
GemStone®

GemStone/S 64 Bit™
Release Notes

Limited Distribution Release

Version 2.4.4.8

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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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GemStone/S 64 Bit

2.4.4.8 Release Notes

(Limited Distribution Release)

Overview

GemStone/S 64 Bit 2.4.4.8 is a new limited distribution patch release of the GemStone/S 64 Bit object server. This patch version fixes several serious bugs impacting warm backups; we recommend GemStone/S 64 Bit applications on v2.4.4.7 or earlier that are running warm backups upgrade to this version. A number of other bugs are also fixed in this release.

This version is not available for AIX. Version 2.4.5.1, which will include all fixes in this release as well as changes in 2.4.5, will provide support for AIX, including support for POWER 7.

These release notes provide changes between the previous version of GemStone/S 64 Bit, version 2.4.4.7, and version 2.4.4.8. If you are upgrading from a version prior to 2.4.4.7, 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 2.4.

Changes and Bugs fixed

Memory leak in tranlog restore

During transaction log restore operations, there was a memory leak of variable size. This memory leak was primarily an issue for warm backups, which repeatedly perform tranlog restores; the stone would eventually run out of memory and shut down. (#42141)

Risk of bad tranlog record written with nonzero STN_GEM_TIMEOUT

The way transaction log records are generated when there is a gem terminated due to STN_GEM_TIMEOUT created a risk of writing a bad record to the tranlog. This is not visible when writing the tranlog, but when the transaction log containing this record is replayed, including during recovery after a shutdown, it fails with the error “unhandled recordKind”. (#42114)

Commit Record Backlog during restore

When restoring transaction logs containing a large amount of reclaim, it was possible for a commit record backlog to develop. This could use up all available free space and cause the restore to fail. (#42125)

commitRestore could reset tranlog sequence to 0

When commitRestore is performed immediately after startstone -N, it may reset the stone's tranlog Id to 0. This may cause a conflict with existing tranlogs. (#41904)

Failure in pregrow of dynamically added extent causes extent corruption

When an extent is added dynamically using methods such as createExtent:withMaxSize:, the new extent is pregrown if DBF_PRE_GROW is true. If the operation fails, for example if the specified size is larger than available disk, the system does not clean up properly, and it can result in the wrong information written to the root page. (#42147)

Scopes overflow error

When handling an exception, it was possible to encounter a fatal error “VM temporary object scopes overflow” (#42105)

TimeWaitingForIo type change

The statistic TimeWaitingForIo has been changed from uvalue to counter; it will now display by default as per Second rather than unfiltered.

ProfMonitorTree profiling errored with user actions

When profiling code containing a user action using ProfMonitorTree, it resulted in a message not understood error on #'_classAndSelectorNameWidth:'. (#41261)

String >> printOn: required receiver to implement _nextPut:

The argument to String >> printOn: needs to implement stream protocol, but not necessarily be a kind of Stream. The printOn: code inappropriately required that instances of classes used as arguments to printOn:, other than GemStone stream classes, implemented the private method _nextPut:. (#41802)

Performance improvement in reverseDo:

The method reverseDo: includes a performance improvement. (#42045)