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://<yourservername>: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