Google Cloud

Edge API Lifecycle and Tools

Continuous Integration

What is CI and what are its principles?

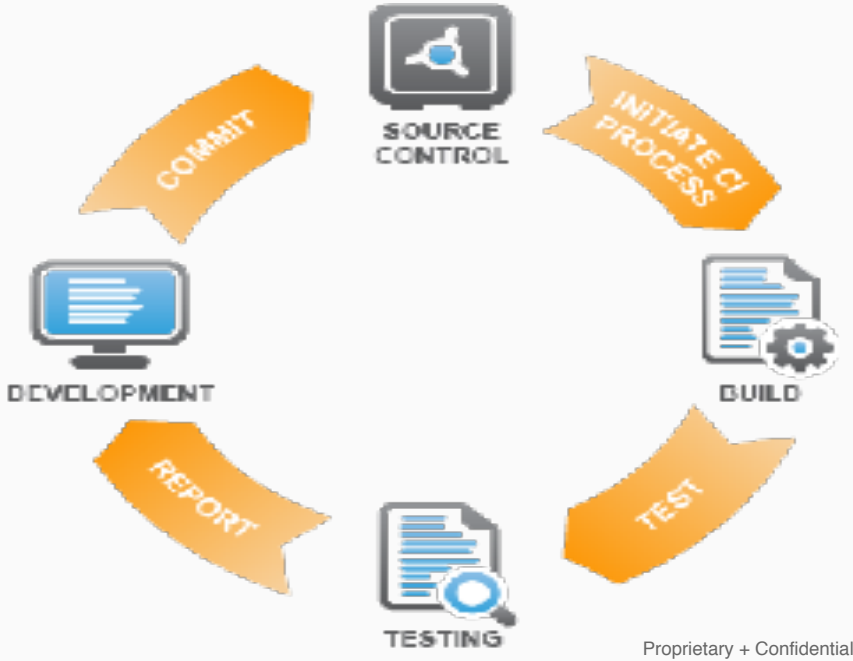
Its main aim is to prevent integration problems, referred to as "integration hell”

Continuous integration (CI) is the practice, in software engineering, of merging all developer working copies with a shared mainline several times a day

It was first named and proposed as part of extreme programming (XP)

Principles

- Maintain a code repository
- Automate the build
- Make the build self-testing
- Keep the build fast
- Make it easy to get the latest deliverables
- Everyone can see the results of the latest build
- Automate deployment



Virtuous CI Cycle for API Proxies

Benefits/Advantages

When unit tests fail or a bug emerges, developers might revert the codebase to a bug-free state

Get feedback early:

- Developers detect and fix integration problems continuously
- Early warning of broken/incompatible code and promotes test automation

Immediate unit testing of all changes

Releasable code. Constant availability of a "current" build for testing, demo, or release purposes

Trust developers to create modular, less complex code

Metrics generated from automated testing and CI. Enables visibility for all team on what's breaking, passing or weak points
e.g. Performance

It's opinionated, so best practices on branching strategy are encouraged

Meant to accelerate time to market

Challenges/Disadvantages

Initial setup time required (lack of time)

Well-developed test-suite required to achieve automated testing advantages

Company culture (“why everyone needs DevOps Now”)

Many teams using CI report that the advantages of CI well outweigh the disadvantages. The effect of finding and fixing integration bugs early in the development process saves both time and money over the lifespan of a project.

Ideal Outcome

What a crazy day !!!
Only 18 hours of sleep…
lol

Demo

THANK YOU