

TSTool – Troubleshooting the Software Installation

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This document provides information about troubleshooting the TSTool software installation, in particular to diagnose major problems that may occur starting the software and connecting to datastores.

Issue #1 – Java Virtual Machine Launcher Error

Scope – This error has been seen on Windows computers.

Behavior – The following error is displayed when trying to start TSTool:



Possible Cause – TSTool was updated from Java 6 to Java 7 as of version 11.00.00. The Java Runtime Environment (JRE) provides a “sandbox” to run Java programs like TSTool. The memory for the JRE within this sandbox is split between the JRE itself and the software that is being run. The maximum amount of memory available to the JRE and the software it is running is theoretically 4 GB on a 32-bit operating system or when a 32-bit JRE is running on a 64-bit operating system. Practically, however, the amount of memory available to a program running in the JRE is in the range 1.4 to 1.6 GB. Differences between memory use for JRE versions 6 and 7 may be causing this error.

Possible Solution – The amount of memory allocated to TSTool at startup is controlled by the `-Xmx` option in the software launcher configuration file *TSTool.l4j.ini*, which is located in the *bin* folder under the TSTool installation folder. The default value for the software may be too high based on the computer’s configuration. To resolve, edit the *TSTool.l4j.ini* file with a text editor and decrease the number at the end of the `-Xmx` parameter. For example, use the following:

```
-Xmx1100m -Dsun.java2d.noddraw=true -Djava.net.useSystemProxies=true
```

Root Cause Solution – This issue is being studied and in the future the default value in this configuration file may be reduced. Another option is to run TSTool on 64-bit computers using 64-bit JRE, which will theoretically increase the amount of memory available to the JRE and programs that it runs. 64-bit TSTool installers may be provided in the future.

Additional Resources – the following article provides additional information:

<http://www.tomshardware.co.uk/faq/id-1761312/fix-create-java-virtual-machine-issue.html>

Issue #2 – Error Connecting to State of Colorado’s HydroBase Database

Scope – This issue has been seen when running TSTool connecting to the HydroBase database within the State of Colorado’s computer network, typically on Windows computers.

Behavior – TSTool versions 10.23.00 or later displays an error connecting to HydroBase within the State of Colorado’s computer network. The error may be shown from the interactive HydroBase login prompt or result in exceptions being logged in the TSTool log file (see **Tools ... Diagnostics** menus in TSTool).

Possible Cause – Within the State of Colorado’s system, access to a shared server version of HydroBase is provided to staff. Due to limitations in the ability to update the version of SQL Server, SQL Server 2000 is used for some instances of HydroBase. TSTool version 10.23.00 and later uses a newer Java ODBC driver for SQL Server, necessary to keep up to date with Microsoft software releases for newer database software versions. However, the newer SQL Server driver does not support SQL Server 2000.

Possible Solution – The work-around is copy the *TSTool-Version\bin\sqljdbc4.jar* file from TSTool version 10.21.00 or earlier into a similar location for the new TSTool version. A copy of this file is also available on the Open Water Foundation TSTool software page, accessible from:
<http://openwaterfoundation.org/software-tools/tstool>.

Root Cause Solution – The solution to the root cause is for the State of Colorado to enhance software that is holding back upgrades of the HydroBase server, and then upgrade HydroBase to a newer version of SQL Server. When this occurs, this error should no longer occur.

Additional Resources – The following page provides information about Microsoft SQL Server database and driver compatibility: <https://msdn.microsoft.com/en-us/data/ff928484>