Red Hat Storage 3
Error Message Guide

Error description and recommended action for possible errors that occur in the Red Hat Storage Server environment.

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Abstract

Red Hat Storage Error Messages Guide makes an effort to provide valuable information that may help you solve the errors that occur in the Red Hat Storage environment, or at least narrow down the parameters of the error.

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Chapter 1. Introduction

The guide provides a list of error messages that may appear while running the Red Hat Storage Server. Each message includes the following information:

- Message ID
- Description
- Recommended Action

Message ID

The message ID is an internally generated ID that uniquely identifies the message. The guide is divided into ranges of Message IDs.

Within each section, the messages are ordered by Message ID. The best way to find a particular message is by searching for the Message ID.

Description

The description is an explanation of the error that was encountered including any background information that may aid you in determining the reason for the error.

Recommended Action

The recommended action is the suggested steps that you must take to recover from any problems caused by the error.

Important

The message IDs appear in the log files only if the**`with-msg-id`** format is configured using the **`gluster volume set <VOLNAME> OPTION PARAMETER`** command. The Administrator can search for the Message ID in the log files. This guide contains the description and recommended action for every Message ID.

There are several storage terminologies used in the context of this guide and the Red Hat Storage environment.

See section *Storage Concepts* in the *Red Hat Storage Administration Guide*

This is the first release of the Red Hat Storage Error Messages Guide. The commonly occurring errors in the following components are documented in this release.

- Automatic File Replication Translator
- glusterFS Management Daemon
- Quota Daemon
- Distributed Hash Table Translator

Chapter 2. glusterFS Management Daemon

2.1. glusterFS Management Daemon

The **glusterFS Management Daemon** is used for elastic volume management. The service runs on all Red Hat Storage servers. This chapter provides a listing of the possible error scenarios in the **glusterFS Management Daemon**.

glusterFS Management Daemon Error Scenarios

106001

Description: The operation could not be performed because the server quorum was not met.

Recommended Action: Ensure that the other peer Red Hat Storage nodes are online and reachable from the local peer Red Hat Storage node.

106002

Description: The local bricks belonging to the volume were killed because server-quorum was not met.

Recommended Action: Ensure that the other Red Hat Storage nodes are online and reachable from the local peer node.

106003

Description: Informational message: The local bricks belonging to the volume were restarted because server-quorum was met.

Recommended Action: None.

106004

Description: The **glusterFS Management Daemon** The glusterFS Management Daemon is either offline or the peer Red Hat Storage node is unreachable.

Recommended Action: Ensure that the **glusterFS Management Daemon** is running on the peer node or the firewall rules are not blocking the port 24007.

106005

Description: The brick process is offline.

Recommended Action:

1. Identify the reason for the brick to go offline in the brick log files.
2. Run the **gluster volume start <*VOLNAME*> force** command to bring the bricks back online.

106006

Description: Either the **glusterNFS Server** or **Self-heal Daemon** is offline.

Recommended Action:

1. Investigate the **Self-heal Daemon** and **glusterNFS Server** log files for the reason for the brick to go offline.

2. Run the **gluster volume start <VOLNAME> force** command to bring the glusterNFS Server and the Self-heal Daemon back online.

106007

*Description:*The rebalance process is offline.

Recommended Action: Execute the **gluster volume rebalance <VOLNAME> status** command and check if the rebalance status is complete, if not, then execute the command: **gluster volume rebalance <*VOLNAME*> start**

106008

*Description:*The volume cleanup operation failed.

Recommended Action: None.

106009

*Description:*A volume version mismatch occurred while adding a peer Red Hat Storage node.

Recommended Action: None.

106010

Description: A volume checksum version mismatch occurred while adding a peer Red Hat Storage node.

The log includes the peer name which caused the mismatch.

Recommended Action:

1. Identify the node that is causing the checksum error.
2. Contact the Red Hat Global Support.

106011

Description: A volume quota configuration version mismatch occurred while adding a peer Red Hat Storage node.

Recommended Action: None.

106012

Description: A quota configuration version checksum mismatch occurred while adding a Red Hat Storage node.

Recommended Action:

1. Identify the node that is causing the checksum error. The log includes the peer name which caused the mismatch.
2. Contact the Red Hat Global Support Services.

106013

Description: The brick process could not be brought offline.

Recommended Action:

1. Identify the PID of the brick process from the log file.

2. Kill the brick process manually.

106014

Description: One of the listed services: glusterNFS Server, Quota Daemon, Self Heal Daemon, or Brick Process could not be brought offline.

Recommended Action:

1. Identify the PID of the process from the log file.
2. Kill the process manually.

106015

Description: The process could not be killed with the specified PID.

Recommended Action: None.

106016

Description: The rebalance socket file is missing.

Recommended Action: Execute the command **gluster volume rebalance <*VOLNAME*> start**.

106017

Description: The UNIX options could not be set as the Red Hat Storage server is out of memory.

Recommended Action: Restart the Red Hat Storage server.

106018

Description: The rebalance process failed as the **glusterFS Management Daemon** could not establish an RPC connection.

Recommended Action:

1. Identify the reason for failure in the log file to resolve the issue.
2. Execute **gluster volume rebalance <*VOLNAME*> start**.

106019

Description: The default volume options could not be set on the **gluster volume create** or **gluster volume reset** commands.

Recommended Action:

1. Identify the reason for failure in the log file to resolve the issue.
2. Set the default volume options again.

For more information on where the log files are located, see section, *Red Hat Storage Component Logs and Location* in the *Red Hat Storage 3.0 Administration Guide*.

Chapter 3. Automatic File Replication Translator

3.1. Automatic File Replication Translator

The **Automatic File Replication** (AFR) translator in **glusterFS** makes use of the extended attributes to keep track of the file operations.

Automatic File Replication Translator Error Scenarios

108001

Description: The file modification operations are not allowed because the client quorum is not met. A few brick processes are either offline or not visible from the client.

Recommended Action: Ensure that the bricks are online and the packet traffic in the network is not blocked.

108002

Description: The bricks that were earlier offline are now online and the client quorum is restored.

Recommended Action: Identify the reason for the bricks to go offline in the brick and mount log files.

108003

Description: Information message: The quorum-count option is no longer valid because the client quorum-type was set to **auto**.

Recommended Action: None.

108004

Description: Replication subvolume received a connection notification from a brick that does not belong to the replica set.

Recommended Action: None.

108005

Description: A replica set that was earlier inaccessible because all its bricks were offline. It is now accessible because at least one of the bricks came back online.

Recommended Action: Identify the reason for the brick to go offline in the brick and mount log files.

108006

Description: All the bricks of a replica set are down.The data residing in that replica cannot be accessed until one of the bricks in the replica set is online.

Recommended Action: Ensure that the bricks are brought back online.

108007

Description: Entry unlocks failed on a brick.

Recommended Action:

1. Identify the reason for the failure in the client log files. The error number indicates the reason for failure.
2. Examine the brick log files for more information.

108008

Description: Inconsistency is noticed in either the data or metadata or GFID of the file amongst the bricks of a replica set.

Recommended Action:

1. Clear the AFR changelog attributes from the appropriate brick to resolve the split brain issue.
2. Execute the command **`gluster volume heal <VOLNAME>`**

   To resolve split brain issues, see section *Managing Split-brain* in the *Red Hat Storage Administration Guide*.

108009

Description: Either the open() or opendir() call failed on the brick.

Recommended Action:

1. Identify the reason for the failure in the client log files. The error number indicates the reason for failure.
2. Examine the brick log files for more information.

Chapter 4. Distributed Hash Table Translator

4.1. Distributed Hash Table Translator

The **`Distributed Hash Table`** (DHT) translator in **`glusterFS`** distributes data across the bricks depending on the filenames.

Distributed Hash Table Translator Error Scenarios

109001

Description: A cached subvolume could not be found for the specified path.

Recommended Action: None.

109002

Description: A linkfile creation failed.

Recommended Action: None.

109003

Description: The value could not be set for the specified key in the dictionary.

Recommended Action: None.

109004

Description: Directory attributes could not be healed.

Recommended Action: None.

109005

Description: Self-heal failed for the specified directory.

Recommended Action:

1. Ensure that all the subvolumes are online and reachable.
2. Perform a lookup operation on the directory again.

109006

Description: The extended attributes could not be healed for the specified directory on the specified subvolume.

Recommended Action: None.

109007

Description: A lookup operation found a file with the same path on multiple subvolumes.

Note

If a rebalance process is in progress, this message can be ignored.

Recommended Action:

1. Create backups of the file on other subvolumes.
2. Inspect the content of all the files to identify and retain the most appropriate one.

109008

Description: A path resolves to a file on one subvolume and a directory on another.

Recommended Action:

1. Create a backup of the file with a different name and delete the original file.
2. In the newly created back up file, remove the **`trusted.gfid`** extended attribute using the command:

   `setfattr -x trusted.gfid <path to the newly created backup file>`

3. Perform a new lookup operation on both the new and old paths.
4. From the mount point, inspect both the paths and retain the relevant file or directory.

109009

Description: The GFID of the file or directory is different on different subvolumes.

Recommended Action: None.

109010

Description: The GFID of the specified file or directory is NULL.

Recommended Action: None.

109011

Description: The hashed subvolume could not be found for the specified file or directory.

Recommended Action: None.

109012

Description: The Distributed Hash Table Translator could not be initiated as the system is out of memory.

Recommended Action: None.

109013

Description: Invalid Distributed Hash Table configuration in the **`volume configuration`** file.

Recommended Action: None.

109014

Description: Invalid disk layout.

Recommended Action: None.

109015

Description: Invalid Distributed Hash Table configuration option.

Recommended Action:

1. Reset the option with a valid value using the **`gluster volume set <VOLNAME>`** command.
2. Restart the process that logged the message in the log file.

109016

Description: The fix layout operation failed.

Recommended Action: None.

109017

Description: Layout merge failed.

Recommended Action: None.

109018

*Description:*The layout for the specified directory does not match that on the disk.

Recommended Action: None.

109019

*Description:*No layout is present for the specified file or directory.

Recommended Action: None.

109020

*Description:*Informational message: Migration of data from the cached subvolume to the hashed subvolume is complete.

Recommended Action: None.

109021

*Description:*Migration of data failed during the rebalance operation.

*Cause:*Directories could not be read to identify the files for the migration process.

*Recommended Action:*The log message indicates the reason for the failure and the corrective action depends on the specific error that is encountered. The error would be one of the standard UNIX errors.

109022

*Description:*Informational message: The file was migrated successfully during the rebalance operation.

*Recommended Action:*None.

109023

*Description:*File migration failed during the rebalance operation.

*Cause:*Rebalance moves data from the cached subvolume to the hashed subvolume. Migrating a single file is a multi-step operation which involves opening, reading, and writing the data and metadata. Any failures in this multi-step operation can result in a file migration failure.

*Recommended Action:*The log message would indicate the reason for the failure and the corrective action depends on the specific error that is encountered. The error is one of the standard UNIX errors.

109024

*Description:*The system is out of memory.

*Recommended Action:*None.

109025

*Description:*The opendir() call failed on the specified directory.

*Cause:*When a directory is renamed, the DHT Translator checks whether the destination directory is empty. This message indicates that the opendir() call on the destination directory has failed.

*Recommended Action:*The log message indicates the reason for the failure and the corrective action depends on the specific error that is encountered. The error is one of the standard UNIX errors.

109026

*Description:*The rebalance operation failed.

*Possible Cause:*A subvolume is down.

*Recommended Action:*Restart the rebalance operation after all the subvolumes are online.

109027

*Description:*Failed to start the rebalance process.

*Recommended Action:*Identify the reason for failure in the log files.

109028

*Description:*Informational Message: Indicates the status of the rebalance operation and details such as the number of files migrated, skipped, or failed.

*Recommended Action:*None.

109029

*Description:*The rebalance operation was aborted by the user.

*Recommended Action:*None.

109030

*Description:*The file or directory could not be renamed.

*Recommended Action:*Ensure that all the subvolumes are reachable and try renaming the file or directory again.

109031

*Description:*Attributes could not be set for the specified file or directory.

*Recommended Action:*None.

109032

*Description:*The specified subvolume is running out of file system inodes. If all subvolumes run out of inodes, then new files cannot be created.

*Recommended Action:*Add more nodes to the cluster if all subvolumes run out of inodes.

109033

*Description:*The specified subvolume is running out of disk space. If all subvolumes run out of space, new files cannot be created.

*Recommended Action:*Add more nodes to the cluster if all subvolumes run out of disk space.

109034

*Description:*Failed to unlink the specified file or directory.

*Recommended Action:*The log message indicates the reason for the failure and the corrective action depends on the specific error that is encountered.

109035

*Description:*The layout information could not be set in the inode.

*Recommended Action:*None.

Revision History

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