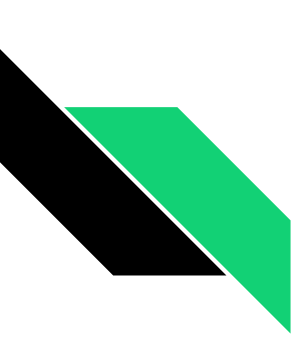




Docker

how we use it for efficient software development



Overview

- What is Docker?
- But why?
- Workshop



What is Docker

- Runtime for containers
- Container is basically just a process
- Containers behave similar to VMs
- Less overhead than a VM



What can it be used for

- Running databases locally for development
- Running services in independent environments in production
- Complete development environment



Docker Hub

- Many existing images
- Often no need to create own images
- Images can be used as base for own images

```
docker run \  
  -e SQL_ROOT_PASSWORD=my-secret-pw \  
  -p 3306:3306 \  
  mariadb:10.4
```



Cheat Sheet

```
docker run <Image>
```

Start container

```
docker ps (-a)
```

Show running (all) containers

```
docker rm (-f) <...>
```

Remove (kill) container

```
docker logs <...>
```

Show container output

```
docker exec -ti <...> /bin/sh
```

Execute command inside of container

```
docker-compose up (-d)
```

Start container

```
docker-compose down
```

Show running (all) containers

```
docker-compose logs
```

```
docker-compose exec
```

...

Demo - Dev-DB



- Dev-DB in Docker
- DB - Schema and test-data is tracked in git
- DB can easily be reset to state that is in git
- Changes to the Test-Data can be snapshotted and committed



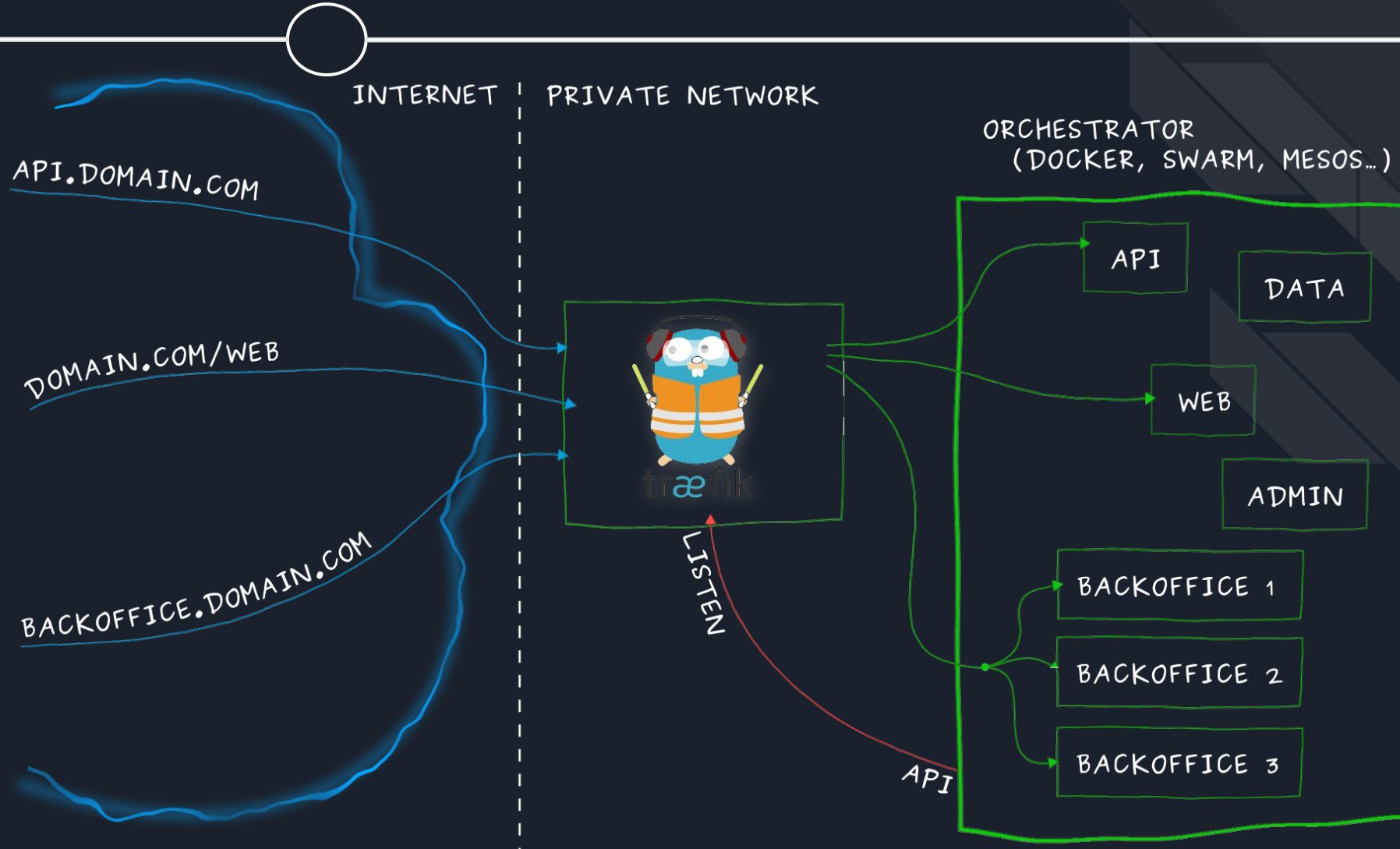
Demo - Prod-Setup



- Application + DB inside of Docker Compose
- Easy to deploy
- Different instances of e.g. MySQL can run smoothly on the same server
- Environment is reproducible and can be tracked in git



Demo - Traefik proxy



Demo - Node-wrapper



- Wrapping Node.js in Docker
- All Devs use the same version of Node.js
- Exactly the same environment during development as in production
- No setup of local environment required



How can I get Docker?



- Available on Linux, Mac and Windows
- For windows
 - Docker Toolbox :(
 - Docker for Windows :) (requires HyperV)
- On Linux make sure to install the latest version





vendevio

where **ventures** meet development

Docker Workshop