

What is the Jenkins pipeline?

Jenkins Pipeline is a tool for creating and automating software delivery processes. It allows developers to define a series of steps that automate the entire process, from building to testing to deployment. The pipeline is defined using a script in a Jenkinsfile, which is stored in the project's source code repository. Jenkins will automatically execute the pipeline whenever changes are made to the repository.

What scripting language is Jenkins pipeline syntax based on?

The Jenkins pipeline syntax is based on the Groovy programming language. Groovy is a dynamic, interpreted language that is designed to be used in conjunction with Java. It is a powerful language that can be used to automate a wide range of tasks.

What are the different ways to trigger a pipeline ?

1. Slack Commands
2. commit commands
3. Rest API
4. Webhook

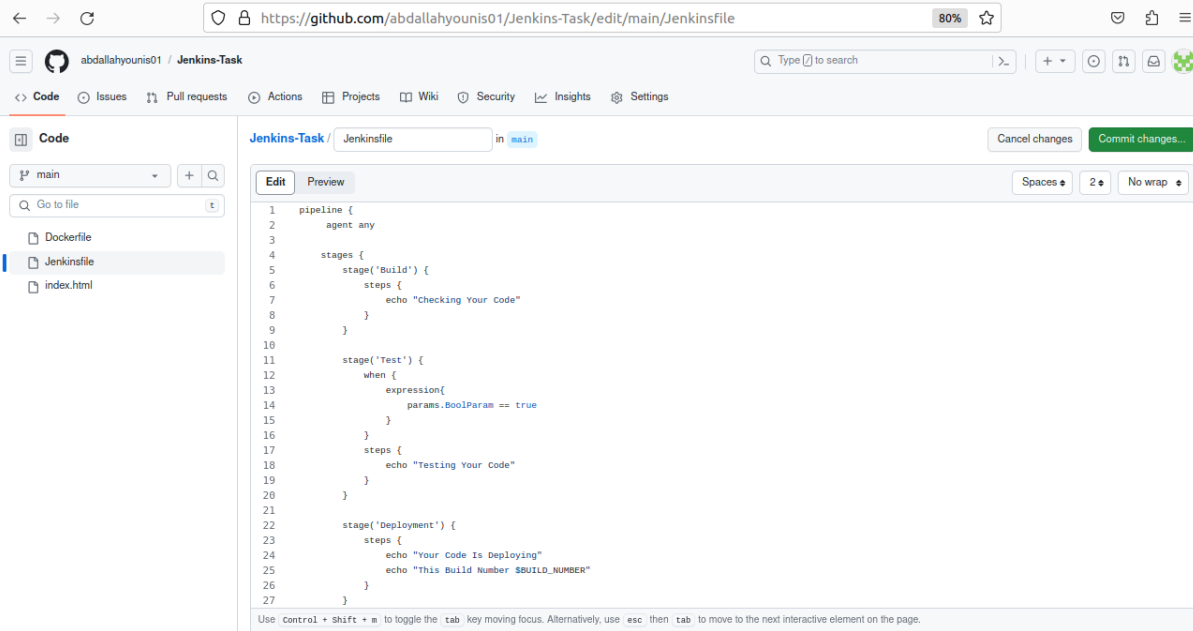
What is the difference between parameter and jenkins env variable?

Parameters are values passed into a pipeline at runtime to allow user customization, while Jenkins environment variables are predefined variables with information about the Jenkins environment used to customize the pipeline behavior accordingly.

What is the organization folder job and what is used for ?

The Organization Folder job in Jenkins automatically creates and manages multiple pipelines based on the repositories in your organization's source code management system. It's useful for managing large-scale software development projects and provides visibility and control over pipelines, as well as the ability to easily add new repositories.

Create a jenkins pipeline for your repo and use script file (jenkinsfile) to write pipeline syntax, include parameter functions and env variables in it ?



The screenshot shows a GitHub repository named 'Jenkins-Task' by user 'abdallahyounis01'. The 'Jenkinsfile' is open in the 'main' branch. The file contains a Jenkins pipeline definition with three stages: 'Build', 'Test', and 'Deployment'.

```
1 pipeline {
2   agent any
3
4   stages {
5     stage('Build') {
6       steps {
7         echo "Checking Your Code"
8       }
9     }
10
11    stage('Test') {
12      when {
13        expression{
14          params.BoolParam == true
15        }
16      }
17      steps {
18        echo "Testing Your Code"
19      }
20    }
21
22    stage('Deployment') {
23      steps {
24        echo "Your Code Is Deploying"
25        echo "This Build Number $BUILD_NUMBER"
26      }
27    }
28  }
```

← → ↺

localhost:8080/job/First-Pipeline/configure

90% ☆

🔒 📄 ☰

Dashboard > First-Pipeline > Configuration

Configure

⚙️ General

🔧 Advanced Project Options

📄 Pipeline

☐ Preserve builds from completed builds ?

☒ This project is parameterized ?

Boolean Parameter ?

Name ?

BoolParam

☒ Set by Default ?

Description ?

[Plain text] Preview

Add Parameter +

☐ Throttle builds ?

Build Triggers

Save Apply

← → ↺

localhost:8080/job/First-Pipeline/build?delay=0sec

90% ☆

🔒 📄 ☰

Dashboard > First-Pipeline >

📄 Status

</> Changes

▶ Build with Parameters

⚙️ Configure

🗑 Delete Pipeline

🔍 Full Stage View

✎ Rename

🔍 Pipeline Syntax

☁ Build History trend ▾

🔍 Filter builds... /

🟢 #3 Jun 21, 2023, 6:11 PM

🔴 #2 Jun 21, 2023, 6:07 PM

🔴 #1 Jun 21, 2023, 5:56 PM

📡 Atom feed for all

📡 Atom feed for failures

Pipeline First-Pipeline

This build requires parameters:

☒ BoolParam

▶ Build

Cancel

Status

- </> Changes
- ▶ Build with Parameters
- ⚙️ Configure
- 🗑️ Delete Pipeline
- 🔍 Full Stage View
- ✎ Rename
- 🔗 Pipeline Syntax

Build History

trend ▾

Filter builds... /

- 🟢 #4 Jun 21, 2023, 6:15 PM
- 🟢 #3 Jun 21, 2023, 6:11 PM
- 🔴 #2 Jun 21, 2023, 6:07 PM
- 🔴 #1 Jun 21, 2023, 5:56 PM

🔔 Atom feed for all 🔔 Atom feed for failures

Pipeline First-Pipeline

✎ Add description

Disable Project

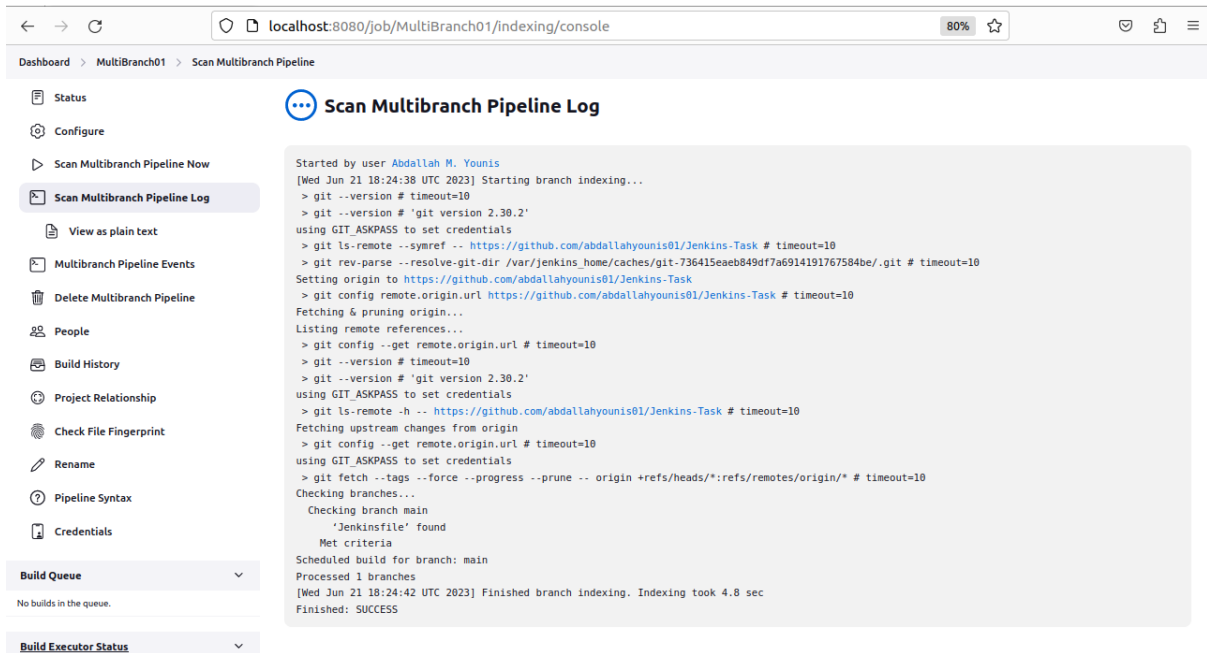
Stage View

Average stage times:
(Average full run time: ~7s)

	Declarative: Checkout SCM	Check	Test	Deployment
	1s	472ms	642ms	485ms
#4 Jun 21 21:15 No Changes	1s	373ms	387ms	521ms
#3 Jun 21 21:11 1 commit	1s	383ms	450ms	629ms
#2 Jun 21 21:07 1 commit	1s	474ms	440ms Failed	326ms Failed
#1 Jun 21 20:56 No Changes	2s	661ms	1s	467ms

```
[Pipeline] }
[Pipeline] // stage
[Pipeline] withEnv
[Pipeline] {
[Pipeline] stage
[Pipeline] { (Check)
[Pipeline] echo
Checking Your Code
[Pipeline] }
[Pipeline] // stage
[Pipeline] stage
[Pipeline] { (Test)
[Pipeline] echo
Testing Your App
[Pipeline] }
[Pipeline] // stage
[Pipeline] stage
[Pipeline] { (Deployment)
[Pipeline] echo
Your Code Is Deploying
[Pipeline] echo
This Build Number 4
[Pipeline] }
[Pipeline] // stage
[Pipeline] }
[Pipeline] // withEnv
[Pipeline] }
[Pipeline] // node
[Pipeline] End of Pipeline
Finished: SUCCESS
```

Create another multibranch pipeline and filter branches to contain only (master , dev , test) ?



The screenshot shows the Jenkins web interface for a multibranch pipeline named 'Scan Multibranch Pipeline'. The left sidebar contains navigation links: Status, Configure, Scan Multibranch Pipeline Now, Scan Multibranch Pipeline Log (selected), View as plain text, Multibranch Pipeline Events, Delete Multibranch Pipeline, People, Build History, Project Relationship, Check File Fingerprint, Rename, Pipeline Syntax, and Credentials. Below these are sections for 'Build Queue' (showing no builds) and 'Build Executor Status'. The main content area displays the 'Scan Multibranch Pipeline Log' with a detailed console output of a successful build.

```
Started by user Abdallah M. Younis
[Wed Jun 21 18:24:38 UTC 2023] Starting branch indexing...
> git --version # timeout=10
> git --version # 'git version 2.38.2'
using GIT_ASKPASS to set credentials
> git ls-remote --symref -- https://github.com/abdallahyounis01/Jenkins-Task # timeout=10
> git rev-parse --resolve-git-dir /var/jenkins_home/caches/git-736415eae849df7a6914191767584be/.git # timeout=10
Setting origin to https://github.com/abdallahyounis01/Jenkins-Task
> git config remote.origin.url https://github.com/abdallahyounis01/Jenkins-Task # timeout=10
Fetching & pruning origin...
Listing remote references...
> git config --get remote.origin.url # timeout=10
> git --version # timeout=10
> git --version # 'git version 2.38.2'
using GIT_ASKPASS to set credentials
> git ls-remote -h -- https://github.com/abdallahyounis01/Jenkins-Task # timeout=10
Fetching upstream changes from origin
> git config --get remote.origin.url # timeout=10
using GIT_ASKPASS to set credentials
> git fetch --tags --force --progress --prune -- origin +refs/heads/*:refs/remotes/origin/* # timeout=10
Checking branches...
Checking branch main
'Jenkinsfile' found
Met criteria
Scheduled build for branch: main
Processed 1 branches
[Wed Jun 21 18:24:42 UTC 2023] Finished branch indexing. Indexing took 4.8 sec
Finished: SUCCESS
```

← → ↻ <https://github.com/abdallahyounis01/Jenkins-Task/tree/main> 80% ☆

abdallahyounis01 / Jenkins-Task 🔍 Type to search > + ↻ 📄 📁 🌱

< Code Issues Pull requests Actions Projects Wiki Security Insights Settings

Jenkins-Task Public Pin Unwatch 2 Fork 0 Star 0

main 3 branches 0 tags Go to file Add file -> Code ->

Switch branches/tags
Find or create a branch...
Branches Tags (default)
✓ main
dev
test
View all branches

2bf22eb 16 minutes ago 7 commits
Add files via upload 2 days ago
Update Jenkinsfile 16 minutes ago
Add files via upload 2 days ago

Protect this branch

Help people interested in this repository understand your project by adding a README. Add a README

About No description, website, or topics provided.
Activity
0 stars
2 watching
0 forks

Releases No releases published
Create a new release

Packages No packages published
Publish your first package

Languages
Dockerfile 59.3% HTML 40.7%

← → ↻ localhost:8080/job/MultiBranch01/configure 80% ☆

Dashboard > MultiBranch01 > Configuration

Configuration

- General
- Branch Sources**
- Build Configuration
- Scan Multibranch Pipeline Triggers
- Orphaned Item Strategy
- Appearance
- Health metrics
- Properties

Branch Sources


Git ?
Project Repository ?
<https://github.com/abdallahyounis01/Jenkins-Task>
Credentials ?
abdallahyounis01/*
Add
Behaviors
Discover branches ?
Filter by name (with wildcards) ?
Include ?
main dev test
Exclude ?

Save Apply

- Status
- Configure
- ▶ Scan Multibranch Pipeline Now
- 📄 Scan Multibranch Pipeline Log
- 📄 Multibranch Pipeline Events
- 🗑 Delete Multibranch Pipeline
- 👤 People
- 📅 Build History
- 🔗 Project Relationship
- 🔍 Check File Fingerprint
- ✎ Rename
- ❓ Pipeline Syntax
- 🔑 Credentials

Build Queue

No builds in the queue.

 **MultiBranch01**


[Disable Multibranch Pipeline](#)


Branches (3)


S	W	Name ↓	Last Success	Last Failure	Last Duration
🟢	🌟	dev	1 min 17 sec #1	N/A	12 sec ▶
🟢	🌟	main	11 min #1	N/A	9.7 sec ▶
🟢	🌟	test	1 min 17 sec #1	N/A	11 sec ▶

Icon: s M L

Icon legend

 Atom feed for all

 Atom feed for failures

 Atom feed for just latest builds