

主从同步过程中，mysqldump备份--set-gtid-purged=OFF参数问题

注解

MySQL 5.6 引入了 GTID 特性，因此随 5.6 版本分发的 mysqldump 工具增加了 --set-gtid-purged 选项。

选项名: set-gtid-purged

默认值: AUTO

可选值: ON, OFF, AUTO

作用

是否输出 SET@@GLOBAL.GTID_PURGED 子句

ON: 在 mysqldump 输出中包含 SET@@GLOBAL.GTID_PURGED 语句

OFF: 在 mysqldump 输出中不包含 SET@@GLOBAL.GTID_PURGED 语句

AUTO: 默认值，对于启用 GTID 实例，会输出 SET@@GLOBAL.GTID_PURGED 语句；对于没有启动或者不支持 GTID 的实例，不输出任何 GTID 相关信息。

小结

gtid是一个全局事物标记号，每执行一个事物，都会有一个gtid标记的号，主从同步时，如果没有开启gtid功能，则进行mysqldump备份时不需要加--set-gtid-purged选项

在开启了gtid功能的数据库中进行逻辑备份的时候需要加--set-gtid-purged=OFF选项

步骤

备份未加参数

开启主从同步以后备份一个shop库，备份过程中未加此参数的备份文件截图

```
-- MySQL dump 10.13 Distrib 5.7.17, for linux-glibc2.5 (x86_64)
--
-- Host: localhost    Database: shop
-- Server version:    5.7.17-log
--
/*!40101 SET @OLD_CHARACTER_SET_CLIENT=@@CHARACTER_SET_CLIENT */;
/*!40101 SET @OLD_CHARACTER_SET_RESULTS=@@CHARACTER_SET_RESULTS */;
/*!40101 SET @OLD_COLLATION_CONNECTION=@@COLLATION_CONNECTION */;
/*!40101 SET NAMES utf8 */;
/*!40103 SET @OLD_TIME_ZONE=@@TIME_ZONE */;
/*!40103 SET TIME_ZONE='+00:00' */;
/*!40014 SET @OLD_UNIQUE_CHECKS=@@UNIQUE_CHECKS, UNIQUE_CHECKS=0 */;
/*!40014 SET @OLD_FOREIGN_KEY_CHECKS=@@FOREIGN_KEY_CHECKS, FOREIGN_KEY_CHECKS=0 */;
/*!40101 SET @OLD_SQL_MODE=@@SQL_MODE, SQL_MODE='NO_AUTO_VALUE_ON_ZERO' */;
/*!40111 SET @OLD_SQL_NOTES=@@SQL_NOTES, SQL_NOTES=0 */;
SET @MYSQLDUMP_TEMP_LOG_BIN = @@SESSION.SQL_LOG_BIN;
SET @@SESSION.SQL_LOG_BIN= 0;
--
-- GTID state at the beginning of the backup
--
SET @@GLOBAL.GTID_PURGED='9991e42f-97dc-11e8-97ae-00163e0e9a8b:1-31';
--
-- Table structure for table `tma`
--
DROP TABLE IF EXISTS `tma`;
/*!40101 SET @saved_cs_client = @@character_set_client */;
/*!40101 SET character_set_client = utf8 */;
CREATE TABLE `tma` (
  `id` int(11) DEFAULT NULL,
  `name` char(10) DEFAULT NULL
) ENGINE=InnoDB DEFAULT CHARSET=latin1;
/*!40101 SET character_set_client = @saved_cs_client */;
```

```

1 -- MySQL dump 10.13 Distrib 5.7.17, for linux-glibc2.5 (x86_64)
2 --
3 -- Host: localhost    Database: shop
4 --
5 -- Server version      5.7.17-log
6
7 /*!40101 SET @OLD_CHARACTER_SET_CLIENT=@@CHARACTER_SET_CLIENT */;
8 /*!40101 SET @OLD_CHARACTER_SET_RESULTS=@@CHARACTER_SET_RESULTS */;
9 /*!40101 SET @OLD_COLLATION_CONNECTION=@@COLLATION_CONNECTION */;
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11 /*!40103 SET @OLD_TIME_ZONE=@@TIME_ZONE */;
12 /*!40103 SET TIME_ZONE='+00:00' */;
13 /*!40014 SET @OLD_UNIQUE_CHECKS=@@UNIQUE_CHECKS, UNIQUE_CHECKS=0 */;
14 /*!40014 SET @OLD_FOREIGN_KEY_CHECKS=@@FOREIGN_KEY_CHECKS, FOREIGN_KEY_CHECKS=0 */;
15 /*!40101 SET @OLD_SQL_MODE=@@SQL_MODE, SQL_MODE='NO_AUTO_VALUE_ON_ZERO' */;
16 /*!40111 SET @OLD_SQL_NOTES=@@SQL_NOTES, SQL_NOTES=0 */;
17 SET @MYSQLDUMP_TEMP_LOG_BIN = @@SESSION.SQL_LOG_BIN;
18 SET @@SESSION.SQL_LOG_BIN= 0;
19
20 --
21 -- GTID state at the beginning of the backup
22 --
23
24 SET @@GLOBAL.GTID_PURGED= '9991e42f-97dc-11e8-97ae-00163e0e9a8b:1-31';
25
26 --
27 -- Table structure for table `tma`
28 --
29
30 DROP TABLE IF EXISTS `tma`;
31 /*!40101 SET @saved_cs_client      = @@character_set_client */;
32 /*!40101 SET character_set_client = utf8 */;
33 CREATE TABLE `tma` (
34   `id` int(11) DEFAULT NULL,
35   `name` char(10) DEFAULT NULL,
36 ) ENGINE=InnoDB DEFAULT CHARSET=latin1;
37 /*!40101 SET character_set_client = @saved_cs_client */;

```

从图中可以看出17,18,24行，表示禁用binlog日志，也就是说在事物1-31（即之前创建库shop以及建表后续的操作）之间的操作禁用了binlog日志

导入数据

先删除库shop，在创建，用mysql -u -p shop < xx.sql导入

1 导入数据以后，主库的截图

The screenshot shows a MySQL terminal window with two tabs. The active tab is titled '2 47.97.63.240:22'. The terminal output shows the following commands and results:

```

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affiliates. Other names may be trademarks of their respective
owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

root@MySQL-01 17:49: [(none)]> show databases;
+-----+
| Database |
+-----+
| information_schema |
| liat |
| list |
| mysql |
| performance_schema |
| shop |
| sys |
| test |
+-----+
8 rows in set (0.00 sec)

root@MySQL-01 17:49: [(none)]> use shop;
Database changed
root@MySQL-01 17:49: [shop]> show tables;
+-----+
| Tables_in_shop |
+-----+
| tma |
| tmb |
+-----+
2 rows in set (0.00 sec)

root@MySQL-01 17:49: [shop]>

```

从图中可以见到，导入数据以后，主库数据恢复

2 从库的截图

```
1 47.97.61.202:22 x 2 47.97.63.240:22 x +
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: 9991e42f-97dc-11e8-97ae-00163e0e9a8b
    Master_Info_File: /alidata/mysql/data/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: 9991e42f-97dc-11e8-97ae-00163e0e9a8b:3-33
Executed_Gtid_Set: 9991e42f-97dc-11e8-97ae-00163e0e9a8b:1-33,
bb62fdb6-9a18-11e8-8b89-00163e0e8017:1
  Auto_Position: 1
Replicate_Rewrite_DB:
  Channel_Name:
  Master_TLS_Version:
1 row in set (0.00 sec)

ERROR:
No query specified

root@MySQL-01 17:23: [shop]> show tables;
Empty set (0.00 sec)

root@MySQL-01 17:50: [shop]>
```

从图中可知，导入数据以后，从库中的shop库中没有数据

3 主从同步截图

```
1 47.97.61.202:22 x 2 47.97.63.240:22 x +
Empty set (0.01 sec)

root@MySQL-01 17:20: [shop]> show tables;
Empty set (0.00 sec)

root@MySQL-01 17:20: [shop]> show slave status\G;
***** 1. row *****
Slave_IO_State: Waiting for master to send event
Master_Host: 47.97.63.240
Master_User: slave
Master_Port: 3306
Connect_Retry: 60
Master_Log_File: mybinlog.000005
Read_Master_Log_Pos: 8433
Relay_Log_File: izbplac6ryn1mjgkcvba3dZ-relay-bin.000002
Relay_Log_Pos: 8243
Relay_Master_Log_File: mybinlog.000005
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: 8433
Relay_Log_Space: 8468
Until_Condition: None
Until_Log_File:
Until_Log_Pos: 0
Master_SSL_Allowed: No
```

从图中可知，主从同步正常

总结

未加参数的时候，在备份的文件中会显示上面三行，表示之前对于库表的操作会禁用其二进制日志，则在导入的时候，从库拉取主库的binlog日志时没有这些操作，所以导入成功以后从库中也没有数据，容易导致主从数据不一致，从库数据丢失，而主从同步却还正常的情况