

How to install and use PhotoPrism on Raspberry Pi

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In the world of self-hosted photo managers that can run on Raspberry Pi, PhotoPrism is one of the most powerful tools. It boasts an impressive search function, facial recognition capabilities, and even offers a world map showing the locations where your photos were taken! PhotoPrism is also easy to install on Raspberry Pi.

How to install PhotoPrism on Raspberry Pi

The first step to getting PhotoPrism up and running on the Raspberry Pi is to install Docker Compose, a tool designed to identify and run multi-container Docker applications.

To get started, add Docker's official GPG key and repository to the Raspberry Pi software source:

```
# Update your package lists sudo apt-get update # Install packages to allow apt to
```

Once the Docker repository is added, you can proceed to install Docker along with other essential components, including Docker Compose:

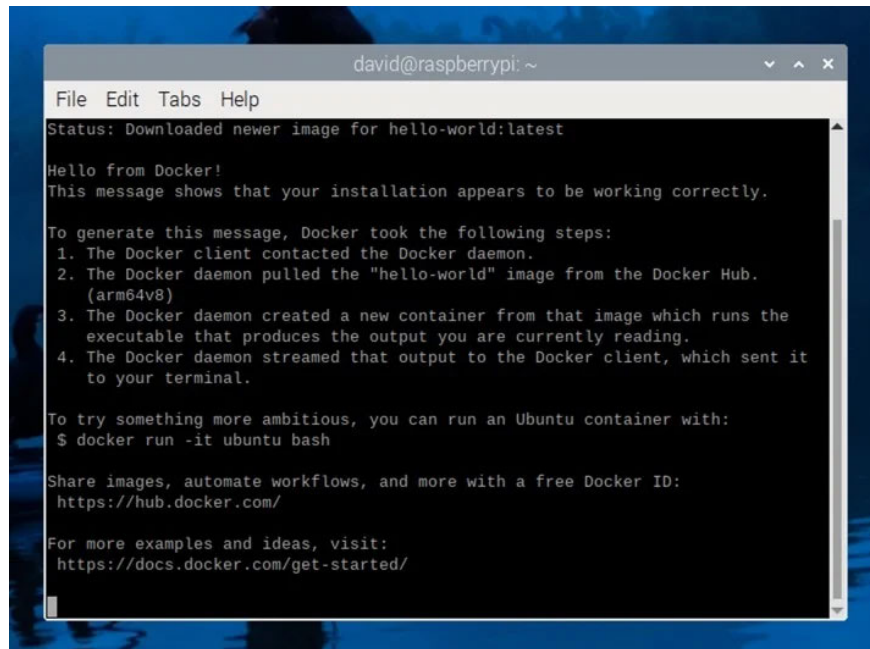
```
sudo apt-get install docker-ce docker-ce-cli containerd.io docker-buildx-plugin
```

After installing Docker, you should add your user to the Docker group so you can execute Docker commands without using sudo:

```
sudo usermod -aG docker $USER
```

Finally, verify that Docker is installed correctly. You can then run containers as a regular user:

```
docker run hello-world
```

A terminal window titled 'david@raspberrypi: ~' showing the output of a Docker command. The output includes a status message, a 'Hello from Docker!' greeting, a confirmation that the installation is working, a list of four steps Docker took to generate the message, instructions to try an Ubuntu container, and links to Docker Hub and documentation.

```
david@raspberrypi: ~
File Edit Tabs Help
Status: Downloaded newer image for hello-world:latest

Hello from Docker!
This message shows that your installation appears to be working correctly.

To generate this message, Docker took the following steps:
 1. The Docker client contacted the Docker daemon.
 2. The Docker daemon pulled the "hello-world" image from the Docker Hub.
    (arm64v8)
 3. The Docker daemon created a new container from that image which runs the
    executable that produces the output you are currently reading.
 4. The Docker daemon streamed that output to the Docker client, which sent it
    to your terminal.

To try something more ambitious, you can run an Ubuntu container with:
$ docker run -it ubuntu bash

Share images, automate workflows, and more with a free Docker ID:
https://hub.docker.com/

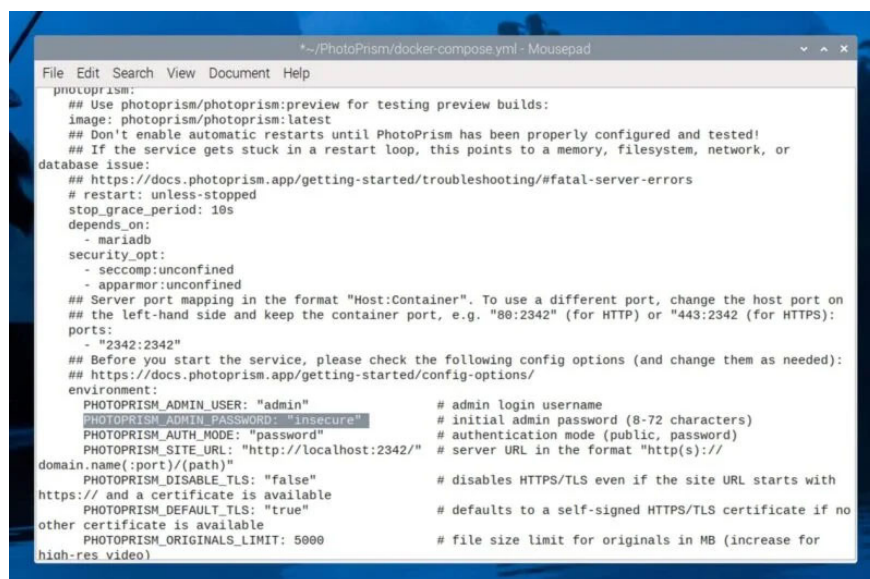
For more examples and ideas, visit:
https://docs.docker.com/get-started/
```

Now that Docker Compose is installed, it's time to install PhotoPrism. The process is very simple and involves downloading the docker-compose.yml file, making some changes to the file, and running a command to start the application and database service.

Download the docker-compose.yml file to any directory you want with the following command:

```
wget https://dl.photoprism.app/docker/docker-compose.yml
```

Open the file in your favorite text editor (you can use nano if you are accessing your Raspberry Pi remotely via SSH) and change all default placeholder passwords ('insecure') to secure passwords, especially PHOTOPRISM_ADMIN_PASSWORD.

A screenshot of a text editor window titled '+~/PhotoPrism/docker-compose.yml - Mousepad'. The editor shows the content of the docker-compose.yml file, which includes configuration for the photoprism service, such as image, restart policy, security options, port mapping, and environment variables. The 'PHOTOPRISM_ADMIN_PASSWORD' variable is highlighted in yellow and set to 'insecure'.

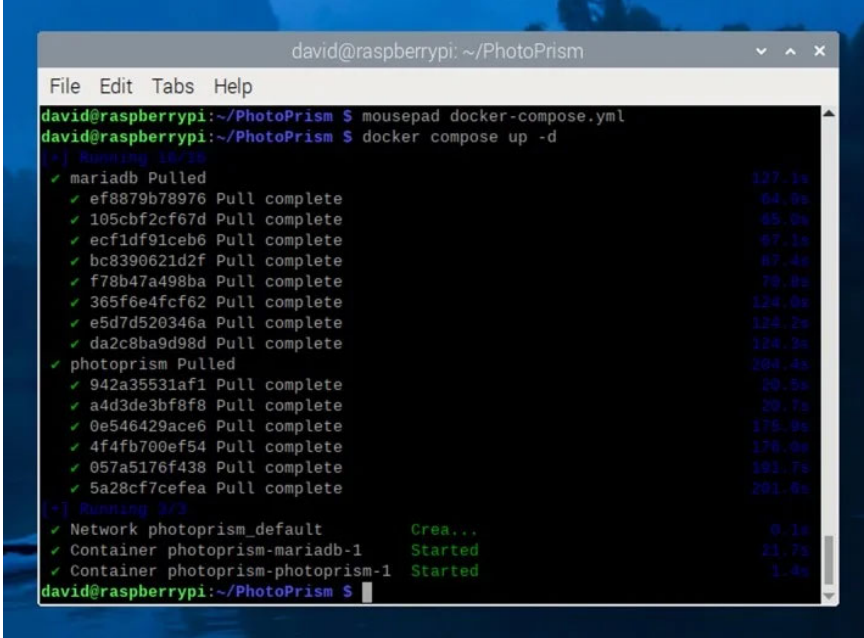
```
+~/PhotoPrism/docker-compose.yml - Mousepad
File Edit Search View Document Help
photoprism:
  ## Use photoprism/photoprism:preview for testing preview builds:
  image: photoprism/photoprism:latest
  ## Don't enable automatic restarts until PhotoPrism has been properly configured and tested!
  ## If the service gets stuck in a restart loop, this points to a memory, filesystem, network, or
  database issue:
  ## https://docs.photoprism.app/getting-started/troubleshooting/#fatal-server-errors
  # restart: unless-stopped
  stop_grace_period: 10s
  depends_on:
    - mariadb
  security_opt:
    - seccomp:unconfined
    - apparmor:unconfined
  ## Server port mapping in the format "Host:Container". To use a different port, change the host port on
  ## the left-hand side and keep the container port, e.g. "80:2342" (for HTTP) or "443:2342 (for HTTPS):
  ports:
    - "2342:2342"
  ## Before you start the service, please check the following config options (and change them as needed):
  ## https://docs.photoprism.app/getting-started/config-options/
  environment:
    PHOTOPRISM_ADMIN_USER: "admin"           # admin login username
    PHOTOPRISM_ADMIN_PASSWORD: "insecure"   # initial admin password (8-72 characters)
    PHOTOPRISM_AUTH_MODE: "password"       # authentication mode (public, password)
    PHOTOPRISM_SITE_URL: "http://localhost:2342/" # server URL in the format "http(s)://"
  domain.name: {port}/{path}
  PHOTOPRISM_DISABLE_TLS: "false"         # disables HTTPS/TLS even if the site URL starts with
  https:// and a certificate is available
  PHOTOPRISM_DEFAULT_TLS: "true"         # defaults to a self-signed HTTPS/TLS certificate if no
  other certificate is available
  PHOTOPRISM_ORIGINALS_LIMIT: 5000       # file size limit for originals in MB (increase for
  high-res video)
```

Adjust the volume mount path to point to the location where you want to store PhotoPrism images and data. For example, if you have an external hard drive mounted, such as `/media/david/extdrive`, you can configure it as follows:

```
services: photoprism: volumes: - "/media/david/extdrive/Photos:/photoprism/origin
```

With the docker-compose.yml file configured, you are ready to launch PhotoPrism. Navigate to the directory containing the docker-compose.yml file and run the following command:

```
docker compose up -d
```



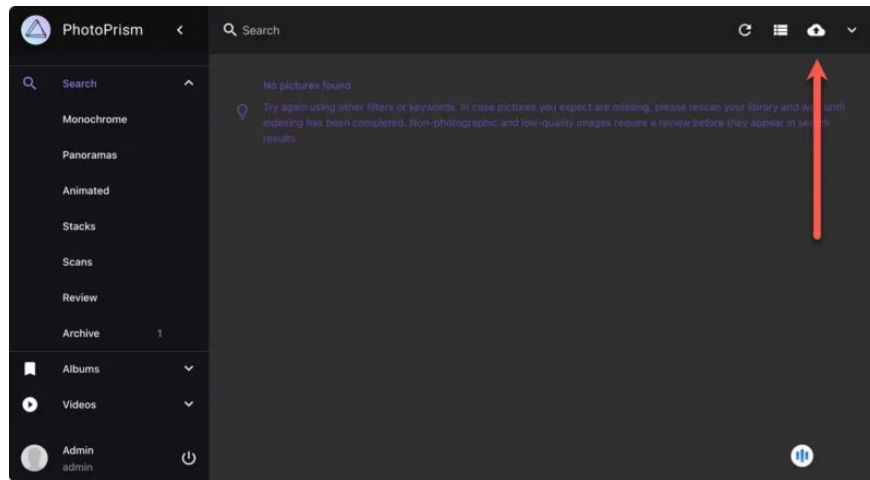
```

david@raspberrypi: ~/PhotoPrism
File Edit Tabs Help
david@raspberrypi:~/PhotoPrism $ mousepad docker-compose.yml
david@raspberrypi:~/PhotoPrism $ docker compose up -d
[+] Running 18/18
  mariadb Pulled                                127.1k
  ✓ ef8879b78976 Pull complete                  64.0k
  ✓ 105cbf2cf67d Pull complete                  65.0k
  ✓ ecf1df91ceb6 Pull complete                  87.1k
  ✓ bc8390621d2f Pull complete                  87.4k
  ✓ f78b47a498ba Pull complete                  79.0k
  ✓ 365f6e4fcf62 Pull complete                 124.0k
  ✓ e5d7d520346a Pull complete                 124.2k
  ✓ da2c8ba9d98d Pull complete                 124.0k
  ✓ photoprism Pulled                          204.4k
  ✓ 942a35531af1 Pull complete                 20.0k
  ✓ a4d3de3bf8f8 Pull complete                 20.7k
  ✓ 0e546429ace6 Pull complete                 176.0k
  ✓ 4f4fb700ef54 Pull complete                 176.0k
  ✓ 057a5176f438 Pull complete                 181.7k
  ✓ 5a28cf7cefea Pull complete                 201.0k
[+] Running 3/3
  ✓ Network photoprism_default                  0.1k
  ✓ Container photoprism-mariadb-1             21.7k
  ✓ Container photoprism-photoprism-1          1.4k
david@raspberrypi:~/PhotoPrism $
```

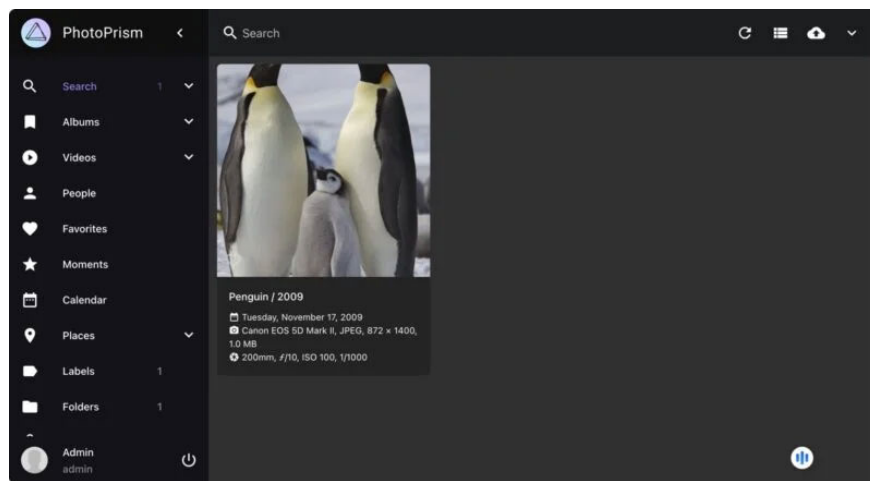
Use PhotoPrism on Raspberry Pi

Once Docker and PhotoPrism are up and running on your Raspberry Pi, you can start managing and viewing your photos through PhotoPrism's web interface. Open your favorite web browser and navigate to <http://:2342/> to access the PhotoPrism user interface. Replace with the actual IP address of the Raspberry Pi or if working directly from the Pi itself, use <http://localhost:2342/>.

At the login screen, enter the admin username and the password you set for **PHOTOPRISM_ADMIN_PASSWORD** during setup. After logging in, you will be greeted by the PhotoPrism dashboard.



To start adding photos to your library, click the upload button located in the upper right corner of the interface. This allows selecting photos from your computer and uploading them directly to the Raspberry Pi's PhotoPrism library.



Since there may be a lot of photos to upload, you should set up an import folder on the Raspberry Pi. To do that, stop running PhotoPrism containers to modify the docker-compose.yml file:

```
docker compose stop
```

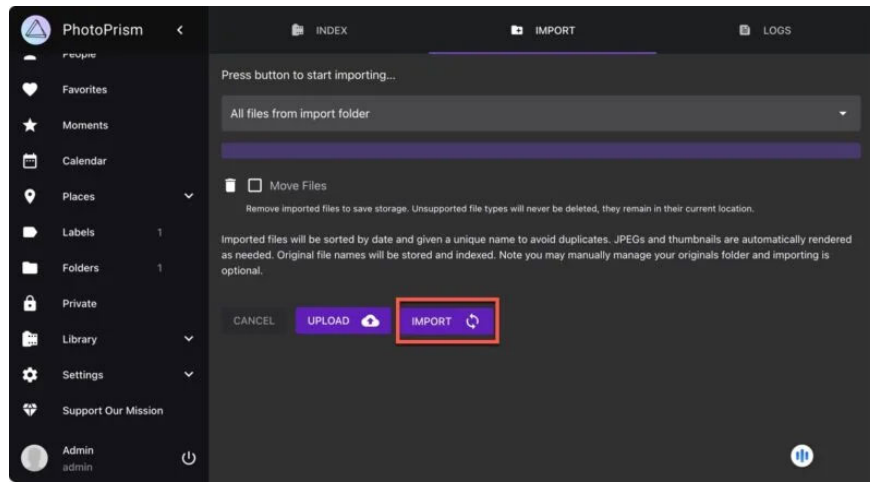
Now, edit the docker-compose.yml file to include the volume mount for the import directory:

```
services: photoprism: volumes: - "/media/david/extdrive/Import:/photoprism/import"
```

This folder will act as a storage area for photos before you import them into your main library. After making these changes, save the file and restart PhotoPrism:

```
docker compose up -d
```

You can now move the photos into the import folder, navigate to **Library -> Import** in the PhotoPrism web UI and start the import process.



To protect precious photos, it is essential to regularly back up PhotoPrism storage devices. That way, you can easily recover in case of any unexpected problems or hardware failures.

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