Iverson Associates Sdn Bhd (303330-M)
Suite T113 – T114, 3rd Floor, Centrepoint, Lebuh Bandar Utama
Bandar Utama, 47800 Petaling Jaya, Selangor Darul Ehsan
Tel: 03-7726 2678   Fax: 03-7727 9737   Website: www.iverson.com.my

Course Outline :: Cloud Foundry Developer::

Module Title	:	**Cloud Foundry Developer**
Duration	:	**3 days**

OVERVIEW

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 Pivotal 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.

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.

Iverson Associates Sdn Bhd (303330-M)
Suite T113 – T114, 3rd Floor, Centrepoint, Lebuh Bandar Utama
Bandar Utama, 47800 Petaling Jaya, Selangor Darul Ehsan
Tel: 03-7726 2678   Fax: 03-7727 9737   Website: www.iverson.com.my

Course Outline :: Cloud Foundry Developer::

TARGET AUDIENCE

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

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