

Protégé Client-Server Installation

There are several web pages that discuss how to find the source for Protégé client-server (some say it is in SVN, others in GIT), build it, install it, and configure it. Most are outdated or otherwise incorrect. I'm not going to try and document what sources don't work. Rather I will try and record a currently viable approach to installing and configuring Protégé Client-Server (still in early alpha phase of development).

My initial installation was on a Macbook Pro. I encountered many odd errors. For example, I had a problematic Maven dependency on Swing that was only resolved by reverting to an older version of Java (1.8 to 1.6). I had issues with incompatibilities in the OWLAPI between the client and server. I am now going to deploy on a Linux box and see which, of the issues I encountered, were particular to my environment and which are common.

Server Install:

First of all, the most currently useful info page is this one: <http://protegewiki.stanford.edu/wiki/Protege4ClientServer> (lets call this the tutorial page). However, it is not entirely correct or complete. Let us start with the server side. The link to the self-extracting installer is broken. But, the installer is the best way to set up the server. I could not get any of the scripts that came from the source repositories (the Git repo is apparently newer than the SVN repo) to correctly build and deploy a runnable server. Or at least I never managed to connect to it. However, the installer can be found in a GIT repo (not the one you'd get the server source code from).

The repo is here: <https://github.com/protegeproject/server-deploy/>

The installer is here: <https://github.com/protegeproject/server-deploy/releases/download/v1.0/owl-server-installer.jar>

Note, the SIG Protégé server is installed on `svn.biostr.washington.edu`. My original intention was to put it on `fma.biostr.washington.edu`, but I had problems with the X-windows setup there. It was easier to switch servers than to try and fix something that no one but me uses (X).

Before running the installer, create a new user with limited permissions on the system. This user account will be used to launch the server and is a security precaution. On Linux, use the following command to create this user (as root or with sudo if configured):

```
adduser --system --home /usr/local/protege.server protege
```

Checking Java installation (with `java -version`) reports:

Java(TM) SE Runtime Environment (build 1.6.0_45-b06)

The Java version may or may not matter, but I had a problem using Java 1.8 in the previous Mac install.

The server installer has a gui, so if you log in remotely (ssh) to run the installer you need to start an X session (use the `-X` switch). To run the server installer on a Linux box (or Mac for that matter), use the following command (again as root or with sudo):

```
java -jar owl-server-installer.jar
```

When the gui pops up fill in the following (your hostname and java command should be completed automatically):

Sandbox User: protege
Hostname: 140.142.232.77
Java Command: /usr/lib/jvm/java-1.7.1-ibm-1.7.1.2.10.x86_64
Memory in megabytes: 2000
 Automatically start server
Installation Directory: /usr/local/protege.server
Data Directory: /var/protege.data
Logs Directory: /var/log/protege

Install Uninstall

Parameter	Value
Installation Directory	/usr/local/protege.server
Data Directory	/var/protege.data
Log Directory	/var/log/protege
Hostname	140.142.232.77

OK

The above command should have not only installed the server, but also started it.

Client Install:

Following the client install instructions on the tutorial page would have you install 3 jar files into the Protégé plugins directory. I tried installing all of those into P5 beta, and could not connect to the server. However, when I installed them into P4.3, I

could. It seemed I could connect with or without the "updated OWLAPI" (I'm not actually sure that is an update, I don't know which version came with P4.3).

Library links in tutorial:

Server plugin (for client):

<http://protege.stanford.edu/files/p4server/org.protege.owl.server.jar>

Client plugin:

<http://protege.stanford.edu/files/p4server/org.protege.editor.owl.client.jar>

Update OWLAPI 3.2.4 (possibly unnecessary):

<http://protege.stanford.edu/files/p4server/org.semanticweb.owl.owlapi.jar>

Address of server (adjust based on hostname):

rmi-owl2-server://140.142.232.77:4875/

I added a user to `/var/protege.data/configuration/UsersAndGroups`, by copying the format of the two existing entries (administrator and guest). However, the two existing users had two roles "admin" and "world". I did not find anywhere a list of the allowed roles or a description of the privileges granted to each role.

I should also note that there are Protégé client-server tutorial documents on the web that suggest that there are some built in users and passwords (redmond - bicycle, vendetta - protege, ...) that are not actually there if you've installed the libraries mentioned here. You can look in the `UsersAndGroups` file to see the pre-configured users (admin and guest).

I've cached the 3 client jars and server installer here (in case they go away):

<https://drive.google.com/a/uw.edu/folderview?id=0B79XScL4Qr16flh0SjRneUx6c3U1eWNUZXU1R3ZTOW92VXZyMjlvTnhCVkZWR1NlaWdOY0k&usp=sharing>