

# JOTM Installation Guide

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## Abstract

This guide describes how to install JOTM.

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## 1 Introduction

This guide describes how to install and configure JOTM.

JOTM (Java Open Transaction Manager) is a fully functional Open Source implementation of JTA (Java Transaction API).

It is a mature project since it has been used for several years in the JOnAS application server project as its own transaction manager.

If you have any questions or comments on JOTM, do not hesitate to let us (<mailto:jotm@objectweb.org>) know.

## 2 Prerequisites

In order to install or use JOTM, you will need a few very common tools for Java which you may already have:

- You'll need a Java platform
- You'll also need Ant tool for compiling and running the examples provided with JOTM
- Additionally, if you're interested to pass the test suite of JOTM, you'll need the Junit Framework.

### 2.1 Java

JOTM needs a Java compiler (`javac` command) and a Java runtime (`java` command).

- Sun Java Development Kits are available at <http://java.sun.com/j2se/>
- IBM Java Development Kits are available at <http://www.ibm.com/java/jdk/>

*JOTM is built and tested on JDK 1.3 and 1.4*

### 2.2 Ant

JOTM uses Ant (version 1.5) for its build process and to run the examples.

Ant can be downloaded from <http://jakarta.apache.org/ant/>. See the documentation of Ant to set it up (<http://jakarta.apache.org/ant/manual/>).

## 2.3 Junit

JOTM also uses Junit (<http://junit.org/>) as the framework of its test suite.

If you're interested by testing JOTM, all you have to do is to download Junit from its web site and to copy the `junit.jar` file into the `lib/` directory of your Ant installation.

## 3 Installing JOTM

JOTM is available under three configurations:

- a package including sources, jars and examples: `jotm-x.y-src.tgz` where `x.y` is the version of JOTM (referenced as *JOTM source package*)
- a package including only jars and examples: `jotm-x.y.tgz` (referenced as *JOTM distribution package*)
- from CVS

### 3.1 From a package

JOTM packages can be downloaded from JOTM download page (<http://www.objectweb.org/jotm/download/>).

To install JOTM from a package, unzip the file with **gunzip** and **tar** on Unix systems and **winzip** on Windows.

This will create a new directory `jotm-x.y`.

### 3.2 From CVS

CVS provides network-transparent source control for groups of developers (more info at <http://www.cycltic.com>).

Working with CVS allows you to do things like **cvs status** or **cvs diff** and any other read-only CVS command.

To get JOTM from CVS, type:

```
$ cvs -d :pserver:anonymous@cvs.objectweb.org:/cvs/JOTM login
$ CVS password: [type Enter]
$ cvs -d :pserver:anonymous@cvs.objectweb.org:/cvs/JOTM co -P jotm
```

This will create a working repository of JOTM in the `jotm/` directory

### 3.3 Test suite

If you want to test JOTM, you'll have to download Junit (see section 2.3) and JOTM test suite. At the moment, the test suite is available only by CVS.

To get it, from the **same** directory you checked out JOTM, type:

```
$ cvs -d :pserver:anonymous@cvs.objectweb.org:/cvs/JOTM co -P test
```

This will create a working repository of JOTM test suite in the **test/** directory (at the same level than the **jotm/** directory).

For more info, see "JOTM Test Suite Guide" (<http://www.objectweb.org/jotm/doc/>).

### 3.4 Web site

JOTM web site (<http://www.objectweb.org/jotm/>) is constructed from XML pages which are kept in its CVS repository.

To get them, from the directory you checked out JOTM, type:

```
$ cvs -d :pserver:anonymous@cvs.objectweb.org:/cvs/JOTM co -P web
```

This will create a working repository of JOTM web site in the **web/** directory.

For more info, see "ObjectWeb website guideline" (<http://www.objectweb.org/architecture/infrastructure/guideline/>).

## 4 Ant commands

If you've retrieved JOTM from a source package or CVS, you'll have to build it and create a distribution before using it.

JOTM relies on Ant for its build process.

All Ant commands are to be typed in the **jotm/** directory (i.e. in the same directory than the **build.xml** file).

To have a list and descriptions of all Ant available targets for JOTM, type:

```
$ ant -projecthelp
```

### 4.1 Compile and build JOTM

This step is necessary only if you have modified JOTM source code or you've retrieved source files only (e.g. with CVS or from a source package).

You just have to type:

```
$ ant dist
```

This will compile all JOTM source files and create all the jar files.

A working version of JOTM is now available in the **output/dist/** subdirectory (the so-called *distribution* directory of JOTM).

## 4.2 Generate Javadoc

To generate JOTM Javadoc, simply type:

```
$ ant jdoc
```

Javadoc pages are now browsable from the `output/dist/jdoc/` subdirectory.

## 4.3 Generate Documentation

JOTM documentation is written in LaTeX.

We use **pdflatex** tool to generate PDF files and **latex2html** to generate HTML files. Since these two tools may not be installed on your system, it's up to you to inform Ant that it'll have the tools to perform document generation.

PDF (resp. HTML) generation is triggered by **pdlatex** (resp. **latex2html**) property on the command line. What's more, for HTML generation a shell script, **doc2html**, is used. So for the moment, you can generate HTML documentation only from Linux. Sorry... (Anyway, documentation is still available online at <http://www.objectweb.org/jotm/doc/> in both PDF and HTML format).

- If you've **pdflatex** on your system, you can ask Ant to generate PDF documentation by typing

```
$ ant doc -Dpdflatex=1
```

- If you've **latex2html** and you're on *Linux*, you can ask Ant to generate HTML documentation by typing

```
$ ant doc -Dlatex2html=1
```

Of course, you can also do both

```
$ ant doc -Dpdflatex=1 -Dlatex2html=1
```

Generated document is put in the `output/dist/doc` directory.

## 4.4 Clean JOTM

To remove files generated during compilation or build process, type:

```
$ ant clean
```

You'll start from a clean working directory again.

## 5 Project Structure

JOTM can be retrieved under two different *forms*:

- a *source* form (from a *source* package or CVS)
- a *distribution* form (from a *distribution* package)

Since these two structures differs slightly, I'll present both of them.

### 5.1 Source Structure

When you retrieve JOTM source, the structure of your `jotm/` directory is the following one:

- `GettingStarted.txt` - a reminder of the main Ant targets for JOTM
- `README.txt` - the usual README file
- `build.xml` - the main Ant build file used JOTM
- `build.properties` - configuration of Ant properties are done in this file
- `archive/` - manifest files for JOTM jars are stored in this directory
- `bin/` - for the moment, there is only a `README.txt` file. No scripts are used to start JOTM, only jar files (with the `java -jar` command)
- `doc/` - all documentation sources are in this directory (e.g. `install.tex` from which this guide has been generated)
- `examples/` - the examples source code
- `ext/` - the extension used by JOTM. For the moment, it is composed of two files for communication protocol configuration
- `externals/` - all libraries to build and use JOTM
- `src/` - the source code of JOTM

### 5.2 Distribution Structure

Once you've built JOTM (i.e. in the `output/dist/` subdirectory) or if you retrieved it from the *distribution* package, the ditribution structure of JOTM is the following:

- `README.txt` - still the usual README file
- `bin/` - the same directory as in the *source* structure

- **config/** - this directory contains all configuration files needed by JOTM at runtime
- **doc/** - this directory may contain PDF and HTML version of the various documentation files (see section 4.3)
- **examples/** - the same directory as in the *source* structure. You'll have to compile the examples before running them
- **jdoc/** - Javadoc of JOTM
- **lib/** - JOTM library directory (it contains both JOTM jar files and other used jar files)

## 6 Run JOTM

Once you've a *distribution* of JOTM, you can directly use it.

To give it a try, go to the **bin/** directory of your JOTM distribution and type:

```
$ ./jotm.sh start --help
```

You should then see an help message from JOTM  
Congratulations! JOTM is working!

## 7 Examples

Once you have a *distribution* of JOTM, one handy way to be sure that it is working is to run the examples (which are in the **examples/** directory of the distribution).

Examples have to be run from the **examples/** directory of a JOTM *distribution* (They won't work from the **examples/** directory of JOTM *source* directory).

For more info about the examples which are included with JOTM distribution, you can have a look at the "JOTM examples guide" (<http://www.objectweb.org/jotm/doc/>).

## 8 Contacts

If you have some trouble to install JOTM, any questions or if you want to contribute, do not hesitate to contact us (<mailto:jotm@objectweb.org>).