



Professional Cloud Developer

Duration 3 Days



PROFESSIONAL
CLOUD
DEVELOPER

COURSE DESCRIPTION

A thorough understanding of the technology platform and cloud-computing provider is essential for any cloud application developer. However, application developers benefit further from having a thorough understanding, and working-level knowledge, of vendor-neutral application design principles, ensuring that applications provide the most value throughout the application lifecycle.

The Cloud Developer course is for application developers who are designing and developing applications for cloud environments. This training is delivered as a 3-day classroom or virtual classroom program. The training covers best practices on application design for cloud environments and supports many vendor technology solutions, covering Open Source and major Vendor Standards. The principles covered in the course apply to the entire application lifecycle, and are relevant to any technology or platform.

The course material includes various reference materials that help to continue participants' educational experience when they are back at work after completion of the course. The course prepares candidates for the Professional Cloud Developer Certification (PCD) Exam provided by the Cloud Credential Council. The PCD is endorsed, recognized and supported by several key technology vendors and standards bodies. The content for this course, as well as the PCD certification is based on the cloud standards developed by NIST.

AUDIENCE

The Professional Cloud Developer course will be of interest to:

- Application Developers
- Cloud Architects

LEARNING OBJECTIVES

At the end of this course, the participant will gain competencies in and be able to:

- Understand Cloud Architecture Patterns, caching, RESTful services and session management, together with security and compliance fundamentals in cloud.
- Apply and analyze knowledge about database integrations, messaging in cloud environment, and scalable coding.
- Understand development monetization techniques and license models.
- Apply knowledge about semantic web and ontologies.
- Understand development and deployment in IaaS
- Understand tenant aware application development, interoperable cloud code and application architecture models in PaaS
- Understand Software development in SaaS, Development of APIs and Mashups together with understanding of cloud service catalogues and application marketplaces.

BENEFITS OF TAKING THIS COURSE

The course allows IT professionals to operate effectively in a cloud environment as they can demonstrate an understanding of the key concepts and relevant terminology. It furthermore provides the foundation needed in order to successfully complete subsequent vendor-specific training/certification programs and also provides a baseline for the subsequent CCC Professional level certifications.

Participants report that this training allows them to better communicate with their peers on cloud benefits and risks, and that they are in a better position to evaluate vendor proposals for cloud computing.

PREREQUISITES

There are no formal prerequisites; however, it is recommended that participants are knowledgeable in programming languages such as Java, PHP, JavaScript, etc. (and that participants are conversant with Cloud concepts and vocabulary). Participants further benefit from a strong background in application design and development.



COURSE OUTLINE

Module 1: Course Introduction

Module 2: Cloud Architecture Patterns

- Cloud Overview
- Multi-Form and Platform Factors
- Understand Cloud Caching
- RESTful vs. RESTless Services
- Stateful vs. Stateless Services
- Designing to Expect Failure
- Bulk API for Bulk Data Uploads with Locking Mechanism
- Foundational Knowledge About Cloud Parsers

Module 3: Service Modularity, Encapsulation, and Orchestration

- Migration and Encapsulation of Existing Legacy Apps to a Cloud Platform Where Possible
- Expose Business Logic as a Web Service
- Cloud Messaging
- Integration of Database as a Service
- Transactional Coding in the Cloud
- DevOps vs. NoOps

Module 4: Development Monetization Techniques

- License Models Comparison
- Developing for Cost
- Hidden Cost of Cloud Development
- Software License Models
- License Acquisition Scenarios
- Insource Outsource and CrowdSource
- Monetizing Apps via Application Markets

Module 5: Cloud Security and Compliance

Fundamentals

- OAuth, SAML, and SSO supported in Cloud Environments
- Integration with Identity as a Service (IDaaS)
- Security at Every Layer
- Custom Security Roles
- Encryption and Anonymization Techniques
- Developing for Compliance

Module 6: Metadata and Semantic

- Semantic Fundamentals
- OWL/RDF
- Open Metadata and Metadata API

Module 7: Deployment and Testing in the Cloud

- Cloud Testing Goals
- Generic Stages of Cloud and Non-Cloud Testing and Development Life Cycles
- Utilization of Crowdsourcing for Massive Cross-Platform Testing

- Cloud Testing Automation
- Cloud Component, Package, and Solution Testing

Module 8: Scalable Coding

- Polyglotism or Coding Languages in the Cloud
- Designing to Handle Massive Success
- Performance Engineering for Scalability, Reliability, and Recovery

Module 9: IaaS: Deployment Automation and Elastic Sizing of Environments

- Service/Application Deployment into Public, Private, and Community Clouds
- Automated Cloud Bursting

Module 10: PaaS: Tenant-Aware Application Development

- Understand Differences Between Native PaaS and CePaaS
- Multi-Tenant Resource Sharing, Isolation, and Customization Mechanisms
- Tenant-Aware Error Tracking
- Multi-Tenant Data Access Controls
- Platform Scalability and Importance of Open Platform APIs

Module 11: PaaS: Application Architecture Models

- Open Source and Technology Driven PaaS
- Cloud Enabled Data Access Frameworks

Module 12: PaaS: Interoperable Cloud Code

- Understand Device Based Platforms
- Interoperable Platforms
- Code Share: Sharing Source Code Across Organizations
- Cloud Persistence Coding

Module 13: SaaS: Cloud Service Catalogs and Application Marketplaces

- Developing Apps as SaaS solutions for Deploying to App Stores
- Cross-Platform Application Cloud Catalogs
- Developing Apps as SaaS Solutions for Single and Multi-Tenancy Models
- BYOD Concepts

Module 14: SaaS: Mashups and Open APIS

- API Development
- Mashups
- Mobile Coding
- Understanding Social APIs
- Understand Major Open APIs
- Module 15: Exam Preparation Guide
- Mock Exam

ABOUT THE EXAM

- **Exam Format:** Web based, Closed Book
- **Question:** 25 questions
- **Pass score:** 65%
- **Duration:** 60 minutes. For non-native English speakers an additional 15 minutes is available.