

Deployment #1

Task: Follow each step of this deployment lab to accomplish your first deployment. Configure an EC2 with Jenkins installed and connected to your GitHub repository. Once Jenkins is installed and connected to your github, fork [kura-lab-org/DEPLOY01_HELLO_WORLD](https://github.com/kura-lab-org/DEPLOY01_HELLO_WORLD) from the Kura repository. Edit the blank Jenkinsfile with a “Hello World” pipeline. Build your Jenkinsfile in Jenkins, commit your Jenkinsfile and make a pull request to the main repository with a screenshot of your successful build.

Step 1: Configure an EC2 with the following configurations:

AMI: Amazon Linux

Bootstrap: Script should install Jenkins

```
#!/bin/bash
```

```
sudo yum update -y
sudo wget -O /etc/yum.repos.d/jenkins.repo \
    https://pkg.jenkins.io/redhat-stable/jenkins.repo
sudo rpm --import https://pkg.jenkins.io/redhat-stable/jenkins.io.key
sudo yum upgrade
sudo yum install jenkins java-1.8.0-openjdk-devel -y
sudo systemctl daemon-reload
sudo systemctl start jenkins
```

Security groups: Only the ports needed to use and access Jenkins

Select: SSH | 22 | “My ip”

Select: HTTP | 80 | Custom 0.0.0.0 /0

Select: Custom TCP Rule | 8080 | Custom 0.0.0.0 /0

Verify that Jenkins is installed and running on EC2 by logging into EC2

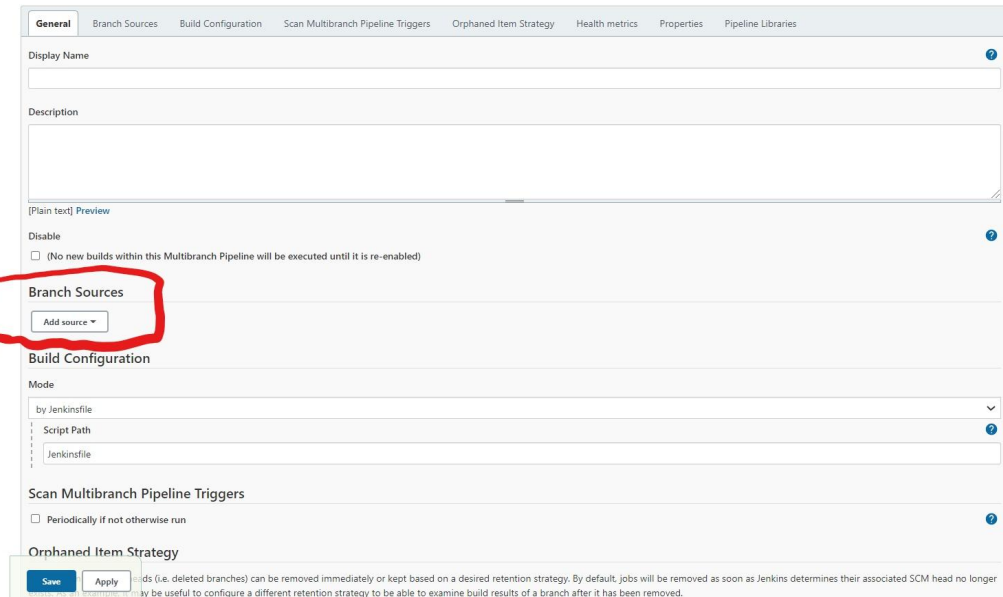
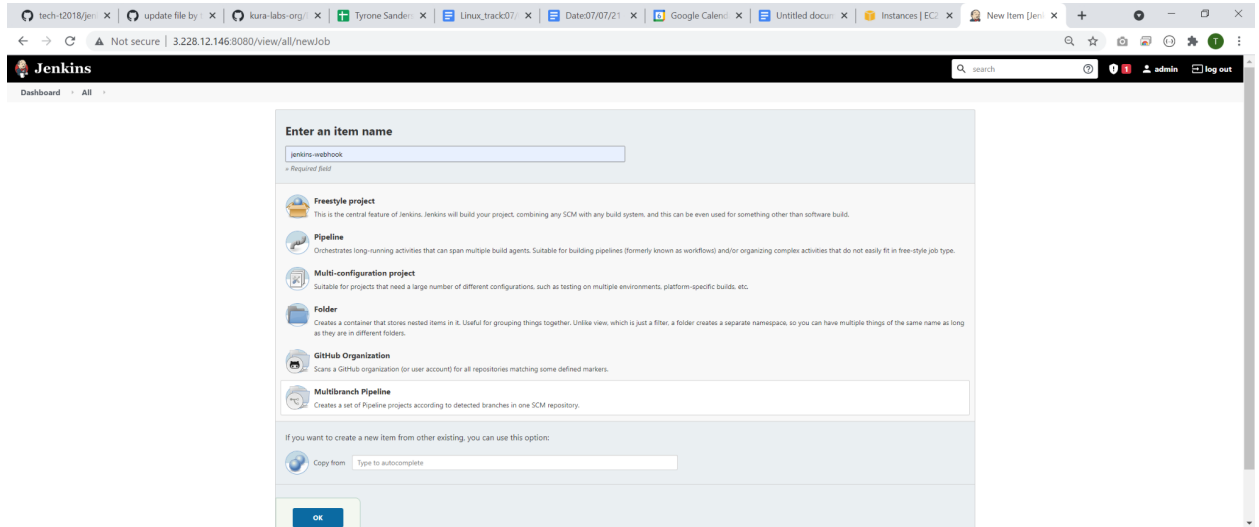
Step 2: Configure Jenkins via web interface with recommended plugins, make a username and password, log into the web interface and install the EC2 plugin.

Step 3: Install git on EC2 by logging into EC2. Verify you have git installed

Step 4: Fork the DEPLOY01_HELLO_WORLD repository. After you have forked the repository, create your “Hello World” pipeline into the Jenkinsfile.

Step 5: A-5: Create an access token from your GitHub account. Once created, copy the token onto notepad or your choice of text editor.

B-5: In Jenkins web interface; create a new item => name the item “Jenkins-webhook”
=> select multibranch pipeline => Add a branch source (GitHub) => Click on ADD => Click on Jenkins



General Branch Sources Build Configuration Scan Multibranch Pipeline Triggers Orphaned Item Strategy Health metrics Properties Pipeline Libraries

Display Name

Description

[Plain text] Preview

Disable ?

☐ (No new builds within this Multibranch Pipeline will be executed until it is re-enabled)

Branch Sources

GitHub ?

Credentials ?

- none - ⚙️ Add

⚠️ Credentials are recommended

☒ Repository HTTPS URL ?

Repository HTTPS URL ?

☐ Repository Scan - Deprecated Visualization

Validate

Save Apply

General Branch Sources Build Configuration Scan Multibranch Pipeline Triggers Orphaned Item Strategy Health metrics Properties Pipeline Libraries

Display Name

Description

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Branch Sources

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Repository HTTPS URL ?

☐ Repository Scan - Deprecated Visualization

Validate

Save Apply

C-5: Add your GitHub account name under username field and paste your access token into the password field. In the ID field, enter **jenkins-webhook-id**

D-5: Set credentials next to the add button. In the owner field enter your GitHub account name. Then select “Repository Scan”. In the repository field, select the **DEPLOY01_HELLO_WORLD** repository. Save your settings.

GeneralBranch SourcesBuild ConfigurationScan Multibranch Pipeline TriggersOrphaned Item StrategyHealth metricsPropertiesPipeline Libraries

Display Name

Description

[Plain text] Preview

Disable

(No new builds within this Multibranch Pipeline will be executed until it is re-enabled)

Branch Sources

GitHub

Credentials

tech-12018/***** (use this 2)Add

User tech-12018

Repository HTTPS URL

Repository HTTPS URL

Repository Scan - Deprecated Visualization

Validate

Save

Apply

GeneralBranch SourcesBuild ConfigurationScan Multibranch Pipeline TriggersOrphaned Item StrategyHealth metricsPropertiesPipeline Libraries

Description

[Plain text] Preview

Disable

(No new builds within this Multibranch Pipeline will be executed until it is re-enabled)

Branch Sources

GitHub

Credentials

tech-12018/***** (use this 2)Add

User tech-12018

Repository HTTPS URL

Repository Scan - Deprecated Visualization

Owner

tech-12018

Repository

jenkins-git

Beh

test-git

Discover branches

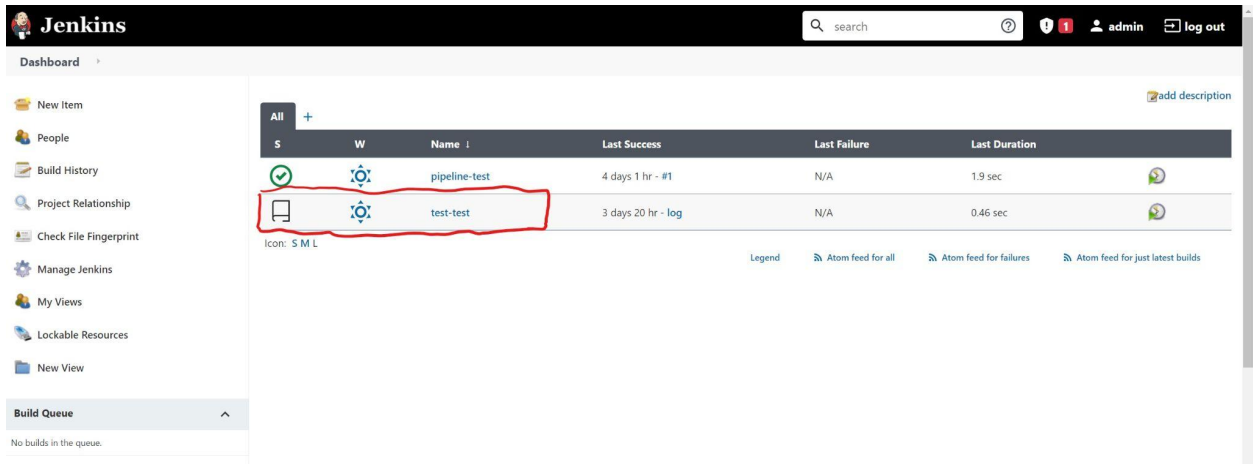
Strategy

Save

Apply

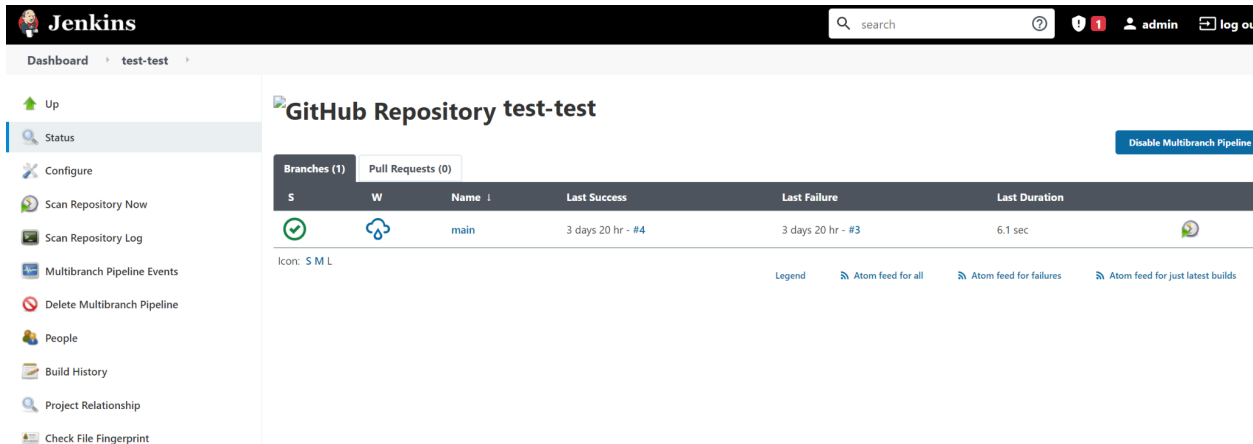
that are also filed as PRs

Step 6: Return to the dashboard. Select the jenkins-webhook => then select the main branch => Now you should see your build. Take a screenshot of your successful build



A screenshot of the Jenkins Dashboard. The left sidebar contains a list of links: New Item, People, Build History, Project Relationship, Check File Fingerprint, Manage Jenkins, My Views, Lockable Resources, and New View. The main content area shows a table of builds. The 'test-test' build is highlighted with a red rectangle. The table has columns for Status (S), Webhook (W), Name (I), Last Success, Last Failure, and Last Duration. The 'test-test' build shows a successful status (green checkmark) and a duration of 0.46 sec.

S	W	Name I	Last Success	Last Failure	Last Duration
✓	⚙️	pipeline-test	4 days 1 hr - #1	N/A	1.9 sec
✓	⚙️	test-test	3 days 20 hr - log	N/A	0.46 sec



A screenshot of the Jenkins GitHub Repository page for 'test-test'. The left sidebar contains a list of links: Up, Status, Configure, Scan Repository Now, Scan Repository Log, Multibranch Pipeline Events, Delete Multibranch Pipeline, People, Build History, Project Relationship, and Check File Fingerprint. The main content area shows a table of builds. The 'main' branch is highlighted. The table has columns for Status (S), Webhook (W), Name (I), Last Success, Last Failure, and Last Duration. The 'main' branch shows a successful status (green checkmark) and a duration of 6.1 sec.

S	W	Name I	Last Success	Last Failure	Last Duration
✓	☁️	main	3 days 20 hr - #4	3 days 20 hr - #3	6.1 sec

Jenkins

Dashboard > test-test > main

Up

Status

Changes

Build Now

View Configuration

Full Stage View

GitHub

Pipeline Syntax

Build History trend

Branch main

Full project name: test-test/main

Recent Changes

Stage View

	Declarative: Checkout SCM	HELLO
Average stage times: (Average full run time: ~6s)	1s	140ms
#4 Jul 02 2001 No Changes	4s	140ms

Step 7: Add screenshot of successful build to your DEPLOY01_HELLO_WORLD repository and initiate a pull request to the kura-lab-org/DEPLOY01_HELLO_WORLD repository with your screenshot and Jenkinsfile