

DevOps Continuous Delivery Architect (CDA) Certificate Program

Course Summary

Description

A continuous delivery architect is a tool-agnostic individual engaged in the design, implementation, and management of DevOps deployment pipelines and toolchains that support Continuous Integration, Continuous Delivery, Continuous Testing and, potentially, Continuous Deployment. A continuous delivery architect is also involved in defining or integrating underpinning processes, metrics, APIs and cultural considerations.

A DevOps Continuous Delivery Architect program prepares IT Professionals with the broad-based competencies required to architect and orchestrate effective and efficient automated deployment pipeline.

Objectives

After taking this course, students will understand:

- The principles of Continuous Integration and Continuous Deployment
- Continuous Delivery vs. DevOps Continuous Integration practices
- Extending Continuous Integration to Continuous Deployment
- Principles for architecting a deployment pipeline
- Engaging Ops in Continuous Delivery
- Testing and continuous delivery
- Security and continuous delivery
- Continuous deployment and automated release
- Cultural and people consideration
- Change resistance
- Metrics Critical Success Factors, Risks, and Challenges
- Getting started

Topics

- Course Introduction
- CDA Concepts
- CDA Culture
- Design Practices for Continuous Delivery
- Continuous Integration
- Continuous Testing
- Continuous Delivery and Deployment
- Continuous Monitoring
- Infrastructure and Tools
- Security Assurance
- Capstone exercise
- Summary
- Additional Sources of Information
- Exam Preparations

Audience

- Enterprise architects
- Software developers
- Build engineers
- Release managers and engineers
- Operational and infrastructure teams
- Security professionals
- Testers and QA managers
- IT Managers
- Project Managers
- Maintenance and support staff

DevOps Continuous Delivery Architect (CDA) Certificate Program

Course Summary (cont.)

Prerequisite

- DevOps Foundation level certification
- Successful exam candidates will be designated as “Continuous Delivery Architects” and will be issued a certificate and digital badge.

Duration

Two Days

DevOps Continuous Delivery Architect (CDA) Certificate Program

Course Outline

I. *Course Introduction*

- A. Course goals
- B. Course agenda

II. *CDA Concepts*

- A. Continuous delivery (CD) definition
- B. Architecting for continuous delivery
- C. Continuous delivery and DevOps
- D. Relationships between CD, Waterfall, Agile, ITIL, and DevOps
- E. Benefits of continuous deliver

III. *CDA Culture*

- A. Importance of culture to the CD Architect
- B. What a CD Architect can do about culture
- C. How to maintain culture
- D. Assignment: DevOps culture and practices to create flow

IV. *Design Practices for Continuous Delivery*

- A. Why design is important to continuous delivery
- B. CD Architect's role in design
- C. Key design principles
- D. CD best practices
- E. Microservices and containers

V. *Continuous Integration*

- A. Continuous integration (CI) defined
- B. CD Architect's role in CI
- C. Importance of CI
- D. Benefits of CI
- E. CI best practices
- F. Assignment: Optimizing CI workflows

VI. *Continuous Testing*

- A. Continuous testing (CT) defined
- B. Importance of CT
- C. Benefits of CT
- D. CD Architect's role in CT
- E. Five tenets of CT
- F. CT best practices
- G. Assignment: Handling environment inconsistencies

VII. *Continuous Delivery and Deployment*

- A. Continuous delivery defined
- B. Continuous deployment defined
- C. Benefits of continuous delivery and deployment
- D. CD Architect's role in continuous delivery and deployment
- E. Continuous delivery and deployment best practices
- F. Assignment: Distinguishing continuous delivery and deployment

VIII. *Continuous Monitoring*

- A. Continuous monitoring defined
- B. Importance of continuous monitoring
- C. CD Architect's role in continuous monitoring
- D. Continuous monitoring best practices
- E. Assignment: Monitoring build progress

IX. *Infrastructure and Tools*

- A. Importance of infrastructure and tools
- B. CD Architect's role in infrastructure and tools
- C. Building a DevOps toolchain
- D. Infrastructure/tools best practices
- E. Assignment: identifying common infrastructure/tool components

X. *Security Assurance*

- A. Importance of security assurance
- B. DevSecOps and Rugged DevOps defined
- C. CD Architect's role in security
- D. Security best practices
- E. Assignment: Applying security practices

XI. *Capstone exercise*

- A. Identifying toolchain and workflow improvements

XII. *Summary*

XIII. *Additional Sources of Information*

XIV. *Exam Preparations*

- A. Exam requirements
- B. Sample exam review