

Kura Labs - Deployment 02

To understand the components of a simple CI/CD pipeline and to manipulate the same.

Original: https://github.com/kura-labs-org/kuralabs_deployment_2

- i. Create a personal access token to be used by Jenkins server

- i. Install Jenkins
- ii. Set up web hook in GitHub repository to automatically receive repo updates and trigger build process
- iii. Install EB CLI in order to trigger Elastic Beanstalk creation from eventual Jenkins build
 - a. EB Environment name: Deployment02-main-dev

- i. Add deployment stage to Jenkinsfile
- ii. Modify "test_app.py" to add new functions and assertions to pytest flow

The screenshot shows the Jenkins web interface. At the top is a navigation bar with the Jenkins logo, project name 'jenkins', and a search bar. Below this is a sidebar with navigation links: Up, Status, Changes, Build Now, View Configuration, Full Stage View, GitHub, and Pipeline Syntax. The main content area is titled 'Branch main' and shows the full project name 'Deployment02/main'. It includes a 'Recent Changes' section with a code icon. To the right, there's a 'Test Result Trend' chart showing a line graph with 'Passed', 'Skipped', and 'Failed' data points. Below the chart is a table showing the 'Stage View' for the pipeline. The table has columns for 'Declarative: Checkmate SCM', 'Build', 'test', and 'Deploy'. The 'test' stage is highlighted in red, indicating a failure. A detailed error message is shown in a red box: 'Failed with the following error(s): [redacted]'. Below the table, there's a 'Build History' section with a list of recent builds, each with a status icon, a timestamp, and a link to the build details.

Observed initial test and deployment failure due to not having installed pip-env environment. This is required for Jenkins to run the Flask app.

The screenshot shows the Jenkins console output for a build. The output indicates that the virtual environment was not created successfully because ensurepip is not available. The error message states: "The virtual environment was not created successfully because ensurepip is not available. On Debian/Ubuntu systems, you need to install the python3-venv package using the following command." The command shown is "apt install python3.10-venv". The output also shows the failing command: "['/var/lib/jenkins/workspace/Deployment02_main/test3/bin/python3', '-Im', 'ensurepip', '--upgrade', '--default-pip']".

```
the recommended git tool is: none
using credential kuralabs_deployment_2
> git rev-parse --resolve-git-dir /var/lib/jenkins/workspace/Deployment02_main/.git # timeout=10
Fetching changes from the remote Git repository
> git config remote.origin.url https://github.com/dacostaration/kuralabs_deployment_2.git # timeout=10
Fetching without tags
Fetching upstream changes from https://github.com/dacostaration/kuralabs_deployment_2.git
> git --version # timeout=10
> git --version # 'git version 2.34.1'
using GIT_ASKPASS to set credentials https://github.com/dacostaration/kuralabs_deployment_2
> git fetch --no-tags --force --progress -- https://github.com/dacostaration/kuralabs_deployment_2.git +refs/heads/main:refs/remotes/origin/main # timeout=10
Checking out Revision c709cc3ce9f9cd440b84dca22572371844703231 (main)
> git config core.sparsecheckout # timeout=10
> git checkout -f c709cc3ce9f9cd440b84dca22572371844703231 # timeout=10
Commit message: "Update README.md"
> git rev-list --no-walk c709cc3ce9f9cd440b84dca22572371844703231 # timeout=10
[Pipeline] }
[Pipeline] // stage
[Pipeline] withEnv
[Pipeline] {
[Pipeline] stage
[Pipeline] { (Build)
[Pipeline] sh
The virtual environment was not created successfully because ensurepip is not
available. On Debian/Ubuntu systems, you need to install the python3-venv
package using the following command.

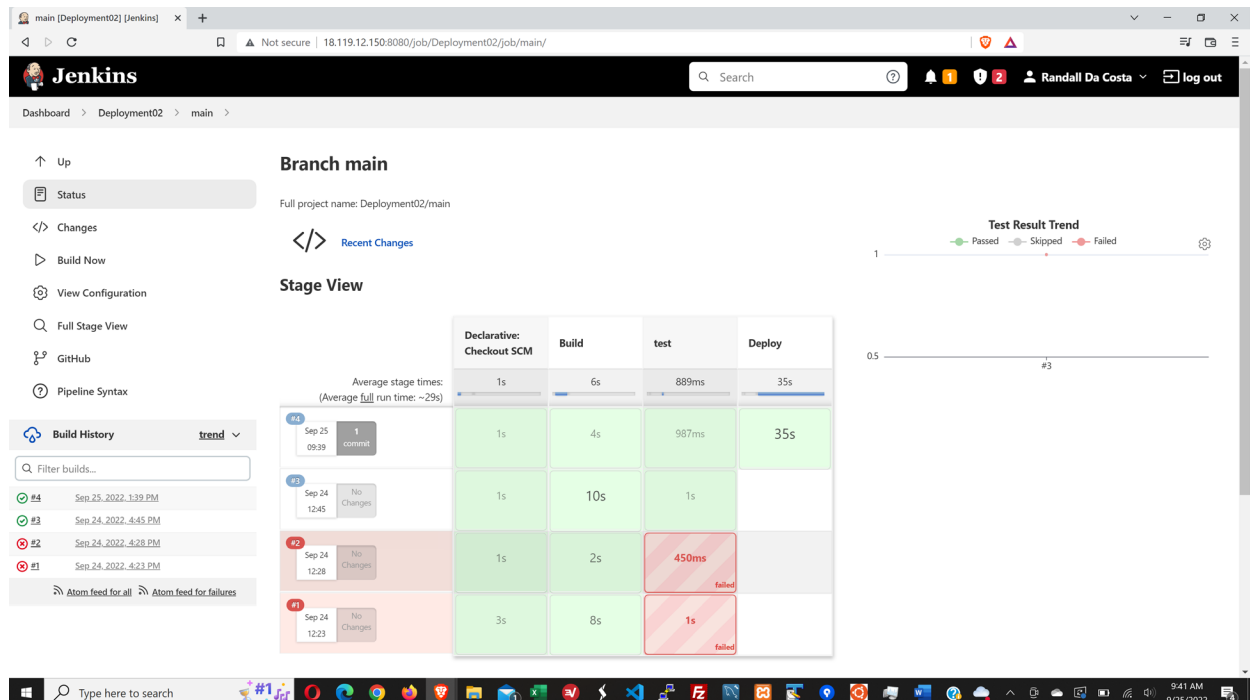
apt install python3.10-venv

You may need to use sudo with that command. After installing the python3-venv
package, recreate your virtual environment.

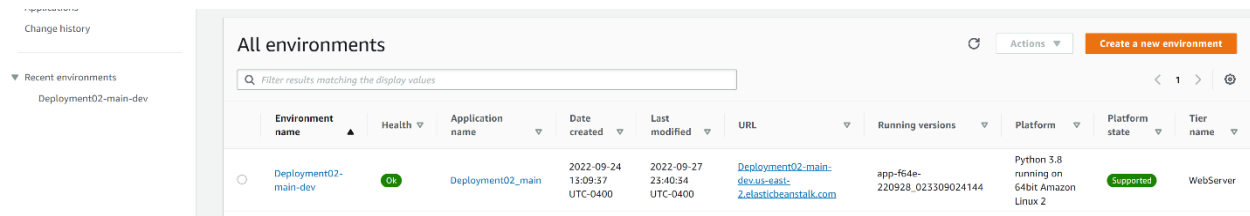
Failing command: [ '/var/lib/jenkins/workspace/Deployment02_main/test3/bin/python3', '-Im', 'ensurepip', '--upgrade', '--default-pip' ]

/var/lib/jenkins/workspace/Deployment02_main@tmp/durable-756687f1/script.sh: line 3: test3/bin/activate: No such file or directory
Defaulting to user installation because normal site-packages is not writeable
Requirement already satisfied: pip in /var/lib/jenkins/.local/lib/python3.10/site-packages (22.2.2)
```

Observe ultimately successful Build, Test and Deployment:



Successful Creation of Environment in AWS Elastic Beanstalk



Environment name	Health	Application name	Date created	Last modified	URL	Running versions	Platform	Platform state	Tier name
Deployment02-main-dev	OK	Deployment02_main	2022-09-24 13:09:37 UTC-0400	2022-09-27 23:40:34 UTC-0400	Deployment02-main-dev.us-east-2.elasticbeanstalk.com	app-f64e-220928_023309024144	Python 3.8 running on 64bit Amazon Linux 2	Supported	WebServer

Successfully Deployed Web Application

<http://deployment02-main-dev.us-east-2.elasticbeanstalk.com/>

Note: App display has been updated to be slightly different from the original

