

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

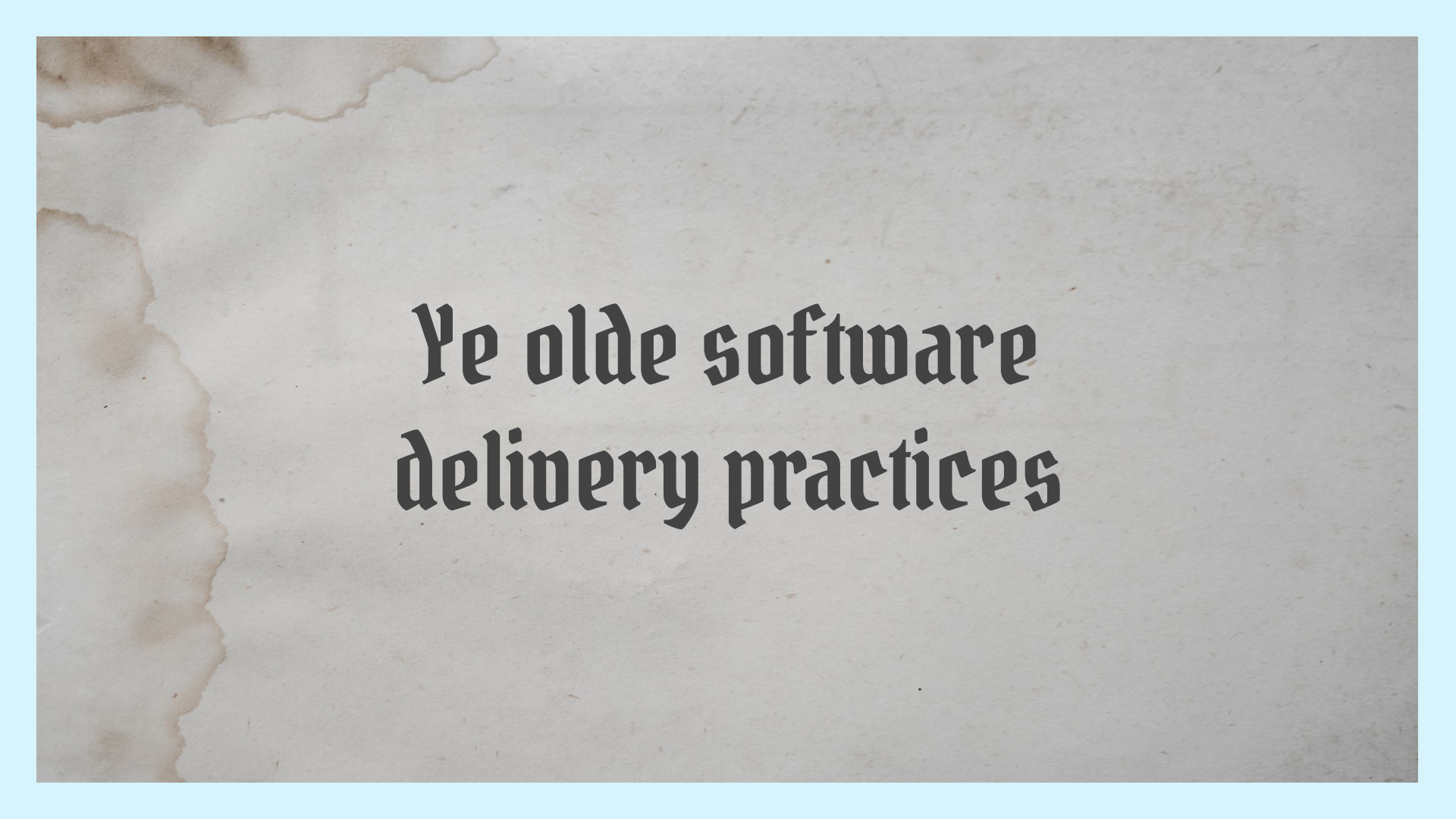
# A Lightning Tour of DevOps

# Agenda ✨

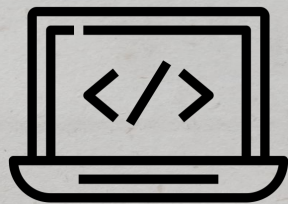
- A short history lesson
- DevOps beyond the buzzwords
- How to start DevOps-ing



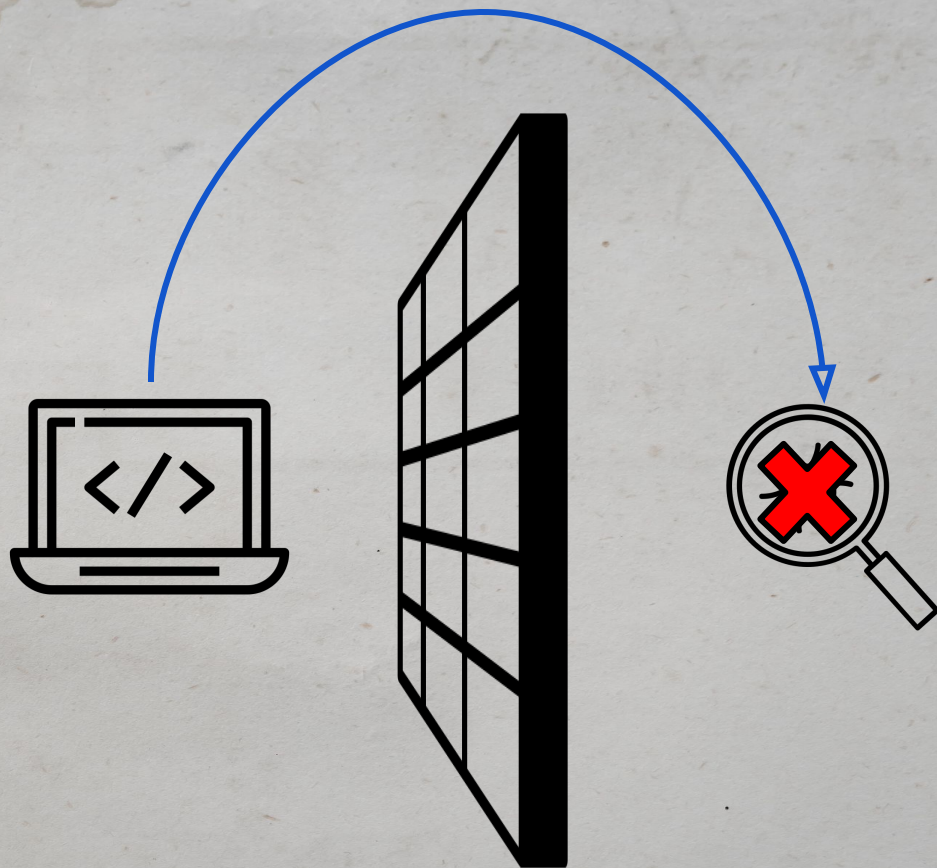
# A Short History Lesson...

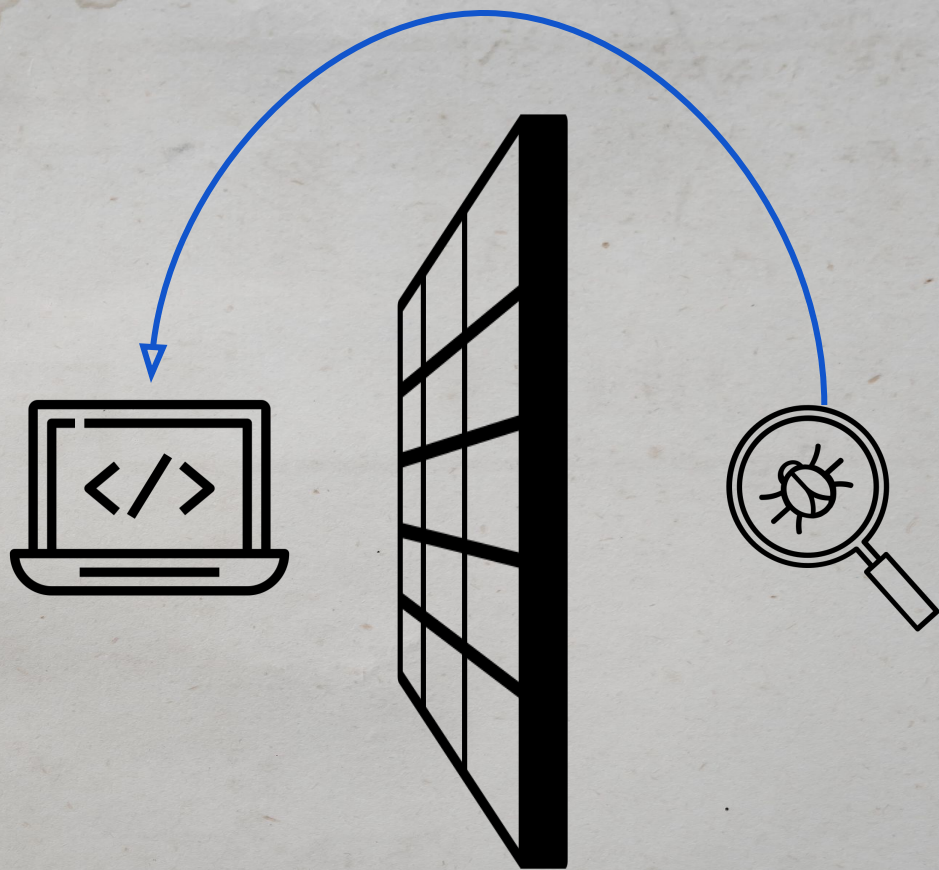


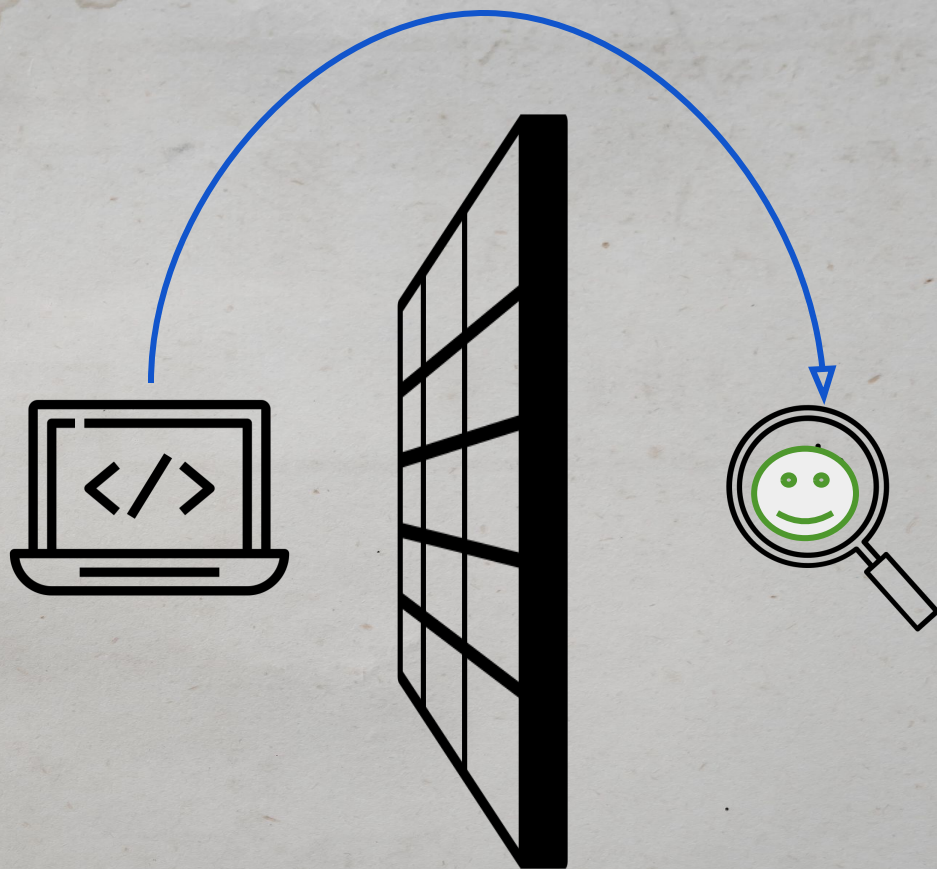
# Ye olde software delivery practices



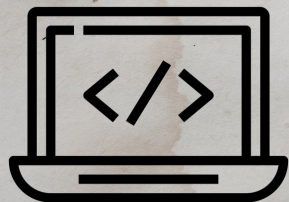


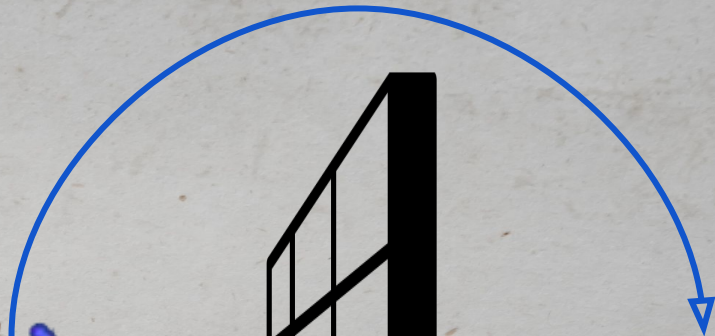
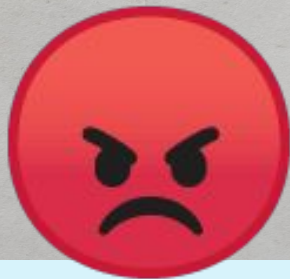
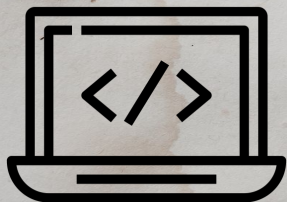


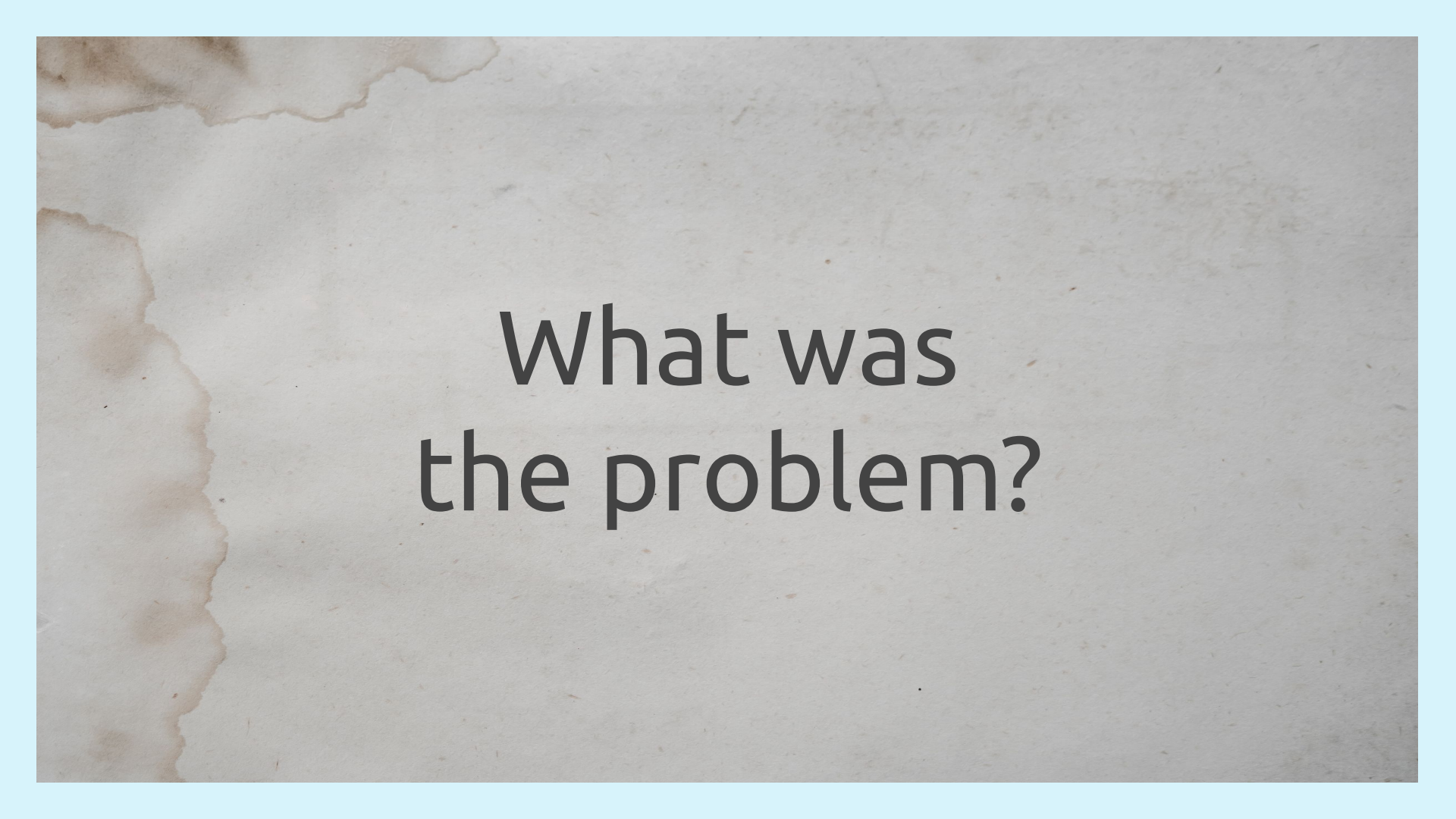










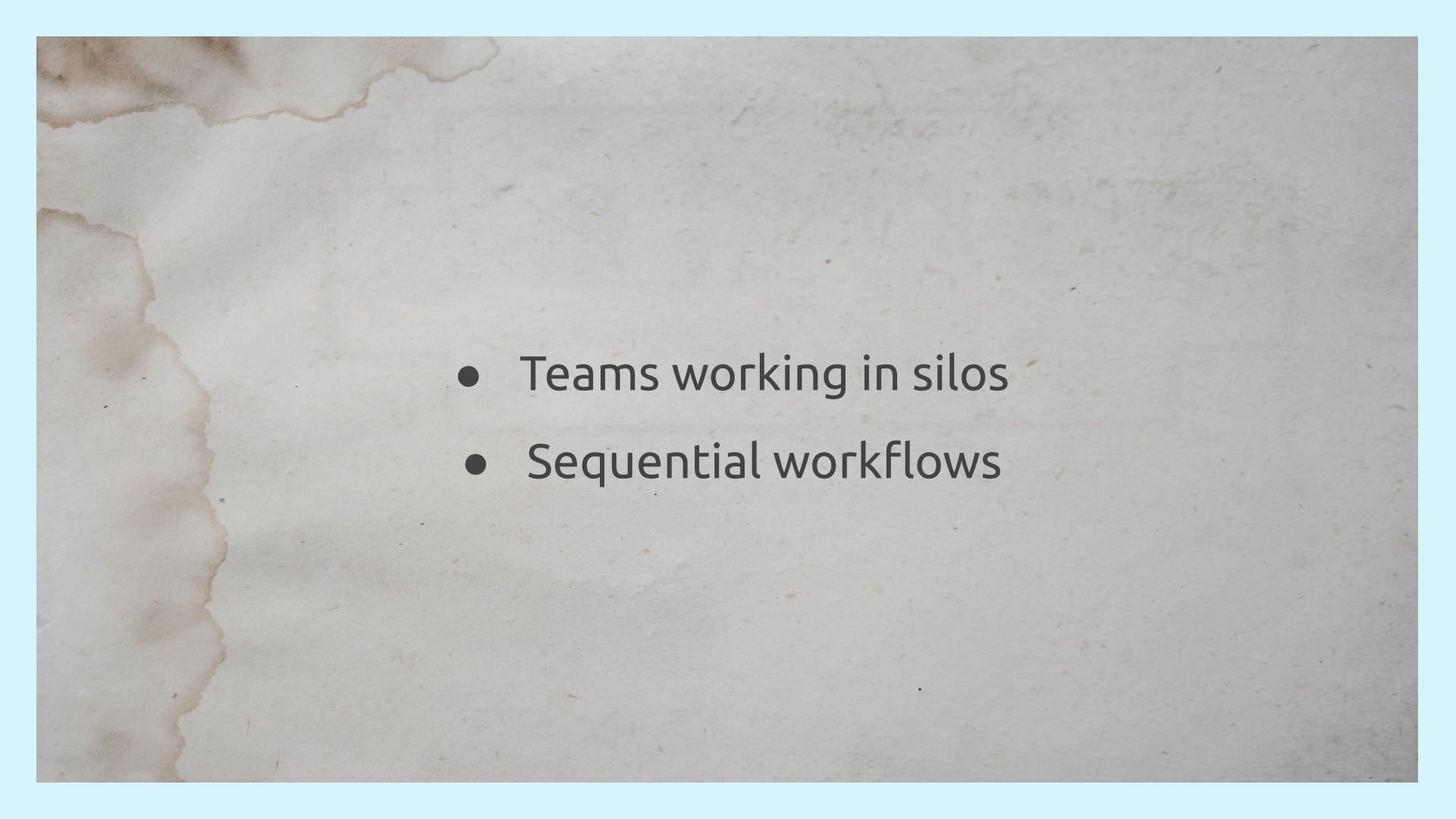


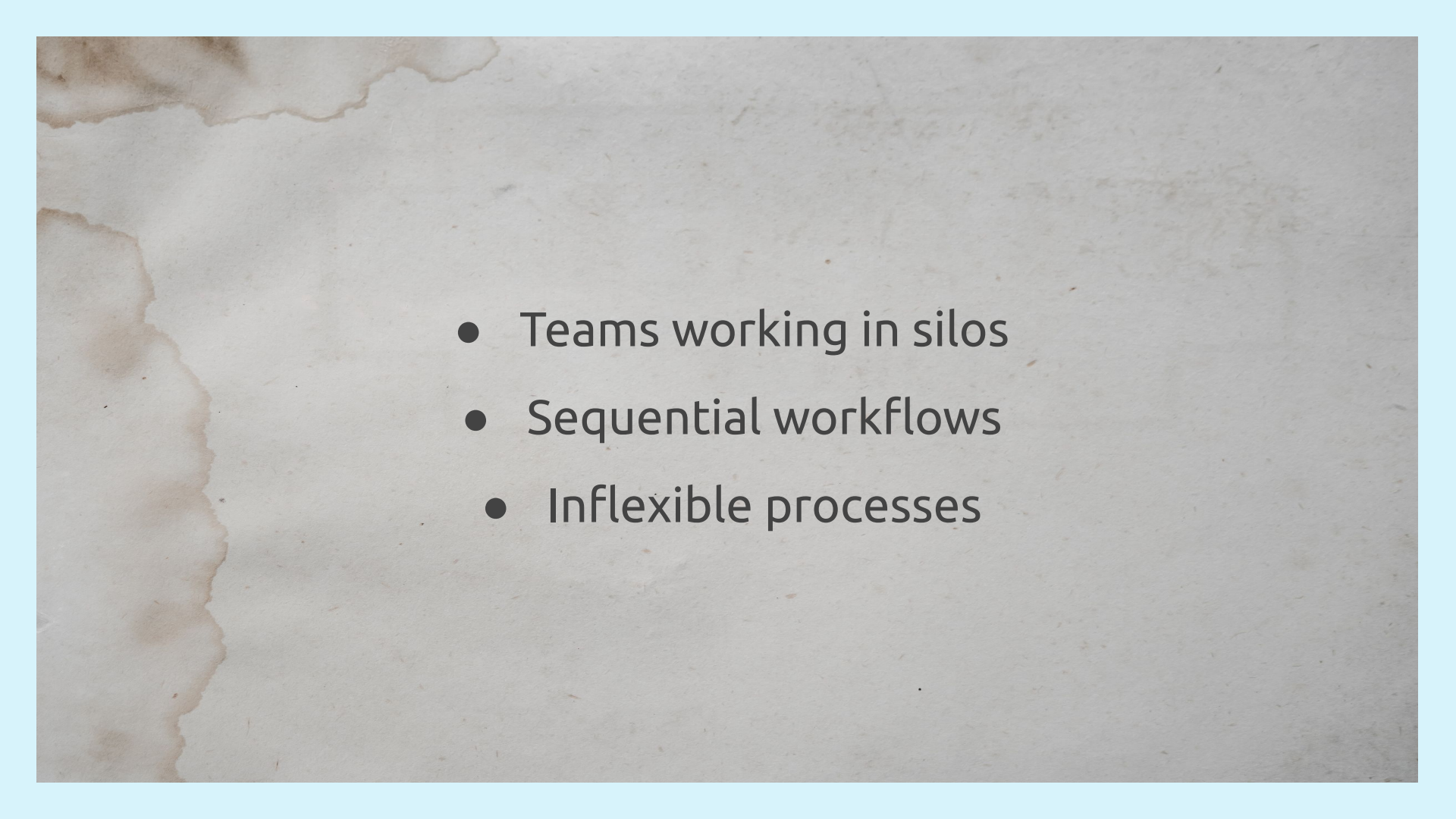
What was  
the problem?



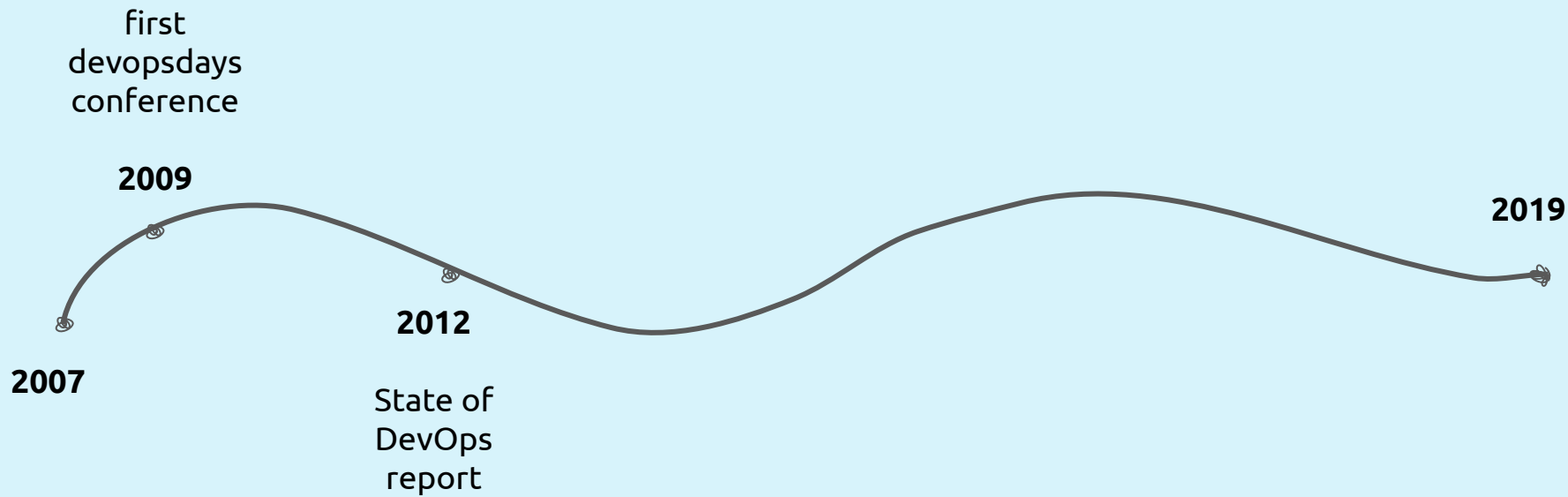
- 
- Teams working in silos




- 
- Teams working in silos
  - Sequential workflows

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

**ENTER: DEVOPS**



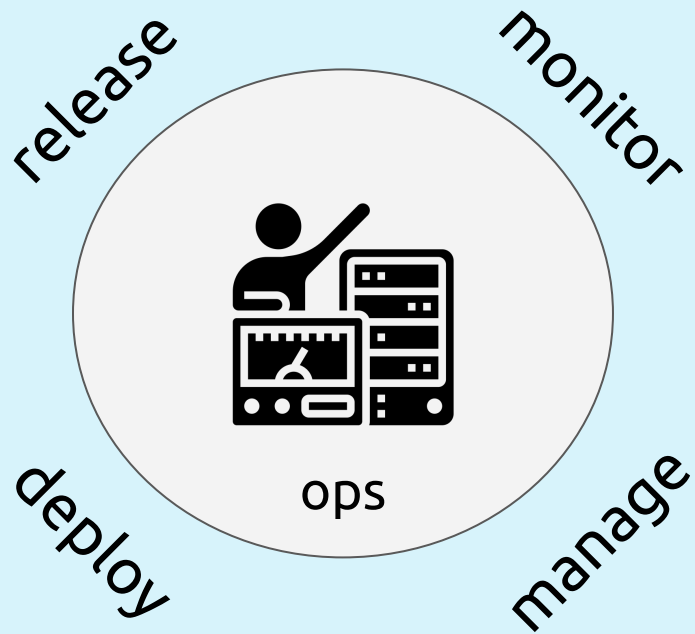
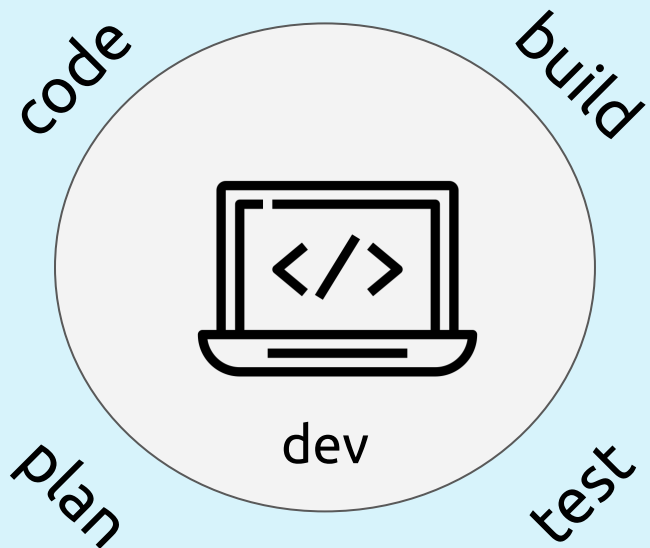


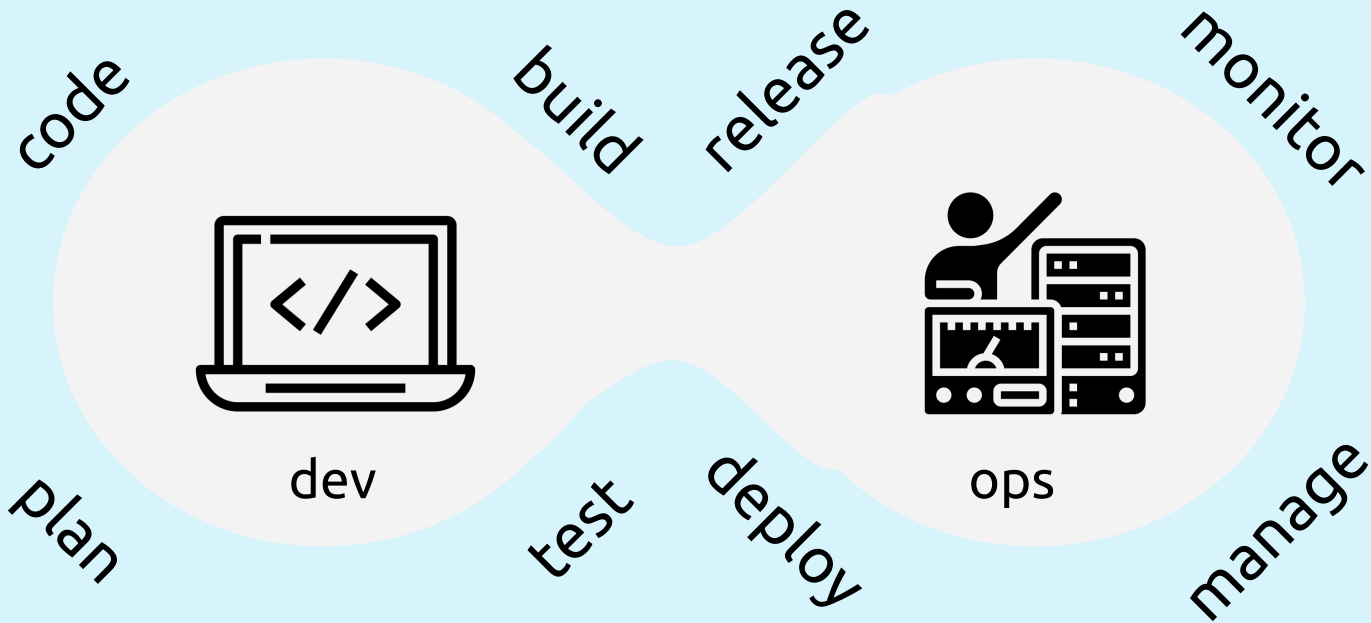
The image features three pixelated clouds in shades of light blue and white, set against a solid pink background. The clouds are positioned around the central text: one in the top left, one in the top right, and one in the bottom left. The text is centered and reads "DevOps, beyond the buzzwords".

# DevOps, beyond the buzzwords

# Cultural shift towards sharing ownership

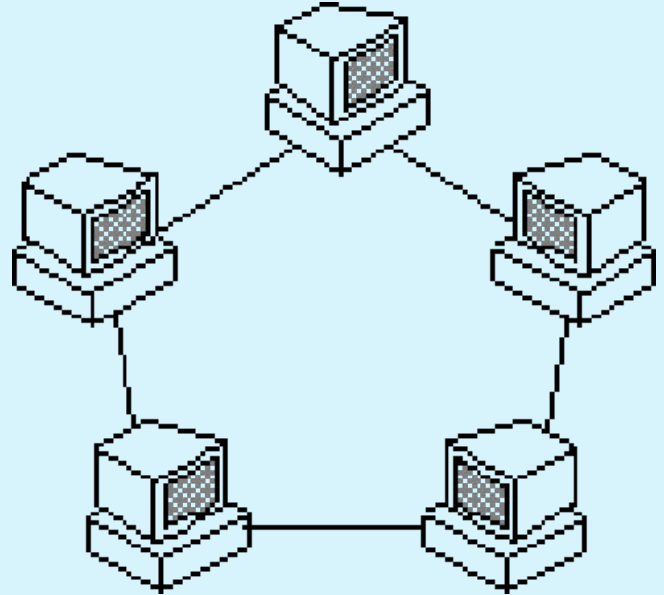








It's not just tooling



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 :)

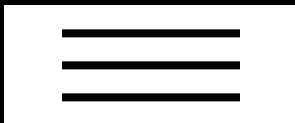
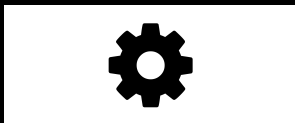


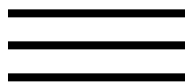
# A BRIEF HISTORY OF CONTAINERS

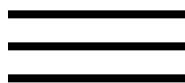


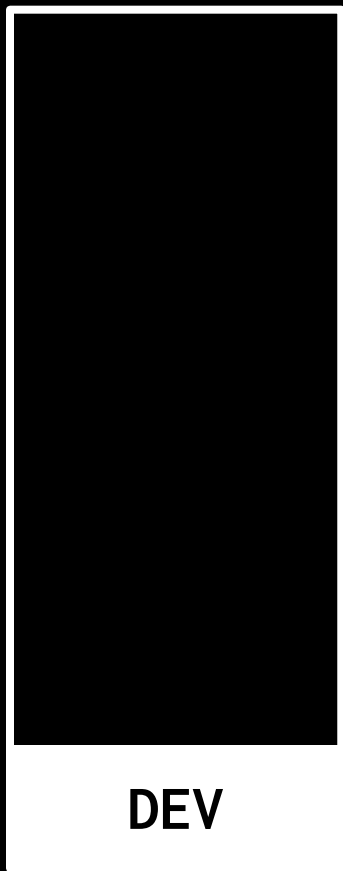






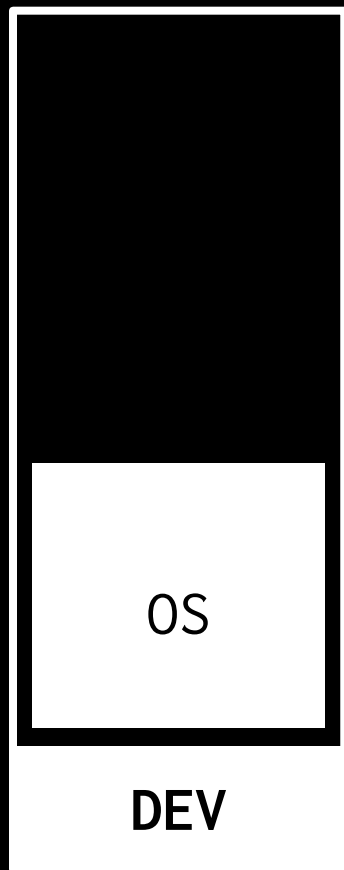


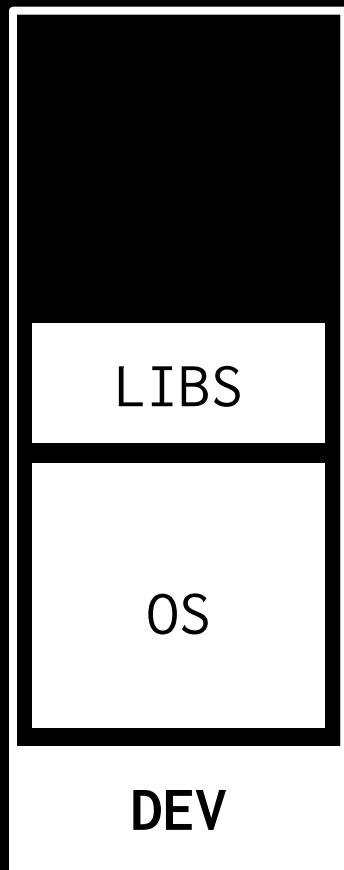




**DEV**









LIBS

OS

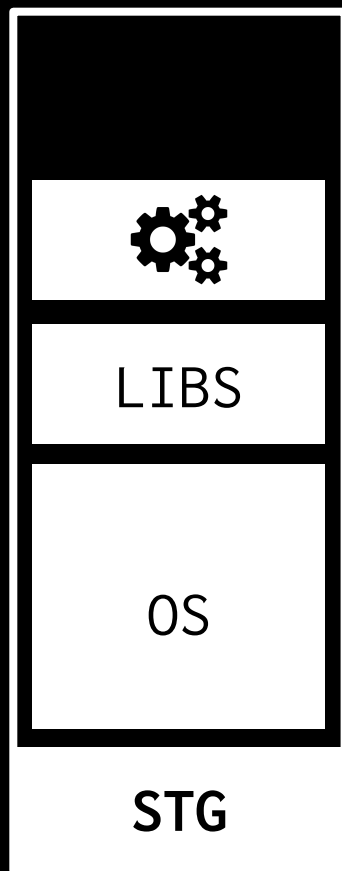
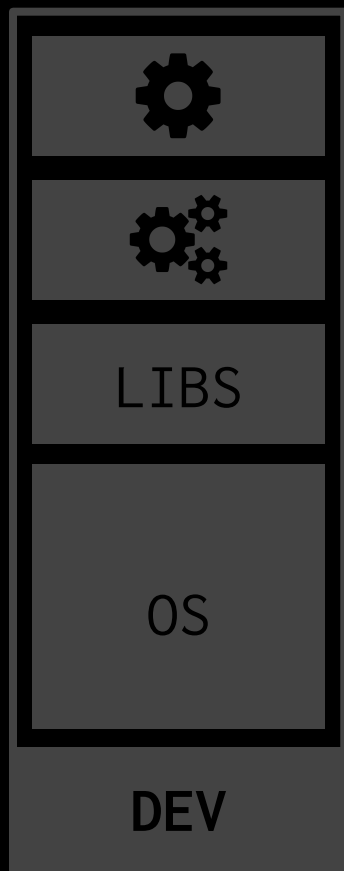
DEV

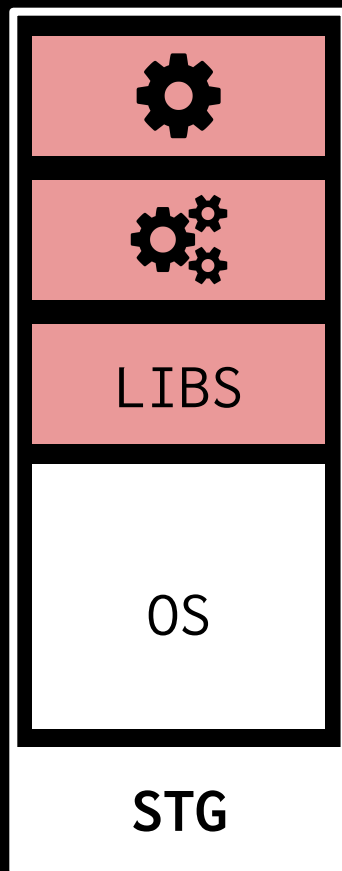
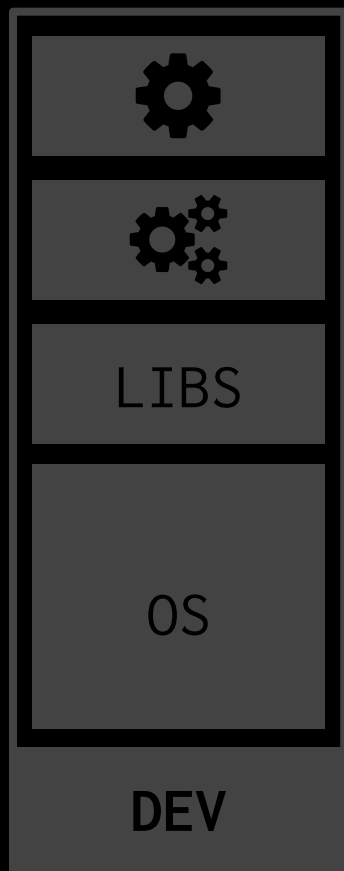


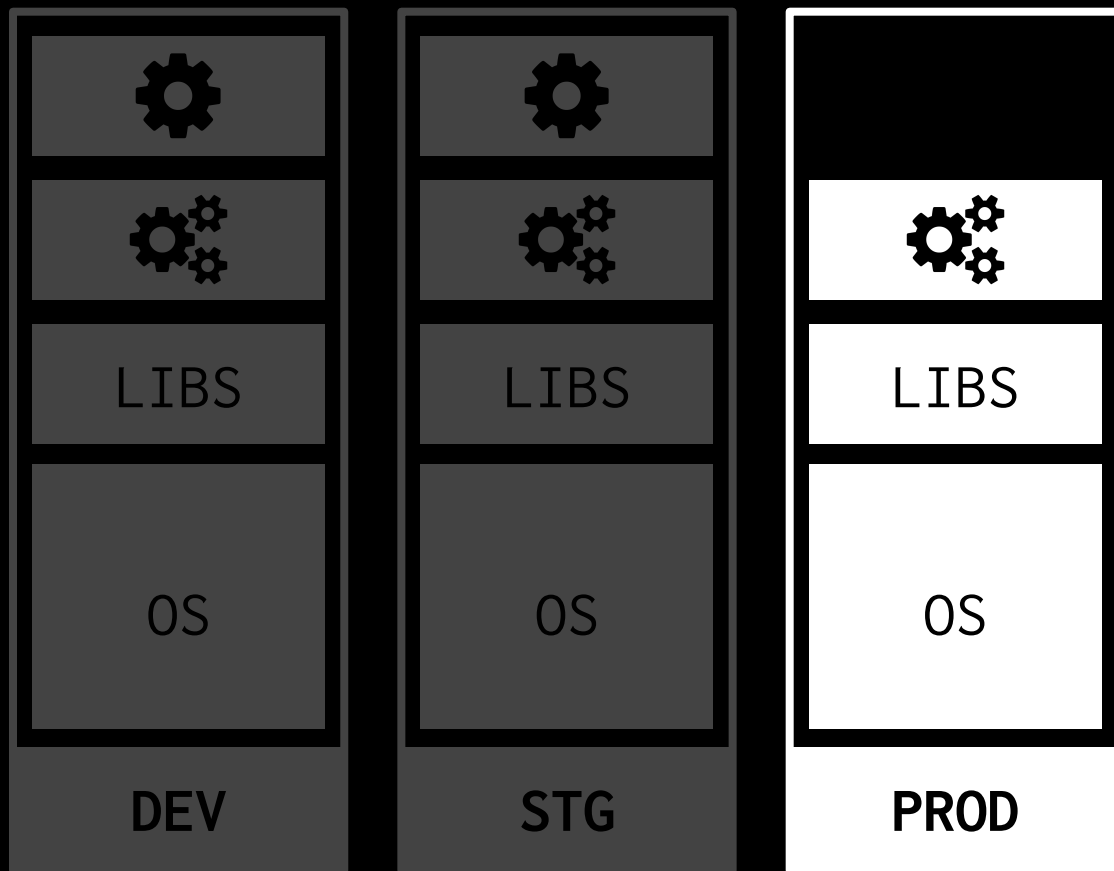
LIBS

OS

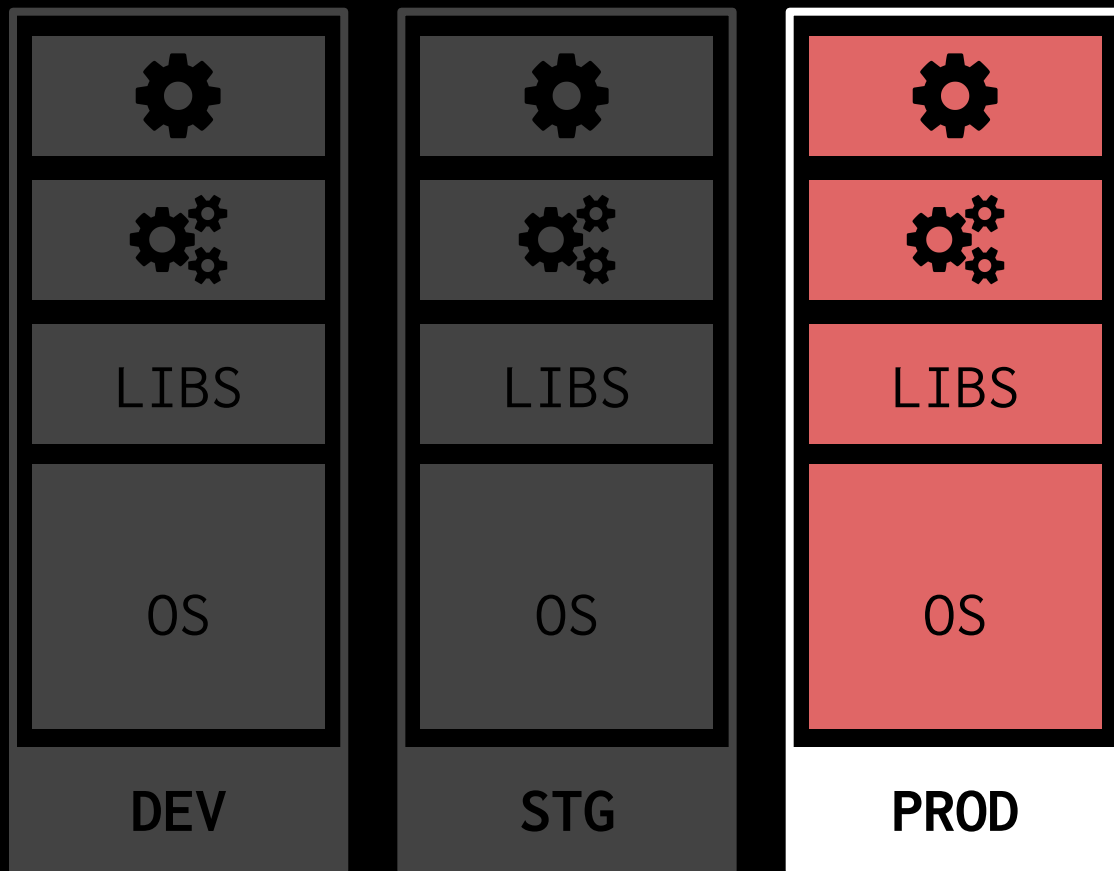
DEV













**How do we encapsulate  
dependencies?**

# Virtual Machine



**SERVER**

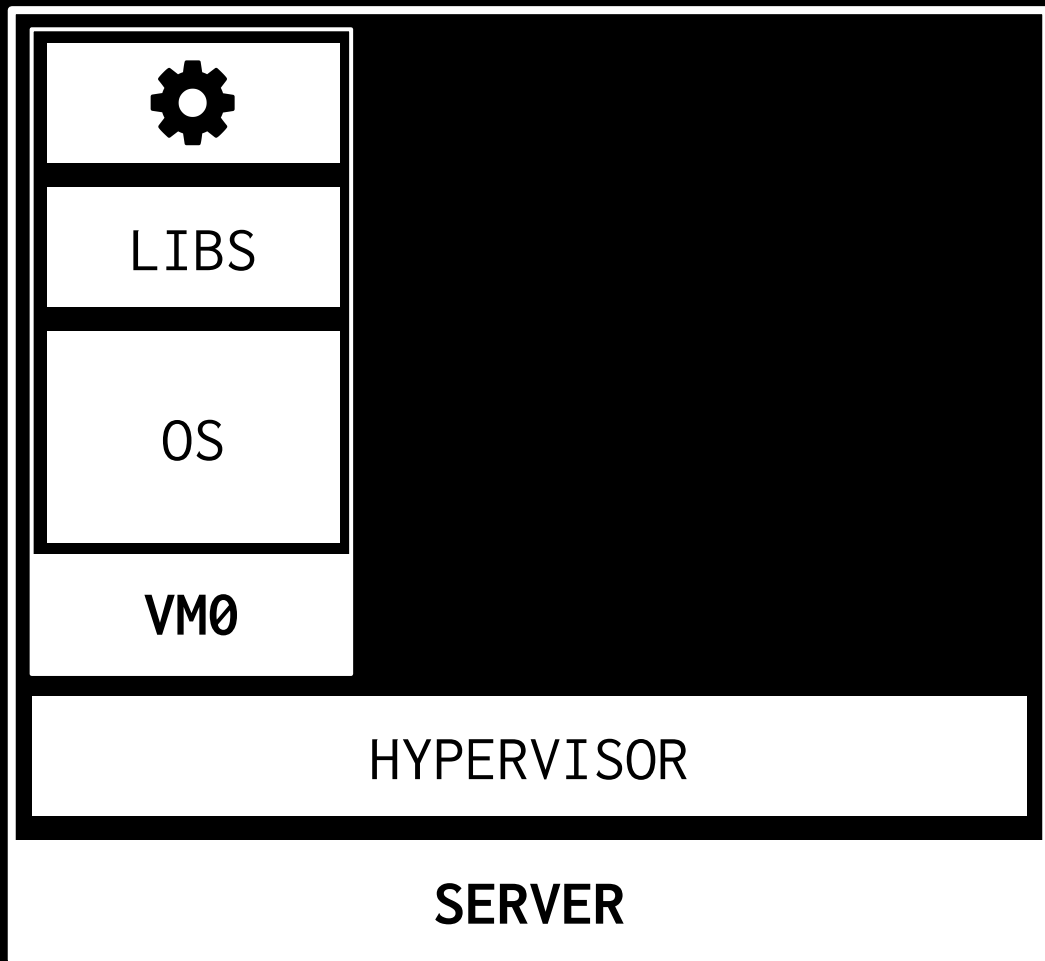


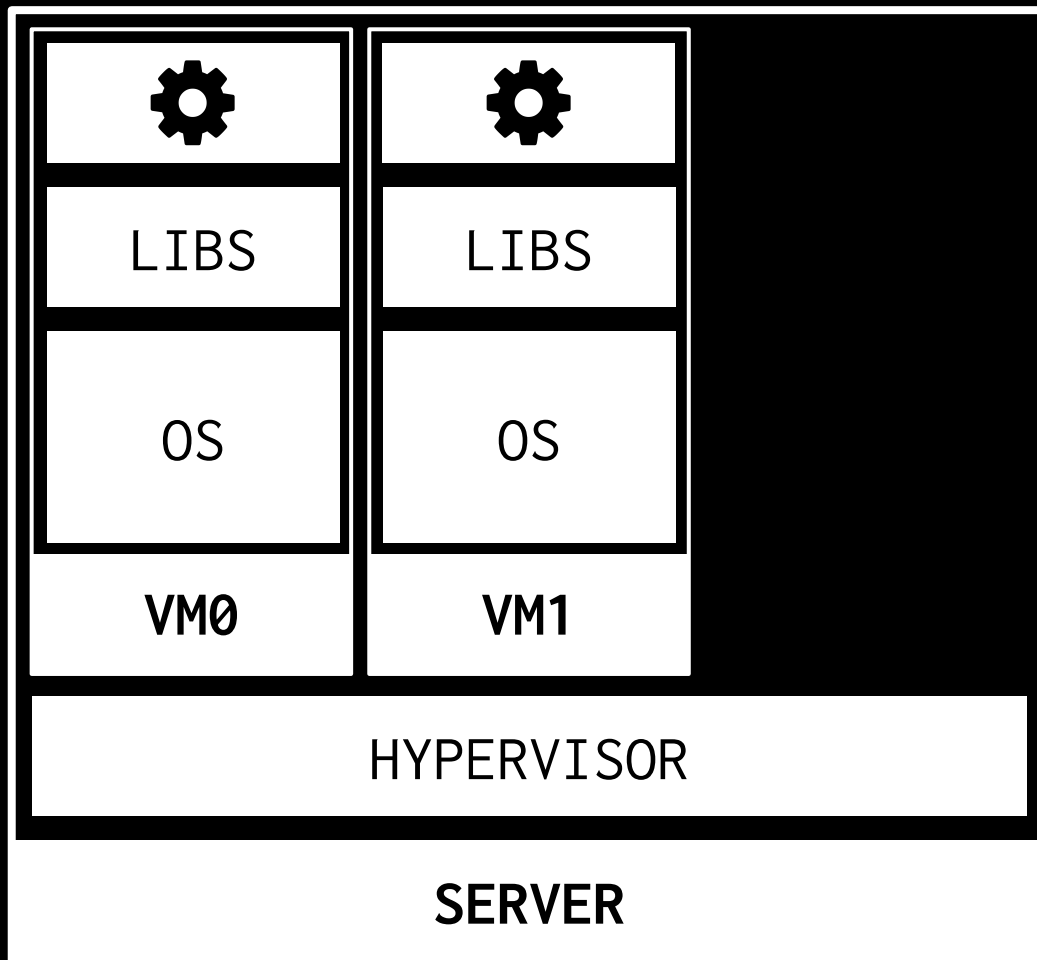
A diagram illustrating a server architecture. It consists of two main layers. The bottom layer is a white rectangle labeled "SERVER". The top layer is a black rectangle labeled "HYPERVISOR". The "HYPERVISOR" layer is positioned directly above the "SERVER" layer, and its width is slightly less than the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

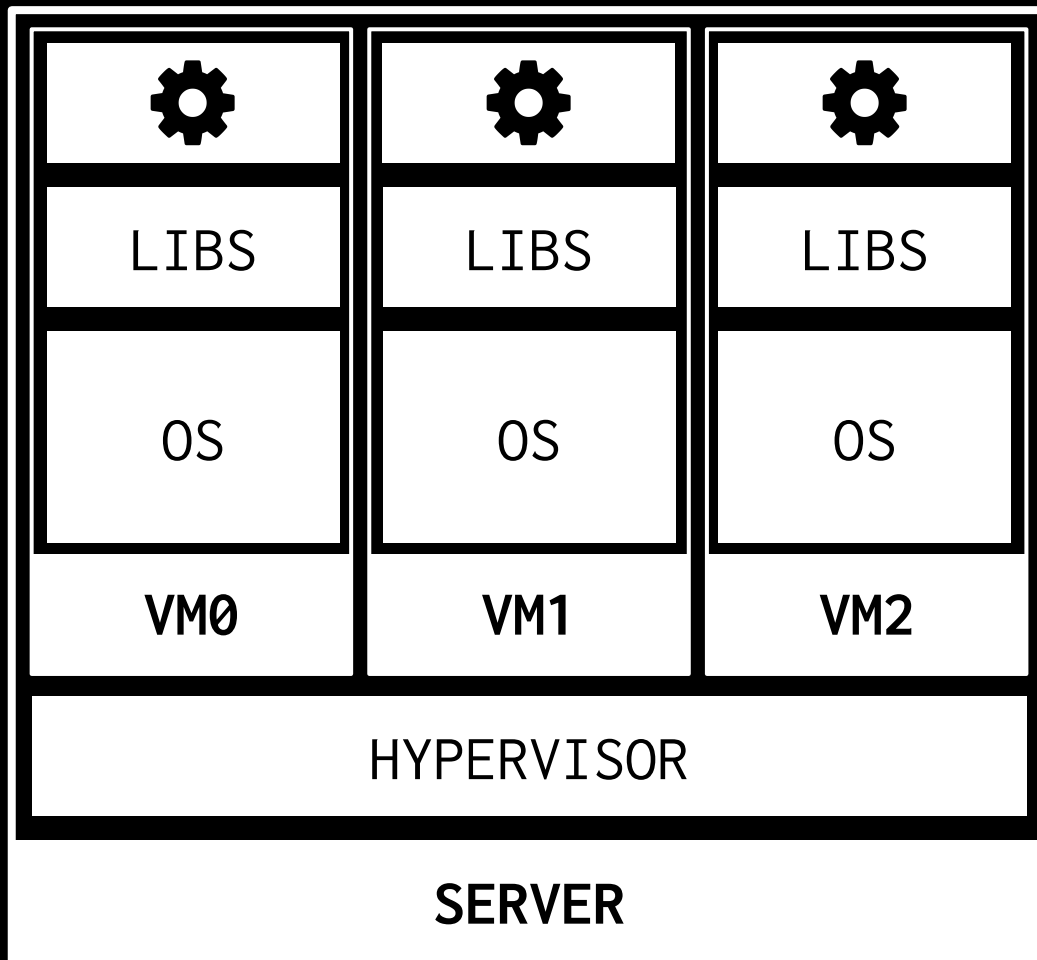
HYPERVISOR

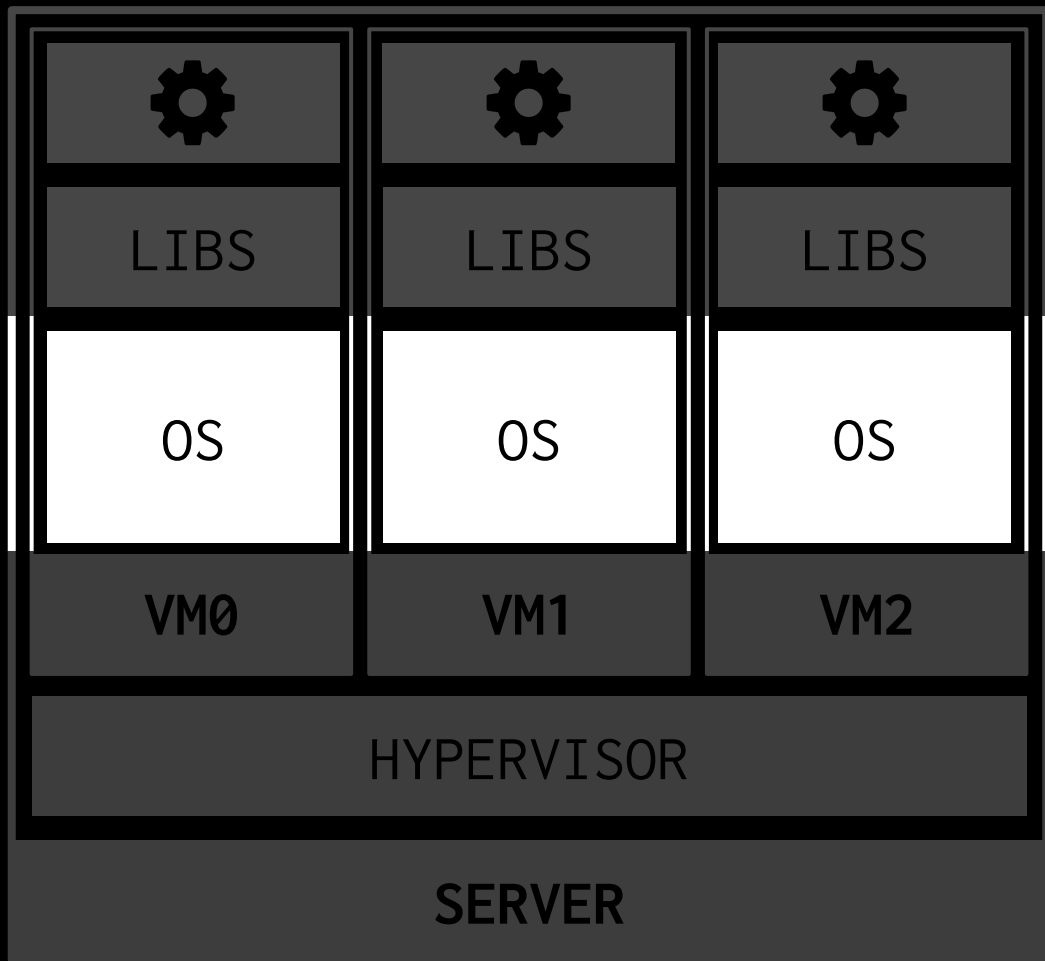
SERVER









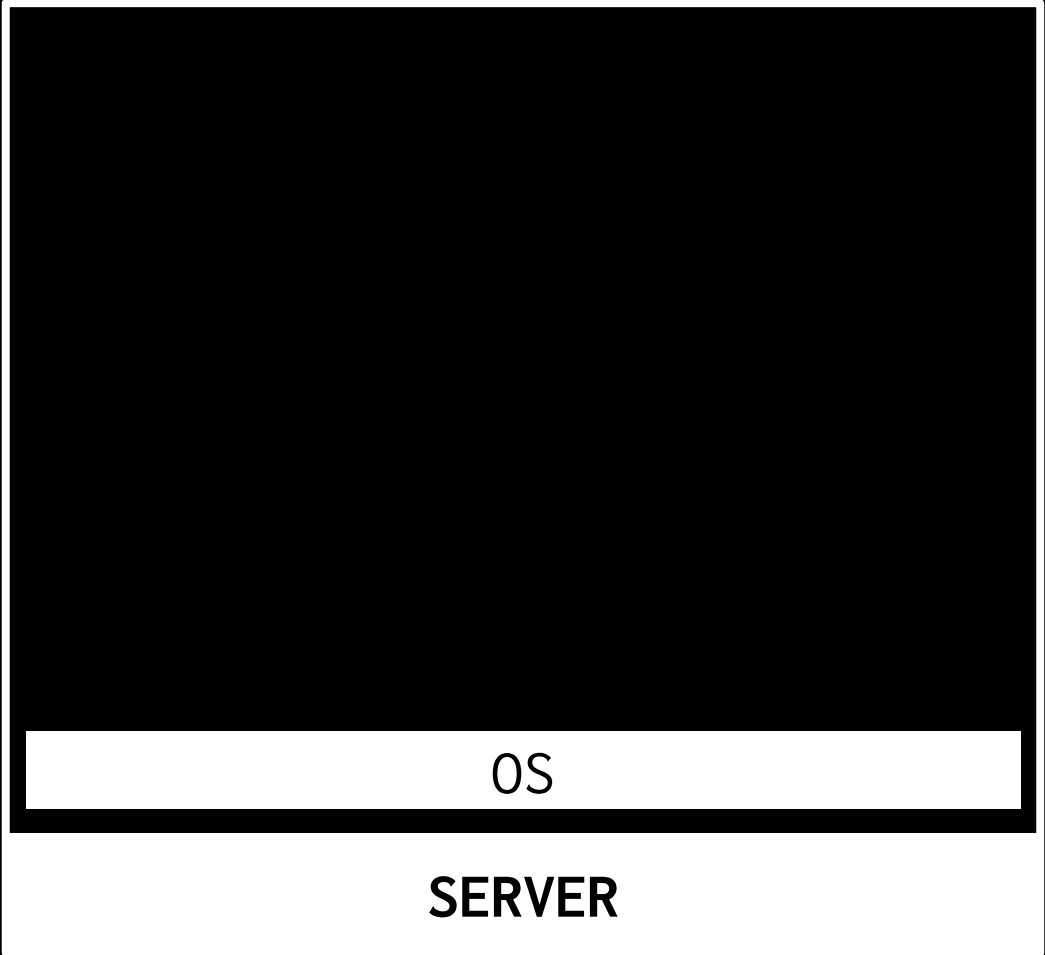


**How do we reduce this  
large footprint?**

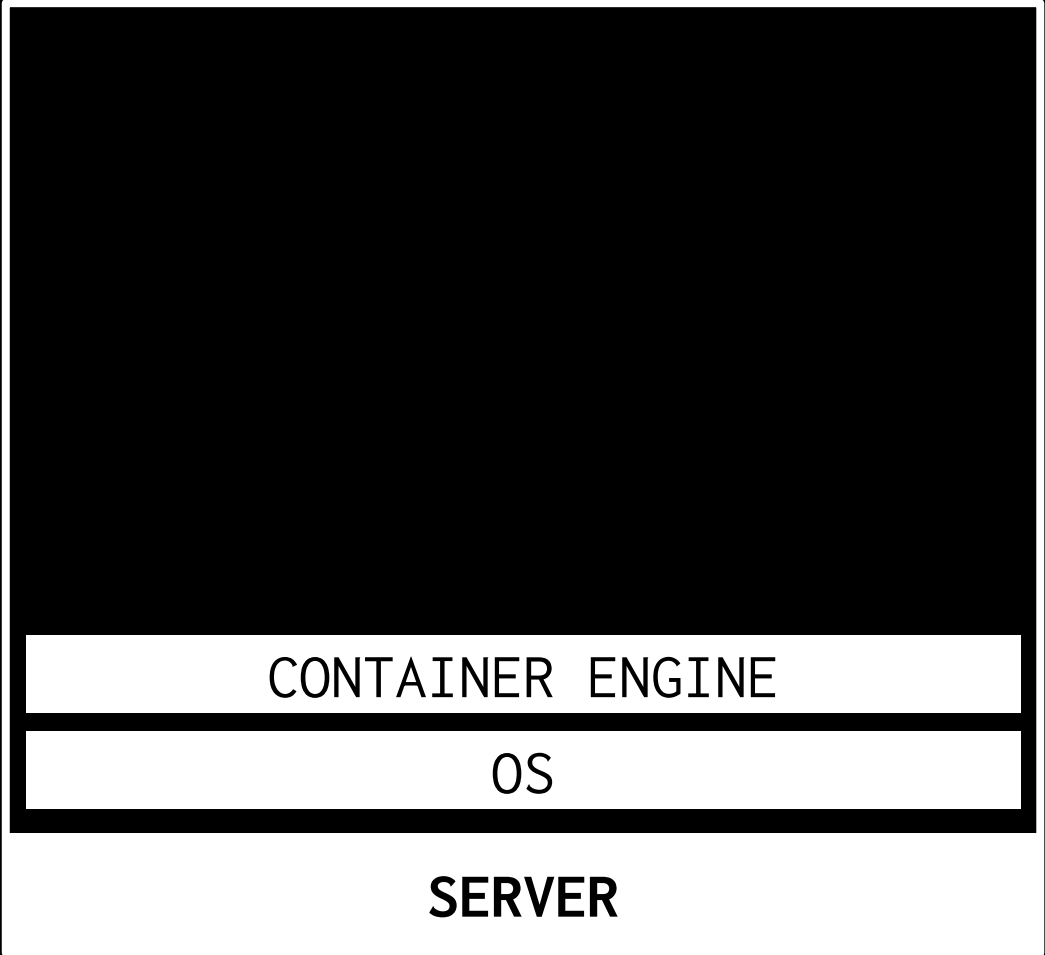
# Containers



**SERVER**



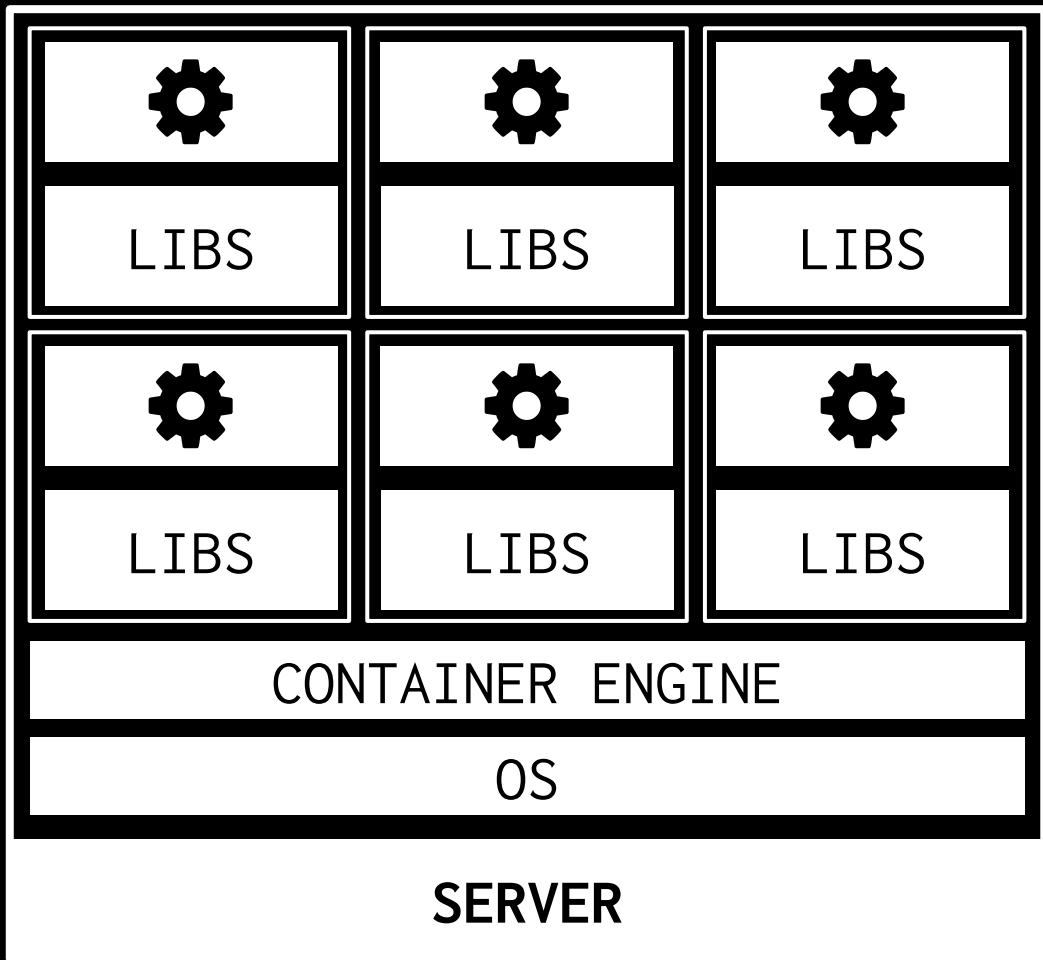




CONTAINER ENGINE

OS

**SERVER**

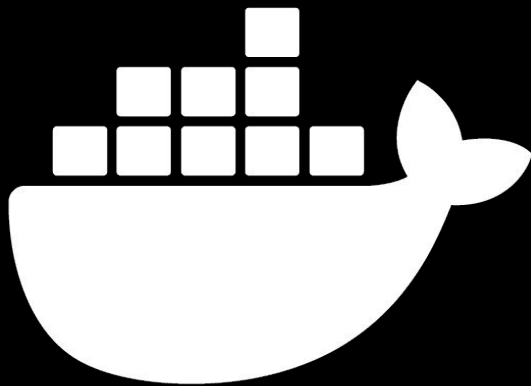


**Consistent runtime  
environment for  
applications**

# Application Sandboxing

**Small physical size**

**Small resource overhead**



docker<sup>®</sup>

**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 mpython.py mpython.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
```