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## Cloudmaven applies full CI/CD for all implementations and development projects

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We are happy to announce that Cloudmaven has adapted full CI/CD for all project developments. This includes all stage process, from establishment to deployment.

### What is CI/CD?

A CI/CD pipeline allows the developers to automate the software delivery process. The pipeline builds code, runs tests (CI), and safely deploys a new version of the application (CD).

It is meant for the automated pipelines to assist developers on:

1. remove manual errors,
2. provide standardized feedback loops to developers, and
3. enable fast product iterations.

### What do they do?

A CI/CD pipeline sounds like an overhyped, when it is essentially only a runnable specification of the steps that any developer requires to help minimizing issues while performing a new version of a software product. In the absence of this automation, developers might still have to perform all the checking process manually, hence far less productively.

In most cases, CI/CD pipelines would run after any trigger by a source code repository. Either minor or major change in code will trigger a notification to the CI/CD tool, which runs the corresponding pipeline.

## What does it do to implement The Pipelines?

### a. Delivering simpler runnable code compiles

A CI/CD pipeline should be convenient to be run from the beginning of the establishment process. It will help by alleviating number of manual errors by a thorough checking on the code applied. In the Building Stage, the pipelines combine the source code and its dependencies to build a runnable instance of our product that we can potentially ship to the end users. Programs written in languages such as Java, C/C++, or Go need to be compiled, whereas Ruby, Python and JavaScript programs work without this step.

*Regardless of the language, cloud-native software is typically deployed with Docker, in which case this stage of the CI/CD pipeline builds the Docker containers.*

### b. Optimal testing for a product

In this phase, we run automated tests to validate the code accuracy and the performance of the product. The test stage acts as a safety net that prevents easily reproducible bugs from reaching the end-users.

Failure during the test stage exposes problems in code that developers didn't foresee when writing the code. So it is essential to make sure every code runs well while testing, apart from any manual errors.

### c. Ensure the accurate and efficient deployments

Once the product passed all predefined tests, we are ready to deploy it. CI/CD allows automation on deploying a product to be safely operated by the end users.

***The full implementation of CI/CD in each process of Cloudmaven's development will help us to quicken the delivery process through any update on product development. We keep optimizing our service to provide our customers the best assistance.***