Reducing the Time to Market

How continuous delivery can double our speed

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As the business grows, the expectations for a consistent and trustworthy product increases

- When we first started out, we had a very simple product, serving a small group of volunteering users.

- When we wanted to deploy a feature, it would take less than a week to go from idea to having the prototype in our users' hands. The user would then give us feedback when they find anything broken and we would deliver them another version until it was correct.

- Today, we are a multi-functional team, serving an international audience with a complex product. There are many paying customers who are relying on our product. It is now a greater risk to deploy features as any unexpected behaviour can erode our customers' trust, and damage our business reputation.

Ensuring a trustworthy product requires time

- Today, it can take several months to release a new feature. When we look at the time breakdown for our product development, we find:
  - 10% of time for developing new code
  - 10% of time to manually build the code for the various platforms
  - 20% of time to manually testing on various platforms
  - 30% of time to manually deploying the code to our servers
  - 10% of time to manually monitoring an issue after deployment
  - 20% of time to manually reverting our servers after detecting an issue
- With 90% of time bottlenecked by manual maintenance, this means there is less time for developing profitable ideas.

We can automate many of the time-consuming tasks

- There is an industry standard for solving our problem - Continuous Integration and Deployment (CI/CD).
- Integration are all the steps for building and testing the code.
- Deployment are all the steps for deploying and monitoring the change.
- CI/CD means all the above steps are done automatically, rather than requiring manual skill and time.
- CI/CD can be achieved entirely with open source tools: CircleCI for orchestrating the entire process, Ansible for updating the servers, Prometheus for monitoring the live server.

There are further business benefits from CI/CD

- Avoid cost: with CI the production server is protected by a layer of automated tests and security checks. The chance for bugs or security vulnerabilities to make it to production through human error is minimised. Once passed, the CD server will be able to deploy the new infrastructure faster than a human.

- Reduce cost: with the automated and faster feedback from CI servers, developers can catch errors before they become more complicated, saving developer time. With CD, the outdated infrastructure can be automatically removed, preventing unnecessary costs.