

Fundamentals of CI/CD and Benefits of CI/CD

What are the objectives?


1. What is Continuous Integration, Continuous Delivery and Continuous Deployment .

2. Understand the stages of CI/CD pipeline.


3. What are the benefits of CI/CD to the organization?

1. What is Continuous Integration, Continuous Delivery and Continuous Deployment ?

1. Continuous Integration(CI) is a DevOps software development practice where developers regularly merge their code changes into a central repository, after which automated builds and tests are run.

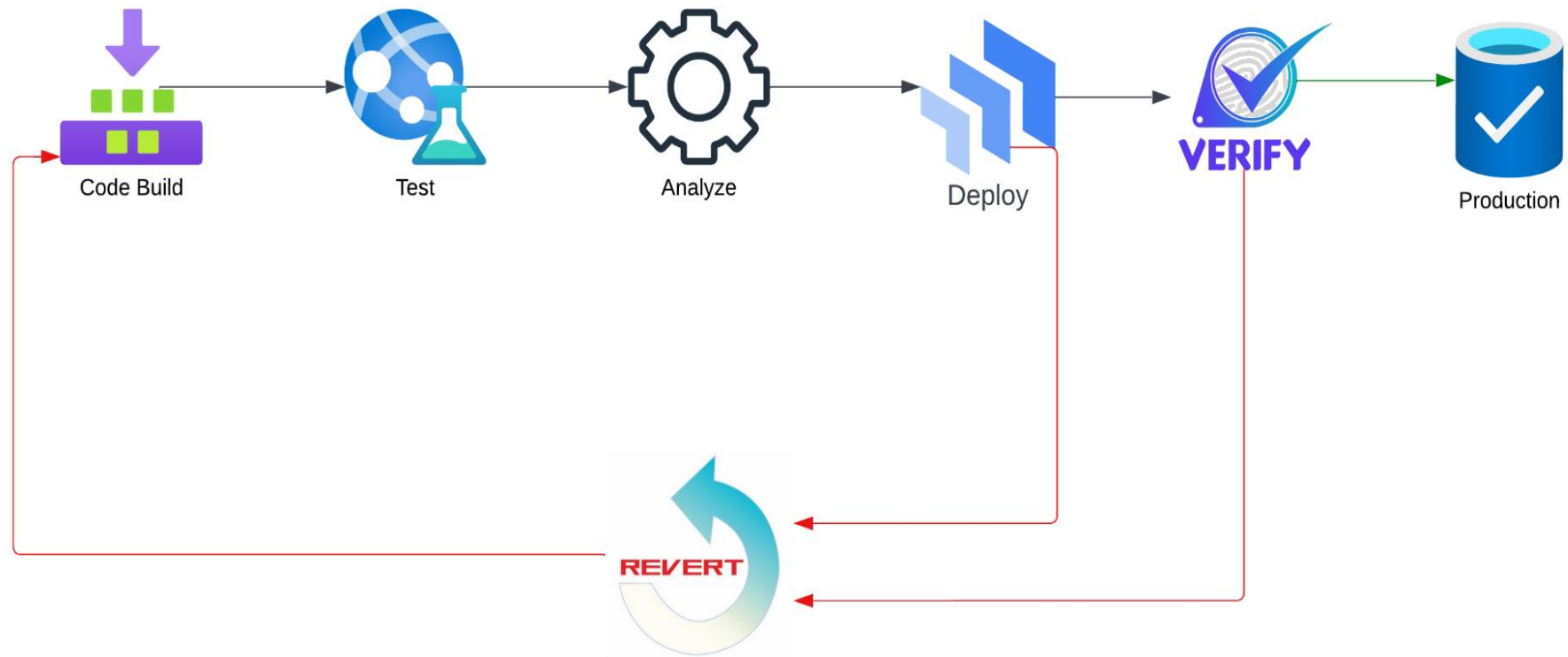


2. Continuous Delivery(CD) is a software development practice where code changes are automatically prepared for a release to production in short circles.



3. Continuous Deployment(CD) is a strategy for software releases wherein any code commit that passes the automated testing phase is automatically released into the production environment, making changes that are visible to the software's users.

The Stages of CI/CD Pipeline



3. What are the benefits of CI/CD to the organization?

Technical Language	Value to the organization	Translation
✓ Catch compile errors after merge	✓ Cost Reduction	✓ Less time spent on issues from new developer code.
✓ Catch unit test failures	✓ Avoid Cost	✓ Less bugs in production less time in testing.
✓ Detecting security vulnerabilities	✓ Avoid Cost	✓ Prevent embarrassing or costly security loop holes
✓ Automate Infrastructure creation	✓ Avoid Cost	✓ Less human errors, faster deployments.
✓ Automate Infrastructure cleanup	✓ Cost Reduction	✓ Less cost from unused resources.
✓ Faster and more frequent deployment production	✓ Increases revenue	✓ Value generating features released more quickly

Technical Language	Value to the organization	Translation
✓ Deploy to production without manual	✓ Increase Revenue	✓ Less time to market.
✓ Automated Smoke test	✓ Protect revenue	✓ Reduced downtime from a deployed related crash or bugs.
✓ Automated rollback triggered by job failure	✓ Protect revenue	✓ Quickly undo to return production working state