GemStone®

GemStone/S™
Release Notes

Version 6.7.1

October 2018

GEMTALK™
SYSTEMS

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

Preface

About This Documentation

These release notes describe changes in the GemStone/S™ version 6.7.1 release. Read these release notes carefully before you begin installation, conversion testing, or development with this release.

No separate Installation Guide is provided with this release. For instructions on installing GemStone/S version 6.7.1, or upgrading or converting from previous products or versions, see the Installation Guide for version 6.7.

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

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. GemStone/S 6.7.1 Release Notes

Chapter

1 GemStone/S 6.7.1 Release Notes

Overview

GemStone/S 6.7.1 is a new version of the GemStone/S object server. This release provides support for AIX 7.2, along with other minor enhancements and bug fixes.

These release notes provide changes between the previous version of GemStone/S, version 6.7, and version 6.7.1. If you are upgrading from a version prior to 6.7, 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.

No separate Installation Guide is provided with this release. For installation instructions, use the Installation Guide for version 6.7.

Supported Platforms and GBS Versions

Platforms

GemStone/S version 6.7.1 is supported on the following platforms:
- ‣ Solaris 10 and 11 on SPARC
- ‣ AIX 6.1, 7.1, and 7.2
- ‣ Red Hat Linux ES 6.9
- ‣ Windows 7 and Windows Server 2016

For more information and detailed requirements for each supported platforms, please refer to the GemStone/S v6.7 Installation Guide for that platform.

GBS version summary

The following versions of GBS have been certified with GemStone/S version 6.7.1, with the following client Smalltalk and platforms versions.

GBS version 8.3

VW 7.10.1 **32-bit**
‣ Windows 7 and Windows Server 2016 ‣ Solaris 10 on SPARC ‣ RedHat Linux ES 6.9

GBS version 5.2.7

VA Smalltalk 8.6 **32 bit**
‣ Windows 7, Windows 2008 R2 and Windows Server 2016

VSD version

The GemStone/S v6.7.1 distribution includes VSD version 5.4. The previous version of GemStone/S, v6.7, included VSD v5.1.

VSD version 5.4 includes many updates, new features and bug fixes. For details on the changes, see the *Release Notes for VSD* v5.4.

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.

Changes in this Release

Added Support for AIX 7.2

This release adds support for AIX 7.2, which was verified on POWER7.

Updated library versions

▶ The libraries used by VSD have been updated.

▶ The Zlib library has been updated to v1.2.11.

Distribution Changes

VSD is now provided only as 64-bit executables; the 32-bit executables are deprecated, and no longer included in the distribution.

With v6.7.1, the 64-bit VSD executable is included in the `$GEMSTONE/bin` directory, and the `/bin64` directory is no longer present.

Added Virtual Memory Manager stats on AIX

The following AIX VMM stats are now collected when running statmonitor with the -s option:

FreeListSize
Number of pages in the free list. From the numfrb member of the vminfo64 struct returned by the vmgetinfo() AIX function.

LargePagesFree
Number of free large memory pages. From the lgpg_numfrb member of the vminfo64 struct returned by the vmgetinfo() AIX function.

LargePageSize
Size in bytes of a large memory page on this host. From the lgpg_size member of the vminfo64 struct returned by the vmgetinfo() AIX function.

LargePagesTotal
Total number of large memory pages. From the lgpg_cnt member of the vminfo64 struct returned by the vmgetinfo() AIX function.

LargePagesUsed
Number of large memory pages in use. From the lgpg_inuse member of the vminfo64 struct returned by the vmgetinfo() AIX function.

LargePageUsedHighWater
High water number of large memory pages used. From the lgpg_hi member of the vminfo64 struct returned by the vmgetinfo() AIX function.

MaxClient
The maximum number of pages that may be used for client pages. From the maxclient member of the vminfo64 struct returned by the vmgetinfo() AIX function.

MaxFree
The threshold of free pages above which the page-stealing algorithm will stop stealing

pages to replenish the free list. From the maxfree member of the vminfo64 struct returned by the vmgetinfo() AIX function.

MaxPerm

The threshold of free pages below which the page-stealing algorithm may steal computational pages as well as file buffer pages. If the free page list is larger than this value, then the page-stealing algorithm will only steal file buffer pages. From the maxperm member of the vminfo64 struct returned by the vmgetinfo() AIX function.

MinFree

The threshold of free pages below which the page-stealing algorithm will begin to steal pages to replenish the free list. From the minfree member of the vminfo64 struct returned by the vmgetinfo() AIX function.

MinPerm

The threshold of free pages below which the page-stealing algorithm may steal computational and file buffer pages regardless of the repaging rate. From the minperm member of the vminfo64 struct returned by the vmgetinfo() AIX function

NumClient

Number of client frames. From the numclient member of the vminfo64 struct returned by the vmgetinfo() AIX function.

NumPerm

Number of pages used to cache files. From the numperm member of the vminfo64 struct returned by the vmgetinfo() AIX function.

RealMemoryPages

The real memory size in 4K pages. From the memsizepgs member of the vminfo64 struct returned by the vmgetinfo() AIX function.

VirtualPagesAccessed

The number of virtual pages accessed. From the numvpages member of the vminfo64 struct returned by the vmgetinfo() AIX function.

Bugs Fixed

Stone name limited to 15 Characters in Statmonitor

Previously, the SPC process name slot was limited to 15 characters, which caused the Stone name displayed in VSD to be truncated. Now, the limit is 31 characters. (#46560)

Note that while this is a limitation in 32-bit GemStone/S, it is only exposed in VSD, and the Bugnote is associated with the VSD product.

installgs fails due to incorrect environment variable

In v6.7, the `installgs` utility failed to find the error file due to an environment variable that was not updated. (#45907)