Cloud-native application architectures and processes are becoming a proven strategy to enable fast delivery of business value.

Spring Boot and Spring Cloud are a powerful combination for building modern cloud-native application architectures that leverage industry battle-tested Spring ecosystem and 3rd party solutions to solve the accompanying problems of scaling, availability and fault tolerance.

The 3-day Spring Cloud Developer course provides participants with an in-depth coverage of cloud-native and microservices patterns using Spring Cloud and Netflix components to help solve challenges associated with running distributed, cloud-native applications over a microservices architecture.

PIVOTAL TRAINING APPROACH
Upon completion of this course, participants will be able to:

- Examine Problems of Distributed Systems and the associated Fault Tolerance patterns
- Examine how Distributed applications contribute to development and runtime of Cloud Native REST applications
- Examine how Distributed applications impact software systems fault tolerance
- Examine development impacts of implementing Spring Cloud solutions
- Contrast the benefits and trade-offs of Spring Cloud solutions
- Implement Spring Cloud solutions

SKU
EDU-1102

DELIVERY METHODS
Instructor-led

DURATION
Three days of instructor-led training

PREREQUISITES
This course assumes you have significant Java experience, and one of the following:
Completion of the Pivotal Platform Acceleration Lab for Developers (Java) course,
Completion of Pivotal’s Spring Core or Spring Boot course or
Spring Boot experience

TARGET AUDIENCE
Developers interested in learning how to construct scalable and fault-tolerant cloud-native applications using the Spring Cloud family of projects.

MORE INFORMATION
On-site training is also available for customers who prefer to bring a Pivotal Certified Instructor to their own facilities For more information about on-site classes, contact us at pivotal.io/training/contact.
COURSE MODULES

INTRODUCTION
- Spring Cloud Introduction

DISTRIBUTED APPLICATION
- Application Continuum
- Spring Cloud Dependencies

EXTERNAL CONFIGURATION
- External Configuration
- Spring Cloud Config Server
- Distributed Updates
- Vault Backend

SERVICE DISCOVERY
- Service Registry Pattern
- Eureka Service Registry
- Service Discovery Clients
- Eureka Server REST Operations

CLIENT LOAD BALANCING
- Load Balancing Patterns
- Load Balancing Client
- Load Balancing with Ribbon

FAULT TOLERANCE
- Fault Tolerance Patterns
- Config Server Fault Tolerance
- Eureka Client Health Check
- Liveness Check with Ribbon
- Retry with Ribbon
- Circuit Breaker
- Timeouts
- Trusted Clients
- Bulkheads through Load Shedding
- Telemetry Stats Aggregation

DISTRIBUTED TRACE
- Generation of Distributed Trace with Sleuth
- Visualization of Distributed Trace with Zipkin
TERMS AND CONDITIONS
By procuring these services, Customer agrees that the terms and conditions set forth here: https://pivotal.io/training/terms are incorporated by reference into this Training Brief and shall govern the provision of Pivotal’s Services herein, unless Customer has a signed applicable agreement with Pivotal (“Terms”).

You may not record the training in any medium, nor may you reproduce, copy, or distribute any Course Materials, (as defined in the Terms), provided pursuant to or in conjunction with the Training Services. Pivotal will determine the personnel assigned to perform the Training Services.

EXPIRATION POLICY
Customer shall have twelve (12) months from the date of Pivotal’s invoice to use the Services described herein (“Service Period”). The Services automatically expire on the last day of the Service Period, unless otherwise approved by Pivotal. Under no circumstances shall Customer be entitled to a credit or refund of any unused portion of the Services. In the event that the Customer believes that the Services outlined herein were not completed, the Customer is required to notify Pivotal in writing at least 30 days prior to the expiration of the Service Period.

DELIVERY POLICY
By Pivotal: Pivotal reserves the right to cancel or reschedule any instructor-led class. If a cancellation or reschedule is necessary, Pivotal will make every effort to notify you at least 10 business days in advance. Unfortunately, last-minute cancellations and rescheduling sometimes require this notification period to be less than 10 business days. Please consider this when making your travel plans. Pivotal will not, in any way, be held responsible for any costs, including loss of airfare or other transportation costs, hotel expenses, or other damages that you may incur in the event that Pivotal cancels or reschedules a class.

By Customer: Customer is permitted to cancel or reschedule the Pivotal Training class at least 10 business days prior to the class start date. If notice is received within 1-9 business days prior to the start date, a penalty of 50% of the course value will be applied. If notice is received on the course start date a penalty of 100% of the course value will be applied. Cancellations and request to reschedule must be submitted in writing to education@pivotal.io.

INVOICING SCHEDULE
Invoices are issued upon Pivotal’s receipt and approval of the Customer’s purchase order. Customer authorizes Pivotal to invoice for, and shall pay additional amounts related to, changes or exceptions to the Services. The Services described in this document are performed on a fixed price basis at the fees specified on the applicable Pivotal quote. For purchases made through the Pivotal Education Store, full payment is due at the time of purchase.

SCOPE CHANGE POLICY
Any changes to the Offering Details must be mutually agreed upon by Pivotal and the Customer in writing. Depending on the scope of such changes, Pivotal may require that a separate Statement of Work be executed by the parties detailing the changes, the impact of the proposed changes on the charges and schedule, and other relevant terms.
BUSINESS HOURS
Training Services shall be performed by Pivotal from 9:00 A.M. until 5:00 P.M. in the local time zone where the Training Services are being performed by Pivotal, Monday through Friday excluding local statutory holidays (for example, within the State of California for Pivotal’s US employees), and any additional holidays that Pivotal grants to its employees, a list of which can be provided by Pivotal to you prior to the commencement of Training Services.