

Course : Distributed System

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Lab-work

Chap 5: Consistency and Replication

QUESTION 1:

The output of the query is:

```
mysql> select * from pet;
+-----+-----+-----+-----+-----+-----+
| name   | owner | species | sex  | birth      | death      |
+-----+-----+-----+-----+-----+-----+
| Whistler | Gwen  | bird    | NULL | 1997-12-09 | NULL       |
| Fluffy   | Harold | cat     | f    | 1993-02-04 | NULL       |
| Claws    | Gwen  | cat     | m    | 1994-03-17 | NULL       |
| Buffy    | Harold | dog     | f    | 1989-05-13 | NULL       |
| Fang     | Benny | dog     | m    | 1990-08-27 | 1997-04-04 |
+-----+-----+-----+-----+-----+-----+
5 rows in set (0,00 sec)
```

The command used to add another entry to the table pet is:

INSERT INTO pet VALUE ('Dawgo', 'Tony', 'chicken', 'f', '1999-03-30', NULL);

The result after adding the new entry is:

```
mysql> select * from pet;
+-----+-----+-----+-----+-----+-----+
| name   | owner | species | sex  | birth      | death      |
+-----+-----+-----+-----+-----+-----+
| Whistler | Gwen  | bird    | NULL | 1997-12-09 | NULL       |
| Fluffy   | Harold | cat     | f    | 1993-02-04 | NULL       |
| Claws    | Gwen  | cat     | m    | 1994-03-17 | NULL       |
| Buffy    | Harold | dog     | f    | 1989-05-13 | NULL       |
| Fang     | Benny | dog     | m    | 1990-08-27 | 1997-04-04 |
| Dawgo    | Tony  | chicken | f    | 1999-03-30 | NULL       |
+-----+-----+-----+-----+-----+-----+
6 rows in set (0,00 sec)
```

QUESTION 2:

The name of the log file is **mysql-bin.000001** and the position is **8250**, both of which are read from the output of the query **SHOW MASTER STATUS;**

```
mysql> show master status;
+-----+-----+-----+-----+-----+
| File           | Position | Binlog_Do_DB | Binlog_Ignore_DB | Executed_Gtid_Set |
+-----+-----+-----+-----+-----+
| mysql-bin.000001 |      8250 | petdatabase  |                   |                   |
+-----+-----+-----+-----+-----+
1 row in set (0.00 sec)
```

QUESTION 3:

Yes, the file **petdatabase.sql** has been sent successfully to the Slave machine.

```
thanhld@thanhld-02:~$ ls
Desktop  Documents  Downloads  Music  petdatabase.sql  Pictures
Public  Templates  Videos
```

As the url given in the **scp** command is “.” the file is stored in the **home folder** of the user used in the command **scp**. In my case, it is **/home/thanhld/petdatabase.sql**

QUESTION 4:

The status information that I received is:

```
mysql> show slave status\G
***** 1. row *****
      Slave_IO_State: Waiting for master to send event
      Master_Host: 192.168.56.7
      Master_User: slave_user
      Master_Port: 3306
      Connect_Retry: 60
      Master_Log_File: mysql-bin.000003
      Read_Master_Log_Pos: 156
      Relay_Log_File: mysql-relay-bin.000005
      Relay_Log_Pos: 371
      Relay_Master_Log_File: mysql-bin.000003
      Slave_IO_Running: Yes
      Slave_SQL_Running: Yes
      Replicate_Do_DB:
      Replicate_Ignore_DB:
      Replicate_Do_Table:
      Replicate_Ignore_Table:
      Replicate_Wild_Do_Table:
      Replicate_Wild_Ignore_Table:
      Last_Errno: 0
      Last_Error:
      Skip_Counter: 0
      Exec_Master_Log_Pos: 156
      Relay_Log_Space: 795
      Until_Condition: None
```

```

        Until_Log_File:
        Until_Log_Pos: 0
    Master_SSL_Allowed: No
    Master_SSL_CA_File:
    Master_SSL_CA_Path:
    Master_SSL_Cert:
    Master_SSL_Cipher:
    Master_SSL_Key:
    Seconds_Behind_Master: 0
Master_SSL_Verify_Server_Cert: No
    Last_IO_Errno: 0
    Last_IO_Error:
    Last_SQL_Errno: 0
    Last_SQL_Error:
    Replicate_Ignore_Server_Ids:
    Master_Server_Id: 1
        Master_UUID: cf6a1aca-
d001-11eb-8db3-080027ff7052
    Master_Info_File: mysql.slave_master_info
        SQL_Delay: 0
    SQL_Remaining_Delay: NULL
    Slave_SQL_Running_State: Slave has read all relay log; waiting
for more updates
    Master_Retry_Count: 86400
    Master_Bind:
    Last_IO_Error_Timestamp:
    Last_SQL_Error_Timestamp:
    Master_SSL_Crl:
    Master_SSL_Crlpath:
    Retrieved_Gtid_Set:
    Executed_Gtid_Set:
    Auto_Position: 0
    Replicate_Rewrite_DB:
    Channel_Name:
    Master_TLS_Version:
    Master_public_key_path:
    Get_master_public_key: 0
    Network_Namespace:
1 row in set, 1 warning (0.00 sec)

```

By checking 3 following fields, I ensure that the slave thread is OK and running.

```

    Last_IO_Errno: 0
    Last_IO_Error:
    Last_SQL_Errno: 0

```

It' because at the first attempt, I got some error and these fields are where I found out the problem and fix it.

```

    Last_IO_Errno: 2003
    Last_IO_Error: error connecting to master
'slave_user@192.168.56.8:3306' - retry-time: 60 retries: 1 message:
Can't connect to MySQL server on '192.168.56.8:3306' (111)
    Last_SQL_Errno: 0

```

QUESTION 5:

In the Slave machine, the new entry has been successfully replicated. The command to verify is ***SELECT * FROM petdatabase.pet;***

The check result is:

```
mysql> select * from pet;
+-----+-----+-----+-----+-----+-----+
| name   | owner | species | sex  | birth      | death      |
+-----+-----+-----+-----+-----+-----+
| Whistler | Gwen  | bird    | NULL | 1997-12-09 | NULL       |
| Fluffy  | Harold | cat     | f    | 1993-02-04 | NULL       |
| Claws   | Gwen  | cat     | m    | 1994-03-17 | NULL       |
| Buffy   | Harold | dog     | f    | 1989-05-13 | NULL       |
| Fang    | Benny | dog     | m    | 1990-08-27 | 1997-04-04 |
| Dawgo   | Tony  | chicken | f    | 1999-03-30 | NULL       |
| Puffball | Diane | hamster | f    | 1999-03-30 | NULL       |
+-----+-----+-----+-----+-----+-----+
7 rows in set (0.00 sec)
```