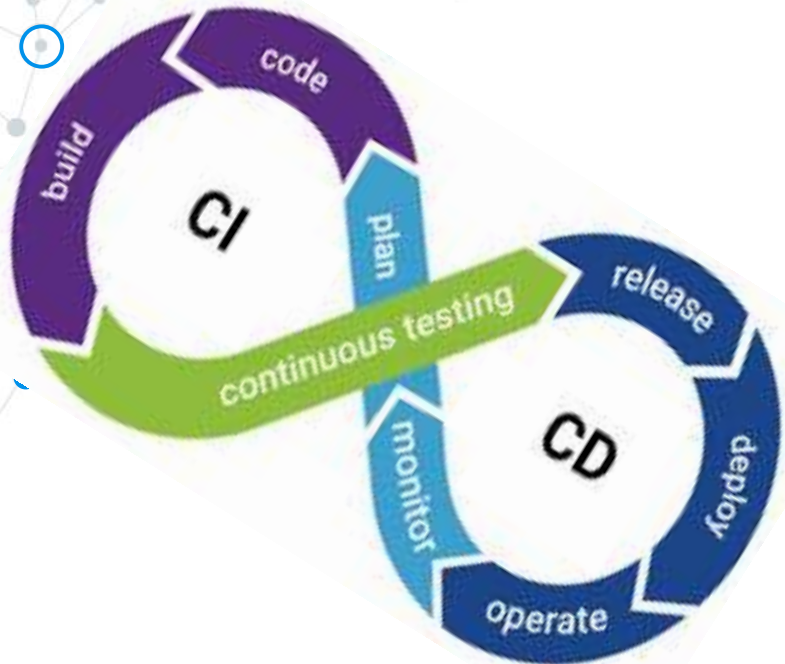# Fundamentals and Benefits of CI/CD to Achieve, Build, and Deploy Automation for Cloud-Based Software Products.

ABDULLAH JIMOH

What is CI/CD

Continuous Integration and Continuous Deployment (CI/CD) is a the process and a practice of merging software engineers copies of work to shared mainline or workflow as many times as possible in a day.

This approach gives room for engineers to deliver value(features, fix downtime quicky..etc) frequently through automated deployment of products and or services.

The process of continuous integration and delivery increases engineers productivity by freeing them from manual task that has been automated. It also encourages the behavior of reducing the number of failed feature in the product that will make the company loose customer.
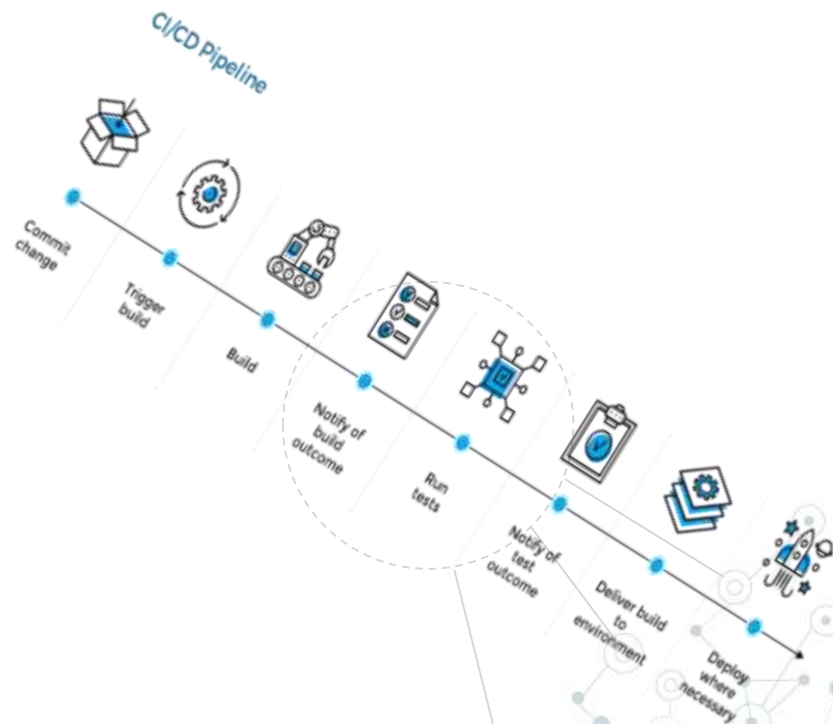
This process enables engineers to discover failed resources and features on time and help the company retrain their customer.

BENEFITS OF CI/CD >>>

CI/CD Creates and increase revenues/Less time to market

> With CI/CD, engineers invest more of their time in deploying features that the users will love and generates revenue other than manually configuring, testing and deploying resources every time a new feature is developed.

CICD has this pipeline that carry out this task for the engineers.

CI/CD Pipeline

Commit change

Trigger build

Build

Notify of build outcome

Run tests

Notify of test outcome

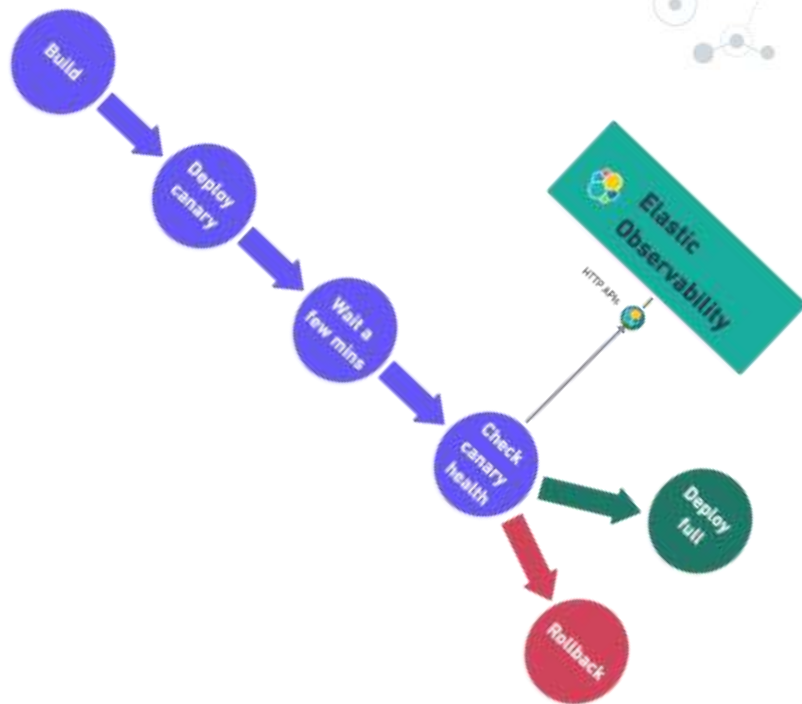Deliver build to environment

Deploy where necessary

Reduces Cost

> With unused resources, and or infrastructure deployed, ci-cd help reduce cost by deleting unused resources deployed to the application after passing through all the stages in the pipeline and most importantly, the automated deployment testing integrated in the pipeline.

Protects Revenue/Control Cost

> CICD pipeline can roll back resources already deployed that failed the automated testing and this helps the management control and protect cost instead of leaving the resource to incur more money.

> The CICD also detects security loopholes and notify engineers faster before it starts to incur the cost the management don't plan for.

I strongly suggest we adopt the use of CI/CD because of it numerous benefits it has to offer.