



MARCH 7, 2023

DevOps Classroomnotes 07/Mar/2023

Jenkins Project Types

- Free Style
- Pipeline
- Maven Project
- Multi Configuration:
 - For building projects which have different configurations for different environments such as linux, windows, mac etc
- Multi branch:
 - This is used for project where we have different branches and each branch has different pipeline.

Multi Branch Demo

- Lets push all the branches after creating 4 branches

```
Dell@DESKTOP-TM7SH71 MINGW64 /c/temp/cicdpractice/pipelines/spring-pet
ic (main)
$ git push --help

Dell@DESKTOP-TM7SH71 MINGW64 /c/temp/cicdpractice/pipelines/spring-pet
ic (main)
$ git push --all
Total 0 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/khajadevopsmarch23/spring-petclinic.git
* [new branch]      dev -> dev
* [new branch]      pt -> pt
* [new branch]      st -> st
* [new branch]      uat -> uat
```

- Create a new multi branch project for spring petclinic

The screenshot shows the Jenkins Declarative UI. At the top, there's a breadcrumb: Dashboard > Declarative > springpetclinic > Configuration. The main area is titled 'Configuration' and has a sidebar with options: General (selected), Branch Sources, Build Configuration, Scan Multibranch Pipeline Triggers, Orphaned Item Strategy, Appearance, Health metrics, and Properties. The 'General' tab is active, showing fields for 'Display Name' (Spring Petclinic), 'Description' (Sample Project for Learning Jenkins), and a 'Save' button. A green circle highlights the 'Add to current view' button at the bottom of the configuration panel.

Dashboard

Declarative

springpetclinic

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/khajadevopsmarch23/spring-petclinic.git

Credentials ?

none

Add

Behaviors

Discover branches ?

Add

Property strategy

All branches get the same properties

Add property

Save

Apply

Dashboard

Declarative

springpetclinic

Configuration

Configuration

General

Branch Sources

Build Configuration

Scan Multibranch Pipeline Triggers

Orphaned Item Strategy

Appearance

Health metrics

Properties

Health metrics

Child item with worst health ?

Recursive ?

Health of the primary branch of a repository ?

Add metric

Properties

Pipeline Libraries

Save

Apply

Dashboard

Declarative

Spring Petclinic

Scan Multibranch Pipeline

Status

Configure

Scan Multibranch Pipeline Now

Scan Multibranch Pipeline Log

View as plain text

Multibranch Pipeline Events

Delete Multibranch Pipeline

People

Build History

Project Relationship

Check File Fingerprint

Scan Multibranch Pipeline Log

Progress

Started by user qtdevops

[Tue Mar 07 02:53:45 UTC 2023] Starting branch indexing...

> git --version # timeout=10

> git --version # 'git version 2.34.1'

> git ls-remote --symref -- https://github.com/khajadevopsmarch23/spring-petclinic.git # timeout=10

> git rev-parse --resolve-git-dir /var/lib/jenkins/caches/git-b85d56fa882b686547874465f37052e0/.git # timeout=10

Setting origin to https://github.com/khajadevopsmarch23/spring-petclinic.git

> git config remote.origin.url https://github.com/khajadevopsmarch23/spring-petclinic.git # timeout=10

Fetching & pruning origin...

Listing remote references...

> git config --get remote.origin.url # timeout=10

> git --version # timeout=10

> git --version # 'git version 2.34.1'

> git ls-remote -h -- https://github.com/khajadevopsmarch23/spring-petclinic.git # timeout=10

Fetching upstream changes from origin

> git config --get remote.origin.url # timeout=10

> git fetch --tags --force --progress --prune -- origin +refs/heads/*:refs/remotes/origin/* # timeout=10

Checking branches...

Checking branch st

Dashboard > Declarative > Spring Petclinic > Scan Multibranch Pipeline

Check File Fingerprint

Rename

Config Files

Pipeline Syntax

Credentials

Build Queue (1)

part of Spring Petclinic - main #1

Build Executor Status

Built-In Node

1 Spring Petclinic - dev #1 (package)

2 Spring Petclinic - uat #1 (package)

3 Spring Petclinic - pt #1 (package)

Checking branches...

Checking branch st
'Jenkinsfile' found
Met criteria
Scheduled build for branch: st

Checking branch main
'Jenkinsfile' found
Met criteria
Scheduled build for branch: main

Checking branch pt
'Jenkinsfile' found
Met criteria
Scheduled build for branch: pt

Checking branch uat
'Jenkinsfile' found
Met criteria
Scheduled build for branch: uat

Checking branch dev
'Jenkinsfile' found
Met criteria
Scheduled build for branch: dev

Processed 5 branches
[Tue Mar 07 02:53:47 UTC 2023] Finished branch indexing. Indexing took 1.7 sec
Finished: SUCCESS

Dashboard > Declarative > Spring Petclinic

Configure

Scan Multibranch Pipeline Now

Scan Multibranch Pipeline Log

Multibranch Pipeline Events

Delete Multibranch Pipeline

People

Build History

Project Relationship

Check File Fingerprint

Rename

Config Files

Pipeline Syntax

Credentials

Folder name: springpetclinic
Sample Project for Learning Jenkins

Disable Multibranch Pipeline

Branches (5)

S	W	Name	Last Success	Last Failure	Last Duration
...	...	dev	N/A	N/A	N/A
...	...	main	N/A	N/A	N/A
...	...	pt	N/A	N/A	N/A
...	...	st	N/A	N/A	N/A
...	...	uat	N/A	N/A	N/A

Icon: S M L

Icon legend

Atom feed for all

Atom feed for failures

Atom feed for just latest builds

- We have pushed the changes to multibranch pipeline

Dashboard > Declarative > Spring Petclinic

Config Files

Pipeline Syntax

Credentials

Build Queue

No builds in the queue.

Build Executor Status

Built-In Node

1 Spring Petclinic - main #1 (sonar analysis)

2 Spring Petclinic - dev #2 (package)

3 Idle

4 Idle

node1

uat 4 min 12 sec #1 N/A 2 min 22 sec

Icon: S M L

Icon legend

Atom feed for all

Atom feed for failures

Atom feed for just latest builds

- Every language has some extra folders generated which might not be required in the git repository.
- For the git to ignore these we create a .gitignore and add the patterns to exclude from git
- [Refer Here](#) for online generator
- Terraform generates some additional folders like .terraform which needs to be ignored, let's view at .gitignore of terraform

```
# are not checked in
override.tf
override.tf.json
*_override.tf
*_override.tf.json

# Include override files you do wish to add to version control using negated pattern
# !example_override.tf

# Include tfplan files to ignore the plan output of command: terraform plan -out=tfplan
# example: *tfplan*

# Ignore CLI configuration files
.terraformrc
terraform.rc

# End of https://www.toptal.com/developers/gitignore/api/terraform
```

Git Tags

- Branch and Tags are reference objects in Git

- Branch points to a commit which changes (generally points to latest commit). Git Tag points to a commit which represents something to be recorded (beta release, customer release)
- Tags are widely used to represent releases
- Lets create and push tag

```
Dell@DESKTOP-TM7SH71 MINGW64 /c/temp/cicdpractice/pipelines/spring-  
ic (dev)  
$ git tag  
  
Dell@DESKTOP-TM7SH71 MINGW64 /c/temp/cicdpractice/pipelines/spring-  
ic (dev)  
$ git tag v1.0_internal  
  
Dell@DESKTOP-TM7SH71 MINGW64 /c/temp/cicdpractice/pipelines/spring-  
ic (dev)  
$ git push --tags  
Total 0 (delta 0), reused 0 (delta 0), pack-reused 0  
To https://github.com/khajadevopsmarch23/spring-petclinic.git  
* [new tag]          v1.0_internal -> v1.0_internal  
  
Dell@DESKTOP-TM7SH71 MINGW64 /c/temp/cicdpractice/pipelines/spring-  
ic (dev)
```

uat had recent pushes 41 minutes ago [Compare & pull request](#)

dev had recent pushes 29 minutes ago [Compare & pull request](#)

main 5 branches 1 tag

Go to file Add file Code

Switch branches/tags

Find a tag

Branches Tags

v1.0_internal View all tags

Protect this branch

Contribute Sync fork

qtikhajcloud Added jenkins file 3415441 yesterday 842 commits

.devcontainer Bump Spring Boot and tidy up plugins 2 months ago

.github/workflows Update actions 2 weeks ago

mvn/wrapper Upgrade to Maven 3.8.2 2 years ago

gradle/wrapper Upgrade to Gradle 7.5.1 and to Spring Boot 2.7.3 6 months ago

Readme Apache-2.0 license 0 stars 0 watching 19.1k forks

Releases 1 tags Create a new release

Packages No packages published Publish your first package

Languages CSS 64.9% Java 27.0% HTML 5.4% SCSS 2.5%

- [Refer Here](#) to know more on tags

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