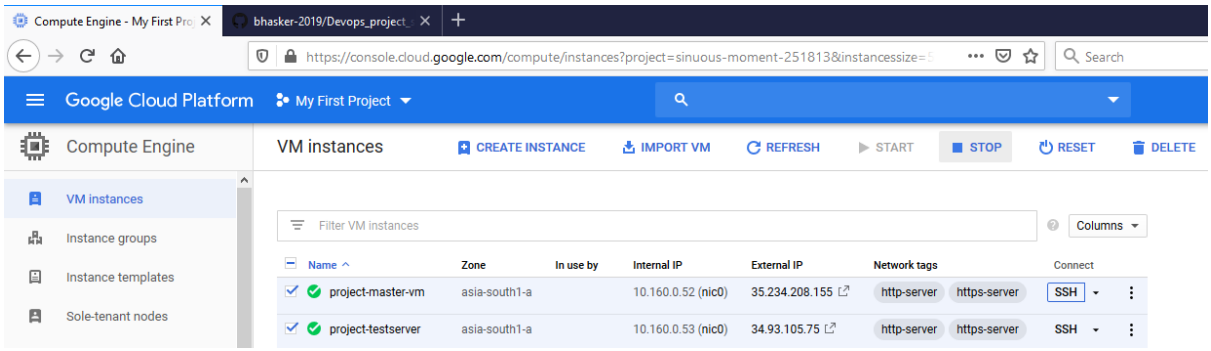
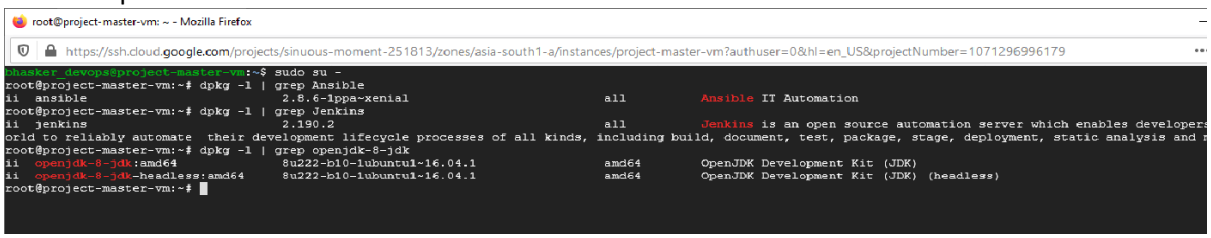
DevOPs Project by Bhasker S

Created the Project Master and TestServer on GCP cloud

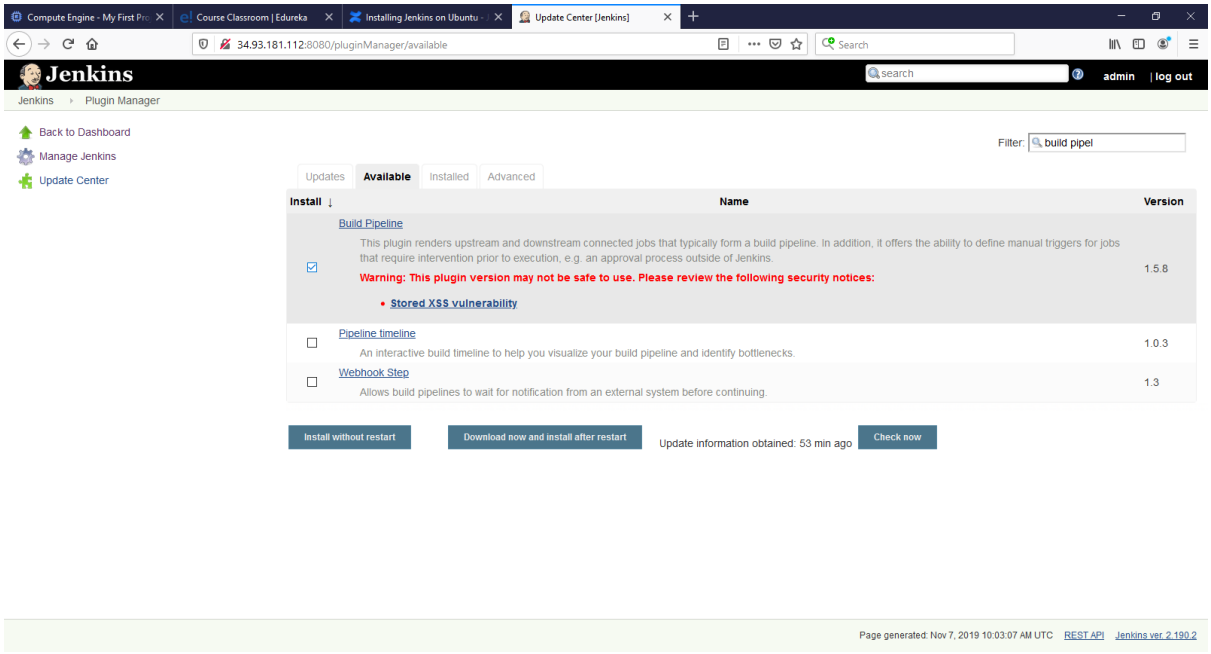


Installed the following software on Master VM

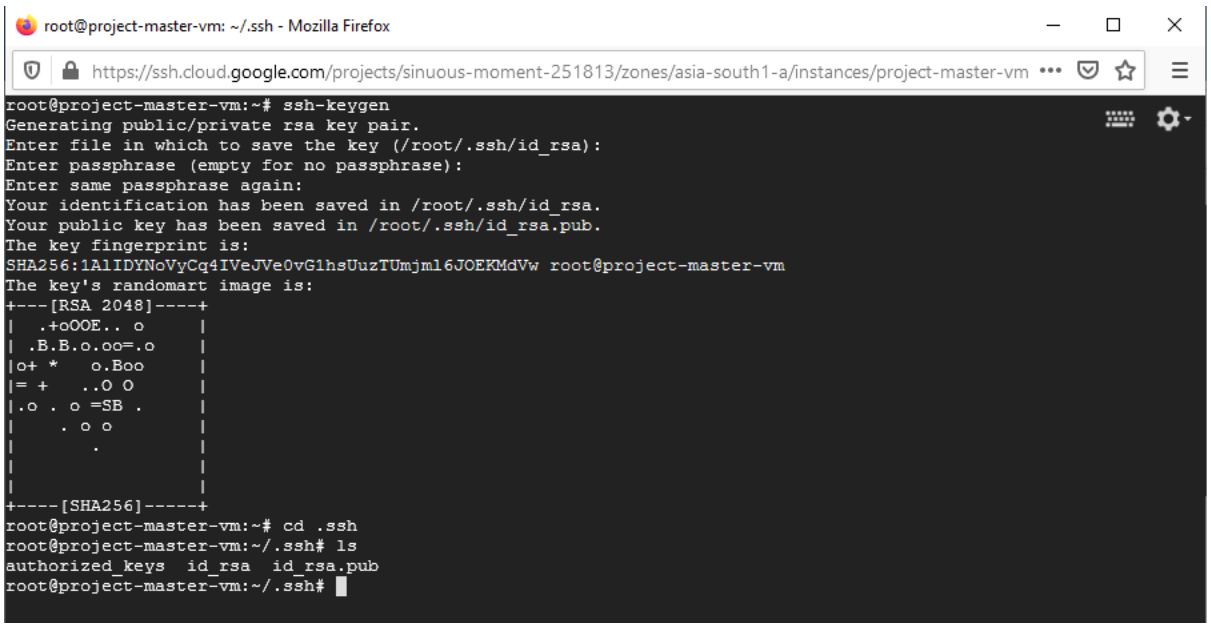
1. Ansible
2. Jenkins
3. OpenJDK-8-JDK



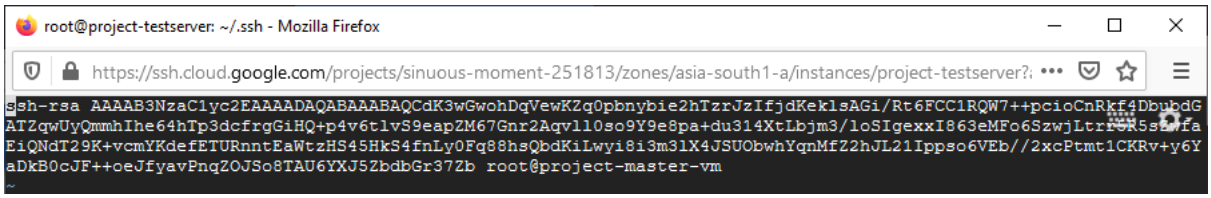
Completed Jenkins configuration with build pipeline plugin

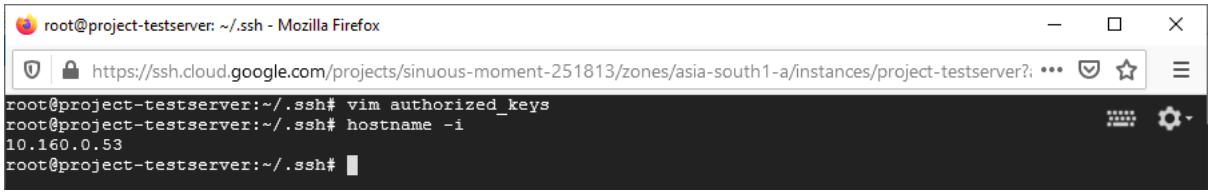


Generating SSH keys in Master VM

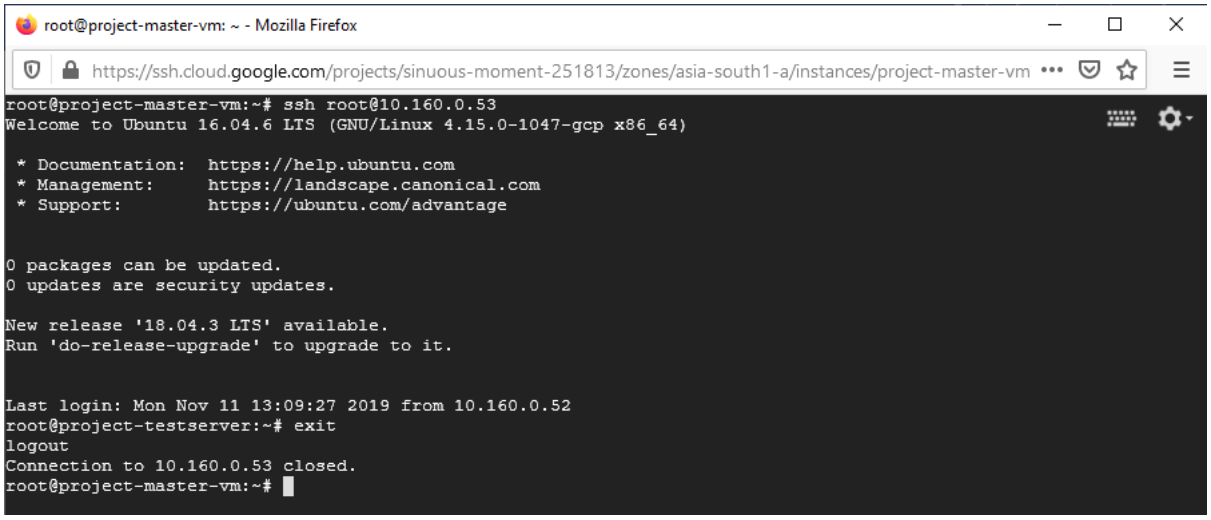


Added id_rsa.pub key from master to slave

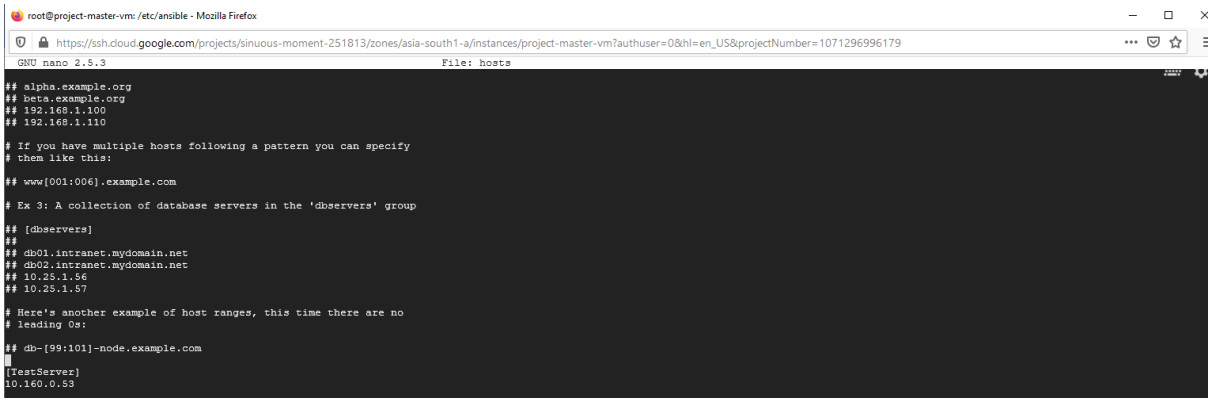




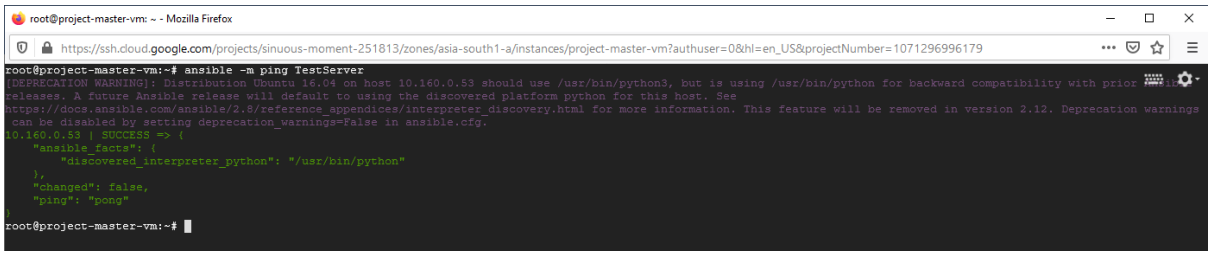
Successfully able to connect from master to slave



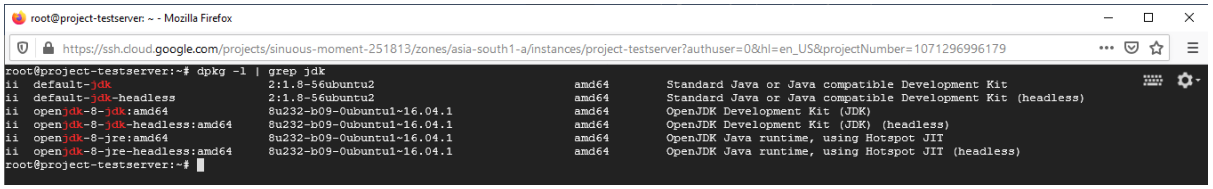
Successfully added the IP address of test server into /etc/Ansible/hosts file



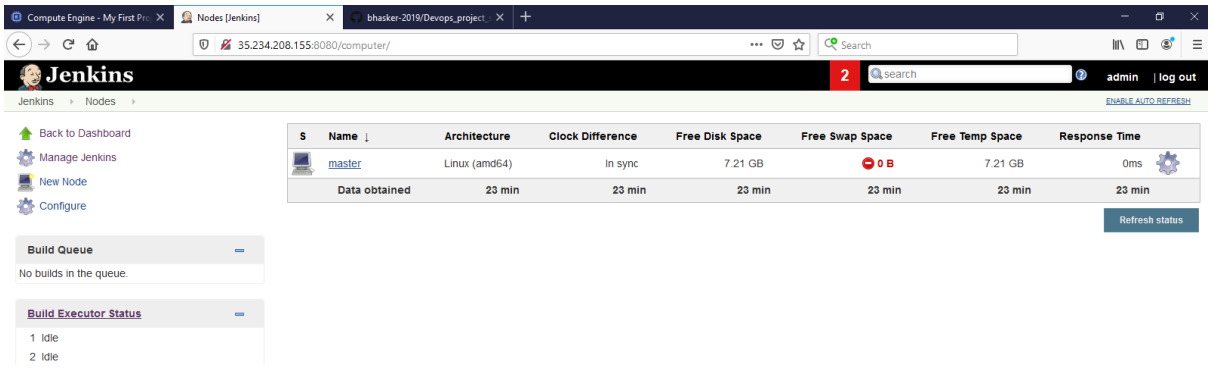
Successfully able to run ansible commands

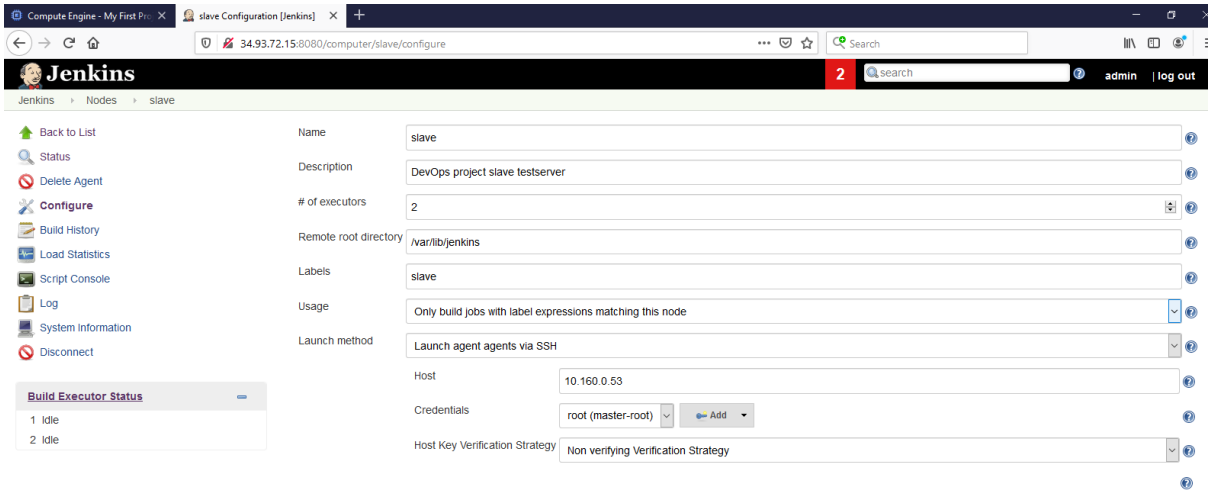


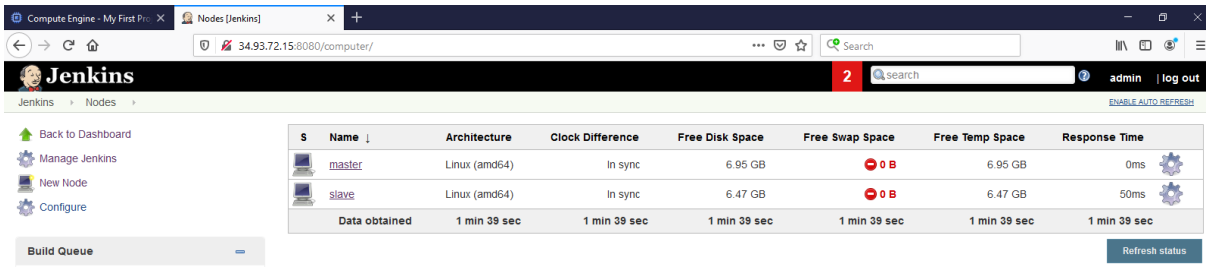
Installed default-jdk into the slave test-server



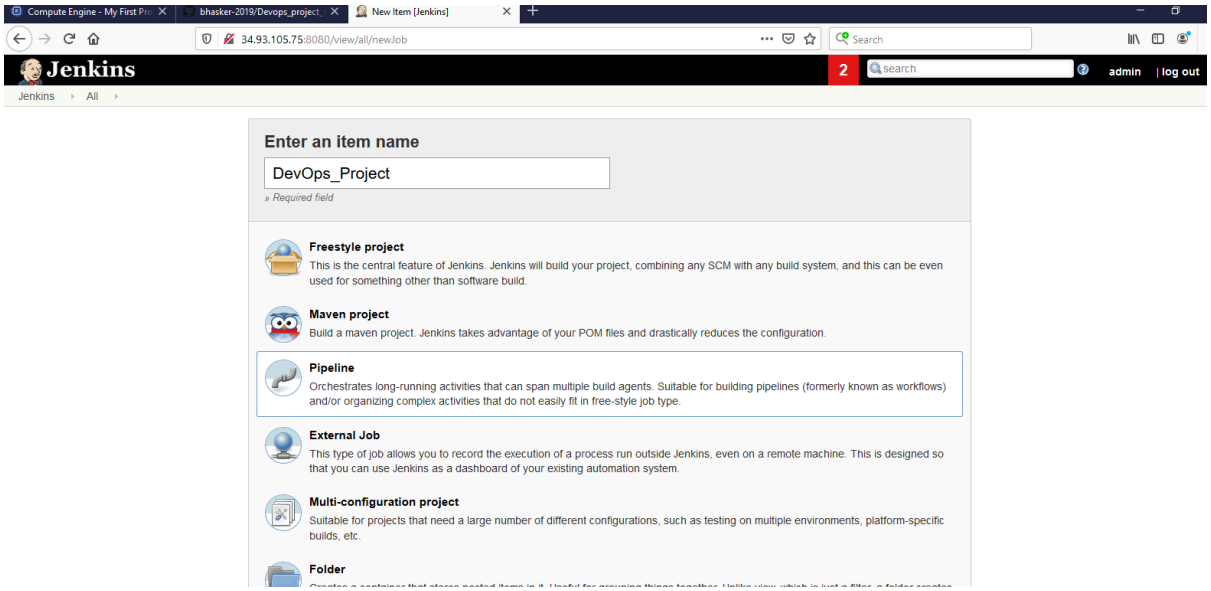
Added slave node in Jenkins master VM

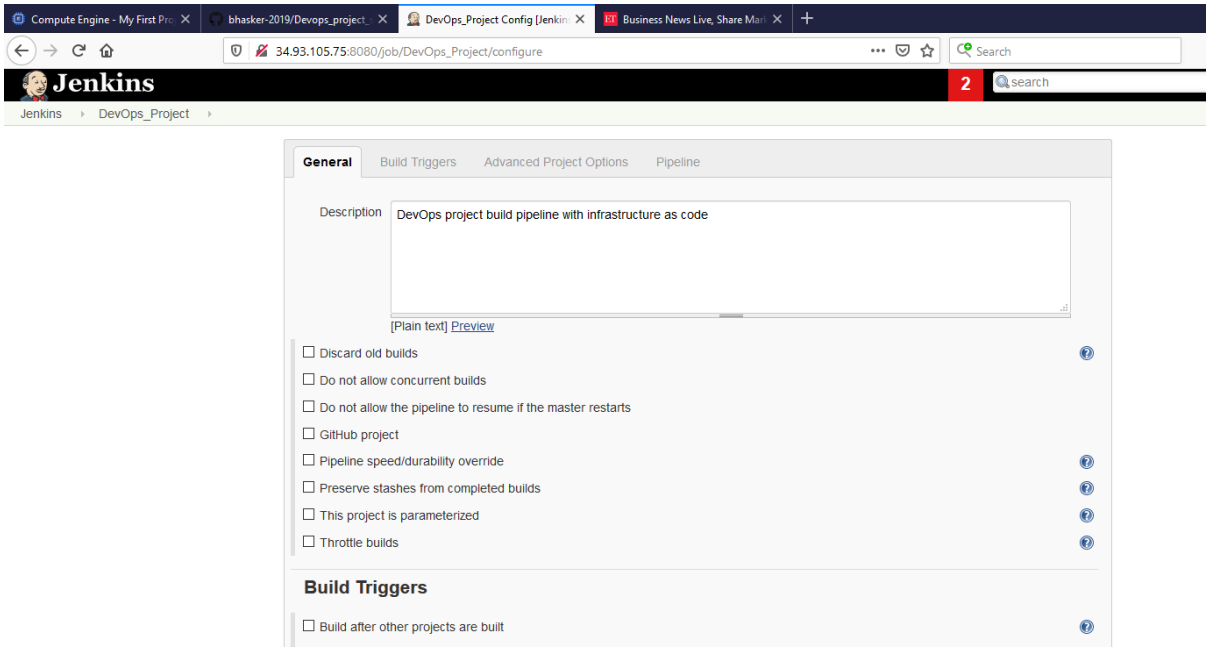


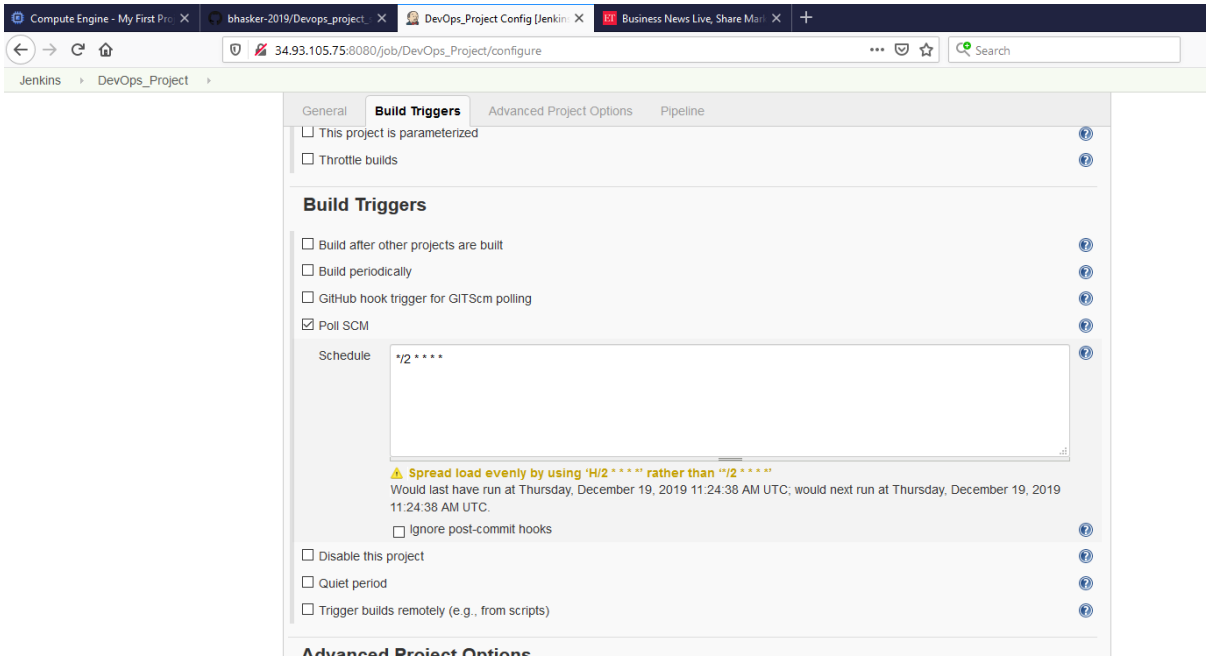


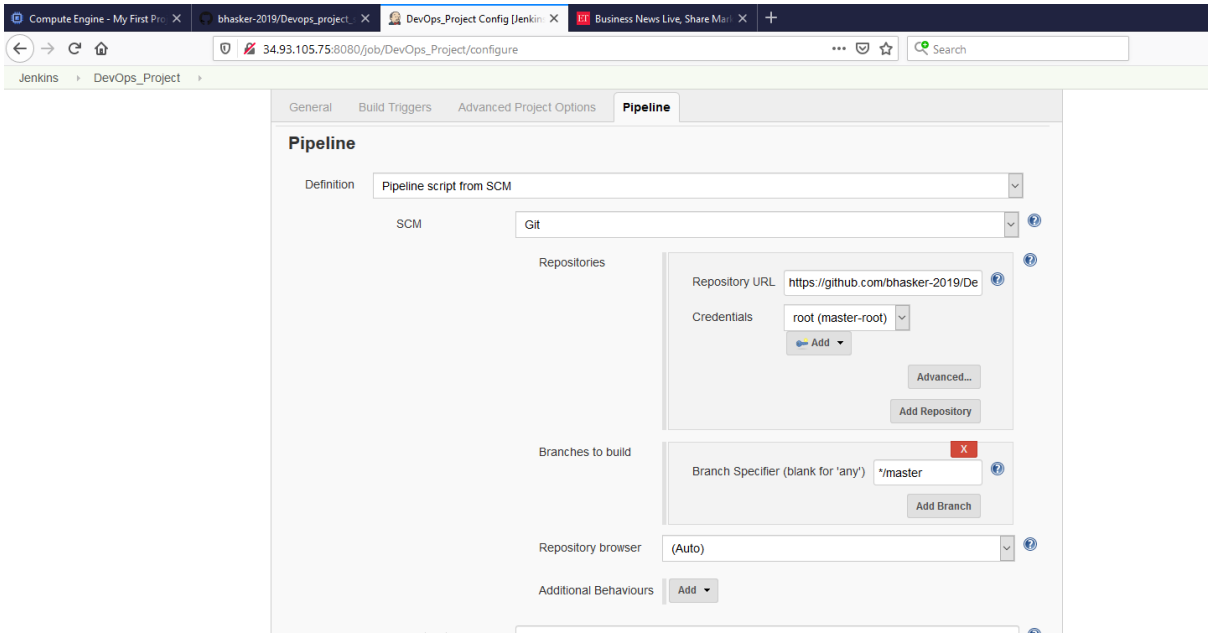


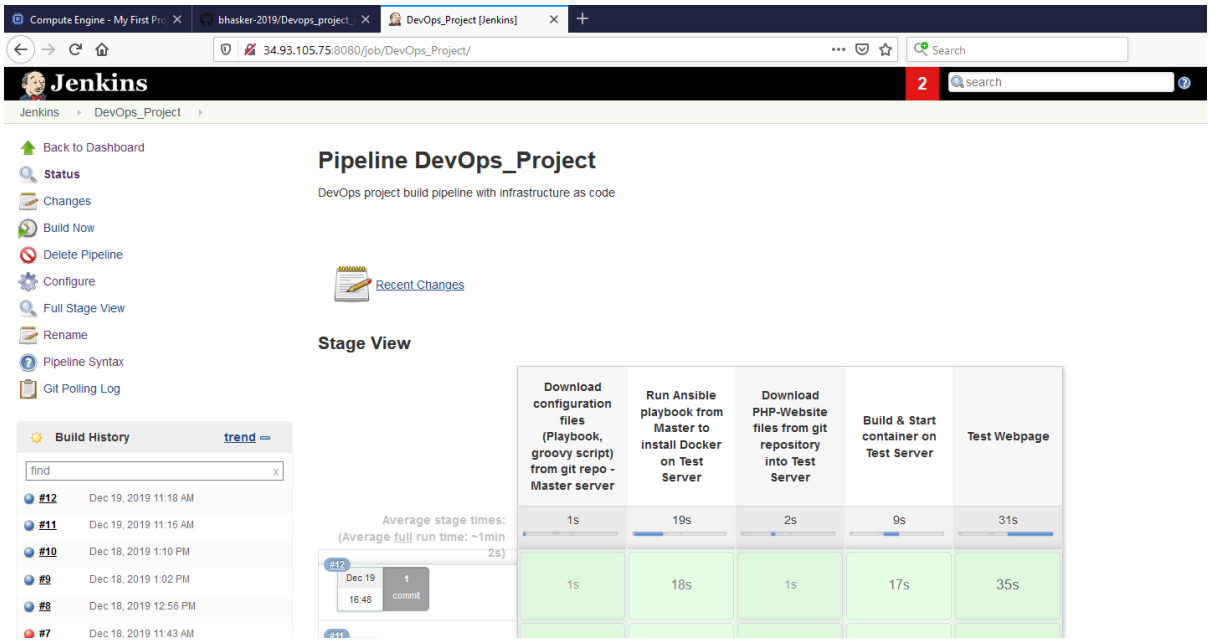
Creating Build Pipeline

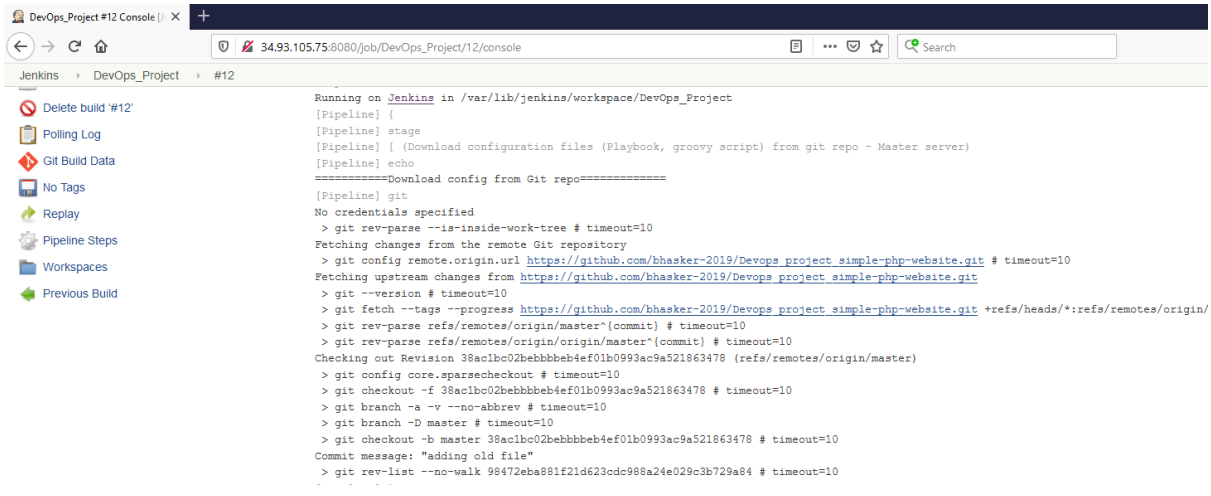


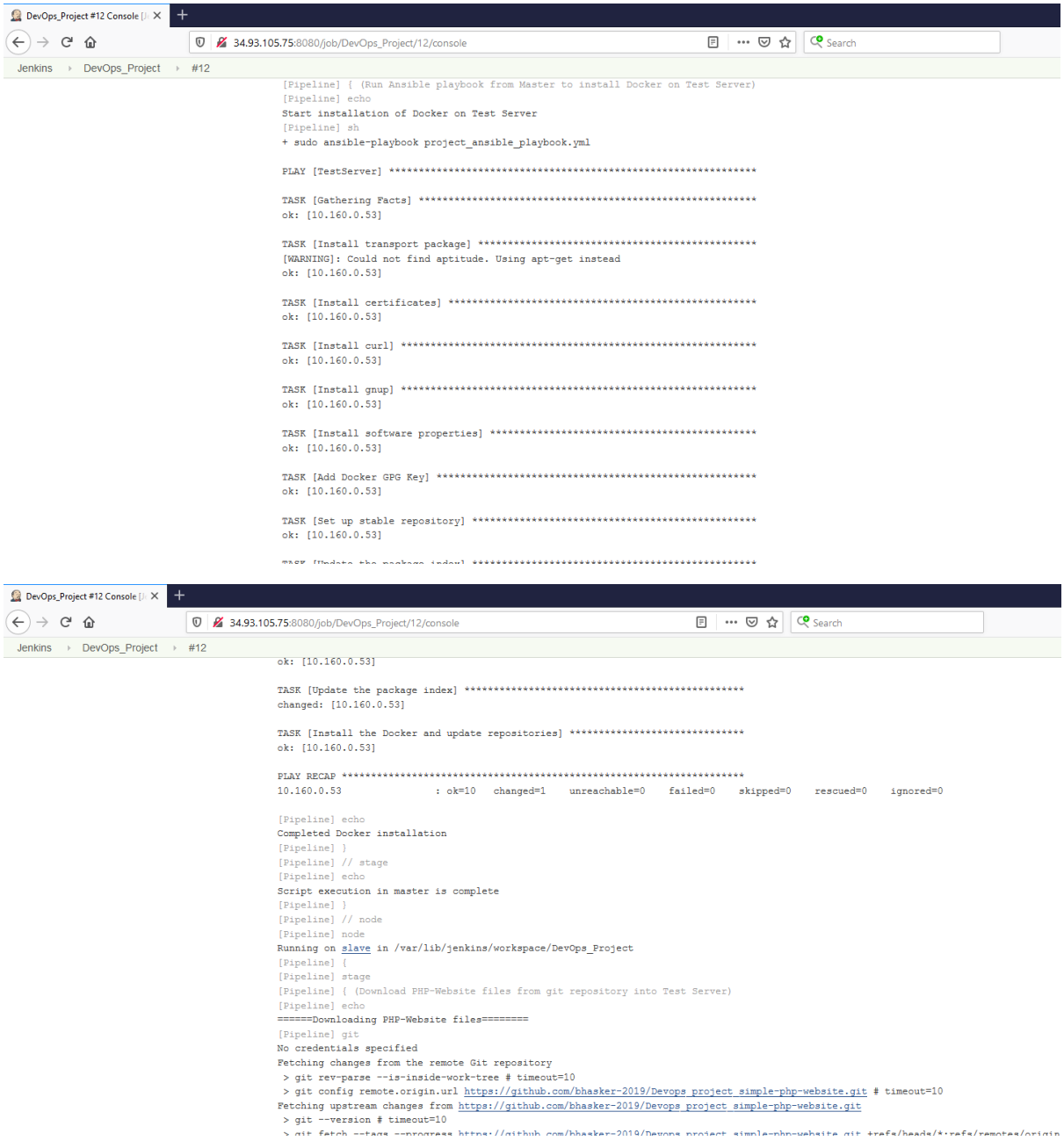

Compute Engine - My First Pro
bhasker-2019/Devops_project_
DevOps_Project Config [Jenkin
Business News Live, Share Mar
34.93.105.75:8080/job/DevOps_Project/configure
Search
Jenkins
2
search
Jenkins
DevOps_Project
General
Build Triggers
Advanced Project Options
Pipeline
Description
DevOps project build pipeline with infrastructure as code
[Plain text] Preview
Discard old builds
Do not allow concurrent builds
Do not allow the pipeline to resume if the master restarts
GitHub project
Pipeline speed/durability override
Preserve stashes from completed builds
This project is parameterized
Throttle builds
Build Triggers
Build after other projects are built


Compute Engine - My First Pro
bhasker-2019/Devops_project_
DevOps_Project Config [Jenkin
Business News Live, Share Mar
34.93.105.75:8080/job/DevOps_Project/configure
Search
Jenkins
DevOps_Project
General
Build Triggers
Advanced Project Options
Pipeline
This project is parameterized
Throttle builds
Build Triggers
Build after other projects are built
Build periodically
GitHub hook trigger for GITScm polling
Poll SCM
Schedule
*/2 * * * *
Spread load evenly by using 'H/2 * * * *' rather than '*/2 * * * *'
Would last have run at Thursday, December 19, 2019 11:24:38 AM UTC; would next run at Thursday, December 19, 2019 11:24:38 AM UTC.
Ignore post-commit hooks
Disable this project
Quiet period
Trigger builds remotely (e.g., from scripts)

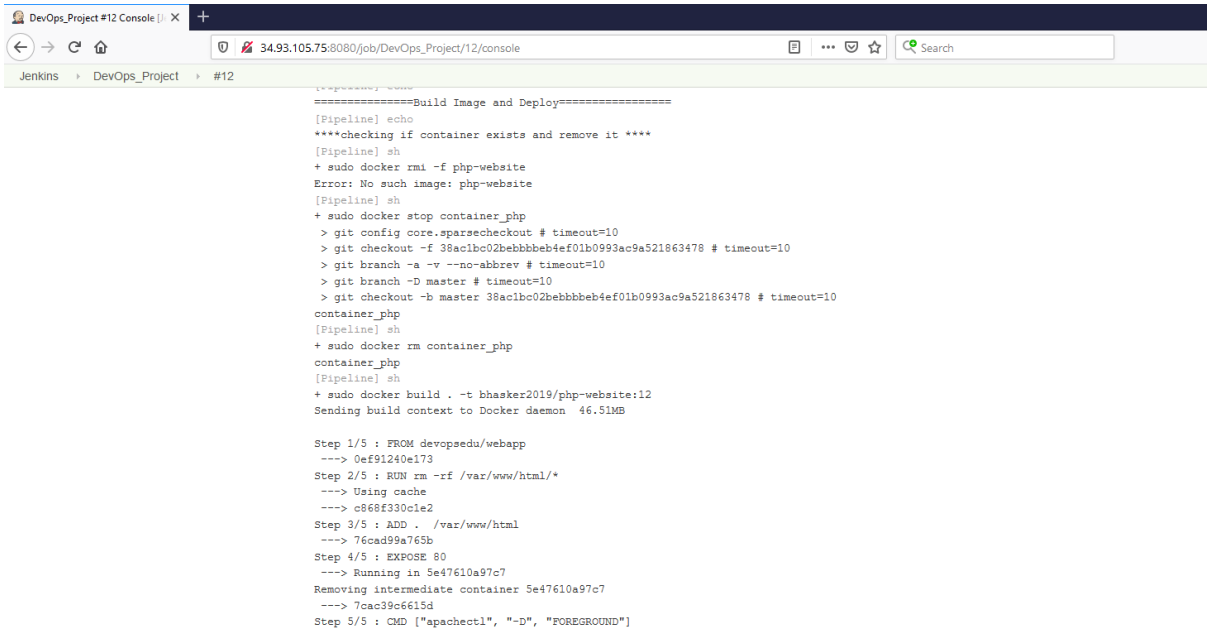

Compute Engine - My First Pro
bhasker-2019/Devops_project_
DevOps_Project Config [Jenkin
Business News Live, Share Mark
34.93.105.75:8080/job/DevOps_Project/configure
Search
Jenkins
DevOps_Project
General
Build Triggers
Advanced Project Options
Pipeline
Pipeline
Definition
Pipeline script from SCM
SCM
Git
Repositories
Repository URL
https://github.com/bhasker-2019/De
Credentials
root (master-root)
Add
Advanced...
Add Repository
Branches to build
Branch Specifier (blank for 'any')
*/master
Add Branch
Repository browser
(Auto)
Additional Behaviours
Add


Compute Engine - My First Pro
bhasker-2019/Devops_project_
DevOps_Project [Jenkins]
34.93.105.75:8080/job/DevOps_Project/
Search
Jenkins
2
search
Jenkins
DevOps_Project
Back to Dashboard
Status
Changes
Build Now
Delete Pipeline
Configure
Full Stage View
Rename
Pipeline Syntax
Git Polling Log
Build History
trend
find
#12 Dec 19, 2019 11:18 AM
#11 Dec 19, 2019 11:16 AM
#10 Dec 18, 2019 1:10 PM
#9 Dec 18, 2019 1:02 PM
#8 Dec 18, 2019 12:56 PM
#7 Dec 18, 2019 11:43 AM
Pipeline DevOps_Project
DevOps project build pipeline with infrastructure as code
Recent Changes
Stage View
Download configuration files (Playbook, groovy script) from git repo - Master server
Run Ansible playbook from Master to install Docker on Test Server
Download PHP-Website files from git repository into Test Server
Build & Start container on Test Server
Test Webpage
Average stage times:
(Average full run time: ~1min 2s)
1s
19s
2s
9s
31s
#12
Dec 19
16:48
1 commit
1s
18s
1s
17s
35s

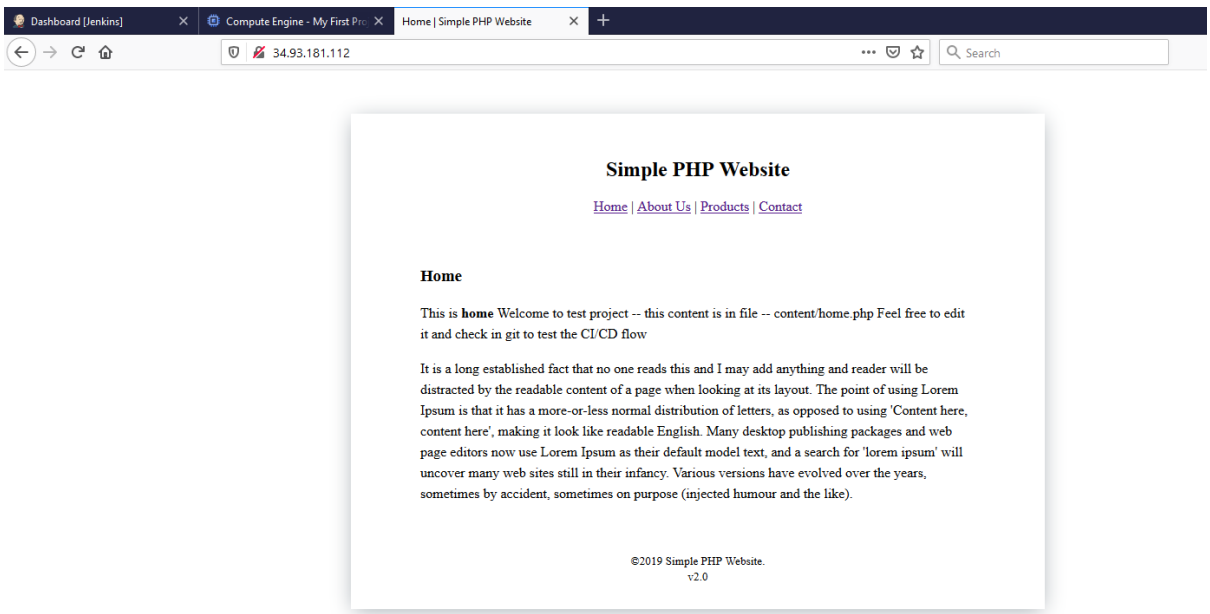

DevOps_Project #12 Console
34.93.105.75:8080/job/DevOps_Project/12/console
Search
Jenkins
DevOps_Project
#12
Delete build '#12'
Polling Log
Git Build Data
No Tags
Replay
Pipeline Steps
Workspaces
Previous Build
Running on Jenkins in /var/lib/jenkins/workspace/DevOps_Project
[Pipeline] {
[Pipeline] stage
[Pipeline] { (Download configuration files (Playbook, groovy script) from git repo - Master server)
[Pipeline] echo
==========Download config from Git repo==========
[Pipeline] git
No credentials specified
> git rev-parse --is-inside-work-tree # timeout=10
Fetching changes from the remote Git repository
> git config remote.origin.url https://github.com/bhasker-2019/Devops_project_simple-php-website.git # timeout=10
Fetching upstream changes from https://github.com/bhasker-2019/Devops_project_simple-php-website.git
> git --version # timeout=10
> git fetch --tags --progress https://github.com/bhasker-2019/Devops_project_simple-php-website.git +refs/heads/*:refs/remotes/origin/
> git rev-parse refs/remotes/origin/master^{commit} # timeout=10
> git rev-parse refs/remotes/origin/origin/master^{commit} # timeout=10
Checking out Revision 38ac1bc02bebbbbeb4ef01b0993ac9a521863478 (refs/remotes/origin/master)
> git config core.sparsecheckout # timeout=10
> git checkout -f 38ac1bc02bebbbbeb4ef01b0993ac9a521863478 # timeout=10
> git branch -a -v --no-abbrev # timeout=10
> git branch -D master # timeout=10
> git checkout -b master 38ac1bc02bebbbbeb4ef01b0993ac9a521863478 # timeout=10
Commit message: "adding old file"
> git rev-list --no-walk 98472eba881f21d623cdc988a24e029c3b729a84 # timeout=10



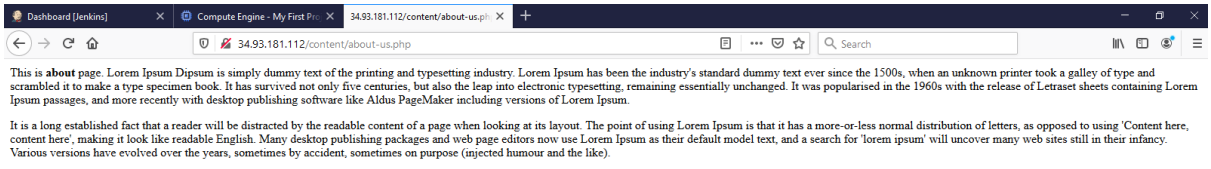
Successfully installed Docker on Test Server

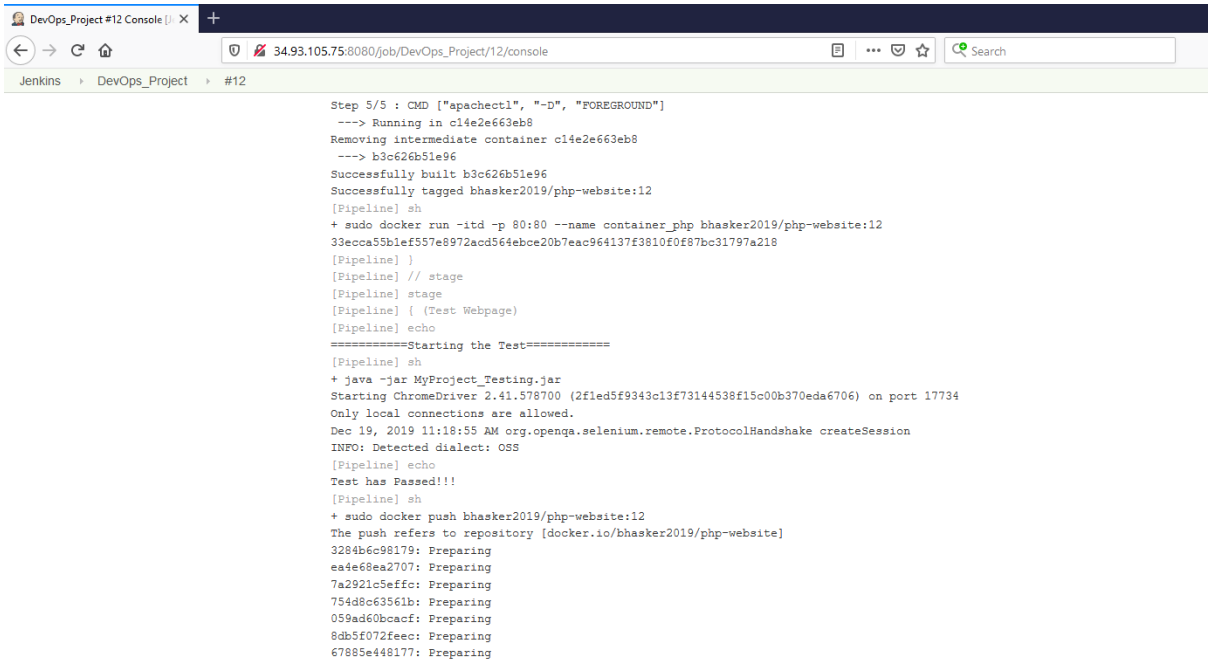


Built and start container using image

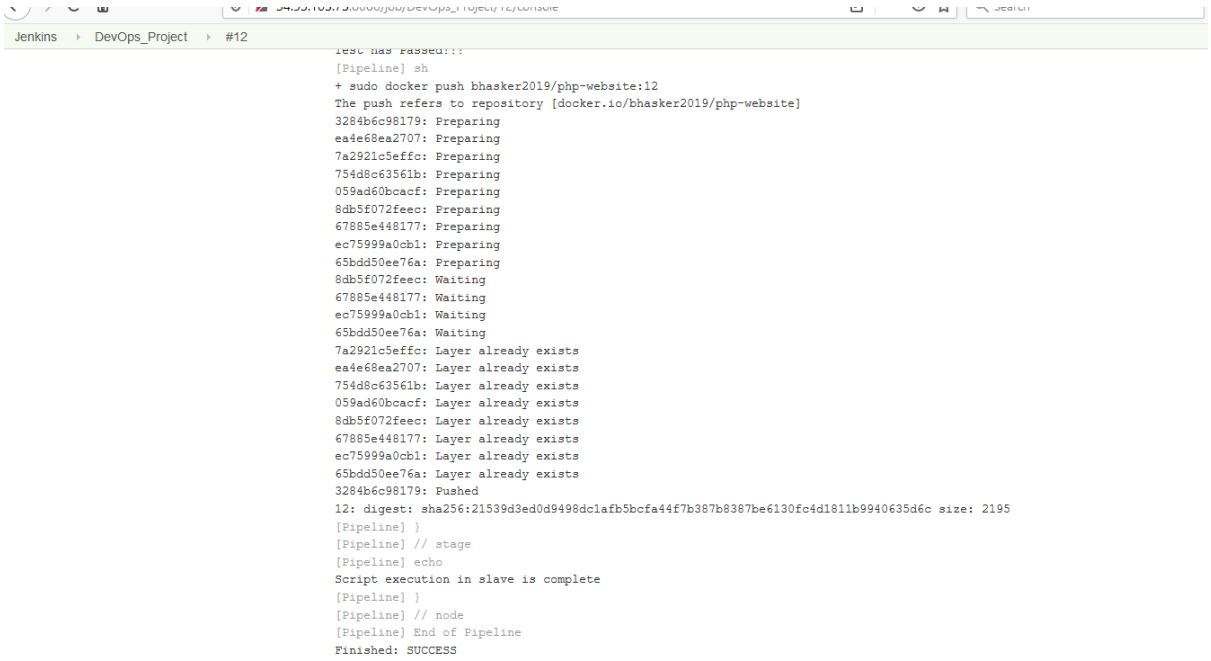


Successfully able to access the PHP website

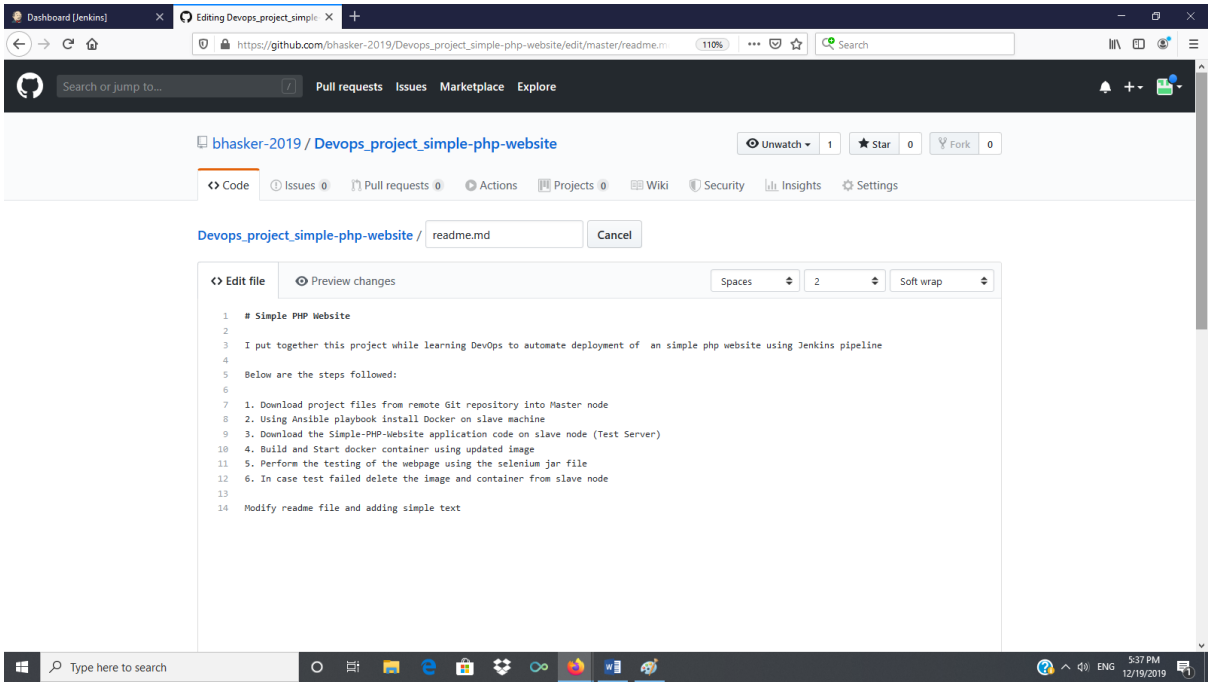


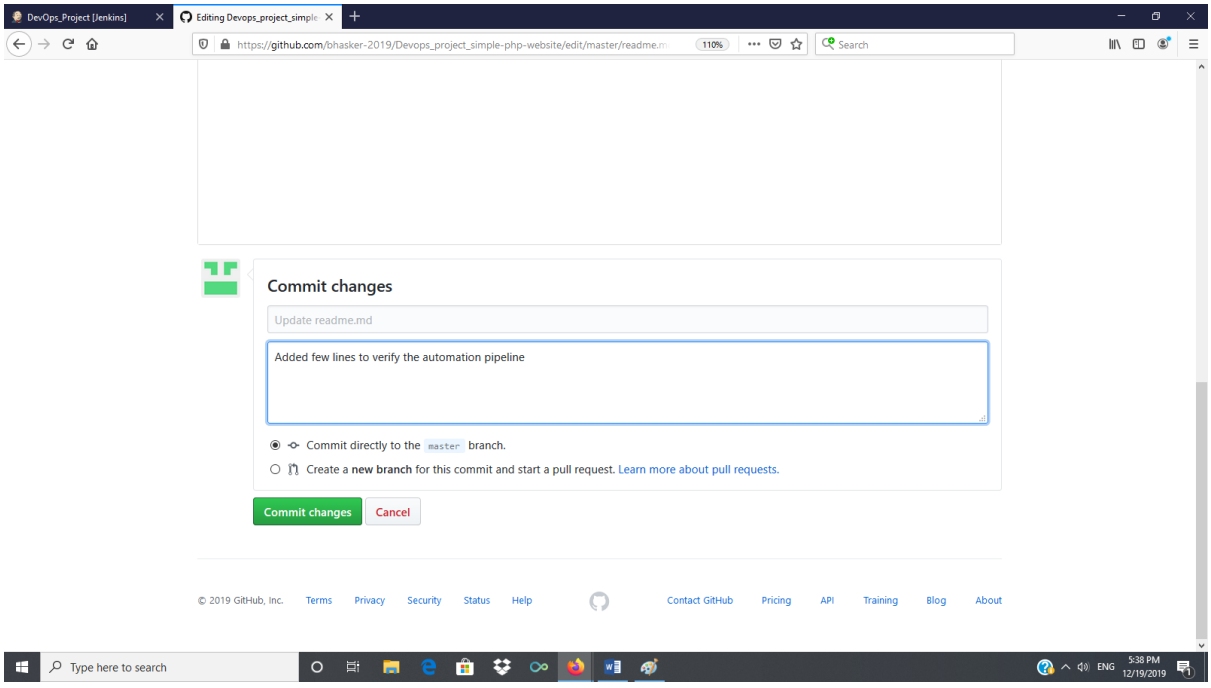


Successfully completed testing of web-page

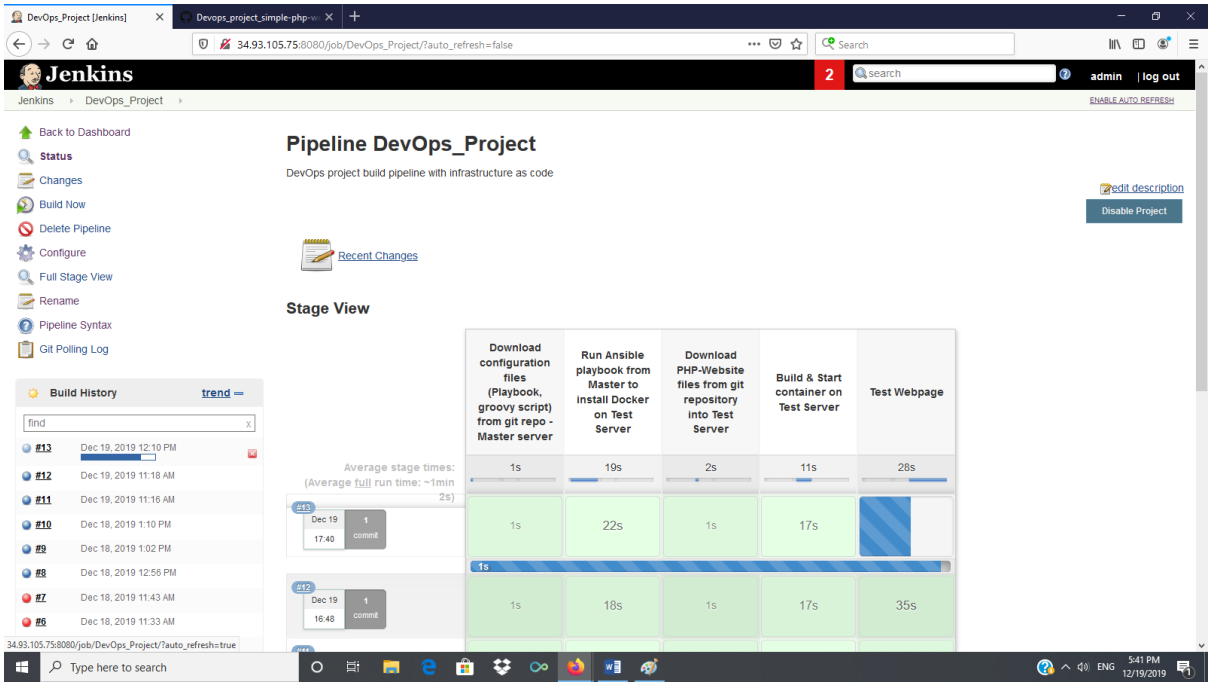


Test Scenario 1 – Modify the readme text file and verify build pipeline

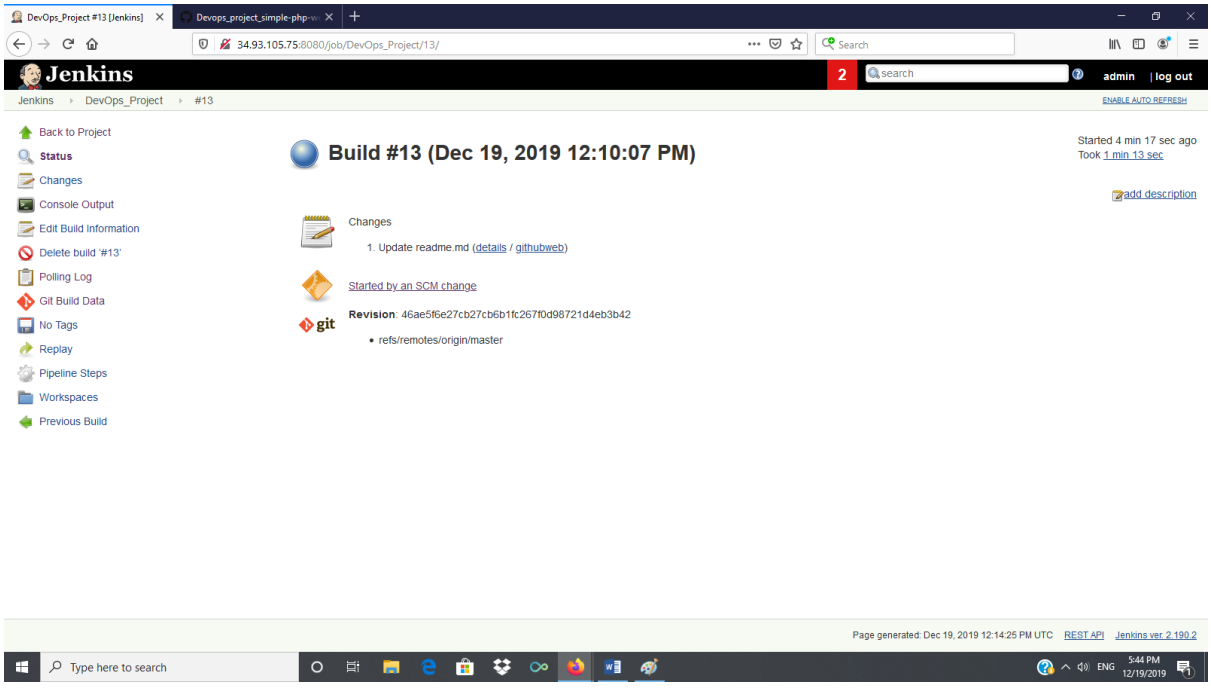


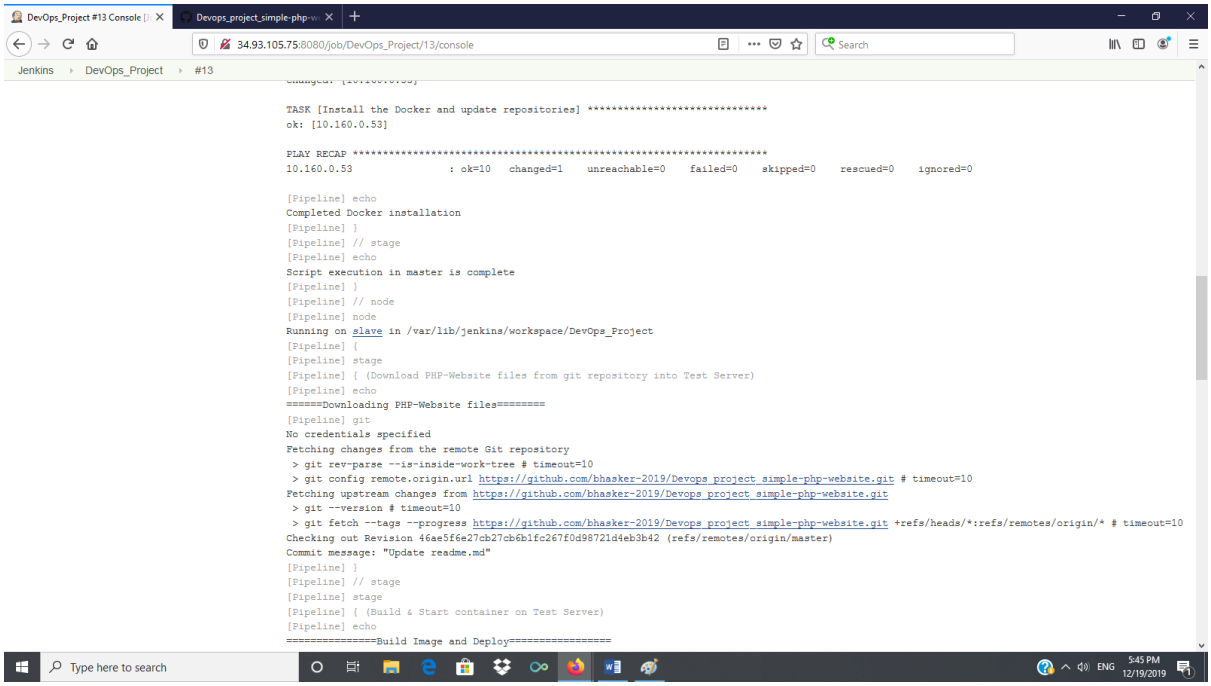


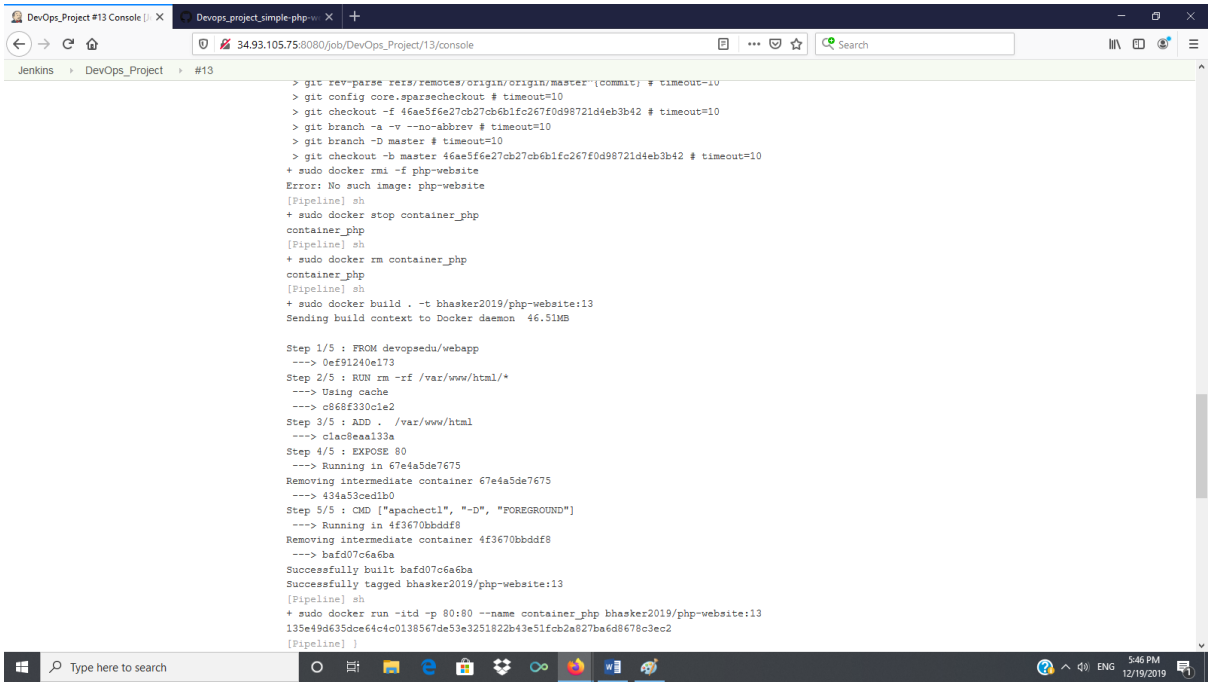
Successfully commited changes into Github remote repository.



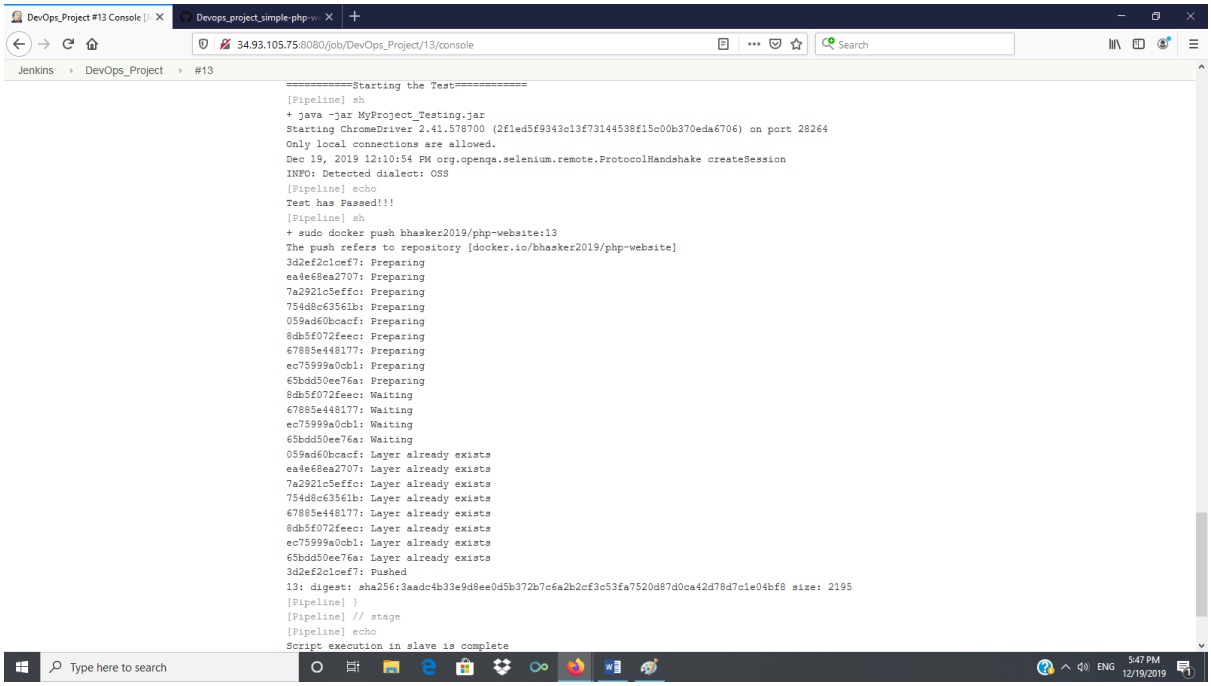
Build#13 – Jenkins successfully has triggerred new build with stages showing green color.





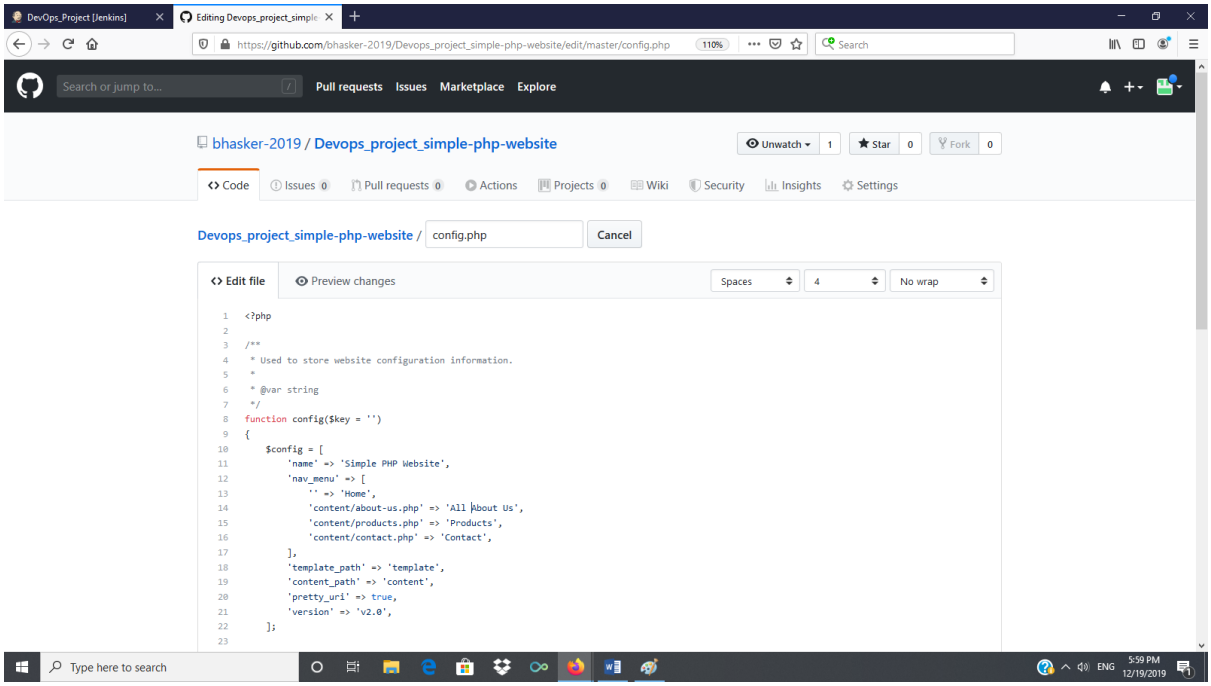


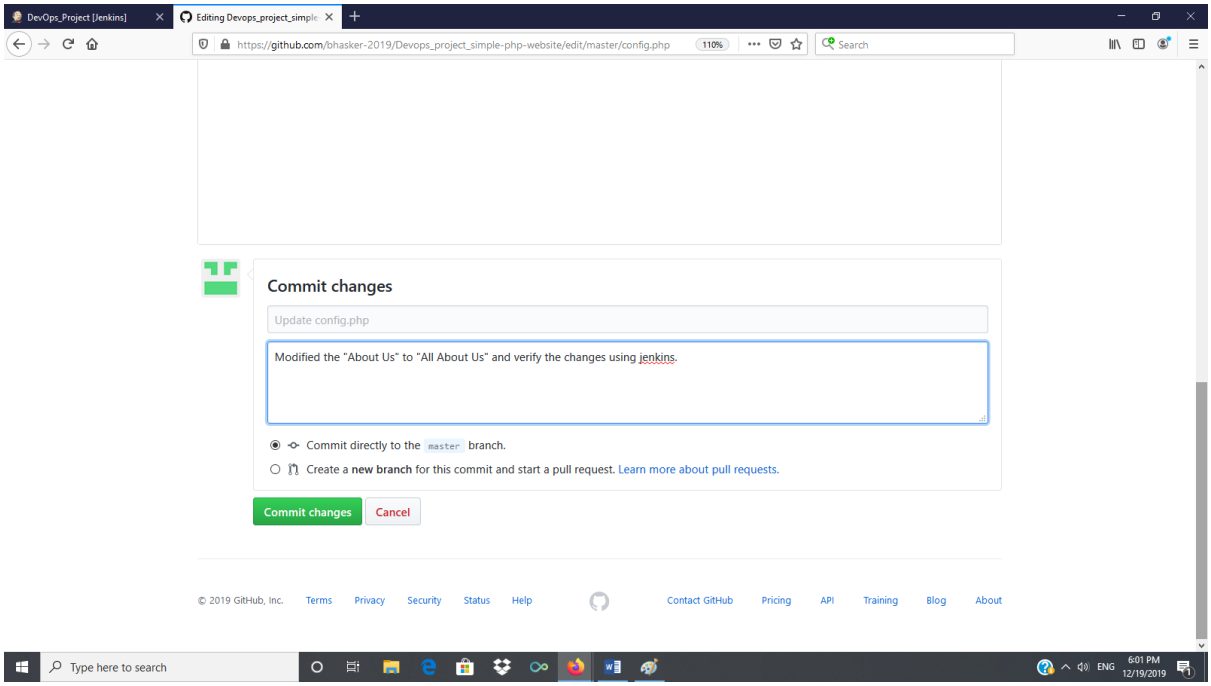
Successfully started the container with build#13



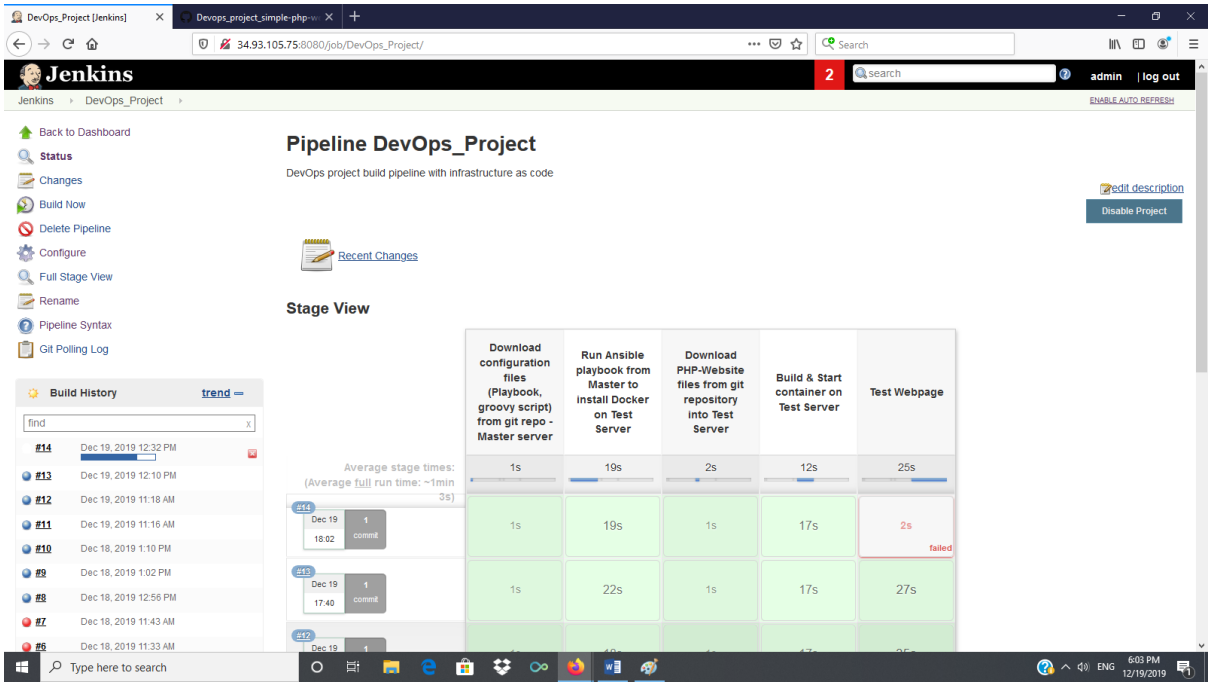
Successfully completed testing and pushed bhasker2019/php-website:13 image to Docker registry.

Test Scenario 2 – Modify the config file and change from “About Us” to “All About Us”

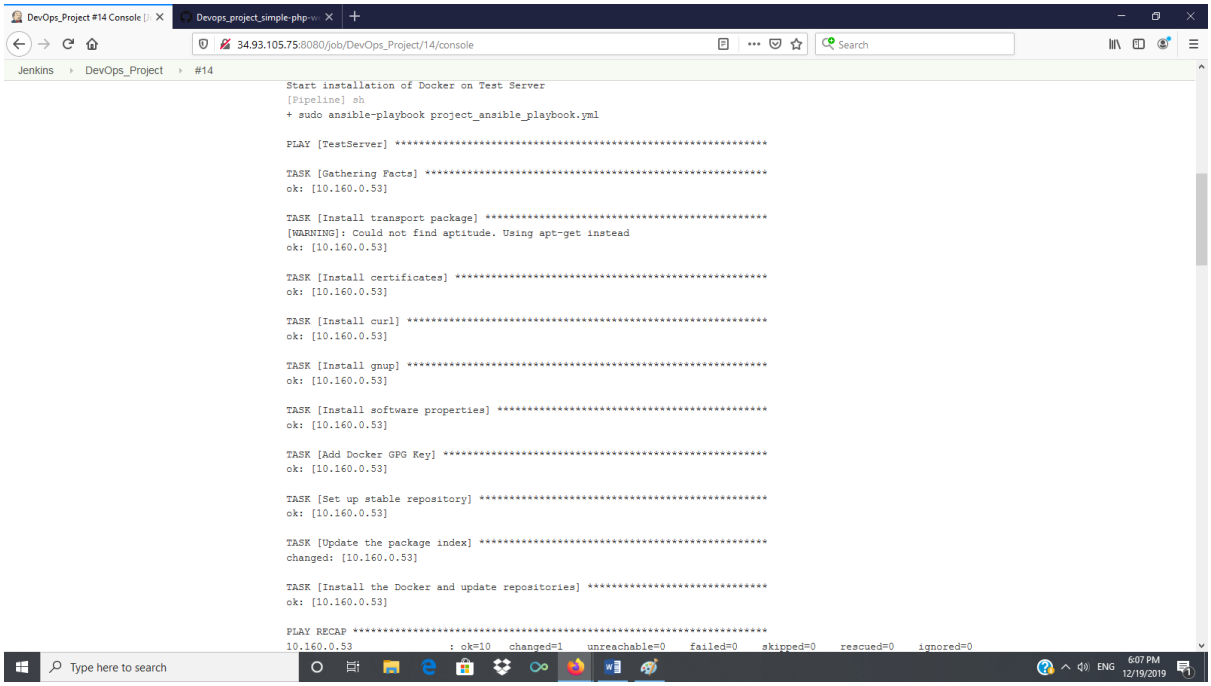


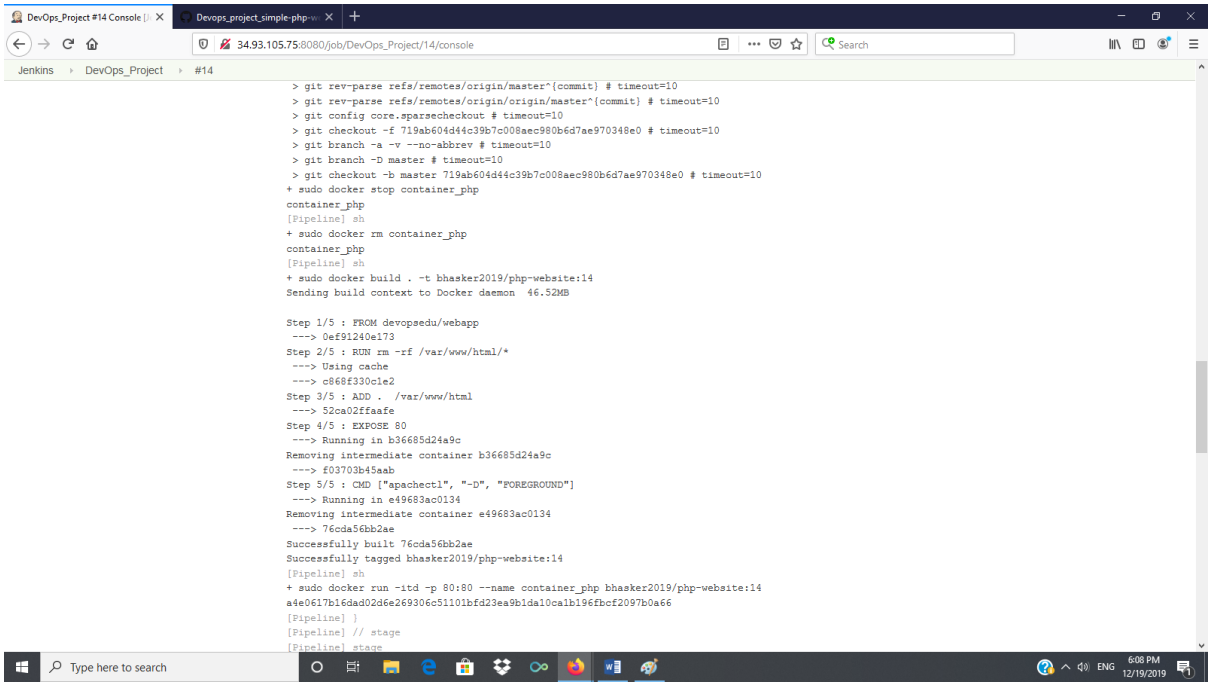


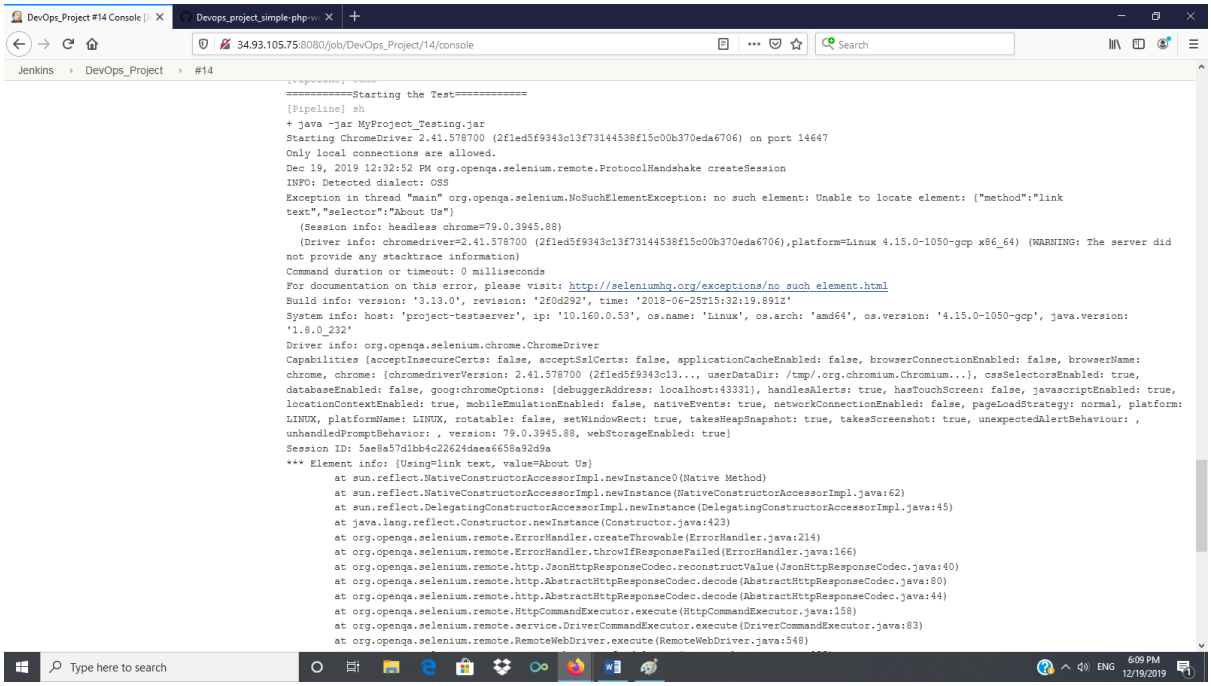
Successfully commited the changes into github remote repository



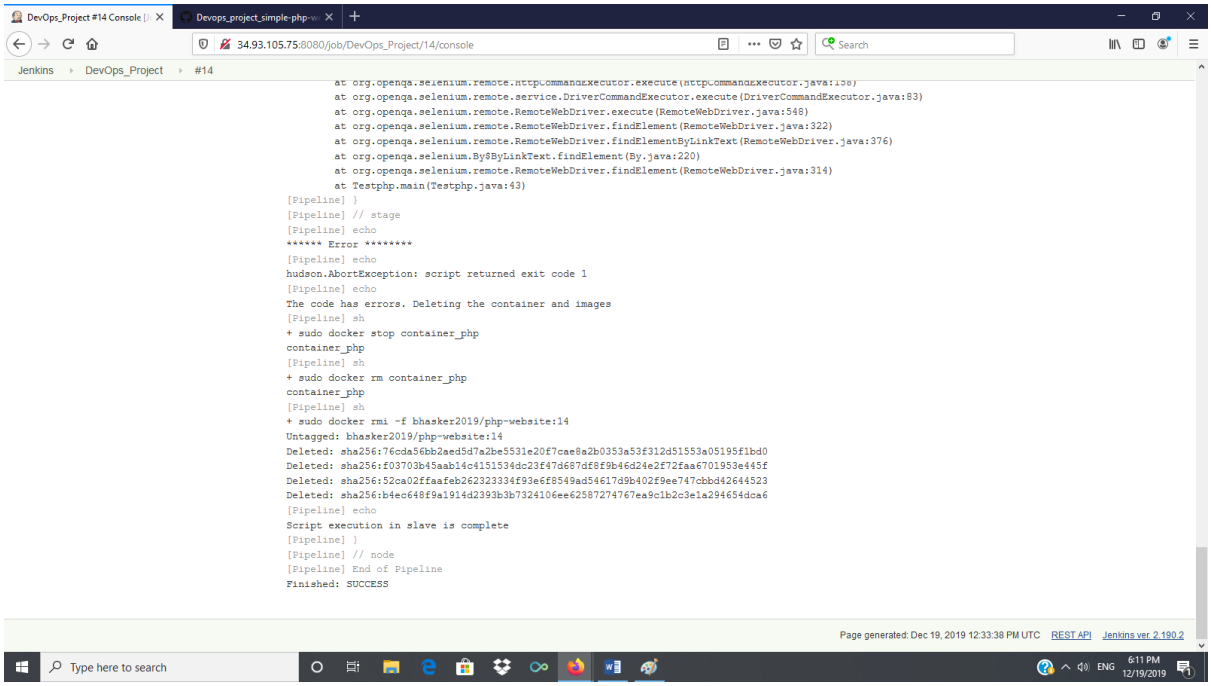
Jenkins successfully trigerred a new build#14 but failed during testing as expected.


DevOps_Project #14 Console
Devops_project_simple-php-w
34.93.105.75:8080/job/DevOps_Project/14/console
Search
Jenkins
DevOps_Project
#14
Start installation of Docker on Test Server
[Pipeline] sh
+ sudo ansible-playbook project_ansible_playbook.yml
PLAY [TestServer] ***
TASK [Gathering Facts] ***
ok: [10.160.0.53]
TASK [Install transport package] ***
[WARNING]: Could not find aptitude. Using apt-get instead
ok: [10.160.0.53]
TASK [Install certificates] ***
ok: [10.160.0.53]
TASK [Install curl] ***
ok: [10.160.0.53]
TASK [Install gnup] ***
ok: [10.160.0.53]
TASK [Install software properties] ***
ok: [10.160.0.53]
TASK [Add Docker GPG Key] ***
ok: [10.160.0.53]
TASK [Set up stable repository] ***
ok: [10.160.0.53]
TASK [Update the package index] ***
changed: [10.160.0.53]
TASK [Install the Docker and update repositories] ***
ok: [10.160.0.53]
PLAY RECAP ***
10.160.0.53 : ok=10 changed=1 unreachable=0 failed=0 skipped=0 rescued=0 ignored=0
Type here to search
ENG
6:07 PM
12/19/2019


DevOps_Project #14 Console
Devops_project_simple-php-w
34.93.105.75:8080/job/DevOps_Project/14/console
Search
Jenkins
DevOps_Project
#14
> git rev-parse refs/remotes/origin/master^{commit} # timeout=10
> git rev-parse refs/remotes/origin/origin/master^{commit} # timeout=10
> git config core.sparsecheckout # timeout=10
> git checkout -f 719ab604d44c39b7c008aec980b6d7ae970348e0 # timeout=10
> git branch -a -v --no-abbrev # timeout=10
> git branch -D master # timeout=10
> git checkout -b master 719ab604d44c39b7c008aec980b6d7ae970348e0 # timeout=10
+ sudo docker stop container_php
container_php
[Pipeline] sh
+ sudo docker rm container_php
container_php
[Pipeline] sh
+ sudo docker build . -t bhasker2019/php-website:14
Sending build context to Docker daemon 46.52MB
Step 1/5 : FROM devopsedu/webapp
---> 0ef91240e173
Step 2/5 : RUN rm -rf /var/www/html/*
---> Using cache
---> c868f330c1e2
Step 3/5 : ADD . /var/www/html
---> 52ca02ffaafe
Step 4/5 : EXPOSE 80
---> Running in b36685d24a9c
Removing intermediate container b36685d24a9c
---> f03703b45aab
Step 5/5 : CMD ["apachectl", "-D", "FOREGROUND"]
---> Running in e49683ac0134
Removing intermediate container e49683ac0134
---> 76cda56bb2ae
Successfully built 76cda56bb2ae
Successfully tagged bhasker2019/php-website:14
[Pipeline] sh
+ sudo docker run -itd -p 80:80 --name container_php bhasker2019/php-website:14
a4e0617b16dad02d6e269306c51101bfd23ea9b1da10ca1b196fbcf2097b0a66
[Pipeline] }
[Pipeline] // stage
[Pipeline] stage
Type here to search
ENG
6:08 PM
12/19/2019

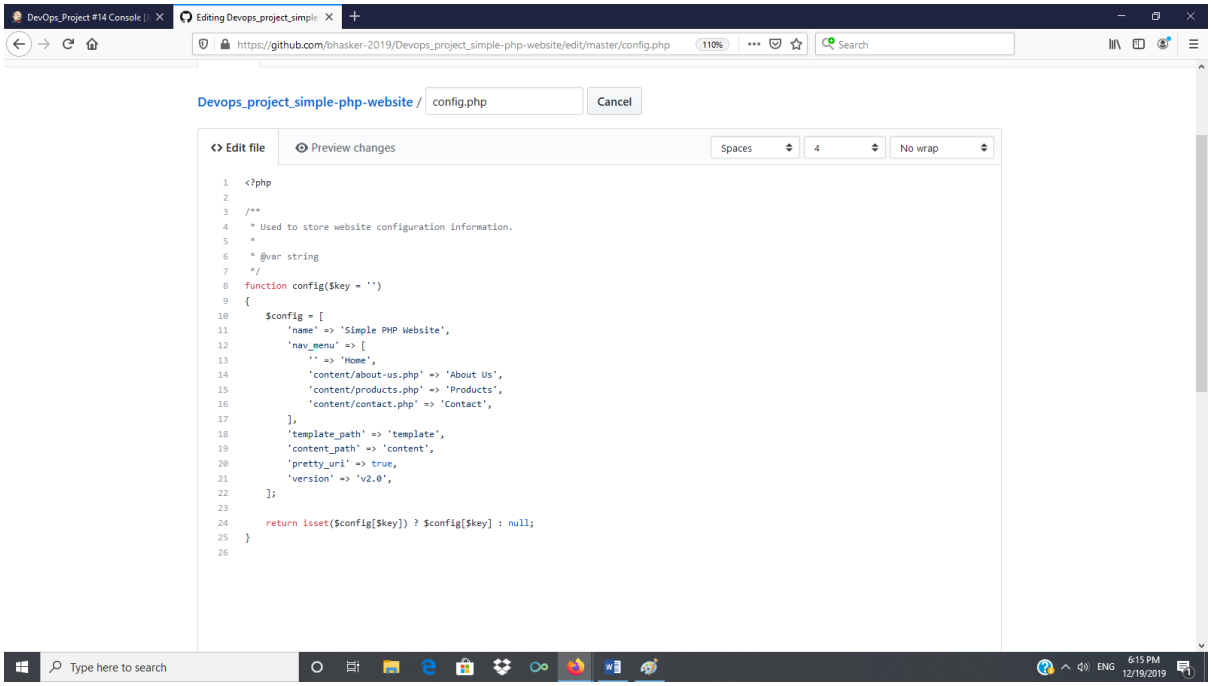


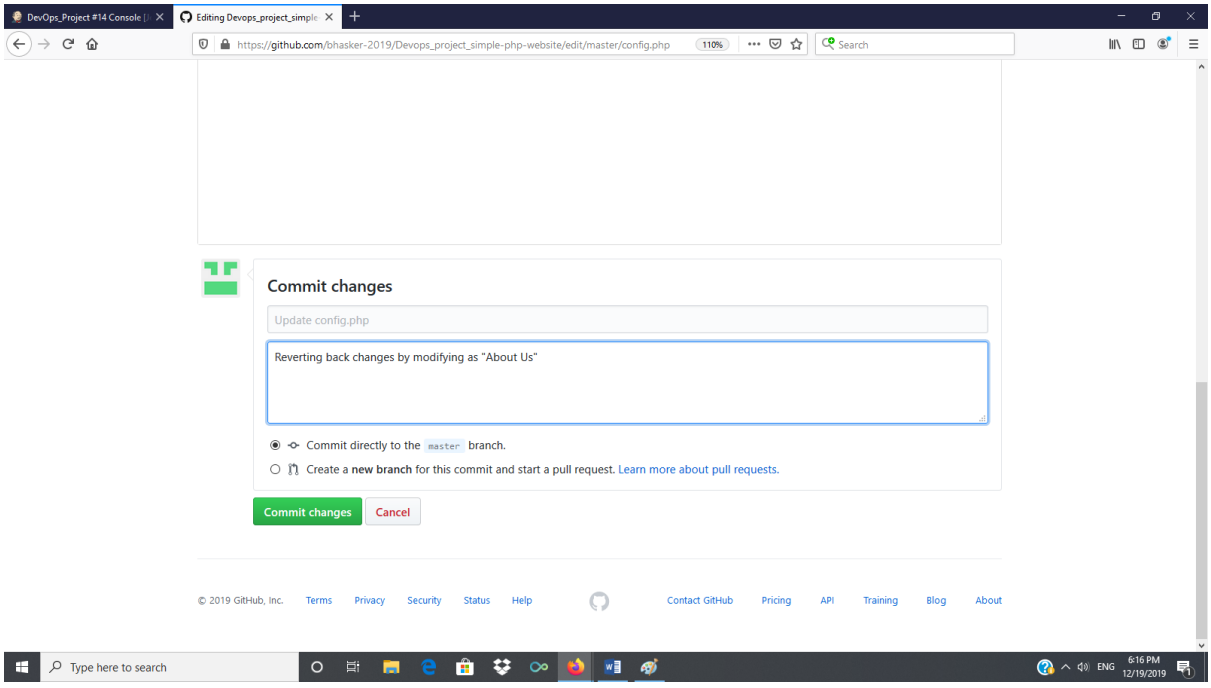
As web element “About Us” not available the test stopped.



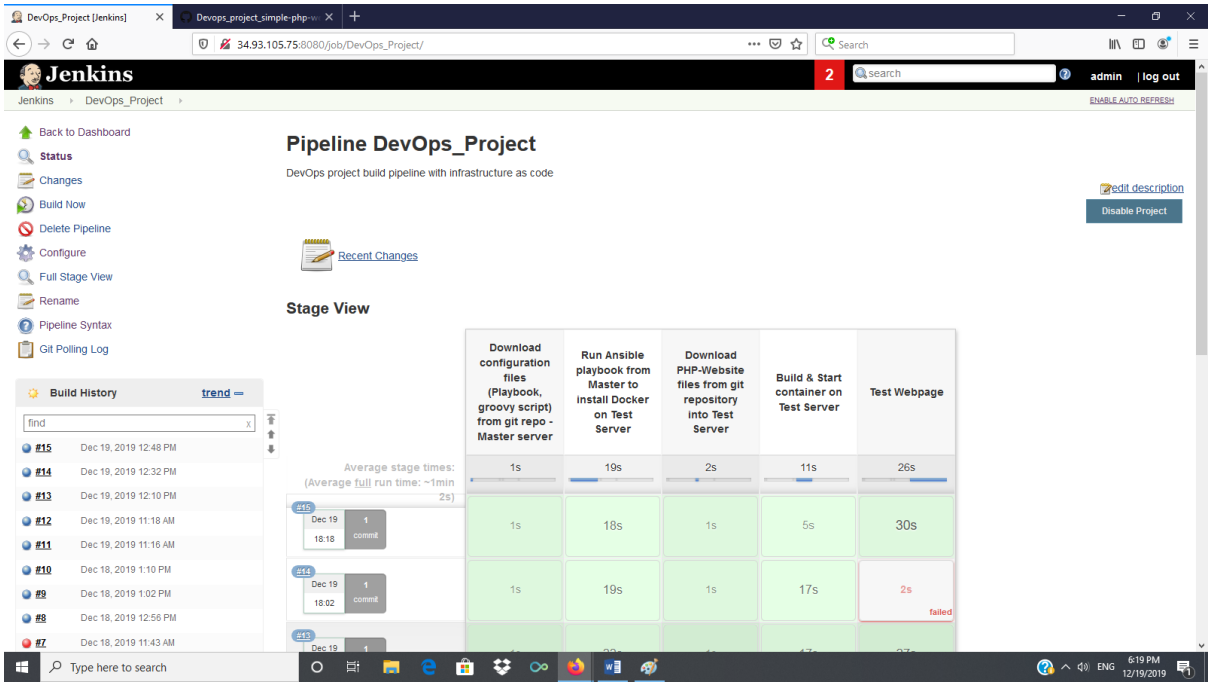
As part of exception hadling the image and container from build#14 were successfully removed.

Test Scenario 3 – Revert the configuration changes by modifying to old state “About Us”

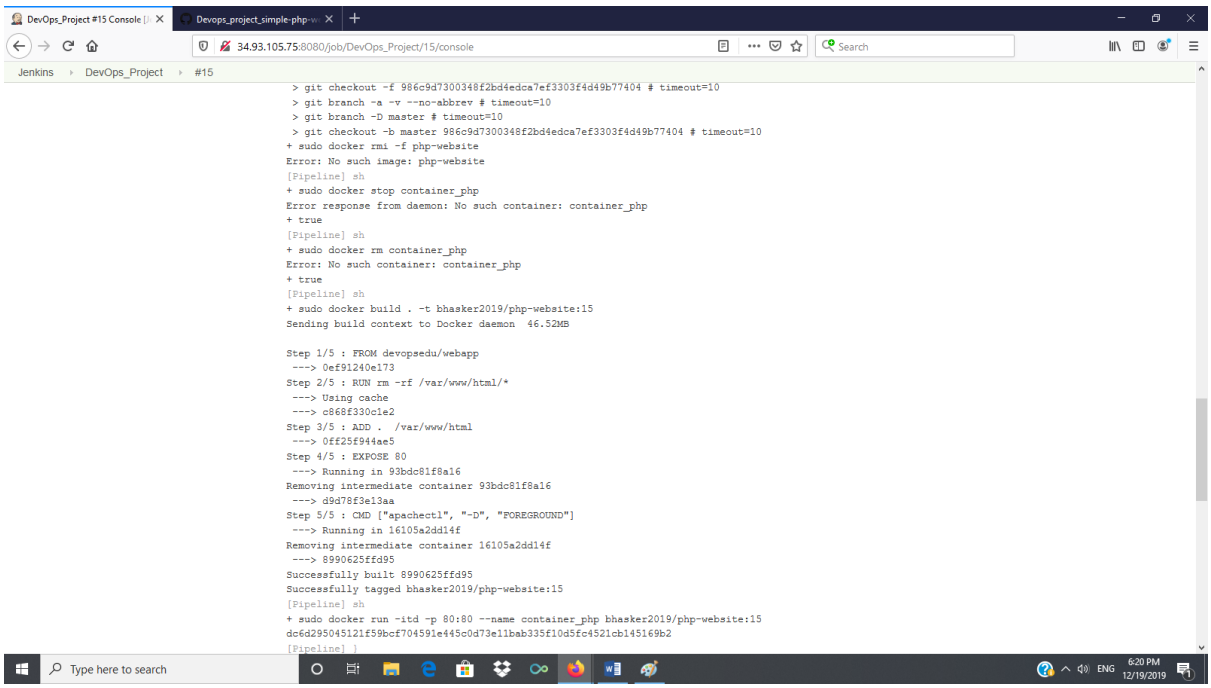


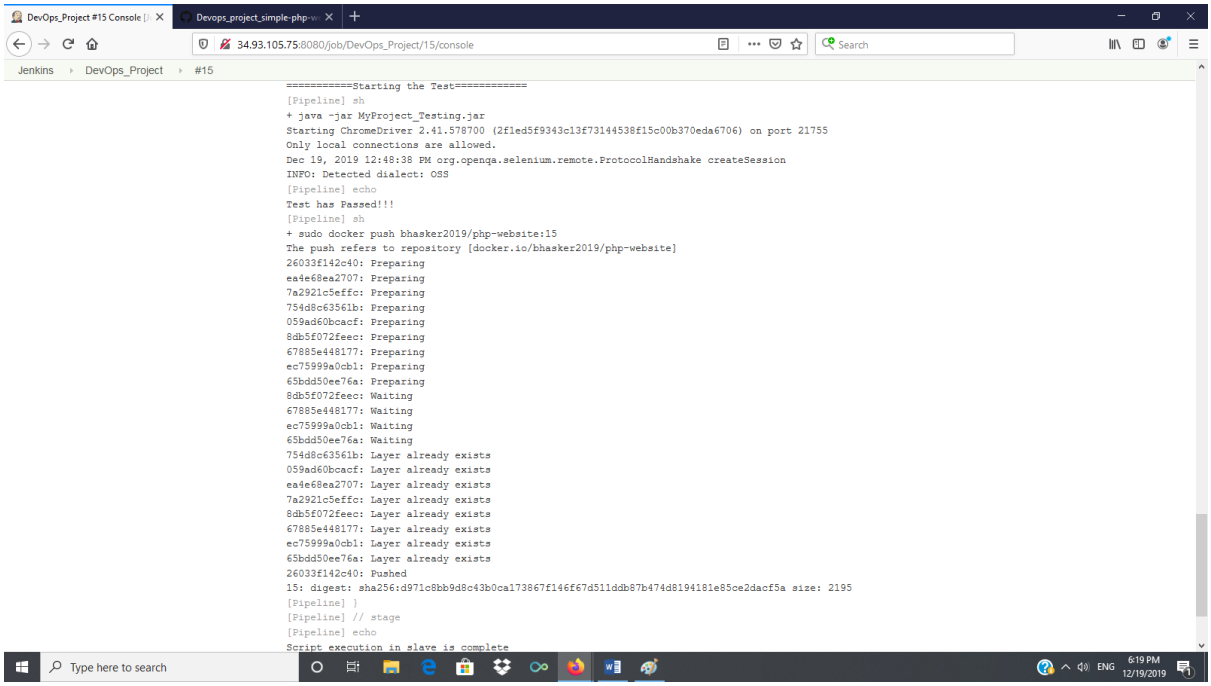


Successfully commited changes into github remote repository



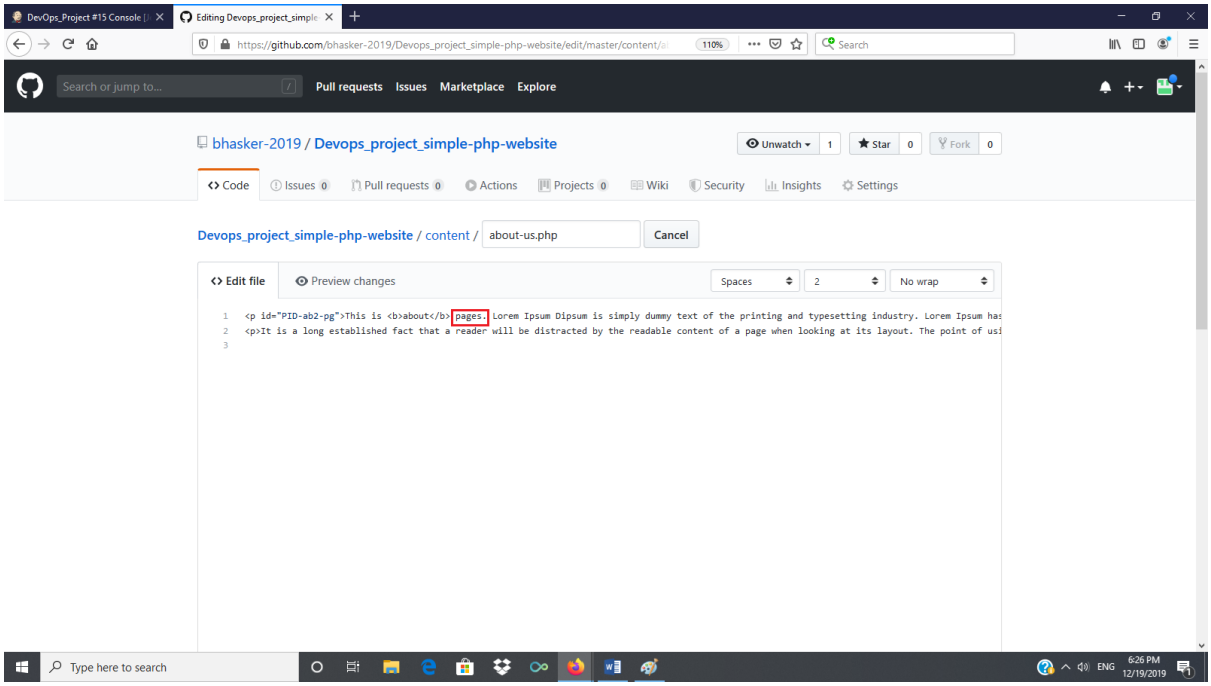
Jenkins has trigerred successfully build#15 with all stages showing green color

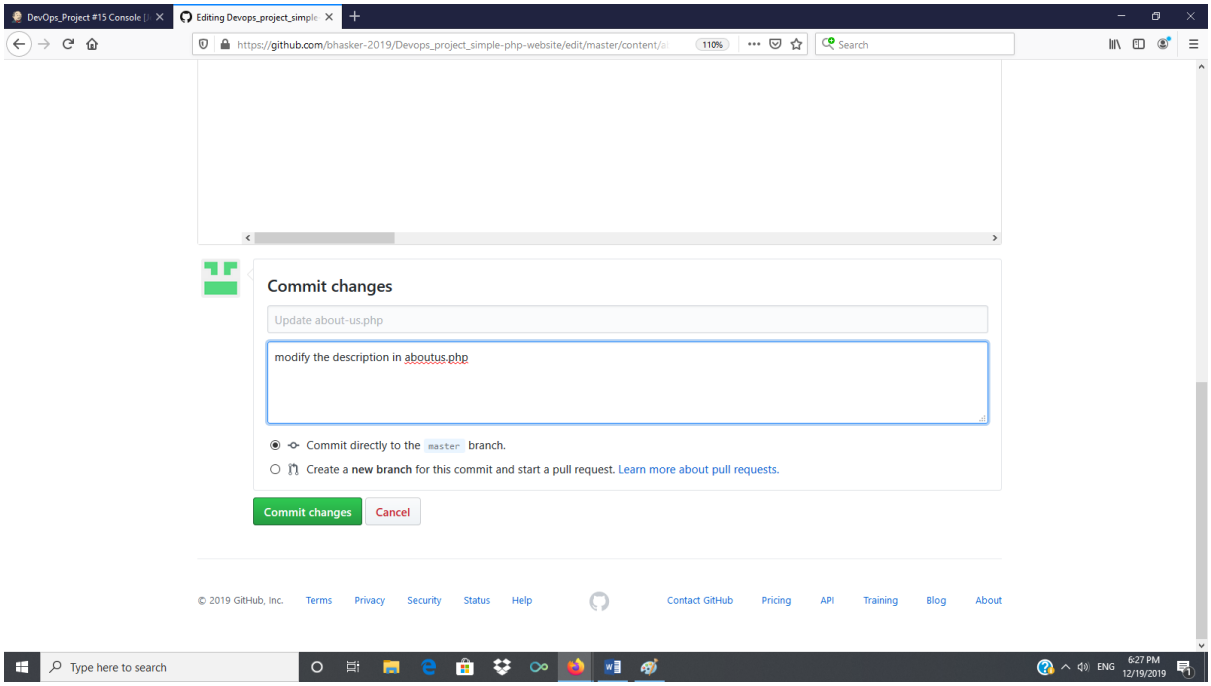




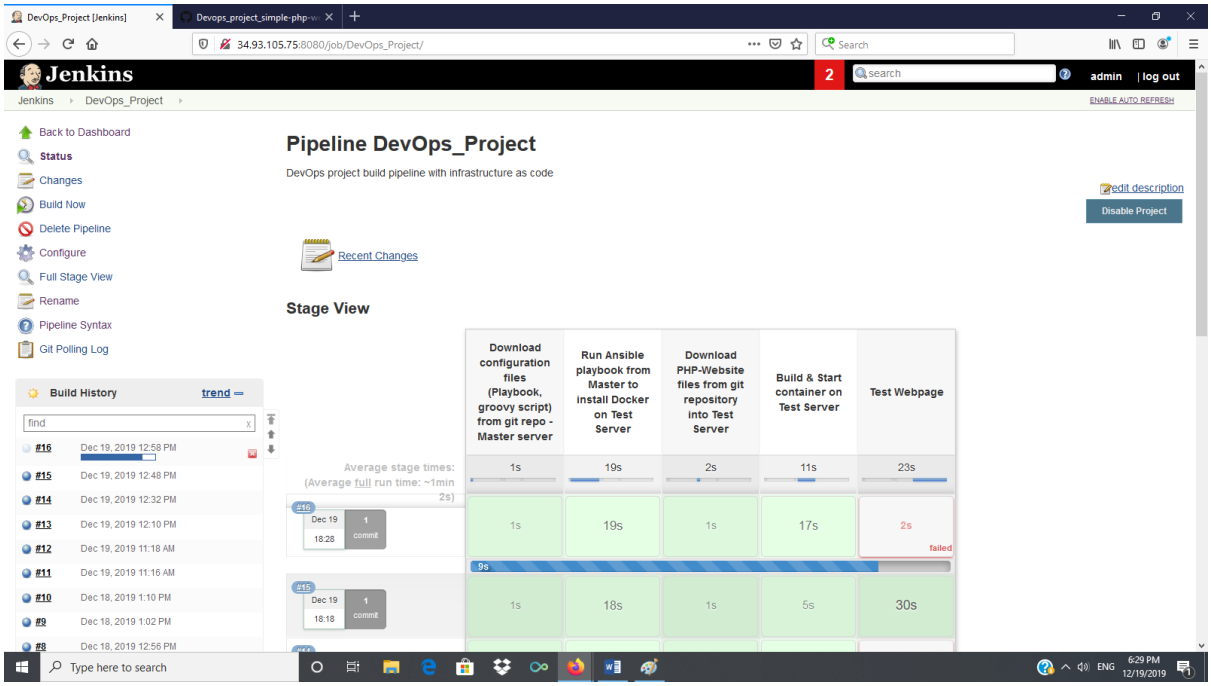
Successfully completed testing and pushed bhasker2019/php-website:15 image to Docker registry.

Test Scenario 4 – Modify the description within aboutus.php page

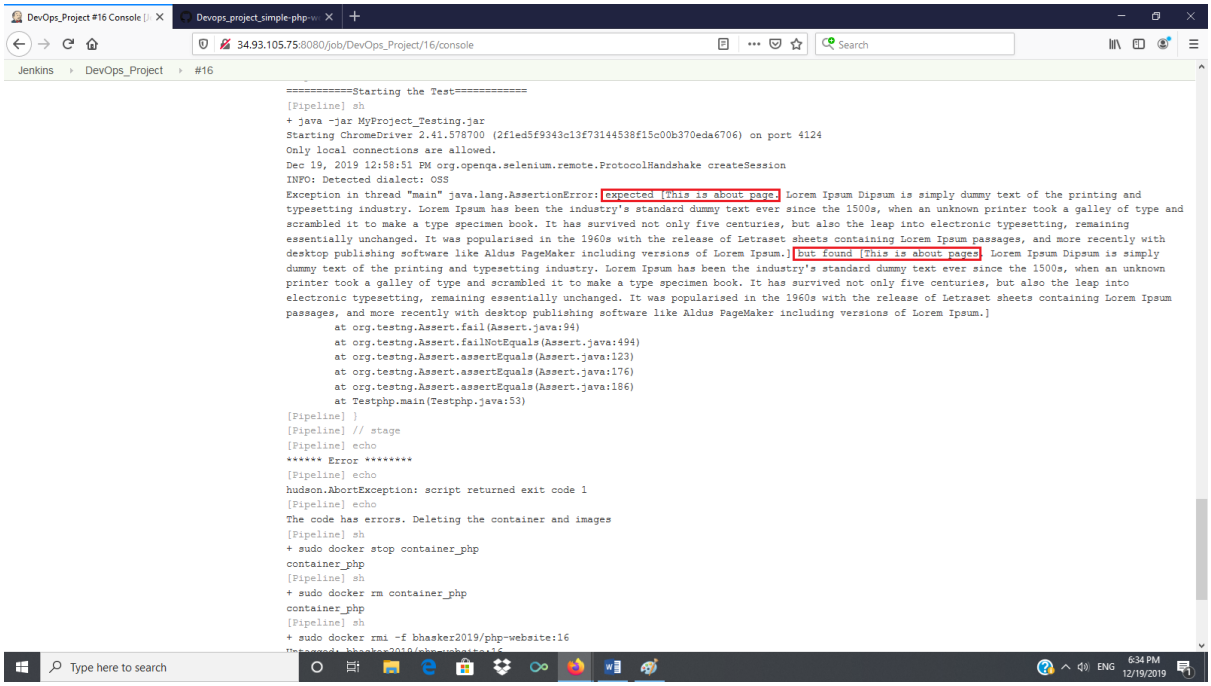




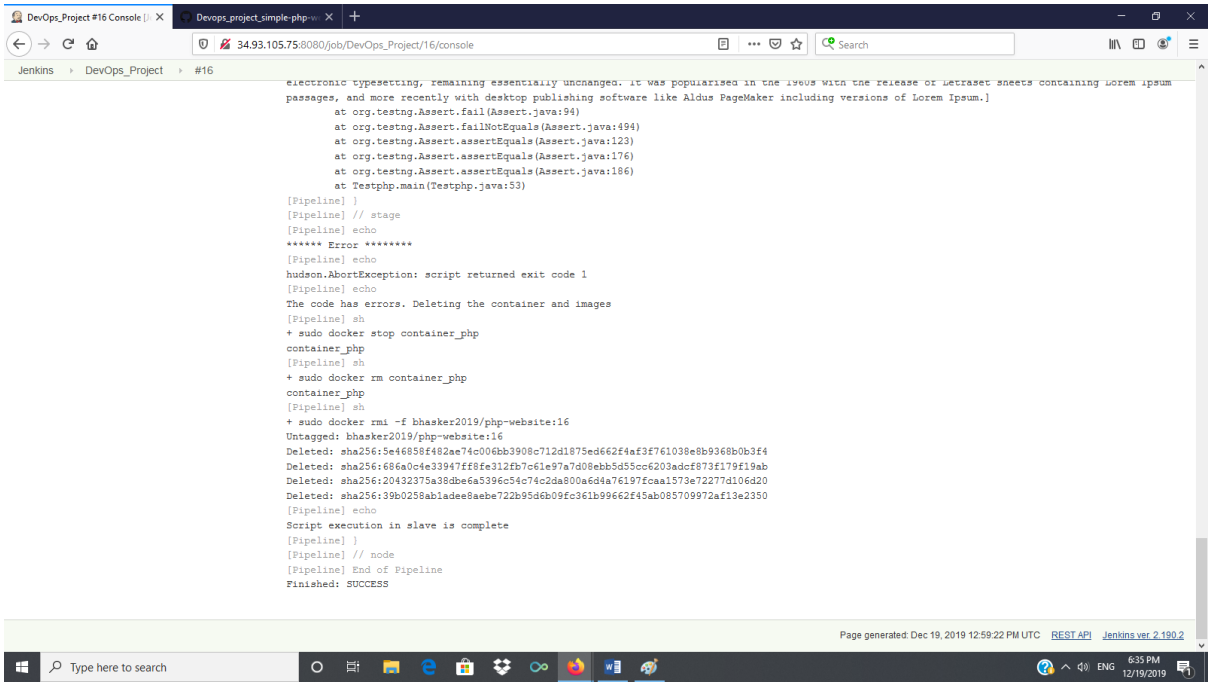
Successfully committed changes into github remote repository



Jenkins trigerred a new build#16 and as expected stage testing got failed.

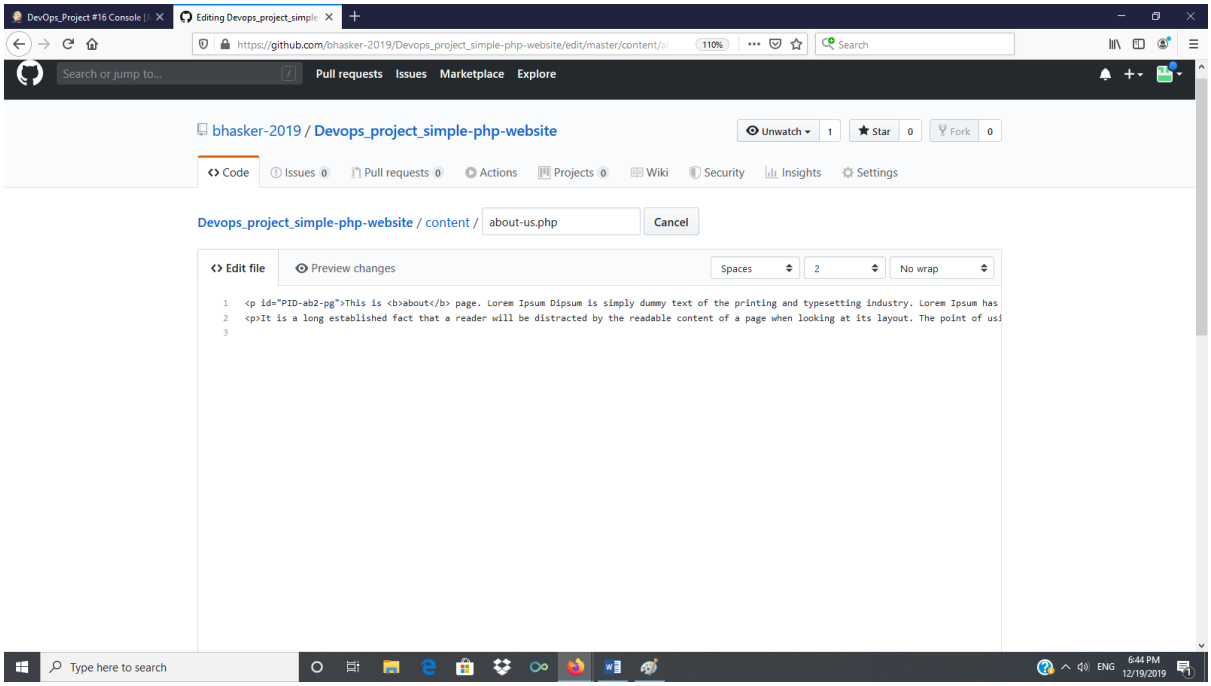


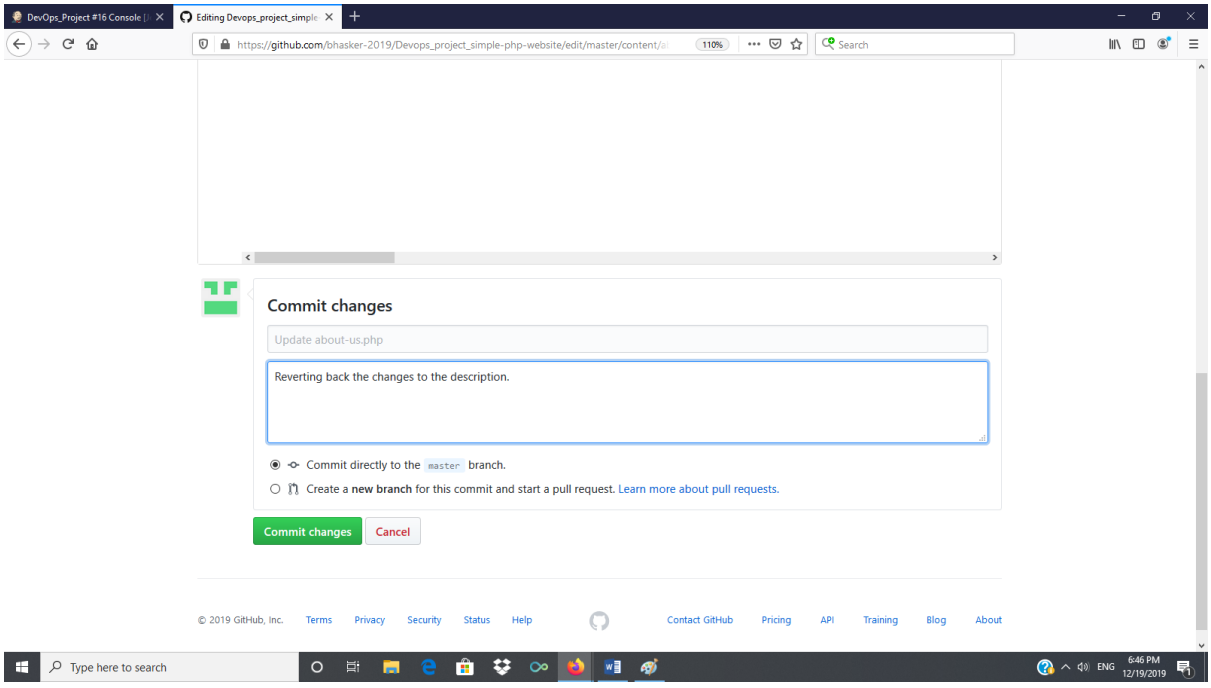
Assertion method condition was not safisfied due to description mis-match hence testing stopped.

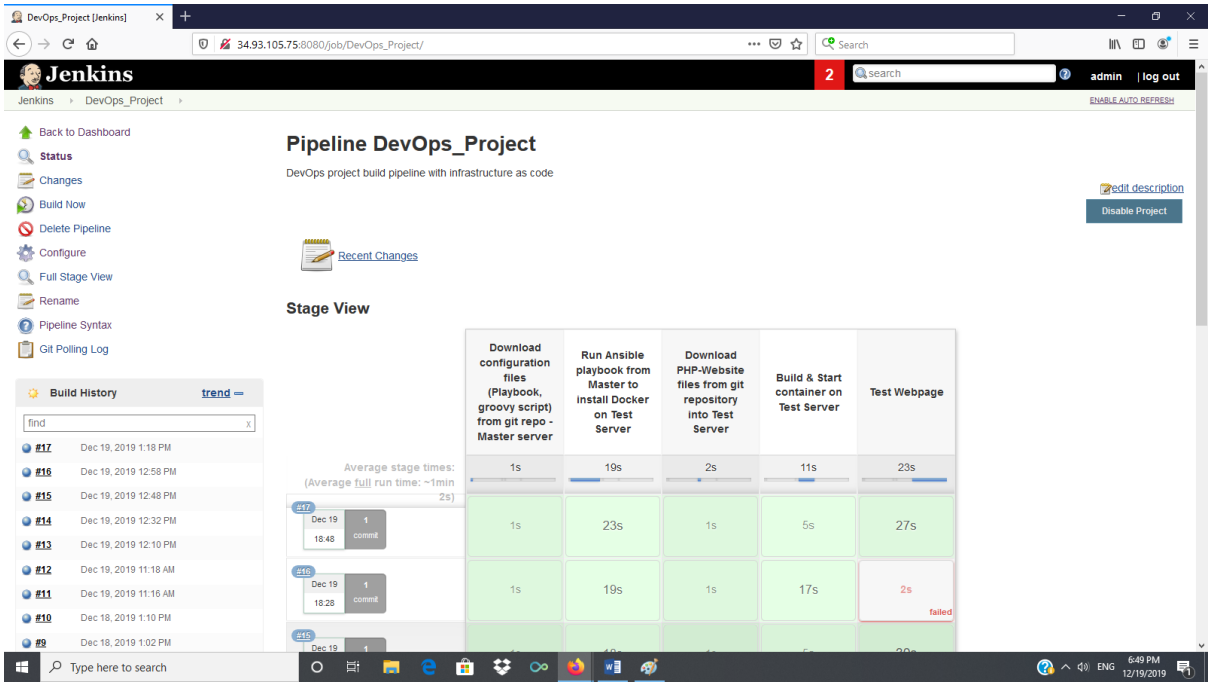


As part of exception handling the image and container are removed from test server.

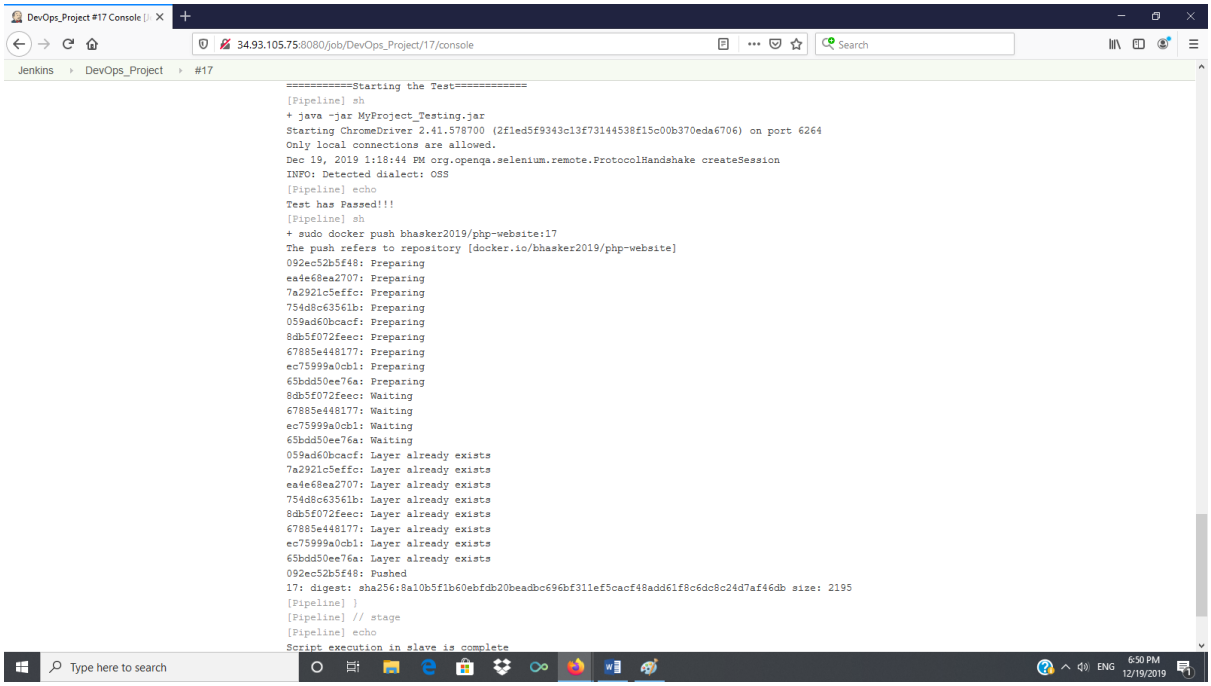
Test Scenario 5 – Revert back the changes with about-us.php







Jenkins trigerred build#17 with all stages showing green color.



Successfully completed testing and pushed bhasker2019/php-website:17 image to Docker registry.