1. Create 2 users: developer1, developer2. The developer1 should be able to build job1 only and can't change the job configuration. The developer2 can configure and build the job2, also he is able to view job1 but can't build/configure it.

### **Create User**

Username:	developer1
Password:	••••
Confirm password:	••••
Full name:	developer-1
E-mail address:	developer1@gmail.com

# Create User

Username:	developer2
Password:	••••
Confirm password:	••••
Full name:	developer2
E-mail address:	developer2@gmail.com

Create User

## **Manage Roles**

#### Global roles

Role	Overa	ll .			Credentials						Ager	nt				
Role	Administer	Read	Create	Delete	ManageDomains	Update	View	Build	Configure	Connect	Create	Delete	Disconnect	Provision	Build	Cancel
admin	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
developer		•						0								

Role to add

developer

Add

Itom roles

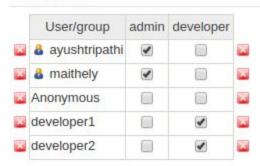
### Item roles

Role	Dettern			Credentials							Job						Run
Role	Pattern	Create	Delete	ManageDomains	Update	View	Build	Cancel	Configure	Create	Delete	Discover	Move	Read	Workspace	Delete	Replay L
developer-al	"job.*"									0				•			
developer1	"job-1"						•			0				•			
developer2	"job-2"						•		•	0				•			

Role to add



### Global roles



### Item roles

#3

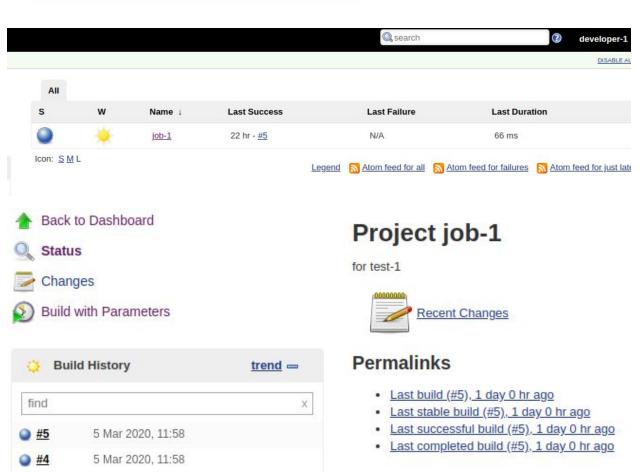
#2

#1

5 Mar 2020, 11:53

5 Mar 2020, 11:49 5 Mar 2020, 11:25





# Project job-1

This build requires parameters:



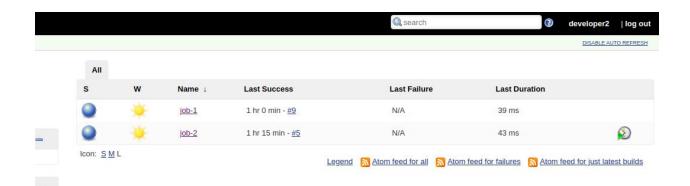




Started by user <a href="mailto:developer-1">developer-1</a>
Running as SYSTEM
Building in workspace /var/lib/jenkins/workspace/job-1
Copying file to file.txt
[job-1] \$ /bin/bash /tmp/jenkins8509581607397954584.sh
Installation instruction

- 1. Open terminal
- 2. Switch to the directory where you have extracted tar compressed fil
- 3. Execute the file as root.
  - a. In Ubuntu/Mint/Elementary OS or other Debian based Linux, u
  - b. In Fedora, Arch, Gentoo, Mageia or where sudo is not configure
- 4. If installation is successfull, you can start xdm from Start Menu o
- 5. To uninstall run /opt/xdman/uninstall.sh as root

Finished: SUCCESS





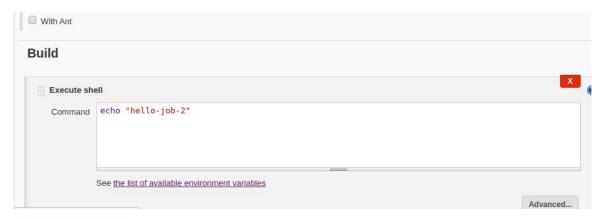


# Project job-2



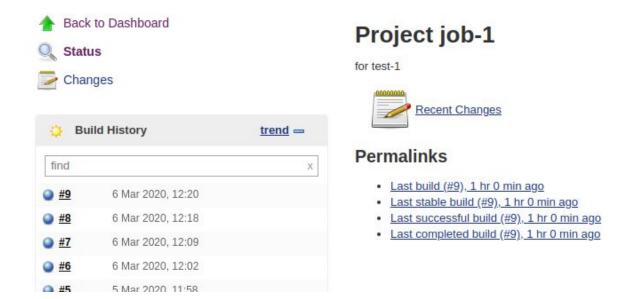
### **Permalinks**

- Last build (#3), 2 min 27 sec ago
- Last stable build (#3), 2 min 27 sec ago
- Last successful build (#3), 2 min 27 sec ago
- Last completed build (#3), 2 min 27 sec ago





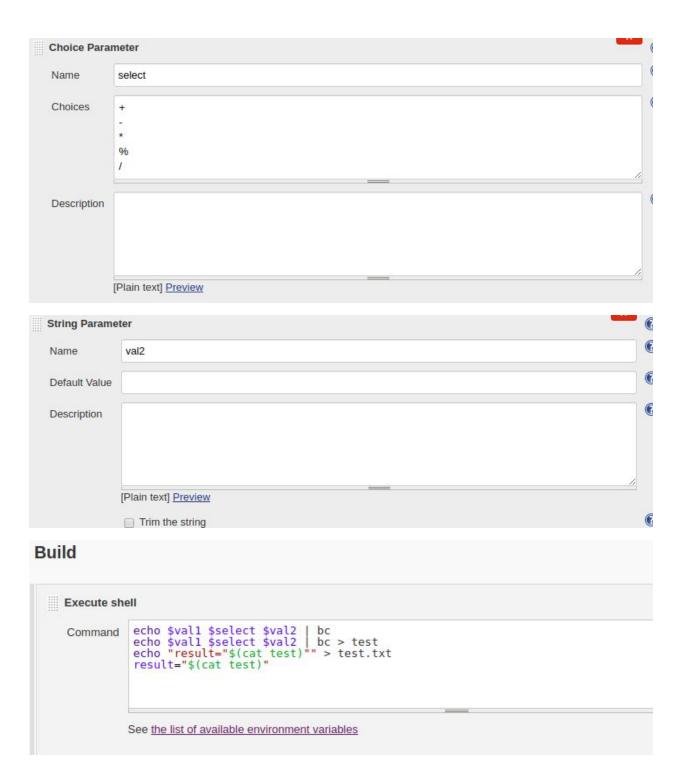
Started by user <u>developer2</u>
Running as SYSTEM
Building in workspace /var/lib/jenkins/workspace/job-2
[job-2] \$ /bin/sh -xe /tmp/jenkins7215075181908425192.sh + echo hello-job-2
hello-job-2
Finished: SUCCESS

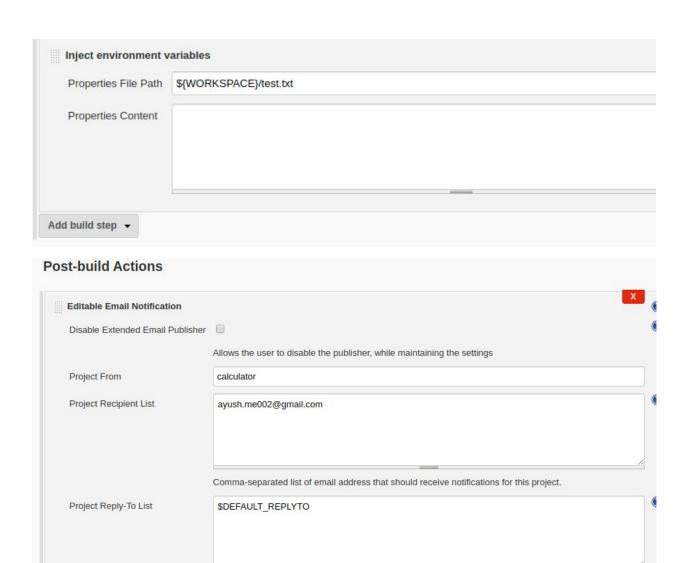


2. Create a Jenkins Job to create a calculator. It should give you a dropdown to ask Addition, Subtraction, Multiplication or Division and email the results.

Hint: Plugin Used (Environment Injector, Extended Email Notification)









Started by user ayushtripathi Running as SYSTEM [EnvInject] - Loading node environment variables. Building in workspace /var/lib/jenkins/workspace/calculator No emails were triggered. [EnvInject] - Executing scripts and injecting environment variables after the SCM step. [calculator] \$ /bin/sh -xe /tmp/jenkins11442940344027148448.sh + echo 66 + 44 + bc 110 + echo 66 + 44 + bc + cat test + echo result=110 + cat test + result=110 [EnvInject] - Injecting environment variables from a build step. [EnvInject] - Injecting as environment variables the properties file path '/var/lib/jenkins/wor [EnvInject] - Variables injected successfully. Email was triggered for: Always Sending email for trigger: Always Sending email to: ayush.me002@gmail.com Finished: SUCCESS

# Project calculator

This build requires parameters:

Bu	ild	
val2	65	
select	+ •	
val1	54	



Started by user <u>ayushtripathi</u>
Running as SYSTEM
Building in workspace /var/lib/jenkins/workspace/calculator
[calculator] \$ /bin/sh -xe /tmp/jenkins5199422816536904585.sh
+ echo 54 + 65
+ bc
119

Finished: SUCCESS

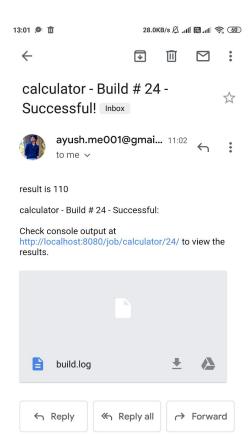
# **Project calculator**

This build requires parameters:

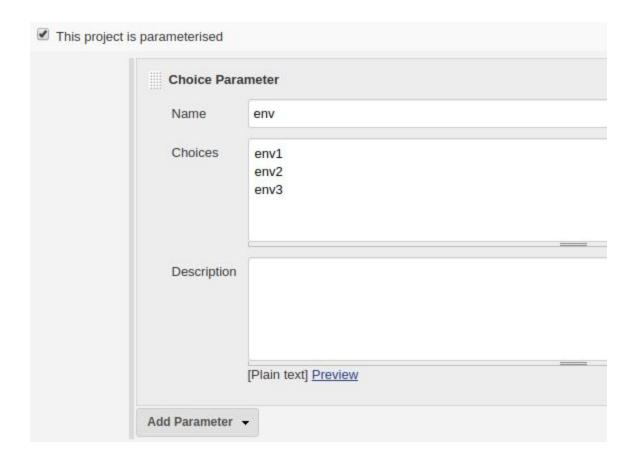




Started by user <u>ayushtripathi</u>
Running as SYSTEM
Building in workspace /var/lib/jenkins/workspace/calculator
[calculator] \$ /bin/sh -xe /tmp/jenkins6833516273413136472.sh
+ bc
+ echo 23 \* 5
115
Finished: SUCCESS



3. Create jenkins parameterized job which on selecting the different Env. will display different web pages by nginx.





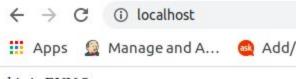
# Project nginx-job

This build requires parameters:





Started by user <u>ayushtripathi</u>
Running as SYSTEM
Building in workspace /var/lib/jenkins/workspace/nginx-job
[nginx-job] \$ /bin/sh -xe /tmp/jenkins10168219352701682328.sh
+ sudo rm -rf /var/www/html/env1.html
+ sudo cp /var/lib/jenkins/jenkins/env2.html /var/www/html
Finished: SUCCESS



this is ENV 2

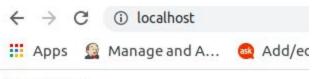
# Project nginx-job

This build requires parameters:





Started by user <u>ayushtripathi</u>
Running as SYSTEM
Building in workspace /var/lib/jenkins/workspace/nginx-job
[nginx-job] \$ /bin/sh -xe /tmp/jenkins14545417317994315833.sh
+ sudo rm -rf /var/www/html/\*
+ sudo cp /var/lib/jenkins/jenkins/env1.html /var/www/html
Finished: SUCCESS



this is ENV 1

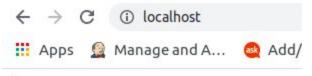
# Project nginx-job

This build requires parameters:



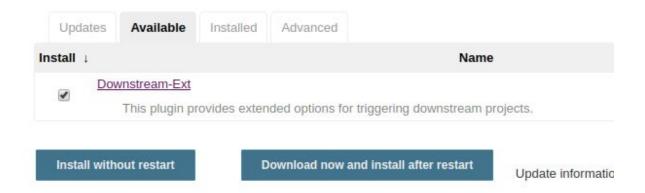


Started by user <u>ayushtripathi</u>
Running as SYSTEM
Building in workspace /var/lib/jenkins/workspace/nginx-job
[nginx-job] \$ /bin/sh -xe /tmp/jenkins13818549049943949711.sh
+ sudo rm -rf /var/www/html/env1.html
+ sudo cp /var/lib/jenkins/jenkins/env3.html /var/www/html
Finished: SUCCESS

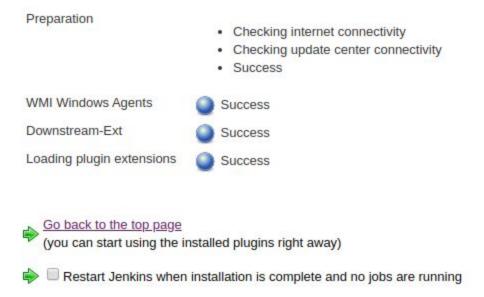


this is ENV 3

# 4. Create a job which on its failure will trigger another job.

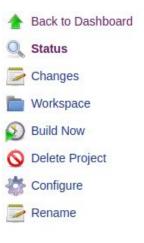


# **Installing Plugins/Upgrades**

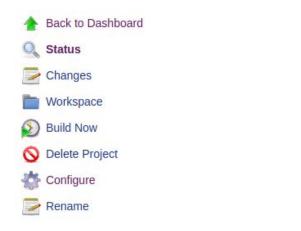


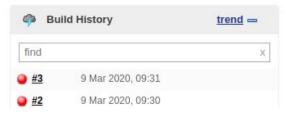
# Post-build Actions Build other projects (extended) Projects to build job-2 Build result is equal ▼ FAILURE ▼ Trigger downstream job if build result meets condition Trigger only if downstream project has SCM changes Trigger only if current project has SCM changes Add post-build action ▼











# Project job-2



### **Upstream Projects**



### Permalinks

- <u>Last build (#6), 9.1 sec ago</u>
- Last stable build (#6), 9.1 sec ago
- Last successful build (#6), 9.1 sec ago
- Last completed build (#6), 9.1 sec ago

# Project fail-build



### **Downstream Projects**



### Permalinks

- Last build (#2), 52 sec ago
- Last failed build (#2), 52 sec ago
- Last unsuccessful build (#2), 52 sec ago



Started by user <u>ayushtripathi</u>

Running as SYSTEM

Building in workspace /var/lib/jenkins/workspace/fail-build [fail-build] \$ /bin/sh -xe /tmp/jenkins15517781169255189129.sh

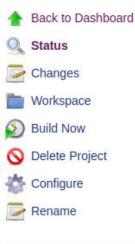
+ cd /var/lib/jenkins/ssdsdvsh

/tmp/jenkins15517781169255189129.sh: 2: cd: can't cd to /var/lib/jenkins/ssdsdvsh

Build step 'Execute shell' marked build as failure

Triggering a new build of job-2

Finished: FAILURE





# Project job-2



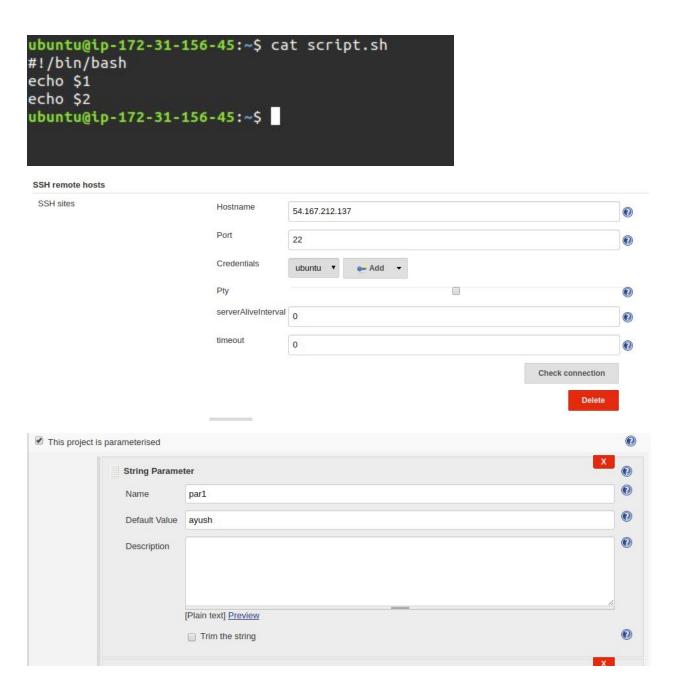
### **Upstream Projects**

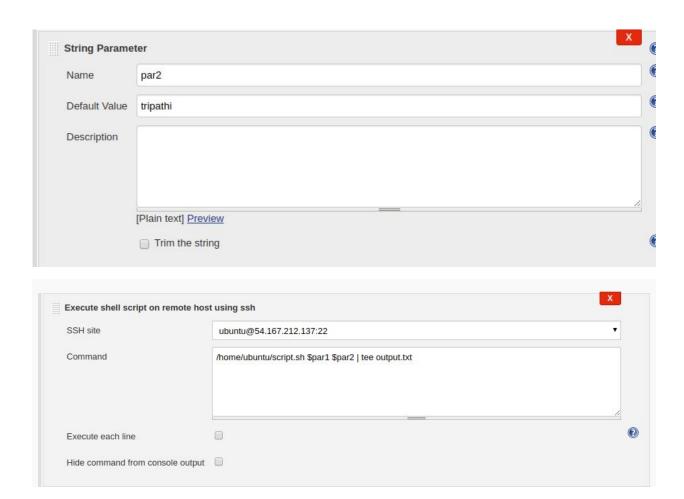


### Permalinks

- Last build (#6), 24 sec ago
- <u>Last stable build (#6), 24 sec ago</u>
- Last successful build (#6), 24 sec ago

5. Create a job which can set a cron job on another server. This server contains a script on its home directory and the script will print the two string parameters which will be given by the jenkins job.







```
Started by user ayushtripathi
Running as SYSTEM
Building in workspace /var/lib/jenkins/workspace/jenkins-ec2
[SSH] script:
parl="hello"
par2="world"

/home/ubuntu/script.sh $par1 $par2 | tee output.txt

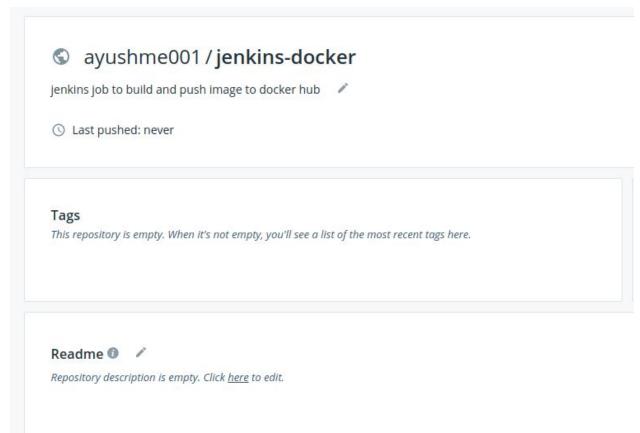
[SSH] executing...
hello
world

[SSH] completed
[SSH] exit-status: 0

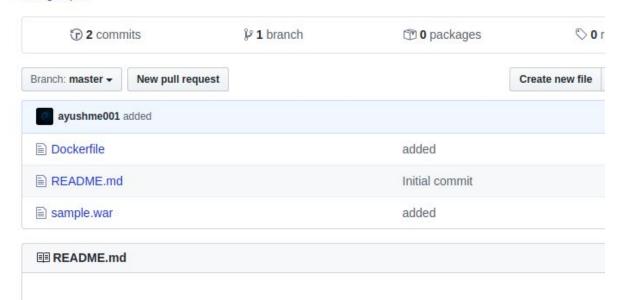
Finished: SUCCESS
```

```
ubuntu@ip-172-31-156-45:~$ cat output.txt
hello
world
ubuntu@ip-172-31-156-45:~$
```

6. Create a job in which: Pull Dockerfile from GitHub, build it and push to Dockerhub. The docker image should have the tag: git commit id.



### Manage topics



# jenkins-dockerhub

Authentication Tokens API Plugin

This plugin provides an API for converting credentials into authentication tokens in Jenkins.

CloudBees Docker Build and Publish plugin

This plugin enables building Dockerfile based projects, as well as publishing of the built images/repos to the docker registry.

Credentials Binding Plugin

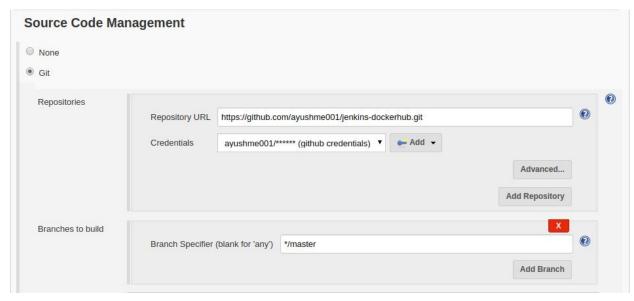
Allows credentials to be bound to environment variables for use from miscellaneous build

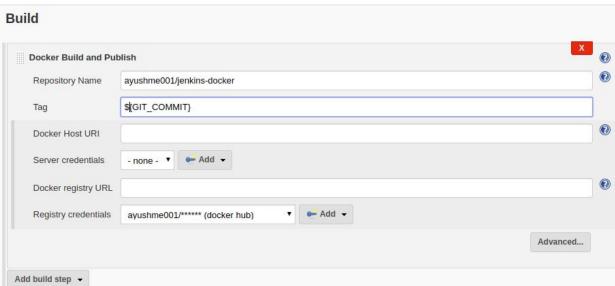


Т	P	Store	Domain	ID	Name
	19	<u>Jenkins</u>	(global)	570cc1f0-7a88-444a-9706-ce58caf3e47c	ubuntu
****	1	Jenkins	(global)	3b3aa3ef-a509-4583-8600-8096fc0e42c3	ayushme001/***** (github credentials)
<u></u>	1	<u>Jenkins</u>	(global)	4401bd90-a9b5-48ce-b135-1f1d61a1d95e	ayushme001/***** (docker hub)

Icon: SML

1





```
Step 1/3 : FROM openjdk:8-jre-alpine
8-jre-alpine: Pulling from library/openjdk
e7c96db7181b: Pulling fs layer
f910a506b6cb: Pulling fs layer
b6abafe80f63: Pulling fs layer
f910a506b6cb: Verifying Checksum
f910a506b6cb: Download complete
e7c96db7181b: Verifying Checksum
e7c96db7181b: Download complete
e7c96db7181b: Pull complete
f910a506b6cb: Pull complete
b6abafe80f63: Verifying Checksum
b6abafe80f63: Download complete
b6abafe80f63: Pull complete
Digest: sha256:f362b165b870ef129cbe730f29065ff37399c0aa8bcab3e44b51c302938c9193
Status: Downloaded newer image for openjdk:8-jre-alpine
---> f7a292bbb70c
Step 2/3 : COPY sample.war /app.war
---> b27593dbedc1
Step 3/3 : CMD ["/usr/bin/java", "-jar", "-Dspring.profiles.active=test", "/app.war"]
---> Running in 71e742fcf6e5
Removing intermediate container 71e742fcf6e5
---> 1103327838df
Successfully built 1103327838df
Successfully tagged ayushme001/jenkins-docker:v1
```

```
[jenkins-dockerhub] $ docker tag 1103327838df ayushme001/jenkins-docker:latest
[jenkins-dockerhub] $ docker inspect 1103327838df
[jenkins-dockerhub] $ docker push ayushme001/jenkins-docker:v1
The push refers to repository [docker.io/ayushme001/jenkins-docker]
147b6f38242d: Preparing
edd61588d126: Preparing
9b9b7f3d56a0: Preparing
f1b5933fe4b5: Preparing
f1b5933fe4b5: Mounted from library/openjdk
9b9b7f3d56a0: Mounted from library/openjdk
edd61588d126: Mounted from library/openjdk
147b6f38242d: Pushed
v1: digest: sha256:be8f77552125725e66fe3b5e3dfb69c5d08679882f9781c90ff0fb00d84b226b size: 1155
[jenkins-dockerhub] $ docker push ayushme001/jenkins-docker:latest
The push refers to repository [docker.io/ayushme001/jenkins-docker]
147b6f38242d: Preparing
edd61588d126: Preparing
9b9b7f3d56a0: Preparing
f1b5933fe4b5: Preparing
edd61588d126: Layer already exists
9b9b7f3d56a0: Layer already exists
147b6f38242d: Layer already exists
f1b5933fe4b5: Layer already exists
latest: digest: sha256:be8f77552125725e66fe3b5e3dfb69c5d08679882f9781c90ff0fb00d84b226b size: 1155
Finished: SUCCESS
   ayushme001/jenkins-docker
   jenkins job to build and push image to docker hub

 Last pushed: a few seconds ago

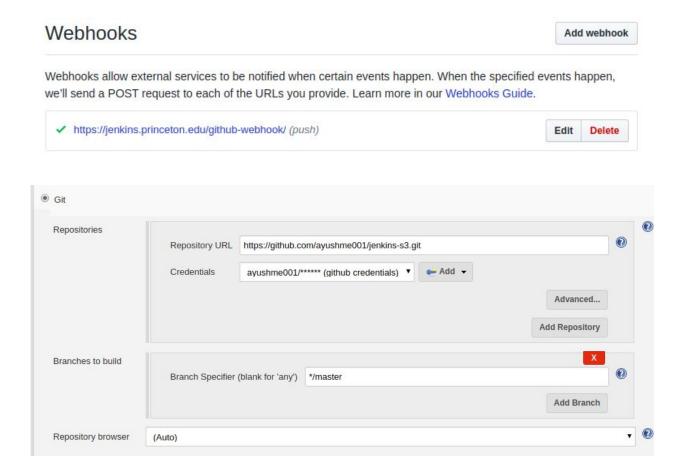
   Tags
   This repository contains 3 tag(s).
                                                                                           O a day ago
     V1
     2043981ab0aba96c2...
                                                                                   O a few seconds ago
                                                                                   O a few seconds ago
     latest
                                                                                                See all
```

### Reffrence

# https://www.techrunnr.com/build-and-push-docker-image-to-docker-hub-using-jenkins/

7. Host a static website on s3.

Its static content should be in git repo. When a person commits any change in the repo, the job should automatically reflect the changes in the s3 website.



```
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
```

```
Execute shell

Command #!/bin/bash echo "hello-world" /usr/bin/aws s3 cp index.html s3://ayush-jenkins/ sleep 10 /usr/bin/aws s3api put-object-acl --bucket ayush-jenkins --key index.html --acl public-read

See the list of available environment variables

Add build step 

Add build step
```

```
Started by user <u>ayushtripathi</u>
Running as SYSTEM
Building in workspace /var/lib/jenkins/workspace/s3-jenkins
using credential 3b3aa3ef-a509-4583-8600-8096fc0e42c3
> git rev-parse --is-inside-work-tree # timeout=10
Fetching changes from the remote Git repository
 > git config remote.origin.url https://github.com/ayushme001/jenkins-s3.git # timeout=10
Fetching upstream changes from <a href="https://github.com/ayushme001/jenkins-s3.git">https://github.com/ayushme001/jenkins-s3.git</a>
 > git --version # timeout=10
using GIT_ASKPASS to set credentials github credentials
> git fetch --tags --progress -- https://github.com/ayushme001/jenkins-s3.git +refs/heads/*:refs/remotes/origin/* #
timeout=10
> git rev-parse refs/remotes/origin/master^{commit} # timeout=10
 > git rev-parse refs/remotes/origin/origin/master^{commit} # timeout=10
Checking out Revision alf75a80c1017755c0d9205d317986fa74822039 (refs/remotes/origin/master)
> git config core.sparsecheckout # timeout=10
 > git checkout -f alf75a80c1017755c0d9205d317986fa74822039 # timeout=10
Commit message: "added"
> git rev-list --no-walk a1f75a80c1017755c0d9205d317986fa74822039 # timeout=10
[s3-jenkins] $ /bin/bash /tmp/jenkins1062872269726950432.sh
Completed 22 Bytes/22 Bytes (12 Bytes/s) with 1 file(s) remaining
upload: ./index.html to s3://ayush-jenkins/index.html
Finished: SUCCESS
```

