GemStone®

GemStone/S 64 Bit™ Release Notes

Version 3.2.17

May 2017

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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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Preface

About This Documentation

These release notes describe changes in the GemStone/S 64 Bit™ version 3.2.17 release. Read these release notes carefully before you begin installation, conversion testing, or development with this release.

No separate Installation Guide is provided with this release. For instructions on installing GemStone/S 64 Bit version 3.2.17, or upgrading or converting from previous products or versions, see the Installation Guide for version 3.2.6.

These documents are available on the GemTalk website, as described below.

Terminology Conventions

The term "GemStone" is used to refer to the server products GemStone/S 64 Bit and GemStone/S, and the GemStone family of products; the GemStone Smalltalk programming language; and may also be used to refer to the company, now GemTalk Systems LLC, previously GemStone Systems, Inc. and a division of VMware, Inc.

Technical Support

Support Website

gemtalksystems.com

GemTalk's website provides a variety of resources to help you use GemTalk products:

- **Documentation** for the current and for previous released versions of all GemTalk products, in PDF form.
- **Product download** for the current and selected recent versions of GemTalk software.
- **Bugnotes**, identifying performance issues or error conditions that you may encounter when using a GemTalk product.

- **TechTips**, providing information and instructions that are not in the documentation.
- **Compatibility matrices**, listing supported platforms for GemTalk product versions.

This material is updated regularly; we recommend checking this site on a regular basis.

Help Requests

You may need to contact Technical Support directly, if your questions are not answered in the documentation or by other material on the Technical Support site. Technical Support is available to customers with current support contracts.

Requests for technical assistance may be submitted online, by email, or by telephone. We recommend you use telephone contact only for more serious requests that require immediate evaluation, such as a production system down. The support website is the preferred way to contact Technical Support.

Website: support.gemtalksystems.com

Email: techsupport@gemtalksystems.com

Telephone: (800) 243-4772 or (503) 766-4702

When submitting a request, please include the following information:

- Your name and company name.
- The versions of GemStone/S 64 Bit and of all related GemTalk products, and of any other related products, such as client Smalltalk products.
- The operating system and version you are using.
- A description of the problem or request.
- Exact error message(s) received, if any, including log files if appropriate.

Technical Support is available from 8am to 5pm Pacific Time, Monday through Friday, excluding GemTalk holidays.

24x7 Emergency Technical Support

GemTalk offers, at an additional charge, 24x7 emergency technical support. This support entitles customers to contact us 24 hours a day, 7 days a week, 365 days a year, for issues impacting a production system. For more details, contact GemTalk Support Renewals.

Training and Consulting

GemTalk Professional Services provide consulting to help you succeed with GemStone products. Training for GemStone/S is available at your location, and training courses are offered periodically at our offices in Beaverton, Oregon. Contact GemTalk Professional Services for more details or to obtain consulting services.

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Chapter

1 GemStone/S 64 Bit 3.2.17 Release Notes

Overview

GemStone/S 64 Bit 3.2.17 is a new version of the GemStone/S 64 Bit object server. This release include fixes for a number of serious bugs.

These release notes provide changes between the previous version of GemStone/S 64 Bit, version 3.2.16, and version 3.2.17. If you are upgrading from a version prior to 3.2.16, review the release notes for each intermediate release to see the full set of changes.

No specific Installation Guide is provided with this release. For details on installing GemStone/S 64 Bit 3.2.17 or upgrading from earlier versions of GemStone/S 64 Bit, see the *GemStone/S 64 Bit Installation Guide* for v3.2.6 for your platform.

Supported Platforms

Platforms for Version 3.2.17

GemStone/S 64 Bit version 3.2.17 is supported on the following platforms:

- Solaris 10 and 11 on SPARC
- Solaris 10 on x86
- AIX 6.1 and AIX 7.1
- Red Hat Linux ES 6.4 and 6.5, Ubuntu 14.04 and 16.04, and SUSE Linux Enterprise 12, on x86
- Mac OSX 10.9.5 (Mavericks), with Darwin 13.4.0 kernel, on x86 (Mac supported for development only)

Note that Solaris on SPARC support is being deprecated and will be available for development only. Solaris on x86 will continue to be fully supported.

GBS Versions

The following versions of GBS are supported with GemStone/S 64 Bit version 3.2.17.

GBS version 8.2

VisualWorks 8.1.1 32-bit	VisualWorks 8.1.1 64-bit	VisualWorks 7.10.1 32-bit	VisualWorks 7.10.1 64-bit
▸ Windows 10, Windows 8, Windows 2008 R2 and Windows 7 ▸ Solaris 10 on SPARC ▸ Ubuntu 14.04 and 16.04, RedHat Linux ES 6.4 and 6.5, and SUSE Linux ES 12	▸ Windows 10, Windows 8, Windows 2008 R2 and Windows 7 ▸ Solaris 10 on SPARC ▸ Ubuntu 14.04 and 16.04, RedHat Linux ES 6.4 and 6.5, and SUSE Linux ES 12	▸ Windows 8, Windows 2008 R2 and Windows 7 ▸ Solaris 10 on SPARC ▸ Ubuntu 14.04, RedHat Linux ES 6.4 and 6.5, and SUSE Linux ES 12	▸ Windows 7 ▸ RedHat Linux ES 6.4 and 6.5

GBS version 5.4.2

VA Smalltalk 8.6	VA Smalltalk 8.5.2
▸ Windows 8, Professional or above ▸ Windows 2008 R2 ▸ Windows 7, Professional or above	▸ Windows 2008 R2 ▸ Windows 7

For more details on supported GBS and client Smalltalk platforms and requirements, see the *GemBuilder for Smalltalk Installation Guide* for that version of GBS.

VSD Version

The GemStone/S 64 Bit v3.2.17 distribution includes VSD version 5.3, the same version of VSD as v3.2.16. For details on VSD versions, see the documentation on the website at gemtalksystems.com/products/vsd/versions/.

Bugs Fixed

Reaching max session limit due to excessive Gem exits during login

If a Gem exits prematurely during the wrong point in the Gem-to-Stone login handshake, a counter in the Stone that was incremented did not get the appropriate decrement. This reduced the maximum possible sessions that could log in (from the limit set by STN_MAX_SESSIONS or license limits). (#46817)

GsFile>>position: failures for arguments over 2 billion

Calling GsFile >> position: with a argument greater or equal to 2^{31} (2147483648) returned nil, and caused subsequent calls to GsFile >> position to return incorrect values. (#46750)

Split IdentitySet store traversal may encounter oop not allocated error

If you do a store traversal of an IdentitySet, and the report is split across traversal buffers so that the first report in a buffer starts with one of the private named instvars that is not the first instvar, the server reports the error GbsObjErrOopNotAllocated. (#46822)

Stone encountering EWOULDBLOCK risked failing to send OOB bytes

If the Stone's send to a gem results in an EWOULDBLOCK, the Out of Band (OOB) bytes may have been lost. OOB processing supports sigAbort handling. (#46846).

Gems may crash or hang under very low memory conditions

When a machine is almost out of swap space, such that an mmap from reserved memory fails, there are cases where the Gem may crash. (#46848)

When a Gem dies due to a malloc failure, it forks a pstack to record the stack. This may hang if there is insufficient virtual memory. (#46830)