

Profiling LCSim with Netbeans

Netbeans

If you don't have Netbeans on your machine already, [download](#) and install it. You should get the Netbeans 6.0.1 release, though any 6.x release will probably suffice.

Install the Netbeans Maven plugin.

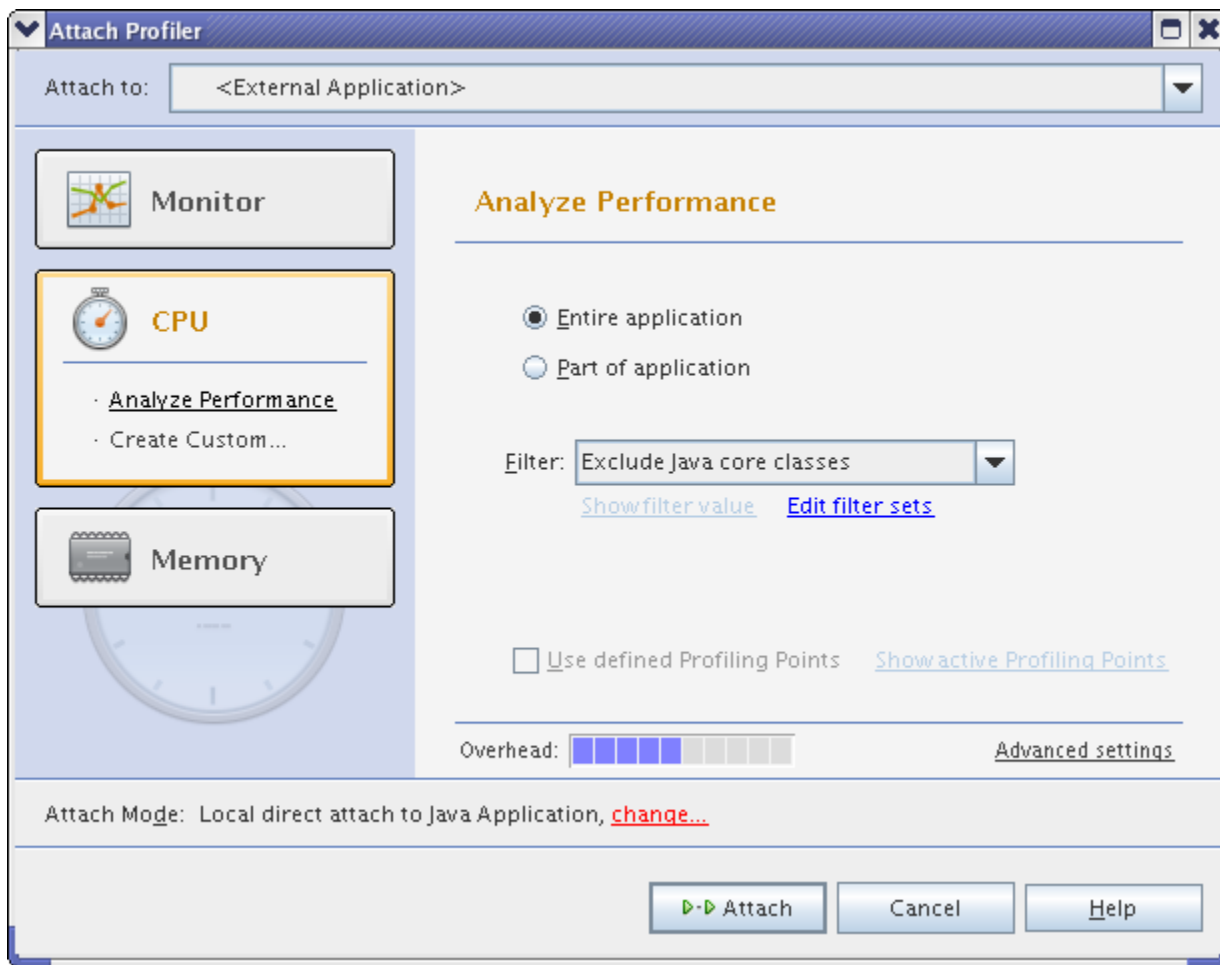
Under **Tools -> Plugins -> Available Plugins**, check the box next to **Maven**. Click **Install**.

Profiler Configuration

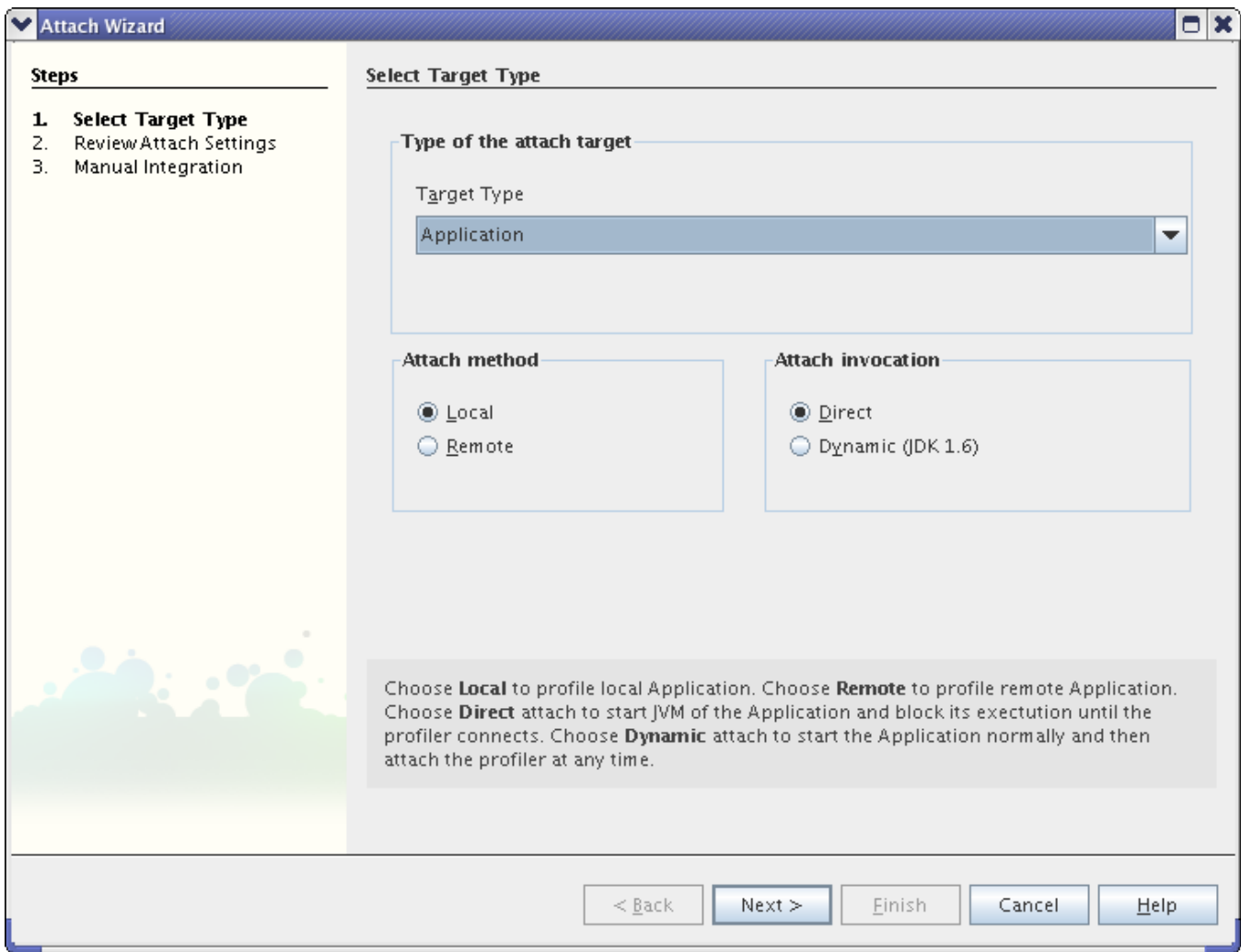
The profiler needs to be calibrated before it can be used. Select **Profiler -> Advanced Commands -> Run Profiler Calibration**.

Some information is required to connect the profiler to our application.

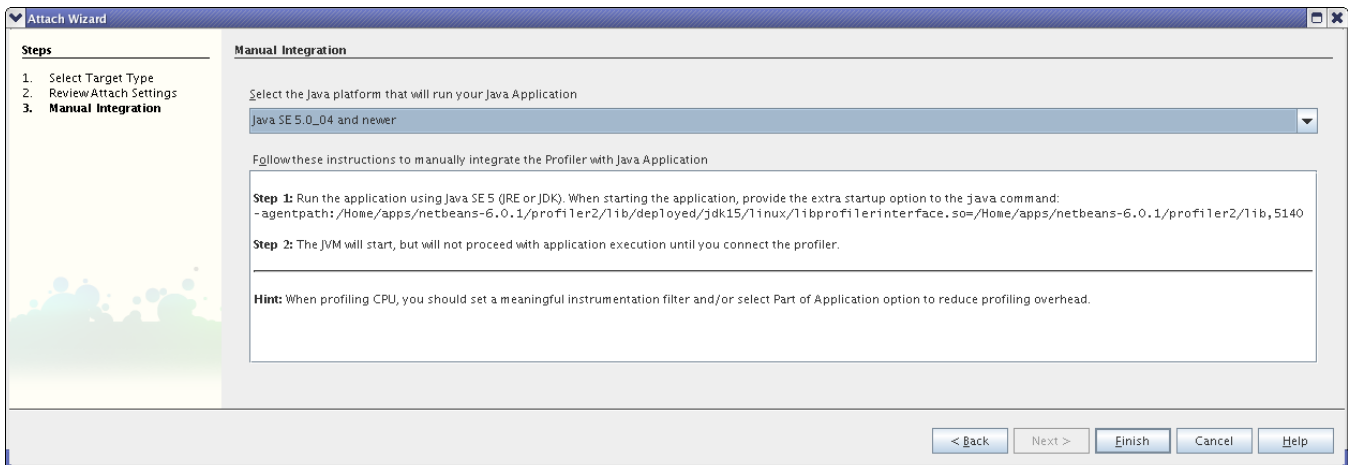
Select **Profiler -> Attach Profiler** to pull up the **Attach Profiler** window.



Click on the **Change** link at the bottom of the window to bring up the **Attach Wizard**.



Make sure **Local** and **Direct** are selected. Click the **Next** button twice.



Copy and paste the entire string beginning with "-agentpath" to a local scratch file. This will be needed to connect the running code to the profiler.

Project Checkout and Setup

Checkout GeomConverter and org.lcsim from [cvs](#).

The Maven 2 POM file does not have the standard name in either of these projects. In Linux, you can create a link with the correct name.

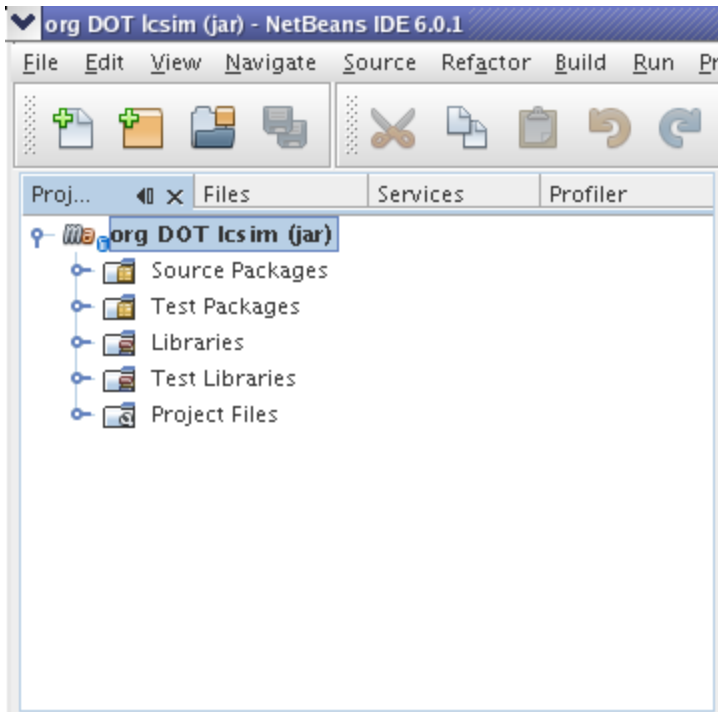
```
ln -s pom2.xml pom.xml
```

Do this before opening the project in Netbeans.

The **Create Shortcut** command may do the same thing in Windows, though I have not tested this.

Open LCSim by selecting **Open Project**. Click on the LCSim root directory and select **Okay**.

You should see LCSim in your Netbeans project window now.

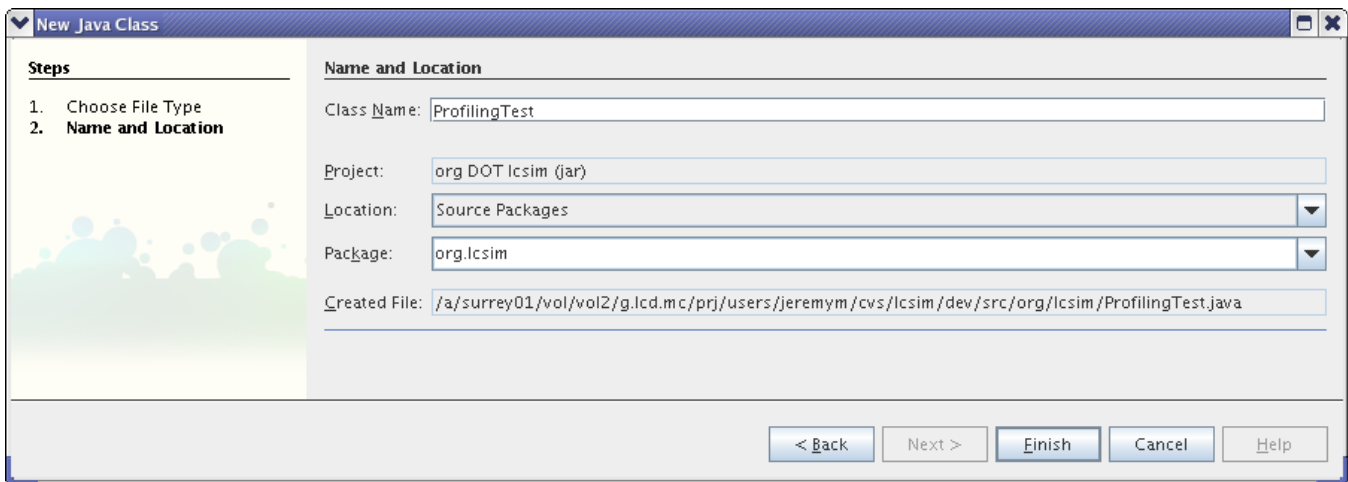


Right click on LCSim and select **Set as Main Project**.

Creating the Main Routine

The profiler will only run on classes that have a main routine.

I created a class called *ProfilingTest* in the package org.lcsim. Technically, this class could be called anything and could be located anywhere under the **src** directory in lcsim.



Add a main routine to this class with some test code. Here is my version of **ProfilingTest.java**.

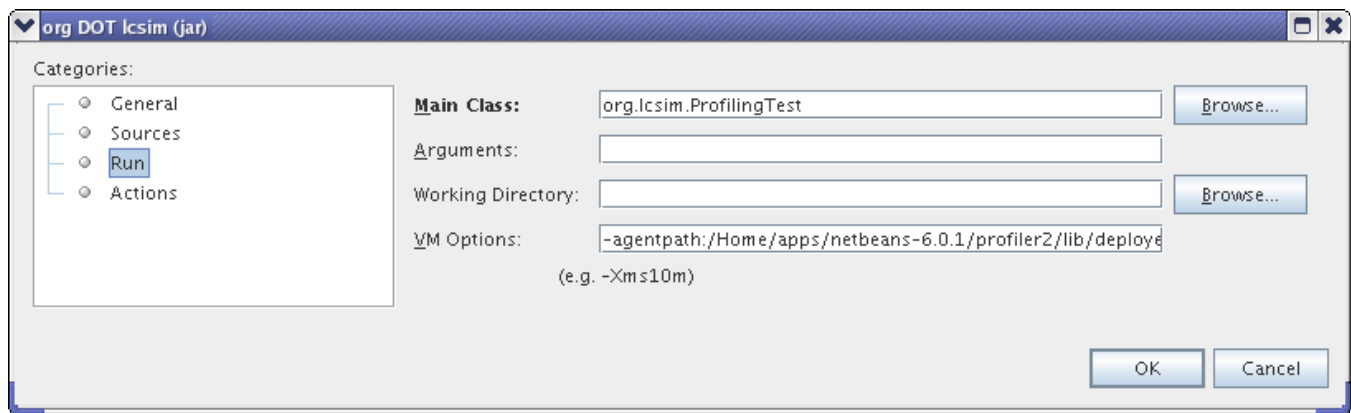
```
package org.lcsim;

public class ProfilingTest
{
    public static void main(String args[])
    {
        System.out.println("hello profiler");
    }
}
```

Right click on LCSim again and select **Properties -> Run**.

Paste the string you saved earlier into the **VM Options** field.

The **Run** settings should now look similar to this.



Netbeans will now wait for a profiler connection before running your main routine.

Connecting to the Profiler in Netbeans

Run the test code by right clicking on the LCSim project and selecting **Run**.

If all was setup correctly, you should see something like the following in your log window.

```
Profiler Agent: Initializing...
Profiler Agent: Options: >/Home/apps/netbeans-6.0.1/profiler2/lib,5140<
Profiler Agent: Initialized succesfully
Profiler Agent: JNI On Load Initializing...
Profiler Agent: JNI OnLoad Initialized succesfully
Profiler Agent: Waiting for connection on port 5140 (Protocol version: 8)
```

This means that you can now launch the profiler using **Profile -> Attach Profiler**, and your main routine will be executed and profiled according to your selections.

Connecting to the Profile from the Command Line

The profiler can also be used to connect to compilations run from the command line.

The following command runs the previously created *ProfilingTest* main from the command-line.

```
java -agentpath:/Home/apps/netbeans-6.0.1/profiler2/lib/deployed/jdk15/linux/libprofilerinterface.so=/Home/apps/netbeans-6.0.1/profiler2/lib,5140 \
-jar ./target/executable-netbeans.dir/lcsim-1.2.jar org.lcsim.ProfilingTest
```

After this statement is executed, you should see the same log message indicating that the program is waiting for a connection.

Now execute **Profile -> Attach Profiler** and the command line program will be profiled.