


GemBuilder™ for Smalltalk/VW Release Notes

Version 8.8

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PATENTS

GemStone software has been 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 the changes in the GemBuilder™ for Smalltalk/VW version 8.8 release.

For information on installing or upgrading to this version of GemBuilder for Smalltalk, please refer to the *GemBuilder for Smalltalk Installation Guide* for version 8.8.

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, 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.

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

We recommend checking this site on a regular basis for the latest updates.

Help Requests

GemTalk Technical Support is limited to customers with current support contracts. Requests for technical assistance may be submitted online (including by email), or by telephone. We recommend you use telephone contact only for urgent requests that require immediate evaluation, such as a production system down. The support website is the preferred way to contact Technical Support.

Website: techsupport.gemtalksystems.com

Email: techsupport@gemtalksystems.com

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

Please include the following, in addition to a description of the issue:

- ▶ The versions of GemBuilder for Smalltalk and of all related GemTalk products, and of any other related products, such as client Smalltalk products, and the operating system and version you are using.
- ▶ Exact error message received, if any, including log files and statmonitor data 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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Release Notes for GemBuilder for Smalltalk 8.8

GemBuilder™ for Smalltalk (GBS) version 8.8 is a new version of the GemBuilder for Smalltalk product, adding support for earlier and later versions of VisualWorks Smalltalk and including other bug fixes and minor improvements.

These release notes provide changes between the previous version of GBS, version 8.7.1, and version 8.8. If you are upgrading from a version prior to 8.7.1, please also review the release notes for each intermediate release between your version and 8.8, to see the full set of changes.

This release supports GemStone/S 64 Bit only, with VisualWorks 8.x and 9.x. GBS 8.8 does not support 32-bit GemStone/S, nor VAST platform (VA Smalltalk).

To install GemBuilder for Smalltalk 8.8, follow the instructions in the *GemBuilder for Smalltalk Installation Guide* for version 8.8.

Supported Platforms and Versions

The following tables describe the client Smalltalk versions and platforms supported by GBS 8.8, and the GemStone server product shared library versions that can be used with each.

For more details, including the specific required client libraries for each server product and versions, refer to the *GemBuilder for Smalltalk Installation Guide* for version 8.8.

Table 1 Supported GemStone/S 64 Bit Server versions

	VW 9.4 64-bit	VW 9.3.1 64-bit	VW 9.1.1 64-bit	VW 8.3.2 64-bit	VW 8.3.2 32-bit
Windows 11	3.7.1, 3.6.8	3.7.1, 3.6.8	3.7.1, 3.6.8	3.7.1, 3.6.8	3.7.1
Windows 10	3.7.1, 3.6.8	3.7.1, 3.6.8	3.7.1, 3.6.8	3.7.1, 3.6.8	3.6.8
Ubuntu Linux 22.04	3.7.1, 3.6.8	3.7.1, 3.6.8	3.7.1, 3.6.8	3.7.1, 3.6.8	
Ubuntu Linux 20.04	3.7.1, 3.6.8	3.7.1, 3.6.8	3.7.1, 3.6.8	3.7.1, 3.6.8	
Red Hat Linux ES 9.4	3.7.1, 3.6.8	3.7.1, 3.6.8	3.7.1, 3.6.8	3.7.1, 3.6.8	
Red Hat Linux ES 8.9	3.7.1, 3.6.8	3.7.1, 3.6.8	3.7.1, 3.6.8	3.7.1, 3.6.8	3.7.1
Red Hat Linux ES 7.9	3.7.1, 3.6.8	3.7.1, 3.6.8	3.7.1, 3.6.8	3.7.1, 3.6.8	3.6.8

Changes in this Release

Re-introduced support for VisualWorks 8.3.2

The way GBS integrates with VisualWorks code during loading has been further modified to allow loading GBS into VisualWorks 8.3.2.

Support for VisualWorks 9.4 added

GBS 8.8 adds support for VisualWorks 9.4.

Access to Gem Ids

GbsSession instances now includes the GemStone sessionId for the Gem, the Gem's PID, and the session's serial number. The following instance methods have been added:

```
GbsSession >> gemProcessId
GbsSession >> gemSerialNumber
GbsSession >> gemSessionId
```

These IDs are now displayed in the printString. For example

```
Session 1 (remote) for 'DataCurator' on 'gs64stone' @ 'lark'
PID: 19136900 Serial #: 2235 Session ID: 5
```


Improvements to GbsSessionParameter import/export

Exported format now uses appropriate accessors

Fileout of GbsSessionParameter instances previously wrote text to recreate the parameters using expressions such as `instVarAt:put:`. Now, the correct accessor methods are used, allowing the exported session parameters to be used independent of the version of GBS. (#49873)

Import/export handling of duplicate session parameters

When exporting session parameters, duplicates are omitted from the exported file, but the duplicates are no longer removed from the current list of parameters.

On import, duplicates are ignored.

Error handling on importing session parameters

By default, errors importing session parameters are counted, and if there were duplicates or session parameters that resulted in an error, the GemStone Launcher will display a message box with the count of each. If no problems occurred, no message box is displayed.

To see errors in import, hold down the Alt key while the import runs; this opens a debugger on the error.

Methods in tools package that are invoked from runtime

There were a few methods located in the GbsTools package, such as `GbsSessionManager >> connectorList`, that were invoked from behavior in the GbsRuntime package. This caused breakages in headless images (in which the GbsTools package is not loaded). The packaging has been adjusted in v8.8. In addition, several methods have been conditionalized to better handle the absence of GbsTool. (#51015)

Support Diagnostic Special Converter

A Diagnostic Special Converter class and the corresponding GBS configuration item for enabling it have been added. These are only used on 64-bit little-endian VisualWorks images. Converting SmallDoubles is approximately 50% slower under the Diagnostic Special Converter than using the standard Special Converter.

Initial selection when System Browser opened

When a new GemStone System Browser is opened, the first SymbolDictionary is now selected. This avoids confusion with the VisualWorks highlighting.

GEM_ABORT_MAX_CRIS automatically disabled on login

On login, `GEM_ABORT_MAX_CRIS` is now always disabled by setting to the maximum value. This configuration parameter limits the number of commit records analyzed on abort, and with GBS all commit records must be considered. (#49438)

Finding selector of BlockContext unnecessarily parsed context's printString

To determine the context's selector, the printString of the block was parsed. If the printString was customized, this caused unexpected behavior. The parse was not necessary. (#50004)

GbsSession>>fetchBehaviorDelegatesForClassConnectors: incorrect with large number of classes

When the number of classes was large enough to exceed printString limitations, the evaluation of `GbsSession>>#fetchBehaviorDelegatesForClassConnectors:` produced invalid Smalltalk and errored. (#50982)

GbsConfiguration missing configuration item for socketWaitTimeout

This configuration item has been added (#50985)

Improved Font handling in Browsers

The method list pane in the System and other Browsers now responds to VisualWorks font size settings. (#49094)

Negative zero doubles lost sign

Negative zero doubles (-0.0d0), were converted by adding 0, which normalized to 0.0 in 64-bit VisualWorks images. Now, the sign is retained. (#51036)