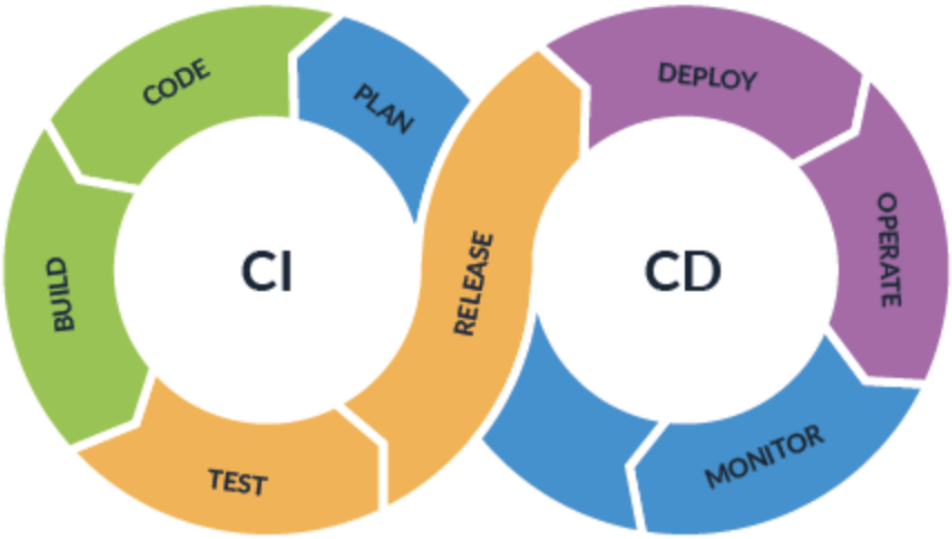
CI/CD and Its Impact on Business Success



This document presents how the adoption of CI/CD affects business success. We talk briefly about what CI/CD is, then discuss benefits that this organization can derive from adopting CI/CD process.

What is CI/CD

CI/CD is an acronym that stands for Continuous Integration and Continuous Deployment Or Continuous Integration and Continuous Delivery depending on the context. This is a software development practice that is concerned with how the software product is deployed. It encompases the process of integrating code changes from development teams (Continuous Integration) and making the software available to end users (Continuous Deployment) in a way that is fast, reliable and secure without compromising the quality of the software. Some of the checklist of CI/CD process are,

- Integrating the code
- Run unit test to confirm the software is still functional
- Check the software against a style guide (linting)
- Scan the software for security vulnerability
- Deploy the software

The deployment process will also have to account for any downtime that can occur and how to mitigate or reduce the downtime to a bearable minimal based on the SLA we offer to our users. To ensure we are pushing features to user as quickly as possible and in a way that guarantee that users are happy with the product, we need to adapt CI/CD strategy that help ensure with our meeting our SLO and SLA. This will in turn result in increased revenue for the organization and also ensure that we are not running cost unnecessarily. Below, I present some of the ways that adoption of an effective CD/CD strategy can benefit us as an organization.

Benefits of CI/CD

Increase Revenue:

Adoption of CI/CD can result in increase revenue for the organization because it enables us to check product faster, thus ensuring that features that generate revenue get to the hands of end users faster. CI/CD removes the burden of following manual checklist before deployment which can take significant time before approval. When we adopt a CI/CD practice, these checklists are codify in a pipeline that automate the checks and provides quick feedback in case a check fails. That way users can start using the latest feature as soon as they are available. This keeps the users happy. Happy users translate to steady flow of revenue for the company.

Protect Revenue:

Adoption of CI/CD not only help to increase the revenue of the company, it also helps to protect the company revenue. We do not want to loss money or users because of shipping buggy software to production. CI/CD help to minimize the impact of mistakenly deploying buggy software to production. Automated smoke tests can help to avoid downtime and catch bugs just before the product is release and a rollback can be initiated as a result. In the event a bug makes it way to production, early detection can help to mitigate the potential effect on customer because we are able to rollout easily and keep our users happy. For example, if only a subset of users are exposed to the issue, the impact will be minimal.

Reduce Cost:

We can also reduce cost by adopting CI/CD. This is possible when checks such as linting, unit tests are implemented in the CI/CD pipeline. Compile error are caught early and can be address by the development team, rather that going through the process of provisioning resources only to discover that there are bugs. Also, from a CI/CD pipeline, we are able to automatically cleanup unused infrastructure after successful deployment. This is less time consuming than trying to do things manually and also ensure that we do not keep resources running beyond when they are needed.

Avoid Cost:

An effecient CI/CD practice also helps to avoid costs is some ways. We are able to detect security vulnerabilities before they make their way to production which saves the company embarrassment and avoid having to pay highly because of security loop holes. We can also avoid cost by automating the provisioning and

de-provisioning of infrastructure in a way that is highly repeatable. This help to remove the possibility of missing steps that could result in extra and unwanted cost for the company.

The points that has been highlighted so far are compelling reasons I would push for the adoption of CI/CD in our software development process. I am confident that all stakeholder will put these into consideration and give support for the adoption of CI/CD as we continue to strive to deliver value to our end users.

Thank you.