

# Regular Jenkins - /bin/False Configuration

Regular Jenkins come with a service account with the username jenkins already configured.

However, the jenkins service account has a shell of /bin/false for security purposes

The first step is to reconfigure the /bin/false shell to /bin/bash

## Step 1

Automate the provisioning of the regular Jenkins using terraform cloud.

## Step 2

Ssh into the jenkins server using the aw ssh client details

Chmod 400 [name of your pem key]

## Example

```
ssh -i "cake.pem" ec2-user@ec2-3-145-177-49.us-east-2.compute.amazonaws.com
```

```
[ec2-user@ip-10-0-1-70 ~]$
```

Do not become the root

```
# sudo cat /etc/passwd [ verify jenkins service account user exists] and the shell is /bin/false
```

## Step 3

Reconfigure the /bin/false to /bin/bash

```
# sudo usermod --shell /bin/bash jenkins
```

```
Do not run # sudo usermod --shell /bin/bash/ jenkins
```

## Step 4

# sudo cat /etc/passwd [ verify jenkins service account user exists] and now is in the shell is /bin/bash

Do not switch yet

### Step 5

```
[ec2-user@ip-10-0-1-70 ~]$ sudo vi /etc/sudoers
```

Go to the last sentence, CHANGE TO the INSERT MODE and ENTER

Uncomment and add this line

**Jenkins ALL=(ALL) NOPASSWD: ALL**

Save and quit

wq!

### Step 6

Do not switch yet

```
[ec2-user@ip-10-0-1-70 ~]$ sudo usermod -a -G docker jenkins
```

Or

```
[ec2-user@ip-10-0-1-70 ~]$ sudo usermod -aG docker jenkins
```

### Step 7

Now switch to jenkins

```
[ec2-user@ip-10-0-1-70 ~]$ sudo su - jenkins
```

### Step 8

You should see something like this

```
[ec2-user@ip-10-0-1-70 ~]$ sudo su - jenkins
Last login: Tue Mar  8 20:41:43 UTC 2022 on pts/0
-bash-4.2$
-bash-4.2$
-bash-4.2$
-bash-4.2$
-bash-4.2$
-bash-4.2$
-bash-4.2$
```

### Step 9

Confirm jenkins service user can access the docker daemon

If you configure everything correctly, jenkins should have all the administrative privileges to access docker daemon.

**Do not use SUDO**

```
-bash-4.2$ docker ps
CONTAINER ID   IMAGE      COMMAND                  CREATED   STATUS    PORTS   NAMES
-bash-4.2$ docker images
REPOSITORY    TAG        IMAGE ID   CREATED   SIZE
```

Some Interesting Stuffs About regular Jenkins

### Step 10

# pwd

```
-bash-4.2$ pwd
/var/lib/jenkins
```

### Step 11

# ls

```
-bash-4.2$ ls
config.xml          nodeMonitors.xml  secret.key.not-so-secret
hudson.model.UpdateCenter.xml  nodes             secrets ✓
identity.key.enc    plugins           updates
jenkins.telemetry.Correlator.xml queue.xml.bak     userContent
jobs               secret.key        users
```

## Step 12

# cd secrets

```
-bash-4.2$ ls
config.xml          nodeMonitors.xml  secret.key.not-so-secret
hudson.model.UpdateCenter.xml  nodes             secrets ✓
identity.key.enc    plugins           updates
jenkins.telemetry.Correlator.xml queue.xml.bak     userContent
jobs               secret.key        users
-bash-4.2$ cd secrets/
-bash-4.2$ ls
filepath-filters.d
initialAdminPassword → cat
jenkins.model.Jenkins.crumbSalt
master.key
org.jenkinsci.main.modules.instance_identity.InstanceIdentity.KEY
slave-to-master-security-kill-switch
whitelisted-callables.d
```

## Step 13

Get the credentials

# cat initialAdminPassword

```
-bash-4.2$ cat initialAdminPassword
f0f9db729bbb4355832e96c1cdb768ba
```

## Step 14

# Unlock Jenkins

To ensure Jenkins is securely set up by the administrator, a password has been written to the log ([not sure where to find it?](#)) and this file on the server:

```
/var/lib/jenkins/secrets/initialAdminPassword
```

Please copy the password from either location and paste it below.

Administrator password

## Step 15

Go to manage plugs → available → backup

Select

**Thinbackups**

**Periodic backup**

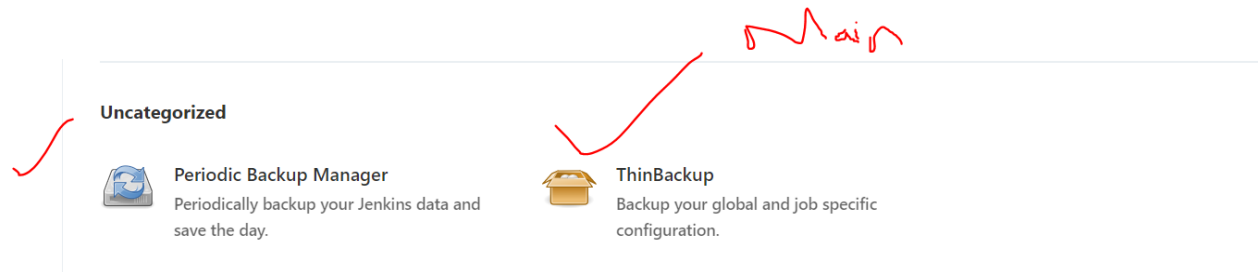
Updates	Available	Installed	Advanced
Install ↑	Name	Version	Released
<input checked="" type="checkbox"/>	<b>ThinBackup</b> Miscellaneous Backups the most important <u>global</u> and <u>job specific</u> configuration files.	1.10	1 yr 7 mo ago
<input type="checkbox"/>	<b>Build Monitor View</b> Build Reports User Interface Views Provides a highly visible view of the status of selected Jenkins jobs. It easily accommodates different computer screen sizes and is ideal as an Extreme Feedback Device to be displayed on a screen on your office wall.	1.13+build.202203071536	1 day 5 hr ago
<input type="checkbox"/>	<b>Backup</b> Miscellaneous Backup or restore your Hudson configuration files <b>This plugin is up for adoption!</b> We are looking for new maintainers. Visit our <a href="#">Adopt a Plugin</a> initiative for more information.	1.6.1	10 yr ago
<input type="checkbox"/>	<b>CloudBees Disk Usage Simple</b> Build Reports Alternative to disk-usage plugin, to compute in the background per job disk usage on jenkins master	0.10	1 yr 8 mo ago
<input checked="" type="checkbox"/>	<b>Periodic Backup</b> Backup or restore your Jenkins <u>configuration files</u>	1.8	1 mo 2 days ago

Install without restart

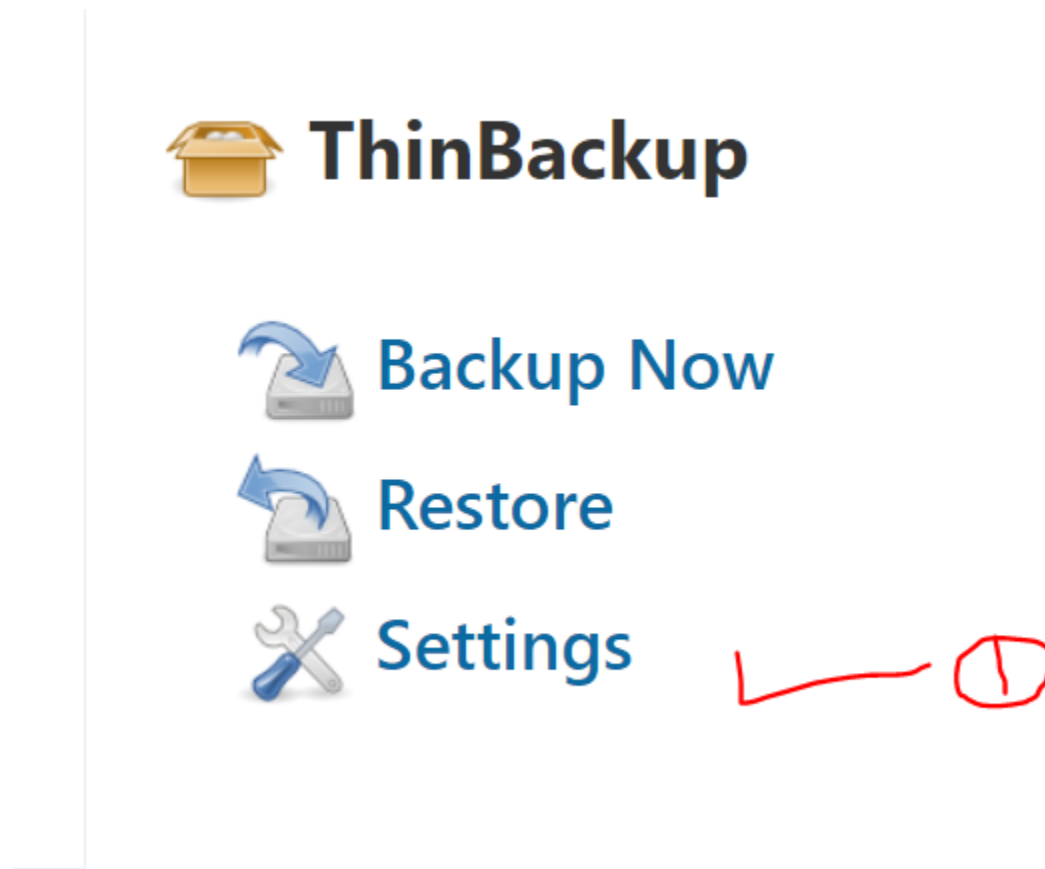
## Step 16

Go to

Manage Jenkins, scroll all the way down the page and look for the following



Click on ThinBackup and select settings



## Step 17

Configure the settings

Start by creating a folder in the terminal of the Jenkins server

```
-bash-4.2$ mkdir backup
```



## thinBackup Configuration

### Backup settings

Backup directory



/var/lib/jenkins/backup

Backup schedule for full backups



H/15 \* \* \* \*

Backup schedule for differential backups



H/15 \* \* \* \*

Max number of backup sets



3

Files excluded from backup (regular expression)



3

☒ Wait until Jenkins/Hudson is idle to perform a backup



Force Jenkins to quiet mode after specified minutes



120

☒ Wait until Jenkins/Hudson is idle to perform a backup



Force Jenkins to quiet mode after specified minutes



120

☒ Backup build results



☒ Backup build archive



☐ Backup only builds marked to keep



☐ Backup 'userContent' folder



☐ Backup next build number file



☐ Backup plugins archives



☐ Backup additional files



☐ Clean up differential backups



☒ Move old backups to ZIP files



Save

Save

## Step 18

Let run a job

**Build Triggers**

- ☐ Build after other projects are built
- ☐ Build periodically
- ☐ GitHub hook trigger for GITScm polling
- ☒ Poll SCM

**Schedule**

H/5 \* \* \* \*

Would last have run at Tuesday, March 8, 2022 9:34:17 PM UTC; would next run at Tuesday, March 8, 2022 9:39:17 PM UTC.

If the cron information is correct, you should see the following

## Step 19

Go to manage plugins → available → docker [ install without restart ]

Q docker

Install	Name	Version	Released
<input checked="" type="checkbox"/>	<a href="#">Docker</a> Cloud Providers Cluster Management docker This plugin integrates Jenkins with <a href="#">Docker</a>	1.2.6	2 mo 25 days ago

[Docker Commons](#)

Go to manage plugins → available → Maven [ install without restart ]

## Step 20

Go to global tool configuration → Maven [ install without restart ]

Give maven a name [ Maven-3.8.4]

Apply → save



## Maven

### Maven installations

Add Maven

Maven

Name

Maven-3.8.4

☒ Install automatically

Install from Apache

Version

3.8.4

Add Installer

Delete Installer

Delete Maven

## Step 21

Git hub Credentials

Go → manage jenkins → credentials



## Manage Credentials

Configure credentials

Kind

Username with password

Scope ?

Global (Jenkins, nodes, items, all child items, etc)

Username ?

joshking1

☐ Treat username as secret ?

Password ?

.....

ID ?

GIT\_HUB\_CREDENTIALS ✓

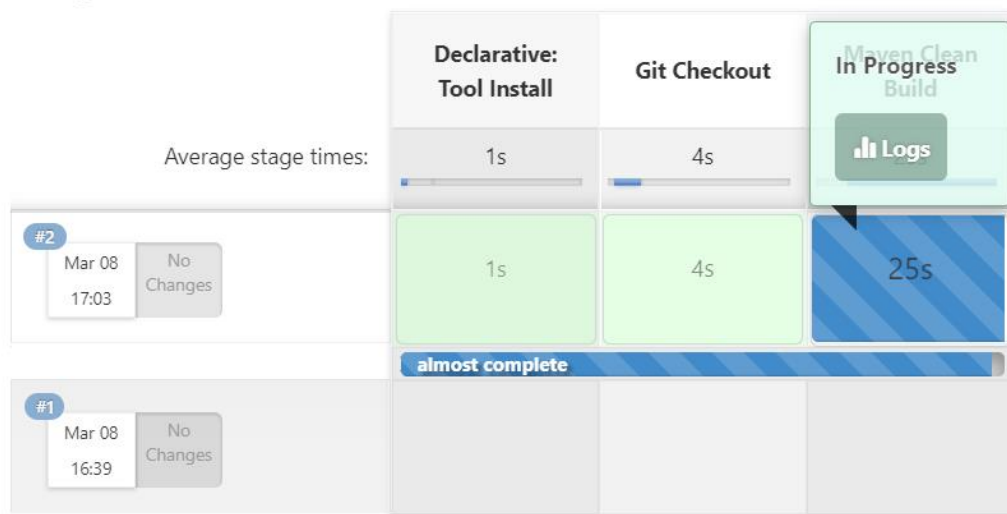
Description ?

git credentials ✓

## Step 22

Go to the pipeline and build

### Stage View



## Step 23

Time to back the data

Go → manage jenkins → thinbackup



# ThinBackup



Backup Now



Restore



Settings



Click backup

## Step 24

This should be done in the terminal of the jenkins

```
-bash-4.2$ ls  
BACKUPSET_2022-03-08_21-45_.zip BACKUPSET_2022-03-08_22-00_.zip FULL-2022-03-08_22-05  
-bash-4.2$
```

That how you backup your Jenkins workspace to avoid losing your data in case of server or operating system failure or data failure.

**A Real Case Scenario that necessitated the need to backup the data in my Jenkins**

Dashboard ▾

- New Item
- People
- Build History
- Project Relationship
- Check File Fingerprint
- Manage Jenkins
- My Views
- Lockable Resources
- New View

Jenkins is going to shut down

S	W	Name ↓	Last Success	Last Failure	Last Duration	
✓	⚙️	iphone-2	17 days - #24	N/A	29 sec	🕒
✓	⚙️	practice-devops	17 days - #4	N/A	1.3 sec	🕒
✗	⚙️	simo-sonar	24 days - #4	22 days - #8	27 sec	🕒

Icon: S M L      Icon legend      Atom feed for all      Atom feed for failures      Atom feed for just latest builds

You can always restore the lost data in the workspace of jenkins

Power loss

Issues with upgrading jenkins

## Step 25

Restore data in jenkins

Go and delete the pipeline job that you created

Go to manage jenkins → thinbackup → and simply click on **RESTORE**



YOU MUST **reboot** your jenkins instance



Go and check your pipeline and it should be restored