

AN INTRODUCTION TO

CI/CD PIPELINES



CI/CD CONCEPTS

What is
continuous
Integration
(CI)?

What is
continuous
Deployment
(CD)?

Benefits of
continuous
Integration
(CI)?

Benefits of
continuous
Deployment
(CD)?



What are

**Continuous Integration and
Continuous Deployment ?**

Continuous Integration

The practice of merging all developers' working copies to a shared mainline several times a day to avoid conflicts in the code.

Continuous Deployment

A software engineering approach in which a value is delivered frequently through automated deployments.



What are the benefits of CICD?

Benefits of CI/CD

CI/CD Language	Captured Value	Translation
Catch Compile Errors After Merge	Reduce Cost	Less developer time on issues from new developer code
Catch Unit Test Failures	Avoid Cost	Less bugs in production and less time in testing
Detect Security Vulnerabilities	Avoid Cost	Prevent embarrassing or costly security holes
Automate Infrastructure Creation	Avoid Cost	Less human error, Faster deployments
Automate Infrastructure Cleanup	Reduce Cost	Less infrastructure costs from unused resources
Faster and More Frequent Production Deployments	Increase Revenue	New value-generating features released more quickly
Deploy to Production Without Manual Checks	Increase Revenue	Less time to market
Automated Smoke Tests	Protect Revenue	Reduced downtime from a deploy-related crash or major bug
Automated Rollback Triggered by Job Failure	Protect Revenue	Quick undo to return production to working state