

# CheatSheet: CRI-O

## CLOUD

- PDF Link: [cheatsheet-crio-A4.pdf](#), Category: Cloud
- Blog URL: <https://cheatsheet.dennyzhang.com/cheatsheet-crio-A4>
- Related posts: Docker CheatSheet, Kubectl CheatSheet, #denny-cheatsheets

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## 1.1 cri-o Basic

| Name             | Summary  |
|------------------|--|
| cri-o            | Another container runtime like dockerd. Initialized from Redhat                |
| cri-o vs dockerd |  |
| Reference        | CheatSheet: Docker, CheatSheet: CRI-O, CheatSheet: rkt, CheatSheet: containerd |

## 1.2 cri-o Components

| Name    | Summary   |
|---------|---|
| crictl  | For troubleshooting and working directly with CRI-O container engines |
| runc    | For running container images  |
| podman  | CLI tool to manage pods and images                                    |
| Buildah | For building, pushing and signing container images                    |
| Skopeo  | For copying, inspecting, deleting, and signing images                 |
| Quay    | Builds, analyzes, distributes your container images. Like CNCF Harbor |

<https://raw.githubusercontent.com/dennyzhang/cheatsheet.dennyzhang.com/master/cheatsheet-crio-A4/crio-arch.png>

## 1.3 Run cri-o as k8s container engine

| Name                           | Summary  |
|--------------------------------|--|
| Run cri-o with minikube        | <code>minikube start --network-plugin=cni --container-runtime=cri-o</code> |
| cri-o conf file                | <code>/etc/crio/crio.conf</code>   |
| Configure cri-o image registry | <code>registries = ['docker.io']</code>                                    |
| Restart cri-o                  | <code>minikube ssh, then systemctl restart crio</code>                     |
| Check status                   | <code>systemctl status</code>  |
| Reference                      | Link: Using the CRI-O Container Engine                                     |

## 1.4 podman

| Name                       | Summary                                      |
|----------------------------|--|
| podman image registry file | <code>/etc/containers/registries.conf</code> |
| pull container             | <code>podman pull nginx:alpine</code>        |
| List all images            | <code>podman images</code>                   |
| List all containers        | <code>podman ps</code>                       |

## 1.5 podman online usage

```
$ sudo podman --help
```

```
WARN[0000] unable to find /etc/containers/registries.conf. some podman (image shortnames) commands may be limited
```

```
NAME:
  podman - manage pods and images
```

```
USAGE:
```

```
podman [global options] command [command options] [arguments...]
```

```
VERSION:
```

```
0.4.1
```

```
COMMANDS:
```

|                 |   |
|-----------------|---|
| attach          | Attach to a running container   |
| commit          | Create new image based on the changed container   |
| build           | Build an image using instructions in a Dockerfile   |
| create          | create but do not start a container   |
| diff            | Inspect changes on container's file systems   |
| exec            | Run a process in a running container  |
| export          | Export container's filesystem contents as a tar archive   |
| history         | Show history of a specified image   |
| images          | list images in local storage  |
| import          | Import a tarball to create a filesystem image   |
| info            | display system information  |
| inspect         | Displays the configuration of a container or image  |
| kill            | Kill one or more running containers with a specific signal  |
| load            | load an image from docker archive   |
| login           | login to a container registry   |
| logout          | logout of a container registry  |
| logs            | Fetch the logs of a container   |
| mount           | Mount a working container's root filesystem   |
| pause           | Pauses all the processes in one or more containers  |
| ps              | List containers   |
| port            | List port mappings or a specific mapping for the container  |
| pull            | pull an image from a registry   |
| push            | push an image to a specified destination  |
| restart         | Restart one or more containers  |
| rm              | podman rm will remove one or more containers from the host. The container name or ID c<br>This does not remove images. Running containers will not be removed without |
| rmi             | removes one or more images from local storage   |
| run             | run a command in a new container  |
| save            | Save image to an archive  |
| search          | search registry for image   |
| start           | Start one or more containers  |
| stats           | Display percentage of CPU, memory, network I/O, block I/O and PIDs for one or more cont   |
| stop            | Stop one or more containers   |
| tag             | Add an additional name to a local image   |
| top             | Display the running processes of a container  |
| umount, unmount | Unmount a working container's root filesystem   |
| unpause         | Unpause the processes in one or more containers   |
| version         | Display the PODMAN Version Information  |
| wait            | Block on one or more containers   |
| help, h         | Shows a list of commands or help for one command  |

**GLOBAL OPTIONS:**

|                                  |  |
|----------------------------------|--|
| --cni-config-dir value           | path of the configuration directory for CNI networks                     |
| --config value, -c value         | path of a config file detailing container server configuration options   |
| --common value                   | path of the common binary  |
| --cpu-profile value              | path for the cpu profiling results                                       |
| --log-level value                | log messages above specified level: debug, info, warn, error (default),  |
| --root value                     | path to the root directory in which data, including images, is stored    |
| --runroot value                  | path to the 'run directory' where all state information is stored        |
| --runtime value                  | path to the OCI-compatible binary used to run containers, default is /us |
| --storage-driver value, -s value | select which storage driver is used to manage storage of images and cont |
| --storage-opt value              | used to pass an option to the storage driver                             |
| --help, -h                       | show help  |
| --version, -v                    | print the version  |

**1.6 More Resources**

<https://github.com/containers>

<https://cri-o.io/>

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