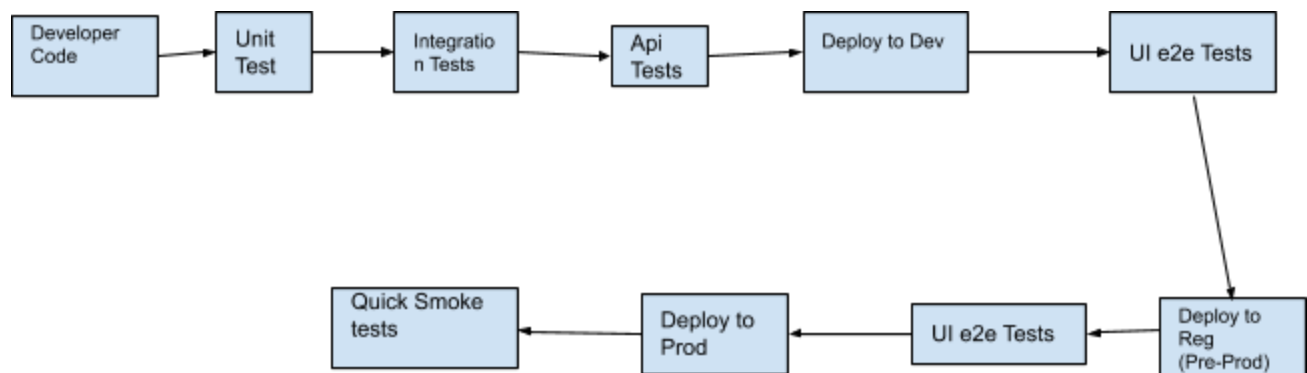


CI/CD Pipeline



Assuming that the CI/CD pipeline is set as above, I would integrate the API tests just before developer code is deployed to the development environment and UI tests after deploying to the development environment. However, for some projects it might make sense to have end to end(e2e) tests that consist of both UI and API tests. There is no perfect formula. What is right, depends on the kind of project and number of resources.

The reasons for integrating API tests early on in the pipeline are:

- Developers get a chance to fix the bugs earlier in the cycle.
- UI tests are more time consuming and therefore running API tests first will help isolate issues sooner.
- Issues can be identified faster, when UI tests are run after API tests, as you can conclude that the issue is not with the API.

UI tests should be integrated with cloud services (ex: SauceLabs, BrowserStack, etc.), where possible, as it can cut down testing time due to:

- No requirement of installing and maintaining servers.
- Cloud based grid allows you to run many tests in parallel.
When you don't have to wait for one test to complete before you have infrastructure available to run the next one, you get results faster.
- Easier to test applications against a very large variety of browsers and devices without having to set up any infrastructure yourself.