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GemStone®

# *GemStone/S* *Release Notes*

Version 6.5.5

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GEMSTONE ™

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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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# GemStone/S 6.5.5

## Release Notes

### Overview

GemStone/S 6.5.5 is a new version of the GemStone Smalltalk object server. This release fixes several significant bugs; we recommend all customers using GemStone/S upgrade to version 6.5.5.

These release notes provide changes between the previous version of GemStone/S, version 6.5.4, and version 6.5.5. If you are upgrading from a version prior to 6.5.4, please also review the release notes for each intermediate release to see the full set of changes.

This release supports Solaris, Linux, AIX, and Windows.

### Installation

No separate Installation Guide is provided with this release. For installation instructions, use the Installation Guide for version 6.5.4.

There are no image-level changes from version 6.5.4. If you are upgrading from version 6.5.4, you do not need to do the image upgrade; using the new executables is sufficient.

If you are upgrading from a version earlier than 6.5.4, you must upgrade the image as usual.

### Bugs Fixed

The following bugs in GemStone/S 6.5.4 have been fixed in GemStone/S 6.5.5:

#### Multiple remote clients caused stone shutdown

*Windows only*

If there are remote logins from more than one remote client machine to a Stone running on Windows, the page manager process on the Stone's machine terminated. This caused the Stone to shut itself down. (#40396)

## Remote caches may have failed to shut down

When a connection to a remote shared page cache was lost, the page manager may not have closed the connection to the cache page server. This prevented the remote cache from shutting down, as it should if there are no remote gems using that cache. (#40340)

## netldi -s option caused logins to crash netldi

If the netldi was started with the -s option, any remote login caused the netldi to crash. (#40370, #40365)

## Stopping the Gem's page server had problems

When a page server for a remote cache was disconnecting, there was a risk of infinite recursion if a queue lock was stuck. In addition to correcting this, code related to pageserver/cache shutdown has been examined and updated to avoid other possible error conditions. (#40360)

Logging has also been improved:

- ▶ Socket errors now print a more useful error message.
- ▶ Suspected stuck queue locks are now logged.

If a fatal stuck lock is encountered, the SPC monitor will attempt to print C stacks for both lock holder and queue lock holder, if they exist, to the SPC monitor log file.

## GsFile operations on disk full cause gem crash

*Linux only*

On Linux, if GsFile operated on a file that is on a disk that was completely full, the subsequent session logout caused the gems session to crash with the error "double free or corruption". (#40382)

## Keepalive only enabled one way on OOB socket

The out of band socket has keepalive enabled, to avoid the socket being closed as inactive. However, the keepalive was only enabled on the gem side of this socket, not on the client side. This means the socket could be closed due to inactivity, resulting in client connection errors. (#40405)

## Stone shutdown during restoreFromLogs may corrupt extents

When the stone was restoring transaction logs, under some very rare internal conditions the pageservers may have failed to write complete checkpoint data to the extents. If the stone then was shut down or crashed, the extents had incomplete informational and were not usable. If the stone was not shut down, a subsequent correct checkpoint flush would make shutdown safe again. (#40368)