




# PCF deployment commands

PCF deployment example for spring boot, python fastapi, react

give all commands of PCF

Here's a **complete PCF (Pivotal Cloud Foundry) deployment guide** for:

-  Spring Boot (Java backend)
-  Python FastAPI
-  React frontend

We'll go step by step for each application including:

- Manifest file
- Required buildpacks
- Commands to push to PCF
- Tips for PCF environments

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## Prerequisites

1. Install the **Cloud Foundry CLI**:  
<https://docs.cloudfoundry.org/cf-cli/install-go-cli.html>
2. Login to your PCF environment:

```
bash
```

```
cf login -a https://api.run.pivotal.io -u <your-email> -p <your-password>
```

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## ◆ 1. Spring Boot (Java) App

### Project structure

```
bash
```

```
spring-boot-app/  
├── target/demo-0.0.1-SNAPSHOT.jar
```

manifest.yml



manifest.yml

yaml

---

applications:

- name: spring-boot-demo

memory: 1G

instances: 1

path: target/demo-0.0.1-SNAPSHOT.jar

buildpacks:

- java\_buildpack

env:

JAVA\_OPTS: '-Djava.security.egd=file:///dev/urandom'



## Deploy to PCF

bash

cd spring-boot-app

mvn clean package # or ./gradlew bootjar

cf push

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## ◆ 2. Python FastAPI App



### Project structure

bash

fastapi-app/

|— app.py

|— requirements.txt

|— Procfile

|— manifest.yml



requirements.txt

txt

```
fastapi
uvicorn[standard]
```



### Procfile

```
txt
```

```
web: uvicorn app:app --host=0.0.0.0 --port=${PORT:-8080}
```



### manifest.yml

```
yaml
```

```
---
```

```
applications:
```

```
- name: fastapi-demo
```

```
  memory: 512M
```

```
  instances: 1
```

```
  buildpacks:
```

```
    - python_buildpack
```

```
  path: .
```



## Deploy to PCF

```
bash
```

```
cd fastapi-app
```

```
cf push
```

---

## ◆ 3. React App (Static frontend)



### Project structure

```
bash
```

```
react-app/
```

```
|—— build/    # created after `npm run build`
```

```
|—— manifest.yml
```

```
|—— Staticfile
```



## Staticfile

Used by the PCF **staticfile\_buildpack**

txt

pushstate: enabled



## manifest.yml

yaml

---

applications:

- name: react-frontend

memory: 256M

instances: 1

buildpacks:

- staticfile\_buildpack

path: build



## Deploy to PCF

bash

cd react-app

npm install

npm run build

cf push



## Useful PCF Commands



### App Management

bash

cf apps *# List apps*

cf logs <app-name> --recent *# Show recent logs*

cf ssh <app-name> *# SSH into app container*

cf restart <app-name> *# Restart the app*

```
cf delete <app-name>      # Delete the app
cf scale <app-name> -i 2    # Scale to 2 instances
```

## Env Variables

```
bash

cf set-env <app-name> KEY value  # Set env var
cf unset-env <app-name> KEY      # Remove env var
cf env <app-name>                # View env
```

## Services (Databases, etc.)

```
bash

cf marketplace              # List available services
cf create-service <service> <plan> <instance-name>
cf bind-service <app-name> <service-instance>
cf restage <app-name>
```

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## Bonus: Mapping a Custom Route

```
bash

cf map-route <app-name> mydomain.com --hostname myapp
```

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Let me know if you want:

- A shared backend for React + Spring Boot
- CI/CD pipeline with PCF
- Use of PCF services like MySQL, Redis, etc.