

General Parallel File Systems



Documentation Updates, March 2011

Version 3 Release 2

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March 2011

This update provides revised information for the General Parallel File System (GPFS™) 3.2 information units. These changes are highlighted as appropriate in:

- “Update to Advanced Administration Guide (SC23-5182-01)”

Information Updates

Update to Advanced Administration Guide (SC23-5182-01)

Chapter

Chapter 8, “Miscellaneous advanced administration topics”

Topic “Using multiple token servers”

In this section, replace existing paragraph 3 with the following:

When a file system is mounted initially, the file system manager is the only token server for the file system. Once the number of external mounts exceeds a single node, the file system manager appoints all the other manager nodes defined in the cluster to share the token server load. Once the token state has been distributed, it remains distributed until all external mounts have gone away. The only nodes that are eligible to become token manager nodes are those designated as manager nodes.

March 2009

This update provides revised information for the General Parallel File System (GPFS) 3.2 information units. These changes are highlighted as appropriate in:

- “Update to Advanced Administration Guide (SC23-5182-01)”
- “Update to What's new in GPFS V3.2”
- “Update to Summary of changes”
- “Update to Administration and Programming Reference (SA23-2221-01)”
- “Update to Concepts, Planning and Installation Guide (GA76-0413-01)” on page 4

Information updates

Update to Advanced Administration Guide (SC23-5182-01)

Chapter

Chapter 2, “Policy-based data management for GPFS”

Topic “Filesets”

Replace the existing bulleted list with the following list:

- Filesets can be used to define quotas on both data blocks and inodes.
- The owning fileset is an attribute of each file and can be specified in a policy to control initial data placement, migration, and replication of the file's data. See Policies and rules.
- The maximum number of filesets that GPFS supports is 1000 filesets per file system.

Update to What's new in GPFS V3.2

Replace the existing bullet with the following revised text:

- GPFS V3.2 Multiplatform supports InfiniBand Remote Direct Memory Access (RDMA) for Linux X86_64, which uses RDMA for NSD client file I/O requests. RDMA transfers data directly between the NSD client memory and the NSD server memory instead of sending and receiving the data over the TCP socket. Using RDMA may improve bandwidth and decrease CPU utilization. For the latest support information, see the GPFS Frequently Asked Questions at: publib.boulder.ibm.com/infocenter/clresctr/topic/com.ibm.cluster.gpfs.doc/gpfs_faqs/gpfsclustersfaq.html.

Update to Summary of changes

Replace the existing bullet with the following revised text:

- GPFS V3.2 Multiplatform supports InfiniBand Remote Direct Memory Access (RDMA) for Linux X86_64, which uses RDMA for NSD client file I/O requests. RDMA transfers data directly between the NSD client memory and the NSD server memory instead of sending and receiving the data over the TCP socket. Using RDMA may improve bandwidth and decrease CPU utilization. For the latest support information, see the GPFS Frequently Asked Questions at: publib.boulder.ibm.com/infocenter/clresctr/topic/com.ibm.cluster.gpfs.doc/gpfs_faqs/gpfsclustersfaq.html.

Update to Administration and Programming Reference (SA23-2221-01)

Chapter

Chapter 2, “Managing your GPFS cluster”

Topic “Changing the GPFS cluster configuration data”

Replace the existing row in the table titled “Table 2. Configuration attributes on the mmchconfig command” with the following:

verbsRdma Enables or disables InfiniBand RDMA using the Verbs API. Note: InfiniBand RDMA for Linux X86_64 is supported only on GPFS V3.2 Multiplatform. ¹	yes	yes	no	yes	if not immediately, on restart of the daemon
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¹ For the latest support information, see the GPFS Frequently Asked Questions at: publib.boulder.ibm.com/infocenter/clresctr/topic/com.ibm.cluster.gpfs.doc/gpfs_faqs/gpfsclustersfaq.html.

Chapter

Chapter 8, “GPFS commands”

Topic “mmchconfig command” (and man page)

Replace the description of the verbsRdma option with the following:

verbsRdma

Enables or disables InfiniBand RDMA using the Verbs API for data transfers between an NSD client and NSD server. Valid values are enable or disable.

Note: InfiniBand RDMA for Linux X86_64 is supported only on GPFS V3.2 Multiplatform. For the latest support information, see the GPFS Frequently Asked Questions at: publib.boulder.ibm.com/infocenter/clresctr/topic/com.ibm.cluster.gpfs.doc/gpfs_faqs/gpfsclustersfaq.html.

Update to Concepts, Planning and Installation Guide (GA76-0413-01)

Chapter

Chapter 1, “Introducing General Parallel File System”

Topic “Interoperable cluster requirements”

Replace the existing bullet with the following:

- Your cluster can have a mix of nodes with GPFS 3.1 (RDMA not available), GPFS 3.2 with RDMA configured, and GPFS 3.2 without RDMA configured. Only the GPFS 3.2 nodes with RDMA configured will use RDMA for data transfer between the NSD client and server.

Note: InfiniBand RDMA for Linux X86_64 is supported only on GPFS V3.2 Multiplatform. For the latest support information, see the GPFS Frequently Asked Questions at: publib.boulder.ibm.com/infocenter/clresctr/topic/com.ibm.cluster.gpfs.doc/gpfs_faqs/gpfsclustersfaq.html.

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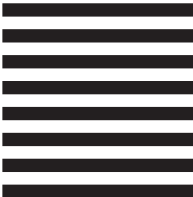
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