Week 2: Microservices
Unit 6: Deploying the Application to Cloud Foundry

Deploying the Application to Cloud Foundry

Demo: Deploy a service to Cloud Foundry

Deploying the Application to Cloud Foundry

Manifest.yml: deployment descriptor

A manifest specifies application parameters to Cloud Foundry.

Example manifest.yml

```
---
applications:
- name: appname
  memory: 800M
  instances: 2
  path: target/ appname.war   // to avoid that other unnecessary files gets uploaded
  buildpack: https://github.com/cloudfoundry/java-buildpack.git#v4.6 // specify version via tag e.g. "v4.6"
  env:
     VCAP_APPLICATION: '{}'
  services:
     - my_mongodb
```

➢ Purpose: obtain a reliable and reproducible deployment

Deploying with Manifests

Deploying the Application to Cloud Foundry
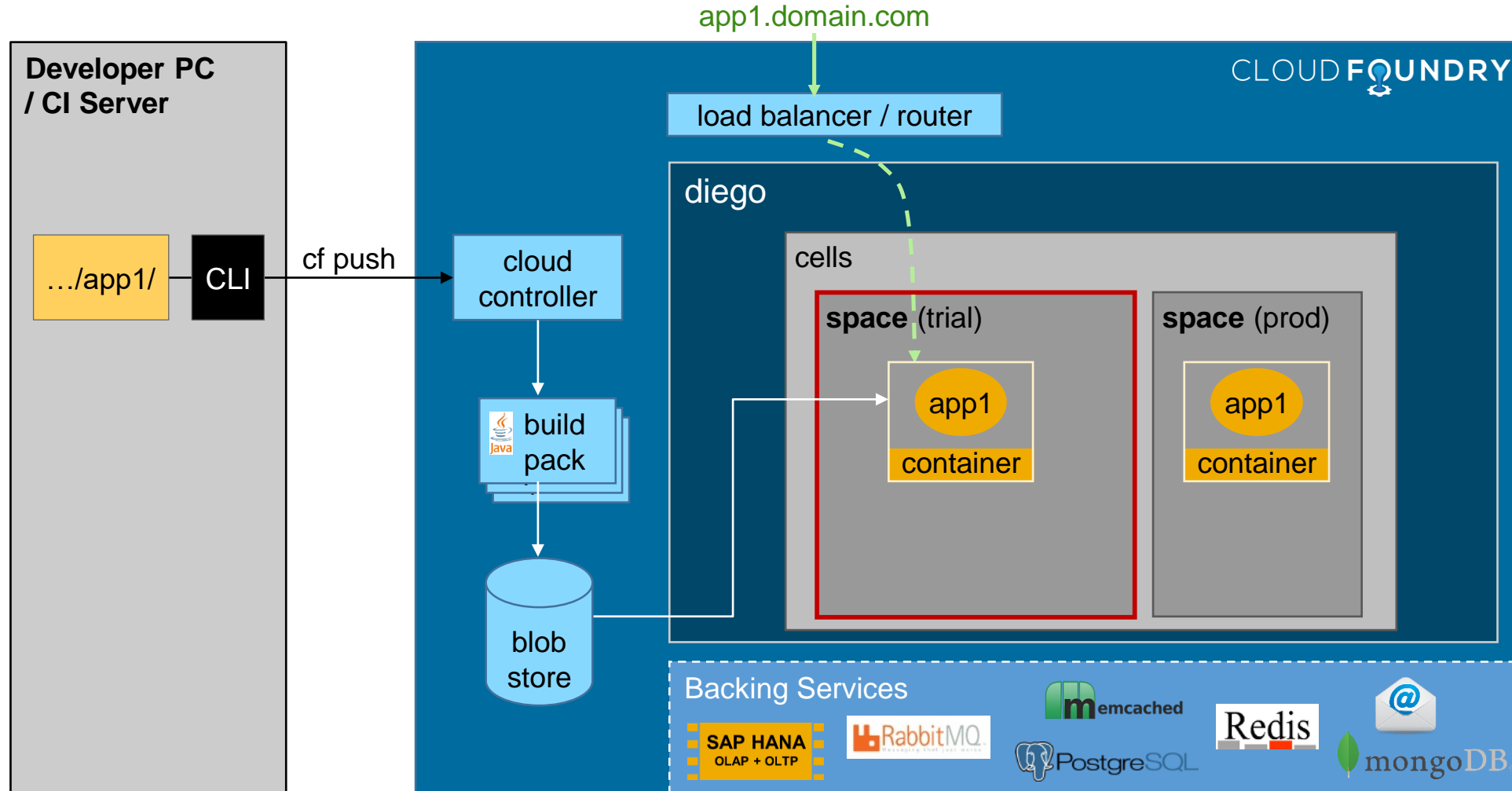Reference: CF commands to deploy a service

cf api https://api.cf.sap.hana.ondemand.com	Connect to a Cloud Foundry provider (URL of cloud controller)
cf login [-u username -o org]	Log in as user (use SAP domain user and password) and pass org
cf target [-s space]	Show or set a target space (where CF apps are deployed)
cf buildpacks	Show supported buildpack versions
cf apps	Show running microservices
cf push [-n hostname]	Push app in current directory to CF using local manifest
cf scale appname -i 2	Scale app to 2 running instances

Further References

- [Cloud Foundry Command Line Cheat Sheet](#)
- [Cloud Foundry CLI Plugins](#)
- [SAP Cloud Platform Cloud Foundry CLI Plugins](#)

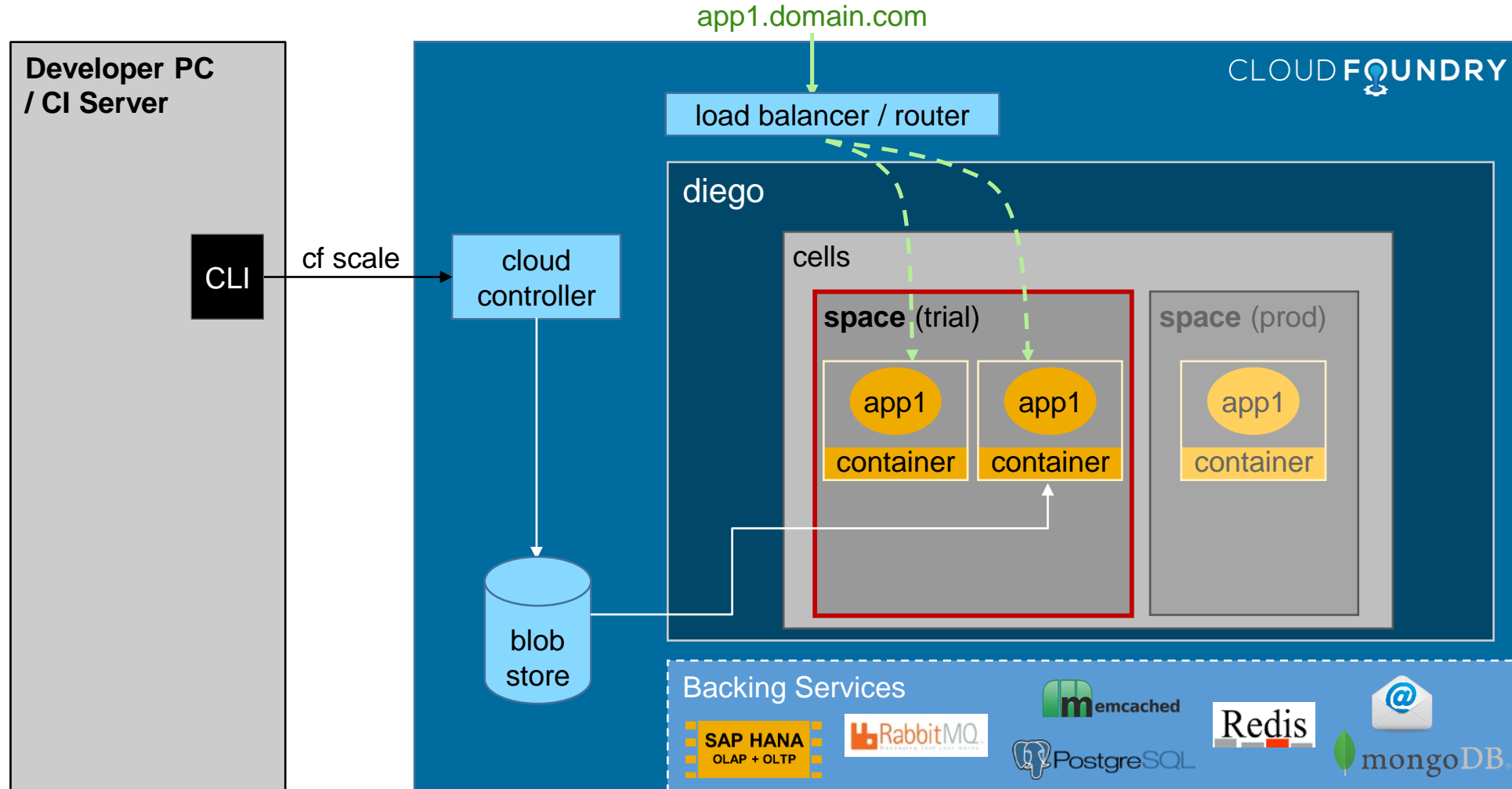# Deploying the Application to Cloud Foundry

Deploy your application: cf push

app1.domain.com

Developer PC / CI Server

.../app1/ — CLI — cf push →

CLOUD F**O**UNDRY

load balancer / router

diego

cloud controller

cells

space (trial)

space (prod)

build pack

app1

app1

container

container

blob store

Backing Services

SAP HANA OLAP + OLTP

RabbitMQ.

memcached

Redis

PostgreSQL

mongoDB.

CF Doc – About Starting Applications

Deploying the Application to Cloud Foundry

Scale your application: cf scale <appname>

app1.domain.com

Developer PC / CI Server

CLOUD **FOUNDRY**

load balancer / router

diego

CLI

cf scale

cloud controller

cells

space (trial)

space (prod)

app1

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CF Doc – Scaling an Application

Deploying the Application to Cloud Foundry

Orgs and spaces

Org defines resource quota, billing account, users etc.

Spaces

- Spaces contain running apps
- Users are assigned to spaces, can deploy, start, stop, scale,...
- Use cf **push -n <hostname>** to specify unique route for your app and to avoid URL conflicts

SAP Cloud Platform Cockpit

*.domain.com

load balancer / router

app1-a.domain.com

app1-b.domain.com

Org: D012345trial_trial

Org: I099887trial_trial

space (dev)

space (dev)

app1   app2

app1   app2

Backing Services

SAP HANA
OLAP + OLTP

RabbitMQ

memcached

PostgreSQL

Redis

@

mongoDB.
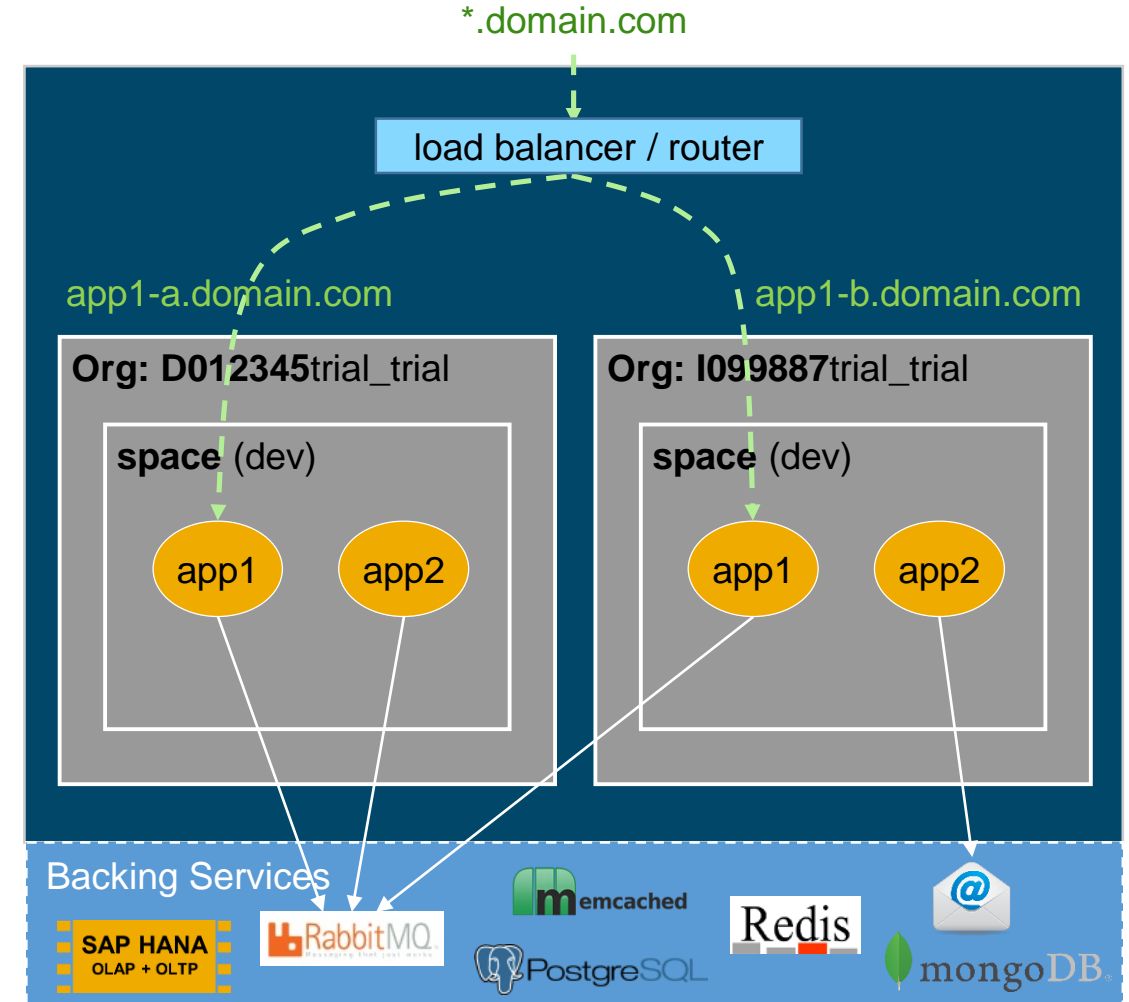
Deploying the Application to Cloud Foundry
Exercise

Exercise 6:
Deploy Service to Cloud Foundry

Local

Postman

HTTPS /
REST

CLOUD **FOUNDRY**

Advertisement Service
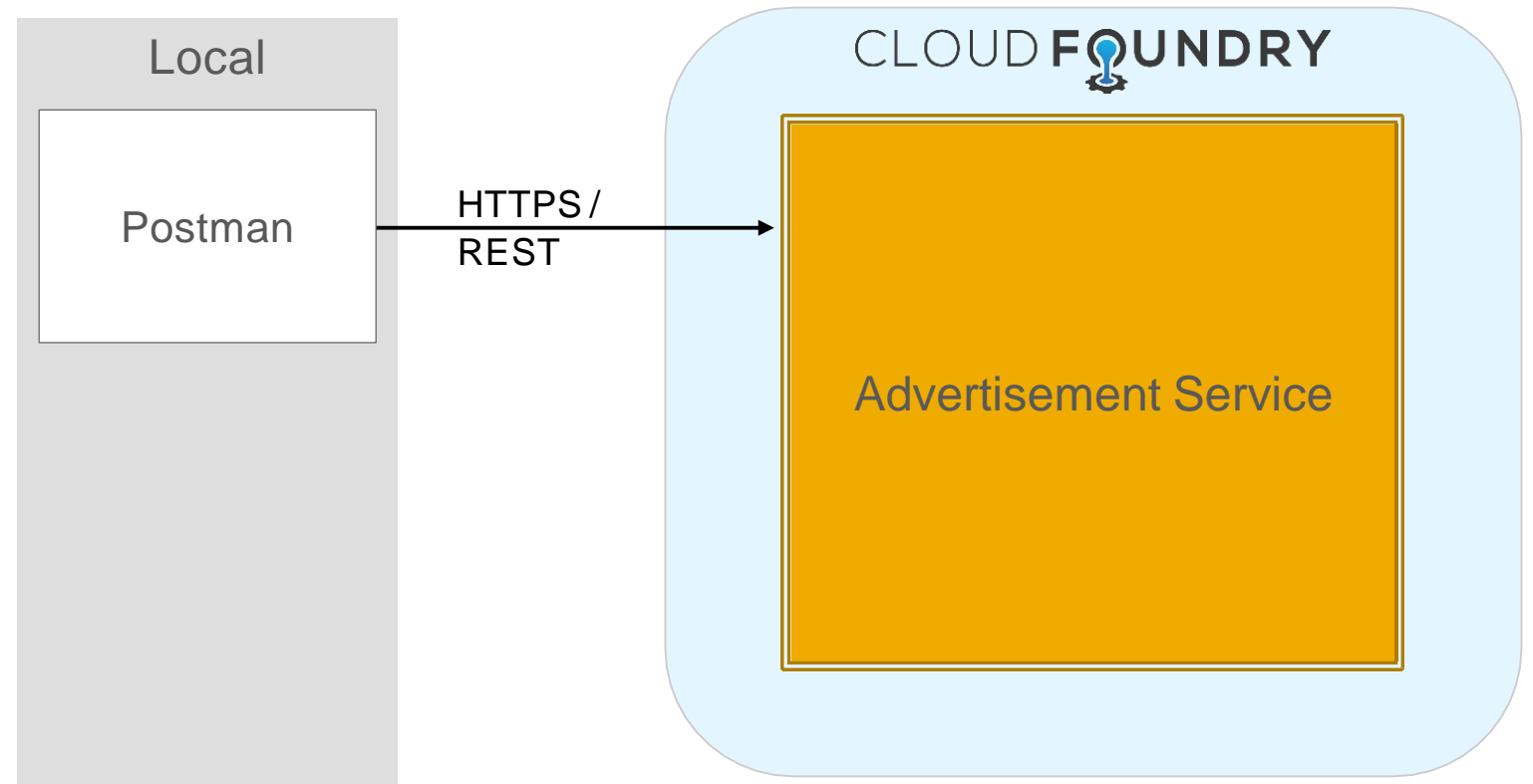
Deploying the Application to Cloud Foundry
Further reading

- Cloud Foundry (CF) Documentation (Docs)
- CF Docs – About Starting Applications
- CF Docs – Scaling an Application
- SAP Cloud Platform Cockpit
- SAP Cloud Platform Documentation
- SAP Cloud Platform Documentation – Regions
- Cloud Foundry Command Line Cheat Sheet
- Cloud Foundry CLI Plugins
- SAP Cloud Platform Cloud Foundry CLI Plugins
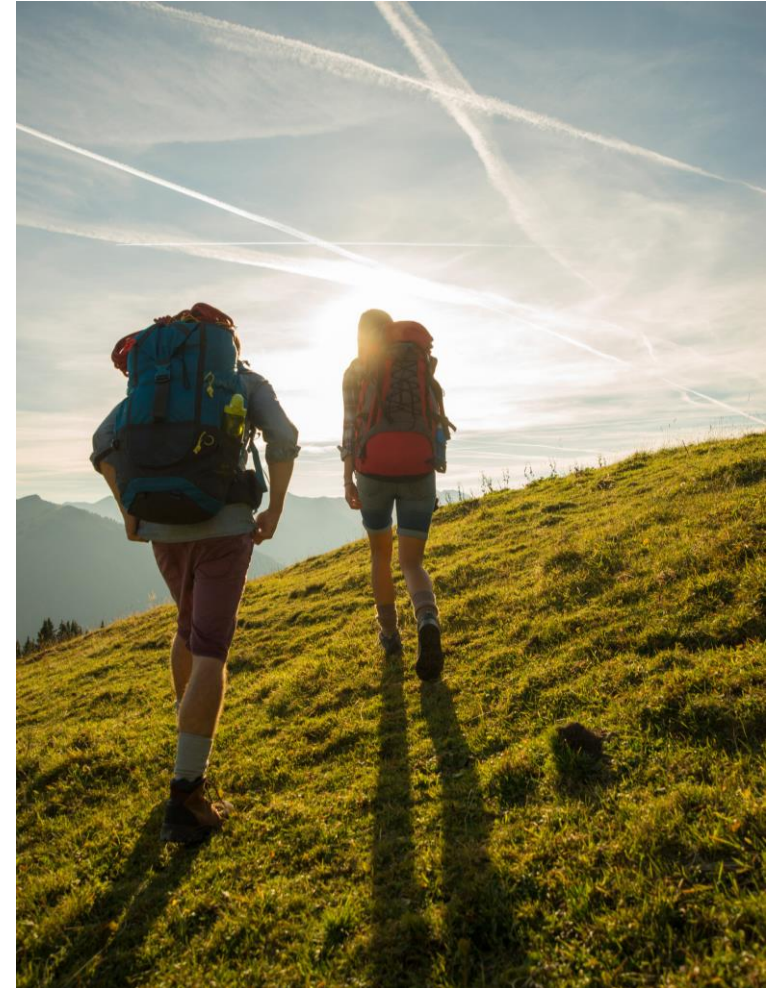
Deploying the Application to Cloud Foundry

What you've learned in this unit

- How to deploy a service to Cloud Foundry using CF CLI
- What the deployment descriptor is and how to write one
- How to scale a service on Cloud Foundry
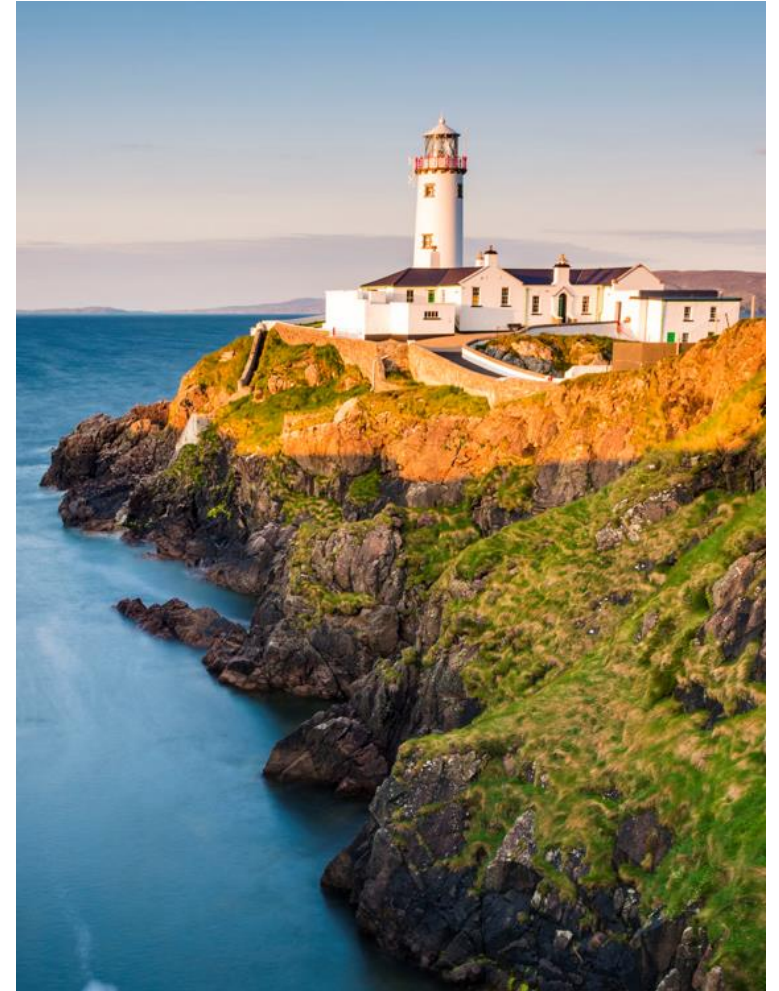
Thank you.

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