

## Stabilized, deprecated, and discontinued features in IBM Storage Scale

A feature is a *deprecated* feature if that specific feature is supported in the current release, but the support might be removed in a future release. In some cases, it might be advisable to plan to discontinue the use of deprecated functionality.

Table 1: Features deprecated in IBM Storage Scale

Category	Deprecated functionality	Recommended action	Starting from IBM Storage Scale release
FPO	All	FPO and SNC remain available. However, it is recommended to limit the size of deployments to 32 nodes. There are no plans for significant new functionality in FPO nor increases in scalability.  The strategic direction for storage using internal drives and storage rich servers is IBM Storage Scale Erasure Code Edition (ECE).	5.0.5
Platforms	AIX support for IBM POWER7 systems	Plan to migrate to newer generations of Power systems.	5.1.1
Security	Support for Vormetric DSM V5	Upgrade to Vormetric DSM V6.2 or later. For more information, see the topic <i>Preparation for encryption</i> in the <i>IBM Storage Scale: Administration Guide</i> .	5.1.1
Protocols	mmcesdr command (Protocols cluster disaster recovery)	Use AFM and AFM DR to set up your own replication strategies between clusters.	5.1.1
Block size	The --metadata-block-size option of mmcrfs command is deprecated. This option is used for defining metadata blocks to a different size than the data blocks.	Only a single definition for the number of subblocks per block exists per file system. Selecting a smaller metadata block size has the unintended side effect of increasing the subblock size for data blocks. Although it is supported to set metadata blocks to a different size than data blocks by using the --metadatablock-size parameter, it is not recommended to use that option. This option is currently being deprecated and it will be removed in a future release. For more information, see the topic <i>mmcrfs command</i> in the <i>IBM Storage Scale: Command and Programming Reference Guide</i> .	5.1.2
Protocols	Clustered Network File System (CNFS)	CNFS remains available. There are no plans neither for significant new functionality nor for increases in performance or scaling. Our strategic direction for NFS access is Cluster Export Services (CES) NFS. For more information, see <a href="#">Migration of CNFS clusters to CES clusters</a> .	5.1.9
Highly Available Write Cache (HAWC)	All	Instead of writing data to HAWC, consider writing data to a shared pool of high-performance drives, such as NVMe.	5.2.0

A feature is a *Discontinued* feature if it has been removed in a release and is no longer available. You need to make changes if you were using that functionality in previous releases.

Table 2: Features discontinued in IBM Storage Scale

Category	Discontinued functionality	Recommended action	Starting from IBM Storage Scale release
Platforms	Windows 7 and Windows Server 2008 R2	Upgrade to a supported version of Windows.	5.0.5
Security	The use of TLS 1.0 and 1.1 for authorization within and between IBM Storage Scale clusters.	Upgrade to TLS 1.2 or later.	5.1.0
GUI/REST API	The use of TLS 1.0 and 1.1 for authorization with the GUI/REST API server	Upgrade to TLS 1.2 or later.	5.1.0
Platforms	Encryption acceleration library for Power7 (CLIC)	If encryption performance is critical, migrate to newer generations of Power Systems.	5.1.0
	Big Endian Power servers	Upgrade to newer generations of Power systems or remain on IBM Storage Scale 5.0.5.	5.1.0
	Red Hat Enterprise Linux support for IBM Power7 systems	Plan to migrate to newer generations of Power systems.	5.1.0
Protocols	iSCSI as a target for remote boot	Use some other block services provider.	5.1.0
Containers	Storage Enabler for Containers (SEC)	Migrate to Container Storage Interface (CSI).	5.1.0
Installation toolkit	NTP configuration	Do time synchronization configuration manually across all nodes in a cluster by using the available method.	5.1.1
	File and object authentication configuration	Use the mmuserauth command to do file and object authentication configuration.	5.1.1
	NSD balance	Use the <code>./spectrumscale nsd servers</code> command to balance the NSD preferred node between the primary and secondary nodes. For example:  <pre>./spectrumscale nsd servers setprimary -s node1.example.com nsd1</pre>	5.1.1

Table 2: Features discontinued in IBM Storage Scale (continued)

Category	Discontinued functionality	Recommended action	Starting from IBM Storage Scale release
Message queue	Kafka message queue for clustered watch folders and file audit logging	<p>The Kafka message queue is no longer installed as a part of the IBM Storage Scale installation. If you are using Kafka for other purposes, install it separately from IBM Storage Scale.</p> <p>If you are upgrading to version 5.1.1, you must disable file audit logging and clustered watch folder and then run <code>mmmsgqueue config --remove</code> before the upgrade, or upgrade to 5.1.0.x, run <code>mmmsgqueue config --remove-msgqueue</code>, and then proceed with the upgrade to 5.1.1.</p>	5.1.2 (deprecated in 5.1.1)
Troubleshooting	Repair functionality of <code>mmfsck</code> command in online mode.	<p>The repair functionality of the <code>mmfsck</code> command in online mode is no longer available. The report-only operation still works in the online mode. For more information, see the topic <i>mmfsck command</i> in the <i>IBM Storage Scale: Command and Programming Reference Guide</i>.</p>	5.1.2
Cluster configuration repository	Cluster configuration using primary and secondary server is deprecated and has been removed.	Cluster Configuration Repository (CCR) is the default cluster configuration method. If CCR is not enabled on the cluster, you can run the <code>mmchcluster --ccr-enable</code> command to enable it. Unless CCR is enabled on the cluster, you cannot run the <code>mmchconfig release=LATEST</code> command to change the minimum release level to the latest version.	5.1.2 (deprecated in 5.1.1)
zLinux Platform coverage on IBM Storage Scale Erasure Code Edition	zLinux Platform coverage on IBM Storage Scale Erasure Code Edition	zLinux Platform coverage on IBM Storage Scale Erasure Code Edition is discontinued in IBM Storage Scale Erasure Code Edition 5.1.7. If you require this capability you may continue to use it on IBM Storage Scale 5.1.2 until the end of support for that release.	IBM Storage Scale Erasure Code Edition 5.1.7

Table 2: Features discontinued in IBM Storage Scale (continued)

Category	Discontinued functionality	Recommended action	Starting from IBM Storage Scale release
Protocols	CES Swift Object feature	<p>IBM Storage Scale 5.1.9 will tolerate the update of a CES node from IBM Storage Scale 5.1.8.</p> <ul style="list-style-type: none"> <li> <b>Tolerate</b> means: <ul style="list-style-type: none"> <li>The CES node will be updated to 5.1.9.</li> <li>Swift Object support will not be updated as part of the 5.1.9 update.</li> <li>You may continue to use the version of Swift Object protocol that was provided in IBM Storage Scale 5.1.8 on the CES 5.1.9 node.</li> <li>IBM will provide usage and known defect support for the version of Swift Object that was provided in IBM Storage Scale 5.1.8 until you migrate to a supported object solution that IBM Storage Scale provides.</li> </ul> </li> </ul>	5.1.9
Transparent Cloud Tiering (TCT)	All	Our strategic direction for cloud object storage tiering is IBM Storage Scale Active File Management (AFM). For information about how to migrate from TCT to AFM, see the documented processes for <a href="#">filesets</a> and for <a href="#">file systems</a> .	5.2.0
OpenStack component support	OpenStack Cinder	Plan to use a different storage for OpenStack environment.	5.2.0
Protocols	IBM Storage Scale Data Access Services (DAS) S3	IBM Storage Scale 5.1.9 was the last release that included DAS S3. You can continue to use DAS S3 for production use, and consider the technology preview of CES S3 introduced by IBM Storage Scale 5.2.0 for proof of concept. In a future release, a migration path from DAS S3 to CES S3 is intended to be provided.	5.2.0 (deprecated in 5.1.9)