Exonmap installation instructions

MichałJ Okoniewski, Tim Yates, Crispin J Miller

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Contents

1 Installation of the XMAP database

The R package requires access to a MySQL database server running a current version of the X:MAP database. Database tables and installation instructions may be downloaded from http://xmap.picr.man.ac.uk.

exonmap also uses the *RMySQL* package, which must also be downloaded and installed.

Once the server is up and running, you must create the necessary configuration files to tell R how to connect to the database. The following explains how to do this for a linux system:

Exonmap uses a configuration directory that stores database connection details. This is specified by the environment variable *R_XMAP_CONF_DIR*. If this variable is not set then exonmap defaults to looking in *.exonmap*.

So the easiest thing to do is first to create a directory called *.exonmap* in your top level user directory, and then set up the environment variable to point to it (you will probably want to put this in your initial start up scripts).

Next create a config file for the human database, *human.mycnf*. In this you must specify the username and password to use to connect to the database along with the database name and the address of the server. NOTE we have added an extra line, species, in this release. This is to support the X:Map bridge (see below). For example, your *human.mycnf* file might look something like this:

```
user      <userid>
database homo_sapiens_core_40_36b
password <password>
host      <the>.<address>.<of the>.<database>
species  homo_sapiens
```

Now do similar for the mouse and rat, databases. Example config files are available from `xmap.picr.man.ac.uk`.

Before first use of any of the database related functions, the connection function for the Human, Mouse or Rat database must be called using, for example, *xmap-Database("Human")*.

New in this release is the ability to display expression data in the X:Map genome browser. This relies on a local Java server that forms a bridge between exonmap and your web browser (this means we don't have to upload any expression data to the X:Map server). The additional software to do this can be downloaded from xmap (`xmap.picr.man.ac.uk`), and Installation instructions are also provided there. It requires a cache directory, the location of which is specified by another environment variable *R_XMAP_BRIDGE_CACHE*. If you are planning to use the bridge you may also want to create this directory and also set up the environment variable now.

If all goes well, that should be it.