
GemStone®

GemStone/S *Release Notes*

Version 6.5.7.3

September 2010

GEMSTONE TM

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.

Intel and **Pentium** are registered trademarks of Intel 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.

Microsoft, **MS**, **Windows**, **Windows XP**, **Windows 2000**, **Windows 2003**, **Windows Vista** and **Windows 7** are registered trademarks of Microsoft Corporation in the United States and other countries.

VisualWorks is trademark of Cincom Systems, Inc.

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

GemStone/S 6.5.7.3

Release Notes

Overview

GemStone/S 6.5.7.3 is a new version of the GemStone Smalltalk object server. This special build release provides several new features and bug fixes.

These release notes provide changes between the previous version of GemStone/S, version 6.5.7.2, and version 6.5.7.3. If you are upgrading from a version prior to 6.5.7.2, 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 6.5.7.

Supported Platforms

GemStone/S version 6.5.7.3 is supported on the following platforms:

- ▶ Solaris 8, 9 and 10 on SPARC
- ▶ Red Hat Linux ES 5.0

For more information and detailed requirements for each supported platforms, please refer to the GemStone/S v6.5.7 Installation Guide for that platform.

Changes in this release

PageManager crash

It was possible for the PageManager to crash with a SIGSEGV during remote cache startup. This caused the Stone to shut down. (#40931).

Mid-level cache changes

Multiple mid-level cache may be used by gems on a single leaf cache

Previously, when using a mid-level cache, all gems on a remote shared page cache (leaf cache) were restricted to using the same mid-level cache. This restriction was originally put in to reduce risk of cache coherency problems. The restriction caused difficulties for complex topologies, and is not necessary to insure correct page handling. Now, each gem on a remote leaf cache may connect to a different mid-level cache. (#40924)

Disallowed use of a cache as both leaf cache and mid-level cache

A remote shared page cache can be used simultaneously as a mid-level cache and as a local cache. However, it is disallowed to use a cache as a mid-level cache and as a leaf cache at the same time. If a gem on a particular cache is using a mid-level cache, the local cache becomes a leaf cache, and this leaf cache cannot then be used as a mid-level cache for other gems.

Class versioning now copies class data

In previous releases, creating a new version of a class that had data in class and class instance variables left the data in the previous version, but did not move it to the new version. Now, when a class is versioned, references to this data are copied to the new version of the class, using the new method `Class >> copyVariables`.

Note that references to Class or Class instance variables for both the new and old class versions will now resolve to the same variable data.

“Too many open file” errors on Solaris

If a Stone on Solaris has a large number of extents and other files open, it was possible for the Stone to encounter EMFILE (too many open file) errors when performing operations such as starting a new transaction log. (#40962)

This bug was introduced by changes in 6.5.7.1 and is not in versions earlier than that.