

GRANT REVOKE MySQL Privileges



Here's a step-by-step guide on `GRANT` and `REVOKE` commands in MySQL for beginners. These commands are used to manage privileges for users in a MySQL database.

1. Basics of Privileges

Privileges control what a user can do in a MySQL database. Common privileges include:

- `SELECT`: Read data from tables.
- `INSERT`: Insert new data into tables.
- `UPDATE`: Modify existing data.
- `DELETE`: Remove data from tables.
- `ALL PRIVILEGES`: Grant all permissions.

2. Create a New User

Before granting privileges, create a new user:

sql

```
CREATE USER 'username'@'localhost' IDENTIFIED BY 'password';
```

- Replace `username` with the desired username.
- Replace `localhost` with `%` for remote access from any host or use a specific IP.
- Replace `password` with the desired password.

3. Grant Privileges

Grant All Privileges on a Database

sql

```
GRANT ALL PRIVILEGES ON database_name.* TO 'username'@'localhost';
```

- `database_name.*`: Grants privileges on all tables in the database.

Grant Specific Privileges on a Database

sql

```
GRANT SELECT, INSERT, UPDATE ON database_name.* TO 'username'@'localhost';
```

Grant Privileges on a Specific Table

sql

```
GRANT SELECT, INSERT ON database_name.table_name TO 'username'@'localhost';
```

Grant Privileges for All Databases

sql

```
GRANT ALL PRIVILEGES ON *.* TO 'username'@'localhost';
```

4. Apply Changes

After granting privileges, run the following to apply changes:

sql

```
FLUSH PRIVILEGES;
```

5. View Privileges

Show Privileges for a User

sql

```
SHOW GRANTS FOR 'username'@'localhost';
```

Show Current User's Privileges

sql

```
SHOW GRANTS;
```

6. Revoke Privileges

Revoke Specific Privileges on a Database

sql

```
REVOKE SELECT, INSERT ON database_name.* FROM 'username'@'localhost';
```

Revoke All Privileges

sql

```
REVOKE ALL PRIVILEGES ON *.* FROM 'username'@'localhost';
```

7. Drop a User

If you want to remove the user completely:

sql

```
DROP USER 'username'@'localhost';
```

8. Example Scenario

Let's assume you have a database named `school` and a user `student` who should only view data:

1. Create the User:

sql

```
CREATE USER 'student'@'localhost' IDENTIFIED BY 'password123';
```

2. Grant `SELECT` Privileges:

sql

```
GRANT SELECT ON school.* TO 'student'@'localhost';
```

3. Check Privileges:

sql

```
SHOW GRANTS FOR 'student'@'localhost';
```

4. Revoke Privileges:

sql

```
REVOKE SELECT ON school.* FROM 'student'@'localhost';
```

Important Notes

- Replace `localhost` with `%` if the user needs remote access.
- Use strong passwords for users.
- Be cautious when using `ALL PRIVILEGES` as it gives full control.

This step-by-step approach ensures clarity for beginners in understanding `GRANT` and `REVOKE` commands.