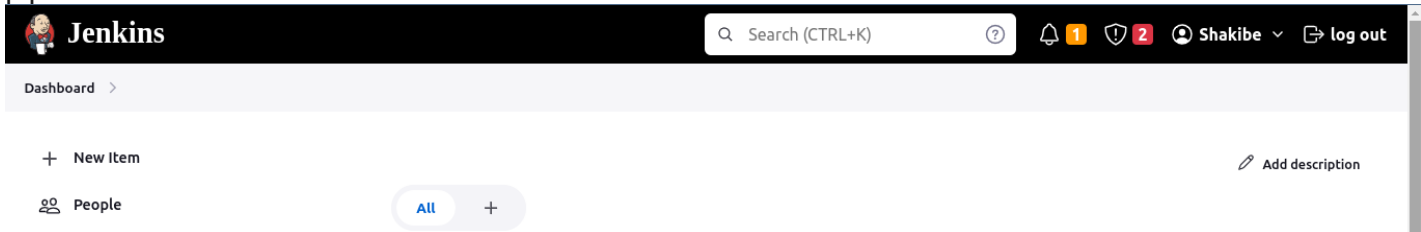


Jenkins Pipeline configuration for a bash script

Last updated by | shakibesaib | Aug 9, 2023 at 12:11 PM GMT+6


To execute a bash script from a repo, configuration of a Jenkins pipeline:

1. We need to create a new item from jenkins dashboard, name it and we have to select a type of our pipeline.




Enter an item name


» This field cannot be empty, please enter a valid name

**Freestyle project**


This is the central feature of Jenkins. Jenkins will build your project, combining any SCM with any build system, and this can be even used for something other than software build.

**Pipeline**

Orchestrates long-running activities that can span multiple build agents. Suitable for building pipelines (formerly known as workflows) and/or organizing complex activities that do not easily fit in free-style job type.

**Multi-configuration project**

Suitable for projects that need a large number of different configurations, such as testing on multiple environments, platform-specific builds, etc.

**Folder**

Creates a container that stores nested items in it. Useful for grouping things together. Unlike view, which is just a filter, a folder

I am using Freestyle project.

2. Then we have to do some global configuration of Jenkins.
Manage Jenkins>System Configuration>System

The screenshot shows the Jenkins Dashboard with the 'Manage Jenkins' section active. On the left sidebar, there are links for 'Check File Fingerprint', 'Manage Jenkins', and 'My Views'. The main content area displays several warnings and system configuration options.

Warnings:

- Building on the built-in node can be a security issue.** You should set up distributed builds. See [the documentation](#). Buttons: [Set up agent](#), [Set up cloud](#), [Dismiss](#).
- Warnings have been published for the following currently installed components:**
 - Jenkins 2.401.2 core and libraries:** [Stored XSS vulnerability](#). A fix for this issue is available. Update Jenkins now.
 - Gradle Plugin 2.8:** [Incorrect control flow breaks credentials masking in the build log](#). A fix for this issue is available. Go to the [plugin manager](#) to update the plugin.

System Configuration:

- System:** Configure global settings and paths.
- Tools:** Configure tools, their locations and automatic installers.
- Plugins:** Add, remove, disable or enable plugins that can extend the functionality of Jenkins. (39 updates available)

3. As i want to receive a email after my script is built and also want the csv file which is a output of my script, I need to install or check **Extendable email notification** plugin.

Extended E-mail Notification

SMTP server

smtp.gmail.com

SMTP Port

465

Advanced ▾

Edited

i used smtp.gmail.com as my email service provider is gmail, and for gmail smtp port is 465.

Then, i need to select advance and add there my email and password for smtp authentication and have to select SSL.

Advanced ▲ Edited

Credentials

shakibesaib@gmail.com/*****

Add ▾

☒ Use SSL

☐ Use TLS

☐ Use OAuth 2.0

password isnt the exact email password that we use for email login. We have to create a app password from our email manage account cause gmail and other email service provider doesnt allow those app, which doesnt have signin with gmail/or any service provider, to login with actual email password.

4. In Email notification section, we have to do the same as last step.

E-mail Notification

SMTP server

smtp.gmail.com

Default user e-mail suffix ?

Advanced ▾

 Edited

☐ Test configuration by sending test e-mail

Advanced ▲

 Edited

☒ Use SMTP Authentication ?

User Name

shakibesaib@gmail.com

Password

 Concealed

Change Password

☒ Use SSL ?

☐ Use TLS

SMTP Port ?

465

5. Before saving the configuration, we can test our email configuration by sending a demo email. We have to select test email configuration and have to provide a valid email address.

☒ Test configuration by sending test e-mail

Test e-mail recipient

shakibesaib@gmail.com

Email was successfully sent

Test configuration

Test email #1 > Inbox x



shakibesaib@gmail.com

to shakibesaib ▾

11:34 (1 minute ago)

☆ ↶ ⋮

This is test email #1 sent from Jenkins

Now we gonna save it and will go back to dashboard & select our item from dashboard.

6. From the left side we gonna select configuration.

Dashboard > ShakibeHasan > Configuration

Configure

- General**
- Source Code Management
- Build Triggers
- Build Environment
- Build Steps
- Post-build Actions

General

Enabled

Description

[Plain text] [Preview](#)

- ☐ Discard old builds ?
- ☐ GitHub project
- ☐ This project is parameterised ?
- ☐ Throttle builds ?
- ☐ Execute concurrent builds if necessary ?

Here we can give a description of our project.

7. The we will check Source Code Management Section(SCM). We gonna select Git and add our repository and credential(if needed).

Git ?

Repositories ?

Repository URL ?

https://dev.azure.com/fronturetech/Fronture%20ERP/_git/bash%20hands-on%20labs%20by%20shakibe%20hasan

Credentials ?

shakibesaib/*****

Add ▾

Advanced ▾

Add Repository

8. Then from Build Triggers section, we gonna select Poll SCM, and schedule with * * * * *

Here, * * * * * this mean every minute, every hour, every day, every month, every year. So, Jenkins will check repository every minute to check if any changed has made. If made, it will automatically pull the

changes and build it.

Build Triggers

- ☐ Trigger builds remotely (e.g., from scripts) ?
- ☐ Build after other projects are built ?
- ☐ Build periodically ?
- ☐ GitHub hook trigger for GITScm polling ?

☒ Poll SCM ?

Schedule ?

⚠ Do you really mean "every minute" when you say "***"? Perhaps you meant "H*****" to poll once per hour**

Would last have run at Wednesday, August 9, 2023 at 11:50:42 AM Bangladesh Standard Time; would next run at Wednesday, August 9, 2023 at 11:50:42 AM Bangladesh Standard Time.

☐ Ignore post-commit hooks ?

9. In Build Step, from add step, we gonna select the Execute shell and add commands to execute the script as like we do in our linux mint terminal. Here execute shell default directory is \$Workspace which is a environment variable of jenkins and its value is `var/lib/jenkins/workspace`

Build Steps

Execute shell ?

Command

See [the list of available environment variables](#)

```
#!/bin/bash

./work_items.sh
```

Advanced ▾

Add build step ▾

10. In the post build section, we gonna add a step, Editable Email Notification as planned to receive a email after my script is built and also want the csv file which is a output of my script. Check out the configuration below-

Post-build Actions

Editable Email Notification ?

Allows the user to disable the publisher, while maintaining the settings

☐ Disable Extended Email Publisher ?

Project From

Project Recipient List ?

Comma-separated list of email address that should receive notifications for this project.

shakibesaib@gmail.com,shayakh@fronturetech.com

\$DEFAULT_REPLYTO

Content Type ?

Default Content Type

Default Subject ?

\$DEFAULT_SUBJECT

Default Content ?

\$DEFAULT_CONTENT

Attachments ?

Can use wildcards like 'module/dist/**/*.*.zip'. See the [@includes of Ant fileset](#) for the exact format. The base directory is [the workspace](#).

Attach Build Log ?
Content Token Reference ?

In the attachment part i gave the path to my csv file, here also the base directory is workspace. So just give the file name you want attach with the email. Save and Select build from the left side.

11. After build check the build status.

**Console Output**

```
Started by user Shakibe
Running as SYSTEM
Building in workspace /var/lib/jenkins/workspace/ShakibeHasan
The recommended git tool is: NONE
using credential 86fc3e93-a491-484f-81a4-424dfaab6238
> git rev-parse --resolve-git-dir /var/lib/jenkins/workspace/ShakibeHasan/.git # timeout=10
Fetching changes from the remote Git repository
> git config remote.origin.url https://dev.azure.com/fronturetech/Fronture%20ERP/_git/bash%20hands-on%20labs%20by%20shakibe%20hasan # timeout=10
Fetching upstream changes from https://dev.azure.com/fronturetech/Fronture%20ERP/_git/bash%20hands-on%20labs%20by%20shakibe%20hasan
> git --version # timeout=10
> git --version # 'git version 2.34.1'
using GIT_ASKPASS to set credentials
> git fetch --tags --force --progress -- https://dev.azure.com/fronturetech/Fronture%20ERP/_git/bash%20hands-on%20labs%20by%20shakibe%20hasan +refs/heads/*:refs/remotes/origin/* # timeout=10
> git rev-parse refs/remotes/origin/main^{commit} # timeout=10
Checking out Revision dc20752ab30683f36c414d9d9f8eaf06a2b3bf63 (refs/remotes/origin/main)
> git config core.sparsecheckout # timeout=10
```

```
> git checkout -f dc20752ab30683f36c414d9d9f8eaf06a2b3bf63 # timeout=10
Commit message: "Final Debug"
> git rev-list --no-walk dc20752ab30683f36c414d9d9f8eaf06a2b3bf63 # timeout=10
No emails were triggered.
[ShakibeHasan] $ /bin/bash /tmp/jenkins11412314404547086787.sh
```

ID	Title	State		
27	Get Overview of DevOps and Write a document for our internal use	Done	Shakibe Hasan	
29	Learn Bash/Powershell and write document for our internal use	Done	Shakibe Hasan	
30	Web server Setup (Apache, Nginx)	Review	Shakibe Hasan	
31	Database Server Setup (Mysql)	Review	Shakibe Hasan	
32	Database User Management	Review	Shakibe Hasan	
33	Mysql Database Backup (Without incremental or differential backup because of license cost)	Review	Shakibe Hasan	
34	GIT Server Setup (gitea)	Done	Shakibe Hasan	
35	Git Server User Management	Done	Shakibe Hasan	
36	Git Manage server all things	Done	Shakibe Hasan	
37	Jenkins Server Setup	Done	Shakibe Hasan	
38	Manage whole Jenkins server	Committed	Shakibe Hasan	
39	All applications are deployed through pipeline Job. (Test & Prod Environment)	New	Shakibe Hasan	
40	OS(Linux) user Management	New	Shakibe Hasan	
41	Application Host (Laravel, Node, React, Vue)	Review	Shakibe Hasan	
42	REST API	Done	Shakibe Hasan	
45	POSTMAN tool	Done	Shakibe Hasan	
46	CURL	Done	Shakibe Hasan	
47	JSON	Done	Shakibe Hasan	
48	GET, POST, PUT, DELETE method	Done	Shakibe Hasan	
49	bash script to fetch	Review	Shakibe Hasan	
50	Configure a Jenkins pipeline from https://dev.azure.com/fronturetech/Fronture%20ERP/_git/bash%20hands-on%20labs%20by%20shakibe%20hasan	Committed	Shakibe Hasan	
51	Configure jenkins pipeline for node hello world app.	Approved	Shakibe Hasan	

work items has been exported to work_items.csv
shakibe hasan
Email was triggered for: Always
Sending email for trigger: Always
Sending email to: shakibesaib@gmail.com shayakh@fronturetech.com
Finished: SUCCESS

and check email.

