CI/CD BENEFITS PROPOSAL

UDAPEOPLE APP

OVERVIEW

- What's CI/CD? The concepts explained
- Benefits of CI/CD
- Benefits from DevOps Principles
- What are the challenges we will face

WHAT DOES CI/CD STAND FOR? THE CONCEPTS EXPLAINED

- CI/CD consists of three major concepts

  - Continuous Integration

    - CI describes the process of merging developer branches to the main branch several times a day. CI puts an emphasis on test automation and finally generates a high-quality, deployable artifact.

  - Continuous Delivery

    - CD ensures that software product changes can be released quickly to customers in an automated way and at any point in time.

  - Continuous Deployment

    - Continuous Deployment extends Continuous Delivery in such a way that it allows frequent automated deployments without any human interaction. Continuous Deployment phases are Infrastructure Provisioning, Smoke Testing, Production Deployments, and automated Rollbacks.

BENEFITS OF CI/CD

- Continuous integration, delivery and deployment (CI/CD) provides:

  - Faster time to market by delivering working software to users quickly and frequently.

  - Better code quality by automation code testing

  - Maximized creativity by building a CI/CD pipeline eliminates waste and helps create a leaner, more efficient software development and release process.

BENEfiTS FROM DEVOPS PRINCIPLES

- Cost reduction due to fewer human errors and faster deployments

- Reduce complexity and safe manual troubleshooting time

- Automated Smoke Tests and Rollbacks will protect project revenue due to reduced downtimes from deploy-related crashes and fast and automated rebuilding of the production-ready state

- Faster feedback cycles of customers lead to higher customer satisfaction rates since they are involved right from the beginning of feature development/deployment and not just at a fixed release date

- The truth lies in the source code and not in the heads of one or two experts. This means that regressions and breaking changes in code as well as in infrastructure deployments can be found much quicker and can be resolved for the whole automation process. And as a plus changes are always documented in the source code.

WHAT ARE THE CHALLENGES WE WILL FACE

- Establishing CI/CD comes with a high amount of initial cost and learning. At first sight, this might seem overwhelming compared to current best practices

- Delivering CI/CD pipelines is not a one-time effort, but requires constant support and maintenance as well as continuous development and improvement

- Even though there are some challenges, CI/CD will improve overall business processes and dramatically reduce costs in the long run

THANK YOU