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GemStone®

***GemStone/S 64 Bit™***  
***Release Notes***

Version 2.4.4.5

April 2011

GEMSTONE  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", 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 may also be covered by one or more pending United States patent applications.

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## About This Documentation

These release notes describe changes in the GemStone/S 64 Bit™ version 2.4.4.5 release. Please 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 2.4.4.5, 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.

## Technical Support

### GemStone Technical Support Website

GemStone's Technical Support website provides a variety of resources to help you use GemStone products. Our support site is available via the URL:

**<http://support.gemstone.com>**

or directly at:

**<http://community.gemstone.com/display/GSS64/GemStoneS>**

All GemStone product documentation is provided in PDF form on this website. In addition to documentation, the [support.gemstone.com](http://support.gemstone.com) website provides:

- ▶ Downloads and Patches, including past and current versions of GemBuilder for Smalltalk.
- ▶ Bugnotes, identifying performance issues or error conditions that you may encounter when using a GemStone product.
- ▶ TechTips, providing information and instructions that are not in the documentation.
- ▶ Compatibility matrices, listing supported platforms for GemStone 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.

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 down. The support website is the preferred way to contact Technical Support.

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

**Email:** [techsupport@gemstone.com](mailto:techsupport@gemstone.com)

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

Your GemStone support agreement may identify specific designated contacts who are responsible for submitting all support requests to GemStone. If so, please submit your information through those individuals.

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.

When submitting a request, please include the following information:

- ▶ Your name, company name, and GemStone server license number.
- ▶ The versions of all related GemStone 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 GemStone holidays.

## 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, for issues impacting a production system. 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. GemStone periodically offers training courses at our offices in Beaverton, Oregon, or training can be arranged at your location. Contact your GemStone account representative for more details or to obtain consulting services.

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## Overview

GemStone/S 64 Bit 2.4.4.5 is a new version of the GemStone/S 64 Bit object server. This release fixes several serious bugs; we recommend all GemStone/S 64 Bit applications upgrade to this version.

These release notes provide changes between the previous version of GemStone/S 64 Bit, version 2.4.4.4, and version 2.4.4.5. If you are upgrading from a version prior to 2.4.4.4, 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.

## Supported Platforms and GBS Versions

### Platforms

GemStone/S 64 Bit version 2.4.4.5 is supported on the following platforms:

- ▶ Solaris 9 and 10 on SPARC
- ▶ Solaris 10 on x86
- ▶ HP-UX 11.11 and 11.31 on PA-RISC
- ▶ HP-UX 11.23 and 11.31 on Itanium
- ▶ AIX 5.3, TL5, SP3 and AIX 6.1, TL1, SP1
- ▶ SuSE Linux ES 10 SP1, and Red Hat Linux ES 5.0 and 5.5

For more information and detailed requirements for each supported platforms, please refer to the GemStone/S 64 Bit v2.4 Installation Guide for that platform.

## GBS versions

The following versions of GBS are supported with GemStone/S 64 Bit version 2.4.4.5, with the following client Smalltalk and platform versions.

### GBS version 7.3.3

VW 7.7.1 32-bit	VW 7.7.1 64-bit	VW 7.7 32-bit	VW 7.7 64-bit
<ul style="list-style-type: none"> <li>▶ Windows XP, Windows 2003, Windows Vista, and Windows 7</li> <li>▶ Solaris 9 and 10 on SPARC</li> <li>▶ SuSE Linux ES 10, Red Hat Linux ES 5.0 and 5.5</li> </ul>	<ul style="list-style-type: none"> <li>▶ Solaris 10 on SPARC</li> <li>▶ SuSE Linux ES 10, Red Hat Linux ES 5.0 and 5.5</li> </ul>	<ul style="list-style-type: none"> <li>▶ Windows XP, Windows 2003, Windows Vista, and Windows 7</li> <li>▶ Solaris 9 and 10 on SPARC</li> <li>▶ SuSE Linux ES 10, Red Hat Linux ES 5.0 and 5.5</li> </ul>	<ul style="list-style-type: none"> <li>▶ Solaris 10 on SPARC</li> <li>▶ SuSE Linux ES 10, Red Hat Linux ES 5.0 and 5.5</li> </ul>

### GBS version 7.3.2

VW 7.7 32-bit	VW 7.7 64-bit	VW 7.6 32-bit with 32-bit 7.6c OE
<ul style="list-style-type: none"> <li>▶ Windows XP, Windows 2003, Windows Vista, and Windows 7</li> <li>▶ Solaris 9 and 10 on SPARC</li> <li>▶ SuSE Linux ES 10, Red Hat Linux ES 5.0 and 5.5</li> </ul>	<ul style="list-style-type: none"> <li>▶ Solaris 10 on SPARC</li> <li>▶ SuSE Linux ES 10, Red Hat Linux ES 5.0 and 5.5</li> </ul>	<ul style="list-style-type: none"> <li>▶ Windows XP and Windows 2003</li> <li>▶ Solaris 9 and 10 on SPARC</li> <li>▶ SUSE Linux ES 10 and Red Hat Linux ES 5.0</li> </ul>

### GBS version 7.1.2patch2

VW 7.5 with 7.5 OE	VW 7.4.1 with 7.4d OE	VW 5i.1 Envy with 5i.4c OE
<ul style="list-style-type: none"> <li>▶ Windows XP and Windows 2003</li> <li>▶ Solaris 9 and 10 on SPARC</li> <li>▶ HP-UX 11.11 on PA-RISC</li> <li>▶ SuSE Linux ES 10</li> </ul>	<ul style="list-style-type: none"> <li>▶ Windows XP</li> <li>▶ Solaris 9 and 10 on SPARC</li> <li>▶ HP-UX 11.11 on PA-RISC</li> <li>▶ SuSE Linux ES 10</li> </ul>	<ul style="list-style-type: none"> <li>▶ Windows XP</li> </ul>

### GBS version 5.3.2

VA Smalltalk 8.0.2	VA Smalltalk 8.0.1	VA Smalltalk 7.5.2
<ul style="list-style-type: none"> <li>▶ Windows 7, Windows Vista, Windows 2003 Server, Windows XP</li> </ul>	<ul style="list-style-type: none"> <li>▶ Windows 7, Windows Vista, Windows 2003 Server, Windows XP</li> </ul>	<ul style="list-style-type: none"> <li>▶ Windows 2003 Server, Windows XP</li> </ul>

For more details on supported platforms and requirements, see the release notes for that version of GBS.



## Changes in this Release

### Improved performance of auditIndexes for equality indexes

Changes have been made in internal data types used by auditIndexes to audit btrees. This improves audit performance, particularly for keys larger than the encrypted size (about 9 bytes).

### Intervals display change

Previously, Intervals displayed their logical collection contents, which obscured the conditions used to create the Interval (`start:`, `stop:`, and `by:` arguments). Now, the creation expression is used to display an Interval.

### Removing symbols from AllSymbols disallowed

Due to the inherent risk in manually removing Symbols from AllSymbols, this operation, which was previously unsupported, has been disallowed.

## Bugs fixed

### Login is possible during recovery, allowing repository corruption

During the period of recovery after an unexpected Stone shutdown, it was possible for user sessions to log in and commit changes, which corrupted the repository. Now, logins are prevented during recovery. (#41462)

### Restore on platform with different byte order corrupted indexes

If a backup of a repository containing indexed collections was restored on a platform with a different native byte order – for example, Solaris on SPARC to Linux on Intel, or vice versa – the indexes in the restored repository were corrupt and reported missing DependencyLists for all indexed elements. (#41476)

### Changing shared counters could trigger gsErrStnNetProtocol error

Methods that update shared counters may have encountered sporadic #gsErrStnNetProtocol errors. (#40330)

### Improved error reporting for backup/restore

Backing up to, or restoring from, files that are not local to the stone requires netldi to be running on the remote machine, and the file names to be specified in NRS (of which a file spec is a subset). If the files are not reachable via NRS, previously only a write error without details was reported. Now, the error message includes details about the cause of the problem. (#41465).

### Problems with backup or restore with multiple remote files

Backup to or restore from a remote disk encountered failures on the third file of a multiple-file backup. (#41466)

Note that backup/restore to local disk will provide better performance.

