**STEPS**

* First download VMware in your systems

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| <https://www.vmware.com/in/products/workstation-player.html> |

* Create an Ubuntu 22.04 VM in it. Download the iso file from the link below.

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| <https://ubuntu.com/download/desktop> |

* Install docker into the Ubuntu 22.04 VM

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| <https://docs.docker.com/engine/install/ubuntu/> |

* Create a Docker network (here it is a bridge network)

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| --- |
| <https://docs.docker.com/engine/reference/commandline/network_create/> |

* Now create a Dockerfile and add the below script in it using nano.

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| --- |
| FROM ubuntu:latest    RUN apt-get update && \  DEBIAN\_FRONTEND=noninteractive apt-get install -y apache2 php php-mysql libapache2-mod-php    EXPOSE 80    CMD ["apache2ctl", "-D", "FOREGROUND"] |

* Create image from the above file using the command below

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| --- |
| sudo docker build -t <image\_name> . |

* Next run the container.

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| --- |
| sudo docker run -it image\_one  or sudo docker run -it -p 80:80 image\_one  Or  Sudo docker run --name <name> -p 80:80 image\_name |

* Now lets start with mariadb container. Pull the existing image in ubuntu

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| --- |
| sudo docker pull mariadb |

* Create the container

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| --- |
| sudo docker run --name maria-db -p 3306:3306 -e MYSQL\_ROOT\_PASSWORD=password -d mariadb |

* Connect both the containers to the bridge network using the following command

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| --- |
| sudo docker network connect wordpress-PHP-network maria-db |

* Verify the network

|  |
| --- |
| sudo docker network inspect wordpress-PHP-network |

**Other useful commands**

* Docker ps – To list all running containers
* Docker images – to list all images
* Docker (start/stop) <name> - to start/stop container
* Docker rm <name> - remove the container
* Docker rmi <name> - remove the image
* docker exec -it wonderful\_swirles bin/bash
* Apt install net-tools – Ifconfig installation

**Main task**

* First pull the ubuntu image and run the container with the following commands.

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| --- |
| Docker pull ubuntu:22.04 docker run –it <imagename> |

* You will be logged in to the contianer, This is a new container that does not have any modules installed.
* Update all by using the command and then install apache2

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| --- |
| apt-get update apt install apache2 |

* To check if the localhost is up and running use ping command.

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| --- |
| apt-get install iputils-ping |

* Next go to var/www/html and create a info.php file and type the following script.

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| --- |
| <?php  phpinfo();  ?> |
| Install nano if required - apt-get install nano |

* Next run the above php script.

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| --- |
| php /var/www/html/info.php |

* Start the server by the following command and restart apache2

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| --- |
| php -S localhost:8000 systemctl restart apache2 |

**Installing wordpress (https://linuxhint.com/install-wordpress-ubuntu-server/)**

* wget <https://wordpress.org/latest.zip>
* unzip latest.zip
* sudo mv wordpress/ /var/www/html/
* Use the below commands to change the permissions for the WordPress folder

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| --- |
| $ sudo chown www-data:www-data -R /var/www/html/wordpress/  $ sudo chmod -R 755 /var/www/html/wordpress/ |

* create a configuration file and paste the below content, editing where necessary.

|  |
| --- |
| *$* sudo nano /etc/apache2/sites-available/wordpress.conf  <VirtualHost \*:80> ServerAdmin [admin@linuxhint.com](mailto:admin@linuxhint.com) DocumentRoot /var/www/html/wordpress ServerName linuxhint.com ServerAlias www.linuxhint.com <Directory /var/www/html/wordpress/> Options FollowSymLinks AllowOverride All Require all granted </Directory> ErrorLog *${APACHE\_LOG\_DIR}*/error.log CustomLog *${APACHE\_LOG\_DIR}*/access.log combined </VirtualHost> |

* Next, enable the **virtual host** and the **rewrite module** we created in the WordPress configuration file and restart your Apache web server to implement the changes.

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| --- |
| $ sudo a2ensite wordpress.conf  $ sudo a2enmod rewrite  $ sudo systemctl restart apache2 |

* Use the below command to disable the Apache test page, restart Apache, and open the address again.

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| --- |
| $ sudo a2dissite 000-default.conf  $ sudo systemctl restart apache2 |

* You should get the WordPress setup page loading from the url.

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| --- |
| <http://localhost/wordpress/wp-admin/setup-config.php?step=1>or http://localhost/wordpress/ |

**Connect wordpress to maria-db**

* Login to the maria-db server and create a user and a database and give all permissions. Use the below commands.

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| --- |
| Mysql –u root –p CREATE DATABASE mydatabase;  CREATE USER 'myuser'@'%' IDENTIFIED BY 'mypassword';  GRANT ALL PRIVILEGES ON mydatabase.\* TO 'myuser'@'localhost';  FLUSH PRIVILEGES;  GRANT ALL ON mydatabase.\* TO 'newuser'@'%' IDENTIFIED BY 'password'; |

* Once you create a user and database enter these details in wordpress login page. Then you will be connected.
* Install mysql-client
* Go to wordpress folder of the apache container and edit the wp-config-sample.php.

**Migrate the wordpress folder to another**

* Make a zip folder of wordpress folder using the command

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| --- |
| Zip –r wordpress.zip wordpress |

* Use the below command to migrate between the containers. First copy the zip file from contianer1 to host system. Then copy it to destination container. We are doing this because cp between containers is not supported.

|  |
| --- |
| docker cp <dockername>:/var/www/html/wordpress.zip home/ docker cp /home/wordpress.zip <dockername>:var/www/html |

* Unzip the wordpress.zip file

**Migrate the database**

* Connect to the database-1 container and create a dump file

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| --- |
| mysqldump -u root -p mydatabase > dump.sql |

* Use the above cp commands and take this .sql file to the host and then transfer it to database-2 container.
* Then connect to the database-2 container and create a database with the same name.
* Then exit of the container
* Next execute the below command

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| --- |
| docker exec -i maria-db-2 mysql -uroot -ppassword mydatabase < dump.sql |

**To finish the migration**

* First write the script to /etc/apache2/sites-available/wordpress.conf in your new container as above. And also run the a2enmod commands as well.
* Next install phpmyadmin

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| --- |
| For configure database select no choose webserver apache2 : 1 |

* Then go to the this path and paste the script into the file.

|  |
| --- |
| Path - /etc/phpmyadmin/config.inc.php  $i++; $cfg['Servers'][$i]['host'] = 'HostName:port'; //provide hostname and port if other than default $cfg['Servers'][$i]['user'] = 'userName'; //user name for your remote server $cfg['Servers'][$i]['password'] = 'Password'; //password $cfg['Servers'][$i]['auth\_type'] = 'config'; // keep it as config |

* Then open <yourip>/phpmyadmin url
* Then choose the database user and provide credentials to login.
* Select the database and next wp\_options. Then edit the top two (siteurl, home) and point it to your IP.