

# BlackLinux

## How to Install & Use the Podman Container on Ubuntu 20.04 ?

### Installing Podman on Ubuntu 20.04

While this article focuses on installation on Ubuntu 20.04, the Podman installation package is included in the native repositories of Ubuntu 20.10. Podman can be installed on Ubuntu 20.10, but please note installation instructions may differ between Ubuntu versions.

### Installation Requirements

- Server 4 GB RAM and 2 core kernels.
- OS Ubuntu 20.04.
- Root user. Podman runs without root by default, but you will need root access to work with images. Use the `sudo` command if you are running commands and do not have root privileges.

### Following Commands :

```
# apt update && apt upgrade -y
```

```
# . /etc/os-release
```

```
# echo "deb https://download.opensuse.org/repositories/devel:/kubic:/libcontainers:/stable/xUbuntu_${VERSION_ID}/ /" | sudo tee /etc/apt/sources.list.d/devel:kubic:libcontainers:stable.list
```

```
# curl -L https://download.opensuse.org/repositories/devel:/kubic:/libcontainers:/stable/xUbuntu_${VERSION_ID}/Release.key | sudo apt-key add -
```

```
# sudo apt update
```

```
# apt install podman -y
```

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```
# podman --version
```

```
# podman info
```

## Working with Registries in Podman

```
# nano /etc/containers/registries.conf
```

```
[registries.search]
registries = ['registry.redhat.io', 'quay.io', 'docker.io']
```

```
# Pulling alpine image.
```

```
root@blackmagiclinux:~#
root@blackmagiclinux:~# podman pull alpine:latest
Resolved "alpine" as an alias (/etc/containers/registries.conf.d/000-shortnames.conf)
Trying to pull docker.io/library/alpine:latest...
Getting image source signatures
Copying blob 5843afab3874 done
Copying config d4ff818577 done
Writing manifest to image destination
Storing signatures
d4ff818577bc193b309b355b02ebc9220427090057b54a59e73b79bdfc139b83
root@blackmagiclinux:~# █
```

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# Check alpine image availability

```
root@blackmagiclinux:~# podman images
REPOSITORY          TAG       IMAGE ID       CREATED        SIZE
docker.io/library/alpine latest    d4ff818577bc   9 days ago    5.87 MB
root@blackmagiclinux:~#
```

# Start Container and update the packages.

```
root@blackmagiclinux:~# podman container run -it docker.io/library/alpine /bin/sh
/ # apk update
fetch https://dl-cdn.alpinelinux.org/alpine/v3.14/main/x86_64/APKINDEX.tar.gz
fetch https://dl-cdn.alpinelinux.org/alpine/v3.14/community/x86_64/APKINDEX.tar.gz
v3.14.0-35-g61662e7eee [https://dl-cdn.alpinelinux.org/alpine/v3.14/main]
v3.14.0-43-gbeaf626f3c [https://dl-cdn.alpinelinux.org/alpine/v3.14/community]
OK: 14921 distinct packages available
/ #
```

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# Installing vim packages

```
/ # apk add vim
(1/5) Installing xxd (8.2.2956-r0)
(2/5) Installing lua5.3-libs (5.3.6-r0)
(3/5) Installing ncurses-terminfo-base (6.2_p20210612-r0)
(4/5) Installing ncurses-libs (6.2_p20210612-r0)
(5/5) Installing vim (8.2.2956-r0)
Executing busybox-1.33.1-r2.trigger
OK: 25 MiB in 19 packages
/ #
```

# Installing openssh packages

```
/ # apk add openssh
(1/8) Installing openssh-keygen (8.6_p1-r2)
(2/8) Installing libedit (20210216.3.1-r0)
(3/8) Installing openssh-client-common (8.6_p1-r2)
(4/8) Installing openssh-client-default (8.6_p1-r2)
(5/8) Installing openssh-sftp-server (8.6_p1-r2)
(6/8) Installing openssh-server-common (8.6_p1-r2)
(7/8) Installing openssh-server (8.6_p1-r2)
(8/8) Installing openssh (8.6_p1-r2)
Executing busybox-1.33.1-r2.trigger
OK: 30 MiB in 27 packages
/ #
```

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# Stop and Remove the Container

```
root@blackmagiclinux:~# podman stop 102478ef654f
podman rm 102478ef654f
102478ef654f
root@blackmagiclinux:~# podman rm 102478ef654f
102478ef654f92f80e1a6350127f549fc55a918038d980c7598b5679865125d5
```

# Remove the Container Image

```
root@blackmagiclinux:~# podman image rm docker.io/library/alpine
Untagged: docker.io/library/alpine:latest
Deleted: d4ff818577bc193b309b355b02ebc9220427090057b54a59e73b79bdfef139b83
```

# Container Hostname

```
root@blackmagiclinux:~# podman container run -it --name=blackubuntu --hostname=blackserver ubuntu
root@blackserver:/#
root@blackserver:/# █
```

# copy the content to container.

```
root@blackmagiclinux:~# podman container run -it --name=blackserver --hostname blackserver ubuntu
root@blackserver:/#
```

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# create a new file, and copy it into the container.

```
root@blackmagiclinux:~# podman container cp /tmp/index.html blackserver:/tmp/index.html
root@blackmagiclinux:~# podman exec -it blackserver ls /tmp/index.html
/tmp/index.html
```

# Jenkins Integration

```
cool@blackmagiclinux:~$ docker images
REPOSITORY          TAG         IMAGE ID      CREATED        SIZE
ubuntu              latest      9873176a8ff5  7 days ago    72.7MB
darwikdev11/thelastsamurai  latest     499db3f3ab43  2 months ago  573MB
hello-world         latest     d1165f221234  3 months ago  13.3kB
centos              latest     300e315adb2f  6 months ago  209MB
darwikdev11/ansi_client  latest     d62b1e6e571a  13 months ago 263MB
darwikdev11/ansi_server  latest     82243db2f73b  13 months ago 409MB
cool@blackmagiclinux:~$ docker container run --name jenkins --rm -d --privileged --publish 8080:8080 --publish 5000:5000 --hostname=jenkinsbaba darwikdev11/thelastsamurai
5fc35e068a80a35710461ec4d42b89f35300aa77de8fe1cc1c0cc19b2b00e042
cool@blackmagiclinux:~$ docker ps
CONTAINER ID   IMAGE                                COMMAND                                            CREATED        STATUS        PORTS
5fc35e068a80   darwikdev11/thelastsamurai          "/sbin/tini -- /usr/..."                      5 seconds ago  Up 3 seconds  0.0.0.0:5000->5000/tcp, :::5000->5000/tcp, 0.0.0.0:8080->8080/tcp, :::8080->8080/tcp, 50000/tcp
jenkins
cool@blackmagiclinux:~$ docker exec -it jenkins bash
jenkins@jenkinsbaba:/$ cat /var/jenkins_home/secrets/initialAdminPassword
ebf409f90ffa4387994f57ee54a49655
jenkins@jenkinsbaba:/$
```