

Dockerized WordPress with SSL Certificate Generation

In this tutorial, we'll walk through the process of enhancing a Dockerized WordPress setup with SSL certificate generation. This will ensure secure communication between servers and clients, bolstering the security of your WordPress deployment.

Prerequisites:

1. Docker installed on your system.
2. Basic understanding of Docker Compose.

Step 1: Update Docker Compose Configuration

Open your `docker-compose.yml` file and make the following modifications:

```
version: '3.1'

services:
  wordpress:
    image: wordpress:php7.2-apache
    ports:
      - "8001:80"
    environment:
      WORDPRESS_DB_HOST: mysql
      WORDPRESS_DB_USER: root
      WORDPRESS_DB_PASSWORD:
      WORDPRESS_DB_NAME: wordpress_db
    volumes:
      - ./website:/var/www/html
      - ./ssl:/etc/apache2/ssl # Mount SSL directory
    depends_on:
      - mysql
    networks:
      - my_network

mysql:
```

```
image: mysql:5.7
environment:
  MYSQL_DATABASE: wordpress_db
  MYSQL_ROOT_PASSWORD:
ports:
  - "3306:3306"
volumes:
  - ./data:/var/lib/mysql
networks:
  - my_network

phpmyadmin:
image: phpmyadmin/phpmyadmin
links:
  - mysql
ports:
  - "8081:80"
environment:
  PMA_HOST: mysql
  MYSQL_ROOT_PASSWORD:
networks:
  - my_network

networks:
  my_network:
    driver: bridge
```

Step 2: Create SSL Certificate Generation Script

Generate a bash script named `generate_ssl.sh` with the following content:

```
#!/bin/bash

SSL_DIR="./ssl"
PRIVATE_KEY="$SSL_DIR/private.key"
CERTIFICATE="$SSL_DIR/certificate.crt"

# Create SSL directory if it doesn't exist
```

```
mkdir -p $SSL_DIR

# Generate SSL certificate if not already present
if [ ! -f "$PRIVATE_KEY" ] || [ ! -f "$CERTIFICATE" ]; then
    openssl req -x509 -nodes -days 365 -newkey rsa:2048 -keyout "$PRIVATE_KEY" -out
"$CERTIFICATE"
fi
```

Step 3: Implement SSL Certificate Generation

Execute the following commands in your terminal:

```
chmod +x generate_ssl.sh
./generate_ssl.sh
```

Step 4: Start Docker Containers

Run the following command to initiate your Docker containers:

```
docker-compose up -d
```

Conclusion

Congratulations! You've successfully enhanced your Dockerized WordPress setup with SSL certificate generation. Your WordPress deployment now benefits from improved security through encrypted communication.

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