Cloud Native Java  
-  
Getting Started!

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So what’s all the buzz about „Cloud“ and „Microservices“?
And what is this talk about?
Spring Boot
Spring Boot

• Create stand-alone Spring applications
  – Embed Tomcat, Jetty or Undertow

• Convention over configuration / Auto-configuration

• Starter dependencies

• Actuator: built-in metrics and health checks
For those on reddit.com/r/java/ saying it’s Spring Boot is “the framework for a framework” here’s a diagram:
Demo
Cloud Foundry
Cloud Native Platform as a Service (PaaS)

open source | multi cloud | developer-friendly
Open source PaaS

• “Cloud Foundry is the world’s leading open source platform for cloud applications.”
  Source: https://www.cloudfoundry.org/members/

• Governed by the Cloud Foundry Foundation

• Backed by industry leaders in IT and a spectrum of end user organizations
Multi-cloud PaaS

Platform Runtime
- Routing
- Service Discovery
- Container Scheduling
- Configuration

Application Framework
- 12 Factor Apps
- Microservices
- RESTful Services
- Circuit Breakers
- Spring Boot
- Ruby on Rails
- Node.js
- .NET

Logging & Metrics
Messaging

Operations
- Zero Downtime Deployments
- Failover & Recovery
- Scaling
- Security Patching
- Platform Upgrades

Infrastructure
- VMware
- OpenStack
- Amazon
- Azure
- Cisco
- Google

Services
- Database
- Big Data
- Object Storage
- Mobile
- Continuous Integration
- User Provided

Source: https://yourdailytech.com/cloud-architecture/review-a-peek-into-pivotal-cloud-foundry/
Cloud Foundry – some public platform providers

- IBM Bluemix
- Pivotal Web Services
- Predix
- Cloud Foundry Certified
- Atos Cloud Foundry

Cloud Native Java – Getting Started!
“PCF Dev is a small footprint distribution of Pivotal Cloud Foundry (PCF) intended to be run locally on a developer machine. It delivers the essential elements of the Pivotal Cloud Foundry experience quickly through a condensed set of components.”

Source: https://pivotal.io/pcf-dev
Demo
Developer-friendly PaaS

cf push haiku
"Here is my source code. Run it in the cloud for me. I do not care how."
- @onsijoe
Cloud Native Java – Getting Further!

UI: Single Page Application

Zuul Gateway Service

User
Comments
Football Manager
Images

Spring Cloud Config

Image Resizing Service

Service Registration & Discovery

Spring Cloud Sleuth

Cloud Native Java – Getting Started!
Cloud Native Java – Getting Further!

Cloud Native Java

DESIGNING RESILIENT SYSTEMS WITH SPRING BOOT, SPRING CLOUD, AND CLOUD FOUNDRY

Josh Long & Kenny Bastani

Cloud Foundry

The Definitive Guide

DEVELOP, DEPLOY, AND SCALE

Duncan C. E. Winn
Cloud Native Java – Getting Further!

Cloud Foundry Meetups

Stuttgart:
https://www.meetup.com/de-DE/Stuttgart-Cloud-Foundry-Meetup
Cloud Native Java – Getting Further!

blog.novatec-gmbh.de

- http://blog.novatec-gmbh.de/service-discovery-eureka-cloud-foundry

spring.io

- http://spring.io/guides/gs/spring-boot
- http://projects.spring.io/spring-cloud

cloudfoundry.org

- http://docs.cloudfoundry.org/devguide/index.html

pivotal.io