

IBM Spectrum Connect
3.11.0

Release Notes



First Edition (April 2023)

This edition applies to IBM® Spectrum Connect 3.11.0 software package. Newer document editions may be issued for the same product version in order to add missing information, update information, or amend typographical errors. The edition is reset to 'First Edition' for every new product version.

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Overview

IBM Spectrum Connect is a centralized server system that consolidates a range of IBM storage provisioning, automation, and monitoring solutions through a unified storage management interface.

IBM Spectrum Connect provides a single server backend location and enables centralized management of IBM storage resources for different virtualization and cloud platforms.

The following solution components, referred to as interfaces, are supported by the software package:

- **IBM Storage Provider for VMware VASA** – Improves the ability to monitor and automate storage-related operations on VMware platforms. This includes support for VASA 3.0 (without replication) and virtual volumes. In addition, it uses Storage Policy Based Management (SPBM) technology for optimizing the virtual machine provisioning process.
- **IBM Storage Enhancements for VMware vSphere Web Client** – Integrate into the VMware vSphere Web Client platform and enable VMware administrators to independently and centrally manage their storage resources on IBM storage systems.
- **IBM Storage Plugin for VMware vRealize Orchestrator** – Allows VMware administrators to include IBM discovery and provisioning in their vRealize Orchestrator automation workflows.
- **IBM Storage Management Pack for VMware vRealize Operations Manager** – Allows VMware administrators to obtain comprehensive monitoring information about the IBM storage resources that are utilized in their virtualized cloud environment.
- **IBM Storage Automation Plugin for PowerShell** – Runs cmdlets for provisioning and management of the IBM FlashSystem® A9000 and A9000R storage systems and IBM Spectrum® Virtualize Family products.

Note: IBM Storage Automation Plugin for PowerShell is not provided as an integral part of the Spectrum Connect package and must be installed separately.

You can download the IBM Spectrum Connect software package at any time from [IBM Fix Central website](http://www.ibm.com/support/fixcentral) (www.ibm.com/support/fixcentral).

What's new in 3.11.0

Spectrum Connect 3.11.0 introduces the following enhancements:

Python package upgrade to 3.9

Python package is upgraded from 3.6 to 3.9.

Access to read nginx logs

Permission provided to read nginx logs in Spectrum Connect logs.

Error message updated for storage FS7200 running 8.3.1

While trying to register a new FS7200 storage system into SC 3.7.0, display error message text got updated.

Log in credentials of VASA provider made hidden

Username is appearing as plain text and password is made hidden for VASA provider.

MAX_CHUNK_SIZE is updated

MAX_CHUNK_SIZE is changed as per 2016 programming guide.

Miscellaneous resolved issue

For more information about the resolved issues in version 3.11, see [“3.11.0 \(April 2023\)”](#) on page 7.

Compatibility and requirements

This section specifies the compatibility and requirements of this version of IBM Spectrum Connect.

Note: For information about the compatibility and requirements of previous versions, refer to relevant release notes of IBM Spectrum Connect, IBM Spectrum Control Base Edition or IBM Storage Integration Server.

Supported storage systems

IBM Spectrum Connect 3.11.0 supports different IBM storage systems as listed in the following table.

Table 1. Supported storage systems

Storage system	Microcode version(s)	Compatibility note(s)	Supported cloud interface(s)
IBM DS8880	8.0.1, 8.1.x, 8.2.x, 8.3.x, 8.4.x, 8.5.x	<ul style="list-style-type: none"> VMware vSphere Web Client support is introduced by the bundle 88.1.xxx. Virtual volume technology is not supported. 	<ul style="list-style-type: none"> IBM Storage Provider for VMware VASA IBM Storage Enhancements for VMware vSphere Web Client IBM Storage Plug-in for VMware vRealize Orchestrator
IBM DS8900	9.0.x	<ul style="list-style-type: none"> Virtual volume technology is not supported. 	<ul style="list-style-type: none"> IBM Storage Provider for VMware VASA IBM Storage Enhancements for VMware vSphere Web Client IBM Storage Plug-in for VMware vRealize Orchestrator
IBM SAN Volume Controller, IBM Storwize, IBM FlashSystem families built with Spectrum Virtualize software (including 5xxx, 7xxx, 9xxx, V3xxx, V5xxx, V7xxx) ¹	7.8.x, 8.2.x, 8.3.x, 8.4.x, 8.5.x		<ul style="list-style-type: none"> IBM Storage Provider for VMware VASA IBM Storage Enhancements for VMware vSphere Web Client IBM Storage Plug-in for VMware vRealize Orchestrator IBM Storage Management Pack for VMware vRealize Operations Manager IBM Storage Automation Plug-in for PowerShell
IBM Storwize® V7000 Unified	1.5.2 - 1.6.2	Only block storage is supported. File shares and file systems are not supported.	<ul style="list-style-type: none"> IBM Storage Provider for VMware VASA IBM Storage Enhancements for VMware vSphere Web Client IBM Storage Plug-in for VMware vRealize Orchestrator IBM Storage Management Pack for VMware vRealize Operations Manager

Table 1. Supported storage systems (continued)

Storage system	Microcode version(s)	Compatibility note(s)	Supported cloud interface(s)
IBM FlashSystem A9000 and A9000R	12.3.2.b or later	VMware Virtual Volume technology (vVol) is not supported	<ul style="list-style-type: none"> • IBM Storage Provider for VMware VASA • IBM Storage Enhancements for VMware vSphere Web Client • IBM Storage Plug-in for VMware vRealize Orchestrator • IBM Storage Management Pack for VMware vRealize Operations Manager • IBM Storage Automation Plug-in for PowerShell

¹Note the following for Spectrum Virtualize family storage systems:

- IBM Spectrum Virtualize family storage systems run the Spectrum Virtualize software. In addition, the Spectrum Virtualize package is available as a deployable solution that can be run on any compatible hardware.
The Spectrum Virtualize family includes SAN Volume Controller, FlashSystem, and Storwize family members built with Spectrum Virtualize (including 5xxx, 7xxx, 9xxx, V3xxx, V5xxx, V7xxx).
- Spectrum Virtualize family microcode versions 8.4.x and 8.5.x include both LTS and Non-LTS releases. For more information, see [IBM Spectrum Virtualize FAQ for Continuous Development \(CD\) Release Model for software releases](#).
- For a full list of beginning and end of supported Spectrum Virtualize products, see the [IBM Spectrum Connect lifecycle and compatibility matrix](#).
- Spectrum Virtualize as software only supports vVols but they cannot be used with HyperSwap.

Note:

- Newer microcode versions may also be compatible. When a newer microcode version becomes available, contact IBM Support to inquire whether the new microcode version is compatible with the current version of IBM Spectrum Connect. Alternatively, check for a newer version of IBM Spectrum Connect. In addition, the [IBM Spectrum Connect lifecycle and compatibility matrix](#) in IBM Documentation details the Spectrum Connect lifecycle with compatible storage system microcodes and supported cloud interfaces.
- See the [VMware compatibility matrix](#) in IBM Documentation for information about supported combinations of IBM storage system software versions and various VMware cloud platforms.

Supported operating systems

The IBM Spectrum Connect software can be installed on the following Linux[®] versions.

Table 2. Supported operating systems	
Operating system	Architecture
Red Hat [®] Enterprise Linux (RHEL) 7.0–7.7, 8.0, 8.2, 8.4, 8.5	x86-64

Minimum server hardware requirements

The Linux server upon which IBM Spectrum Connect is installed should meet the following minimum hardware requirements:

- 64-bit dual-core CPU
- 4 GB of RAM
- 16 GB of free disk space

- 4 GB swap space

The same requirements apply if a virtual machine is used instead of a physical server.

Note:

- For best performance, use a dedicated server.
- The minimum requirements are for supporting up to 20 storage systems and up to 1000 objects (storage resources, volumes, hosts, mappings, snapshots, mirroring groups, consistency groups).

Supported VMware platforms

This version of IBM Spectrum Connect supports the following VMware platforms and frameworks.

Table 3. Supported VMware platforms and frameworks

VMware platform and framework	Version
vCenter Server for Windows	6.0, 6.5, 6.7, 7.0
vCenter Server Appliance (VCSA)	6.0, 6.5, 6.7, 7.0
vSphere Web Client	6.0, 6.5, 6.7, 7.0
vSphere APIs for Storage Awareness (VASA)	1.0, 2.0, 3.0 (without replication)
vRealize Operations Manager (vROps)	6.6, 6.7, 7.0, 7.5, 8.0, 8.1, 8.2, 8.3, 8.4, 8.5, 8.6
vRealize Orchestrator (vRO)	7.3, 7.4, 7.5, 7.6, 8.0, 8.2, 8.3, 8.4, 8.5, 8.6

Note:

- The IBM Storage Enhancements for VMware vSphere Web Client are automatically deployed and enabled by registering vCenter servers on Spectrum Connect.
- The IBM Storage Plug-in for VMware vRealize Orchestrator is deployed by installing its plug-in package on the vRealize Orchestrator server.
- The IBM Storage Management Pack for VMware vRealize Operations Manager is deployed by installing its PAK file on the vRealize Operations Manager server.
- For more information about supported combinations of IBM storage system software versions and various VMware cloud platforms, see the [VMware compatibility matrix](#).

For more information, refer to the user guide.

Included cloud interfaces

This version of IBM Spectrum Connect includes the following cloud interfaces (plugins):

Table 4. Cloud interfaces (plugins) included with Spectrum Connect

Cloud interface	Version
IBM Storage Provider for VMware APIs for Storage Awareness 1.0	3.6.0
IBM Storage Provider for VMware APIs for Storage Awareness 2.0	3.7.0
IBM Storage Provider for VMware APIs for Storage Awareness 3.0	3.10.0
IBM Storage Enhancements for VMware vSphere Web Client, Flex-based	3.4.0

<i>Table 4. Cloud interfaces (plugins) included with Spectrum Connect (continued)</i>	
Cloud interface	Version
IBM Storage Enhancements for VMware vSphere Web Client, HTML5-based	3.8.0
IBM Storage Management Pack for VMware vRealize Operations Manager	3.7.0
IBM Storage Plug-in for VMware vRealize Orchestrator	3.8.0

Note: In addition to the supported cloud interfaces included with Spectrum Connect, listed in [Table 4 on page 5](#), IBM Storage Automation Plug-in for PowerShell 1.1 is also supported but must be installed separately.

Supported browsers

IBM Spectrum Connect can be accessed and managed with the following web browsers:

- Microsoft Internet Explorer 11.0 or later.
- Mozilla Firefox 31 or later.
- Google Chrome 39.0 or later.

The required screen resolution for GUI management is 1024×768 or higher.

CPU and memory consumption on vRealize Orchestrator

When the IBM Storage Plugin for VMware vRealize Orchestrator is used, the CPU and memory consumption impact on the vRealize Orchestrator server is minimal: approximately 2% CPU usage at peak, and less than 1% memory usage.

The server environment on which the IBM Storage Plug-in for VMware vRealize Orchestrator was tested included:

- CPU: 2 vCPU, Intel Xeon X5650 @ 2.67GHz
- Memory: 3088 MB

Change log

This section summarizes the changes that were made in released versions of IBM Spectrum Connect.

Note: New functional features of these versions are only briefly summarized. For a detailed summary of the new functional features of a specific version, refer to the 'What's new' section of its release notes.

3.11.0 (April 2023)

Spectrum Connect 3.11.0 is a software release that includes the following updates and enhancements:

- updated MX_CHUNK_SIZE
- Log in credentials for VASA provider made hidden
- Python package upgrade from 3.6 to 3.9

In addition, version 3.11.0 fixes the following issues:

Ticket ID	Description
SCB-7172	Fixed: Error message text got updated while registering new storage system in FS7200 in 8.3.1 in SC 3.7.0 environment
SCB-7196	Fixed: Log in credentials for VASA provider are hidden, username is showing as plain text and password is hidden
SCB-7743	Fixed: Extra logs are added to delete vvol for better understanding. To avoid the case where main vvol's are getting deleted instead of snapshot vvol by which VMware is permanently terminated.
SCB-7757	Fixed: MAX_CHUNK_SIZE is increased as per new programming guide 2016
SCB-7763	Fixed: Python package is upgraded from 3.6 to 3.9
SCB-7122	Fixed: Permission is provided to read nginx logs in the Spectrum Connect logs

3.10.0 (August 2022)

Spectrum Connect 3.10.0 is a minor software release that includes the following updates and enhancements:

- Introduces VMware plugin FIPS compliance
- New Red Hat Enterprise Linux (RHEL) support with SELinux enabled

In addition, version 3.10.0 fixes the following issues:

Ticket ID	Description
SCB-7170	Fixed: VMware snapshot size is limited due to limited to a maximum of 32 GB segment length.
SCB-7171	Fixed: When a Spectrum Virtualize family node canister is in a service state, the Spectrum Connect fails to update details from the storage array.
SCB-7677	Fixed: In rare cases, conducting VMware operations, such as creating a VMware snapshot, results in a failure with the following error: <code>vasa2.vasa2_api.errors.InvalidSession</code>

Ticket ID	Description
SCB-7730	Fixed: Unable to re-register the Spectrum Connect on vCenter after changing the Spectrum Connect IP address.
SCB-7750	Fixed: In cases where the Spectrum Virtualize VASA Provider user account credentials fail, Spectrum Connect is identified as a distributed denial-of-service (DDoS) attacker on the Spectrum Virtualize system. This can result in difficulty in accessing the Spectrum Virtualize command-line interface (CLI).
SCB-7752	Fixed: nginx permissions are insufficient for login to Spectrum Connect when SELinux is enabled on Red Hat® Enterprise Linux (RHEL) 8.2 through 8.5 operating systems.
SCB-7753	Fixed: In some cases, Spectrum Connect cannot extend vVols when the virtual machine (VM) is powered on.
SCB-7756	Fixed: When vCenter has Federal Information Processing Standards (FIPS) enabled, Spectrum Connect is unable to complete storage operations.

3.9.0 (February 2022)

This version introduces the following enhancements:

- Support for IBM FlashSystem 7300
- Support for FlashSystem 9500
- Support for SV3 storage system
- Support for VMware vRO 8.2–8.6
- Support for VMware vROps 8.2–8.6
- Introduce RHEL 8.2, 8.4, and 8.5 operating system support for x86-64 architectures

Fixed issues:

Ticket ID	Description
SCB-7488	Fixed: Common security issue. For more information about this security issue, see CVE-2021-45046 on the Common Vulnerabilities and Exposures (CVE) information website (cve.mitre.org).

3.8.0 (May 2021)

This version introduced the following enhancements:

- Support for IBM FlashSystem 5200 storage system.
- Ability to add LDAP groups to Spectrum Connect to provide multiple LDAP users within a configured LDAP group access to Spectrum Connect in one operation.
- Support for RHEL/CentOS 8.0.
- Support for VMware vROps 8.1.

Fixed issues:

Ticket ID	Description
SCB-6995	Fixed: In certain cases, such as when a volume was the target of a remote copy, and its source volume had the same ID, some of the DS8000® Volume Remote Copies could not be displayed.

Ticket ID	Description
SCB-7132	Fixed: FlashSystem A9000 and FlashSystem A9000R systems could not be monitored in vROps.

3.7.0 (February 2020)

This version introduced the following enhancements:

- Upgrade to Python 3.
- Support for VMware vSphere APIs for Storage Awareness (VASA) 3.0 (without replication).
- Support for DS8000 series storage systems on VMware vRealize Orchestrator (vRO).
- Support for VMware vRO 8.0.
- Support for VMware vRealize Operations Manager (vROps) 8.0.

Fixed issues:

Ticket ID	Description
SCB-1361	Fixed: The user catalog on the storage systems that run Spectrum Virtualize is not updated immediately after storage system credentials are changed via the Spectrum Connect GUI.
SCB-6403	Fixed: When volumes were created from an HTML5 vSphere Web Client, specified custom Storage LUNs did not take effect.
SCB-6495	Fixed: (Applies only to IBM Spectrum Virtualize Family storage systems.) When creating a paired resource, if the site name for a storage system has blank space, the creation fails.
SCB-6693	Fixed: On the Interface tab, if an interface was attached to two services with the same name in separate spaces, an error was reported.
SCB-6769	Fixed: VM names could only have ASCII-based characters.
SCB-7009	Fixed: Spectrum Connect would not start after a RHEL upgrade, and the error message The SECRET_KEY setting must not be empty was reported.
SCB-7017	Fixed: In some cases, Spectrum Connect could not read the correct timezone value from Spectrum Virtualize Family storage systems.

3.6.3 (August 2019)

This version introduced the following enhancement:

- VMware vRO (7.5, 7.6) support.

Fixed issues:

Ticket ID	Description
SCB-6952	Fixed: Spectrum Connect could not list mappings for a volume in a paired resource. This happened when using PowerShell or IBM Storage Enabler for Containers.

3.6.2 (May 2019)

This version introduced the following enhancements:

- Improved I/O group selection for Spectrum Virtualize Family systems.
- VMware vSphere 6.7 Update 2 support.
- VMware vROps (7.5) support.

Fixed issues:

Ticket ID	Description
SCB-6545	Fixed: Spectrum Connect services cannot use encryption capability for Spectrum Virtualize Family arrays if the storage systems use centralized key servers for managing encryption keys (USB flash drive encryption is supported).
SCB-6593	Fixed: Unencrypted parent pools on Spectrum Virtualize systems can be attached to a storage service with enabled encryption capability.

3.6.1 (March 2019)

This version introduced the following enhancements:

- Mapping IBM DS8000 volumes on IBM System Z (s390x).
- Improved host filtering in vSphere Web Client.
- Support for RHEL 7.6.

Fixed issues:

Ticket ID	Description
SCB-6363	Fixed: Spectrum Connect cannot be used to manage Spectrum Virtualize Family storage systems if they have spare nodes.

3.6.0 (December 2018)

This version introduced the following enhancements:

- Improved event log management for IBM Spectrum Virtualize storage systems.
- VMware vROps (7.0) support.
- VMware vRO (7.4) support.

Fixed issues:

Ticket ID	Description
SCB-5712	Fixed: Incompatibility in the event management system between Spectrum Connect and new IBM Spectrum Virtualize firmware.
SCB-6108	Fixed: A storage system cannot be added to the Storage System pane, when its volume is mapped to an NVMe-type host.
UB-1060	Fixed: If a pod termination takes more than six minutes, the Kubernetes primary node attempts to detach the pod automatically. This results in the pod becoming unresponsive, persisting in the <i>Terminating</i> status.

3.5.0 (August 2018)

This version introduced the following enhancements:

- Support for IBM FlashSystem 9100 storage systems.
- HTML5-based IBM Storage Enhancements for VMware vSphere Web Client.
- Storage services with deduplication capability for Spectrum Virtualize storage systems.
- Data reduction pool attachment on Spectrum Virtualize storage systems.

Fixed issues:

Ticket ID	Description
SCB-4176	Fixed: Cannot rename a volume if its name starts with a number.
SCB-5204	Fixed: A VM with the vvol-no-requirement policy, using a thin-provisioned disk cannot be created on a VVol-based datastore. In this case, the datastore uses a storage space, containing both a thick- and thin-provisioned services with the thick service set as a default one for the VVol container.
SCB-5431	Fixed: If a vCenter interface is disconnected from a Spectrum Connect server, and then reconnected to its another instance, the old connectivity remains visible in vSphere Web Client.
SCB-5456	Fixed: A volume cannot be created via vSphere Web Client or vRO, if the volume uses a service without mirrored capability, but with paired storage resources attached to it.
SCB-5470	Fixed: Population of the Spectrum Virtualize storage system fails if the storage systems have NPIV enabled.
SCB-5631	Fixed: Adding a volume to a consistency group might fail if the volume uses a replicated storage service.
SCB-5794	Fixed: Number of attached services for any IBM storage space selected via the vSphere Web Client always displays 0.

3.4.1 (June 2018)

This version introduced full compatibility with requirements of VMware VASA and VMware vRealize Operations Manager (6.7) for the Spectrum Virtualize Family products.

3.4.0 (March 2018)

Starting from this version, IBM Spectrum Control Base Edition was renamed to IBM Spectrum Connect. This version also introduced the following enhancements:

- Synchronous mirroring for Spectrum Accelerate storage systems.
- Local HyperSwap[®] and data mirroring for Spectrum Virtualize storage systems.
- Host clustering for Spectrum Virtualize storage systems.
- Registering multiple Spectrum Connect instances on several vCenter servers.
- IBM Storage Enabler for Containers support by DS8000 Family products.
- IBM Storage Automation Plug-in for PowerShell support by FlashSystem A9000 and A9000R.
- CentOS 7.x and RHEL 6.9 support.
- Improved performance and stability.

Fixed issues:

Ticket ID	Description
SCB-3631	Fixed: Memory-type VVols may fail to show in the VM Related Objects tab under IBM Storage VVols .
SCB-3751	Fixed: A FastClone procedure might fail on IBM SAN Volume Controller storage systems, if the source and target VMs use different storage policies.
SCB-4146	Fixed: Combination of a storage resource on a Spectrum Accelerate Family system and a service with Availability capability set to Regular is not supported. This combination might cause an unstable behavior of Spectrum Connect.
SCB-4167	Fixed: When using IBM Storage Automation Plug-in for PowerShell, volume can be renamed only using volume resize procedure.
SCB-4380	Fixed: Spectrum Connect cannot recover VVol metadata if the metadata disparity occurs.
SCB-4640	Fixed: In the VMware vSphere 6.5 environment and later, generating server certificate requires both IP address and FQDN of the Spectrum Connect server.
SCB-5124	Fixed: IBM Storage Enabler for Containers fails, when attempting to create more than 50 PVCs.
SCB-5127	Fixed: Spectrum Connect with LDAP enabled cannot be registered as a storage provider on VMware vCenter server.

Limitations

As opposed to known issues, limitations are functionality restrictions that are part of the predefined system design and capabilities in a particular version.

Data copying limitation

To prevent unauthorized copying, data transfer between virtual machines is subject to the following limitation:

- When a virtual machine with Spectrum Connect installation is cloned from another VM or from a template, Spectrum Connect fails to start, indicating the database corruption. You can use Spectrum Connect backup and restore functionality to copy the application data to new VMs.

IBM XIV Storage System and IBM Spectrum Accelerate storage systems not supported

Starting from Spectrum Connect 3.7.0, the following IBM Spectrum Accelerate Family storage systems are no longer supported:

- IBM XIV[®] Storage System
- IBM Spectrum Accelerate

Known issues

This section details the known issues in this version of IBM Spectrum Connect and its solution components, along with possible solutions or workarounds (if available).

The following severity levels apply to known issues:

- **HIPER** – High Impact Pervasive. A critical issue that IBM has either fixed or plans to fix promptly. Requires immediate customer attention or code upgrade.
- **High Impact** – Potentially irrecoverable error that might impact data or access to data in rare cases or specific situations/configurations.
- **Moderate** – Limited functionality issue and/or performance issue with a noticeable effect.
- **Service** – Non-disruptive recoverable error that can be resolved through a workaround.
- **Low** – Low-impact usability-related issue.
- [Known issues in Spectrum Connect](#)
- [Known issues in IBM Storage Provider for VMware VASA](#)
- [Known issues in IBM Storage Enhancements for VMware vSphere Web Client](#)
- [Known issues in IBM Storage Plug-in for VMware vRealize Orchestrator](#)
- [Known issues in IBM Storage Management Pack for VMware vRealize Operations Manager](#)

Important:

- **The issues listed below apply to Spectrum Connect 3.11.0 or earlier versions.** As long as a newer version has not yet been released, a newer release notes edition for this release might be issued to provide a more updated list of known issues and workarounds.
- When a newer version is released for general availability, the 3.11.0 release notes will no longer be updated. Accordingly, check the release notes of the newer version to learn whether any newly discovered issues affect Spectrum Connect 3.11.0 or whether the newer version resolves any of the issues listed below.

Table 5. Known issues in IBM Spectrum Connect

Ticket ID	Severity	Description
SCB-6509	High Impact	Mounting /tmp with <i>noexec</i> option results in package installation failure. In the result of failure, the message License not accepted is displayed instead of the license being displayed. Workaround: To resolve this issue, mount /tmp with <i>exec</i> option, then remount it with <i>noexec</i> after successful installation of the Spectrum Connect software.
SCB-2222	Moderate	Failure to resolve a DNS hostname may result in the <i>rabbitmq</i> process malfunction. Workaround: To avoid this issue, verify that the Spectrum Connect DNS hostname can be resolved.
SCB-5121	Moderate	LDAP configuration is excluded from the backup and restore process. Workaround: To resolve this issue, reconfigure the LDAP access after the Spectrum Connect is restored.
SCB-5915	Moderate	A storage system that lost its connectivity to a Spectrum Connect instance, cannot be removed from the web UI. Workaround: No workaround available.

Table 5. Known issues in IBM Spectrum Connect (continued)

Ticket ID	Severity	Description
SCB-5927	Moderate	User-defined credentials are not retained after the backup and restore procedure. A restored Spectrum Connect installation reverts to the default username and password, without informing the user. Workaround: To resolve this issue, change the default user credentials after system restore.
SCB-6316	Moderate	During upgrade from 3.4.x to any higher release, the initial setup wizard is invoked automatically, even if all relevant configuration changes were made before the upgrade. Workaround: To resolve this issue, log into Spectrum Connect CLI utility as <i>ibmsc</i> user and run the sc_setting modify -n CERTIFICATE_EXISTS -v TRUE command.
SCB-6594	Moderate	When a new storage resource (child pool) is created within an unencrypted parent pool on Spectrum Virtualize system, and attached to an encrypted service on Spectrum Connect, the child pool might not be encrypted. Workaround: Use the Spectrum Virtualize UI or CLI to verify encryption status of the pool.
SCB-6599	Moderate	After unregistering Spectrum Connect from a VCenter (VC) as VASA Provider (VP), the relevant VC entry is not removed from the database for up to 90 minutes. As a result, service and resource changes are not allowed in the Spectrum Connect GUI for that time. Workaround: Restart Spectrum Connect to clear the VC entry sooner.
SCB-7121	Moderate	After clicking the Table View button to display the existing storage resources as a table, the Domain column is not displayed as expected. Workaround: No workaround available.
SCB-7127	Moderate	It may be possible to attach a non-encrypted FlashSystem A9000 or A9000R storage resource to an encryption enabled service. Workaround: No workaround available.
SCB-85	Service	Disconnected storage array disappear from the Spectrum Connect web interface after the upgrade. Workaround: To avoid this issue, before performing upgrade, verify that all storage arrays are connected to Spectrum Connect properly.
SCB-90	Service	Spectrum Connect cannot use IPv6 addresses for management connection to FlashSystem A9000 and A9000R storage systems. Workaround: To resolve this issue, use IPv4 addressing, when configuring storage arrays.
SCB-165	Service	Editing the <code>ldap.ini</code> file manually may cause the Spectrum Connect LDAP integration failure. Workaround: To avoid this issue, use the sc_ldap CLI command for LDAP configuration.

Table 5. Known issues in IBM Spectrum Connect (continued)

Ticket ID	Severity	Description
SCB-598	Service	In some cases, the Celery service might hang when it is stopped. Workaround: To resolve this issue, terminate the Celery background process by using the Linux kill -9 command.
SCB-1023	Service	Starting from 2.2.0, a vCO server must be added manually to the Spectrum Connect. However, if the Spectrum Connect is upgraded from any previous release to 2.2.0 or later, a vCO server is added automatically to the GUI. To resolve this issue, remove the vCO server manually after the upgrade is completed.
SCB-1355	Service	LDAP configuration is reset after Spectrum Connect is upgraded from 2.1.1 to 2.2.0. Workaround: No workaround available.
SCB-1359	Service	If a software on IBM SAN Volume Controller (SVC), which has been added to Spectrum Connect, is re-installed, the storage system still appears connected, but does not function properly. Workaround: To avoid this issue, remove SVC from Spectrum Connect after the SVC software is re-installed and connect the storage system to Spectrum Connect again.
SCB-2517	Service	The <i>postgresql</i> service does not start if the /tmp folder does not have <i>o+x</i> access permission. Workaround: To resolve this issue, configure the required permission for the /tmp folder, using the chmod o+x /tmp command.
SCB-2888	Service	Installation fails when the root user has a default umask , preventing other users from changing root-created directories. Workaround: To avoid this issue, use the mkdir /opt/ibm and chmod 755 /opt/ibm commands to create the /opt/ibm folder and set correct permissions.
SCB-5126	Service	After upgrading Spectrum Connect to 3.3.0, any LDAP user with the username consisting of capital letters becomes a local user. Workaround: To resolve this issue, change the local user to an LDAP user after upgrading Spectrum Connect to 3.3.0.
SCB-5837	Service	The Spectrum Connect UI allows selection of the deduplication mode of data reduction when defining a storage service for IBM FlashSystem A9000 or A9000R storage systems. But, this mode is only supported for Spectrum Virtualize storage systems. Workaround: No workaround available.

Table 5. Known issues in IBM Spectrum Connect (continued)

Ticket ID	Severity	Description
SCB-377	Low	<p>If the IP address of a storage array changes, the sc_storage_array CLI command is unable to update the IP address of the storage array.</p> <p>Workaround: In such a case, use the Spectrum Connect GUI to edit and update the IP address of the storage array (In the Arrays pane, move the mouse pointer over an array that you want to update, and then click the Edit button).</p>
SCB-3660	Low	<p>On RHEL 7.x, due to the Django framework update, Spectrum Connect upgrade from 3.0.3 to 3.1.0 generates several warning messages about missing files. Despite the messages, the upgrade completes correctly.</p> <p>Workaround: No workaround available.</p>
SCB-3845	Low	<p>Used capacity indication for storage services does not take into account the space reserved for snapshots on FlashSystem A9000 and A9000R storage systems. As a result, the real free hard capacity is less than displayed in Spectrum Connect.</p> <p>Workaround: No workaround available.</p>
SCB-4124	Low	<p>Storage resource (pool) capacity for the IBM FlashSystem A9000 and A9000R storage systems is limited to 1 PB. Any attempt to create a storage resource exceeding 1 PB in size results in an error message.</p> <p>Workaround: No workaround available.</p>
SCB-4251	Low	<p>For Storwize V7000 Unified storage arrays, the microcode version number, build number, and system ID number are not consistent when appearing in Spectrum Connect, vSphere Web Client, and storage system management GUIs. Different version numbers and system IDs are displayed on each platform.</p> <p>Workaround: No workaround available.</p>
SCB-4252	Low	<p>The registration of Spectrum Connect as a VASA storage provider on the vCenter server side might fail if an expired self-signed SSL certificate is present on Spectrum Connect.</p> <p>Workaround: To resolve this issue, replace the self-signed certificate as explained in the user guide.</p>
SCB-4253	Low	<p>After an upgrade or reinstallation of Spectrum Connect, some DS8000 or SAN Volume Controller storage system identifiers might change, causing Spectrum Connect to stop synchronizing with these storage systems.</p> <p>Workaround: To resolve this issue, use the Spectrum Connect GUI or CLI to remove and then add back these storage systems.</p>
SCB-5995	Low	<p>When Spectrum Virtualize action commands are based only on object names and fail to find their object IDs in the audit log, Spectrum Connect cannot create their reference configuration events.</p> <p>Workaround: No workaround available.</p>

Table 5. Known issues in IBM Spectrum Connect (continued)

Ticket ID	Severity	Description
SCB-7124	Low	<p>A storage LUN ID of more than 255 characters cannot be input for a FlashSystem A9000 or A9000R volume added in vCenter, even though FlashSystem A9000R and A9000R support having a LUN ID of more than 255 characters.</p> <p>Workaround: No workaround available.</p>
SCB-7160	Low	<p>PowerShell does not return correct or useful error messages for several errors.</p> <p>Workaround: No workaround available.</p>
SCB-7161	Low	<p>After several Spectrum Connect connections are added in PowerShell, Spectrum Connect users cannot log into the Spectrum Connect GUI, and errors are reported for the attempts.</p> <p>Workaround: No workaround available.</p>

Table 6. Known issues in IBM Storage Provider for VMware VASA

Ticket ID	Severity	Description
SCB-1138	Moderate	<p>A VM cannot be created on a datastore, if a size of thick-provisioned virtual disk size is bigger than any of the Spectrum Virtualize child pools comprising the vDisk.</p> <p>Workaround: To avoid this issue, make sure that at least one of the child pools has sufficient disk space to host the datastore vDisk.</p>
SCB-1366	Moderate	<p>Rescanning storage providers on VMware vCenter server results in rescan error, if two Spectrum Connect instances are registered as storage providers for both VASA 1.0 and VASA 2.0 / 3.0.</p> <p>Workaround: To avoid this issue, register all Spectrum Connect instances as storage providers for either only VASA 1.0 or only VASA 2.0 / 3.0.</p>
SCB-2518	Moderate	<p>After a VM migration from a vVol-based datastore, the datastore may become inaccessible via vWC.</p> <p>Workaround: To resolve this issue, cancel registration of Spectrum Connect as a VASA storage provider, and run the registration again.</p>
SCB-2531	Moderate	<p>When migrating a VM into a vVol-based datastore, which does not support space efficiency (thin or thick), the migration fails without a specific error message, explaining the reason for the failure.</p> <p>Workaround: To avoid this issue, create a vVol-enabled storage service that supports thick and thin provisioning. Then attach storage resources which will be able to support the correct destination vVol-based destination datastore.</p>
SCB-2653	Moderate	<p>Storage system information does not appear on the vCenter server after registering Spectrum Connect as a storage provider for the first time.</p> <p>Workaround: To resolve this issue, wait for several minutes after the initial registration attempt, and run the registration again.</p>

Table 6. Known issues in IBM Storage Provider for VMware VASA (continued)

Ticket ID	Severity	Description
SCB-3712	Moderate	<p>Stretched capability of storage profile cannot be changed for virtual volumes on IBM SAN Volume Controller storage systems.</p> <p>Workaround: No workaround available.</p>
SCB-255	Service	<p>Cloning of a virtual machine from a vVol to another vVol on the same IBM SAN Volume Controller (SVC) fails, when the user chooses to customize the VM hardware during the cloning procedure. Moreover, resizing of the source and target VMs fails, if the SVC background copy is in progress.</p> <p>Workaround: To avoid this issue, customize the virtual machine hardware only after the VM cloning and SVC background copy process are completed.</p>
SCB-523	Service	<p>If a storage system is removed and added to Spectrum Connect after its storage resource was added to a vVol-enabled service, its previous configuration is not preserved after the addition. This occurs if Spectrum Connect is not registered as a VASA provider.</p> <p>Workaround: To avoid this issue, verify that Spectrum Connect is registered as a VASA provider before adding the storage system after its removal. In addition, after the storage system is added, it is recommended to check the vCenter log whether Spectrum Connect was identified as an active VASA provider.</p>
SCB-1085	Service	<p>When attempting to resize a virtual disk on a storage system, running Spectrum Virtualize, while the disk formatting is in progress, vCenter displays the following error message: 'The disk extend operation failed: The vVol target encountered a vendor specific error.'</p> <p>Workaround: To avoid this issue, resize the virtual disk only after the disk formatting process is finished.</p>
SCB-2369	Service	<p>A name of a VM, which is created on a vVol datastore, can have only ASCII-based characters.</p> <p>Workaround: No workaround available.</p>
SCB-3351	Service	<p>Resizing a VM based on an IBM SAN Volume Controller stretched cluster can fail, if the two copies of the virtual volume are not synchronized.</p> <p>Workaround: To avoid this issue, wait for the synchronization to complete on storage system side. You can use the SVC lsvdisksyncprogress command to monitor synchronization progress.</p>
SCB-3463	Service	<p>The Edit Settings operation for a vVol-based VM fails, if a storage resource used by the VM datastore has less free space than the vVol data disk of VM.</p> <p>Workaround: To avoid this issue, make sure that the storage resource for the VM datastore has sufficient free space to accommodate the vVol data disk.</p>

Table 6. Known issues in IBM Storage Provider for VMware VASA (continued)

Ticket ID	Severity	Description
SCB-5586	Service	<p>In deployments with more than one or two vCenter servers and two storage providers with different priorities, a suspended and reactivated vCenter server fails to rescan the providers. As a result, the storage providers remain inactive.</p> <p>Workaround: To resolve this issue, disconnect the inactive storage providers and connect them again to the vCenter server(s).</p>

Table 7. Known issues in IBM Storage Enhancements for VMware vSphere Web Client

Ticket ID	Severity	Description
SCB-417	Moderate	<p>The Manage > Host Mapping tab of the IBM Storage Volume object shows incorrect mapping information. Hosts that cannot access the datastore are shown as not being mapped to the LUN.</p> <p>Workaround: No workaround available.</p>
SCB-447	Moderate	<p>When using the storage system management GUI (as opposed to the IBM Storage Enhancements GUI in vSphere Web Client) to map a single volume to more than one ESXi hosts using different LUN IDs, the volume is not properly recognized by vSphere Web Client and cannot be managed by the IBM Storage Enhancements. In addition, multiple errors might occur on the vSphere Web Client during the use or modification of that volume.</p> <p>Workaround: To avoid this issue, always use the same LUN ID when mapping a volume to multiple ESXi hosts via the storage system management GUI.</p>
SCB-3654	Moderate	<p>When a vCenter user without storage management privileges adds a vCenter interface to Spectrum Connect and then modifies the vCenter with the administrator credentials, logs into vSphere Web client and performs volume operations, some of these operations may fail.</p> <p>Workaround: To resolve this issue, remove the vCenter interface from Spectrum Connect, and add the vCenter again, using valid administrator credentials.</p>
SCB-3759	Moderate	<p>After VMware vCenter reboot or upgrade, the changes made for the vCenter before the reboot or upgrade fail to propagate to the IBM extension for vCenter.</p> <p>Workaround: To resolve this issue, restart the refresh vWC service by logging into the Spectrum Connect host as root and running the /etc/init.d/ibm_spectrum_connect restart_vwc_refresh command.</p>

Table 7. Known issues in IBM Storage Enhancements for VMware vSphere Web Client (continued)

Ticket ID	Severity	Description
SCB-4184	Moderate	<p>Removing a vCenter interface from Spectrum Connect may cause unstable behavior of the vWC plug-in.</p> <p>Workaround: To resolve this issue, perform one of the following procedures, depending on the Spectrum Connect and vCenter deployment scenarios:</p> <ul style="list-style-type: none"> • If you remove a vCenter interface from Spectrum Connect, restart the vSphere Web Client, before reconnecting the vCenter interface to the Spectrum Connect instance. • If you uninstall Spectrum Connect, wait until the uninstallation process is completed, and then restart each vCenter server that was connected to Spectrum Connect at the time of uninstall. • If you upgrade Spectrum Connect, wait until the upgrade process is completed, and then restart all vSphere vWCs attached to the upgraded Spectrum Connect server.
SCB-4193	Moderate	<p>When provisioning a new volume using vSphere Web Client, the Max Provision Size of the new volume is permanently set to 0. This results in volume creation failure.</p> <p>Workaround: To avoid this issue, connect all vCenter servers in the SSO to the same Spectrum Connect instance.</p>
SCB-5356	Moderate	<p>After upgrade to 3.4.0, in rare cases, Spectrum Connect might lose connection with the vWC plug-in.</p> <p>Workaround: To resolve this issue, restart the web plug-in service on the relevant vCenter server.</p>
SCB-5841	Moderate	<p>A volume cannot be resized via vSphere Web Client.</p> <p>Workaround: To resolve this issue, resize the volume using the storage system web-based user interface or CLI.</p>
SCB-154	Service	<p>If a vCenter server is disconnected from Spectrum Connect during the upgrade, the vWC extension appears with the previous version, when the vCenter server is re-activated.</p> <p>Workaround: To resolve this issue, remove and reattach the vCenter server on Spectrum Connect.</p>
SCB-399	Service	<p>If a volume is deleted, using vSphere Web Client, but the deletion fails on the storage system, the volume is removed from the vSphere Web Client display. In this case, the volume is successfully unmapped from the host, but there is no indication on the vSphere Web Client that the volume still exists.</p> <p>Workaround: To avoid this issue, delete the volume from the storage system directly.</p>

Table 7. Known issues in IBM Storage Enhancements for VMware vSphere Web Client (continued)

Ticket ID	Severity	Description
SCB-671	Service	<p>vWC volume creation and mapping task may fail if a source pool that exists on a FlashSystem A9000 or A9000R storage system within a domain has been attached to a service created by the default Spectrum Control user.</p> <p>Workaround: To avoid this issue, associate the default Spectrum Connect user with the storage array domain.</p>
SCB-701	Service	<p>A volume being moved between two FlashSystem A9000 or A9000R storage systems using IBM Hyper-Scale Mobility cannot be unmapped in vWC from the ESXi host after the source storage system enters the proxy mode.</p> <p>Workaround: To resolve this issue, remove volume mapping using IBM Hyper-Scale Manager.</p>
SCB-775	Service	<p>Creating a volume with minimum size (87 GB) on IBM FlashSystem A9000 or 9000R may fail, if the target pool size is smaller than 103 GB.</p> <p>Workaround: To avoid this situation, increase the storage pool size to be 103 GB or bigger.</p>
SCB-2479	Service	<p>Creating and mapping a volume on a FlashSystem A9000 or A9000R storage system via the vWC plug-in may fail if a storage resource is connected to a host outside of a storage system domain.</p> <p>Workaround: To avoid this situation, verify that all the hosts defined on the vCenter are also defined on the storage systems and are associated with the domain. In addition, make sure that the default storage credentials defined in Spectrum Connect belong to the domain as well.</p>
SCB-2519	Service	<p>Creating and mapping a volume on a FlashSystem A9000 or A9000R storage system via the vWC plug-in may fail if ESXi LUNs used by the volumes do not belong to any domain, while the Spectrum Connect storage credentials are associated with a specific domain.</p> <p>Workaround: To avoid this situation, verify that volumes outside of a domain are not mapped to the target host.</p>
SCB-3049	Service	<p>A connection session between Spectrum Connect and vCenter server remains open after Spectrum Connect has been restarted or the vCenter server has been removed and added again via the Spectrum Connect GUI. This results in multiple concurrent connection sessions with different IDs between the servers.</p> <p>Workaround: To resolve this issue, manually remove the redundant session via the vSphere Web Client (Manage > Sessions > Terminate Selected Sessions).</p>
SCB-3063	Service	<p>When mapping a volume to several hosts that do not have a common storage resource (pool), this operation may fail.</p> <p>Workaround: To avoid this issue, verify that all hosts to be mapped share at least one storage resource on the same storage system.</p>

Table 7. Known issues in IBM Storage Enhancements for VMware vSphere Web Client (continued)

Ticket ID	Severity	Description
SCB-3456	Service	<p>Resizing a stretched volume on IBM SAN Volume Controller can fail, if the two copies of the volume are not synchronized.</p> <p>Workaround: To avoid this issue, wait for the synchronization to complete on storage system side. You can use the SVC lsvdisksyncprogress command to monitor synchronization progress.</p>
SCB-3637	Service	<p>If a volume is mapped to an ESXi 6.5 host, the size of the volume under the IBM Storage Volumes tab does not change after its extension.</p> <p>Workaround: To resolve this issue, rescan the host manually.</p>
SCB-4525	Service	<p>Creation of several volumes and their subsequent renaming might fail in mid-process with an error, indicating insufficient memory. As a result, some of the volumes are created successfully, and some of them are not.</p> <p>Workaround: No workaround available.</p>
SCB-6287	Service	<p>There are inconsistencies in service capabilities as they appear in the Spectrum Connect web UI and in the Flex-based version of the vWC plugin. For example, Data Reduction: Deduplication in the Spectrum Connect UI is displayed as Deduplication: Enabled, with spaceEfficiency: Thin in vWC.</p> <p>Workaround: No workaround available.</p>
SCB-705	Low	<p>A volume, whose deletion fails, disappears from the volume list. The volume reappears in the list after the next population.</p> <p>Workaround: No workaround available.</p>
SCB-836	Low	<p>If a combination of both iSCSI and FC initiator port types is defined for an ESXi host, mapping volumes to that ESXi host causes both iSCSI and FC to be used for those volumes.</p> <p>Workaround: To avoid this situation, use the storage system management tools to define only one active protocol type (iSCSI or FC) for the initiators of each ESXi host.</p>
SCB-2718	Low	<p>When delegating a single vVol-type service to several vCenter servers, the service vVols will be exposed to all servers, even though they relate to only one of them.</p> <p>Workaround: No workaround available.</p>
SCB-2970	Low	<p>Actions are allowed on volumes that are mapped to a disconnected or non-responsive ESXi host. The volume actions will fail due to the host status. Moreover, if the disconnected host is added to another vCenter server, the volume operations will fail on the new server as well.</p> <p>Workaround: To avoid this situation, verify that the host is connected to the vCenter server. If a disconnected or non-responsive host is connected to a new server, remove it from the original server to allow proper volume performance.</p>

Table 7. Known issues in IBM Storage Enhancements for VMware vSphere Web Client (continued)

Ticket ID	Severity	Description
SCB-2974	Low	When a LUN is shared between several ESXi hosts, its number must be the same on all hosts. Workaround: To avoid this situation, verify that the shared LUN number is available for all hosts.
SCB-2991	Low	If a volume is shared between several datacenters, volume-related objects, such as a datastore or a VM that belong to other datacenters, are missing from the vWC. Workaround: No workaround available.
SCB-2999	Low	When a disk is removed from a VM created on a vVol-based datastore, but not removed from the datastore, the VM is still listed as a related object on the vVol. Workaround: No workaround available.
SCB-6476	Low	When a traditional (non-virtual) volume name is changed via Hyper-Scale Manager or CLI management tool, the name does not change in vSphere UI. Workaround: No workaround available.

Table 8. Known issues in IBM Storage Plug-in for VMware vRealize Orchestrator

Ticket ID	Severity	Description
SCB-140	Moderate	If the Map workflow uses initiators that are not configured on the storage array, the workflow succeeds even though the initiators are silently ignored. Workaround: No workaround available.

Table 9. Known issues in IBM Storage Management Pack for VMware vRealize Operations Manager

Ticket ID	Severity	Description
SCB-6562	High Impact	LDAP authentication is not supported when connecting to vROps using Spectrum Connect. Workaround: To avoid this issue, use local accounts to access vROps.
SCB-796	Moderate	When data collection interval is set to 1 minute, the array IOPS statistics are presented as 0. Workaround: No workaround available.
SCB-845	Moderate	If the vROps server becomes unreachable while Spectrum Connect is still reporting to it, the reporting ceases when the vROps server becomes reachable again. Workaround: To resolve this issue, restart the Spectrum Connect service.

Table 9. Known issues in IBM Storage Management Pack for VMware vRealize Operations Manager (continued)

Ticket ID	Severity	Description
SCB-7062	Moderate	<p>After installing the new PAK file provided with Spectrum Connect 3.8.0 on the vROps server, there will be two IBM Storage Management Pack plugins, the old one and the new one.</p> <p>Workaround: To resolve this issue, uninstall the old IBM Storage Management Pack plugin.</p>
SCB-7165	Moderate	<p>When objects related to different arrays are given the same object name and ID, they are merged into one object related to both arrays instead of existing as separate objects, each related to its own array, as expected.</p> <p>Workaround: No workaround available.</p>
SCB-842	Service	<p>Duplicate thresholds might appear in vROps if a vROps server was removed from Spectrum Connect and then re-added.</p> <p>Workaround: To resolve this issue, delete the duplicate thresholds.</p>
SCB-6171	Service	<p>Incorrect compliance information for Spectrum Virtualize objects is presented in vROps 7.0.</p> <p>Workaround: No workaround available.</p>
SCB-844	Low	<p>If a storage object name contains spaces, it is displayed in the vROps custom view with underlines instead of spaces.</p> <p>Workaround: No workaround available.</p>

Related information and publications

You can find additional information and publications related to IBM Spectrum Connect on the following information sources.

- [IBM Documentation](https://ibm.com/docs/en) (ibm.com/docs/en)
- [IBM DS8880 in IBM Documentation](https://ibm.com/docs/en/ds8880) (ibm.com/docs/en/ds8880)
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- [Persistent volumes on Kubernetes](https://kubernetes.io/docs/concepts/storage/volumes) (kubernetes.io/docs/concepts/storage/volumes)

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