

# Installing Grouper



Work in progress

This is the app that we intent to use for all our group management.

We will run this on an Ubuntu 12.04 VM.

I would like to stick as much as possible to Ubuntu provided packages, preferably the latest versions of everything. [Confirmed on the list](#) that Grouper can run fine with OpenJDK, so no need for the ~~Sun~~ Oracle Java stuff any more (which was tedious to install and update since Oracle ended their *Operating System Distributor License for Java* in August 2011). So, at the moment it looks like we're going to use:

- Tomcat 6.0.35 ([v7 does not work with Grouper](#) - yet)
- PostgreSQL 9.1.4
- Ant 1.8.2
- OpenJDK 7u3

To page described how to get all various components installed and running on a pristine Ubuntu 12.04 system.

## Grouper core

This is the core, and consists of a database and the `grouper/` directory in the repository - which is downloaded later.

```
apt-get install --no-install-recommends subversion postgresql libpgjava tomcat6 openjdk-7-jdk ant
```

Remove the old JRE:

```
apt-get purge openjdk-6-jre-headless
```

Now download the source code, in this case we're fetching the latest version of the 2.1 branch, and stick that under `/opt`:

```
cd /opt
svn co http://anonsvn.internet2.edu/svn/i2mi/tags/GROUPER_2_1_BRANCH/
```

Create the PostgreSQL database and credentials:

```
sudo su - postgres
createuser -D -I -R -S -P grouper_user
createdb -O grouper_user -T template0 grouper
exit
```

Because we run our databases on IPv6 only, we have to edit `/etc/postgresql/9.1/main/postgresql.conf` to list:

```
listen_addresses = ':::'
```

Copy the default hibernate config file:

```
cd /opt/GROUPER_2_1_BRANCH/grouper/conf
cp grouper.hibernate.example.properties grouper.hibernate.properties
```

and edit accordingly. Note that the values should **not** be enclosed in quotes:

```
# Example:
hibernate.connection.url           = jdbc:postgresql://ip6-localhost:5432/grouper
hibernate.connection.username      = grouper_user
hibernate.connection.password     = hackme
```

Change all (6) occassions of the version string "1.5" into "1.7" in build.xml:

```
sed -i -e 's/"1\.5"/"1.7"/g' build.xml
```

Symlink the database driver:

```
ln -s /usr/share/java/postgresql-jdbc4.jar /opt/GROUPER_2_1_BRANCH/grouper/lib/custom/
```

Compile sources:

```
cd /opt/GROUPER_2_1_BRANCH/grouper
ant dist
```

Create the database structure:

```
bin/gsh.sh -registry -runscript
```

Check if this went OK:

```
bin/gsh.sh -registry -check
```

Run the tests. This is an extensive test suite - on a powerful VM it took me about one hour:

```
bin/gsh.sh -test -all
```

No errors should be reported in the end.

## Configure the subject source(s)

At this stage the database structure is in place to manage groups, but obviously you need something to group 😊.

Often you'll want to group users together. In Grouper-speak users are called *subjects*.

Grouper needs to know about the subjects before it can group them. This is done by configuring one or more *subject sources*.

There are several options: let Grouper look stuff up in a directory, an SQL database, etc, depending on the local situation.

Our ~~users~~ subjects are stored in a PostgreSQL database on a remote server. I created a dedicated view in the database, just for Grouper, which is handy because you can add whatever you like, without affecting the rest of the database.

## User interface

This is the web interface that comes as another java app, and sits in `/grouper-ui` of the repository.

First change the version statement to 1.7 to make sure it works with JDK1.7:

```
cd /opt/GROUPER_2_1_BRANCH/grouper-ui
sed -i -e 's/"1\.5"/"1.7"/g' build.xml
```

Compile the app:

```
ant dist
```

Create a file `/etc/tomcat6/Catalina/localhost/grouper.xml` with this content:

```
<?xml version="1.0" encoding="UTF-8"?>
<Context
  path="/grouper"
  docBase="/opt/GROUPER_2_1_BRANCH/grouper-ui/dist/grouper"
  reloadable="false"
/>
```

Edit `/etc/tomcat6/tomcat-users.xml` so that there is a user called `GrouperSystem`, with a secure password:

```
<tomcat-users>
<role rolename="grouper_user"/>
<user username="GrouperSystem" password="hackme" roles="grouper_user"/>
</tomcat-users>
```

Change the permissions on the logging directory:

```
chown tomcat6:tomcat6 /opt/GROUPER_2_1_BRANCH/grouper/logs
```

Restart tomcat

```
service tomcat6 restart
```

You should now be able to go to `http://<yoursevername>:8080/grouper-ui/`

and log in.

## Apache

This is optional, but good practise for security considerations. All the JAVA stuff can run on unprivileged ports, and apache faces the internet.

```
cd /etc/apache2  
a2enmod proxy_ajp
```

Configure SSL certificates etc

**TO BE CONTINUED**