

# Docker-Compose Tutorial

- Create a Node.js express application.
- Create a [Dockerfile](#) to run the container with the configurations of your project.

```
FROM node:12

WORKDIR /app

COPY ./package.json .
RUN npm cache clean --force
RUN npm install
COPY . .

EXPOSE 3000

CMD [ "node", "server.js" ]
```

- Create [.dockerignore](#) to prevent your local modules and debug logs from being copied on the docker image.

```
node_modules
npm-debug.log
```

- Create [docker-compose.yml](#) file to define the services to make up the app.

```
version: "3.8"

services:
  app:
    restart: on-failure
    build: .
    depends_on:
      - postgres
    environment:
      DATABASE_URL: postgres://user:pass@postgres:5432/db
      NODE_ENV: development
      PORT: 3000
    ports:
      - "3000:3000"
    command: npm run start
    volumes:
      - ./app/
      - /app/node_modules
```

```

postgres:
  image: postgres:11
  ports:
    - "5432:5432"
  environment:
    POSTGRES_USER: user
    POSTGRES_PASSWORD: pass
    POSTGRES_DB: db

```

- Deploy the application `docker-compose up -d`

```

root@DESKTOP-SOIFB18:~/jalasoft-bootcamp/devOps_1/JalaUniversity_DevOps/docker-compose$ docker-compose up -d
[*] Building 4.4s (11/11) FINISHED
=> [internal] load build definition from Dockerfile
=> => transferring dockerfile: 183B
=> [internal] load .dockerignore
=> => transferring context: 66B
=> [internal] load metadata for docker.io/library/node:12
=> [internal] load build context
=> => transferring context: 31.17kB
=> [1/6] FROM docker.io/library/node:12@sha256:81627efeb18e3854eeba1485541ca846c8bfcac1cb6f3be9478c747a2711879
=> CACHED [2/6] WORKDIR /app
=> CACHED [3/6] COPY ./package.json
=> CACHED [4/6] RUN npm cache clean --force
=> CACHED [5/6] RUN npm install
=> [6/6] COPY
=> exporting to image
=> => exporting layers
=> => writing image sha256:1a7f7b2744faa8f4e5d0944513e8b774eafec0d248c7d841af8c07dcd80cb4
=> => naming to docker.io/library/docker-compose-app
[*] Running 3/3
0 Network docker-compose_default Created
0 Container docker-compose-postgres-1 Started
0 Container docker-compose-app-1 Started

```

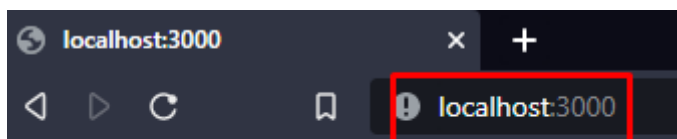
- Show running containers.

```

root@DESKTOP-SOIFB18:~/jalasoft-bootcamp/devOps_1/JalaUniversity_DevOps/docker-compose$ docker-compose ps
NAME                COMMAND                  SERVICE    STATUS    PORTS
docker-compose-app-1  "docker-entrypoint.s..." app        running   0.0.0.0:3000->3000/tcp
docker-compose-postgres-1  "docker-entrypoint.s..." postgres  running   0.0.0.0:5432->5432/tcp

```

- Access the application at <http://localhost:3000>



Docker Node JS Express app connected to postgres