



SPONSORS



ELASTICBRAINS



QAIWARE



Google Cloud



AppCode mkdev



ISOVALENT



INNOVATIVE SOLUTIONS
BY OPEN SOURCE EXPERTS



StormForge



EXOSCALE



Red Hat



Eleven



white duck
the open source experts



blueshoe

Speaker: Mathieu Tortuyaux

Company: Microsoft

Cluster API OpenStack

+

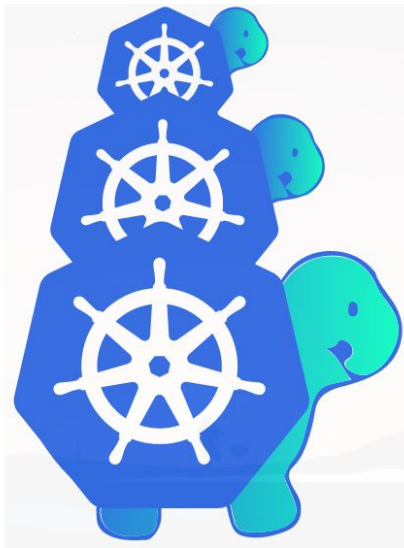
Flatcar

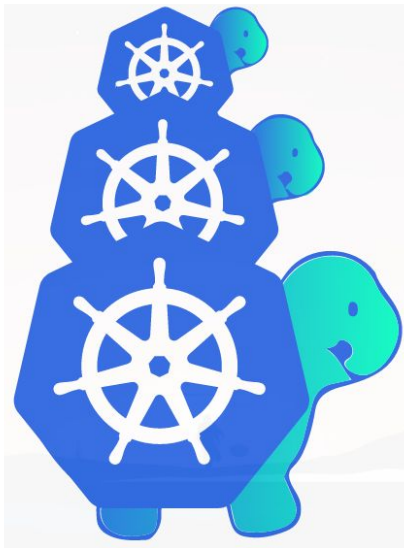
=



Context

- Flatcar maintainer / @tormath1
- Involved on the OpenStack support for Flatcar
- Jumped into the Cluster API OpenStack topic





Why Flatcar?

- Immutable
- Lightweight
- Secure
- Designed to run container workloads

How to use it



```
$ kubectl get nodes
```

NAME	STATUS	ROLES	AGE	VERSION
kind-control-plane	Ready	control-plane	43m	v1.25.3

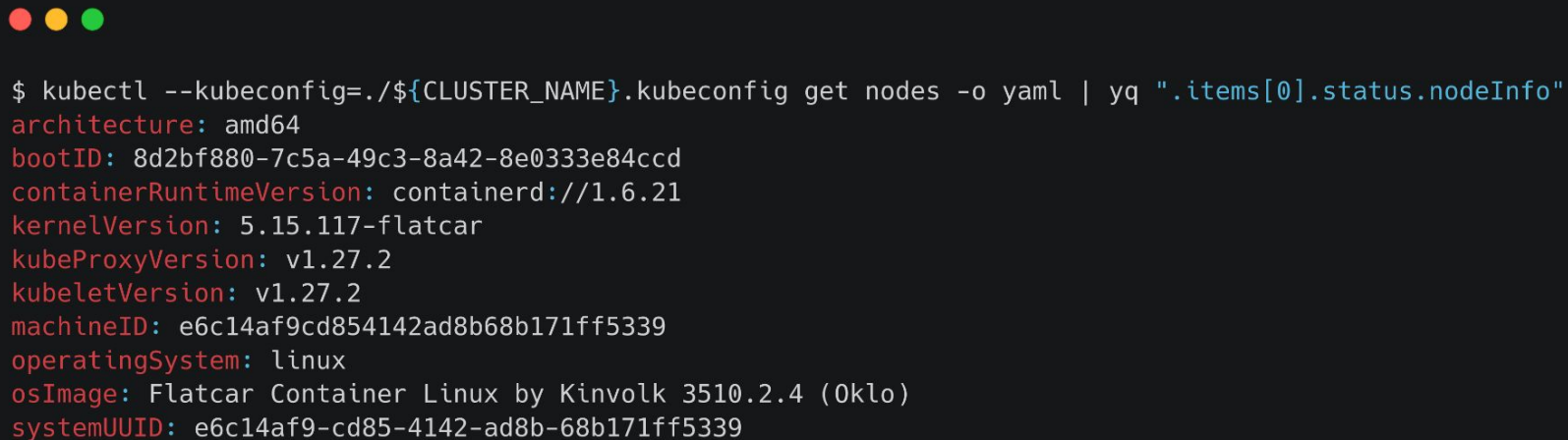
Management cluster deployed with Kind

Generate the workload cluster configuration



```
$ export EXP_KUBEADM_BOOTSTRAP_FORMAT_IGNITION=true
$ clusterctl init --infrastructure openstack
$ clusterctl generate cluster capi-quickstart \
  --flavor flatcar \
  --kubernetes-version v1.27.2 \
  --control-plane-machine-count=1 \
  --worker-machine-count=3 > capi-quickstart.yaml
```

Voilà



```
$ kubectl --kubeconfig=./${CLUSTER_NAME}.kubeconfig get nodes -o yaml | yq ".items[0].status.nodeInfo"
architecture: amd64
bootID: 8d2bf880-7c5a-49c3-8a42-8e0333e84ccd
containerRuntimeVersion: containerd://1.6.21
kernelVersion: 5.15.117-flatcar
kubeProxyVersion: v1.27.2
kubeletVersion: v1.27.2
machineID: e6c14af9cd854142ad8b68b171ff5339
operatingSystem: linux
osImage: Flatcar Container Linux by Kinvolk 3510.2.4 (Oklo)
systemUUID: e6c14af9-cd85-4142-ad8b-68b171ff5339
```

Nodes running on Flatcar

Next steps

- Provide CAPO images (<https://kubernetes-sigs.github.io/cluster-api-provider-openstack/#1502>)

Resources



- #flatcar, #cluster-api-openstack on Kubernetes Slack
- #flatcar on Matrix
- Office hours
- <https://www.flatcar.org/docs/latest/container-runtimes/getting-started-with-kubernetes/#cluster-api>
- <https://cluster-api-openstack.sigs.k8s.io/clusteropenstack/configuration.html#ignition-based-images>
- <https://gist.github.com/tormath1/eef833300f2cc8ea79d5ce3bf126f311>