

KUBERNETES IS DEPRECATING DOCKER SUPPORT?! 😱

Richard Szabo
Duelbox
Co-Founder, Software Engineer



KUBERNETES V1.20

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Currently shows only a warning.

Planned to be fully removed in late 2021 (~v1.23).

WHAT DOES IT MEAN?



Joe Beda ✓
@jbeda



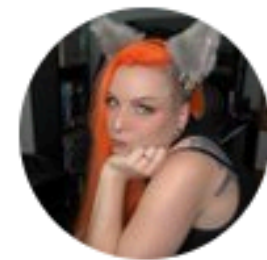
Fascinating how this docker/docker-shim deprecation has created mass confusion. Probably should have seen it coming.

So many things called "docker". The company, the dev experience, images, container instances.

2:32 AM · Dec 3, 2020 · TweetDeck



WHAT DOES IT MEAN?



Kat Cosgrove, seriously this time

@Dixie3Flatline



So, Kubernetes is deprecating Docker support and you're either nervous or confused. That's okay! I would like to help you understand what's happening. A thread! 1/10

6:33 PM · Dec 2, 2020 · Twitter Web App

experience, images, container instances.

2:32 AM · Dec 3, 2020 · TweetDeck



WHAT DOES IT MEAN?



Kelsey Hightower ✓
@kelseyhightower

If you're still trying to wrap your head around this whole Kubernetes deprecating Docker thing. Think of it like this -- Docker refactored its code base, broke up the monolith, and created a new service, containerd, which both Kubernetes and Docker now use for running containers.

7:01 PM · Dec 4, 2020 · Twitter Web App

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WHAT DOES IT MEAN?



Arnaud Porterie
@arnaudporterie

For the sake of clarity: k8s isn't "deprecating" docker. Containerd was created specifically to be a better building block for systems such as k8s. Docker uses containerd internally, and k8s is finally abandoning an intermediate layer it never really needed. This is good news!

10:34 PM · Dec 2, 2020 · Tweetbot for iOS

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WHAT DOES IT MEAN?

Kubernetes is removing Docker as container runtime.



KUBERNETES VS DOCKER

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Kubernetes

Container orchestration.

Working with containers in cloud infrastructure:

- Scheduling containers on multiple nodes.

- Load balancing.

- Service discovery.

- Resource allocation.

- Health check.

- Provisioning, deployment.



KUBERNETES VS DOCKER

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Docker

A container runtime and much more.

Building / running container images.

Focusing on developer tooling (e.g. CLI).

Storage, network management.



HISTORY OF KUBERNETES & DOCKER

Docker was integrated directly into Kubernetes (kubelet) code base.

Integrating rkt or other container runtimes wasn't straightforward.

Huge maintenance overhead.

Separation of concerns: container orchestration vs container runtime.

CONTAINER RUNTIME INTERFACE

Common plugin interface for integrating container runtimes with Kubernetes.

Running OCI-compliant containers.

cri-containerd & CRI-O



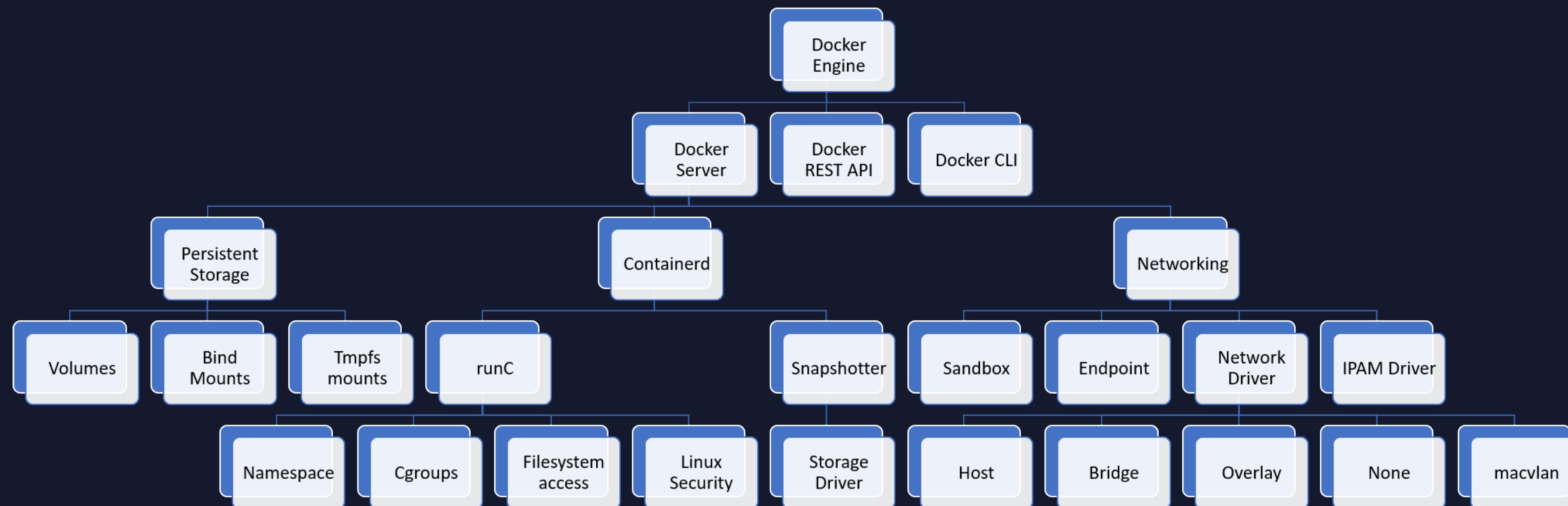
CONTAINER RUNTIME INTERFACE DOCKERSHIM

Dockershim: middleman between Kubernetes and Docker.



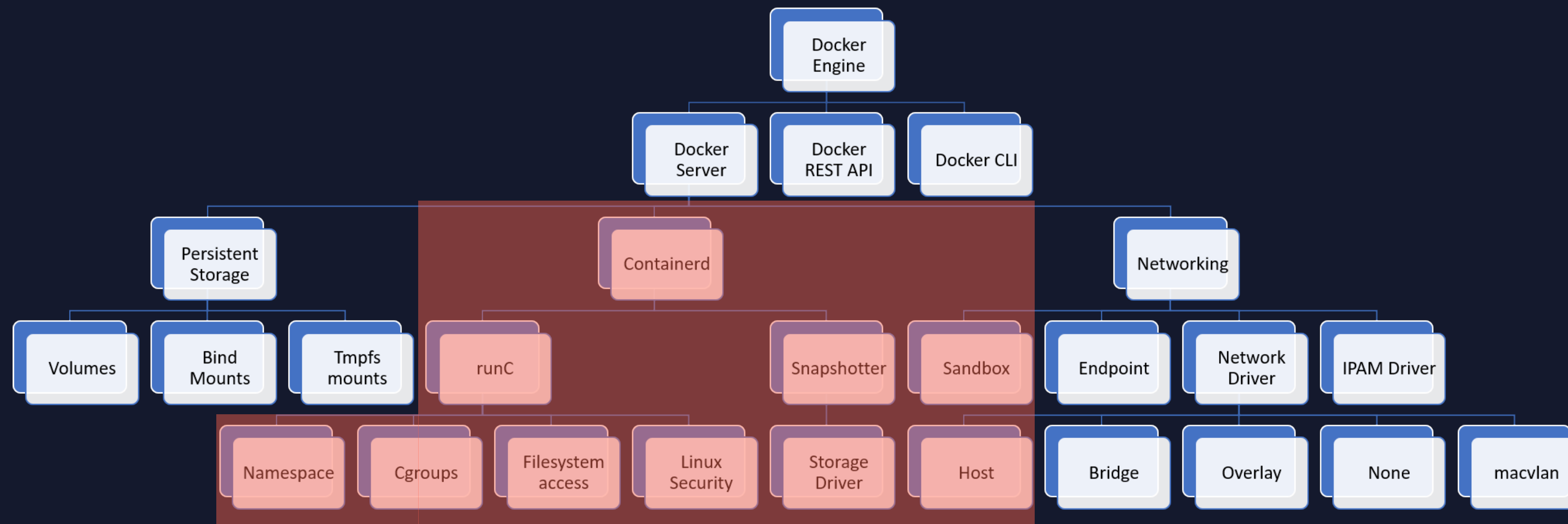
<https://kubernetes.io/blog/2018/05/24/kubernetes-containerd-integration-goes-ga/>

DOCKER ENGINE



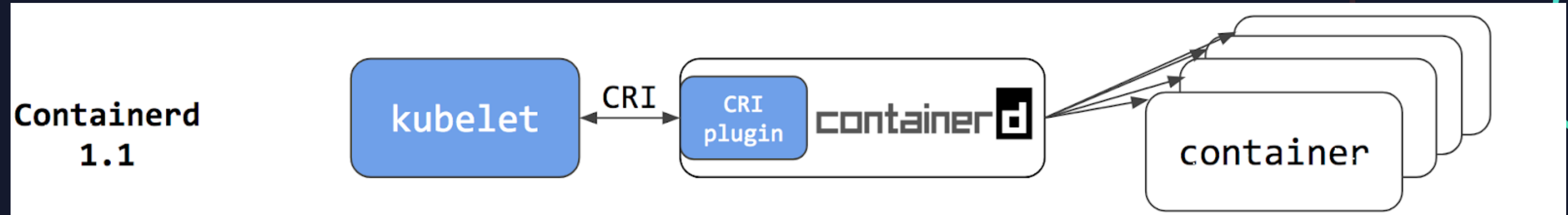
<https://www.studytrails.com/2018/12/04/docker-architecture-engine-containerd-runc/>

DOCKER ENGINE



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CONTAINER RUNTIME INTERFACE CONTAINERD



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KUBERNETES & DOCKER

You can still use container images built with Docker.

Docker uses containerd under the hood.

Docker images are OCI-compliant.



DOCKER DOESN'T GO AWAY

Focusing on developer tasks.

Running container images in local development environment.

Building, distributing container images.

CI/CD pipeline.

Docker registry.

(Though there are alternatives for these tasks...)



PREPARING FOR THE MIGRATION

Managed kubernetes: GKE, EKS, AKS

Direct use of Docker APIs, docker socket:

Docker-in-Docker
building Docker images in Docker
monitoring containers

There's still an option: cri-dockerd.

Dockershim deprecation FAQ:
<https://kubernetes.io/blog/2020/12/02/dockershim-faq/>



THANK YOU!

