



What's New in ESS/GNR

September 19, 2018

Steve Duersch
ESS Program Manager



Disclaimer

The information in this document is **IBM CONFIDENTIAL**.

This information is provided on an "AS IS" basis without warranty of any kind, express or implied, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose. Some jurisdictions do not allow disclaimers of express or implied warranties in certain transactions; therefore, this statement may not apply to you.

This information is provided for information purposes only as a high level overview of possible future products.

PRODUCT SPECIFICATIONS, ANNOUNCE DATES, AND OTHER INFORMATION CONTAINED HEREIN ARE SUBJECT TO CHANGE AND WITHDRAWAL WITHOUT NOTICE.

USE OF THIS DOCUMENT IS LIMITED TO SELECT IBM PERSONNEL AND TO BUSINESS PARTNERS WHO HAVE A CURRENT SIGNED NONDISCLOSURE AGREEMENT ON FILE WITH IBM. THIS INFORMATION CAN ALSO BE SHARED WITH CUSTOMERS WHO HAVE A CURRENT SIGNED NONDISCLOSURE AGREEMENT ON FILE WITH IBM, BUT THIS DOCUMENT SHOULD NOT BE GIVEN TO A CUSTOMER EITHER IN HARDCOPY OR ELECTRONIC FORMAT.

IBM's statements regarding its plans, directions, and intent are subject to change or withdrawal without notice at IBM's sole discretion. Information regarding potential future products is intended to outline our general product direction and it should not be relied on in making a purchasing decision. The information mentioned regarding potential future products is not a commitment, promise, or legal obligation to deliver any material, code, or functionality. The development, release, and timing of any future features or functionality described for our products remains at our sole discretion.

IBM reserves the right to change product specifications and offerings at any time without notice. This publication could include technical inaccuracies or typographical errors. References herein to IBM products and services do not imply that IBM intends to make them available in all countries.

ESS 5.3.0 (April 2018)

Key Features:

- Support for Spectrum Scale 5.0.0
 - More than 32 subblocks per block
 - Faster file system rebalancing

Deployment improvements (menu driven deployment)

Software:

- Spectrum Scale 5.0.0
- RH 7.3

ESS 5.3.1 (June 2018)

Key Features:

- Support Flash and Disk tiered storage on the same ESS node.
GHxy: (x= # of Flash enclosures, y= # of Disk enclosures)
GH12 1-Flash enclosure, 2-Disk enclosures (ESS 5.3.1.1)
GH14 1-Flash enclosure, 4-Disk enclosures
GH24 2-Flash enclosure, 4-Disk enclosures
- No longer need to upgrade existing building setup when integrating new building block (but highly recommended you do).
- mmvdisk: An integrated CLI for GNR. It provides a unified framework for:
 - GNR configuration
 - ESS building block recognition
 - Recovery group creation
 - User vdisk NSD sizing and creation
 - File system creation

Software:

- Spectrum Scale 5.0.1
- RH 7.4

ESS 5.3.1.1 (Aug 2018)

Key Features:

- Integrated Protocol Node Management. New Protocol Node MTM allows delivery of preinstalled and configured Protocol Nodes.
 - Introduction of 5148-22L protocol node (orderable as standalone or with a new ESS order)
 - Full support for SMB, NFS, Object protocols
 - Up to 16 protocol nodes when SMB is enabled
 - Up to 32 protocol nodes when SMB is disabled and NFS/OBJ are used
 - OS/OFED/drivers/kernel/system/netmgr/IPR management by xCAT on the EMS
 - 5.0.1.2 Scale located in /root out of mfg
 - Integrated GUI panels for protocol nodes (including HW rack locations, monitoring, performance statistics, and all CES protocol panels)
 - Max connections and performance measurements consistent with stated numbers in Spectrum Scale FAQ and Knowledge Center
 - Integrated procedures for install/node add combining ESS scripts and Install Toolkit
 - Automated cesSharedRoot creation according to best practices
 - File Audit Logging is currently not supported in clusters including an ESS – coming soon

Support Matrix for online ESS upgrade

Supported upgrade paths for ESS

Table 1. ESS upgrade paths

Upgrading from:	To: 3.5.5 or earlier	To: 4.0.x	To: 4.5 or 4.6	To: 5.0.x	To: 5.1.x	To: 5.2.x	To: 5.3.x	To: 5.3.1.x
3.5.5 or earlier	Yes	Yes	Yes	No	No	No	No	No
4.0.x	--	Yes	Yes	Yes	No	No	No	No
4.5 or 4.6	--	--	Yes	Yes	Yes	No	No	No
5.0.x	--	--	--	Yes	Yes	Yes	No	No
5.1.x	--	--	--	--	Yes	Yes	Yes	Yes
5.2.x	--	--	--	--	--	Yes	Yes	Yes
5.3.x	--	--	--	--	--	--	Yes	Yes
5.3.1.x	--	--	--	--	--	--	--	Yes

Roadmap

2H18

2019

- *Concurrent capacity upgrade by adding additional storage enclosures - mmvdisk (Flash/Disk)*
- *IBM Spectrum Scale V5.0.2*
- *New Ultra High-Density Storage with 12G SAS*
- *RHEL 7.5*
- *Enhancements to install and upgrade*
- *Further Protocol Node management integration enhancements (FAL)*

- *Next Generation ESS*
- *Enhanced Power9 Server*
- *High speed NVMe storage*
- *Flexible expansion points per storage enclosure*
- *Enhanced Linux Functionality (RHEL 8.x)*
- *Further enhancement to concurrent capacity upgrade (hybrid/new models)*
- *IBM Spectrum Scale V5.0.3*
- *Disk refresh*
- *Simplified service procedure for disk replacement*
- *enhanced messages and documentation*

Roadmap line items subject to change without notice