Udapeople App: Automating Software Delivery

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Overview

One of the challenges with modern day products is delivery, stiff competition to markets, possessing agility to innovate and incorporate users' feedback in product release iterations and proactive measure to ensure reliability of our products and services, these challenges have led the team to explore ways that would in fact improve our product releases and reliability and one such way is CI/CD.

Goals

1. Improved reliability

2. Speed up software delivery and reliability

3. Quickly detect faults and failures

4. Simplify deployment process

Specifications

Continuous Integration

This is the practice of merging code from developers into a shared mainline and ensuring it is fully integrated and in a working state. This improves the ability to pick up conflicts/divergence early and improve the overall quality of the system and its maintainability.

Continuous Delivery

This process involves the delivery of our services and products to our end users/consumers in a seamless iterable manner. Both processes involves automation and iteration to improve speed of delivery and reliability of our systems.

Benefits

I. Repeatable reliable processes

Deploying our services becomes easier to implement and manage, with predictable steps to releases; requiring little human effort, we have a more reliable way to release our products and services, this saves the business money by ensuring developers are focused on building new services and not spending so much time thinking about strategies on each deployment.

II. Built-in quality

CICD encourages automation, with less human involvement in release steps, reduced exposure to human errors in predictable steps, this helps avoid the extra cost of fixing repeated introduced human errors.

III. Detect Faults and Increased fault tolerance

Checks and continuous monitoring are put in place to ensure issues, bugs and downtimes are caught early and fixed, when an infrastructure is faulty, it is quickly taken down and replaced with a healthy system, ensuring value is gotten from invested revenue in infrastructure.

IV. Reduce wastage

Since systems can self heal and necessary parties are duly informed about incidents in time, company resources are preserved and great value is gotten from investment into adopting these processes.