**Docker Networking Example**

As you already read our previous tutorial [**Docker Networking**](https://tecadmin.net/tutorial/docker/docker-networking/). This tutorial, we will create a small docker network with 2 docker containers as following.

**> MySQL** – A relational database server.  
**> PHPMyAdmin** – A web based interface to manage MySQL server.

In this tutorial, you will learn how to access MySQL server using PHPMyAdmin running on the different container.

**1. Create Network**

First of all, create a new docker network. Use below command to create new bridge network named **my-bridge-network**.

$ docker network create -d bridge my-bridge-network

**2. Run MySQL Container**

Now, run a new MySQL docker container. Set the default root user password with **MYSQL\_ROOT\_PASSWORD** variable as showing in below command.

$ docker run --name mysql -e MYSQL\_ROOT\_PASSWORD=secret -d mysql/mysql-server

After creating container add this to our network.

$ docker network connect my-bridge-network mysql

Now view the new IP address of the MySQL container, which is required in next step.

$ docker inspect mysql | grep "IPAddress"

**3. Run PHPMyAdmin Container**

Now run a new Docker container of phpmyadmin using the following command. Change the **PMA\_HOST** value with the IP address of MySQL container IP address get in last step.

$ docker run --name phpmyadmin -d -e PMA\_HOST=172.21.0.2 -p 8080:80 phpmyadmin/phpmyadmin

Add this container to our network.

$ docker network inspect my-bridge-network

**4. Inspect Our Network**

As you have attached both containers to our new network. Let’s inspect the current network settings.

$ docker network inspect my-bridge-network

You will get the result some like below.

**5. Allow MySQL to PHPMyAdmin Host**

The default MySQL doesn’t allow remote hosts to connect. So allow phpmyadmin for MySQL connection. Get shell access to your MySQL container using below command.

$ docker exec -it mysql bash

Login to your MySQL server using the password provided during instance creation.

bash-4.2# mysql -u root -p

Create a new user with phpmyadmin host ip address. In my case phpmyadmin host ip address is ‘**172.21.0.3**‘ as shown in above step.



|  |  |
| --- | --- |
| 1  2  3  4  5  6  7  8 | mysql> GRANT ALL on \*.\* to 'dbuser'@'172.21.0.3' identified by 'secret';  Query OK, 0 rows affected, 1 warning (0.00 sec)    mysql> flush privileges;  Query OK, 0 rows affected (0.00 sec)    mysql> exit  Bye |

**6. Access MySQL with PHPMyAdmin**

Finally, Connect your docker host system on port 8080 to access phpmyadmin web user interface.