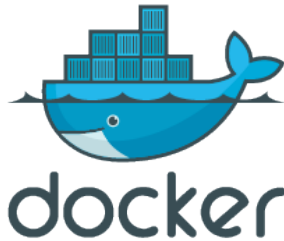


# Step-by-Step Guide: How to Setup Wastebin



This article will guide you through

the process of building your own Wastebin image for the ARM64 architecture, specifically designed to run on a Raspberry Pi 5. Wastebin is a minimal pastebin application originally designed for AMD64 architecture. In this guide, you will learn how to build and run it on ARM64 using Docker Swarm with an SQLite3 database.

## Building the Image for ARM64/v8 Architecture

### Step 1: Download the Wastebin GitHub Repository

Start by cloning the official Wastebin GitHub repository:

```
git clone https://github.com/matze/wastebin.git
```

### Step 2: Navigate to the Wastebin Directory

Navigate to the downloaded Wastebin repository:

```
cd /path/to/wastebinrepo/wastebin
```

## Step 3: Build the ARM64 Image

To build an ARM64 image on an x86\_64 host, run the following command:

```
sudo docker build --platform linux/arm64 -t wastebin:v2.5.0-arm64 -f Dockerfile.arm .
```

Building the image may take some time. For example, it took around 322 seconds for me, so be patient.

### Step 3.1: Verify the Image

Check if the image was built successfully:

```
docker images
```

You should see output like this:

wastebin	v2.5.0-arm64	796d3c8a13da	42 seconds ago	12.3MB
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## Step 4: Login to Docker Hub

Login to your Docker Hub account:

```
docker login
```

After logging in, visit <https://login.docker.com/activate> and enter your confirmation code.

## Step 5: Push the Image to Docker Hub

You can now push your newly built image to Docker Hub.

**Step 5.1:** Tag the image using your Docker Hub username:

```
docker tag wastebin:v2.5.0-arm64 aeoneros/wastebin:v2.5.0-arm64
```

**Step 5.2:** Push the image to Docker Hub:

```
docker push aeoneros/wastebin:v2.5.0-arm64
```

You can also access my prebuilt image on Docker Hub: [Wastebin ARM64 Image](#).

# Running Wastebin with Docker-Compose and Traefik

## Step 1: Create a Directory for Persistent Data

You'll need a directory for storing Wastebin data. Create the following directories:

```
mkdir /mnt/glustermount/data/wastebin_data  
sudo useradd -u 10001 wastebinuser
```

## Step 2: Create the Docker Compose File

Now create and customize your `docker-compose.yaml` file:

```
nano docker-compose.yaml
```

Here is an example configuration:

```
version: "3.8"  
  
services:  
  wastebin:  
    image: aeoneros/wastebin:v2.5.0-arm64  
    environment:  
      - WASTEBIN_DATABASE_PATH=/data/state.db # Don't change this, it maps inside the container  
      - WASTEBIN_PASSWORD_SALT=${WASTEBIN_PASSWORD_SALT_HASH}  
      - RUST_LOG=info
```

```
volumes:
  - '/mnt/gluster mount/data/wastebin_data:/data'

networks:
  - management_net

deploy:
  mode: replicated
  replicas: 1
  labels:
    - 'traefik.enable=true'
    - 'traefik.http.routers.wastebin.rule=Host(`wastebin.aeoneros.com`)'
    - 'traefik.http.routers.wastebin.entrypoints=websecure'
    - 'traefik.http.routers.wastebin.tls.certresolver=leresolver'
    - 'traefik.http.services.wastebin.loadbalancer.server.port=8088'
    - 'traefik.docker.network=management_net'

networks:
  management_net:
    external: true
```

Ensure the `/wastebin_data` folder is writable by user `10001`.

## Step 3: Adjust Permissions

Change the ownership and permissions of the storage directory to ensure proper access.

### Step 3.1: Change ownership:

```
sudo chown 10001:10001 /mnt/gluster mount/data/wastebin_data
```

### Step 3.2: Set the correct permissions:

```
sudo chmod 700 /mnt/gluster mount/data/wastebin_data
```

Verify the ownership and permissions:

```
ls -ld /mnt/gluster mount/data/wastebin_data
```

You should see something like this:

```
drwx----- 10001 10001 ... /mnt/glustermount/data/wastebin_data
```

## Step 4: Deploy the Stack

Deploy the Wastebin service using Docker Swarm:

```
docker stack deploy -c docker-compose.yaml wastebin
```

## Configuration Options

The following environment variables can be used to configure Wastebin:

- **WASTEBIN\_ADDRESS\_PORT**: Sets the address and port (default: `0.0.0.0:8088`).
- **WASTEBIN\_BASE\_URL**: Determines the base URL for QR code display.
- **WASTEBIN\_CACHE\_SIZE**: Number of cached syntax-highlighted items (default: `128`).
- **WASTEBIN\_DATABASE\_PATH**: Path to the SQLite3 database (default: in-memory).
- **WASTEBIN\_HTTP\_TIMEOUT**: Maximum request processing time (default: `5 seconds`).
- **WASTEBIN\_MAX\_BODY\_SIZE**: Maximum POST request size (default: `1 MB`).
- **WASTEBIN\_MAX\_PASTE\_EXPIRATION**: Maximum paste lifetime (default: unlimited).
- **WASTEBIN\_PASSWORD\_SALT**: Salt for hashing user passwords.
- **WASTEBIN\_SIGNING\_KEY**: Key to sign cookies (random if not set).
- **WASTEBIN\_TITLE**: HTML page title (default: `wastebin`).
- **RUST\_LOG**: Logging level (e.g., `info`, `debug`).

## Extra Information:

### WASTEBIN\_PASSWORD\_SALT

The `WASTEBIN_PASSWORD_SALT` environment variable provides additional security when hashing passwords. Here's how it works:

### What is a Password Hash?

A password hash is a secure, irreversible transformation of a user's password, ensuring the password itself is not stored.

### What is a Salt?

A salt is a random string added to the password before hashing, ensuring that even if two users have the same password, their hashes will differ.

### Why Use a Salt?

Using a salt protects against certain attacks, like rainbow table attacks, by making it harder for attackers to crack passwords.

### Do You Need to Set It?

For production environments, it's recommended to set a unique, secure salt. You can generate a salt using:

```
openssl rand -base64 32
```

---

## Conclusion

In this guide, you've learned how to build and deploy Wastebin for ARM64 architecture on a Raspberry Pi 5 using Docker Swarm. Wastebin's minimal footprint, combined with features like encrypted pastes and QR code sharing, make it a versatile tool for managing and sharing data. With proper configuration, you can run it securely in production and adapt it to future versions as needed.

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