

Setting Up WordPress with MySQL Using Docker

This lab will guide you through creating a WordPress instance connected to a MySQL database using Docker. You'll set up a network, run MySQL and WordPress containers, and configure the WordPress `wp-config.php` file to connect to the MySQL database.

1. Create Docker Network

First, create a Docker network to allow communication between containers:

```
docker network create mynetwork
```

2. Run MySQL Container

Start a MySQL container with the necessary environment variables and volume for persistent data:

```
docker run -d --name my-db --network mynetwork \ -v  
wordpress-data:/var/lib/mysql \ -e MYSQL_ROOT_PASSWORD=mypassword \ -e  
MYSQL_DATABASE=wordpress \ -e MYSQL_USER=wordpressuser \ -e  
MYSQL_PASSWORD=wordpresspass \ mysql:5.7
```

3. Run WordPress Container

Launch the WordPress container, configuring it to connect to the MySQL database:

```
docker run -d --name my-wordpress --network mynetwork -p 8080:80 \  
-e WORDPRESS_DB_HOST=my-db \  
-e WORDPRESS_DB_USER=wordpressuser \  
-e WORDPRESS_DB_PASSWORD=wordpresspass \  
-e WORDPRESS_DB_NAME=wordpress \  
-v wordpress-files:/var/www/html \  
-v apache-config:/etc/apache2 \  
wordpress
```

4. Verify MySQL Connection

To check if the WordPress container can connect to the MySQL database:

```
docker exec -it my-wordpress bash  
apt-get update && apt-get install -y mysql-client  
mysql -h my-db -u wordpressuser -p
```

Enter the password `wordpresspass` when prompted to access the MySQL prompt.

5. Update `wp-config.php` File

To ensure the WordPress instance is properly configured, update the `wp-config.php` file with the correct database settings:

Option 1: Directly on the Volume

```
cd /var/lib/docker/volumes/wordpress-files/_data

# Database name
sed -i "s/define('DB_NAME', '.*');/define('DB_NAME', 'wordpress');/"
wp-config.php

# Database user
sed -i "s/define('DB_USER', '.*');/define('DB_USER', 'wordpressuser');/"
wp-config.php

# Database password
sed -i "s/define('DB_PASSWORD', '.*');/define('DB_PASSWORD',
'wordpresspass');/" wp-config.php

# Database host
sed -i "s/define('DB_HOST', '.*');/define('DB_HOST', 'my-db');/"
wp-config.php
```

Option 2: Inside the WordPress Container

```
docker exec -it my-wordpress sed -i "s/define('DB_NAME',
'.*');/define('DB_NAME', 'wordpress');/" /var/www/html/wp-config.php

docker exec -it my-wordpress sed -i "s/define('DB_USER',
'.*');/define('DB_USER', 'wordpressuser');/" /var/www/html/wp-config.php

docker exec -it my-wordpress sed -i "s/define('DB_PASSWORD',
'.*');/define('DB_PASSWORD', 'wordpresspass');/"
/var/www/html/wp-config.php

docker exec -it my-wordpress sed -i "s/define('DB_HOST',
'.*');/define('DB_HOST', 'my-db');/" /var/www/html/wp-config.php
```