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

Sir, we the technical team on your project would love to implement CI/CD in the creation of Infrastructure and deployment of applications. In the concepts of CI/CD we seek to achieve two major fundamentals. Namely:

Continuous Integration

This is the practice of merging all developers' working copies to a shared mainline several times a day. Some of the benefits this bring to the company and team include

- Catching compile errors after merge that notifies developers of bug areas that reduce the hours we spend trying to find the error and debug it. This aids the company to reduce the extra cost it would take to fix issues from developers' code.
- We can automate unit testing and detect security vulnerability which would avoid the cost of from security holes during production
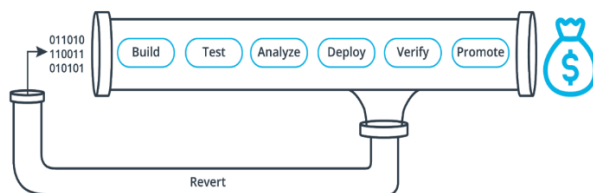
Continuous Deployments

  This involves the delivery of value and artifacts (our application) through automated deployment. It involves creating infrastructure, provisioning servers, verifying production using smoke tests and during automated rollbacks in cases of failed jobs.

  Some of the benefits it brings to the company include:

- It automates infrastructure creation that leads to faster deployments avoiding cost with less human errors.
- The infrastructure code created are reusable in other similar projects using version control that enables us save our building time which would avoid the cost of having developers' rebuild the infrastructure.

With the two concepts combined it Illustrates the pipeline below which is a fully automated CI/CD project steps which creates faster and more frequent deployments that would increase the company's revenue and in cases of failed jobs there are automated rollbacks that would protect company's revenue by returning the deployment back to the working stage.

The CI/CD Pipeline

We the technical members of your team expect your response soonest as this project would boost the morale of the technical team and bring smiles to the faces of our company accountants. Sir, thank you for the time and patience.