

Microsoft Tech Summit

Build your skills with the latest in
cloud technologies



Best Cloud patterns and practices for Cloud Foundry and Spring using Azure



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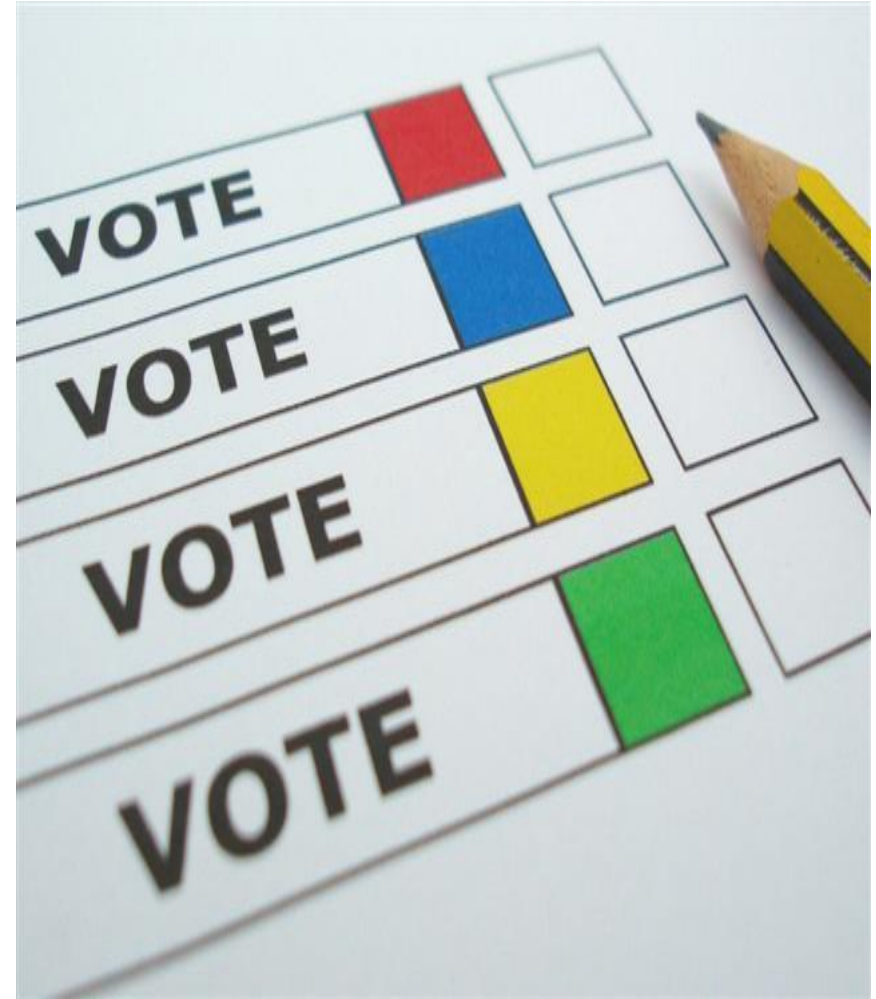
POLL

Who's using Azure?

Who's doing microservices?

Who's using PCF?

Who's using PCF on Azure?

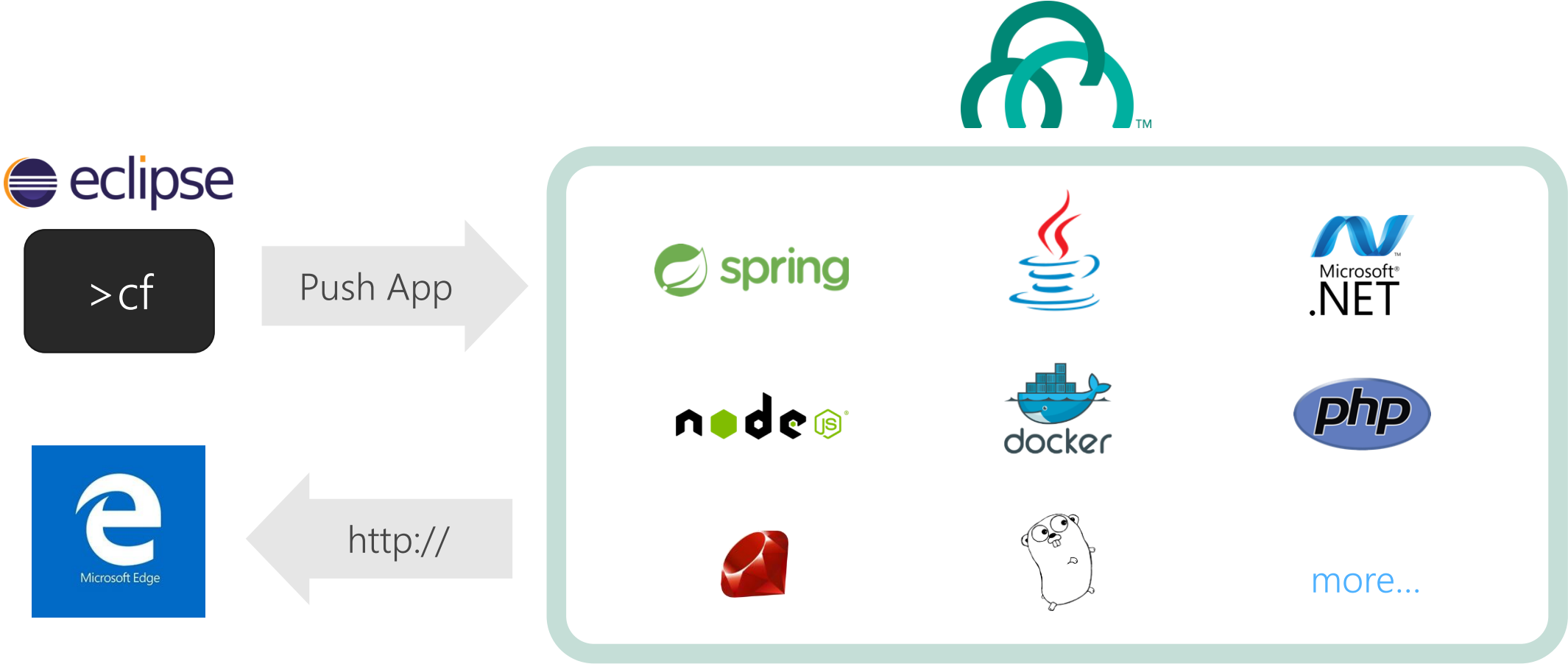




Pivotal Cloud Foundry

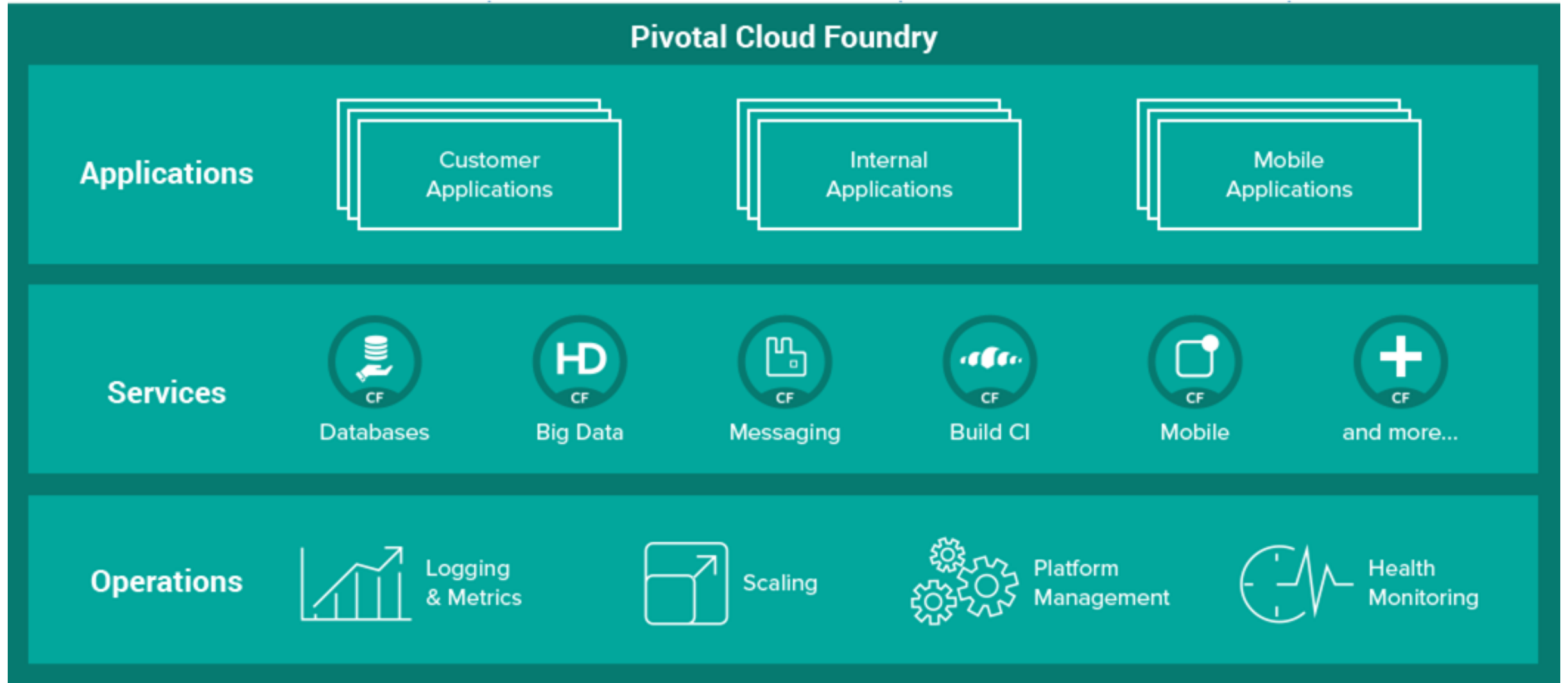


Developer Self Service Provisioning

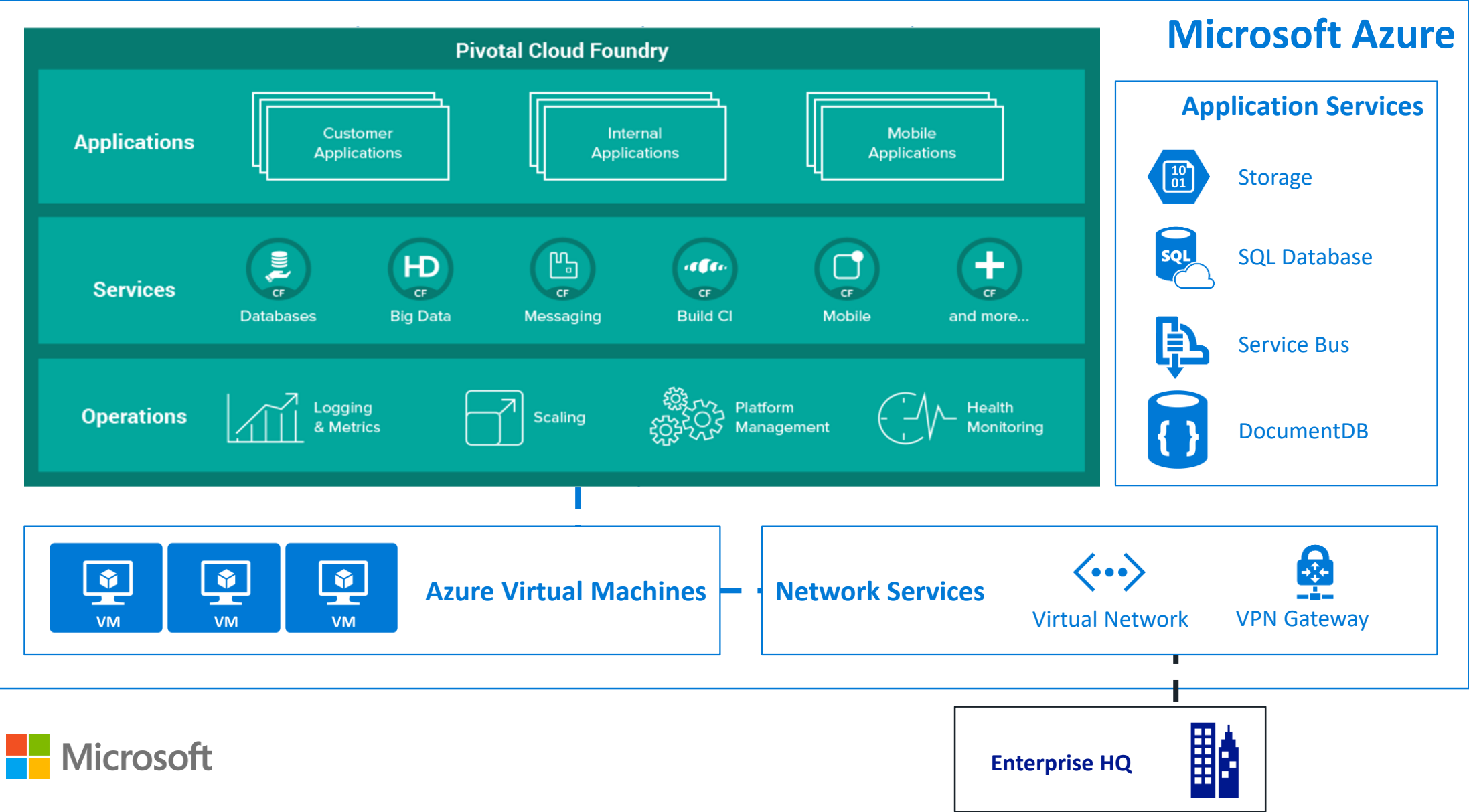


Architecture

Pivotal Cloud Foundry



PCF + Azure Logical Architecture



Dev/Prod parity

Visual Studio Team Services CF Integration




Definitions / cf2048 Pivotal | Builds

Build Options Repository Variables Triggers General Retention History

Save Queue build... Undo

+ Add build step...

 cf delete-service
Cloud Foundry CLI

 Push to Cloud Foundry
Cloud Foundry

Push to Cloud Foundry


Cloud Foundry Endpoint Pivotal Web Services CF  [Manage](#) 

Connection Settings

Deployment Options

Specify Options ☒ With a manifest file ☐ Manually

Manifest File 2048/manifest.yml 

Additional Arguments 

Services

Create Services ☒

Create Service Arguments my-db-service -p "{\"ram_gb\":\"4\"}"

Bind Services ☒

Application Name mgtest-game-2048

Bind Service Arguments my-db-service -c "{\"permissions\":\"read-only\"}"
my-drain-service1



Security

App Registration w/ Azure Active Directory



Microsoft Azure

Home > Marketplace > Everything > Pivotal Cloud Foundry on Microsoft Azure > Create Pivotal Cloud Foundry on Microsoft Azure > Basics

Report a bug Search resources, services and docs

Pivotal Cloud Foundry on Microsoft Azure

Pivotal Software Inc.

Build and run modern web applications with Pivotal Cloud Foundry on Microsoft Azure

Pivotal Cloud Foundry®, running on Microsoft® Azure™, helps enterprises execute their digital transformation strategies. How? Together, Pivotal and Microsoft help you focus on applications, not infrastructure. Build meaningful apps in any language—Java, .NET Framework, .NET Core, Node.js, and more—and continuously deliver them to a platform designed for secure operations at scale.

Business Benefits

Pivotal Cloud Foundry - Cloud Native Platform

- Ship and run all types of modern apps in a consistent way, anywhere you want.
- Push code or Docker images to a secure-by-default platform designed to simplify operations at enterprise-scale.
- Plug into integrated-ecosystem of leading database, messaging, logging, and application performance software.
- Follow the digital transformation lead of Pivotal customers like Comcast, Allstate, Ford, and more.

FREE 90 day evaluation license.

A single instance of PCF will utilize approximately **30 ARM cores** and 96GB RAM.

Key Features

- First-class support for Spring Cloud & Spring Boot applications
- Deploy code and have the platform containerize your application, or push Docker images.
- Run long-running or short-lived applications with manual or automatic scaling based on load.
- Built-in log aggregation and application monitoring.
- Native multi-tenancy model that offers unique workspaces with usage quotas and role-

Select a deployment model

Resource Manager

Create

Create Pivotal Cloud Foundry on...

Basics

1 Basics
Configure basic settings

2 Summary
Pivotal Cloud Foundry on Mic...

3 Buy

* Storage Account Name Prefix
ruyakubu18

* SSH public key
/G8NggikRvoHWBY9LoKViuP4+eWON
nf0Vc3x6cToapBsDK5RhjQJnnsvWEBiv
WB/hXZ+oa1ar5YB/78BllowrRn+sw==
rsa-key-20180228

* Service Principal
"azure-service-principal.json"

* Pivotal Network Token
LnP2F1r-ojbtPjmWZySp

Subscription
Microsoft Azure Internal Consumption

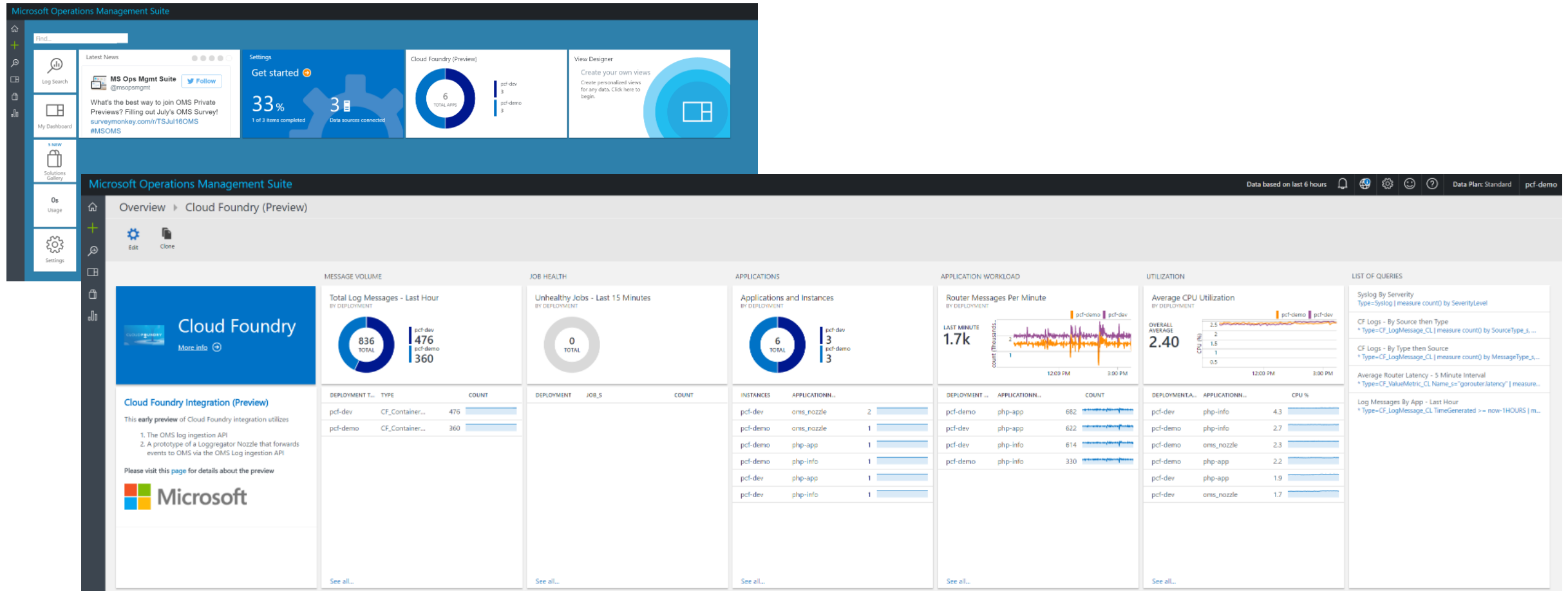
* Resource group
☒ Create new ☐ Use existing
LabRG

* Location
East US

```
{  
  "subscriptionID": "SUBSCRIPTION-ID",  
  "tenantID": "TENANT-ID",  
  "clientId": "SERVICE-PRINCIPAL-NAME",  
  "clientSecret": "SERVICE-PRINCIPAL-PASSWORD"  
}
```

Logs & Monitoring

Microsoft OMS Integration with PCF



Demo

PCF Deployment in Azure



Microsoft Azure

Home > Resource groups > demoRG

Resource groups

demoRG

Subscription (change)
Microsoft Azure Internal Consumption
Subscription ID: [REDACTED]

Deployments

Filter by name... All types All locations No grouping

14 items

NAME	TYPE	LOCATION
boshfckuq6k4z77uq	Storage account	East US
cffckuq6k4z77uq	Storage account	East US
opsman-ip	Public IP address	East US
opsmgr-nsg	Network security group	East US
pcf-lb	Load balancer	East US
pcf-lb-ip	Public IP address	East US
pcf-net	Virtual network	East US
pcf-ops-man	Virtual machine	East US
pcf-ops-man	Network interface	East US
sqlserverfckuq6k4z77uq	SQL server	East US
azuremetabroker	SQL database	East US
xtrastrgfckuq6k4z77uq1	Storage account	East US
xtrastrgfckuq6k4z77uq2	Storage account	East US
xtrastrgfckuq6k4z77uq3	Storage account	East US

App Deploy Code Snippet

1. `cf login -a https://api.SYSTEMDOMAINURL --skip-ssl-validation`
2. `cf create-org myorg`
3. `cf create-space dev -o myorg`
4. `cf target -o testorg -s dev`
5. `cf push`
6. Launch your Application
7. `cf logs hello-spring-cloud`

Concurrency

Code Snippet

```
cf scale -i 2 hello-spring-cloud
```

What Just Happened?

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.


Ops Manager

P


PCF Ops Manager

Import a Product

Installation Dashboard




v1.8.11.0




Pivotal Elastic Runtime

v1.8.21-build.1




Spring Cloud Services

v1.3.4




RabbitMQ

v1.7.8



MySQL

v1.8.0



Microsoft Azure Service Broker

v1.1.0

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