

CI/CD

Current Problems

- Currently we are investing more time in deploying our features than in the features themselves
- We have low code coverage and hence also low quality assurance for our customers
- There is blaming between operations and developers because of all the issues

How CI/CD Solves our Problems

- CI/CD gives us the ability to push code live automatically, without having to intervene manually, hence speeding up our deployments
- We can integrate our test suite in our CI/CD pipeline forcing a green test suite before every change goes live, increasing our quality assurance
- Operations and developers can work together improving the code base and focus on providing maximal value for our customers

Suggested CI/CD Setup

- Build server to run the CI/CD pipeline
- Build, Test and Lint the code
- Use infrastructure as code to spin up completely new infrastructure for each release
- Use configuration management to provision our servers after creation
- Finally smoke test the deployment, switch the live loadbalancer, and tear down the old infrastructure

Suggested CI/CD Tools

- Using Circleci as a build server minimizes costs since it does not require maintenance or administration of a build server
- NPM package manager and shell scripts for building, testing and linting are already available, need only be integrated into the build pipeline
- Cloudformation for infrastructure as code is the simplest solution using AWS since we get access to the UI in AWS
- Ansible for configuration management is the simplest solution since it focuses on simplicity, runs over ssh and has simple yaml configuration

Cost of Implementation

- Our engineers have verified that as a team they can get the pipeline running in one week if the suggested tooling is approved