

# Development Tricks

## Java Runtime configuration

It is recommended to customize some variables:

```
export JAVA_OPTS="-Djava.net.preferIPv4Stack=true -Xmx1024m -XX:PermSize=128m -XX:MaxPermSize=256m -XX:+UseConcMarkSweepGC -XX:+CMSClassUnloadingEnabled -XX:+UseConcMarkSweepGC -XX:+HeapDumpOnOutOfMemoryError"
```

## Paths in Windows-based systems

In Windows some paths, the user home for instance, usually contain spaces, which could be problematic with some development environments. Therefore the recommendations are:

- Place your LMF working copy under a path without spaces
  - Tomcat, and maybe other servlet containers, are not happy with such paths
- Configure related tools (maven and so on) to use a home path also without spaces; these are some of the environment variables involved

## Database configuration

Internally LMF uses a relational database to persist the data using a custom and efficient schema.

For instance, for creating such database in PostgreSQL you'd need to execute something like:

```
$ su
# su - postgres
$ psql
postgres=# CREATE USER lmf WITH PASSWORD 'lmf';
postgres=# CREATE DATABASE lmf WITH OWNER lmf;
```

Then you'd need to configure the access to it, using the userConfig.properties file or through the web interface under LMF core.

## Performance

These [performance tricks](#) may be of your interest.

## Maven

See [Maven](#) for further details.

## Hot Deployment / JRebel

See [JRebel](#) for further details.