

**DevOps Certification Training
Certification Project – Insure Me
Insurance Domain
By Swapnil Jadhav**

Insure Me is a Global leading Insurance provider based out of USA. The company offers products and services like Home Insurance, Health Insurance, Car Insurance and Life Insurances. Initially the company was using a Monolithic application architecture, As the company grown, It started facing difficulties in managing the application infrastructure and application deployments.

Insure-Me has decided to transform its monolithic application architecture to microservice application architecture and opted to go DevOps by implementing CICD pipeline and necessary automations. Insure me has decided to use AWS as primary cloud services provider to create servers, databases, and application deployments.

The company's goal is to deliver the product updates frequently to production with High quality & Reliability. They also want to accelerate software delivery speed, quality and reduce feedback time between developers and testers.

Following are the problems the company is facing at the moment

- Building Complex builds is difficult

- Manual efforts to test various components/modules of the project

- Incremental builds are difficult to manage, test and deploy

- Creation of infrastructure and configure it manually is very time consuming

- Continuous manual monitoring the application is quite challenging.

In order to implement a POC, you are requested to develop a mavenized microservice using spring boot and in memory h2 database.

1. a microservice which exposes below mentioned endpoints as APIs and uses in memory h2 database to store the data.
 - a. /createPolicy (HTTP Method : POST) (Request Body : JSON)
 - b. /updatePolicy/{policy id} (HTTP Method : PUT) (Request Body : JSON)
 - c. /viewPolicy/{policy id} (HTTP Method : GET) (No Request Body)
 - d. /deletePolicy/{policy id} (HTTP Method : DELETE) (No Request Body)

2. Write necessary Junit testcase.

3. Generate HTML report using TestNG.

4. Push your code into your GitHub Repository.

Note : Preload some data into the database. www.staragile.com

Later, you need to implement Continuous Integration & Continuous Deployment using following tools:

- Git - For version control for tracking changes in the code files
- Jenkins - For continuous integration and continuous deployment
- Docker - For deploying containerized applications
- Ansible - Configuration management tools
- Selenium - For automating tests on the deployed web application
- AWS : For creating ec2 machines as servers and deploy the web application.

This project will be about how to test the services and deploy code to dev/stage/prod etc, just on a click of button.

Business challenge/requirement

As soon as the developer pushes the updated code on the GIT master branch, the Jenkins job should be triggered using a GitHub Webhook and Jenkins job should be triggered, The code should be checked out, compiled, tested, packaged and containerized and deployed to the preconfigured test-server automatically.

The deployment should then be tested using a test automation tool (Selenium), and if the build is successful, it should be deployed to the prod server. All this should happen automatically and should be triggered from a push to the GitHub master branch.

Note : To have a detailed information about running the application and exposed APIs, Input/Output format, Refer to the README.md in the GitHub repository.

swapniljadhav9519/project1 x project1 [Jenkins] x swapnil9519/project1 gener x Prometheus Time Series Coll x Prometheus Time Series Coll x localhost x + -

https://github.com/swapniljadhav9519/project1

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master 1 branch 0 tags Go to file Add file <> Code About

swapniljadhav9519 my jenkins file b12443e 10 minutes ago 36 commits

.mvn/wrapper	initial commit	3 weeks ago
src	initial commit	3 weeks ago
.gitignore	initial commit	3 weeks ago
Dockerfile	original target jar	12 minutes ago
README.md	Update README.md	2 weeks ago
ansible-playbook.yml	sample webhook check	yesterday
ansibleplaybookbackup.yml	Update ansibleplaybookbackup.yml	last week
insureselenium.jar	new selenium file	54 minutes ago
jenkin1.txt	my jenkins file	10 minutes ago
mvnw	initial commit	3 weeks ago
mvnw.cmd	initial commit	3 weeks ago
pom.xml	initial commit	3 weeks ago

About

No description, website, or topics provided.

Readme

0 stars

1 watching

0 forks

Releases

No releases published

Create a new release

Packages

No packages published

Publish your first package

Contributors 2

niladrimondal

swapniljadhav9519 x project1 Config U x Docker Hub x Prometheus Time x Prometheus Time x localhost x localhost x localhost x + -

localhost:8080/job/project1/configure

Dashboard > project1 > Configuration

Configure

General Advanced Project Options Pipeline

Build Triggers

☐ Build after other projects are built ?

☐ Build periodically ?

☒ GitHub hook trigger for GITScm polling ?

☐ Poll SCM ?

☐ Quiet period ?

☐ Trigger builds remotely (e.g., from scripts) ?

Advanced Project Options

Advanced

Pipeline

Definition

Save Apply

swapniljadhav9519/pr...

project1 [Jenkins]

swapnil9519/project1

Prometheus Time Serie...

Prometheus Time Serie...

Deleting a repository -

Insure-me

localhost:8080/job/project1/

Dashboard > project1 >

Status

Changes

Build Now

Configure

Delete Pipeline

Full Stage View

Rename

Pipeline Syntax

GitHub Hook Log

Build History

trend

Filter builds...

#39Apr 4, 2023, 2:12 PM

#38Apr 4, 2023, 2:01 PM

#37Apr 4, 2023, 1:27 PM

#36Apr 4, 2023, 1:11 PM

#35Apr 4, 2023, 1:00 PM

#34Apr 4, 2023, 12:44 PM

Pipeline project1

Add description

Disable Project

Stage View

Average stage times:
(Average full run time: ~5min 16s)

	Environment Declaration	code checkout	maven build	build docker image	push to dockerhub	run the container
#35 Apr 04 14:12 2 commits	110ms	2s	30s	8s	1min 47s	3s
#38 Apr 04 14:01 No Changes	95ms	2s	31s	20s	5min 26s	3s
#37 Apr 04 13:27 No Changes	141ms	7s	29s	24s	9min 7s	2s aborted
#36 Apr 04 13:11 1 commit	110ms	3s	33s	34s	13min 49s	aborted

14:18
04-04-2023

swapniljadhav9519/pr...

project1 [Jenkins]

swapnil9519/project1

Prometheus Time Serie...

Prometheus Time Serie...

Deleting a repository -

Insure-me

https://hub.docker.com/repository/docker/swapnil9519/project1/general

Add a short description for this repository
The short description is used to index your content on Docker Hub and in search engines. It's visible to users in search results.
Update

swapnil9519/project1

Description
This repository does not have a description
Last pushed: 5 minutes ago

Docker commands
To push a new tag to this repository,
docker push swapnil9519/project1:tagname
Public View

Tags
This repository contains 1 tag(s).

Tag	OS	Type	Pulled	Pushed
1.0		Image	---	5 minutes ago

[See all](#)[Go to Advanced Image Management](#)

Automated Builds
Manually pushing images to Hub? Connect your account to GitHub or Bitbucket to automatically build and tag new images whenever your code is updated, so you can focus your time on creating.
Available with Pro, Team and Business subscriptions. [Read more about automated builds.](#)
Upgrade

README
Repository description is empty. Click [here](#) to edit.

14:18
04-04-2023







