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| Installation Guide |
| Java GlusterFS |
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# 1. User Installation

Installation is easy. Create a Maven project in whatever manner you would prefer (either through your preferred IDE or through Maven’s command line interface; instructions for which can be found on Maven’s website [1]). Then add the following to your Maven’s pom.xml file:

<dependencies>

<dependency>

<groupId>com.peircean.glusterfs</groupId>

<artifactId>glusterfs-java-filesystem</artifactId>

<version>1.0.3</version>

</dependency>

</dependencies>

You can check the version at Maven Central by searching for keyword “glusterfs.”

If you do not wish to have a Maven project, then you can create an ordinary project and then generate a “shaded” JAR file using Maven. This would be done by cloning the GitHub repository [2] and then issuing the final commands in a terminal:

cd glusterfs-java-filesystem

mvn package shade:shade

Maven will output the path of the JAR file to the console, which you can then export to your CLASSPATH environment variable using:

export CLASSPATH=<path-to-shaded.jar>

If you do not want to use Maven at all, you may contact the repository’s maintainer and he will provide you with a shaded JAR.

# 2. Maintainer Installation

## Hardware Requirements:

For testing (recommended):

1. You must be on a 64-bit Linux machine (a VM will not suffice).
2. Your CPU MUST have 64-bit virtualization technology.
3. 64-bit virtualization must be enabled in the BIOS.

For building:

1. You must be on a 64-bit Linux machine (a VM will suffice).

## Steps:

Those marked with a star can be skipped if you do not intend to test anything.

* Go to Virtualbox.org and download latest version of VirtualBox\*
* Go to Vagrantup.com and download latest version of Vagrant\*
* Go to Oracle.com and download JDK7
* Unpack the JDK into some directory
* Go to IntelliJ's site and download latest version of IntelliJ IDEA
* Create script to load IDEA and set IDEA\_JDK environment variable to point to location of unpacked JDK7.
* sudo apt-get install git
* Load IDEA to create IdeaProjects directory
* Download Lombok plugin from JetBrains Plugin Repository
* Load Lombok into IDEA
* Clone repos [2][3] into IdeaProjects directory

The following block of commands are to be done for testing:

sudo apt-get install libtool build-essential pkg-config automake default-jdk maven glusterfs-common

export JAVA\_HOME=/usr/lib/jvm/default-java

cd <project-root>/glusterfs-java-filesystem

vagrant up

vagrant ssh

sudo -i

add-apt-repository -y ppa:gluster/glusterfs-3.4

apt-get update

apt-get install glusterfs-server

sed -i 's/\(end-volume\)/ option rpc-auth-allow-insecure on\n\1/' /etc/glusterfs/glusterd.vol

service glusterfs-server restart

gluster volume create foo 172.31.31.31:/var/tmp/foo force

gluster volume set foo server.allow-insecure on

gluster volume start foo

mkdir /mnt/foo

mount -t glusterfs localhost:foo /mnt/foo

chmod ugo+w

su vagrant

In another terminal (or same, if you did not do the above):

cd <project-root>/libgfapi-jni

mvn -P download install

mvn -Pfull [-Dmaven.test.skip=true] clean install

cd <project-root>/glusterfs-java-filesystem

mvn clean install

cd gluster-java-filesystem-example

mvn exec:exec

If the four mvn commands executed without a hitch, then you can begin work on the project.

# 3. References

[1] Maven Central – <http://search.maven.org/>

[2] Java GlusterFS Repository – <https://github.com/semiosis/glusterfs-java-filesystem.git>

[3] libgfapi-jni Repository – https://github.com/semiosis/libgfapi-jni.git