
GemStone®

GemStone/S 64 Bit Release Notes

Version 2.4.2

January 2009

GEMSTONE[™] S 64

INTELLECTUAL PROPERTY OWNERSHIP

This documentation is furnished for informational use only and is subject to change without notice. GemStone Systems, Inc. assumes no responsibility or liability for any errors or inaccuracies that may appear in this documentation.

This documentation, or any part of it, may not be reproduced, displayed, photocopied, transmitted, or otherwise copied in any form or by any means now known or later developed, such as electronic, optical, or mechanical means, without express written authorization from GemStone Systems, Inc.

Warning: This computer program and its documentation are protected by copyright law and international treaties. Any unauthorized copying or distribution of this program, its documentation, or any portion of it, may result in severe civil and criminal penalties, and will be prosecuted under the maximum extent possible under the law.

The software installed in accordance with this documentation is copyrighted and licensed by GemStone Systems, Inc. under separate license agreement. This software may only be used pursuant to the terms and conditions of such license agreement. Any other use may be a violation of law.

Use, duplication, or disclosure by the Government is subject to restrictions set forth in the Commercial Software - Restricted Rights clause at 52.227-19 of the Federal Acquisitions Regulations (48 CFR 52.227-19) except that the government agency shall not have the right to disclose this software to support service contractors or their subcontractors without the prior written consent of GemStone Systems, Inc.

This software is provided by GemStone Systems, Inc. and contributors "as is" and any expressed or implied warranties, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose are disclaimed. In no event shall GemStone Systems, Inc. or any contributors be liable for any direct, indirect, incidental, special, exemplary, or consequential damages (including, but not limited to, procurement of substitute goods or services; loss of use, data, or profits; or business interruption) however caused and on any theory of liability, whether in contract, strict liability, or tort (including negligence or otherwise) arising in any way out of the use of this software, even if advised of the possibility of such damage.

COPYRIGHTS

This software product, its documentation, and its user interface © 1986-2010 GemStone Systems, Inc. All rights reserved by GemStone Systems, Inc.

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.

TRADEMARKS

GemStone, **GemBuilder**, **GemConnect**, and the GemStone logos are trademarks or registered trademarks of GemStone Systems, Inc. in the United States and other countries.

UNIX is a registered trademark of The Open Group in the United States and other countries.

Sun, **Sun Microsystems**, **Solaris**, and **SunOS** are trademarks or registered trademarks of Sun Microsystems, Inc. All **SPARC** trademarks are used under license and are trademarks or registered trademarks of SPARC International, Inc. **SPARCstation** is licensed exclusively to Sun Microsystems, Inc. Products bearing SPARC trademarks are based upon an architecture developed by Sun Microsystems, Inc.

HP and **HP-UX** are registered trademarks of Hewlett Packard Company.

Intel and **Pentium** are registered trademarks of Intel Corporation in the United States and other countries.

Microsoft, **MS**, **Windows**, **Windows XP**, **Windows 2000**, **Windows 2003**, and **Windows Vista** are registered trademarks of Microsoft Corporation in the United States and other countries.

Linux is a registered trademark of Linus Torvalds and others.

Red Hat and all Red Hat-based trademarks and logos are trademarks or registered trademarks of Red Hat, Inc. in the United States and other countries.

AIX and **POWER4**, **POWER5**, and **POWER6** are trademarks or registered trademarks of International Business Machines Corporation.

Other company or product names mentioned herein may be trademarks or registered trademarks of their respective owners. Trademark specifications are subject to change without notice. All terms mentioned in this documentation that are known to be trademarks or service marks have been appropriately capitalized to the best of our knowledge; however, GemStone cannot attest to the accuracy of all trademark information. Use of a term in this documentation should not be regarded as affecting the validity of any trademark or service mark.

GemStone Systems, Inc.
1260 NW Waterhouse Avenue, Suite 200
Beaverton, OR 97006

Preface

About This Documentation

These release notes describe changes in the GemStone/S 64 Bit version 2.4.2 release. We recommend that everyone migrating to this version read these release notes before beginning installation, testing or development.

No separate Installation Guide is provided with this release. For instructions on installing GemStone/S 64 Bit version 2.4.2, or upgrading or converting from previous products or versions, see the Installation Guide for version 2.4.

These documents are also available on the GemStone customer 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 provide extensive documentation, and should be your first source of information.

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:

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, and past and current versions of GemBuilder for Smalltalk.

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.

Community Links provide 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.

Help Requests

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.

Website: <http://techsupport.gemstone.com>

Email: support@gemstone.com

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

Requests for technical assistance may be submitted online, or 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 as 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.

Contents

Chapter 1. GemStone/S 64 Bit 2.4.2 Release Notes

Overview 9

Bugs Fixed 9

 continueTransaction after indexing updates may cause crash on commit 9

 Object does not exist errors after failed commit. 9

 Transaction log restore issues. 10

 Cannot restart stone after unclean shutdown during tranlog restore . . 10

 During restore, if final log is corrupt, commitRestore crashed Stone . . 10

 After commitRestore, slight risk of topaz hang 10

 Upgrade handled ProfMonitorTree incorrectly 10

GemStone/S 64 Bit 2.4.2 Release Notes

Overview

GemStone/S 64 Bit 2.4.2 is a new version of the GemStone/S 64 Bit object server. This release provides fixes for a number of serious bugs; we recommend everyone using GemStone/S 64 Bit upgrade to this new version. The details of these changes are provided in this document.

These release notes provide changes between the previous version of GemStone/S 64 Bit, version 2.4.1, and version 2.4.2. If you are upgrading from a version prior to 2.4.1, 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.

Bugs Fixed

The following bugs in GemStone/S 64 Bit 2.4.1 have been fixed in GemStone/S 64 Bit 2.4.2.

continueTransaction after indexing updates may cause crash on commit

Under certain rare circumstances involving a large transaction with many indexing updates, if continueTransaction is invoked, the subsequent commit may cause a fatal error in the stone, crashing the stone. The stone recovers cleanly and there are no further problems with the stone. (#40394)

Object does not exist errors after failed commit

If a commit failure is not immediately followed by an abort transaction, there is a sequence of events that can result in a newly created, referenced object not being written to the repository. This results in object does not exist errors. This case is not simply reproducible, but involves a sequence of failed commit, processing, abort, then a successful commit. (#40454)

Transaction log restore issues

Cannot restart stone after unclean shutdown during tranlog restore

During restore of tranlogs, if the stone was killed or shut down uncleanly, the restart attempt fails in recovery; the stone will not be able to start. The tranlogs generated by the stone performing the tranlog restore did not track checkpoints correctly. (#40450)

During restore, if final log is corrupt, commitRestore crashed Stone

When restarting the stone with the -N -R options and restoring tranlogs, if the final tranlog in the sequence to be restored was corrupt, it was not handled correctly. The subsequent commitRestore caused the stone to exit with the error that a tranlog cannot be written. (#40453)

After commitRestore, slight risk of topaz hang

Following a completed commitRestore, there was a very small risk that topaz would hang on login while attempting to get OOPs from the Stone. (#40226)

Upgrade handled ProfMonitorTree incorrectly

If a repository was upgraded from 2.4 to a more recent version, the class ProfMonitorTree could be unnecessarily recreated. (#40448)