GemStone®

GemBuilder for Smalltalk Installation Guide

For Instantiations VA Smalltalk Environment

Version 5.3.2

June 2010

GEMSTONE S™

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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

This document explains how to install GemBuilder for Smalltalk® version 5.3.2. This information is also available on the GemStone customer website.

For information regarding new features and changes in this release of GemBuilder for Smalltalk, please refer to the *GemBuilder for Smalltalk Release Notes* for version 5.3.2.

Technical Support

GemStone's Technical Support website provides a variety of resources to help you use GemStone products.

GemStone Web Site: http://support.gemstone.com

Use of this site requires an account, but registration is free of charge and provides immediate access.

All GemStone product documentation is provided in PDF form on this website. Documentation is also available at

http://www.gemstone.com/documentation

In addition to documentation, the 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 otherwise included 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: support@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.

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Chapter

1 Installation

Version 5.3.2 of GemBuilder for Smalltalk supports VA Smalltalk only. It does not support VisualWorks; VisualWorks support is provided in separate releases.

This version of GemBuilder for Smalltalk is compatible only with GemStone/S 64 Bit 2.x. Support for 32-bit GemStone/S is provided in separate releases.

This release adds support for VA Smalltalk 8.0.2; there are no other changes from the previous release of GBS, version 5.3.1.

Installing GemBuilder for Smalltalk is a five-step process:

1. Ensure that your system has the necessary disk space, RAM, GemStone object server version, operating system version, and a supported client Smalltalk version.
2. Copy the GemBuilder for Smalltalk files to the desired directory.
3. Ensure that the shared library files can be found in your path.
4. Load the GemBuilder for Smalltalk code into your Smalltalk image.
5. Test the installation.

System Requirements

Disk space

- The GBS distribution file requires about 3 megabytes; unzipping this file will require an additional 10 megabytes.
- The server shared library files require about 2.2 megabytes of free disk space.
- Installing GemBuilder for Smalltalk into your ENVY repository will increase its size by approximately 7megabytes.
- Adding GemBuilder for Smalltalk to your Smalltalk image adds about 2 MB to the image file size.

RAM

Logging into a GemStone server requires a Gem session, which is a component of the GemStone server. With GemStone/S 64 Bit, the Gem session will be a separate RPC Gem process, running on a platform supported by GemStone/S 64 Bit. Consult the GemStone/S 64 Bit documentation for memory requirements for Gem processes.

Operating system

Operating systems are listed in Table 1.

GemStone server product

A supported GemStone/S 64 Bit version, installed on a network-accessible host. GemBuilder for Smalltalk 5.3.2 is compatible with GemStone/S 64 version 2.2.5.4 and later only.

The following table lists the supported operating system, client Smalltalk, and GemStone server version configurations for this version of GBS.

Table 1 GemStone/S 64 Bit shared library versions compatible with GBS 5.3.2 on each platform and client Smalltalk

	Windows 7	Windows Vista	Windows 2003	Windows XP, Service pack 1 or later
Instantiations VA Smalltalk 8.0.2	GemStone/S 64 Bit 2.3.1.6 and 2.4.4	GemStone/S 64 Bit 2.3.1.6 and 2.4.4	GemStone/S 64 Bit 2.3.1.6 and 2.4.4	GemStone/S 64 Bit 2.3.1.6 and 2.4.4
Instantiations VA Smalltalk 8.0.1	GemStone/S 64 Bit 2.3.1.6 and 2.4.4	GemStone/S 64 Bit 2.3.1.6 and 2.4.4	GemStone/S 64 Bit 2.3.1.6 and 2.4.4	GemStone/S 64 Bit 2.3.1.6 and 2.4.4
Instantiations VA Smalltalk 7.5.2			GemStone/S 64 Bit 2.3.1.6 and 2.4.4	GemStone/S 64 Bit 2.3.1.6 and 2.4.4

Distribution Files

GemBuilder for Smalltalk is provided in zipped form. Prior to following the installation instructions, unzip the distribution.

The GemBuilder for Smalltalk distribution includes the following:

gbs5.3.2.dat — The GemBuilder for Smalltalk ENVY data file.

A directory named **docs** that contains the product documentation in PDF form:

GemBuilder_VA.pdf (unchanged from previous releases)
GBS-ReleaseNotes-5.3.2.pdf - Release notes describing changes in this release
GBS-InstallGuide-5.3.2.pdf - This installation guide

Shared Library Files

GemBuilder for Smalltalk 5.3.2 requires access to a set of shared library files that are compatible with the specific GemStone/S 64 Bit version.

The detailed instructions on configuring the shared libraries to work with your GemStone/S 64 Bit server product are provided in the Installation Guide for GemStone/S 64 Bit.

1. Copy the shared library files to the appropriate location, per the instructions in the Installation Guide for GemStone/S 64 Bit.
2. Ensure that your library search path includes the directory to which they were copied, and that your client has read and execute privileges on these files.
3. By default, GBS loads the shared library named `libgcirpc.dll`, and as long as the library can be located, you do not need to do anything further.

   If you want to explicitly specify the name of the shared library, you can set *libraryName* to the name of the shared library, which is provided in Table 2. This is described in the section "Test Your Installation by Logging into GemStone" on page 10.

Table 2 Shared Library Files for Windows

Server Product and version	Shared Library Files
GemStone/S 64 Bit 2.4.4	`libgcirpc.dll` `libgcirpc64-244.dll`
GemStone/S 64 Bit 2.3.1.6	`libgcirpc.dll` `libgcirpc64-231.dll`

Loading GBS into Your Development Environment

Installing Gembuilder for Smalltalk is a two-step process:

1. Import the GemBuilder for Smalltalk configuration map into your ENVY repository.
2. Load GemBuilder for Smalltalk from your ENVY repository into your image.

Importing into your ENVY Repository

You need to perform this procedure only once per ENVY repository. You can then load GBS from that repository into any number of Smalltalk client images.

1. Start a client Smalltalk image which does not have any previous versions of GemBuilder for Smalltalk loaded.
2. In the Configuration Maps Browser, choose **Names > Import > Selected Versions...**.
3. A dialog will open requesting **Enter the IP address or host name of the server**. Leave the field blank and click on **OK**.
4. In the resulting dialog, navigate to the GBS distribution location and select the file `gbs5.3.2.dat`.
5. Click **Open**.

6. In the Name pane on the left, select the `GBSGemBuilder` configuration map to import.
7. In the middle versions pane, select version `5.3.2`, and click **>>** to move it to the Selected versions pane on the right.
8. Click **OK** or **Accept**.
9. Check in the Configuration Maps Browser to ensure that the configuration map was imported.
10. Quit the image if you wish (you need not save it), or proceed to the next task.

Loading into an Image

1. Start a client Smalltalk image which does not have any previous versions of GemBuilder for Smalltalk loaded.
2. From a Configuration Maps Browser, select the newly imported `GBSGemBuilder` map in the Names pane on the left. Version `5.3.2` appears in the middle Editions and Versions pane.
3. In the Editions and Versions pane, select `5.3.2` and choose the menu item **load** to load the configuration map.
4. Save your image.

   You may find it helpful to create an additional copy of this GBS image to use as a backup during application development.

Test Your Installation by Logging into GemStone

1. If you have not already done so, start a GemStone server (stone process) and NetLDI process on the server host. For example:

   ```
   % startstone gs64stone
   ...
   % startnetldi
   ...
   ```

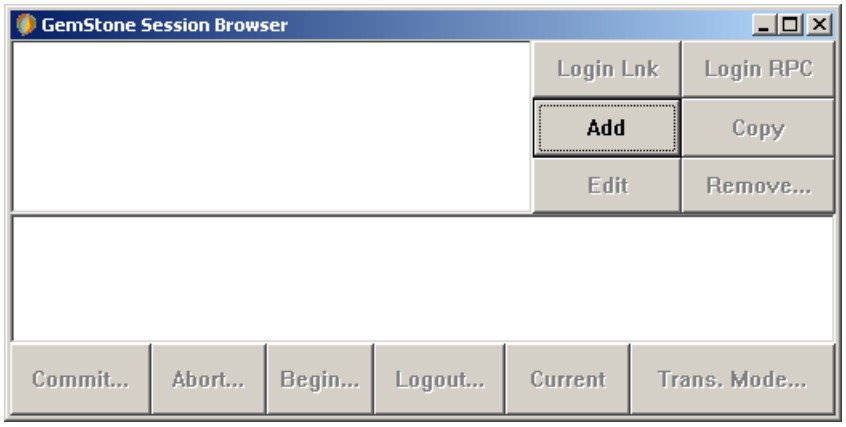
2. Start your client Smalltalk using the image into which you have loaded GemBuilder for Smalltalk.
3. Optionally, set the GbsConfiguration parameter *libraryName* to the name of the appropriate shared library. When left at the default, an empty string, GBS attempts to load the library named `libgcirpc.dll`, which is correct for all supported platforms for GemBuilder for Smalltalk version 5.3.2. The library names are listed in Table 2. You may set the *libraryName* by executing:

   ```
   GbsConfiguration current libraryName: 'libraryname'
   ```

   Alternatively, `libraryName` can be set using the Settings tool. Selecting **GemStone > Tools > Settings**, and go to the tab **Server Communication.**

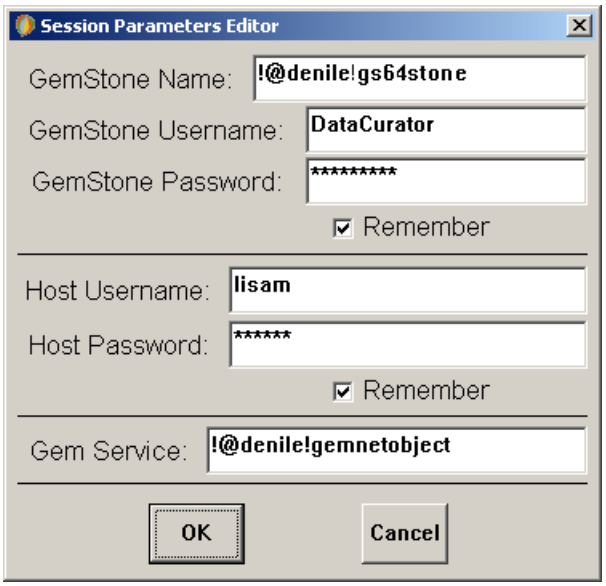
4. Select **GemStone > Sessions**.

Figure 1 The Session Browser Before Adding a Session



5. Select the **Add** button to add a set of session parameters. A Session Parameters Editor dialog opens, prompting you for the session parameters (Figure 2).

Figure 2 The Session Parameters Editor



6. Fill in the session parameters:

   GemStone repository: provide the name of the Stone process that you started running in Step 1. For a Stone running on a remote server, be sure to include the

server's hostname in Network Resource String (NRS) format. For example, for a Stone process called 'gs64Stone' running on node 'denile', specify the NRS string:

```
!@denile!gs64stone
```

GemStone username: Your GemStone username, such as DataCurator.

GemStone password: Your GemStone password. Click on **Remember** if you do not wish to supply this password each time you log in. When this is set, the password is stored in the client image.

Host username: Supply the username for your account on the server host.

Host password: The password for your account on the server. Again, click on **Remember** if you do not wish to supply this password each time you log in. When this is set, the password is stored in the client image.

NOTE

If you start your NetLDI process in guest mode (`startnetldi -g`*), you do not need to supply a host username and password.*

Gem Service: Specify `gemnetobject`. For a remote Gem process, you must provide the Gem host name in NRS format. For example,

```
!@denile!gemnetobject
```

For NetLDI processes with names other than the default, insert the NetLDI name or port number as well:

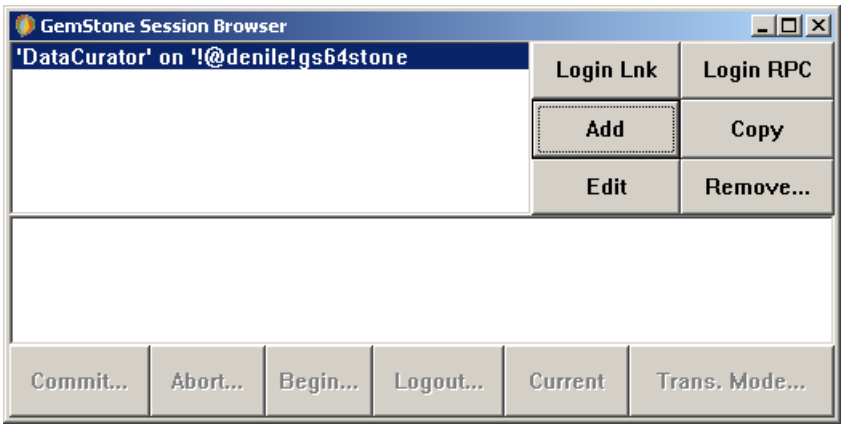
`!@denile#netldi:`*<processNameOrPort>*`!gemnetobject`

For more information on Network Resource Strings, see the *GemBuilder for Smalltalk User's Guide.*

When you're done, click **OK**. The dialog closes, and the session parameters you have provided appear in the top left pane of the Session Browser.

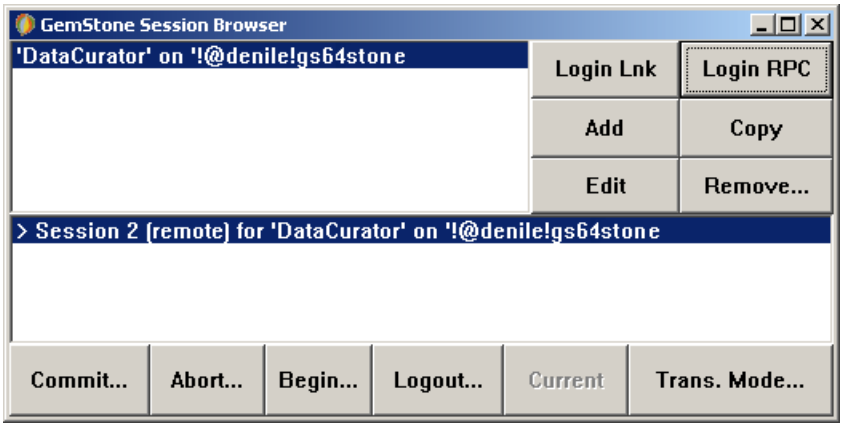
7. In the Session Browser, select the newly-defined session parameters (Figure 3) and click on **Login RPC** to log in to GemStone.

Figure 3 The Session Browser Before Login



8. A successful login results in the session information appearing in the lower pane of the Session Browser, with the bottom row of buttons enabled (Figure 4).

Figure 4 The Session Browser After Login



9. Successfully logging in to GemStone verifies that your GBS installation is complete. To end the session, click **Logout**. If you wish to save your session parameters, save your Smalltalk image when you exit.

   If the login attempt did not succeed, see your GemBuilder for Smalltalk User's Guide for details on login parameters. Highlight the session parameters in the upper pane of the browser and select **Edit** to change your settings and try again.