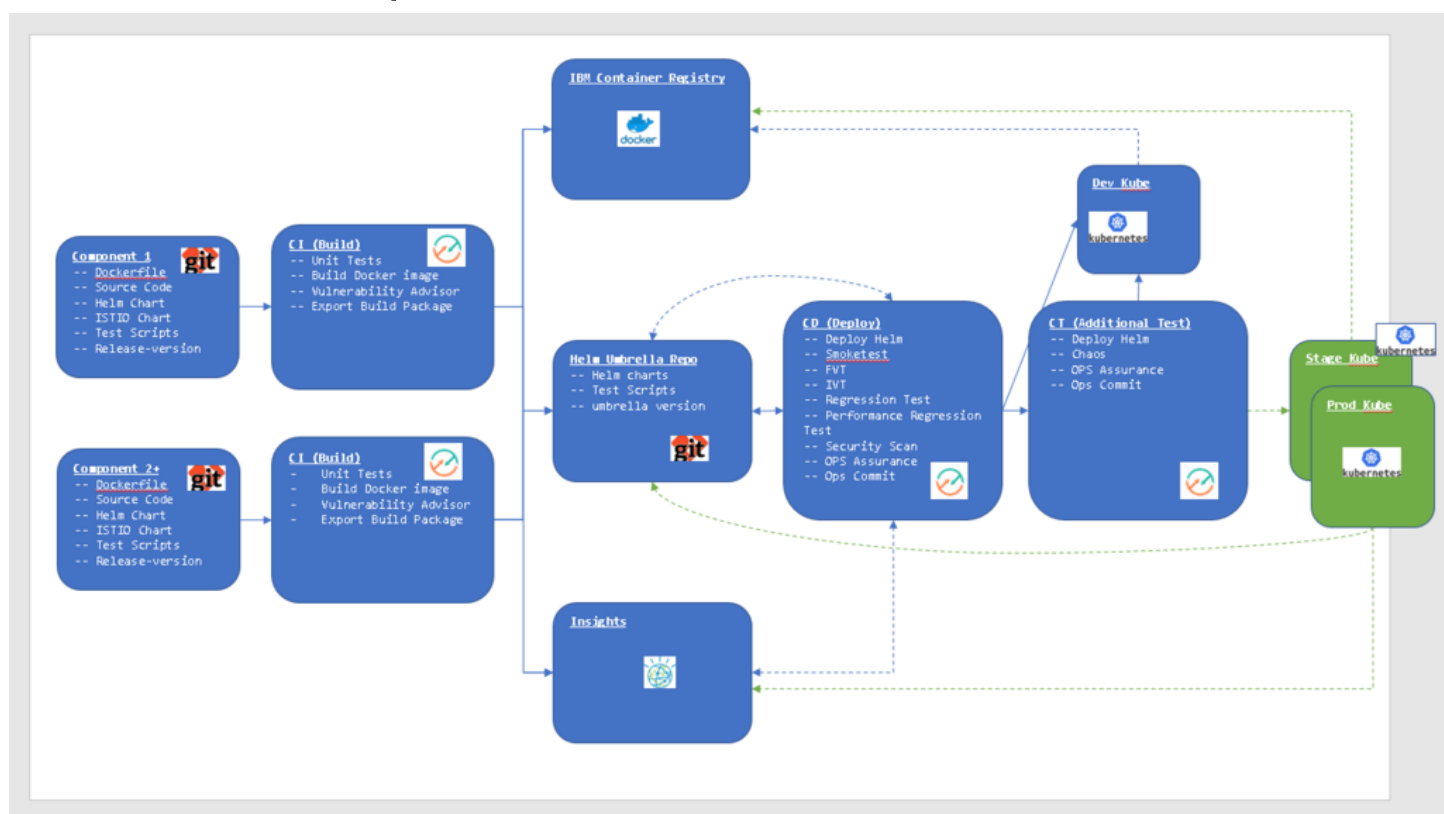


CICD for IBM Cloud Functions

Objectives

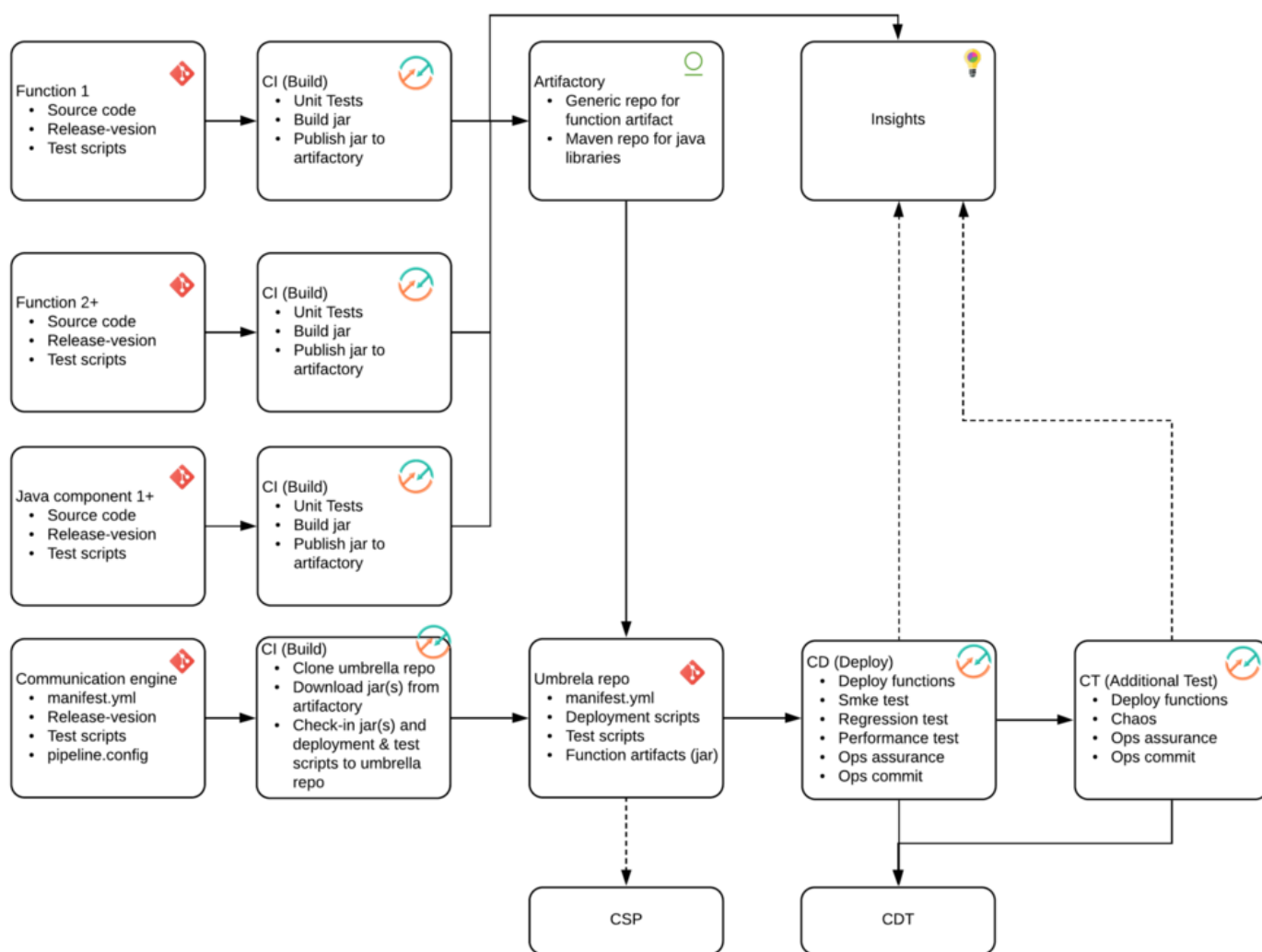
- Build a toolchain to automate the deployment of cloud functions
- Create a template of the toolchain which can re-use beyond Phytel use-cases

WHF CI/CD template for Kubernetes



source : <https://pages.github.ibm.com/wh-ops/wh-ops-playbook/checklist/learn/dev-ops/pipeline-structure.html>

Proposed CI/CD for IBM cloud functions which follows the stages and processes defined in WHF KS CI/CD template



Comparison of CI

WHF KS CI	IBM Cloud Function CI
Build docker images	Build jar packages
Execute unite tests	Execute unit tests
Publish docker image to container registry	Publish jar package to generic/maven repository on Artifactory
Once docker image publish to registry : scan for vulnerability	Integrate AppScan for vulnerability scan in code

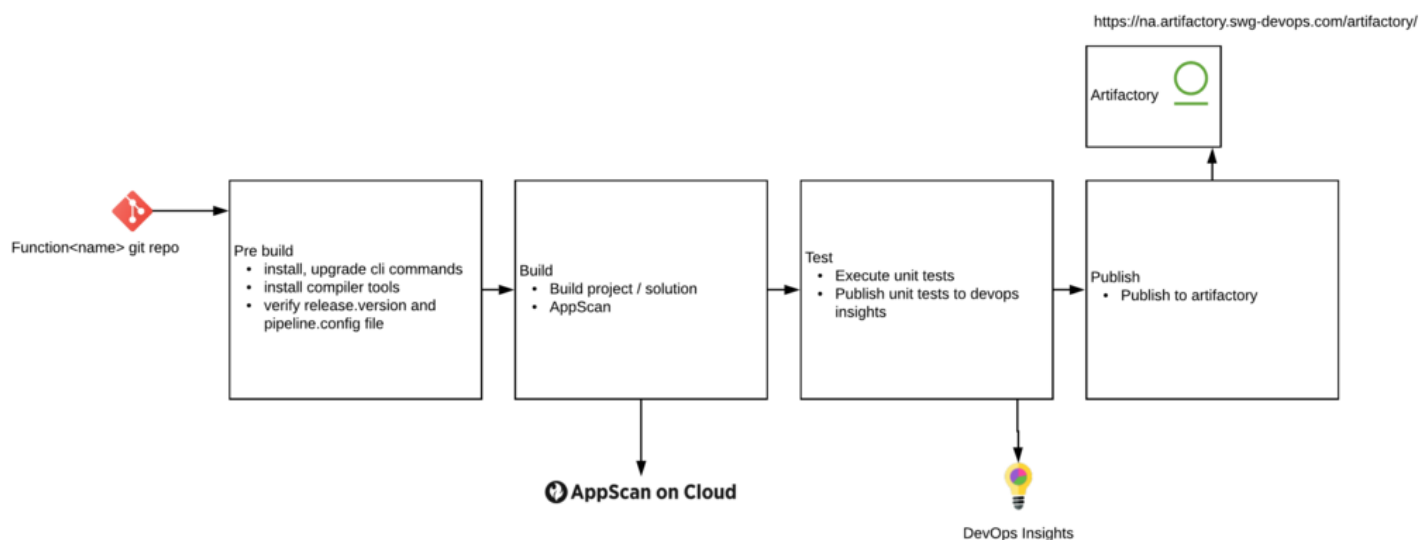
Publish deployment artifacts to umbrella repo

Only the "communication engine" CI to publish deployment artifacts to umbrella repo

Comparison of CD

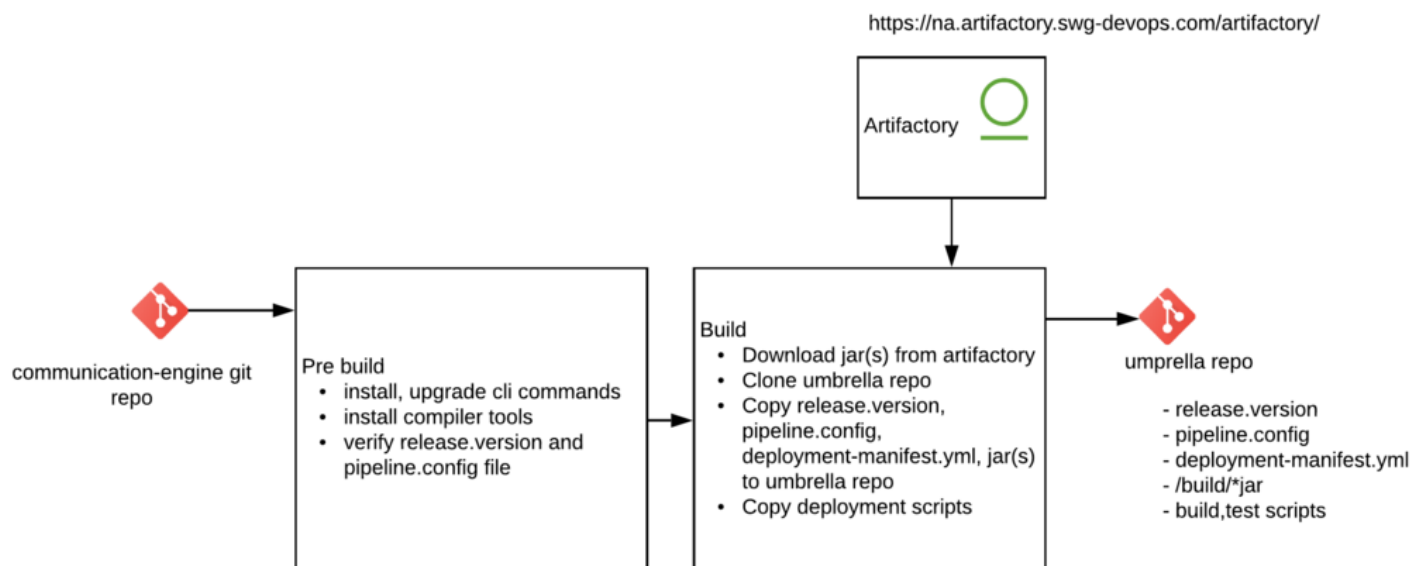
WHF KS CD	IBM Cloud Function CD
Deploy to Kurbenetes using helm	Deploy functions using ibmcloud cli
Docker images are downloaded from docker registry during helm deployment	"jar" packages are referenced from umbrella repo
Smoke, regression, performance test	Smoke, regression, performance test

Detail view : CI - IBM Cloud Functions

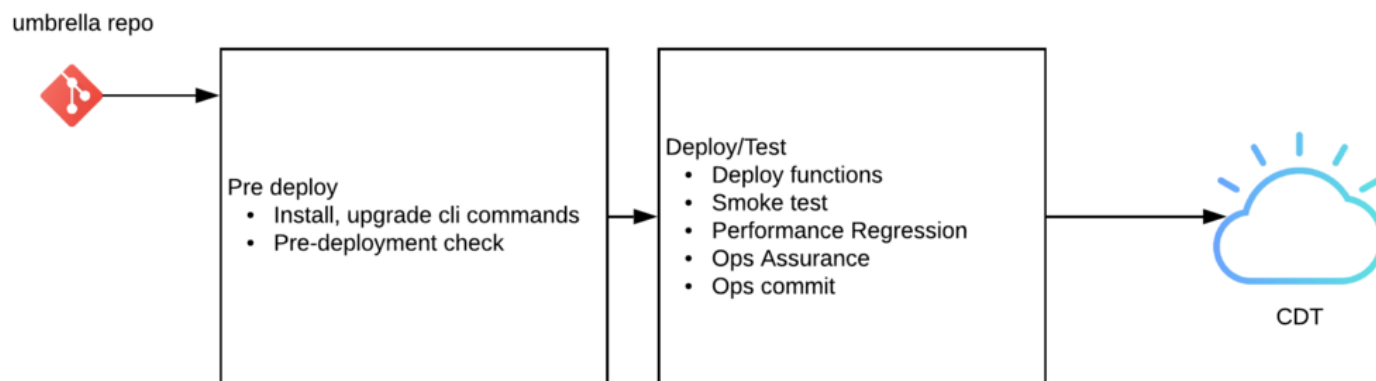


TBD : How to integrate AppScan from IBM Toolchain

Detail view : CI - Communications Engine



Detail view : CD - IBM Cloud Functions / communications engine



Roadmap

Comm engine - Sprint 2	Comm engine - Sprint 3, 5	Comm engine - Sprint 5
Wire-up toolchains manually	Bug fixes and any improvements to workflow from observations	Identify and remove/generalize activities specific to the communications engine from

		CI/CD workflow.
Develop build, deployment & test scripts	Improve build & deployment scripts re-usability configurability	Create toolchain template which can auto wire CI & CD pipelines