

Fundamentals and Benefits of CI/CD to Achieve, Build, and Deploy Automation for Cloud-Based Software Products

Udacity Cloud DevOps Project 3 Presentation

Fundamentals

- Establish integration:** It's an automated process that allows multiple developers to contribute software components to the same project without integration conflicts.
- Test:** Checking the quality of the code whenever a software change is integrated into the repository.
- Deploy when ready:** Automatically releasing a developer's changes from the repository to production, where it is usable by customers.
- Monitor:** Continuous check on the infrastructures created for possible faults and collection of log data which would be used to prevent future occurrences.

Benefits

- Faster and More Frequent Production Deployments

Increase Revenue

New value-generating features released more quickly

- 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

- Deploy to Production Without Manual Checks

Increase Revenue

Less time for product to get to the 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

- Catch Compile Errors After Merge

Reduce Cost

Less developer time on issues from new developer code