

The background of the slide features several pixelated, stylized clouds in shades of light blue and white, scattered across a solid light blue background. The clouds have a blocky, digital aesthetic.

A Lightning Tour of DevOps

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@sometimes_milo
<https://emilywoods.me>

Hello, I'm Emily



Crate.io is hiring!

Technical writers

Product managers

Engineers: mobile, frontend, backend, infra

<https://crate.io/jobs/>

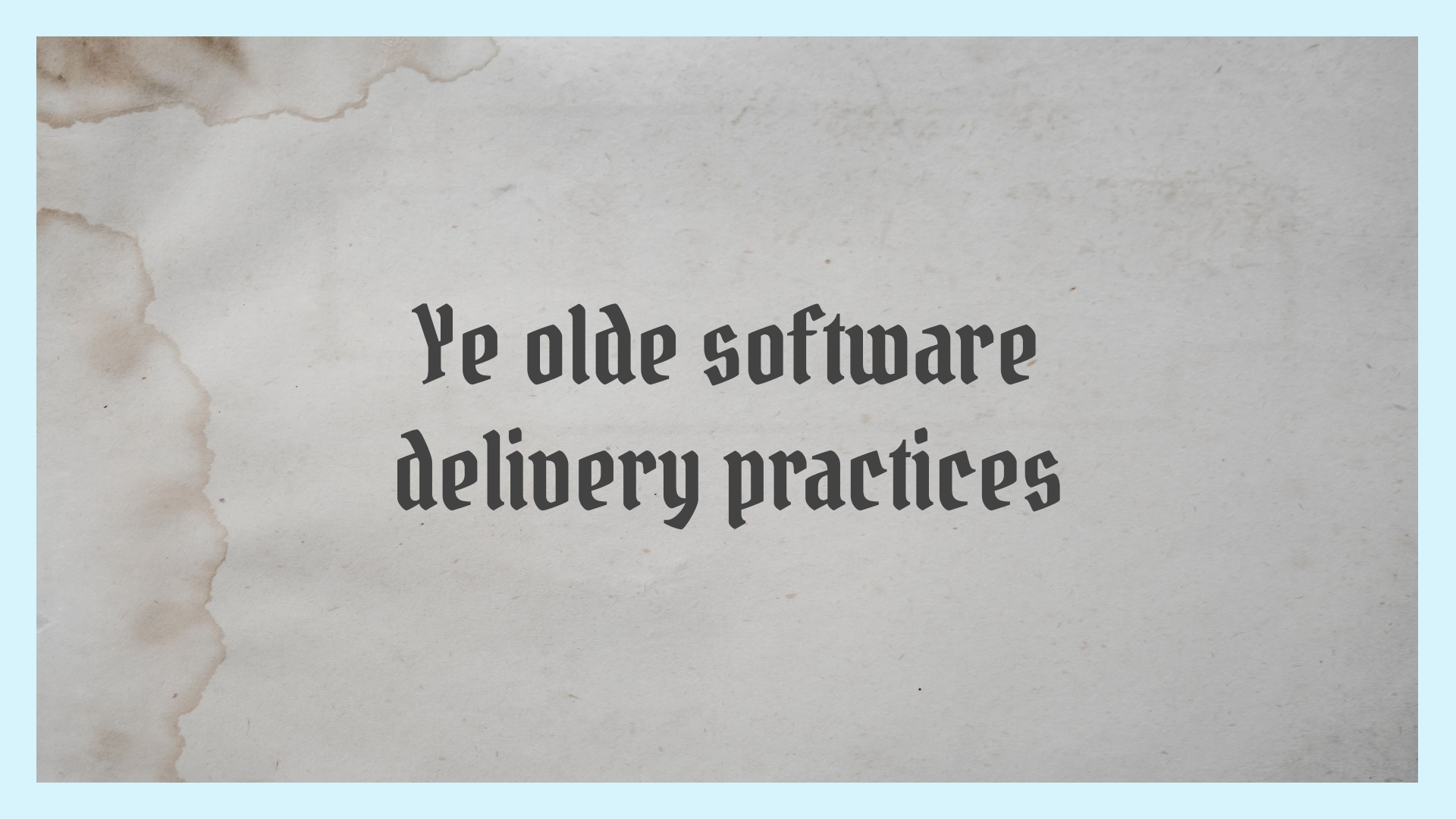


CRATE.IO

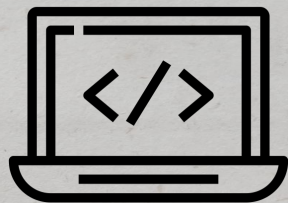
Agenda ✨

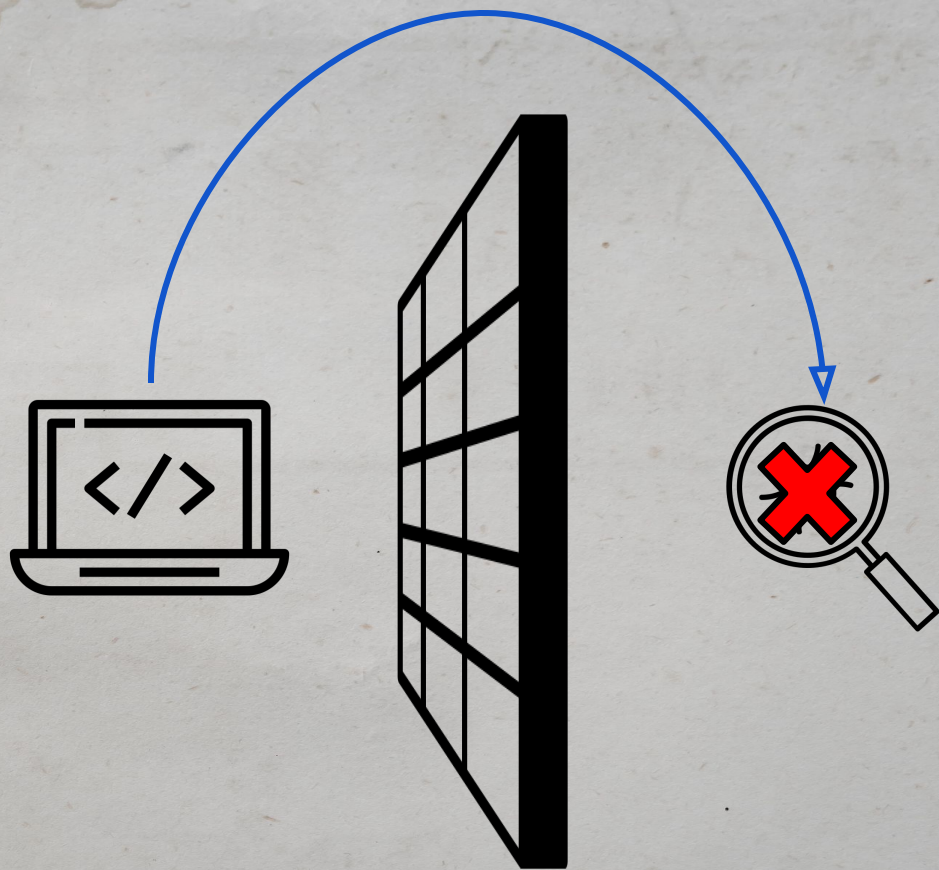
- A short history lesson
- DevOps beyond the buzzwords
- How to start DevOps-ing

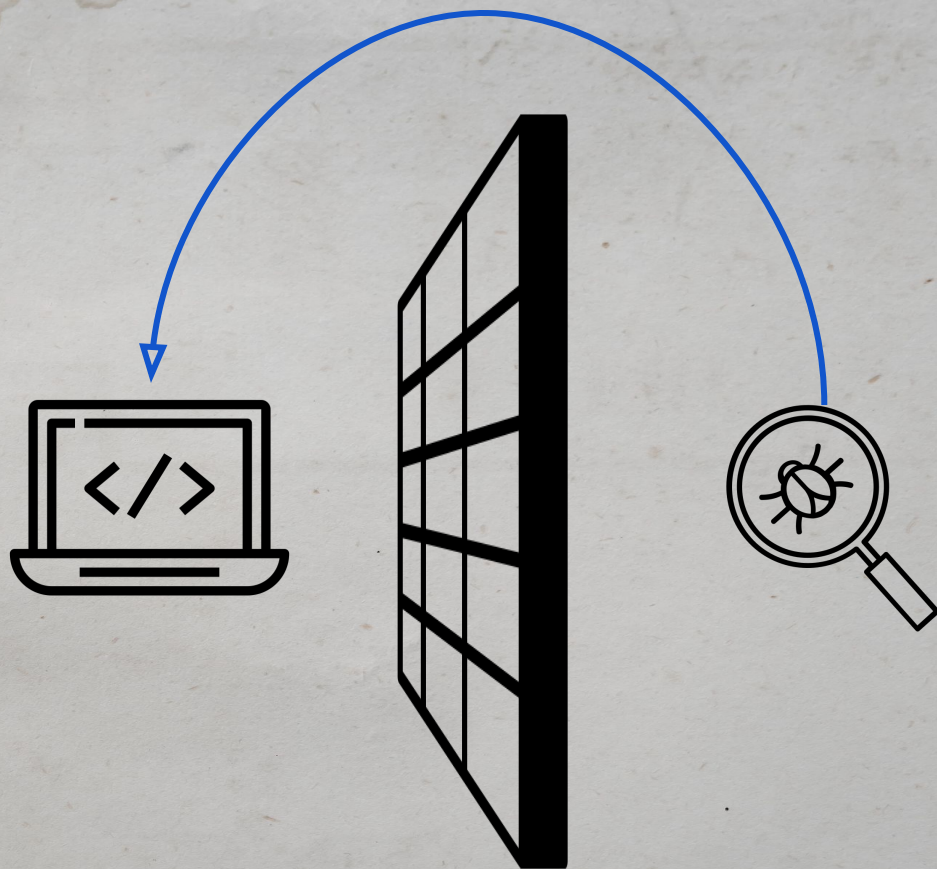


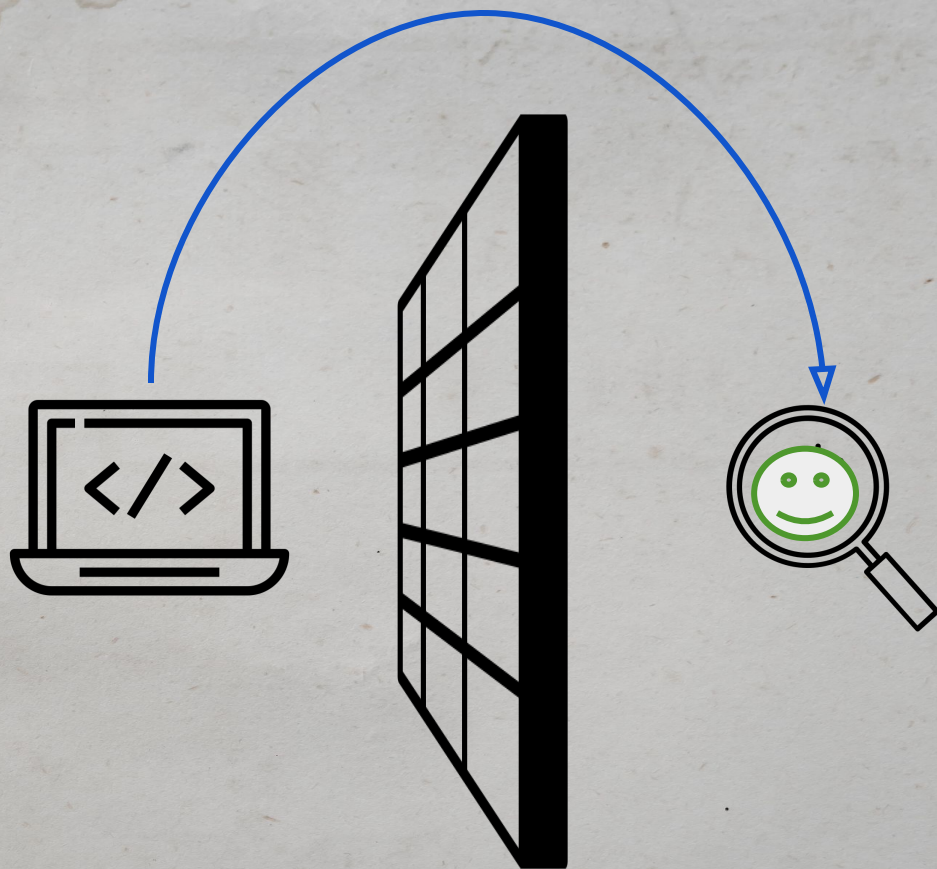


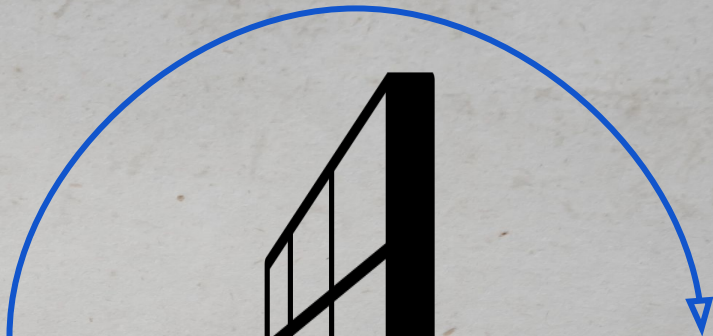
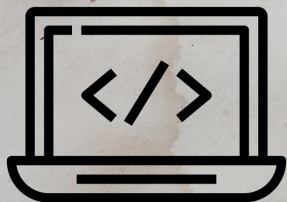
Ye olde software delivery practices

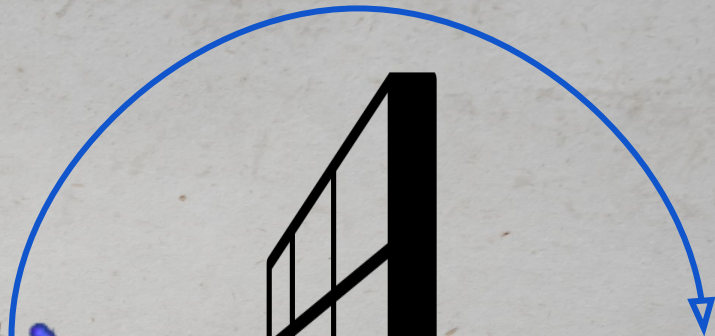
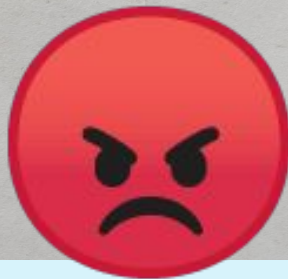
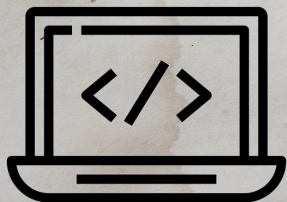


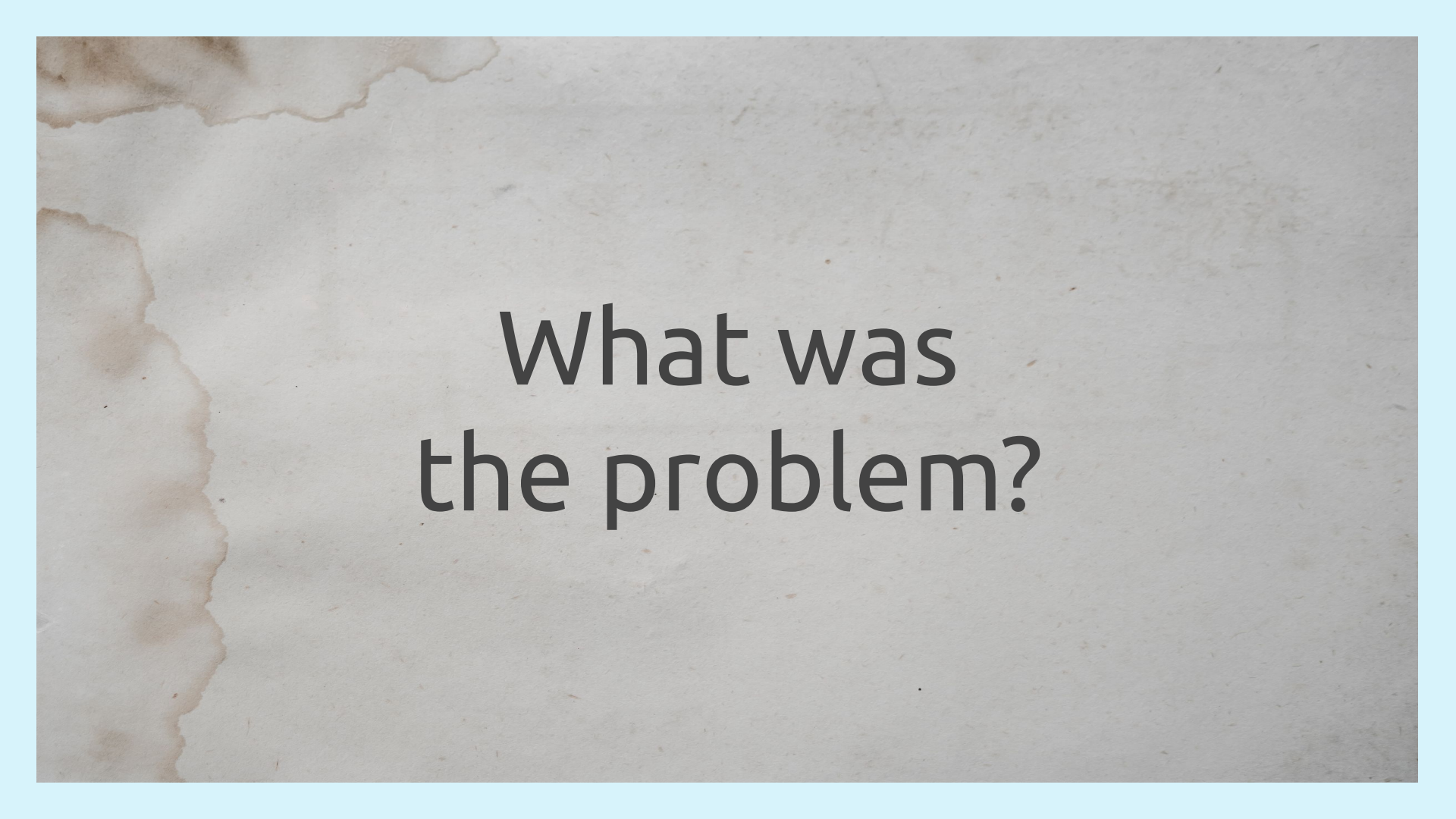






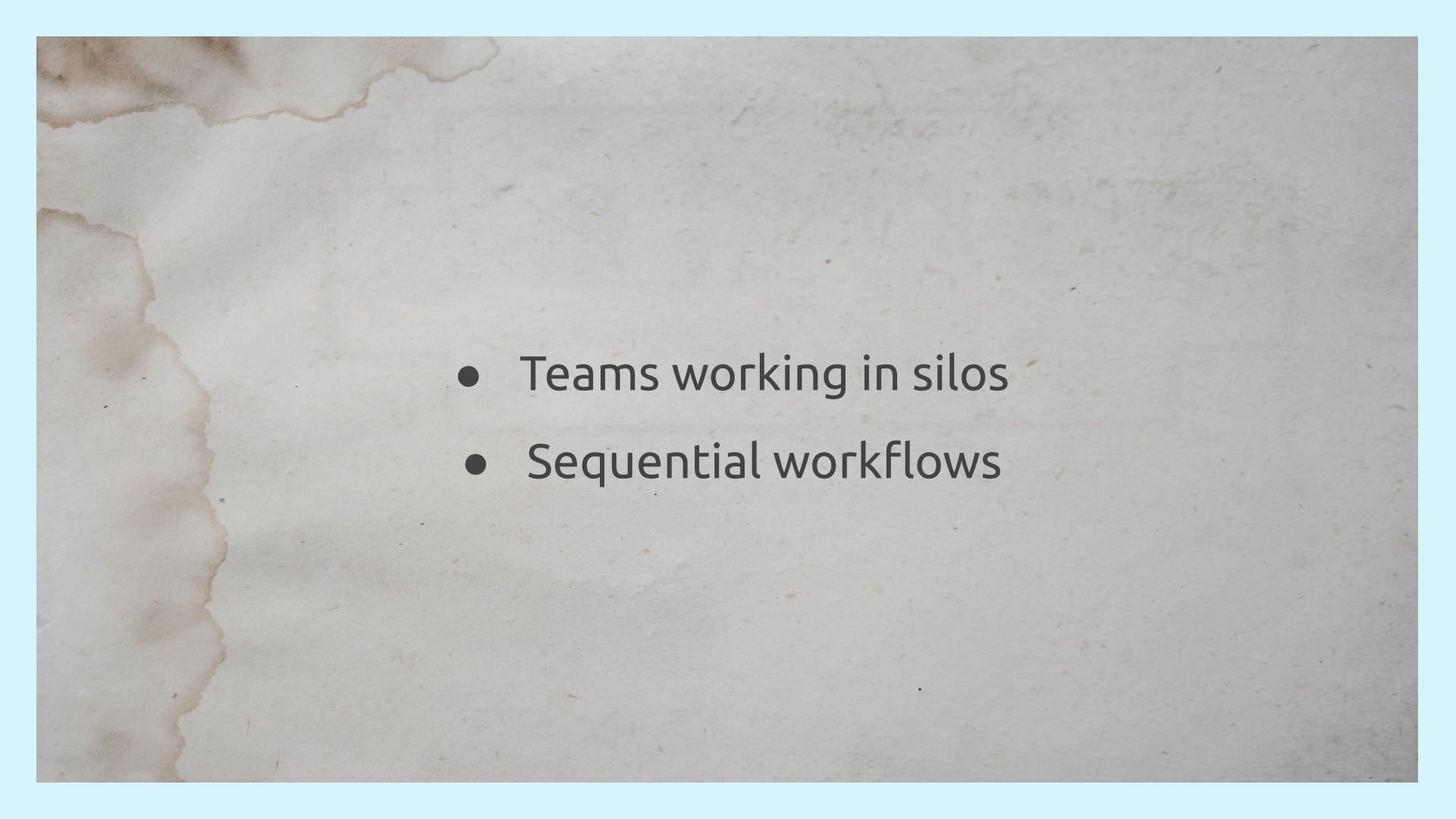


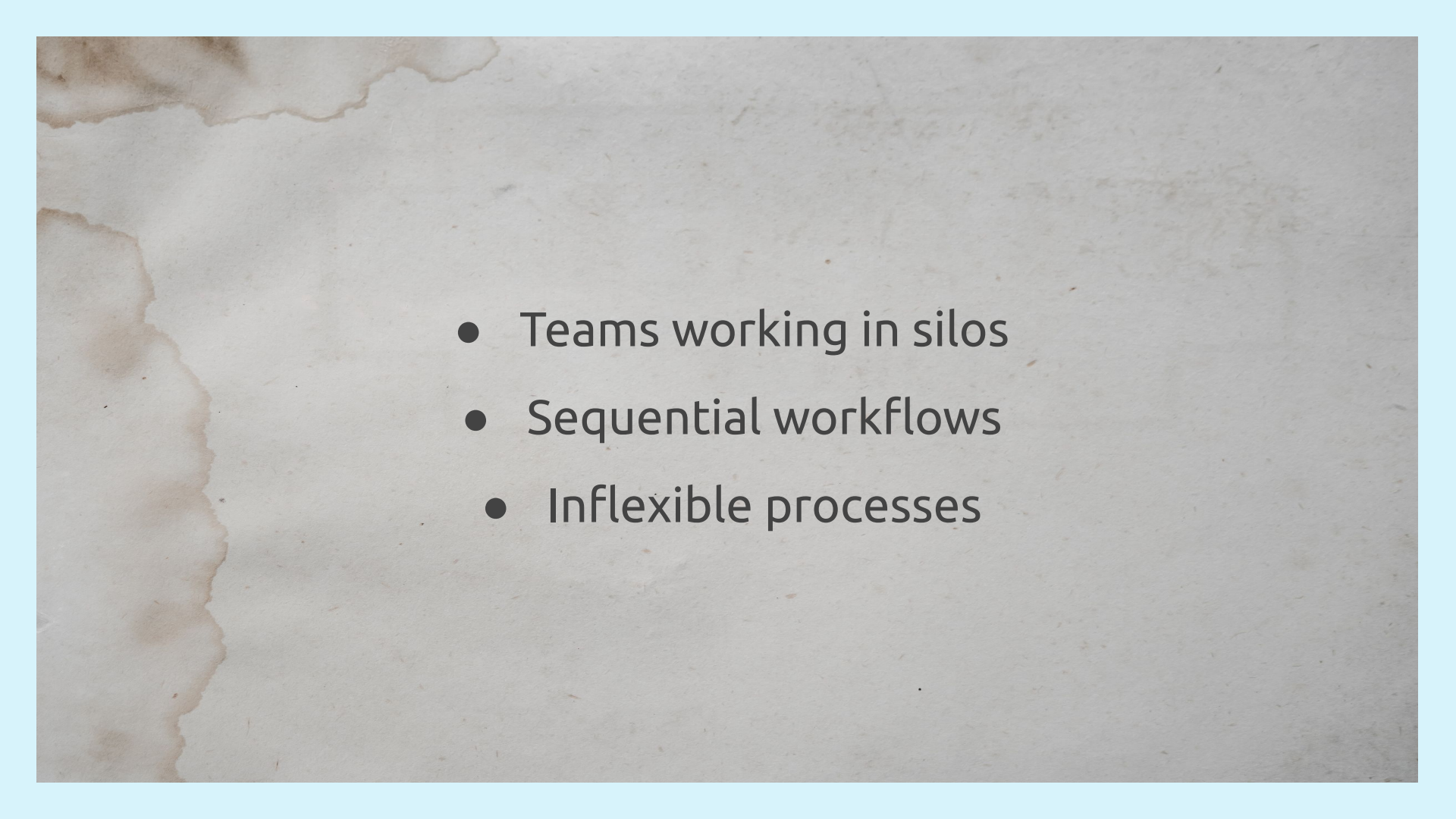




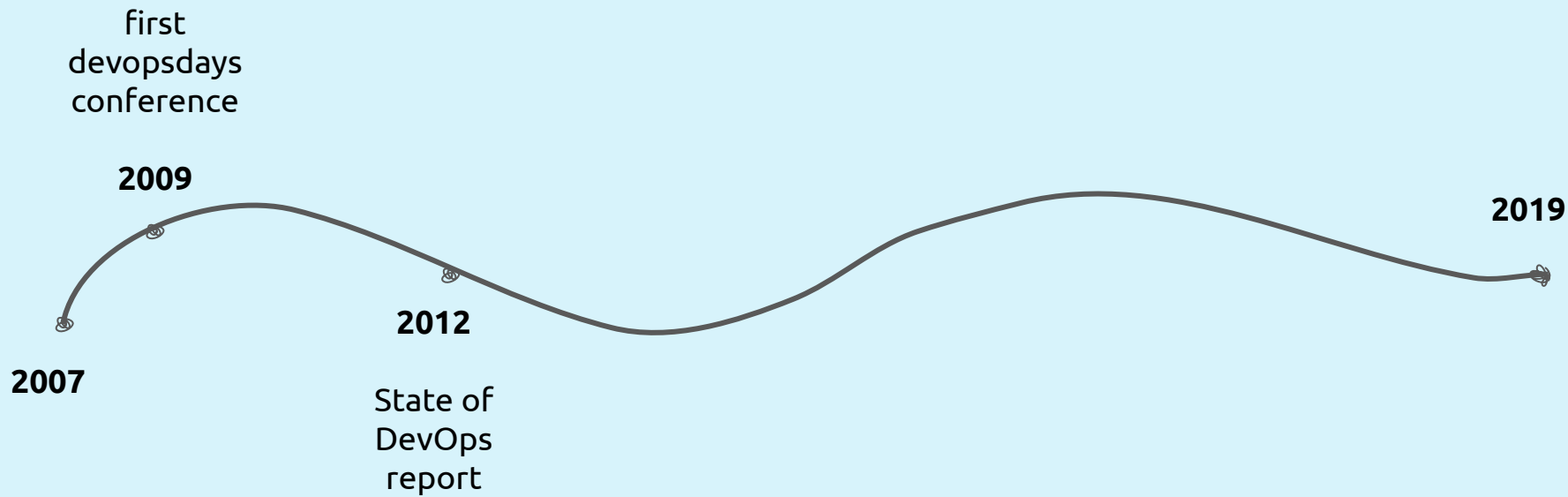
What was
the problem?


- 
- Teams working in silos

- 
- Teams working in silos
 - Sequential workflows

- 
- Teams working in silos
 - Sequential workflows
 - Inflexible processes

ENTER: DEVOPS

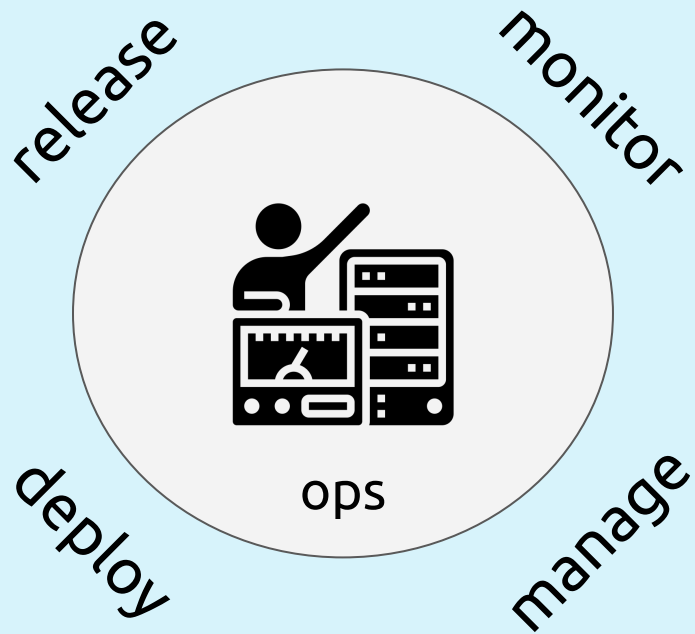
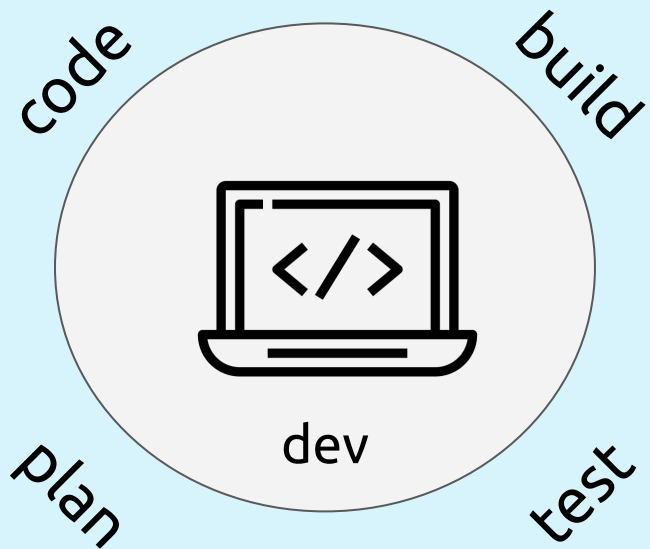


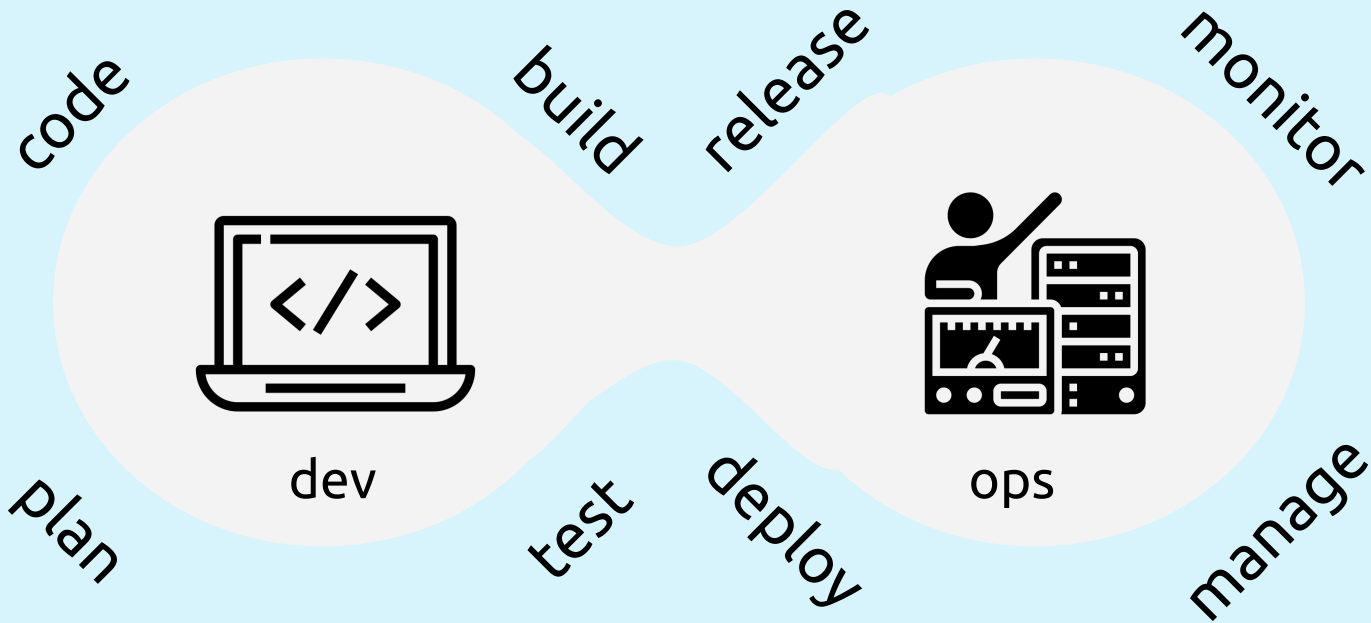
The image features three pixelated clouds in shades of light blue and white, set against a solid pink background. The clouds are positioned around the central text: one in the top left, one in the top right, and one in the bottom left. The text is centered and reads "DevOps, beyond the buzzwords".

DevOps, beyond the buzzwords

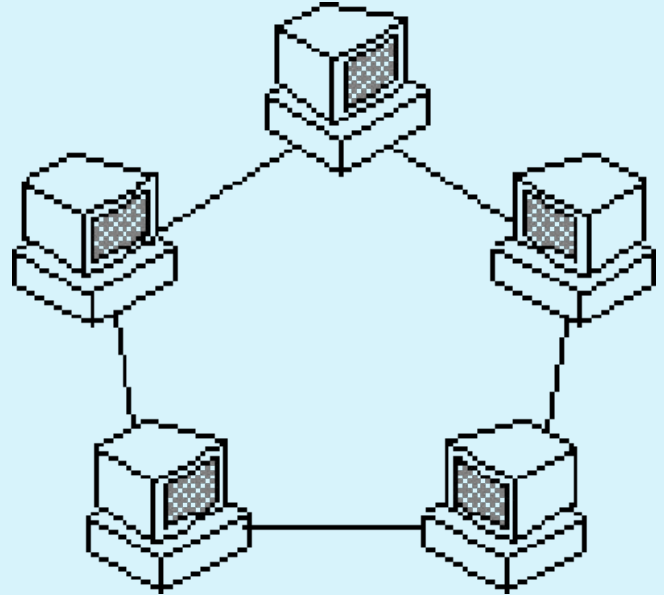
Cultural shift towards sharing ownership







It's not just tooling



Infrastructure
as Code

Containerization

Agile
methodologies

Orchestration

Cloud
technologies

Observability

CI/CD

technical +
cultural +
process

Outcomes

Outcomes

Better communication

Outcomes

Better communication

Faster delivery

Outcomes

Better communication

Faster delivery

Stability

Outcomes

Better communication

Faster delivery

Stability

Happier teams and users

The image features four pixelated clouds in shades of light blue and white, set against a solid pink background. The clouds are positioned in the top-left, top-right, bottom-left, and bottom-right corners, framing the central text. Each cloud has a distinct, blocky, pixelated appearance.

How to start DevOps-ing

Can I be a “DevOps Engineer”?

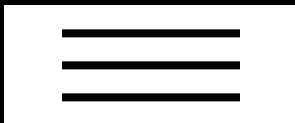
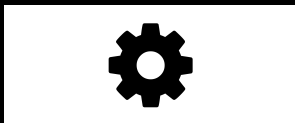
Thank you :)

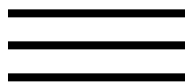
A BRIEF HISTORY OF CONTAINERS

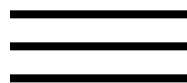


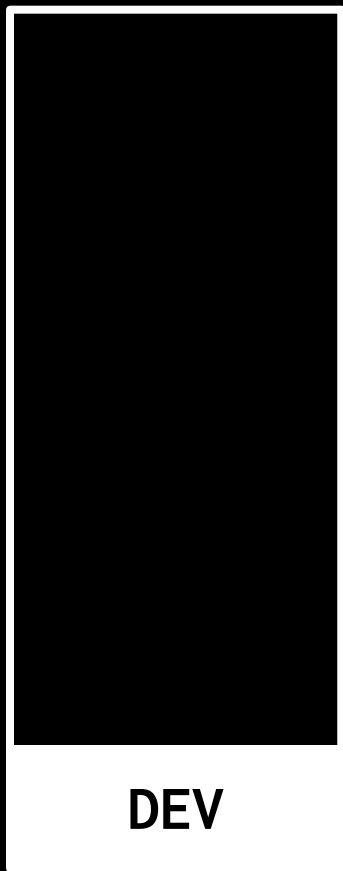


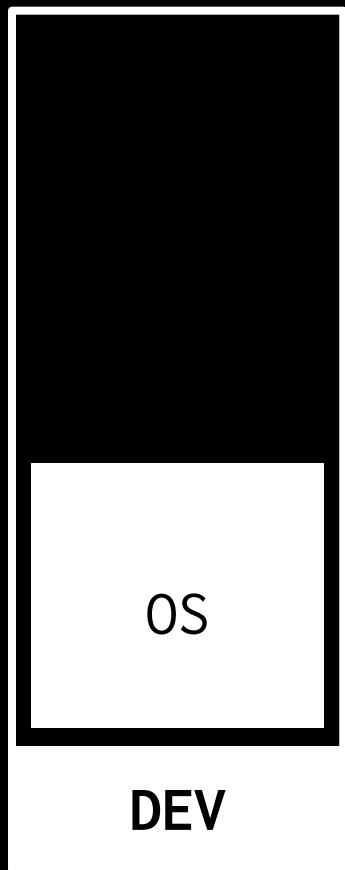


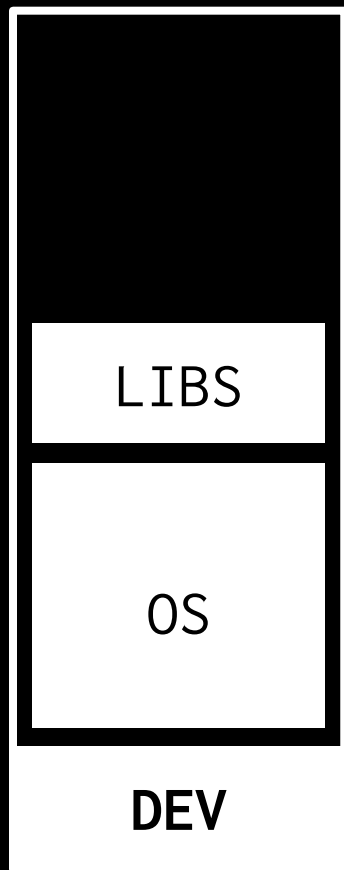














LIBS

OS

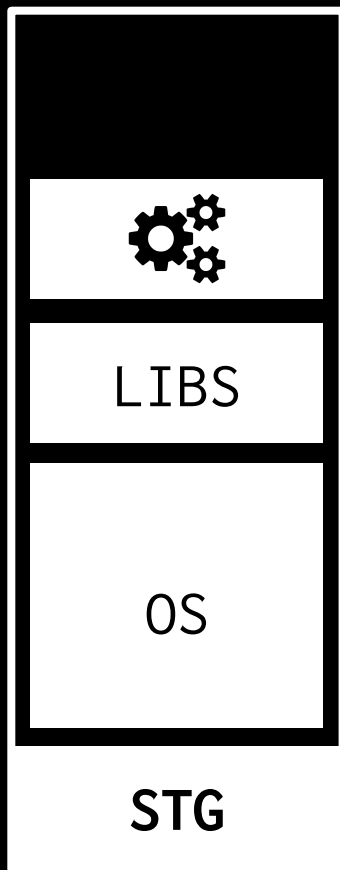
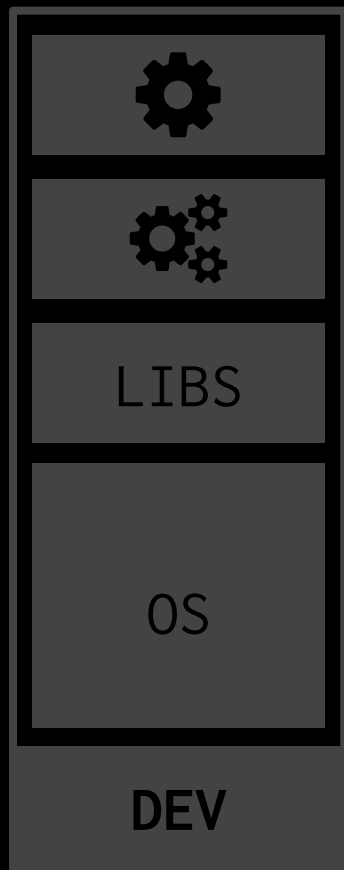
DEV

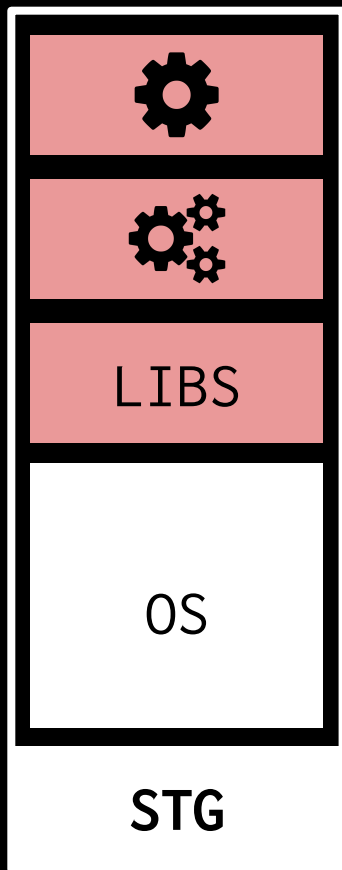
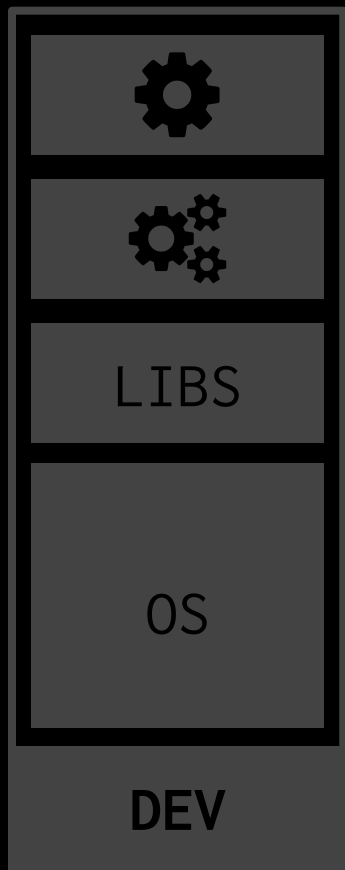


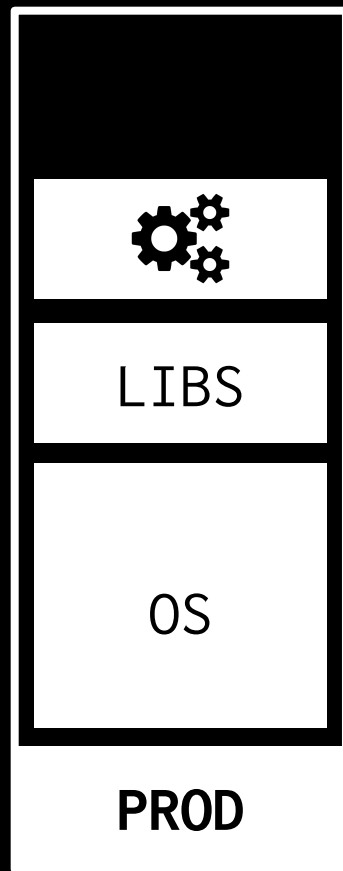
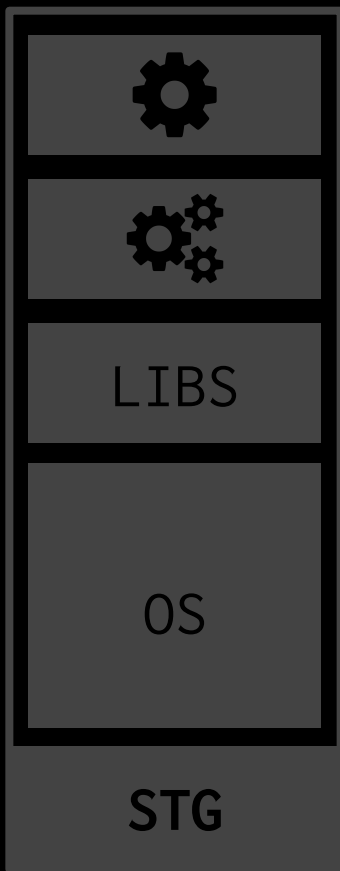
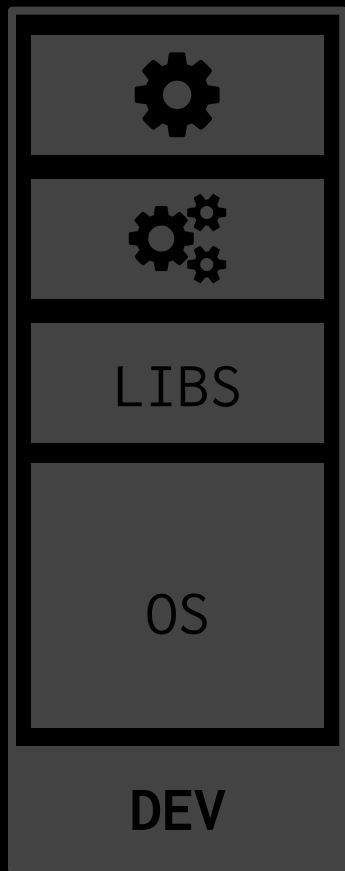
LIBS

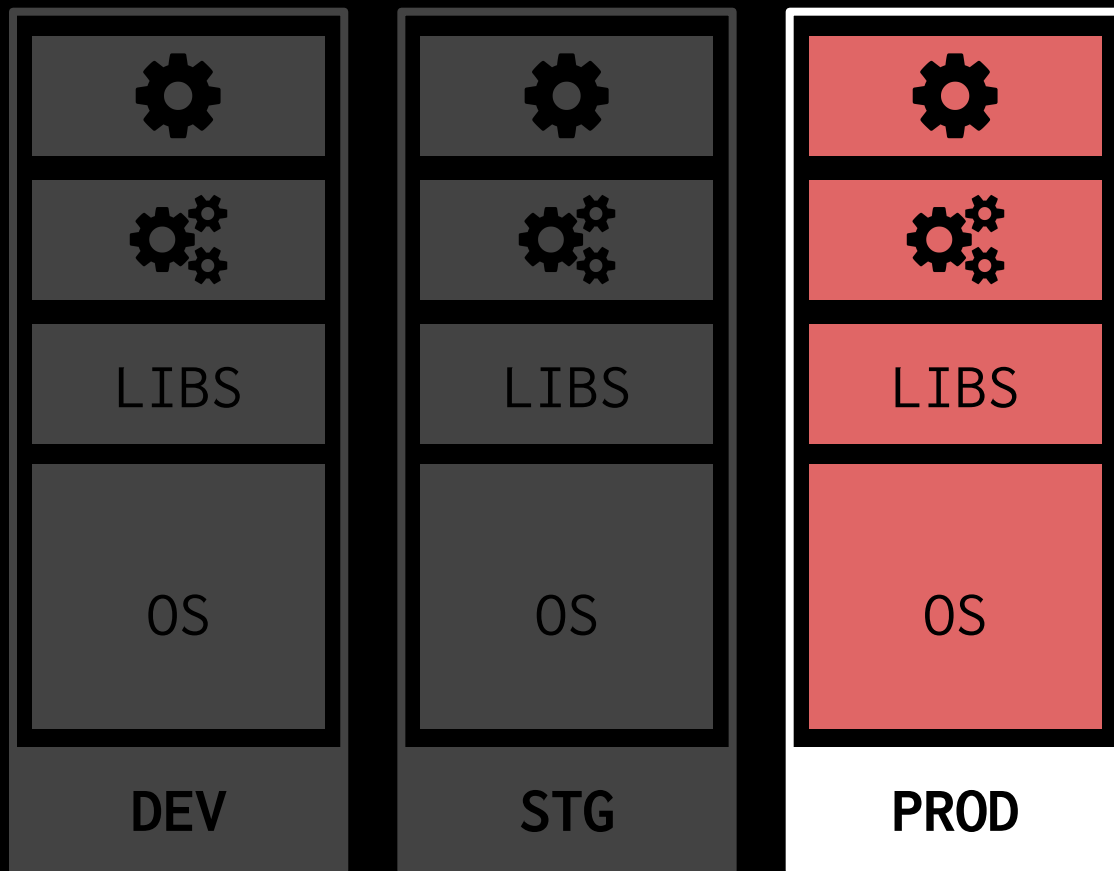
OS

DEV











**How do we encapsulate
dependencies?**

Virtual Machine



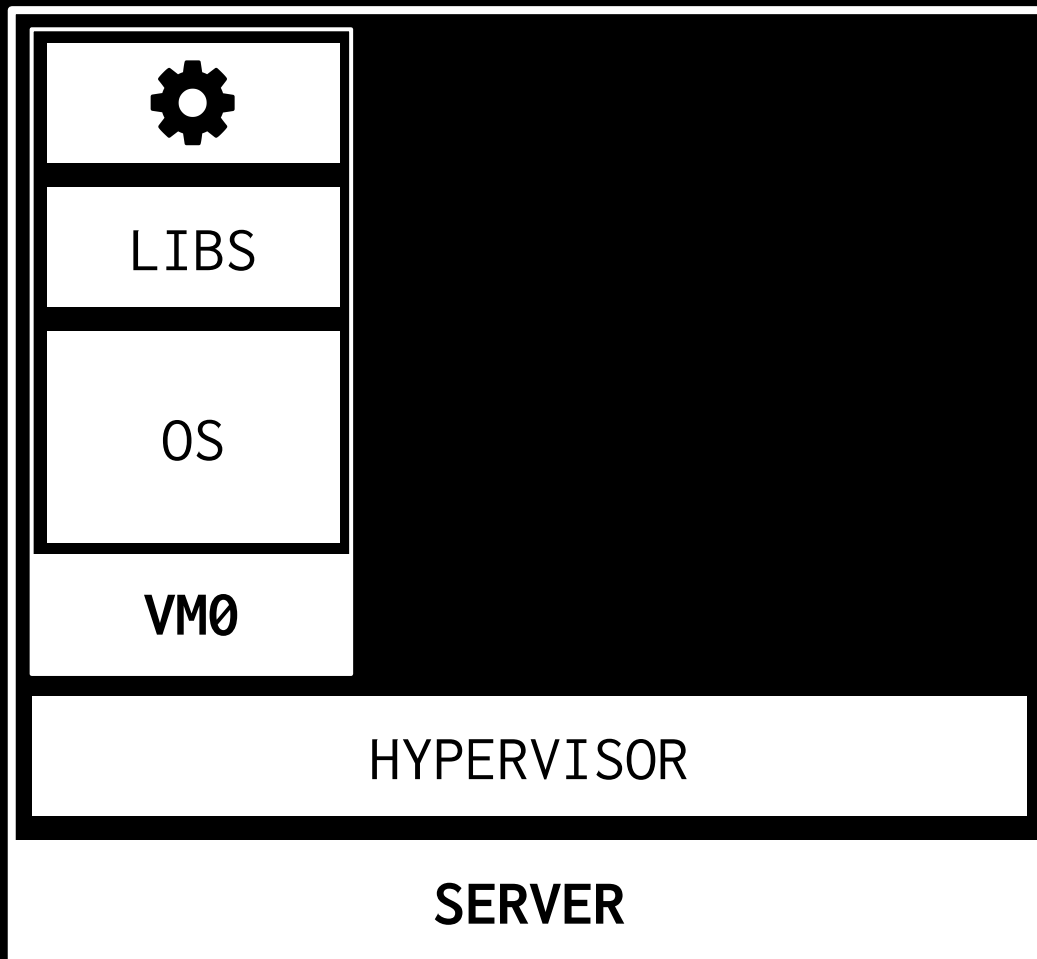
SERVER

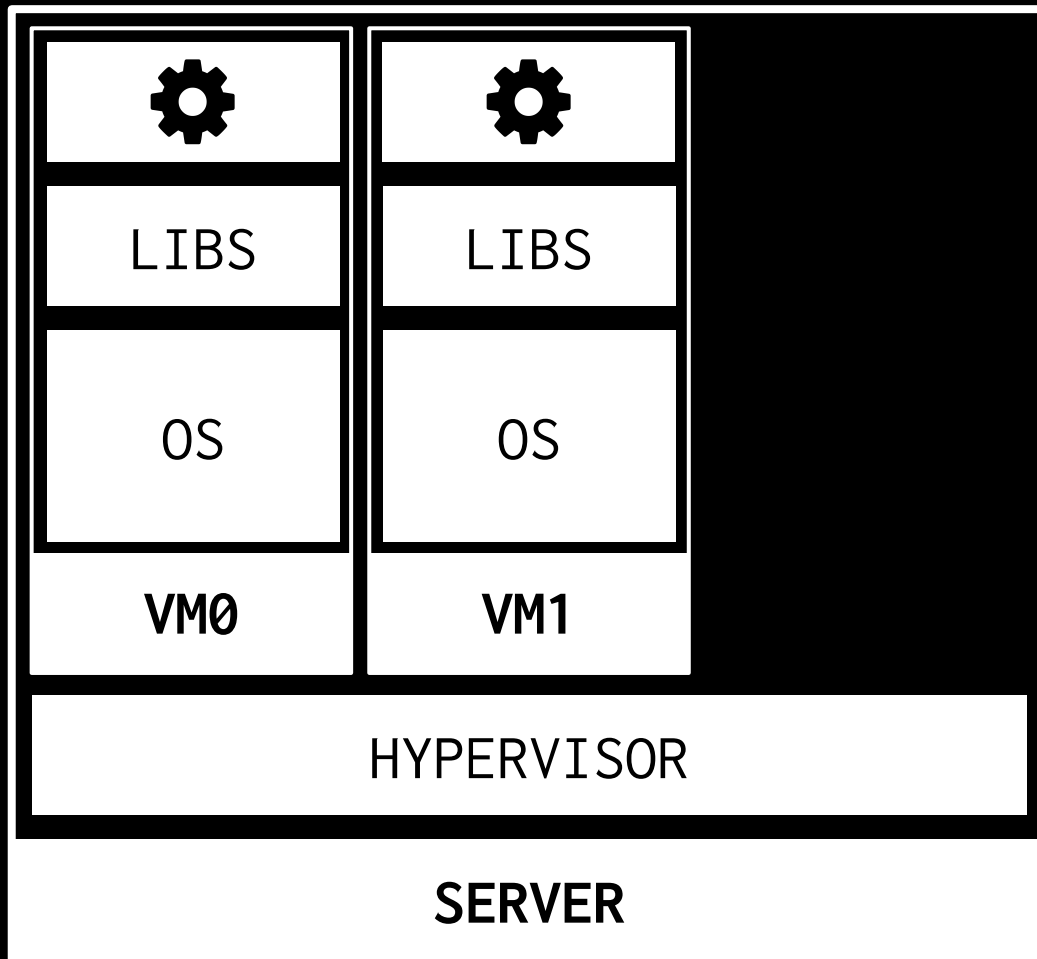


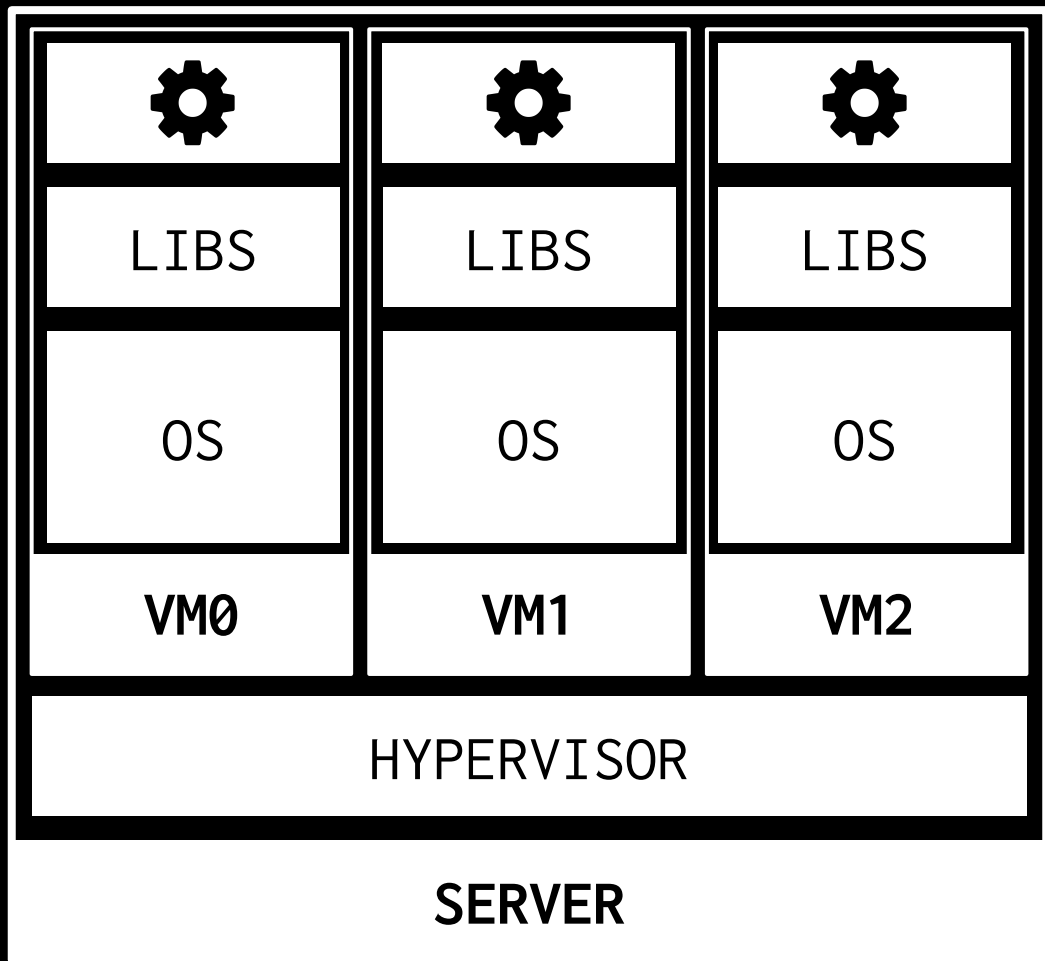
A diagram illustrating a server architecture. It consists of two main layers. The bottom layer is a white rectangle labeled "SERVER". The top layer is a black rectangle labeled "HYPERVISOR". The "HYPERVISOR" layer is positioned directly above the "SERVER" layer, and its width is slightly less than the width of the "SERVER" layer, centered horizontally.

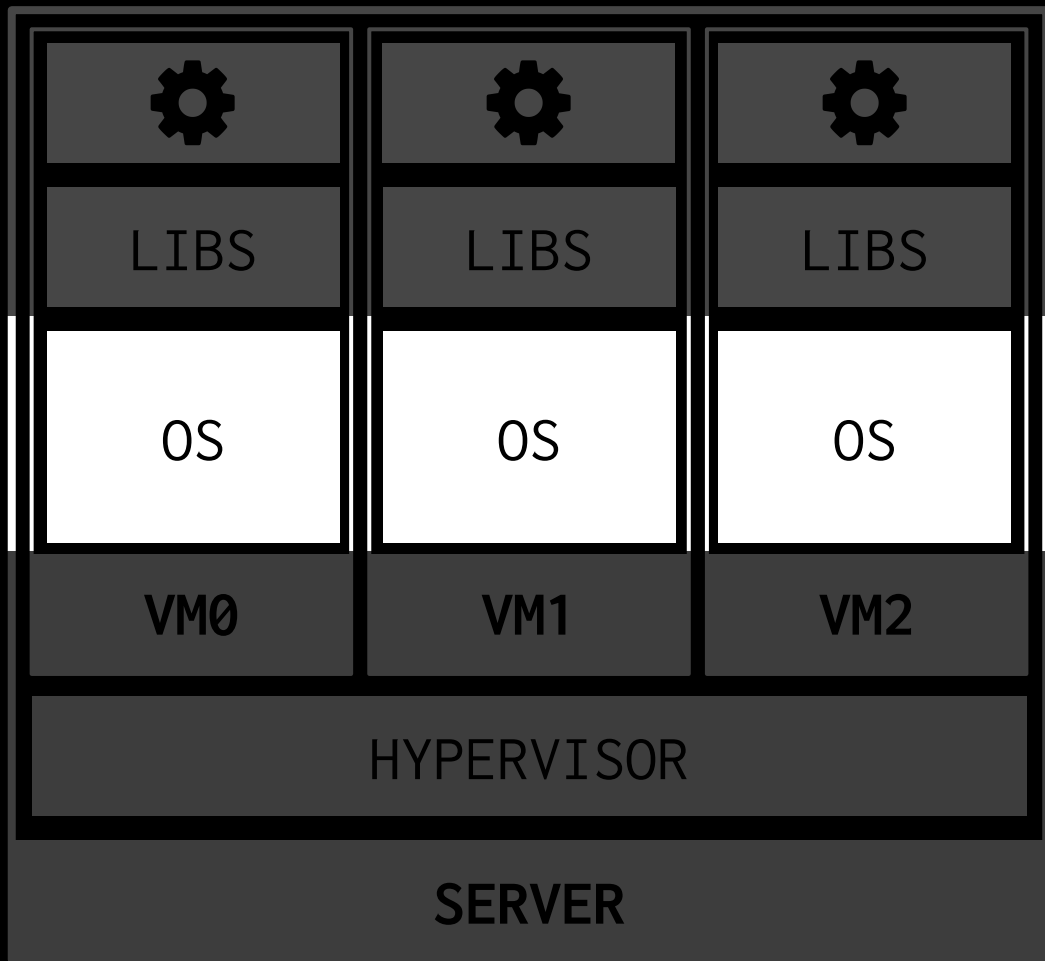
HYPERVISOR

SERVER







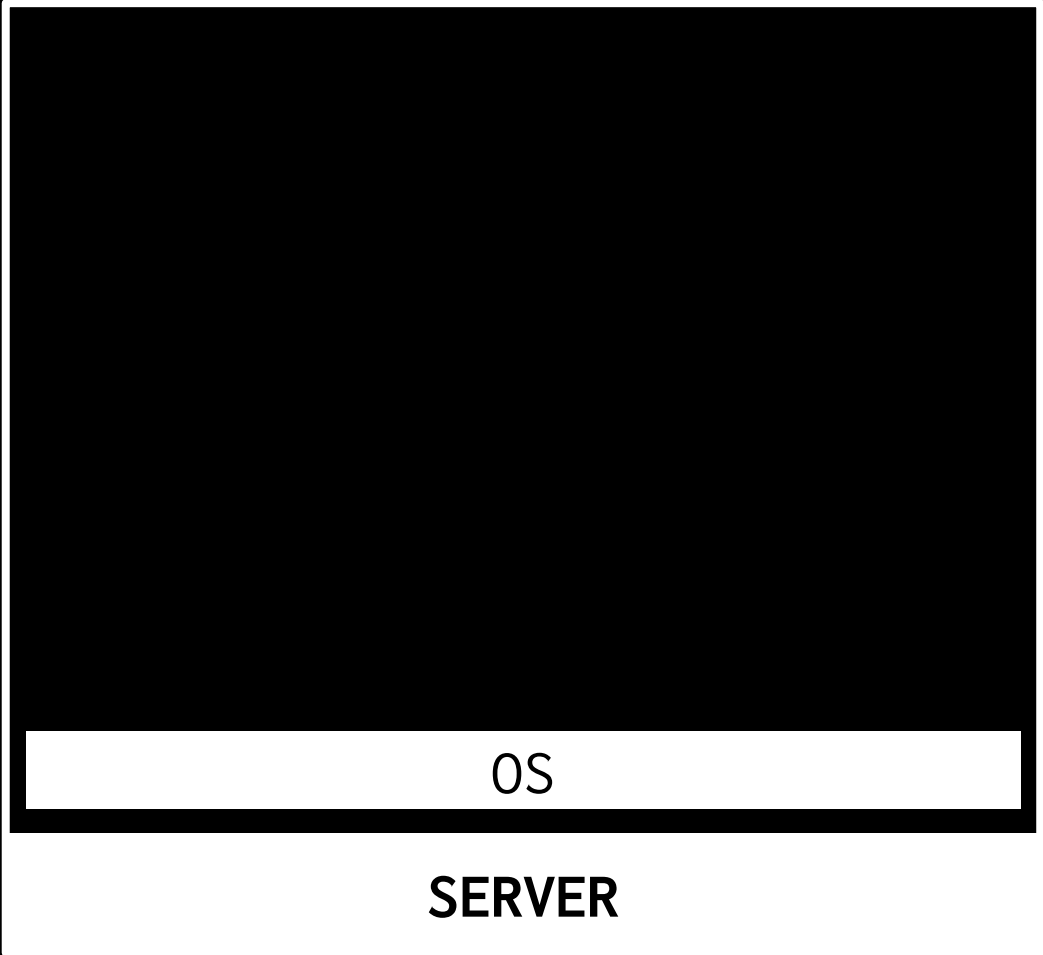


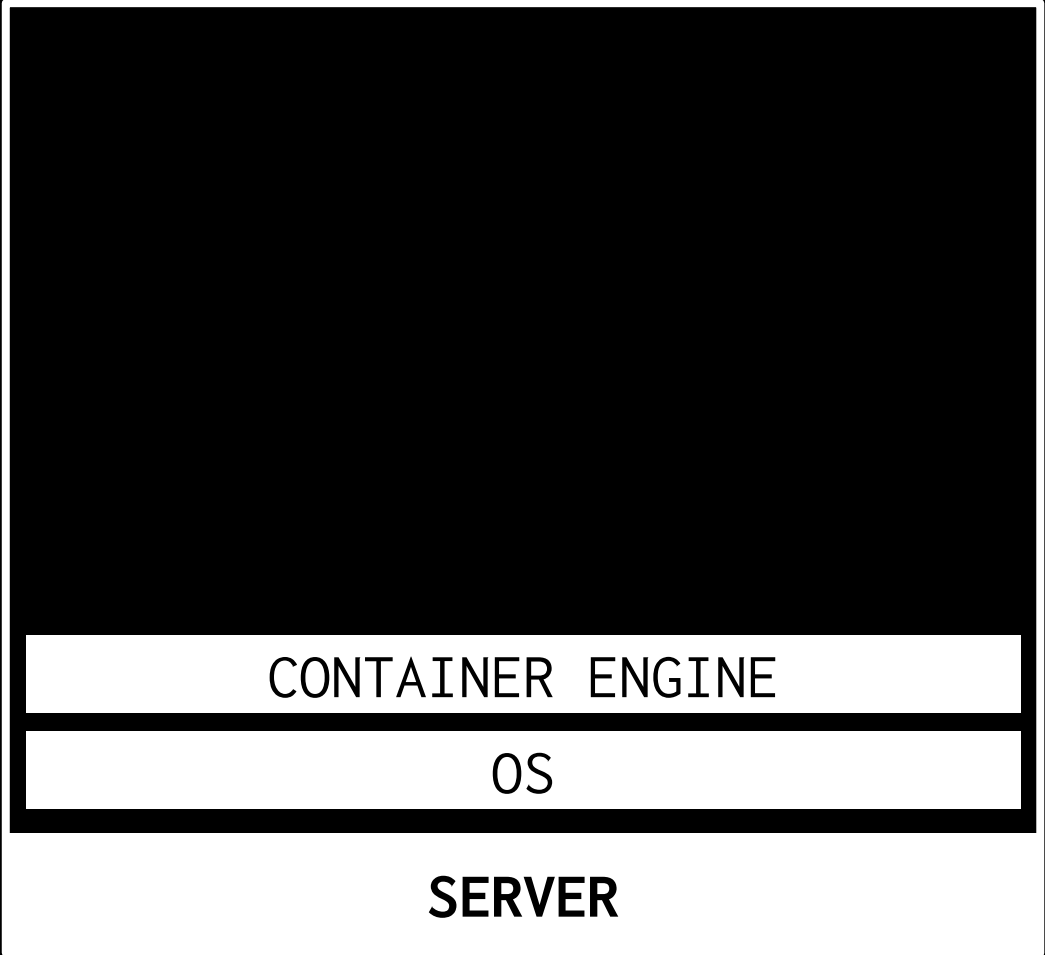
**How do we reduce this
large footprint?**

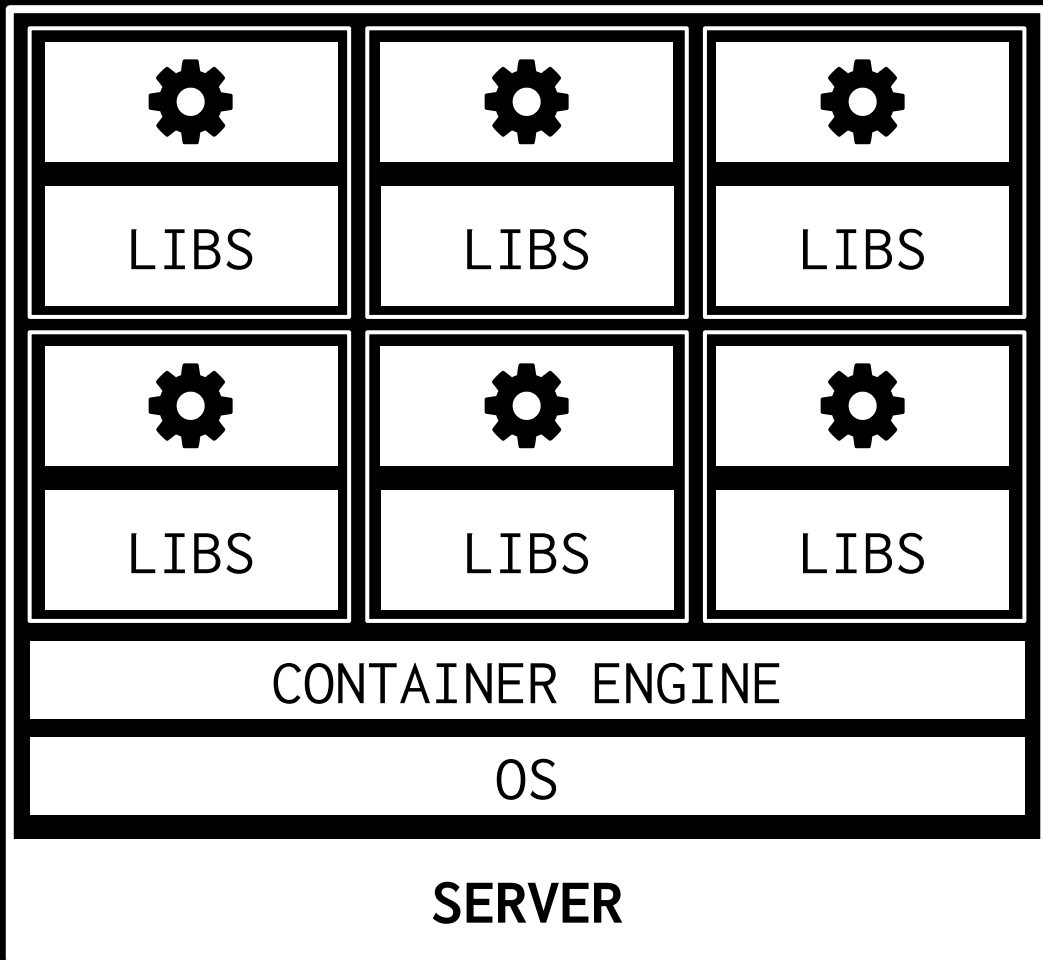
Containers



SERVER





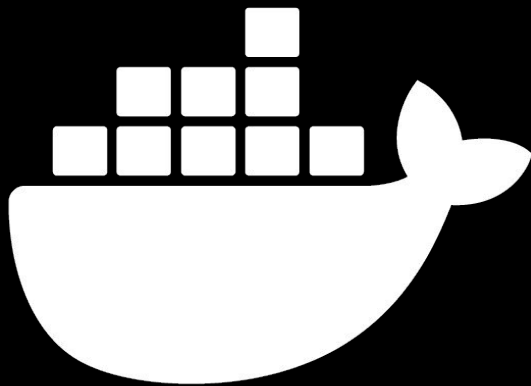


**Consistent runtime
environment for
applications**

Application Sandboxing

Small physical size

Small resource overhead



docker[®]

**DOCKER
FILE**

ANATOMY

An abstract background pattern consisting of numerous overlapping, curved, dark gray shapes that resemble stylized scales or facets. These shapes are set against a solid black background, creating a complex, three-dimensional geometric texture.

Start with a base.

FROM python:3.7

ADD requirements.txt .

ADD mypython.py

RUN pip install -r requirements.txt

EXPOSE 5000

LABEL maintainer="pyladies-berlin"

ENTRYPOINT ["python", "mypython.py"]

Add in your project files.

FROM python:3.7

ADD requirements.txt requirements.txt

ADD mypython.py mypython.py

**Install your project
dependencies.**

FROM python:3.7

ADD requirements.txt requirements.txt

ADD mypython.py mypython.py

RUN pip install -r requirements.txt

Add metadata.

FROM python:3.7

ADD requirements.txt requirements.txt

ADD mypython.py mypython.py

RUN pip install -r requirements.txt

EXPOSE 5000

LABEL maintainer="pyladies-berlin"

Run your project.

EXAMPLE DOCKER FILE

FROM python:3.7

ADD requirements.txt requirements.txt

ADD mypython.py mypython.py

RUN pip install -r requirements.txt

EXPOSE 5000

LABEL maintainer="pyladies-berlin"

ENTRYPOINT ["python", "mypython.py"]

```
$ docker build . -t myimage:latest
```

<https://github.com/emilywoods/pyladies-docker-workshop>

**COMMON
DOCKER**

COMMANDS



```
docker pull grafana/grafana:6.4.4
```

docker run

-d

--name=grafana

-p 9000:3000

grafana/grafana:6.4.4

docker run

-d

--name=grafana

-p 9000:3000

grafana/grafana:6.4.4

```
docker run  
-d  
--name=grafana  
-p 9000:3000  
grafana/grafana:6.4.4
```

```
docker run  
    -d  
    --name=grafana  
    -p 9000:3000  
    grafana/grafana:6.4.4
```

```
docker run  
  -d  
  --name=grafana  
  -p 9000:3000  
grafana/grafana:6.4.4
```

localhost:9000

docker ps

NAME	grafana
IMAGE	grafana/grafana:6.4.4
STATUS	Up 2 minutes
PORTS	0.0.0.0:9000->3000/tcp

docker logs grafana

```
docker stop grafana
```