

MySQL Enterprise Backup

Introduction

Estimated Lab Time: 15 minutes

Objectives

In this lab, you will:

- We work now with **mysql-advanced** instance

Note:

- Server: mysql1

Task 1: Create a backup

1. MySQL Enterprise Backup is now available inside MySQL Enterprise Distributions like a tool, so you don't have to install it.
2. Create directories to store backups

```
<span style="color:green">shell</span> <copy>sudo mkdir -p  
/backupdir/full</copy>
```

```
<span style="color:green">shell</span> <copy>sudo mkdir  
/backupdir/compressed</copy>
```

```
<span style="color:green">shell</span> <copy>sudo chown -R  
mysqluser:mysqlgrp /backupdir</copy>
```

```
<span style="color:green">shell</span> <copy>sudo chmod 770 -R  
/backupdir</copy>
```

3. Create a user in **mysql-advanced** with grants options for backup. To simplify user creations we have a script with minimal grants for this user (see the manual for additional privileges required for specific features like TTS, SBT integration, encrypted). You can also have a look on the privileges opening the file `/workshop/support/mysqlbackup_user_grants.sql`

```
<span style="color:green">shell</span> <copy>mysqlsh  
admin@mysql1:3307</copy>
```

```
<span style="color:blue">mysql</span> <copy>CREATE USER 'mysqlbackup'@'%'  
IDENTIFIED BY 'Welcome1!';</copy>
```

```
<span style="color:blue">mysql</span> <copy>source  
/workshop/support/mysqlbackup_user_grants.sql;</copy>
```

```
<span style="color:blue">mysql</span> <copy>\q</copy>
```

4. Create a full backup

```
<span style="color:green">shell</span> <copy>mysqlbackup --port=3307 --  
host=127.0.0.1 --user=mysqlbackup --password --backup-dir=/backupdir/full  
backup-and-apply-log</copy>
```

5. Create a second backup with compression

```
<span style="color:green">shell</span> <copy>mysqlbackup --port=3307 --  
host=127.0.0.1 --user=mysqlbackup --password --backup-  
dir=/backupdir/compressed --compress backup-and-apply-log</copy>
```

6. Have a look of the content of the backup folders

```
<span style="color:green">shell</span> <copy>cd /backupdir/full</copy>
```

```
<span style="color:green">shell</span> <copy>ls -l</copy>
```

```
<span style="color:green">shell</span> <copy>cd  
/backupdir/compressed</copy>
```

```
<span style="color:green">shell</span> <copy>ls -l</copy>
```

7. Check the size of the two backups, the one uncompressed and the one compressed

```
<span style="color:green">shell></span> <copy>cd /backupdir</copy>
```

```
<span style="color:green">shell></span> <copy>du -sh *</copy>
```

Task 2: Restore

1. Stop the server

```
<span style="color:green">shell></span> <copy>sudo systemctl stop mysqld-advanced</copy>
```

2. (destroy time!) Empty datadir before restore the instance

```
<span style="color:green">shell></span> <copy>sudo rm -rf /mysql/data/*</copy>
```

3. Make a copy of existing binary logs and create a directory to store the new ones

```
<span style="color:green">shell></span> <copy>sudo mv /mysql/binlog/  
/mysql/binlog.old</copy>
```

```
<span style="color:green">shell></span> <copy>sudo mkdir  
/mysql/binlog</copy>
```

```
<span style="color:green">shell></span> <copy>sudo chown mysqluser:mysqlgrp  
/mysql/binlog</copy>
```

```
<span style="color:green">shell></span> <copy>sudo chmod -R 750  
/mysql/binlog</copy>
```

4. Restore the backup We execute mysqlbackup as root because of permission in destination folders

```
<span style="color:green">shell</span> <copy>sudo /mysql/mysql-latest/bin/mysqlbackup --defaults-file=/mysql/etc/my.cnf --backup-dir=/backupdir/full/ copy-back</copy>
```

5. Rename backup-auto.cnf, backup-mysqld-auto.cnf

```
<span style="color:green">shell</span> <copy>sudo mv /mysql/data/backup-auto.cnf /mysql/data/auto.cnf</copy>
```

```
<span style="color:green">shell</span> <copy>sudo mv /mysql/data/backup-mysqld-auto.cnf /mysql/data/mysqld-auto.cnf</copy>
```

6. Set the ownership and privileges

```
<span style="color:green">shell</span> <copy>sudo chown -R mysqluser:mysqlgrp /mysql/data /mysql/binlog</copy>
```

```
<span style="color:green">shell</span> <copy>sudo chmod -R 750 /mysql/data /mysql/binlog</copy>
```

7. Start the server and verify the data

```
<span style="color:green">shell</span> <copy>sudo systemctl start mysqld-advanced</copy>
```

```
<span style="color:green">shell</span> <copy>mysqlsh admin@mysql11:3307</copy>
```

```
<span style="color:blue">mysql</span> <copy>SHOW DATABASES;</copy>
```

Learn More

- <https://dev.mysql.com/doc/mysql-enterprise-backup/8.4/en/mysqlbackup.tasks.html>
- <https://dev.mysql.com/doc/mysql-enterprise-backup/8.4/en/mysqlbackup.privileges.html>

Acknowledgements

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