Installing DSpace 4.2 on Ubuntu Server 14.04.1 LTS

This how-to is an updated version of Peter Dietz's installation guide. The purpose of this guide is to extend the ease and clarity of that instruction set to more modern installs.

This install is based on Ubuntu 14.04.1 LTS Server.

- Install Prerequisites
  - Make sure your sources are up to date before beginning
  - Install the server stack of Tomcat (web server) and PostgreSQL (database)
  - Install the Compile / Build tools
- Configure the Prerequisite Software
  - Create the database user (dspace)
  - Allow the database user (dspace) to connect to the database
  - Create the DSpace Database
  - Configure Tomcat to know about the DSpace webapps.
- Download and Install DSpace
  - Create the [dspace] directory.
  - Download the Release
  - Compile and Build DSpace
  - Fix Tomcat permissions, and restart the Tomcat server
- Test it out in your browser

Install Prerequisites

Make sure your sources are up to date before beginning

```
sudo apt-get update
```

Install the server stack of Tomcat (web server) and PostgreSQL (database)

```
sudo apt-get install tasksel
sudo tasksel
```

Select the following packages

```
[*] LAMP server
[*] PostgreSQL database
[*] Tomcat Java server
```

*** Don't forget to deselect any defaults!

If tasksel fails with an aptitude (100) error

You can try executing the commands which tasksel would have executed as separate statements:

sudo tasksel install lamp-server

sudo tasksel install tomcat-server

sudo tasksel install postgresql-server

Install the Compile / Build tools

```
sudo apt-get install ant maven
```

Configure the Prerequisite Software

Create the database user (dspace)

```
sudo su postgres
createuser -U postgres -d -A -P dspace
exit
```

- At this point, you will be asked to enter a password. Make it secure and remember it.
- You will also be prompted as to whether or not this user should be able to create other users. This should be no.

Allow the database user (dspace) to connect to the database

```
sudo vi /etc/postgresql/9.3/main/pg_hba.conf

# Add this line to the configuration:
        local all dspace md5
# Comment out any lines that have "peer" at the end of them

# When done, restart postgresql:
        sudo service postgresql restart
```

Create the DSpace Database

```
createdb -U dspace -E UNICODE dspace
```

Configure Tomcat to know about the DSpace webapps.

```
sudo vi /etc/tomcat7/server.xml
# Insert the following chunk of text just above the closing </Host>

<!-- Define a new context path for all DSpace web apps -->
<Context path="/xmlui" docBase="/dspace/webapps/xmlui"/>
<Context path="/sword" docBase="/dspace/webapps/sword"/>
<Context path="/oai"   docBase="/dspace/webapps/oai"/>
<Context path="/jspui" docBase="/dspace/webapps/jspui"/>
<Context path="/lni"   docBase="/dspace/webapps/lni"/>
<Context path="/solr"  docBase="/dspace/webapps/solr"/>
```

Download and Install DSpace

Create the [dspace] directory.

The [dspace] directory is where the running dspace code will reside.

```
sudo mkdir /dspace

cd /dspace
```

Download the Release

The source release allows you to customize every aspect of DSpace. This step downloads the compressed archive from SourceForge, and unpacks it in your current directory. The dspace-1.x.x-src-release directory is typically referred to as [dspace-src].

```
sudo git clone https://github.com/DSpace/DSpace.git (apt-get install git if you don't already have it)

# Now, actually checkout the 4.2 codebase via the 'dspace-4.2' tag. There's two options, CHOOSE ONE

# Option #1: Checkout the official 'dspace-4.2' tag into a new local branch (which we've named "dspace-source")
sudo git checkout -b dspace-source dspace-4.2

# Option #2: Just checkout the "dspace-4_x" maintenance branch. This will essentially include all the latest
patches on 4.x
sudo git checkout dspace-4_x
```

Compile and Build DSpace

The source release that has been obtained is human readable source code, and must be compiled to machine code for the server to run it. "mvn package" compiles the source code, and "ant" will do all the work necessary to initialize the database with the DSpace schema, and copy all of the compiled machine code to a location where the web server can serve it. **This will overwrite any existing installation of DSpace that you may have**.

make sure all your dependencies are in order, and you're running maven 3.x. (Check this version with mvn -v). If not, run these commands:



```
sudo apt-get install maven

sudo apt-get remove maven2
```

Now run these:

```
sudo apt-get install openjdk-7-jdk
cd DSpace
sudo mvn package (this step takes a long time)
cd dspace/target/dspace-installer
sudo ant fresh_install
```

Fix Tomcat permissions, and restart the Tomcat server

This guide follows the convention where the tomcat user will own all of the files in [dspace], so we have to change the owner of the files to tomcat7. Restarting tomcat will deploy the dspace webapps that are now ready to be viewed.

```
cd /home/dspace (or wherever your bottom most directory for dspace is)
sudo chown tomcat7:tomcat7 /dspace -R
sudo service tomcat7 restart
```

Test it out in your browser

That is all that is required to install DSpace on Ubuntu. There are two main webapps that provide a similar turn-key repository interface

http://localhost:8080/xmlui

http://localhost:8080/jspui