GemStone®

GemStone/S 64 Bit™ Release Notes

Special Limited Distribution Release

Version 2.2.5.3.3

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vmware®

GEMSTONE S™ 64

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PATENTS

GemStone software is covered by U.S. Patent Number 6,256,637 "Transactional virtual machine architecture", Patent Number 6,360,219 "Object queues with concurrent updating", Patent Number 6,567,905 "Generational garbage collector with persistent object cache", and Patent Number 6,681,226 "Selective pessimistic locking for a concurrently updateable database". GemStone software may also be covered by one or more pending United States patent applications.

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VMware, Inc.
15220 NW Greenbrier Parkway
Suite 150
Beaverton, OR 97006

Chapter 1

GemStone/S 64 Bit 2.2.5.3.3 Release Notes (Special Limited Distribution Release)

Overview

GemStone/S 64 Bit 2.2.5.3.3 is a new limited distribution special release version of the GemStone/S 64 Bit object server. This release fixes several bugs in 2.2.5.3.2 that impact system performance. This release is only available for AIX, and GBS support is provided for a limited set of configurations.

These release notes provide changes between the previous version of GemStone/S 64 Bit, version 2.2.5.3.2, and version 2.2.5.3.3. If you are upgrading from a version prior to 2.2.5.3.2, 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 2.2.5.2.

Supported Platforms and GBS Versions

Platforms

GemStone/S 64 Bit version 2.2.5.3.3 is supported on the following platforms:

- AIX 5.3, TL5, SP3 and AIX 6.1, TL1, SP1

For more information and detailed requirements for each supported platforms, please refer to the GemStone/S 64 Bit v2.2.5.2 Installation Guide for that platform.

GBS versions

The following versions of GBS are supported with GemStone/S 64 Bit version 2.2.5.3.3.

GBS version 7.2.2

VW 7.6 with 7.6 OE	**VW 7.5** with 7.5 OE
▸ Windows XP and Windows 2003 ▸ Solaris 10 on x86 ▸ SuSE Linux ES 10, Red Hat Linux ES 5.0	▸ Windows XP and Windows 2003 ▸ SuSE Linux ES 10, Red Hat Linux ES 5.0

For more details on supported platforms and requirements, see the release notes for that version of GBS.

Changes in this release

Long running Write-Set union sweeps

Under some circumstances, long running gems may have stale objects in the pom_gen memory space. As a result, during the voting on possible dead following mark/sweep, they may vote down many objects from the possible dead set, causing the write set union sweep to take unnecessarily long.

To avoid this, the configuration parameter GEM_TEMPOBJ_POMGEN_PRUNE_ON_VOTE has been added. This controls how aggressively the gem will remove old POM objects from pom_gen prior to voting.

Added configuration parameter

GEM_TEMPOBJ_POMGEN_PRUNE_ON_VOTE

The percent of the pom generation area to be thrown away when voting on possible dead objects. Only subspaces of pom generation older than 5 minutes are thrown away. The most recently used subspace is never thrown away.

If this value is not specified, or the specified value is out of range, the default is used.

Default: 50
Minimum: 0
Maximum: 90

Added Cache Statistic

GcWsUnionSize (Stone)
Number of objects in the write set union used to finalize possible dead objects. All objects in the WSU must be scanned to determine if any objects reference one or more possible dead objects.

EpochLastDuration (Stone)
Duration of the last completed epoch garbage collection operation in seconds.

Dead object reclaim may have stopped

Under certain circumstances, the Reclaim GcGems could stop reclaiming dead objects. (#41634)

GcGems deleted log files with #verboseLogging

When the GcUser parameter `#verboseLogging` is true, the GcGems were incorrectly deleting their log files. Now, when this parameters is set, the deletion of GcGem log files is suppressed. (#41829)