

# IBM Spectrum Virtualize for Public Cloud V8.3.1 expands hybrid multicloud support and offers additional ordering and licensing options

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## At a glance

IBM Spectrum<sup>(R)</sup> Virtualize for Public Cloud V8.3.1 delivers additional features and enhancements for use on Amazon Web Services (AWS) and IBM Cloud<sup>TM</sup>. These enhancements include additional scalability features, public cloud infrastructure optimization, and improved performance. AWS clients will be able to attach up to 20 Amazon Elastic Block Store (EBS) volumes per cluster to deliver a total capacity of 320 TB. In addition, a cluster can utilize up to four nodes for scalability and performance for business-critical workloads.

To help clients further reduce and optimize provisioned AWS EBS storage, data reduction pools can be created with support for software compression and deduplication. In this release, data reduction pools are also supported with the deduplication capability on IBM Cloud. These features give clients the ability to both compress and deduplicate data for significant savings in AWS EBS capacity.

IBM Spectrum Virtualize for Public Cloud V8.3.1 is orderable in both Passport Advantage<sup>(R)</sup> and in AAS. This enables all IBM FlashSystem<sup>(R)</sup> storage to include IBM Spectrum Virtualize for Public Cloud with appliance orders as part of a complete hybrid cloud solution. In addition, clients will be able to extend their current or new IBM<sup>(R)</sup> SAN Volume Controller (SVC) licensed capacity to IBM Spectrum Virtualize for Public Cloud, enabling flexible hybrid multicloud deployments.

Support for AWS enables deployment of IBM Spectrum Virtualize for Public Cloud on supported AWS EC2 instances deployed through the AWS Marketplace. Clients can create secondary copies of their on-premises data in the public cloud for disaster recovery, workload mobility, or migration of data between on-premises data centers and the public cloud. The software will be accompanied by several blueprint guides for complete application-aware hybrid cloud deployments.

## Overview

IBM Spectrum Virtualize for Public Cloud software delivers a powerful solution for creating hybrid multicloud architectures, extending on-premises appliances to public clouds, or independently deploying IBM Spectrum Virtualize for Public Cloud to manage data on the cloud just like on-premises.

IBM Spectrum Virtualize V8.3.1 adds the following benefits:

- Support for up to four nodes in a cluster on AWS

- Support for up to 20 EBS volumes provisioned to a cluster on AWS
- Support for up to 320 TB of storage in a single cluster on AWS
- Improved IO performance compared to V8.3.0. on larger Amazon Elastic Compute Cloud (Amazon EC2) instances as a result of additional RAM and processor capacity
- Data reduction pools with deduplication on AWS and on IBM Cloud
- Support for software-based compression on AWS
- Expanded support from Intel Xeon™ E5-2620 or E5-2650 bare metal servers to include Intel Xeon 5120 on IBM Cloud

IBM Spectrum Virtualize for Public Cloud V8.3.1 is a fully inclusive license with a flat per terabyte licensing model. It can be purchased through Passport Advantage as either a monthly term license or as a perpetual license. Through AAS, the software can be ordered with IBM FlashSystem hardware as a perpetual license. Support for AWS enables deployment of IBM Spectrum Virtualize for Public Cloud on supported AWS EC2 instances, deployable through the AWS Marketplace. Through the use of Cloud Formation Templates from Amazon, clients can deploy a cluster on the public cloud in just 15 minutes with an existing Amazon Virtual Private Cloud (Amazon VPC) on AWS.

Clients will be able to create hybrid multicloud solutions, offering the ability to transfer block data between on-premises data centers or private clouds using any IBM Spectrum Virtualize-based appliance, such as SVC, all IBM FlashSystem appliances, IBM Storwize<sup>®</sup> family appliances, and VersaStack. Clients can create secondary copies of their on-premises data in the public cloud for disaster recovery, workload redistribution, or migration of data from on-premises data centers to the public cloud. Consistent APIs, CLIs, and UIs between private and public clouds enable clients to provision and manage data on public clouds in the same way they do on-premises. Additionally, with deduplication and compression with data reduction pools, clients will have similar optimization capabilities on cloud infrastructures as they do on-premises.

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## Key requirements

### Software requirements

IBM Spectrum Virtualize for Public Cloud V8.3 (5737-F08) has the same software prerequisites as IBM Spectrum Virtualize for Public Cloud V8.1.

See the [Description](#) section for more information about these products and their software requirements.

### Hardware requirements

IBM Spectrum Virtualize for Public Cloud requires the separate purchase of either an IBM Cloud or AWS cloud infrastructure through the respective cloud provider. For IBM Cloud, the requirement is at least two bare metal servers, plus IBM Endurance or Performance Block Storage for data stores. In AWS, the requirement is at least three EC2 instances in addition to EBS storage. IBM Cloud and AWS infrastructures are to be purchased directly from the cloud provider under the user's own account.

IBM Cloud hardware requirements include:

- Two, four, six, or eight IBM Cloud bare metal servers depending on the size of the cluster required. Recommended for IBM Spectrum Virtualize are servers that include 2.4 GHz, Intel Xeon E5-2620, 12 Core, and 64 GB RAM, Intel™ X540 / X540-T2 or Intel X710 / X710-T4.
- The server version should be a dual-processor multicore server. CPU model Intel Xeon E5-2620 v3 is recommended except in locations with the 16+ cores, which require a server with more cores in order to get the required networking support.
- CPU should be no less than six cores per CPU.
- At least 64 GB of RAM configured in the bare metal server.

- There must be four hard disks per server, configured as two independent RAID 1 arrays resulting in /dev/sda for the operating system and /dev/sdb for exclusive use by IBM Spectrum Virtualize for Public Cloud. /dev/sdb must be greater than or equal to 150 GB.
- There must be a configuration of 10 Gb private unbounded VLAN on each bare metal server. The network cards must be 10 Gbps dual-public and dual-private network uplinks (unbonded).
- A redundant power supply is required if available in the selected IBM Cloud data center.
- All nodes of the same IBM Spectrum Virtualize for Public Cloud cluster must use the same VLAN.
- For back-end block storage managed by IBM Spectrum Virtualize, either IBM Cloud block endurance or performance tiers are supported.
- See the [IBM Cloud Block Storage](#) website for details.
- For clients who wish to replicate data between on-premises data centers and IBM public cloud using IBM Spectrum Virtualize copy services, proper networking connectivity is required between the on-premises data center and IBM Cloud. Consult the [IBM Cloud Networking Services](#) website for network connectivity, including VPN or gateways, that may be required.

IBM Spectrum Virtualize for Public Cloud supports specific hardware that can be purchased as part of an AWS infrastructure. The following EC2 instances are supported on AWS:

Model	vCPU	Memory (GiB)	Instance Storage (GiB)	Network Bandwidth (Gbps)	EBS Bandwidth (Mbps)
c5.4xlarge	16	32	EBS-Only	Up to 10	3,500
c5.9xlarge	36	72	EBS-Only	10	7,000
c5.18xlarge	72	144	EBS-Only	25	14,000

- For back-end block storage managed by IBM Spectrum Virtualize for Public Cloud, clients can purchase Amazon EBS from their AWS account.
- The EC2 instances and EBS must be in the same available zone.
- For clients who wish to replicate data between on-premises data centers and the AWS data center, consult the Amazon website for network connectivity, including VPN or gateways, that may be required.

Current support summaries, including specific software, hardware, and firmware levels supported, are maintained at the [IBM Spectrum Virtualize for Public Cloud](#) support website.

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## Planned availability date

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March 6, 2020

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

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## Description

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IBM Spectrum Virtualize for Public Cloud V8.3.1 adds additional support features for AWS running on Amazon EC2 and virtualizing Amazon EBS and on IBM Cloud. IBM Spectrum Virtualize for Public Cloud delivers a powerful solution for the deployment of IBM Spectrum Virtualize for Public Cloud in hybrid multicloud configurations that support IBM Cloud and AWS, including both private and public clouds.

### Data reduction pools

- Create data reduction pools from Amazon EBS volumes provisioned on AWS or with IBM Cloud Block Storage on IBM Cloud.

- Use deduplication features on AWS or IBM Cloud to reduce the amount of capacity required to store data on a public cloud.
- In AWS, clients can also take advantage of compression with data reduction pools for cost savings in EBS capacity.

### **Improved performance, capacity, and scalability on AWS**

- IBM Spectrum Virtualize for Public Cloud on AWS will support up to four-node clusters from client-selected Amazon EC2 instances.
- Increased capacity is offered for AWS through the support of 20 Amazon EBS volumes per cluster, or up to 320 TB of managed capacity for IBM Spectrum Virtualize for Public Cloud.
- Improved IO performance compared to V8.3.0 on larger Amazon EC2 instances as a result of additional RAM and processor capacity.

### **New infrastructure support on IBM Cloud**

- Expanded support from Intel Xeon E5-2620 or E5-2650 bare metal servers to now include Intel Xeon 5120 on IBM Cloud.

### **Extend hardware appliances to hybrid multicloud**

- SVC offers a no cost option to extend licensing to the public cloud. Either existing or new capacity for SVC can be extended to IBM Spectrum Virtualize for Public Cloud capacity with the "Enable Hybrid Cloud" option. Public cloud capacity is licensed as storage capacity unit category 1.
- All IBM FlashSystem storage arrays ordered in AAS are instantly cloud-ready by selecting IBM Spectrum Virtualize for Public Cloud on the "Additional Software" tab.

### **Section 508 of the US Rehabilitation Act**

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IBM Spectrum Virtualize software V8.3.1 is capable as of March 6, 2020, when used in accordance with associated IBM documentation, of satisfying the applicable standards, including the Worldwide Consortium Web Content Accessibility Guidelines, European Standard EN 301 349, and US Section 508, provided that any assistive technology used with the product properly interoperates with it. An Accessibility Conformance Statement can be requested on the [Product accessibility information](#) website.

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## **Product positioning**

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Clients 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. Clients also are embarking on the journey of IT transformation, transitioning from traditional data centers to using five or more private and public cloud providers in their business environments.

IBM Spectrum Virtualize systems deliver management of storage from entry and midrange up to enterprise storage systems, and enable hosts to attach through Fibre Channel (FC), FC over Ethernet (FCoE), iSCSI, or FC-NVMe. 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.

In conjunction with IBM Spectrum Virtualize on-premises, IBM Spectrum Virtualize for Public Cloud V8.3.1 enables clients to migrate data to and from supported public cloud providers, including IBM Cloud and AWS. Clients can create hybrid multicloud solutions for their traditional block data and workloads through the use of built-in IP replication capabilities. IBM Spectrum Virtualize for Public Cloud is deployed on

cloud IaaS from IBM Cloud or AWS, either on bare metal servers in IBM Cloud with IBM Cloud Block storage or on Amazon EC2 instances on AWS and virtualizing AWS EBS storage. This ability enables clients to create clustered configurations just like on-premises while bringing the optimization and virtualization capabilities of IBM Spectrum Virtualize to public cloud infrastructures.

These capabilities include most of the key features of IBM Spectrum Virtualize such as FlashCopy<sup>(R)</sup>, transparent cloud tiering, thin provisioning, Global Mirror, Metro Mirror, Global Mirror with change volumes, and Easy Tier<sup>(R)</sup> to public cloud IaaS. In this release, the ability to use data reduction pools on the public cloud through IBM Spectrum Virtualize for Public Cloud has been added. With this feature, clients can deduplicate and compress their data on AWS EBS storage, or deduplicate their data on IBM Cloud block storage. This can save clients significant amounts of capacity and therefore costs for the use of cloud storage.

Another key feature of IBM Spectrum Virtualize is its scalability. In this release, IBM Spectrum Virtualize for Public Cloud V8.3.1 brings scalability in performance and capacity to AWS through the ability to expand to a four-node cluster. An increase in the number of EBS volumes that can be attached to a single cluster from 16 to 20 provides more scalability, managing up to 320 TB of storage.

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## Availability of national languages

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Planned and supported geography translations will be available for download by March 6, 2020, at the [IBM Spectrum Virtualize for Public Cloud](#) website.

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

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## Program number

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Program number	VRM	Program name
5737-F08	8.3.1	IBM Spectrum Virtualize for Public Cloud
5641-PB1	8.3.1	IBM Spectrum Virtualize for Public Cloud with 1 year S&S
5641-PB2	8.3.1	IBM Spectrum Virtualize for Public Cloud with 2 year S&S
5641-PB3	8.3.1	IBM Spectrum Virtualize for Public Cloud with 3 year S&S
5641-PB4	8.3.1	IBM Spectrum Virtualize for Public Cloud with 4 year S&S
5641-PB5	8.3.1	IBM Spectrum Virtualize for Public Cloud with 5 year S&S
<b>Program number</b>		
5641-PB1		
<b>Program number</b>		
5641-PB2		
<b>Program number</b>		
5641-PB3		
<b>Program number</b>		
5641-PB4		

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**Program number**

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5641-PB5

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**Business Partner information**

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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<sup>(R)</sup> ID and password are required (use IBMid).

[BP Attachment for Announcement Letter 220-038](#)

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**Education support**

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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.

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**Offering Information**

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

More information is also available on the [Passport Advantage and Passport Advantage Express<sup>\(R\)</sup>](#) website.

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**Publications**

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

<b>Title</b>	<b>Order number</b>
<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 [IBM Spectrum Virtualize for Public Cloud](#) website in IBM Knowledge Center.

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**Services**

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**Software Services**

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IBM Software Services has the breadth, depth, and reach to manage your services needs. You can leverage the deep technical skills of the lab-based software services team and the business consulting, project management, and infrastructure expertise of the IBM Global Services team. Also, IBM extends the reach of IBM Software Services through IBM Business Partners to provide an extensive portfolio of capabilities. IBM provides 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.

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## Technical information

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### Specified operating environment

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#### Hardware requirements

IBM Spectrum Virtualize for Public Cloud requires the separate purchase of either an IBM Cloud or AWS cloud infrastructure through the respective cloud provider. For IBM Cloud, the requirement is at least two bare metal servers, plus IBM Endurance or Performance Block Storage for data stores. In AWS, the requirement is three Amazon EC2 instances, plus Amazon EBS storage. IBM Cloud and AWS infrastructures are to be purchased directly from the cloud provider under the client's own account.

IBM Cloud hardware requirements include:

- Two, four, six, or eight IBM Cloud bare metal servers depending on the size of the cluster required. Recommended for IBM Spectrum Virtualize are servers that include 2.4 GHz, Intel Xeon E5-2620, 12 Core, and 64 GB RAM, Intel X540 / X540-T2 or Intel X710 / X710-T4.
- The server version should be a dual-processor multicore server. CPU model Intel Xeon E5-2620 v3 is recommended except in locations with more than 16 cores which require a server with more cores in order to receive the required networking support.
- CPU should be no less than six cores per CPU.
- At least 64 GB of RAM configured in the bare metal server.
- There must be four hard disks per server, configured as two independent RAID 1 arrays resulting in /dev/sda for the operating system and /dev/sdb for exclusive use by IBM Spectrum Virtualize for Public Cloud. /dev/sdb must be greater than or equal to 150 GB.
- There must be a configuration of 10 Gb private unbounded VLAN on each bare metal server. The network cards must be 10 Gbps dual-public and dual-private network uplinks (unbonded).
- A redundant power supply is recommended if available in the selected IBM Cloud data center.
- All nodes of the same IBM Spectrum Virtualize for Public Cloud cluster must use the same VLAN.
- For back-end block storage managed by IBM Spectrum Virtualize, either IBM Cloud block endurance or performance tiers are supported.
- See the [IBM Cloud Block Storage](#) website for details.
- For clients who wish to replicate data between on-premises data centers and IBM public cloud using IBM Spectrum Virtualize copy services, proper networking connectivity is required between the on premises data center and the IBM cloud. Consult the [IBM Cloud Networking Services](#) website for network connectivity, including VPN or gateways, that may be required.

IBM Spectrum Virtualize for Public Cloud supports specific hardware that can be purchased as part of an AWS infrastructure. The following Amazon EC2 instances are supported on AWS:

Model	vCPU	Memory (GiB)	Instance storage (GiB)	Network bandwidth (Gbps)	Amazon EBS bandwidth (Mbps)
c5.4xlarge	16	32	EBS-Only	Up to 10	3,500
c5.9xlarge	36	72	EBS-Only	10	7,000
c5.18xlarge	72	144	EBS-Only	25	14,000

- For back-end block storage managed by IBM Spectrum Virtualize for Public Cloud, clients can purchase Amazon EBS from their AWS account.
- The Amazon EC2 instances and Amazon EBS must be in the same available zone.

- For clients who wish to replicate data between on-premises data centers and the AWS data center, see the Amazon website for network connectivity, including VPN or gateways that may be required.

Current support summaries, including specific software, hardware, and firmware levels supported, are maintained at the [IBM Spectrum Virtualize for Public Cloud](#) support website.

### **Software requirements**

Only internet connectivity and a browser to access the service are needed. There are no other prerequisites.

For product environment and configuration information, go to the [IBM Spectrum Virtualize for Public Cloud](#) website.

IBM Spectrum Virtualize for Public Cloud, all software maintenance renewals will be managed and invoiced through Passport Advantage. A license must be purchased before it can be deployed on either the IBM Cloud or AWS. The license can be used on either IBM Cloud or on AWS based on selecting the appropriate part numbers. The license is transferable between different supported public clouds.

See the [Description](#) section for new storage system and host environment support added by this release. For all current storage systems and host environments supported, go to the [IBM Spectrum Virtualize for Public Cloud](#) support website.

### **Compatibility**

For further information about currently supported environments and operating guidelines, go to the [IBM Spectrum Virtualize for Public Cloud](#) support website.

### **Limitations**

For IBM Spectrum Virtualize for Public Cloud V8.3.01, the following limitations exist for deployment in AWS:

- The Amazon EC2 instances and Amazon EBS must be in the same available zone.
- Single IO group support prevents nondisruptive vDisk move to be used.

The following features are not supported in version 8.3.1 of IBM Spectrum Virtualize for Public Cloud, but may be supported in later versions:

- Encryption
- Stretch cluster and local HyperSwap<sup>(R)</sup>
- Real-time Compression
- Hot spare node
- IPv6 address as node IP

For IBM Spectrum Virtualize for Public Cloud V8.3, the following limitations exist for deployment on the IBM Cloud:

- The IO performance of IBM Spectrum Virtualize for Public Cloud is limited by the number of Ethernet ports available on the bare metal servers in the IBM Cloud infrastructure. Each IBM Spectrum Virtualize for Public Cloud node is limited to two 10 Gb Ethernet ports, which are used for IO to and from hosts, IO to and from IBM Cloud block storage, as well as for intranode communication.
- In order to achieve better performance, IP addresses for IBM Spectrum Virtualize for Public Cloud nodes and client nodes should be configured to use the same subnet.

The following features are not supported in version 8.3.1 of IBM Spectrum Virtualize for Public Cloud:



- Encryption
- Stretch cluster and local HyperSwap

For additional information, see the [Usage restrictions](#) 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.

Additional information about configuration limitations and configuration guidelines is further documented in the README file accompanying the IBM Spectrum Virtualize Software or in furnished publications for this product available at the [IBM Spectrum Virtualize for Public Cloud support](#) website.

### ***Performance considerations***

The IO performance delivered by IBM Spectrum Virtualize for Public Cloud is also limited by 2x10 Gb Ethernet port per node shared by IO from hosts to IBM Spectrum Virtualize for Public Cloud, IBM Spectrum Virtualize for Public Cloud to IBM Cloud block storage, and IBM Spectrum Virtualize for Public Cloud write mirror.

In order to achieve better performance, IP addresses for IBM Spectrum Virtualize for Public Cloud nodes and client nodes should be configured to use the same subnet.

### ***IBM Support***

[IBM Support](#) is your gateway to technical support tools and resources that are designed to help you save time and simplify support. IBM Support can help you find answers to questions, download fixes, troubleshoot, submit and track problem cases, and build skills. Learn and stay informed about the transformation of IBM Support, including new tools, new processes, and new capabilities, by going to the [IBM Support Insider](#).

### ***Planning information***

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#### ***Client responsibilities***

The client is responsible for the separate purchase and contracting of all IBM Cloud infrastructure resources that are connected to IBM Spectrum Virtualize for Public Cloud, including networking (public and private), bare metal servers, and IBM Cloud endurance or performance block storage.

On AWS, the client is responsible for the purchase of Amazon EC2, networking, and Amazon EBS resources as part of the deployment of IBM Spectrum Virtualize for Public Cloud through the AWS Marketplace.

The client is responsible for providing network connectivity between on-premises data centers and the public cloud for the use of replication services in IBM Spectrum Virtualize for Public Cloud.

The client is responsible for enabling Call Home after installing IBM Spectrum Virtualize for Public Cloud. Call Home will be used to enable remote support assistance, and also to enable metering of monthly capacity.

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

Planning considerations for IBM Spectrum Virtualize Software are listed in IBM Knowledge Center under the respective [IBM Spectrum Virtualize for Public Cloud](#) webpage.

#### ***Packaging***

This offering is available from [IBM Marketplace](#) and on AWS Marketplace. On IBM Marketplace, you can discover, try, and buy software, hardware, and services from IBM and third-party providers.

For IBM Cloud, this offering will come with an installation script that will automate the installation of the image from a repository on the public cloud to bare metal servers as provided by the client.

For AWS, there is no code to be downloaded after purchase. On AWS, there is a secure Amazon Machine Image that will automatically be deployed through the CloudFormation template on AWS Marketplace. The client does not need to install or download any software separately.

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.

On Amazon AWS, the IBM License Agreement and License information are available to view during deployment.

### **Direct client support**

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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 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 with each program license acquired. The initial period of Software Subscription and Support can be extended by the purchase of a renewal option, if available.

### **Security, auditability, and control**

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IBM Spectrum Virtualize Software can use an existing LDAP for authentication, for example, interfacing with Microsoft Active Directory.

The client is responsible for evaluation, selection, and implementation of security features, administrative procedures, and appropriate controls in application systems and communication facilities.

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## **Ordering information**

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Products announced as dual-pipe are available for ordering by program number and feature number or by part number. Products can be obtained by part number through [Passport Advantage](#).

For more information, contact your IBM representative or IBM Business Partner.

This product is only available through Passport Advantage. It is not available as shrinkwrap.

These products may only be sold directly by IBM or by IBM Business Partners.

To locate IBM Business Partners in your geography, see the [Find a Business Partner](#) page.

### **Passport Advantage**

Program name: **IBM Spectrum Virtualize for Public Cloud (5737-F08)**

<b>Program name/Description</b>	<b>Part number</b>
IBM Spectrum Virtualize for Public Cloud on IBM Cloud 1 Terabyte Monthly License Incremental Capacity	D1VPCLL

<b>Program name/Description</b>	<b>Part number</b>
IBM Spectrum Virtualize for Public Cloud on IBM Cloud10 Terabytes License + SW Subscription & Support 12 Months	D1VNILL
IBM Spectrum Virtualize for Public Cloud on IBM Cloud10 Terabytes Monthly Base License	D1VNNLL
IBM Spectrum Virtualize for Public Cloud on IBM Cloud10 Terabytes Annual SW Subscription & Support Renewal 12 Months	E0NZQLL
IBM Spectrum Virtualize for Public Cloud on IBM Cloud 10 Terabytes SW Subscription & Support Reinstatement 12 Months	D1VNJLL
IBM Spectrum Virtualize for Public Cloud on IBM Cloud 1 Terabyte License + SW Subscription and Support 12 Months	D27GDLL
IBM Spectrum Virtualize for Public Cloud on IBM Cloud 1 Terabyte SW Subscription & Support Reinstatement 12 Months	D27GELL
IBM Spectrum Virtualize for Public Cloud on IBM Cloud 1 Terabyte SW Subscription and Support Renewal 12 Months	E0QV3LL
IBM Spectrum Virtualize for Public Cloud on AWS 10 Terabytes License + SW Subscription & Support 12 Months	D22TPLL
IBM Spectrum Virtualize for Public Cloud on AWS 10 Terabytes Monthly License	D22STLL
IBM Spectrum Virtualize for Public Cloud on AWS 10 Terabytes Annual SW Subscription & Support Renewal 12 Months	E0Q2CLL
IBM Spectrum Virtualize for Public Cloud on AWS 10 Terabytes SW Subscription & Support Reinstatement 12 Months	D22TSLL
IBM Spectrum Virtualize for Public Cloud on AWS 1 Terabyte License + SW Subscription & Support 12 Months	D22TVLL
IBM Spectrum Virtualize for Public Cloud on AWS 1 Terabyte Monthly License	D22SULL
IBM Spectrum Virtualize for Public Cloud on AWS 1 Terabyte Annual SW Subscription & Support Renewal 12 Months	E0Q2FLL
IBM Spectrum Virtualize for Public Cloud on AWS 1 Terabyte SW Subscription & Support Reinstatement 12 Months	D22TWLL

### **IBM Configurator for e-business (e-config)**

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

These software licenses include Software Subscription and Support, previously referred to as Software Maintenance. Coverage for a total of one year, two years, three years, four years, or five years, from the date of acquisition, may be elected. Renewals, and reinstatement if needed, will be managed in Passport Advantage.

### **New program and feature numbers**

IBM Spectrum Virtualize for Public Cloud V8.3.1 introduces the following program and feature numbers:

<b>Program number</b>	<b>Feature description</b>	<b>One-time charge feature number</b>
5641-PB1	IBM SV on IBM Cloud with 1 Year S&S, Per Terabyte	2440

<b>Program number</b>	<b>Feature description</b>	<b>One-time charge feature number</b>
	IBM SV on IBM Cloud with 1 Year S&S, Per 250 Terabyte	2441
	IBM SV on AWS with 1 Year S&S, Per Terabyte	2438
	IBM SV on AWS with 1 Year S&S, Per 250 Terabyte	2439
<b>Program number</b>	<b>Feature description</b>	<b>One-time charge feature number</b>
5641-PB2	IBM SV on IBM Cloud with 2 Year S&S, Per Terabyte	2469
	IBM SV on IBM Cloud with 2 Year S&S, Per 250 Terabyte	2468
	IBM SV on AWS with 2 Year S&S, Per Terabyte	2466
	IBM SV on AWS with 2 Year S&S, Per 250 Terabyte	2467
<b>Program number</b>	<b>Feature description</b>	<b>One-time charge feature number</b>
5641-PB3	IBM SV on IBM Cloud with 3 Year S&S, Per Terabyte	2464
	IBM SV on IBM Cloud with 3 Year S&S, Per 250 Terabyte	2465
	IBM SV on AWS with 3 Year S&S, Per Terabyte	2463
	IBM SV on AWS with 3 Year S&S, Per 250 Terabyte	2462
<b>Program number</b>	<b>Feature description</b>	<b>One-time charge feature number</b>
5641-PB4	IBM SV on IBM Cloud with 4 Year S&S, Per Terabyte	2461
	IBM SV on IBM Cloud with 4 Year S&S, Per 250 Terabyte	2460
	IBM SV on AWS with 4 Year S&S, Per Terabyte	2458
	IBM SV on AWS with 4 Year S&S, Per 250 Terabyte	2459
<b>Program number</b>	<b>Feature description</b>	<b>One-time charge feature number</b>
5641-PB5	IBM SV on IBM Cloud with 5 Year S&S, Per Terabyte	2456
	IBM SV on IBM Cloud with 5 Year S&S, Per 250 Terabyte	2457
	IBM SV on AWS with 5 Year S&S, Per Terabyte	2454
	IBM SV on AWS with 5 Year S&S, Per 250 Terabyte	2455

## **Charge metric**

The charge metrics for these licensed products can be found in the following License Information documents:

<b>Program identifier</b>	<b>License Information document title</b>	<b>License Information document number</b>
5737-F08	IBM Spectrum Virtualize for Public Cloud, v8.3 GA	<a href="#">L-SVGY-BHXSTQ</a>
5641-PB1	IBM Spectrum Virtualize for Public Cloud with 1 year Subscription and Support, v8.3 GA	<a href="#">L-SVGY-BHXSTQ</a>
5641-PB2	IBM Spectrum Virtualize for Public Cloud with 2 year Subscription and Support, v8.3 GA	<a href="#">L-SVGY-BHXSTQ</a>
5641-PB3	IBM Spectrum Virtualize for Public Cloud with 3 year Subscription and Support, v8.3 GA	<a href="#">L-SVGY-BHXSTQ</a>
5641-PB4	IBM Spectrum Virtualize for Public Cloud with 4 year Subscription and Support, v8.3 GA	<a href="#">L-SVGY-BHXSTQ</a>
5641-PB5	IBM Spectrum Virtualize for Public Cloud with 5 year Subscription and Support, v8.3 GA	<a href="#">L-SVGY-BHXSTQ</a>

Select your language of choice and scroll down to the Charge Metrics section. Follow-on releases, if any, may have updated terms. See the [License Information documents](#) website for more information.

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## **Terms and conditions**

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

This product is only available through Passport Advantage.

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### **License Information number**

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The following License Information documents apply to the offerings in this announcement:

<b>Program identifier</b>	<b>License Information document title</b>	<b>License Information document number</b>
5737-F08	IBM Spectrum Virtualize for Public Cloud, v8.3.1 GA	<a href="#">L-SVGY-BHXSTQ</a>

Select your language of choice and scroll down to the Charge Metrics section.

Follow-on releases, if any, may have updated terms. See the [License Information documents](#) website for more information.

### **Limited warranty applies**

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Yes

### **Limited warranty**

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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.

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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**

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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.

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### **Volume orders (IVO)**

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Yes. Contact your IBM representative.

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### **Passport Advantage applies**

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Yes, information is available on the [Passport Advantage and Passport Advantage Express](#) website.

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### **Usage restrictions**

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Yes

This offering is subject to usage restrictions.

See License Information document [L-SVGY-BHXSTQ](#) for details. These restrictions are current as of the date of announcement. Follow-on releases, if any, may have updated terms. See the [License Information documents](#) website for any new or revised restrictions.

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### **Software Subscription and Support applies**

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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 client productivity by providing voice or electronic access into the IBM support organizations.

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### **Variable charges apply**

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No

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### **Educational allowance available**

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

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## **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

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### Passport Advantage

For Passport Advantage information and charges, contact your IBM representative or IBM Business Partner for Channel Value Rewards. Additional information is also available on the [Passport Advantage and Passport Advantage Express](#) website.

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

Program number	Feature description	One-time charge feature number
5641-PB1	IBM SV on IBM Cloud with 1 Year S&S, Per Terabyte	2440
	IBM SV on IBM Cloud with 1 Year S&S, Per 250 Terabyte	2441
	IBM SV on AWS with 1 Year S&S, Per Terabyte	2438
	IBM SV on AWS with 1 Year S&S, Per 250 Terabyte	2439
Program number	Feature description	One-time charge feature number
5641-PB2	IBM SV on IBM Cloud with 2 Year S&S, Per Terabyte	2469
	IBM SV on IBM Cloud with 2 Year S&S, Per 250 Terabyte	2468
	IBM SV on AWS with 2 Year S&S, Per Terabyte	2466
	IBM SV on AWS with 2 Year S&S, Per 250 Terabyte	2467
Program number	Feature description	One-time charge feature number
5641-PB3	IBM SV on IBM Cloud with 3 Year S&S, Per Terabyte	2464



<b>Program number</b>	<b>Feature description</b>	<b>One-time charge feature number</b>
	IBM SV on IBM Cloud with 3 Year S&S, Per 250 Terabyte	2465
	IBM SV on AWS with 3 Year S&S, Per Terabyte	2463
	IBM SV on AWS with 3 Year S&S, Per 250 Terabyte	2462
<b>Program number</b>	<b>Feature description</b>	<b>One-time charge feature number</b>
5641-PB4	IBM SV on IBM Cloud with 4 Year S&S, Per Terabyte	2461
	IBM SV on IBM Cloud with 4 Year S&S, Per 250 Terabyte	2460
	IBM SV on AWS with 4 Year S&S, Per Terabyte	2458
	IBM SV on AWS with 4 Year S&S, Per 250 Terabyte	2459
<b>Program number</b>	<b>Feature description</b>	<b>One-time charge feature number</b>
5641-PB5	IBM SV on IBM Cloud with 5 Year S&S, Per Terabyte	2456
	IBM SV on IBM Cloud with 5 Year S&S, Per 250 Terabyte	2457
	IBM SV on AWS with 5 Year S&S, Per Terabyte	2454
	IBM SV on AWS with 5 Year S&S, Per 250 Terabyte	2455

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