# IBM Wazi as a Service

*Getting started securing your z/OS app dev & test in IBM Cloud*


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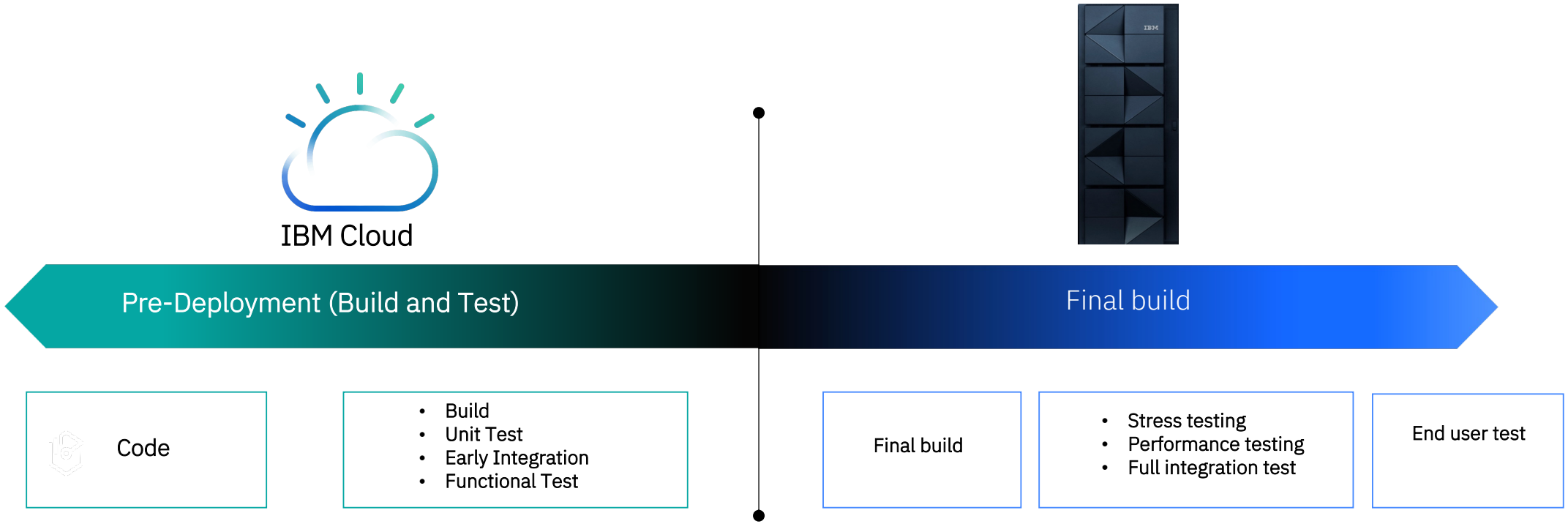
# Agenda

- Introduction to z/OS  Development & Test on the Cloud
- Getting started with IBM Cloud Continuous delivery
- **Demo** – Using IBM Cloud Toolchain for Continuous Integration
- Next steps
  - Resources – demo playlist
  - Webpage
  - Join the community

# Introduction to z/OS Development & Test on the Cloud

# Wazi aaS – z/OS dev and test




**33%**

of developers see a lack of skills or resource allocation inhibiting their productivity[1]

**36%**

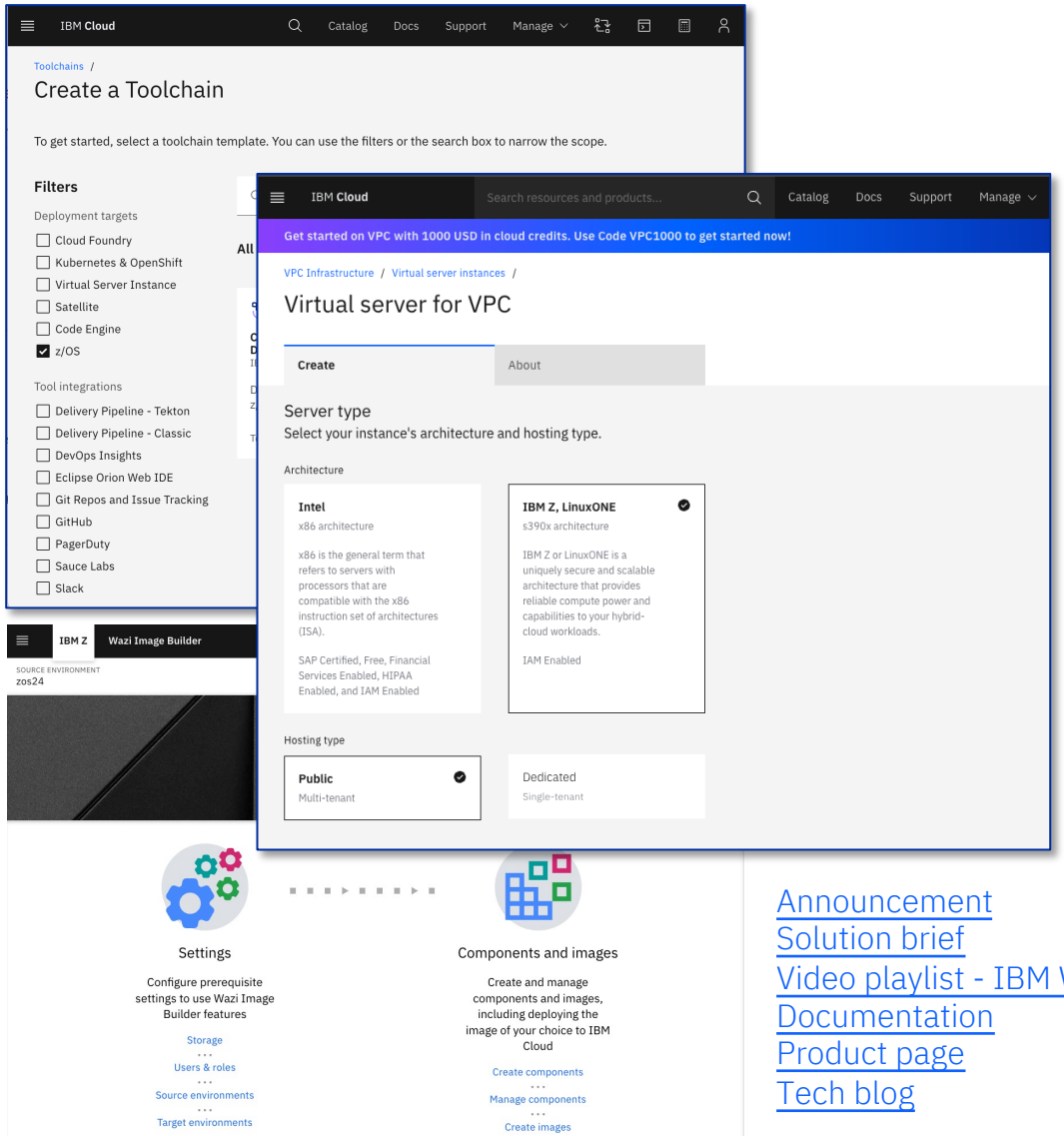
of developers view a lack of collaboration between development and IT operations as inhibiting their productivity[3]

**3rd**

year in a row, a majority of Gitlab survey takers resoundingly pointed to testing as the area most likely to cause delays[2]

# IBM Wazi aaS

Cloud-native development and test for z/OS on IBM Cloud




## Wazi - z/OS Dev and Test system in your Virtual Private Cloud (VPC) – GA allow list (June 30)

- Dedicated and Isolated environment reducing conflicts
- Stock image with pre-installed and customized software
- Manage virtual machine-based compute, storage and networking resources in a private, secure space you define
- Infrastructure as a Service with flexible consumption model

## Wazi Image Builder: - GA on PPA (June 30)

- Create custom images from your on-premises LPAR
- Web UI and REST APIs to automate to deploy to IBM Cloud

## Continuous Integration: (Experimental)

- Use z/OS templates that extend IBM Continuous Delivery Service to automate builds, tests, deployments and more, in secure DevSecOps toolchains.

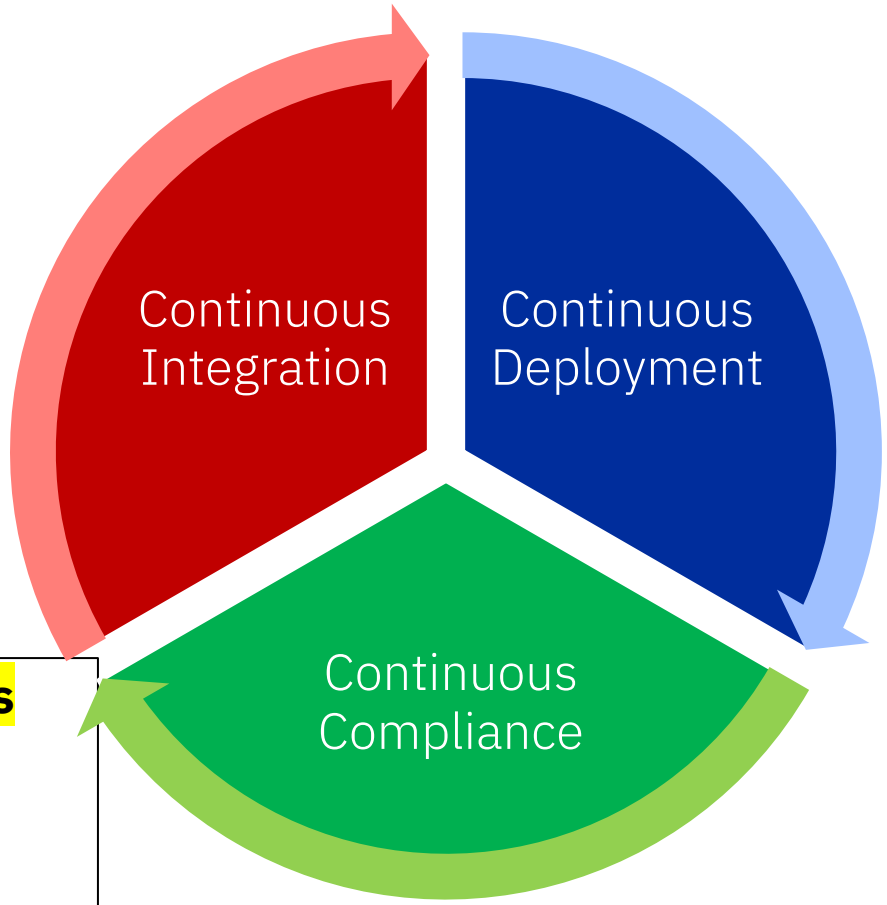
Announcement
Solution brief
Video playlist - IBM Wazi aaS
Documentation
Product page
Tech blog

# Experimental
# Getting Started with IBM Cloud Continuous Delivery

# IBM Cloud Secure Software Supply Chain

A Reference Architecture designed to prevent software security problems from reaching production systems and streamline compliance audits using **DevSecOps** practices.

An implementation built on IBM Cloud **as-a-service**, backed by IBM Cloud certified services, extensible with your own tools.




**New! Experiment Continuous Integration for z/OS applications**

- Experimental exploration of IBM Cloud Continuous Delivery through z/OS integration templates based on DevSecOps practices.
- Access a unified user experience for z/OS and cloud-native applications in IBM Cloud to create and use toolchains, with security and auditability at its core.

# IBM Cloud Reference Implementation

- **Family of templates** built on IBM Cloud Continuous Delivery codify the Reference Architecture to ease onboarding
  - Continuous Integration (***including for z/OS app***)
  - Continuous Deployment
  - Continuous Compliance

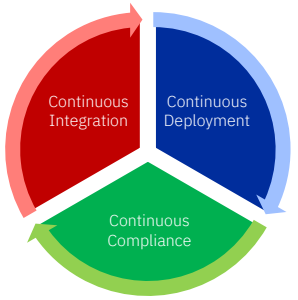
- **Easy Setup** – step-by-step user experience to deploy reference implementation on IBM Cloud

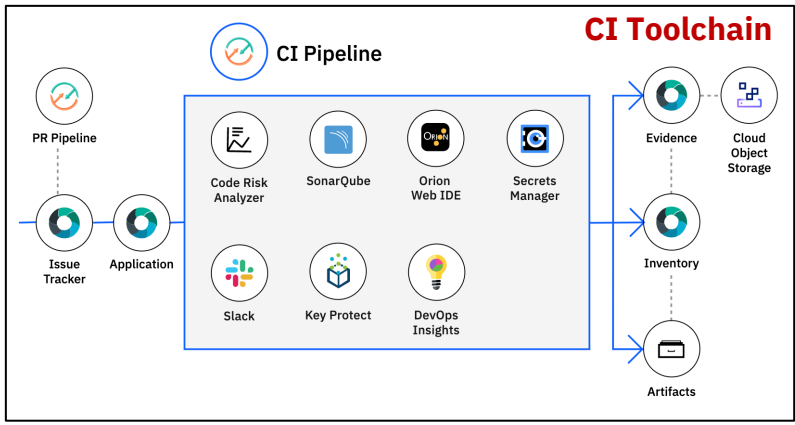
- **Leverage** IBM Cloud Platform Portfolio to bring consistency, standardization to the delivery lifecycle

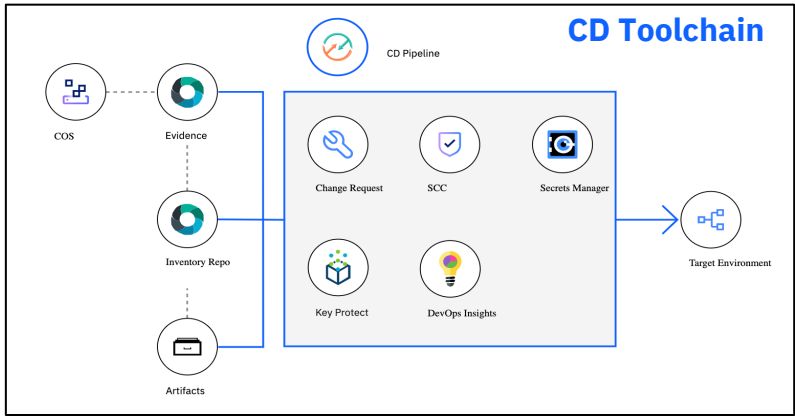
- **Standardized solution to accelerate** compliance requirements
  - ISO 27k, SOC2, FS Cloud, FedRAMP, etc.
  - Deploy into IBM Cloud Satellite
  - Air-gapped solutions

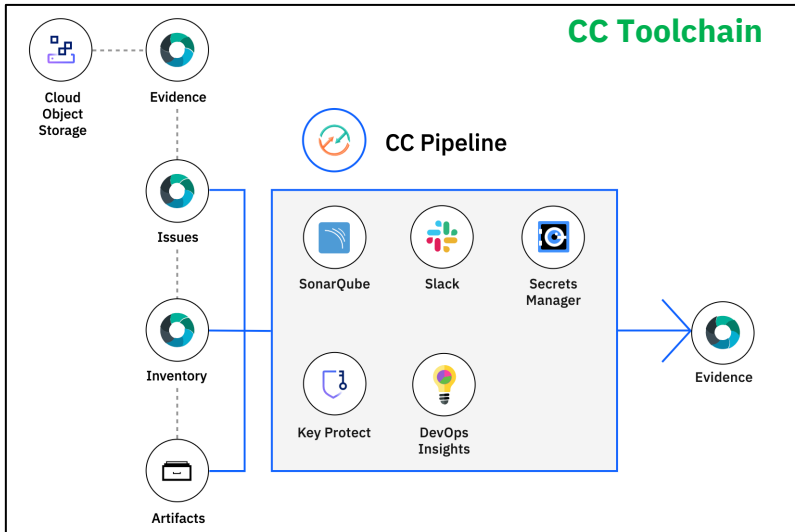
- **Worldwide availability:** US South, US East, Frankfurt, London, Tokyo, Osaka, Sydney, Toronto, Sao Paulo

- **Reliability:** Architected on Kubernetes, exploits 3 availability zones per region for HA (MZR)

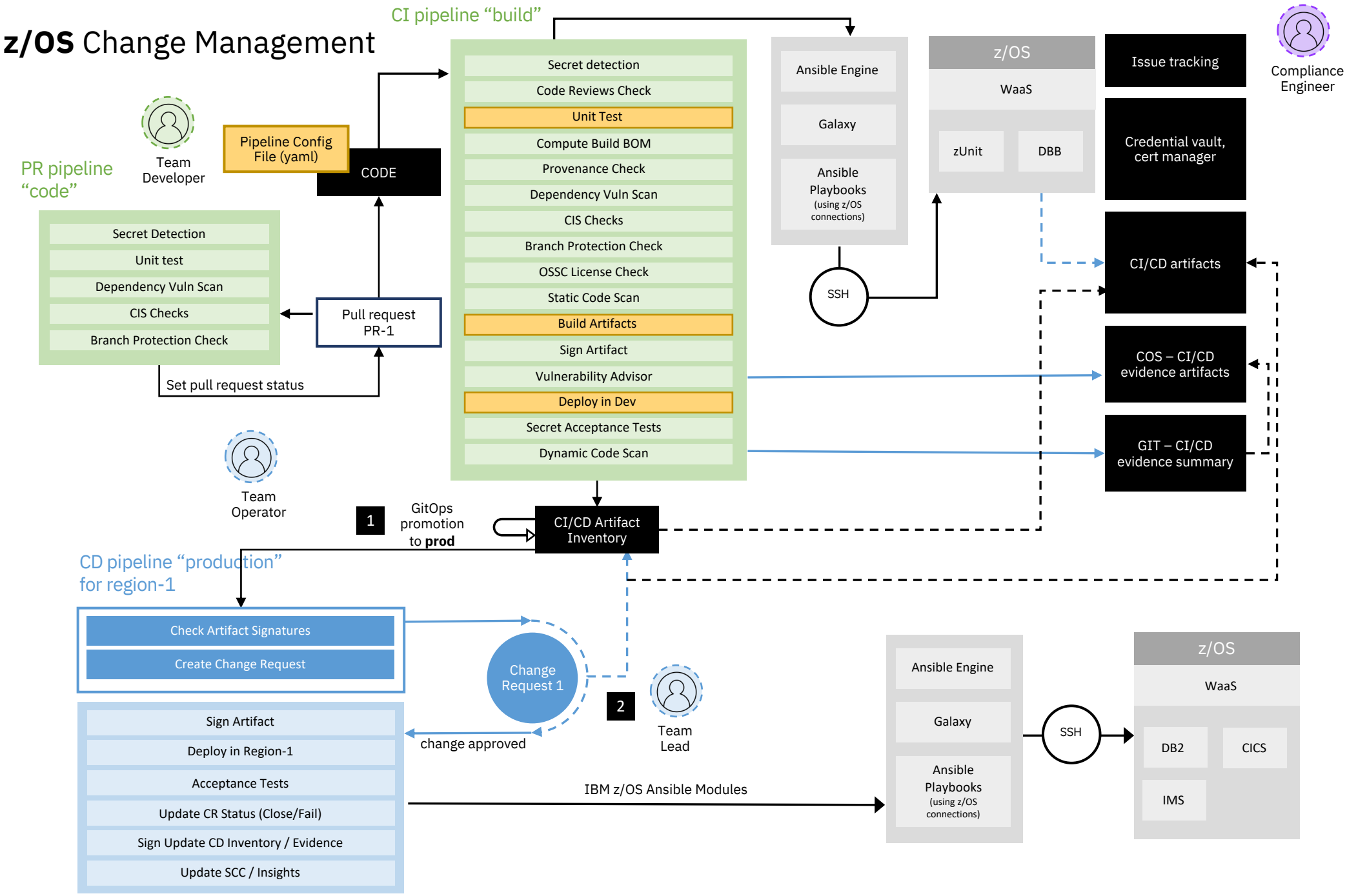


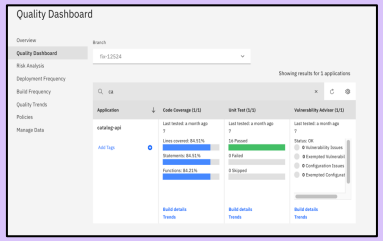



# z/OS Change Management




## DevOps Insights

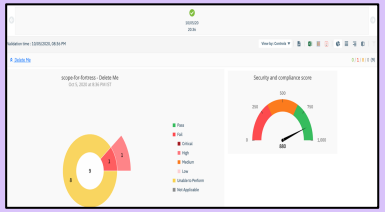



## GitLab, ServiceNow

**Change Request (Service Now)**

- Cumulative list of changes
- Traceability: Issue/Pull Request
- Bill of material
- Status on each control:
  - ✓ Secret detection
  - ✓ Unit test passed
  - ✓ [CRA] Dependency vulnerability scan (CVE)
  - ✓ Static code scan
  - ✓ Dynamic code scan
  - ✓ Changes reviewed
  - ✓ Signed artifact
  - ✓ [VA] No vulnerability found
  - ✓ Acceptance tests in PRE-PROD
  - ✓ ...
- Links to Evidence

## Sec & Compliance Centre



# Demo – Using IBM Cloud Toolchain for Continuous Integration

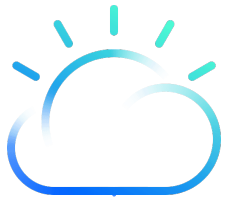
# Streamline dev & test

- With Wazi aaS, z/OS Dev and test pipelines, easily adopt DevSecOps practices
- Ensure Continuous Compliance and audit-ability
- ‘Shift left’ and test as early as possible

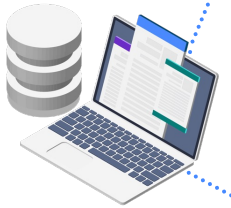
System Admin, DevOps Engineer

Developer

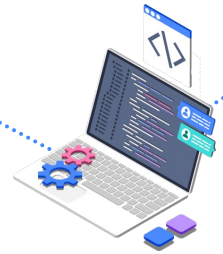
Compliance Engineer



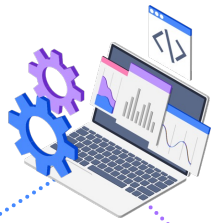
**Step 1**
Accesses the IBM Cloud portal or the APIs customized for the application to quickly create a secure CI pipeline for z/OS app with DevSecOps practices



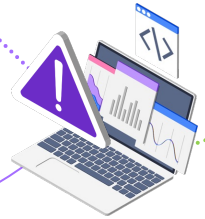
**Step 2**
He chooses a z/OS virtual server instance to build against and the Cloud services to secure the pipeline with, and store immutable evidence



**Step 3**
He grants access to the newly created CI pipeline to the development team members



**Step 4**
She begins to edit, debug and tests her application using the IDE and language of her choice



**Step 5**
She can start sharing code changes with the team to trigger the CI pipeline to build and test her application

**Step 6**
He can start inspecting and providing evidence to auditors, while ensuring my systems are correctly secured

# **Wazi aaS** – Benefits

## Cloud-native development and test for z/OS applications

Accelerate DevOps practices with flexible, consumption-based pricing

### Speed to Market

Accelerate development and testing with on-demand access to z/OS system

**Eliminate wait times** involved in exclusive access to environments

**Improved developer productivity** resulting n accelerated release cycle

### Improved Software Quality

Shift left and start testing as early as your code phase with access to isolated development environment

Create your development environment with **automated deployment** of custom application

Hybrid application development with **standard CI/CD pipeline**

### Flexible pricing

Infrastructure as a Service enabling access to z/OS system and pay for what you use

**Pay for what you use** on hourly basis

Additional discount based on period and usage

### Innovate with Freedom

Innovate at scale with Wazi z/OS Dev and Test system with pre-installed software’s

**Deploy a stock image** with preinstalled software's onto z/OS Virtual server

Innovate at scale and **deploy with confidence**

# Next Steps

# For More Information

## Resources

- Demos:
  - https://mediacenter.ibm.com/playlist/dedicated/189147203/1_5q5qeehb/1_b8aircfl
- Blogs
  - Getting started with Wazi as a Service
- Technical Documentation
  - https://www.ibm.com/docs/en/wazi-aas/1.0.0

## Wazi as a Service

- https://www.ibm.com/cloud/wazi-as-a-service

## Join the Community

- Cloud Native Development on IBM Z

## Other Useful Resources

- IBM Cloud Continuous Delivery in the Cloud Catalog: https://cloud.ibm.com/catalog/services/continuous-delivery
- Cloud Dev Tools @IBM External Slack Channel: https://ic-devops-slack-invite.us-south.devops.cloud.ibm.com/

# Thank you