, go to the individual IBM Knowledge Center product website:

- [IBM Storwize V7000](#)
- [IBM FlashSystem 9100](#)

Services

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, contact your Lab Services Sales or Delivery Leader.

Technical information

Specified operating environment

Hardware requirements

IBM Spectrum Virtualize Software for Storwize V7000 Controller Software (5639-CB8) requires at least one IBM Storwize V7000 control enclosure (2076-AF6, 2076-624, or 2076-524) for installation.

IBM Spectrum Virtualize Software for Storwize V7000 Expansion Software (5639-XB8) requires at least one IBM Storwize V7000 expansion enclosure (2076-A9F, 2076-92F, 2076-AFF, 2076-12F, or 2076-24F) for installation. The high-density enclosures (2076-A9F and 2076-92F) require four of the base software charge codes to support the number of drive slots in the system.

IBM Spectrum Virtualize Software for Storwize V7000 External Data Virtualization Software (5639-EB8) requires at least one IBM Storwize V7000 enclosure (2076-AF6, 2076-624, or 2076-524) for installation.

IBM Spectrum Virtualize Software for FlashSystem 9110 Controller (5639-FA2) requires at least one IBM FlashSystem 9110 control enclosure (9846-AF7 or 9848-AF7) for installation.

IBM Spectrum Virtualize Software for FlashSystem 9150 Controller (5639-FA3) requires at least one IBM FlashSystem 9150 control enclosure (9846-AF8 or 9848-AF8) for installation.

IBM Spectrum Virtualize Software for FlashSystem 9100 Expansions (5639-FA1) requires at least one IBM FlashSystem 9100 expansion enclosure (9846-AFF, 9846-A9F, 9848-AFF, or 9848-A9F) for installation. The high-density enclosures (9846-A9F and 9848-A9F) require four of the base software charge codes to support the number of drive slots in the system.

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

- [IBM Storwize V7000](#)
- [IBM FlashSystem 9100](#)

Software requirements

Installation of IBM Spectrum Virtualize Software V8.2 can be done directly from systems running IBM Spectrum Virtualize Software V7.8.1, or later.

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

- [IBM Storwize V7000](#)
- [IBM FlashSystem 9100](#)

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 the applicable two-, three-, four-, or five-year software maintenance registration program number and features.

Compatibility

For further information about currently supported environments and operating guidelines, go to the respective support website:

- [IBM Storwize V7000](#)
- [IBM FlashSystem 9100](#)

Limitations

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

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

Additional information on configuration limitations and configuration guidelines is further documented in the README file accompanying the Spectrum Virtualize Software or in furnished publications for this product available at the [IBM Storwize V7000](#) or [IBM FlashSystem 9100](#) support websites.

Encryption and other functions in this announcement may be subject to limitations and restrictions for supported configurations, environments, and use. See the *IBM Spectrum Virtualize V8.2 Configuration Limits and Restrictions* document for details.

To view this document, access the [IBM Systems Support](#) website.

Enter *V8.2 Configuration Limits and Restrictions* in the Search Support field and check the *Search only...* box.

Planning information

Client responsibilities

Planning for and provisioning of the required power and environmental support for an IBM Spectrum Virtualize family product, including its storage engines, is a customer responsibility.

Planning considerations for IBM Spectrum Virtualize Software are listed in IBM Knowledge Center under the respective product.

- [IBM Storwize V7000](#)
- [IBM FlashSystem 9100](#)

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.

Packaging

New order packaging

License information documents for IBM Spectrum Virtualize 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 Spectrum Virtualize Software order.

IBM FlashSystem 9100 Software V8.2 (5639-FA1, 5639-FA2, and 5639-FA3) is preinstalled on, and shipped with, the IBM 9846 and 9848 FlashSystem 9100 systems.

IBM Spectrum Virtualize Software for Storwize V7000 V8.2 (5639-CB8, 5639-XB8, 5639-EB8) 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 is shipped with each new controller order.

The paid invoice acts as Proof of Entitlement (PoE) for all orders of IBM Spectrum Virtualize Software V8.2. All associated media listed in the [Publications](#) section

are also shipped with the new hardware order. One media set per IBM Spectrum Virtualize system will be shipped.

Subsequent media orders

For additional available publications, see 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, which 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.

Direct client support

For technical support or assistance, contact your IBM representative or go to the [IBM Support Portal](#) website.

Security, auditability, and control

IBM Spectrum Virtualize 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.

Ordering information

Consult your IBM representative.

5639-FA2 -IBM Spectrum Virtualize Software for FlashSystem 9110 Controller Software V8

Feature description	OTC Feature number
IBM Spectrum Virtualize Software for FlashSystem 9110 Controller Software with 1 Year SW maintenance, Per Storage Device	0001

5639-FA3 -IBM Spectrum Virtualize Software for FlashSystem 9150 Controller Software V8

Feature description	OTC Feature number
5639-FA3 -IBM Spectrum Virtualize Software for FlashSystem 9150 Controller Software with 1 Year SW maintenance, Per Storage Device	0001
5639-FA3 -IBM Spectrum Virtualize Software for FlashSystem 9150 Controller Software Upgrade from 5639-FA2 with 1 Year SW maintenance, Per Storage Device	0002

5639-FA1 -IBM Spectrum Virtualize Software for FlashSystem 9100 Expansions Software V8

Feature description	OTC Feature number
IBM Spectrum Virtualize Software for FlashSystem 9100 Expansions Software with 1 Year SW maintenance, Per Storage Device	0001

This software license includes Software Maintenance, previously referred to as Software Subscription and Technical Support.

Extending coverage for a total of five years from the date of acquisition may be elected. Order the program number, feature number, and quantity to extend coverage for your software licenses. If maintenance has expired, specify the after license feature number.

Maintenance PID Description

Maintenance PID number	Description
5639-FAJ	IBM Spectrum Virtualize Software for FlashSystem 9110 Controller Software Maintenance 1 Year Registration and Renewal
5639-FAK	IBM Spectrum Virtualize Software for FlashSystem 9110 Controller Software Maintenance 1 Year After license
5639-FAP	IBM Spectrum Virtualize Software for FlashSystem 9110 Controller Software Maintenance 2 Yr Registration
5639-FAL	IBM Spectrum Virtualize Software for FlashSystem 9110 Controller Software Maintenance 3 Year Registration
5639-FAM	IBM Spectrum Virtualize Software for FlashSystem 9110 Controller Software Maintenance 3 Year Renewal
5639-FAN	IBM Spectrum Virtualize Software for FlashSystem 9110 Controller Software Maintenance 3 Year After License
5639-FAQ	IBM Spectrum Virtualize Software for FlashSystem 9110 Controller Software Maintenance 4 Year Registration
5639-FAR	IBM Spectrum Virtualize Software for FlashSystem 9110 Controller Software Maintenance 5 Year Registration
5639-FAS	IBM Spectrum Virtualize Software for FlashSystem 9150 Controller Software Maintenance 1 Year Registration and Renewal
5639-FAT	IBM Spectrum Virtualize Software for FlashSystem 9150 Controller Software Maintenance 1 Year After license
5639-FAX	IBM Spectrum Virtualize Software for FlashSystem 9150 Controller Software Maintenance 2 Year Registration
5639-FAU	IBM Spectrum Virtualize Software for FlashSystem 9150 Controller Software Maintenance 3 Year Registration
5639-FAV	IBM Spectrum Virtualize Software for FlashSystem 9150 Controller Software Maintenance 3 Year Renewal
5639-FAW	IBM Spectrum Virtualize Software for FlashSystem 9150 Controller Software Maintenance 3 Year After License
5639-FAY	IBM Spectrum Virtualize Software for FlashSystem 9150 Controller Software Maintenance 4 Year Registration
5639-FAZ	IBM Spectrum Virtualize Software for FlashSystem 9150 Controller Software Maintenance 5 Year Registration

Maintenance PID number	Description
5639-FAA	IBM Spectrum Virtualize Software for FlashSystem 9100 Expansion Software Maintenance 1 Year Registration and Renewal
5639-FAB	IBM Spectrum Virtualize Software for FlashSystem 9100 Expansion Software Maintenance 1 Year After license
5639-FAF	IBM Spectrum Virtualize Software for FlashSystem 9100 Expansion Software Maintenance 2 Year Registration
5639-FAC	IBM Spectrum Virtualize Software for FlashSystem 9100 Expansion Software Maintenance 3 Year Registration
5639-FAD	IBM Spectrum Virtualize Software for FlashSystem 9100 Expansion Software Maintenance 3 Year Renewal
5639-FAE	IBM Spectrum Virtualize Software for FlashSystem 9100 Expansion Software Maintenance 3 Year After License
5639-FAG	IBM Spectrum Virtualize Software for FlashSystem 9100 Expansion Software Maintenance 4 Year Registration
5639-FAH	IBM Spectrum Virtualize Software for FlashSystem 9100 Expansion Software Maintenance 5 Year Registration

Software license includes 1 year Software Maintenance

IBM Spectrum Virtualize Software for FlashSystem 9110 Controller Software Maintenance

Maintenance PID number	Feature description	OTC feature number
5639-FAJ	IBM Spectrum Virtualize Software for FlashSystem 9110 Controller Software Maintenance 1 Year Renewal, Per Storage Device	0001
5639-FAK	IBM Spectrum Virtualize Software for FlashSystem 9110 Controller Software Maintenance 1 Year After license, Per Storage Device	0001
5639-FAP	IBM Spectrum Virtualize Software for FlashSystem 9110 Controller Software Maintenance 2 Yr Registration, Per Storage Device	0001
5639-FAL	IBM Spectrum Virtualize Software for FlashSystem 9110 Controller Software Maintenance 3 Year Registration, Per Storage Device	0001
5639-FAM	IBM Spectrum Virtualize Software for FlashSystem 9110 Controller Software Maintenance 3 Year Renewal, Per Storage Device	0001
5639-FAN	IBM Spectrum Virtualize Software for FlashSystem 9110 Controller Software Maintenance 3 Year After License, Per Storage Device	0001

Maintenance PID number	Feature description	OTC feature number
5639-FAQ	IBM Spectrum Virtualize Software for FlashSystem 9110 Controller Software Maintenance 4 Year Registration, Per Storage Device	0001
5639-FAR	IBM Spectrum Virtualize Software for FlashSystem 9110 Controller Software Maintenance 5 Year Registration, Per Storage Device	0001

Maintenance PID number	Feature description	No charge feature number
5639-FAJ	IBM Spectrum Virtualize Software for FlashSystem 9110 Controller Software Maintenance 1 Year NC Registration, Per Storage Device	0002

IBM Spectrum Virtualize Software for FlashSystem 9150 Controller Software Maintenance

Maintenance PID number	Feature description	OTC feature number
5639-FAS	IBM Spectrum Virtualize Software for FlashSystem 9150 Controller Software Maintenance 1 Year Renewal, Per Storage Device	0001
5639-FAT	IBM Spectrum Virtualize Software for FlashSystem 9150 Controller Software Maintenance 1 Year After license, Per Storage Device	0001
5639-FAX	IBM Spectrum Virtualize Software for FlashSystem 9150 Controller Software Maintenance 2 Year Registration, Per Storage Device	0001
5639-FAU	IBM Spectrum Virtualize Software for FlashSystem 9150 Controller Software Maintenance 3 Year Registration, Per Storage Device	0001
5639-FAV	IBM Spectrum Virtualize Software for FlashSystem 9150 Controller Software Maintenance 3 Year Renewal, Per Storage Device	0001
5639-FAW	IBM Spectrum Virtualize Software for FlashSystem 9150 Controller Software Maintenance 3 Year After License, Per Storage Device	0001
5639-FAY	IBM Spectrum Virtualize Software for FlashSystem 9150 Controller Software Maintenance 4 Year	0001

Maintenance PID number	Feature description	OTC feature number
	Registration, Per Storage Device	
5639-FAZ	IBM Spectrum Virtualize Software for FlashSystem 9150 Controller Software Maintenance 5 Year Registration, Per Storage Device	0001

Maintenance PID number	Feature description	No charge feature number
5639-FAS	IBM Spectrum Virtualize Software for FlashSystem 9150 Controller Software Maintenance 1 Year NC Registration, Per Storage Device	0002

IBM Spectrum Virtualize Software for FlashSystem 9100 Expansion Software Maintenance

Maintenance PID number	Feature description	OTC feature number
5639-FAA	IBM Spectrum Virtualize Software for FlashSystem 9100 Expansion Software Maintenance 1 Year Renewal, Per Storage Device	0001
5639-FAB	IBM Spectrum Virtualize Software for FlashSystem 9100 Expansion Software Maintenance 1 Year After license, Per Storage Device	0001
5639-FAF	IBM Spectrum Virtualize Software for FlashSystem 9100 Expansion Software Maintenance 2 Year Registration, Per Storage Device	0001
5639-FAC	IBM Spectrum Virtualize Software for FlashSystem 9100 Expansion Software Maintenance 3 Year Registration, Per Storage Device	0001
5639-FAD	IBM Spectrum Virtualize Software for FlashSystem 9100 Expansion Software Maintenance 3 Year Renewal, Per Storage Device	0001
5639-FAE	IBM Spectrum Virtualize Software for FlashSystem 9100 Expansion Software Maintenance 3 Year After License, Per Storage Device	0001
5639-FAG	IBM Spectrum Virtualize Software for FlashSystem 9100 Expansion Software Maintenance 4 Year Registration, Per Storage Device	0001
5639-FAH	IBM Spectrum Virtualize Software for FlashSystem	0001

Maintenance PID number	Feature description	OTC feature number
	9100 Expansion Software Maintenance 5 Year Registration, Per Storage Device	

Maintenance PID number	Feature description	No charge feature number
5639-FAA	IBM Spectrum Virtualize Software for FlashSystem 9100 Expansion Software Maintenance 1 Year NC Registration, Per Storage Device	0002

Charge metric

Program name	Part number or PID number	Charge metric
IBM Spectrum Virtualize Software for Storwize V7000 Controller software V8	5639-CB8	Per Storage Device
IBM Spectrum Virtualize Software for Storwize V7000 Expansion software V8	5639-XB8	Per Storage Device
IBM Spectrum Virtualize Software for Storwize V7000 External data virtualization software V8	5639-EB8	Per Storage Device
IBM Spectrum Virtualize Software for FlashSystem 9110 Controller V8	5639-FA2	Per Storage Device
IBM Spectrum Virtualize Software for FlashSystem 9150 Controller V8	5639-FA3	Per Storage Device
IBM Spectrum Virtualize Software for FlashSystem 9100 Expansions V8	5639-FA1	Per Storage Device

New orders for IBM Spectrum Virtualize Software

For IBM Spectrum Virtualize Software V8 program number orders, first order the appropriate hardware for the initial system or cluster, then order the IBM Spectrum Virtualize Software license.

Note: Depending on the product, compression, external virtualization, remote mirroring, and encryption software product identifiers are optional. They can be ordered at the same time as the IBM Spectrum Virtualize Software and the corresponding hardware, or they can be ordered after the initial purchase, assuming the system is appropriately configured and licensed.

License metric definition

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 up to 25 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.

For devices which support more than twenty five drives (hard disk drives or solid state) multiple charge codes must be ordered in a quantity that will be equal to or greater than the maximum number of drives which are supported by the enclosure.

A storage device is equivalent to an enclosure supporting up to 25 disks, the term used most often when describing the Spectrum Virtualize Software product licensing and usage.

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^(R) Agreement, and the IBM Agreement for Acquisition of Software Maintenance.

Licensing

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

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

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 client signatures.

Licenses under the IBM Program License Agreement (IPLA) 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 can be extended by the purchase of a renewal option, if available. Two charges apply: 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

L-SVGY-AYTLX9 License Information for:

- 5639-CB8 -IBM Spectrum Virtualize V7000 Controller Software V8
- 5639-XB8 -IBM Spectrum Virtualize V7000 Expansion Software V8
- 5639-EB8 -IBM Spectrum Virtualize V7000 External Data Virtualization Software V8

L-SVGY-AYTLLJ License Information for:

- 5639-FA2 -IBM Spectrum Virtualize Software for FlashSystem 9110 Controller V8
- 5639-FA3 -IBM Spectrum Virtualize Software for FlashSystem 9150 Controller V8
- 5639-FA1 -IBM Spectrum Virtualize Software for FlashSystem 9100 Expansions V8

On or near the planned availability date, the current License Information documents will be available for review on the [IBM Software License Agreement](#) website.

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, see the [IBM Software Support Handbook](#).

IBM will maintain this information for at least one year after the original licensee acquires the program (warranty period).

Program support

Subscription and Support includes telephone assistance, as well as access to updates, releases, and versions of the program as long as support is in effect. You will be notified of discontinuance of support with 12 months' notice.

Money-back guarantee

If for any reason you are dissatisfied with the program and you are the original licensee, you may obtain a refund of the amount you paid for it, if within 30 days of your invoice date you return the program and its PoE to the party from whom you obtained it. If you downloaded the program, you may contact the party from whom you acquired it for instructions on how to obtain the refund.

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

Volume orders (IVO)

Yes. Contact your IBM representative.

Passport Advantage applies

No

Usage restrictions

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 Programs 5639-CB8 or 5639-XB7 are not transferable 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.

FlashSystem 9100

The following Program Unique Terms apply. This program is licensed for use with the IBM FlashSystem 9100 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 FlashSystem 9100 storage enclosure. The following paragraph titled "Disabling device" applies to the use of the IBM FlashSystem 9100 Software components. The term "Program" in these paragraphs shall mean the IBM FlashSystem 9100 Software components.

For all externally virtualized storage (such as any storage not purchased as part of a 9100 system), SVC capacity based licensing applies.

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-FA1, 5639-FA2, or 5639-FA3 are not transferable between IBM FlashSystem 9100 systems and are only to be used on the IBM FlashSystem 9100 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.

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Software Subscription and Support applies

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

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IBM Operational Support Services - SoftwareXcel

No

Variable charges apply

No

Educational allowance available

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

Statement of good security practices

IT system security involves protecting systems and information through intrusion 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 regulatory compliant, comprehensive security approach, which will necessarily involve additional operational procedures, and may require other systems, products, or services to be most effective.

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Prices

For all local charges, contact your IBM representative or your authorized IBM Business Partner.

5639-FA2 -IBM Spectrum Virtualize Software for FlashSystem 9110 Controller Software V8

Feature description	OTC Feature number
IBM Spectrum Virtualize Software for FlashSystem 9110 Controller Software with 1 Year SW maintenance, Per Storage Device	0001

5639-FA3 -IBM Spectrum Virtualize Software for FlashSystem 9150 Controller Software V8

Feature description	OTC Feature number
5639-FA3 -IBM Spectrum Virtualize Software for FlashSystem 9150 Controller Software with 1 Year SW maintenance, Per Storage Device	0001
5639-FA3 -IBM Spectrum Virtualize Software for FlashSystem 9150 Controller Software Upgrade from 5639-FA2 with 1 Year SW maintenance, Per Storage Device	0002

5639-FA1 -IBM Spectrum Virtualize Software for FlashSystem 9100 Expansions Software V8

Feature description	OTC Feature number
IBM Spectrum Virtualize Software for FlashSystem 9100 Expansions Software	0001

Feature description	OTC Feature number
with 1 Year SW maintenance, Per Storage Device	

IBM Spectrum Virtualize Software for FlashSystem 9110 Controller Software Maintenance

Maintenance PID number	Feature description	OTC feature number
5639-FAJ	IBM Spectrum Virtualize Software for FlashSystem 9110 Controller Software Maintenance 1 Year Renewal, Per Storage Device	0001
5639-FAK	IBM Spectrum Virtualize Software for FlashSystem 9110 Controller Software Maintenance 1 Year After license, Per Storage Device	0001
5639-FAP	IBM Spectrum Virtualize Software for FlashSystem 9110 Controller Software Maintenance 2 Yr Registration, Per Storage Device	0001
5639-FAL	IBM Spectrum Virtualize Software for FlashSystem 9110 Controller Software Maintenance 3 Year Registration, Per Storage Device	0001
5639-FAM	IBM Spectrum Virtualize Software for FlashSystem 9110 Controller Software Maintenance 3 Year Renewal, Per Storage Device	0001
5639-FAN	IBM Spectrum Virtualize Software for FlashSystem 9110 Controller Software Maintenance 3 Year After License, Per Storage Device	0001
5639-FAQ	IBM Spectrum Virtualize Software for FlashSystem 9110 Controller Software Maintenance 4 Year Registration, Per Storage Device	0001
5639-FAR	IBM Spectrum Virtualize Software for FlashSystem 9110 Controller Software Maintenance 5 Year Registration, Per Storage Device	0001

IBM Spectrum Virtualize Software for FlashSystem 9150 Controller Software Maintenance

Maintenance PID number	Feature description	OTC feature number
5639-FAS	IBM Spectrum Virtualize Software for FlashSystem 9150 Controller Software Maintenance 1 Year Renewal, Per Storage Device	0001

Maintenance PID number	Feature description	OTC feature number
5639-FAT	IBM Spectrum Virtualize Software for FlashSystem 9150 Controller Software Maintenance 1 Year After license, Per Storage Device	0001
5639-FAX	IBM Spectrum Virtualize Software for FlashSystem 9150 Controller Software Maintenance 2 Year Registration, Per Storage Device	0001
5639-FAU	IBM Spectrum Virtualize Software for FlashSystem 9150 Controller Software Maintenance 3 Year Registration, Per Storage Device	0001
5639-FAV	IBM Spectrum Virtualize Software for FlashSystem 9150 Controller Software Maintenance 3 Year Renewal, Per Storage Device	0001
5639-FAW	IBM Spectrum Virtualize Software for FlashSystem 9150 Controller Software Maintenance 3 Year After License, Per Storage Device	0001
5639-FAY	IBM Spectrum Virtualize Software for FlashSystem 9150 Controller Software Maintenance 4 Year Registration, Per Storage Device	0001
5639-FAZ	IBM Spectrum Virtualize Software for FlashSystem 9150 Controller Software Maintenance 5 Year Registration, Per Storage Device	0001

IBM Spectrum Virtualize Software for FlashSystem 9100 Expansion Software Maintenance

Maintenance PID number	Feature description	OTC feature number
5639-FAA	IBM Spectrum Virtualize Software for FlashSystem 9100 Expansion Software Maintenance 1 Year Renewal, Per Storage Device	0001
5639-FAB	IBM Spectrum Virtualize Software for FlashSystem 9100 Expansion Software Maintenance 1 Year After license, Per Storage Device	0001
5639-FAF	IBM Spectrum Virtualize Software for FlashSystem 9100 Expansion Software Maintenance 2 Year Registration, Per Storage Device	0001

Maintenance PID number	Feature description	OTC feature number
5639-FAC	IBM Spectrum Virtualize Software for FlashSystem 9100 Expansion Software Maintenance 3 Year Registration, Per Storage Device	0001
5639-FAD	IBM Spectrum Virtualize Software for FlashSystem 9100 Expansion Software Maintenance 3 Year Renewal, Per Storage Device	0001
5639-FAE	IBM Spectrum Virtualize Software for FlashSystem 9100 Expansion Software Maintenance 3 Year After License, Per Storage Device	0001
5639-FAG	IBM Spectrum Virtualize Software for FlashSystem 9100 Expansion Software Maintenance 4 Year Registration, Per Storage Device	0001
5639-FAH	IBM Spectrum Virtualize Software for FlashSystem 9100 Expansion Software Maintenance 5 Year Registration, Per Storage Device	0001

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