
GemStone®

GemBuilder® for Smalltalk Installation Guide

For Instantiations VA Smalltalk Environment

Version 5.4

December 2011

vmware®

GEMSTONE[™]
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PATENTS

GemStone software 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 software may also be covered by one or more pending United States patent applications.

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About This Documentation

This document explains how to install GemBuilder® for Smalltalk version 7.4. This documentation is also available on the GemStone Technical Support 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 7.4.

Terminology Conventions

The term “GemStone” is used to refer to the server products GemStone/S 64 Bit and GemStone/S; and may also be used to refer to the company, previously GemStone Systems, Inc., now a division of VMware, Inc.

Technical Support

GemStone Website

<http://support.gemstone.com>

GemStone’s Technical Support website provides a variety of resources to help you use GemStone products:

- ▶ Documentation for released versions of all GemStone products, in PDF form.
- ▶ Downloads and Patches, including past and current versions of GemBuilder for Smalltalk.
- ▶ Bugnotes, identifying performance issues or error conditions you should be aware of.
- ▶ 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. Technical Support is available to customers with current support contracts.

Requests for technical support may be submitted online, or by email or by telephone. We recommend you use telephone contact only for serious requests that require immediate attention, 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

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

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. Please also open a ticket on the website, and include error and log information. 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.

GemStone Technical Support is available from 8am to 5pm Pacific Time, Monday through Friday, excluding VMware/GemStone holidays.

24x7 Emergency Technical Support

GemStone Technical Support 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 is available to help you succeed with GemStone products. Training for GemStone software is available at your location, and training courses are offered periodically at our offices in Beaverton, Oregon. Contact your GemStone account representative for more details or to obtain consulting services.

Contents

Chapter 1. Installation

System Requirements	7
Distribution Files	8
Shared Library Files	8
Loading GBS into Your Development Environment	9
Importing into your ENVY Repository	9
Loading into an Image	10
Test Your Installation by Logging into GemStone	10

Version 5.4 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 3.x. Support for 32-bit GemStone/S, and for earlier versions of GemStone/S 64 Bit, are provided in separate releases.

For details on changes in this version of GemBuilder for Smalltalk, see the *GemBuilder for Smalltalk Release Notes*.

Installing GemBuilder for Smalltalk is a five-step process:

1. Ensure that your system has the necessary GemStone server version, operating system version, and client Smalltalk version.
2. Import the GemBuilder for Smalltalk configuration map into your ENVY repository.
3. Load the GemBuilder for Smalltalk code into your Smalltalk image.
4. Ensure that the shared library files can be found in your path.
5. Test the installation.

System Requirements

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 5.4 is compatible with GemStone/S 64 version 3.0 and later only.

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

Only RPC logins are supported.

Table 1 Supported GemStone/S 64 Bit Server versions

	VA Smalltalk 8.5	VA Smalltalk 8.0.3	VA Smalltalk 8.0.2
64-bit Windows 2008	3.0.1, 3.0	3.0.1, 3.0	3.0.1, 3.0
32-bit Windows 7	3.0.1, 3.0	3.0.1, 3.0	3.0.1, 3.0
64-bit Windows 7	3.0.1, 3.0	3.0.1, 3.0	3.0.1, 3.0
32-bit Windows XP, SP 1 or later	3.0.1, 3.0	3.0.1, 3.0	3.0.1, 3.0

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:

gbs5.4.dat – The GemBuilder for Smalltalk ENVY data file.

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

GBS-UsersGuide-VA-5.4.pdf

GBS-ReleaseNotes-5.4.pdf

GBS-InstallGuide-5.4.pdf

Shared Library Files

GemBuilder for Smalltalk 5.4 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 *library-Name* 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 3.0	libgcirpc.dll libgcirpc64-300.dll
GemStone/S 64 Bit 3.0.1	libgcirpc.dll libgcirpc64-301.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 `gbs5.4.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 `5.4`, 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 5.4 appears in the middle Editions and Versions pane.
3. In the Editions and Versions pane, select 5.4 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
...
```

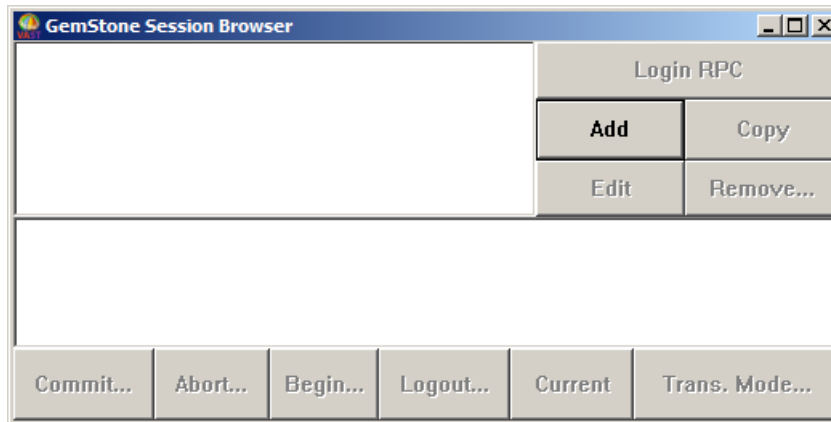
2. Start your client Smalltalk using the image into which you have loaded GemBuilder for Smalltalk.
3. Optionally, set the `GbsConfiguration` parameter *libraryName* to the name of the appropriate shared library. When left at the default, an empty string, GBS attempts to load the library named `libgcirpc.dll`, which is correct for all supported platforms for GemBuilder for Smalltalk version 5.4. 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**.

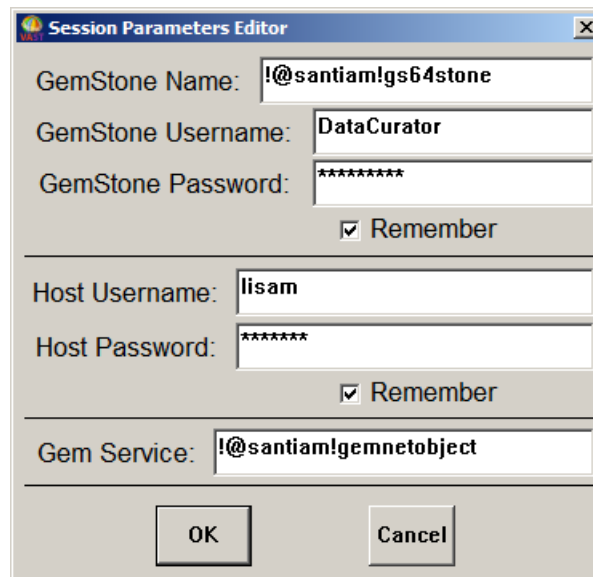
4. Select **GemStone > Sessions**.

Figure 1.1 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 1.2).

Figure 1.2 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 'santiam', specify the NRS string:

```
!@santiam!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,

```
!@santiam!gemnetobject
```

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

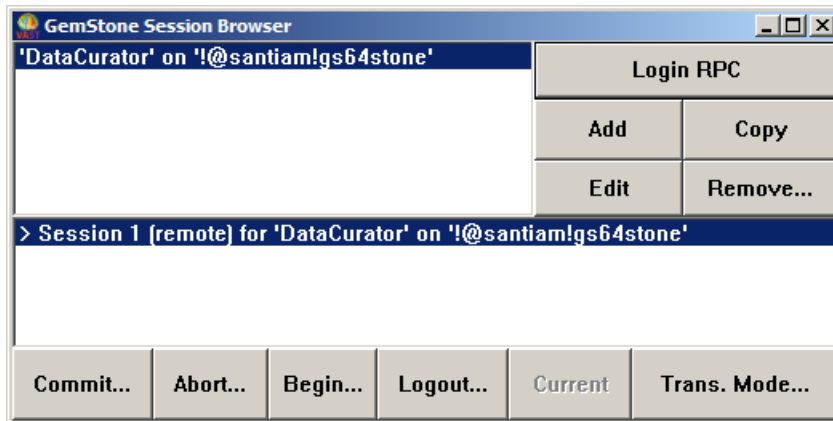
```
!@santiam#netldi:<processNameOrPort>!gemnetobject
```

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, and click on **Login RPC** to log in to GemStone.
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 1.3).

Figure 1.3 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.