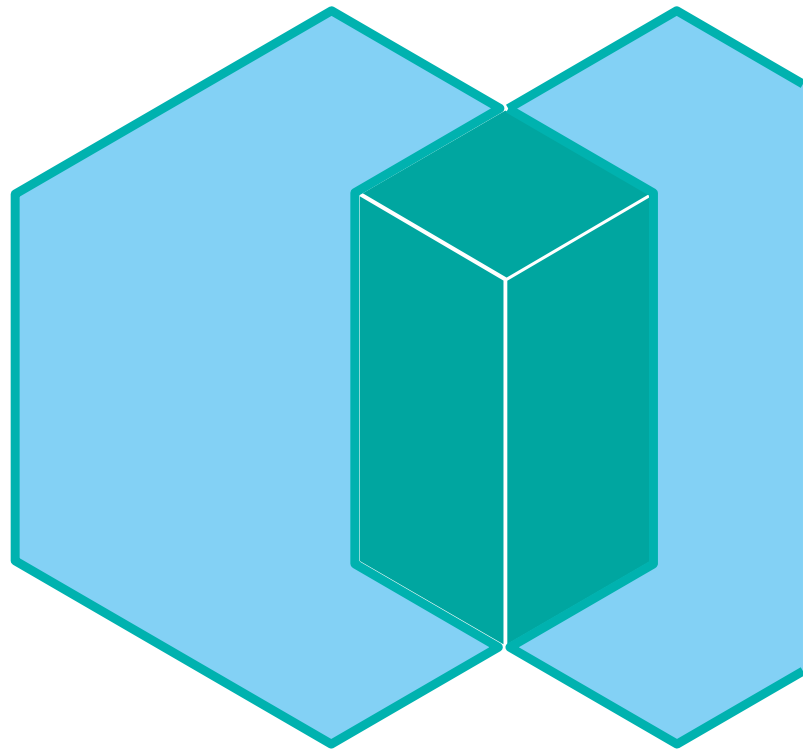# IBM Spectrum Scale
What's new in 5.0.2

5.0.2 Updates

Filesystem Enhancements

- mmnetverify enhancements, including remote cluster testing
- mmchconfig performance improvements
  - Reduce number of file operations – most noticeable in diskless or slow-disk environments
- LTFS EE and mmbackup integration improvements
  - LTFS EE awareness of backed up files to reduce the chance of recall storms during backups
  - Requires updates to LTFS EE, planned for future releases
- Automatic rebuild of GPFS portability layer on Linux systems after kernel upgrades
  - Configurabile via the 'autoBuildGPL' configuration option
- Addition of new filesystem maintenance mode
  - Disables certain filesystem operations, such as mounts, write I/O, disk down scenarios, and others if a filesystem is placed in maintenance mode
- Updates to stat cache on Linux systems
  - Stat cache is now usable on Linux systems
  - See updated performance guidelines regarding stat cache for more information

5.0.2 Updates (continued)

Watch Folders (new in 5.0.2)

- Flexible API that allows programmatic actions to be taken based on filesystem events
  - Can be run against directories, filesets, and inode spaces
- Modeled after Linux inotify, but works with clustered filesystems and supports recursive watches for filesets an inodespaces
- 2 primary components:
  - Spectrum Scale C API
  - mmwatch command for monitoring watches running in the cluster
- A watch folder uses the API to run as an executable C program on a node within the cluster
  - Utilizes message queues to receive events from multiple cluster nodes and consume events on the node running the application
  - Lightweight events are generated by elibigible nodes within the cluster, and from remote clusters
- Integration into callhome, GPFS snaps, and GPFS tracing
- Contact IBM support for additional details prior to use

5.0.2 Updates (continued)

GUI Updates

- Display of quota information and capacity data for remote clusters
- Node classes can now be created, displayed, and modified
- Ability to enable and disable File Audit Logging
- Health events show up faster, especially on large clusters
- The cluster name is now displayed in the banner (usability)
- Users are logged off immediately if a password expires, a user role is changed, or user is deleted

Health and monitoring

- CES IP address lists show node affinity
- Improved CES node suspend for easier service and and unmounts of filesystems
- Additional File Audit Logging events
- Ability to view statistics on cluster components that have been removed
- Grafana bridge updates

5.0.2 Updates (continued)

File Audit Logging Updates

- Multi-cluster/remote mount support for file audit logging
- Improved monitoring of Kafka producers

NFS and protocol updates

- NFS CLI performance improvements
- Package names changed to avoid conflicts with distribution packages
- NFSv4 pseudo path support

Currency Updates

- Ubuntu 18.04.1 kernel support
- Windows 10 Enterprise Edition client support
- Install toolkit support for Ubuntu 18.04/18.04.1
- Hortonworks and HDFS 3.0 support

5.0.2 Updates (continued)

Big Data & Analytics

- Support for Hortonworks Data Platform 3.0 and Management Pack 2.7.0.0

- Support for Apache Hadoop 3.0.x

- Support for native HDFS encryption

- Changes to configuration and logging paths for greater consistency

- FPO improvements to scanning for inconstant replicas and automatic recovery from certain node/disk failures

Linux on Z systems

- Ubuntu 18.04.1 kernel support

- File Audit Logging is now supported on Linux on Z

- Deployment toolkit support for installation, deployment, and configuration on Linux on Z

REST API

- SMB ACL's can now be retrieved and modified

- File Audit Logging can be enabled and disabled and configuration information can be retrieved

5.0.2 Updates (continued)

Deployment Toolkit Updates

- zLinux support
- Ubuntu 18.04/18.04.1 support for install, deployment, and upgrade
- Additional support for file audit logging and watch folders

Upgrade Enhancements

- Documentation and flowchart improvements for easier upgrade planning
- Deployment toolkit tolerance of unhealthy nodes prior to an upgrade
- Improved ability to restart a failed upgrade in the deployment toolkit
- Improved filesystem unmount experience on CES-enabled ndoes
- Documentation updates and performance tuning guide available

AFM Enhancements

- Allow users to modify AFM gateway nodes
- Additional prefetch options
- Read-only NFS exports supported for read-only AFM relationships

LEARN MORE

Client Enablement Material

New videos, blogs and presentations:

➢ https://www.ibm.com/developerworks/community/wikis/home?lang=en#!/wiki/General%20Parallel%20File%20System%20(GPFS)/page/White%20Papers%20%26%20Media

Watch for new blogs at:

➢ https://developer.ibm.com/storage/blog/

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