CI/CD

Fundamentals and Benefits

Concepts

TEST

COMMIT

CODE

UNIT TEST

BUILD   INTEGRATION TESTS

RELATED CODE

CI PIPELINE

REVIEW   STAGING   PRODUCTION

CD PIPELINE
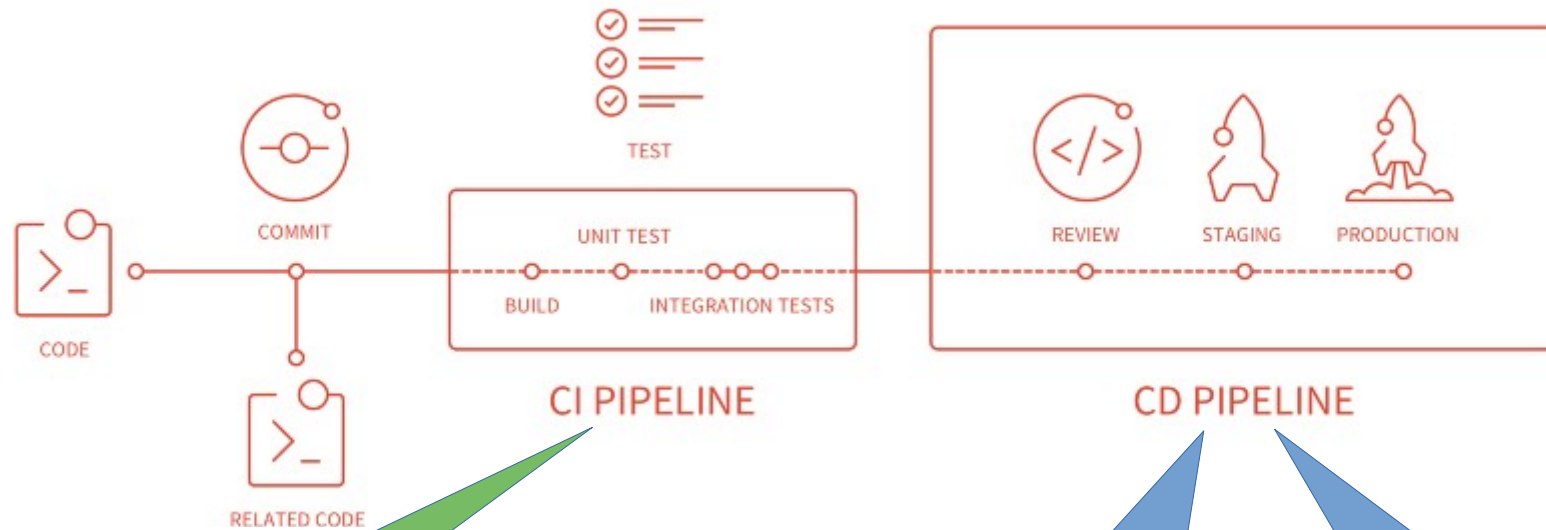
Continuous Integration

New code changes are regularly built, tested and merged to a shared repository

Continuous Delivery

App changes are automatically bug tested and updated to a repository, ready to be deployed

Continuous Deployment

Automatically release changes from repository to production

CI Benefits

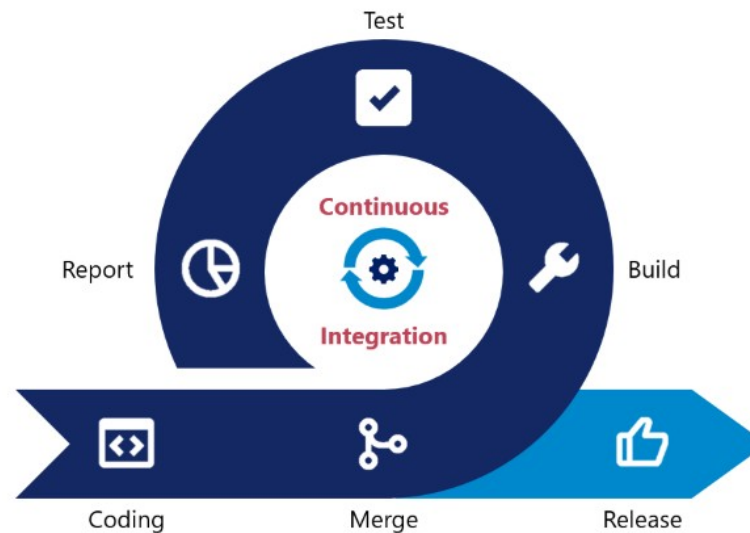If you're going to fail, then fail early!

Smaller code changes

Separate software builds from software deployments

Enables Continuous Deployments

Increases confidence in the software

Enables automated testing

CD Benefits

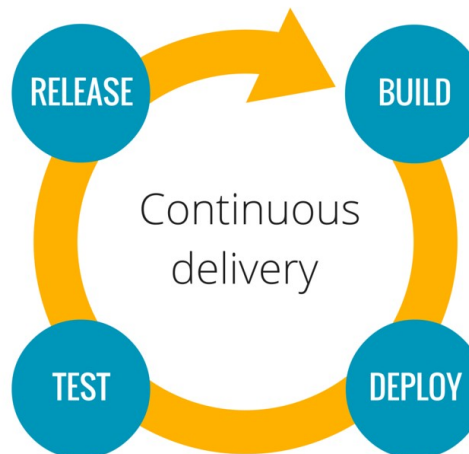Deliver software with fewer bugs and lower risk

Easy Maintenance and Updates

Stable and highly available environments

Release new features to market more frequently

Faster Release Rate

Faster feedback

Revenue and Cost Benefits

Frees up developer time that could be spent on product development

Automation increases code quality → ROI increase

Less number of incidents in production

Bugs are found faster & fixes are implemented quickly

Savings in infrastructure provisioning