L2 “如何创建数据库——存储引擎”MySQL 测试语句

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1. 查看存储引擎

Mysql 语句：

```
show engines;
```

程序运行结果：

```
mysql> show engines;
+--------------------+---------+----------------------------------------------------------------+--------------+------+------------+
| Engine             | Support | Comment                                                        | Transactions | XA   | Savepoints |
+--------------------+---------+----------------------------------------------------------------+--------------+------+------------+
| ndbcluster         | NO      | Clustered, fault-tolerant tables                               | NULL         | NULL | NULL       |
| CSV                | YES     | CSV storage engine                                             | NO           | NO   | NO         |
| ARCHIVE            | YES     | Archive storage engine                                         | NO           | NO   | NO         |
| BLACKHOLE          | YES     | /dev/null storage engine (anything you write to it disappears) | NO           | NO   | NO         |
| ndbinfo            | NO      | MySQL Cluster system information storage engine                | NULL         | NULL | NULL       |
| MRG_MYISAM         | YES     | Collection of identical MyISAM tables                          | NO           | NO   | NO         |
| FEDERATED          | NO      | Federated MySQL storage engine                                 | NULL         | NULL | NULL       |
| MyISAM             | YES     | MyISAM storage engine                                          | NO           | NO   | NO         |
| PERFORMANCE_SCHEMA | YES     | Performance Schema                                             | NO           | NO   | NO         |
| InnoDB             | DEFAULT | Supports transactions, row-level locking, and foreign keys     | YES          | YES  | YES        |
| MEMORY             | YES     | Hash based, stored in memory, useful for temporary tables      | NO           | NO   | NO         |
+--------------------+---------+----------------------------------------------------------------+--------------+------+------------+
11 rows in set (0.01 sec)
```

mysql 语句：

```
show engines \G;
```

运行结果：

```
mysql> show engines \G;
*************************** 1. row ***************************
      Engine: ndbcluster
     Support: NO
     Comment: Clustered, fault-tolerant tables
Transactions: NULL
          XA: NULL
  Savepoints: NULL
*************************** 2. row ***************************
      Engine: CSV
     Support: YES
     Comment: CSV storage engine
Transactions: NO
          XA: NO
  Savepoints: NO
*************************** 3. row ***************************
      Engine: ARCHIVE
     Support: YES
     Comment: Archive storage engine
Transactions: NO
          XA: NO
```

2. 查看 MySql 默认的存储引擎

mysql 语句

```
show variables like '%storage_engine%';
```

运行结果：

```
mysql> show variables like '%storage_engine%';
+---------------------------------+-----------+
| Variable_name                   | Value     |
+---------------------------------+-----------+
| default_storage_engine          | InnoDB    |
| default_tmp_storage_engine      | InnoDB    |
| disabled_storage_engines        |           |
| internal_tmp_mem_storage_engine | TempTable |
+---------------------------------+-----------+
```

3. 创建存储引擎为 myisam 的表【注：要在某一个数据库里面创建表格】

第一步：查看所有数据库

```
show databases;
```

运行结果：

```
mysql> show databases;
+--------------------+
| Database           |
+--------------------+
| information_schema |
| mysql              |
| performance_schema |
| sys                |
| test               |
+--------------------+
5 rows in set (0.01 sec)
```

PS：如果没有 test 这个数据库，先创建一个新的数据库名为 test；对应的 mysql 语句为：

```
create database test;
```

如果已经有了 test 这个数据库，就跳过此步骤。

第二步：启用 test 数据库

```
use test;
```

```
mysql> use test;
Reading table information
You can turn off this fea

Database changed
mysql>
```

4. 创建存储引擎为 myisam 的表

```
CREATE TABLE myisam (id int(11) NULL DEFAULT 0, data int(11) NULL DEFAULT 0) ENGINE=myisam;
```

5. 创建存储引擎为 innodb 的表

CREATE TABLE innodb (id int(11) NULL DEFAULT 0, data int(11) NULL DEFAULT 0) ENGINE=innodb;

运行结果：

```
mysql> show tables;
+----------------+
| Tables_in_test |
+----------------+
| cdb_posts      |
| innodb         |
| myisam         |
| R              |
| S              |
+----------------+
5 rows in set (0.00 sec)
```

6. 通过创建存储过程，做插入性测试

[注意下面语句里的表名前后添加的是反撇符号`，用于转义，也可忽略]

```
drop procedure if exists inno_insert;
delimiter ;;
create procedure inno_insert(a int)
begin
declare i int default 1;
repeat
insert   into `innodb` values(i, i);
set i =i+1;
until i>a end repeat;
end;;
```

[注意下面语句里的表名前后添加的是反撇符号`，用于转义，也可忽略]

```
drop procedure if exists my_insert;
delimiter ;;
create procedure my_insert(a int)
begin
declare i int default 1;
repeat
insert   into `myisam` values(i, i);
set i =i+1;
until i>a end repeat;
end;;
```

```
delimiter ;
```

```
call inno_insert(100000);
call my_insert(100000);
```

运行结果：

```
mysql> call inno_insert(100000);
Query OK, 1 row affected (31.88 sec)

mysql> call my_insert(100000);
Query OK, 1 row affected (18.17 sec)
```

可以看到存储引擎为 mysiam 的表的插入时间性能更好。