

Continuous Integration/ Continuous Delivery/ Deployment


The CI/CD pipeline consist of the following in order:

1. Build
2. Test
3. Analyze
4. Deploy
5. Verify

6. Revert or Promote: When the code is verified if it doesn't meet the requirements it is reverted back to stage 1. Or if it meets requirements it is promoted to production.

Importance of CI/CD

.The importance of continuous integration, continuous deployment and continuous delivery cannot be over emphasized. This is the single tool that means that production will be available for users and features will be built correctly. There are two main areas in which CI/CD will affect. These areas are it will reduce cost and increase revenue for the organization.



Cost is reduced in the following ways:

- The developer spends less time on issues from new developer code because they are able to catch compile errors after merge.
- Less infrastructure costs from unused resources because infrastructure cleanup is automated.
- Prevent costly security holes from the code and infrastructure because the team is able to detect security vulnerabilities.

Revenue is increased in the following ways:

- New value-generating features released more quickly because of faster and more frequent deployments.
 - Less time to market because deployment is made to production without manual checks but with automated checks.
 - Reduced downtime from a deploy-related crash or major bug because smoke tests are automated.

All these and more are achieved because more time is invested in delivering value rather than release cycle which brings less friction between the development team and the operations team.

