CI/CD ADOPTION FOR UDAPEOPLE PROJECT

ACHIEVE, BUILD AND DEPLOY AUTOMATION

FUNDAMENTALS OF CI/CD

▶ **Continuous Integration**

This is a practice where developers integrate code into a central repository regularly. Each code check-in is verified by an automatic build, enabling teams to identify errors quickly.

▶ **Continuous Delivery**

With continuous Delivery, quality products are released frequently in an automated fashion.

▶ **Continuous Deployment**

Continuous deployment goes a step further than continuous delivery as it allows frequent automated deployments without any human intervention.

CI/CD Benefits

- **Faster time to Resolution:**

With CI/CD, you can test and deploy code more frequently, giving testers the ability to detect issues early and fix them promptly. Also, it provides quick and easy rollback of code changes if there are any issues after a release in the production.

- **Efficient Infrastructure:**

With a seamless CI/CD pipeline, teams can build, test, and deliver features automatically with minimal manual intervention which reduces cost for the organization. In addition, it provides an automated infrastructure cleanup which reduces cost from unused resources.

CI/CD Benefits

▶ **Smaller Code Changes:**

In CI/CD, small pieces of code are integrated one at a time. These changes are easier to handle than huge chunks of code and, thus require fewer changes to the original version.

▶ **Collaboration and Communication:**

CI/CD allows many functions and specialists involved in a project to get better visibility of the software development process and collaborate more with each other.

Tools used for the Project

- Cloud Provider: AWS
- Cloud Integration Pipeline: Circle CI
- IT Automation: Ansible
- Analytics and Metrics: Prometheus

THANK YOU