

Cloud-Native Developer (CND) Java

Experience best practices building Cloud Native applications in a hands-on setting with Pivotal educators and consultants. The program is focused on enabling customers and partners through “doing it” rather than “talking about it”.

The PAL teaches developers and architects how to build and architect cloud native software and covers the following topics; Pivotal Cloud Foundry, greenfield cloud native development, end state reference architectures, replatforming, modernization.

PLATFORM ACCELERATION LAB (PAL) APPROACH

Upon completion of this course, participants will understand how implement the following:

- Understand what Cloud Foundry is, and how it runs apps
- Learn about key app-centric Cloud Foundry constructs: app, manifest, buildpack, service instance, binding, domain, route, environment variables
- Experience common impediments to running an app on Cloud Foundry, and overcome them
- Learn how to identify, codify, and make use of reusable patterns for building Cloud Native applications. Understand distributed system development/ architectures.
- Learn how to evolve monolithic apps to be Cloud Native. Understand when and how to break out microservices from the monolith.

SKU

EDU-1177

DELIVERY METHODS

Public (classroom)

Private, onsite

DURATION

Four days, instructor-led training

PREREQUISITES

Experience building and deploying modern software; i.e. TDD, CI/CD, and Refactoring.

Familiarity with design patterns, domain driven design, component based architecture, and evolutionary architecture

Experience developing apps using: Java 6 and above, Java Enterprise Edition, Java/ Spring.

TARGET AUDIENCE

Developers and Lead Developers

MORE INFORMATION

Please contact

platform-acceleration-lab@pivotal.io for more information.

SUBJECTS AND SCHEDULE

CLOUD FOUNDRY, SPRING BOOT, CI

Best Practices / Architecture

- 12-Factor applications
- Domain Driven Design
- Evolutionary Architecture
- Test First Development (TDD)

Pivotal Cloud Foundry Concepts

- Applications
- Buildpacks
- Manifests
- Organizations and Spaces
- Users and Roles
- Domains and Routes
- Services
- Environment variables

Continuous Delivery / Integration

- Build Pipelines

Microservices

- Resilience
- Scaling
- Deployment
- Replaceability
- Organization Alignment
- Service Versioning
- Service Reuse

SPRING CLOUD SERVICES

- Service Discovery
- Service Configuration
- Cascading Failures
- Service Security
- Service Monitoring

Spring Boot Developer

Pair rotation guide

Building a Spring Boot app

Deploy a Spring Boot app to Cloud Foundry

Deployment Pipelines for multiple environments

Spring MVC with REST endpoints

Cloud Foundry Services & Database migrations

Spring JDBC template

Spring Boot Actuator

HTTP Basic authentication and SSL with Spring Security

Architecture

The Application Continuum

Spring Cloud Developer

Deploying distributed systems

Service discovery and client-side load balancing

Circuit breakers

Securing a distributed system

Config server

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