

# Podman

## What is Podman?

Podman is daemon -less, It is like your average program; once you perform an action (start/stop a container) using Podman, it exists.

Podman is open source Linux utility for creating, managing, and running containers and images.

## Podman installation

### Run command for installation :

#### Step 1:

**sudo apt-get install runc -y**

```
taj01@taj01-Standard-PC-Q35-ICH9-2009:~$ sudo apt-get install runc -y
[sudo] password for taj01:
Reading package lists... Done
Building dependency tree
Reading state information... Done
runc is already the newest version (1.1.7-0ubuntu1~20.04.1).
The following packages were automatically installed and are no longer required:
  docker-buildx-plugin docker-ce-cli docker-ce-rootless-extras
  docker-compose-plugin gir1.2-goa-1.0 pigz slirp4netns
Use 'sudo apt autoremove' to remove them.
0 upgraded, 0 newly installed, 0 to remove and 4 not upgraded.
```

## Install Podman on Ubuntu 20.04 or Earlier

#### Step 2:

For earlier Ubuntu versions (versions below 20.10), add the Kubic project repository before installing Podman.

Follow the steps below:

Source the *os-release* file to ensure the right repository is added:

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

**Note:** The `(.)` instructs bash to source the file. In bash, zsh, ksh, the [source command](#) can be used instead of `..`

```
taj01@taj01-Standard-PC-Q35-ICH9-2009:~$ . /etc/os-release
```

### Step 3: Run the following command to add the Kubic repository:

```
sudo sh -c "echo 'deb http://download.opensuse.org/repositories/devel:kubic:libcontainers:stable/xUbuntu_${VERSION_ID}/ /' > /etc/apt/sources.list.d/devel:kubic:libcontainers:stable.list"
```

```
taj01@taj01-Standard-PC-Q35-ICH9-2009:~$ sudo sh -c "echo 'deb http://download.opensuse.org/repositories/devel:kubic:libcontainers:stable/xUbuntu_${VERSION_ID}/ /' > /etc/apt/sources.list.d/devel:kubic:libcontainers:stable.list"
```

The `>` symbol redirects the output to the specified file, adding the repository to the system file. Alternatively, pipe the output into the [tee command](#) to write to the specified file.

### Step 4: Verify the package integrity by adding a GPG key

```
wget -nv
```

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

```
taj01@taj01-Standard-PC-Q35-ICH9-2009:~$ wget -nv https://download.opensuse.org/repositories/devel:kubic:libcontainers:stable/xUbuntu_${VERSION_ID}/Release.key -O- | sudo apt-key add -
2023-08-05 14:10:50 URL:https://download.opensuse.org/repositories/devel:kubic:libcontainers:stable/xUbuntu_20.04/Release.key [1093/1093] -> "-" [1]
OK
```

### Step 5: Update the package repository with information from the newly added repository

```
sudo apt update
```

```

taj01@taj01-Standard-PC-Q35-ICH9-2009:~$ sudo apt update
Get:1 http://security.ubuntu.com/ubuntu focal-security InRelease [114 kB]
G Rhythmbox //download.opensuse.org/repositories/devel:/kubic:/libcontainers:/stable/xUbuntu_20.04 InRel
ease [1,042 B]
Hit:3 http://in.archive.ubuntu.com/ubuntu focal InRelease
Get:4 http://in.archive.ubuntu.com/ubuntu focal-updates InRelease [114 kB]
G LibreOffice Writer //download.opensuse.org/repositories/devel:/kubic:/libcontainers:/stable/xUbuntu_20.04 Packa
ges [14.7 kB]
Hit:6 https://download.docker.com/linux/ubuntu focal InRelease
Get:7 http://in.archive.ubuntu.com/ubuntu focal-backports InRelease [108 kB]
Get:8 http://security.ubuntu.com/ubuntu focal-security/main amd64 DEP-11 Metadata [59.9 kB]
Get:9 http://in.archive.ubuntu.com/ubuntu focal-updates/main i386 Packages [859 kB]
Get:10 http://security.ubuntu.com/ubuntu focal-security/universe amd64 DEP-11 Metadata [96.5 kB]
Get:11 http://security.ubuntu.com/ubuntu focal-security/multiverse amd64 DEP-11 Metadata [940 B]
Get:12 http://in.archive.ubuntu.com/ubuntu focal-updates/main amd64 Packages [2,737 kB]
Get:13 http://in.archive.ubuntu.com/ubuntu focal-updates/main amd64 DEP-11 Metadata [275 kB]
Get:14 http://in.archive.ubuntu.com/ubuntu focal-updates/universe amd64 Packages [1,096 kB]
Get:15 http://in.archive.ubuntu.com/ubuntu focal-updates/universe i386 Packages [741 kB]
Get:16 http://in.archive.ubuntu.com/ubuntu focal-updates/universe amd64 DEP-11 Metadata [410 kB]
Get:17 http://in.archive.ubuntu.com/ubuntu focal-updates/multiverse amd64 DEP-11 Metadata [944 B]
Get:18 http://in.archive.ubuntu.com/ubuntu focal-backports/main amd64 DEP-11 Metadata [7,992 B]
Get:19 http://in.archive.ubuntu.com/ubuntu focal-backports/universe amd64 DEP-11 Metadata [30.5 kB]
Fetched 6,666 kB in 9s (705 kB/s)
Reading package lists... Done
Building dependency tree
Reading state information... Done
5 packages can be upgraded. Run 'apt list --upgradable' to see them.

```

## Step 6: Install Podman

```
sudo apt -y install podman
```

```
taj01@taj01-Standard-PC-Q35-ICH9-2009:~$ sudo apt -y install podman
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following packages were automatically installed and are no longer required:
  docker-buildx-plugin docker-ce-cli docker-ce-rootless-extras
  docker-compose-plugin gir1.2-goa-1.0 pigz
Use 'sudo apt autoremove' to remove them.
The following additional packages will be installed:
  catatonit common containernetworking-plugins containers-common criu crun
  fuse-overlayfs fuse3 libfuse3-3 libnet1 libprotobuf-c1 podman-machine-cni
  LibreOffice Writer slirp4netns uidmap
The following packages will be REMOVED:
  fuse
The following NEW packages will be installed:
  catatonit common containernetworking-plugins containers-common criu crun
  fuse-overlayfs fuse3 libfuse3-3 libnet1 libprotobuf-c1 podman
  podman-machine-cni podman-plugins uidmap
The following packages will be upgraded:
  slirp4netns
1 upgraded, 15 newly installed, 1 to remove and 4 not upgraded.
Need to get 30.6 MB of archives.
After this operation, 151 MB of additional disk space will be used.
Get:2 http://in.archive.ubuntu.com/ubuntu focal/universe amd64 libfuse3-3 amd64 3.9.0-2 [74.0 kB]
Get:3 http://download.opensuse.org/repositories/devel:/kubic:/libcontainers:/stable/xUbuntu_20.04 conno
n 100:2.1.2-0 [33.7 kB]
Get:4 http://download.opensuse.org/repositories/devel:/kubic:/libcontainers:/stable/xUbuntu_20.04 conta
iners-common 100:1-22 [52.4 kB]
Get:6 http://in.archive.ubuntu.com/ubuntu focal/universe amd64 fuse3 amd64 3.9.0-2 [24.7 kB]
Get:7 http://in.archive.ubuntu.com/ubuntu focal/main amd64 libnet1 amd64 1.1.6+dfsg-3.1build1 [43.3 kB]
Get:9 http://in.archive.ubuntu.com/ubuntu focal-updates/universe amd64 libprotobuf-c1 amd64 1.3.3-1ubunt
u0.1 [19.3 kB]
Get:10 http://in.archive.ubuntu.com/ubuntu focal-updates/universe amd64 uidmap amd64 1:4.8.1-1ubuntu5.20
.04.4 [26.4 kB]
Get:11 http://download.opensuse.org/repositories/devel:/kubic:/libcontainers:/stable/xUbuntu_20.04 fuse
overlayfs 100:1-5-0-3 [44.0 kB]
```

```
Selecting previously unselected package uidmap.  
Preparing to unpack .../13-uidmap_1%3a4.8.1-1ubuntu5.20.04.4_amd64.deb ...  
Unpacking uidmap (1:4.8.1-1ubuntu5.20.04.4) ...  
Selecting previously unselected package container networking-plugins.  
Preparing to unpack .../14-container networking-plugins_100%3a1.1.1~1_amd64.deb .  
..  
Unpacking container networking-plugins (100:1.1.1~1) ...  
Setting up slirp4netns (100:1.1.8-4) ...  
Setting up uidmap (1:4.8.1-1ubuntu5.20.04.4) ...  
Setting up libnet1:amd64 (1.1.6+dfsg-3.1build1) ...  
Setting up libprotobuf-c1:amd64 (1.3.3-1ubuntu0.1) ...  
Setting up podman-machine-cni (100:0.0.0-1) ...  
Setting up common (100:2.1.2~0) ...  
Setting up container networking-plugins (100:1.1.1~1) ...  
Setting up catatonit (0.1.7-1) ...  
Setting up containers-common (100:1-22) ...  
Setting up podman-plugins (100:1.2.0-1) ...  
Setting up libfuse3-3:amd64 (3.9.0-2) ...  
Setting up criu (3.17.1-1) ...  
Setting up crun (100:1.2-2) ...  
Setting up podman (100:3.4.2-5) ...  
Setting up fuse3 (3.9.0-2) ...  
Installing new version of config file /etc/fuse.conf ...  
update-initramfs: deferring update (trigger activated)  
Setting up fuse-overlayfs (100:1.5.0-2) ...  
Processing triggers for libc-bin (2.31-0ubuntu9.9) ...  
Processing triggers for man-db (2.9.1-1) ...  
Processing triggers for initramfs-tools (0.136ubuntu6.7) ...  
update-initramfs: Generating /boot/initrd.img-5.15.0-78-generic
```

## Step 7: Verify the installation by checking the program version

podman --version

```
taj01@taj01-Standard-PC-Q35-ICH9-2009:~$ podman --version  
podman version 3.4.2
```