Backup With mysqldump

Pinal Dave
http://blog.sqlauthority.com
@pinaldave

pluralsight
hardcore developer training

Outline

- **Introduction**
- **Scenario Setup**
- **Backup Single Database**
- **Backup Multiple Databases**
- **Backup All Databases**
- **Backup Single Table**
- **Backup Stored Routines, Procedures, Triggers and Events**
- **Summary**

Introduction

- **mysqldump is a client utility that performs a logical backup**

- **mysqldump command generates SQL statements that can be run to reproduce original schema objects and data**

- **Besides SQL Statement mysqldump command can also generate CSV, delimited text or XML format**

- **Note: For large scale backup and restore using a physical backup copy data files in their original format that can be restored quickly**

Scenario Setup

- **Name of Company – SQL Authority**
- **Company HQ – USA**
- **Business – Movie Rental**

TITLE

DIRECTOR

CAMERA

DATE   SCENE   TAKE

USA

India

Database Administrators

Rahul

Mike

Scenario Setup

- **Name of Company – SQL Authority**
- **Company HQ – USA**
- **Business – Movie Database**
- **2 Offices**
  - US
  - India
- **2 Database Admins**
  - US – Mike
  - India – Rahul
- **Samples Database – sakila, test, world**
  - https://dev.mysql.com/downloads/
- **India and US run different business units**

Scenario 1: Business Needs

India and US run separate business units and maintain their own databases.

Every month end India and US have to take the inventory of all the movies rented and pay the royalty to film studios in the USA.

Scenario 1: Backup Single Database

Mike requests Rahul to take backup of sakila database containing film rental activities and send it from India to USA.

Action: Take a backup of a single database

Scenario 2: Business Needs

India and US run separate business units and maintain their own databases.

Every month end India and US have to take the inventory of all the movies rented and pay the royalty to film studios in the USA.

Additionally, Team India is also developing new application which is based on the world data. As database development has significantly progressed, it is important to send the new database to Team USA for collaboration.

Scenario 2: Backup Multiple Database

Mike requests Rahul to take backup of sakila and world database containing film rental activities and world data respectively. Rahul will send both the databases from India to USA.

Action: Take a backup of a multiple database

Scenario 3: Business Needs

India and US run separate business units and maintain their own databases.

Every month end India and US have to take the inventory of all the movies rented and pay the royalty to film studios in the USA.

For audit purposes, it is important to take backup of all the databases on India and USA server and keep at a central location in the USA.

EVERYTHING

Scenario 3: Backup All Databases

Mike requests Rahul to take backup of all the databases of the server and send it from India to USA.
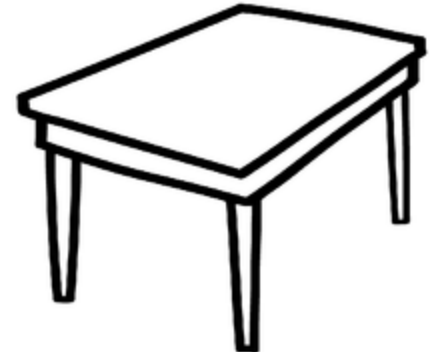
Action: Take a backup of all the databases

Scenario 4: Business Needs

India and US run separate business units and maintain their own databases.

Every day there are film rental activities in India and USA. The royalty is calculated daily in the USA for the rental activities. It is important to send the data related to rental activities to the USA every evening.

Scenario 4: Backup Single Table

Mike requests Rahul to take backup of a single table containing rental activities and send it from India to USA.

Action: Take a backup of a single table

Scenario 5: Business Needs

India and US run separate business units and maintain their own databases.

The business in India has different tax and royalty model when compared to the business in the USA. The logic to calculate royalty is different for both countries.

The business logic of the royalty calculation is written into stored procedure and functions. Team USA would like to keep the copy of the logic as a backup.

Scenario 5: Backup Stored Routines

Mike requests Rahul to take backup of all the database objects like Stored Procedures, Triggers and Events and send it from India to USA.

Action: Take a backup of Stored Procedures, Triggers and Events

Various Options

- **There are many different options available for mysqldump**
- **You can also create option file separately and mysql can read it when connecting to the database**

- **Read all the options here:**
  - https://dev.mysql.com/doc/refman/5.7/en/mysqldump.html

Summary in Sixty Seconds

#1 mssqldump is a client utility that performs a logical backup

#2 User can take backup of Database, Table, Schema, Stored Routines and various other objects with the help of mysqldump

#3 For additional backup options related to mysqldump visit:
https://dev.mysql.com/doc/refman/5.7/en/mysqldump.html