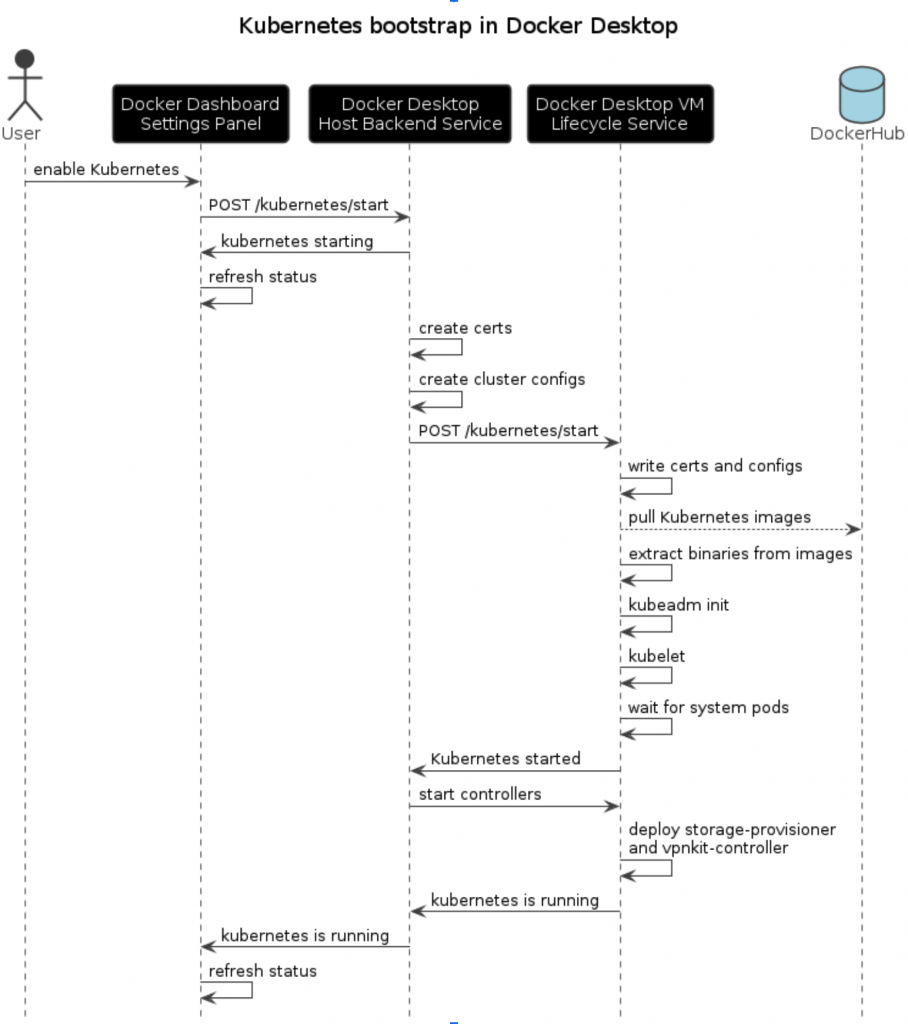
**Important Notes you care about:**

* <https://kubernetes.io/docs/reference/kubectl/cheatsheet/>
* <https://www.docker.com/blog/how-kubernetes-works-under-the-hood-with-docker-desktop/>
* <https://birthday.play-with-docker.com/kubernetes-docker-desktop/>
* <https://github.com/kubernetes-sigs/metrics-server>
* <https://www.docker.com/101-tutorial/>
* <https://betterprogramming.pub/dockers-voting-app-on-swarm-kubernetes-and-nomad-8835a82050cf>
* <https://docs.docker.com/engine/reference/commandline/container_ls/>
* <https://github.com/docker/labs/blob/master/beginner/chapters/votingapp.md>
* < - - - - do this next !
* Shortcuts
  + -n is namespace
  + svc is services
* single-node Kubernetes cluster is what you get ! with desktop version

**Docker Desktop Examination**



**Docker:**

(base) PS C:\Windows\system32> docker

A self-sufficient runtime for containers

Options:

--config string Location of client config files (default

"C:\\Users\\tbresee\\.docker")

-c, --context string Name of the context to use to connect to the

daemon (overrides DOCKER\_HOST env var and

default context set with "docker context use")

-D, --debug Enable debug mode

-H, --host list Daemon socket(s) to connect to

-l, --log-level string Set the logging level

("debug"|"info"|"warn"|"error"|"fatal")

(default "info")

--tls Use TLS; implied by --tlsverify

--tlscacert string Trust certs signed only by this CA (default

"C:\\Users\\tbresee\\.docker\\ca.pem")

--tlscert string Path to TLS certificate file (default

"C:\\Users\\tbresee\\.docker\\cert.pem")

--tlskey string Path to TLS key file (default

"C:\\Users\\tbresee\\.docker\\key.pem")

--tlsverify Use TLS and verify the remote

-v, --version Print version information and quit

Management Commands:

builder Manage builds

buildx\* Docker Buildx (Docker Inc., v0.8.2)

compose\* Docker Compose (Docker Inc., v2.5.1)

config Manage Docker configs

container Manage containers

context Manage contexts

image Manage images

manifest Manage Docker image manifests and manifest lists

network Manage networks

node Manage Swarm nodes

plugin Manage plugins

sbom\* View the packaged-based Software Bill Of Materials (SBOM) for an image (Anchore Inc., 0.6.0)

scan\* Docker Scan (Docker Inc., v0.17.0)

secret Manage Docker secrets

service Manage services

stack Manage Docker stacks

swarm Manage Swarm

system Manage Docker

trust Manage trust on Docker images

volume Manage volumes

Commands:

attach Attach local standard input, output, and error streams to a running container

build Build an image from a **Dockerfile**

commit Create a new image from a container's changes

cp Copy files/folders between a container and the local filesystem

create Create a new container

diff Inspect changes to files or directories on a container's filesystem

events Get real time events from the server

exec Run a command in a running container

export Export a container's filesystem as a tar archive

history Show the history of an image

images List images

import Import the contents from a tarball to create a filesystem image

info Display system-wide information

inspect Return low-level information on Docker objects

kill Kill one or more running containers

load Load an image from a tar archive or STDIN

login Log in to a Docker registry

logout Log out from a Docker registry

logs Fetch the logs of a container

pause Pause all processes within one or more containers

port List port mappings or a specific mapping for the container

ps List containers

pull Pull an image or a repository from a registry

push Push an image or a repository to a registry

rename Rename a container

restart Restart one or more containers

rm Remove one or more containers

rmi Remove one or more images

run Run a command in a new container

save Save one or more images to a tar archive (streamed to STDOUT by default)

search Search the Docker Hub for images

start Start one or more stopped containers

stats Display a live stream of container(s) resource usage statistics

stop Stop one or more running containers

tag Create a tag TARGET\_IMAGE that refers to SOURCE\_IMAGE

top Display the running processes of a container

unpause Unpause all processes within one or more containers

update Update configuration of one or more containers

version Show the Docker version information

wait Block until one or more containers stop, then print their exit codes

Run 'docker COMMAND --help' for more information on a command.

**(base) PS C:\Windows\system32> docker container ls -h**

Flag shorthand -h has been deprecated, please use --help

Usage: docker container ls [OPTIONS]

List containers

Aliases:

ls, ps, list

Options:

-a, --all Show all containers (default shows just running)

-f, --filter filter Filter output based on conditions provided

--format string Pretty-print containers using a Go template

-n, --last int Show n last created containers (includes all

states) (default -1)

-l, --latest Show the latest created container (includes all

states)

--no-trunc Don't truncate output

-q, --quiet Only display container IDs

-s, --size Display total file sizes

(base) PS C:\Windows\system32> docker container ls --all

CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES

26ed0866cc45 8c2c38aa676e "/kube-vpnkit-forwar…" 3 minutes ago Up 3 minutes k8s\_vpnkit-controller\_vpnkit-controller\_kube-system\_32e3e3db-5f49-40f4-988e-a9d9f7271608\_4

a20233479c19 99f89471f470 "/storage-provisione…" 3 minutes ago Up 3 minutes k8s\_storage-provisioner\_storage-provisioner\_kube-system\_7baf73dd-07d6-49e4-915b-49dba02bd604\_4

b81f407fe0ac a4ca41631cc7 "/coredns -conf /etc…" 3 minutes ago Up 3 minutes k8s\_coredns\_coredns-6d4b75cb6d-kwgxs\_kube-system\_a867bdef-73c4-4a01-9c6f-deb4a068db00\_2

ee730e49e0e1 a4ca41631cc7 "/coredns -conf /etc…" 3 minutes ago Up 3 minutes k8s\_coredns\_coredns-6d4b75cb6d-6sqpj\_kube-system\_10aaf19b-812c-456d-89c7-c0a720cc8954\_2

2f6d0ff84882 k8s.gcr.io/pause:3.7 "/pause" 3 minutes ago Up 3 minutes k8s\_POD\_coredns-6d4b75cb6d-kwgxs\_kube-system\_a867bdef-73c4-4a01-9c6f-deb4a068db00\_2

7c8002a42ff0 k8s.gcr.io/pause:3.7 "/pause" 3 minutes ago Up 3 minutes k8s\_POD\_vpnkit-controller\_kube-system\_32e3e3db-5f49-40f4-988e-a9d9f7271608\_2

b74f7a1551db k8s.gcr.io/pause:3.7 "/pause" 3 minutes ago Up 3 minutes k8s\_POD\_coredns-6d4b75cb6d-6sqpj\_kube-system\_10aaf19b-812c-456d-89c7-c0a720cc8954\_2

874425035cbc k8s.gcr.io/pause:3.7 "/pause" 3 minutes ago Up 3 minutes k8s\_POD\_storage-provisioner\_kube-system\_7baf73dd-07d6-49e4-915b-49dba02bd604\_2

3bb3136757e5 77b49675beae "/usr/local/bin/kube…" 3 minutes ago Up 3 minutes k8s\_kube-proxy\_kube-proxy-dnpvr\_kube-system\_1b866f39-b32c-42bd-ac62-de44c0ad39d0\_2

46c19c55e003 k8s.gcr.io/pause:3.7 "/pause" 3 minutes ago Up 3 minutes k8s\_POD\_kube-proxy-dnpvr\_kube-system\_1b866f39-b32c-42bd-ac62-de44c0ad39d0\_2

131c1910e47e aebe758cef4c "etcd --advertise-cl…" 3 minutes ago Up 3 minutes k8s\_etcd\_etcd-docker-desktop\_kube-system\_2449ddc0985e3be8dd23ffc4d12cb53b\_7

5bbcc98a1224 88784fb4ac2f "kube-controller-man…" 3 minutes ago Up 3 minutes k8s\_kube-controller-manager\_kube-controller-manager-docker-desktop\_kube-system\_d9c6bbd179b0d64e8d303a659acf3a74\_7

92c5c945e5ed e3ed7dee73e9 "kube-scheduler --au…" 3 minutes ago Up 3 minutes k8s\_kube-scheduler\_kube-scheduler-docker-desktop\_kube-system\_1fa929fab6e17047f7779b2ab8125174\_7

e65c0a1b5f8e 529072250ccc "kube-apiserver --ad…" 3 minutes ago Up 3 minutes k8s\_kube-apiserver\_kube-apiserver-docker-desktop\_kube-system\_f76ea91a200a6b1cfe31c7a114460aac\_7

7e1afcbd8fd7 k8s.gcr.io/pause:3.7 "/pause" 3 minutes ago Up 3 minutes k8s\_POD\_kube-scheduler-docker-desktop\_kube-system\_1fa929fab6e17047f7779b2ab8125174\_2

4162121af842 k8s.gcr.io/pause:3.7 "/pause" 3 minutes ago Up 3 minutes k8s\_POD\_kube-controller-manager-docker-desktop\_kube-system\_d9c6bbd179b0d64e8d303a659acf3a74\_2

88907c4094d9 k8s.gcr.io/pause:3.7 "/pause" 3 minutes ago Up 3 minutes k8s\_POD\_kube-apiserver-docker-desktop\_kube-system\_f76ea91a200a6b1cfe31c7a114460aac\_2

3a7cd71faea3 k8s.gcr.io/pause:3.7 "/pause" 3 minutes ago Up 3 minutes k8s\_POD\_etcd-docker-desktop\_kube-system\_2449ddc0985e3be8dd23ffc4d12cb53b\_2

e06ff9afd134 alpine/git:latest "git --help" 7 months ago Exited (0) 7 months ago brave\_euclid

1847fb69f1b3 tabresee/docker101tutorial:latest "/docker-entrypoint.…" 7 months ago Exited (0) 7 months ago charming\_blackwell

9c0c804e0b9b docker101tutorial "/docker-entrypoint.…" 14 months ago Exited (255) 14 months ago 0.0.0.0:80->80/tcp docker-tutorial

e157d40cdf76 alpine/git "git clone https://g…" 14 months ago Exited (0) 14 months ago repo

**will show only the running containers:**

(base) PS C:\Windows\system32> docker container ls

CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES

26ed0866cc45 8c2c38aa676e "/kube-vpnkit-forwar…" 3 minutes ago Up 3 minutes k8s\_vpnkit-controller\_vpnkit-controller\_kube-system\_32e3e3db-5f49-40f4-988e-a9d9f7271608\_4

a20233479c19 99f89471f470 "/storage-provisione…" 3 minutes ago Up 3 minutes k8s\_storage-provisioner\_storage-provisioner\_kube-system\_7baf73dd-07d6-49e4-915b-49dba02bd604\_4

b81f407fe0ac a4ca41631cc7 "/coredns -conf /etc…" 4 minutes ago Up 4 minutes k8s\_coredns\_coredns-6d4b75cb6d-kwgxs\_kube-system\_a867bdef-73c4-4a01-9c6f-deb4a068db00\_2

ee730e49e0e1 a4ca41631cc7 "/coredns -conf /etc…" 4 minutes ago Up 4 minutes k8s\_coredns\_coredns-6d4b75cb6d-6sqpj\_kube-system\_10aaf19b-812c-456d-89c7-c0a720cc8954\_2

2f6d0ff84882 k8s.gcr.io/pause:3.7 "/pause" 4 minutes ago Up 4 minutes k8s\_POD\_coredns-6d4b75cb6d-kwgxs\_kube-system\_a867bdef-73c4-4a01-9c6f-deb4a068db00\_2

7c8002a42ff0 k8s.gcr.io/pause:3.7 "/pause" 4 minutes ago Up 4 minutes k8s\_POD\_vpnkit-controller\_kube-system\_32e3e3db-5f49-40f4-988e-a9d9f7271608\_2

b74f7a1551db k8s.gcr.io/pause:3.7 "/pause" 4 minutes ago Up 4 minutes k8s\_POD\_coredns-6d4b75cb6d-6sqpj\_kube-system\_10aaf19b-812c-456d-89c7-c0a720cc8954\_2

874425035cbc k8s.gcr.io/pause:3.7 "/pause" 4 minutes ago Up 4 minutes k8s\_POD\_storage-provisioner\_kube-system\_7baf73dd-07d6-49e4-915b-49dba02bd604\_2

3bb3136757e5 77b49675beae "/usr/local/bin/kube…" 4 minutes ago Up 4 minutes k8s\_kube-proxy\_kube-proxy-dnpvr\_kube-system\_1b866f39-b32c-42bd-ac62-de44c0ad39d0\_2

46c19c55e003 k8s.gcr.io/pause:3.7 "/pause" 4 minutes ago Up 4 minutes k8s\_POD\_kube-proxy-dnpvr\_kube-system\_1b866f39-b32c-42bd-ac62-de44c0ad39d0\_2

131c1910e47e aebe758cef4c "etcd --advertise-cl…" 4 minutes ago Up 4 minutes k8s\_etcd\_etcd-docker-desktop\_kube-system\_2449ddc0985e3be8dd23ffc4d12cb53b\_7

5bbcc98a1224 88784fb4ac2f "kube-controller-man…" 4 minutes ago Up 4 minutes k8s\_kube-controller-manager\_kube-controller-manager-docker-desktop\_kube-system\_d9c6bbd179b0d64e8d303a659acf3a74\_7

92c5c945e5ed e3ed7dee73e9 "kube-scheduler --au…" 4 minutes ago Up 4 minutes k8s\_kube-scheduler\_kube-scheduler-docker-desktop\_kube-system\_1fa929fab6e17047f7779b2ab8125174\_7

e65c0a1b5f8e 529072250ccc "kube-apiserver --ad…" 4 minutes ago Up 4 minutes k8s\_kube-apiserver\_kube-apiserver-docker-desktop\_kube-system\_f76ea91a200a6b1cfe31c7a114460aac\_7

7e1afcbd8fd7 k8s.gcr.io/pause:3.7 "/pause" 4 minutes ago Up 4 minutes k8s\_POD\_kube-scheduler-docker-desktop\_kube-system\_1fa929fab6e17047f7779b2ab8125174\_2

4162121af842 k8s.gcr.io/pause:3.7 "/pause" 4 minutes ago Up 4 minutes k8s\_POD\_kube-controller-manager-docker-desktop\_kube-system\_d9c6bbd179b0d64e8d303a659acf3a74\_2

88907c4094d9 k8s.gcr.io/pause:3.7 "/pause" 4 minutes ago Up 4 minutes k8s\_POD\_kube-apiserver-docker-desktop\_kube-system\_f76ea91a200a6b1cfe31c7a114460aac\_2

3a7cd71faea3 k8s.gcr.io/pause:3.7 "/pause" 4 minutes ago Up 4 minutes k8s\_POD\_etcd-docker-desktop\_kube-system\_2449ddc0985e3be8dd23ffc4d12cb53b\_2

(base) PS C:\Windows\system32> docker container ls -q

26ed0866cc45

a20233479c19

b81f407fe0ac

ee730e49e0e1

2f6d0ff84882

7c8002a42ff0

b74f7a1551db

874425035cbc

3bb3136757e5

46c19c55e003

131c1910e47e

5bbcc98a1224

92c5c945e5ed

e65c0a1b5f8e

7e1afcbd8fd7

4162121af842

88907c4094d9

3a7cd71faea3

Text

Description automatically generated

Click Apply & Restart to save the settings and then click Install to confirm. This instantiates images required to run the Kubernetes server as containers, and installs the /usr/local/bin/kubectl command on your machine.

(base) PS C:\Windows\system32> docker container ls -l

CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES

26ed0866cc45 8c2c38aa676e "/kube-vpnkit-forwar…" 5 minutes ago Up 5 minutes k8s\_vpnkit-controller\_vpnkit-controller\_kube-system\_32e3e3db-5f49-40f4-988e-a9d9f7271608\_4

(base) PS C:\Windows\system32> docker container ls --last 10 # last 10 created

CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES

26ed0866cc45 8c2c38aa676e "/kube-vpnkit-forwar…" 5 minutes ago Up 5 minutes k8s\_vpnkit-controller\_vpnkit-controller\_kube-system\_32e3e3db-5f49-40f4-988e-a9d9f7271608\_4

a20233479c19 99f89471f470 "/storage-provisione…" 5 minutes ago Up 5 minutes k8s\_storage-provisioner\_storage-provisioner\_kube-system\_7baf73dd-07d6-49e4-915b-49dba02bd604\_4

b81f407fe0ac a4ca41631cc7 "/coredns -conf /etc…" 6 minutes ago Up 6 minutes k8s\_coredns\_coredns-6d4b75cb6d-kwgxs\_kube-system\_a867bdef-73c4-4a01-9c6f-deb4a068db00\_2

ee730e49e0e1 a4ca41631cc7 "/coredns -conf /etc…" 6 minutes ago Up 6 minutes k8s\_coredns\_coredns-6d4b75cb6d-6sqpj\_kube-system\_10aaf19b-812c-456d-89c7-c0a720cc8954\_2

2f6d0ff84882 k8s.gcr.io/pause:3.7 "/pause" 6 minutes ago Up 6 minutes k8s\_POD\_coredns-6d4b75cb6d-kwgxs\_kube-system\_a867bdef-73c4-4a01-9c6f-deb4a068db00\_2

7c8002a42ff0 k8s.gcr.io/pause:3.7 "/pause" 6 minutes ago Up 6 minutes k8s\_POD\_vpnkit-controller\_kube-system\_32e3e3db-5f49-40f4-988e-a9d9f7271608\_2

b74f7a1551db k8s.gcr.io/pause:3.7 "/pause" 6 minutes ago Up 6 minutes k8s\_POD\_coredns-6d4b75cb6d-6sqpj\_kube-system\_10aaf19b-812c-456d-89c7-c0a720cc8954\_2

874425035cbc k8s.gcr.io/pause:3.7 "/pause" 6 minutes ago Up 6 minutes k8s\_POD\_storage-provisioner\_kube-system\_7baf73dd-07d6-49e4-915b-49dba02bd604\_2

“CONTAINER ID” is the container unique identifier. This identifier is the truncated version of a pretty long SHA-256 hash

“IMAGE” is the container image name and its tag separated by a colon such as postgres:11

“COMMAND” is the command responsible for running the container

“CREATED” shows when the container was created

“STATUS” shows the container status. As mentioned above, all these containers are running

“PORTS” shows the port mappings between the host machine and inside the container. For instance, the “0.0.0.0:32789->5432/tcp” means that port 32789 in the host is mapped to port 5432 inside the container. Also, we can see that we didn't map any port for the Nats container — “4222/tcp, 6222/tcp, 8222/tcp”

“NAMES” represents the human-readable name of the Docker container, such as pg-2

docker container ls --latest -s

(base) PS C:\Windows\system32> docker container ls --latest -s

CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES SIZE

26ed0866cc45 8c2c38aa676e "/kube-vpnkit-forwar…" 9 minutes ago Up 9 minutes k8s\_vpnkit-controller\_vpnkit-controller\_kube-system\_32e3e3db-5f49-40f4-988e-a9d9f7271608\_4 0B (virtual 21MB)

(base) PS C:\Windows\system32> docker container ls --latest -s --no-trunc

CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES SIZE

26ed0866cc451407c8d2cfb2b0240f2c951d899e8ed1e7768d7359344e9bea18 sha256:8c2c38aa676e97e57b4c8385bbcdcb240a933fafcc5f6cc508d2a3a005b24cb8 "/kube-vpnkit-forwarder -path /run/host-services/backend.sock" 9 minutes ago Up 9 minutes k8s\_vpnkit-controller\_vpnkit-controller\_kube-system\_32e3e3db-5f49-40f4-988e-a9d9f7271608\_4 0B (virtual 21MB)

Text

Description automatically generated with medium confidence

(base) PS C:\Windows\system32> docker images --all

REPOSITORY TAG IMAGE ID CREATED SIZE

hubproxy.docker.internal:5000/docker/desktop-kubernetes kubernetes-v1.24.0-cni-v0.8.5-critools-v1.17.0-cri-dockerd-v0.2.0-1-debian c3114e97d326 2 weeks ago 348MB

k8s.gcr.io/kube-apiserver v1.24.0 529072250ccc 3 weeks ago 130MB

k8s.gcr.io/kube-proxy v1.24.0 77b49675beae 3 weeks ago 110MB

k8s.gcr.io/kube-controller-manager v1.24.0 88784fb4ac2f 3 weeks ago 119MB

k8s.gcr.io/kube-scheduler v1.24.0 e3ed7dee73e9 3 weeks ago 51MB

k8s.gcr.io/etcd 3.5.3-0 aebe758cef4c 5 weeks ago 299MB

k8s.gcr.io/pause 3.7 221177c6082a 2 months ago 711kB

k8s.gcr.io/coredns/coredns v1.8.6 a4ca41631cc7 7 months ago 46.8MB

docker/desktop-kubernetes kubernetes-v1.21.5-cni-v0.8.5-critools-v1.17.0-debian 967a1c03eb00 8 months ago 290MB

k8s.gcr.io/kube-apiserver v1.21.5 7b2ac941d4c3 8 months ago 126MB

k8s.gcr.io/kube-controller-manager v1.21.5 184ef4d127b4 8 months ago 120MB

k8s.gcr.io/kube-proxy v1.21.5 e08abd2be730 8 months ago 104MB

k8s.gcr.io/kube-scheduler v1.21.5 8e60ea3644d6 8 months ago 50.8MB

docker/desktop-vpnkit-controller v2.0 8c2c38aa676e 12 months ago 21MB

docker/desktop-storage-provisioner v2.0 99f89471f470 13 months ago 41.9MB

docker101tutorial latest 54c26a30d4d3 14 months ago 27.9MB

tabresee/docker101tutorial latest 54c26a30d4d3 14 months ago 27.9MB

alpine/git latest a939554ad0d0 15 months ago 25.1MB

k8s.gcr.io/pause 3.4.1 0f8457a4c2ec 16 months ago 683kB

(base) PS C:\Windows\system32> docker images

REPOSITORY TAG IMAGE ID CREATED SIZE

hubproxy.docker.internal:5000/docker/desktop-kubernetes kubernetes-v1.24.0-cni-v0.8.5-critools-v1.17.0-cri-dockerd-v0.2.0-1-debian c3114e97d326 3 weeks ago 348MB

k8s.gcr.io/kube-apiserver v1.24.0 529072250ccc 3 weeks ago 130MB

k8s.gcr.io/kube-proxy v1.24.0 77b49675beae 3 weeks ago 110MB

k8s.gcr.io/kube-controller-manager v1.24.0 88784fb4ac2f 3 weeks ago 119MB

k8s.gcr.io/kube-scheduler v1.24.0 e3ed7dee73e9 3 weeks ago 51MB

k8s.gcr.io/etcd 3.5.3-0 aebe758cef4c 5 weeks ago 299MB

docker/getting-started latest cb90f98fd791 6 weeks ago 28.8MB

k8s.gcr.io/pause 3.7 221177c6082a 2 months ago 711kB

k8s.gcr.io/coredns/coredns v1.8.6 a4ca41631cc7 7 months ago 46.8MB

docker/desktop-kubernetes kubernetes-v1.21.5-cni-v0.8.5-critools-v1.17.0-debian 967a1c03eb00 8 months ago 290MB

k8s.gcr.io/kube-apiserver v1.21.5 7b2ac941d4c3 8 months ago 126MB

k8s.gcr.io/kube-controller-manager v1.21.5 184ef4d127b4 8 months ago 120MB

k8s.gcr.io/kube-scheduler v1.21.5 8e60ea3644d6 8 months ago 50.8MB

k8s.gcr.io/kube-proxy v1.21.5 e08abd2be730 8 months ago 104MB

docker/desktop-vpnkit-controller v2.0 8c2c38aa676e 12 months ago 21MB

docker/desktop-storage-provisioner v2.0 99f89471f470 13 months ago 41.9MB

docker101tutorial latest 54c26a30d4d3 14 months ago 27.9MB

tabresee/docker101tutorial latest 54c26a30d4d3 14 months ago 27.9MB

alpine/git latest a939554ad0d0 15 months ago 25.1MB

kubernetesui/dashboard v2.2.0 5c4ee6ca42ce 15 months ago 225MB

k8s.gcr.io/metrics-server/metrics-server v0.4.2 17c225a562d9 15 months ago 60.5MB

k8s.gcr.io/pause 3.4.1 0f8457a4c2ec 16 months ago 683kB

kubernetesui/metrics-scraper v1.0.6 48d79e554db6 19 months ago 34.5MB

docker/getting-started pwd 45328bdf05eb 2 years ago 25.8MB

(base) PS C:\Windows\system32> docker run alpine ls -l

Unable to find image 'alpine:latest' locally

latest: Pulling from library/alpine

2408cc74d12b: Pull complete

Digest: sha256:686d8c9dfa6f3ccfc8230bc3178d23f84eeaf7e457f36f271ab1acc53015037c

Status: Downloaded newer image for alpine:latest

total 56

drwxr-xr-x 2 root root 4096 May 23 16:51 bin

drwxr-xr-x 5 root root 340 May 25 18:50 dev

drwxr-xr-x 1 root root 4096 May 25 18:50 etc

drwxr-xr-x 2 root root 4096 May 23 16:51 home

drwxr-xr-x 7 root root 4096 May 23 16:51 lib

drwxr-xr-x 5 root root 4096 May 23 16:51 media

drwxr-xr-x 2 root root 4096 May 23 16:51 mnt

drwxr-xr-x 2 root root 4096 May 23 16:51 opt

dr-xr-xr-x 410 root root 0 May 25 18:50 proc

drwx------ 2 root root 4096 May 23 16:51 root

drwxr-xr-x 2 root root 4096 May 23 16:51 run

drwxr-xr-x 2 root root 4096 May 23 16:51 sbin

drwxr-xr-x 2 root root 4096 May 23 16:51 srv

dr-xr-xr-x 11 root root 0 May 25 18:50 sys

drwxrwxrwt 2 root root 4096 May 23 16:51 tmp

drwxr-xr-x 7 root root 4096 May 23 16:51 usr

drwxr-xr-x 12 root root 4096 May 23 16:51 var

(base) PS C:\Windows\system32> docker run alpine echo "hello from alpine"

(base) PS C:\Windows\system32> docker images # List the most recently created images

REPOSITORY TAG IMAGE ID CREATED SIZE

hubproxy.docker.internal:5000/docker/desktop-kubernetes kubernetes-v1.24.0-cni-v0.8.5-critools-v1.17.0-cri-dockerd-v0.2.0-1-debian c3114e97d326 2 weeks ago 348MB

k8s.gcr.io/kube-apiserver v1.24.0 529072250ccc 3 weeks ago 130MB

k8s.gcr.io/kube-proxy v1.24.0 77b49675beae 3 weeks ago 110MB

k8s.gcr.io/kube-controller-manager v1.24.0 88784fb4ac2f 3 weeks ago 119MB

k8s.gcr.io/kube-scheduler v1.24.0 e3ed7dee73e9 3 weeks ago 51MB

k8s.gcr.io/etcd 3.5.3-0 aebe758cef4c 5 weeks ago 299MB

k8s.gcr.io/pause 3.7 221177c6082a 2 months ago 711kB

k8s.gcr.io/coredns/coredns v1.8.6 a4ca41631cc7 7 months ago 46.8MB

docker/desktop-kubernetes kubernetes-v1.21.5-cni-v0.8.5-critools-v1.17.0-debian 967a1c03eb00 8 months ago 290MB

k8s.gcr.io/kube-apiserver v1.21.5 7b2ac941d4c3 8 months ago 126MB

k8s.gcr.io/kube-proxy v1.21.5 e08abd2be730 8 months ago 104MB

k8s.gcr.io/kube-controller-manager v1.21.5 184ef4d127b4 8 months ago 120MB

k8s.gcr.io/kube-scheduler v1.21.5 8e60ea3644d6 8 months ago 50.8MB

docker/desktop-vpnkit-controller v2.0 8c2c38aa676e 12 months ago 21MB

docker/desktop-storage-provisioner v2.0 99f89471f470 13 months ago 41.9MB

docker101tutorial latest 54c26a30d4d3 14 months ago 27.9MB

tabresee/docker101tutorial latest 54c26a30d4d3 14 months ago 27.9MB

alpine/git latest a939554ad0d0 15 months ago 25.1MB

k8s.gcr.io/pause 3.4.1 0f8457a4c2ec 16 months ago 683kB

(base) PS C:\Windows\system32> docker images --format "table {{.ID}}\t{{.Repository}}\t{{.Tag}}"

*To list all images with their repository and tag in a table format you can use:*

IMAGE ID REPOSITORY TAG

c3114e97d326 hubproxy.docker.internal:5000/docker/desktop-kubernetes kubernetes-v1.24.0-cni-v0.8.5-critools-v1.17.0-cri-dockerd-v0.2.0-1-debian

529072250ccc k8s.gcr.io/kube-apiserver v1.24.0

77b49675beae k8s.gcr.io/kube-proxy v1.24.0

88784fb4ac2f k8s.gcr.io/kube-controller-manager v1.24.0

e3ed7dee73e9 k8s.gcr.io/kube-scheduler v1.24.0

aebe758cef4c k8s.gcr.io/etcd 3.5.3-0

221177c6082a k8s.gcr.io/pause 3.7

a4ca41631cc7 k8s.gcr.io/coredns/coredns v1.8.6

967a1c03eb00 docker/desktop-kubernetes kubernetes-v1.21.5-cni-v0.8.5-critools-v1.17.0-debian

7b2ac941d4c3 k8s.gcr.io/kube-apiserver v1.21.5

184ef4d127b4 k8s.gcr.io/kube-controller-manager v1.21.5

8e60ea3644d6 k8s.gcr.io/kube-scheduler v1.21.5

e08abd2be730 k8s.gcr.io/kube-proxy v1.21.5

8c2c38aa676e docker/desktop-vpnkit-controller v2.0

99f89471f470 docker/desktop-storage-provisioner v2.0

54c26a30d4d3 tabresee/docker101tutorial latest

54c26a30d4d3 docker101tutorial latest

a939554ad0d0 alpine/git latest

0f8457a4c2ec k8s.gcr.io/pause 3.4.1

(base) PS C:\Windows\system32> docker container ls --format '{{.Names}}'

k8s\_vpnkit-controller\_vpnkit-controller\_kube-system\_32e3e3db-5f49-40f4-988e-a9d9f7271608\_5

k8s\_storage-provisioner\_storage-provisioner\_kube-system\_7baf73dd-07d6-49e4-915b-49dba02bd604\_4

k8s\_coredns\_coredns-6d4b75cb6d-kwgxs\_kube-system\_a867bdef-73c4-4a01-9c6f-deb4a068db00\_2

k8s\_coredns\_coredns-6d4b75cb6d-6sqpj\_kube-system\_10aaf19b-812c-456d-89c7-c0a720cc8954\_2

k8s\_POD\_coredns-6d4b75cb6d-kwgxs\_kube-system\_a867bdef-73c4-4a01-9c6f-deb4a068db00\_2

k8s\_POD\_vpnkit-controller\_kube-system\_32e3e3db-5f49-40f4-988e-a9d9f7271608\_2

k8s\_POD\_coredns-6d4b75cb6d-6sqpj\_kube-system\_10aaf19b-812c-456d-89c7-c0a720cc8954\_2

k8s\_POD\_storage-provisioner\_kube-system\_7baf73dd-07d6-49e4-915b-49dba02bd604\_2

k8s\_kube-proxy\_kube-proxy-dnpvr\_kube-system\_1b866f39-b32c-42bd-ac62-de44c0ad39d0\_2

k8s\_POD\_kube-proxy-dnpvr\_kube-system\_1b866f39-b32c-42bd-ac62-de44c0ad39d0\_2

k8s\_etcd\_etcd-docker-desktop\_kube-system\_2449ddc0985e3be8dd23ffc4d12cb53b\_7

k8s\_kube-controller-manager\_kube-controller-manager-docker-desktop\_kube-system\_d9c6bbd179b0d64e8d303a659acf3a74\_7

k8s\_kube-scheduler\_kube-scheduler-docker-desktop\_kube-system\_1fa929fab6e17047f7779b2ab8125174\_7

k8s\_kube-apiserver\_kube-apiserver-docker-desktop\_kube-system\_f76ea91a200a6b1cfe31c7a114460aac\_7

k8s\_POD\_kube-scheduler-docker-desktop\_kube-system\_1fa929fab6e17047f7779b2ab8125174\_2

k8s\_POD\_kube-controller-manager-docker-desktop\_kube-system\_d9c6bbd179b0d64e8d303a659acf3a74\_2

k8s\_POD\_kube-apiserver-docker-desktop\_kube-system\_f76ea91a200a6b1cfe31c7a114460aac\_2

k8s\_POD\_etcd-docker-desktop\_kube-system\_2449ddc0985e3be8dd23ffc4d12cb53b\_2

Text

Description automatically generated

(base) PS C:\Windows\system32> docker container ls --format '{{.Names}}'

k8s\_vpnkit-controller\_vpnkit-controller\_kube-system\_32e3e3db-5f49-40f4-988e-a9d9f7271608\_5

k8s\_storage-provisioner\_storage-provisioner\_kube-system\_7baf73dd-07d6-49e4-915b-49dba02bd604\_4

k8s\_coredns\_coredns-6d4b75cb6d-kwgxs\_kube-system\_a867bdef-73c4-4a01-9c6f-deb4a068db00\_2

k8s\_coredns\_coredns-6d4b75cb6d-6sqpj\_kube-system\_10aaf19b-812c-456d-89c7-c0a720cc8954\_2

k8s\_POD\_coredns-6d4b75cb6d-kwgxs\_kube-system\_a867bdef-73c4-4a01-9c6f-deb4a068db00\_2

k8s\_POD\_vpnkit-controller\_kube-system\_32e3e3db-5f49-40f4-988e-a9d9f7271608\_2

k8s\_POD\_coredns-6d4b75cb6d-6sqpj\_kube-system\_10aaf19b-812c-456d-89c7-c0a720cc8954\_2

k8s\_POD\_storage-provisioner\_kube-system\_7baf73dd-07d6-49e4-915b-49dba02bd604\_2

k8s\_kube-proxy\_kube-proxy-dnpvr\_kube-system\_1b866f39-b32c-42bd-ac62-de44c0ad39d0\_2

k8s\_POD\_kube-proxy-dnpvr\_kube-system\_1b866f39-b32c-42bd-ac62-de44c0ad39d0\_2

k8s\_etcd\_etcd-docker-desktop\_kube-system\_2449ddc0985e3be8dd23ffc4d12cb53b\_7

k8s\_kube-controller-manager\_kube-controller-manager-docker-desktop\_kube-system\_d9c6bbd179b0d64e8d303a659acf3a74\_7

k8s\_kube-scheduler\_kube-scheduler-docker-desktop\_kube-system\_1fa929fab6e17047f7779b2ab8125174\_7

k8s\_kube-apiserver\_kube-apiserver-docker-desktop\_kube-system\_f76ea91a200a6b1cfe31c7a114460aac\_7

k8s\_POD\_kube-scheduler-docker-desktop\_kube-system\_1fa929fab6e17047f7779b2ab8125174\_2

k8s\_POD\_kube-controller-manager-docker-desktop\_kube-system\_d9c6bbd179b0d64e8d303a659acf3a74\_2

k8s\_POD\_kube-apiserver-docker-desktop\_kube-system\_f76ea91a200a6b1cfe31c7a114460aac\_2

k8s\_POD\_etcd-docker-desktop\_kube-system\_2449ddc0985e3be8dd23ffc4d12cb53b\_2

Names:

docker ps --format '{{.Names}}'

ID:

docker ps --format '{{.ID}}'

Image:

docker ps --format '{{.Image}}'

Command:

docker ps --format '{{.Command}}'

Created:

docker ps --format '{{.RunningFor}}'

Status:

docker ps --format '{{.Status}}'

Ports:

docker ps --format '{{.Ports}}'

(base) PS C:\Windows\system32> docker container ls

CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES

049faff73bba 8c2c38aa676e "/kube-vpnkit-forwar…" About a minute ago Up About a minute k8s\_vpnkit-controller\_vpnkit-controller\_kube-system\_32e3e3db-5f49-40f4-988e-a9d9f7271608\_5

(base) PS C:\Windows\system32> docker container ls --format "table {{.Image}}\t{{.Ports}}\t{{.Names}}"

IMAGE PORTS NAMES

8c2c38aa676e k8s\_vpnkit-controller\_vpnkit-controller\_kube-system\_32e3e3db-5f49-40f4-988e-a9d9f7271608\_5

99f89471f470 k8s\_storage-provisioner\_storage-provisioner\_kube-system\_7baf73dd-07d6-49e4-915b-49dba02bd604\_4

a4ca41631cc7 k8s\_coredns\_coredns-6d4b75cb6d-kwgxs\_kube-system\_a867bdef-73c4-4a01-9c6f-deb4a068db00\_2

a4ca41631cc7 k8s\_coredns\_coredns-6d4b75cb6d-6sqpj\_kube-system\_10aaf19b-812c-456d-89c7-c0a720cc8954\_2

k8s.gcr.io/pause:3.7 k8s\_POD\_coredns-6d4b75cb6d-kwgxs\_kube-system\_a867bdef-73c4-4a01-9c6f-deb4a068db00\_2

k8s.gcr.io/pause:3.7 k8s\_POD\_vpnkit-controller\_kube-system\_32e3e3db-5f49-40f4-988e-a9d9f7271608\_2

k8s.gcr.io/pause:3.7 k8s\_POD\_coredns-6d4b75cb6d-6sqpj\_kube-system\_10aaf19b-812c-456d-89c7-c0a720cc8954\_2

k8s.gcr.io/pause:3.7 k8s\_POD\_storage-provisioner\_kube-system\_7baf73dd-07d6-49e4-915b-49dba02bd604\_2

77b49675beae k8s\_kube-proxy\_kube-proxy-dnpvr\_kube-system\_1b866f39-b32c-42bd-ac62-de44c0ad39d0\_2

k8s.gcr.io/pause:3.7 k8s\_POD\_kube-proxy-dnpvr\_kube-system\_1b866f39-b32c-42bd-ac62-de44c0ad39d0\_2

aebe758cef4c k8s\_etcd\_etcd-docker-desktop\_kube-system\_2449ddc0985e3be8dd23ffc4d12cb53b\_7

88784fb4ac2f k8s\_kube-controller-manager\_kube-controller-manager-docker-desktop\_kube-system\_d9c6bbd179b0d64e8d303a659acf3a74\_7

e3ed7dee73e9 k8s\_kube-scheduler\_kube-scheduler-docker-desktop\_kube-system\_1fa929fab6e17047f7779b2ab8125174\_7

529072250ccc k8s\_kube-apiserver\_kube-apiserver-docker-desktop\_kube-system\_f76ea91a200a6b1cfe31c7a114460aac\_7

k8s.gcr.io/pause:3.7 k8s\_POD\_kube-scheduler-docker-desktop\_kube-system\_1fa929fab6e17047f7779b2ab8125174\_2

k8s.gcr.io/pause:3.7 k8s\_POD\_kube-controller-manager-docker-desktop\_kube-system\_d9c6bbd179b0d64e8d303a659acf3a74\_2

k8s.gcr.io/pause:3.7 k8s\_POD\_kube-apiserver-docker-desktop\_kube-system\_f76ea91a200a6b1cfe31c7a114460aac\_2

k8s.gcr.io/pause:3.7 k8s\_POD\_etcd-docker-desktop\_kube-system\_2449ddc0985e3be8dd23ffc4d12cb53b\_2

(base) PS C:\Windows\system32> docker images -h

Flag shorthand -h has been deprecated, please use --help

Usage: docker images [OPTIONS] [REPOSITORY[:TAG]]

List images

Options:

-a, --all Show all images (default hides intermediate images)

--digests Show digests

-f, --filter filter Filter output based on conditions provided

--format string Pretty-print images using a Go template

--no-trunc Don't truncate output

-q, --quiet Only show image IDs

Graphical user interface, text

Description automatically generated with medium confidence

(base) PS C:\Windows\system32> docker ps --format '{{.Names}}'

k8s\_vpnkit-controller\_vpnkit-controller\_kube-system\_32e3e3db-5f49-40f4-988e-a9d9f7271608\_5

k8s\_storage-provisioner\_storage-provisioner\_kube-system\_7baf73dd-07d6-49e4-915b-49dba02bd604\_4

k8s\_coredns\_coredns-6d4b75cb6d-kwgxs\_kube-system\_a867bdef-73c4-4a01-9c6f-deb4a068db00\_2

k8s\_coredns\_coredns-6d4b75cb6d-6sqpj\_kube-system\_10aaf19b-812c-456d-89c7-c0a720cc8954\_2

k8s\_POD\_coredns-6d4b75cb6d-kwgxs\_kube-system\_a867bdef-73c4-4a01-9c6f-deb4a068db00\_2

k8s\_POD\_vpnkit-controller\_kube-system\_32e3e3db-5f49-40f4-988e-a9d9f7271608\_2

k8s\_POD\_coredns-6d4b75cb6d-6sqpj\_kube-system\_10aaf19b-812c-456d-89c7-c0a720cc8954\_2

k8s\_POD\_storage-provisioner\_kube-system\_7baf73dd-07d6-49e4-915b-49dba02bd604\_2

k8s\_kube-proxy\_kube-proxy-dnpvr\_kube-system\_1b866f39-b32c-42bd-ac62-de44c0ad39d0\_2

k8s\_POD\_kube-proxy-dnpvr\_kube-system\_1b866f39-b32c-42bd-ac62-de44c0ad39d0\_2

k8s\_etcd\_etcd-docker-desktop\_kube-system\_2449ddc0985e3be8dd23ffc4d12cb53b\_7

k8s\_kube-controller-manager\_kube-controller-manager-docker-desktop\_kube-system\_d9c6bbd179b0d64e8d303a659acf3a74\_7

k8s\_kube-scheduler\_kube-scheduler-docker-desktop\_kube-system\_1fa929fab6e17047f7779b2ab8125174\_7

k8s\_kube-apiserver\_kube-apiserver-docker-desktop\_kube-system\_f76ea91a200a6b1cfe31c7a114460aac\_7

k8s\_POD\_kube-scheduler-docker-desktop\_kube-system\_1fa929fab6e17047f7779b2ab8125174\_2

k8s\_POD\_kube-controller-manager-docker-desktop\_kube-system\_d9c6bbd179b0d64e8d303a659acf3a74\_2

k8s\_POD\_kube-apiserver-docker-desktop\_kube-system\_f76ea91a200a6b1cfe31c7a114460aac\_2

k8s\_POD\_etcd-docker-desktop\_kube-system\_2449ddc0985e3be8dd23ffc4d12cb53b\_2

**Kubernetes Commands**

(base) PS C:\Windows\system32> kubectl config get-contexts

CURRENT NAME CLUSTER AUTHINFO NAMESPACE

\* docker-desktop docker-desktop docker-desktop

(base) PS C:\Windows\system32> kubectl

kubectl controls the Kubernetes cluster manager.

Find more information at: <https://kubernetes.io/docs/reference/kubectl/overview/>

Basic Commands (Beginner):

create Create a resource from a file or from stdin

expose Take a replication controller, service, deployment or pod and expose it as a new Kubernetes service

run Run a particular image on the cluster

set Set specific features on objects

Basic Commands (Intermediate):

explain Get documentation for a resource

get Display one or many resources

edit Edit a resource on the server

delete Delete resources by file names, stdin, resources and names, or by resources and label selector

Deploy Commands:

rollout Manage the rollout of a resource

scale Set a new size for a deployment, replica set, or replication controller

autoscale Auto-scale a deployment, replica set, stateful set, or replication controller

Cluster Management Commands:

certificate Modify certificate resources.

cluster-info Display cluster information

top Display resource (CPU/memory) usage

cordon Mark node as unschedulable

uncordon Mark node as schedulable

drain Drain node in preparation for maintenance

taint Update the taints on one or more nodes

Troubleshooting and Debugging Commands:

describe Show details of a specific resource or group of resources

logs Print the logs for a container in a pod

attach Attach to a running container

exec Execute a command in a container

port-forward Forward one or more local ports to a pod

proxy Run a proxy to the Kubernetes API server

cp Copy files and directories to and from containers

auth Inspect authorization

debug Create debugging sessions for troubleshooting workloads and nodes

Advanced Commands:

diff Diff the live version against a would-be applied version

apply Apply a configuration to a resource by file name or stdin

patch Update fields of a resource

replace Replace a resource by file name or stdin

wait Experimental: Wait for a specific condition on one or many resources

kustomize Build a kustomization target from a directory or URL.

Settings Commands:

label Update the labels on a resource

annotate Update the annotations on a resource

completion Output shell completion code for the specified shell (bash, zsh or fish)

Other Commands:

alpha Commands for features in alpha

api-resources Print the supported API resources on the server

api-versions Print the supported API versions on the server, in the form of "group/version"

config Modify kubeconfig files

plugin Provides utilities for interacting with plugins

version Print the client and server version information

Usage:

kubectl [flags] [options]

Use "kubectl <command> --help" for more information about a given command.

Use "kubectl options" for a list of global command-line options (applies to all commands).

(base) PS C:\Windows\system32> kubectl options

The following options can be passed to any command:

--add-dir-header=false:

If true, adds the file directory to the header of the log messages (DEPRECATED: will be removed in a future

release, see

https://github.com/kubernetes/enhancements/tree/master/keps/sig-instrumentation/2845-deprecate-klog-specific-flags-in-k8s-components)

--alsologtostderr=false:

log to standard error as well as files (DEPRECATED: will be removed in a future release, see

https://github.com/kubernetes/enhancements/tree/master/keps/sig-instrumentation/2845-deprecate-klog-specific-flags-in-k8s-components)

--as='':

Username to impersonate for the operation. User could be a regular user or a service account in a namespace.

--as-group=[]:

Group to impersonate for the operation, this flag can be repeated to specify multiple groups.

--as-uid='':

UID to impersonate for the operation.

--cache-dir='C:\Users\tbresee\.kube\cache':

Default cache directory

--certificate-authority='':

Path to a cert file for the certificate authority

--client-certificate='':

Path to a client certificate file for TLS

--client-key='':

Path to a client key file for TLS

--cluster='':

The name of the kubeconfig cluster to use

--context='':

The name of the kubeconfig context to use

--insecure-skip-tls-verify=false:

If true, the server's certificate will not be checked for validity. This will make your HTTPS connections

insecure

--kubeconfig='':

Path to the kubeconfig file to use for CLI requests.

--log-backtrace-at=:0:

when logging hits line file:N, emit a stack trace (DEPRECATED: will be removed in a future release, see

https://github.com/kubernetes/enhancements/tree/master/keps/sig-instrumentation/2845-deprecate-klog-specific-flags-in-k8s-components)

--log-dir='':

If non-empty, write log files in this directory (DEPRECATED: will be removed in a future release, see

https://github.com/kubernetes/enhancements/tree/master/keps/sig-instrumentation/2845-deprecate-klog-specific-flags-in-k8s-components)

--log-file='':

If non-empty, use this log file (DEPRECATED: will be removed in a future release, see

https://github.com/kubernetes/enhancements/tree/master/keps/sig-instrumentation/2845-deprecate-klog-specific-flags-in-k8s-components)

--log-file-max-size=1800:

Defines the maximum size a log file can grow to. Unit is megabytes. If the value is 0, the maximum file size

is unlimited. (DEPRECATED: will be removed in a future release, see

https://github.com/kubernetes/enhancements/tree/master/keps/sig-instrumentation/2845-deprecate-klog-specific-flags-in-k8s-components)

--log-flush-frequency=5s:

Maximum number of seconds between log flushes

--logtostderr=true:

log to standard error instead of files (DEPRECATED: will be removed in a future release, see

https://github.com/kubernetes/enhancements/tree/master/keps/sig-instrumentation/2845-deprecate-klog-specific-flags-in-k8s-components)

--match-server-version=false:

Require server version to match client version

-n, --namespace='':

If present, the namespace scope for this CLI request

--one-output=false:

If true, only write logs to their native severity level (vs also writing to each lower severity level)

(DEPRECATED: will be removed in a future release, see

https://github.com/kubernetes/enhancements/tree/master/keps/sig-instrumentation/2845-deprecate-klog-specific-flags-in-k8s-components)

--password='':

Password for basic authentication to the API server

--profile='none':

Name of profile to capture. One of (none|cpu|heap|goroutine|threadcreate|block|mutex)

--profile-output='profile.pprof':

Name of the file to write the profile to

--request-timeout='0':

The length of time to wait before giving up on a single server request. Non-zero values should contain a

corresponding time unit (e.g. 1s, 2m, 3h). A value of zero means don't timeout requests.

-s, --server='':

The address and port of the Kubernetes API server

--skip-headers=false:

If true, avoid header prefixes in the log messages (DEPRECATED: will be removed in a future release, see

https://github.com/kubernetes/enhancements/tree/master/keps/sig-instrumentation/2845-deprecate-klog-specific-flags-in-k8s-components)

--skip-log-headers=false:

If true, avoid headers when opening log files (DEPRECATED: will be removed in a future release, see

https://github.com/kubernetes/enhancements/tree/master/keps/sig-instrumentation/2845-deprecate-klog-specific-flags-in-k8s-components)

--stderrthreshold=2:

logs at or above this threshold go to stderr (DEPRECATED: will be removed in a future release, see

https://github.com/kubernetes/enhancements/tree/master/keps/sig-instrumentation/2845-deprecate-klog-specific-flags-in-k8s-components)

--tls-server-name='':

Server name to use for server certificate validation. If it is not provided, the hostname used to contact the

server is used

--token='':

Bearer token for authentication to the API server

--user='':

The name of the kubeconfig user to use

--username='':

Username for basic authentication to the API server

-v, --v=0:

number for the log level verbosity

--vmodule=:

comma-separated list of pattern=N settings for file-filtered logging

--warnings-as-errors=false:

Treat warnings received from the server as errors and exit with a non-zero exit code

(base) PS C:\Windows\system32> kubectl get services (list all services within the namespace)

NAME TYPE CLUSTER-IP EXTERNAL-IP PORT(S) AGE

kubernetes ClusterIP 10.96.0.1 <none> 443/TCP 37m

(base) PS C:\Windows\system32> kubectl get services --all-namespaces

NAMESPACE NAME TYPE CLUSTER-IP EXTERNAL-IP PORT(S) AGE

default kubernetes ClusterIP 10.96.0.1 <none> 443/TCP 38m

kube-system kube-dns ClusterIP 10.96.0.10 <none> 53/UDP,53/TCP,9153/TCP 38m

(base) PS C:\Windows\system32> kubectl get pods --all-namespaces

NAMESPACE NAME READY STATUS RESTARTS AGE

kube-system coredns-6d4b75cb6d-6sqpj 1/1 Running 2 (32m ago) 39m

kube-system coredns-6d4b75cb6d-kwgxs 1/1 Running 2 (32m ago) 39m

kube-system etcd-docker-desktop 1/1 Running 7 (32m ago) 39m

kube-system kube-apiserver-docker-desktop 1/1 Running 7 (32m ago) 39m

kube-system kube-controller-manager-docker-desktop 1/1 Running 7 (32m ago) 39m

kube-system kube-proxy-dnpvr 1/1 Running 2 (32m ago) 39m

kube-system kube-scheduler-docker-desktop 1/1 Running 7 (32m ago) 39m

kube-system storage-provisioner 1/1 Running 4 (32m ago) 39m

kube-system vpnkit-controller 1/1 Running 6 (6m37s ago) 39m

(base) PS C:\Windows\system32> **kubectl get pods -o wide --all-namespaces**

NAMESPACE NAME READY STATUS RESTARTS AGE IP NODE NOMINATED NODE READINESS GATES

kube-system coredns-6d4b75cb6d-6sqpj 1/1 Running 2 (33m ago) 39m 10.1.0.31 docker-desktop <none> <none>

kube-system coredns-6d4b75cb6d-kwgxs 1/1 Running 2 (33m ago) 39m 10.1.0.33 docker-desktop <none> <none>

kube-system etcd-docker-desktop 1/1 Running 7 (33m ago) 39m 192.168.65.4 docker-desktop <none> <none>

kube-system kube-apiserver-docker-desktop 1/1 Running 7 (33m ago) 39m 192.168.65.4 docker-desktop <none> <none>

kube-system kube-controller-manager-docker-desktop 1/1 Running 7 (33m ago) 39m 192.168.65.4 docker-desktop <none> <none>

kube-system kube-proxy-dnpvr 1/1 Running 2 (33m ago) 39m 192.168.65.4 docker-desktop <none> <none>

kube-system kube-scheduler-docker-desktop 1/1 Running 7 (33m ago) 39m 192.168.65.4 docker-desktop <none> <none>

kube-system storage-provisioner 1/1 Running 4 (33m ago) 39m 10.1.0.30 docker-desktop <none> <none>

kube-system vpnkit-controller 1/1 Running 6 (7m5s ago) 39m 10.1.0.32 docker-desktop <none> <none>

(base) PS C:\Windows\system32> **kubectl get services --all-namespaces**

NAMESPACE NAME TYPE CLUSTER-IP EXTERNAL-IP PORT(S) AGE

default kubernetes ClusterIP 10.96.0.1 <none> 443/TCP 43m

kube-system kube-dns ClusterIP 10.96.0.10 <none> 53/UDP,53/TCP,9153/TCP 43m

(base) PS C:\Windows\system32> **kubectl describe services --all-namespaces**

Name: kubernetes

Namespace: default

Labels: component=apiserver # this is the raw apiserver

provider=kubernetes

Annotations: <none>

Selector: <none>

Type: ClusterIP ?

IP Family Policy: SingleStack

IP Families: IPv4

IP: 10.96.0.1

IPs: 10.96.0.1

Port: https 443/TCP

TargetPort: 6443/TCP

Endpoints: 192.168.65.4:6443

Session Affinity: None

Events: <none>

Name: kube-dns

Namespace: kube-system

Labels: k8s-app=kube-dns

kubernetes.io/cluster-service=true

kubernetes.io/name=CoreDNS

Annotations: prometheus.io/port: 9153

prometheus.io/scrape: true

Selector: k8s-app=kube-dns

Type: ClusterIP

IP Family Policy: SingleStack

IP Families: IPv4

IP: 10.96.0.10

IPs: 10.96.0.10

Port: dns 53/UDP

TargetPort: 53/UDP

Endpoints: 10.1.0.31:53,10.1.0.33:53

Port: dns-tcp 53/TCP

TargetPort: 53/TCP

Endpoints: 10.1.0.31:53,10.1.0.33:53

Port: metrics 9153/TCP

TargetPort: 9153/TCP

Endpoints: 10.1.0.31:9153,10.1.0.33:9153

Session Affinity: None

Events: <none>

(base) PS C:\Windows\system32> kubectl get svc

NAME TYPE CLUSTER-IP EXTERNAL-IP PORT(S) AGE

kubernetes ClusterIP 10.96.0.1 <none> 443/TCP 45m

(base) PS C:\Windows\system32> kubectl get pods -n kube-system

NAME READY STATUS RESTARTS AGE

coredns-6d4b75cb6d-6sqpj 1/1 Running 2 (40m ago) 46m

coredns-6d4b75cb6d-kwgxs 1/1 Running 2 (40m ago) 46m

etcd-docker-desktop 1/1 Running 7 (40m ago) 46m

kube-apiserver-docker-desktop 1/1 Running 7 (40m ago) 46m

kube-controller-manager-docker-desktop 1/1 Running 7 (40m ago) 46m

kube-proxy-dnpvr 1/1 Running 2 (40m ago) 46m

kube-scheduler-docker-desktop 1/1 Running 7 (40m ago) 46m

storage-provisioner 1/1 Running 4 (39m ago) 46m

vpnkit-controller 1/1 Running 6 (13m ago) 46m

(base) PS C:\Windows\system32> kubectl get pods -n kube-system

NAME READY STATUS RESTARTS AGE

coredns-6d4b75cb6d-6sqpj 1/1 Running 2 (42m ago) 49m

coredns-6d4b75cb6d-kwgxs 1/1 Running 2 (42m ago) 49m

etcd-docker-desktop 1/1 Running 7 (42m ago) 49m

kube-apiserver-docker-desktop 1/1 Running 7 (42m ago) 49m

kube-controller-manager-docker-desktop 1/1 Running 7 (42m ago) 49m

kube-proxy-dnpvr 1/1 Running 2 (42m ago) 49m

kube-scheduler-docker-desktop 1/1 Running 7 (42m ago) 49m

storage-provisioner 1/1 Running 4 (42m ago) 48m

vpnkit-controller 1/1 Running 6 (16m ago) 48m

*docs say you SHOULD get this:*

*Checking system pods at this state should return the following: looks pretty much the same !*

*$ kubectl get pods -n kube-system*

*NAME READY STATUS RESTARTS AGE*

*coredns-78fcd69978-7m52k 1/1 Running 0 99m*

*coredns-78fcd69978-mm22t 1/1 Running 0 99m*

*etcd-docker-desktop 1/1 Running 1 99m*

*kube-apiserver-docker-desktop 1/1 Running 1 99m*

*kube-controller-manager-docker-desktop 1/1 Running 1 99m*

*kube-proxy-zctsm 1/1 Running 0 99m*

*kube-scheduler-docker-desktop 1/1 Running 1 99m*

*storage-provisioner 1/1 Running 0 98m*

*vpnkit-controller 1/1 Running 0 98m*

s

(base) PS C:\Windows\system32> kubectl get nodes

NAME STATUS ROLES AGE VERSION

docker-desktop Ready control-plane 52m v1.24.0

(base) PS C:\Windows\system32> **docker info**

Client:

Context: default

Debug Mode: false

Plugins:

buildx: Docker Buildx (Docker Inc., v0.8.2)

compose: Docker Compose (Docker Inc., v2.5.1)

sbom: View the packaged-based Software Bill Of Materials (SBOM) for an image (Anchore Inc., 0.6.0)

scan: Docker Scan (Docker Inc., v0.17.0)

Server:

Containers: 38

Running: 32

Paused: 0

Stopped: 6

Images: 18

Server Version: 20.10.14

Storage Driver: overlay2

Backing Filesystem: extfs

Supports d\_type: true

Native Overlay Diff: true

userxattr: false

Logging Driver: json-file

Cgroup Driver: cgroupfs

Cgroup Version: 1

Plugins:

Volume: local

Network: bridge host ipvlan macvlan null overlay

Log: awslogs fluentd gcplogs gelf journald json-file local logentries splunk syslog

Swarm: inactive

Runtimes: io.containerd.runc.v2 io.containerd.runtime.v1.linux runc

Default Runtime: runc

Init Binary: docker-init

containerd version: 3df54a852345ae127d1fa3092b95168e4a88e2f8

runc version: v1.0.3-0-gf46b6ba

init version: de40ad0

Security Options:

seccomp

Profile: default

Kernel Version: 5.10.16.3-microsoft-standard-WSL2

Operating System: Docker Desktop

OSType: linux

Architecture: x86\_64

CPUs: 24

Total Memory: 50.17GiB

Name: docker-desktop

ID: O5GD:DI63:ZKYP:7SMF:P624:5YUV:IFIS:2U4D:YESY:ISRM:L4L6:66GX

Docker Root Dir: /var/lib/docker

Debug Mode: false

HTTP Proxy: http.docker.internal:3128

HTTPS Proxy: http.docker.internal:3128

No Proxy: hubproxy.docker.internal

Registry: https://index.docker.io/v1/

Labels:

Experimental: false

Insecure Registries:

hubproxy.docker.internal:5000

127.0.0.0/8

Live Restore Enabled: false

WARNING: No blkio throttle.read\_bps\_device support

WARNING: No blkio throttle.write\_bps\_device support

WARNING: No blkio throttle.read\_iops\_device support

WARNING: No blkio throttle.write\_iops\_device support

(base) PS C:\Windows\system32>

<https://andrewlock.net/running-kubernetes-and-the-dashboard-with-docker-desktop/>

(base) PS C:\Windows\system32> kubectl apply -f https://raw.githubusercontent.com/kubernetes/dashboard/v2.2.0/aio/deploy/recommended.yaml

namespace/kubernetes-dashboard created

serviceaccount/kubernetes-dashboard created

service/kubernetes-dashboard created

secret/kubernetes-dashboard-certs created

secret/kubernetes-dashboard-csrf created

secret/kubernetes-dashboard-key-holder created

configmap/kubernetes-dashboard-settings created

role.rbac.authorization.k8s.io/kubernetes-dashboard created

clusterrole.rbac.authorization.k8s.io/kubernetes-dashboard created

rolebinding.rbac.authorization.k8s.io/kubernetes-dashboard created

clusterrolebinding.rbac.authorization.k8s.io/kubernetes-dashboard created

deployment.apps/kubernetes-dashboard created

service/dashboard-metrics-scraper created

Warning: spec.template.metadata.annotations[seccomp.security.alpha.kubernetes.io/pod]: deprecated since v1.19, non-functional in v1.25+; use the "seccompProfile" field instead

deployment.apps/dashboard-metrics-scraper created

(base) PS C:\Windows\system32> kubectl apply -f https://raw.githubusercontent.com/kubernetes/dashboard/v2.2.0/aio/deploy/recommended.yaml

namespace/kubernetes-dashboard unchanged

serviceaccount/kubernetes-dashboard unchanged

service/kubernetes-dashboard unchanged

secret/kubernetes-dashboard-certs unchanged

secret/kubernetes-dashboard-csrf configured

Warning: resource secrets/kubernetes-dashboard-key-holder is missing the kubectl.kubernetes.io/last-applied-configuration annotation which is required by kubectl apply. kubectl apply should only be used on resources created declaratively by either kubectl create --save-config or kubectl apply. The missing annotation will be patched automatically.

secret/kubernetes-dashboard-key-holder configured

configmap/kubernetes-dashboard-settings unchanged

role.rbac.authorization.k8s.io/kubernetes-dashboard unchanged

clusterrole.rbac.authorization.k8s.io/kubernetes-dashboard unchanged

rolebinding.rbac.authorization.k8s.io/kubernetes-dashboard unchanged

clusterrolebinding.rbac.authorization.k8s.io/kubernetes-dashboard unchanged

deployment.apps/kubernetes-dashboard unchanged

service/dashboard-metrics-scraper unchanged

deployment.apps/dashboard-metrics-scraper unchanged

<http://localhost:8001/>

this is what you see below:

{

"paths": [

"/.well-known/openid-configuration",

"/api",

"/api/v1",

"/apis",

"/apis/",

"/apis/admissionregistration.k8s.io",

"/apis/admissionregistration.k8s.io/v1",

"/apis/apiextensions.k8s.io",

"/apis/apiextensions.k8s.io/v1",

"/apis/apiregistration.k8s.io",

"/apis/apiregistration.k8s.io/v1",

"/apis/apps",

"/apis/apps/v1",

"/apis/authentication.k8s.io",

"/apis/authentication.k8s.io/v1",

"/apis/authorization.k8s.io",

"/apis/authorization.k8s.io/v1",

"/apis/autoscaling",

"/apis/autoscaling/v1",

"/apis/autoscaling/v2",

"/apis/autoscaling/v2beta1",

"/apis/autoscaling/v2beta2",

"/apis/batch",

"/apis/batch/v1",

"/apis/batch/v1beta1",

"/apis/certificates.k8s.io",

"/apis/certificates.k8s.io/v1",

"/apis/coordination.k8s.io",

"/apis/coordination.k8s.io/v1",

"/apis/discovery.k8s.io",

"/apis/discovery.k8s.io/v1",

"/apis/discovery.k8s.io/v1beta1",

"/apis/events.k8s.io",

"/apis/events.k8s.io/v1",

"/apis/events.k8s.io/v1beta1",

"/apis/flowcontrol.apiserver.k8s.io",

"/apis/flowcontrol.apiserver.k8s.io/v1beta1",

"/apis/flowcontrol.apiserver.k8s.io/v1beta2",

"/apis/networking.k8s.io",

"/apis/networking.k8s.io/v1",

"/apis/node.k8s.io",

"/apis/node.k8s.io/v1",

"/apis/node.k8s.io/v1beta1",

"/apis/policy",

"/apis/policy/v1",

"/apis/policy/v1beta1",

"/apis/rbac.authorization.k8s.io",

"/apis/rbac.authorization.k8s.io/v1",

"/apis/scheduling.k8s.io",

"/apis/scheduling.k8s.io/v1",

"/apis/storage.k8s.io",

"/apis/storage.k8s.io/v1",

"/apis/storage.k8s.io/v1beta1",

"/healthz",

"/healthz/autoregister-completion",

"/healthz/etcd",

"/healthz/log",

"/healthz/ping",

"/healthz/poststarthook/aggregator-reload-proxy-client-cert",

"/healthz/poststarthook/apiservice-openapi-controller",

"/healthz/poststarthook/apiservice-openapiv3-controller",

"/healthz/poststarthook/apiservice-registration-controller",

"/healthz/poststarthook/apiservice-status-available-controller",

"/healthz/poststarthook/bootstrap-controller",

"/healthz/poststarthook/crd-informer-synced",

"/healthz/poststarthook/generic-apiserver-start-informers",

"/healthz/poststarthook/kube-apiserver-autoregistration",

"/healthz/poststarthook/priority-and-fairness-config-consumer",

"/healthz/poststarthook/priority-and-fairness-config-producer",

"/healthz/poststarthook/priority-and-fairness-filter",

"/healthz/poststarthook/rbac/bootstrap-roles",

"/healthz/poststarthook/scheduling/bootstrap-system-priority-classes",

"/healthz/poststarthook/start-apiextensions-controllers",

"/healthz/poststarthook/start-apiextensions-informers",

"/healthz/poststarthook/start-cluster-authentication-info-controller",

"/healthz/poststarthook/start-kube-aggregator-informers",

"/healthz/poststarthook/start-kube-apiserver-admission-initializer",

"/livez",

"/livez/autoregister-completion",

"/livez/etcd",

"/livez/log",

"/livez/ping",

"/livez/poststarthook/aggregator-reload-proxy-client-cert",

"/livez/poststarthook/apiservice-openapi-controller",

"/livez/poststarthook/apiservice-openapiv3-controller",

"/livez/poststarthook/apiservice-registration-controller",

"/livez/poststarthook/apiservice-status-available-controller",

"/livez/poststarthook/bootstrap-controller",

"/livez/poststarthook/crd-informer-synced",

"/livez/poststarthook/generic-apiserver-start-informers",

"/livez/poststarthook/kube-apiserver-autoregistration",

"/livez/poststarthook/priority-and-fairness-config-consumer",

"/livez/poststarthook/priority-and-fairness-config-producer",

"/livez/poststarthook/priority-and-fairness-filter",

"/livez/poststarthook/rbac/bootstrap-roles",

"/livez/poststarthook/scheduling/bootstrap-system-priority-classes",

"/livez/poststarthook/start-apiextensions-controllers",

"/livez/poststarthook/start-apiextensions-informers",

"/livez/poststarthook/start-cluster-authentication-info-controller",

"/livez/poststarthook/start-kube-aggregator-informers",

"/livez/poststarthook/start-kube-apiserver-admission-initializer",

"/logs",

"/metrics",

"/openapi/v2",

"/openapi/v3",

"/openapi/v3/",

"/openid/v1/jwks",

"/readyz",

"/readyz/autoregister-completion",

"/readyz/etcd",

"/readyz/informer-sync",

"/readyz/log",

"/readyz/ping",

"/readyz/poststarthook/aggregator-reload-proxy-client-cert",

"/readyz/poststarthook/apiservice-openapi-controller",

"/readyz/poststarthook/apiservice-openapiv3-controller",

"/readyz/poststarthook/apiservice-registration-controller",

"/readyz/poststarthook/apiservice-status-available-controller",

"/readyz/poststarthook/bootstrap-controller",

"/readyz/poststarthook/crd-informer-synced",

"/readyz/poststarthook/generic-apiserver-start-informers",

"/readyz/poststarthook/kube-apiserver-autoregistration",

"/readyz/poststarthook/priority-and-fairness-config-consumer",

"/readyz/poststarthook/priority-and-fairness-config-producer",

"/readyz/poststarthook/priority-and-fairness-filter",

"/readyz/poststarthook/rbac/bootstrap-roles",

"/readyz/poststarthook/scheduling/bootstrap-system-priority-classes",

"/readyz/poststarthook/start-apiextensions-controllers",

"/readyz/poststarthook/start-apiextensions-informers",

"/readyz/poststarthook/start-cluster-authentication-info-controller",

"/readyz/poststarthook/start-kube-aggregator-informers",

"/readyz/poststarthook/start-kube-apiserver-admission-initializer",

"/readyz/shutdown",

"/version"

]

}

<http://localhost:8001/api/v1/namespaces/kubernetes-dashboard/services/https:kubernetes-dashboard:/proxy/>

Graphical user interface, application, Teams

Description automatically generated

<https://andrewlock.net/running-kubernetes-and-the-dashboard-with-docker-desktop/>

(base) PS C:\Windows\system32> kubectl apply -f https://github.com/kubernetes-sigs/metrics-server/releases/download/v0.4.2/components.yaml

serviceaccount/metrics-server created

clusterrole.rbac.authorization.k8s.io/system:aggregated-metrics-reader created

clusterrole.rbac.authorization.k8s.io/system:metrics-server created

rolebinding.rbac.authorization.k8s.io/metrics-server-auth-reader created

clusterrolebinding.rbac.authorization.k8s.io/metrics-server:system:auth-delegator created

clusterrolebinding.rbac.authorization.k8s.io/system:metrics-server created

service/metrics-server created

deployment.apps/metrics-server created

apiservice.apiregistration.k8s.io/v1beta1.metrics.k8s.io created

(base) PS C:\Windows\system32> kubectl patch deployment metrics-server -n kube-system --type 'json' -p '[{"op": "add", "path": "/spec/template/spec/containers/0/args/-", "value": "--kubelet-insecure-tls"}]'

deployment.apps/metrics-server patched

You are going thru installation from github

<https://andrewlock.net/running-kubernetes-and-the-dashboard-with-docker-desktop/>

# Install Kubernetes Dashboard

kubectl apply -f https://raw.githubusercontent.com/kubernetes/dashboard/v2.2.0/aio/deploy/recommended.yaml

# Patch the dashboard to allow skipping login

kubectl patch deployment kubernetes-dashboard -n kubernetes-dashboard --type 'json' -p '[{"op": "add", "path": "/spec/template/spec/containers/0/args/-", "value": "--enable-skip-login"}]'

# Install Metrics Server

kubectl apply -f https://github.com/kubernetes-sigs/metrics-server/releases/download/v0.4.2/components.yaml

# Patch the metrisc server to work with insecure TLS

kubectl patch deployment metrics-server -n kube-system --type 'json' -p '[{"op": "add", "path": "/spec/template/spec/containers/0/args/-", "value": "--kubelet-insecure-tls"}]'

# Run the Kubectl proxy to allow accessing the dashboard

kubectl proxy

Graphical user interface, text, application, email

Description automatically generated

<https://andrewlock.net/running-kubernetes-and-the-dashboard-with-docker-desktop/>

(base) PS C:\Windows\system32> # Install Kubernetes Dashboard

(base) PS C:\Windows\system32> kubectl apply -f https://raw.githubusercontent.com/kubernetes/dashboard/v2.2.0/aio/deploy/recommended.yaml

namespace/kubernetes-dashboard unchanged

serviceaccount/kubernetes-dashboard unchanged

service/kubernetes-dashboard unchanged

secret/kubernetes-dashboard-certs unchanged

secret/kubernetes-dashboard-csrf unchanged

secret/kubernetes-dashboard-key-holder unchanged

configmap/kubernetes-dashboard-settings unchanged

role.rbac.authorization.k8s.io/kubernetes-dashboard unchanged

clusterrole.rbac.authorization.k8s.io/kubernetes-dashboard unchanged

rolebinding.rbac.authorization.k8s.io/kubernetes-dashboard unchanged

clusterrolebinding.rbac.authorization.k8s.io/kubernetes-dashboard unchanged

deployment.apps/kubernetes-dashboard unchanged

service/dashboard-metrics-scraper unchanged

deployment.apps/dashboard-metrics-scraper unchanged

(base) PS C:\Windows\system32> # Patch the dashboard to allow skipping login

(base) PS C:\Windows\system32> kubectl patch deployment kubernetes-dashboard -n kubernetes-dashboard --type 'json' -p '[{"op": "add", "path": "/spec/template/spec/containers/0/args/-", "value": "--enable-skip-login"}]'

deployment.apps/kubernetes-dashboard patched

(base) PS C:\Windows\system32> # Install Metrics Server

(base) PS C:\Windows\system32> kubectl apply -f https://github.com/kubernetes-sigs/metrics-server/releases/download/v0.4.2/components.yaml

serviceaccount/metrics-server unchanged

clusterrole.rbac.authorization.k8s.io/system:aggregated-metrics-reader unchanged

clusterrole.rbac.authorization.k8s.io/system:metrics-server unchanged

rolebinding.rbac.authorization.k8s.io/metrics-server-auth-reader unchanged

clusterrolebinding.rbac.authorization.k8s.io/metrics-server:system:auth-delegator unchanged

clusterrolebinding.rbac.authorization.k8s.io/system:metrics-server unchanged

service/metrics-server unchanged

deployment.apps/metrics-server configured

apiservice.apiregistration.k8s.io/v1beta1.metrics.k8s.io unchanged

(base) PS C:\Windows\system32> # Patch the metrisc server to work with insecure TLS

(base) PS C:\Windows\system32> kubectl patch deployment metrics-server -n kube-system --type 'json' -p '[{"op": "add", "path": "/spec/template/spec/containers/0/args/-", "value": "--kubelet-insecure-tls"}]'

deployment.apps/metrics-server patched

(base) PS C:\Windows\system32> # Run the Kubectl proxy to allow accessing the dashboard

(base) PS C:\Windows\system32> kubectl proxy

Starting to serve on 127.0.0.1:8001

<https://birthday.play-with-docker.com/kubernetes-docker-desktop/>

<https://github.com/dockersamples/example-voting-app>

Text

Description automatically generated with low confidence

**(base) PS C:\Windows\system32> kubectl get nodes --all-namespaces**

NAME STATUS ROLES AGE VERSION

docker-desktop Ready control-plane 3h24m v1.24.0

(base) PS C:\Windows\system32> kubectl describe nodes docker-desktop

Name: docker-desktop

Roles: control-plane

Labels: beta.kubernetes.io/arch=amd64

beta.kubernetes.io/os=linux

kubernetes.io/arch=amd64

kubernetes.io/hostname=docker-desktop

kubernetes.io/os=linux

node-role.kubernetes.io/control-plane=

node.kubernetes.io/exclude-from-external-load-balancers=

Annotations: kubeadm.alpha.kubernetes.io/cri-socket: unix:///var/run/cri-dockerd.sock

node.alpha.kubernetes.io/ttl: 0

volumes.kubernetes.io/controller-managed-attach-detach: true

CreationTimestamp: Tue, 24 May 2022 12:59:03 -0500

Taints: <none>

Unschedulable: false

Lease:

HolderIdentity: docker-desktop

AcquireTime: <unset>

RenewTime: Tue, 24 May 2022 16:23:33 -0500

Conditions:

Type Status LastHeartbeatTime LastTransitionTime Reason Message

---- ------ ----------------- ------------------ ------ -------

MemoryPressure False Tue, 24 May 2022 16:23:06 -0500 Tue, 24 May 2022 12:59:02 -0500 KubeletHasSufficientMemory kubelet has sufficient memory available

DiskPressure False Tue, 24 May 2022 16:23:06 -0500 Tue, 24 May 2022 12:59:02 -0500 KubeletHasNoDiskPressure kubelet has no disk pressure

PIDPressure False Tue, 24 May 2022 16:23:06 -0500 Tue, 24 May 2022 12:59:02 -0500 KubeletHasSufficientPID kubelet has sufficient PID available

Ready True Tue, 24 May 2022 16:23:06 -0500 Tue, 24 May 2022 12:59:03 -0500 KubeletReady kubelet is posting ready status

Addresses:

InternalIP: 192.168.65.4

Hostname: docker-desktop

Capacity:

cpu: 24

ephemeral-storage: 263174212Ki

hugepages-1Gi: 0

hugepages-2Mi: 0

memory: 52602964Ki

pods: 110

Allocatable:

cpu: 24

ephemeral-storage: 242541353378

hugepages-1Gi: 0

hugepages-2Mi: 0

memory: 52500564Ki

pods: 110

System Info:

Machine ID: 27bb5c95-c4b7-438c-bed1-ed90bac37fb7

System UUID: 27bb5c95-c4b7-438c-bed1-ed90bac37fb7

Boot ID: 0ab54df2-aa76-41ab-b10e-61e4066f389f

Kernel Version: 5.10.16.3-microsoft-standard-WSL2

OS Image: Docker Desktop

Operating System: linux

Architecture: amd64

Container Runtime Version: docker://20.10.14

Kubelet Version: v1.24.0

Kube-Proxy Version: v1.24.0

Non-terminated Pods: (12 in total)

Namespace Name CPU Requests CPU Limits Memory Requests Memory Limits Age

--------- ---- ------------ ---------- --------------- ------------- ---

kube-system coredns-6d4b75cb6d-6sqpj 100m (0%) 0 (0%) 70Mi (0%) 170Mi (0%) 3h24m

kube-system coredns-6d4b75cb6d-kwgxs 100m (0%) 0 (0%) 70Mi (0%) 170Mi (0%) 3h24m

kube-system etcd-docker-desktop 100m (0%) 0 (0%) 100Mi (0%) 0 (0%) 3h24m

kube-system kube-apiserver-docker-desktop 250m (1%) 0 (0%) 0 (0%) 0 (0%) 3h24m

kube-system kube-controller-manager-docker-desktop 200m (0%) 0 (0%) 0 (0%) 0 (0%) 3h24m

kube-system kube-proxy-dnpvr 0 (0%) 0 (0%) 0 (0%) 0 (0%) 3h24m

kube-system kube-scheduler-docker-desktop 100m (0%) 0 (0%) 0 (0%) 0 (0%) 3h24m

kube-system metrics-server-9f897d54b-gtgmt 0 (0%) 0 (0%) 0 (0%) 0 (0%) 93m

kube-system storage-provisioner 0 (0%) 0 (0%) 0 (0%) 0 (0%) 3h24m

kube-system vpnkit-controller 0 (0%) 0 (0%) 0 (0%) 0 (0%) 3h24m

kubernetes-dashboard dashboard-metrics-scraper-77d78b7997-kprvl 0 (0%) 0 (0%) 0 (0%) 0 (0%) 103m

kubernetes-dashboard kubernetes-dashboard-7c879d66cd-w4vz7 0 (0%) 0 (0%) 0 (0%) 0 (0%) 82m

Allocated resources:

(Total limits may be over 100 percent, i.e., overcommitted.)

Resource Requests Limits

-------- -------- ------

cpu 850m (3%) 0 (0%)

memory 240Mi (0%) 340Mi (0%)

ephemeral-storage 0 (0%) 0 (0%)

hugepages-1Gi 0 (0%) 0 (0%)

hugepages-2Mi 0 (0%) 0 (0%)

Events: <none>

(base) PS C:\Windows\system32> **kubectl get pods --all-namespaces**

NAMESPACE NAME READY STATUS RESTARTS AGE

kube-system coredns-6d4b75cb6d-6sqpj 1/1 Running 2 (3h20m ago) 3h26m

kube-system coredns-6d4b75cb6d-kwgxs 1/1 Running 2 (3h20m ago) 3h26m

kube-system etcd-docker-desktop 1/1 Running 7 (3h20m ago) 3h26m

kube-system kube-apiserver-docker-desktop 1/1 Running 7 (3h20m ago) 3h26m

kube-system kube-controller-manager-docker-desktop 1/1 Running 7 (3h20m ago) 3h26m

kube-system kube-proxy-dnpvr 1/1 Running 2 (3h20m ago) 3h26m

kube-system kube-scheduler-docker-desktop 1/1 Running 7 (3h20m ago) 3h26m

kube-system metrics-server-9f897d54b-gtgmt 1/1 Running 0 96m

kube-system storage-provisioner 1/1 Running 4 (3h20m ago) 3h26m

kube-system vpnkit-controller 1/1 Running 19 (69s ago) 3h26m

kubernetes-dashboard dashboard-metrics-scraper-77d78b7997-kprvl 1/1 Running 0 105m

kubernetes-dashboard kubernetes-dashboard-7c879d66cd-w4vz7 1/1 Running 0 84m

(base) PS C:\Windows\system32> kubectl describe pods -n kube-system

Name: coredns-6d4b75cb6d-6sqpj

Namespace: kube-system

Priority: 2000000000

Priority Class Name: system-cluster-critical

Node: docker-desktop/192.168.65.4

Start Time: Tue, 24 May 2022 12:59:11 -0500

Labels: k8s-app=kube-dns

pod-template-hash=6d4b75cb6d

Annotations: <none>

Status: Running

IP: 10.1.0.31

IPs:

IP: 10.1.0.31

Controlled By: ReplicaSet/coredns-6d4b75cb6d

Containers:

coredns:

Container ID: docker://ee730e49e0e1a78d6ce721669f3fa7a00f86a06b5e629f9a064f65997354e125

Image: k8s.gcr.io/coredns/coredns:v1.8.6

Image ID: docker://sha256:a4ca41631cc7ac19ce1be3ebf0314ac5f47af7c711f17066006db82ee3b75b03

Ports: 53/UDP, 53/TCP, 9153/TCP

Host Ports: 0/UDP, 0/TCP, 0/TCP

Args:

-conf

/etc/coredns/Corefile

State: Running

Started: Tue, 24 May 2022 13:05:41 -0500

Last State: Terminated

Reason: Error

Exit Code: 255

Started: Tue, 24 May 2022 13:00:11 -0500

Finished: Tue, 24 May 2022 13:05:22 -0500

Ready: True

Restart Count: 2

Limits:

memory: 170Mi

Requests:

cpu: 100m

memory: 70Mi

Liveness: http-get http://:8080/health delay=60s timeout=5s period=10s #success=1 #failure=5

Readiness: http-get http://:8181/ready delay=0s timeout=1s period=10s #success=1 #failure=3

Environment: <none>

Mounts:

/etc/coredns from config-volume (ro)

/var/run/secrets/kubernetes.io/serviceaccount from kube-api-access-zhm78 (ro)

Conditions:

Type Status

Initialized True

Ready True

ContainersReady True

PodScheduled True

Volumes:

config-volume:

Type: ConfigMap (a volume populated by a ConfigMap)

Name: coredns

Optional: false

kube-api-access-zhm78:

Type: Projected (a volume that contains injected data from multiple sources)

TokenExpirationSeconds: 3607

ConfigMapName: kube-root-ca.crt

ConfigMapOptional: <nil>

DownwardAPI: true

QoS Class: Burstable

Node-Selectors: kubernetes.io/os=linux

Tolerations: CriticalAddonsOnly op=Exists

node-role.kubernetes.io/control-plane:NoSchedule

node-role.kubernetes.io/master:NoSchedule

node.kubernetes.io/not-ready:NoExecute op=Exists for 300s

node.kubernetes.io/unreachable:NoExecute op=Exists for 300s

Events: <none>

Name: coredns-6d4b75cb6d-kwgxs

Namespace: kube-system

Priority: 2000000000

Priority Class Name: system-cluster-critical

Node: docker-desktop/192.168.65.4

Start Time: Tue, 24 May 2022 12:59:11 -0500

Labels: k8s-app=kube-dns

pod-template-hash=6d4b75cb6d

Annotations: <none>

Status: Running

IP: 10.1.0.33

IPs:

IP: 10.1.0.33

Controlled By: ReplicaSet/coredns-6d4b75cb6d

Containers:

coredns:

Container ID: docker://b81f407fe0ac7186f45d585db36690c175104f81715f828a68032640f7d8b5fe

Image: k8s.gcr.io/coredns/coredns:v1.8.6

Image ID: docker://sha256:a4ca41631cc7ac19ce1be3ebf0314ac5f47af7c711f17066006db82ee3b75b03

Ports: 53/UDP, 53/TCP, 9153/TCP

Host Ports: 0/UDP, 0/TCP, 0/TCP

Args:

-conf

/etc/coredns/Corefile

State: Running

Started: Tue, 24 May 2022 13:05:42 -0500

Last State: Terminated

Reason: Error

Exit Code: 255

Started: Tue, 24 May 2022 13:00:10 -0500

Finished: Tue, 24 May 2022 13:05:22 -0500

Ready: True

Restart Count: 2

Limits:

memory: 170Mi

Requests:

cpu: 100m

memory: 70Mi

Liveness: http-get http://:8080/health delay=60s timeout=5s period=10s #success=1 #failure=5

Readiness: http-get http://:8181/ready delay=0s timeout=1s period=10s #success=1 #failure=3

Environment: <none>

Mounts:

/etc/coredns from config-volume (ro)

/var/run/secrets/kubernetes.io/serviceaccount from kube-api-access-frxlv (ro)

Conditions:

Type Status

Initialized True

Ready True

ContainersReady True

PodScheduled True

Volumes:

config-volume:

Type: ConfigMap (a volume populated by a ConfigMap)

Name: coredns

Optional: false

kube-api-access-frxlv:

Type: Projected (a volume that contains injected data from multiple sources)

TokenExpirationSeconds: 3607

ConfigMapName: kube-root-ca.crt

ConfigMapOptional: <nil>

DownwardAPI: true

QoS Class: Burstable

Node-Selectors: kubernetes.io/os=linux

Tolerations: CriticalAddonsOnly op=Exists

node-role.kubernetes.io/control-plane:NoSchedule

node-role.kubernetes.io/master:NoSchedule

node.kubernetes.io/not-ready:NoExecute op=Exists for 300s

node.kubernetes.io/unreachable:NoExecute op=Exists for 300s

Events: <none>

Name: etcd-docker-desktop

Namespace: kube-system

Priority: 2000001000

Priority Class Name: system-node-critical

Node: docker-desktop/192.168.65.4

Start Time: Tue, 24 May 2022 13:05:33 -0500

Labels: component=etcd

tier=control-plane

Annotations: kubeadm.kubernetes.io/etcd.advertise-client-urls: https://192.168.65.4:2379

kubernetes.io/config.hash: 2449ddc0985e3be8dd23ffc4d12cb53b

kubernetes.io/config.mirror: 2449ddc0985e3be8dd23ffc4d12cb53b

kubernetes.io/config.seen: 2022-05-24T17:59:00.660352141Z

kubernetes.io/config.source: file

seccomp.security.alpha.kubernetes.io/pod: runtime/default

Status: Running

IP: 192.168.65.4

IPs:

IP: 192.168.65.4

Controlled By: Node/docker-desktop

Containers:

etcd:

Container ID: docker://131c1910e47e2687c5b1f2a41d1fe9b70564622fe5a75fe48ebfa3d573c51644

Image: k8s.gcr.io/etcd:3.5.3-0

Image ID: docker://sha256:aebe758cef4cd05b9f8cee39758227714d02f42ef3088023c1e3cd454f927a2b

Port: <none>

Host Port: <none>

Command:

etcd

--advertise-client-urls=https://192.168.65.4:2379

--cert-file=/run/config/pki/etcd/server.crt

--client-cert-auth=true

--data-dir=/var/lib/etcd

--experimental-initial-corrupt-check=true

--initial-advertise-peer-urls=https://192.168.65.4:2380

--initial-cluster=docker-desktop=https://192.168.65.4:2380

--key-file=/run/config/pki/etcd/server.key

--listen-client-urls=https://127.0.0.1:2379,https://192.168.65.4:2379

--listen-metrics-urls=http://127.0.0.1:2381

--listen-peer-urls=https://192.168.65.4:2380

--name=docker-desktop

--peer-cert-file=/run/config/pki/etcd/peer.crt

--peer-client-cert-auth=true

--peer-key-file=/run/config/pki/etcd/peer.key

--peer-trusted-ca-file=/run/config/pki/etcd/ca.crt

--snapshot-count=10000

--trusted-ca-file=/run/config/pki/etcd/ca.crt

State: Running

Started: Tue, 24 May 2022 13:05:34 -0500

Last State: Terminated

Reason: Error

Exit Code: 255

Started: Tue, 24 May 2022 13:00:04 -0500

Finished: Tue, 24 May 2022 13:05:22 -0500

Ready: True

Restart Count: 7

Requests:

cpu: 100m

memory: 100Mi

Liveness: http-get http://127.0.0.1:2381/health delay=10s timeout=15s period=10s #success=1 #failure=8

Startup: http-get http://127.0.0.1:2381/health delay=10s timeout=15s period=10s #success=1 #failure=24

Environment: <none>

Mounts:

/run/config/pki/etcd from etcd-certs (rw)

/var/lib/etcd from etcd-data (rw)

Conditions:

Type Status

Initialized True

Ready True

ContainersReady True

PodScheduled True

Volumes:

etcd-certs:

Type: HostPath (bare host directory volume)

Path: /run/config/pki/etcd

HostPathType: DirectoryOrCreate

etcd-data:

Type: HostPath (bare host directory volume)

Path: /var/lib/etcd

HostPathType: DirectoryOrCreate

QoS Class: Burstable

Node-Selectors: <none>

Tolerations: :NoExecute op=Exists

Events: <none>

Name: kube-apiserver-docker-desktop

Namespace: kube-system

Priority: 2000001000

Priority Class Name: system-node-critical

Node: docker-desktop/192.168.65.4

Start Time: Tue, 24 May 2022 13:05:33 -0500

Labels: component=kube-apiserver

tier=control-plane

Annotations: kubeadm.kubernetes.io/kube-apiserver.advertise-address.endpoint: 192.168.65.4:6443

kubernetes.io/config.hash: f76ea91a200a6b1cfe31c7a114460aac

kubernetes.io/config.mirror: f76ea91a200a6b1cfe31c7a114460aac

kubernetes.io/config.seen: 2022-05-24T17:59:00.660367770Z

kubernetes.io/config.source: file

seccomp.security.alpha.kubernetes.io/pod: runtime/default

Status: Running

IP: 192.168.65.4

IPs:

IP: 192.168.65.4

Controlled By: Node/docker-desktop

Containers:

kube-apiserver:

Container ID: docker://e65c0a1b5f8ef5b57607078aec0a54f51407c3e47018100b633ea91651f8ee71

Image: k8s.gcr.io/kube-apiserver:v1.24.0

Image ID: docker://sha256:529072250ccc6301cb341cd7359c9641b94a6f837f86f82b1223a59bb0712e64

Port: <none>

Host Port: <none>

Command:

kube-apiserver

--advertise-address=192.168.65.4

--allow-privileged=true

--authorization-mode=Node,RBAC

--client-ca-file=/run/config/pki/ca.crt

--enable-admission-plugins=NodeRestriction

--enable-bootstrap-token-auth=true

--etcd-cafile=/run/config/pki/etcd/ca.crt

--etcd-certfile=/run/config/pki/apiserver-etcd-client.crt

--etcd-keyfile=/run/config/pki/apiserver-etcd-client.key

--etcd-servers=https://127.0.0.1:2379

--kubelet-client-certificate=/run/config/pki/apiserver-kubelet-client.crt

--kubelet-client-key=/run/config/pki/apiserver-kubelet-client.key

--kubelet-preferred-address-types=InternalIP,ExternalIP,Hostname

--proxy-client-cert-file=/run/config/pki/front-proxy-client.crt

--proxy-client-key-file=/run/config/pki/front-proxy-client.key

--requestheader-allowed-names=front-proxy-client

--requestheader-client-ca-file=/run/config/pki/front-proxy-ca.crt

--requestheader-extra-headers-prefix=X-Remote-Extra-

--requestheader-group-headers=X-Remote-Group

--requestheader-username-headers=X-Remote-User

--secure-port=6443

--service-account-issuer=https://kubernetes.default.svc.cluster.local

--service-account-key-file=/run/config/pki/sa.pub

--service-account-signing-key-file=/run/config/pki/sa.key

--service-cluster-ip-range=10.96.0.0/12

--tls-cert-file=/run/config/pki/apiserver.crt

--tls-private-key-file=/run/config/pki/apiserver.key

--watch-cache=false

State: Running

Started: Tue, 24 May 2022 13:05:34 -0500

Last State: Terminated

Reason: Error

Exit Code: 255

Started: Tue, 24 May 2022 13:00:04 -0500

Finished: Tue, 24 May 2022 13:05:22 -0500

Ready: True

Restart Count: 7

Requests:

cpu: 250m

Liveness: http-get https://192.168.65.4:6443/livez delay=10s timeout=15s period=10s #success=1 #failure=8

Readiness: http-get https://192.168.65.4:6443/readyz delay=0s timeout=15s period=1s #success=1 #failure=3

Startup: http-get https://192.168.65.4:6443/livez delay=10s timeout=15s period=10s #success=1 #failure=24

Environment: <none>

Mounts:

/etc/ca-certificates from etc-ca-certificates (ro)

/etc/ssl/certs from ca-certs (ro)

/run/config/pki from k8s-certs (ro)

/usr/local/share/ca-certificates from usr-local-share-ca-certificates (ro)

/usr/share/ca-certificates from usr-share-ca-certificates (ro)

Conditions:

Type Status

Initialized True

Ready True

ContainersReady True

PodScheduled True

Volumes:

ca-certs:

Type: HostPath (bare host directory volume)

Path: /etc/ssl/certs

HostPathType: DirectoryOrCreate

etc-ca-certificates:

Type: HostPath (bare host directory volume)

Path: /etc/ca-certificates

HostPathType: DirectoryOrCreate

k8s-certs:

Type: HostPath (bare host directory volume)

Path: /run/config/pki

HostPathType: DirectoryOrCreate

usr-local-share-ca-certificates:

Type: HostPath (bare host directory volume)

Path: /usr/local/share/ca-certificates

HostPathType: DirectoryOrCreate

usr-share-ca-certificates:

Type: HostPath (bare host directory volume)

Path: /usr/share/ca-certificates

HostPathType: DirectoryOrCreate

QoS Class: Burstable

Node-Selectors: <none>

Tolerations: :NoExecute op=Exists

Events: <none>

Name: kube-controller-manager-docker-desktop

Namespace: kube-system

Priority: 2000001000

Priority Class Name: system-node-critical

Node: docker-desktop/192.168.65.4

Start Time: Tue, 24 May 2022 13:00:03 -0500

Labels: component=kube-controller-manager

tier=control-plane

Annotations: kubernetes.io/config.hash: d9c6bbd179b0d64e8d303a659acf3a74

kubernetes.io/config.mirror: d9c6bbd179b0d64e8d303a659acf3a74

kubernetes.io/config.seen: 2022-05-24T17:59:00.660368872Z

kubernetes.io/config.source: file

seccomp.security.alpha.kubernetes.io/pod: runtime/default

Status: Running

IP: 192.168.65.4

IPs:

IP: 192.168.65.4

Controlled By: Node/docker-desktop

Containers:

kube-controller-manager:

Container ID: docker://5bbcc98a1224332df05f84b0c1d5a38c65fae16e3c3f2c899ff086df8ab91344

Image: k8s.gcr.io/kube-controller-manager:v1.24.0

Image ID: docker://sha256:88784fb4ac2f696b8fed607f6aa8bd5710544652f4ca166462937a36368f6364

Port: <none>

Host Port: <none>

Command:

kube-controller-manager

--authentication-kubeconfig=/etc/kubernetes/controller-manager.conf

--authorization-kubeconfig=/etc/kubernetes/controller-manager.conf

--bind-address=127.0.0.1

--client-ca-file=/run/config/pki/ca.crt

--cluster-name=kubernetes

--cluster-signing-cert-file=/run/config/pki/ca.crt

--cluster-signing-key-file=/run/config/pki/ca.key

--controllers=\*,bootstrapsigner,tokencleaner

--horizontal-pod-autoscaler-sync-period=60s

--kubeconfig=/etc/kubernetes/controller-manager.conf

--leader-elect=false

--node-monitor-grace-period=180s

--node-monitor-period=30s

--pvclaimbinder-sync-period=60s

--requestheader-client-ca-file=/run/config/pki/front-proxy-ca.crt

--root-ca-file=/run/config/pki/ca.crt

--service-account-private-key-file=/run/config/pki/sa.key

--use-service-account-credentials=true

State: Running

Started: Tue, 24 May 2022 13:05:34 -0500

Last State: Terminated

Reason: Error

Exit Code: 255

Started: Tue, 24 May 2022 13:00:04 -0500

Finished: Tue, 24 May 2022 13:05:22 -0500

Ready: True

Restart Count: 7

Requests:

cpu: 200m

Liveness: http-get https://127.0.0.1:10257/healthz delay=10s timeout=15s period=10s #success=1 #failure=8

Startup: http-get https://127.0.0.1:10257/healthz delay=10s timeout=15s period=10s #success=1 #failure=24

Environment: <none>

Mounts:

/etc/ca-certificates from etc-ca-certificates (ro)

/etc/kubernetes/controller-manager.conf from kubeconfig (ro)

/etc/ssl/certs from ca-certs (ro)

/run/config/pki from k8s-certs (ro)

/usr/libexec/kubernetes/kubelet-plugins/volume/exec from flexvolume-dir (rw)

/usr/local/share/ca-certificates from usr-local-share-ca-certificates (ro)

/usr/share/ca-certificates from usr-share-ca-certificates (ro)

Conditions:

Type Status

Initialized True

Ready True

ContainersReady True

PodScheduled True

Volumes:

ca-certs:

Type: HostPath (bare host directory volume)

Path: /etc/ssl/certs

HostPathType: DirectoryOrCreate

etc-ca-certificates:

Type: HostPath (bare host directory volume)

Path: /etc/ca-certificates

HostPathType: DirectoryOrCreate

flexvolume-dir:

Type: HostPath (bare host directory volume)

Path: /usr/libexec/kubernetes/kubelet-plugins/volume/exec

HostPathType: DirectoryOrCreate

k8s-certs:

Type: HostPath (bare host directory volume)

Path: /run/config/pki

HostPathType: DirectoryOrCreate

kubeconfig:

Type: HostPath (bare host directory volume)

Path: /etc/kubernetes/controller-manager.conf

HostPathType: FileOrCreate

usr-local-share-ca-certificates:

Type: HostPath (bare host directory volume)

Path: /usr/local/share/ca-certificates

HostPathType: DirectoryOrCreate

usr-share-ca-certificates:

Type: HostPath (bare host directory volume)

Path: /usr/share/ca-certificates

HostPathType: DirectoryOrCreate

QoS Class: Burstable

Node-Selectors: <none>

Tolerations: :NoExecute op=Exists

Events: <none>

Name: kube-proxy-dnpvr

Namespace: kube-system

Priority: 2000001000

Priority Class Name: system-node-critical

Node: docker-desktop/192.168.65.4

Start Time: Tue, 24 May 2022 12:59:10 -0500

Labels: controller-revision-hash=8db7f9b94

k8s-app=kube-proxy

pod-template-generation=1

Annotations: <none>

Status: Running

IP: 192.168.65.4

IPs:

IP: 192.168.65.4

Controlled By: DaemonSet/kube-proxy

Containers:

kube-proxy:

Container ID: docker://3bb3136757e5599b01ed2a7205ffe7053e5765982aa23cb7d3d72ed41c91392e

Image: k8s.gcr.io/kube-proxy:v1.24.0

Image ID: docker://sha256:77b49675beae1d7a23dbd96d367e8ae0fd3318631f270455e0c3e5e771232505

Port: <none>

Host Port: <none>

Command:

/usr/local/bin/kube-proxy

--config=/var/lib/kube-proxy/config.conf

--hostname-override=$(NODE\_NAME)

State: Running

Started: Tue, 24 May 2022 13:05:39 -0500

Last State: Terminated

Reason: Error

Exit Code: 255

Started: Tue, 24 May 2022 13:00:09 -0500

Finished: Tue, 24 May 2022 13:05:22 -0500

Ready: True

Restart Count: 2

Environment:

NODE\_NAME: (v1:spec.nodeName)

Mounts:

/lib/modules from lib-modules (ro)

/run/xtables.lock from xtables-lock (rw)

/var/lib/kube-proxy from kube-proxy (rw)

/var/run/secrets/kubernetes.io/serviceaccount from kube-api-access-krfft (ro)

Conditions:

Type Status

Initialized True

Ready True

ContainersReady True

PodScheduled True

Volumes:

kube-proxy:

Type: ConfigMap (a volume populated by a ConfigMap)

Name: kube-proxy

Optional: false

xtables-lock:

Type: HostPath (bare host directory volume)

Path: /run/xtables.lock

HostPathType: FileOrCreate

lib-modules:

Type: HostPath (bare host directory volume)

Path: /lib/modules

HostPathType:

kube-api-access-krfft:

Type: Projected (a volume that contains injected data from multiple sources)

TokenExpirationSeconds: 3607

ConfigMapName: kube-root-ca.crt

ConfigMapOptional: <nil>

DownwardAPI: true

QoS Class: BestEffort

Node-Selectors: kubernetes.io/os=linux

Tolerations: op=Exists

node.kubernetes.io/disk-pressure:NoSchedule op=Exists

node.kubernetes.io/memory-pressure:NoSchedule op=Exists

node.kubernetes.io/network-unavailable:NoSchedule op=Exists

node.kubernetes.io/not-ready:NoExecute op=Exists

node.kubernetes.io/pid-pressure:NoSchedule op=Exists

node.kubernetes.io/unreachable:NoExecute op=Exists

node.kubernetes.io/unschedulable:NoSchedule op=Exists

Events: <none>

Name: kube-scheduler-docker-desktop

Namespace: kube-system

Priority: 2000001000

Priority Class Name: system-node-critical

Node: docker-desktop/192.168.65.4

Start Time: Tue, 24 May 2022 13:05:33 -0500

Labels: component=kube-scheduler

tier=control-plane

Annotations: kubernetes.io/config.hash: 1fa929fab6e17047f7779b2ab8125174

kubernetes.io/config.mirror: 1fa929fab6e17047f7779b2ab8125174

kubernetes.io/config.seen: 2022-05-24T17:59:00.660369693Z

kubernetes.io/config.source: file

seccomp.security.alpha.kubernetes.io/pod: runtime/default

Status: Running

IP: 192.168.65.4

IPs:

IP: 192.168.65.4

Controlled By: Node/docker-desktop

Containers:

kube-scheduler:

Container ID: docker://92c5c945e5eda6936d4f43c98d0cb80938d84705a949855f2ca6734ffa087003

Image: k8s.gcr.io/kube-scheduler:v1.24.0

Image ID: docker://sha256:e3ed7dee73e9341d613017a135d2e8e6f169b16ffdcf0564a67147aef941322d

Port: <none>

Host Port: <none>

Command:

kube-scheduler

--authentication-kubeconfig=/etc/kubernetes/scheduler.conf

--authorization-kubeconfig=/etc/kubernetes/scheduler.conf

--bind-address=127.0.0.1

--kubeconfig=/etc/kubernetes/scheduler.conf

--leader-elect=true

State: Running

Started: Tue, 24 May 2022 13:05:34 -0500

Last State: Terminated

Reason: Error

Exit Code: 255

Started: Tue, 24 May 2022 13:00:04 -0500

Finished: Tue, 24 May 2022 13:05:22 -0500

Ready: True

Restart Count: 7

Requests:

cpu: 100m

Liveness: http-get https://127.0.0.1:10259/healthz delay=10s timeout=15s period=10s #success=1 #failure=8

Startup: http-get https://127.0.0.1:10259/healthz delay=10s timeout=15s period=10s #success=1 #failure=24

Environment: <none>

Mounts:

/etc/kubernetes/scheduler.conf from kubeconfig (ro)

Conditions:

Type Status

Initialized True

Ready True

ContainersReady True

PodScheduled True

Volumes:

kubeconfig:

Type: HostPath (bare host directory volume)

Path: /etc/kubernetes/scheduler.conf

HostPathType: FileOrCreate

QoS Class: Burstable

Node-Selectors: <none>

Tolerations: :NoExecute op=Exists

Events: <none>

Name: metrics-server-9f897d54b-gtgmt

Namespace: kube-system

Priority: 2000000000

Priority Class Name: system-cluster-critical

Node: docker-desktop/192.168.65.4

Start Time: Tue, 24 May 2022 14:49:54 -0500

Labels: k8s-app=metrics-server

pod-template-hash=9f897d54b

Annotations: <none>

Status: Running

IP: 10.1.0.37

IPs:

IP: 10.1.0.37

Controlled By: ReplicaSet/metrics-server-9f897d54b

Containers:

metrics-server:

Container ID: docker://4973ca58f441d38472fc5d5e6fa4670699274a9b35ffd3c8058ed64c77a15128

Image: k8s.gcr.io/metrics-server/metrics-server:v0.4.2

Image ID: docker-pullable://k8s.gcr.io/metrics-server/metrics-server@sha256:dbc33d7d35d2a9cc5ab402005aa7a0d13be6192f3550c7d42cba8d2d5e3a5d62

Port: 4443/TCP

Host Port: 0/TCP

Args:

--cert-dir=/tmp

--secure-port=4443

--kubelet-preferred-address-types=InternalIP,ExternalIP,Hostname

--kubelet-use-node-status-port

--kubelet-insecure-tls

State: Running

Started: Tue, 24 May 2022 14:49:55 -0500

Ready: True

Restart Count: 0

Liveness: http-get https://:https/livez delay=0s timeout=1s period=10s #success=1 #failure=3

Readiness: http-get https://:https/readyz delay=0s timeout=1s period=10s #success=1 #failure=3

Environment: <none>

Mounts:

/tmp from tmp-dir (rw)

/var/run/secrets/kubernetes.io/serviceaccount from kube-api-access-mb252 (ro)

Conditions:

Type Status

Initialized True

Ready True

ContainersReady True

PodScheduled True

Volumes:

tmp-dir:

Type: EmptyDir (a temporary directory that shares a pod's lifetime)

Medium:

SizeLimit: <unset>

kube-api-access-mb252:

Type: Projected (a volume that contains injected data from multiple sources)

TokenExpirationSeconds: 3607

ConfigMapName: kube-root-ca.crt

ConfigMapOptional: <nil>

DownwardAPI: true

QoS Class: BestEffort

Node-Selectors: kubernetes.io/os=linux

Tolerations: node.kubernetes.io/not-ready:NoExecute op=Exists for 300s

node.kubernetes.io/unreachable:NoExecute op=Exists for 300s

Events: <none>

Name: storage-provisioner

Namespace: kube-system

Priority: 0

Node: docker-desktop/192.168.65.4

Start Time: Tue, 24 May 2022 12:59:16 -0500

Labels: component=storage-provisioner

Annotations: <none>

Status: Running

IP: 10.1.0.30

IPs:

IP: 10.1.0.30

Containers:

storage-provisioner:

Container ID: docker://a20233479c195b57fc7a547565c060f6e49881c75cf8f76d83e82f1aeb256298

Image: docker/desktop-storage-provisioner:v2.0

Image ID: docker://sha256:99f89471f4708f1173e688f7f77bf6b995b10355a46cc388b273b0130add7aad

Port: <none>

Host Port: <none>

Args:

/var/lib/k8s-pvs

State: Running

Started: Tue, 24 May 2022 13:05:55 -0500

Last State: Terminated

Reason: Error

Exit Code: 1

Started: Tue, 24 May 2022 13:05:41 -0500

Finished: Tue, 24 May 2022 13:05:41 -0500

Ready: True

Restart Count: 4

Environment: <none>

Mounts:

/var/lib/k8s-pvs from pvs (rw)

/var/run/secrets/kubernetes.io/serviceaccount from kube-api-access-lbt7d (ro)

Conditions:

Type Status

Initialized True

Ready True

ContainersReady True

PodScheduled True

Volumes:

pvs:

Type: HostPath (bare host directory volume)

Path: /var/lib/k8s-pvs

HostPathType: Directory

kube-api-access-lbt7d:

Type: Projected (a volume that contains injected data from multiple sources)

TokenExpirationSeconds: 3607

ConfigMapName: kube-root-ca.crt

ConfigMapOptional: <nil>

DownwardAPI: true

QoS Class: BestEffort

Node-Selectors: <none>

Tolerations: node.kubernetes.io/not-ready:NoExecute op=Exists for 300s

node.kubernetes.io/unreachable:NoExecute op=Exists for 300s

Events: <none>

Name: vpnkit-controller

Namespace: kube-system

Priority: 0

Node: docker-desktop/192.168.65.4

Start Time: Tue, 24 May 2022 12:59:16 -0500

Labels: component=vpnkit-controller

Annotations: <none>

Status: Running

IP: 10.1.0.32

IPs:

IP: 10.1.0.32

Containers:

vpnkit-controller:

Container ID: docker://e8424b1365f554d8cbf296f66c1483c62465098602dc743759f07757bc9140bd

Image: docker/desktop-vpnkit-controller:v2.0

Image ID: docker://sha256:8c2c38aa676e97e57b4c8385bbcdcb240a933fafcc5f6cc508d2a3a005b24cb8

Port: <none>

Host Port: <none>

Command:

/kube-vpnkit-forwarder

-path

/run/host-services/backend.sock

State: Running

Started: Tue, 24 May 2022 16:24:53 -0500

Last State: Terminated

Reason: Error

Exit Code: 2

Started: Tue, 24 May 2022 16:07:09 -0500

Finished: Tue, 24 May 2022 16:24:52 -0500

Ready: True

Restart Count: 19

Environment: <none>

Mounts:

/run/host-services/backend.sock from api (rw)

/var/run/secrets/kubernetes.io/serviceaccount from kube-api-access-q4dm7 (ro)

Conditions:

Type Status

Initialized True

Ready True

ContainersReady True

PodScheduled True

Volumes:

api:

Type: HostPath (bare host directory volume)

Path: /run/host-services/backend.sock

HostPathType:

kube-api-access-q4dm7:

Type: Projected (a volume that contains injected data from multiple sources)

TokenExpirationSeconds: 3607

ConfigMapName: kube-root-ca.crt

ConfigMapOptional: <nil>

DownwardAPI: true

QoS Class: BestEffort

Node-Selectors: <none>

Tolerations: node.kubernetes.io/not-ready:NoExecute op=Exists for 300s

node.kubernetes.io/unreachable:NoExecute op=Exists for 300s

Events:

Type Reason Age From Message

---- ------ ---- ---- -------

Warning BackOff 20m (x12 over 3h21m) kubelet Back-off restarting failed container

Normal Pulled 2m18s (x17 over 3h21m) kubelet Container image "docker/desktop-vpnkit-controller:v2.0" already present on machine

Normal Created 2m18s (x17 over 3h21m) kubelet Created container vpnkit-controller

Normal Started 2m18s (x17 over 3h21m) kubelet Started container vpnkit-controller

(base) PS C:\Windows\system32>

Diagram

Description automatically generated

**EXAMPLE: RUNNING DOCKER WEBAPP**

<https://github.com/docker/labs/blob/master/beginner/chapters/webapps.md>

Text

Description automatically generated

(base) PS C:\Windows\system32> docker run -d dockersamples/static-site # DETACHED mode

32a1057c68744d7d026c5a0cc9a7b761df9e026151cdca845cec80d24c1ac5ac

(base) PS C:\Windows\system32> docker ps # looking at first one

CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES

32a1057c6874 dockersamples/static-site "/bin/sh -c 'cd /usr…" 12 seconds ago Up 11 seconds 80/tcp, 443/tcp interesting\_buck

Container info: container id, image name, command, created, status, ports, names

The actual Dockerfile:

FROM nginx

ENV AUTHOR=Docker

WORKDIR /usr/share/nginx/html

COPY Hello\_docker.html /usr/share/nginx/html

CMD cd /usr/share/nginx/html && sed -e s/Docker/"$AUTHOR"/ Hello\_docker.html > index.html ; nginx -g 'daemon off;'

Hello\_docker.html:

<!DOCTYPE html><html>

<head>

<meta charset="utf-8">

<style type="text/css">

body {

font-family: Helvetica, arial, sans-serif;

font-size: 14px;

line-height: 1.6;

padding-top: 10px;

padding-bottom: 10px;

background-color: white;

padding: 30px; }

body > \*:first-child {

margin-top: 0 !important; }

body > \*:last-child {

margin-bottom: 0 !important; }

a {

color: #4183C4; }

a.absent {

color: #cc0000; }

a.anchor {

display: block;

padding-left: 30px;

margin-left: -30px;

cursor: pointer;

position: absolute;

top: 0;

left: 0;

bottom: 0; }

h1, h2, h3, h4, h5, h6 {

margin: 20px 0 10px;

padding: 0;

font-weight: bold;

-webkit-font-smoothing: antialiased;

cursor: text;

position: relative; }

h1:hover a.anchor, h2:hover a.anchor, h3:hover a.anchor, h4:hover a.anchor, h5:hover a.anchor, h6:hover a.anchor {

background: url(data:image/png;base64,) no-repeat 10px center;

text-decoration: none; }

h1 tt, h1 code {

font-size: inherit; }

h2 tt, h2 code {

font-size: inherit; }

h3 tt, h3 code {

font-size: inherit; }

h4 tt, h4 code {

font-size: inherit; }

h5 tt, h5 code {

font-size: inherit; }

h6 tt, h6 code {

font-size: inherit; }

h1 {

font-size: 28px;

color: black; }

h2 {

font-size: 24px;

border-bottom: 1px solid #cccccc;

color: black; }

h3 {

font-size: 18px; }

h4 {

font-size: 16px; }

h5 {

font-size: 14px; }

h6 {

color: #777777;

font-size: 14px; }

p, blockquote, ul, ol, dl, li, table, pre {

margin: 15px 0; }

hr {

background: transparent url(data:image/png;base64,) repeat-x 0 0;

border: 0 none;

color: #cccccc;

height: 4px;

padding: 0;

}

body > h2:first-child {

margin-top: 0;

padding-top: 0; }

body > h1:first-child {

margin-top: 0;

padding-top: 0; }

body > h1:first-child + h2 {

margin-top: 0;

padding-top: 0; }

body > h3:first-child, body > h4:first-child, body > h5:first-child, body > h6:first-child {

margin-top: 0;

padding-top: 0; }

a:first-child h1, a:first-child h2, a:first-child h3, a:first-child h4, a:first-child h5, a:first-child h6 {

margin-top: 0;

padding-top: 0; }

h1 p, h2 p, h3 p, h4 p, h5 p, h6 p {

margin-top: 0; }

li p.first {

display: inline-block; }

li {

margin: 0; }

ul, ol {

padding-left: 30px; }

ul :first-child, ol :first-child {

margin-top: 0; }

dl {

padding: 0; }

dl dt {

font-size: 14px;

font-weight: bold;

font-style: italic;

padding: 0;

margin: 15px 0 5px; }

dl dt:first-child {

padding: 0; }

dl dt > :first-child {

margin-top: 0; }

dl dt > :last-child {

margin-bottom: 0; }

dl dd {

margin: 0 0 15px;

padding: 0 15px; }

dl dd > :first-child {

margin-top: 0; }

dl dd > :last-child {

margin-bottom: 0; }

blockquote {

border-left: 4px solid #dddddd;

padding: 0 15px;

color: #777777; }

blockquote > :first-child {

margin-top: 0; }

blockquote > :last-child {

margin-bottom: 0; }

table {

padding: 0;border-collapse: collapse; }

table tr {

border-top: 1px solid #cccccc;

background-color: white;

margin: 0;

padding: 0; }

table tr:nth-child(2n) {

background-color: #f8f8f8; }

table tr th {

font-weight: bold;

border: 1px solid #cccccc;

margin: 0;

padding: 6px 13px; }

table tr td {

border: 1px solid #cccccc;

margin: 0;

padding: 6px 13px; }

table tr th :first-child, table tr td :first-child {

margin-top: 0; }

table tr th :last-child, table tr td :last-child {

margin-bottom: 0; }

img {

max-width: 100%; }

span.frame {

display: block;

overflow: hidden; }

span.frame > span {

border: 1px solid #dddddd;

display: block;

float: left;

overflow: hidden;

margin: 13px 0 0;

padding: 7px;

width: auto; }

span.frame span img {

display: block;

float: left; }

span.frame span span {

clear: both;

color: #333333;

display: block;

padding: 5px 0 0; }

span.align-center {

display: block;

overflow: hidden;

clear: both; }

span.align-center > span {

display: block;

overflow: hidden;

margin: 13px auto 0;

text-align: center; }

span.align-center span img {

margin: 0 auto;

text-align: center; }

span.align-right {

display: block;

overflow: hidden;

clear: both; }

span.align-right > span {

display: block;

overflow: hidden;

margin: 13px 0 0;

text-align: right; }

span.align-right span img {

margin: 0;

text-align: right; }

span.float-left {

display: block;

margin-right: 13px;

overflow: hidden;

float: left; }

span.float-left span {

margin: 13px 0 0; }

span.float-right {

display: block;

margin-left: 13px;

overflow: hidden;

float: right; }

span.float-right > span {

display: block;

overflow: hidden;

margin: 13px auto 0;

text-align: right; }

code, tt {

margin: 0 2px;

padding: 0 5px;

white-space: nowrap;

border: 1px solid #eaeaea;

background-color: #f8f8f8;

border-radius: 3px; }

pre code {

margin: 0;

padding: 0;

white-space: pre;

border: none;

background: transparent; }

.highlight pre {

background-color: #f8f8f8;

border: 1px solid #cccccc;

font-size: 13px;

line-height: 19px;

overflow: auto;

padding: 6px 10px;

border-radius: 3px; }

pre {

background-color: #f8f8f8;

border: 1px solid #cccccc;

font-size: 13px;

line-height: 19px;

overflow: auto;

padding: 6px 10px;

border-radius: 3px; }

pre code, pre tt {

background-color: transparent;

border: none; }

sup {

font-size: 0.83em;

vertical-align: super;

line-height: 0;

}

\* {

-webkit-print-color-adjust: exact;

}

@media screen and (min-width: 914px) {

body {

width: 854px;

margin:0 auto;

}

}

@media print {

table, pre {

page-break-inside: avoid;

}

pre {

word-wrap: break-word;

}

}

</style>

</head>

<body>

<p><br>

<br>

<br>

<br>

<br>

<br>

<br>

<br>

<br>

<br></p>

<h1 id="toc\_0">Hello Docker!</h1>

<p>This is being served from a <b>docker</b><br>

container running Nginx.</p>

</body>

</html>

Graphical user interface, text, application, email

Description automatically generated

(base) PS C:\Windows\system32> docker run --name static-site-3 -e AUTHOR="Tom Bresee" -d -P dockersamples/static-site

b4ababd9b82d4ea3a4536dd3d86bd87c4d38d49cded872ba25dd73c6bf3ff3e3

(base) PS C:\Windows\system32> docker port static-site-3

443/tcp -> 0.0.0.0:49157

80/tcp -> 0.0.0.0:49158