

MariaDB Installation and Configuration

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Overview

This page provides step-by-step instructions for installing MariaDB on *buzz.deome.net* and configuring it to work with applications like BookStack and the photo gallery.

1. Installing MariaDB

1. Update the System:

- Ensure all packages are up-to-date.

```
sudo apt update && sudo apt upgrade -y
```

2. Install MariaDB Server:

- Use the following command to install MariaDB:

```
sudo apt install mariadb-server -y
```

3. Start and Enable MariaDB:

- Start the MariaDB service and enable it to start on boot:

```
sudo systemctl start mariadb  
sudo systemctl enable mariadb
```

4. Verify Installation:

- Check the MariaDB version to confirm it is installed:

```
mysql --version
```

- You should see output confirming the MariaDB version, as shown in your initial check.
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2. Initial MariaDB Configuration

1. Run the Security Script:

- MariaDB provides a security script to help you configure common security settings.

```
sudo mysql_secure_installation
```

- This script will prompt you to:
 - Set a root password.
 - Remove anonymous users.
 - Disallow remote root login.
 - Remove test databases.
- Answer each prompt as needed to secure the installation.

2. Log in as the Root User:

- After configuring security, log in to MariaDB:

```
sudo mysql -u root -p
```

3. Create a New Database and User for Each Application:

- **Database for BookStack:**

```
CREATE DATABASE bookstackdb;  
CREATE USER 'bookstackuser'@'localhost' IDENTIFIED BY 'your_password';  
GRANT ALL PRIVILEGES ON bookstackdb.* TO 'bookstackuser'@'localhost';  
FLUSH PRIVILEGES;
```

- **Database for Photo Gallery:**

```
CREATE DATABASE gallerydb;  
CREATE USER 'galleryuser'@'localhost' IDENTIFIED BY 'your_password';  
GRANT ALL PRIVILEGES ON gallerydb.* TO 'galleryuser'@'localhost';  
FLUSH PRIVILEGES;
```

- Replace `your_password` with secure passwords.

4. Exit MariaDB:

- Once databases and users are set up, exit MariaDB:

```
EXIT;
```

3. Basic MariaDB Configuration Options

1. Optimize Settings (Optional):

- Open the MariaDB configuration file:

```
sudo nano /etc/mysql/mariadb.conf.d/50-server.cnf
```

- Modify settings under `[mysqld]` as needed. Example optimizations:

```
max_connections = 100
innodb_buffer_pool_size = 256M
```

- Save and close the file.

2. Restart MariaDB:

- Apply changes by restarting the MariaDB service:

```
sudo systemctl restart mariadb
```

4. Testing and Verification

1. Verify Databases and Users:

- Log in as root and list the databases to confirm they were created:

```
sudo mysql -u root -p
SHOW DATABASES;
```

2. Connect Using Each Application's Credentials:

- Use the created usernames and passwords to confirm access for BookStack and the gallery:

```
mysql -u bookstackuser -p
mysql -u galleryuser -p
```

3. Connection from Applications:

- Ensure that *BookStack* and the photo gallery application can connect to MariaDB using the specified database names and credentials.

5. Maintenance and Backup

1. Automate Backups:

- Create a cron job to back up each database:

```
mysqldump -u root -p bookstackdb > /path/to/backup/bookstackdb.sql
mysqldump -u root -p gallerydb > /path/to/backup/gallerydb.sql
```

2. Update MariaDB:

- Periodically check for updates to keep MariaDB secure and optimized:

```
sudo apt update && sudo apt upgrade mariadb-server
```