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*GemStone*®



# Visual Statistics Display (VSD) Release Notes

**Version 5.6**

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GemStone software has been 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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# VSD 5.6 Release Notes

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## Overview

Visual Statistics Display (VSD) version 5.6 is a new release of the VSD product, including several new features and bug fixes.

These release notes describe changes between the previous version of VSD, version 5.5.4, and version 5.6.

This version of VSD supports statmonitor files generated from:

- ▶ All versions of GemStone/S 64 Bit™
- ▶ All versions of 32-bit GemStone/S
- ▶ All versions of GemBuilder™ for Smalltalk (GBS)

## Supported Platforms

VSD version 5.6 is verified and supported on the following platforms:

- ▶ (64-bit) Windows 10 and Windows 11
- ▶ AIX 7.1 and 7.2
- ▶ Red Hat Enterprise Server/CentOS Linux/Rocky Linux/AlmaLinux 7.x, 8.x, and 9.x; Ubuntu 20.04 and 22.04 on x86; and Ubuntu 20.04 on arm64
- ▶ OSX 13.1 (Ventura) with Darwin 22.2.0 kernel, and OSX 12.6 (Monterey) with Darwin 21.6.0 kernel on x86; and OSX 11.6 (Big Sur) with Darwin 20.6.0 kernel on Apple silicon.

Windows 7, Red Hat 6.x, and Ubuntu 18.04 are expected to work, but as these are end-of-life, are not officially supported.

## Changes in this Release

### VSD automatically adjusts for statmonitor data timezone

The timestamps in VSD records are in UTC, and VSD traditionally has not been aware of the timezone in which the statistics were actually generated. In previous versions of VSD, VSD displayed the timestamp of the record in the current timezone (the timezone of the machine on which VSD is running). A manual control was provided that allowed you to set the hours forward or backwards.

Now, VSD will examine the statmonitor file's header timestamp, and adjust the display accordingly. This means that a log file message can be easily correlated to the VSD statistics, regardless of the timezone in which VSD is executing, and without having to manually adjust the time offset.

In previous GemStone releases, statmonitor timestamps have been printed in a old, non-standard format, for example:

```
Time = "03/13/2023 16:06:42 PDT"
```

VSD reads these timestamps and can determine the offset for most common timezones.

As of GemStone versions 3.6.6 and 3.7, statmonitor will now print timestamps in the standard ISO-8601 format, for example:

```
Time = "2023-03-13T16:05:54.757-07:00"
```

VSD can understand any timestamp in this format.

### Reading lz4-compressed files from v3.6.6 and later

With GemStone/S 64 Bit v3.6.6 and later, **statmonitor** now uses an additional C dictionary to improve compression in lz4-compressed data files. This dictionary must be used by VSD to uncompress and read the data file. As a result, lz4-compressed statmonitor data files generated by 3.6.6. or later cannot be read by previous VSD versions.

VSD 5.6 or later is required to read lz4-compressed statmonitor data files generated by 3.6.6 or later. VSD 5.6 can read lz4-compressed (and other format) files produced by earlier version of GemStone/S and GemBuilder.

### Unsigned 64 bit integer type added type added

The type `uvalue64`, an unsigned 64-bit int, has been added and is used for many statistics, such as `FreeOps`, that were previously `svalue64`.

### VSD walkback if previous stat directory does not exist

VSD uses the directory in which you most recently opened a statmonitor data file as the initial directory in the file selection dialog when opening a new file. If this directory was deleted meanwhile, VSD errored with a walkback. Now, it will default to the home directory of the user. (#50104)

### Hide Instances By Type>Host System did not hide all system types

The menu item **Hide Instances By Type > Host System** hid the `Linux_System` (or equivalent for that OS) type, but did not hide other host system types such as the ones relating to CPU, hard disk, and so on. (#50096)