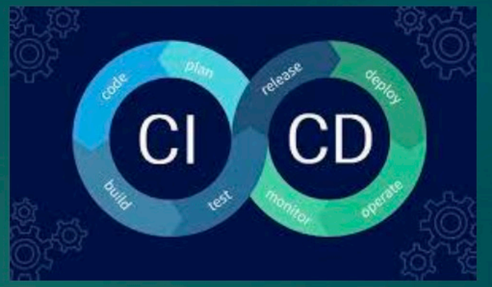
Fundamentals and benefits of CI/CD

How organizations save cost and deliver faster ?

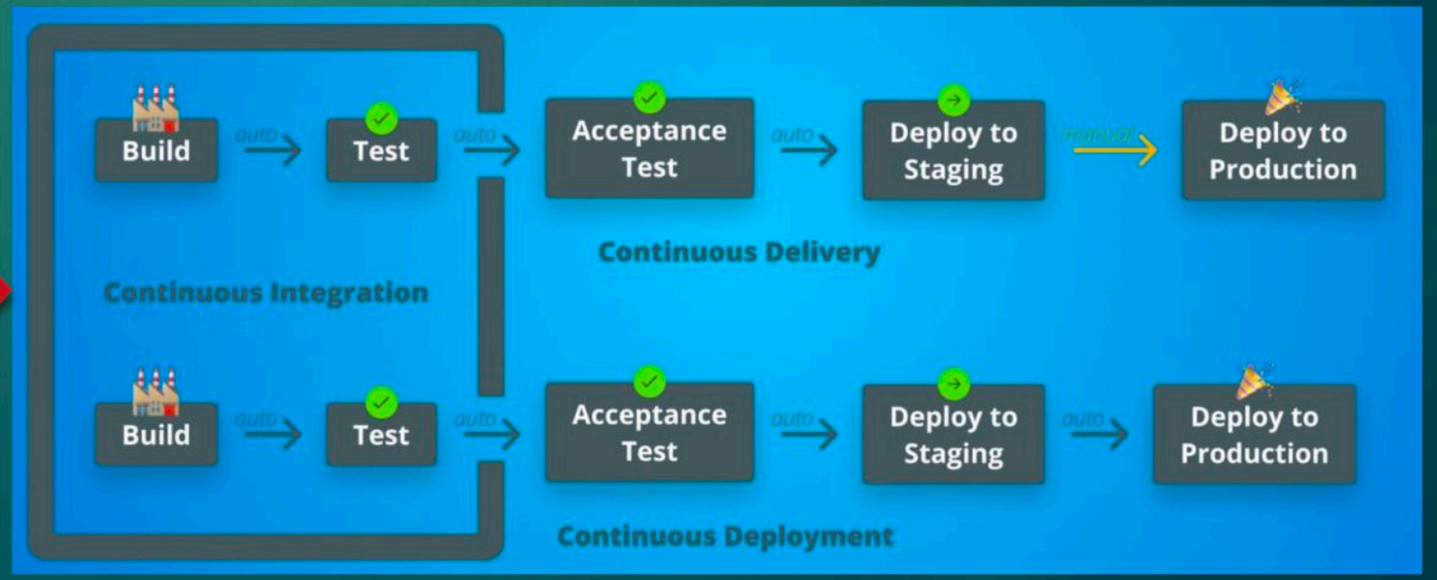
What is CI/CD?



Continuous integration is a development practice of code integration into a shared repository. Each integration is verified by an automated build and automated tests.

Continuous Delivery is an extension of continuous integration. it aims to reduce the time the development teams takes between writing one new line of code and using it in production

How is the CI/CD Works?



Continuous Integration

- Reduces code conflicts.
- Faster code merge.
- Catch compile errors after merge.

What's in it for my organization?

- Increase in revenue.
- Cost Reduction.
- Cost Avoidance at some cases.
- Revenue protection.

Continuous Deployment

- Faster and more frequent production deployments.
- Avoid manual intervention by deploying to production in an automated fashion.
- Automated rollbacks in case of failure.

Why the hassle?

- Increase in market share
- Faster feature delivery for customers

Why CI/CD ?

1. Customer satisfaction: Buggy softwares can harm your brand reputation Utilizing a CI/CD approach keeps your product up-to-date with the latest technology and allows you to gain new customers and guarantee long term contracts for your company.

2. Reduce Costs and Boost Profits: Lowering chances of mistakes and limits the potential impact and loss that a deployment problem and bugs can cause.

3. Smaller Backlog: As most of the process is automated so your tester now have the time to deeply focus on the important phases of testing to get higher quality product.

4. Shorter MTTR: Its makes Mean time to resolution shorter because of smaller changes with faster fault isolation.

5. Accelerated Time to Market: The release frequency will increase dramatically which makes the way from development to production is too short.

6. Fault Isolations: Its help to isolate the faults and makes it faster and easier to be detected by combine monitoring the systems to report the stage and locations of the faults.

7. Increased productivity: Thanks to the Automation of routine processes now the developer can focus on the crucial tasks only.

8. Flexibility and responsiveness : Its makes application updates faster which help to release the new features faster and easier and fix the issues quickly once a bug detected.

Action	Value
New value-generating features released more quickly	Increase Revenue
Less time to market	Increase Revenue
Less human error, Faster deployments	Cost Avoidance
Quick undo to return production to working state	Protect Revenue