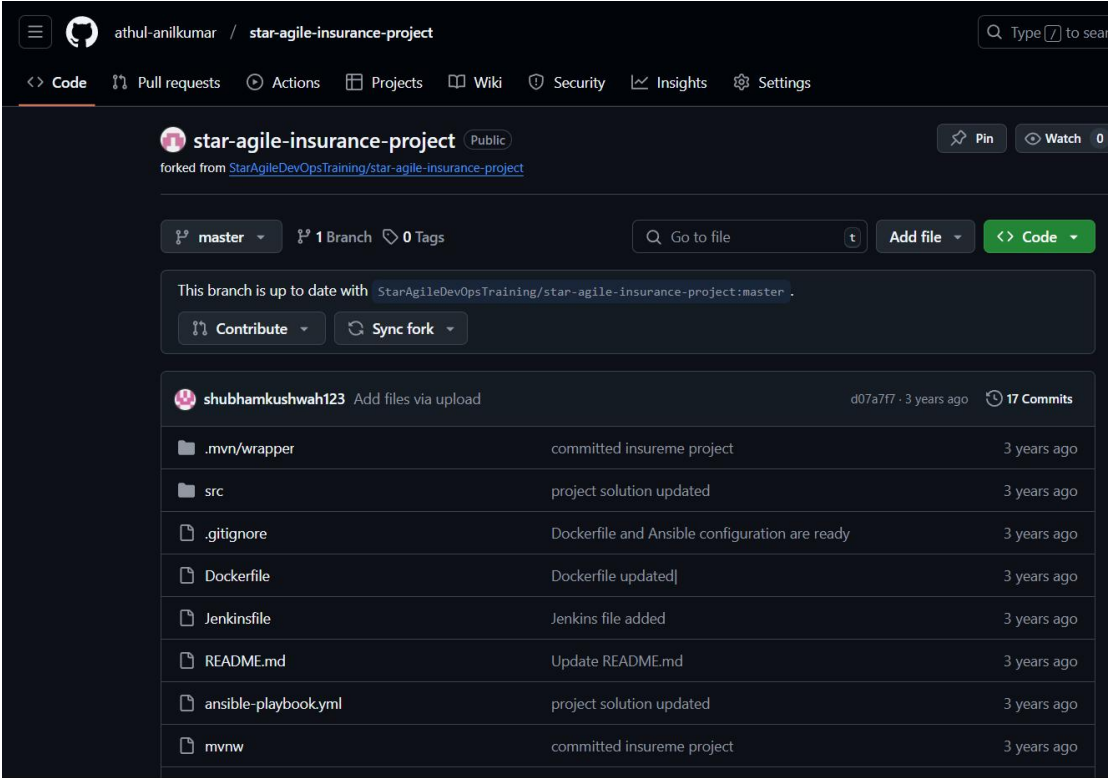


INSURANCE CAPSTONE PROJECT

Creating Repositories



Forked the required files from Staragile git repo to my repo

Name	Date modified	Type	Size
.git	18-01-2025 20:39	File folder	
.mvn	18-01-2025 20:04	File folder	
.vscode	18-01-2025 20:05	File folder	
src	18-01-2025 20:04	File folder	
target	18-01-2025 20:04	File folder	
.gitignore	18-01-2025 20:04	Git Ignore Source ...	1 KB
ansible-playbook.yml	18-01-2025 20:44	Yaml Source File	1 KB
Dockerfile	18-01-2025 20:04	File	1 KB
Jenkinsfile	18-01-2025 20:44	File	3 KB
mvnw	18-01-2025 20:04	File	11 KB
mvnw.cmd	18-01-2025 20:04	Windows Comma...	7 KB
pom.xml	18-01-2025 20:04	XML File	2 KB
README.md	18-01-2025 20:04	Markdown Source ...	1 KB
selenium-insure-me-runnable.jar	18-01-2025 20:04	Executable Jar File	18,811 KB

Created a local repo from github

Creating Jenkins File

```
node{
  def mavenHome
  def mavenCMD
  def docker
  def dockerCMD
  def tagName

  stage('prepare enviroment'){
    echo 'Initialize all the variables'
    mavenCMD = "/usr/share/maven/bin/mvn"
    docker = tool name: 'docker' , type: 'org.jenkinsci.plugins.docker.commons.tools.DockerTool'
    dockerCMD = "${docker}/bin/docker"
    tagName="3.0"
  }

  stage('git code checkout'){
    echo 'checkout the code from git repository'
    git 'https://github.com/athul-anilkumar/star-agile-insurance-project.git'
  }


  stage('Build the Application'){
    echo "Cleaning... Compiling...Testing... Packaging..."
    //sh 'mvn clean package'
    sh "${mavenCMD} clean package"
  }

  stage('Containerize the application'){
    echo 'Creating Docker image'
    sh "${dockerCMD} build -t athulanil/insure-me:${tagName} ."
  }

  stage('Pushing it ot the DockerHub'){
    echo 'Pushing the docker image to DockerHub'
    withCredentials([string(credentialsId: 'dock-password', variable: 'dockerHubPassword')]) {
      sh "${dockerCMD} login -u athulanil -p ${dockerHubPassword}"
      sh "${dockerCMD} push athulanil/insure-me:${tagName}"
    }
  }

  stage('Configure and Deploy to the test-server'){
    ansiblePlaybook become: true, credentialsId: 'ansible-key', disableHostKeyChecking: true, installation: 'ansible', inventory: '/etc/ansible/hosts', playbook: 'ansible-playbook.yml'
  }
}
```

Created a jenkins file with all the necessary steps.

 Jenkinsfile

jenkins file updated


2 minutes ago

Uploaded updated file to remote repo.

Creation of ansible playbook

```
1 - name: Configure Docker on EC2 Instances
2 hosts: all
3 become: true
4 connection: ssh
5 tasks:
6 - name: updating apt
7   command: sudo apt-get update
8
9 - name: Install Docker
10  command: sudo apt-get install -y docker.io
11  become: yes
12  become user: root
13
14 - name: Start Docker Service
15  command: sudo systemctl start docker
16  become: yes
17  become user: root
18
19 - name: Deploy Docker Container
20  command: docker run -itd -p 8084:8081 athulanil/insurance:3.0
21
```

Created an ansible playbook to deploy to Prod servers.

 ansible-playbook.yml

ansible playbook updated

1 minute ago

Committed the playbook to remote repo.

Server Creation

aws

Mac

ubuntu

Microsoft

Red Hat

Including AMIs from AWS, Marketplace and the Community

Amazon Machine Image (AMI)

Ubuntu Server 22.04 LTS (HVM), SSD Volume Type
ami-023a307f3d27ea427 (64-bit (x86)) / ami-054ce975817cc2c02 (64-bit (Arm))
Virtualization: hvm ENA enabled: true Root device type: ebs

Free tier eligible

Description

Ubuntu Server 22.04 LTS (HVM),EBS General Purpose (SSD) Volume Type. Support available from Canonical (<http://www.ubuntu.com/cloud/services>).

Canonical, Ubuntu, 22.04, amd64 jammy image

Architecture

AMI ID

Username

64-bit (x86)

ami-023a307f3d27ea427

ubuntu

Verified provider

▼ Instance type

Info | Get advice

Instance type

t2.medium
Family: t2 2 vCPU 4 GiB Memory Current generation: true On-Demand Linux base pricing: 0.0496 USD per Hour
On-Demand Ubuntu Pro base pricing: 0.0531 USD per Hour On-Demand Windows base pricing: 0.0676 USD per Hour
On-Demand RHEL base pricing: 0.0784 USD per Hour On-Demand SUSE base pricing: 0.1496 USD per Hour

All generations

Compare instance types

Additional costs apply for AMIs with pre-installed software

▼ Key pair (login)

Info

You can use a key pair to securely connect to your instance. Ensure that you have access to the selected key pair before you launch the instance.

Key pair name - required

Ansible-key

Create new key pair

Created a server named Jenkins server To implement CI/CD setup

Amazon Linux

aws

macOS

Mac

Ubuntu

ubuntu

Windows

Microsoft

Red Hat

Red Hat

SUSE Linux

Debian

debian

Browse more AMIs

Including AMIs from AWS, Marketplace and the Community

Amazon Machine Image (AMI)

Ubuntu Server 24.04 LTS (HVM), SSD Volume Type

Free tier eligible

ami-00bb6a80f01f03502 (64-bit (x86)) / ami-09773b29dffbef1f2 (64-bit (Arm))

Virtualization: hvm ENA enabled: true Root device type: ebs

Description

Ubuntu Server 24.04 LTS (HVM),EBS General Purpose (SSD) Volume Type. Support available from Canonical (<http://www.ubuntu.com/cloud/services>).

Canonical, Ubuntu, 24.04, amd64 noble image

Architecture

AMI ID

Username

Verified provider

64-bit (x86)

ami-00bb6a80f01f03502

ubuntu

▼ Instance type

Info | Get advice

Instance type

t2.micro

Free tier eligible

Family: t2 1 vCPU 1 GiB Memory Current generation: true On-Demand Linux base pricing: 0.0124 USD per Hour

On-Demand Windows base pricing: 0.017 USD per Hour On-Demand RHEL base pricing: 0.0268 USD per Hour

On-Demand Ubuntu Pro base pricing: 0.0142 USD per Hour On-Demand SUSE base pricing: 0.0124 USD per Hour

All generations

Compare instance types

Additional costs apply for AMIs with pre-installed software

▼ Key pair (login)

Info

You can use a key pair to securely connect to your instance. Ensure that you have access to the selected key pair before you launch the instance.

Key pair name - required

Ansible-key

Create new key pair

Created another server to deploy the packaged docker image into using ansible

Jenkins Server Setup

```
ubuntu@ip-172-31-40-89:~$ jenkins --version
2.479.3
ubuntu@ip-172-31-40-89:~$ ansible --version
ansible [core 2.17.7]
  config file = /etc/ansible/ansible.cfg
  configured module search path = ['/home/ubuntu/.ansible/plugins/modules', '/usr/share/ansible/plugins/modules']
  ansible python module location = /usr/lib/python3/dist-packages/ansible
  ansible collection location = /home/ubuntu/.ansible/collections:/usr/share/ansible/collections
  executable location = /usr/bin/ansible
  python version = 3.10.12 (main, Nov  6 2024, 20:22:13) [GCC 11.4.0] (/usr/bin/python3)
  jinja version = 3.0.3
  libyaml = True
```

Installed Jenkins and ansible.

```
ubuntu@ip-172-31-40-89:~$ docker --version
Docker version 27.5.0, build a187fa5
```

Installed Docker

Ansible Setup

```
# This is the default ansible 'hosts' file.
#
# It should live in /etc/ansible/hosts
#
# - Comments begin with the '#' character
# - Blank lines are ignored
# - Groups of hosts are delimited by [header] elements
# - You can enter hostnames or ip addresses
# - A hostname/ip can be a member of multiple groups
[Prod-server]
43.204.140.59
# Ex 1: Ungrouped hosts, specify before any group headers:

## green.example.com
## blue.example.com
## 192.168.100.1
## 192.168.100.10

# Ex 2: A collection of hosts belonging to the 'webservers' group:

## [webservers]
## alpha.example.org
## beta.example.org
## 192.168.1.100
## 192.168.1.110

# If you have multiple hosts following a pattern, you can specify
# them like this:

"hosts" 55L, 1202B
```

Edited ansible hosts file to include Deployment server

Jenkins Setup

Getting Started

Getting Started

✓ Folders	✓ OWASP Markup Formatter	✓ Build Timeout	⌚ Credentials Binding	** Ionicons API
⌚ Timestamper	⌚ Workspace Cleanup	⌚ Ant	⌚ Gradle	Folders
⌚ Pipeline	⌚ GitHub Branch Source	⌚ Pipeline: GitHub Groovy Libraries	⌚ Pipeline Graph View	OWASP Markup Formatter
⌚ Git	⌚ SSH Build Agents	⌚ Matrix Authorization Strategy	⌚ PAM Authentication	** ASM API
⌚ LDAP	⌚ Email Extension	⌚ Mailer	⌚ Dark Theme	** JSON Path API
				** Structs
				** Pipeline: Step API
				** Token Macro
				Build Timeout
				** bouncycastle API

** - required dependency

Jenkins 2.479.3

Logged in and setup jenkins

Added credentials for dockerhub

Q ansible

Name ↓

Enabled

Ansible plugin 403.v8d0ca_dcb_b_502

Invoke [Ansible](#) Ad-Hoc commands and playbooks.
[Report an issue with this plugin](#)

This plugin is up for adoption! We are looking for new maintainers. Visit our [Adopt a Plugin](#) initiative for more information.

Installed ansible plugin for jenkins

Q docker

Name ↓

Enabled

Docker API Plugin 3.4.1-96.v77147a_de67f8

This plugin provides [docker-java](#) API for other plugins.
[Report an issue with this plugin](#)

Docker Commons Plugin 445.v6b_646c962a_94

Provides the common shared functionality for various Docker-related plugins.
[Report an issue with this plugin](#)

Docker plugin 1.7.0

This plugin integrates Jenkins with [Docker](#)
[Report an issue with this plugin](#)

Installed docker plugin for jenkins

New credentials

Kind
Secret text

Scope ?
Global (Jenkins, nodes, items, all child items, etc)

Secret
.....

ID ?
dock-password

Description ?
dockerhub password

Create

Added dockerhub credentials

Update credentials

Scope ?
Global (Jenkins, nodes, items, all child items, etc)

ID ?
ansible-key

Description ?

Username
ubuntu

☐ Treat username as secret ?

Private Key
☒ Enter directly

Key
Concealed for Confidentiality Replace

Passphrase

Save

Added Key to access deployment server

New Item

Enter an item name

Insurance

Select an item type



Freestyle project

Classic, general-purpose job type that checks out from up to one SCM, executes build steps serially, followed by post-build steps like archiving artifacts and sending email notifications.



Pipeline

Orchestrates long-running activities that can span multiple build agents. Suitable for building pipelines (formerly known as workflows) and/or organizing complex activities that do not easily fit in free-style job type.

Triggers

☐ Build after other projects are built ?

☐ Build periodically ?

☒ GitHub hook trigger for GITScm polling ?

When Jenkins receives a GitHub push hook, GitHub Plugin checks to see whether the hook came from a GitHub repository which matches the Git repository defined in SCM/Git section of this job. If they match and this option is enabled, GitHub Plugin triggers a one-time polling on GITScm. When GITScm polls GitHub, it finds that there is a change and initiates a build. The last sentence describes the behavior of Git plugin, thus the polling and initiating the build is not a part of GitHub plugin.

(from GitHub plugin)

☒ Poll SCM ?

Schedule ?

⚠ Do you really mean "every minute" when you say "*****"? Perhaps you meant "H*****" to poll once per hour

Would last have run at Sunday, January 19, 2025 at 8:16:44 AM Coordinated Universal Time; would next run at Sunday, January 19, 2025 at 8:16:44 AM Coordinated Universal Time.

☐ Ignore post-commit hooks ?

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

Pipeline

Define your Pipeline using Groovy directly or pull it from source control.

Definition

Pipeline script from SCM

SCM ?

Git

Repositories ?

Repository URL ?

https://github.com/athul-anilkumar/star-agile-insurance-project.git

Credentials ?

- none -

+ Add

Advanced ▾

Add Repository

Branches to build ?

Branch Specifier (blank for 'any') ?

*/master

Add Branch

Repository browser ?

(Auto)

Additional Behaviours

Add ▾

Save

Apply

Created new pipeline job called insurance

ACCESS

Collaborators

Moderation options

Code and automation

Branches

Tags

Rules

Actions

Webhooks

Environments

Codespaces

Pages

Security

Code security

Deploy keys

Secrets and variables

Integrations

GitHub Apps

Email notifications

SettingsRecent Deliveries

We'll send a POST request to the URL below with details of any subscribed events. You can also specify which data format you'd like to receive (JSON, x-www-form-urlencoded, etc). More information can be found in [our developer documentation](#).

Payload URL *
http://13.234.119.180/github-webhook/

Content type *
application/json

Secret

SSL verification

By default, we verify SSL certificates when delivering payloads.

☐ Enable SSL verification☒ Disable (not recommended)

Which events would you like to trigger this webhook?

☒ Just the push event.☐ Send me everything.☐ Let me select individual events.

☒ **Active**
We will deliver event details when this hook is triggered.

Setup github webhook

Maven installations ^

Edited

Add Maven

Maven

Name
maven

☒ Install automatically ?

Install from Apache

Version
3.9.9

Add Installer

Ansible installations ^

Edited

Add Ansible

Ansible

Name
ansible

Path to ansible executables directory
/usr/bin

☐ Install automatically ?

Docker installations ^ Edited

Add Docker

Docker

Name

docker

Installation root ?

☐

Install automatically ?

Add Docker

Save

Apply

Configured Docker maven and ansible installations.

✓

< Build #11

▶ Rebuild

📄 Console

Configure

Pipeline

Start

prepare envirom...

git code checkout

Build the Applic...

Containerize the...

Pushing it ot the...

Configure and D...

End

Details

👤 Manually run by admin

🕒 Started 1 min 49 sec ago

🕒 Queued 2 ms

🕒 Took 1 min 24 sec

```

interpreter at /usr/bin/python3.12, but future installation of another Python
interpreter could change the meaning of that path. See
https://docs.ansible.com/ansible-
core/2.17/reference\_appendices/interpreter\_discovery.html for more information.
ok: [43.204.140.59]

TASK [updating apt] *****
changed: [43.204.140.59]

TASK [Install Docker] *****
changed: [43.204.140.59]

TASK [Start Docker Service] *****
changed: [43.204.140.59]

TASK [Deploy Docker Container] *****
changed: [43.204.140.59]

PLAY RECAP *****
43.204.140.59      : ok=5    changed=4    unreachable=0    failed=0    skipped=0    rescued=0    ignored=0

[Pipeline] }
[Pipeline] // stage
[Pipeline] }
[Pipeline] // stage
[Pipeline] }
[Pipeline] // node
[Pipeline] End of Pipeline
Finished: SUCCESS

```

Build complete

