GemStone®

GemStone/S 64 Bit Release Notes

Version 2.2.5.2

May 2008

GemStone S 64™

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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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Preface

About This Documentation

These release notes describe changes in the GemStone / S 64 Bit version 2.2.5.2 release. We recommend that everyone migrating to this version read these release notes before beginning installation, testing or development.

For information on installing or upgrading to this version of GemStone / S 64 Bit, please refer to the *GemStone/S 64 Bit Installation Guide.*

These documents are available on the GemStone customer support website, as described below.

Terminology Conventions

This document uses the following terminology:

The term “GemStone” is used to refer both to the product, GemStone / S 64 Bit, or previous GemStone / S server products; and to the company, GemStone Systems, Inc.

Technical Support

GemStone provides several sources for product information and support. The product-specific manuals and online help provide extensive documentation, and should always be your first source of information. GemStone Technical Support engineers will refer you to these documents when applicable.

GemStone Web Site: http://support.gemstone.com

GemStone’s Technical Support website provides a variety of resources to help you use GemStone products. Use of this site requires an account, but registration is free of charge. To get an account, just complete the Registration Form, found in the same location. You’ll be able to access the site as soon as you submit the web form.

The following types of information are provided at this web site:

Help Request allows designated support contacts to submit new requests for technical assistance and to review or update previous requests.

Documentation for GemStone/S 64 Bit is provided in PDF format. This is the same documentation that is included with your GemStone/S 64 Bit product.

Release Notes and **Install Guides** for your product software are provided in PDF format in the Documentation section.

Downloads and **Patches** provide code fixes and enhancements that have been developed after product release. Most code fixes and enhancements listed on the GemStone Web site are available for direct downloading.

Bugnotes, in the Learning Center section, identify performance issues or error conditions that you may encounter when using a GemStone product. A bugnote describes the cause of the condition, and, when possible, provides an alternative means of accomplishing the task. In addition, bugnotes identify whether or not a fix is available, either by upgrading to another version of the product, or by applying a patch. Bugnotes are updated regularly.

TechTips, also in the Learning Center section, provide information and instructions for topics that usually relate to more effective or efficient use of GemStone products. Some Tips may contain code that can be downloaded for use at your site.

Community provides customer forums for discussion of GemStone product issues.

Technical information on the GemStone Web site is reviewed and updated regularly. We recommend that you check this site on a regular basis to obtain the latest technical information for GemStone products. We also welcome suggestions and ideas for improving and expanding our site to better serve you.

You may need to contact Technical Support directly for the following reasons:

- Your technical question is not answered in the documentation.
- You receive an error message that directs you to contact GemStone Technical Support.
- You want to report a bug.
- You want to submit a feature request.

Questions concerning product availability, pricing, keyfiles, or future features should be directed to your GemStone account manager.

When contacting GemStone Technical Support, please be prepared to provide the following information:

- Your name, company name, and GemStone/S license number
- The GemStone product and version you are using
- The hardware platform and operating system you are using
- A description of the problem or request
- Exact error message(s) received, if any

Your GemStone support agreement may identify specific individuals who are responsible for submitting all support requests to GemStone. If so, please submit your information through those individuals. All responses will be sent to authorized contacts only.

For non-emergency requests, the support website is the preferred way to contact Technical Support. Only designated support contacts may submit help requests via the support website. If you are a designated support contact for your company, or the designated contacts have changed, please contact us to update the appropriate user accounts.

Email: support@gemstone.com

Telephone: (800) 243-4772 or (503) 533-3503

Requests for technical assistance may also be submitted 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 that is non-operational. In these cases, please also submit your request via the web or email, including pertinent details such error messages and relevant log files.

If you are reporting an emergency by telephone, select the option to transfer your call to the technical support administrator, who will take down your customer information and immediately contact an engineer.

Non-emergency requests received by telephone will be placed in the normal support queue for evaluation and response.

24x7 Emergency Technical Support

GemStone 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, if they encounter problems that cause their production application to go down, or that have the potential to bring their production application down. For more details, contact your GemStone account manager.

Training and Consulting

Consulting and training for all GemStone products are available through GemStone's Professional Services organization.

- Training courses are offered periodically at GemStone's offices in Beaverton, Oregon, or you can arrange for onsite training at your desired location.
- Customized consulting services can help you make the best use of GemStone products in your business environment.

Contact your GemStone account representative for more details or to obtain consulting services.

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Chapter 1

GemStone/S 64 Bit 2.2.5.2 Release Notes

Overview

GemStone/S 64 Bit 2.2.5.2 is a new version of the GemStone/S 64 Bit object server. This release fixes a number of bugs; we recommend everyone using or intending to upgrade to GemStone/S 64 Bit 2.x, upgrade to this new version. The details of these changes are provided in this document.

These release notes provide the changes between the previous version of GemStone/S 64 Bit, version 2.2.5.1, and version 2.2.5.2. If you are upgrading from a version prior to 2.2.5.1, please also review the release notes for each intermediate release to see the full set of changes.

For details about installing GemStone/S 64 Bit 2.2.5.2 or upgrading from earlier versions of GemStone/S 64 Bit or other GemStone server products, see the *GemStone/S 64 Bit Installation Guide* for version 2.2.5.2.

Changes and New Features

AIX 6.1 on POWER6

In addition to the previously supported AIX platforms, AIX 6.1 on the POWER6 processor is now a fully supported platform for GemStone/S 64 Bit 2.2.5.1 and later.

Timestamps in Smalltalk stacks

When the Smalltalk stack is printed – for example, as a result of sending kill -USR1 to a gem process – the resulting stack now includes a timestamp.

Bugs Fixed

The following bugs in GemStone/S 64 Bit 2.2.5.1 have been fixed in GemStone/S 64 Bit 2.2.5.2.

SmallDouble >> floor incorrect results

The method SmallDouble >> floor returned incorrect results (0 rather than -1) for values between 0 and -1, exclusive. (#38862)

Timeout in stone startup with very large cache

In a system configured with a very large shared page cache, it was possible for the startup to timeout before the cache completely initialized. The previous timeout was 60 seconds, this has been increased to 300 seconds. (#38861).

postconv typo caused skipped conversion with cache warmers

The postconv script omitted a $ from a variable name. The resulting comparison of an uninitialized variable caused the postconv script to exit before performing the post conversion of large methods and large objects. This only occurred if cache warmer gems were specified in the postconv argument; and on Linux, but not on Solaris, due to the different ways the shells handle initialized variables. (#38902)

Conflict in signal usage with Java VM on Linux

Linux only

Internally GemStone used SIGUSR2 to terminate threads. The Java VM on Linux, when loaded into a gem, could intercept this signal, resulting in a possible SIGSEGV. This has been observed as SIGSEGV on session logout. GemStone now uses a different signal to terminate threads on Linux. (#38911)

Symbol name collisions with applications shared libraries

GemStone's process of linking shared libraries left more symbols globally visible than was necessary. This made it possible for customer-created shared libraries to encounter symbol name collisions with symbols in the GemStone shared libraries. To address this issue, GemStone shared libraries are now linked in such a way that only externally callable GCI functions are globally visible. (#38906)