GemBuilder™ for Smalltalk/VA Release Notes

Version 5.4.6

November 2020

INTELLECTUAL PROPERTY OWNERSHIP

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

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 GemTalk Systems 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 GemTalk Systems.

This software is provided by GemTalk Systems LLC 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 GemTalk Systems LLC 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 © 1986-2020 GemTalk Systems LLC. All rights reserved by GemTalk Systems.

PATENTS

GemStone software is or has been covered by U.S. Patent Number 6,256,637 "Transactional virtual machine architecture" (1998-2018), Patent Number 6,360,219 "Object queues with concurrent updating" (1998-2018), Patent Number 6,567,905 "Generational garbage collector with persistent object cache" (2001-2021), and Patent Number 6,681,226 "Selective pessimistic locking for a concurrently updateable database" (2001-2021).

TRADEMARKS

GemTalk, **GemStone**, **GemBuilder**, **GemConnect**, and the GemTalk logo are trademarks of GemTalk Systems LLC, or of VMware, Inc., previously 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.

Solaris, **Java**, and **Oracle** are trademarks or registered trademarks of Oracle and/or its affiliates. **SPARC** is a registered trademark of SPARC International, Inc.

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

Microsoft, **Windows**, and **Windows Server** 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.

Ubuntu is a registered trademark of Canonical Ltd., Inc., in the U.S. and other countries.

SUSE is a registered trademark of Novell, Inc. in the United States and other countries.

AIX, **POWER6**, **POWER7**, **POWER8** and **VisualAge** are trademarks or registered trademarks of International Business Machines Corporation.

Apple, **Mac**, **MacOS**, and **Macintosh** are trademarks of Apple Inc., in the United States and other countries.

CINCOM, **Cincom Smalltalk**, and **VisualWorks** are trademarks or registered trademarks 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. GemTalk Systems 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.

GemTalk Systems LLC
15220 NW Greenbrier Parkway
Suite 240
Beaverton, OR 97006

Preface

About This Documentation

These Release Notes describe the changes in the GemBuilder™ for Smalltalk/VA version 5.4.6 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 5.4.6.

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.

Table of Contents

Chapter 1. Release Notes for GemBuilder for Smalltalk 5.4.6

Supported Platforms and Versions 7

Changes in this Release 8

Support for GemStone/S 64 Bit version 3.6 . . . 8
New Specials added . . . 8
DateAndTime now mapped. . . . 8
GBS Window titles now prefixed with #imageShortName . . . 8
Setting transaction mode in Session Browser . . . 8

Bugs Fixed 9

On Windows 10, loading server shared library full path had issues . . . 9
GbsScaledDecimal did not support //. . . . 9
Call Tracing improvements . . . 9
Browse implementors/senders/references unnecessary second prompt . . . 9
Class Instance Variable Check On Create/Compile in ST Raises Error . . . 9
Invalid transactionMode: argument could deadlock debugger . . . 9
Opening a workspace on a file may have errored . . . 9

Chapter

1 Release Notes for GemBuilder for Smalltalk 5.4.6

GemBuilder™ for Smalltalk (GBS) version 5.4.6 is a new version of the GemBuilder for Smalltalk product, adding support for GemStone/S 64 Bit version 3.6. Please take time to read through these release notes before installing or upgrading, to acquaint yourself with the changes.

These release notes provide changes between the previous version of GBS, version 5.4.5, and version 5.4.6. If you are upgrading from a version prior to 5.4.5, please also review the release notes for each intermediate release to see the full set of changes.

This release supports applications running with Instantiation's VA Smalltalk only. Version 5.4.6 does not support VisualWorks, nor can it be used with GemStone/S 64 Bit 2.x or 32-bit GemStone/S. Support for these servers is provided in separate GBS releases.

To install GemBuilder for Smalltalk 5.4.6, follow the instructions in the *GemBuilder for Smalltalk Installation Guide* for version 5.4.6.

Supported Platforms and Versions

The following tables describe the client Smalltalk versions and platforms supported by GBS 5.4.6, and the GemStone server versions that can be used with each. For more details, see the *GemBuilder for Smalltalk Installation Guide* for version 5.4.6.

Table 1 Supported GemStone/S 64 Bit Server versions - RPC logins only

	32-bit VA Smalltalk 9.2.2	**32-bit VA Smalltalk 8.6.3**
Windows 10	3.6, 3.5.4	3.6, 3.5.4
Windows 7, Professional or above		3.5.4

Changes in this Release

Support for GemStone/S 64 Bit version 3.6

Support for the latest version of the GemStone/S 64 Bit server, v3.6, has been added.

If you are upgrading to v3.6 as well as upgrading GBS, please read through the Release Notes for v3.6 for changes that impact your GBS application.

New Specials added

GBS 5.4.6 includes support for replicating the special data types added in GemStone/S 64 Bit v3.6:

- SmallDate
- SmallTime
- SmallScaledDecimal
- SmallDateAndTime

These are replicated as immutable instances of client objects.

DateAndTime now mapped

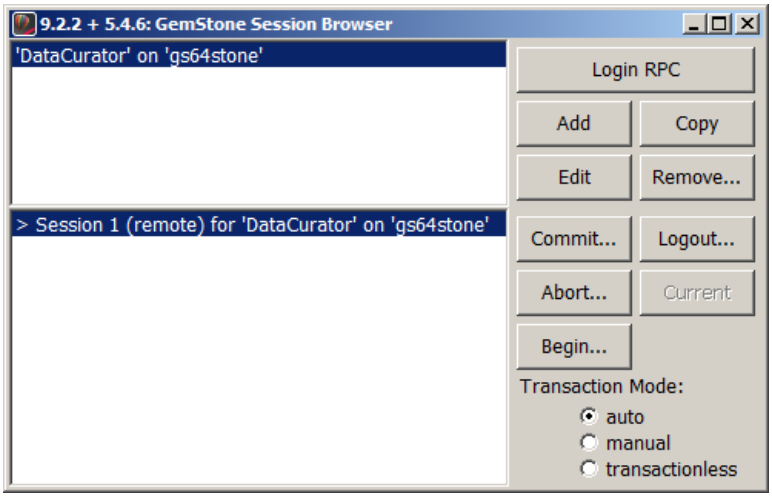
DateAndTime has been available in both VAST and the GemStone server, but it was previously not mapped for replication. Now, instances of DateAndTime can be replicated and flushed.

GBS Window titles now prefixed with #imageShortName

VAST allows you to set an Image Short Name, which is used to prefix the title on individual browser windows. These prefix names are now displayed on GBS-specific windows as well.

Setting transaction mode in Session Browser

The Session Browser now includes buttons to set the transaction mode, and allows you to set the transaction mode to #transactionless



Bugs Fixed

On Windows 10, loading server shared library full path had issues

Loading the server shared library using `libraryName:` accepts a full path to the `libgcirpc` server library. On Windows 10, this was not sufficient to allow other libraries that are loaded by `libgcirpc` to be found. (#48680)

GbsScaledDecimal did not support //

The operator // was not implemented for GbsScaledDecimal. (#48717)

Call Tracing improvements

The call tracing mechanism had several deficiencies, such as failing to close files when a new trace was opened. (#48299).

The Call Tracing code has been refactored and cleaned up in this release.

Call tracing produces a record of the low-level GCI calls that are made from GBS to the server, and are intended for use by experts who are familiar with the internal operations of the GCI calls.

Browse implementors/senders/references unnecessary second prompt

If the search results is a single entry that is equal to the search criteria, there was an unnecessary second prompt, which is only needed for wild-card searches. (#48193)

Class Instance Variable Check On Create/Compile in ST Raises Error

Create/Compile in ST for a GemStone class that has a capitalized class instance variable results in a warning dialog, since this is not the convention. A 'no' answer on this dialog previously was not handled well; now, any issues with create or compile in ST are reported clearly. (#35422).

Invalid transactionMode: argument could deadlock debugger

Due to the code path to error handling, when setting the transactionMode (via `GBSM currentSession transactionMode:`), if the argument was not a valid transaction mode symbol, opening the debugger could deadlock. (#49186)

Opening a workspace on a file may have errored

Opening a file in a workspace may have errored in recent VAST versions. (#48194)