DevOps Continuous Delivery Architect (CDA)™

Overview

This course is designed for participants who are 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. The course highlights underpinning processes, metrics, APIs and cultural considerations with Continuous Delivery. Key benefits of Continuous Delivery will be covered including increased velocity to assist organizations to respond to market changes rapidly, thus being able to outmaneuver competition, reduce risk and lower costs while releasing higher quality solutions. Increased productivity and employee morale by having more activities performed by pipelines instead of humans so teams can focus on vision while pipelines do the execution.

Prerequisite Comments

The DevOps Foundation certification is a prerequisite for Continuous Delivery Architecture to ensure participants are aligned with the baseline DevOps definitions and principles.

Target Audience

The target audience for the Continuous Delivery Architecture course is anyone interested in learning about the principles of Continuous Integration and Continuous Delivery, such as:
Build Engineers
Enterprise Architects
IT Managers
Maintenance and Support Staff
Operational and Infrastructure Teams
Project Managers
QA Managers
Release Managers and Engineers
Software Developers
Security Professionals
Testers

Course Objectives

The learning objectives for CDA include a practical understanding of:
Goals, history, terminology, and pipeline
The importance, practices, and transformation of a DevOps collaborative culture
Design practices, such as modular design and microservices
Continuous Integration (CI), such as version control, builds, and remediation
Tenets and best practices of Continuous Testing (CT)
Continuous Delivery and Deployment (CD): packaging, containers, and release
Continuous Monitoring (CM): monitoring and analysis infrastructure, process, and apps
Infrastructure and tools: frameworks, tools, and infrastructure as code
Security Assurance: DevSecOps
The opportunity to hear and share real-life scenarios

Course Outline

Course Introduction

Course goals
Course agenda

CDA Concepts

Continuous delivery (CD) definition
Architecting for continuous delivery
Continuous delivery and DevOps
Relationships between CD, Waterfall, Agile, ITIL, and DevOps
Benefits of continuous delivery

CDA Culture

Importance of culture to the CD Architect
What a CD Architect can do about culture
How to maintain culture
Assignment: DevOps culture and practices to create flow

Design Practices for Continuous Delivery

Why design is important to continuous delivery
CD Architect’s role in design
Key design principles
CD best practices
Microservices and containers

Continuous Integration

Continuous integration (CI) defined
CD Architect’s role in CI
Importance of CI
Benefits of CI
CI best practices
Assignment: Optimizing CI workflows

Continuous Testing

Continuous testing (CT) defined
Importance of CT
Benefits of CT
CD Architect's role in CT
Five tenets of CT
CT best practices
Assignment: Handling environment inconsistencies

Continuous Delivery and Deployment

Continuous delivery defined
Continuous deployment defined
Benefits of continuous delivery and deployment
CD Architect's role in continuous delivery and deployment
Continuous delivery and deployment best practices
Assignment: Distinguishing continuous delivery and deployment

Continuous Monitoring

Continuous monitoring defined
Importance of continuous monitoring
CD Architect's role in continuous monitoring
Continuous monitoring best practices
Assignment: Monitoring build progress

Infrastructure and Tools

Importance of infrastructure and tools
CD Architect's role in infrastructure and tools
Building a DevOps toolchain
Infrastructure/tools best practices
Assignment: identifying common infrastructure/tool components

Security Assurance

Importance of security assurance
DevSecOps and Rugged DevOps defined
CD Architect's role in security
Security best practices
Assignment: Applying security practices

Capstone exercise

Identifying toolchain and workflow improvements

Summary

Additional Sources of Information

Exam Preparations

Exam requirements
Sample exam review