TEMPO UI INSTALLATION

v0.2.4 (BETA)
7/1/2011

Tempo is implemented with Java and requires the Sun's JRE or JDK for Java 5.0 or higher. This piece of software must be installed first before proceeding with the notes below. Sun's JRE (Java Runtime Environment) supports executing Java programs; Sun's JDK (Java Development Kit) supports writing Java applications. If you already have the Java 5.0 JDK installed, you also have the JRE and meet the requirements. If you are using a 32 or 64 bit platform, then make sure to get the matching Java and the appropriate Tempo installation bundle. Otherwise, the installation of the JRE (or JDK) is platform independent.

As of writing this document on the development side we have been using Java 6 which supports running applications in Java 5.0 mode. No testing was done using Java SE 7.

On Windows

Head to http://www.oracle.com/technetwork/java/javase/downloads/index-jdk5-jsp-142662.html and choose either the JRE 5.0 or the JDK 5.0. Download the archive and install the software.

On Linux

Make sure that Java is not already available on your platform. To find out, open a terminal, and type

at the prompt the command `java -version` . If Java 5.0 is installed (and in your search PATH) you should see something similar to:

```
aegir /home/ldm [21] -> java -version
java version "1.5.0_04"
Java(TM) 2 Runtime Environment, Standard Edition (build 1.5.0_04-b05)
Java HotSpot(TM) Client VM (build 1.5.0_04-b05, mixed mode, sharing)
```

If java is not installed, head to http://www.oracle.com/technetwork/java/javase/downloads/index.html and choose either the 5.0 JRE or the JDK 5.0. Download the archive and install the software. You should probably have administrator privilege to install the software, check with your site administrator.

Alternatively, you can utilize the native installation tools provided by your flavor of Linux, such as `sudo apt-get install sun-java6-jdk`, however in order for this to work you may have to add third-party software sources.

As of writing this document, we tested the installation procedures on Debian 6 (32 bit platform), and Ubuntu 10.4 lts (64 bit platform). If you used different Linux distribution then please tell us about
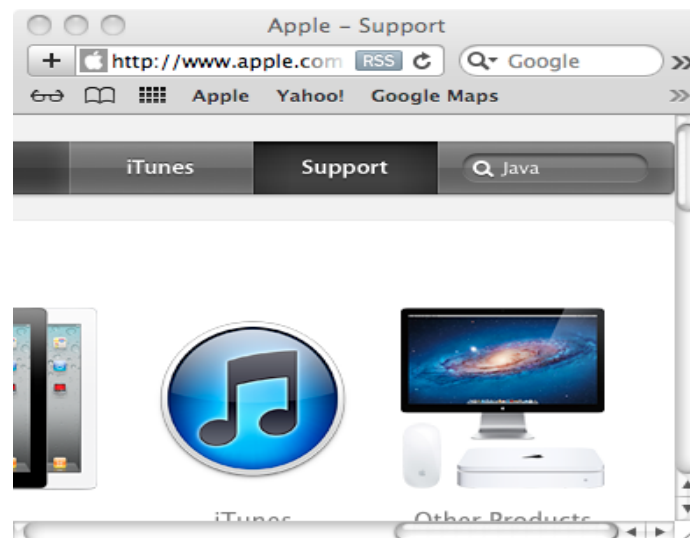
successes and failures alike.

On OS X (Snow Leopard 10.6)

Apple ships a full JDK with OS X. However, it is worth to double check which version is installed on your system. Navigate to /Applications/Utilities/JavaPreferences. If you see the following:
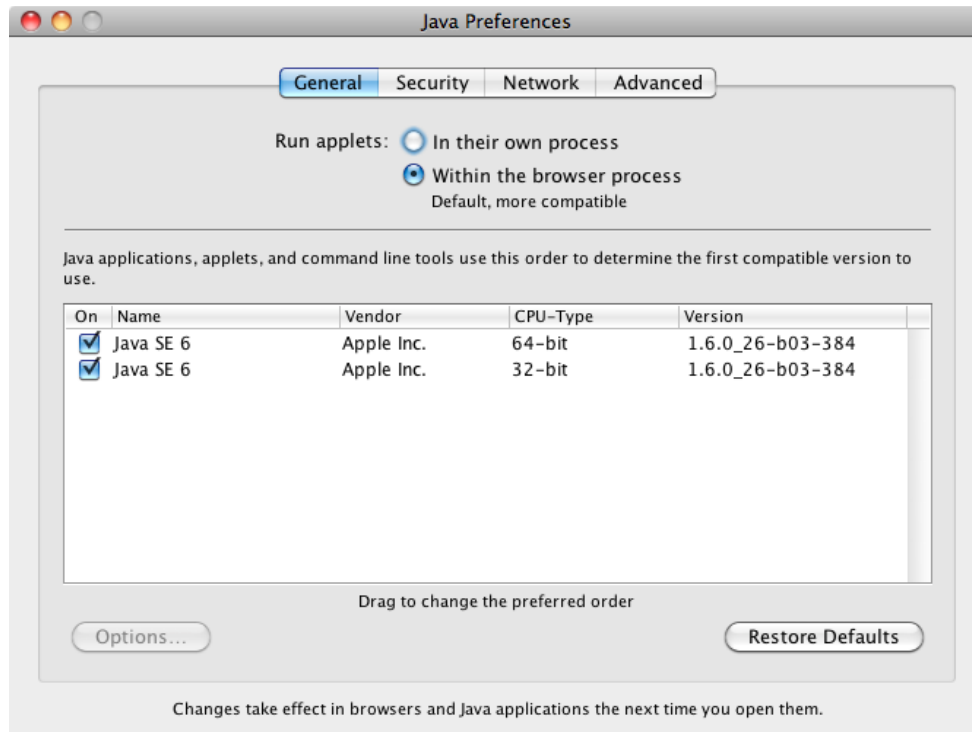
Then You should be all set. Otherwise, head to http://www.apple.com/support and search for Java as depicted in the picture below.

And choose the latest release of Java.

Installation

Installation procedure is more or less identical for all platforms. Go to http://www.veromodo.com and download the appropriate bundle based on Your operating system. The downloaded bundle is a zip file containing the UI executable, command line tool, documents, and some examples. Unzip the bundle to the desired directory.

Directory structure

Top level

       cmd – includes command line tools (the tempo.jar file and the stages directory with plugins).

       doc – includes documents with lots of useful information about the model and supported tools.

       examples – some examples to get You started.

       gui – includes the Tempo UI executable called "tempo" (extension platform dependent).

       License.text – contains important license information.

       README.pdf – distribution specific information.

       ReleaseNotes.pdf – tempo release notes.

The first run

As already mentioned, make sure that `java` appears in the environment's path. Also, You may configure your environment by adding locations of the Tempo executables.

IMPORTANT: On Linux and Mac OS X it may be necessary to set the *execute priority bit* on the command line and UI executables.

Installing UPPAAL

Obtain the UPPAAL application from, http://www.uppaal.org (non-commercial) or http://www.uppaal.com (commercial).

On Windows

Decompress the UPPAAL archive into an install location on the same drive as Tempo. For instance, you could decompress into the windows Program Files directory to obtain

<div align="center">

`C:\Program Files\uppaal`

</div>

Modify your PATH environment variable to include the `uppal` directory that you have just decompressed. On Windows this is accomplished as follows,

<div align="center">

Open System Properties (Start > Settings > Control Panel > System)

</div>

Select the Advanced Tab, Click on Environment Variables (lower left). In the top box find a variable named Path and click Edit. In the lower box add a semi colon and the path which you installed UPPAAL.

<div align="center">

`... ; C:\Program Files\uppaal`

</div>

Complete the changes by clicking Ok on the three open windows. You must restart for these changes to take full effect. Tempo will now automatically run uppaal when the "-plugin=uppaal" options is specified.

<div align="center">

`tempo -plugin=uppaal <tioafile1> <tioafile2> ... <tioafilek>`

</div>

On Linux

Decompress the UPPAAL archive into an install location on the same drive as Tempo. For instance, if we assume that your login name is john, you could decompress into your home folder to obtain:

<div align="center">

`/home/john/uppaal-4.0.2`

</div>

Once the archive is decompressed, move to the directory

<div align="center">

`cd /home/john/uppaal-4.0.2`

</div>

And change the permission on the script named uppaal with the command

<div align="center">

`chmod a+rx uppaal`

</div>

Then move to the bin directory for Linux and change the permission of all the executables with the commands:

<div align="center">

`cd bin-Linux`

`chmod a+rx *`

</div>

Finally, modify your PATH environment variable to include the path to the uppaal script. This depends on which shell you use.

For csh/tcsh users, edit your .cshrc (/Users/john/.cshrc), locate your path setting and add a line (after

the path is defined)

$$\text{set path=(\$path : /home/john/uppaal-4.0.2)}$$

For bash users, edit either your .bashrc or your .profile to add a line (at the end)

$$\text{export PATH=\$PATH:/home/john/uppaal-4.0.2}$$

Your are now all set. You can resource your shell. On Linux, the UPPAAL plugin for Tempo can automatically launch the UPPAAL tool and load the translated TIOA.

On Mac OS X

The current version of UPPAAL has a bug which prevent the automatic loading of translated TIOA specifications into UPPAAL. You can install the UPPAAL tool (same directions as for Linux). However, you will have to manually load the translated file (extension .xta) into UPPAAL each time.

Installing PVS

Obtain the PVS application from, http://pvs.csl.sri.com/download.shtml
The TIOA translator has been tested with PVS version 3.2. For additional details on setting up PVS with the TAME/TIOA libraries see the tioa2pvs manual. For additional details on setting up PVS Integration see the PVS manual supplement. Both of these documents are located in the documentation directory.

Enjoy!

-- Tempo People