

# Backup & Restore

## Backup

Script#1:

```
#!/bin/bash

# 数据库名称
mysql_user="USER" #MySQL 用户
mysql_password="PASSWORD" #MySQL 密码
mysql_host="localhost"
mysql_port="3306"
mysql_charset="utf8" #MySQL 字符集
backup_db_arr=("db1" "db2") #数据库名称数组 ("db1" "db2" "db3")
backup_location=/var/www/mysql #备份目录"/"
expire_backup_delete="ON" #备份删除 ON 开启 OFF 关闭
expire_days=3 #备份天数 expire_backup_delete 删除

# 备份时间
backup_time=`date +%Y%m%d%H%M` #备份时间
backup_Ymd=`date +%Y-%m-%d` #备份年月日
backup_3ago=`date -d '3 days ago' +%Y-%m-%d` #3 天前
backup_dir=$backup_location/$backup_Ymd #备份目录
welcome_msg="Welcome to use MySQL backup tools!" #欢迎消息

# 检查 MySQL 是否运行,mysql 进程
mysql_ps=`ps -ef |grep mysql |wc -l`
mysql_listen=`netstat -an |grep LISTEN |grep $mysql_port|wc -l`
if [ [$mysql_ps == 0] -o [$mysql_listen == 0] ]; then
    echo "ERROR:MySQL is not running! backup stop!"
    exit
else
    echo $welcome_msg
fi
```

```

# 连接mysql 数据库
mysql -h$mysql_host -P$mysql_port -u$mysql_user -p$mysql_password <<end
use mysql;
select host,user from user where user='root' and host='localhost';
exit
end

flag=`echo $?`
if [ $flag != "0" ]; then
    echo "ERROR:Can't connect mysql server! backup stop!"
    exit
else
    echo "MySQL connect ok! Please wait....."
    # 连接mysql 数据库
    if [ "$backup_db_arr" != "" ];then
        #dbnames=$(cut -d ',' -f1-5 $backup_database)
        #echo "arr is (${backup_db_arr[@]})"
        for dbname in ${backup_db_arr[@]}
        do
            echo "database $dbname backup start..."
            `mkdir -p $backup_dir`
            `mysqldump -h$mysql_host -P$mysql_port -u$mysql_user -p$mysql_password $dbname --default-
character-set=$mysql_charset | gzip > $backup_dir/$dbname-$backup_time.sql.gz`
            flag=`echo $?`
            if [ $flag == "0" ];then
                echo "database $dbname success backup to $backup_dir/$dbname-$backup_time.sql.gz"
            else
                echo "database $dbname backup fail!"
            fi

        done
    else
        echo "ERROR:No database to backup! backup stop"
        exit
    fi
    # 删除过期备份数据
    if [ "$expire_backup_delete" == "ON" -a "$backup_location" != "" ];then
        #`find $backup_location/ -type d -o -type f -ctime +$expire_days -exec rm -rf {} \;`
        `find $backup_location/ -type d -mtime +$expire_days | xargs rm -rf`
        echo "Expired backup data delete complete!"
    fi
fi

```

```
fi
echo "All database backup success! Thank you!"
exit
fi
```

## Restore

### How to Restore Large MySQL Database

“ When we restore a large database, usually we come across two errors as shown below: “MySQL server has gone away” & “Lost connection to MySQL server during query”

Here, we consider restoring a **16GB** database:

When restoring huge database, we need to set the values as specified below:

- connect\_timeout = **3600**
- max\_allowed\_packet = **1024M**
- net\_buffer\_length = **1000000**
- wait\_timeout = **86400** (which means 24 hours)
- interactive\_timeout = **86400** (which means 24 hours)
- net\_write\_timeout = **3600**
- net\_read\_timeout = **3600**

```
mysql -u root -p -max_allowed_packet=1024M \  
-connect_timeout=3600 \  
-net_buffer_length=1000000 \  
-wait_timeout=86400 \  
-interactive_timeout=86400 \  
-net_write_timeout=3600 \  
-net_read_timeout=3600 \  
database-name < database.sql
```

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