



## Developing Cloud-Native Applications for Bluemix Information

<b>Length:</b>	2.0 Days
<b>Ref:</b>	CK102G-X
<b>Delivery method:</b>	ClassroomInstructor Led Online
<b>Price:</b>	AUD

### Overview

This course shows you how to design and develop cloud-native applications, ones that aren't just cloud ready or cloud hosted but that take maximum advantage of the cloud. It teaches practices for developing cloud applications, using Java EE as the primary programming language. You also learn how to deploy these applications using Bluemix, with its platform capabilities, PaaS capabilities, and its services.

### Public

This course is designed for application developers who are responsible for designing and building applications in cloud-based environments, such as IBM Bluemix.

### Prerequisites

Before taking this course, you should have the following skills:

- Basic Java EE architecture and development skills
- Basic cloud concepts

### Objective

After you complete this course, you can perform the following tasks:

- Explain in detail the characteristics of a cloud-native application
- Describe Cloud Adoption Pattern to use application in cloud
- List the twelve factors for application in cloud
- Apply best practices to architect a cloud-native application using Java EE
- Design microservices as the building block for your application
- Use various data sources that can be used by your Bluemix application
- Describe and apply security for your cloud-based application

### Topics

Introduction to cloud native application development

## **Introduction to cloud-native application development**

- Developer roles in Bluemix
- Cloud-native application characteristics
- Course roadmap and positioning

## **Cloud adoption patterns**

- Introduction
- Adoption process
- Application architecture
- DevOps
- Deployment
- Hybrid connectivity

## **The twelve-factor application**

- The twelve factors
- Twelve-factor details

## **Developing applications for IBM Bluemix**

- Introduction to WebSphere Liberty
- Liberty development environment and tooling
- State in cloud applications
- Improving performance in Bluemix with data caching
- Application scaling on IBM Bluemix

## **Developing applications by using microservices**

- Introduction to microservices
- Application architecture evolution
- Microservices component architecture
- Microservices integration
- Refactoring to microservices
- Developing microservices

## **Data management**

- IBM DB2 on Cloud
- PostgreSQL
- Cloudant
- Object storage
- Data transformation

## **Security**

- Terminology
- Java Enterprise security model
- Application security enforced in code
- External authentication
- Bluemix single sign-on