Microsoft Azure

Building Spring MicroServices

Rory Preddy - @RoryPreddy

Who Am I?

Rory works in the Developer Relations team at Microsoft as a Senior Cloud Advocate for Java.

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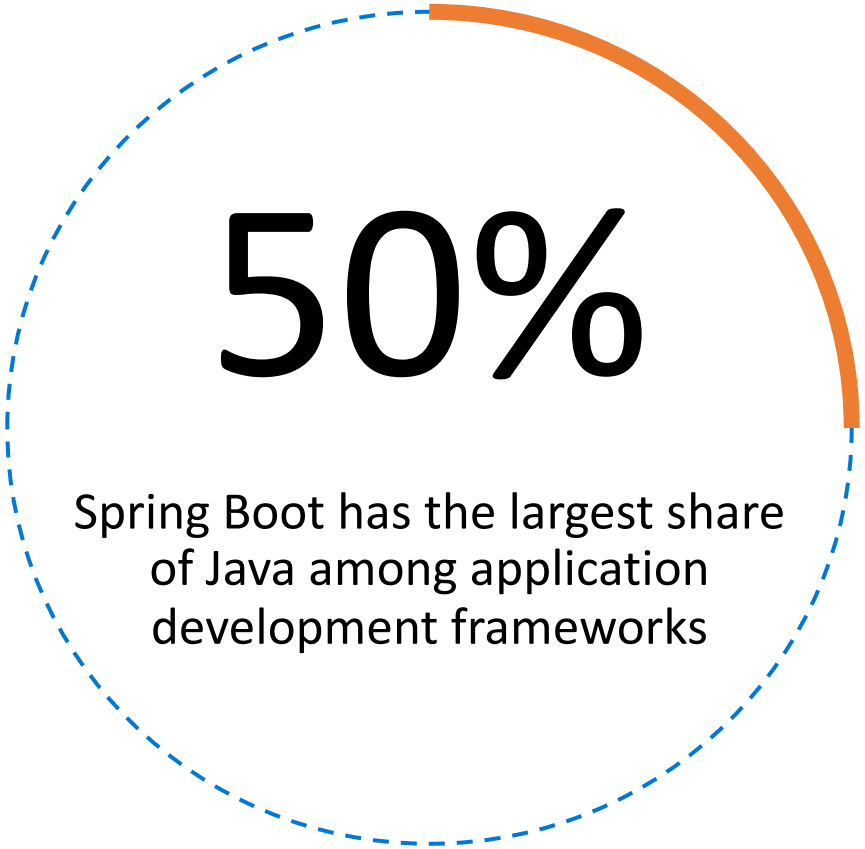
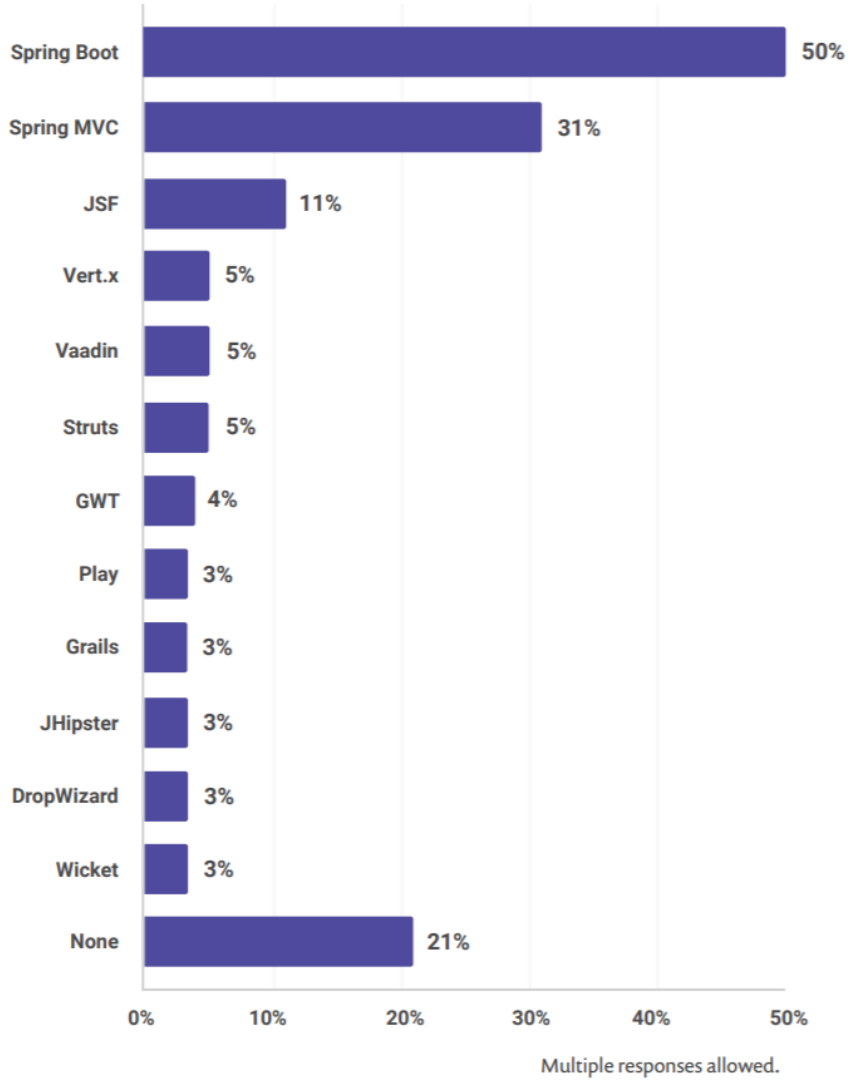
Spring is Everywhere





Spring's focus on **speed**, **simplicity**, and **productivity** has made it the world's most popular Java framework.

https://snyk.io/wp-content/uploads/jvm_2020.pdf

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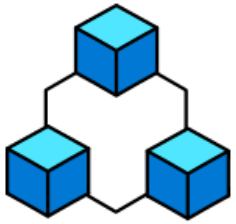
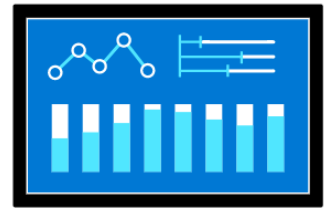


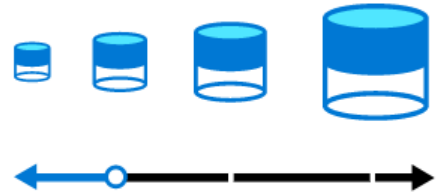
Build Service Independently



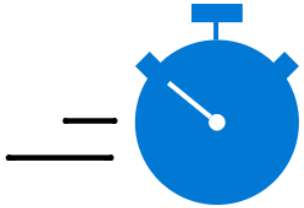
Be productive through app lifecycle

Super Charge

Run Applications globally



Scale services autonomously



Deliver Value Faster

“Time to market”

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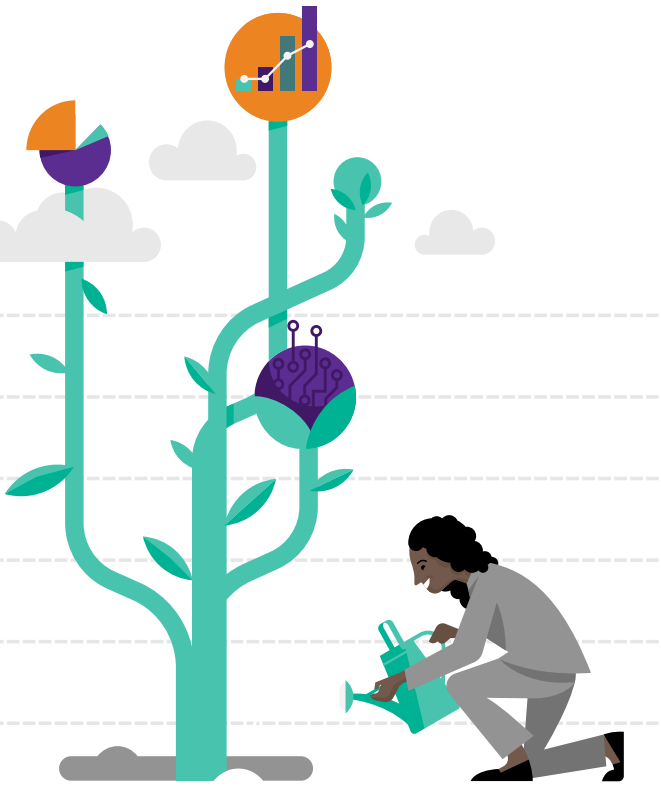
How?



- Build Services Independently
- Run applications globally
- Scale services autonomously
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- Deliver Value Faster

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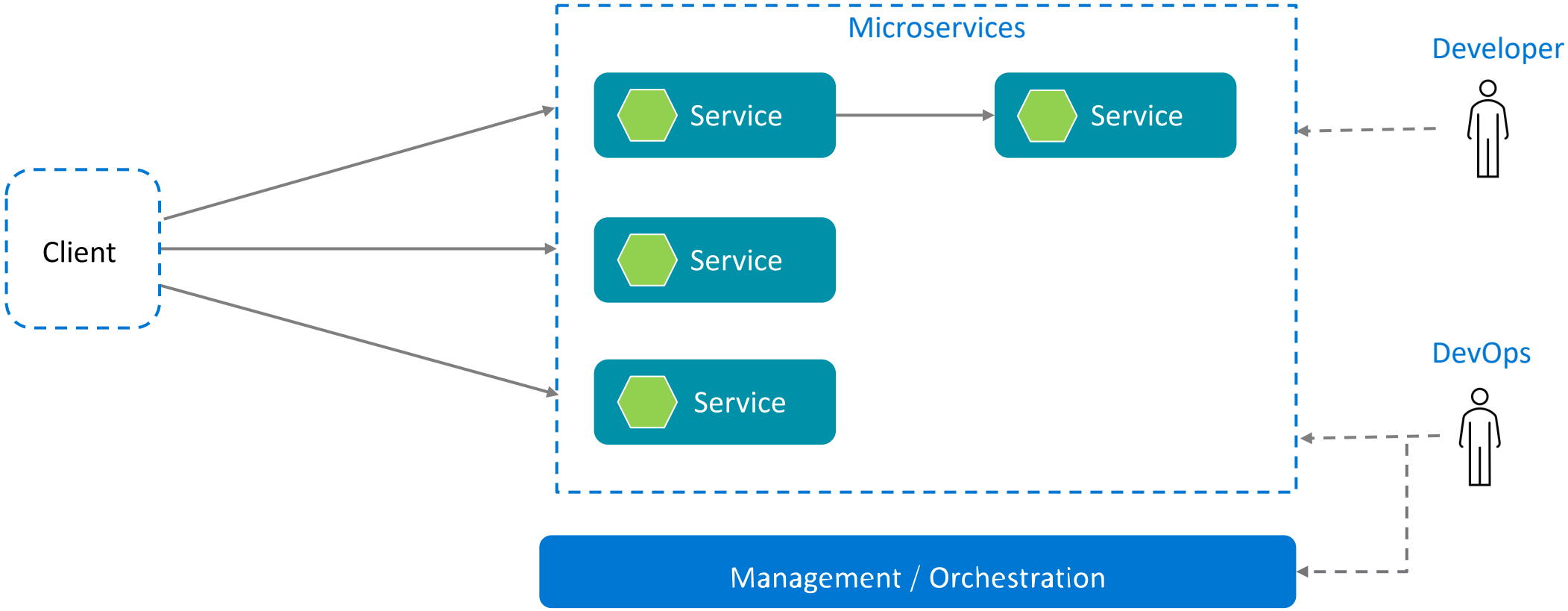
Microservice

Microservices are a popular architectural style for building applications that are resilient, highly scalable, independently deployable, and able to evolve quickly.



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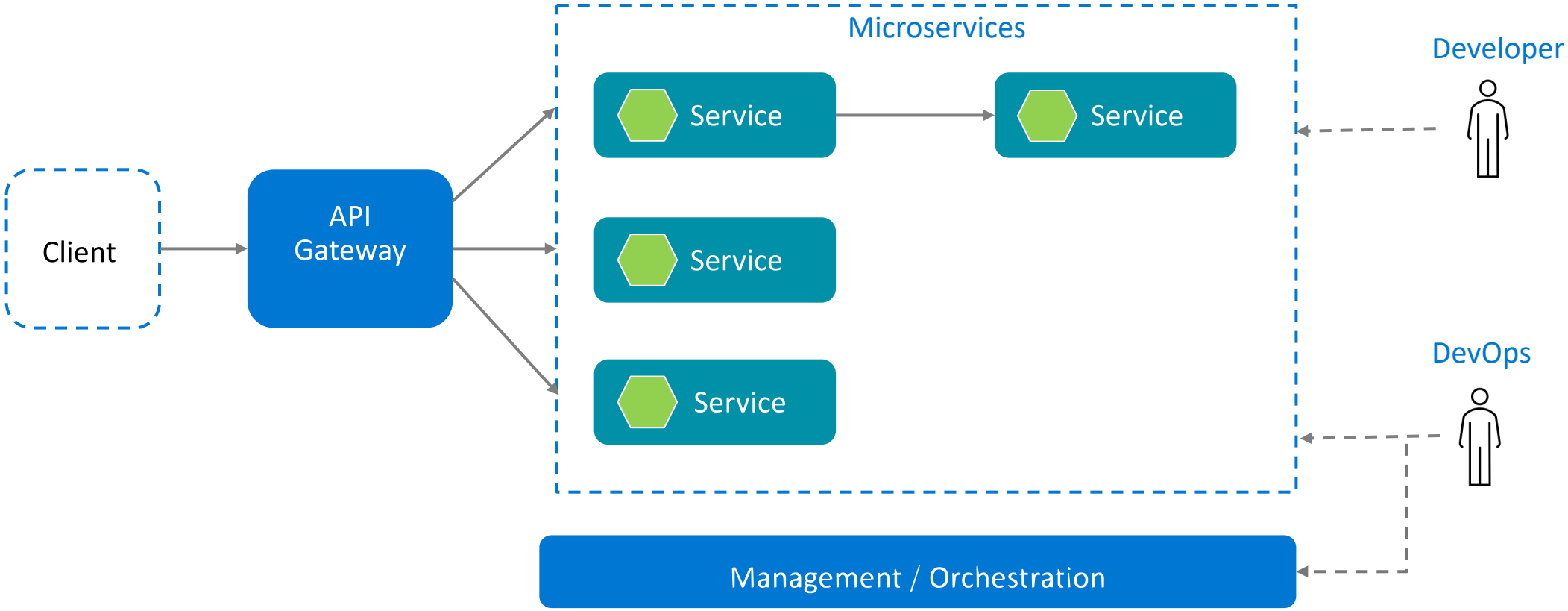

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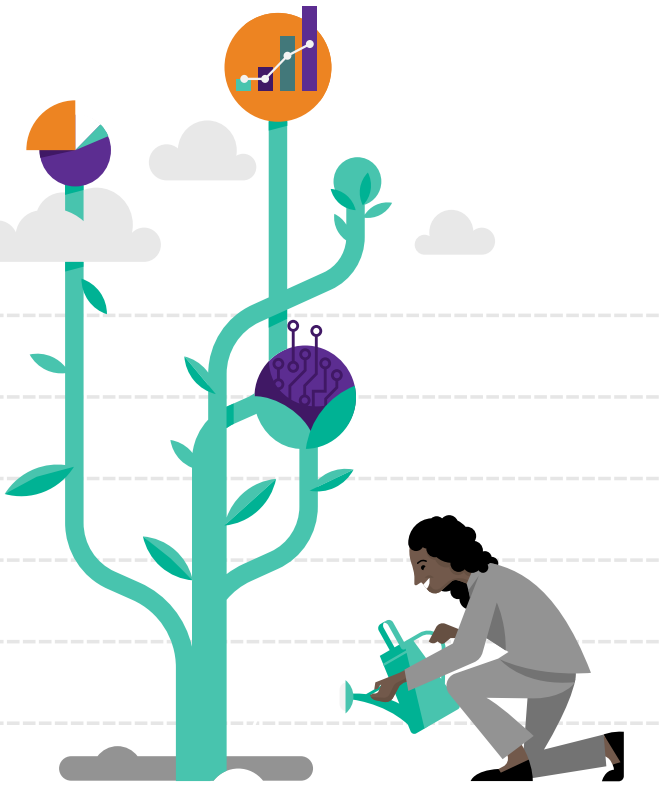

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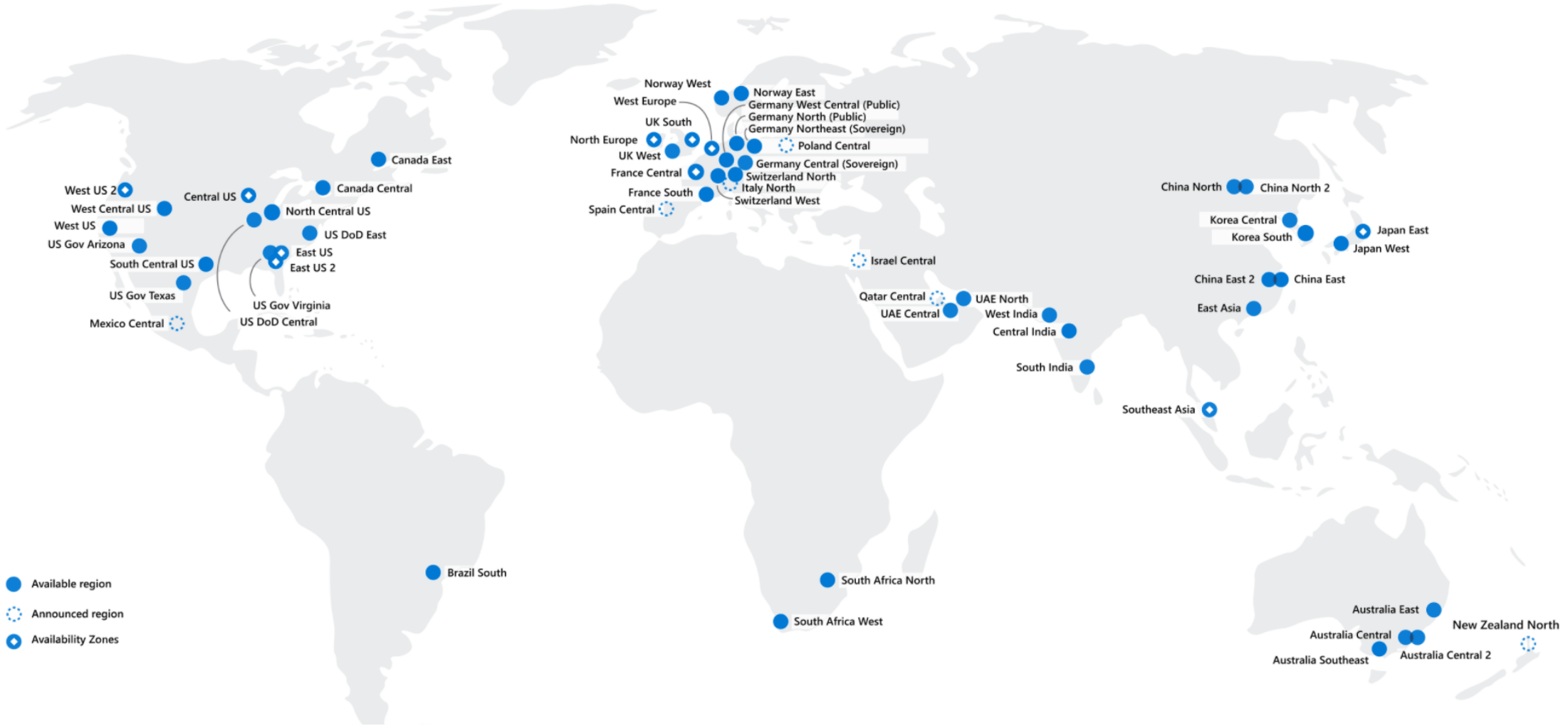
Get the most in the cloud



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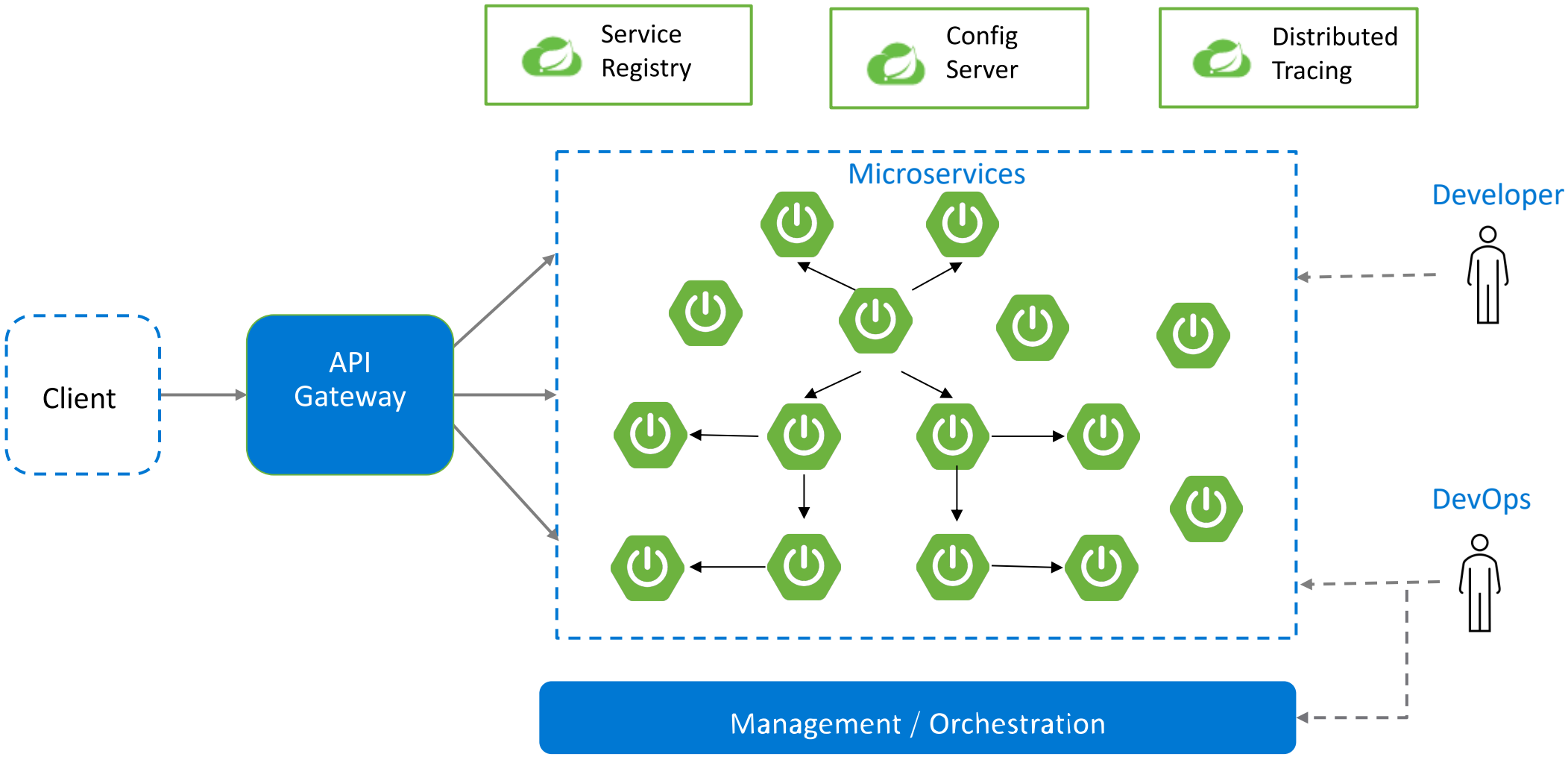
Spring Cloud is Your Platform



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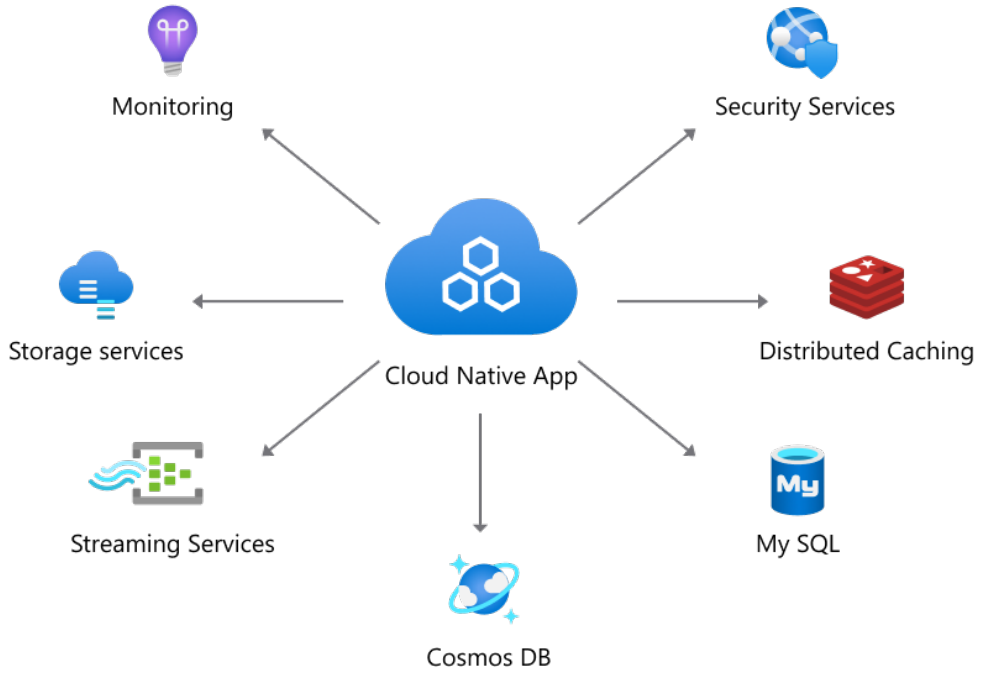
Seamlessly Integrate w/ Cloud Services



Microsoft Azure

spring®

- Spring starters for Azure simplifies connection and consumption of Azure services under the Spring framework.
- Developers can adopt a **Spring-idiomatic** way to take advantage of managed services on Azure, with only few lines of configuration and minimal code changes.
- Close collaboration between Microsoft and VMware Spring engineers.

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Landscape of Spring Azure Ecosystem

Spring Cloud

App Configuration

Event Hubs

Service Bus

Storage

Redis

Functions

R2DBC

Azure SQL

PostgreSQL

MySQL

Spring Data

Azure SQL

MySQL

PostgreSQL

Maria DB

Cosmos DB

- SQL
- MongoDB
- Cassandra
- Gremlin

Spring Security

Active Directory (AAD)

AAD B2C

Key Vault

Spring Cache

Redis Cache

Spring Resource

Storage

Spring Messaging

Service Bus

Micrometer

Monitor (includes

Log Analytics)

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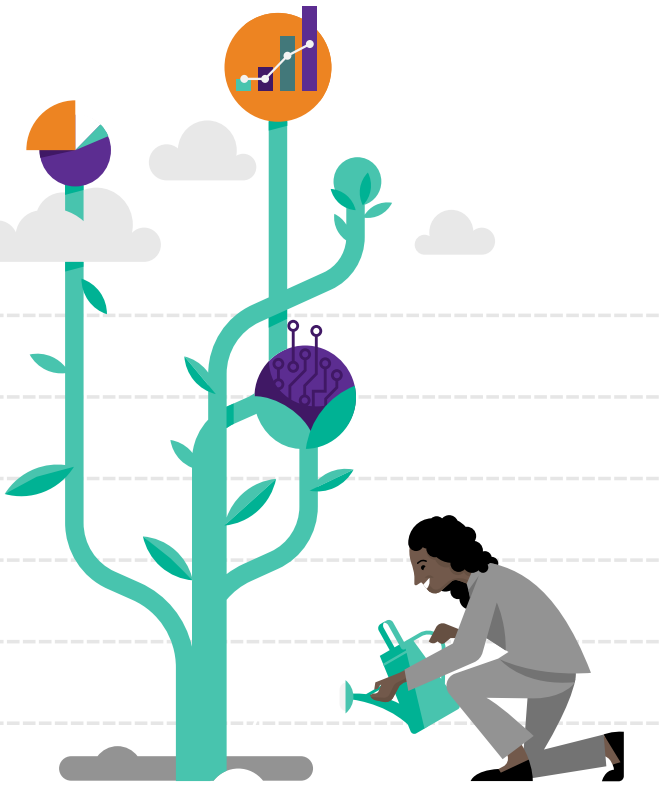
https://spring.io/projects/spring-cloud-azure

How?



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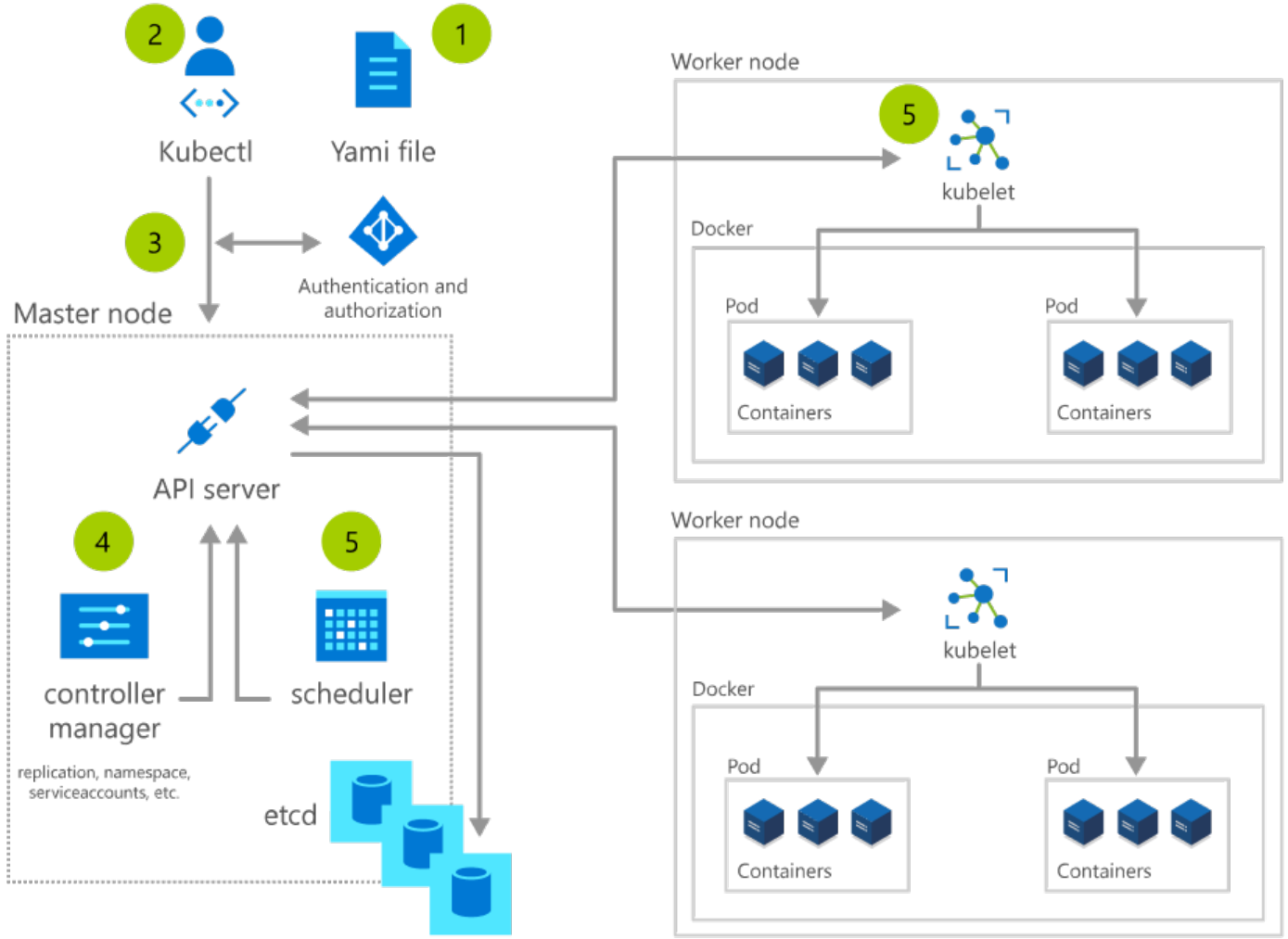
Orchestrate Microservices w/ Kubernetes

Deploy and manage containerized applications (microservices) at scale

Rapid growing ecosystem

Kubernetes services, support, and tools are widely available



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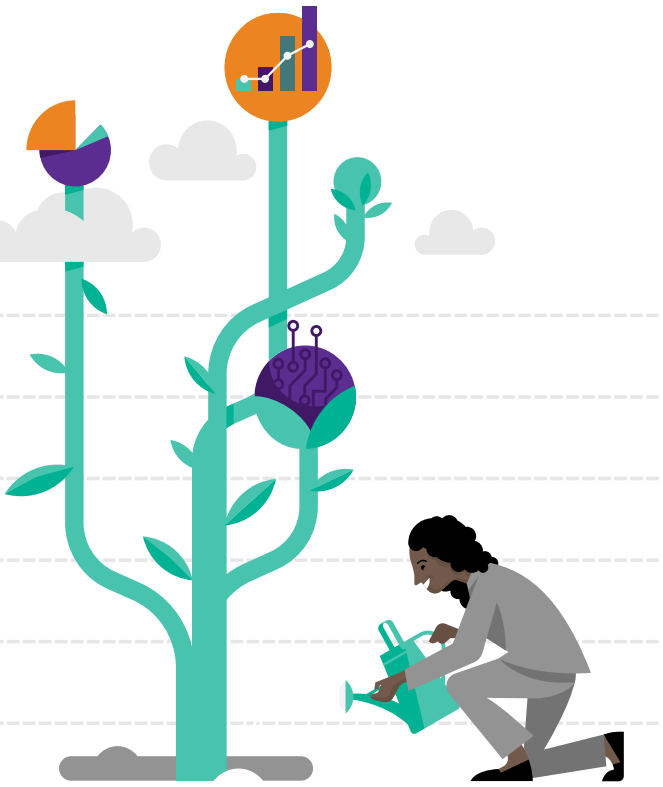

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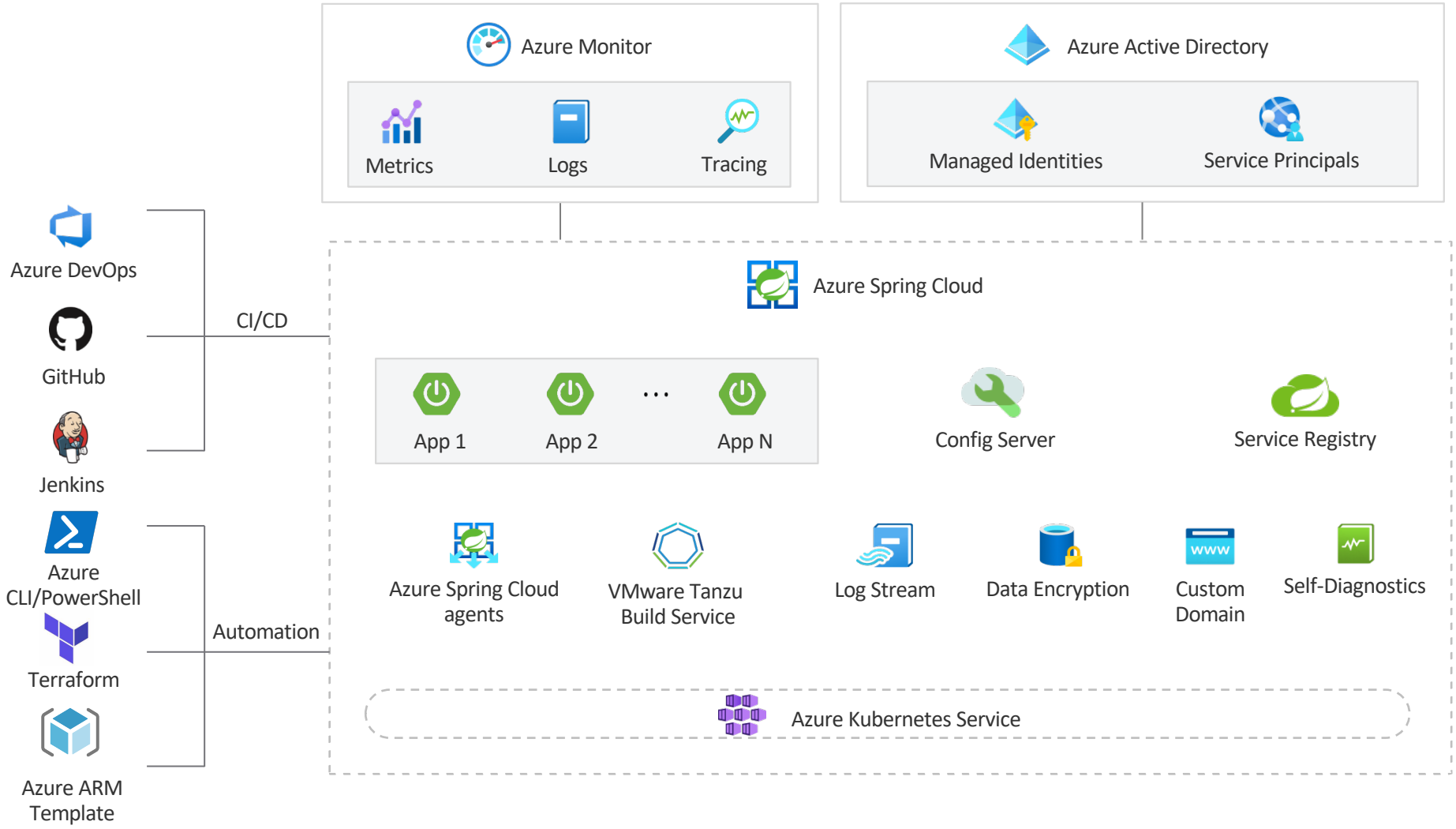
Go Azure Spring Cloud



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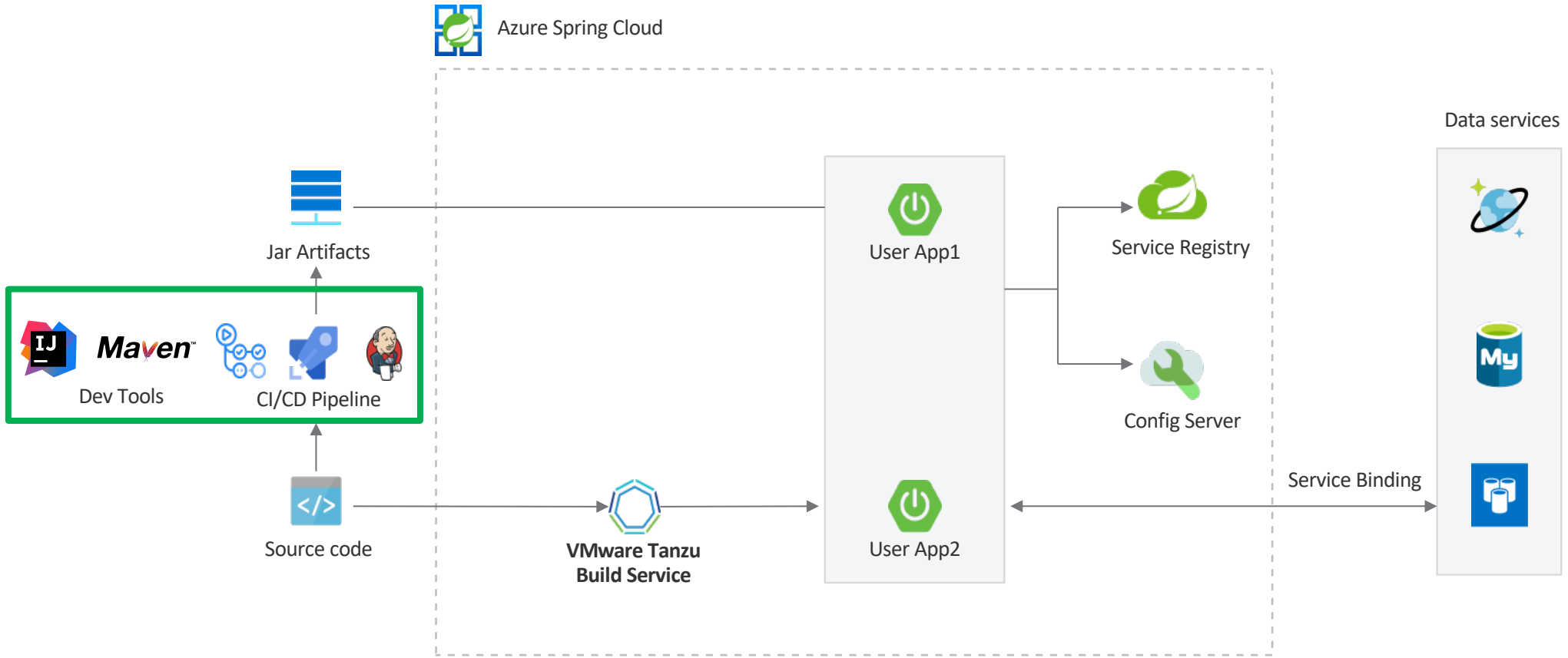
Accelerate Development



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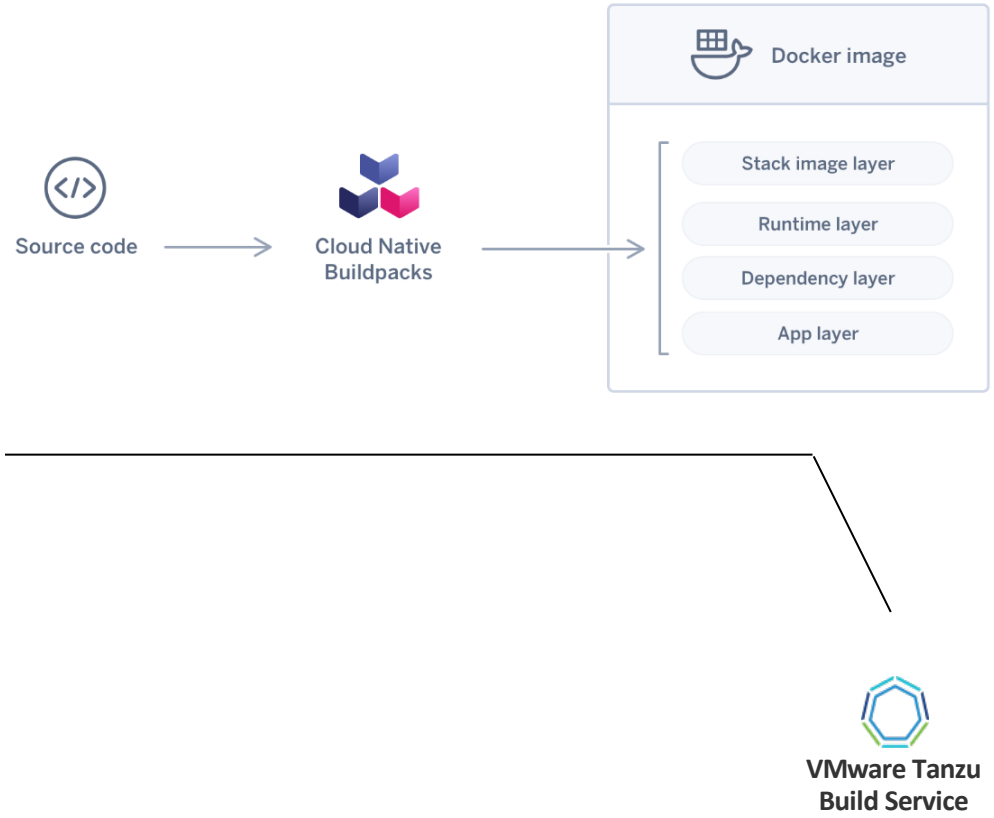
Source Code to Container



Azure Cloud Shell

kyliel@microsoft.com
MICROSOFT

Bash

```
    spring-boot: java -cp $CLASSPATH $JAVA_OPTS com.microsoft.sample.java8ASCdemo.Java8AscDemoApplication
    task:        java -cp $CLASSPATH $JAVA_OPTS com.microsoft.sample.java8ASCdemo.Java8AscDemoApplication
    web:         java -cp $CLASSPATH $JAVA_OPTS com.microsoft.sample.java8ASCdemo.Java8AscDemoApplication

Pivotal Spring Auto-reconfiguration Buildpack 1.0.85
  Spring Auto-reconfiguration 2.11.0: Contributing to layer
    Reusing cached download from buildpack
    Copying to /layers/io.pivotal.springautoreconfiguration/auto-reconfiguration
    Writing CLASSPATH to launch
Adding layer 'app'
Adding layer 'config'
Adding layer 'launcher'
Adding layer 'io.pivotal.zulu:class-counter'
Adding layer 'io.pivotal.zulu:java-security-properties'
Adding layer 'io.pivotal.zulu:jvmkill'
Adding layer 'io.pivotal.zulu:link-local-dns'
Adding layer 'io.pivotal.zulu:memory-calculator'
Adding layer 'io.pivotal.zulu:openjdk-jre'
Adding layer 'io.pivotal.zulu:security-provider-configurer'
Adding layer 'io.pivotal.jvmapplication:executable-jar'
Adding layer 'io.pivotal.springboot:spring-boot'
Adding layer 'io.pivotal.springautoreconfiguration:auto-reconfiguration'
*** Images (sha256:68733ff92b511c9ef93161a0f98e5e760367f6f70be7f0dc564125a8d07bf644):
      acrd8157c3f0ce74e8d8.azurecr.io/3d34e755b3fa4f278873e2a3bc77a209-test:d-aae83ad5ad8d8618bcdb
Caching layer 'io.pivotal.zulu:openjdk-jdk'
Caching layer 'io.pivotal.buildsystem:build-system-application'
Caching layer 'io.pivotal.buildsystem:build-system-cache'
Caching layer 'io.pivotal.buildsystem:maven'
Caching layer 'io.pivotal.jvmapplication:executable-jar'
Caching layer 'io.pivotal.springboot:spring-boot'

Log status was: 'completed'
- Running ..
```

Generate docker image

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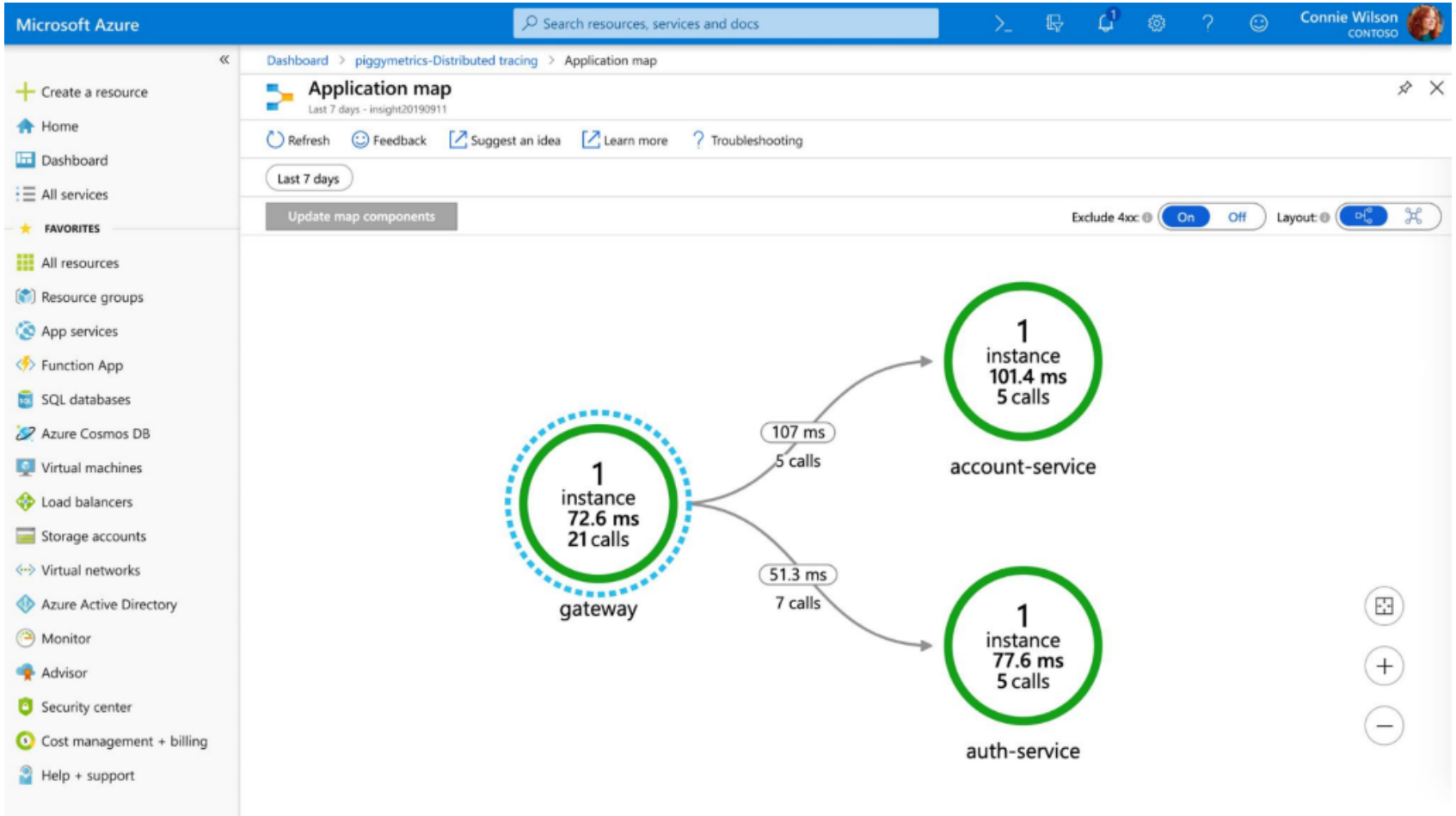
Ease of Monitoring

- System & JVM Metrics
- Log Analytics
- Real time log streaming
- Distributed Tracing
- Threshold Alerting



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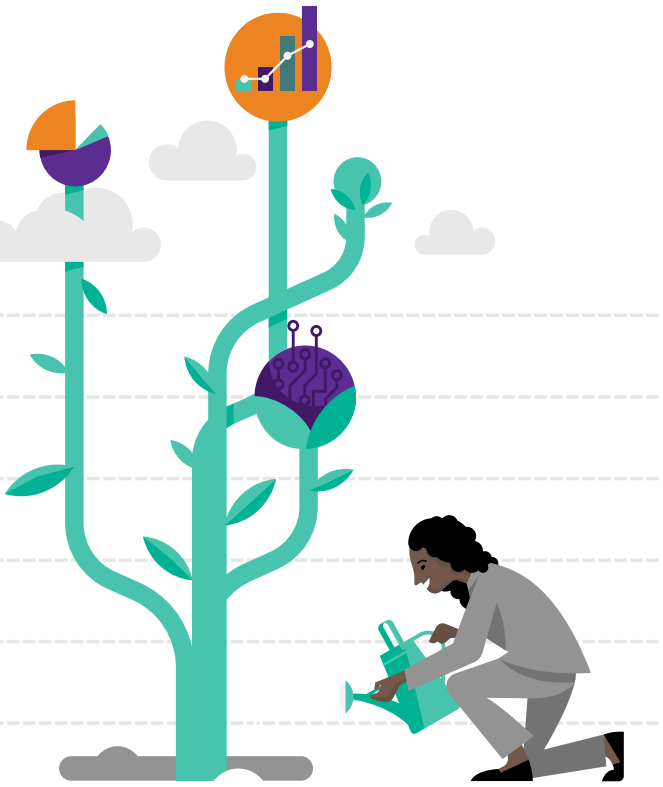

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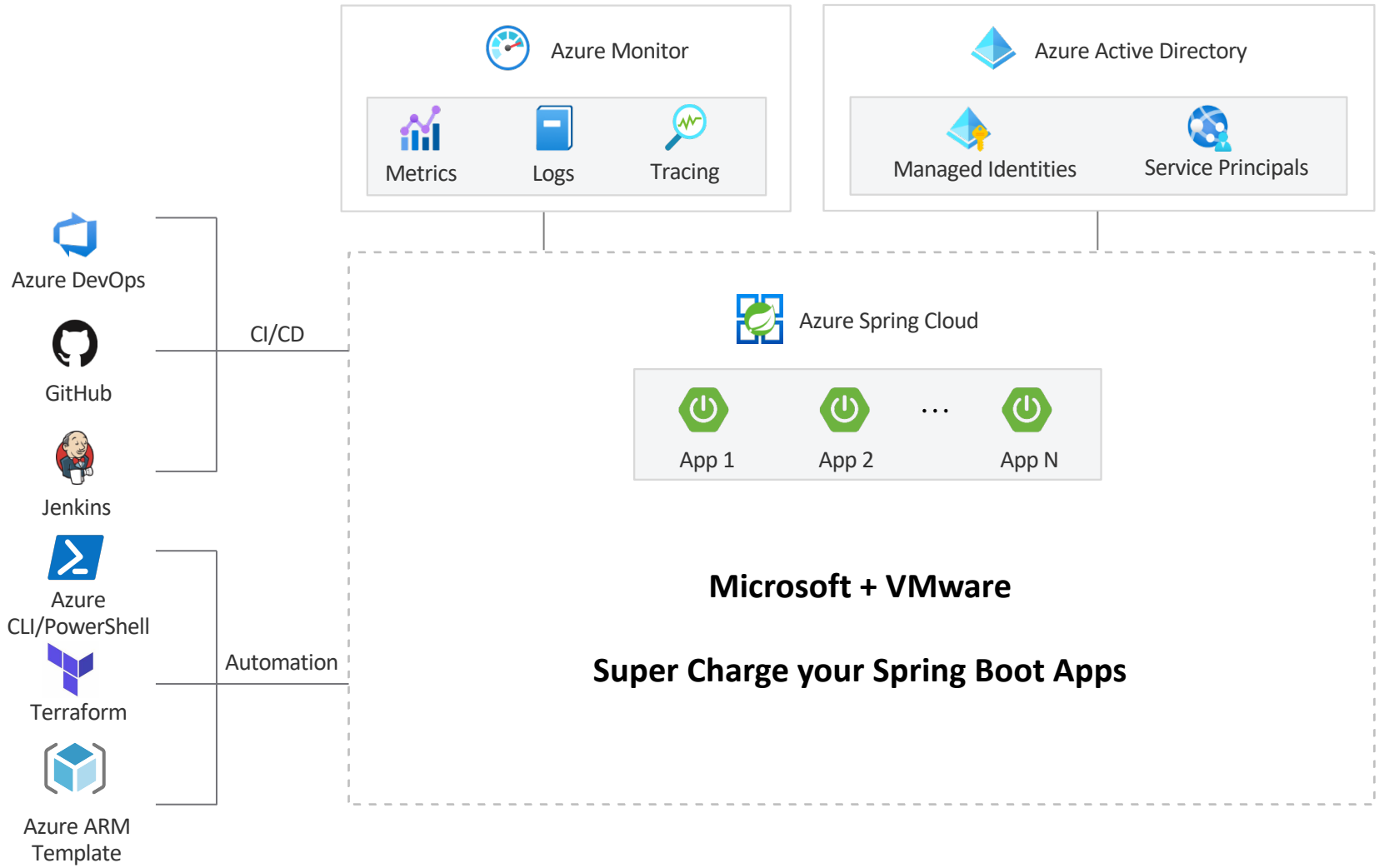
Super Charge Your Spring Boot Apps

Responsibilities	DIY with Spring Boot	Azure Spring Cloud Service
Application iteration, debugging		
CI/CD		
Build and manage Clusters		
Host Spring Cloud Middleware		
Monitoring and logging		
Scaling		
Patching		
Support		

Customer VMware Microsoft



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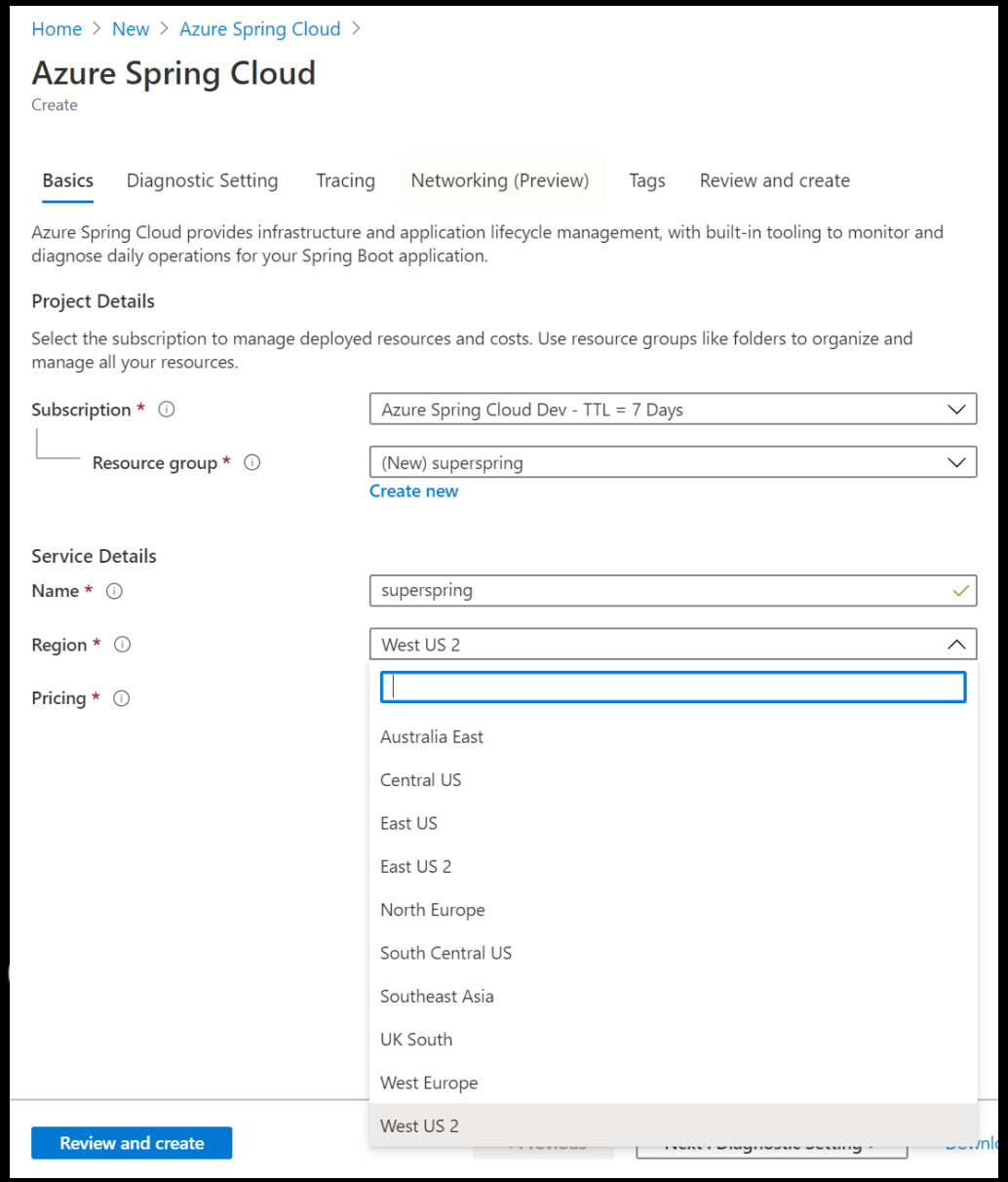
Demo



Learn More

Get started with Azure Spring Cloud

- https://aka.ms/SpringCloudDocs

Use Azure Spring starters to interact with Azure services

- https://aka.ms/SpringStarters

Learn Azure Spring Cloud with this self-paced workshop

- https://aka.ms/SpringCloudWorkshop

We listen to your feedback: http://aka.ms/springazure

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Thank You !

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