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Percona Server

Percona Server ? MySQL ?????????????? MySQL ??? HA/Cluster ??????????????

Percona Server ?????????? MySQL ?????????? features????????????????????????????????????

?????? MySQL ?????????????????? MySQL CE ?????????????????????????????????? Percona Server????? OpenSource ?????????????? feature ??????????????

- [http://blog.wu-boy.com/category/%E9%...tradb-cluster/](#)
- [Personal Server v.s MySQL CE ????](#)
- [???](#)
 - ? <http://www.percona.com/doc/percona-s...tallation.html>
 - ? [Percona XtraDB Cluster ?? HAProxy](#)

????/??

// ??/?????? schema

mysqldump --no-data --tables -uroot -p [db_name] > mydb-schema.sql

Notes: ??????

? --ignore-table=[db_name].[table_name] ??????????????????????????????
 ? ??????? Trigger ? procedure ????

// ??/???????

\$> mysqldump --add-drop-table -uroot -p [db_name] > mydb-dump.sql

Notes:

??????? procedure????????? --routines?

// ??? Table

\$> mysqldump --add-drop-table -uroot -p [db_name] Table-1 Table-2 > mydb-tables.sql

// ?? Table ????

\$> mysqldump --databases asteriskcdrdb --tables cdr --where="calldate > '2015-07-05' order by calldate desc" -uyouruser -p'yourpass' > cdr.sql

// ????? - ?? (for InnoDB)

\$> mysqldump --single-transaction --add-drop-table -uroot -p [db_name] > my_innodb.sql

TIPs:

--single-transaction ????????????????

????:

<http://dev.mysql.com/doc/refman/5.0/...db-backup.html>

<http://www.neo.com.tw/archives/1122>

<http://www.softwareprojects.com/reso...base-1684.html>

// ?????? - ?? (for InnoDB)

NOTE: ??????????? Binary Log (--bin-log) ????????????

```
$> mysqldump --single-transaction --flush-logs --master-data=2 \
  --all-databases > backup_sunday_1_PM.sql
```

?????

???????

```
$> mysql < backup_sunday_1_PM.sql
```

??? binary logs

```
$>mysqlbinlog gbichot2-bin.000007 gbichot2-bin.000008 | mysql
```

TIPS?

???

<https://dev.mysql.com/doc/refman/5.0...up-policy.html>

MySQL?????? binary log?

// ??????

????

```
# mysql -u<db-user> -p <db-name> < mydb-dump.sql
```

????

```
# mysql -u<db-user> -p
mysql> SET GLOBAL connect_timeout=60;
mysql> use <db-name>;
mysql> \. /path/to/mydb-dump.sql
mysql> quit
```

Bash Samples

```
#!/bin/sh
```

...

```
#Update Database
```

```
RESULT=`/usr/bin/mysql -uroot -p$MYSQLROOTPASSWORD <<SQL
```

use asteriskcdrdb

```
CREATE TABLE cdr_new (
acctid integer NOT NULL AUTO_INCREMENT PRIMARY KEY,
```

```
src varchar(80) NOT NULL,
dst varchar(80) NOT NULL,
...
...
uniqueid varchar(32) NOT NULL,
userfield varchar(80) NOT NULL
);
```

```
RENAME TABLE cdr TO cdr_backup;
```

```
RENAME TABLE cdr_new TO cdr;
ALTER TABLE cdr ADD INDEX ( calldate );
ALTER TABLE cdr ADD INDEX ( dst );
ALTER TABLE cdr ADD INDEX ( accountcode );
```

```
quit
SQL`
...

```

?? MySQL ??????????

?? /etc/mysql/my.cnf

???? bind-address

#bind-address = 127.0.0.1

DB????????????????????????????????

MySQL Tuning and Optimization

????????????

- [MySQL 5.4 Scaling on Nehalem with Sysbench](#)
- [Tuning MySQL on Linux](#)
- [Maximizing Sysbench OLTP performance for MySQL](#)
- [MySQL 5 Optimization and Tuning Guide](#)
- [mysql 5.0 my.cnf?????](#)
- [\[MySQL\] Chapter 8. Optimization](#)
- [mysql5.x????MyISAM?InnoDB??????](#)
- [MariaDB Optimization and Tuning](#)
- [How To Optimize MySQL with Query Cache on Ubuntu 18.04](#)
- [OREILLY: Chapter 4. Query Performance Optimization](#)
- tmp_table_size
 - ? [mysql tmp table size??????????](#)
 - ? [\[Mysql/MariaDB\] ??Memory????????????????](#)

??????

```
locate my-large.cnf
locate my-huge.cnf
```

```
mysqladmin variables -uroot -p
mysql> SHOW VARIABLES;
mysql> SHOW STATUS;
```

```
MySQL ????
// ????
```

```
mysql> show variables like '%keyword%';
?? % ??????
```

```
shell> mysqladmin variables -uroot -p
```

```
// MySQL ??
```

```
mysql> show variables like 'version';
```

```
// ????
```

```
mysql> /s
```

```
mysql Ver 14.12 Distrib 5.0.77, for redhat-linux-gnu (i686) using readline 5.1
```

```
Connection id:      29
Current database:
Current user:       root@localhost
SSL:               Not in use
Current pager:     stdout
Using outfile:     ""
Using delimiter:   ;
Server version:    5.0.77 Source distribution
Protocol version:  10
Connection:        127.0.0.1 via TCP/IP
Server charsetset: latin1
Db charsetset:    latin1
Client charsetset: latin1
Conn. charsetset: latin1
TCP port:          3306
Uptime:            4261 days 14 hours 34 min 50 sec
```

```
DB????
- ??
```

- [MySQL Activity Report](#)

???? <http://gert.sos.be/demo/mysqlar/>

- ??

- [mysqlreport](#)
 - [MySQL Tuner](#)
- ?? <http://tools.assembla.com/svn/mysqldt.../mysqldtuner.pl>

mysql> show processlist;

Id	User	Host	db	Command	Time	State	Info
3	root	localhost	webapp	Query	0	NULL	show processlist
5	root	localhost:61704	webapp	Sleep	208		NULL
6	root	localhost:61705	webapp	Sleep	208		NULL
7	root	localhost:61706	webapp	Sleep	208		NULL

4 rows in set (0.00 sec)

mysql> show status like '%onn%';

Variable_name	Value
Aborted_connects	0
Connections	8
Max_used_connections	4
Ssl_client_connects	0
Ssl_connect_renegotiates	0
Ssl_finished_connects	0
Threads_connected	4

<< active connections

7 rows in set (0.00 sec)

?? root ??

shell> mysqladmin -u root -p password 'newpass'

??????

????

???)

#>mysql -u root -p mysql

mysql> CREATE USER 'db_user'@'from_host' IDENTIFIED BY 'db_pass';

mysql> GRANT ALL PRIVILEGES ON db_name.* TO 'db_user'@'from_host' WITH GRANT OPTION;

???)

#>mysql -u roop -p mysql

```
mysql> INSERT INTO user
-> VALUES('from_host','db_user',PASSWORD('db_pass'),
-> 'Y','Y','Y','Y','Y','Y','Y','Y','Y','Y','Y','Y','Y','Y');
mysql> FLUSH PRIVILEGES;
```

TIP:

```
from_host ????? IP ? hostname?????
- localhost ???local ??
- % ?????
```

```
????
// ??????
```

```
mysql>select host,user from mysql.user;
```

```
// ????? user1 ???
```

```
mysql> SHOW GRANTS FOR user1@localhost;
```

```
// ??????????
```

```
mysql> SHOW GTANTS;
```

```
????
```

```
mysql> DROP USER 'user1'@'localhost';
```

```
????????
???)
```

```
#>mysql -u root -p
mysql> SET PASSWORD FOR 'user'@'hostname' = PASSWORD('newpassword');
mysql> flush privileges;
```

```
???)
```

```
#>mysql -u root -p
mysql> use mysql;
mysql> UPDATE user SET Password=PASSWORD("??") WHERE User='?????' AND Host = 'localhost';
mysql> flush privileges;
```

```
?? SQL ??????
```

```
mysql> pager less -n -i -S;
```

```
mysql> show table status;
```

Name	Engine	Version	Row_format	Rows	Avg_row_length	Data_length	Max_data_length
Backup	MyISAM	10	Dynamic	0	0	0	281474976710655
admin	MyISAM	10	Dynamic	2	32	64	281474976710655
ampusers	MyISAM	10	Dynamic	1	44	44	281474976710655
announcement	MyISAM	10	Dynamic	0	0	0	281474976710655
callback	MyISAM	10	Dynamic	0	0	0	281474976710655
cidlookup	MyISAM	10	Dynamic	0	0	0	281474976710655
cidlookup_incoming	MyISAM	10	Dynamic	0	0	0	281474976710655
cronmanager	MyISAM	10	Dynamic	1	100	100	281474976710655
custom_destinations	MyISAM	10	Dynamic	0	0	0	281474976710655
custom_extensions	MyISAM	10	Dynamic	0	0	0	281474976710655
devices	MyISAM	10	Dynamic	2	38	76	281474976710655
disa	MyISAM	10	Dynamic	0	0	0	281474976710655
extensions	MyISAM	10	Dynamic	3	65	196	281474976710655
featurecodes	MyISAM	10	Dynamic	39	54	2136	281474976710655
findmefollow	MyISAM	10	Dynamic	0	0	0	281474976710655

```
?? \G ??????????
```

```
NOTE: ??? rows ?????
```

```
mysql> show table status like 'data_source_stats_hourly_cache' \G
```

```
***** 1. row *****
```

```
    Name: data_source_stats_hourly_cache
```

```
    Engine: MEMORY
```

```
    Version: 10
```

```
    Row_format: Fixed
```

```
    Rows: 124417
```

```
    Avg_row_length: 73
```

```
    Data_length: 10244096
```

```
    Max_data_length: 9278300
```

```
    Index_length: 6654260
```

```
    Data_free: 191479
```

```
    Auto_increment: NULL
```

```
    Create_time: 2014-12-24 20:34:07
```

```
    Update_time: NULL
```

```
    Check_time: NULL
```

```
    Collation: utf8_general_ci
```

```
    Checksum: NULL
```

```
    Create_options:
```

```
    Comment:
```

```
1 row in set (0.01 sec)
```

```
?? Store Engine (InnoDB/MyISAM)
```

```
// ?? Table ? storage engine type
```



```
mysql> use <db_name>;
mysql> pager less -n -i -S;
mysql> show table status;
mysql> show table status like "<table_name>";
mysql> show table status from <db_name>;
```

? Linux console ????

???? Tables

```
mysqlshow -uroot -p'password' --status <db_name>
```

????? Table

```
mysqlshow -uroot -p'password' --status <db_name> <table_name>
```

// ????? Store Engine Type

```
mysql> show engines;
mysql> show variables;
```

// ?? Table ? Store Engine Type

```
mysql> ALTER TABLE <table_name> ENGINE=InnoDB;
```

View ??

// ?????? VIEW

```
mysql> show full tables in <table_name> where table_type like 'VIEW';
```

Procedure ??

// ?? procedure

```
mysql> show procedure status;
```

Trigger ??

// ?? trigger

```
mysql> show triggers like 'name%';
```

```
mysql> show triggers;
```

// ?? trigger ? script

```
DELIMITER ;;
```

```
SET SESSION SQL_MODE="ALLOW_INVALID_DATES" ;;
```

```
CREATE DEFINER=`root`@`localhost` TRIGGER `cdr_insert` AFTER INSERT
ON `cdr` FOR EACH ROW BEGIN
```

```

DECLARE new_dst varchar(80);
IF NEW.billsec > 0 THEN
  CALL fix_number(NEW.dst,@fixed_dst);
  CALL get_rate(@fixed_dst,NEW.dstchannel,NEW.billsec,@myname,@final_cost);
  INSERT INTO cdrcost (uniqueid,destination,cost) VALUES (NEW.uniqueid,@myname,@final_cost);
  INSERT INTO normalization (destination,fixed,dstchannel) VALUES
(NEW.dst,@fixed_dst,NEW.dstchannel);
END IF;
END ;;

```

Tips:

```

??? root ????? trigger????? super ???????? ?.? ???
mysql> grant super on *.* to '<user>'@'localhost'
????????????????????

```

// ?? trigger

```
mysql> DROP TRIGGER <schema.name>.<trigger.name>
```

? schema.name ?? database name?

Primary key ? Unique Key

?? Primary Key

```
mysql> ALTER TABLE ans
mysql> ADD PRIMARY KEY (sn);

```

?? Primary Key

```
mysql> ALTER TABLE ans DROP PRIMARY KEY;
```

?? Unique Key

```
mysql> show create table ans;
```

```

-----+
| ans | CREATE TABLE `ans` (
  `SN` int(11) NOT NULL,
  `AN` varchar(64) NOT NULL,
  `MonthsFromStart` int(11) NOT NULL,
  UNIQUE KEY `AN` (`AN`),
  KEY `ClusteredIndex-20160930-104525` (`SN`)
) ENGINE=InnoDB DEFAULT CHARSET=latin1 |
-----+-----

```

```
mysql> ALTER table ans drop key AN;
```

```
???(Table)??
```

```
// ??????? Table
```

```
mysql> use <db_name>;
```

```
mysql> show tables;
```

```
mysql> show tables from <db_name>;
```

```
????????????????????
```

```
mysql> show table status;
```

```
mysql> show table status like 'table-name';
```

```
// ??????? Create ? SQL statement
```

```
mysql> use <db_name>;
```

```
mysql> show create table <table_name>;
```

```
// ???????
```

```
mysql> describe <table_name>;
```

```
mysql> show columns from <table_name>;
```

```
// ???????
```

```
mysql> RENAME TABLE old_name TO new_name;
```

```
// ???????
```

```
mysql> INSERT INTO <table_name> (col1,col2) VALUES(val1,val2);
```

```
// ???????
```

```
mysql> DELETE FROM <table_name> WHERE <column_name>='value';
```

```
// ???????
```

```
mysql> DELETE FROM <table_name>;
```

```
// ???????
```

```
//??? id=3????
```

```
mysql> update <table> set <field>=replace(<field>,'<str_search>','<str_replace>') where id=3;
```

```
// ???????
```

```
mysql> ALTER TABLE <table_name> ADD <column_name> VARCHAR(32);
```

```
???? dash ? column name????????? `???????
```

```
mysql> ALTER TABLE <table_name> ADD `column-name` VARCHAR(32);
```

```
// ??????????
```

```
mysql> ALTER TABLE <table_name> MODIFY <column_name> VARCHAR(16) NOT NULL;
```

```
// ????? INDEX
```

```
// ?? INDEX
```

```
mysql> SHOW INDEX FROM <db_name>.<table_name>;
```

```
// ?? INDEX
```

```
mysql> ALTER TABLE <table_name> ADD INDEX (column1);
```

```
// ?? UNIQUE INDEX
```

```
mysql> ALTER TABLE <table_name> ADD UNIQUE (column2);
```

```
// ??????????
```

```
????????????????? Table 'cc_system_log' is marked as crashed and should be repaired
```

```
????????
```

```
mysql> repair TABLE <tab_name>;
```

```
// ??????????????
```

```
????? 30 ?
```

```
mysql>SELECT calldate FROM cdr WHERE calldate < '2011/1/1' ORDER BY calldate DESC LIMIT 30;
```

```
mysql>SELECT count(*) FROM cdr WHERE calldate < '2011/1/1';
```

```
mysql>DELETE FROM cdr WHERE calldate < '2011/1/1';
```

```
???(Database)??
```

```
//?????????
```

```
mysql> show databases;
```

```
//??????
```

```
mysql> use [db_name];
```

```
//??????????
```

```
mysql> show variables;
```

```
//?????
```

```
mysql> CREATE DATABASE [db_name];
```

```
//?????
```

```
mysql> GRANT ALL PRIVILEGES ON [db_name].* TO [db_user]@localhost;
```

```
mysql> GRANT ALL PRIVILEGES ON [db_name].* TO [db_user]@localhost WITH GRANT OPTION;
```

```
//?????
```

```
mysql> REVOKE ALL PRIVILEGES,GRANT OPTION ON [db_name].* FROM [db_user]@localhost;
```

```
//?????
```

```
mysql> DROP DATABASE [db_name];
```

```
??????SQL statement
```

```
$>mysql -u db_user -ppassword -e "show tables" database
```

```
-p ???????????
```

```
????
```

```
mysql> \h
```

```
mysql> help
```

```
mysql> help <command>;
```