MariaDB installation (v10.2)
for project 4

Concurrent Programming

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Introduction

- What is the MariaDB?
- Installing MariaDB
- Setting for uploading to GitLab
- Test

What is the MariaDB?

- Community-developed fork of the MySQL relational database management system
- Maintain high compatibility with MySQL
- Includes the XtraDB storage engine for replacing InnoDB

Installing MariaDB (v10.2)

- Prepare project4 path

```
$ mkdir -p project4/mariadb
```

Installing MariaDB (v10.2)

- Download source codes in your project3/mariadb directory

```
$ cd project4/mariadb
$ git clone https://github.com/MariaDB/server.git
```

Installing MariaDB (v10.2)

- Install CMake

```
$ sudo apt-get install cmake
```

Download other packages

```
$ sudo apt-get install cmake vim gcc g++ libxml2-dev openssl
libssl-dev curl libcurl4-openssl-dev libjpeg-dev libpng-dev
libfreetype6-dev libsasl2-dev autoconf libncurses5-dev bison
```

Download cmake script file from Piazza

- Download cmake_local.sh file from the Piazza resource page
  - https://piazza.com/hanyang.ac.kr/fall2017/ite406510074/resources
  - Open this page via firefox on Ubuntu to download the file into the Ubuntu

```
$ cp cmake_local.sh project4/mariadb/server
$ cd project4/mariadb/server
$ sudo chmod 755 cmake_local.sh
```

Installing MariaDB (v10.2)

- Change MY_DB_PATH to your project4 path in the cmake_local.sh file

```
#!/bin/bash
export MY_DB_PATH=$HOME/TA/Multicore/project4/mariadb # change this path
cmake \
-DCMAKE_INSTALL_PREFIX=$MY_DB_PATH/run \
-DSYSCONFDIR=$MY_DB_PATH/run \
-DMYSQL_TCP_PORT=3306 \
-DDEFAULT_CHARSET=utf8 \
-DWITH_EXTRA_CHARSETS=all \
-DDEFAULT_COLLATION=utf8_general_ci \
-DMYSQL_UNIX_ADDR=$MY_DB_PATH/run/mariadb.sock \
-DMYSQL_DATADIR=$MY_DB_PATH/data \
-DWITHOUT_TOKUDB_STORAGE_ENGINE=YES \
-DWITHOUT_MROONGA_STORAGE_ENGINE=YES \
-DWITHOUT_ROCKSDB_STORAGE_ENGINE=YES \
```

Build MariaDB

```
$ ./cmake_local.sh
```

```
-- Configuring done
-- Generating done
-- Build files have been written to: /home/mrbin2002/TA/Multicore/project4/serve
r
```

Build MySQL

```
$ make
$ make install
$ cd ..
$ ls
```

If you allocated more than 1 CPU and sufficient memory(more than 4GB) to the virtual machine, use “make -j” command rather than “make”.

```
mrbin2002@ubuntu:~/TA/Multicore/project4$ ls
run  server
```

Now you can see *run* directory that contains an executable MariaDB server and client

Installing MariaDB (v10.2)

- Set configuration file, my.cnf
- MariaDB supports default configuration files, named my-XXX.cnf in support-files folder. So simply use it now

```
$ cd project4/mariadb/run
$ cp support-files/my-small.cnf my.cnf
```

Generate an initial database

```
$ cd project4/mariadb/run/
$ ./scripts/mysql_install_db --datadir=../data
$ cd ..
$ ls
```

```
mrbin2002@ubuntu:~/TA/Multicore/project4$ ls
data  run  server
```

Now you can see *data* directory that contains database files

Test

- Run the MariaDB Server

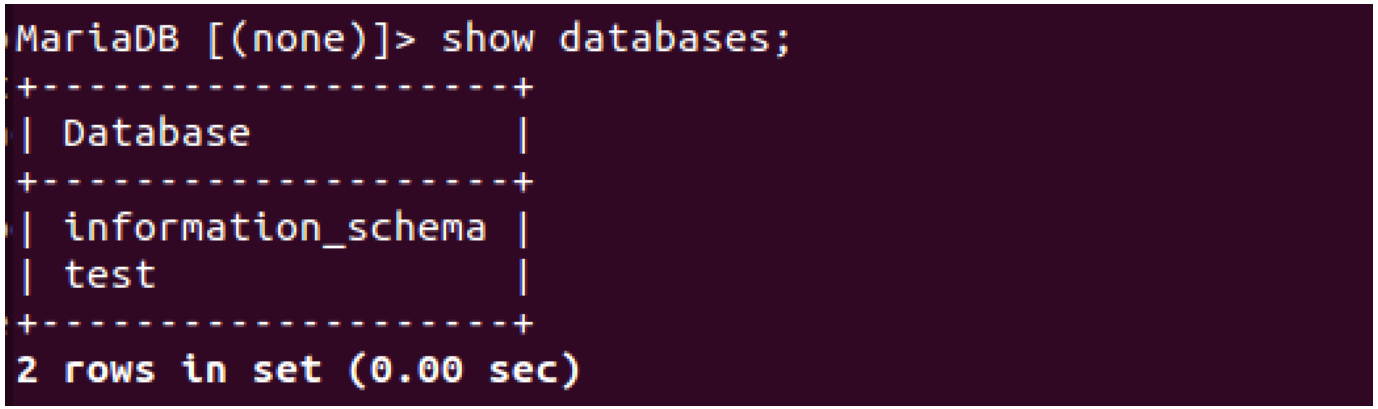
```
$ cd project4/mariadb/run/bin
$ ./mysqld
```

```
2017-11-01  6:44:48 139672461530944 [Note] InnoDB: File './ibtmp1' size is now 1
2 MB.
2017-11-01  6:44:48 139672461530944 [Note] InnoDB: 5.7.20 started; log sequence
number 1619987
2017-11-01  6:44:48 139670834890496 [Note] InnoDB: Loading buffer pool(s) from /
home/mrbin2002/TA/Multicore/project4/data/ib_buffer_pool
2017-11-01  6:44:48 139672461530944 [Note] Plugin 'FEEDBACK' is disabled.
2017-11-01  6:44:48 139670834890496 [Note] InnoDB: Buffer pool(s) load completed
 at 171101  6:44:48
2017-11-01  6:44:48 139672461530944 [Note] Server socket created on IP: '::'.
2017-11-01  6:44:48 139672461530944 [Note] Reading of all Master_info entries su
cceded
2017-11-01  6:44:48 139672461530944 [Note] Added new Master_info '' to hash tabl
e
2017-11-01  6:44:48 139672461530944 [Note] ./mysqld: ready for connections.
Version: '10.2.11-MariaDB'  socket: '/home/mrbin2002/TA/Multicore/project4/run/m
ysql.sock'  port: 3306  Source distribution
```

Test

- Open an another terminal to run MariaDB client

```
$ cd project4/mariadb/run/bin
$ ./mysql
MariaDB [(none)]> show databases;
MariaDB [(none)]> exit
```



Test

- Shutdown MariaDB Server

```
$ ./mysqladmin -uroot shutdown
```

Setting for uploading to GitLab

Setting for uploading to GitLab

- We should erase the *.git* directory that contains the Git informations of original GitHub repository

```
$ cd project4/mariadb/server
$ rm -rf .git
```

Setting for uploading to GitLab

- Create a new *.gitignore* in the project4 path

```
$ cd project4/mariadb
$ vi .gitignore
```

- Append these path / files

```
run
data
cscope*
```

Setting for uploading to GitLab

- Modify the .gitignore in the mariadb source path

```
$ cd project4/mariadb/server
$ vi .gitignore
```

- Append these path

```
!storage/mroonga/build
!storage/innobase/data
!dbug/user.r
```

Upload MariaDB to GitLab

Project4/mariadb/.gitignore

```
1 run
2 data
3 cscope*
```

project4/mariadb/server/.gitignore

```
492 # Microsoft Fakes
493 FakesAssemblies/
494
495 # Do not ignore these files to make successfully
496 !storage/mroonga/build
497 !storage/innobase/data
498 !dbug/user.r
```

Upload MariaDB to GitLab

- Upload project4 to your GitLab repository

```
$ cd project4
$ git add .
$ git commit -m “…”
$ git push origin master
```

Thank You