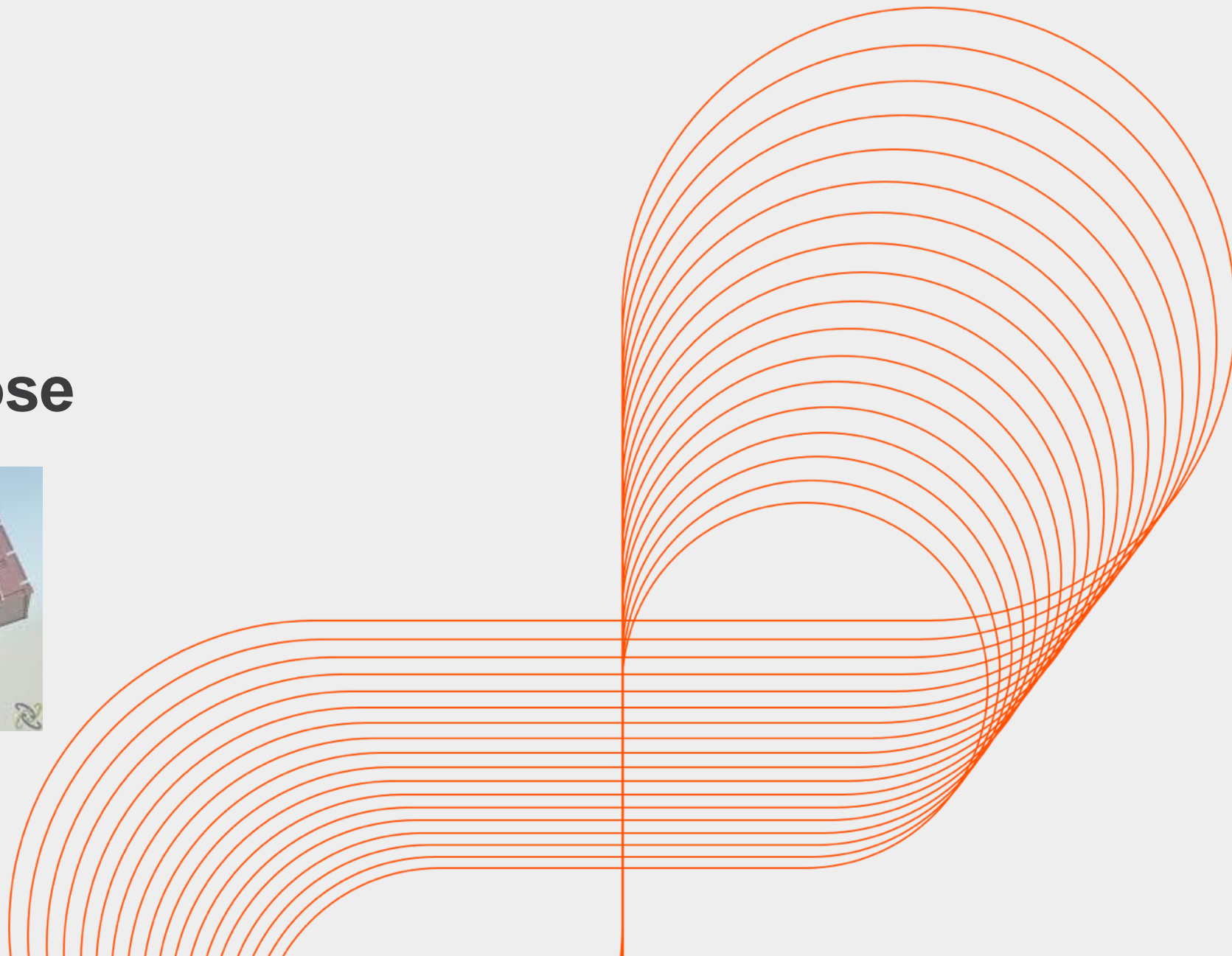




Persistent

Docker compose



Overview of Docker Compose

- Compose is a tool for defining and running multi-container Docker applications.
- With Compose, you use a Compose file to configure your application's services.
- Using a single command, you create and start all the services from your configuration.
- The features of Compose that make it effective are .
 - Multiple isolated environments on a single host
 - Preserve volume data when containers are created
 - Only recreate containers that have changed
 - Variables and moving a composition between environments

What is Docker Compose?

- Define and run multi-container applications
- Specify images and configuration in a simple YAML file:

```
docker-compose.yml
```

- One command to get it all running:

```
$ docker-compose up
```

Docker Compose...

①

Write your dockerfile

```
WORKDIR /code
ADD requirements.txt
/code/
RUN pip install -r
requirements.txt
ADD . /code
CMD python app.py
```

②

Write your compose.yml file

```
web:
  build: .
  links:
    - db
  ports:
    - "8000:8000"
db:
  image: postgres
```

③

Run your app

```
$ docker-compose up
```

Docker compose example : WordPress

- Define the project
- Create an empty project directory.
- Change directories into your project directory.
- Create a docker-compose.yml file that will start your Wordpress blog and a separate MySQL instance with a volume mount for data persistence.
- Build the project using command, `$ docker-compose up -d`
- Bring up WordPress in a web browser
- Here is the link for these steps.

<https://docs.docker.com/compose/wordpress/>

A sample Docker compose file

```
version: '2'
services:
  db:
    image: mysql:5.7
    volumes:
      - "../.data/db:/var/lib/mysql"
    restart: always
    environment:
      MYSQL_ROOT_PASSWORD: wordpress
      MYSQL_DATABASE: wordpress
      MYSQL_USER: wordpress
      MYSQL_PASSWORD: wordpress

  wordpress:
    depends_on:
      - db
    image: wordpress:latest
    links:
      - db
    ports:
      - "8000:80"
    restart: always
    environment:
      WORDPRESS_DB_HOST: db:3306
      WORDPRESS_DB_PASSWORD: wordpress
```

A sample Docker compose file...

DOCKER-COMPOSE.YML

```
redisdata:
  image: redis:latest
  command: echo Data-only container for Redis
  volumes:
    - /data

redis:
  image: redis:latest
  command: redis-server --appendonly yes
  volumes_from:
    - redisdata
  # ports:
  #   - "6379:6379"
  expose:
    - "6379"
```

Internal name

Docker image name

What to run when it starts

Create a persistent volume

Import a volume

Expose ports (two ways)

Docker compose commands

Command line

- `$ docker-compose build`
- `$ docker-compose create`
- `$ docker-compose up`
- `$ docker-compose start`
- `$ docker-compose run`

Reference Material : Websites & Blogs

- <https://docs.docker.com/compose/overview/>
- <https://www.youtube.com/watch?v=11jfxkul0l4>
- <https://docs.docker.com/compose/wordpress/>

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Thank you!

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