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Continuous delivery pipeline for Digibank

When a developer checks-in his/her code, a build is triggered. This build includes code compilation, code quality check, and static code analysis and sanity tests.

This should all be done as part of the Continuous Integration (CI) pipeline. Jenkins to be used as the orchestrator that is plugged in to all the tools in the tool chain. SonarQube to be used for Static Code Analysis, with AppScan for Security checks.

All the Unit/Integration Tests are also to be run as a part of the CI process. Once the code has been built successfully, the code will be committed to the repository, and linked to the Work Item (Story, Task, Defect, etc.)That will be on a Jira ticket and that triggered the build.

The built artifacts should then be stored and version controlled in Jira. Artifactory to also used to store the Container images. The code then gets promoted to the QA environment.

In the QA environment, all the end-to-end tests are to be run before deploying the application to the production environment. Selenium is to be used for Web based functional testing. For all Mobile based functional testing we are to use Appium. The other automated test tools include SoapUI for API and end point testing, Blazemeter for Performance and Cucumber for Behavior Driven Development.

Application deployment is to be done using UrbanCode Deploy (UCD). Docker Containers are to be used for Containerization, and the toolchain is also capable of automatically deploying containers using Chef and UrbanCode Deploy.

The deployed application is then Continuously Monitored for any anomalies. The deployed application code can be traced back to its work item as this process will have created an end-to-end traceability, enabling deployments across multiple environments.