

BitNami JRubyStack 1.0-beta-0

Quick Start Guide

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Acknowledgments

BitNami JRubyStack is based on a number of open source components:

JRuby. The 100% Java implementation of the Ruby programming language.

<http://www.jruby.org/>

Java. The programming language.

<http://java.sun.com/>

Apache Tomcat. The Java application server.

<http://tomcat.apache.org/>

GlassFish. The Java application server.

<http://glassfish.java.net/>

Rails. Together with Ruby (RoR) is a open-source web application framework that's optimized for programmers happiness and sustainable productivity.

<http://www.rubyonrails.org/>.

MySQL. The world's leading open source database.

<http://www.mysql.com>

Subversion. The open-source version control system.

<http://www.subversion.tigris.org>

RubyGems. The premier ruby packaging system

<http://rubygems.org/>

The OpenSSL library for encrypting communications.

<http://www.openssl.org/>.

The zlib data-compression library.

<http://www.zlib.net>

The libiconv library for multiple character encoding.

<http://www.gnu.org/software/libiconv/>

jpegsrc. Software developed by the The Independent JPEG Group.

<http://www.ijg.org>

The gd graphics library.

<http://www.boutell.com/gd/>

You can find the individual licenses for the above projects as part of the installation.

BitNami JRubyStack Overview

The BitNami Project was created to help spread the adoption of freely available, high quality, open source web applications. BitNami aims to make it easier than ever to discover, download and install open source software such as document and content management systems, wikis and blogging software. You can learn more about BitNami at <http://bitnami.org>.

Components

BitNami JRubyStack includes **JRuby 1.1RC2**, **Rails 2.0.2**, **Java 1.5.0**, **GlassFish gem 0.1.1-universal-java**, **Warbler gem 0.9.3**, **Apache Tomcat 5.5.25**, **Subversion 1.4.6**, **SQLite 3_5_2**, **MySQL 5.0.45** and more requirement libraries. On Linux and Windows there are two versions of the stack, with and without a bundled JDK 1.5.0. On OS X, it is required that you have Java 1.5 or later installed in your system. It can be downloaded from <http://www.apple.com/macosx/features/java/>.

JRuby is a 100% Java implementation of the Ruby programming language. It is Ruby for the JVM. JRuby provides a complete set of core "builtin" classes and syntax for the Ruby language, as well as most of the Ruby Standard Libraries. You can learn more about JRuby at <http://www.jruby.org/>.

Ruby on Rails is a full-stack MVC framework for database-backed web applications that's optimized for programmer happiness and sustainable productivity. It lets you write beautiful code by favoring convention over configuration. You can learn more about Ruby at <http://www.rubyonrails.org>.

The **BitNami JRubyStack** is an installer that greatly simplifies the installation of JRuby and its runtime dependencies. It includes ready-to-run versions of JRuby, Rails, Java, Tomcat, GlassFish gem, MySQL and Subversion. JRubyStack is distributed for free under the Apache 2.0 license and has been packaged using BitRock's multi platform installer. Please see the appendix for the specific licenses of all open source components included. You can learn more about BitNami Stacks at <http://bitnami.org/stacks/>.

MySQL is the world's most popular open source database. It is a relational database management system that combines speed, reliability and ease of use. It is developed and maintained by MySQL AB. You can find more information about MySQL at <http://www.mysql.com>.

SubversionThe goal of the Subversion project is to build a version control system that is a compelling replacement for CVS in the open source community. The software is released under an Apache/BSD-style open source license. <http://subversion.tigris.org/>.

Requirements

To run BitNami JRubyStack you will need:

- Intel x86 or compatible processor
- Minimum of 512 MB RAM
- Minimum of 150 MB hard drive space
- A Windows operating system
- TCP/IP protocol support

- An x86 Linux operating system or
A 32-bit Windows operating system such as Windows 2000, XP, Vista or Windows Server 2003 or
an OS X operating System (x86 or PowerPC).

Installation Guide

This section describes where to download BitNami JRubyStack and the different installation modes that are available.

Downloading BitNami JRubyStack

You can download the BitNami JRubyStack binary file from <http://bitnami.org/stacks/>. It will be named `bitnami-jrubystack-1.0-beta-0-windows-installer.exe` for Windows, `bitnami-jrubystack-1.0-beta-0-linux-installer.bin` for Linux or `bitnami-jrubystack-1.0-beta-0-osx-x86-installer.app.zip` for OS X x86 or `bitnami-jrubystack-1.0-beta-0-osx-powerpc-installer.app.zip` for OS X PowerPC.

Installing BitNami JRubyStack

To begin the installation process, double-click on the file from your Desktop environment or invoke it directly from the command line.

On Linux, you will need to give it executable permissions:

```
chmod 755 bitnami-jrubystack-1.0-beta-0-linux.bin
```

On OS X, you will need to extract the installer from the zip (this may have been done automatically by Safari).

You will be greeted by the 'Welcome' screen. The next step is to select the installation directory.

JRubyStack bundles a number of components that use TCP/IP ports. In particular, the default listening port for MySQL is 3306 for GlassFish 3000 and for Tomcat 8080.

The next screen will prompt you for data necessary to create the initial admin user:

MySQL root password: Here you can set the password that will be used when performing operations such as creating or deleting databases.

Application name and database password: JRubyStack will create a sample Rails application with the name selected here. It will also create the corresponding databases using that name as a prefix. Finally, the password entered here will be used by your new application when accessing the databases with the application name as user name.

You are now ready to begin the installation, which will start when you press 'Next'. Once the installation process has been completed, you will see the 'Installation Finished' page. At this point, you can launch a GlassFish server and a browser. In addition to that, an information window about a report file will be shown. The report is located at the root of the installation directory and will also be accessible from a link in the Start Menu. It contains the passwords and user names you provided during installation, so you may want to store it in an alternate location if other people are able to access that file.

If you receive an error message during installation, please refer to the Troubleshooting section.

Directory Structure

The installation process will create several sub folders under the main installation directory:

- `apache-tomcat/`: Apache Tomcat Web server.
- `img/`: Additional image files.
- `java/`: Java SE Development Kit.
- `jruby/`: JRuby and RubyGems.
- `license/`: License files.
- `mysql/`: MySQL Database.
- `subversion/`: Subversion revision control system.
- `scripts/`: Simple scripts for launching rails applications.
- `sqlite/`: SQLite files.

Uninstalling BitNami JRubyStack

As part of the installation, an uninstall program will be created at the installation root directory and a link placed in the Start Menu on Windows. For Unix based systems you can run the `uninstall` application located into the JRubyStack's root installation directory. The uninstaller will stop the currently running servers and delete any files and registry entries created during installation. The uninstaller will not delete any files or databases that were created by the end user.

JRuby

On this section we are going to assume that JRubyStack has been installed at `C:\Program Files\Bitnami JRubyStack\` on Windows, `/home/user/jrubystack` on Linux or `/Applications/jrubystack/projects/` on OS X and your Rails application name is `jrubystack`.

This part of the tutorial has been written following a Questions and Answers model.

- **How do I start doing things with JRubyStack?**

The first thing you must do is to run a JRuby Environment by selecting:

```
Start -> BitNami JRubyStack -> Use JRuby on Windows or
/home/user/jrubystack/jrubyconsole on Linux or /Applications/jrubystack/jrubyconsole
on OS X.
```

That will open a console window with a properly setup environment where you can then issue commands.

To launch Ruby applications with JRuby you can do the following:

```
jruby -S command-name
```

The switch `-S` indicates JRuby that should run following command from its binary directory (

```
jruby/bin). For instance: jruby -S gem list
jruby -S rails my-app
jruby -S rake db:migrate
jruby -S glassfish_rails ./
```

To run Ruby scripts of your application you can do the following:

```
jruby script/my-script
```

Notice that now we do not use the `-S` switch because the script is not located on `jruby/bin` but your actual directory. For instance:

```
jruby script/server
jruby script/plugin install calendar_helper
jruby script/generate scaffold User name:string
```

- **How do I launch or stop MySQL and Tomcat services?**

On Windows, open the Rails Environment and then run the `servicerun.bat` script to start or stop the services. In order to start services you must run:

```
servicerun.bat START
```

And to stop them:

```
servicerun.bat STOP
```

Be sure you are in the main directory of the JRubyStack installation (`C:\Program Files\Bitnami JRubyStack\`

).

On Linux, you can start/stop Tomcat, MySQL and Subversion server with `ctlscript.sh`. You can type

```
./ctlscript.sh help to see all options:
```

```
usage: ./ctlscript.sh help
```

```
./ctlscript.sh (start|stop|restart)
./ctlscript.sh (start|stop|restart) mysql
./ctlscript.sh (start|stop|restart) tomcat
./ctlscript.sh (start|stop|restart) subversion
```

```
help - this screen
start - start the service(s)
stop - stop the service(s)
restart - restart or start the service(s)
```

- **How do I launch my web application?**

With JRubyStack you have more than one way to start your web application, the simplest one is running it with WEBrick. For example, if you did not change its name, the default Rails application is named `jrubystack` and is located under `C:\Documents and Settings\your-user-name\BitNami JRubyStack projects` on Windows and `/home/user/jrubystack/projects/` on Linux or `/Applications/jrubystack/projects/` on OS X, which is also where the "Use Ruby" console starts at.

```
cd jrubystack
jruby script/server
```

- **How can I launch my JRuby application with GlassFish?**

```
cd jrubystack
jruby -S glassfish_rails ./
```

- **How can I access my web application?**

Ensure that you are running the application server (see "How do I launch my web application?") and then point your web browser to `http://localhost:3000/`.

- **How can I stop my web server?**

Just close the window where the server is running.

- **How can I deploy my web application with Tomcat?**

Thanks to JRuby and the Warbler gem you can make a `.war` file that can be deployed with Tomcat. Here are the steps:

Open a `rubyconsole` and move to your Rails application directory:

```
cd jrubystack
```

Use the Warbler gem to generate a `config/warble.rb` file:

```
jruby -S warble config
```

That file contains information that will be used to generate the `.war` file. In case you are using any gem apart from the default Rails gems, add their names to the `config.gems` array.

Generate the `.war` file and copy it to the Tomcat's `webapps` directory. On Unix systems:

```
jruby -S warble war
cp jrubystack.war ../../apache-tomcat/webapps
```

On Windows:

```
jruby -S warble war
copy jrubystack.war c:\Program Files\BitNami JRubyStack\apache-tomcat\webapps
```

Start Tomcat (See "How do I launch or stop MySQL and Tomcat services?" point above) and you can point your browser to `http://localhost:8080/jrubystack`. Keep in mind that Tomcat takes some time to start (about 20 seconds).

Remember that if you want to deploy your application for a second time, you should remove the previous `.war` file and the directory with the same name from the Tomcat `webapps` directory.

If you encounter problems deploying your web application see the Troubleshooting section.

- **How can I create another rails web application?**

Run "jruby -S rails" followed by the name of your desired application inside the Rails Environment:

```
jruby -S rails my_new_app
```

That will create a directory called `my_new_app` with the corresponding files inside. The next step is to create databases for that application, which is explained below.

- **How can I configure my new Rails application to properly use MySQL?**

You need to create a file called "database.yml" inside of your web application config directory. In order to do that, open "notepad" or your preferred text editor and paste the following on Windows:

```
development:
  adapter: jdbc
  database: com.mysql.jdbc.Driver
  username: your-mysql-username
  password: your-password-here
  url: jdbc:mysql://localhost:your-mysql-port/my_new_app_development

test:
  adapter: jdbc
  database: com.mysql.jdbc.Driver
  username: your-mysql-username
  password: your-password-here
  url: jdbc:mysql://localhost:your-mysql-port/my_new_app_test

production:
  adapter: jdbc
  database: com.mysql.jdbc.Driver
  username: your-mysql-username
  password: your-password-here
  url: jdbc:mysql://localhost:your-mysql-port/my_new_app_production
```

Save it to "my_new_app\config\database.yml".

- **How can I create the corresponding databases for my new web application?**

"C:\Program Files\BitNami JRubyStack\mysql\bin\mysql.exe" -u root -p --port=your-port-here on windows or /home/user/jrubystack/mysql/bin/mysql -u root -p on Linux or /Applications/jrubystack/mysql/bin/mysql -u root -p on OS X.

From there you can run the following.

```
CREATE DATABASE IF NOT EXISTS my_new_app_production;
CREATE DATABASE IF NOT EXISTS my_new_app_development;
CREATE DATABASE IF NOT EXISTS my_new_app_test;
GRANT ALL PRIVILEGES on my_new_app_test.* to 'your-mysql-username'@'localhost'
identified by 'your-password-here';
GRANT ALL PRIVILEGES on my_new_app_production.* to 'your-mysql-
username'@'localhost';
GRANT ALL PRIVILEGES on my_new_app_development.* to 'your-mysql-
username'@'localhost';
flush privileges;
```

Troubleshooting

This section describes some of the most common problems you may find when installing BitNami JRubyStack. If your problem is not solved here do not hesitate on dropping us a post on our forums: <http://bitnami.org/forums>

Installer

Installer Payload Error

You may get the following error while trying to run the installer from the command line:

```
Installer payload initialization failed. This is likely due to an incomplete or corrupt downloaded file.
```

The installer binary is not complete, likely because the file was not downloaded correctly. You will need to download the file and repeat the installation process.

Installation does not complete and hangs at the end forever.

You are probably overwriting a previous JRubyStack installation and therefore a previous MySQL with a different MySQL root password. Remove or move your previous JRubyStack installation and try to install JRubyStack again.

JRuby

JRuby application deploy with Tomcat doesn't work

The first thing you should look is the log file. In this case it is located at `apache-tomcat/logs/catalina.out` on Windows or `apache-tomcat/logs/catalina.date.log` on Unix systems.

I modified my application and deployed again but the application always stays the same

Remember that if you want to deploy your application for a second time, you should remove the previous `.war` file and the directory with the same name from the Tomcat `webapps` directory `apache-tomcat/webapps`.

I modified my application and deployed again but now I get a "tampered cookie" error

Delete your browser's cookies and reload.

MySQL

If you encounter any problems starting MySQL, the first place to look in is the "Problems and Common Errors" section of the MySQL manual, which you will find at <http://dev.mysql.com/doc/>

The following are some common problems:

Access denied when trying to connect to MySQL.

If you get an `Access Denied` message while trying to connect to MySQL, make sure you are using the correct username and password.

"Can't connect to server" message.

Make sure the MySQL daemon is up and running.