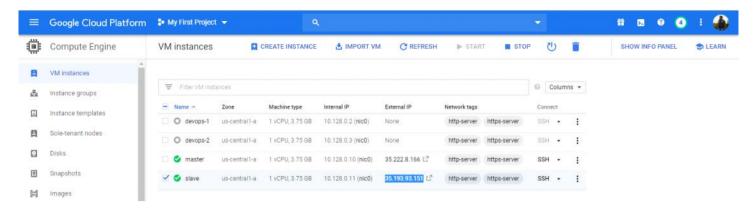
DevOps Project By Raveendiran RR

Created Master and Slave machine on GCP Cloud



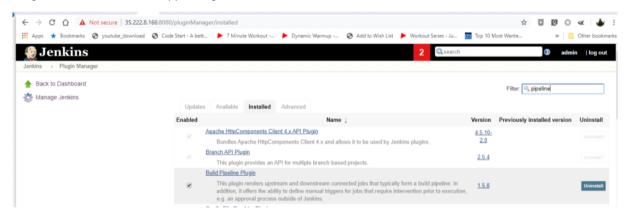
Installed the following on the master machine:

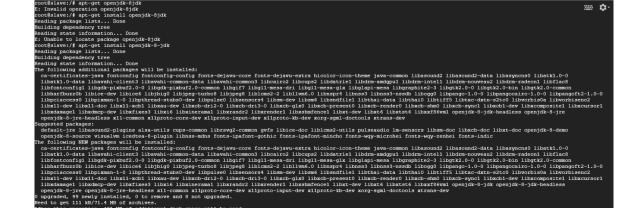
- 1. Open JDK
- 2. Jenkins
- 3. Ansible
- Since the machines are on cloud all server have openSSH is pre-installed

```
4. Since the machines are on cloud all Servet Have openants login: Thu Nov 14 06:1247 2019 from 74.125.41.105 artbond@master:-$ sudo succemaster:/home/smartbond# dpkg -1 | grep Ansible ansible 2.8.6-1ppa-xenial
                                                                                                                                                                                                                                            all
                                                                                                                                                                                                                                                                                      Ansible IT Automatio
obt@master:/home/smartbond# dpkg -1 | grep Jenkins
2.190.2
all Jenkins is an open source automation server which enables developers around the world to re
lably automate their development lifecycle processes of all kinds, including build, document, test, package, stage, deployment, static analysis and many more.

obc@master:/home/smartbond# dpkg -1 | grep openjdk-8-jdk
dopenjdk-8-jdk-amd64
8u222-b10-lubuntul-16.04.1
amd64
OpenJDK Development Kit (JDK)
i openjdk-8-jdk-headless:amd64
8u222-b10-lubuntul-16.04.1
amd64
OpenJDK Development Kit (JDK)
(headless)
```

Configured Jenkins and installed the build pipeline Plugin





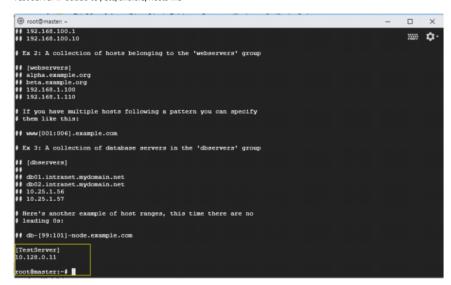
ntu.com/ubuntu xenial-updates/main amd64 libjpeg-turbo8 amd64 1.4.2-0ubuntu3.3 [111 kB]

Added the id_rsa.pub keys from master to slave

Installed Open JDK on Slave machine



Test server IP added to /etc/ansible/hosts file



Successfully able to connect from master to slave

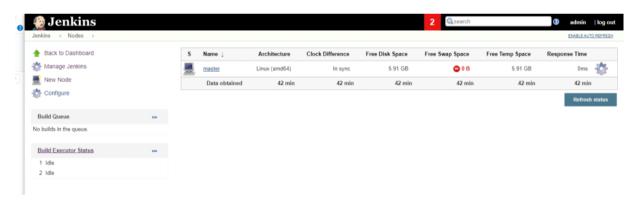
```
---- O
## 192.168.100.1
## 192.168.100.10
 Ex 2: A collection of hosts belonging to the 'webservers' group
## [webservers]
## alpha.example.org
## beta.example.org
## 192.168.1.100
## 192.168.1.110
# If you have multiple hosts following a pattern you can specify
# them like this:
## www[001:006].example.com
 Ex 3: A collection of database servers in the 'dbservers' group
## [dbservers]
##
## db01.intranet.mydomain.net
## db02.intranet.mydomain.net
## 10.25.1.56
# Here's another example of host ranges, this time there are no
# leading 0s:
 ## db-[99:101]-node.example.com
 root@master:-f ssh 10.128.0.11
Welcome to Ubuntu 16.04.6 LTS (GNU/Linux 4.15.0-1049-gcp x86_64)
 * Documentation: https://help.ubuntu.com
* Management: https://landscape.canonical.com
* Support: https://ubuntu.com/advantage
  * Kata Containers are now fully integrated in Charmed Kubernetes 1.16!
Yes, charms take the Krazy out of K8s Kata Kluster Konstruction.
       https://ubuntu.com/kubernetes/docs/release-notes
  O packages can be updated.
updates are security updates.
  New release '18.04.3 LTS' available.
 tast login: Fri Nov 15 11:14:18 2019 from 10.128.0.10
```

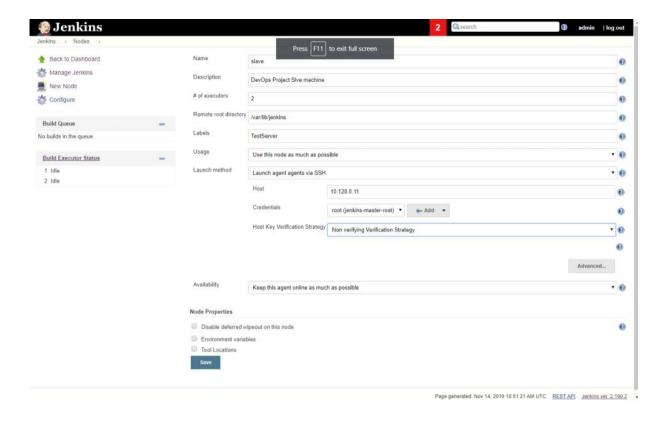
Able to run commands on the test server

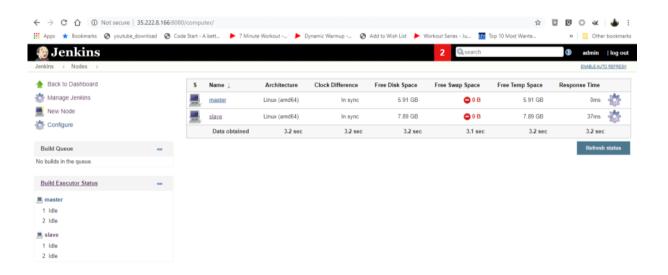
root@master:-f ansible -m ping TestServer
[DEPREATION MARNING]: Distribution Usunu 16.04 on host 10.128.0.11 should use /usr/bin/python3, but is using /usr/bin/python for backward compatibility with prior Ansible releases.
A future Ansible release will default to using the discovered platform python for this host. See https://docs.ansible.com/ansible/2.8/reference appendices/interpreter_discovery.html
for more information. This feature will be removed in version 2.12. Deprecation warnings can be disabled by setting deprecation_warnings=False in ansible.ofg.

"ansible_facts": (
 "discovered_interpreter_python": "/usr/bin/python"
],
 "conanged": false,
 "ping": "pong"

Adding the Slave node in Jenkins

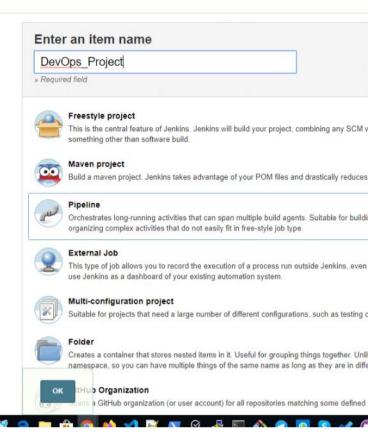


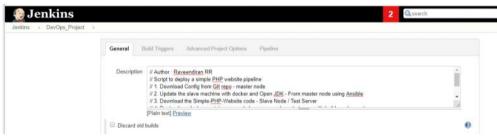


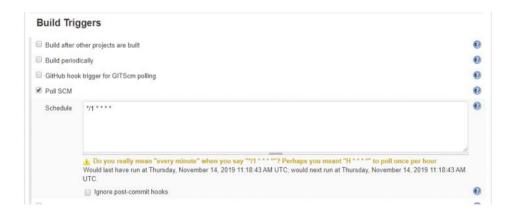


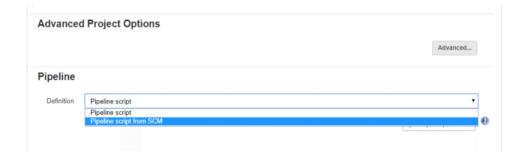
Pipeline Project

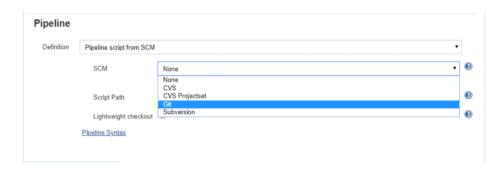


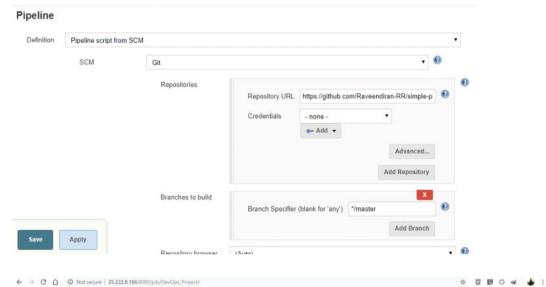


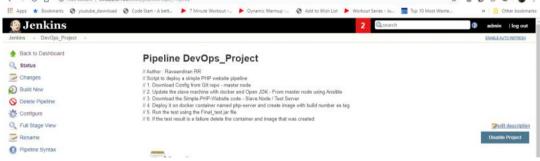










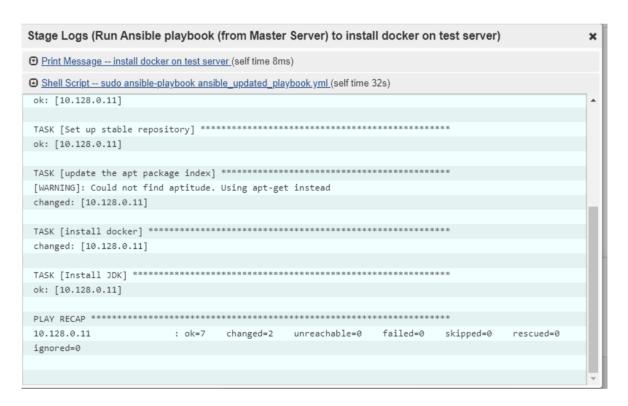


Download configuration files (Playbook, groovy script) from git repo - Master server	Run Ansible playbook (from Master Server) to install docker on test server	Download PHP- Website files from git repo - Test Server	Build / deploy to Test server stage	Test about page	deploy to production
551ms	10s	509ms	4s	23s	4s
525ms	10s	466ms	4s	11s	14s

```
Stage Logs (Download configuration files (Playbook, groovy script) from git repo - Master server)
                                                                                                                               ×
₱ Print Message -- =======Download config from Git repo====== (self time 10ms)

<u>Git</u> (self time 1s)

No credentials specified
 Cloning the remote Git repository
Cloning repository <a href="https://github.com/Raveendiran-RR/simple-php-website.git">https://github.com/Raveendiran-RR/simple-php-website.git</a>
 > git init /var/lib/jenkins/workspace/DevOps_Project # timeout=10
Fetching upstream changes from https://github.com/Raveendiran-RR/simple-php-website.git
 > git --version # timeout=10
> git fetch --tags --progress <a href="https://github.com/Raveendiran-RR/simple-php-website.git">https://github.com/Raveendiran-RR/simple-php-website.git</a> +refs/heads/*:r
efs/remotes/origin/* # timeout=10
 > git config remote.origin.url https://github.com/Raveendiran-RR/simple-php-website.git # timeout=10
  > git config --add remote.origin.fetch +refs/heads/*:refs/remotes/origin/* # timeout=10
> git config remote.origin.url <a href="https://github.com/Raveendiran-RR/simple-php-website.git">https://github.com/Raveendiran-RR/simple-php-website.git</a> # timeout=10
Fetching upstream changes from <a href="https://github.com/Raveendiran-RR/simple-php-website.git">https://github.com/Raveendiran-RR/simple-php-website.git</a>
 > git fetch --tags --progress https://github.com/Raveendiran-RR/simple-php-website.git +refs/heads/*:r
efs/remotes/origin/* # timeout=10
> git rev-parse refs/remotes/origin/config^{commit} # timeout=10
  > git rev-parse refs/remotes/origin/origin/config^{commit} # timeout=10
Checking out Revision f53b4dddd3921f71bc31352aaf8592f93af9d29e (refs/remotes/origin/config)
  > git config core.sparsecheckout # timeout=10
> git checkout -f f53b4dddd3921f71bc31352aaf8592f93af9d29e # timeout=10
```



```
Stage Logs (Download PHP-Website files from git repo - Test Server)

₱ Print Message -- =====Download PHP-Website files====== (self time 9ms)

            <u>A Git -- https://github.com/Raveendiran-RR/simple-php-website.git (self time 4s)</u>

Fetching upstream changes from <a href="https://github.com/Raveendiran-RR/simple-php-website.git">https://github.com/Raveendiran-RR/simple-php-website.git</a>
  > git --version # timeout=10
> git fetch --tags --progress <a href="https://github.com/Raveendiran-RR/simple-php-website.git">https://github.com/Raveendiran-RR/simple-php-website.git</a> +refs/heads/*:r
 efs/remotes/origin/* # timeout=10
Checking out Revision 9677f44012a641d5a9546094114b35dd656d616c (refs/remotes/origin/master)
  > git config remote.origin.url <a href="https://github.com/Raveendiran-RR/simple-php-website.git">https://github.com/Raveendiran-RR/simple-php-website.git</a> # timeout=10
> git config --add remote.origin.fetch +refs/heads/*:refs/remotes/origin/* # timeout=10
   > git config remote.origin.url https://github.com/Raveendiran-RR/simple-php-website.git # timeout=10
Fetching upstream changes from <a href="https://github.com/Raveendiran-RR/simple-php-website.git">https://github.com/Raveendiran-RR/simple-php-website.git</a>
   > git fetch --tags --progress <a href="https://github.com/Raveendiran-RR/simple-php-website.git">https://github.com/Raveendiran-RR/simple-php-website.git</a> +refs/heads/*:r
efs/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
  > git config core.sparsecheckout # timeout=10
  > git checkout -f 9677f44012a641d5a9546094114b35dd656d616c # timeout=10
 Commit message: "Testing Success condition"
First time build. Skipping changelog.
  > git branch -a -v --no-abbrev # timeout=10
> git checkout -b master 9677f44012a641d5a9546094114b35dd656d616c # timeout=10
```

Build Image

```
Stage Logs (Build / deploy to Test server stage )
                                                                                                      ×
Print Message -- ======Build Image and Deploy=======(self time 8ms)

₱ Print Message -- ****checking if container exists and remove it **** (self time 8ms)

Shell Script -- sudo docker build . -t smartbond/simple-php-website:v${BUILD_NUMBER}.(self time 3s)
---> 0ef91240e173
Step 2/6 : MAINTAINER Raveendiran-RR
---> Using cache
 ---> 4963c89e380c
Step 3/6 : RUN rm -f /var/www/html/*
 ---> Using cache
 ---> 98937f956477
Step 4/6 : COPY . /var/www/html/
 ---> aea74a3c902e
Step 5/6 : EXPOSE 80
 ---> Running in 7198b4633c9a
Removing intermediate container 7198b4633c9a
---> 56e7cb1d601b
Step 6/6 : CMD ["/usr/sbin/apachectl","-D","FOREGROUND"]
 ---> Running in 2c7cf35503c1
Removing intermediate container 2c7cf35503c1
 ---> 9a8ad41af1a3
Successfully built 9a8ad41af1a3
Successfully tagged smartbond/simple-php-website:v30
```

Deploy on test server



Website deployed on test server (docker container)





Products Page



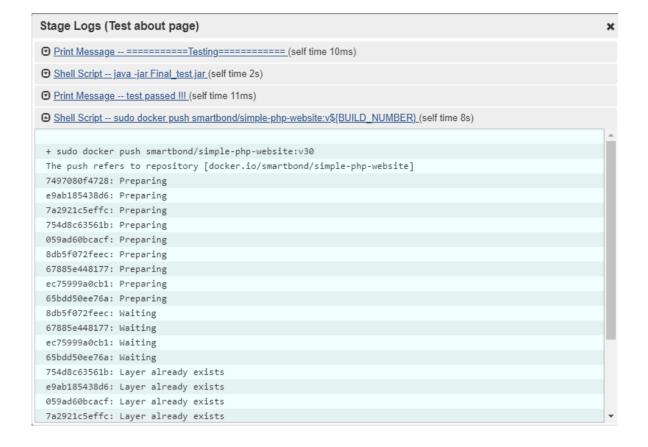
Contact page



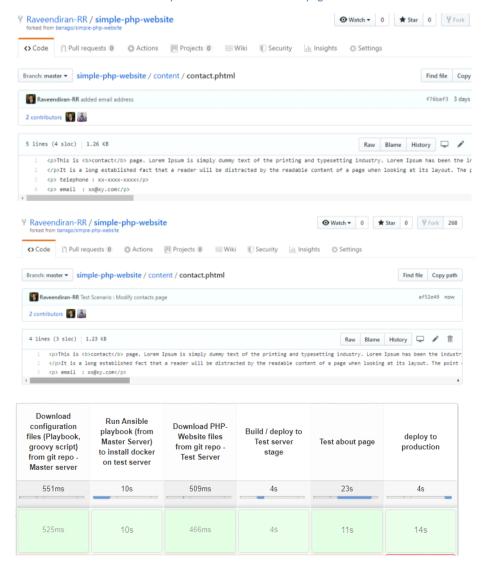




Image pushed to docker-hub



Test Scenario 1: remove the telephone number from contact page



Same results as build #1

Contact Page updated Successfully

Simple PHP Website

Home | About Us | Products | Contact

Contact

This is contact page. Lorem Ipsum is simply dummy text of the printing and typesetting industry. Lorem Ipsum has been the industry's standard dummy text ever since the 1500s, when an unknown printer took a galley of type and scrambled it to make a type specimen book. It has survived not only five centuries, but also the leap into electronic typesetting, remaining essentially unchanged. It was popularised in the 1960s with the release of Letraset sheets containing Lorem Ipsum passages, and more recently with desktop publishing software like Aldus PageMaker including versions of Lorem Ipsum.

It is a long established fact that a reader will be distracted by the readable content of a page when looking at its layout. The point of using Lorem Ipsum is that it has a more-or-less normal distribution of letters, as opposed to using 'Content here, content here, 'making it look like readable English. Many desktop publishing packages and web page editors now use Lorem Ipsum as their default model text, and a search for lorem ipsum' will uncover many web sites still in their infancy. Various versions have evolved over the years, sometimes by accident, sometimes on purpose (injected humour and the like).

email:xx@xy.com

02019 Simple PHP Website. v3.0

Creating a failure condition:

Changed the link of the page from About Us to About me

Download configuration files (Playbook, groovy script) from git repo - Master server	Run Ansible playbook (from Master Server) to install docker on test server	Download PHP- Website files from git repo - Test Server	Build / deploy to Test server stage	Test about page	deploy to production
551ms	10s	509ms	4s	23s	4s
525ms	10s	466ms	4s	11s	14s

Same output for all stages except Test About Stage

Stage Logs (Test about page)	×
⊙ Print Message =====Testing======(self time 9ms)	
<u> Shell Script java -jar Final_test.jar (</u> self time 1min 7s)	
+ java -jar Final_test.jar	
→ Print Message test failed_(self time 10ms)	
→ Shell Script sudo docker rm -f php-server true (self time 293ms)	
• Print Message container deleted (self time 9ms)	
➡ Shell Script sudo docker rmi -f ravi/proj-php:v\${BUILD_NUMBER} true (self time 299ms)	
• Print Message image deleted (self time 6ms)	

```
Stage Logs (Test about page)

Print Message -- ======Testing======= (self time 9ms)

Shell Script -- java -jar Final_test.jar (self time 1min 7s)

Print Message -- test failed (self time 10ms)

test_failed.
```

Stage Logs (Test about page)

Print Message -- ======Testing====== (self time 11ms)

Shell Script -- java -jar Final_test.jar (self time 1min 7s)

Print Message -- test failed. (self time 14ms)

Shell Script -- sudo docker rm -f website-test || true (self time 561ms)

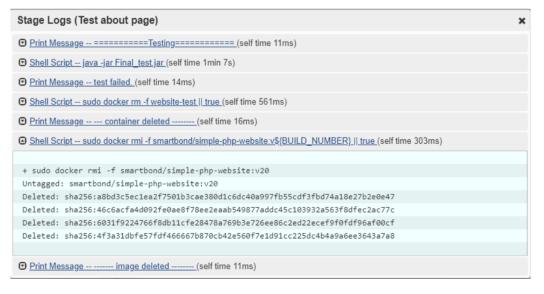
+ sudo docker rm -f website-test
website-test

Print Message -- -- container deleted --- (self time 16ms)

Shell Script -- sudo docker rmi -f smartbond/simple-php-website:v\${BUILD_NUMBER} || true (self time 303ms)

Print Message -- --- image deleted --- (self time 11ms)

Stage Logs (Test about page) Print Message -- =======Testing=======(self time 9ms) Shell Script -- java -jar Final_test.jar (self time 1min 7s) Print Message -- test failed. (self time 10ms) Shell Script -- sudo docker rm -f php-server || true (self time 293ms) Print Message -- -- container deleted ----- (self time 9ms) Shell Script -- sudo docker rmi -f ravi/proj-php:v\$(BUILD_NUMBER).|| true (self time 299ms) Print Message -- --- image deleted ----- (self time 6ms)



Stage Logs (Test about page)	×
ூ Print Message =====Testing====== (self time 9ms)	
➡ Shell Script — java -jar Final_test.jar (self time 1min 7s)	
➡ Print Message test failed. (self time 10ms)	
➡ Shell Script sudo docker rm -f php-server true (self time 293ms)	
₱ Print Message container deleted (self time 9ms)	
➡ Shell Script sudo docker rmi -f ravi/proj-php:v\${BUILD_NUMBER} true (self time 299ms)	
Print Message image deleted (self time 6ms)	
image deleted	

Stage Logs (deploy to production) Print Message -- Since tests failed, no changes in production (self time 5ms) Since tests failed, no changes in production