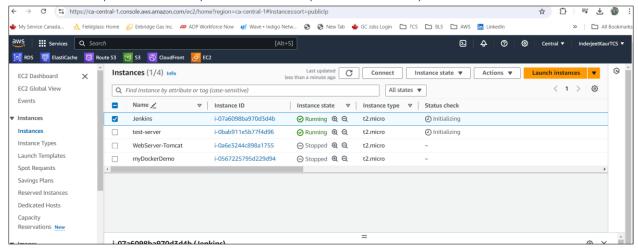
Assignment: Medicure Project

Jenkins Server (15.223.64.207) and Test server (35.183.111.138):



Mvn, Jenkins and docker installed on Jenkins Server

```
Processing triggers for man-db (2.18.2-1) ...
Scanning processes...
Running kernel seems to be up-to-date.
No services need to be restarted.
No containers need to be restarted.
No containers need to be restarted.
No user sessions are running outdated hypervisor (qemu) binaries on this host.
Outside the processes...
No type sets are running outdated hypervisor (qemu) binaries on this host.
Outside the processes...
Outside the processes...
No type sets are running outdated hypervisor (qemu) binaries on this host.
Outside the processes...
Outs
```

Git Cloned from: https://github.com/InderjeetKaur03/medicure-app-assignment-project

```
ubuntu@ip-172-31-24-144:~$ git clone https://github.com/InderjeetKaur03/medicure-app-assignment-project
Cloning into 'medicure-app-assignment-project'...
remote: Enumerating objects: 259, done.
remote: Counting objects: 100% (25/25), done.
remote: Compressing objects: 100% (18/18), done.
remote: Total 259 (delta 20), reused 7 (delta 7), pack-reused 234 (from 1)
Receiving objects: 100% (259/259), 1.83 MiB | 7.99 MiB/s, done.
Resolving deltas: 100% (98/98), done.
ubuntu@ip-172-31-24-144:~$ |
```

Application built locally:

Dockerfile created



Docker image built

```
ubuntu@ip-172-31-24-144: ~/ ×
 buntu@ip-172-31-24-144:~/medicure-app-assignment-project$ docker ps
                         COMMAND CREATED STATUS
CONTAINER ID
               IMAGE
                                                          PORTS
                                                                    NAMES
            72-31-24-144:~/medicure-app-assignment-project$ docker build -t inderjeetkaur03/medicure:1.0 .
DEPRECATED: The legacy builder is deprecated and will be removed in a future release.
             Install the buildx component to build images with BuildKit:
             https://docs.docker.com/go/buildx/
Sending build context to Docker daemon 49.65MB
Step 1/5: FROM openjdk:11
11: Pulling from library/openjdk
001c52e26ad5: Pull complete
d9d4b9b6e964: Pull complete
2068746827ec: Pull complete
9daef329d350: Pull complete
d85151f15b66: Pull complete
66223a710990: Pull complete
db38d58ec8ab: Pull complete
Digest: sha256:99bac5bf83633e3c7399aed725c8415e7b569b54e03e4599e580fc9cdb7c21ab
Status: Downloaded newer image for openjdk:11
    -> 47a932d998b7
Step 2/5 : MAINTAINER "Inderjeet"
    -> Running in 3c40b8ce1399
Removing intermediate container 3c40b8ce1399
    -> f33ab3a4872c
Step 3/5 : ARG JAR_FILE=target/*.jar
    -> Running in 23adbbdc1484
Removing intermediate container 23adbbdc1484
  ---> 7064d24a50b3
Step 4/5 : COPY ${JAR_FILE} app.jar
    -> 203203a2bb04
Step 5/5 : ENTRYPOINT ["java", "-jar", "app.jar"]
    -> Running in abaaf95b02e1
Removing intermediate container abaaf95b02e1
---> 2fa2924e60e6
Successfully built 2fa2924e60e6
Successfully tagged inderjeetkaur03/medicure:1.0
 ubuntu@ip-172-31-24-144:~/medicure-app-assignment-project$ docker images
REPOSITORY
                            TAG
                                       IMAGE ID
                                                       CREATED
                                                                          SIZE
inderjeetkaur03/medicure
                             1.0
                                       2fa2924e60e6
                                                       33 seconds ago
                                                                         695MB
openjdk
                                       47a932d998b7
                                                       2 years ago
                                                                         654MB
```

Docker image ran

```
IMAGE ID
                                                                CREATED
REPOSITORY
                                 TAG
                                                                                     ŠIZE
                                 1.0
                                                                33 seconds ago
inderjeetkaur03/medicure
                                              2fa2924e60e6
                                                                                     695MB
                                                                2 years ago
                                 11
                                             47a932d998b7
                                                                                     654MB
ubuntu@ip-172-31-24-144:~/medicure-app-assignment-project$ docker run -itd -p 8081:8081 inderjeetkaur03/medicure:1.0
d2a578d5018f6f3bce40402558716cb8cef58fe1a3a3258ae88e87056b63a692
                 -31-24-144:~/medicure-app-assignment-project$|
```

Docker image pushed to docker hub:

```
Login Succeeded
ubuntu@ip-172-31-24-144:~/medicure-app-assignment-project$ docker push inderjeetkaur03/medicure:1.0
The push refers to repository [docker.io/inderjeetkaur03/medicure]
71a03893f7cb: Pushed
7b7f3078e1db: Layer already exists
826c3ddbb29c: Layer already exists
b626401ef603: Layer already exists
9b55156abf26: Layer already exists
9b55156abf26: Layer already exists
933d5db30c9f: Layer already exists
03127cdb479b: Layer already exists
9c742cd6c7a5: Layer already exists
1.0: digest: sha256:c9f5415624c164c11e32aa6914861945e9cb92d27b3bd17834b48b85b0bd76f5 size: 2007
ubuntu@ip-172-31-24-144:~/medicure-app-assignment-project$
```

Ansible installed:

```
ubuntu@ip-172-31-24-144:~/medicure-app-assignment-project$ ansible --version
ansible 2.10.8
config file = None
configured module search path = ['/home/ubuntu/.ansible/plugins/modules', '/usr/share/ansible/plugins/modules']
ansible python module location = /usr/lib/python3/dist-packages/ansible
executable location = /usr/bin/ansible
python version = 3.10.12 (main, Nov 20 2023, 15:14:05) [GCC 11.4.0]
ubuntu@ip-172-31-24-144:~/medicure-app-assignment-project$ |
```

Pem file copied to Ansible master:

```
ubuntu@ip-172-31-24-144:~$ ls -al
total 56
drwxr-x--- 8 ubuntu ubuntu 4096 Aug 19 02:12 .
drwxr-xr-x 3 root root 4096 Aug 19 00:48 ..
drwxrwxr-x 3 ubuntu docker 4096 Aug 19 01:58 .ansible
-rw----- 1 ubuntu ubuntu 895 Aug 19 01:44 .bash_history
-rw-r--r-- 1 ubuntu ubuntu 220 Jan 6 2022 .bash_logout
-rw-r--r-- 1 ubuntu ubuntu 3771 Jan 6 2022 .bashrc
drwx----- 2 ubuntu ubuntu 4096 Aug 19 00:48 .cache
drwx----- 2 ubuntu docker 4096 Aug 19 01:55 .docker
drwxrwxr-x 3 ubuntu ubuntu 4096 Aug 19 01:15 .m2
-rw-r--r-- 1 ubuntu ubuntu 807 Jan 6 2022 .profile
drwx----- 2 ubuntu ubuntu 4096 Aug 19 00:48 .ssh
-rw-r--r-- 1 ubuntu ubuntu    0 Aug 19 01:00 .sudo_as_admin_successful
-rw----- 1 ubuntu ubuntu 1486 Aug 19 02:03 .viminfo
-r----- 1 ubuntu ubuntu 1678 Aug 19 02:12 devopsTCSKeyPair.pem
drwxrwxr-x 6 ubuntu ubuntu 4096 Aug 19 01:46 medicure-app-assignment-project
ubuntu@ip-172-31-24-144:~$
```

Pinged test server

```
ip-172-31-24-144:~$ ls -all
total 56
drwxr-x--- 8 ubuntu ubuntu 4096 Aug 19 02:22 .
drwxr-xr-x 3 root root 4096 Aug 19 00:48 ..
drwxrwxr-x 3 ubuntu docker 4096 Aug 19 01:58 .ansible
-rw--r--- 1 ubuntu ubuntu 895 Aug 19 01:44 .bash_history
-rw-r--r- 1 ubuntu ubuntu 220 Jan 6 2022 .bash_logout
-rw-r--r-- 1 ubuntu ubuntu 3771 Jan 6 2022 .bashrc
drwx----- 2 ubuntu ubuntu 4096 Aug 19 00:48 .cache
drwx----- 2 ubuntu docker 4096 Aug 19 01:55 .docker
drwxrwxr-x 3 ubuntu ubuntu 4096 Aug 19 01:15 .m2
-rw-r--r-- 1 ubuntu ubuntu 807 Jan 6 2022 .profile
drwx----- 2 ubuntu ubuntu 4096 Aug 19 00:48 .ssh
-rw-r--r-- 1 ubuntu ubuntu 0 Aug 19 01:00 .sudo_as_admin_successful
-rw----- 1 ubuntu ubuntu 2124 Aug 19 02:22 .viminfo
 r------ 1 ubuntu ubuntu 1678 Aug 19 02:12 devopsTCSKeyPair.pem
drwxrwxr-x 6 ubuntu ubuntu 4096 Aug 19 01:46 medicure-app-assignment-project
ubuntu@ip-172-31-24-144:~$ ansible -m ping test-server
[WARNING]: Invalid characters were found in group names but not replaced, use -v
The authenticity of host '35.183.111.138 (35.183.111.138)' can't be established.
ED25519 key fingerprint is SHA256:KB0WEL0RbAjdgG7R2mD21AYUIfI0JxYKe/NOvax7mPM.
This key is not known by any other names
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
ubuntu@ip-172-31-24-144:~$
```

Ansible playbook written and ran

```
- hosts: test-server
become: true
tasks:
    - name: update cache
apt:
    update_cache: yes

- name: install docker
apt:
    pkg: docker.io
    state: present

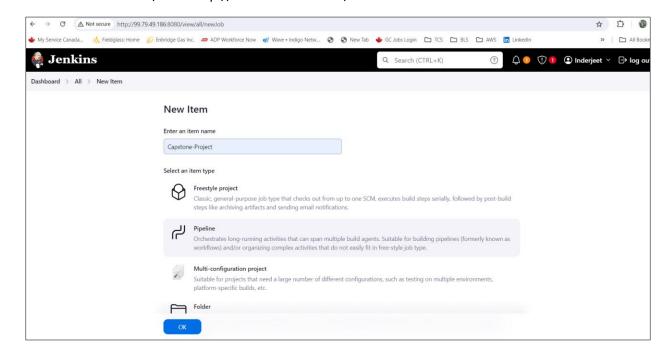
- name: start docker service
service:
    name: docker
    state: started
enabled: true

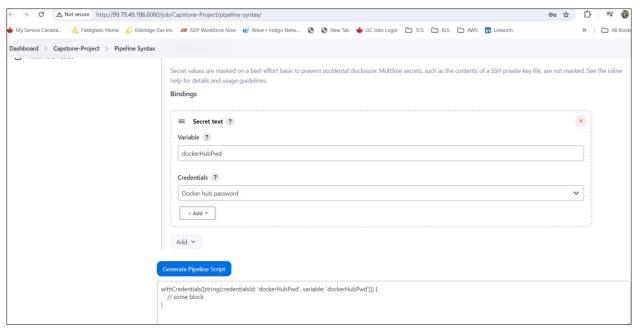
- name: deploy to test server
command: docker run -itd -p 8081:8081 inderjeetkaur03/medicure:1.0
```

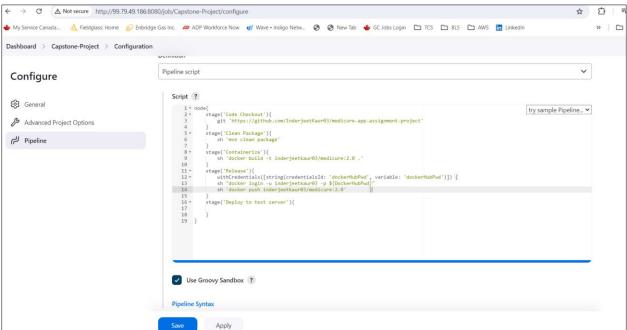
```
| Internal | Internal
```

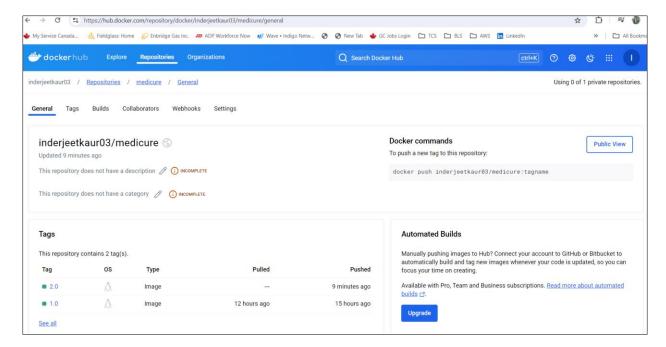
Dockerfile and ansible configuration committed to git

Building Jenkins Pipeline (New Jenkins had to be set up, previous one did not connect): New Jenkins Server IP/URL: http://99.79.49.186:8080/

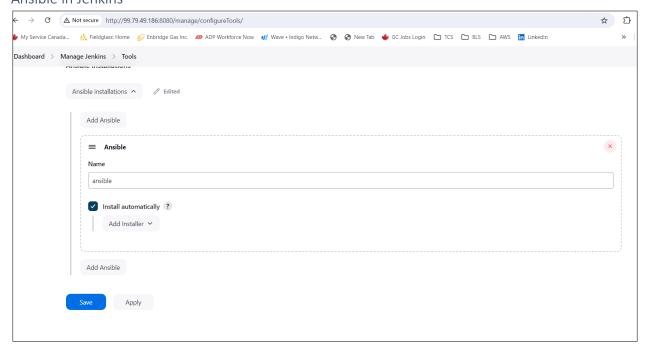




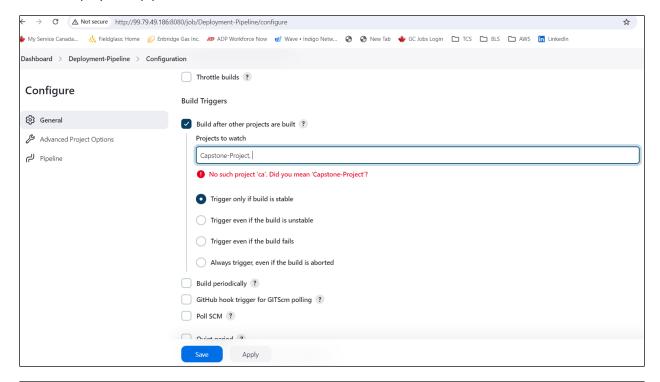


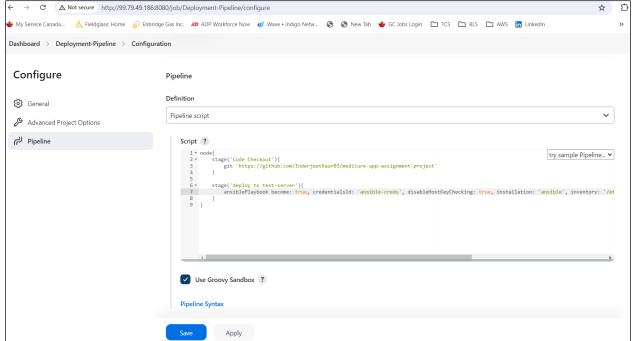


Ansible in Jenkins



Ansible deployment pipeline





Deployment pipeline triggered successfully

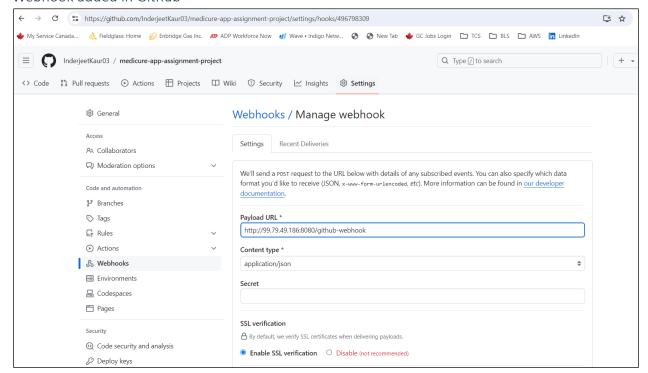


Docker image deployed on test server

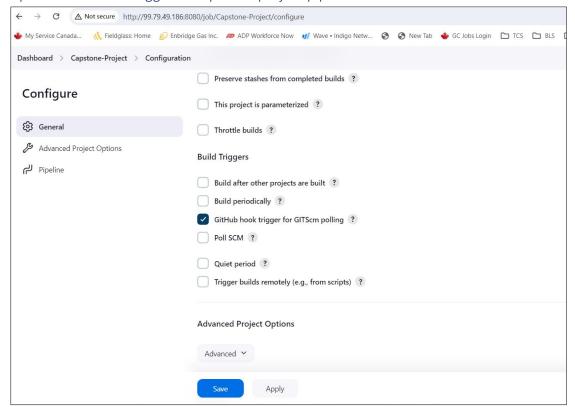
```
*** System restart required ***
Last login: Mon Aug 19 17:27:58 2024 from 99.79.49.186
ubuntu@ip-172-31-20-157:~$ sudo docker ps
CONTAINER ID IMAGE
COMMAND
CREATED
STATUS
FORTS
NAMES
elastic_buck
ubuntu@ip-172-31-20-157:~$ []

i-Obab911e5b77f4d96 (test-server)
PublicIPs: 35.183.111.138
PrivateIPs: 172.31.20.157
```

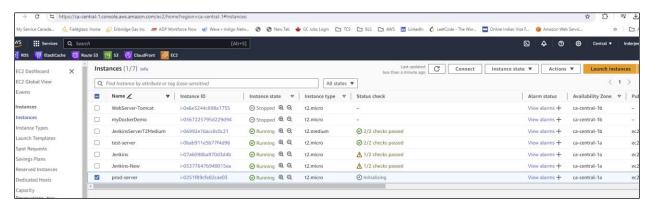
Webhook added in Github



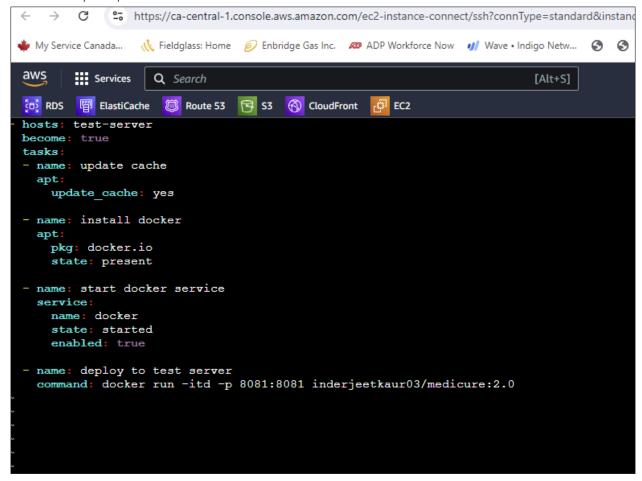
Updated webhook trigger in Capstone-project pipeline in Jenkins



Prod-server created manually



Test server yml updated to medicure version 2



Prod server yml created

```
ubuntu@ip-172-31-2-27:~/medicure-app-assignment-project$ sudo cat prod-server-deploy.yml
 hosts: prod-server
 become: true
 tasks:
  - name: update cache
   apt:
     update cache: yes
 - name: install docker
     pkg: docker.io
     state: present
 - name: start docker service
   service:
     name: docker
     state: started
     enabled: true
  - name: deploy to prod server
   command: docker run -itd -p 8081:8081 inderjeetkaur03/medicure:2.0
ubuntu@ip-172-31-2-27:~/medicure-app-assignment-project$
  i-06992e16acc8c0c21 (JenkinsServerT2Medium)
  PublicIPs: 99.79.49.186 PrivateIPs: 172.31.2.27
```

Hosts file updated

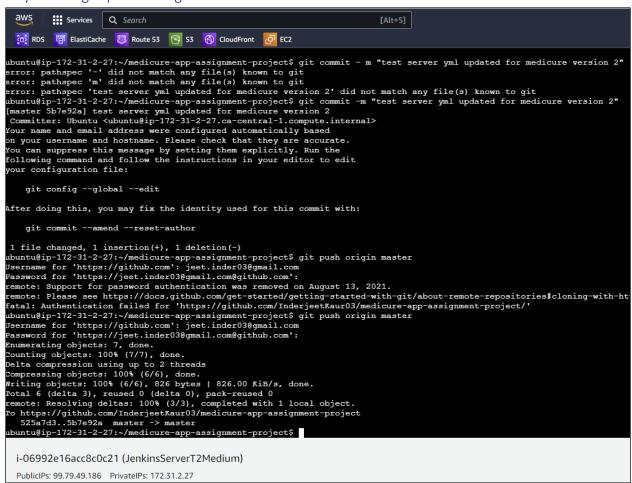
```
ibuntu@ip-172-31-2-27:/etc/ansible$ sudo docker ps
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES
ibuntu@ip-172-31-2-27:/etc/ansible$ sudo vi hosts
ibuntu@ip-172-31-2-27:/etc/ansible$ sudo cat hosts
[test-server]
[5.183.111.138

[prod-server]
[5.157.66.46
ibuntu@ip-172-31-2-27:/etc/ansible$

i-06992e16acc8c0c21 (JenkinsServerT2Medium)

PublicIPs: 99.79.49.186 PrivateIPs: 172.31.2.27
```

All yml changes pushed to git



Medicure test app created and tested:

https://github.com/InderjeetKaur03/medicure-test-app.git

```
ile Edit Source Refactor Source Navigate Search Project Run Window Help
 열 ▼ 🔡 🐚 💛 ♡ 🐎 ▼ 🔾 ▼ 📞 ▼ 🥵 ▼ 😭 ❤ 😭 ♥ 💮 😭 🔗 🔗 ▼ 🖳 😭 👂 🖋 🕬 🗉 💌 🗎 ▼ 🔭 🕏 🏕 🗎 😁
                                                                                E 😩 🕼 🖁 🗖 🗖 📓 medicure-app-assignment-project/pom.xml 📓 medicure-test-app/pom.xml 🔝 App.java ×

■ Package Explorer ×
                                                                                                                                                                       System.out.println("Phone number Entered");
  📸 > medicure-app-assignment-project [medicure-app-assignment-
    > 려 src/main/java
                                                                                                                                                   // 3. Find email text box and fill it
   > @ src/main/resources
                                                                                                                                                                       Webflement email_textbox = driver.findElement(By.xpath("/html/body/section/div/div[2]/div[1]/di
email_textbox.sendKeys("inderjeetkaur@xyz.com");
   > 蹻 src/test/java
   > Mark JRE System Library [JavaSE-1.8]
                                                                                                                                                                       Thread.sleep(2000);
   > Maven Dependencies
                                                                                                                                                                      System.out.println("Email Entered");
                                                                                                                                              // 4. Find message text box and fill it
    WebElement message_textbox = driver.findElement(By.xpath("/html/body/section/div/div[2]/div[1]/
    message_textbox.sendKeys("Hello from Inder");
    Thread.sLeep(2000);
      AWSAppServersEC2.tf
        Dockerfile
       healthcare domain.md
                                                                                                                                                                      System.out.println("Message Entered");
        mvnw
                                                                                                                                                  // 5. Send message
       lmx.moq 🔬
                                                                                                                                                                      WebElement send_button = driver.findElement(By.xpath("/html/body/section/div/div[2]/div[1]/div/
                                                                                                                                                                      send_button.click();
        prod-server-deploy.yml
        README.md
                                                                                                                                                                    System.out.println("Send clicked");
        test-server-deploy.yml
   🔀 medicure-test-app
                                                                                                                                                                       String response = driver.findElement(By.id("message")).getText();
    System.out.println(response);

    # com.testing.medicure test app

             App.java
   > M JRE System Library [JavaSE-11]
    > Maven Dependencies
    > 🗁 src
                                                                                                                        Problems @ Javadoc Q Declaration ☐ Console ×
      target
                                                                                                                        < terminated > App [Java Application] \ C:\ Users \ kanwa\ p2\ pool \ plugins \ org. eclipse justj. openjdk. hotspot jre. full. win 32.x86\_64\_22.0.2.v20240802-1626 \ jre. \ bin \ java \ property \
       mx.moq
                                                                                                                        Title is :Medicure
                                                                                                                        Name Entered
                                                                                                                        Phone number Entered
Email Entered
                                                                                                                        Message Entered
                                                                                                                        Send clicked
                                                                                                                         Email sent.
```

Test app build on server:

My test app fails to build in Jenkins, could not find why. It builds fine when done manually on test server.

This last step was left pending. Below was the error.

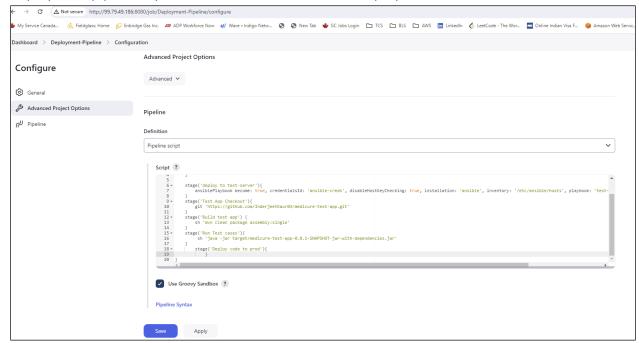
Failed to execute goal org.apache.maven.plugins:maven-assembly-plugin:3.3.0:single(default-cli) on project medicure

Error reading assemblies: No assembly descriptors found

```
> git branch -a -v --no-abbrev # timeout=10
> git branch -D master # timeout=10
> git checkout -b master f454b9led3f25a89fa530ae17fd7ae06e32e22d8 # timeout=10
Commit message: "Update README.md"
> git rev-list --no-walk 5b7e92aa2252b1b25616b832b2bbeb16ee45aad9 # timeout=10
[Pipeline] }
[Pipeline] // stage
[Pipeline] stage
[Pipeline] stage
[Pipeline] stage
[Pipeline] sh
+ mvv clean package assembly:single
[B[1;34mINFOB[m]] Scanning for projects...
[BI1:34mINFOB[m]] Scanning for projects...
```

```
[E[1;34mINFOE[m] E[1--- E[0;32mmaven-assembly-plugin:3.3.0:singleE[m E[1m(default-cli)E[m @ E[36mmedicureE[0;1m --- E[m
[E[1;34mINFOE[m] E[1m---
[B[1;34mINFOB[m] B[1;31mBUILD FAILURED[m
[B[1;34mINFOB[m] B[1m------
[U[1;34mINFOU[m]] Total time: 11.506 s
[U[1;34mINFOU[m]] Finished at: 2024-08-21716:23:13Z
 [B[1:34mINFOB[m] B[1m-----
[E[[13]IRERRORE[m] Failed to execute goal E[32morg.apache.maven.plugins:maven-assembly-plugin:3.3.0:singleE[m E[Im(default-cli)E[m on project E[36mmedicureE[m: E[1;31mError reading assemblies: No
 assembly descriptors found.@[m -> @[1m[Help 1]@[m
[B[1:31mERRORB[m] To see the full stack trace of the errors, re-run Maven with the B[im-eB[m switch.
[E[1;31mERRORE[m] Re-run Maven using the E[1m-XE[m switch to enable full debug logging.
[@[1;31mERROR@[m]
 [B[1;31mERRORB[m] For more information about the errors and possible solutions, please read the following articles:
[B[1:31mERRORB[m] B[1m[Help 1]B[m http://cwiki.apache.org/confluence/display/
[Pipeline] }
[Pipeline] // stage
[Pipeline] }
[Pipeline] // node
 [Pipeline] End of Pipeline
ERROR: script returned exit code 1
Finished: FAILURE
```

Deployment pipeline updated to run test cases before deployment to test server



Deploy to prod server:

