GemStone®

GemStone/S Release Notes

Version 6.5.3.6

June 2010

GEMSTONE S™

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PATENTS

GemStone is covered by U.S. Patent Number 6,256,637 "Transactional virtual machine architecture", Patent Number 6,360,219 "Object queues with concurrent updating", and Patent Number 6,567,905 "Generational Garbage Collector". GemStone may also be covered by one or more pending United States patent applications.

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Chapter

1

GemStone/S 6.5.3.6 Release Notes

Overview

GemStone/S 6.5.3.6 is a new version of the GemStone Smalltalk object server. This is a special build release provides bug fixes to address a number of issues with remote caches.

These release notes provide changes between the previous version of GemStone/S, version 6.5.3.5, and version 6.5.3.6. If you are upgrading from a version prior to 6.5.3.5, please also review the release notes for each intermediate release to see the full set of changes.

No separate Installation Guide is provided with this release. For installation instructions, use the Installation Guide for version 6.5.

Supported Platforms

Platforms

GemStone/S version 6.5.3.6 is supported on the following platforms:

▸ Solaris 8, 9 and 10 on SPARC
▸ Red Hat Linux ES 3.0 and 5.0

For more information and detailed requirements for each supported platforms, please refer to the GemStone/S v6.5 Installation Guide for that platform.

Changes in this release

Authorization failures with mid-level caches

When the system is configured with netldi running as root, which requires authentication to start processes, attempts to start a mid-level cache failed authentication. (#40718)

Performance problems in PageManager poll() with remote caches

When the page manager read responses from remote cache page servers, it performed non-blocking I/O, and therefore called code to wait and poll for response. On a heavily loaded system with many remote caches, this resulted in very high CPU use by the page manager, and high values for the cache statistic TimeInNetPgsvrReads.

Since the pagemanager has already been informed that a response is available, there is no need to wait or poll. Now, the page manager uses blocking I/O to read the response.

In addition, the pagemanager no longer calls poll when conversing with the Stone.

(#40733)

Remote cache timeouts counted sequentially, resulting in delayed timeout

The STN_REMOTE_CACHE_PGSVR_TIMEOUT configuration parameter controls how long the page manager waits before determining that a remote cache is unresponsive. These timeouts were not handled correctly with multiple remote caches, resulting in potentially delayed handling of unresponsive remote caches.

When the page manger was waiting for responses from multiple page servers, instead of counting the timeout from the time the message was sent to a specific remote pgsvr, the timeout was started at the time a response was received from any remote pgsvr. This resulted in potentially nearly cumulative timeouts.

In addition to simultaneous timeouts, when the remote cache response is received after more than 50% of the remote cache timeout period has elapsed, a warning is printed to the pagemanager log file. For example,

--- 06/21/10 13:15:43.345 PDT :[Warning]: Slow response from page server on host bebop.gemstone.com with process ID 12975: 13849 ms.

Potential memory leak in stone

Code existed for increasing the size of an empty buffer that could have resulted in a memory leak. While it is not expected that the specific circumstances that would cause a leak can occur, it has been fixed. (#40731.