Pivotal Cloud Foundry

Deploying and Scaling Applications

Key Platform Capabilities

Automatic Middleware Configuration

Application Containerization

Simple Service Binding

Automatic IaaS Provisioning

High Availability and Scaling

Integrated Services: Data, Mobile, Platform

Monitoring, Logs and Performance as-a-Service

Network Isolation and Security Groups

Roles and Policy Management

Deploy, Operate, Update & Scale with minimal downtime on choice of IaaS

vmware®

amazon webservices™

openstack™

Google Cloud

….and more

Architecture
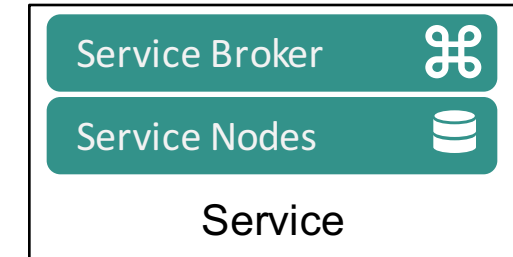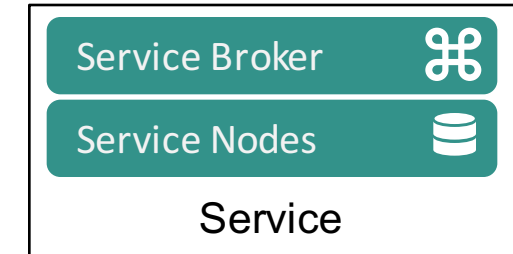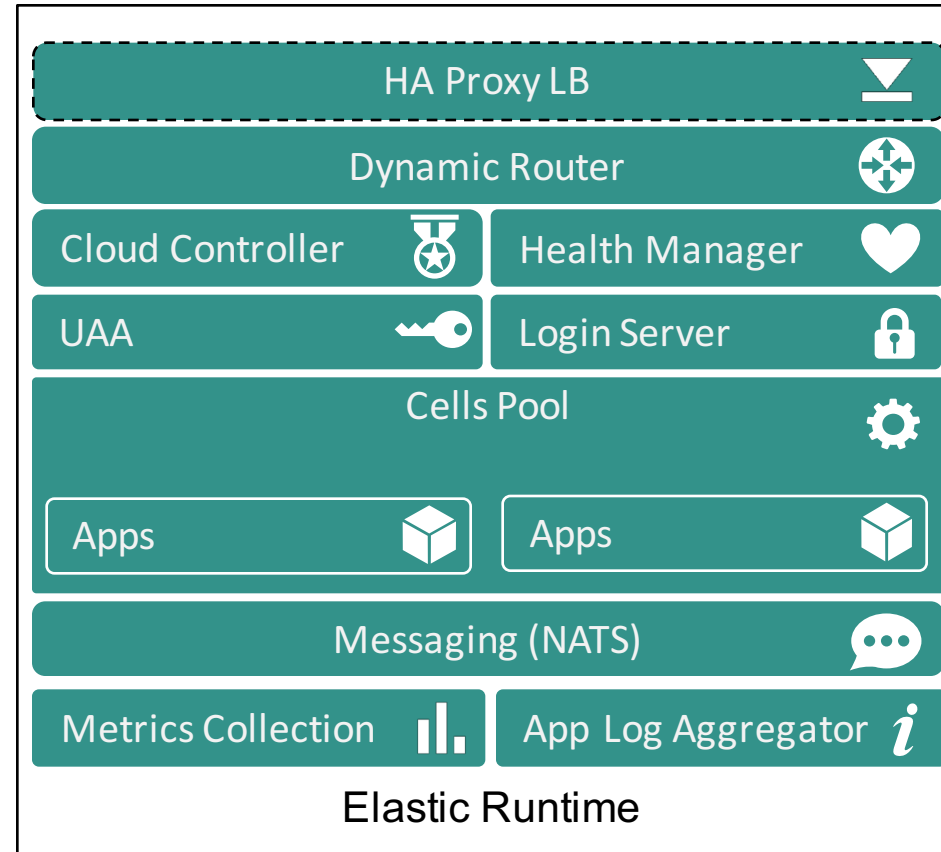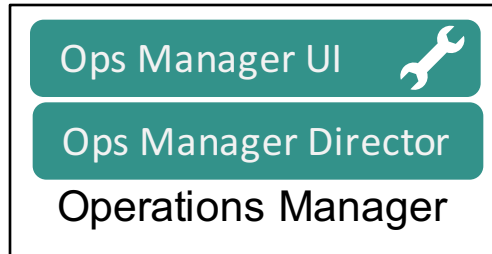
Key elastic runtime terminology

- Container

- Cell

- Diego Auction

- Cloud Controller

Diego Container

An application instance is run within an immutable container
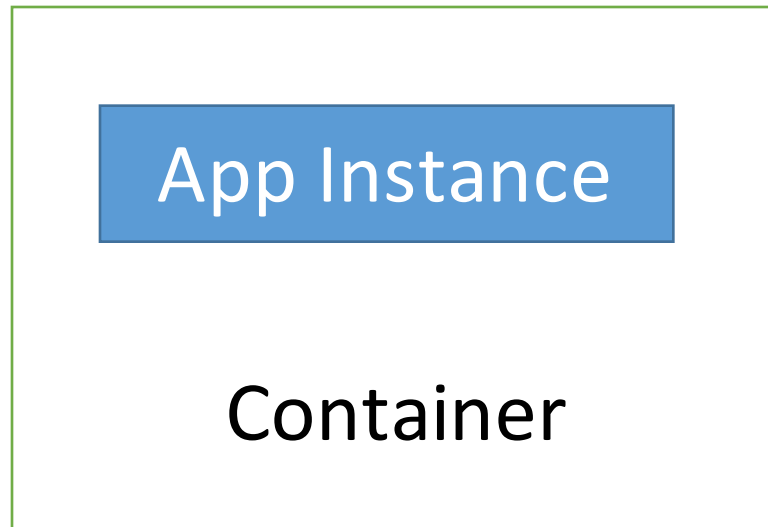
Diego Cell

Containers run within a cell

App Instance	App Instance	App Instance
Container	Container	Container

Cell

Diego Auction

The platform takes care of where to run your container by running an auction to find the best location!

Cloud Controller

The Cloud Controller exposes an API for using and managing the elastic runtime

Cf push

Apps Manager

Router

Cloud Controller

How it Works: Just "Push" Your App

Behind the scenes with

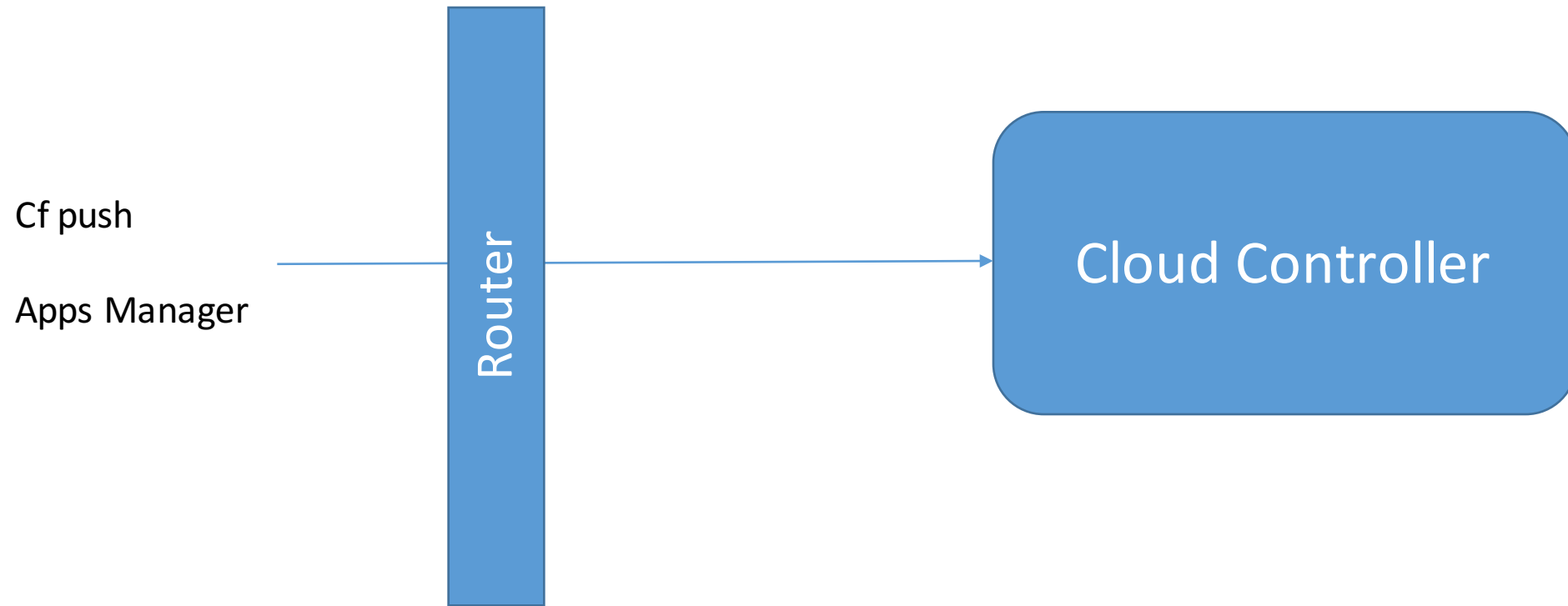`$ cf push`

Upload

cf push uploads your files to a cloud controller API which transforms them a running application.

Stage

Behind the scenes, your files go through staging scripts called buildpacks to create a ready-to-run droplet.

Distribute

A Droplet Execution Agent unpacks the droplets into containers, calls a start command and alerts cloud controller that your app instances are ready to receive traffic.

Run

Your app receives an entry in a dynamic routing tier, which load balances traffic across all your app instances.

The Developer Experience

- Target My Cloud Foundry Provider

- Push My App

- Bind My App to Backing Services

- Scale My App

- Monitor My App's Logs

- Monitor My App's Health

- Monitor My App's Performance