**Factorbase on the Apple OS**

**Install MariaDB**

* The version of MariaDB that should work is mariadb:10.4.17 as that is the same one used in the GitHub Actions build.
* Through brew to install the right version: “brew install [mariadb@10.4](mailto:mariadb@10.4)”
* Use brew start to start the database server:
  + “brew services start mariadb@10.4”
  + “brew services restart mariadb@10.4”

**Install Maven**

* go through this web tutorial: <https://www.digitalocean.com/community/tutorials/install-maven-mac-os>

**FactorBase Instruction:**

* Clone the repository from <https://github.com/sfu-cl-lab/FactorBase>
* Follow the instruction on the github to install

Useful command:

To run factorbase:

“java -Dconfig=path\_to\_the\_.cfg -jar factorbase/target/factorbase-1.0-SNAPSHOT.jar”

**Factorbase on the Compute Canada Cedar**

**Connect to Cedar**

* Follow the instruction to log into the Cedar: <https://csil-git1.cs.surrey.sfu.ca/oschulte/group-sharing/-/wikis/Clusters>

**Load Module**

After connected to the Cedar. Load module, load the Java module and MySQL module by below commands. [Using Module](https://docs.alliancecan.ca/wiki/Utiliser_des_modules/en)

“module load java/11.0.2”

“module load mariadb/10.4.13”

Details:

<https://docs.alliancecan.ca/wiki/Java>

<https://docs.alliancecan.ca/wiki/Database_servers>

**Set up database**

After load the mariadb module, we could run mysql command.

**Name restriction**

There is restriction of name of database in Cedar. Basically, the name of the database will typically be "<username>\_db" where <username> is your Alliance username.

Eg: Database names need to start with “functor\_” like functor\_unilwin\_BN, functor\_movie\_lens

**Information of database server**

The username, password, database server name, and other information required to make a MySQL connection will be stored in a file called my.cnf located in your home directory.

“host=cedar-mysql-vm

user=functor

protocol=TCP

password=+!IqI+OTfYG89g%U”

“mysql --host=cedar-mysql-vm --user=functor --password=+!IqI+OTfYG89g%U”

**Transfer file between local and cedar**

Move file by [Globus](https://www.globus.org/), the endpoint can be found at [Cedar page](https://docs.alliancecan.ca/wiki/Cedar)

|  |
| --- |
| Availability: Compute RAC2017 allocations started June 30, 2017 |
| Login node: **cedar.computecanada.ca** |
| Globus endpoint: **computecanada#cedar-dtn** |
| System Status Page: [**http://status.computecanada.ca/**](http://status.computecanada.ca/) |

Useful command:

**Dump database** from cedar:

“mysqldump -u name\_of\_database > name\_of\_database.sql”

Example configuration:

dbaddress = mysql://cedar-mysql-vm

dbname = functor\_carla\_271

dbusername = functor

dbpassword = +!IqI+OTfYG89g%U

dbtemporarytablesize = 10

Example sh\_file ([detail instruction](https://docs.alliancecan.ca/wiki/Running_jobs)):

#!/bin/bash

#SBATCH --gres=gpu:1 # number of gpus per node

#SBATCH --mem=16GB # memory per node

#SBATCH --time=0-10:10 # time (DD-HH:MM)

#SBATCH --account=def-functor # account

#SBATCH --output=log\_%a.out # %A for main jobID, %a for array id.

java -Dconfig=../config.cfg -jar ../jar/factorbase-1.0-SNAPSHOT.jar