

# Installation

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## Downloading Daisy

Packaged versions of Daisy can be found in the [distribution area](#)<sup>1</sup> (Sourceforge). This includes everything required to run Daisy, except for:

- a Java Virtual Machine (JVM): Java 1.5 or higher required
- a MySQL database: version 4.1.7 or higher required (5 also fine)

If you don't have these already, the installation of these will be covered further on.

Consider subscribing to the [Daisy mailing list](#)<sup>2</sup> to ask questions and talk with fellow Daisy users and developers.

There is also information available about the [source code](#)<sup>3</sup>.

## Installation Overview

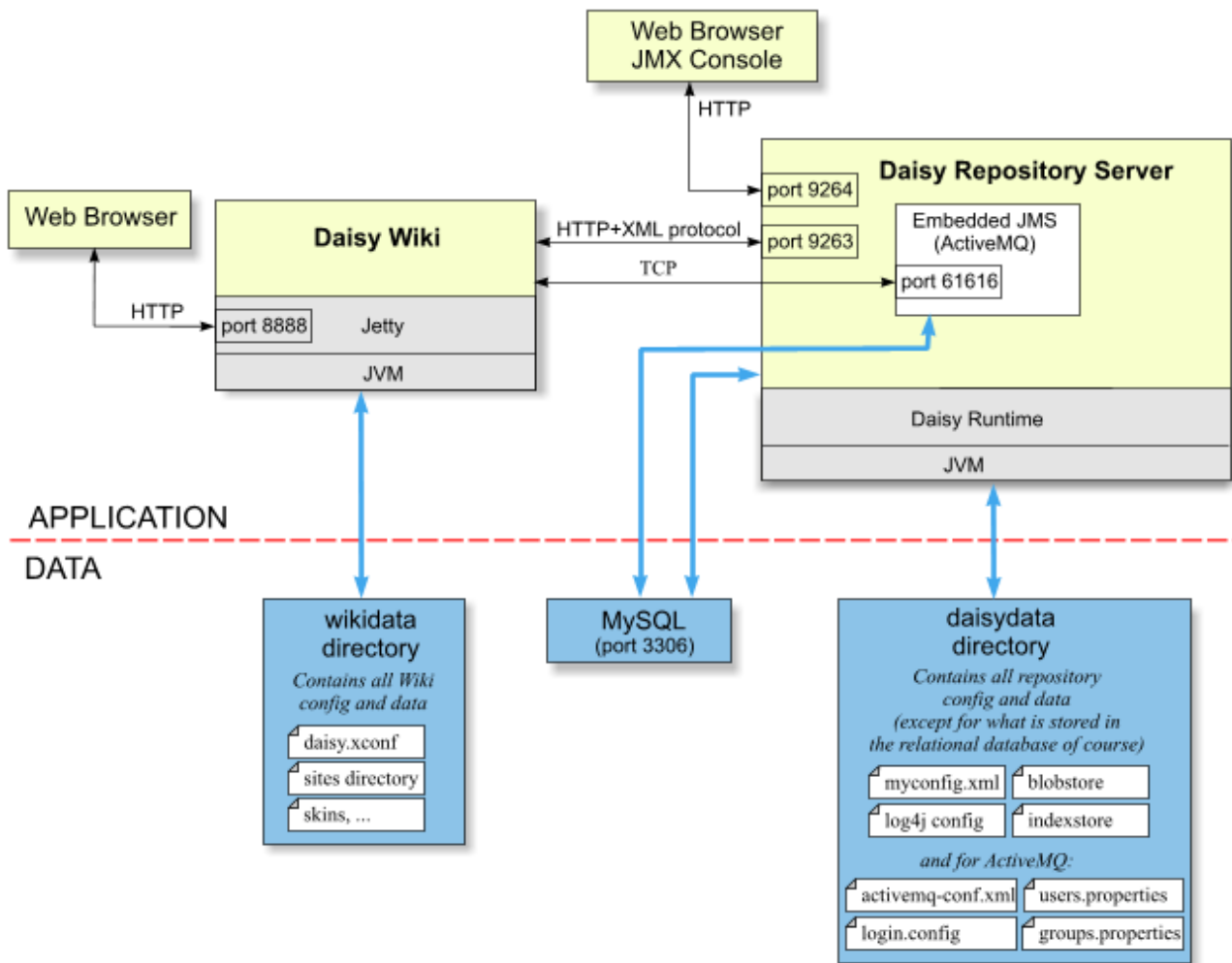
Daisy is a multi-tier application, consisting of a repository server and a publication layer. Next to those, a database server (MySQL) is required. All together, this means three processes, which can run on the same server or on different servers.

The Daisy binary distribution packs most of the needed software together, the only additional things you'll need is a Java Virtual Machine for your platform, and MySQL. All libraries and applications shipped with Daisy are the original, unmodified distributions that will be configured as part of the installation. We've only grouped them in one download for your convenience.

If you follow the instructions in this document, you can have Daisy up and running in less than an hour.

The diagram below gives an overview of the the setup. All shown port numbers are configurable of course.

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1. [http://sourceforge.net/project/showfiles.php?group\\_id=176692](http://sourceforge.net/project/showfiles.php?group_id=176692)
  2. <http://lists.cocoonddev.org/mailman/listinfo/daisy>
  3. [daisy:152-cd](#) (Source Code)



## Platform Requirements

We have tested the Daisy installation on Windows 2000/XP, GNU/Linux and MacOSX. Other unices like Solaris should also work, though we don't test that ourselves.

## Memory Requirements

By default, the Daisy Wiki and Daisy Repository Server are started with a maximum heap size of 128 MB each. To this you need to add some overhead of the JVMs themselves, and then some memory for MySQL, the OS and its (filesystem) caches. This doesn't mean all this memory will be used, that will depend on usage intensity.

## Required knowledge

These installation instructions assume you're comfortable with installing software, editing configuration (XML) files, running applications from the command line, setting environment variables, and that sort of stuff.

## Can I use Oracle, PostgreSQL, MS-SQL, ... instead of MySQL? Websphere, Weblogic, Tomcat, ... instead of Jetty?

Daisy contains the necessary abstractions to support different database engines, though we currently only support MySQL. Users are welcome to contribute and maintain different databases (ask on the mailing list how to get started).

The Daisy Wiki webapp should be able to run in any servlet container (at least one that can run unpacked webapps, and as far as there aren't any Cocoon-specific issues), but we ship Jetty by default. For example, using Tomcat instead of Jetty is very simple and is described [on this page](#)<sup>4</sup>.

## Installing a Java Virtual Machine

Daisy requires the Java JDK or JRE 1.5 or 1.6 (the versions are also known as 5 or 6). You can download it from [here on the Sun site](#)<sup>5</sup> (take by preference the JDK, not the JRE). Install it now if you don't have it already.

After installation, make sure the `JAVA_HOME` environment variable is defined and points to the correct location (i.e., the directory where Java is installed). To verify this, open a command prompt or shell and enter:

```
For Windows:
%JAVA_HOME%/bin/java -version

For Linux:
$JAVA_HOME/bin/java -version
```

This should print out something like:

```
java version "1.5.0"

or

java version "1.6.0"
```

## Installing JAI (Java Advanced Imaging) -- optional

If you want images (especially PNG) to appear in PDFs, it is highly advisable to install JAI, which you can download from the [JAI project on java.net](#)<sup>6</sup>. Take the JDK (or JRE) package, this will make JAI support globally available.

## Installing MySQL

Daisy requires one of the following MySQL versions:

- version 4.1.7 or a newer version from the 4.1.x series
- version 5
- **what won't work:** version 3 (doesn't support transactions), version 4.0 (doesn't support subselects)

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4. [daisy:208-cd \(Deploying on Tomcat\)](#)

5. <http://java.sun.com/j2se/1.5.0/download.jsp>

6. [https://jai.dev.java.net/binary-builds.html#Release\\_builds](https://jai.dev.java.net/binary-builds.html#Release_builds)

MySQL can be downloaded from [mysql.com](http://mysql.com)<sup>7</sup>. Install it now, and start it (often done automatically by the install).

NOTE

**Windows users** can take the "Windows Essentials" package. During installation and the configuration wizard, you can leave most things to their defaults. In particular, be sure to leave the "Database Usage" to "Multifunctional Database", and leave the TCP/IP Networking enabled (on port 3306). When it asks for the default character set, select "Best Support For Multilingualism" (this will use UTF-8). When it asks for Windows options, check the option "Include Bin Directory In Windows Path".

NOTE

**Linux users:** install the "MySQL server" and "MySQL client" packages. Installing the MySQL server RPM will automatically initialize and start the MySQL server.

## Creating MySQL databases and users

MySQL is used by both the Daisy Repository Server and JMS (ActiveMQ). Therefore, we are now going to create two databases and two users.

Open a command prompt, and start the MySQL client as root user:

```
mysql -uroot -pYourRootPassword
```

On some systems, the root user has no password, in which case you can drop the `-p` parameter.

Now create the necessary databases, users and access rights by entering (or copy-paste) the commands below in the `mysql` client. What follows behind the `IDENTIFIED BY` is the password for the user, which you can change if you wish. The `daisy@localhost` entries are necessary because otherwise the default access rights for anonymous users `@localhost` will take precedence. If you'll run MySQL on the same machine as the Daisy Repository Server, you only need the `@localhost` entries.

```
CREATE DATABASE daisyrepository CHARACTER SET 'utf8';
GRANT ALL ON daisyrepository.* TO daisy@%' IDENTIFIED BY 'daisy';
GRANT ALL ON daisyrepository.* TO daisy@localhost IDENTIFIED BY 'daisy';
CREATE DATABASE activemq CHARACTER SET 'utf8';
GRANT ALL ON activemq.* TO activemq@%' IDENTIFIED BY 'activemq';
GRANT ALL ON activemq.* TO activemq@localhost IDENTIFIED BY 'activemq';
```

## Extract the Daisy download

Extract the Daisy download. On Linux/Unix you can extract the `.tar.gz` file as follows:

```
tar xvzf daisy-<version>.tar.gz
```

NOTE

On non-Linux unixes (Solaris notably), use the GNU tar version if you experience problems extracting.

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7. <http://dev.mysql.com/downloads/>

On Windows, use the .zip download, which you can extract using a tool like WinZip.

After extraction, you will get a directory called `daisy-<version>`. This directory is what we will call from now on the **DAISY\_HOME** directory. You may set a global environment variable pointing to that location, or you can do it each time in the command prompt when needed.

## Daisy Repository Server

### Initialising and configuring the Daisy Repository

Open a command prompt or shell and set an environment variable `DAISY_HOME`, pointing to the directory where Daisy is installed.

```
Windows:
set DAISY_HOME=c:\daisy-2.0

Linux:
export DAISY_HOME=/home/daisy_user/daisy-2.0
```

Then go to the directory `<DAISY_HOME>/install`, and execute:

```
daisy-repository-init
```

Follow the instructions on screen. The installation will (1) initialize the database tables for the repository server and (2) create a Daisy data directory containing customized configuration files.

### Starting the Daisy Repository Server

Still in the same command prompt (or in a new one, but make sure `DAISY_HOME` is set), go to the directory `<DAISY_HOME>/repository-server/bin`, and execute:

```
daisy-repository-server <location-of-daisy-data-dir>
```

In which you replace `<location-of-daisy-data-dir>` with the location of the daisy data directory created in the previous step.

Starting the repository server usually only takes a few seconds, however the first time it will take a bit longer because the workflow database tables are created during startup. When the server finished starting it will print a line like this:

```
Daisy repository server started [timestamp]
```

Wait for this line to appear (the prompt will not return).

## Daisy Wiki

### Initializing the Daisy Wiki

Before you can run the Daisy Wiki, the repository needs to be initialised with some document types, a "guest" user, a default ACL configuration, etc.

Open a command prompt or shell, make sure DAISY\_HOME is set, go to the directory <DAISY\_HOME>/install, and execute:

```
daisy-wiki-init
```

The program will start by asking a login and password, enter here the user created during the execution of daisy-repository-init (the default was testuser/testuser). It will also ask for the URL where the repository is listening, you can simply press enter here.

If everything goes according to plan, the program will now print out some informational messages and end with "Finished."

## Creating a "wikidata" directory

Similar to the data directory of the Daisy repository server, the Daisy Wiki also has its own data directory (which we call the "wikidata directory").

To set up this directory, open a command prompt or shell, make sure DAISY\_HOME is set, go to the directory <DAISY\_HOME>/install, and execute:

```
daisy-wikidata-init
```

and follow the instructions on-screen.

### NOTE

Since the Daisy Wiki and the Daisy repository server are two separate applications (which might be deployed on different servers), each has its own data directory.

## Creating a Daisy Wiki Site

The Daisy Wiki has the concept of multiple sites, these are multiple views on top of the same repository. You need at least one site to do something useful with the Daisy Wiki, so we are now going to create one.

Open a command prompt or shell, make sure DAISY\_HOME is set, go to the directory <DAISY\_HOME>/install, and execute:

```
daisy-wiki-add-site <location of wikidata directory>
```

The application starts by asking the same parameters as for daisy-wiki-init.

Then it will ask a name for the site. This should be a name without spaces. If you're inspirationless, enter something like "test" or "main".

Then it will ask for the sites directory location, for which the presented default should be OK, so just press enter.

## Starting the Daisy Wiki

Open a command prompt or shell and make sure DAISY\_HOME is set.

Go to the directory <DAISY\_HOME>/daisywiki/bin, and execute:

```
daisy-wiki <location of wikidata directory>
```

NOTE

Background info: this will start Jetty (a servlet container) with the webapp found in `<DAISY_HOME>/daisywiki/webapp`.

## Finished!

Now you can point your web browser to:

```
http://localhost:8888/
```

To be able to create or edit documents, you will have to change the login, you can use the user you created for yourself while running `daisy-repository-init` (the default was `testuser/testuser`).

To start the Daisy repository server and Daisy Wiki after the initial installation, see the [summary here](#)<sup>8</sup>, or even better, set up [service \(init\) scripts](#)<sup>9</sup> to easily/automatically start and stop Daisy.

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8. `daisy:161-cd` (Starting and stopping Daisy)
  9. `daisy:193-cd` (Concept and general instructions)