Cloud Foundry Developer

This course provides students with the concepts and experience needed to work with and deploy applications on Cloud Foundry, the foundation of the Pivotal Platform Application Service. Students will gain experience in pushing apps to Cloud Foundry, accessing logs, and scaling. Students will explore topics directly related to the design and running of cloud native applications, including microservice architectures, blue-green deployments, and continuous delivery. This course prepares students for the Cloud Foundry Foundation Developer certification exam.

PIVOTAL TRAINING APPROACH

At the end of the training, you should have an understanding of the following:

- Understand the differences between traditional IT provisioning, Infrastructure as a Service and Platform as a Service
- Explain organizations, spaces, routes, services (managed, user defined), manifests, buildpacks, applications and droplets
- Identify Cloud Foundry components: Router, Cloud Controller, Health Manager, Loggregator and Cells
- Deploy pre-existing applications to Cloud Foundry, obtain logs, debug deployment issues, scale, start, stop, bind to services
- Use the command-line interface to work with Cloud Foundry
- Understand the impact of the cloud environment on application architecture
- Perform zero-downtime deployments
- Understand the role of services in Cloud Foundry, gain experience using one or more examples
- Understand the purpose of buildpacks, gain experience specifying buildpacks and making configuration changes
- Understand and gain experience with 3rd party log management, Application Performance Monitoring, and
- Continuous Delivery tools that integrate with Cloud Foundry.

SKU
EDU-1092

DELIVERY METHODS
Instructor-led: private and public offerings are available

DURATION
Instructor-led: 3-days

PREREQUISITES
Understanding of application development and deployment. This course is aimed at developers regardless of your development language of choice. No specific programming language is needed or assumed.

TARGET AUDIENCE
Application developers seeking introductory understanding of Cloud Foundry and experience using it to deploy, manage, and scale applications.

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.

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COURSE MODULES

AN INTRODUCTION TO CLOUD FOUNDRY

- Evolution of Cloud Architectures
- Industry Trends
- Cloud Foundry

LOGGING, SCALE AND HA

- Cloud Native Apps
- Elastic Runtime Architecture
- High Availability

SERVICES

- Cloud Native Apps
- Managed Services
- User Provided Service Instances

MANIFESTS

- Using Manifests

APPLICATION SECURITY GROUPS

- Managing Application Security Groups

LOG DRAINING

- Cloud Native Apps
- Loggregator Review

BLUE-GREEN DEPLOYMENTS

- Blue-Green Routing
- Implications App Design

MICROSERVICES

- The Monolith
- Microservices

BUILDPACKS

- Buildpack API

SERVICE BROKERS

- Service Broker API

CONTINUOUS DELIVERY

- Continuous Delivery Defined
- How Cloud Foundry Enables Continuous Delivery

ROUTE SERVICE

- Purpose
- Request Flow

ADVANCED TOPICS

- TCP Routing
- Cascading failure
- Distributed tracing

SECURITY

- Securing applications with UAA and OAuth2
- Using route services for authentication

TERMS AND CONDITIONS

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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.

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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.

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