
GemStone®

GemStone/S™ **Release Notes**

Version 6.7.2

June 2021



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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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Preface

About This Documentation

These release notes describe changes in the GemStone/S™ version 6.7.2 release. Read these release notes carefully before you begin installation, conversion testing, or development with this release.

For information on installing or upgrading to this version of GemStone/S, please refer to the *GemStone/S Installation Guide* for version 6.7.2.

These documents are available on the GemTalk website, as described below.

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.
- ▶ **TechTips**, providing information and instructions that are not in the documentation.
- ▶ **Compatibility matrices**, listing supported platforms for GemTalk 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 assistance may be submitted online, 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: techsupport.gemtalksystems.com

Email: techsupport@gemtalksystems.com

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

When submitting a request, please include the following information:

- ▶ Your name and company name.
- ▶ The versions of GemStone/S and of all related GemTalk 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 GemTalk holidays.

24x7 Emergency Technical Support

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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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GemStone/S 6.7.2 Release Notes

Overview

GemStone/S 6.7.2 is a new version of the GemStone/S object server. This release provides a solution for a significant bug, updated build platforms, and a few other minor changes.

These release notes provide changes between the previous version of GemStone/S, version 6.7.1, and version 6.7.2. If you are upgrading from a version prior to 6.7.1, review the release notes for each intermediate release to see the full set of changes.

Customers on 32-bit GemStone/S are encouraged to migrate to GemStone/S 64 Bit, for additional scalability and reliability as well as many important new and enhanced features.

For details about installing GemStone/S 6.7.2 or upgrading from earlier versions of GemStone/S, see the *GemStone/S Installation Guide* for version 6.7.2.

Supported Platforms and GBS Versions

Platforms

GemStone/S version 6.7.2 is supported on the following platforms:

- ▶ Solaris 10 and 11 on SPARC
- ▶ AIX 7.1 and 7.2
- ▶ Red Hat Enterprise Linux Server and CentOS Linux 7.9 and Ubuntu 18.04
GemStone performs testing on a mixture of Red Hat and CentOS servers; both are fully certified platforms. Any reference to Red Hat applies to both distributions.
- ▶ Windows 10

Updated Build Platforms

The build platform for AIX is now AIX 7.1; GemStone/S v6.7.2 will not run on AIX 6.x.

The build platform for Windows is now Windows 10. GemStone/S v6.7.2 runs on Windows 7, but this is not a certified platform.

GBS version summary

The following versions of GBS have been certified with GemStone/S version 6.7.2, with the following client Smalltalk and platforms versions.

GBS version 8.3

VW 8.2.1 32-bit
<ul style="list-style-type: none"> ▶ Windows 10 ▶ Solaris 10 on SPARC ▶ RedHat Linux ES 7.9 and Ubuntu 18.04

GBS version 5.2.7

VA Smalltalk 8.6.3 32 bit	VA Smalltalk 8.6 32 bit
▶ Windows 10 and Windows Server 2016	▶ Windows 10 and Windows Server 2016

VSD version

The GemStone/S v6.7.2 distribution includes VSD version 5.5.1. The previous version of GemStone/S, v6.7.1, included VSD v5.4.

VSD version 5.5.1 includes many updates, new features and bug fixes. For details on the changes, see the [Release Notes for VSD v5.5.1](#).

VSD versions are not tied to GemStone server versions: both older and newer versions of VSD can be used to read statmonitor files generated by both older and newer versions of GemStone/S and GemStone/S 64 Bit.

However, note that 32-bit VSD is no longer built or distributed. If you are running on 32-bit Windows or Linux machines, you must continue to use VSD v5.4 or earlier.

Changes in this Release

RcQueue will have problems on January 5, 2022

On January 5, 2022, the number of seconds since January 1, 2005 (as returned, for example, by the method `System class >> timeGmt2005`) will exceed the value of `SmallInteger maximumValue`. `RcQueues` use this value to mark the time elements are added to the queue; the `RcQueueEntry` has a `createTime` variable for seconds and `createTimeUs` for microseconds.

After the rollover, the `createTime` will be set to a negative `SmallInteger`, starting with negative `SmallInteger maximumValue - 1`, and increase from there.

While the `RcQueue` will continue to work, elements added after the rollover will be returned out of order, before elements added before the rollover.

To address this problem, a new class `RcQueueEntry2020` has been added, which set the time based on the seconds since January 1, 2020. Instances of `RcQueueEntry2020` are used for new items added to an `RcQueue`. Instances of `RcQueueEntry2020` transparently interoperate with any previously existing entries in an `RcQueue`, which are instances of `RcQueueEntry`.

The number of seconds since January 1 2020 will return positive `SmallIntegers` until January 4, 2037.

The method `System >> timeGmt2020` has been added, which returns the value used for `RcQueueEntry2020`.

Improvements in DNS lookups

Internal socket code has been refactored to avoid reverse and unnecessary DNS lookups, which can create problems if name resolution is not correctly setup, and may have performance impacts. (#49323)

Windows dll now included in distribution

If a Windows machine had a different version installed of the Windows DLL `msvcrNNN.dll` than GemStone was compiled for, it resulted in errors with unclear error messages. With Windows 10, this file has been renamed to `vcruntimeNNN.dll`, and it is now included within the GemStone distribution. (#47874)