

THE BENEFITS OF CI/CD FOR ACHIEVING, BUILDING, AND DEPLOYING AUTOMATION FOR CLOUD-BASED SOFTWARE PRODUCTS.

Assunta Maria

CI/CD FOR CLOUD-BASED SOFTWARE PRODUCTS

- CI/CD is a set of practices and tools that automate the software development process, from building to testing to deploying.
- CI/CD is important for cloud-based software products because it enables businesses to quickly and efficiently develop, test, and deploy software products to the cloud.
- By incorporating CI/CD into our system, business will improve in competitiveness, customer satisfaction, and profitability.

I will discuss further on how CI/CD will benefit UdaPeople.

PROBLEMS

Not incorporating CI/CD can lead to several problems that negatively affect the organization, including:

1. Slow release cycles

Without CI/CD, software releases can take weeks or even months, delaying new features, bug fixes, and security patches, and hampering the ability to respond to customer needs quickly.

2. High risk of errors:

Manually building and deploying software increases the risk of human error, leading to bugs, crashes, and security vulnerabilities that can damage the reputation of the product and the business.

3. High costs:

Manual testing and deployment processes require more resources and time, resulting in higher costs for the organization.

4. Limited scalability:

Without CI/CD, scaling the product can be challenging and time-consuming, leading to decreased agility and competitiveness in the market.

BENEFITS OF INCORPORATING CI/CD IN THE DEVELOPMENT OF UDAPEOPLE

- Accelerated Time-to-Market: By expediting the release of revenue-generating features, we can maximize our revenue potential.
- Improved Quality: Implementing automated testing will minimize the occurrence of crashes and major bugs, reducing downtime and increasing production time, ultimately resulting in a better end-product.
- Cost Optimization: Through the implementation of CI/CD, we can reduce expenses by mitigating human errors and streamlining the deployment process. Additionally, this will enhance collaboration within our development team, allowing for increased efficiency.
- Efficiency Gains: With CI/CD automation, we can eliminate manual and repetitive tasks, leading to a more efficient deployment process. Moreover, by enabling rapid rollback to previous production versions in the event of a failure, we can safeguard our revenue stream.
-

SOLUTION

SOME EXAMPLES OF COMPANIES THAT HAVE IMPLEMENTED CI/CD AND ACHIEVED POSITIVE OUTCOMES AND ROI:

AMAZON

Amazon uses a highly automated CI/CD pipeline to deploy updates to its e-commerce platform multiple times a second. This has enabled Amazon to achieve faster time-to-market, improve quality and reliability, and reduce downtime, resulting in an estimated \$1 billion in annual revenue.

NETFLIX

Netflix uses a highly automated and resilient CI/CD pipeline to deploy updates to its streaming platform multiple times a day. This has enabled Netflix to achieve faster time-to-market, improve quality and reliability, and reduce costs, resulting in an estimated \$1 billion in annual cost savings.

CAPITAL ONE

Capital One has implemented a fully automated CI/CD pipeline for its banking software, enabling the bank to deploy updates in minutes instead of weeks, reduce the number of failed deployments, and increase customer satisfaction. This has resulted in an estimated \$50 million in annual savings.

SUMMARY

Implementing CI/CD can enable us to achieve significant positive outcomes and ROI, including faster time-to-market, improved quality and reliability, reduced costs, and increased customer satisfaction.