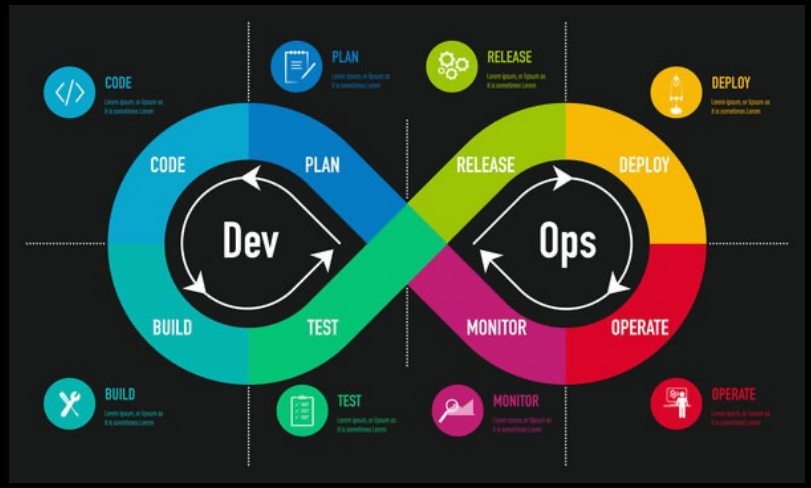
UdaPeople

How DevOPS will improve time to market and reduce cost?



OVERVIEW

1. What does CI/CD stand for? The concepts explained
2. What are our current pain points?
3. CI/CD to the rescue. How we could benefit from DevOps principles

WHAT DOES CI/CD STAND FOR? THE CONCEPTS EXPLAINED

- CI/CD consists of three major concepts
  - Continuous Integration
    - Continuous Integration 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 high quality, deployable artifact.
  - Continuous Delivery
    - In addition to Continuous Integration, Continuous Delivery makes sure that changes in a software product 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 frequently automated deployments without any human interaction. Typical phases in Continuous Deployment are Infrastructure Provisioning, Smoke Testing, Production Deployments, and automated Rollback

WHAT ARE OUR CURRENT PAIN POINTS?

1. Our manual release process is error-prone and always leads to delays in production deployments
2. This in turn often leads to poor software quality since we don’t have time for quality analysis anymore
3. Deployments are pretty complex. Only a chosen few experts are able to understand the whole process and tons of hand crafted
   helper scripts. No smoke tests and rollback mechanisms.
4. We get late feedback from the business department which prevents us from creating flexible solutions

CI/CD TO THE RESCUE. HOW WE COULD BENEFIT FROM DEVOPS PRINCIPLE

- Automate Infrastructure Creation and clean up:
  Eliminating human errors and avoid unnecessary cost of unused or invalid infrastructure
- Faster to production:
  By automating the pipeline to production this way we can deploy
  features as soon as created which will help increase revenue
- Automated Rollback Triggered by Job Failure:
  Automate the process of rolling back and cleaning any infrastructure left which would help in reducing cost and lower down time
- Catch Unit Test Failures:
  Unit tests are not neglected with CICD which will increase code quality and catch errors early before production which would decrease cost