



OPENSIFT CONTAINER PLATFORM CI/CD Build & Deploy

`$ oc get users`

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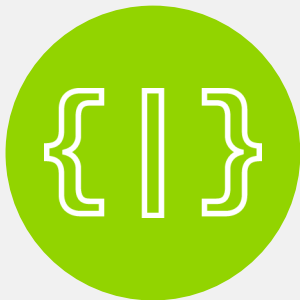
EMEA OpenShift Senior Specialist Solution Architect

T: @tpahonen #RedHat #openshift #devops

“IT WORKS ON MY COMPUTER” [OBJ]



BUILD AND DEPLOY CONTAINER IMAGES



**DEPLOY YOUR
SOURCE CODE**

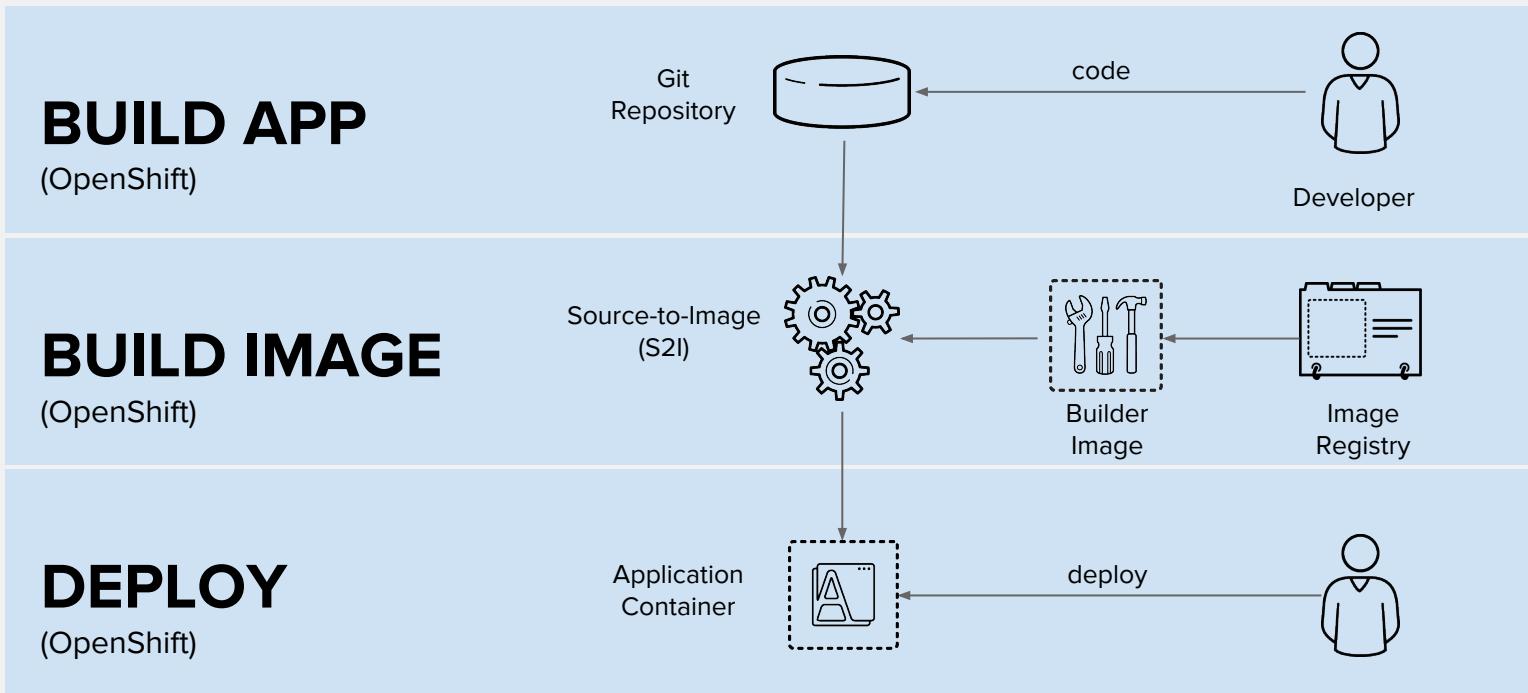


**DEPLOY YOUR
APP BINARY**

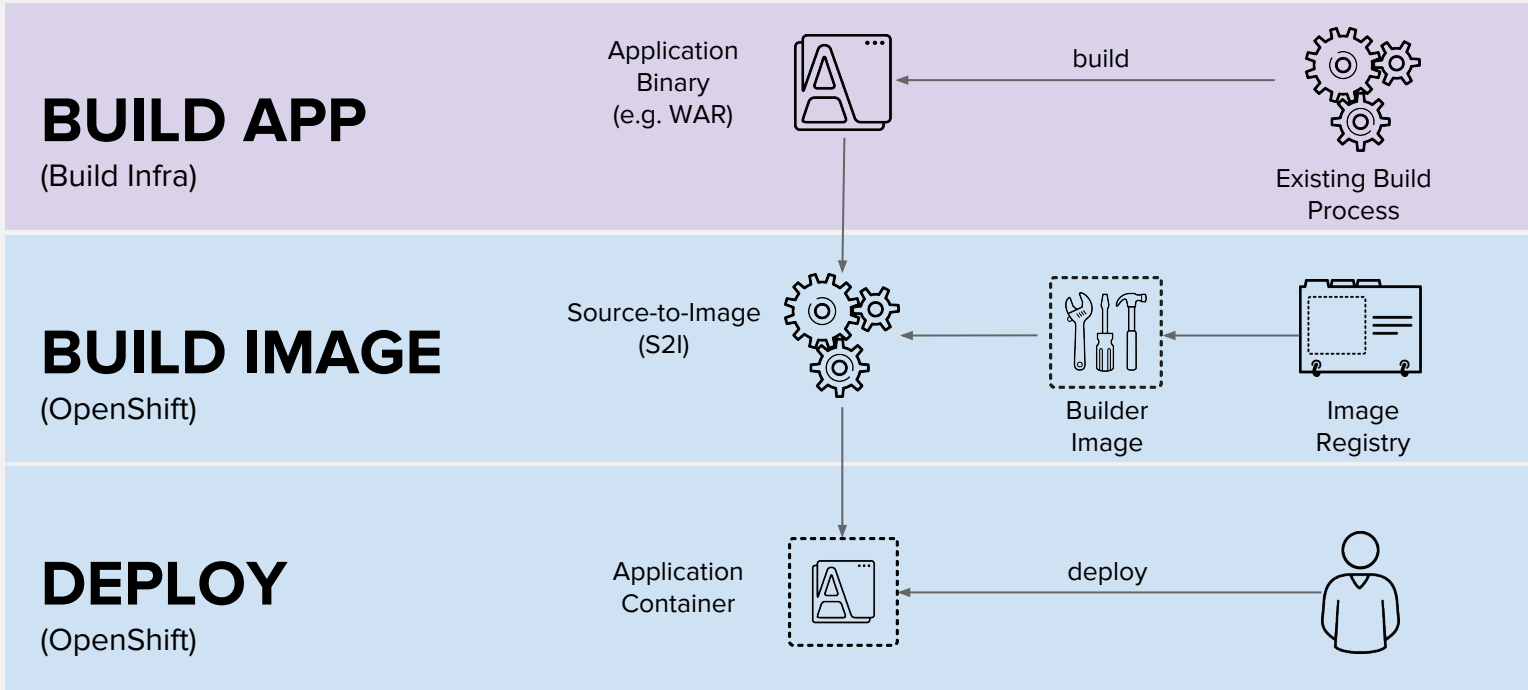


**DEPLOY YOUR
CONTAINER IMAGE**

DEPLOY SOURCE CODE WITH SOURCE-TO-IMAGE (S2I)

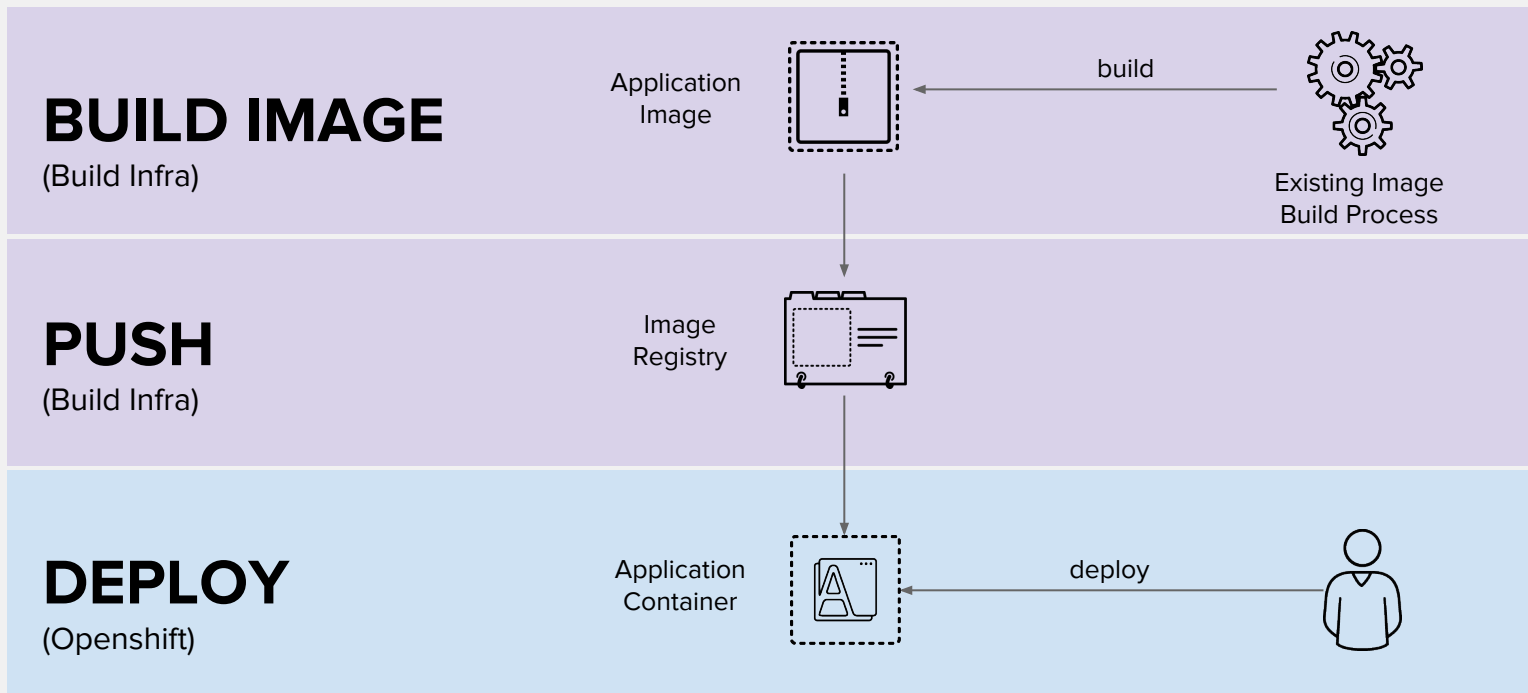


DEPLOY APP BINARY WITH SOURCE-TO-IMAGE (S2I)



■ User/Tool Does ■ OpenShift Does

DEPLOY DOCKER IMAGE



CONTINUOUS INTEGRATION (CI) CONTINUOUS DELIVERY (CD)

CI/CD WITH BUILD AND DEPLOYMENTS

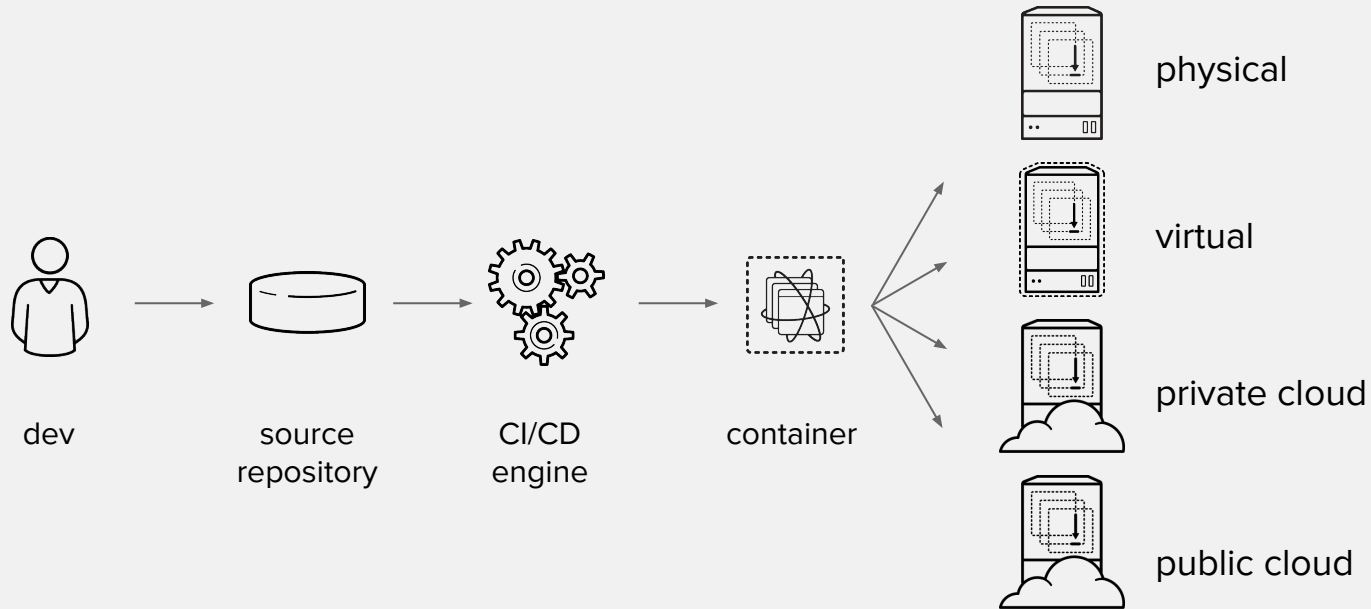
BUILDS

- Webhook triggers: build the app image whenever the code changes
- Image trigger: build the app image whenever the base language or app runtime changes
- Build hooks: test the app image before pushing it to an image registry

DEPLOYMENTS

- Deployment triggers: redeploy app containers whenever configuration changes or the image changes in the OpenShift integrated registry or upstream registries

CONTINUOUS DELIVERY WITH CONTAINERS



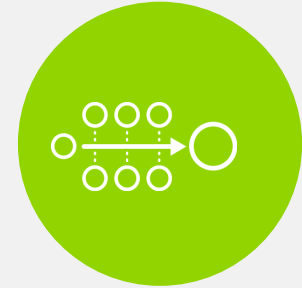
OPENSIFT LOVES CI/CD



**JENKINS-AS-A SERVICE
ON OPENSIFT**



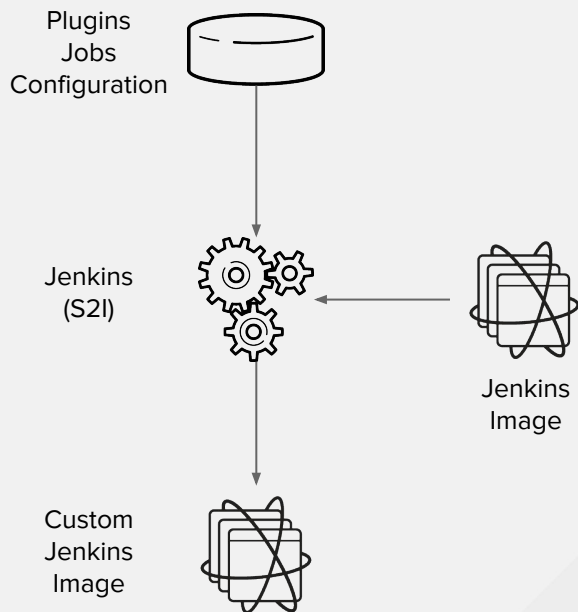
**HYBRID JENKINS INFRA
WITH OPENSIFT**



**EXISTING CI/CD
DEPLOY TO OPENSIFT**

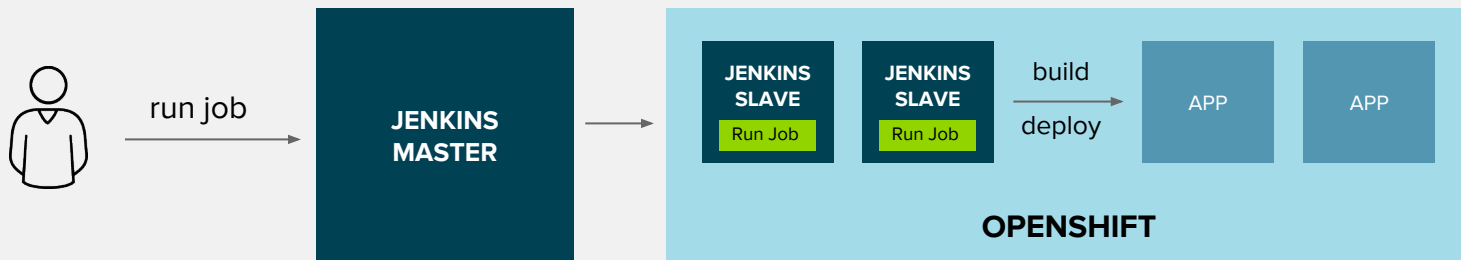
JENKINS-AS-A-SERVICE ON OPENSHIFT

- Certified Jenkins images with pre-configured plugins
- Jenkins S2I Builder for customizing the image
- OpenShift plugins to integrate authentication with OpenShift and also CI/CD pipelines
- Dynamically deploys Jenkins slave containers



HYBRID JENKINS INFRA WITH OPENSHIFT

- Scale existing Jenkins infrastructure by dynamically provisioning Jenkins slaves on OpenShift
- Use Kubernetes plug-in on existing Jenkins servers



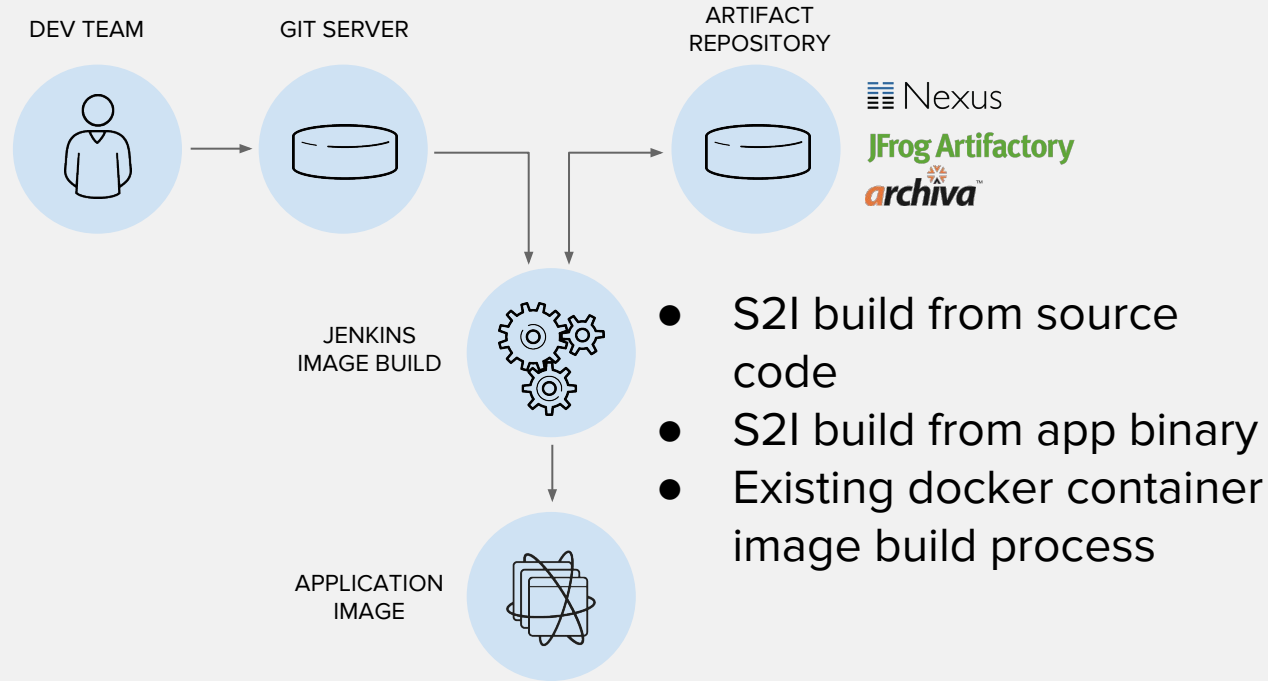
OPENSIFT PIPELINES

- OpenShift Pipelines allow defining a CI/CD workflow via a Jenkins pipeline which can be started, monitored, and managed similar to other builds
- Dynamic provisioning of Jenkins slaves
- Auto-provisioning of Jenkins server
- OpenShift Pipeline strategies
 - Embedded Jenkinsfile
 - Jenkinsfile from a Git repository

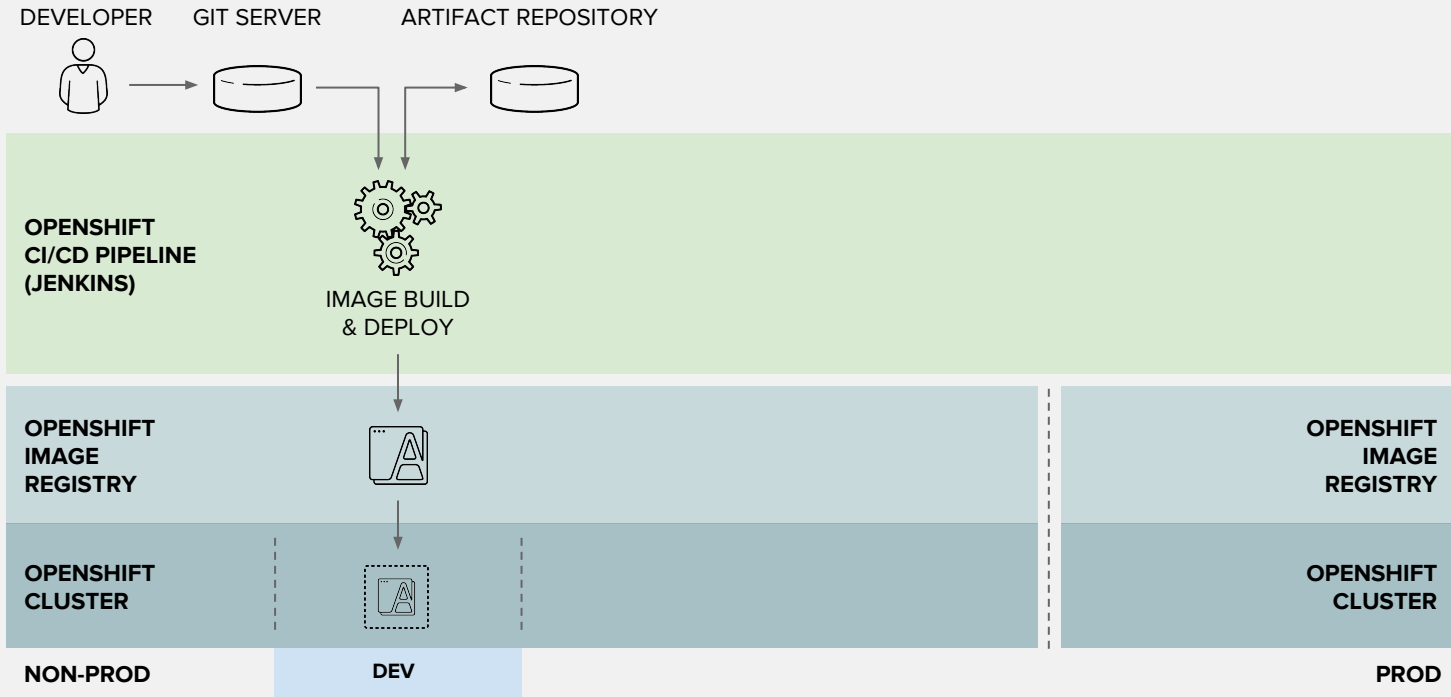
```
apiVersion: v1
kind: BuildConfig
metadata:
  name: app-pipeline
spec:
  strategy:
    type: JenkinsPipeline
    jenkinsPipelineStrategy:
      jenkinsfile: |-
        node('maven') { ◀-----
          stage('build app') {
            git url: 'https://git/app.git'
            sh "mvn package"
          }
          stage('build image') {
            sh "oc start-build app --from-file=target/app.jar"
          }
          stage('deploy') {
            openshiftDeploy deploymentConfig: 'app'
          }
        }
      }
```

Provision a Jenkins slave for running Maven

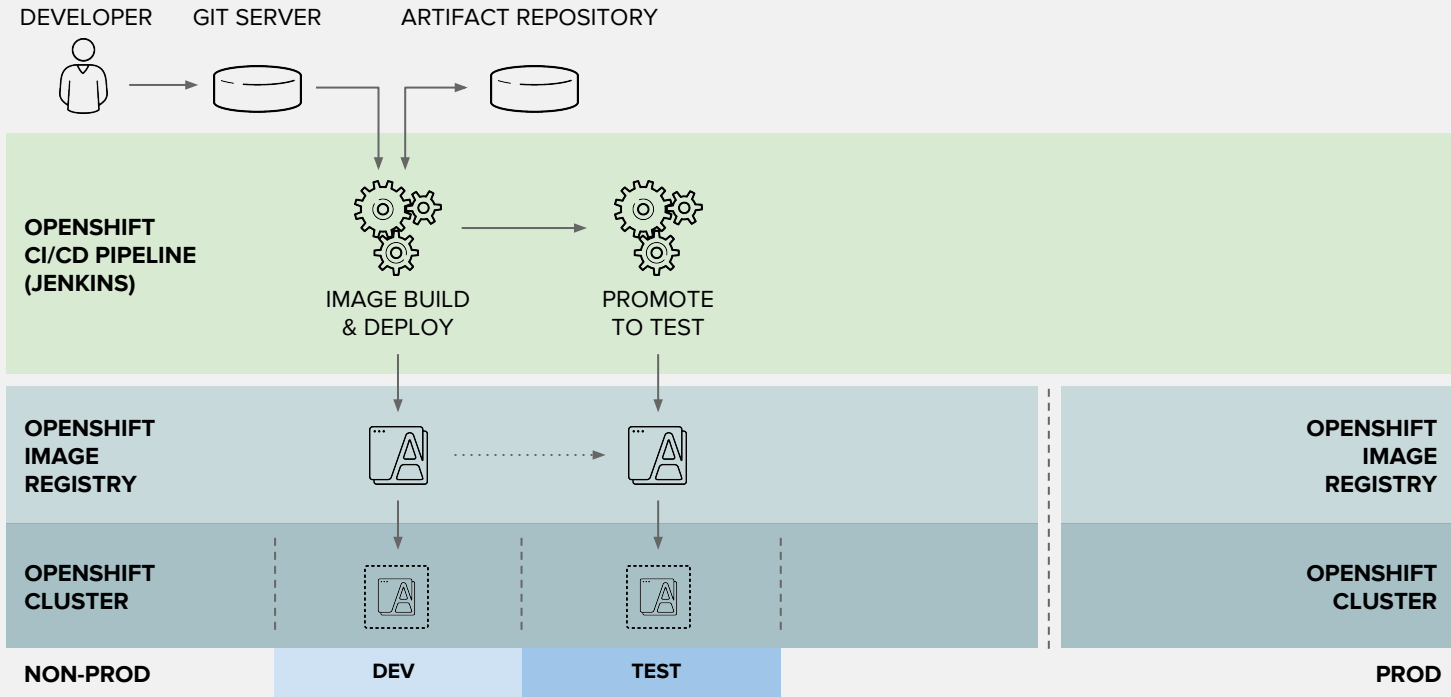
CONTINUOUS DELIVERY PIPELINE



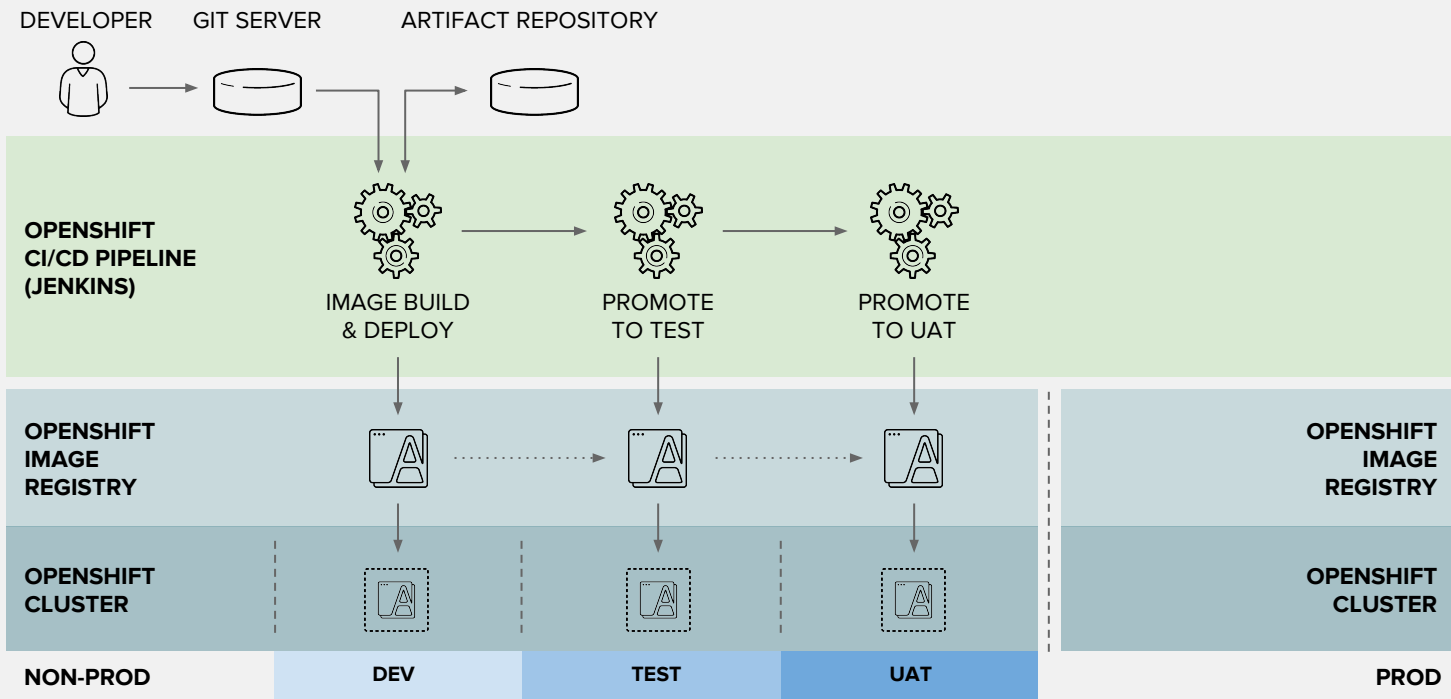
CONTINUOUS DELIVERY PIPELINE



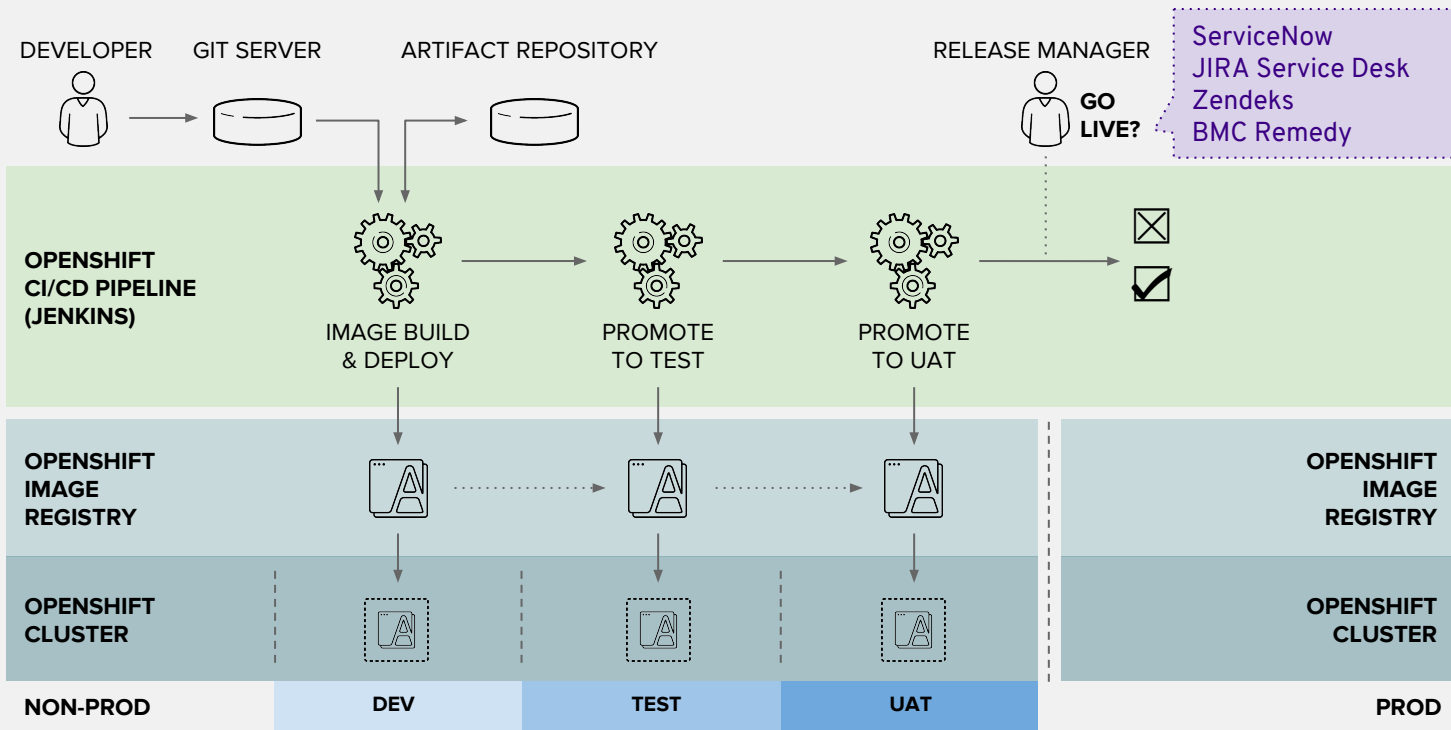
CONTINUOUS DELIVERY PIPELINE



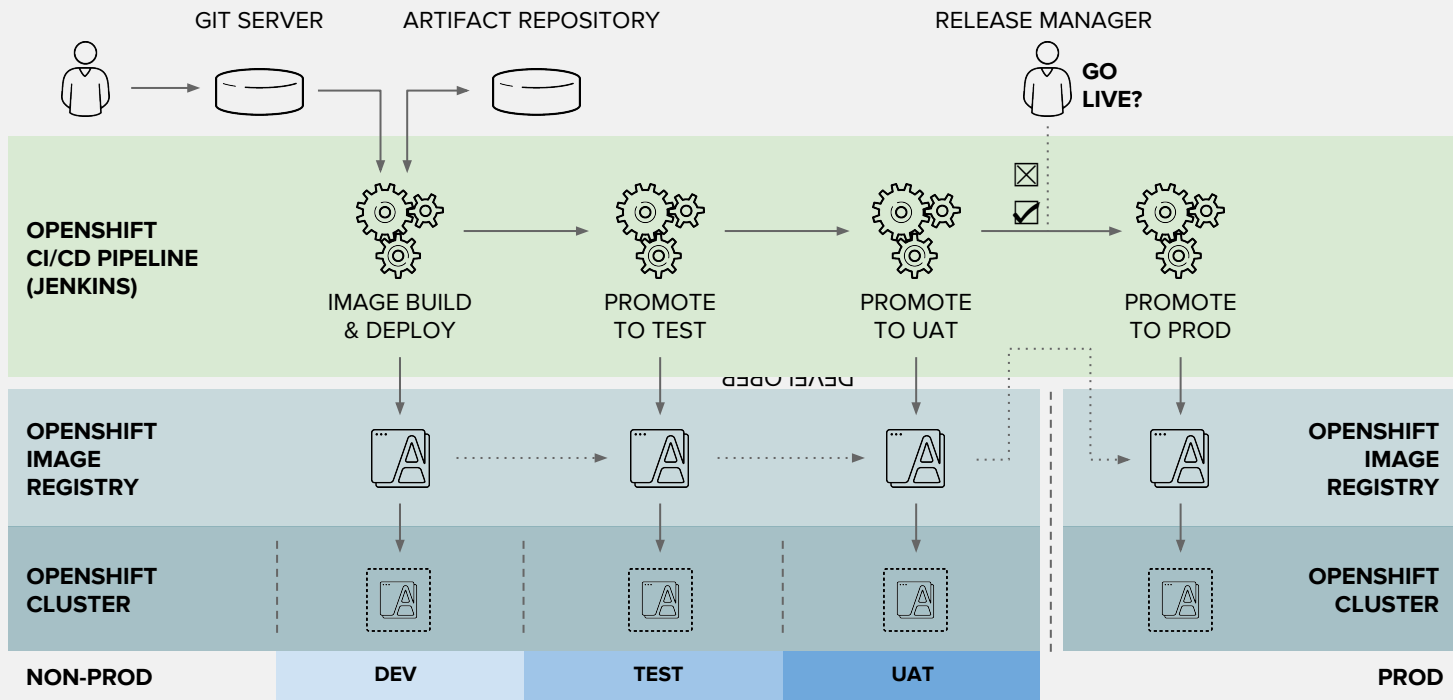
CONTINUOUS DELIVERY PIPELINE



CONTINUOUS DELIVERY PIPELINE

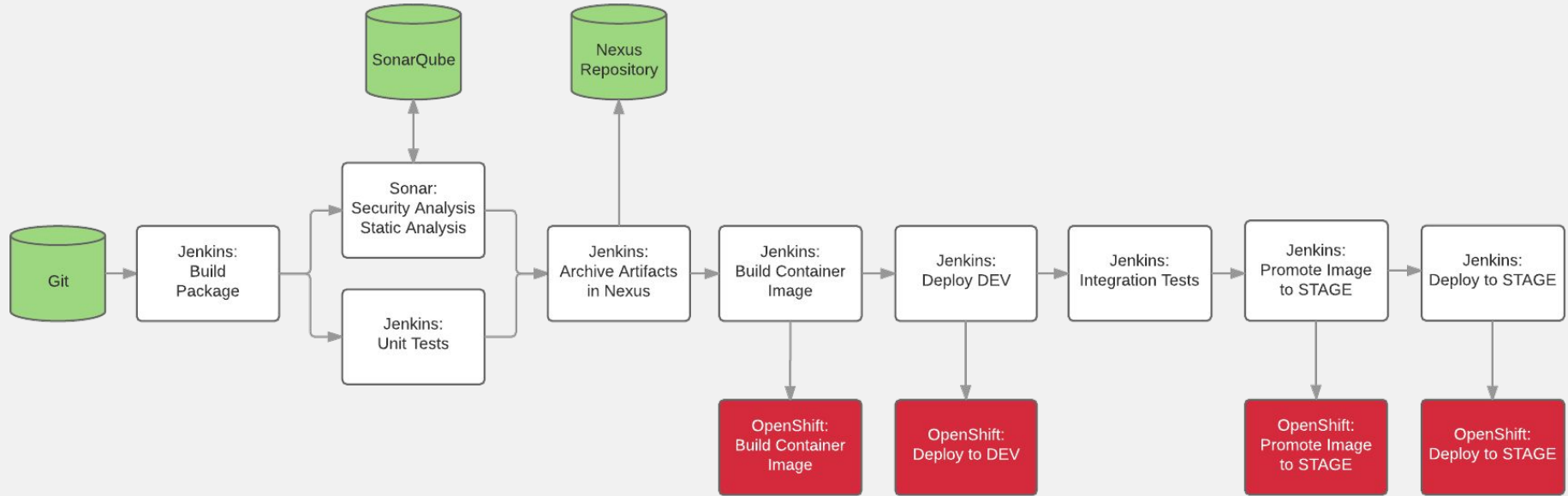


CONTINUOUS DELIVERY PIPELINE



DEMO TIME

OPENSIFT CI/CD PIPELINE



OCP NINJAS!



DEMO LINKS

<https://github.com/OpenShiftDemos/openshift-cd-demo>

<https://learn.openshift.com/introduction/>





THANK YOU



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