

Rkt

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Overview



rkt is the next-generation container manager for Linux clusters. Designed for security, simplicity, and composability within modern cluster architectures, rkt discovers, verifies, fetches, and executes application containers with pluggable isolation. rkt can run the same container with varying degrees of protection, from lightweight, OS-level namespace and capabilities isolation to heavier, VM-level hardware virtualization.

rkt's primary interface comprises a single executable, rather than a background daemon, and rkt leverages this design to easily integrate with existing init systems, like [SystemD](#), and with advanced cluster orchestration environments, like Kubernetes. rkt implements a modern, open, standard container format, the [App Container \(appc\)](#), but can also execute other container images, like those created with Docker.

rkt is [open source software](#) written in the Go programming language, from the team that develops [CoreOS Linux](#), [etcd](#), [flannel](#), and dozens of other projects for enterprise container clusters.

Ripped from <https://coreos.com/rkt/>

Installation

<https://coreos.com/rkt/docs/latest/distributions.html#debian>

Ansible

You should be using this method.

Ubuntu

```
gpg --recv-key 18AD5014C99EF7E3BA5F6CE950BDD3E0FC8A365E
wget
https://github.com/coreos/rkt/releases/download/v1.23.0/rkt_1.23.0-1_amd
64.deb
wget
https://github.com/coreos/rkt/releases/download/v1.23.0/rkt_1.23.0-1_amd
64.deb.asc
gpg --verify rkt_1.23.0-1_amd64.deb.asc
sudo dpkg -i rkt_1.23.0-1_amd64.de
sudo apt-get install -y docker2aci
```

Important File Locations

File Location	Purpose

Networking Information

Protocol	Port Number	Purpose
TCP		
TCP		
UDP		

Usage

Display version

```
rkt version
```

Run a docker container as a rkt pod

Docker containers must be run with --insecure-options because docker does not support signature verification.

```
sudo rkt --insecure-options=image run docker://redis
```

List running pods

```
sudo rkt list
```

```
$ sudo rkt list
UUID          APP      IMAGE NAME                                STATE    CREATED
STARTED      NETWORKS
6582acc6     redis   registry-1.docker.io/library/redis:latest  running
1 minute ago 1 minute ago default:ip4=172.16.28.2
```

Stop a pod

```
sudo rkt stop 658
```

```
$ sudo rkt stop 658
UUID          APP      IMAGE NAME                                STATE    CREATED
STARTED      NETWORKS
6582acc6     redis   registry-1.docker.io/library/redis:latest  exited
7 minutes ago 7 minutes ago
```

Garbage collect pods

This only garbage collects stopped containers. Garbage collect automatically removes containers after a 30 minute grace period just in case.

```
sudo rkt gc
```

```
$ sudo rkt gc
gc: moving pod "6582acc6-e138-4dfd-953b-51b76156bf41" to garbage
gc: pod "6582acc6-e138-4dfd-953b-51b76156bf41" not removed: still within
grace period (30m0s)
```

```
$ sudo rkt list
```

UUID	APP	IMAGE NAME	STATE	CREATED
6582acc6	redis	registry-1.docker.io/library/redis:latest	exited	
garbage	8 minutes ago	8 minutes ago		

Get status of a pod

```
sudo rkt status $PODID
```

```
$ sudo rkt status 658
state=exited garbage
created=2017-01-26 11:42:45.126 -0500 EST
started=2017-01-26 11:42:45.354 -0500 EST
pid=16900
exited=true
app-redis=0
```

Remove a pod

A pod must be stopped before it can be removed!

```
sudo rkt rm $PODID
```

```
$ sudo rkt list
UUID      APP      IMAGE NAME      STATE      CREATED      STARTED      NETWORKS
6582acc6   redis    registry-1.docker.io/library/redis:latest    exited
7 minutes ago    7 minutes ago
8feac208   redis    registry-1.docker.io/library/redis:latest    running
10 minutes ago    10 minutes ago    default:ip4=172.16.28.2

$ sudo rkt rm 658
"6582acc6-e138-4dfd-953b-51b76156bf41"

$ sudo rkt rm 8fea
rm: pod "8feac208-0802-4998-8202-5e8b1fad780f" is currently running
rm: failed to remove one or more pods

$ sudo rkt list
UUID      APP      IMAGE NAME      STATE      CREATED      STARTED      NETWORKS
8feac208   redis    registry-1.docker.io/library/redis:latest    running
10 minutes ago    10 minutes ago    default:ip4=172.16.28.2
```

Enter a container

This is basically **docker exec -it \$CID /bin/bash**

```
sudo rkt enter $PODID
```

```
$ sudo rkt enter 8fe
enter: no command specified, assuming "/bin/bash"
root@rkt-8feac208-0802-4998-8202-5e8b1fad780f:/#
```

References

<https://coreos.com/rkt/>

<https://github.com/coreos/rkt/>

<https://coreos.com/rkt/docs/latest/running-docker-images.html>

```
$ sudo rkt rm 8fea
rm: pod "8feac208-0802-4998-8202-5e8b1fad780f" is currently running
rm: failed to remove one or more pods
```