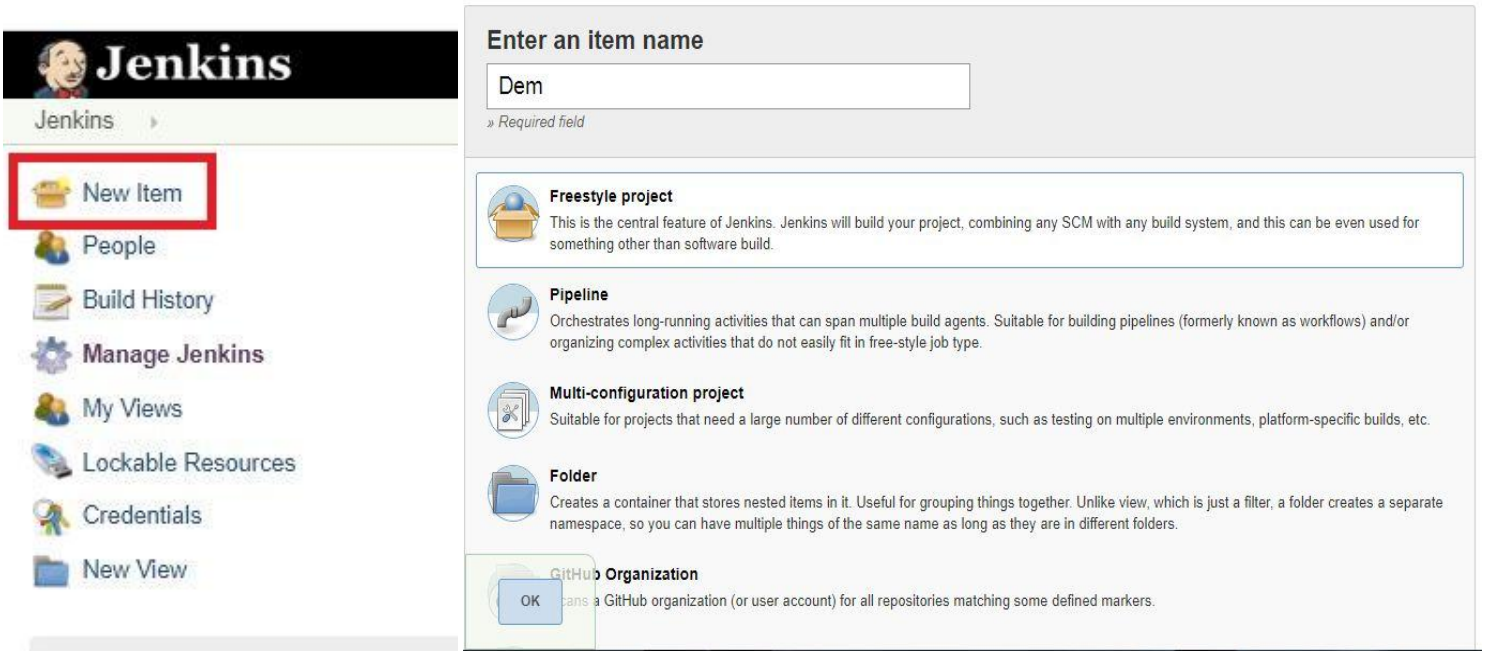
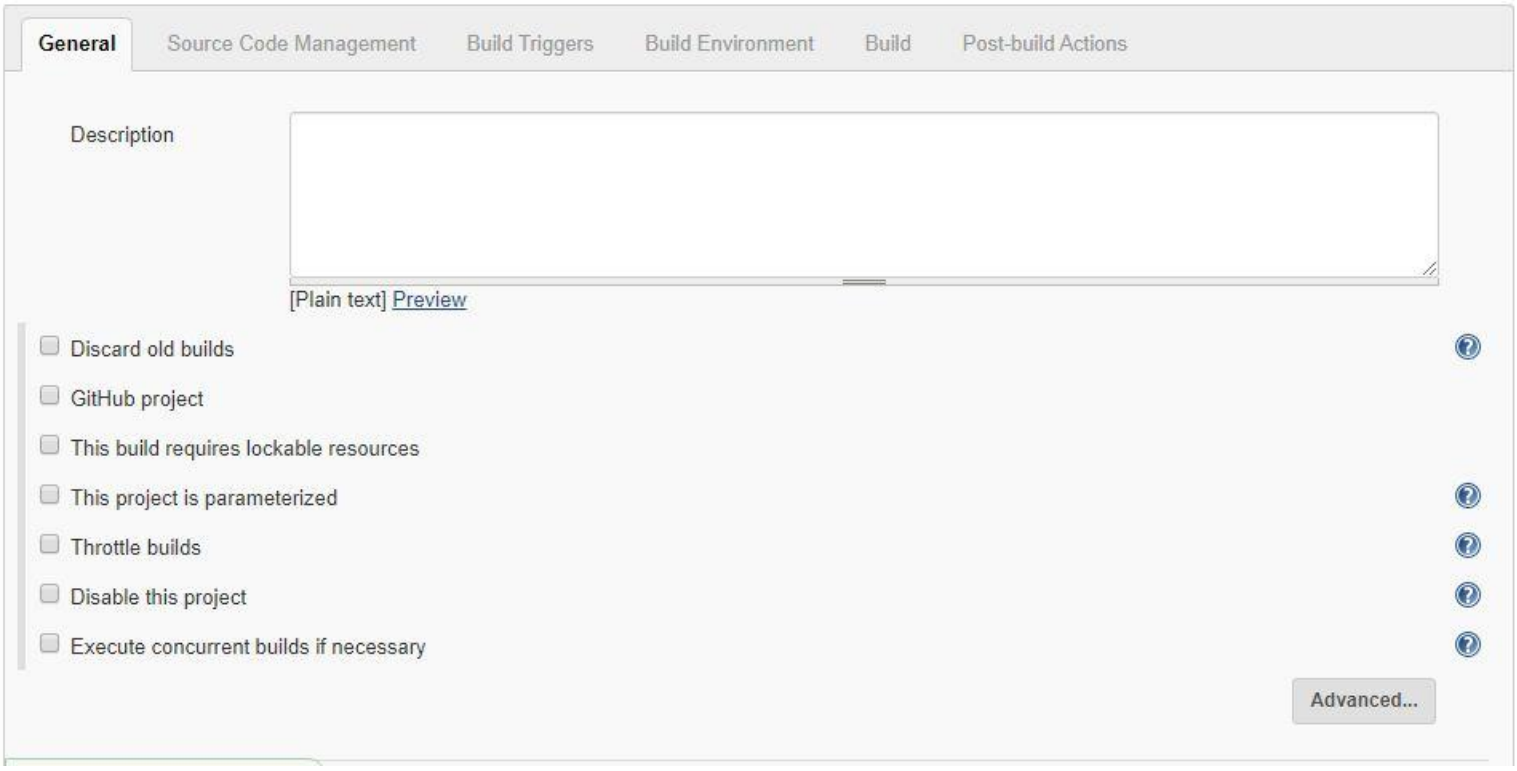
Jenkins LAB	CREATING A NEW FREESTYLE PROJECT

Step1: Click 'new item' in the dashboard. It will redirect to wizard provide 'item name' and type of project select 'Freestyle Project'.

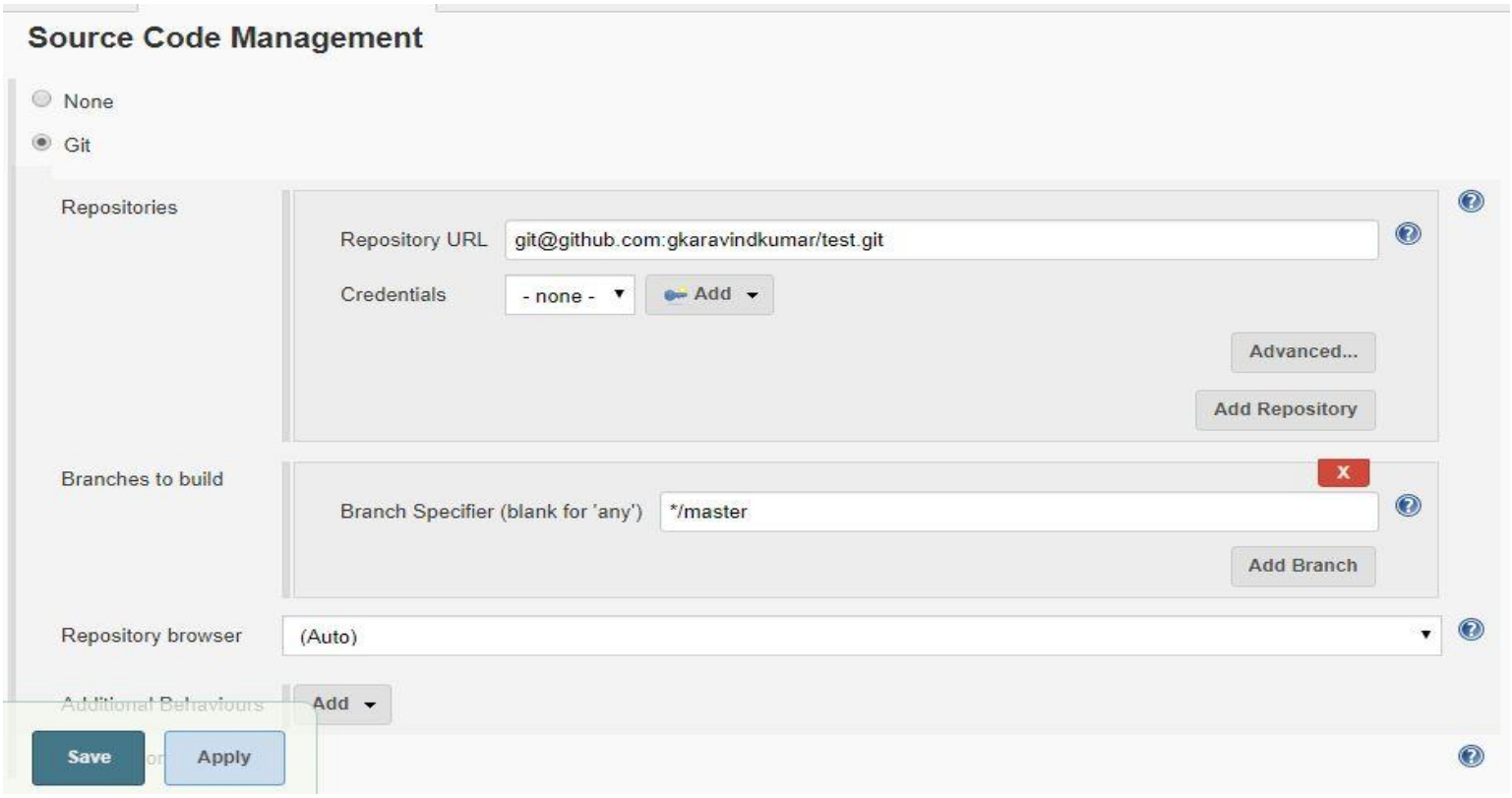


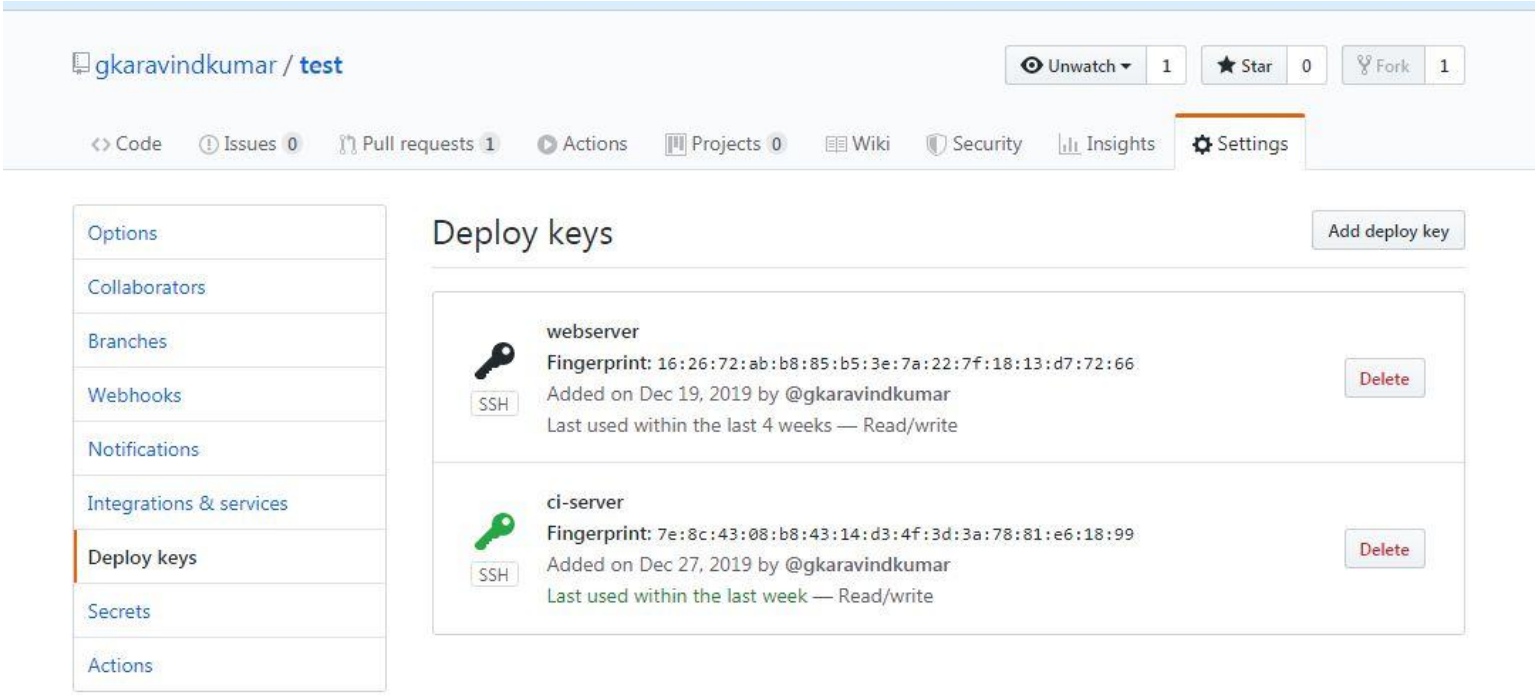
Step2: Once the freestyle project wizard open provide the description and check the option which is needed.



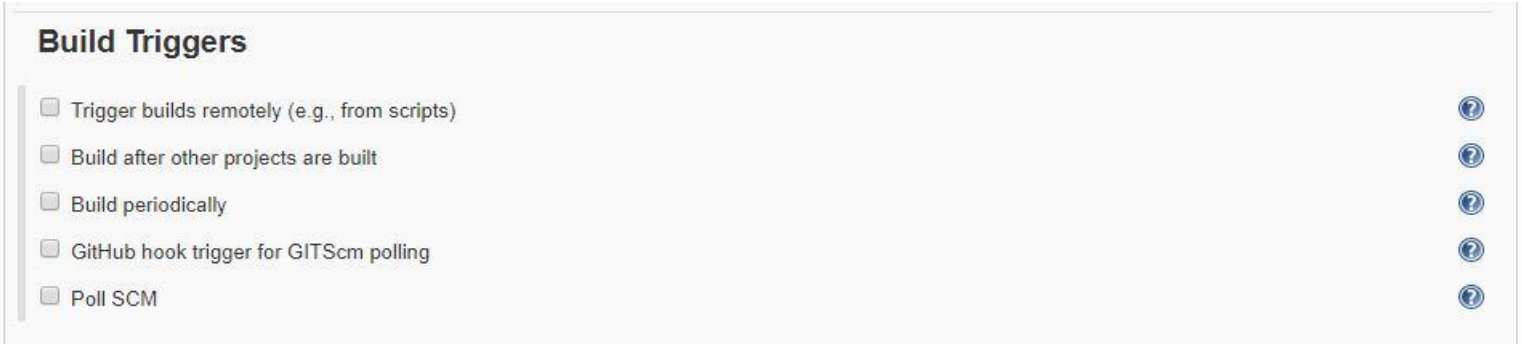
Step-3: Enter the source code details. Provide GIT or repository URL and integrate the GIT and Jenkins using ssh keys.

Copy the ssh key of **jenkins** user in Jenkins server and add the key in Git deploy keys (Refer the old documents on ssh keys for the steps).

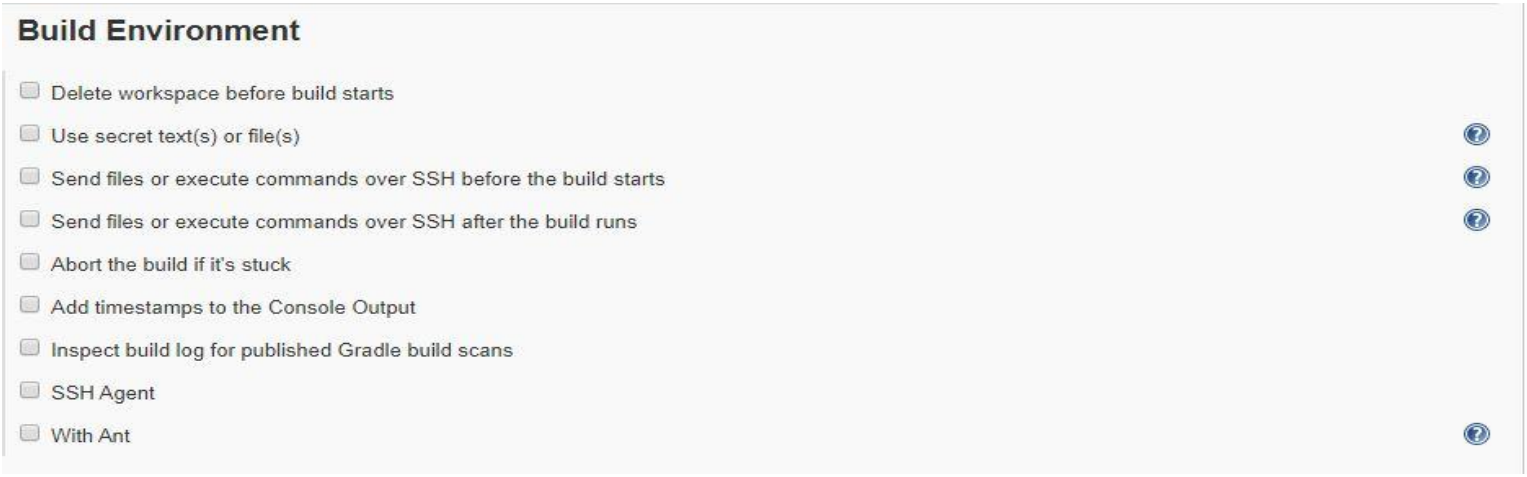




Step-4: Use **Build Triggers** this if needed (we have separate Lab document on Build triggers)



Step-5: We can use the **Build Environment** option if needed



Step-6: In Build option we have multiple options, I select "**Execute shell**" to execute a shell script. This script will bring the build artifacts from GIT to our Jenkins server and place those artifacts in folder **/build** and extract the artifacts then run **Unit Testing**.

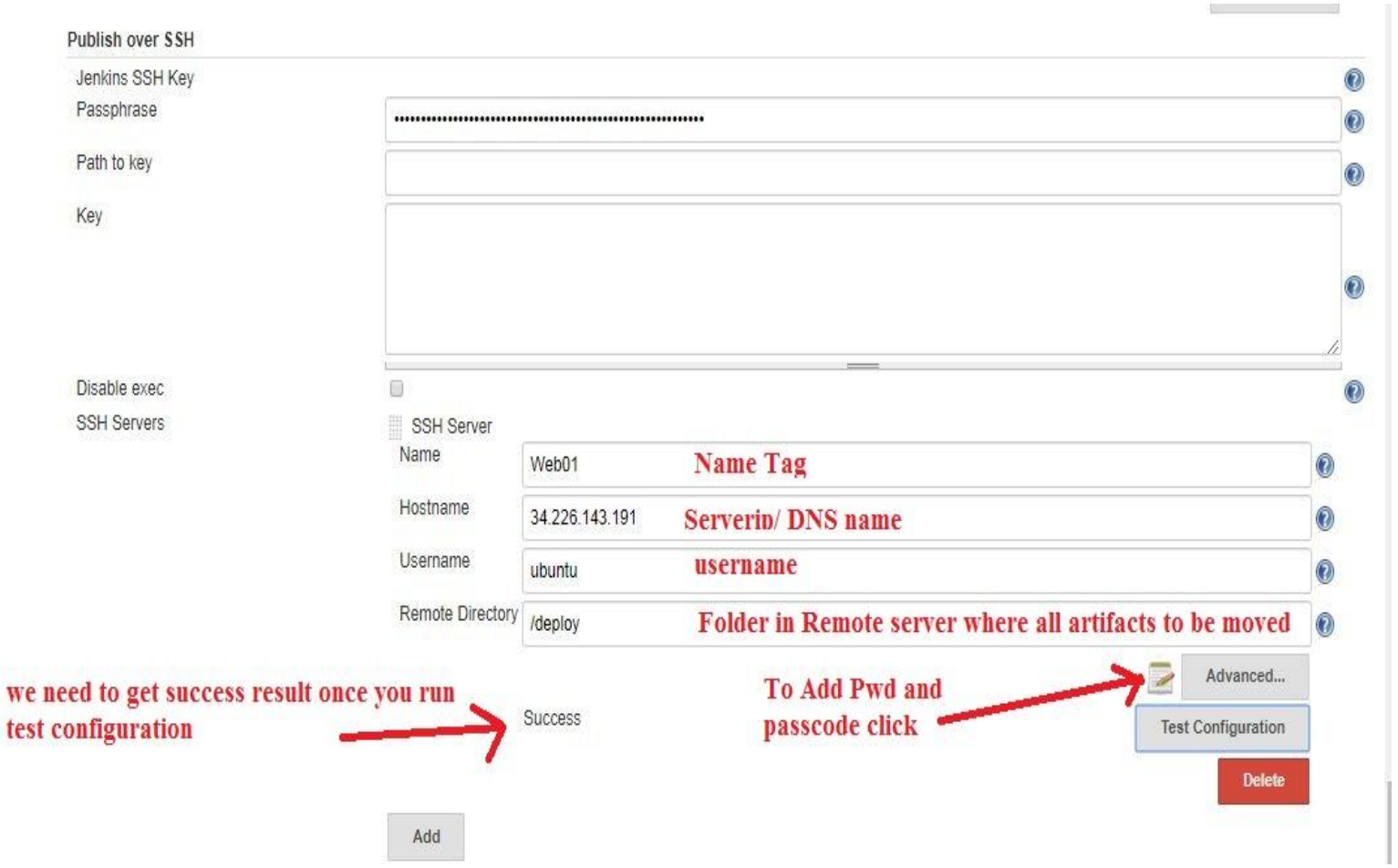
Unit testing will fail if index.php have any word as master (demo testing you can add your own script).If **unit testing fails the build will fail**.

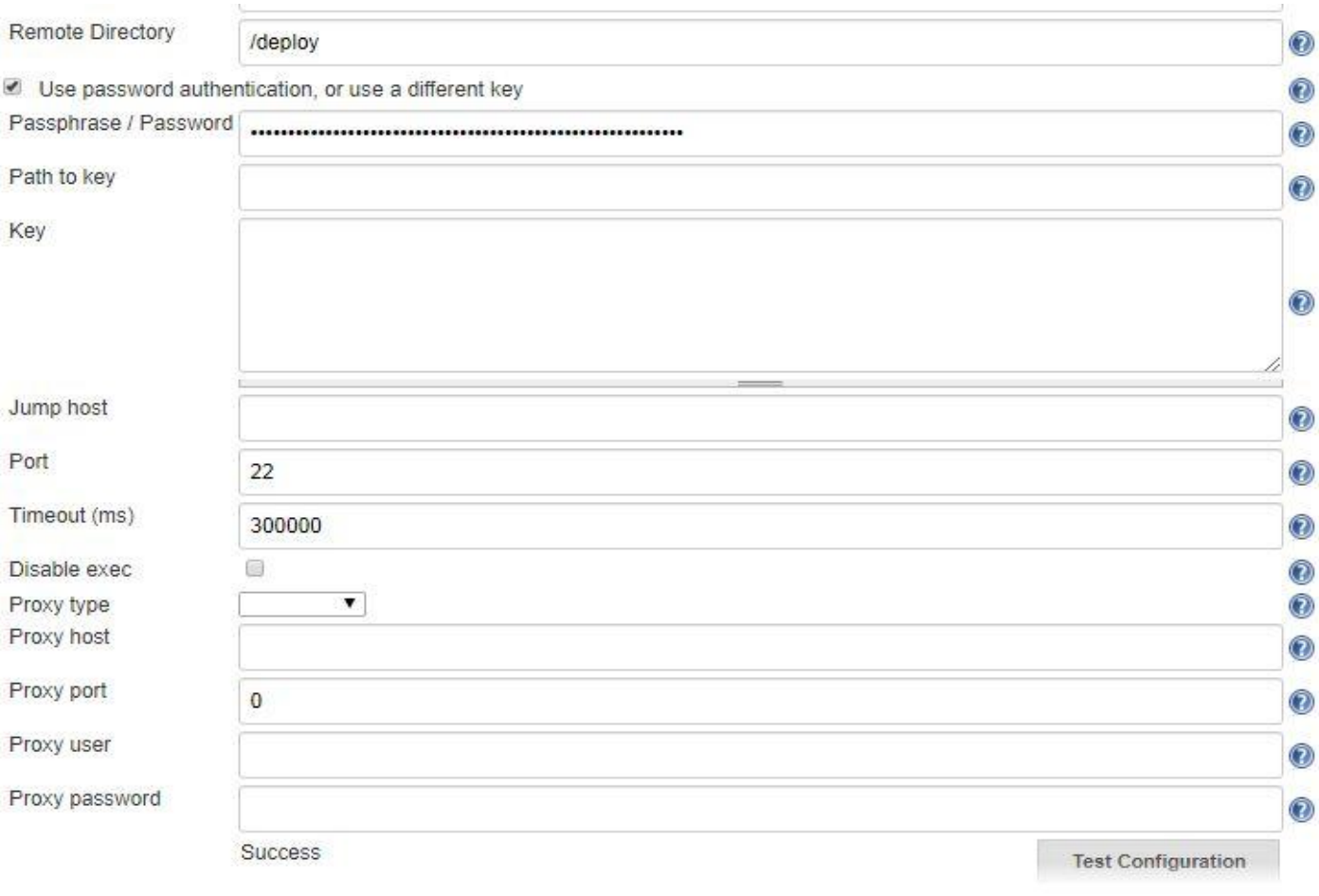
Demo Script here(Make our own script based on your environment)

```
git archive HEAD --format=zip > $JOB_NAME-$BUILD_NUMBER-archive.zip
cp –r $JOB_NAME-$BUILD_NUMBER-archive.zip /build
cd /build/
mkdir $JOB_NAME-$BUILD_NUMBER
unzip $JOB_NAME-$BUILD_NUMBER-archive.zip -d $JOB_NAME-$BUILD_NUMBER
#Unit Testing
echo "unit testing started"
if grep 'master' /build/$JOB_NAME-$BUILD_NUMBER/index.php; then
 echo "Test is failed in following number of line"
 sed -n '/master/=' /build/$JOB_NAME-$BUILD_NUMBER/index.php
 exit 1
fi
echo "Test is Successful"
```

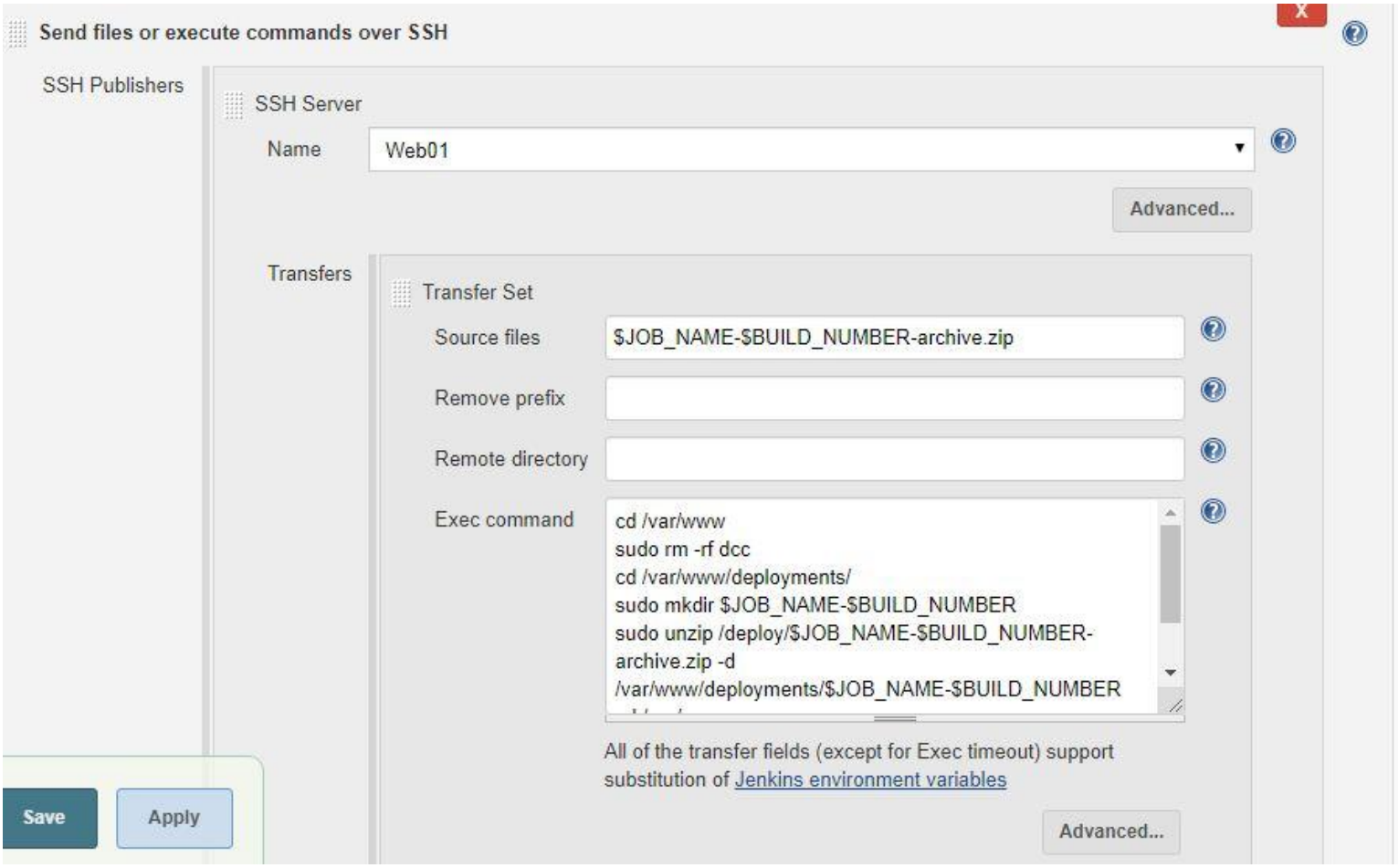
Step-7: Moving forward to deployment we need to add hosts/server in Jenkins (web servers where we are going to do the deployments).
To Add ssh host/ Server we need to add plugins (Publish over ssh).Take a look at Jenkins environment setup document for adding plugins.
To add ssh host install Publish over ssh plugin.
Go to Jenkins→ Manage Jenkins→ Configure systems

Go to the bottom of Jenkins page you will see **Publish over SSH**


Publish over SSH
Jenkins SSH Key
Passphrase
Path to key
Key
Disable exec
SSH Servers
SSH Server
Name
Web01
Name Tag
Hostname
34.226.143.191
Serverip/ DNS name
Username
ubuntu
username
Remote Directory
/deploy
Folder in Remote server where all artifacts to be moved
we need to get success result once you run test configuration
Success
To Add Pwd and passcode click
Advanced...
Test Configuration
Delete
Add


Remote Directory
/deploy
Use password authentication, or use a different key
Passphrase / Password
Path to key
Key
Jump host
Port
22
Timeout (ms)
300000
Disable exec
Proxy type
Proxy host
Proxy port
0
Proxy user
Proxy password
Success
Test Configuration

Step-8: Once you added the server in configure systems then return to your Build plan and now in Build options select "**Send files or execute commands over ssh**". You will see the host added there in scroll down list, select your server and other options and "**Execute shell**" which should be executed in remote server.




```
cd /var/www/
sudo rm -rf dcc
cd /var/www/deployments/
sudo mkdir $JOB_NAME-$BUILD_NUMBER
sudo unzip /deploy/$JOB_NAME-$BUILD_NUMBER-archive.zip -d /var/www/deployments/$JOB_NAME-$BUILD_NUMBER
cd /var/www/
sudo ln -s deployments/$JOB_NAME-$BUILD_NUMBER dcc
```

The above script will extract the source artifacts from **/deploy** to **/deployments/JOB_NAME-BUILD_NUMBER** and then create simlink (softlink) **dcc** which pointing to **/deployments/JOB_NAME-BUILD_NUMBER** so that current version will be loaded in site.

This plan based on PHP deployment try the same with your own options.