



Increasing the Max Memory Allocation

Technical Documentation

For public distribution

Submission From Support

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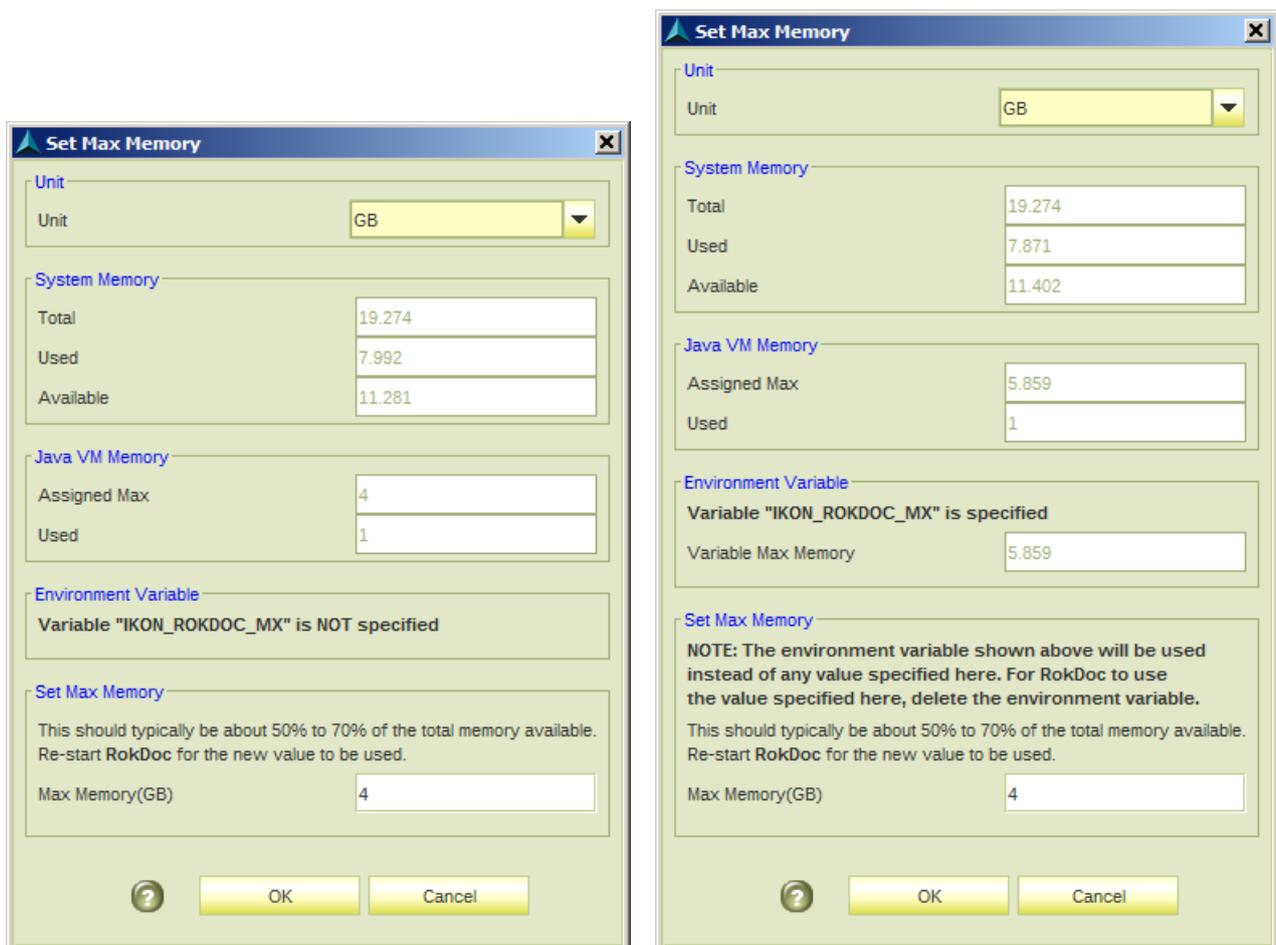
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1 General Information

It is recommended that your computer has 8GB of RAM as an absolute practical minimum in order to benefit from an enhanced RokDoc experience. The default maximum memory assigned to RokDoc is 4GB; this should be increased at the earliest opportunity after installing RokDoc. RokDoc memory management is performed as follows:

- Up to 6GB of RAM assigned, RokDoc will open with the least amount of RAM the JVM requires to launch and will continue to obtain further RAM up to the specified amount, however, will **not** be able to obtain access to any extra memory, even for more memory intensive operations.
- If assigned in excess of 6GB of RAM, then RokDoc will open with 6GB, however:
 - ✓ RokDoc **will** be able to obtain access to additional RAM (up to the specified limit) for more memory intensive operations
 - ✓ Once any memory intensive operations have been completed, any surplus RAM no longer required will be returned to the OS
 - ✓ After returning surplus RAM to the OS, RokDoc will revert to using not less than 6GB of RAM to ensure enhanced performance for continued day-to-day usage

The 'set max memory' dialog in RokDoc shows system level memory information as well as JVM memory information. Please note that the default (display) unit for memory is GB, although this can be altered to MB from the drop-down list.



The 'set max memory' dialog also indicates whether or not the `IKON_ROKDOC_MX` environment variable is being used. **Use of the environment variable is strongly recommended** as it is the most elegant manner with which to control the memory assignment and will apply to all/any version of RokDoc installed, including *future* versions. Details on setting the variable are described below.

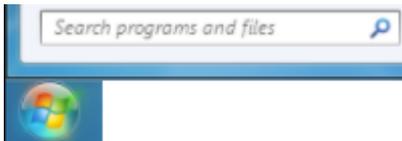
2 Setting an Environment Variable (preferred)

This is the preferred option, as the advantage of using an environment variable, is that all RokDoc versions (including future versions) are automatically assigned the specified memory allocation.

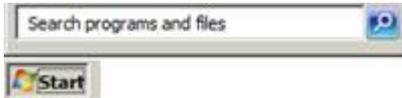
2.1 Environment Variable for RokDoc on Windows

The simplest way to raise the Windows '*environment variables*' dialog is using the Windows [start] button (Windows symbol in bottom left corner) > type `envi` in the '*search programs and files*' field, followed by the 'enter' keystroke.

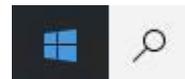
Windows 7



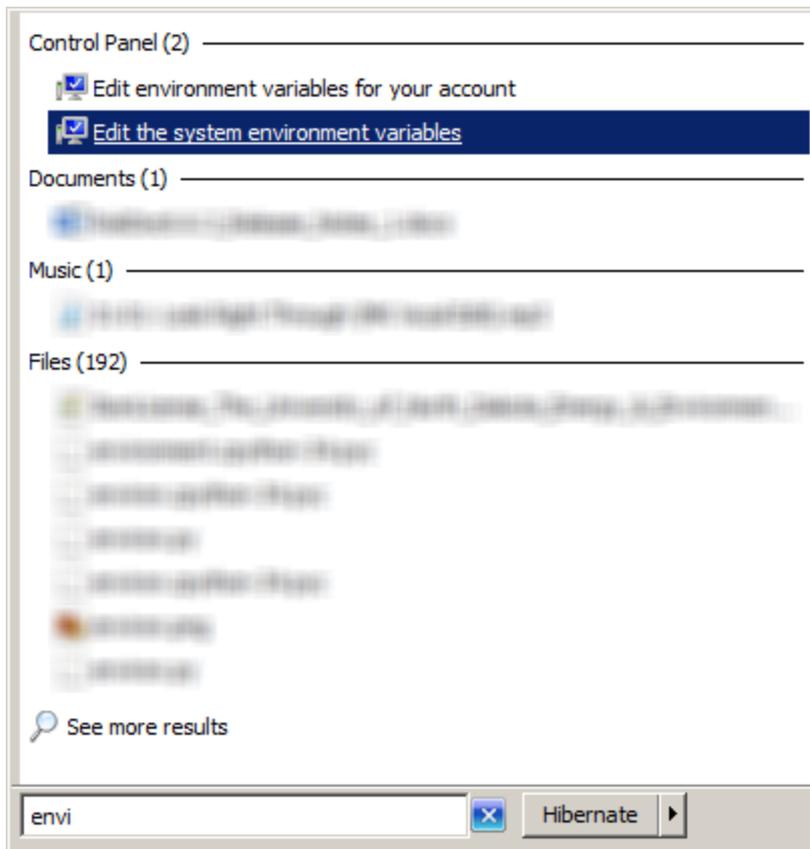
Windows 7 [classic view]



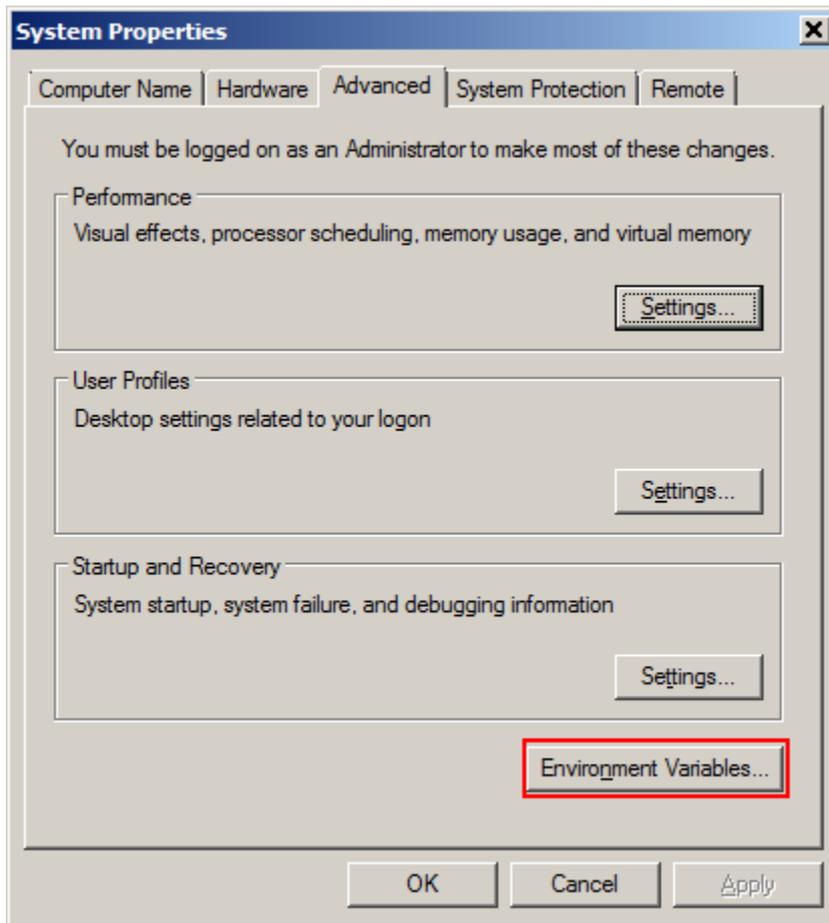
Windows 10



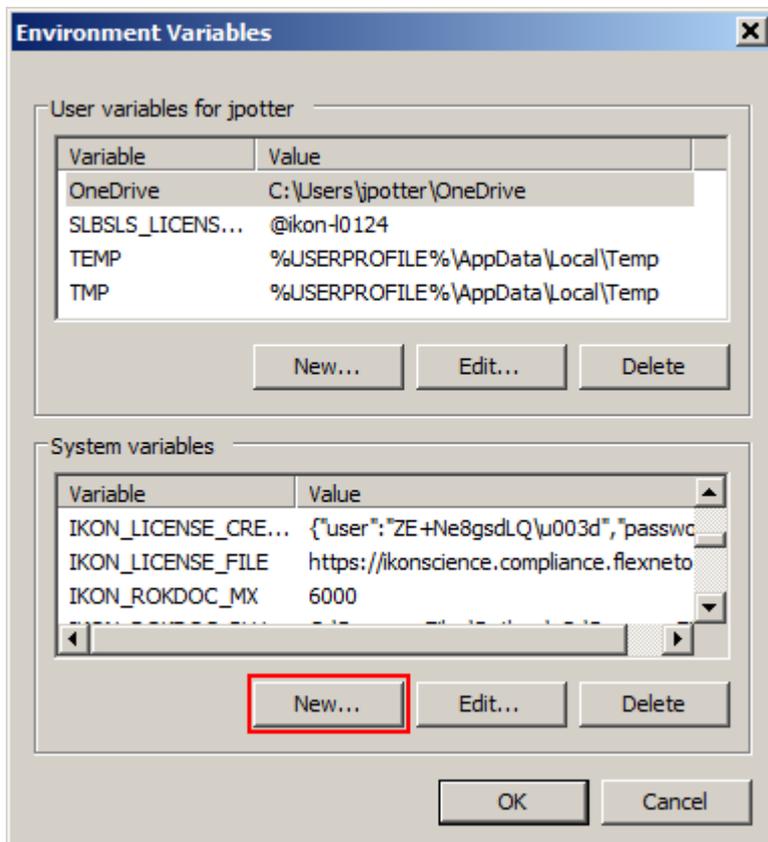
.... from the list presented, select '*edit the system environment variables*'



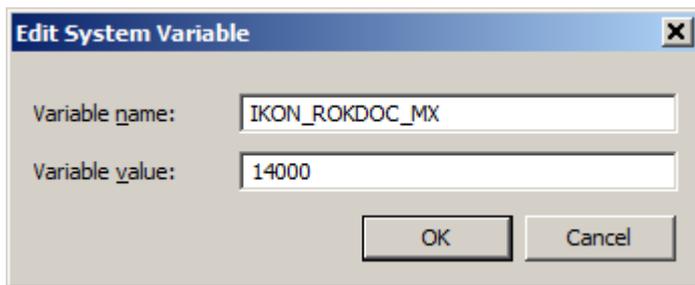
Next, click on the 'environment variables' button....



.... followed by the 'new' button....



Create the `IKON_ROKDOC_MX` environment variable – if insufficient permission to create a **system** variable are encountered, try creating as a **user** variable.... if necessary, contact the IT administrator for assistance with permissions.



Note that the variable value is specified in MB (the example above is 14000MB, ie. ~14GB) and should not be more than about $\frac{2}{3}$ of the total system RAM. The change will be applied when RokDoc is next launched. To confirm the change, view the '*about RokDoc*' dialog (*help > about RokDoc*).

2.2 Environment Variable for RokDoc on Linux

Setting an environment variable in Linux will depend on the type of shell your flavour of Linux is using, its corresponding shell command syntax to set a variable and the system level at which you wish to implement it; please escalate to your IT administrator for assistance.

Below is an example using Bash, as it is widely distributed as the default shell on Linux distributions. For the purpose of this example, the `IKON_ROKDOC_MX` variable will be set to 14000MB.

2.2.1 Configure for Individual Users

Edit the `~/ .bashrc` to include the following line: `export IKON_ROKDOC_MX=14000`. To enable the change to the `~/ .bashrc` log out and then log back in again.

2.2.2 Configure Setting at System Level

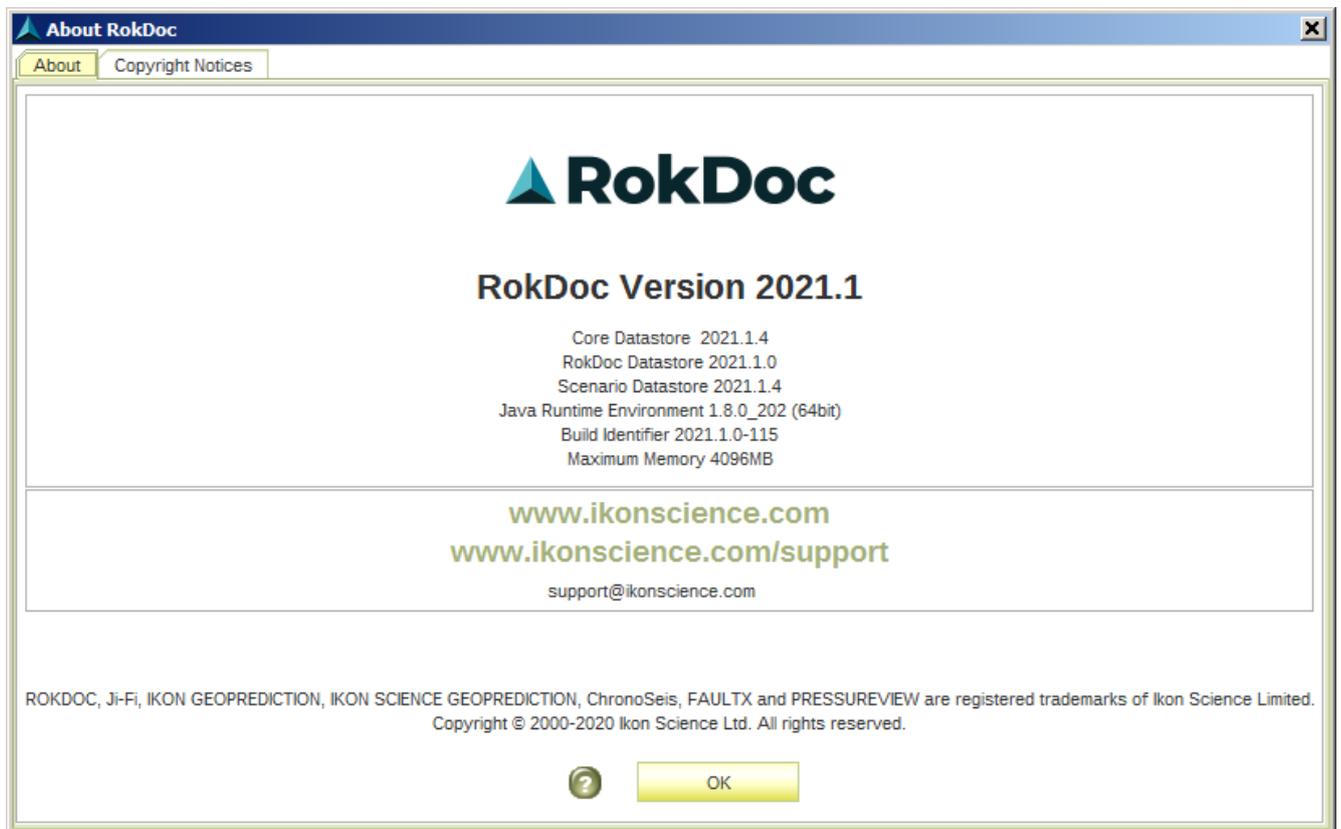
Edit the `/etc/bashrc` to include the line: `export IKON_ROKDOC_MX=14000`. To edit the `/etc/bashrc` will require root privilege; to enable the change to the `/etc/bashrc` to be effected, log out and then log back in again.

3 Setting Memory within RokDoc (less elegant)

The '*set max memory*' dialog can be launched from the Project Viewer '*file*' menu item. Firstly, tick the '*debug mode*' checkbox, also found under the '*file*' menu item; this will extend the list of options available from the '*file*' menu item, including the '*set max memory*' option – selecting said menu option will launch the '*set max memory*' dialog.

4 Confirming Memory Assignment is Applied

The memory assignment can be confirmed from the 'about RokDoc' dialog, launched from either the Project Viewer or the Well Viewer *help > about RokDoc*.



Remember this value is the *maximum* memory assigned, so if comparing to the *javaw.exe* process in the Windows 'task manager' dialog, or using the `top` command on Linux, expect to see a lower value than this reported, unless performing a very memory intensive operation.