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ABOUT US

AEM Corporation founded Vizuri in 2002 as its innovation hub. As technologies and standards evolve, Vizuri has invested heavily in diverse capabilities to benefit AEM's diverse private- and public-sector clients.

Our industry-leading technology and business experts help Fortune 500 organizations with tactical technology capabilities, industry knowledge, and strategic business insights.

FACTS

- Vizuri is a dba (doing business as) of AEM; commercial branding

- Open Source solutions provider

- Industry recognized awards and certifications
  - 4 Red Hat Innovation Awards
  - 5 Time Red Hat Middleware Partner of the Year
  - 1st recipient of the Red Hat Partner of Excellence Award in North America

- Lead and Sponsor of NOVA MEAN & DC JBoss Users Groups

WHAT IS CI/CD

Continuous Integration establishes a consistent and automated way to build, package, and test applications.

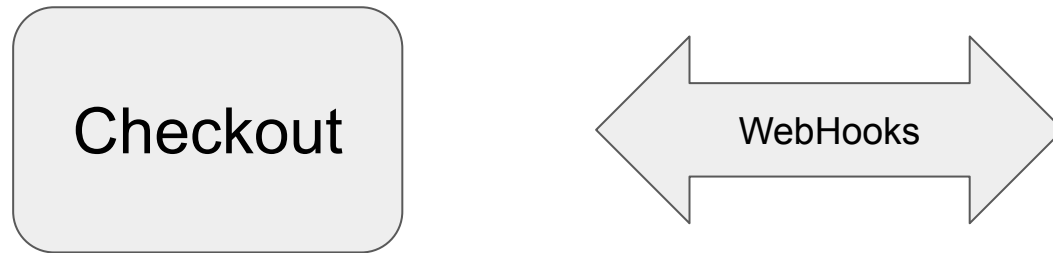Continuous Deploy automates the delivery of applications to selected infrastructure environments.

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CI/CD PIPELINE ACTIVITIES

What do we want to automate in our CI/CD Pipelines?

CI/CD PIPELINE STEPS – (SCM)

CI/CD PIPELINE STEPS – NOTIFICATIONS

Notify

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CI/CD PIPELINE STEPS – CODE BUILD

Build

CI/CD PIPELINE STEPS – UNIT TEST

Unit Test

JUnit

cucumber

nunit

CI/CD PIPELINE STEPS – INTEGRATION TEST

Integration Test

POSTMAN

JUnit

cucumber

nunit

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CI/CD PIPELINE STEPS – CODE ANALYSIS

Analyze Code

CI/CD PIPELINE STEPS – ARTIFACT REPOSITORY

Publish Build Artifacts

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CI/CD PIPELINE STEPS – CONTAINER BUILD

Build
Container

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CI/CD PIPELINE STEPS – CONTAINER REGISTRY

Container Push

CI/CD PIPELINE STEPS – CONTAINER SCAN

Container Scan

clair

BLACKDUCK

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CI/CD PIPELINE STEPS – APPROVALS

Approve

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CI/CD PIPELINE STEPS – DEPLOY

Deploy

CI/CD PIPELINE

GitHub · sonarqube · Sonatype Nexus · docker · QUAY · RED HAT OPENSHIFT Container Platform

Checkout	Build	Unit Test	Code Analysis	Publish Build Artifact	Container Build	Container Push	Deploy Dev

Integration Test	Approve	Deploy Test	Integration Test	Approve	Deploy Prod	Integration Test

Jenkins · RED HAT OPENSHIFT Container Platform · Jenkins · RED HAT OPENSHIFT Container Platform

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JENKINS OPENSHIFT PLUGINS

- **OpenShift Client Plugin** - Use OpenShift DSL to interact with OpenShift Clusters
- **OpenShift Jenkins Sync** - Synchronizes Build Jobs Between Jenkins and OpenShift
- **Kubernetes** - Jenkins slave PODs on Kubernetes/Openshift
- **Kubernetes Credentials** - Manage Kubernetes Credentials

OTHER JENKINS PLUGINS

- **Anchore** - Container and Image Scanner Plugin
- **jUnit/xUnit** - Publish Unit Test Results
- Slack Notification Plugin
- **Docker Pipeline** - Build and Publish Containers
- Sonar Scanner
- Sonar Quality Gates

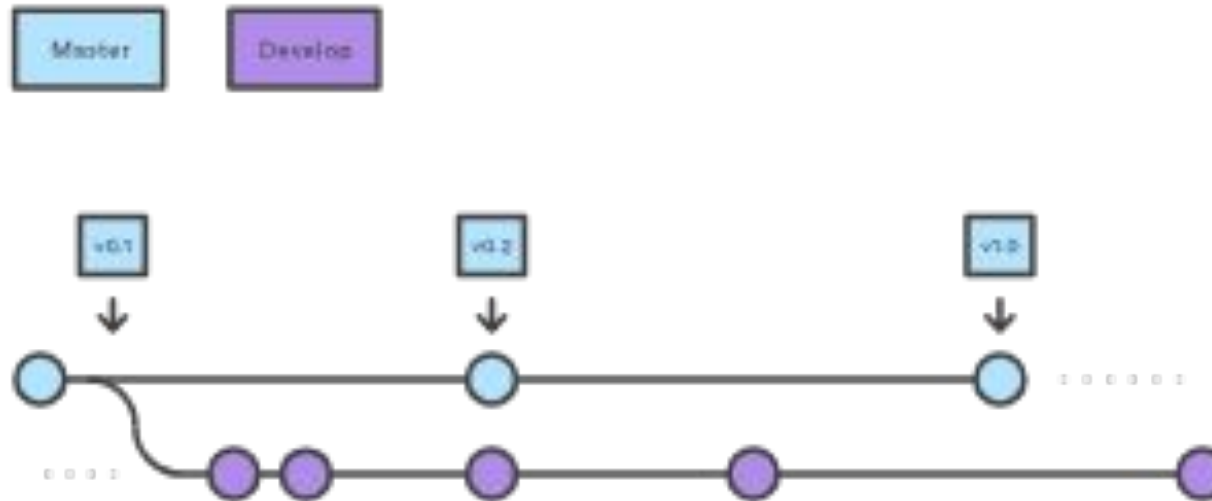# CI/CD PIPELINE TOOLS

We have tools and plugins now what...

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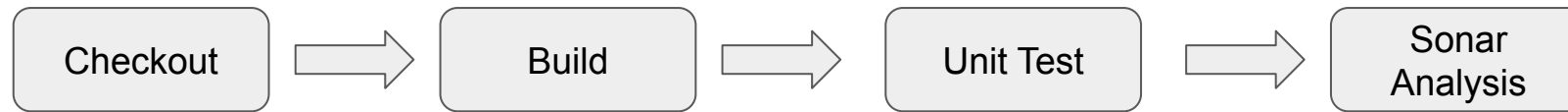# CI/CD PIPELINE PROCESS

We need a process.

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CI/CD PIPELINE PROCESS - GITFLOW

The master branch stores the official release history, and the develop branch serves as an integration branch for features.

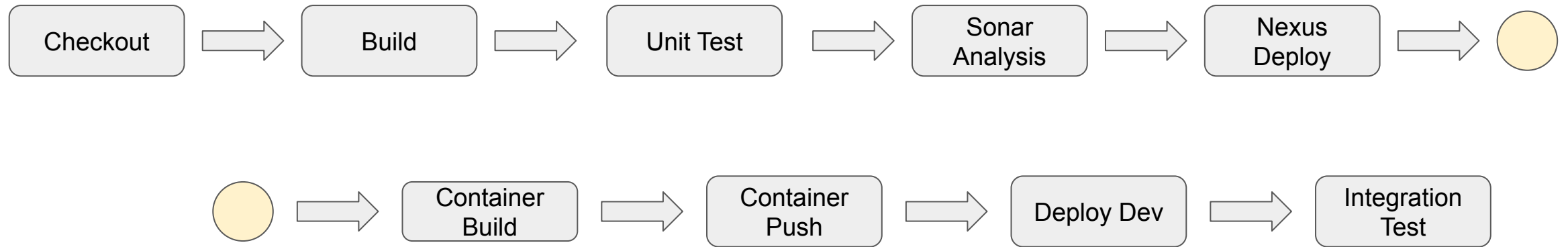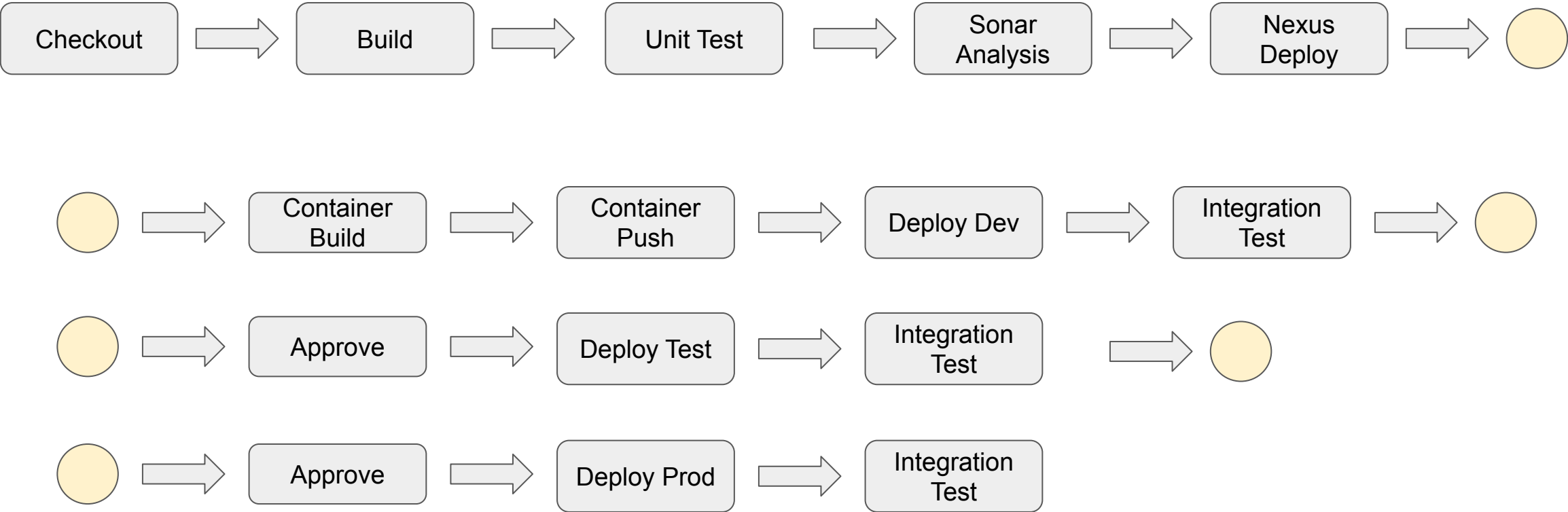# CI/CD PIPELINE PROCESS – FEATURE/BUG BRANCHES

Checkout ➡ Build ➡ Unit Test ➡ Sonar Analysis

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CI/CD PIPELINE PROCESS – DEVELOP BRANCH

Checkout → Build → Unit Test → Sonar Analysis → Nexus Deploy → ○

○ → Container Build → Container Push → Deploy Dev → Integration Test

CI/CD PIPELINE PROCESS – RELEASE BRANCH

Let's see the CI/CD Process in Action

http://student-X.ocpws.kee.vizuri.com
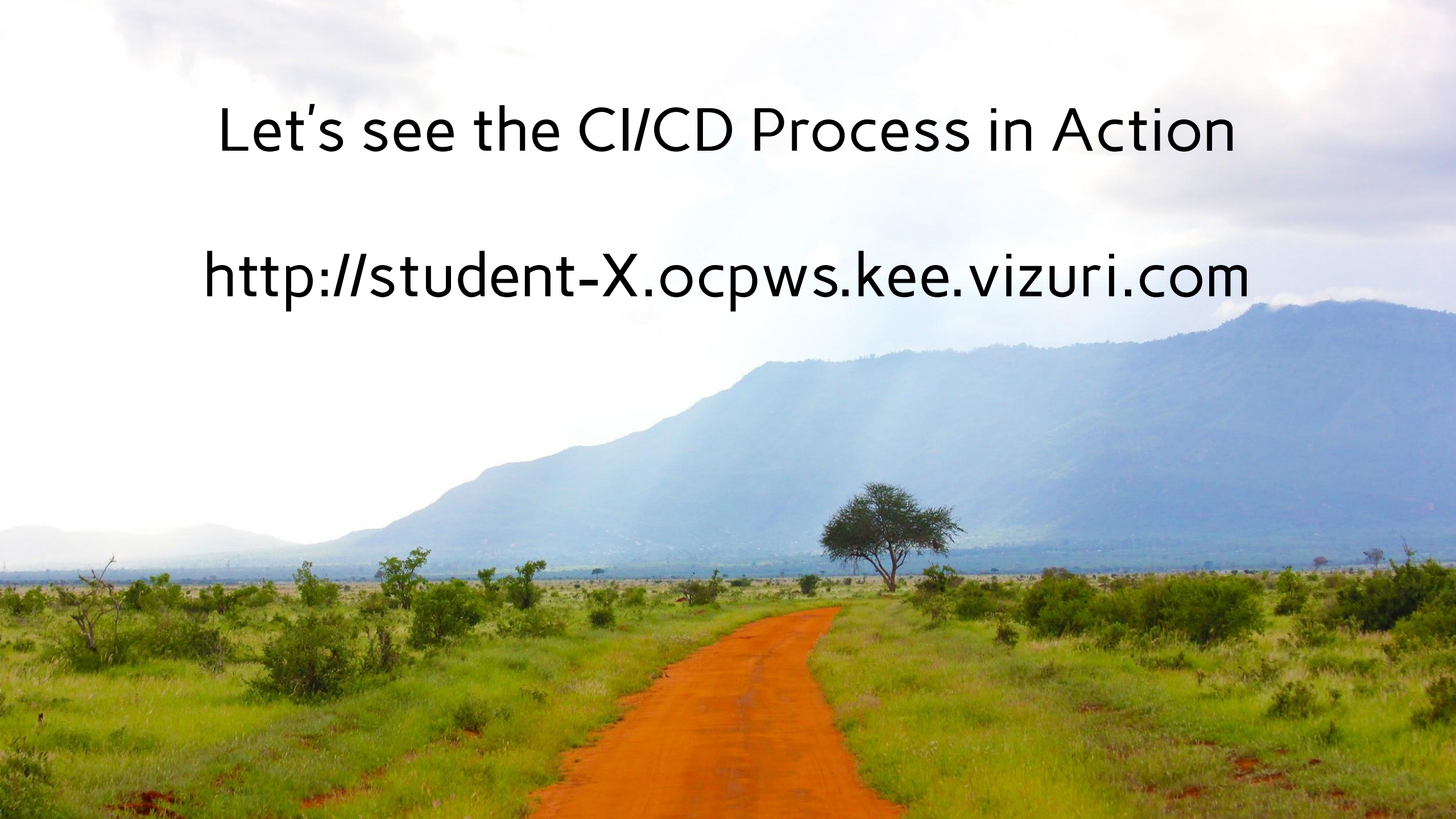
THANK YOU

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