Pivotal

Cloud Native Platform:
Pivotal Application Service

Fall 2018

4 Pillars of the Pivotal Platform

Developer Productivity

- Accelerate feedback loops by improving delivery velocity
- Focus on applications, not infrastructure
- Give developers the tools and frameworks to build resilient apps

Operational Efficiency

- Employ 500:1 developer to operator ratio
- Perform zero-downtime upgrades
- Runs the same way on every public/private cloud

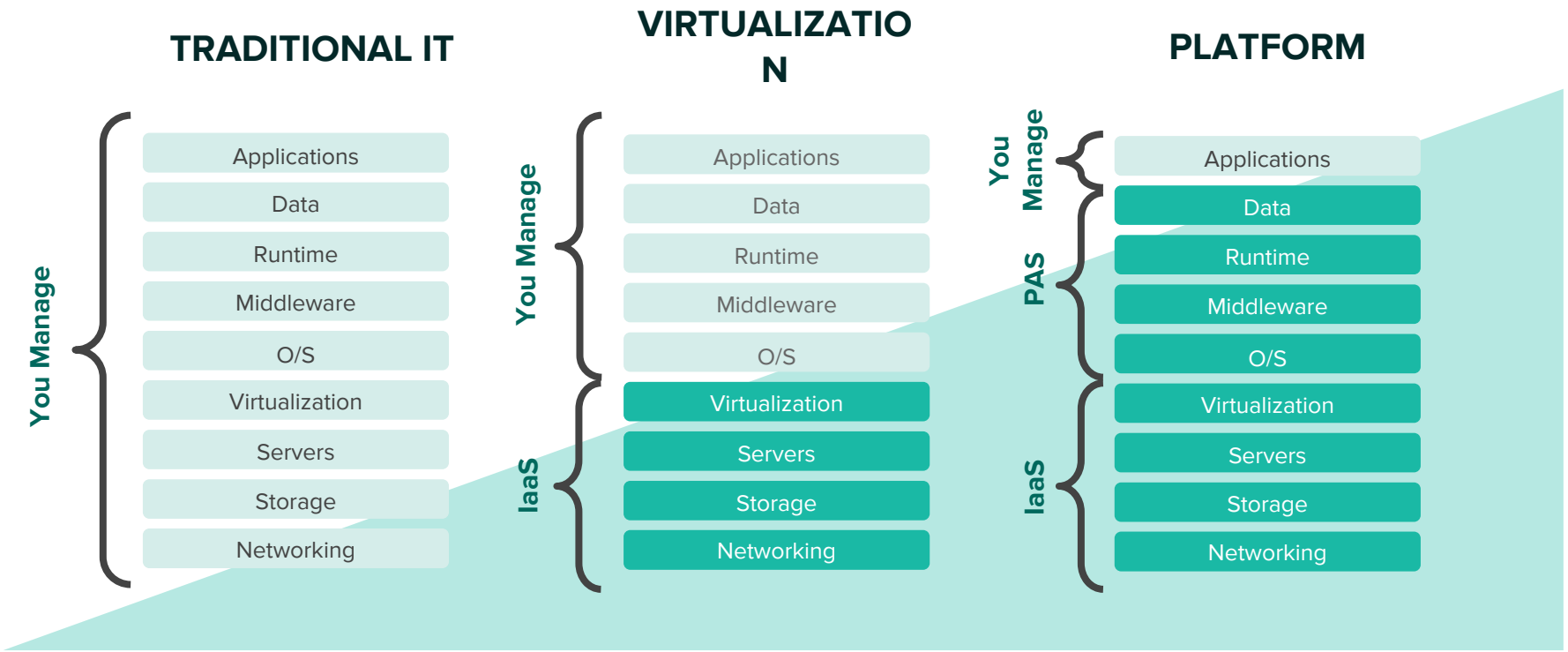
Comprehensive Security

- Adopt a defense-in-depth approach
- Continuously update platforms to limit threat impact
- Apply the 3 R's → repair, repave, rotate

High Availability & Stability

- Run platforms that stays online under all circumstances
- Scale up and down, in and out, through automation
- Deploy multi-cloud resilience patterns

Why Platforms?



Platform Evolution

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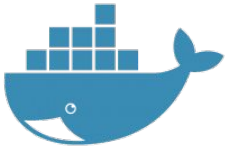
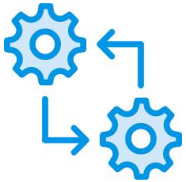
There are many ways to package and run workloads in the cloud



Containers



Batches

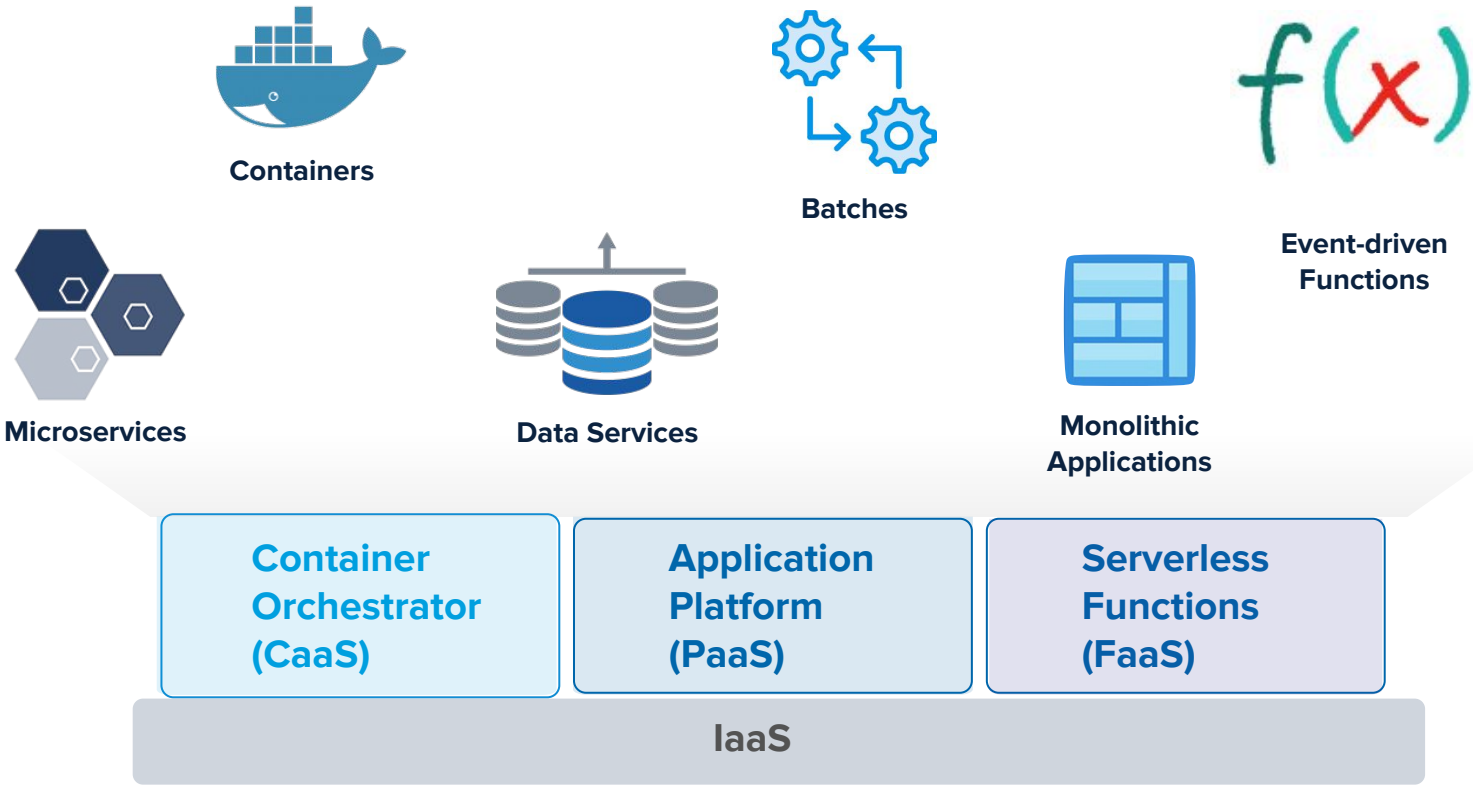
Event-driven Functions

Microservices

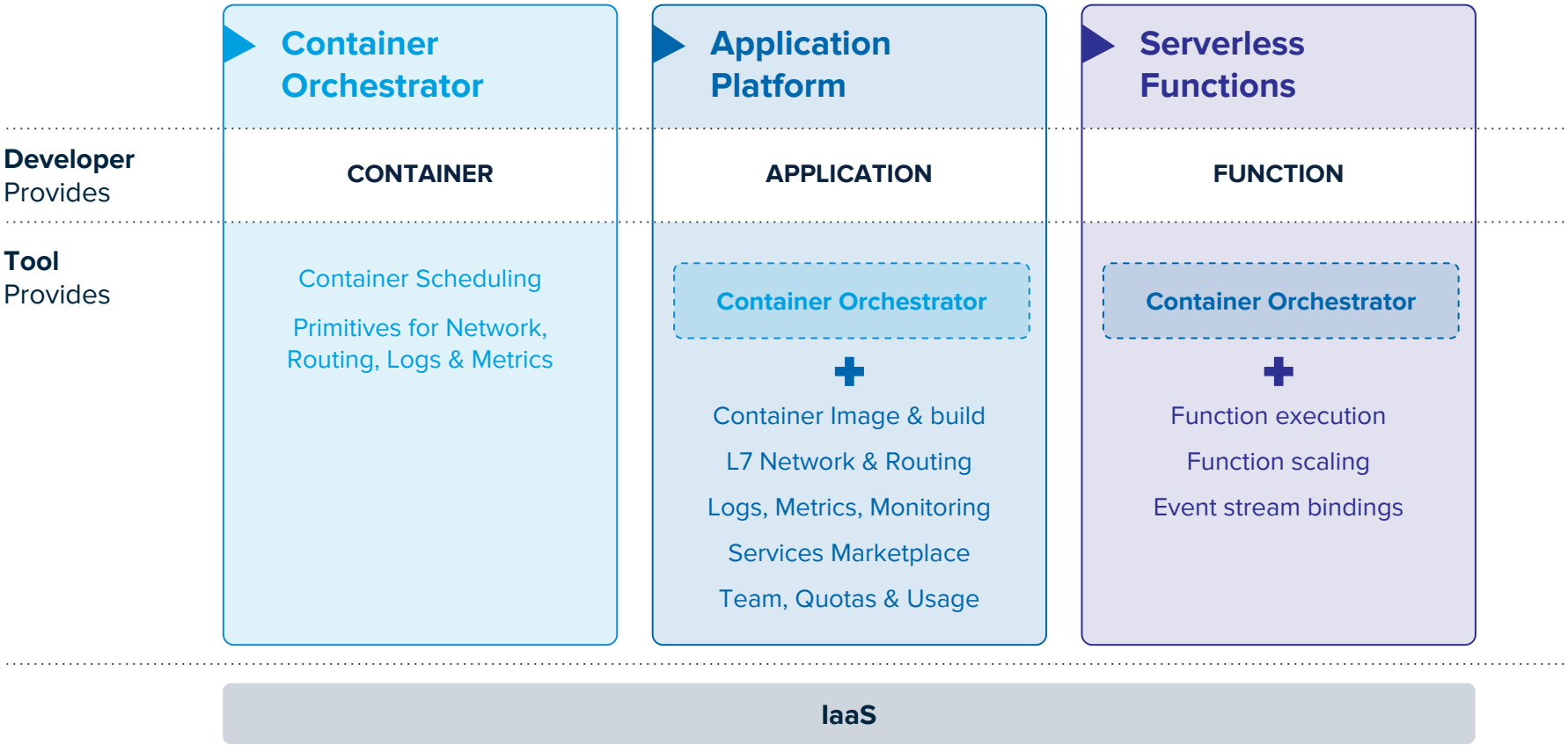
Data Services

Monolithic Applications

Your goal: choose the right runtime for each workload

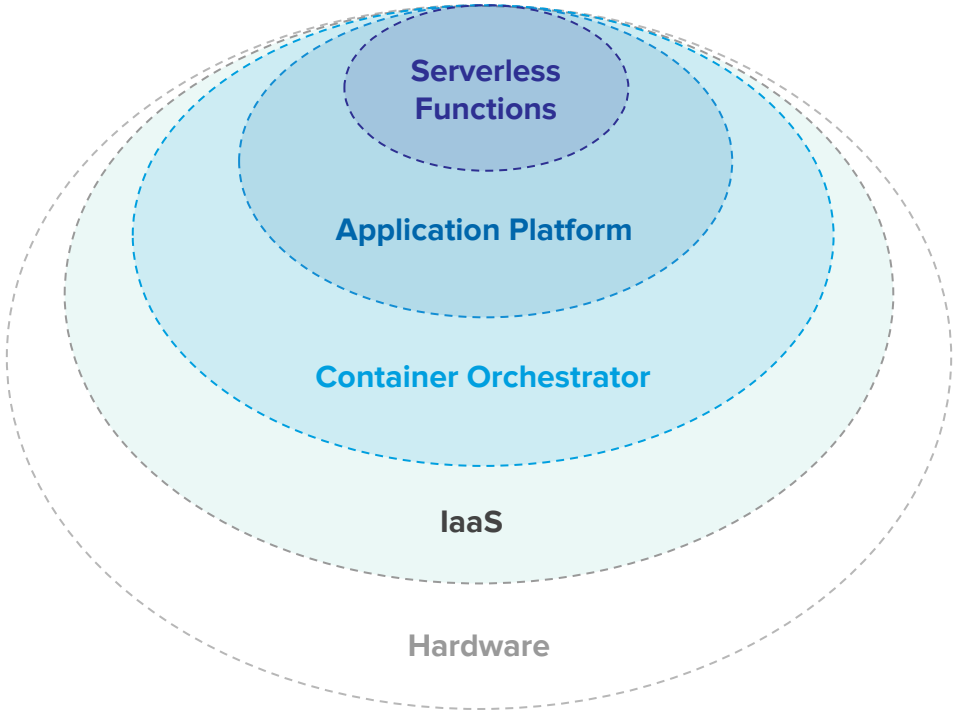


Choose the right tool for the job



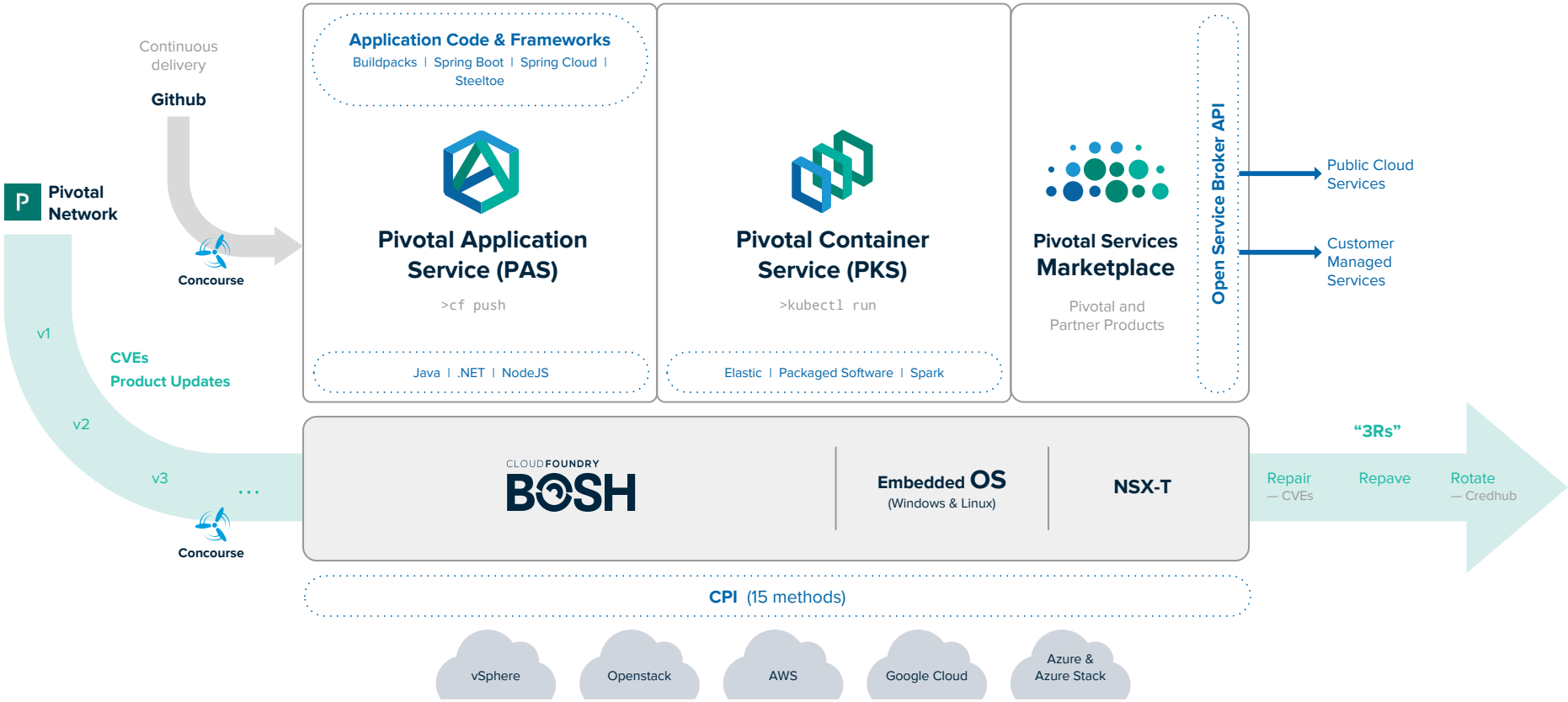
Use the highest abstraction possible

Higher flexibility and less enforcement of standards

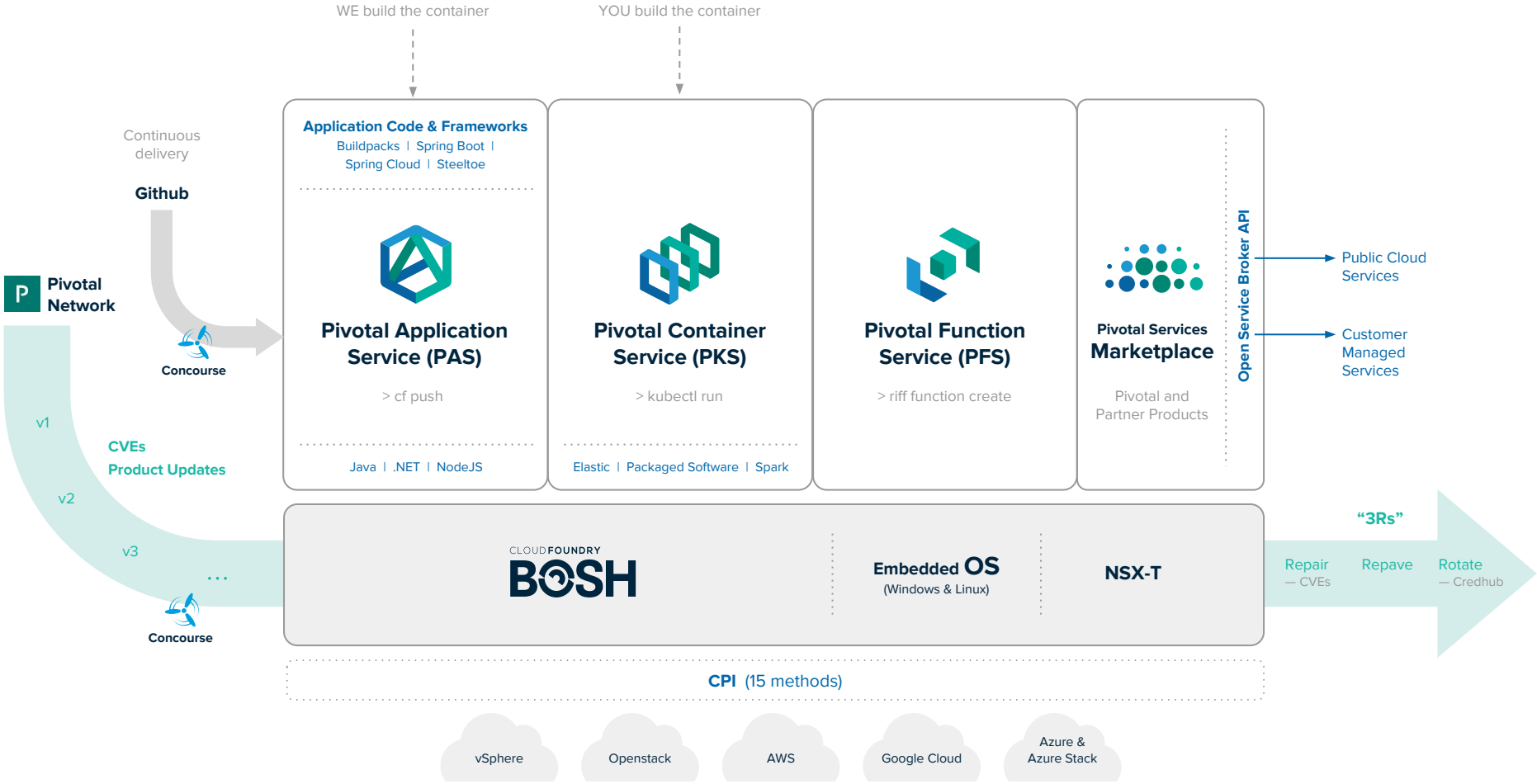


Lower development complexity and higher operational efficiency

Your strategic goal: Push as many workloads as technically feasible to the top of the platform hierarchy


Continuous delivery
Github
Concourse
Application Code & Frameworks
Buildpacks | Spring Boot | Spring Cloud | Steeltoe
Pivotal Application Service (PAS)
>cf push
Java | .NET | NodeJS
Pivotal Container Service (PKS)
>kubectl run
Elastic | Packaged Software | Spark
Pivotal Services Marketplace
Pivotal and Partner Products
Open Service Broker API
Public Cloud Services
Customer Managed Services
Pivotal Network
v1
CVEs
Product Updates
v2
v3
...
Concourse
CLOUDFOUNDRY BOSH
Embedded OS
(Windows & Linux)
NSX-T
"3Rs"
Repair
— CVEs
Repave
Rotate
— Credhub
CPI (15 methods)
vSphere
Openstack
AWS
Google Cloud
Azure & Azure Stack

Pivotal


WE build the container
YOU build the container
Continuous delivery
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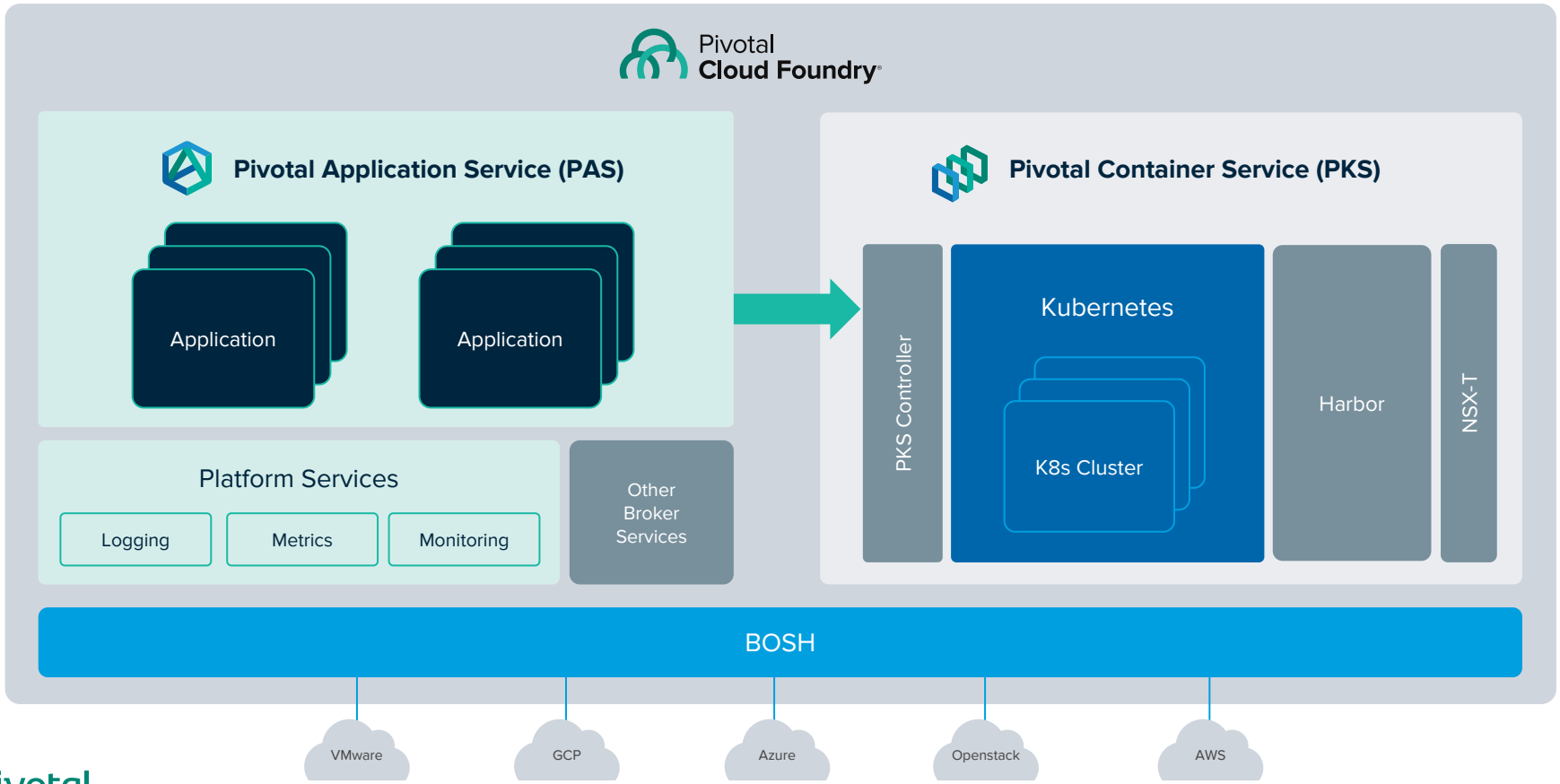
Leveraging more than one abstraction



Platforms!

But *Really* What Is It?

Multi-Cloud Support

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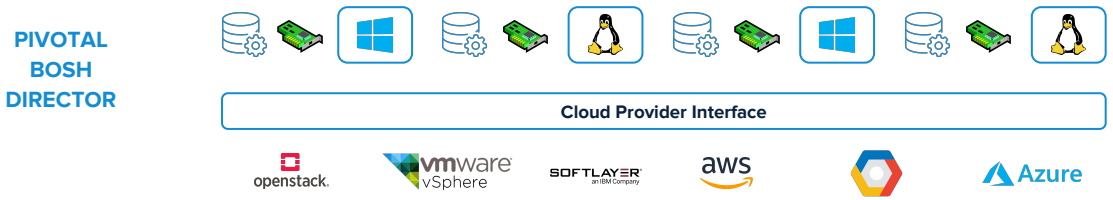
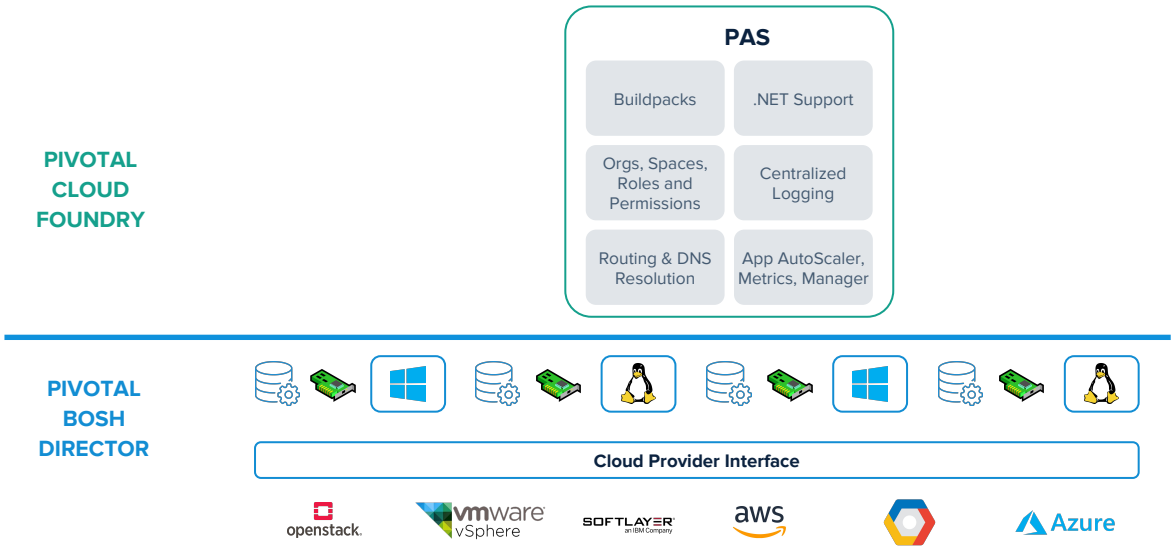
Operating System Support

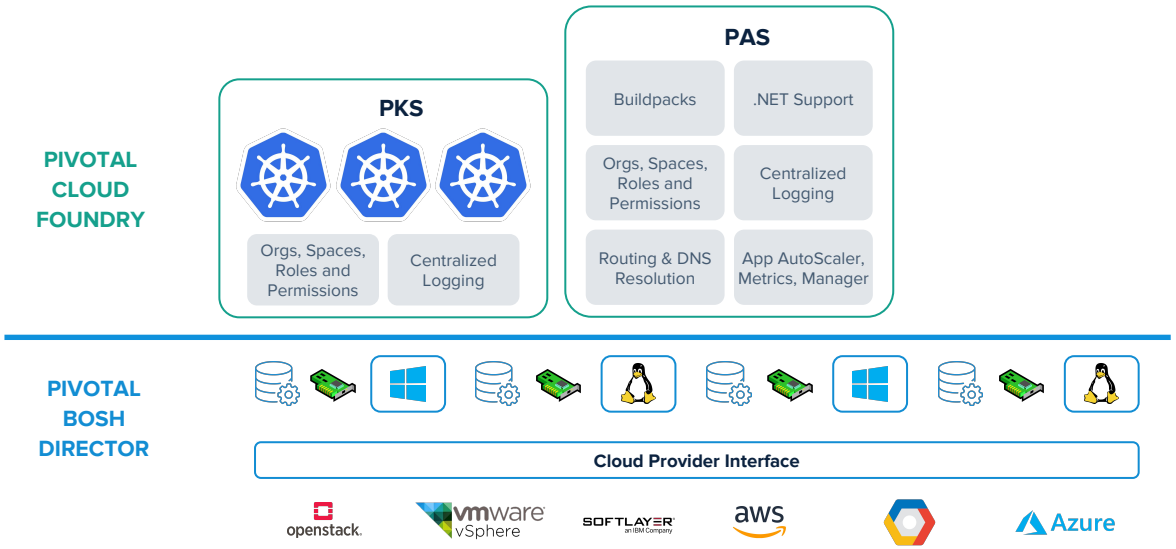
Infrastructure Support



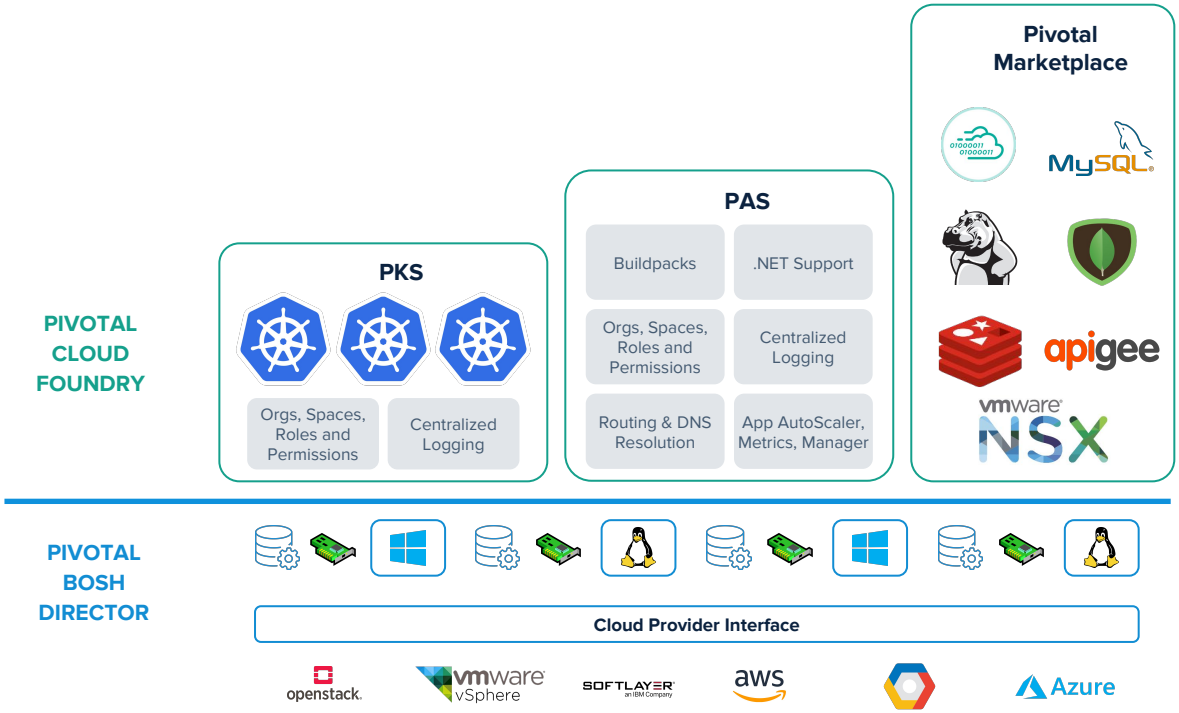
Application Orchestration



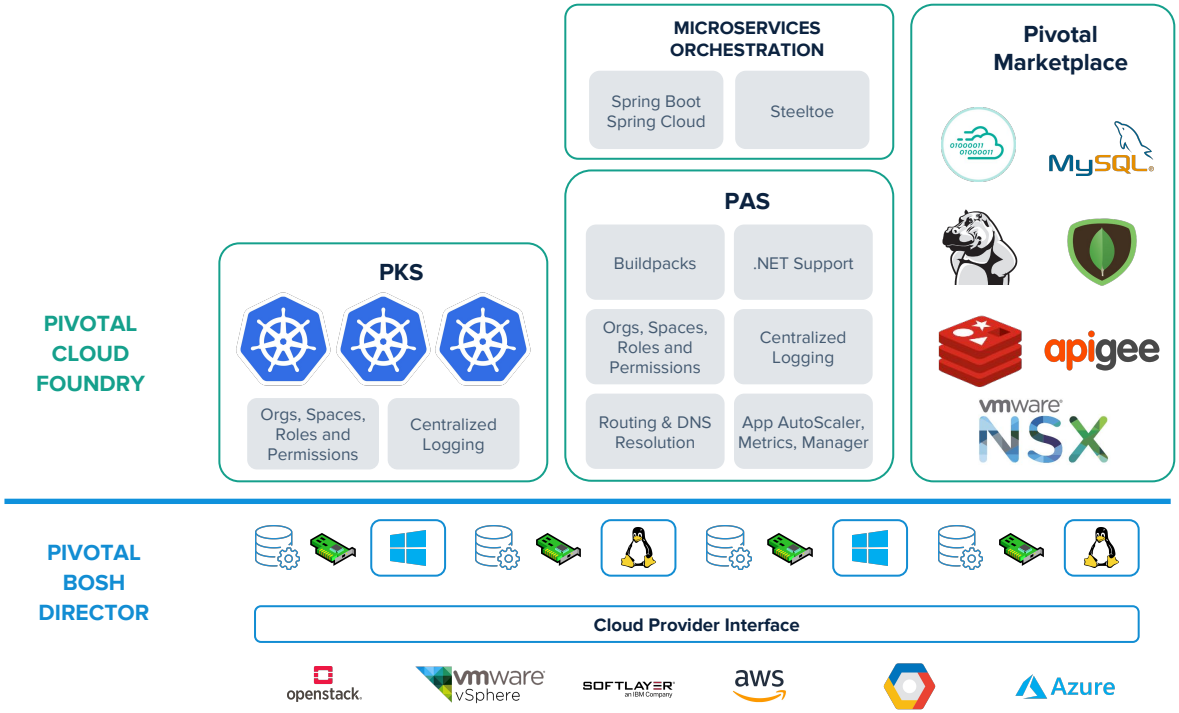
Container Orchestration



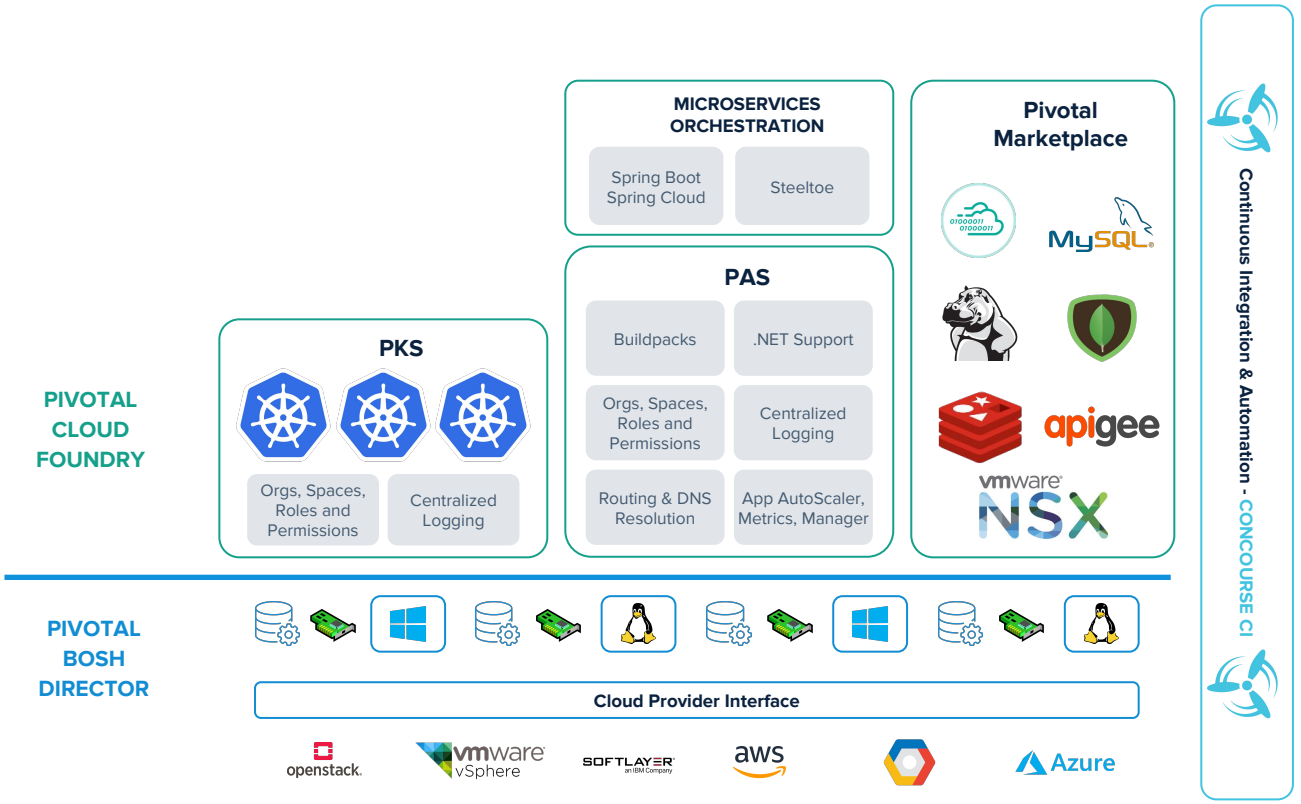
Services Marketplace



Cloud Native Applications



Automation


PIVOTAL CLOUD FOUNDRY
PKS
Orgs, Spaces, Roles and Permissions
Centralized Logging
MICROSERVICES ORCHESTRATION
Spring Boot Spring Cloud
Steeltoe
PAS
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Orgs, Spaces, Roles and Permissions
Centralized Logging
Routing & DNS Resolution
App AutoScaler, Metrics, Manager
Pivotal Marketplace
MySQL
apigee
vmware NSX
PIVOTAL BOSH DIRECTOR
Cloud Provider Interface
openstack
vmware vSphere
SOFTLAYER
aws
Azure
Continuous Integration & Automation - CONCOURSE CI

The Value Line

Your team's focus on the activities that drive business value.

CLIENT APPLICATIONS

VALUE LINE

PIVOTAL CLOUD FOUNDRY

Let Pivotal handle infrastructure, monitoring, OS patching, and upgrades.

PKS

Orgs, Spaces, Roles and Permissions

Centralized Logging

MICROSERVICES ORCHESTRATION

Spring Boot Spring Cloud

Steeltoe

PAS

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Cloud Provider Interface

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SOFTLAYER an IBM Company

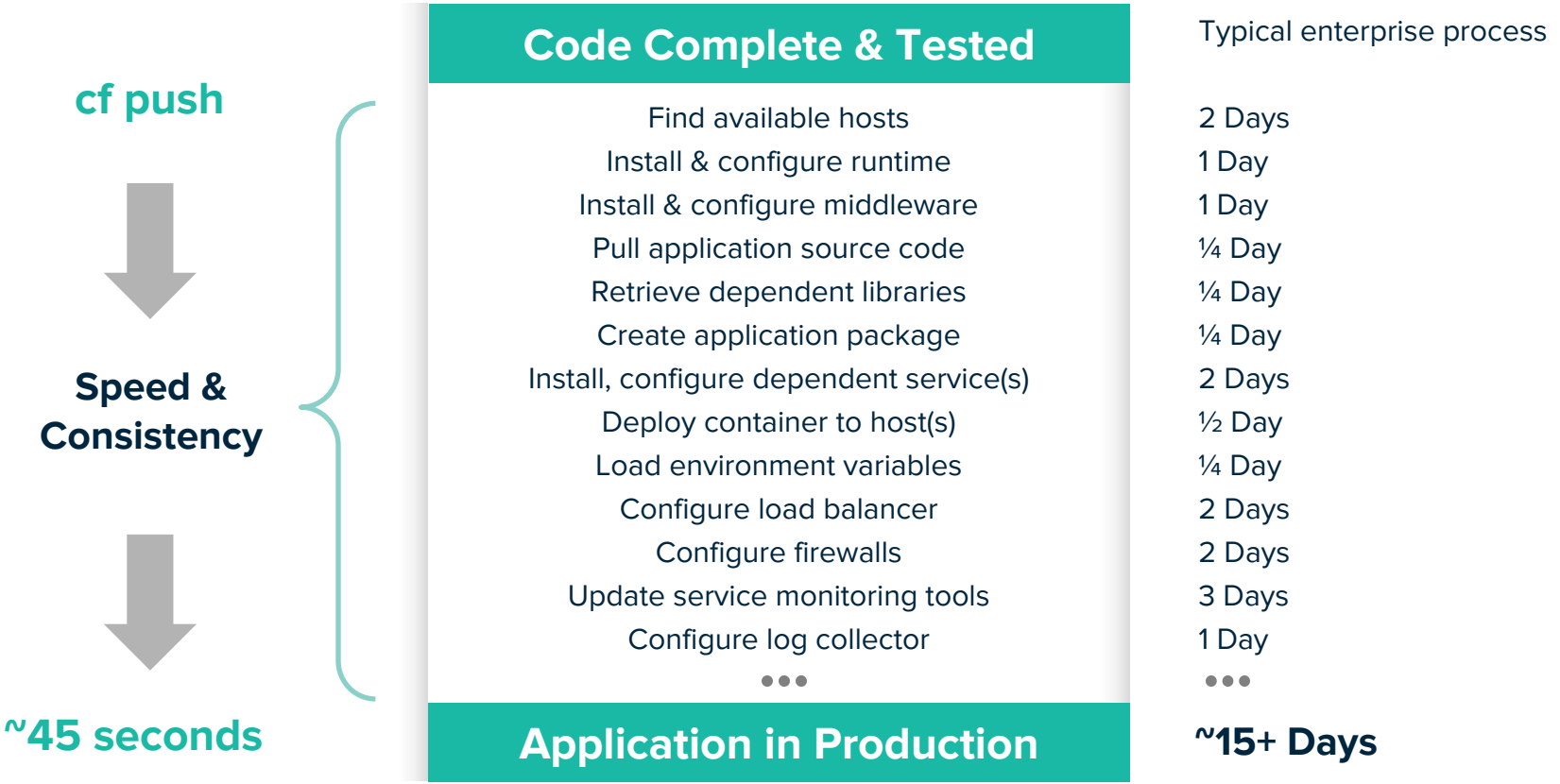
aws

Azure

Continuous Integration & Automation - CONCOURSE CI

Pivotal

No more tickets — self-service provision and deploy



The App Platform

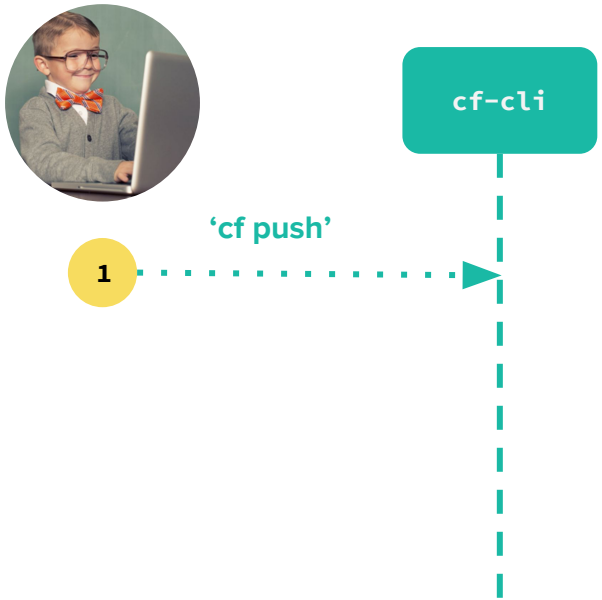
PAS

Pivotal Application Service

Pivotal

What's in a 'cf push'?

Part 1: App Save



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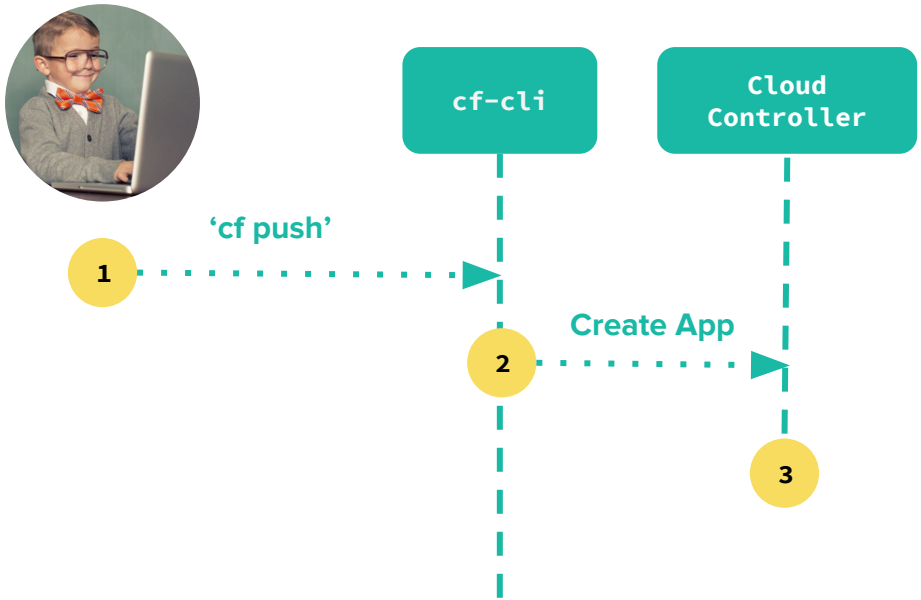

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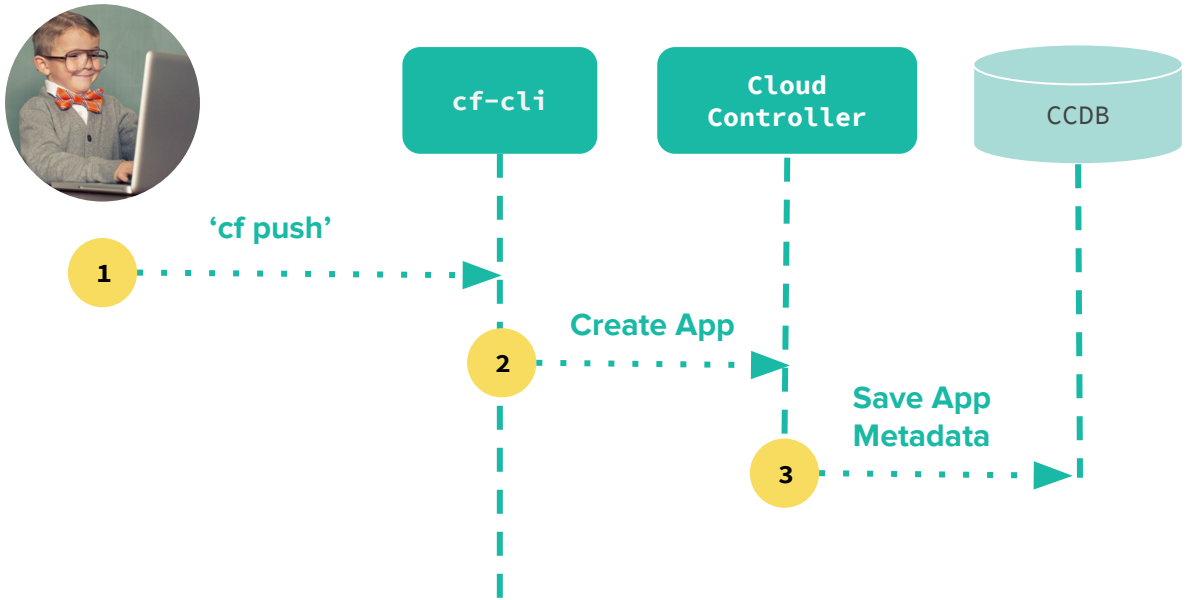

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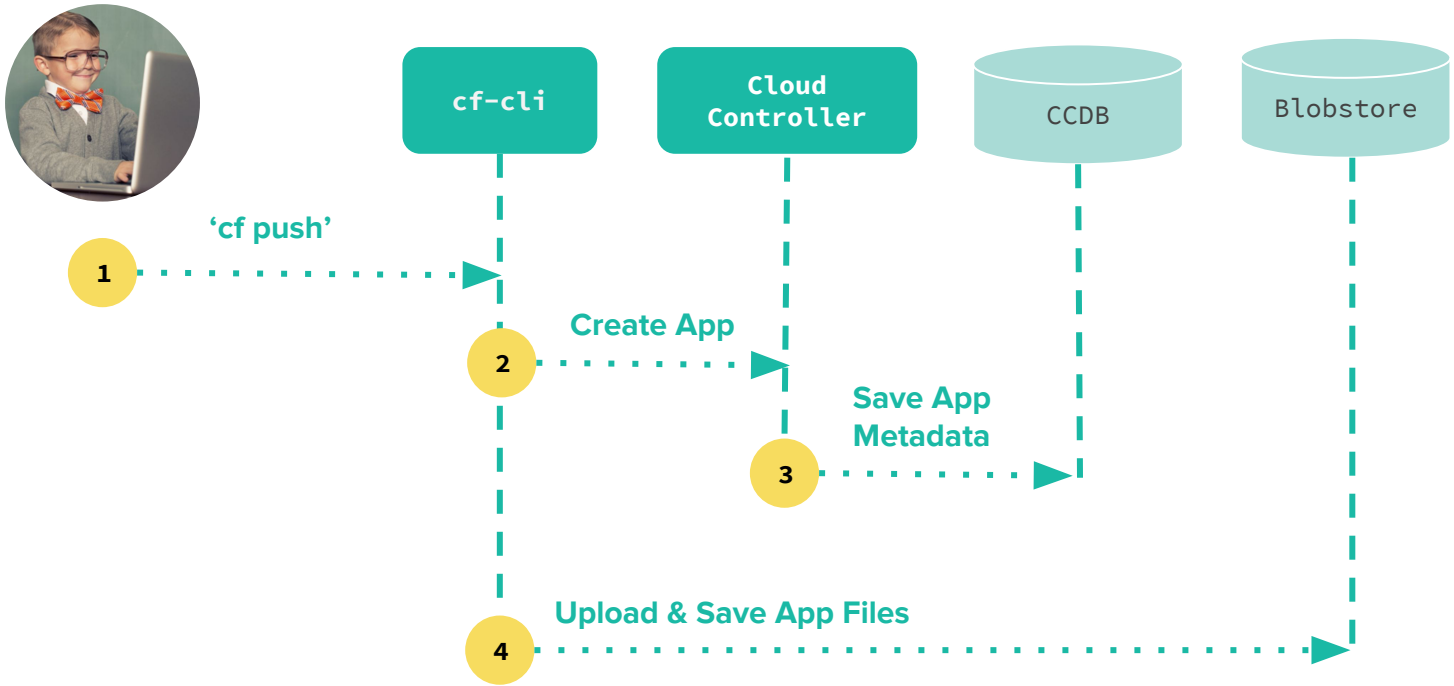

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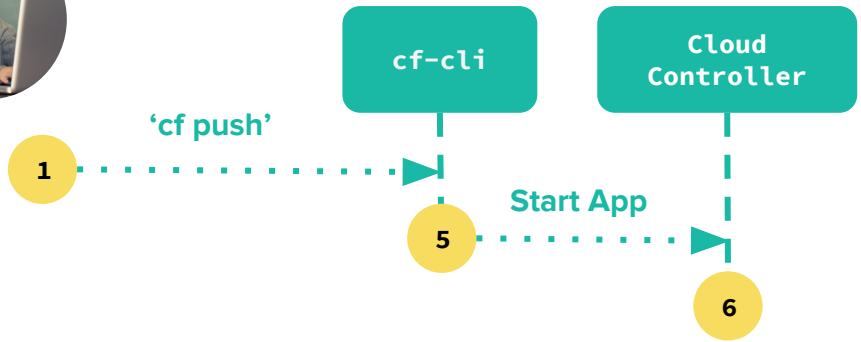
Part 2: Staging



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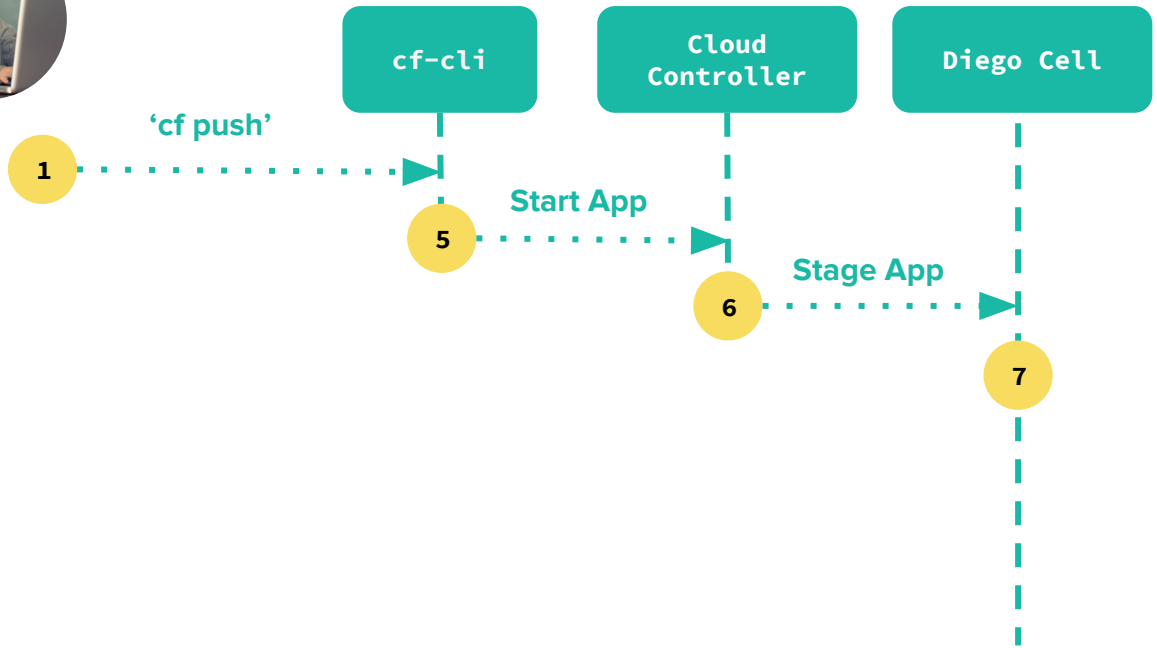

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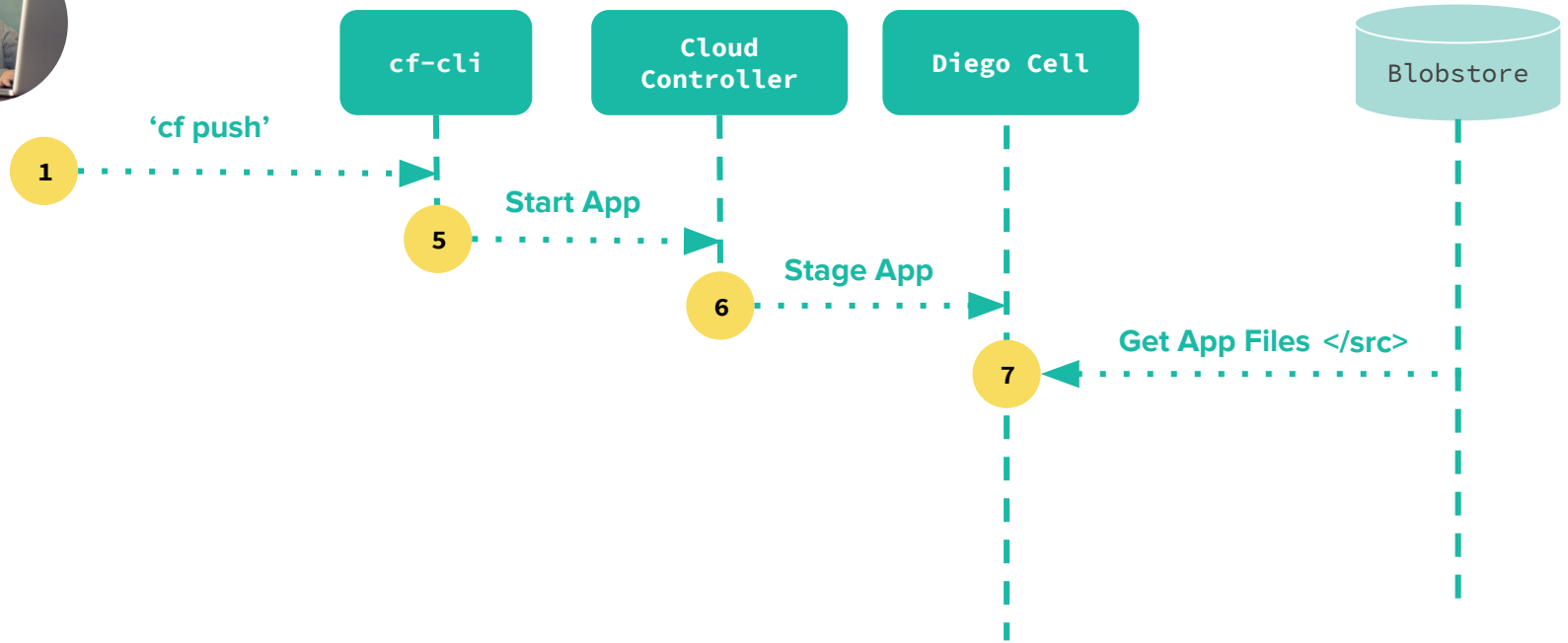

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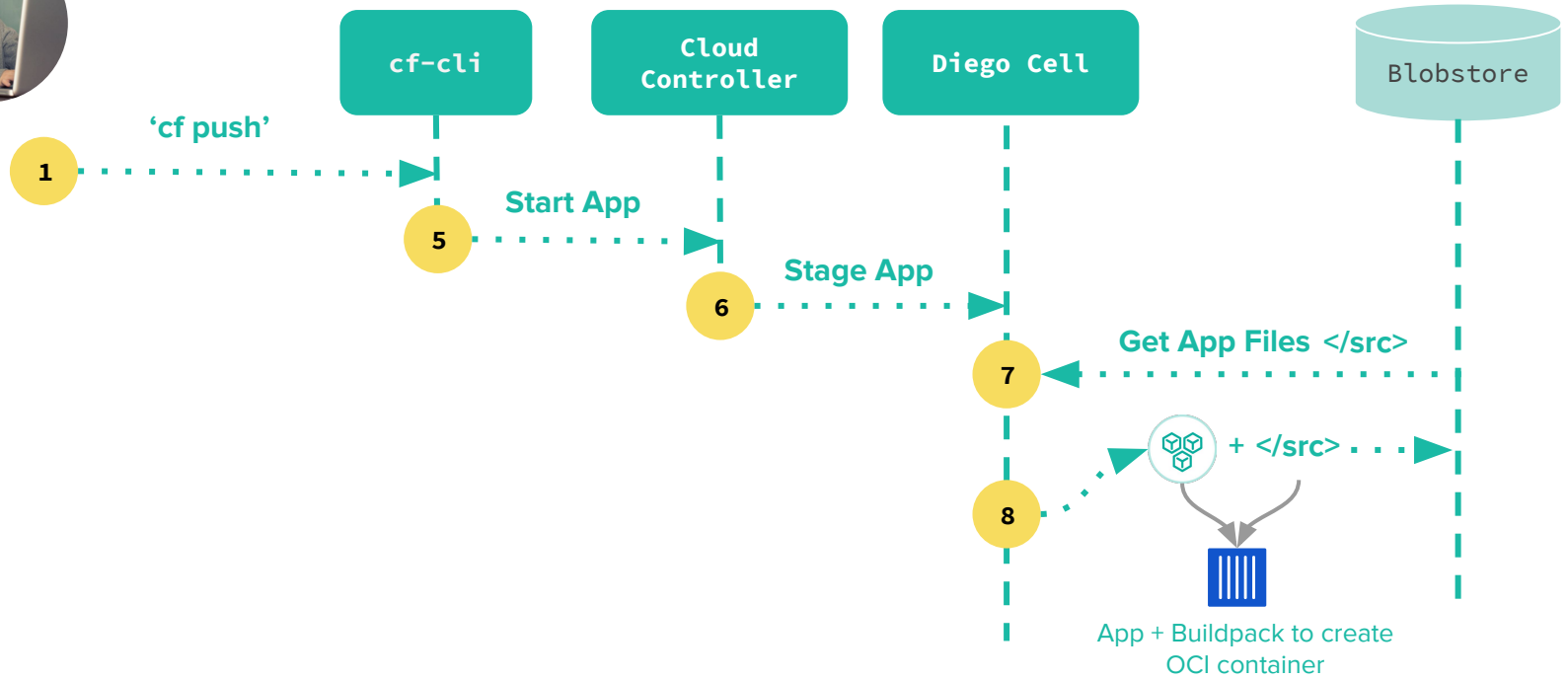
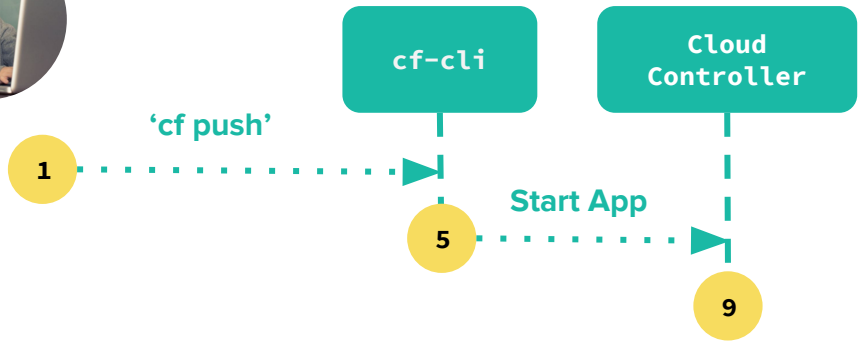


What's in a 'cf push'?

Part 3: Run



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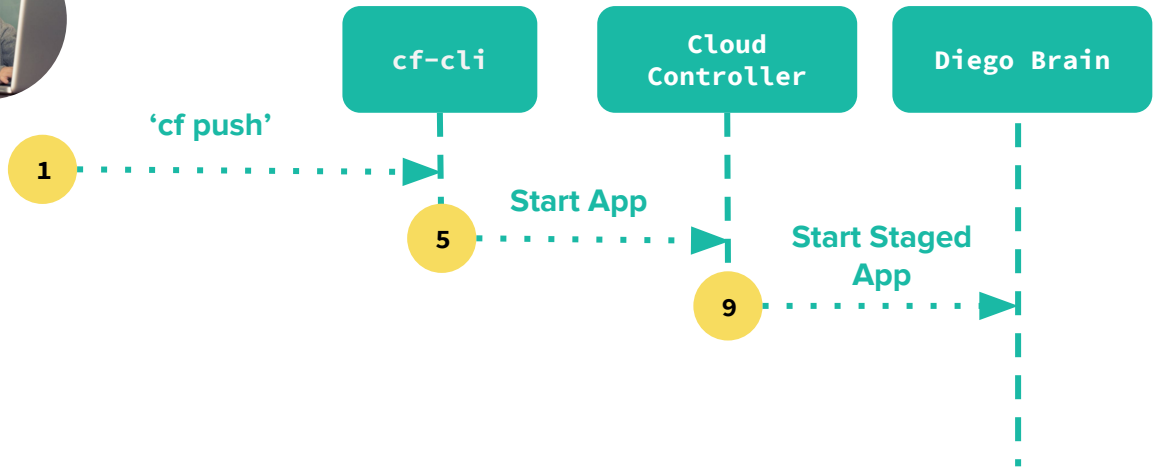

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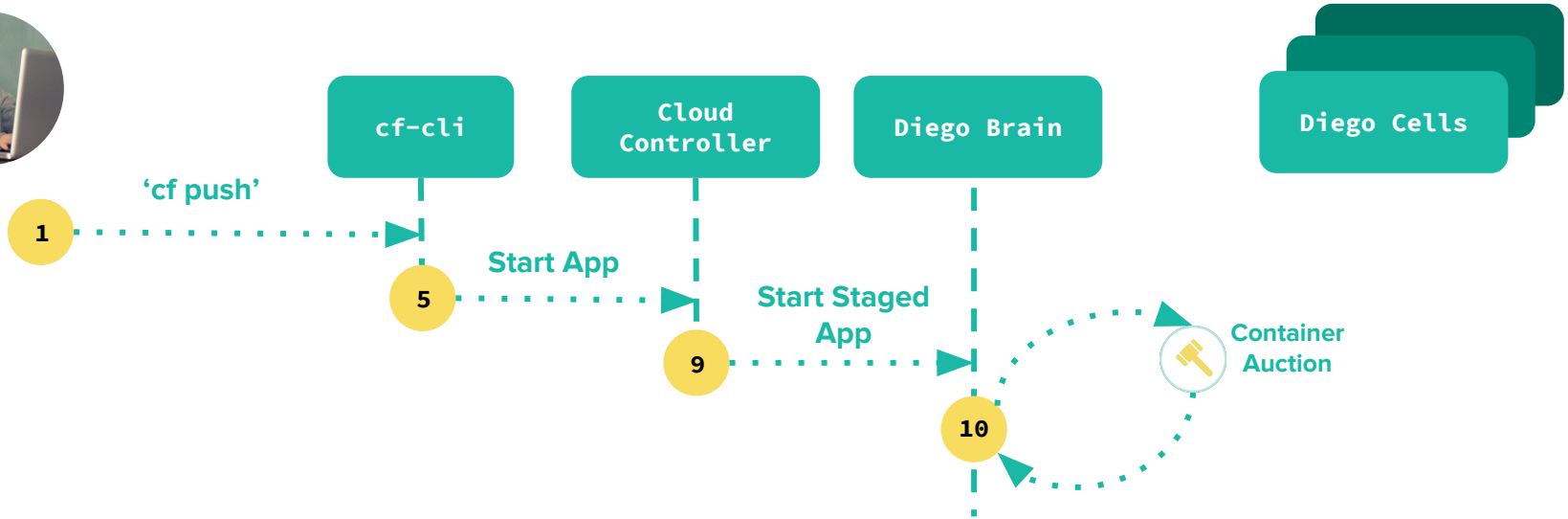

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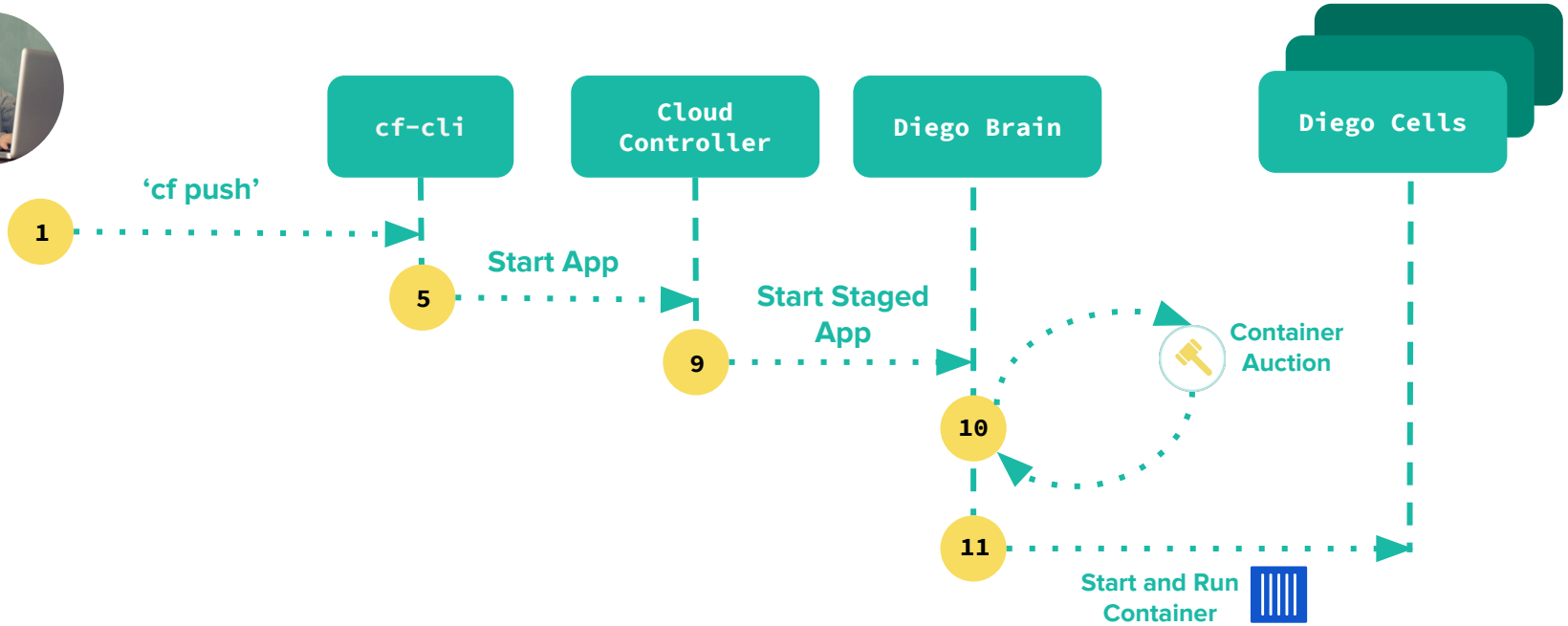

Keep Calm
and
`cf push`

Pivotal
Cloud Foundry

Pivotal
Application Service

Pivotal
Container Service

Pivotal
Function Service

Pivotal
Services Marketplace