CI/CD
INNOVATION IN PRODUCT DELIVERY

The Benefits of using CI/CD to achieve Automated Deployment

CONTINUOUS INTEGRATION

What Is "CI"?

CI Aims to scale up throughput of engineering teams. Introducing CI to the work environment allows software developers to work independently on features in parallel which increases productivity which in turn increases income.

When using CI, the features can be merged rapidly into the product, thus saving time and effort, which is one of the reasons it's being used in big enterprises.

- Some common CI-related phases might include:

    - Compile

    - Unit Test

    - Static Analysis

    - Dependency vulnerability testing

    - Store artifact

CONTINUOUS DEPLOYMENT

What Is "CD"?

Continuous Deployment (CD) is is a software engineering approach that takes validated software features in a staging environment and deploys them into the production environment, where they are readied for release, and then delivered frequently and through automated deployments.

- Some common CD-related phases might include:

- Creating and configuring infrastructure

- Promoting to production

- Smoke Testing (aka Verify)
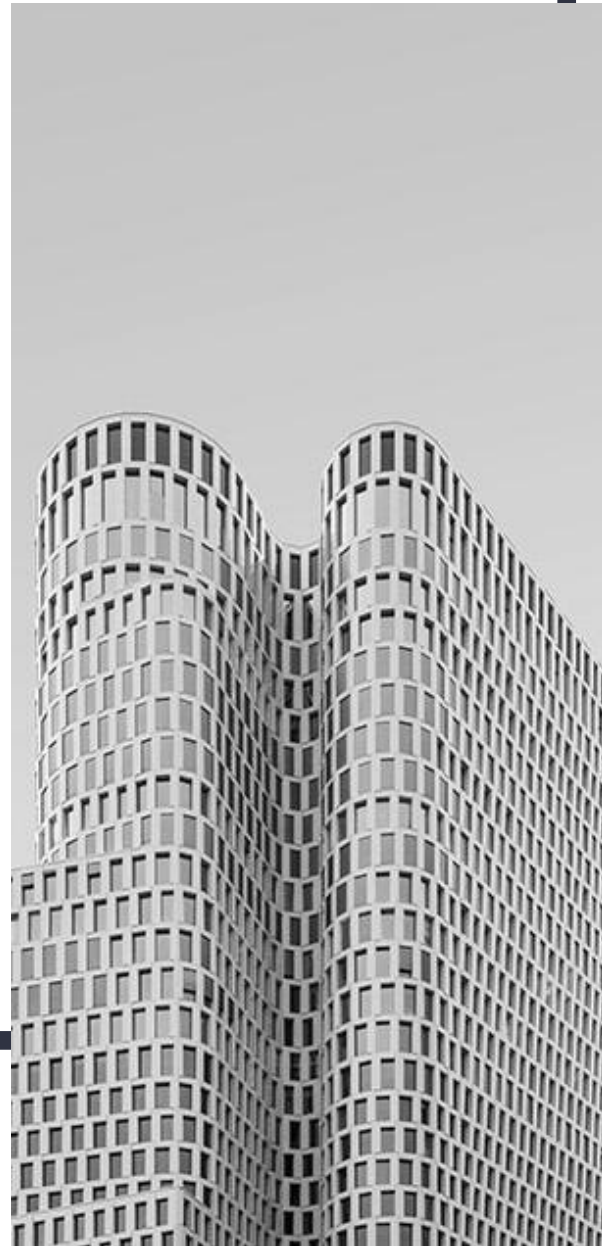
- Rollbacks in case if any failure

WHY DO WE USE CI/CD?

CI BENEFITS

- Faster and More Frequent Production Deployments

- Find problems easily

- Reduce costs

- Make users happy

- Iterate faster

CD BENEFITS

- Catch Compile Errors After Merge

- Catch Unit Test Failures

- Automate Infrastructure Creation

- Automate Infrastructure Cleanup

- Automated Smoke Tests

BUSINESS BENEFITS OF CI/CD

Technical Term	Translation	Benefit
Catch Compile Errors After Merge	Less developer time on issues from new developer code	Reduce Cost
Automate Infrastructure Cleanup	Less infrastructure costs from unused resources	Reduce Cost
Catch Unit Test Failures	Less bugs in production and less time in testing	Avoid Cost
Detect Security Vulnerabilities	Prevent embarrassing or costly security holes	Avoid Cost
Faster and More Frequent Production Deployments	New value-generating features released more quickly	Increase Revenue
Deploy to Production Without Manual Checks	Less time to market	Increase Revenue
Automated Smoke Tests	Reduced downtime from a deploy-related crash or major bug	Protect Revenue
Automated Rollback Triggered by Job Failure	Quick undo to return production to working state	Protect Revenue

THANK YOU