

How to Install JaCalIVE

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1 Package necessary to run JaCalIVE

JaCalIVE is a framework to designed intelligent virtual environment base on multi-agent system and Artifacts. To run JaCalIVE is necessary the next tools.

1. Jason¹: Used to create the agents. JaCalIVE require *Jason-1.3.9* to run.
2. CArtaGO²: Used to create the Artifacts. JaCalIVE require *cartago-2.0.1* to run.
3. JBullet³: Used for physical simulation. JaCalIVE require *jbullet-20101010* (based on Bullet 2.72).
4. Lwjgl⁴: This library is necessary to build the jbullet local render. You can find it in the folder *lib* when you download Jbullet.
5. vecmath: This library is necessary to build the jbullet local render. You can find it in the folder *lib* when you download Jbullet.
6. Java: Is use to run all before packages. JaCalIVE runs with this version of *jdk1.7.0_25*.

2 Installing packages on Windows

The first step is to install jason. For Jason install and configuration take a look at this manual. <http://jason.sourceforge.net/mini-tutorial/getting-started/>.

The second step is install the other packages. It is necessary to know the Java path install in your OS. In windows Java path is located in program files *ProgramFiles(x86)/Java/jdk1.7.0_25*. Copy the *.jar files bellow in the following folder *Program Files (x86)/Java/jdk1.7.0_25/jre/lib/ext*.

1. *jbullet.jar*
2. *jbullet-demos.jar*
3. *jinput.jar*
4. *lwjgl.jar*

¹ <http://jason.sourceforge.net/wp/>

² <http://cartago.sourceforge.net/>

³ <http://jbullet.advel.cz/>

⁴ <http://lwjgl.org/>

5. *lwjgl_util.jar*
6. *vecmath.jar*

Browse all the *.dll files in the folder Jbullet *Jbullet/lib/lwjgl/win32*, copy them in the folder program files *Program Files (x86)/Java/jdk1.7.0_25/jre/bin*. Once the

files are copied the

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3 Configuring JaCalIVE

When you create a project on JaCalIVE, you have to make two process. The first is create a XML file where you create the IVE model. The second one is to create the templates where you program the agent and artifacts behaviours. Windows bat files executes the JacalIVE parser and get the XML file information to creates this templates. Figure 1 shows the project folder.

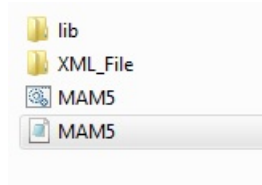


Fig. 1. Project Folder

In the project folder we must have the next folders and files:

1. lib
 - (a) *BuildMaM5.jar*: This *.jar is necessary to create the template. It gets the XML file information and create the project (*.mas2j), agents file (*.asl) and java class (*.java).
 - (b) *cartago.jar*: This is a library of cartago.
 - (c) *JacaLiveFrameWork.jar*: This jar is JaCalIVE.
 - (d) *Jason_Lib*: This is all library of Jason
 - (e) *Cartago_Lib*: This is all library of Cartago
2. XML_FILE: In this folder are the *.xml files. Remember on this file is were we modelling the IVE.
3. MAM5.bat and MAM5.sh: This is a script to execute *BuildMaM5.jar* and create a template.

In this moment we are prepare to execute a script MAM5.bat, when we have double click BuildMaM5.jar is execute and the folder project and all templates are created as show in Figure 2 and Figure 3

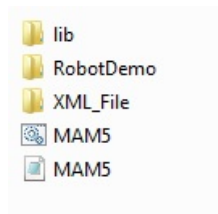


Fig. 2. Folder Templates

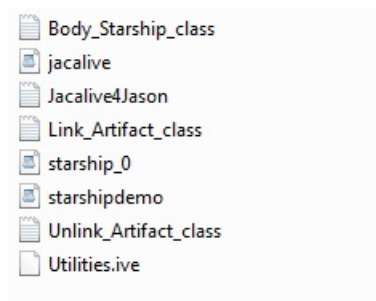


Fig. 3. Folder Templates

4 Installing the packages in Linux

The first step is to install jason. For Jason install and configuration take a look at this manual. <http://jason.sourceforge.net/mini-tutorial/getting-started/>.

The second step is install the other packages. It is necessary to know the Java path install in your OS. In linux Java path is located in *JAVAHOME/jdk1.7.0_25*, Copy the *.jar files bellow in the following folder *JAVAHOME/jdk1.7.0_25/jre/lib/ext*

1. *jbullet.jar*
2. *jbullet-demos.jar*
3. *jinput.jar*
4. *lwjgl.jar*
5. *lwjgl_util.jar*

6. *vecmath.jar*

Browse all the *.so files in folder of *Jbullet/lib/lwjgl/linux*, copy them in the folder *JAVAHOME/jdk1.7.0_25/jre/lib/ext*.

Note: If you are manually searching for the JDK on your UNIX/Linux machine, look in the following directories:

```
/usr/java  
/usr/java/jdk  
/usr/j2se  
/usr/j2sdk  
/usr/jdk  
/usr/lib/java  
/usr/lib/j2se  
/usr/lib/j2sdk  
/usr/lib/jdk  
/usr/lib/jvm/java  
/usr/lib/jvm/j2se  
/usr/lib/jvm/j2sdk  
/usr/lib/jvm/jdk  
/usr/local/java  
/usr/local/java/jdk  
/usr/local/jdk  
/opt/java  
/opt/j2se  
/opt/j2sdk  
/opt/jdk
```

5 Installing the packages on MACOS

The first step is to install jason. For Jason install and configuration take a look at this manual. <http://jason.sourceforge.net/mini-tutorial/getting-started/>.

The second step is install the other packages. It is necessary to know the Java path install in your OS. In MACOS Java path is located in *JAVAHOME/jdk1.7.0_25*, Copy the *.jar files bellow in the following folder *JAVAHOME/jdk1.7.0_25/jre/lib/ext*

1. *jbullet.jar*
2. *jbullet-demos.jar*
3. *jinput.jar*
4. *lwjgl.jar*
5. *lwjgl_util.jar*
6. *vecmath.jar*

Browse all the *.jnilib files in folder of *Jbullet/lib/lwjgl/linux*, copy them in the folder *JAVAHOME/jdk1.7.0_25/jre/lib/ext*.

Note: If you are manually searching for the JDK on your Mac machine, look in the following directories:

*/usr/java
/usr/java/jdk
/usr/j2se
/usr/j2sdk
/usr/jdk
/usr/lib/java
/usr/lib/j2se
/usr/lib/j2sdk
/usr/lib/jdk
/usr/lib/jvm/java
/usr/lib/jvm/j2se
/usr/lib/jvm/j2sdk
/usr/lib/jvm/jdk
/usr/local/java
/usr/local/java/jdk
/usr/local/jdk
/opt/java
/opt/j2se
/opt/j2sdk
/opt/jdk*