What I wish my mom had told me about containers

A quick start to the wonderful world of containers

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Agenda

Containers

- On Laptop
- In Homelab
- At Work

Laptop

Problem : Need to write som PowerCli code

- Don't use Powercli that often (Read: never)

- Don't have the correct packages, modules etc. installed

- Have to google to find sample scripts.

- Don't know where I saved my old scripts.

- Running MAC == Not being native

Docker Hub to the rescue

vmware/powerclicore ✔ Verified Publisher ☆

⬇ Pulls 10M+

By VMware · Updated 4 months ago

A multi-platform scripting language to manage your VMware infrastructure on any OS.

Image

Overview   Tags

PowerCLI Core

Welcome!

This Docker image contains PowerShell Core, PowerCLI 10, PowerNSX, and a number of community modules and script examples

For more information, visit the following links:

PowerCLI PowerNSX PowerVRA PowerCLI-Example-Scripts

Docker Pull Command

```
docker pull vmware/powerclicore
```

Source Repository
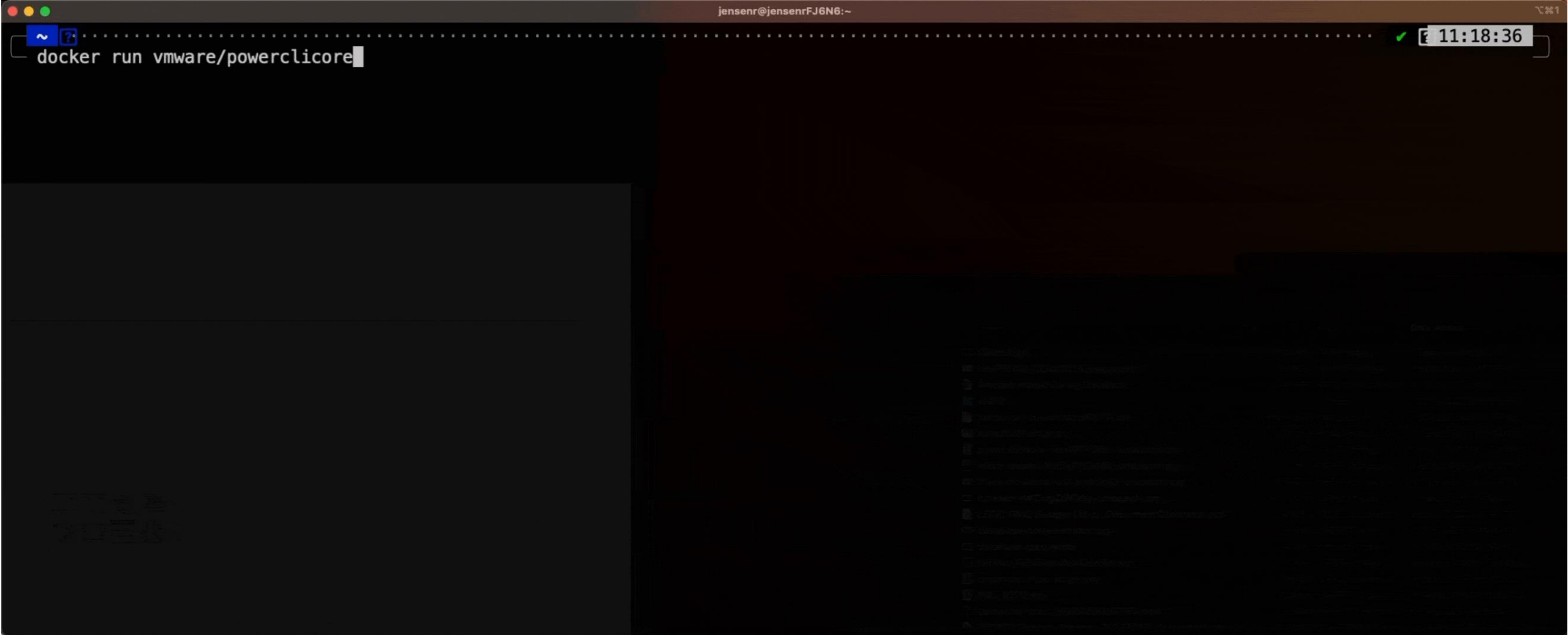
Github
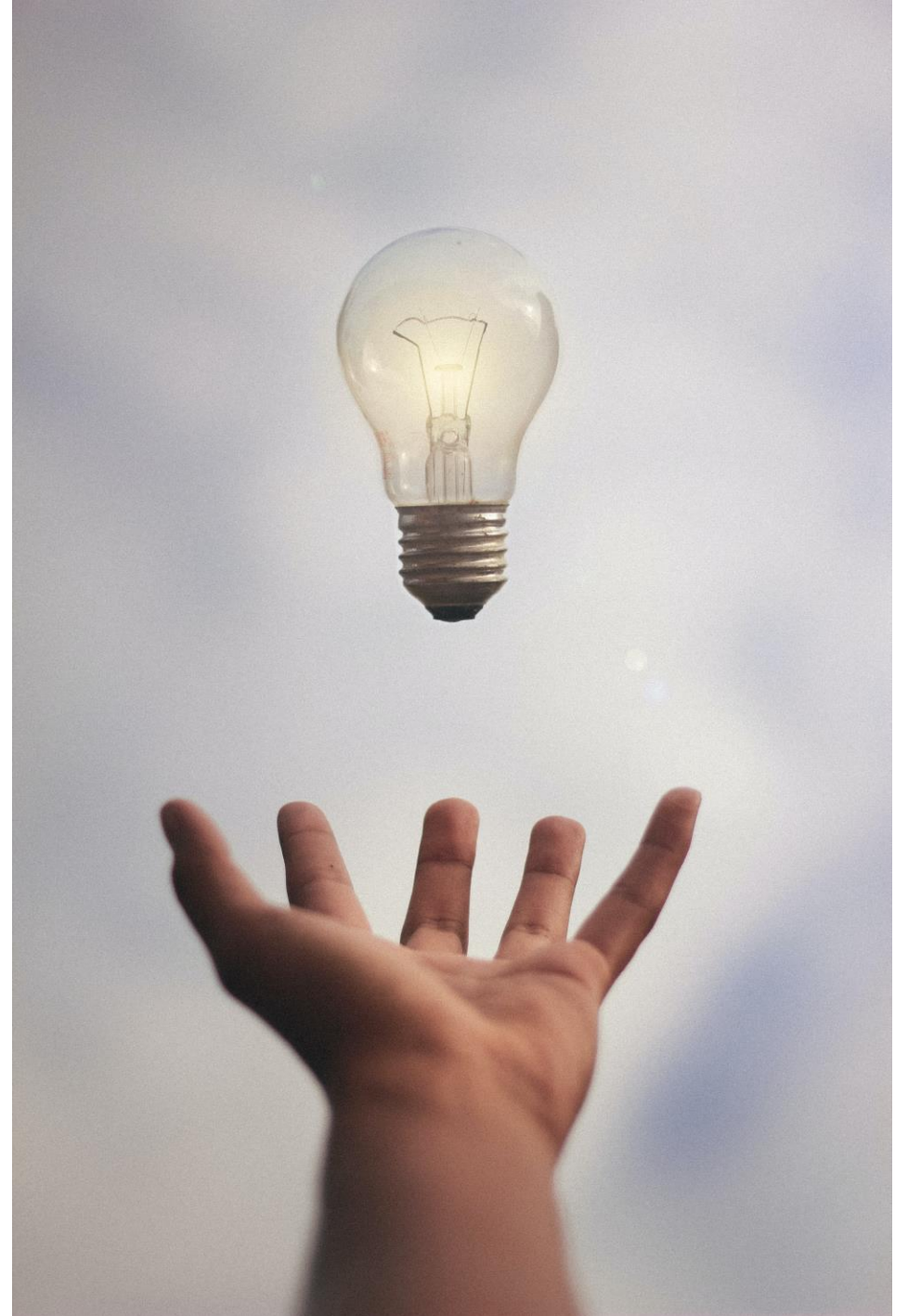vmware/powerclicore

Skip the GUI and learn the CLI (first)

Docker run vmware/powerclicore

Containers are not hard.
But they are different. Don't
treat them as VM's

Docker run –rm –it vmware/powerclicore

What if you could combine your IDE with Docker ?

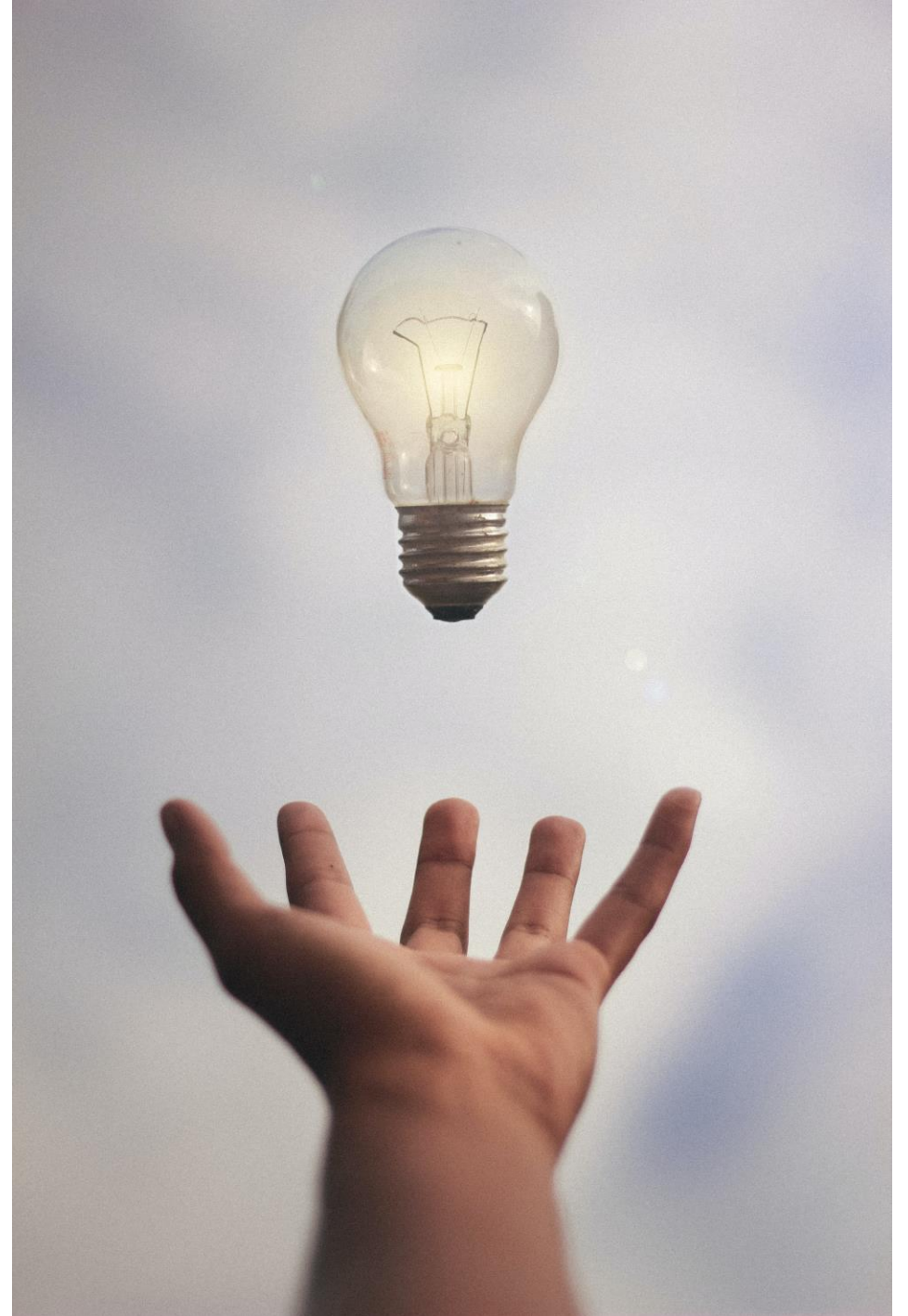**DEMO**
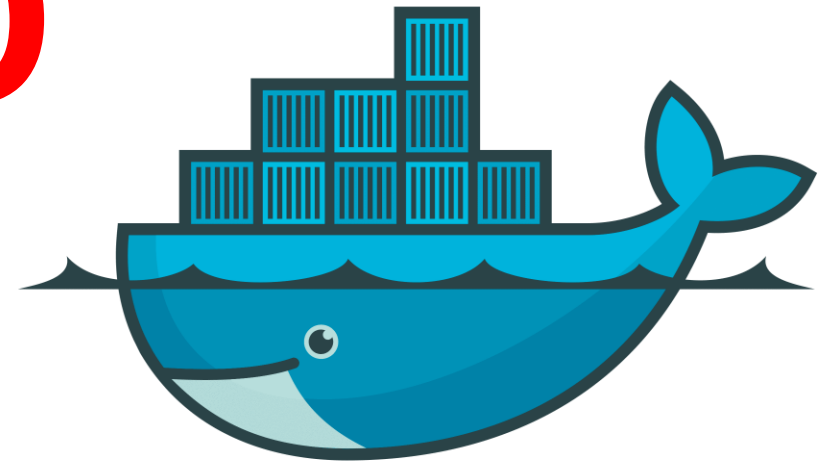
Learn Git
And share your work.

Homelab

Problem : Need run a lot of different apps, in my homelab

- I don't want to maintain a lot of VM's

- I want to be able to update them easily

- I want to learn more about containers
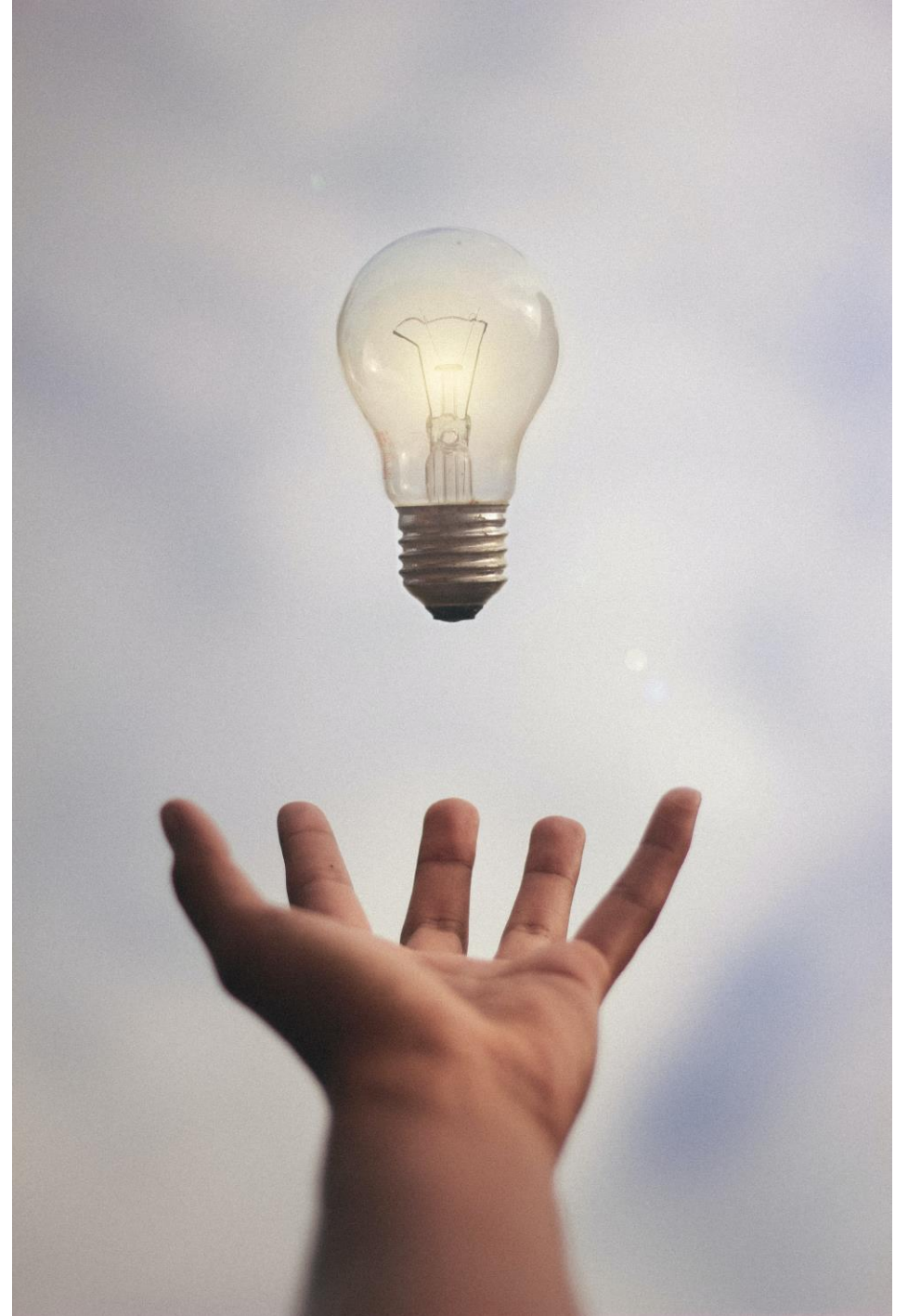
- I got limited resources.

Home Assistant (The Demo app)

- Home automation software

- Requires network access to devices on Lan

- Might require external access (internet)

- Might require external services (MQTT, DB etc.)

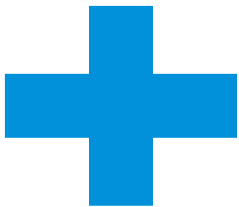- Might require access to external devices (USB etc.)

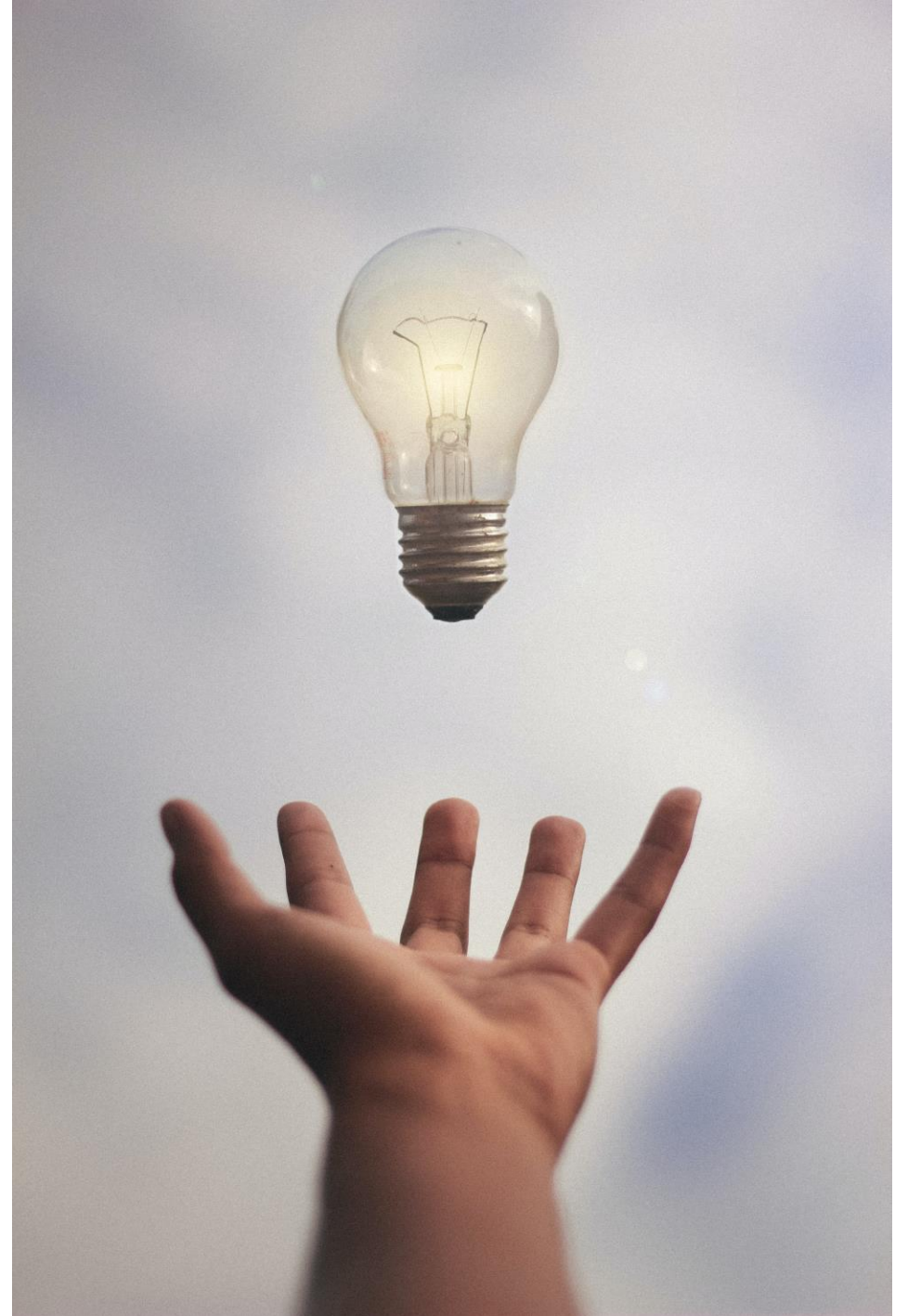# Docker Compose is a nice steppingstone, on the way to Kubernetes
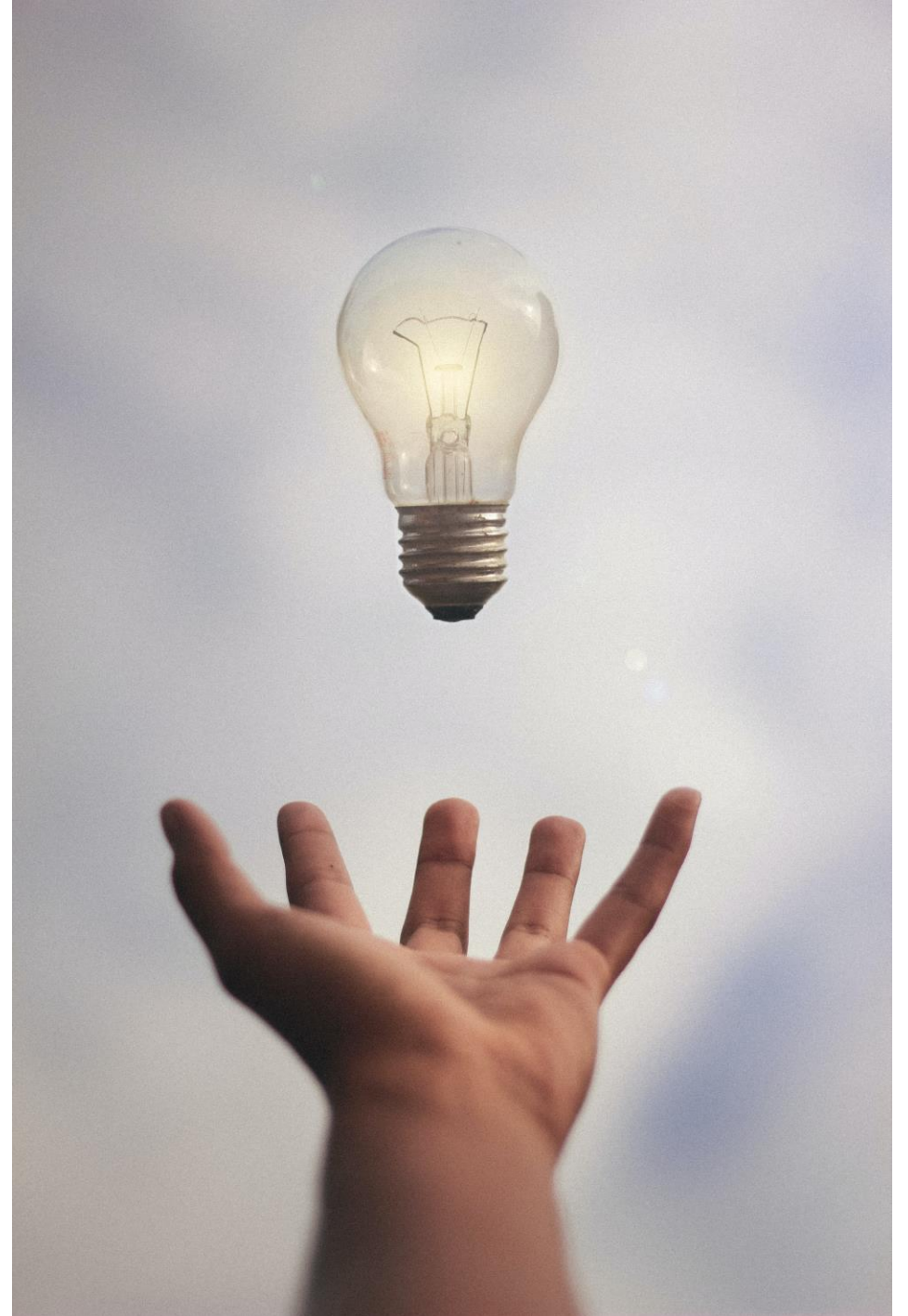
HomeAssistant running in a Container

If you don't know Linux, now is a good time to start learning.

Work

Think different!!!

New platforms requires new way of thinking

© Freek van Arkel

What is Kubernetes (K8s)

Kubernetes, is an open-source platform for managing, automating deployment, scaling, and operating containerized applications across a cluster of worker nodes.

Capabilities:

- Deploy your applications quickly and predictably
- Scale your applications on the fly
- Seamlessly roll out new features
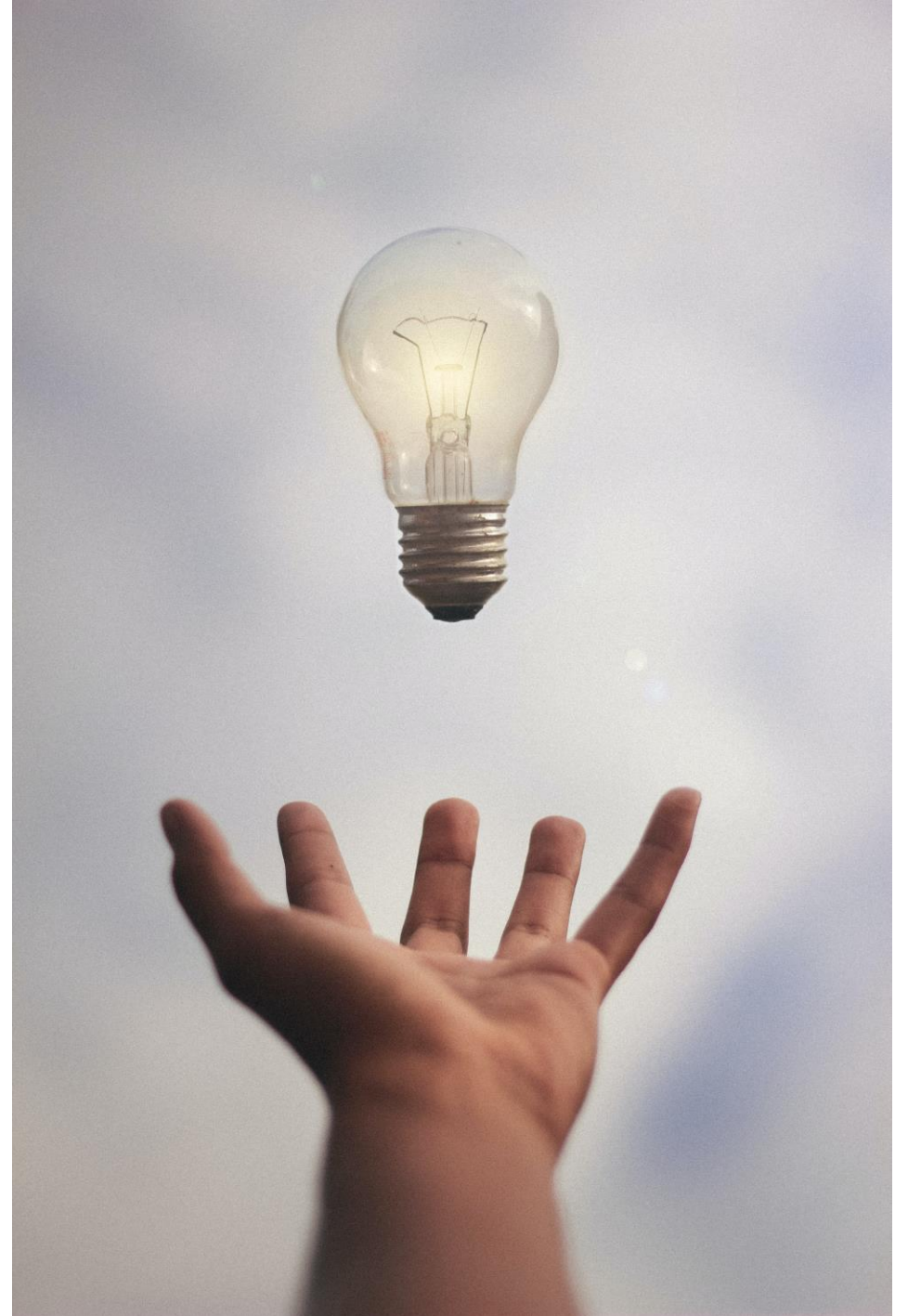- Optimize use of your hardware by using only the resources you need

Role:

- K8s sits in the Container as a Service (CaaS) or Container orchestration layer
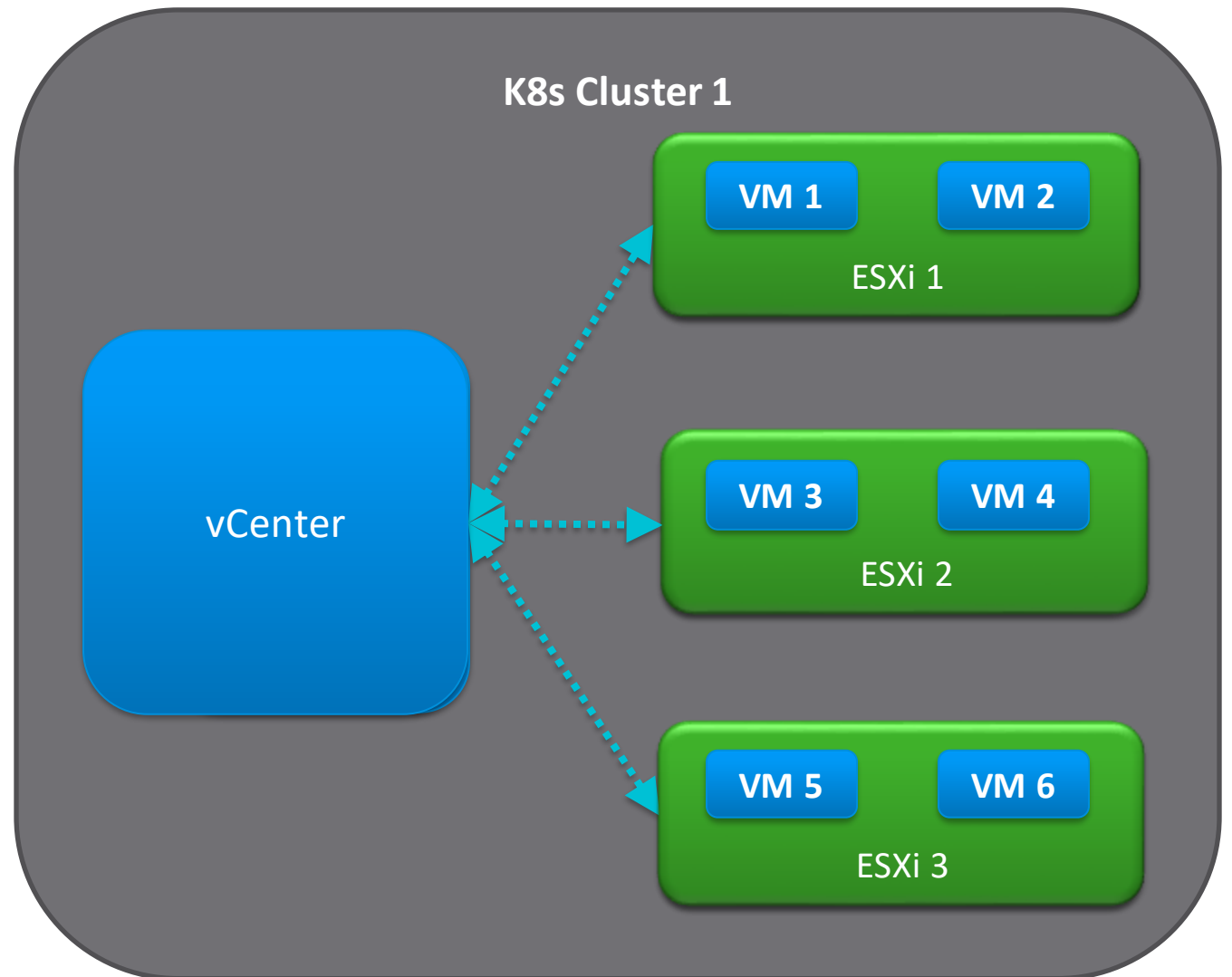
Kubernetes is not hard.
But it can be.

K8s introduces a lot new concepts

10,000 ft. View

- ## Cluster
- ## Master
- ## ESXi (Hosts)
- ## Pods

K8s Cluster 1

VM 1   VM 2

ESXi 1

vCenter

VM 3   VM 4

ESXi 2

VM 5   VM 6

ESXi 3

HomeAssistant running in a Container

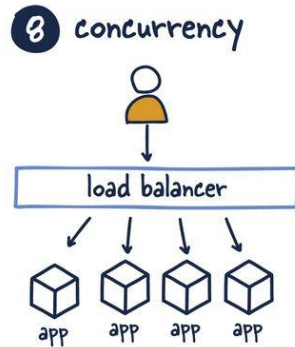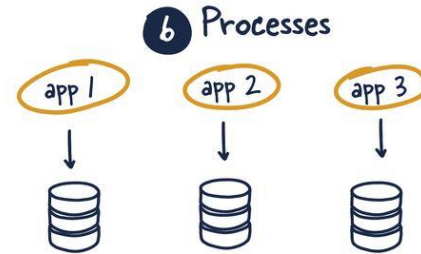Source : https://architecturenotes.co/12-factor-app-revisited/
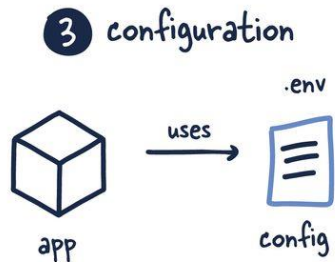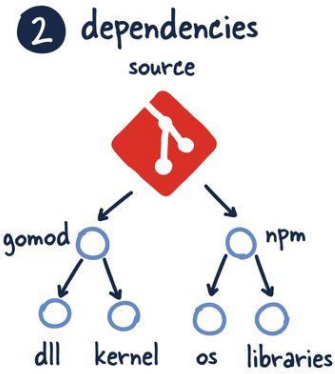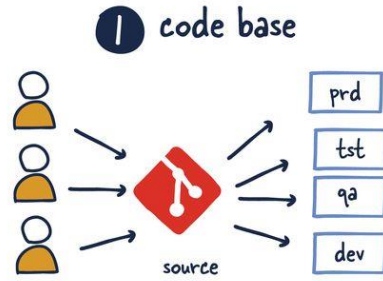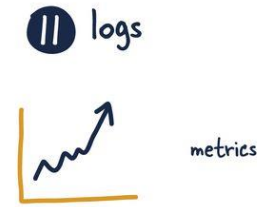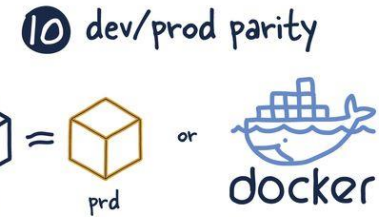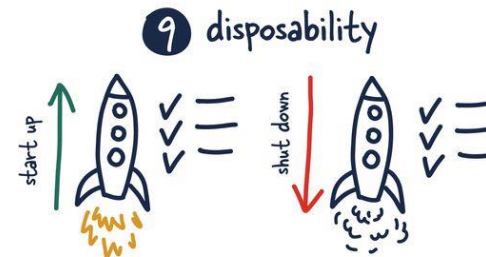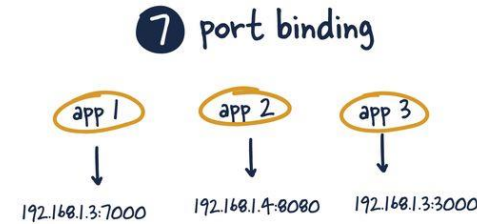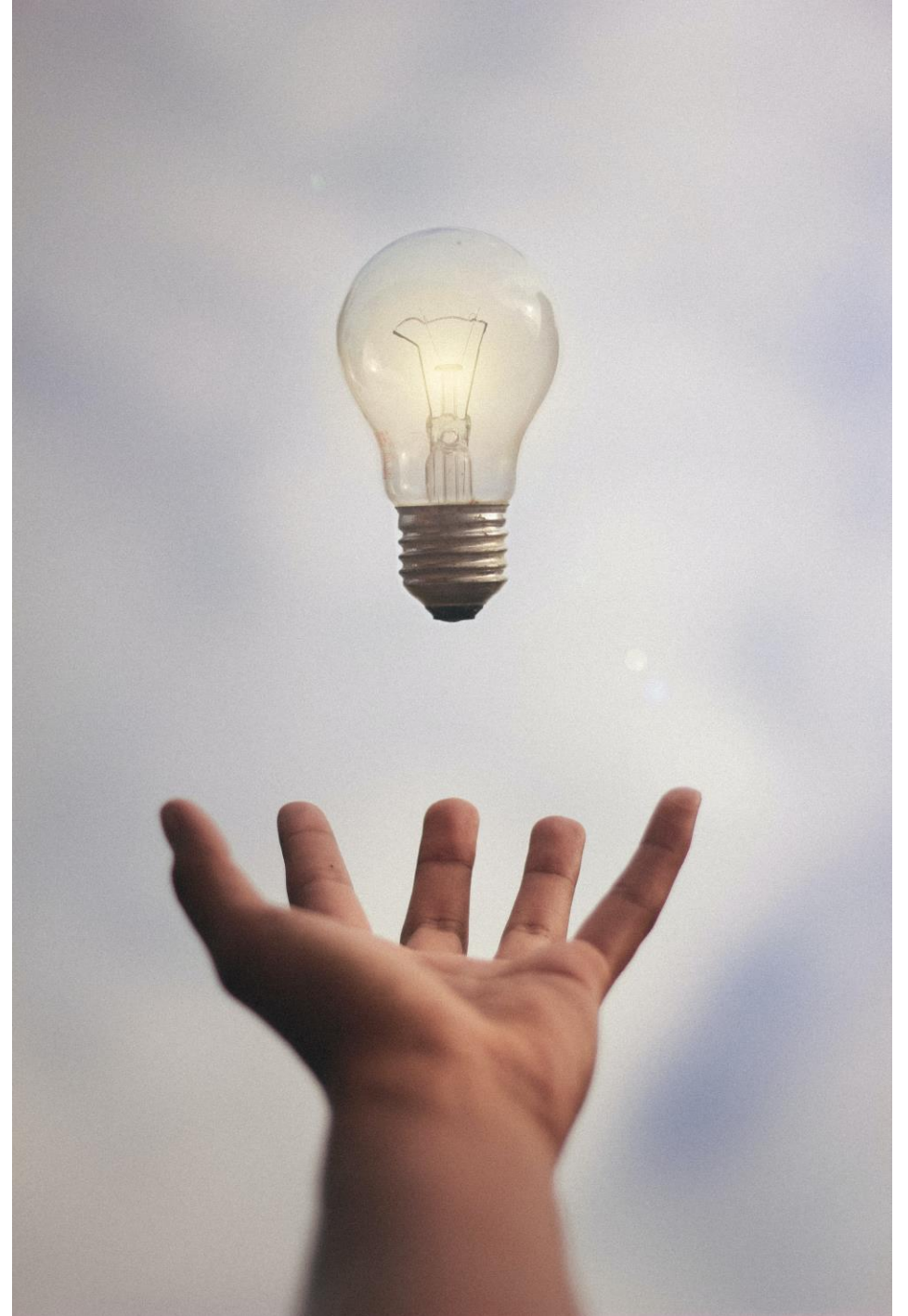
Learn GitOps

Questions or just connect

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Links

https://webinars.tanzu.dk

https://kube.academy

https://tanzu.academy

https://community.cncf.io

https://kcddenmark.dk