

openEuler riscv - Docker 安装和功能测试

(HYK-ISCAS 严禁复制)

准备工作

在安装好 openEuler 环境后，启动并登录，按照测试说明为 dnf 添加三个软件库：

http://119.3.219.20:82/openEuler:/Mainline:/RISC-V/standard_riscv64/

http://121.36.3.168:82/home:/pandora/openEuler_stage1/

http://121.36.3.168:82/home:/pandora:/docker/standard_riscv64/

添加可使用 `dnf config-manager --add-repo repository_url` 指令，在添加完成后执行 `dnf repolist all` 可以得到以下的输出：

```
Terminal
Mar 25 09:45
fcwpl@ubuntu: ~/Desktop/openEuler

[root@openEuler-RISCV-rare ~]# dnf config-manager --add-repo http://119.3.219.20:82/openEuler:/Mainline:/RISC-V/standard_riscv64/
Adding repo from: http://119.3.219.20:82/openEuler:/Mainline:/RISC-V/standard_riscv64/
[root@openEuler-RISCV-rare ~]#
[root@openEuler-RISCV-rare ~]# dnf config-manager --add-repo http://121.36.3.168:82/home:/pandora/openEuler_stage1/
Adding repo from: http://121.36.3.168:82/home:/pandora/openEuler_stage1/
[root@openEuler-RISCV-rare ~]#
[root@openEuler-RISCV-rare ~]# dnf config-manager --add-repo http://121.36.3.168:82/home:/pandora:/docker/standard_riscv64/
Adding repo from: http://121.36.3.168:82/home:/pandora:/docker/standard_riscv64/
[root@openEuler-RISCV-rare ~]#
[root@openEuler-RISCV-rare ~]# dnf repolist all
repo id                                repo name                                status
119.3.219.20_82_openEuler_Mainline_RISC-V_standard_riscv64_ created by enabled
121.36.3.168_82_home_pandora_docker_standard_riscv64_ created by enabled
121.36.3.168_82_home_pandora_openEuler_stage1_ created by enabled
base                                   base                                   enabled
oe-noarch                             oe-noarch                             disabled
[root@openEuler-RISCV-rare ~]#
```

接下来执行 `date` 指令查看时间，如果时间不正确，需要使用 `date -s` 设置正确时间，设置方式如下图所示。

```
Terminal
Mar 25 09:50
fcwpl@ubuntu: ~/Desktop/openEuler

[root@openEuler-RISCV-rare ~]# date
Thu Sep  5 17:59:23 CST 2019
[root@openEuler-RISCV-rare ~]# date -s "2022-05-25 09:50"
Wed May 25 09:50:00 CST 2022
[root@openEuler-RISCV-rare ~]#
```

接下来就可以使用 `dnf` 来安装 `docker`，执行 `dnf install -y docker` 安装 `docker`，可能会出现如下的内容：

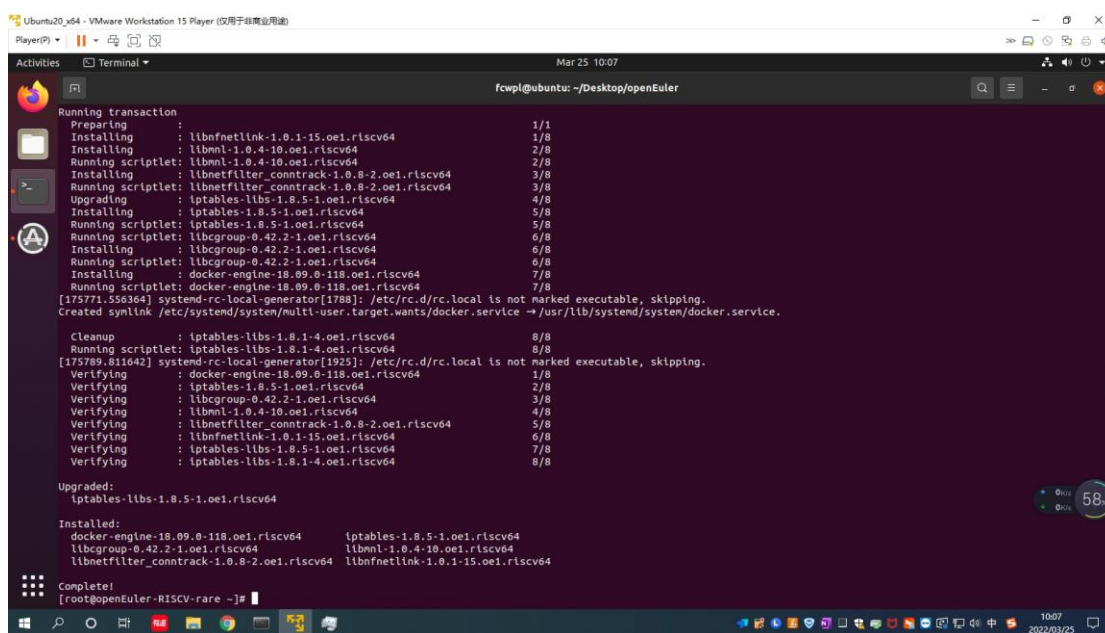
```
You have enabled checking of packages via GPG keys. This is a good thing.
However, you do not have any GPG public keys installed. You need to download
the keys for packages you wish to install and install them.
You can do that by running the command:
    rpm --import public.gpg.key

Alternatively you can specify the url to the key you would like to use
for a repository in the 'gpgkey' option in a repository section and DNF
will install it for you.

For more information contact your distribution or package provider.
```

这时执行 `rpm --import /etc/pki/rpm-gpg/RPM-GPG-KEY-openEuler` 之后再重新安装 `docker` 即可。

安装过程如下图所示：

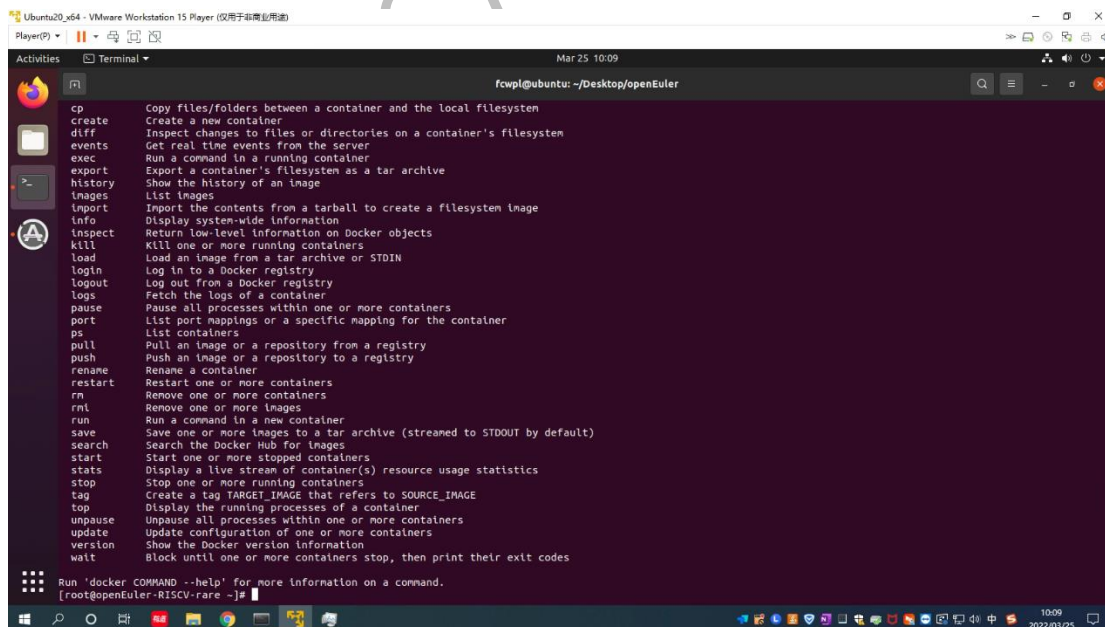


至此，准备工作完成，接下来是 Docker 测试的阶段。

测试阶段

1.测试 docker 是否安装成功

在命令行中执行 docker 指令，可以看到如下的界面，表明 docker 安装成功。

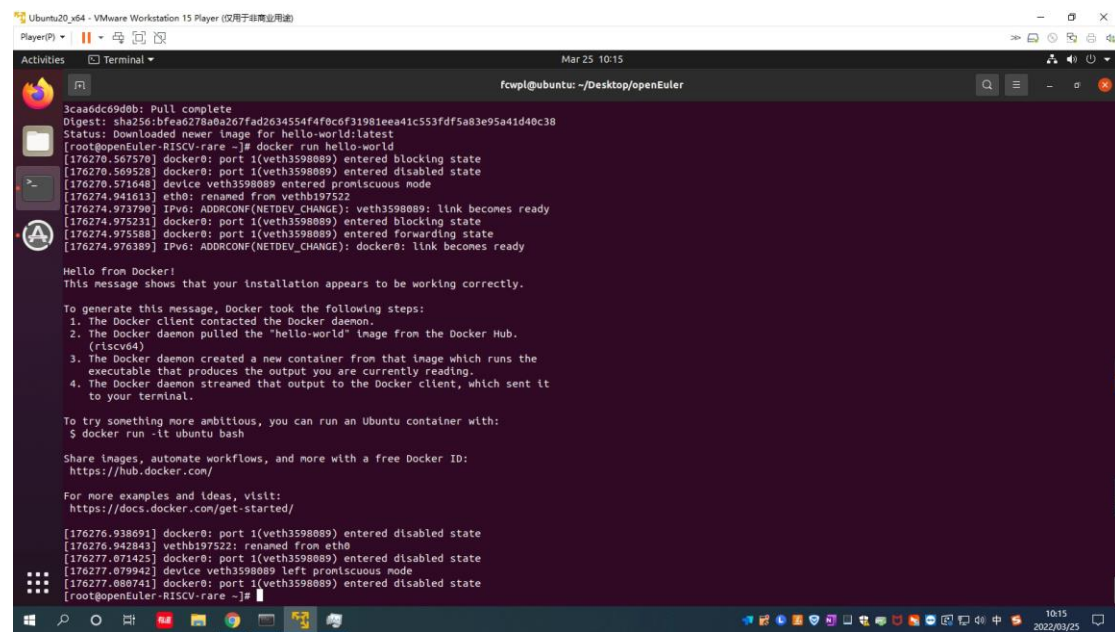


2.拉取 docker 官方仓库提供的 hello-world image 生成并运行容器

按照测试说明中的提示，到 docker 官网找到 hello-world 镜像，找到镜像抓取指令如下：

docker pull hello-world

抓取完成后执行 **docker run hello-world** 指令得到如下的输出：



```
3caad6c69deb: Pull complete
Digest: sha256:bfe6278a8a267fad2634554f4f0c6f31981eea41c553fd5a83e95a41d40c38
Status: Downloaded newer image for hello-world:latest
[root@openEuler-RISCv-rare ~]# docker run hello-world
[176276.567576] docker0: port 1(veth3598089) entered blocking state
[176276.569528] docker0: port 1(veth3598089) entered disabled state
[176276.571648] device veth3598089 entered promiscuous mode
[176274.941613] eth0: renamed from vethb197522
[176274.973790] IPv6: ADDRCONF(NETDEV_CHANGE): veth3598089: link becomes ready
[176274.975231] docker0: port 1(veth3598089) entered blocking state
[176274.975588] docker0: port 1(veth3598089) entered forwarding state
[176274.976389] IPv6: ADDRCONF(NETDEV_CHANGE): docker0: link becomes ready

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.
   (riscv64)
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.

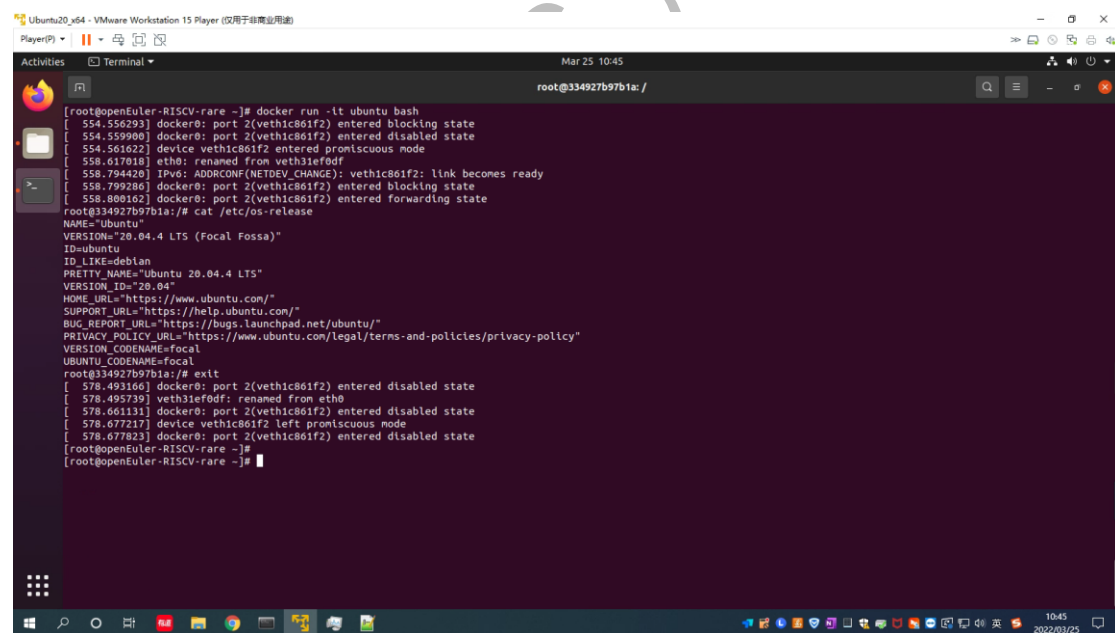
To try something more ambitious, you can run an Ubuntu container with:
$ docker run -it ubuntu bash

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/

[176276.938691] docker0: port 1(veth3598089) entered disabled state
[176276.942843] vethb197522: renamed from eth0
[176277.071425] docker0: port 1(veth3598089) entered disabled state
[176277.079942] device veth3598089 left promiscuous mode
[176277.080741] docker0: port 1(veth3598089) entered disabled state
[root@openEuler-RISCv-rare ~]#
```

3. 拉取 **docker** 官方仓库提供的常见 **Linux** 发行版 **image**，生成并运行容器
完成了 **hello-world** 之后，采用同样的方法，使用 **docker pull ubuntu** 拉取 **ubuntu**。
之后执行 **docker run -it ubuntu bash**，再输入 **cat /etc/os-release** 可以得到以下输出：



```
[root@openEuler-RISCv-rare ~]# docker run -it ubuntu bash
[ 554.556293] docker0: port 2(veth1c861f2) entered blocking state
[ 554.559900] docker0: port 2(veth1c861f2) entered disabled state
[ 554.561622] device veth1c861f2 entered promiscuous mode
[ 558.617010] eth0: renamed from veth31efdf
[ 558.794420] IPv6: ADDRCONF(NETDEV_CHANGE): veth1c861f2: link becomes ready
[ 558.799286] docker0: port 2(veth1c861f2) entered blocking state
[ 558.800102] docker0: port 2(veth1c861f2) entered forwarding state
root@334927b97b1a:/# cat /etc/os-release
NAME="Ubuntu"
VERSION="20.04.4 LTS (Focal Fossa)"
ID=ubuntu
ID_LIKE=debian
PRETTY_NAME="Ubuntu 20.04.4 LTS"
VERSION_ID="20.04"
HOME_URL="https://www.ubuntu.com/"
SUPPORT_URL="https://help.ubuntu.com/"
BUG_REPORT_URL="https://bugs.launchpad.net/ubuntu/"
PRIVACY_POLICY_URL="https://www.ubuntu.com/legal/terms-and-policies/privacy-policy"
VERSION_CODENAME=focal
UBUNTU_CODENAME=focal
root@334927b97b1a:/# exit
[ 578.493166] docker0: port 2(veth1c861f2) entered disabled state
[ 578.495739] veth31efdf: renamed from eth0
[ 578.661131] docker0: port 2(veth1c861f2) entered disabled state
[ 578.677217] device veth1c861f2 left promiscuous mode
[ 578.677823] docker0: port 2(veth1c861f2) entered disabled state
[root@openEuler-RISCv-rare ~]#
```

至此，**openEuler** 的 **docker** 安装与使用全部完成。