

# RokDoc

Increasing the  
Max Memory  
Allocation

Technical Documentation

For **public distribution**

Submission From **Support**

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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 2GB; 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 box displays the following information:

System Memory	
Total	19.274
Used	8.722
Available	10.552

Java VM Memory	
Total	1.935
Used	0.935

Environment Variable: Variable "IKON\_ROKDOC\_MX" is NOT specified

Set Max Memory: This should typically be about 50% to 70% of the total memory available. Re-start RokDoc for the new value to be used. Max Memory(GB): 2

The 'Set Max Memory' dialog box displays the following information:

System Memory	
Total	19.274
Used	8.914
Available	10.359

Java VM Memory	
Total	3.841
Used	3.06

Environment Variable: Variable "IKON\_ROKDOC\_MX" is specified

Variable Max Memory: 3.906

Set Max Memory: NOTE: The environment variable shown above will be used instead of any value specified here. For RokDoc to use the value specified here, delete the environment variable. This should typically be about 50% to 70% of the total memory available. Re-start RokDoc for the new value to be used. Max Memory(GB): 2

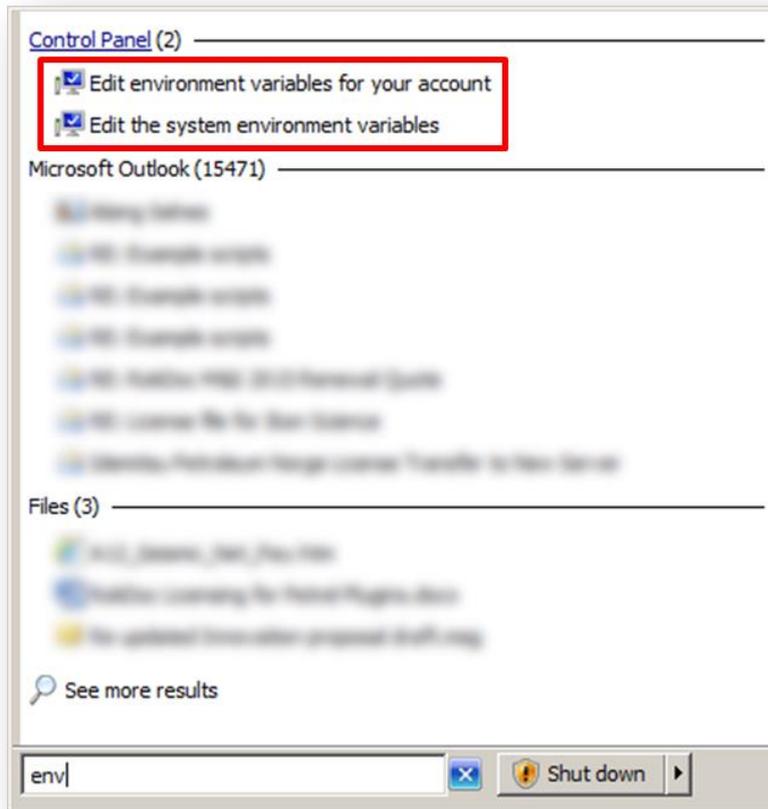
The 'set max memory' dialog also indicates whether or not the IKON\_ROKDOC\_MX environment variable is being used. **Use of the environment variable is recommended** as it is the most elegant manner with which to control the memory assignment and will apply to all/any version of RokDoc installed, including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

## 2 Setting an Environment Variable (preferred)

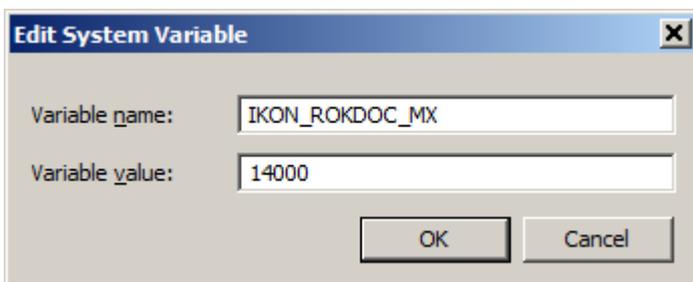
This is the preferred option, as the advantage of using an environment variable, is that all RokDoc versions (including *future* versions) are automatically assigned the specified memory allocation.

### 2.1 Environment Variable for RokDoc on Windows

Click on the Windows 'start' button & type `env` into the 'search programs and files' field. Click on either of the edit variables options; this launches the 'environment variables' dialog.



Either edit the existing `IKON_ROKDOC_MX` environment variable or create it for the first time – you may find that you do not have permission to edit/create a **system** variable; if so, try editing/creating as a **user** variable. If you are not able to edit/create a user variable, please contact your IT administrator for this to be done on your behalf.



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 refer 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.

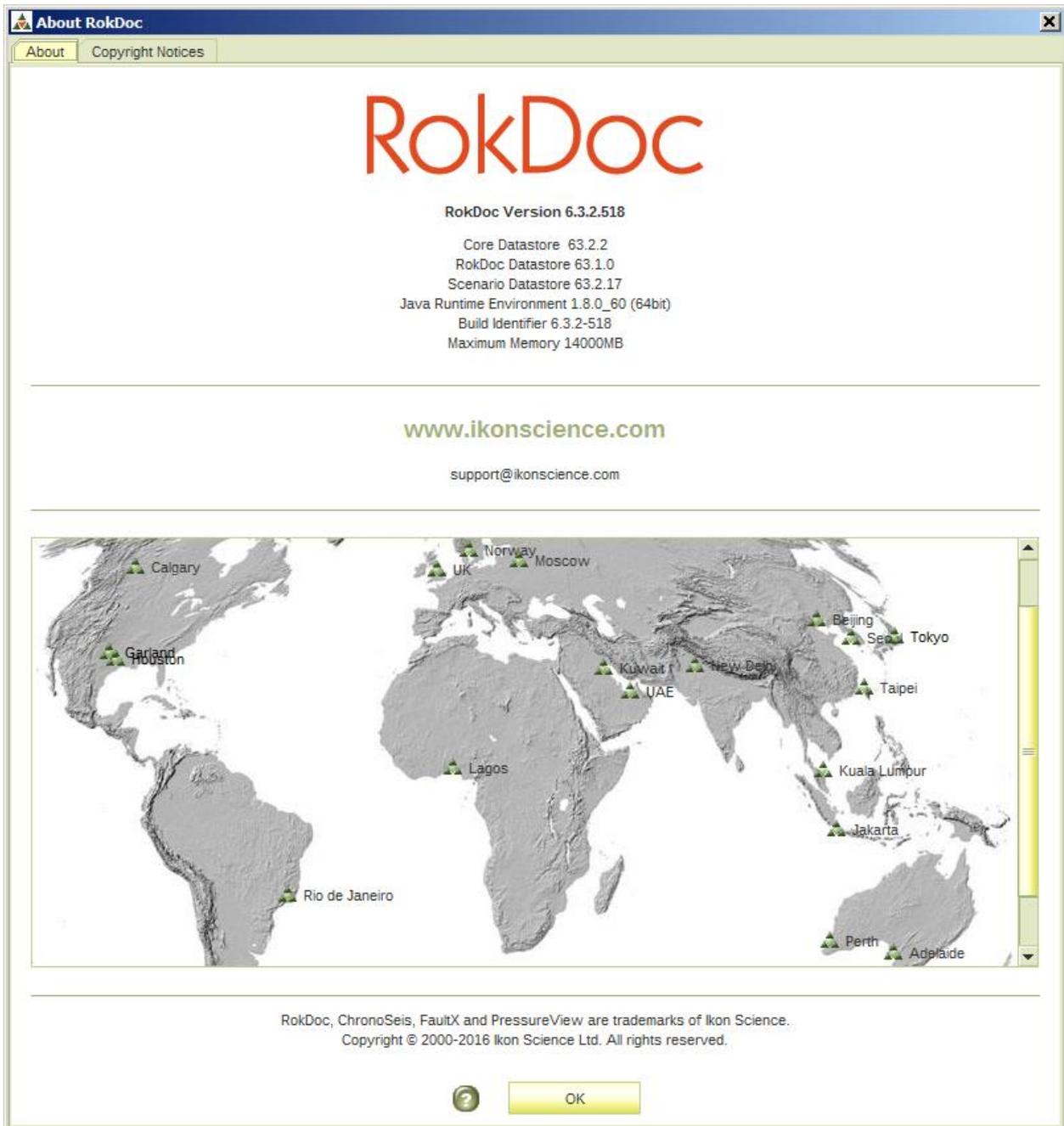
The screenshot shows a dialog box titled "Set Max Memory". It contains several sections:

- Unit:** A dropdown menu set to "GB".
- System Memory:** A table with three rows: "Total" (19.274), "Used" (8.722), and "Available" (10.552).
- Java VM Memory:** A table with two rows: "Total" (1.935) and "Used" (0.935).
- Environment Variable:** A text box containing "Variable \"IKON\_ROKDOC\_MX\" is NOT specified".
- Set Max Memory:** A text box for "Max Memory(GB)" with the value "2". Above it is a note: "This should typically be about 50% to 70% of the total memory available. Re-start RokDoc for the new value to be used."

At the bottom, there is a question mark icon, an "OK" button, and a "Cancel" button.

## 4 Confirming Memory Assignment

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.