

"The JVM could not be started. The main method may have thrown an exception" error when starting idea.exe

In IntelliJ IDEA 9.0 we've raised the default heap settings to the following values (see *idea.exe.vmoptions* file):

```
-Xms128m  
-Xmx512m  
-XX:MaxPermSize=250m
```

On some systems the error in subject occurs when trying to run IntelliJ IDEA. It happens because the native *idea.exe* executable built with the *exe4j* uses the splash screen which loads a dll (to decode the splash image) in the address space of the process. The *jvm.dll* loaded after the splash needs to allocate the heap memory in one chunk, however the dll loaded before the *jvm.dll* can fragment the address space (limited to 2GB for the 32-bit applications) too much and there will be no single chunk of free memory required for the JVM to initialize.

Depending on the other DLLs loaded, applications with DLL hooks and drivers installed on the system, IntelliJ IDEA may be not able to start even with relatively low heap size of 512m.

Workarounds:

- use **idea.bat** to run IntelliJ IDEA (you need to set **IDEA_JDK** environment variable pointing to the JDK 1.6 installation first)
- lower heap size in *idea.exe.vmoptions* to 400m or the value when JVM can be started reliably on your system
- replace *idea.exe* with the new version attached to this document which doesn't show splash screen and therefore is not affected by this bug

We plan to address this issue in IntelliJ IDEA 9.0.1 release which will be available before the New Year 2010 by disabling the native splash screen in the executable wrapper.

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Bonus:

- in the **idea.zip** file attached to this document you will also find **idea64.exe** which allows you to run IntelliJ IDEA under 64-bit JDK (don't forget to set **IDEA_JDK** environment variable to point to your **64-bit** JDK 1.6 installation directory). Good thing is that you can delete *jre* directory under IntelliJ IDEA installation directory to save some disk space. Running under 64-bit JVM allows to use higher heap size (if necessary), however doesn't use memory efficiently (has overhead), add *-XX:+UseCompressedOops* VM option to save some memory.