

SoftWare Repository for Container

Getting Started

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1 Uploading an Image Through a Container Engine Client

Introduction

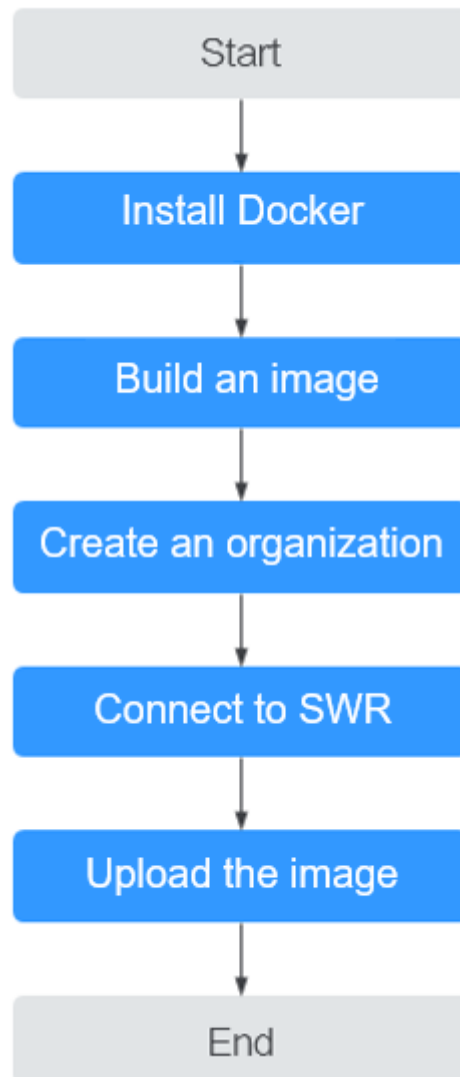
SWR provides easy, secure, and reliable management for container images throughout their lifecycles, facilitating the deployment of containerized applications. This section uses the 2048 application as an example to show how to install the container engine, build an image, and use the container engine to upload the image to SWR.

NOTE

Currently, images can be uploaded to SWR only through the SWR console. No APIs for image push are available.

The following diagram shows the process of uploading an image to SWR.

Figure 1-1 Process



Prerequisites

You have registered a Huawei Cloud account.

If you do not have a Huawei Cloud account, perform the following steps to register one.

1. Visit [HUAWEI CLOUD](#) and click **Register**.
2. On the page displayed, register an account as prompted. After the registration, the system automatically redirects you to your personal information page.

Step 1: Install the Container Engine

Prepare a VM, on which the container engine **1.11.2** or later is installed.

Step 1 Create a Linux ECS with an elastic public IP address..

For demonstration, you do not need to select high-specification ECS and public IP address. For example, select the ECS with **1 vCPUs | 2 GB**, the public IP bandwidth of **1 Mbit/s**, and the operating system with **CentOS 7.5**.

NOTE

- You can also install the container engine on other machines.
- If you use a **CentOS**, you are advised to use CentOS 7, CentOS 7.2, CentOS 7.3, CentOS 7.4, CentOS 7.5 or CentOS 7.6 to avoid exceptions during the installation.

Step 2 After the ECS is created, return to the ECS list and click **Remote Login** to log in to the ECS as user **root**.

Step 3 Run the following commands to quickly install the container engine:

```
curl -fsSL get.docker.com -o get-docker.sh
sh get-docker.sh
sudo systemctl daemon-reload
sudo systemctl restart docke
```

----End

Step 2: Build an Image

Step 1 Run the following command on the VM where the container engine is installed to download the source code of the 2048 application:

```
git clone https://gitee.com/jorgensen/2048.git
```

NOTE

If the message "git: command not found" is displayed, the Git tool is not installed. In this case, run the **yum install git** command to install it first.

Step 2 After the download is successful, access the **2048** directory.

```
cd 2048
```

Step 3 Modify the Dockerfile file.

vim Dockerfile

```
FROM nginx
COPY ./usr/share/nginx/html

EXPOSE 80
CMD ["nginx", "-g", "daemon off;"]
```

- **FROM:** specifies **nginx** as the base image.
- **COPY:** copies the source code of the 2048 application to the directory **/usr/share/nginx/html** in the container.
- **EXPOSE:** exposes port 80 of the container.
- **CMD:** specifies the default command to run the container.

Press **Esc** and enter **:wq** to save the settings and exit.

Step 4 Run the **docker build** command to build an image.

```
docker build -t 2048 .
```

In the preceding command:

- **-t** indicates to label the image, that is, to name the image. In this example, the image name is **2048**.
- **.** indicates the context path. All contents in this path are packed and sent to the container engine to build an image.

Step 5 Run the following command to view the 2048 image that has been successfully built. The image tag is **latest** by default.

docker images

```
# docker images
REPOSITORY TAG IMAGE ID CREATED SIZE
2048 latest 8d421c503ed0 About a minute ago 134MB
nginx latest dd34e67e3371 6 days ago 133MB
```

You can also see a nginx image, which is pulled from the image repository and used as the base image of the 2048 image.

Step 6 (Optional) Run the container image.

After the image is successfully built, you can run the **docker run** command to run the container image.

docker run -p 8080:80 2048

The **docker run** command starts a container. In the preceding command, **-p** indicates that port 8080 of the VM is mapped to port 80 of the container. When you access **https://EIP of the ECS:8080**, the container is accessed. The 2048 application page is displayed.

----End

Step 3: Create an Organization

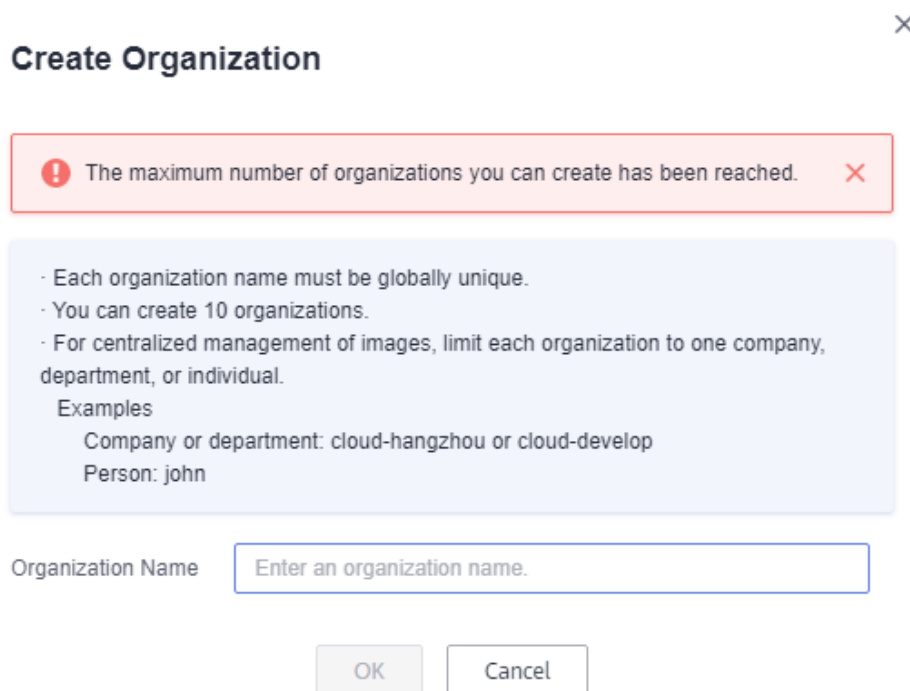
An organization is used to isolate images and grant different access permissions, namely, read, edit, and manage, to different users under an account.

Step 1 Log in to the SWR console.

Step 2 In the navigation pane on the left, choose **Organization Management**. On the displayed page, click **Create Organization** in the upper right corner.

Step 3 Enter the organization name and click **OK**.

Figure 1-2 Creating an organization



----End

Step 4: Connect to SWR

Step 1 Log in to the SWR console.


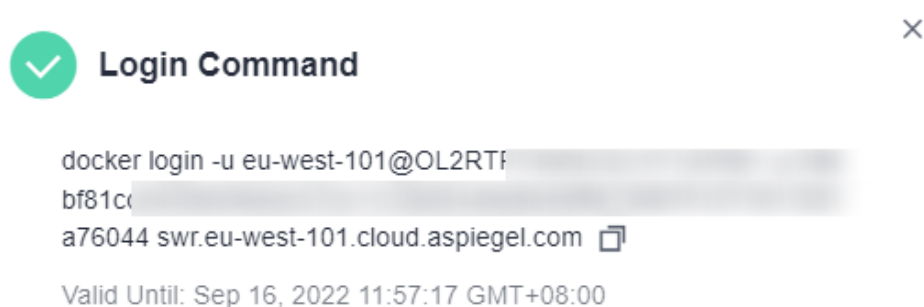
Step 2 In the navigation pane on the left, choose **Dashboard** and click **Generate Login Command** in the upper right corner. On the displayed page, click  to copy the login command.

Figure 1-3 Generating a login command



NOTE

The validity period of the generated login command is 24 hours. To obtain a long-term valid login command, see [Obtaining a Long-Term Valid Login Command](#).

Step 3 Run the login command on the VM where the container engine is installed.

The message **Login Succeeded** will be displayed upon a successful login.

----End

Step 5: Upload the Image

Step 1 Run the following command to label the 2048 image on the VM where the container engine is installed:

```
docker tag[Image name 1:tag 1] [Image repository address]/[Organization name]/[Image name 2:tag 2]
```

In the preceding command:

- **[Image name 1:tag 1]**: name and tag of the image to be uploaded.
- **[Image repository address]**: The domain name at the end of the login command in [Step 4: Connect to SWR](#) is the image repository address, which can be obtained on the SWR console.
- **[Organization name]**: name of the organization created in [Step 3: Create an Organization](#).
- **[Image name 2:tag 2]**: desired image name and tag.

Example:

```
docker tag 2048:latest swr.eu-west-101.cloud.aspiegel.com/cloud-develop/2048:v1
```

Step 2 Push the image to the image repository.

```
docker push [Image repository address]/[Organization name]/[Image name 2:tag 2]
```

Example:

```
docker push swr.eu-west-101.cloud.aspiegel.com/cloud-develop/2048:v1
```

The following information will be returned upon a successful push:

```
The push refers to repository [swr.eu-west-101.cloud.aspiegel.com/cloud-develop/2048]
fbce26647e70: Pushed
fb04ab8effa8: Pushed
8f736d52032f: Pushed
009f1d338b57: Pushed
678bbd796838: Pushed
d1279c519351: Pushed
f68ef921efae: Pushed
v1: digest: sha256:0cdfc7910db531bfa7726de4c19ec556bc9190aad9bd3de93787e8bce3385f8d size: 1780
```

To view the pushed image, go to the SWR console and refresh the **My Images** page.

Step 3 Use the pushed image to deploy a workload on CCE.

----End