
GemStone®

GemBuilder for Smalltalk Release Notes

Version 7.1.1

December 2006

GEMSTONE ™
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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

These release notes describe the changes in the GemBuilder for Smalltalk® version 7.1.1 release. We recommend that everyone using GemBuilder for Smalltalk read these release notes before installing or upgrading. These release notes are also available on the GemStone customer website, as described in the next section.

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

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 GemBuilder for Smalltalk is provided in PDF format. This is the same documentation that is included with your GemBuilder for Smalltalk 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 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. 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 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.

Chapter 1. Release Notes for GemBuilder for Smalltalk 7.1.1

Supported Platforms and Versions. 1

Bugs Fixed 4

 Assignment to instance variable of a forwarder could be lost. 4

 Possible infinite recursion in diagnostic dumping 4

 Theoretically possible deadlock when concurrently logging in and out 4

 Race condition in mapping client object to server 4

 Race condition in obtaining linked login. 4

 Inspecting IdentityKeyValueDictionary resulted in error 4

 GbsSessionManager >> loadUserActionLibrary: failed 4

 Timing-dependent MNU in multi-threaded session after fatal error. 5

 VisualWorks 7.x only 5

 “Failed to arm read event” error on Windows 5

 Inspectors refreshed incorrectly or failed to refresh 5

 Errors with VisualWorks 7.4d object engines 5

 Inspecting instance that does not inherit from Object failed. 5

 Debugging within server blocks failed or showed incorrect number of
 variables 5

 Debugger showed incorrect “self” when in server block closure 5

Release Notes for GemBuilder for Smalltalk 7.1.1

GemBuilder for Smalltalk (GBS) version 7.1.1 is a new release of the GemBuilder for Smalltalk product. Please take time to read through these release notes before installing or upgrading, to acquaint yourself with the changes.

This release supports both VisualWorks 5i and 7.x. It does not support VisualAge or VA Smalltalk; support for this is provided in a separate release. For details on supported client platforms, see 'Supported Platforms and Versions' below.

To install GemBuilder for Smalltalk 7.1.1, follow the instructions in the *GemBuilder for Smalltalk Installation Guide*.

If you have any questions regarding this release, please contact your GemStone account manager or GemStone Technical Support.

Supported Platforms and Versions

The following tables describe the client Smalltalk versions and platforms supported by GBS 7.1.1, and the GemStone server product shared library versions that can be used with each.

GemBuilder for Smalltalk supports all three GemStone/S server products: GemStone/S, the original GemStone object server; GemStone/S 2G, a specialized server product; and GemStone/S 64 Bit, the redesigned 64-bit GemStone/S-based object server.

The following tables list the supported client operating system, client Smalltalk, and GemStone server version configurations for each GemStone server product. Updated information may be found on the GemStone Technical Support site at http://support.gemstone.com/gemstone_s/learning_center/compat/index.htm.

Table 1 Supported GemStone/S Server versions

	VW 7.3.1 with 7.3a OE	VW 7.4 with 7.4 OE	VW 7.4.1 with 7.4d OE	VW 5i.1 Envy with 5i.4c OE
Windows 2000, SP 1 or later	6.1.5, 6.1.6*	6.1.5, 6.1.6*	6.1.5, 6.1.6*	6.1.5, 6.1.6*
Windows XP, SP 1 or later	6.1.5, 6.1.6*	6.1.5, 6.1.6*	6.1.5, 6.1.6*	6.1.5, 6.1.6*
Windows 2003	6.1.5, 6.1.6*	6.1.5, 6.1.6*	6.1.5, 6.1.6*	6.1.5, 6.1.6*
Red Hat Linux Advanced Server 2.1	6.1.5	6.1.5	6.1.5	
Red Hat Linux Advanced Server 3.0	6.1.5	6.1.5	6.1.5	
Solaris 2.8	6.1.5	6.1.5	6.1.5	6.1.5
Solaris 2.9	6.1.5	6.1.5	6.1.5	6.1.5
Solaris 2.10	6.1.5	6.1.5	6.1.5	6.1.5
HPUX 11.11	6.1.5 (RPC only)	6.1.5 (RPC only)	6.1.5 (RPC only)	6.1.5 (RPC only)

* v.6.1.6 was not released on Windows; only RPC logins from Windows are supported.

Table 2 Supported GemStone/S 64 Bit Server versions

	VW 7.3.1 with 7.3a OE	VW 7.4 with 7.4 OE	VW 7.4.1 with 7.4d OE	VW 5i.1 Envy with 5i.4c OE
Windows 2000, SP 1 or later	1.1.9, 2.0.5, 2.1.2 (RPC only)	1.1.9, 2.0.5, 2.1.2 (RPC only)	1.1.9, 2.0.5, 2.1.2 (RPC only)	1.1.9, 2.0.5, 2.1.2 (RPC only)
Windows XP, SP 1 or later	1.1.9, 2.0.5, 2.1.2 (RPC only)	1.1.9, 2.0.5, 2.1.2 (RPC only)	1.1.9, 2.0.5, 2.1.2 (RPC only)	1.1.9, 2.0.5, 2.1.2 (RPC only)
Red Hat Linux ES 4.0	1.1.9 (RPC only)	1.1.9 (RPC only)	1.1.9, 2.1.2 (RPC only)	
SuSE Linux ES 9.3	1.1.9 (RPC only)	1.1.9 (RPC only)	1.1.9, 2.1.2 (RPC only)	
Solaris 2.9	1.1.9 (RPC only)	1.1.9, 2.0.5, 2.1.2 (RPC only)	1.1.9, 2.0.5, 2.1.2 (RPC only)	1.1.9 (RPC only)
Solaris 2.10	1.1.9 (RPC only)	1.1.9, 2.0.5, 2.1.2 (RPC only)	1.1.9, 2.0.5, 2.1.2 (RPC only)	1.1.9 (RPC only)
HPUX 11.11		with 7.4c Object Engine: 2.0.5, 2.1.2 (RPC only)	2.0.5, 2.1.2 (RPC only)	

Table 3 Supported GemStone/S 2G Server versions

	VW 7.4 with 7.4 OE	VW 5i1 Envy with 5i.4c OE
Windows 2000, SP 1 or later	1.2.4 (RPC only)	1.2.4 (RPC only)
Windows XP, SP 1 or later	1.2.4 (RPC only)	1.2.4 (RPC only)
Solaris 2.8	1.2.4 (RPC only)	1.2.4 (RPC only)
Solaris 2.10	1.2.4 (RPC only)	1.2.4 (RPC only)
HPUX 11.11	1.2.4 (RPC only)	1.2.4 (RPC only)

Bugs Fixed

The following bugs have been fixed since GemBuilder for Smalltalk version 7.1:

Assignment to instance variable of a forwarder could be lost

If a replicate became a forwarder during the execution of a method whose receiver was the replicate, any assignments to its instance variables later in the method were lost. Now, if autoMarkDirty is enabled (which is recommended) any such assignments will cause the object to revert to being a replicate, and the assignments will not be lost. (#35722)

Possible infinite recursion in diagnostic dumping

While dumping stacks and cache contents using GbtStackDumper, if an object in the cache contained direct or indirect references to itself it was possible for the dumping process to enter infinite recursion. This only happened when sending #printOn: to the object also caused infinite recursion. (#35827)

Theoretically possible deadlock when concurrently logging in and out

If one Smalltalk Process was logging in concurrently with another Process logging out, there was a race condition. During a narrow time window, a delegate from the logging-out session could be partially cleaned up. If the logging-in Process accessed that delegate during the time window, it would acquire semaphores in the wrong order, making a deadlock with some other Process theoretically possible. (#35237)

Race condition in mapping client object to server

If multiple Smalltalk Processes concurrently scheduled a client object to be replicated to the server using #asGObjectInSession:, it was possible that each Process would receive a delegate with a different server object ID. Only one of these would get actually created on the server, and subsequent uses of the other delegates would result in an ObjErrDoesNotExist. (#36079)

Race condition in obtaining linked login

If a GCI library that supports linked logins was used, and multiple Smalltalk Processes concurrently logged in using #login, it was possible for more than one Process to attempt to log in linked. Only one Process would succeed, the other Processes would receive a GciErrAlreadyLoggedIn. (#36070)

Inspecting IdentityKeyValueDictionaries resulted in error

Inspecting an instance of IdentityKeyValueDictionary resulted in an error in VW 5i, or using the non-Trippy (shift-inspect) inspectors in VW 7.x. (#36098)

GbsSessionManager >> loadUserActionLibrary: failed

The method GbsSessionManager >> loadUserActionLibrary: failed with a doesNotUnderstand error. This method is now functional, but has been deprecated. We recommend that you not use this method. (#36045)

Timing-dependent MNU in multi-threaded session after fatal error

When multiple Smalltalk Processes were concurrently accessing the same session, and the session encountered a fatal error, it was possible to get a MessageNotUnderstood in Processes other than the one that first discovered the fatal error. (#36004)

VisualWorks 7.x only

“Failed to arm read event” error on Windows

Windows only

It was possible for a non-blocking RPC session to experience a “Failed to arm read event” error. This occurred only when using the default “waiting” method of determining when a server response or asynchronous event is available. (#35935)

Inspectors refreshed incorrectly or failed to refresh

When objects were modified, open inspectors did not correctly refresh, even when using the **Object > refresh** menu item. (#36033)

Errors with VisualWorks 7.4d object engines

Windows only

VisualWorks 7.4d object engines included a change in socket protocol that resulted in errors on login of default non-blocking RPC sessions. Linked sessions, RPC sessions using blockingProtocolRpc, and RPC sessions using both pollForRpcResponse and pollForAsynchronousEvents do not encounter these errors. (#35909)

Inspecting instance that does not inherit from Object failed

Inspecting an instance of a class that does not inherit from Object (such as classes subclassed from nil) resulted in errors, including image hang. (#35959)

Debugging within server blocks failed or showed incorrect number of variables

Debugging server code within a block displayed the number of temporary variables present in the method, not in the block. If the number of variables displayed was greater than the actual number, a walkback would be displayed when the block context was selected. (#34181)

Debugger showed incorrect “self” when in server block closure

When debugging in a server block closure, the debugger's receiver inspector incorrectly showed 'self' as the block closure. (#31922)

