

A Cool Kids Guide to Kubernetes Deployments



Lucy Linder, Séminaires Linux Fribourg
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kubernetes



Kubernetes - or its numeronym k8s - is an open-source container orchestration platform that automates the deployment, scaling, and management of containerized applications.

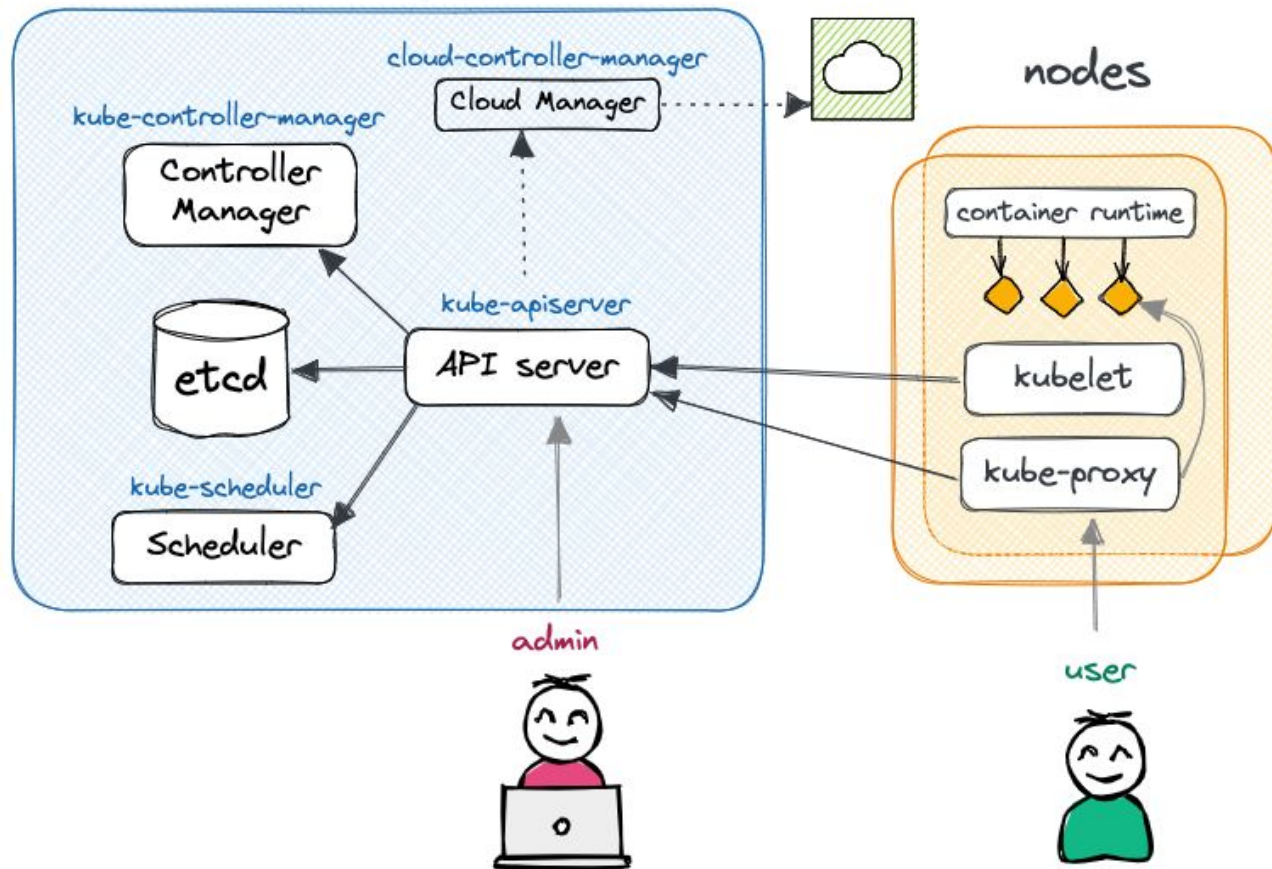


Video from the YouTube channel [FireShip](#)



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control plane



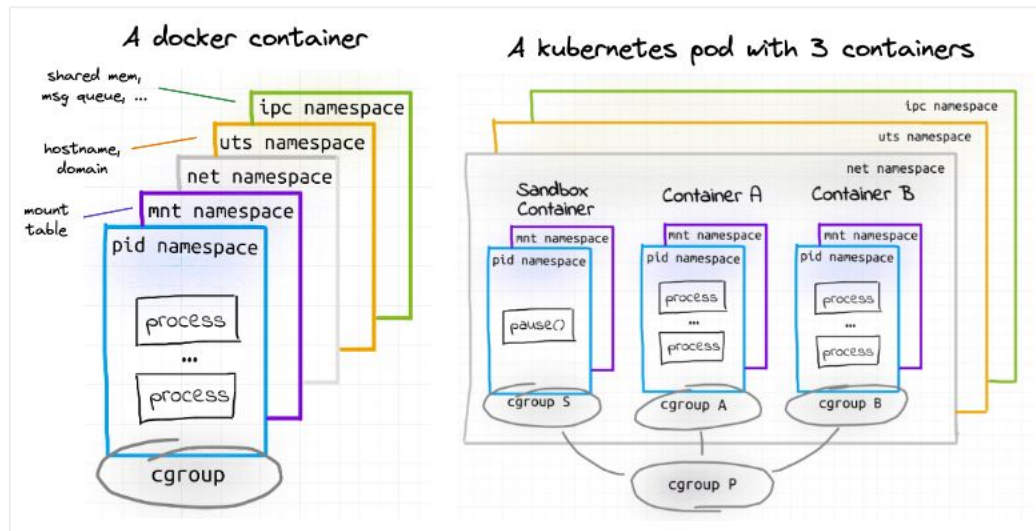
Pod VS Container



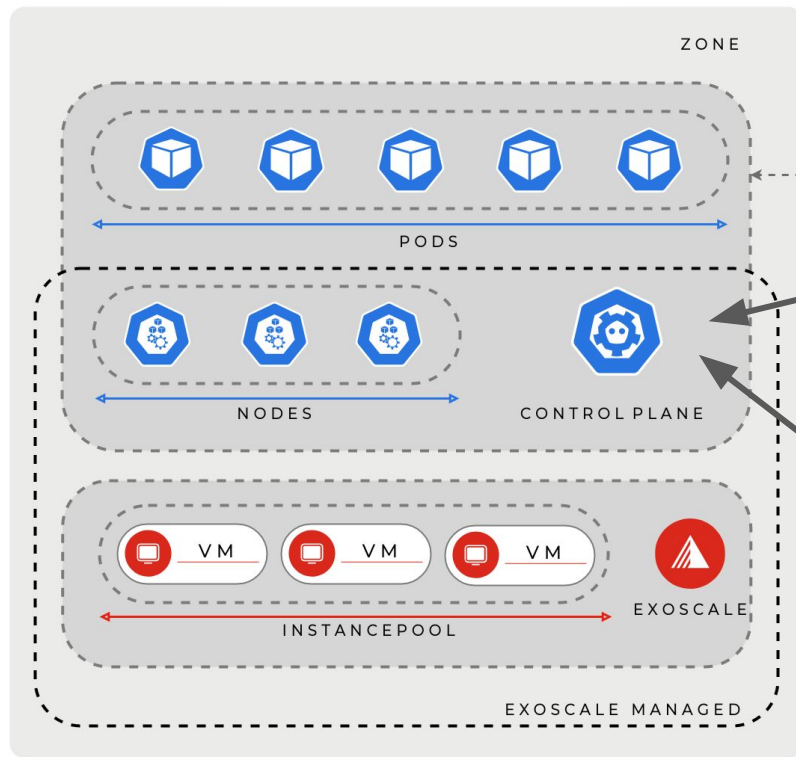
The **smallest deployable unit** on Kubernetes.

Can have *multiple containers*:

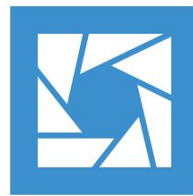
- run on the same node
- synchronized lifecycle
- mutual isolation weakened



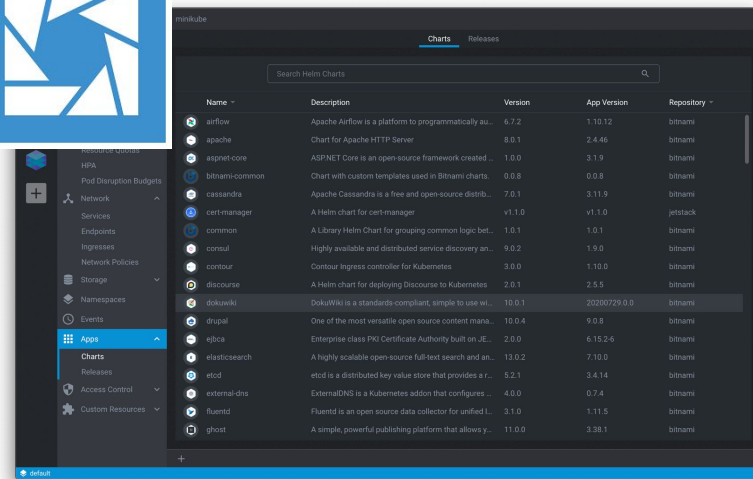
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SKS = Scalable Kubernetes Service



Lens IDE



terminal



```
kubectl get nodes
```



Our App: rickroller

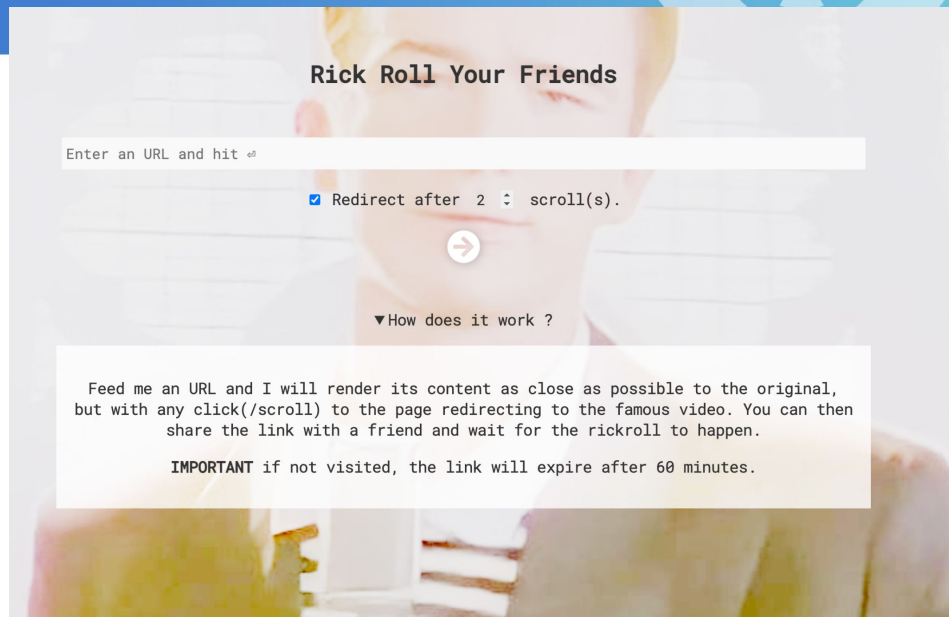


<https://rroll.derlin.ch/> (Google Cloud Run)

<https://tinyurl.us.aldryn.io/> (Divio)

```
services:
  web:
    image: derlin/rickroller:latest
    ports: [8080:8080]
    environment:
      DATABASE_URL: postgres://postgres@db:5432/db
    links: [db]
    depends_on: [db]

  db:
    image: postgres:13.5-alpine
    environment:
      POSTGRES_DB: db
      POSTGRES_HOST_AUTH_METHOD: trust
```

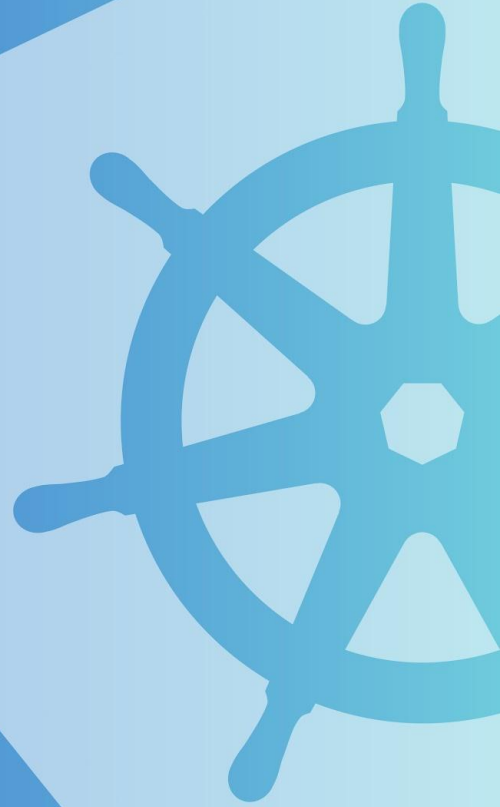


Python webapp + optional database (SQL/MongoDB)



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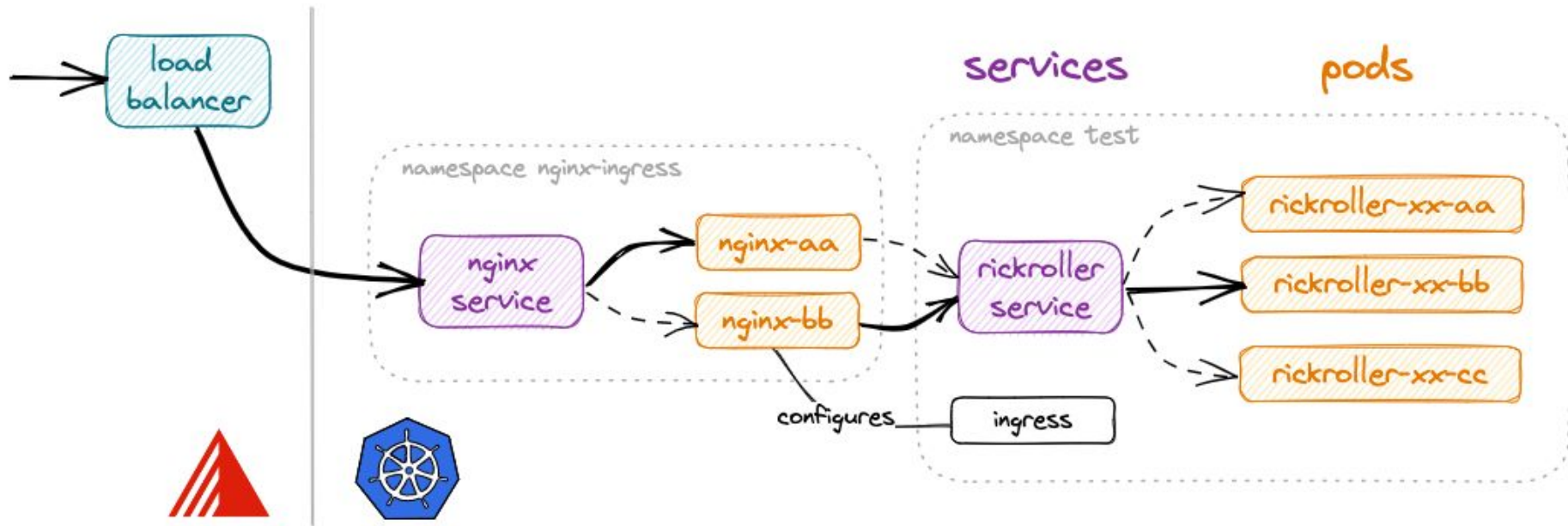
Let's go live!



Ingresses

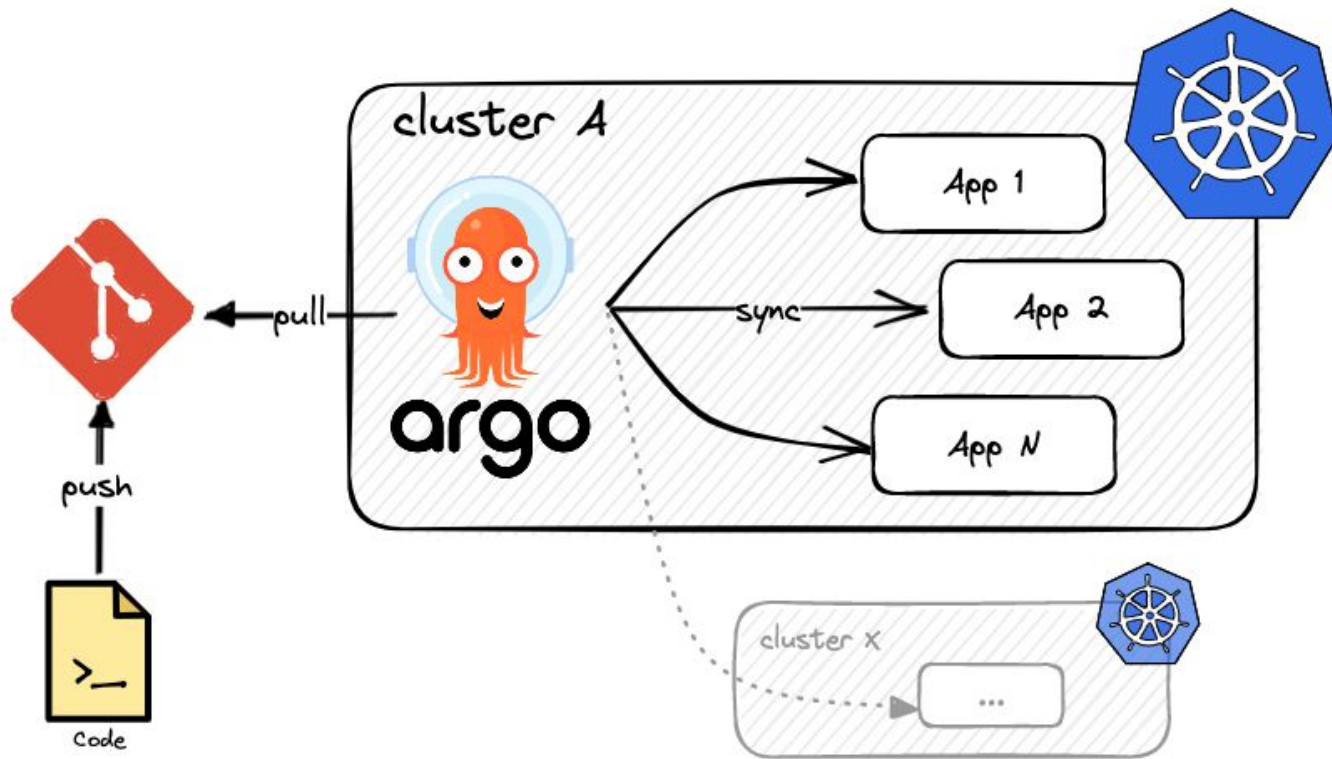


With SKS + Nginx Ingress Controller:

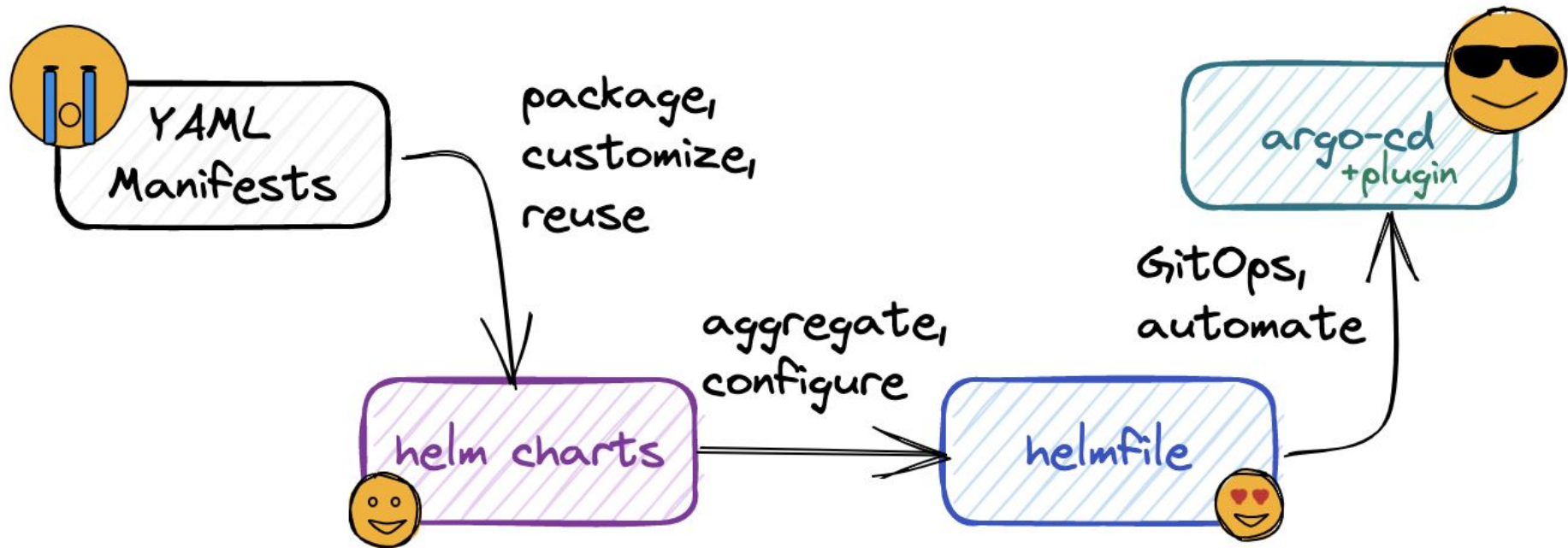


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Argo CD




Recap'






kubernetes

<https://bit.ly/2023-linux-seminar-kube-deploy>

<https://github.com/derlin/fribourg-linux-seminar-k8s-deploy-like-a-pro>

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[Helm](#)
[Helmfile](#)
[Argo CD](#)


Introduction

In a single sentence:

Quote

Kubernetes - or its numeronym k8s - is an open-source container orchestration platform that automates the deployment, scaling, and management of containerized applications.

Developed first internally by Google, it was open-sourced in 2014 and became one of the pillars of the Cloud Native Computing Foundation. It is now ubiquitous, and supported by all major cloud providers. It can also run locally on Docker using [minikube](#) or [k3d](#)!

 Major managed Kubernetes providers

The vastness and complexity of k8s is too much to take in one go. So in this pages, we will focus only on one aspect: how to deploy an application on Kubernetes.

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[Requirements](#)
[Our toy application](#)



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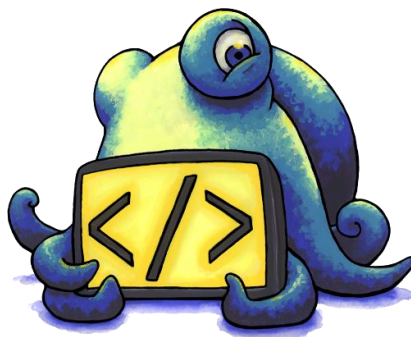


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About me



Lucy Linder - better known as **derlin**



<https://derlin.ch>

<https://blog.derlin.ch> | <https://dev.to/derlin>

<https://github.com/derlin>



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