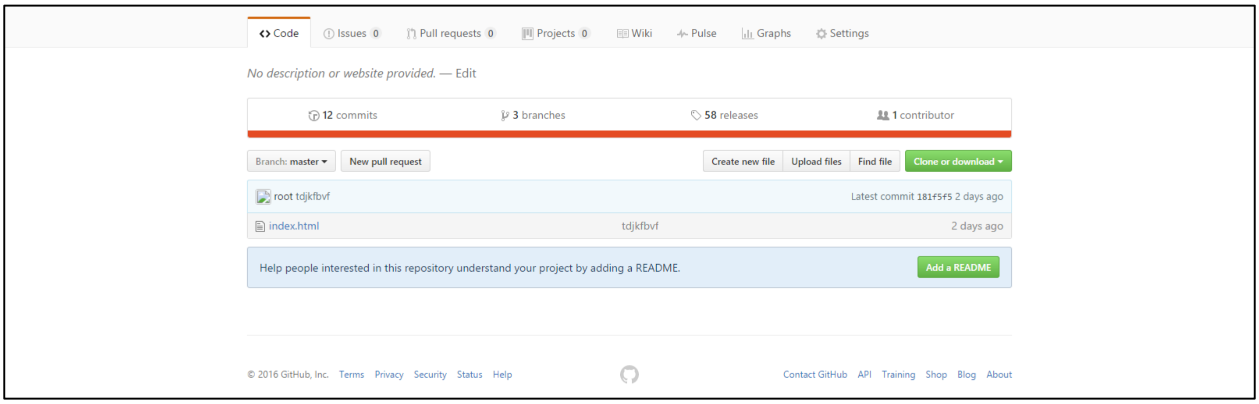
Requirement: GitHub Tag based Deployment and Rollback.

Tagging:

Step 1:

This is my remote repository:



<> Code | Issues 0 | Pull requests 0 | Projects 0 | Wiki | Pulse | Graphs | Settings

No description or website provided. — Edit

12 commits | 3 branches | 58 releases | 1 contributor

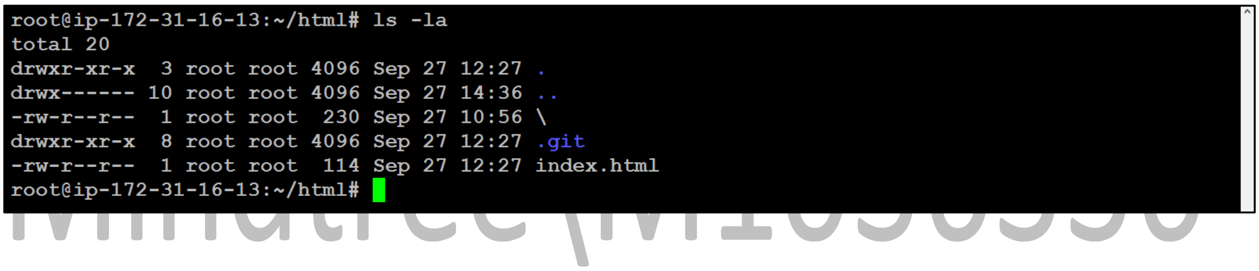
Branch: master ▾ | New pull request | Create new file | Upload files | Find file | Clone or download ▾

root tdjkfbvf		Latest commit 181f5f5 2 days ago
index.html	tdjkfbvf	2 days ago

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

© 2016 GitHub, Inc. Terms Privacy Security Status Help   Contact GitHub API Training Shop Blog About

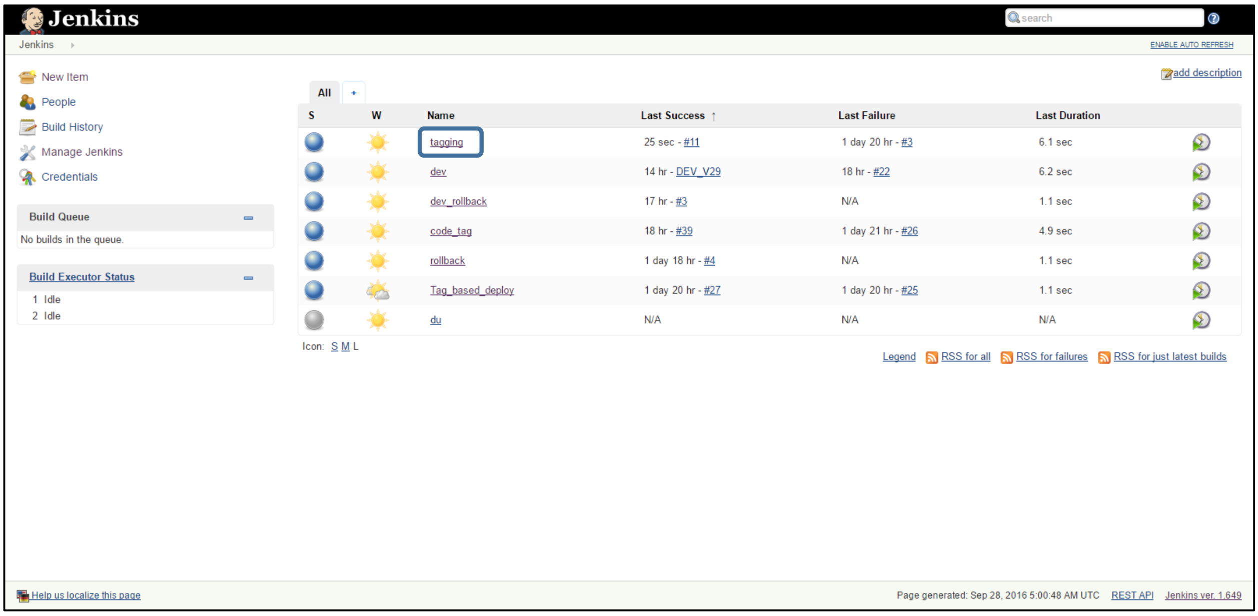
And this is my local repository cloned from remote repository:



```
root@ip-172-31-16-13:~/html# ls -la
total 20
drwxr-xr-x  3 root root 4096 Sep 27 12:27 .
drwx------ 10 root root 4096 Sep 27 14:36 ..
-rw-r--r--  1 root root  230 Sep 27 10:56 \
drwxr-xr-x  8 root root 4096 Sep 27 12:27 .git
-rw-r--r--  1 root root  114 Sep 27 12:27 index.html
root@ip-172-31-16-13:~/html# 
```

Step 2:

Let’s create a job names “tagging” in Jenkins



Build Queue

No builds in the queue.

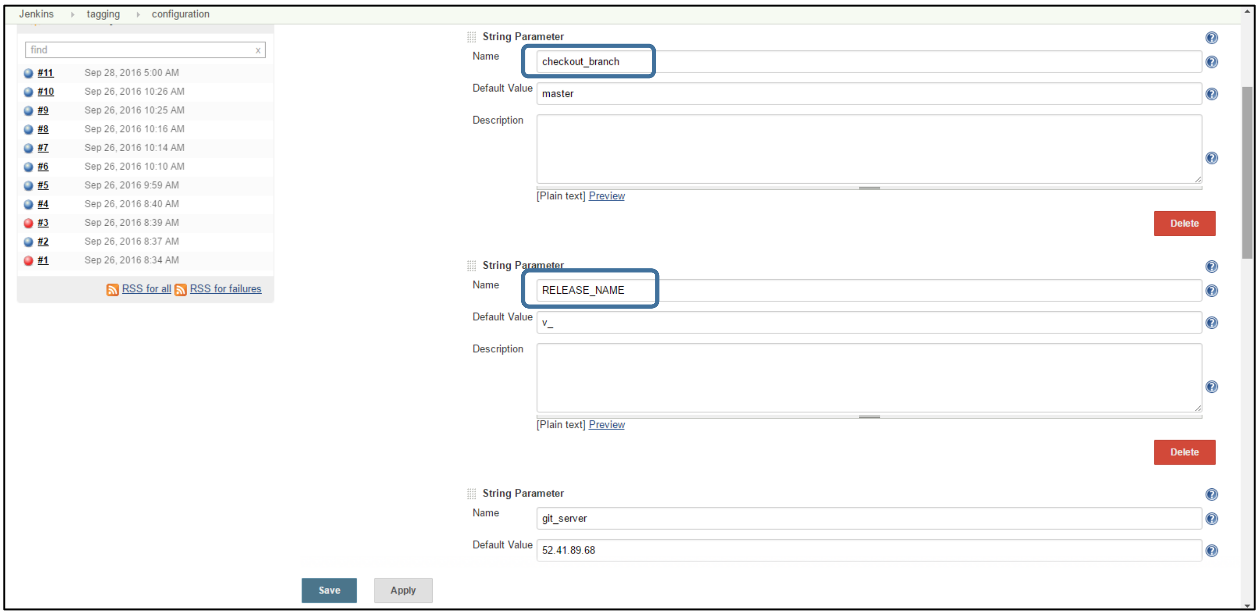
Build Executor Status

1 Idle
2 Idle

S	W	Name	Last Success ↑	Last Failure	Last Duration
●	☀	tagging	25 sec - #11	1 day 20 hr - #3	6.1 sec
●	☀	dev	14 hr - DEV_V29	18 hr - #22	6.2 sec
●	☀	dev_rollback	17 hr - #3	N/A	1.1 sec
●	☀	code_tag	18 hr - #39	1 day 21 hr - #26	4.9 sec
●	☀	rollback	1 day 18 hr - #4	N/A	1.1 sec
●	⛅	Tag_based_deploy	1 day 20 hr - #27	1 day 20 hr - #25	1.1 sec
●	☀	du	N/A	N/A	N/A

Page generated: Sep 28, 2016 5:00:48 AM UTC REST API Jenkins ver. 1.649

The configurations inside the job is displayed:



#11	Sep 28, 2016 5:00 AM
#10	Sep 26, 2016 10:26 AM
#9	Sep 26, 2016 10:25 AM
#8	Sep 26, 2016 10:16 AM
#7	Sep 26, 2016 10:14 AM
#6	Sep 26, 2016 10:10 AM
#5	Sep 26, 2016 9:59 AM
#4	Sep 26, 2016 8:40 AM
#3	Sep 26, 2016 8:39 AM
#2	Sep 26, 2016 8:37 AM
#1	Sep 26, 2016 8:34 AM

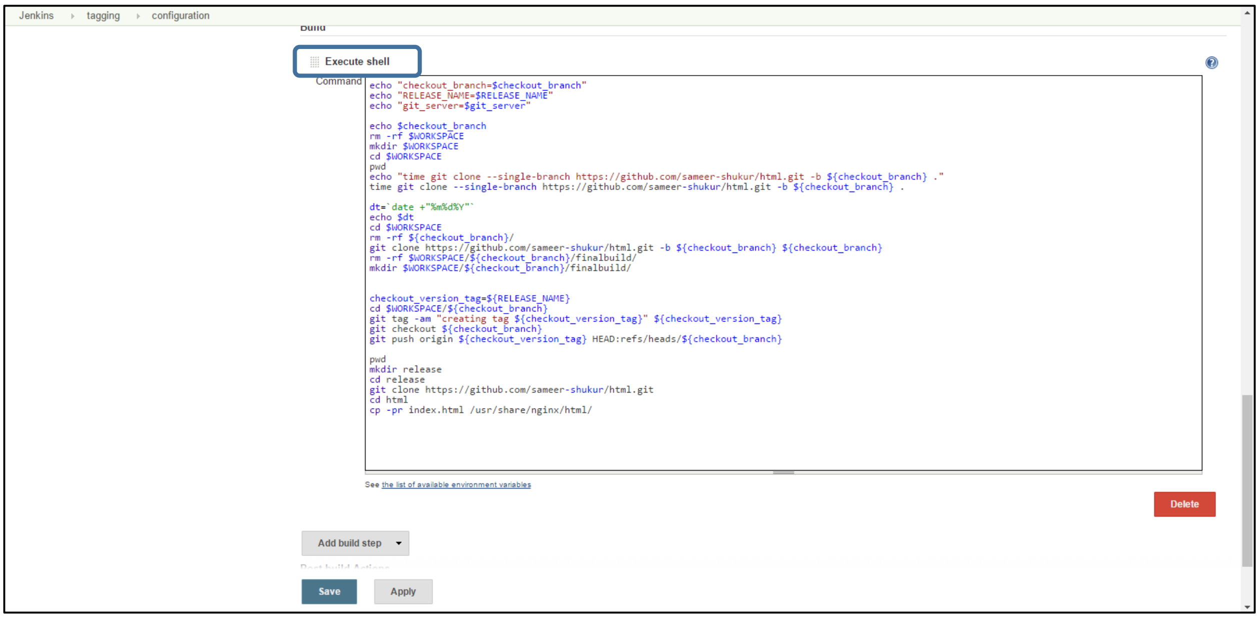
String Parameter
Name: checkout_branch
Default Value: master
Description:
[Plain text] Preview

String Parameter
Name: RELEASE_NAME
Default Value: v_
Description:
[Plain text] Preview

String Parameter
Name: git_server
Default Value: 52.41.89.68

Step 3:

We will write a shell script for tagging our git repository.



Command

```
echo "checkout_branch=$checkout_branch"
echo "RELEASE_NAME=$RELEASE_NAME"
echo "git_server=$git_server"

echo $checkout_branch
rm -rf $WORKSPACE
mkdir $WORKSPACE
cd $WORKSPACE
pwd
echo "time git clone --single-branch https://github.com/sameer-shukur/html.git -b ${checkout_branch} ."
time git clone --single-branch https://github.com/sameer-shukur/html.git -b ${checkout_branch} .

dt=`date +"%m%d%Y"`
echo $dt
cd $WORKSPACE
rm -rf ${checkout_branch}/
git clone https://github.com/sameer-shukur/html.git -b ${checkout_branch} ${checkout_branch}
rm -rf $WORKSPACE/${checkout_branch}/finalbuild/
mkdir $WORKSPACE/${checkout_branch}/finalbuild/


checkout_version_tag=${RELEASE_NAME}
cd $WORKSPACE/${checkout_branch}
git tag -am "creating tag ${checkout_version_tag}" ${checkout_version_tag}
git checkout ${checkout_branch}
git push origin ${checkout_version_tag} HEAD:refs/heads/${checkout_branch}

pwd
mkdir release
cd release
git clone https://github.com/sameer-shukur/html.git
cd html
cp -pr index.html /usr/share/nginx/html/
```

See the list of available environment variables

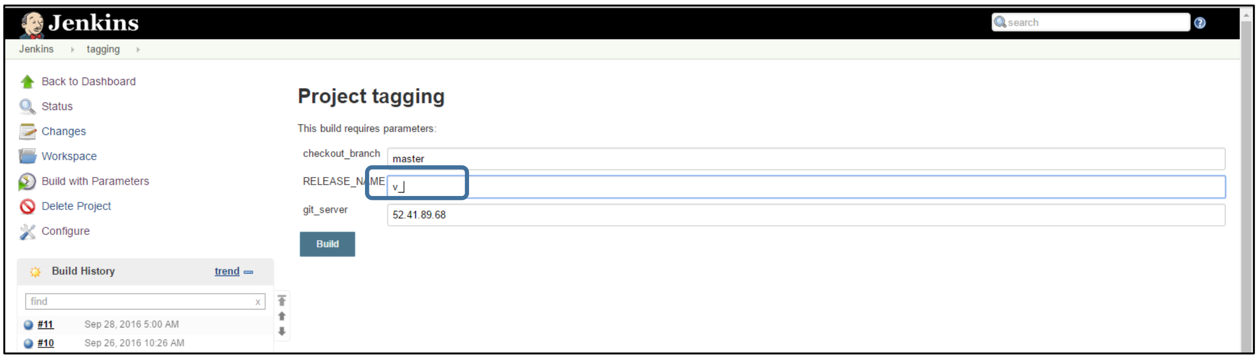
The shell script is:

```
echo "checkout_branch=$checkout_branch"
echo "RELEASE_NAME=$RELEASE_NAME"
echo "git_server=$git_server"

echo $checkout_branch
rm -rf $WORKSPACE
mkdir $WORKSPACE
cd $WORKSPACE
pwd
echo "time git clone --single-branch https://github.com/sameer-shukur/html.git -b ${checkout_branch} ."
time git clone --single-branch https://github.com/sameer-shukur/html.git -b ${checkout_branch} .
```

```
dt=`date +"%m%d%Y"`
echo $dt
cd $WORKSPACE
rm -rf ${checkout_branch}/
git clone https://github.com/sameer-shukur/html.git -b ${checkout_branch} ${checkout_branch}
rm -rf $WORKSPACE/${checkout_branch}/finalbuild/
mkdir $WORKSPACE/${checkout_branch}/finalbuild/


checkout_version_tag=${RELEASE_NAME}
cd $WORKSPACE/${checkout_branch}
git tag -am "creating tag ${checkout_version_tag}" ${checkout_version_tag}
git checkout ${checkout_branch}
git push origin ${checkout_version_tag} HEAD:refs/heads/${checkout_branch}

pwd
mkdir release
cd release
git clone https://github.com/sameer-shukur/html.git
cd html
cp -pr index.html /usr/share/nginx/html/
```

Step 4:

Then we will build it with parameter giving the tag number “V_601”.



Project tagging

This build requires parameters:

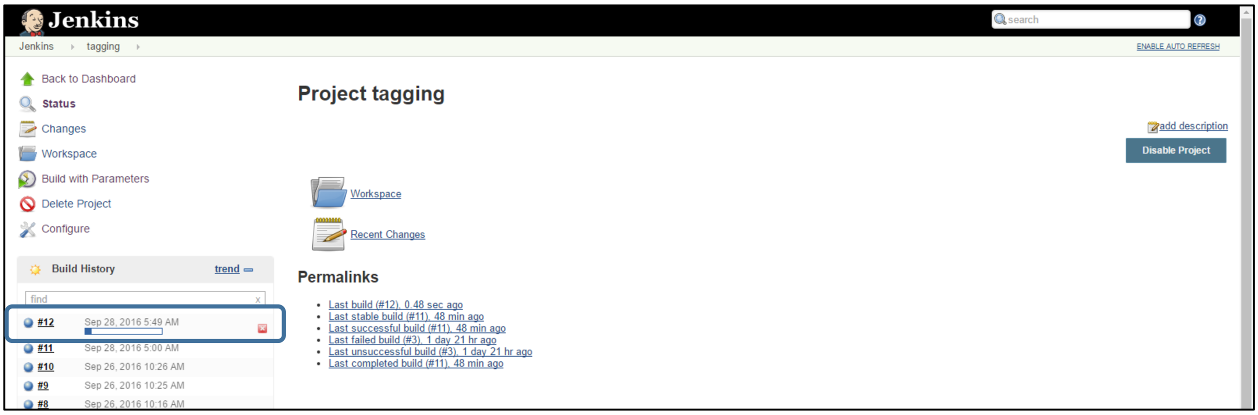
checkout_branch: master

RELEASE_NAME: v_

git_server: 52.41.89.68

#11 Sep 28, 2016 5:00 AM

#10 Sep 26, 2016 10:26 AM



Project tagging

#12 Sep 28, 2016 5:49 AM

#11 Sep 28, 2016 5:00 AM

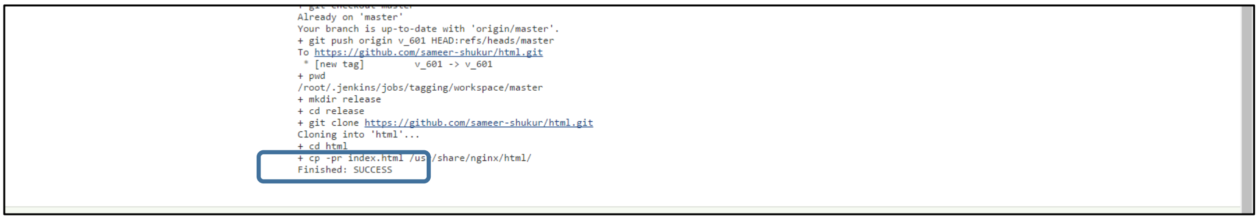
#10 Sep 26, 2016 10:26 AM

#9 Sep 26, 2016 10:25 AM

#8 Sep 26, 2016 10:16 AM

Permalinks

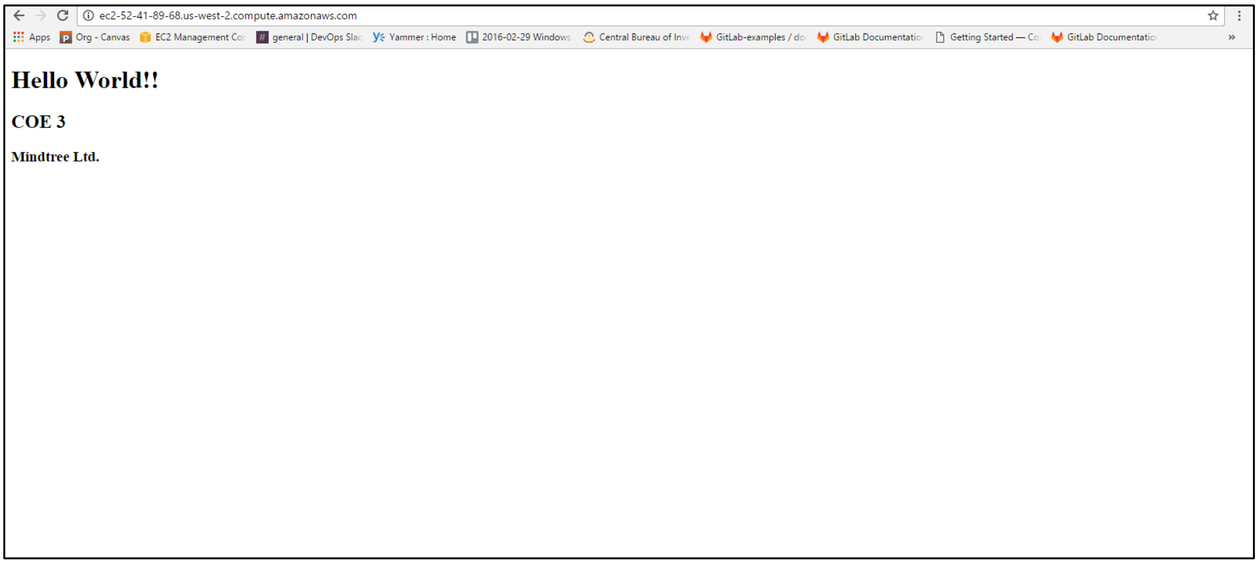
- Last build (#12), 0.48 sec ago
- Last stable build (#11), 48 min ago
- Last successful build (#11), 48 min ago
- Last failed build (#3), 1 day 21 hr ago
- Last unsuccessful build (#3), 1 day 21 hr ago
- Last completed build (#11), 48 min ago



```
+ git checkout master
Already on 'master'
Your branch is up-to-date with 'origin/master'.
+ git push origin v_601 HEAD:refs/heads/master
To https://github.com/sameer-shukur/html.git
 * [new tag]         v_601 -> v_601
+ pwd
/root/.jenkins/jobs/tagging/workspace/master
+ mkdir release
+ cd release
+ git clone https://github.com/sameer-shukur/html.git
Cloning into 'html'...
+ cd html
+ cp -pr index.html /usr/share/nginx/html/
Finished: SUCCESS
```

Step 5:

When the build is success, we can see the webpage deployed in nginx sever.



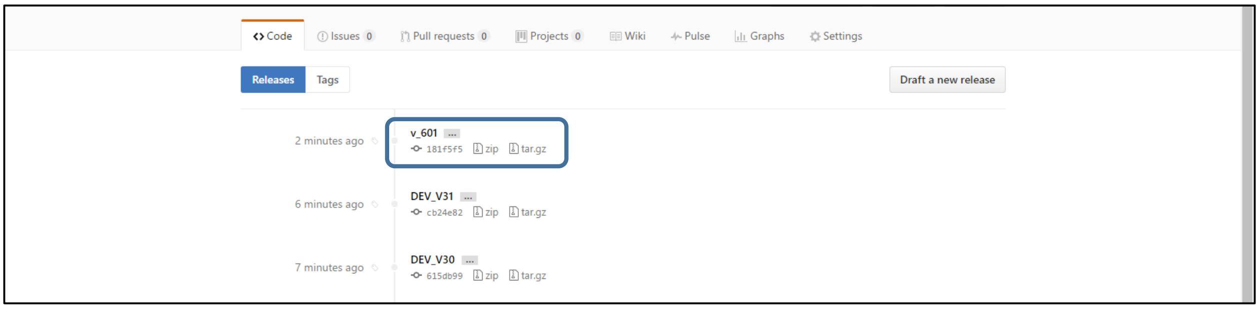
Hello World!!

COE 3

Mindtree Ltd.

Step 6:

We can even see the tags created in GitHub remote repository.



2 minutes ago — v_601 … 181f5f5 zip tar.gz

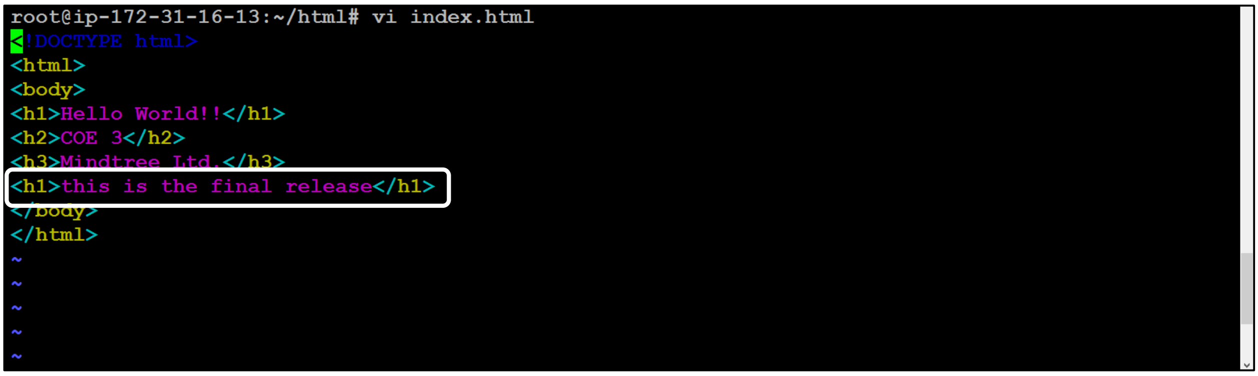
6 minutes ago — DEV_V31 … cb24e82 zip tar.gz

7 minutes ago — DEV_V30 … 615db99 zip tar.gz

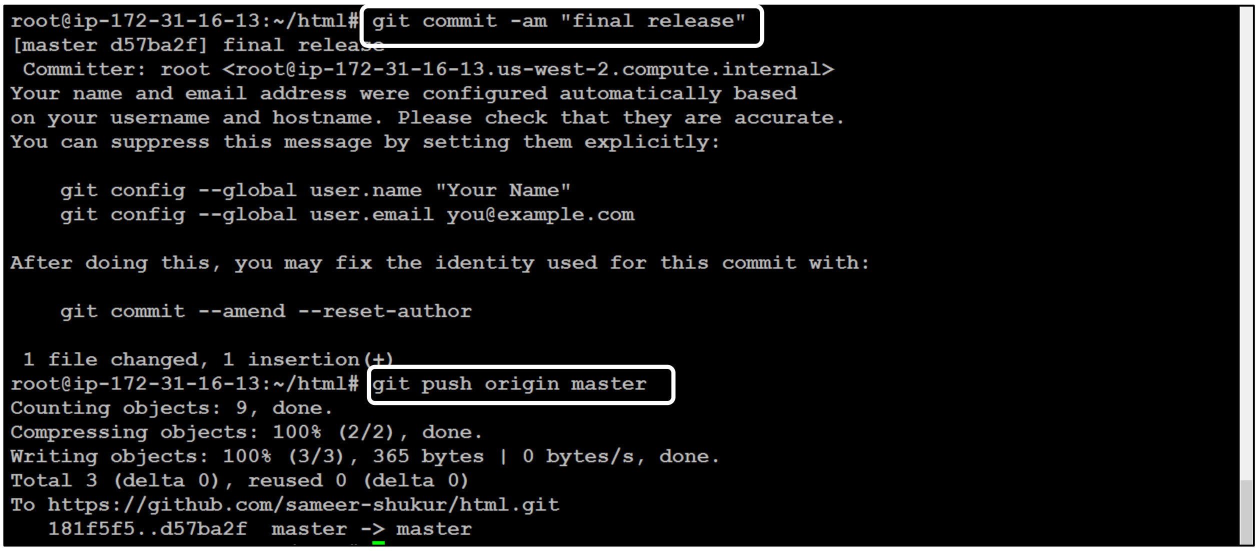
Rollback:

Step 1:

We will create some changes in our source code and push it to the remote repository.



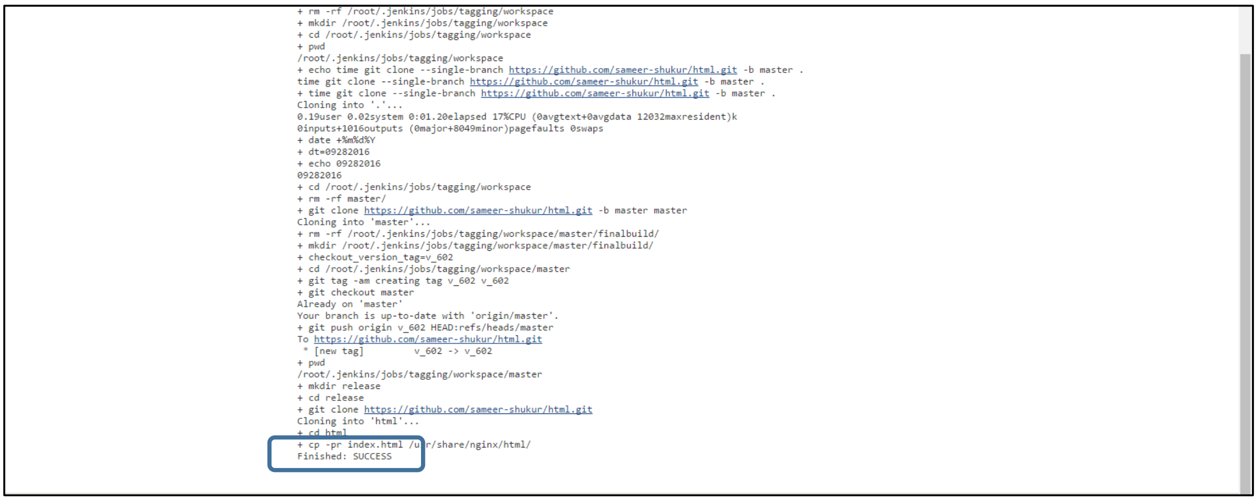
```
root@ip-172-31-16-13:~/html# vi index.html
<!DOCTYPE html>
<html>
<body>
<h1>Hello World!!</h1>
<h2>COE 3</h2>
<h3>Mindtree Ltd.</h3>
<h1>this is the final release</h1>
</body>
</html>
~
~
~
~
~
```



```
root@ip-172-31-16-13:~/html# git commit -am "final release"
[master d57ba2f] final release
 Committer: root <root@ip-172-31-16-13.us-west-2.compute.internal>
Your name and email address were configured automatically based
on your username and hostname. Please check that they are accurate.
You can suppress this message by setting them explicitly:

    git config --global user.name "Your Name"
    git config --global user.email you@example.com

After doing this, you may fix the identity used for this commit with:

    git commit --amend --reset-author

 1 file changed, 1 insertion(+)
root@ip-172-31-16-13:~/html# git push origin master
Counting objects: 9, done.
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 365 bytes | 0 bytes/s, done.
Total 3 (delta 0), reused 0 (delta 0)
To https://github.com/sameer-shukur/html.git
   181f5f5..d57ba2f  master -> master
```

Step 2:

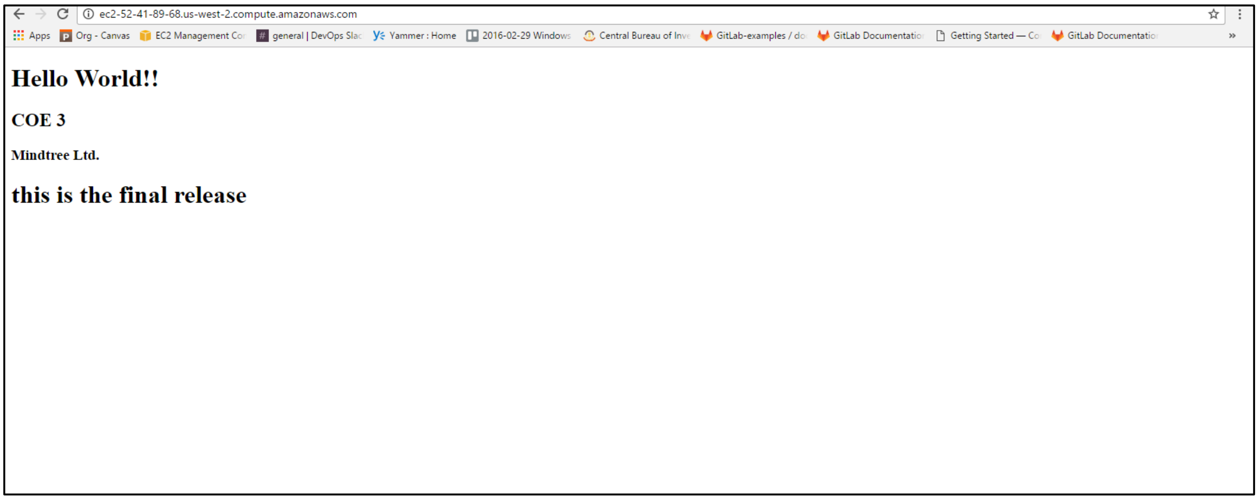
We will build the “tagging” job again in Jenkins with a tag name “V_602” so that the new changes are displayed in the nginx server.



```
+ rm -rf /root/.jenkins/jobs/tagging/workspace
+ mkdir /root/.jenkins/jobs/tagging/workspace
+ cd /root/.jenkins/jobs/tagging/workspace
+ pwd
/root/.jenkins/jobs/tagging/workspace
+ echo time git clone --single-branch https://github.com/sameer-shukur/html.git -b master .
time git clone --single-branch https://github.com/sameer-shukur/html.git -b master .
+ time git clone --single-branch https://github.com/sameer-shukur/html.git -b master .
Cloning into '.'...
0.19user 0.02system 0:01.20elapsed 17%CPU (0avgtext+0avgdata 12032maxresident)k
0inputs+1016outputs (0major+8049minor)pagefaults 0swaps
+ date +%m%d%Y
+ dt=09282016
+ echo 09282016
09282016
+ cd /root/.jenkins/jobs/tagging/workspace
+ rm -rf master/
+ git clone https://github.com/sameer-shukur/html.git -b master master
Cloning into 'master'...
+ rm -rf /root/.jenkins/jobs/tagging/workspace/master/finalbuild/
+ mkdir /root/.jenkins/jobs/tagging/workspace/master/finalbuild/
+ checkout_version_tag=v_602
+ cd /root/.jenkins/jobs/tagging/workspace/master
+ git tag -am creating tag v_602 v_602
+ git checkout master
Already on 'master'
Your branch is up-to-date with 'origin/master'.
+ git push origin v_602 HEAD:refs/heads/master
To https://github.com/sameer-shukur/html.git
 * [new tag]         v_602 -> v_602
+ pwd
/root/.jenkins/jobs/tagging/workspace/master
+ mkdir release
+ cd release
+ git clone https://github.com/sameer-shukur/html.git
Cloning into 'html'...
+ cd html
+ cp -pr index.html /usr/share/nginx/html/
Finished: SUCCESS
```

Step 3:

After build got success, we can refresh our webpage to see the changes.



ec2-52-41-89-68.us-west-2.compute.amazonaws.com

Hello World!!

COE 3

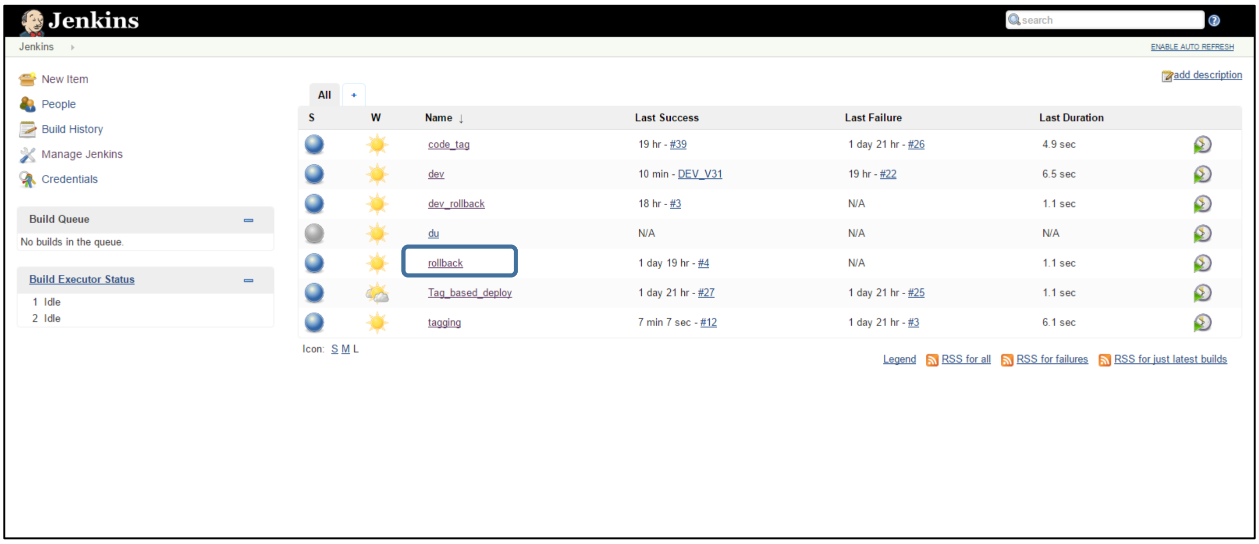
Mindtree Ltd.

this is the final release

Step 4:

Now we don’t want these changes to happen and we want our previous version of webpage.

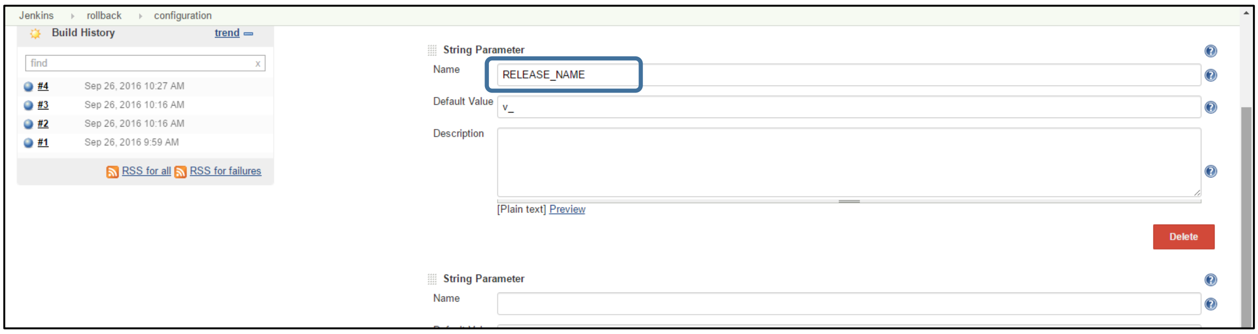
So, let’s create a job names “rollback” in Jenkins.



S	W	Name ↓	Last Success	Last Failure	Last Duration
●	☀	code_tag	19 hr - #39	1 day 21 hr - #26	4.9 sec
●	☀	dev	10 min - DEV_V31	19 hr - #22	6.5 sec
●	☀	dev_rollback	18 hr - #3	N/A	1.1 sec
●	☀	du	N/A	N/A	N/A
●	☀	rollback	1 day 19 hr - #4	N/A	1.1 sec
●	⛅	Tag_based_deploy	1 day 21 hr - #27	1 day 21 hr - #25	1.1 sec
●	☀	tagging	7 min 7 sec - #12	1 day 21 hr - #3	6.1 sec

Step 2:

Configure the job as described below:



#4	Sep 26, 2016 10:27 AM
#3	Sep 26, 2016 10:16 AM
#2	Sep 26, 2016 10:16 AM
#1	Sep 26, 2016 9:59 AM

String Parameter

Name: RELEASE_NAME

Default Value: v_

Description:

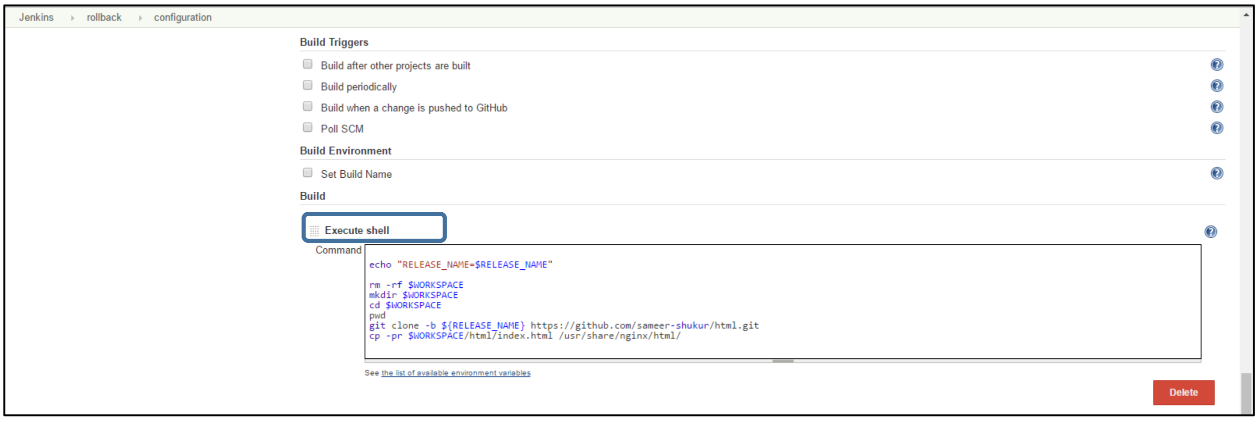
[Plain text] Preview

String Parameter

Name:

Step 3:

We will write a shell script for rollback as a build step:



Jenkins › rollback › configuration

Build Triggers

□ Build after other projects are built

□ Build periodically

□ Build when a change is pushed to GitHub

□ Poll SCM

Build Environment

□ Set Build Name

Build

Execute shell

Command

```
echo "RELEASE_NAME=$RELEASE_NAME"

rm -rf $WORKSPACE
mkdir $WORKSPACE
cd $WORKSPACE
pwd
git clone -b ${RELEASE_NAME} https://github.com/sameer-shukur/html.git
cp -pr $WORKSPACE/html/index.html /usr/share/nginx/html/
```

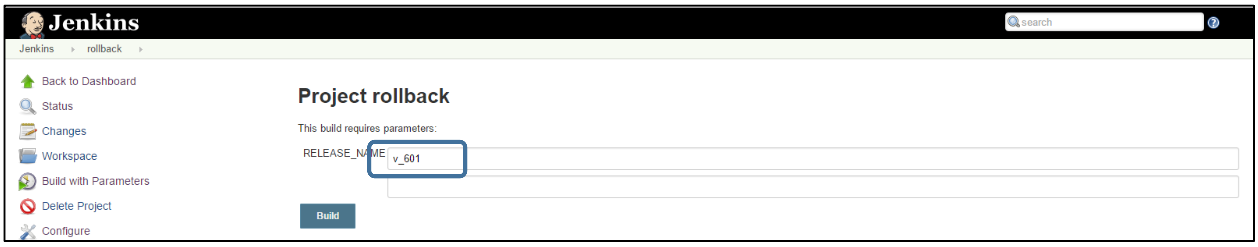
See the list of available environment variables

The shell script is :

```
echo "RELEASE_NAME=$RELEASE_NAME"

rm -rf $WORKSPACE
mkdir $WORKSPACE
cd $WORKSPACE
pwd
git clone -b ${RELEASE_NAME} https://github.com/sameer-shukur/html.git
cp -pr $WORKSPACE/html/index.html /usr/share/nginx/html/
```

Step 4:

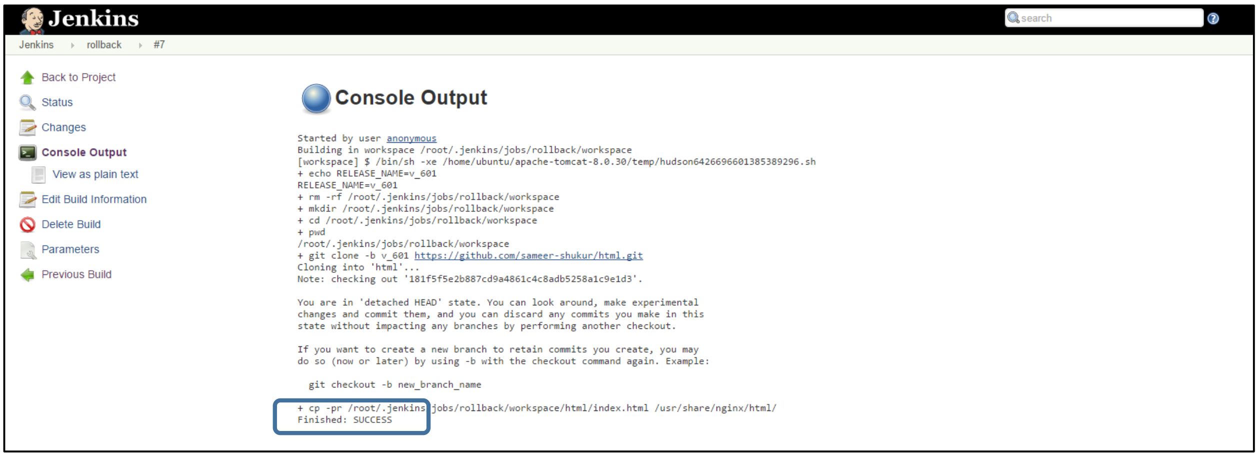
We will build it with parameter as giving the previous tag number “V_601”.



Project rollback

This build requires parameters:

RELEASE_NAME: v_601

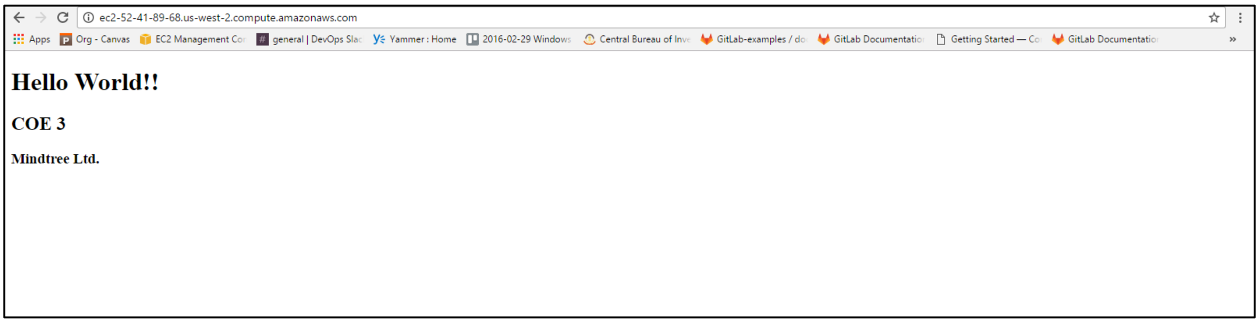


Console Output

```
Started by user anonymous
Building in workspace /root/.jenkins/jobs/rollback/workspace
[workspace] $ /bin/sh -xe /home/ubuntu/apache-tomcat-8.0.30/temp/hudson6426696601385389296.sh
+ echo RELEASE_NAME=v_601
RELEASE_NAME=v_601
+ rm -rf /root/.jenkins/jobs/rollback/workspace
+ mkdir /root/.jenkins/jobs/rollback/workspace
+ cd /root/.jenkins/jobs/rollback/workspace
+ pwd
/root/.jenkins/jobs/rollback/workspace
+ git clone -b v_601 https://github.com/sameer-shukur/html.git
Cloning into 'html'...
Note: checking out '181f5f5e2b887cd9a4861c4c8adb5258a1c9e1d3'.

You are in 'detached HEAD' state. You can look around, make experimental
changes and commit them, and you can discard any commits you make in this
state without impacting any branches by performing another checkout.

If you want to create a new branch to retain commits you create, you may
do so (now or later) by using -b with the checkout command again. Example:

  git checkout -b new_branch_name

+ cp -pr /root/.jenkins/jobs/rollback/workspace/html/index.html /usr/share/nginx/html/
Finished: SUCCESS
```

Step 5:

We will refresh our webpage and we can see that we rolled back to the previous version of our webpage.



Hello World!!

COE 3

Mindtree Ltd.