Devops Capstone Project – 2

You are hired as a DevOps Engineer for Analytics Pvt Ltd. This company is a Product based organization which uses Docker for their containerization needs Within the company. The final product received a lot of traction in the first few Weeks of launch. Now with the increasing demand, the organization needs to Have a platform for automating deployment, scaling and operations of application. Containers across clusters of hosts. As a DevOps Engineer, you need to implement a DevOps lifecycle such that all the requirements are implemented without any change in the Docker containers in the testing environment.

Up until now, this organization used to follow a monolithic architecture with just 2 Developers. The product is present on:
https://github.com/hshar/website.git

Following are the specifications of the lifecycle:

1. Git workflow should be implemented. Since the company follows a monolithic architecture of development, you need to take care of version control. The release should happen only on the 25th of every month.
2. CodeBuild should be triggered once the commits are made in the master branch.
3. The code should be containerized with the help of the Dockerfile. The Dockerfile should be built every time if there is a push to GitHub. Create a custom Docker image using a Dockerfile.
4. As per the requirement in the production server, you need to use the Kubernetes cluster and the containerized code from Docker Hub should be deployed with 2 replicas. Create a NodePort service and configure the same for port 30008.
5. Create a Jenkins Pipeline script to accomplish the above task.
6. For configuration management of the infrastructure, you need to deploy the configuration on the servers to install necessary software and configurations.
7. Using Terraform, accomplish the task of infrastructure creation in the AWS cloud provider.

Architectural Advice:
Softwares to be installed on the respective machines using configuration management.

Steps and Commands

- Create 1 instance names them as master
- Connect to master instance
- Update the machine by running the command **sudo apt update**
- Next create a file to install terraform by running the command **sudo nano (provide the name for creating file.sh)**
- Provide the necessary command to install terraform
    a) wget -O- https://apt.releases.hashicorp.com/gpg | sudo gpg --dearmor -o /usr/share/keyrings/hashicorp-archive-keyring.gpg
    b) echo "deb [signed-by=/usr/share/keyrings/hashicorp-archive-keyring.gpg] https://apt.releases.hashicorp.com $(lsb_release -cs) main" | sudo tee /etc/apt/sources.list.d/hashicorp.list
    c) sudo apt update && sudo apt install terraform –y
- save and exit from the created file
- To run the commands which was provided in file by running the command **sudo bash (provide the name for created file.sh)**
- To see the terraform installed in the machine by running the command **terraform –version**
- Next create a file for providing script for creating resource by running the command **sudo nano (provide the name for creating file.tf)**
- Provide the necessary script in created file to create 2 EC2 instance
- save and exit from the created file
- To see the created file by running the command **ls**
- Next to initialize terraform by running the command **terraform init**
- And next run the command **terraform plan**
- To create the necessary resource by running the command **terraform apply**
- And also provide **yes** for confirmation.
- Now the new 2 EC2 instance will be created in the name of Kmaster and kslave by the terraform.
- Connect to kmaster and kslave instance
- Update both the machine by running the command **sudo apt update**
- The python3 is pre-installed in Ubuntu machine to see the python3 installed in the both the kmaster and kslave machine by running the command **python3 --version**
- Navigate to master instance
- To install Ansible by running the following command
    a) sudo apt install software-properties-common
    b) sudo add-apt-repository --yes --update ppa:ansible/ansible
    c) **sudo apt install ansible –y**

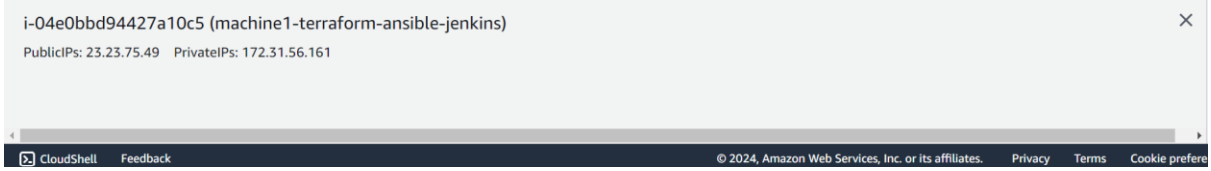
- To see the ansible installed in the machine by running the command **ansible --version**
- To create a password-less SSH authentication connection between master and slave go inside the .ssh by running the command **cd .ssh/**
- Next create a key by running the command **ssh-keygen**
- To see the created file by running the command **ls**
- Copy the content of the id_ras.pub from master machine which is created and paste in the authorized_key in both the salve machine
- Next copy the private IP address of both kmaster and mslave machine and past in the host file in the master machine and provide the name for each private IP kmaster and slave
- Next create a file to provide necessary command to install in master machine by running the command sudo nano master.sh
- Provide the necessary command to install Jenkins, Java and docker in master.sh file
- Next create a file to provide necessary command to install in kmaster and kslave machine by running the command sudo nano slave.sh
- Provide the necessary command to install Java, docker and Kubernetes in slave.sh file
- To create the playbook by running the command **sudo nano play1.yaml**
- Provide the necessary script and mention the master.sh and slave.sh file in play1.yaml
- save and exit from the created file
- To see the created file by running the command **ls**
- Next to do the syntax check by running the command **ansible-playbook play1.yaml --syntax --check**
- And next run the command **ansible-playbook play1.yaml --check**
- Next to execute the playbook by running the command **ansible-playbook play1.yaml**
- Navigate to kmaster instance
- Next In order to generate a token and to make the master machines as administrator by running the command **sudo kubeadm init --apiserver-advertise-address=(privateip of master)**
- Navigate to kslave instance
- Next copy the token generated in mater and paste in both the kslave
- Navigate to kmaster instance
- And next run the following in master machine command
    a) **mkdir -p $HOME/.kube**
    b) **sudo cp -i /etc/kubernetes/admin.conf $HOME/.kube/config**
    c) **sudo chown $(id -u):$(id -g) $HOME/.kube/config**
    d) **curl https://raw.githubusercontent.com/projectcalico/calico/v3.27.2/manifests/calico.yaml -O**

e) **kubectl apply -f calico.yaml**

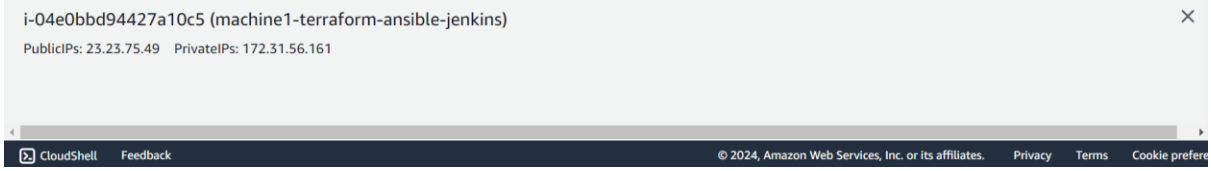
- Next to check the list of node by running the command **kubectl get nodes**
- Navigate to master instance
- Now to see the Jenkins page put the (**public IP Address:8080)** of the master instance in browser Jenkins pages will be reflected
- Navigate to Jenkins page in browser
- Provide the necessary configuration
- Provide the user name, password and email address in Jenkins page
- Now the Jenkins dashboard page will be reflected
- Go inside manage Jenkins and click the nodes
- To create test node
    a) Provide the name for the node as kmaster
    b) Provide /home/Ubuntu/Jenkins/ in the remote root directory
    c) Select launch agents via SSH in launch method
    d) Provide the private IP DNS name of kmaster instance in hosts
    e) Provide the credentials and necessary configuration
    f) Finally click on save
- To create prod node
    a) Provide the name for the node as kslave
    b) Provide /home/Ubuntu/Jenkins/ in the remote root directory
    c) Select launch agents via SSH in launch method
    d) Provide the private IP DNS name of kslave instance in hosts
    e) Provide the credentials and necessary configuration
    f) Finally click on save
- Navigate to Github account of Abode software
    a) Click the fork to have this application in our Github account repository
    b) Select the our Github account in owner and provide name for repository which is going to be created with application
    c) Finally the application which is presented in Analytics Pvt Ltd will be reflected in our Github account under the repository
- Navigate to master instance
- To clone the file from our repository by running the command **git clone (repository URL link)**
- Now the master branch will be created and to see the master branch by running the command **git branch**
- To create Docker file by running the command **sudo nano dockerfile**
- Provide the necessary script in dockerfile
- Save and exit from the dockerfile

- Create a file for providing script for deployment by running the command **sudo nano deployment.yaml**
- Provide the necessary script for for deployment
- Create a file for providing script for creating for service by running the command **sudo nano service.yaml**
- Provide the necessary script for for service
- To stage files by running the command **git add dockerfile,**
- And to check the files which are in status by running the command **git status**
- To push the files to commit stage by running command **git commit –m "necessary notes"**
- Navigate to Jenkins page
- To create the job click on new item
- To create the job1-production
    a. Provide the name for the Job1-developbranch
    b. Select the pipeline method and click ok
    c. Provide the **(repository URL link)** in the Github project
    d. Provide the necessary pipeline script
    e. Navigate to github repository which was created
    f. To create the webhook by following steps
        i. Click the settings of created repository
        ii. Go inside the webhooks and click the add webhook
        iii. Provide the Jenkins page URL/github-webhook/
        iv. Finally click on add webhook
    g. Select the Github hook trigger for GITScm polling in build triggers
- Finally click apply and save the Job1-production will be created
- Navigate to master instance
- To push the master and files into the repository by running the command **git push origin master**
- Provide the username and password token which was assigned by github
- Now the files which was created in master machine will be reflected in Github repository in master branch
- Navigate to Jenkins page
- Now the job1-production which was created will be triggered and run in the kmaster node which was created because push was made to repository in master branch
- Now if we put the (**public IP address:30008)** of kmaster instance in the Brower the Analytics Pvt Ltd application page will be reflected.
- Now if we put the (**public IP address:30008)** of kslave instance in the Brower the Analytics Pvt Ltd application page will be reflected

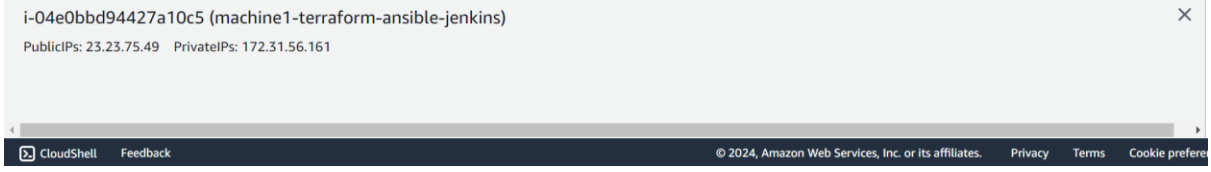
```
ubuntu@ip-172-31-56-161:~$  sudo apt update
```




```
ubuntu@ip-172-31-56-161:~$ wget -O- https://apt.releases.hashicorp.com/gpg | sudo gpg --dearmor -o /usr/share/keyrings/hashicorp-archive-keyrin
gpg
```




```
ubuntu@ip-172-31-56-161:~$ wget -O- https://apt.releases.hashicorp.com/gpg | sudo gpg --dearmor -o /usr/share/keyrings/hashicorp-archive-keyrin
gpg
--2024-04-20 06:28:08--  https://apt.releases.hashicorp.com/gpg
Resolving apt.releases.hashicorp.com (apt.releases.hashicorp.com)... 99.84.108.36, 99.84.108.40, 99.84.108.74, ...
Connecting to apt.releases.hashicorp.com (apt.releases.hashicorp.com)|99.84.108.36|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 3980 (3.9K) [binary/octet-stream]
Saving to: 'STDOUT'

-                                   100%[=================================================================>]   3.89K  --.-KB/s    in 0s

2024-04-20 06:28:08 (148 MB/s) - written to stdout [3980/3980]

ubuntu@ip-172-31-56-161:~$ echo "deb [signed-by=/usr/share/keyrings/hashicorp-archive-keyring.gpg] https://apt.releases.hashicorp.com $(lsb_rel
se -cs) main" | sudo tee /etc/apt/sources.list.d/hashicorp.list
```



```
ubuntu@ip-172-31-56-161:~$ wget -O- https://apt.releases.hashicorp.com/gpg | sudo gpg --dearmor -o /usr/share/keyrings/hashicorp-archive-keyrin
gpg
--2024-04-20 06:28:08--  https://apt.releases.hashicorp.com/gpg
Resolving apt.releases.hashicorp.com (apt.releases.hashicorp.com)... 99.84.108.36, 99.84.108.40, 99.84.108.74, ...
Connecting to apt.releases.hashicorp.com (apt.releases.hashicorp.com)|99.84.108.36|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 3980 (3.9K) [binary/octet-stream]
Saving to: 'STDOUT'

-                                   100%[=================================================================>]   3.89K  --.-KB/s    in 0s

2024-04-20 06:28:08 (148 MB/s) - written to stdout [3980/3980]

ubuntu@ip-172-31-56-161:~$ echo "deb [signed-by=/usr/share/keyrings/hashicorp-archive-keyring.gpg] https://apt.releases.hashicorp.com $(lsb_rel
se -cs) main" | sudo tee /etc/apt/sources.list.d/hashicorp.list
deb [signed-by=/usr/share/keyrings/hashicorp-archive-keyring.gpg] https://apt.releases.hashicorp.com focal main
ubuntu@ip-172-31-56-161:~$ sudo apt update && sudo apt install terraform -y
```

i-04e0bbd94427a10c5 (machine1-terraform-ansible-jenkins)

PublicIPs: 23.23.75.49 PrivateIPs: 172.31.56.161


```
ubuntu@ip-172-31-56-161:~$ terraform --version
Terraform v1.8.1
on linux_amd64
ubuntu@ip-172-31-56-161:~$
```

i-04e0bbd94427a10c5 (machine1-terraform-ansible-jenkins)

PublicIPs: 23.23.75.49 PrivateIPs: 172.31.56.161

CloudShell Feedback © 2024, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie prefere

```
ubuntu@ip-172-31-56-161:~$ terraform --version
Terraform v1.8.1
on linux_amd64
ubuntu@ip-172-31-56-161:~$ sudo nano main.tf
```

i-04e0bbd94427a10c5 (machine1-terraform-ansible-jenkins)

PublicIPs: 23.23.75.49 PrivateIPs: 172.31.56.161

CloudShell Feedback © 2024, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie prefere

```
  GNU nano 4.8                                  main.tf                                       Modifi
provider "aws" {
  secret_key = "3QClfm+WQsMCaMhi+G/ASkzCqCxqskfGYjGXPAls"
  access_key = "AKIA47CRV22SOLQDENDG"
  region = "us-east-1"
}
resource "aws_instance" "K8-M" {
  ami = "ami-0cd59ecaf368e5ccf"
  instance_type = "t2.medium"
  key_name = "new"
  tags = {
    Name = "Kmaster"
  }
}

^G Get Help  ^O Write Out  ^W Where Is  ^K Cut Text  ^J Justify  ^C Cur Pos  M-U Undo  M-A Mark Text  M-] To Bracke
^X Exit      ^R Read File  ^\ Replace   ^U Paste Text ^T To Spell  ^_ Go To Line M-E Redo  M-6 Copy Text  ^Q Where Was
```

i-04e0bbd94427a10c5 (machine1-terraform-ansible-jenkins)

PublicIPs: 23.23.75.49 PrivateIPs: 172.31.56.161

CloudShell Feedback © 2024, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie prefere

```
  GNU nano 4.8                                  main.tf                                       Modifi
  tags = {
    Name = "Kmaster"
  }
}

resource "aws_instance" "K8-S1" {
  ami = "ami-0cd59ecaf368e5ccf"
  instance_type = "t2.medium"
  key_name = "new"
  tags = {
    Name = "Kslave1"
  }
}

^G Get Help  ^O Write Out  ^W Where Is  ^K Cut Text  ^J Justify  ^C Cur Pos  M-U Undo  M-A Mark Text  M-] To Bracke
^X Exit      ^R Read File  ^\ Replace   ^U Paste Text ^T To Spell  ^_ Go To Line M-E Redo  M-6 Copy Text  ^Q Where Was
```

i-04e0bbd94427a10c5 (machine1-terraform-ansible-jenkins)

PublicIPs: 23.23.75.49 PrivateIPs: 172.31.56.161

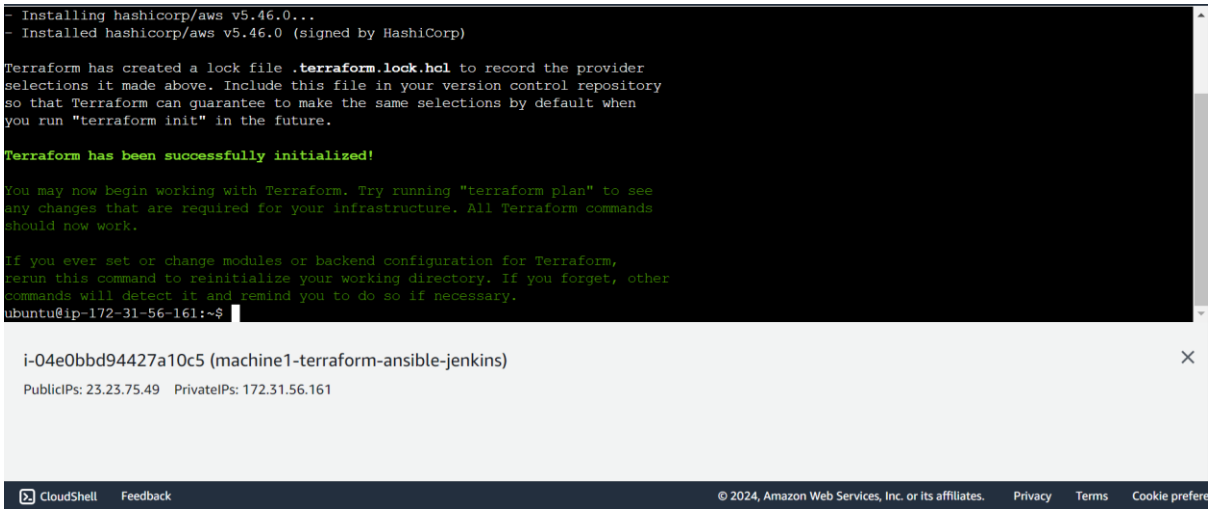
CloudShell Feedback © 2024, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie prefere

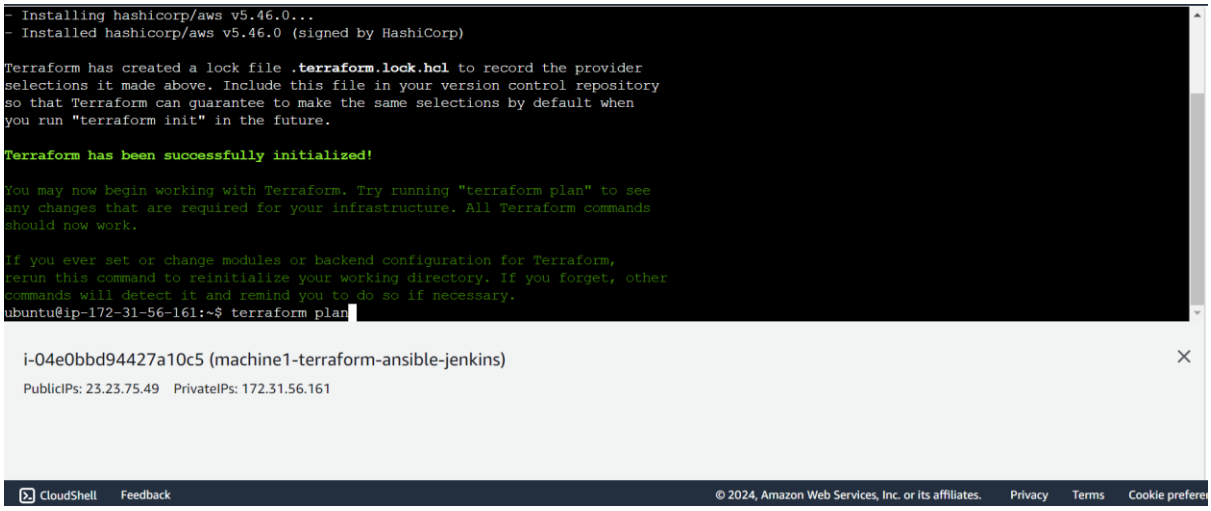
```
ubuntu@ip-172-31-56-161:~$ terrafrom init
```

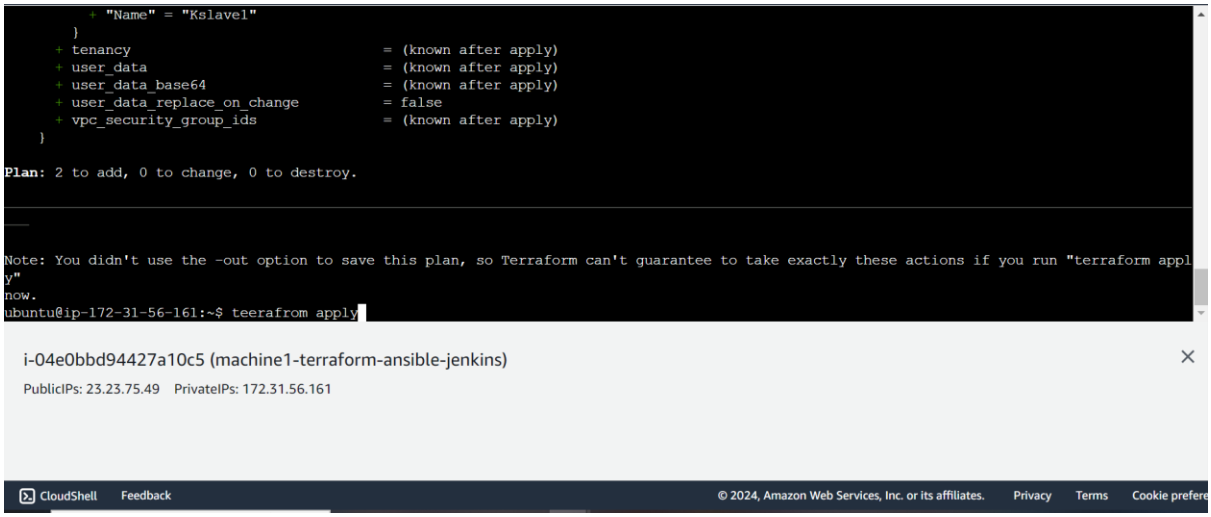
i-04e0bbd94427a10c5 (machine1-terraform-ansible-jenkins)

PublicIPs: 23.23.75.49 PrivateIPs: 172.31.56.161

CloudShell Feedback © 2024, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie prefere


- Installing hashicorp/aws v5.46.0...
- Installed hashicorp/aws v5.46.0 (signed by HashiCorp)
Terraform has created a lock file .terraform.lock.hcl to record the provider
selections it made above. Include this file in your version control repository
so that Terraform can guarantee to make the same selections by default when
you run "terraform init" in the future.
Terraform has been successfully initialized!
You may now begin working with Terraform. Try running "terraform plan" to see
any changes that are required for your infrastructure. All Terraform commands
should now work.
If you ever set or change modules or backend configuration for Terraform,
rerun this command to reinitialize your working directory. If you forget, other
commands will detect it and remind you to do so if necessary.
ubuntu@ip-172-31-56-161:~$
i-04e0bbd94427a10c5 (machine1-terraform-ansible-jenkins)
PublicIPs: 23.23.75.49 PrivateIPs: 172.31.56.161
CloudShell
Feedback
© 2024, Amazon Web Services, Inc. or its affiliates.
Privacy
Terms
Cookie prefere


- Installing hashicorp/aws v5.46.0...
- Installed hashicorp/aws v5.46.0 (signed by HashiCorp)
Terraform has created a lock file .terraform.lock.hcl to record the provider
selections it made above. Include this file in your version control repository
so that Terraform can guarantee to make the same selections by default when
you run "terraform init" in the future.
Terraform has been successfully initialized!
You may now begin working with Terraform. Try running "terraform plan" to see
any changes that are required for your infrastructure. All Terraform commands
should now work.
If you ever set or change modules or backend configuration for Terraform,
rerun this command to reinitialize your working directory. If you forget, other
commands will detect it and remind you to do so if necessary.
ubuntu@ip-172-31-56-161:~$ terraform plan
i-04e0bbd94427a10c5 (machine1-terraform-ansible-jenkins)
PublicIPs: 23.23.75.49 PrivateIPs: 172.31.56.161
CloudShell
Feedback
© 2024, Amazon Web Services, Inc. or its affiliates.
Privacy
Terms
Cookie prefere


+ "Name" = "Kslavel"
}
+ tenancy = (known after apply)
+ user_data = (known after apply)
+ user_data_base64 = (known after apply)
+ user_data_replace_on_change = false
+ vpc_security_group_ids = (known after apply)
}
Plan: 2 to add, 0 to change, 0 to destroy.
Note: You didn't use the -out option to save this plan, so Terraform can't guarantee to take exactly these actions if you run "terraform appl
y"
now.
ubuntu@ip-172-31-56-161:~$ teerafrom apply
i-04e0bbd94427a10c5 (machine1-terraform-ansible-jenkins)
PublicIPs: 23.23.75.49 PrivateIPs: 172.31.56.161
CloudShell
Feedback
© 2024, Amazon Web Services, Inc. or its affiliates.
Privacy
Terms
Cookie prefere

```
      }
    + tags_all                              = {
        + "Name" = "Kslave1"
      }
    + tenancy                               = (known after apply)
    + user_data                             = (known after apply)
    + user_data_base64                      = (known after apply)
    + user_data_replace_on_change           = false
    + vpc_security_group_ids                = (known after apply)
  }

Plan: 2 to add, 0 to change, 0 to destroy.

Do you want to perform these actions?
  Terraform will perform the actions described above.
  Only 'yes' will be accepted to approve.

  Enter a value: yes
```

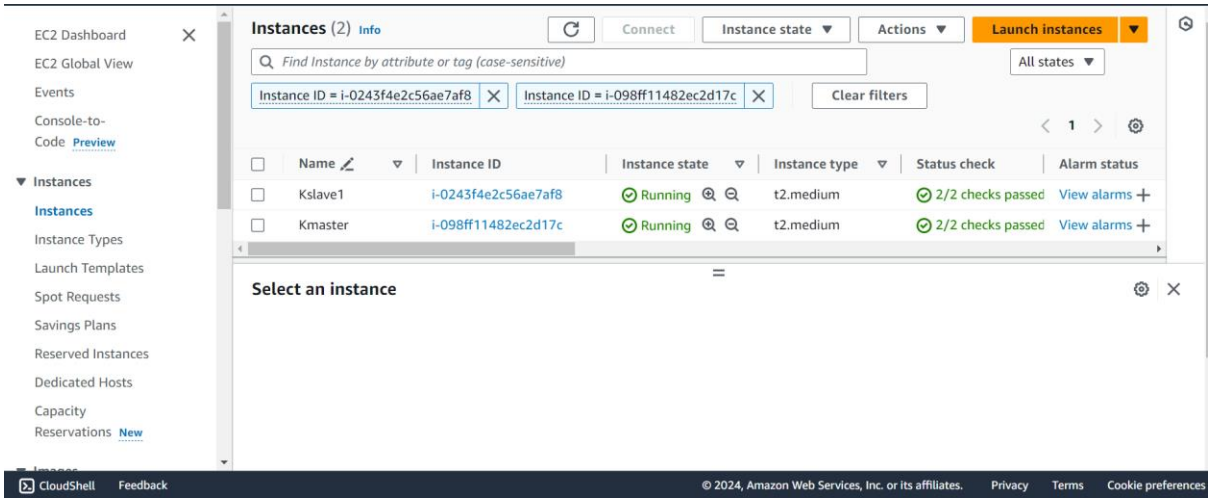
i-04e0bbd94427a10c5 (machine1-terraform-ansible-jenkins)

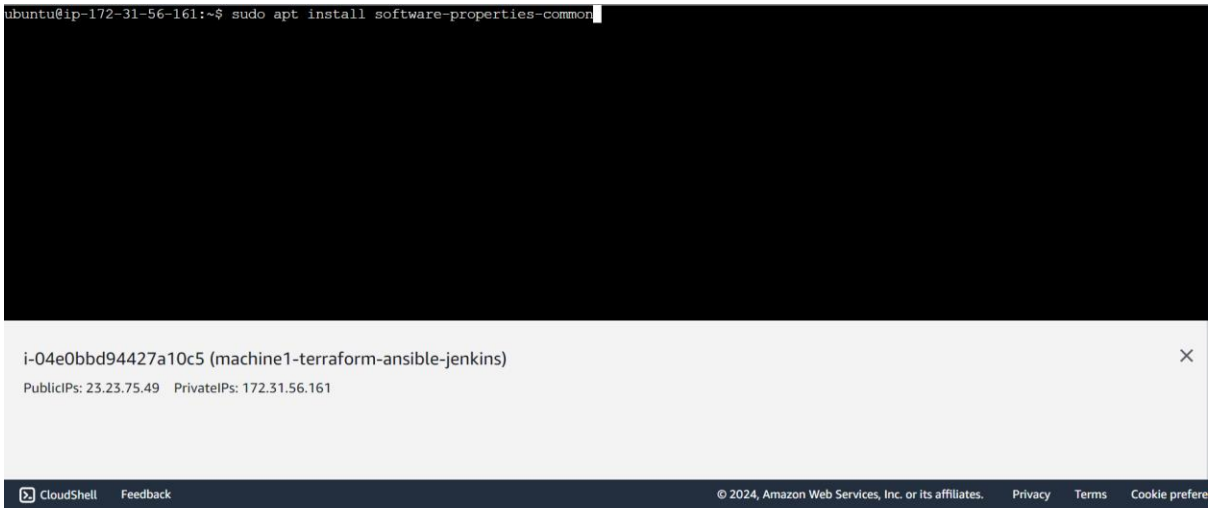
PublicIPs: 23.23.75.49 PrivateIPs: 172.31.56.161

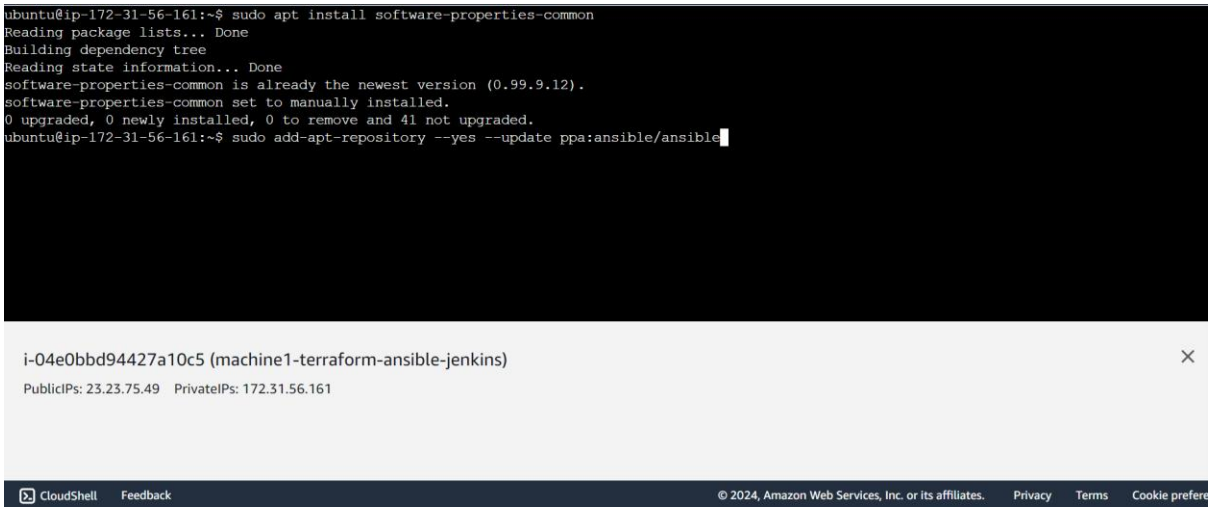

```
  Terraform will perform the actions described above.
  Only 'yes' will be accepted to approve.

  Enter a value: yes

aws_instance.K8-S1: Creating...
aws_instance.K8-M: Creating...
aws_instance.K8-M: Still creating... [10s elapsed]
aws_instance.K8-S1: Still creating... [10s elapsed]
aws_instance.K8-S1: Still creating... [20s elapsed]
aws_instance.K8-M: Still creating... [20s elapsed]
aws_instance.K8-M: Still creating... [30s elapsed]
aws_instance.K8-S1: Still creating... [30s elapsed]
aws_instance.K8-S1: Creation complete after 31s [id=i-0243f4e2c56ae7af8]
aws_instance.K8-M: Creation complete after 32s [id=i-098ff11482ec2d17c]

Apply complete! Resources: 2 added, 0 changed, 0 destroyed.
ubuntu@ip-172-31-56-161:~$
```

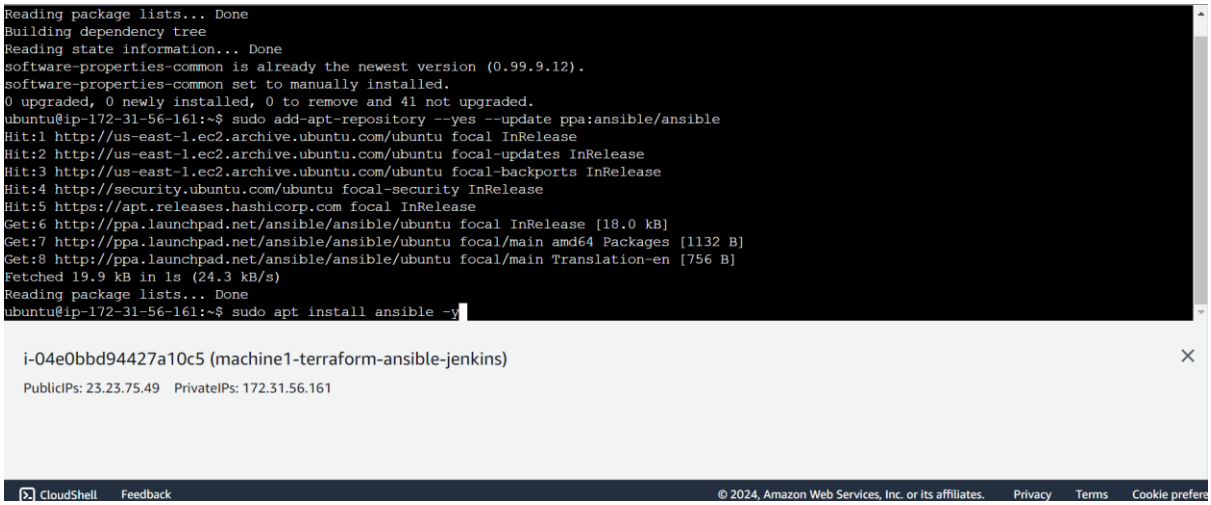
i-04e0bbd94427a10c5 (machine1-terraform-ansible-jenkins)

PublicIPs: 23.23.75.49 PrivateIPs: 172.31.56.161




ubuntu@ip-172-31-56-161:~$ sudo apt install software-properties-common
i-04e0bbd94427a10c5 (machine1-terraform-ansible-jenkins)
PublicIPs: 23.23.75.49 PrivateIPs: 172.31.56.161
CloudShell
Feedback
© 2024, Amazon Web Services, Inc. or its affiliates.
Privacy
Terms
Cookie prefere


ubuntu@ip-172-31-56-161:~$ sudo apt install software-properties-common
Reading package lists... Done
Building dependency tree
Reading state information... Done
software-properties-common is already the newest version (0.99.9.12).
software-properties-common set to manually installed.
0 upgraded, 0 newly installed, 0 to remove and 41 not upgraded.
ubuntu@ip-172-31-56-161:~$ sudo add-apt-repository --yes --update ppa:ansible/ansible
i-04e0bbd94427a10c5 (machine1-terraform-ansible-jenkins)
PublicIPs: 23.23.75.49 PrivateIPs: 172.31.56.161
CloudShell
Feedback
© 2024, Amazon Web Services, Inc. or its affiliates.
Privacy
Terms
Cookie prefere


Reading package lists... Done
Building dependency tree
Reading state information... Done
software-properties-common is already the newest version (0.99.9.12).
software-properties-common set to manually installed.
0 upgraded, 0 newly installed, 0 to remove and 41 not upgraded.
ubuntu@ip-172-31-56-161:~$ sudo add-apt-repository --yes --update ppa:ansible/ansible
Hit:1 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal InRelease
Hit:2 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal-updates InRelease
Hit:3 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal-backports InRelease
Hit:4 http://security.ubuntu.com/ubuntu focal-security InRelease
Hit:5 https://apt.releases.hashicorp.com focal InRelease
Get:6 http://ppa.launchpad.net/ansible/ansible/ubuntu focal InRelease [18.0 kB]
Get:7 http://ppa.launchpad.net/ansible/ansible/ubuntu focal/main amd64 Packages [1132 B]
Get:8 http://ppa.launchpad.net/ansible/ansible/ubuntu focal/main Translation-en [756 B]
Fetched 19.9 kB in 1s (24.3 kB/s)
Reading package lists... Done
ubuntu@ip-172-31-56-161:~$ sudo apt install ansible -y
i-04e0bbd94427a10c5 (machine1-terraform-ansible-jenkins)
PublicIPs: 23.23.75.49 PrivateIPs: 172.31.56.161
CloudShell
Feedback
© 2024, Amazon Web Services, Inc. or its affiliates.
Privacy
Terms
Cookie prefere

```
ubuntu@ip-172-31-56-161:~$ ansible --version
ansible [core 2.12.10]
  config file = /etc/ansible/ansible.cfg
  configured module search path = ['/home/ubuntu/.ansible/plugins/modules', '/usr/share/ansible/plugins/modules']
  ansible python module location = /usr/lib/python3/dist-packages/ansible
  ansible collection location = /home/ubuntu/.ansible/collections:/usr/share/ansible/collections
  executable location = /usr/bin/ansible
  python version = 3.8.10 (default, Nov 22 2023, 10:22:35) [GCC 9.4.0]
  jinja version = 2.10.1
  libyaml = True
ubuntu@ip-172-31-56-161:~$
```

i-04e0bbd94427a10c5 (machine1-terraform-ansible-jenkins)

PublicIPs: 23.23.75.49 PrivateIPs: 172.31.56.161


```
ubuntu@ip-172-31-60-100:~$ sudo apt update
```

i-098ff11482ec2d17c (Kmaster)

PublicIPs: 54.237.127.128 PrivateIPs: 172.31.60.100


```
ubuntu@ip-172-31-59-168:~$ sudo apt update
```

i-0243f4e2c56ae7af8 (Kslave1)

PublicIPs: 34.204.91.175 PrivateIPs: 172.31.59.168

```
ubuntu@ip-172-31-56-161:~$ ssh-keygen
```

i-04e0bbd94427a10c5 (machine1-terraform-ansible-jenkins)

PublicIPs: 23.23.75.49 PrivateIPs: 172.31.56.161


```
Enter same passphrase again:
Your identification has been saved in /home/ubuntu/.ssh/id_rsa
Your public key has been saved in /home/ubuntu/.ssh/id_rsa.pub
The key fingerprint is:
SHA256:CYg0RRrdPbXCT2dqgPHDkXxQ6RywSmHKboYTElozfgg ubuntu@ip-172-31-56-161
The key's randomart image is:
+---[RSA 3072]----+
|E B+o.+o+*o.     |
|.* X.+.B=o+.     |
|o * = + O=o.o    |
| . = . o Bo+     |
|  o + . S +      |
|   +     .       |
|                 |
|                 |
|                 |
+----[SHA256]-----+
ubuntu@ip-172-31-56-161:~$
```

i-04e0bbd94427a10c5 (machine1-terraform-ansible-jenkins)

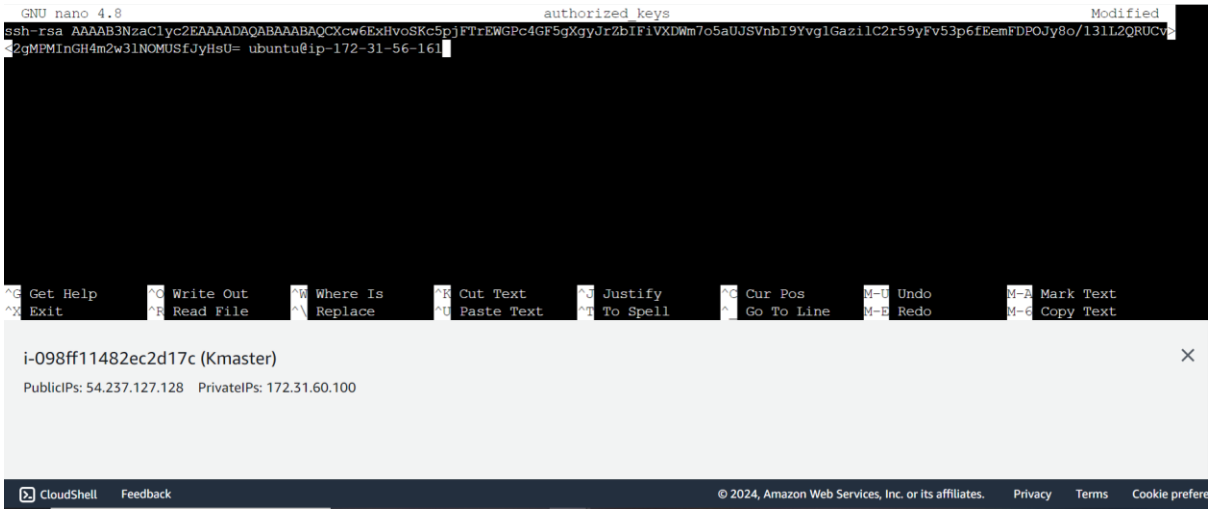
PublicIPs: 23.23.75.49 PrivateIPs: 172.31.56.161


```
ubuntu@ip-172-31-56-161:~/.ssh$ ls
authorized_keys  id_rsa  id_rsa.pub
ubuntu@ip-172-31-56-161:~/.ssh$ cat id_rsa.pub
ssh-rsa AAAAB3NzaC1yc2EAAAADAQABAAABgQD3LKBj1TfpSgFp/T65VP4HIpOdBNQ68g4iul+DCRuBpAw0cNpitLZJqtWRz9dKOZJBPSYS+OIoBNcgj/JKlu07khlGE3qdW3Hh4C0xG
UGMc3dVYWkBwPVM0gCW2iFeUXtxdIppcbDxij2G+e1C1JTBbXw9gdKs/cLVh5PMGujzDe9Hi83dA/GYRl+zGv0e1xp9NUB1a0vYu4UygjlXmkjlbd5NbFBSfMW9DgH3uD98qw0H2Eb7Xh
mgrvglQ7UF21UXH3qxlNZ+THjvbAqVrwRQ3Y6MBGYFNsc2fdNsByCdoZ18IhpOLvG9HizByWld0d9Sg5p05wbGATfjDIRJq58fsdseuwZihGKa9BaPtj0OZLvL2WxBEGpqjnY266Hkp+o
4+n/2hqcbQZMLsF4CleamMh+ZWZXVsgqlYcQOih/yWnTx2P76WkiiFOM+5Kov3ViFQV/s/plnbjIiouwW4UrSjlxPlaYQg3ykI73zw2gMPMInGH4m2w3lNOMUSfJyHsU= ubuntu@ip-1
72-31-56-161
ubuntu@ip-172-31-56-161:~/.ssh$
```

i-04e0bbd94427a10c5 (machine1-terraform-ansible-jenkins)

PublicIPs: 23.23.75.49 PrivateIPs: 172.31.56.161


ubuntu@ip-172-31-60-100:~/.ssh$ ls
authorized_keys
ubuntu@ip-172-31-60-100:~/.ssh$ sudo nano authorized_key
i-098ff11482ec2d17c (Kmaster)
PublicIPs: 54.237.127.128 PrivateIPs: 172.31.60.100
CloudShell Feedback
© 2024, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie prefere


GNU nano 4.8 authorized_keys Modified
ssh-rsa AAAAB3NzaC1yc2EAAAADAQABAAABAQCXcw6ExHvoSKc5pjFTrEWGPc4GF5gXgyJrZbIFiVXDWm7o5aUJSVnbI9YvglGazilC2r59yFv53p6fEemFDPOJy8o/13lL2QRUCv
2gMPMInGH4m2w3lNOMUSfJyHsU= ubuntu@ip-172-31-56-161
^G Get Help ^O Write Out ^W Where Is ^K Cut Text ^J Justify ^C Cur Pos M-U Undo M-A Mark Text
^X Exit ^R Read File ^\ Replace ^U Paste Text ^T To Spell ^_ Go To Line M-E Redo M-6 Copy Text
i-098ff11482ec2d17c (Kmaster)
PublicIPs: 54.237.127.128 PrivateIPs: 172.31.60.100
CloudShell Feedback
© 2024, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie prefere


ubuntu@ip-172-31-59-168:~$ cd .ssh/
ubuntu@ip-172-31-59-168:~/.ssh$ ls
authorized_keys
ubuntu@ip-172-31-59-168:~/.ssh$ sudo nano authorized_keys
ubuntu@ip-172-31-59-168:~/.ssh$
i-0243f4e2c56ae7af8 (Kslave1)
PublicIPs: 34.204.91.175 PrivateIPs: 172.31.59.168
CloudShell Feedback
© 2024, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie prefere

```
 GNU nano 4.8                                authorized_keys                                      Modified
ssh-rsa AAAAB3NzaC1yc2EAAAADAQABAAABAQCXcw6ExHvoSKc5pjFTrEWGPc4GF5gXgyJrZbIFiVXDWm7o5aUJSVnbI9YvglGazilC2r59yFv53p6fEemFDPOJy8o/13lL2QRUCvk6>
<H4m2w3lNOMUSfJyHsU= ubuntu@ip-172-31-56-161

^G Get Help  ^O Write Out  ^W Where Is  ^K Cut Text  ^J Justify  ^C Cur Pos  M-U Undo  M-A Mark Text  M-] To Bracket
^X Exit      ^R Read File  ^\ Replace   ^U Paste Text ^T To Spell  ^_ Go To Line M-E Redo  M-6 Copy Text  ^Q Where Was
```

i-0243f4e2c56ae7af8 (Kslave1)

PublicIPs: 34.204.91.175 PrivateIPs: 172.31.59.168


```
ubuntu@ip-172-31-56-161:~$ cd /etc/ansible
ubuntu@ip-172-31-56-161:/etc/ansible$
```

i-04e0bbd94427a10c5 (machine1-terraform-ansible-jenkins)

PublicIPs: 23.23.75.49 PrivateIPs: 172.31.56.161


```
ubuntu@ip-172-31-56-161:~$ cd /etc/ansible
ubuntu@ip-172-31-56-161:/etc/ansible$ sudo nano machin1.sh
```

i-04e0bbd94427a10c5 (machine1-terraform-ansible-jenkins)

PublicIPs: 23.23.75.49 PrivateIPs: 172.31.56.161

CloudShell Feedback © 2024, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie prefere

```
 GNU nano 4.8                                machin1.sh                                Modified
sudo apt-get install openjdk-11-jdk -y
sudo wget -O /usr/share/keyrings/jenkins-keyring.asc \
  https://pkg.jenkins.io/debian-stable/jenkins.io-2023.key
echo deb [signed-by=/usr/share/keyrings/jenkins-keyring.asc] \
  https://pkg.jenkins.io/debian-stable binary/ | sudo tee \
  /etc/apt/sources.list.d/jenkins.list > /dev/null
sudo apt-get update
sudo apt-get install jenkins -y
sudo apt-get install docker.io -y

^G Get Help  ^O Write Out  ^W Where Is  ^K Cut Text  ^J Justify  ^C Cur Pos  M-U Undo  M-A Mark Text  M-] To Bracket
^X Exit      ^R Read File  ^\ Replace   ^U Paste Text ^T To Spell  ^_ Go To Line M-E Redo  M-6 Copy Text  ^Q Where Was
```

i-04e0bbd94427a10c5 (machine1-terraform-ansible-jenkins)

PublicIPs: 23.23.75.49 PrivateIPs: 172.31.56.161

CloudShell Feedback © 2024, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie prefere

```
ubuntu@ip-172-31-56-161:~$ cd /etc/ansible
ubuntu@ip-172-31-56-161:/etc/ansible$ sudo nano machin1.sh
ubuntu@ip-172-31-56-161:/etc/ansible$ ls
ansible.cfg  hosts  machin1.sh  roles
ubuntu@ip-172-31-56-161:/etc/ansible$ sudo nano slavel_k8master.sh
```

i-04e0bbd94427a10c5 (machine1-terraform-ansible-jenkins)

PublicIPs: 23.23.75.49 PrivateIPs: 172.31.56.161

CloudShell Feedback © 2024, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie prefere

```
 GNU nano 4.8                              slavel_k8master.sh                          Modified
sudo apt install openjdk-11-jdk -y
sudo apt-get update
sudo apt-get update -y
sudo apt install docker.io -y
sudo apt-get install -y apt-transport-https ca-certificates curl gpg
sudo mkdir -p -m 755 /etc/apt/keyrings
curl -fsSL https://pkgs.k8s.io/core:/stable:/v1.28/deb/Release.key | sudo gpg --dearmor -o /etc/apt/keyrings/kubernetes-apt-keyring.gpg
echo 'deb [signed-by=/etc/apt/keyrings/kubernetes-apt-keyring.gpg] https://pkgs.k8s.io/core:/stable:/v1.28/deb/ /' | sudo tee /etc/apt/sourc
sudo apt-get update
sudo apt-get install -y kubelet kubeadm kubectl
sudo systemctl enable --now kubelet

^G Get Help  ^O Write Out  ^W Where Is  ^K Cut Text  ^J Justify  ^C Cur Pos  M-U Undo  M-A Mark Text  M-] To Bracket
^X Exit      ^R Read File  ^\ Replace   ^U Paste Text ^T To Spell  ^_ Go To Line M-E Redo  M-6 Copy Text  ^Q Where Was
```

i-04e0bbd94427a10c5 (machine1-terraform-ansible-jenkins)

PublicIPs: 23.23.75.49 PrivateIPs: 172.31.56.161

CloudShell Feedback © 2024, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie prefere

```
ubuntu@ip-172-31-56-161:/etc/ansible$ ls
ansible.cfg  hosts  machin1.sh  roles  slave1_k8master.sh
ubuntu@ip-172-31-56-161:/etc/ansible$
```

i-04e0bbd94427a10c5 (machine1-terraform-ansible-jenkins)

PublicIPs: 23.23.75.49 PrivateIPs: 172.31.56.161


```
ubuntu@ip-172-31-56-161:/etc/ansible$ ls
ansible.cfg  hosts  machin1.sh  roles  slave1_k8master.sh
ubuntu@ip-172-31-56-161:/etc/ansible$ sudo nano slave2_k8slave.sh
```

i-04e0bbd94427a10c5 (machine1-terraform-ansible-jenkins)

PublicIPs: 23.23.75.49 PrivateIPs: 172.31.56.161


```
 GNU nano 4.8                                slave2_k8slave.sh
sudo apt install openjdk-11-jdk -y
sudo apt install docker.io -y
sudo apt-get update
sudo apt install docker.io -y
sudo apt-get install -y apt-transport-https ca-certificates curl gpg
sudo mkdir -p -m 755 /etc/apt/keyrings
curl -fsSL https://pkgs.k8s.io/core:/stable:/v1.28/deb/Release.key | sudo gpg --dearmor -o /etc/apt/keyrings/kubernetes-apt-keyring.gpg
echo 'deb [signed-by=/etc/apt/keyrings/kubernetes-apt-keyring.gpg] https://pkgs.k8s.io/core:/stable:/v1.28/deb/ /' | sudo tee /etc/apt/sou
sudo apt-get update
sudo apt-get install -y kubelet kubeadm kubectl
sudo systemctl enable --now kubelet


                            [ Read 11 lines ]
^G Get Help  ^O Write Out  ^W Where Is  ^K Cut Text  ^J Justify  ^C Cur Pos  M-U Undo  M-A Mark Text
^X Exit      ^R Read File  ^\ Replace   ^U Paste Text ^T To Spell ^_ Go To Line M-E Redo  M-6 Copy Text
```

i-04e0bbd94427a10c5 (machine1-terraform-ansible-jenkins)

PublicIPs: 18.234.105.171 PrivateIPs: 172.31.56.161

```
  GNU nano 4.8                                play.yaml                                      Modified
---
- name: Installations on jenkinsMaster_machin1
  hosts: localhost
  become: true
  tasks:
  - name: Executing script on master
    script: machin1.sh

- name: Installations on Kmaster_slavel
  hosts: Kmaster
  become: true
  tasks:
   - name: Executing script on Kmaster
     script: slavel_k8master.sh

^G Get Help    ^O Write Out   ^W Where Is    ^K Cut Text    ^J Justify     ^C Cur Pos     M-U Undo       M-A Mark Text
^X Exit        ^R Read File   ^\ Replace     ^U Paste Text  ^T To Spell    ^_ Go To Line  M-E Redo       M-6 Copy Text
```

i-04e0bbd94427a10c5 (machine1-terraform-ansible-jenkins)

PublicIPs: 18.234.105.171 PrivateIPs: 172.31.56.161

CloudShell Feedback © 2024, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie prefere

```
ubuntu@ip-172-31-56-161:/etc/ansible$ sudo nano hosts
```

i-04e0bbd94427a10c5 (machine1-terraform-ansible-jenkins)

PublicIPs: 18.234.105.171 PrivateIPs: 172.31.56.161

CloudShell Feedback © 2024, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie prefere

```
  GNU nano 4.8                                  hosts
[Kmaster]
100.26.234.168
[Kslave]
54.237.16.178



# This is the default ansible 'hosts' file.
#
# It should live in /etc/ansible/hosts
#
#   - Comments begin with the '#' character
#   - Blank lines are ignored
                                [ Read 52 lines ]
^G Get Help    ^O Write Out   ^W Where Is    ^K Cut Text    ^J Justify     ^C Cur Pos     M-U Undo       M-A Mark Text
^X Exit        ^R Read File   ^\ Replace     ^U Paste Text  ^T To Spell    ^_ Go To Line  M-E Redo       M-6 Copy Text
```

i-04e0bbd94427a10c5 (machine1-terraform-ansible-jenkins)

PublicIPs: 18.234.105.171 PrivateIPs: 172.31.56.161

CloudShell Feedback © 2024, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie prefere

```
ubuntu@ip-172-31-56-161:/etc/ansible$ ansible-playbook play.yaml
```

i-04e0bbd94427a10c5 (machine1-terraform-ansible-jenkins)

PublicIPs: 18.234.105.171 PrivateIPs: 172.31.56.161


```
PLAY [Installations on Kslave_slave2] ******************************************************************************************************

TASK [Gathering Facts] *********************************************************************************************************************
The authenticity of host '54.237.16.178 (54.237.16.178)' can't be established.
ECDSA key fingerprint is SHA256:fh+ZLBI/j1/Ou4xgIfgxgGAf/TNaUNgHsXCRIMao0F0.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
ok: [54.237.16.178]

TASK [Executing script on Kslave] **********************************************************************************************************
changed: [54.237.16.178]

PLAY RECAP *********************************************************************************************************************************
100.26.234.168             : ok=2    changed=1    unreachable=0    failed=0    skipped=0    rescued=0    ignored=0
54.237.16.178              : ok=2    changed=1    unreachable=0    failed=0    skipped=0    rescued=0    ignored=0
localhost                  : ok=2    changed=1    unreachable=0    failed=0    skipped=0    rescued=0    ignored=0

ubuntu@ip-172-31-56-161:/etc/ansible$
```

i-04e0bbd94427a10c5 (machine1-terraform-ansible-jenkins)

PublicIPs: 18.234.105.171 PrivateIPs: 172.31.56.161


```
ubuntu@ip-172-31-56-161:/etc/ansible$ jenkins --version
2.440.3
ubuntu@ip-172-31-56-161:/etc/ansible$ java --version
openjdk 11.0.22 2024-01-16
OpenJDK Runtime Environment (build 11.0.22+7-post-Ubuntu-0ubuntu220.04.1)
OpenJDK 64-Bit Server VM (build 11.0.22+7-post-Ubuntu-0ubuntu220.04.1, mixed mode, sharing)
ubuntu@ip-172-31-56-161:/etc/ansible$ docker --version
Docker version 24.0.5, build 24.0.5-0ubuntu1~20.04.1
ubuntu@ip-172-31-56-161:/etc/ansible$
```

i-04e0bbd94427a10c5 (machine1-terraform-ansible-jenkins)

PublicIPs: 18.234.105.171 PrivateIPs: 172.31.56.161

```
ubuntu@ip-172-31-60-100:~$ docker --version
Docker version 24.0.5, build 24.0.5-0ubuntu1~20.04.1
ubuntu@ip-172-31-60-100:~$ java --version
openjdk 11.0.22 2024-01-16
OpenJDK Runtime Environment (build 11.0.22+7-post-Ubuntu-0ubuntu220.04.1)
OpenJDK 64-Bit Server VM (build 11.0.22+7-post-Ubuntu-0ubuntu220.04.1, mixed mode, sharing)
ubuntu@ip-172-31-60-100:~$ kubectl --version
error: unknown flag: --version
See 'kubectl --help' for usage.
ubuntu@ip-172-31-60-100:~$ kubectl version
Client Version: v1.28.9
Kustomize Version: v5.0.4-0.20230601165947-6ce0bf390ce3
The connection to the server localhost:8080 was refused - did you specify the right host or port?
ubuntu@ip-172-31-60-100:~$
```

i-098ff11482ec2d17c (Kmaster)

PublicIPs: 100.26.234.168 PrivateIPs: 172.31.60.100


```
ubuntu@ip-172-31-59-168:~$ java --version
openjdk 11.0.22 2024-01-16
OpenJDK Runtime Environment (build 11.0.22+7-post-Ubuntu-0ubuntu220.04.1)
OpenJDK 64-Bit Server VM (build 11.0.22+7-post-Ubuntu-0ubuntu220.04.1, mixed mode, sharing)
ubuntu@ip-172-31-59-168:~$ docker --version
Docker version 24.0.5, build 24.0.5-0ubuntu1~20.04.1
ubuntu@ip-172-31-59-168:~$
```

i-0243f4e2c56ae7af8 (Kslave1)

PublicIPs: 54.237.16.178 PrivateIPs: 172.31.59.168


```
ubuntu@ip-172-31-60-100:~$ sudo kubeadm init --apiserver-advertise-address=172.31.60.100
```

i-098ff11482ec2d17c (Kmaster)

PublicIPs: 100.26.234.168 PrivateIPs: 172.31.60.100

```
ubuntu@ip-172-31-60-100:~$ mkdir -p $HOME/.kube
ubuntu@ip-172-31-60-100:~$ sudo cp -i /etc/kubernetes/admin.conf $HOME/.kube/config
ubuntu@ip-172-31-60-100:~$ sudo chown $(id -u):$(id -g) $HOME/.kube/config
```

i-098ff11482ec2d17c (Kmaster)

PublicIPs: 100.26.234.168 PrivateIPs: 172.31.60.100

CloudShell Feedback © 2024, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie prefere

```
ubuntu@ip-172-31-60-100:~$ mkdir -p $HOME/.kube
ubuntu@ip-172-31-60-100:~$ sudo cp -i /etc/kubernetes/admin.conf $HOME/.kube/config
ubuntu@ip-172-31-60-100:~$ sudo chown $(id -u):$(id -g) $HOME/.kube/config
ubuntu@ip-172-31-60-100:~$ curl https://raw.githubusercontent.com/projectcalico/calico/v3.27.2/manifests/calico.yaml -O
  % Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
                                 Dload  Upload   Total   Spent    Left  Speed
100  246k  100  246k    0     0  2772k      0 --:--:-- --:--:-- --:--:-- 2772k
ubuntu@ip-172-31-60-100:~$
```

i-098ff11482ec2d17c (Kmaster)

PublicIPs: 100.26.234.168 PrivateIPs: 172.31.60.100

CloudShell Feedback © 2024, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie prefere

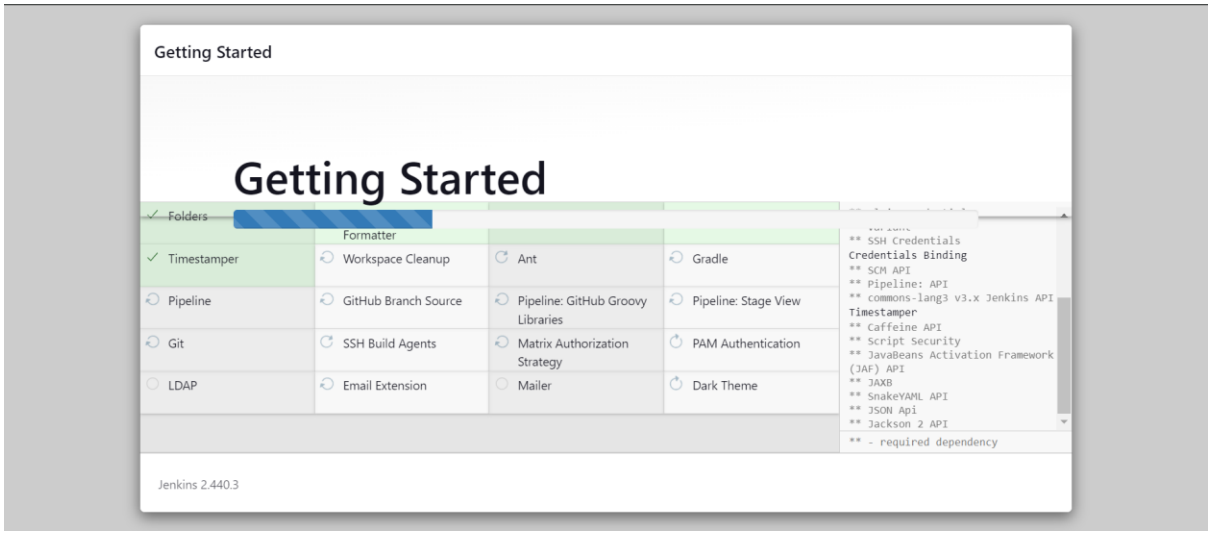
```
Unpacking kubelet (1.28.8-1.1) ...
Selecting previously unselected package kubectl.
Preparing to unpack .../6-kubectl_1.28.8-1.1_amd64.deb ...
Unpacking kubectl (1.28.8-1.1) ...
Selecting previously unselected package kubeadm.
Preparing to unpack .../7-kubeadm_1.28.8-1.1_amd64.deb ...
Unpacking kubeadm (1.28.8-1.1) ...
Setting up conntrack (1:1.4.5-2) ...
Setting up kubectl (1.28.8-1.1) ...
Setting up ebtables (2.0.11-3build1) ...
Setting up socat (1.7.3.3-2) ...
Setting up cri-tools (1.28.0-1.1) ...
Setting up kubernetes-cni (1.2.0-2.1) ...
Setting up kubelet (1.28.8-1.1) ...
Setting up kubeadm (1.28.8-1.1) ...
Processing triggers for man-db (2.9.1-1) ...
ubuntu@ip-172-31-87-240:~$ sudo kubeadm join 172.31.82.138:6443 --token m06hdn.79rpr1rax6e9frht \
>         --discovery-token-ca-cert-hash sha256:bbcbf6a64f7f06a0fe1d4ecf21df8c85cc6c4e3cd43ad0fc5ea4a0e60b2a7fe7
```

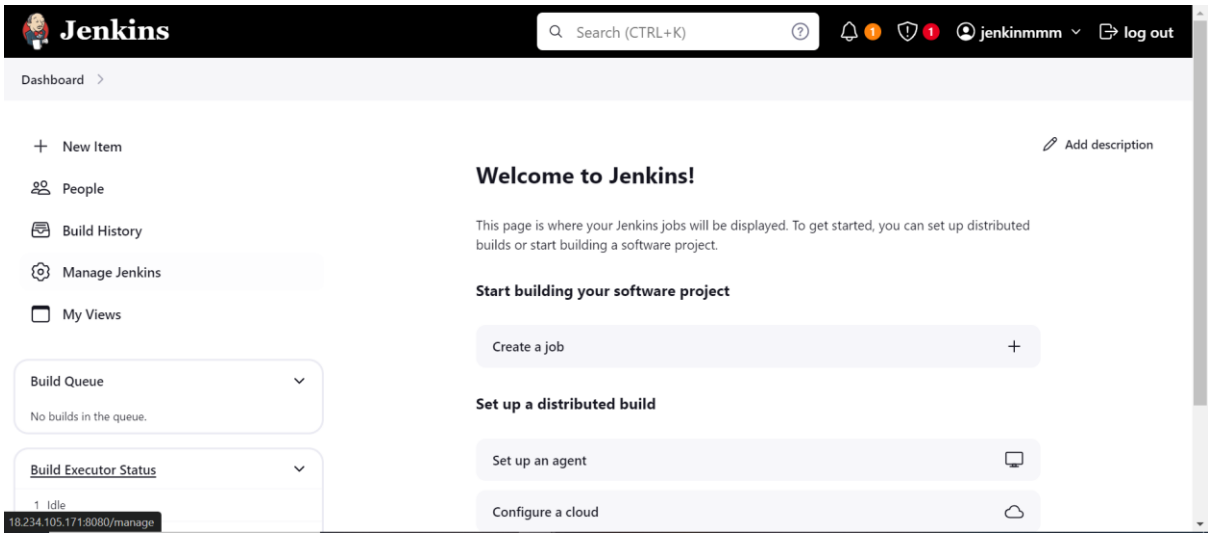
```
ubuntu@ip-172-31-60-100:~$ kubectl get nodes
NAME               STATUS   ROLES           AGE   VERSION
ip-172-31-60-100   Ready    control-plane   41m   v1.28.9
ubuntu@ip-172-31-60-100:~$
```

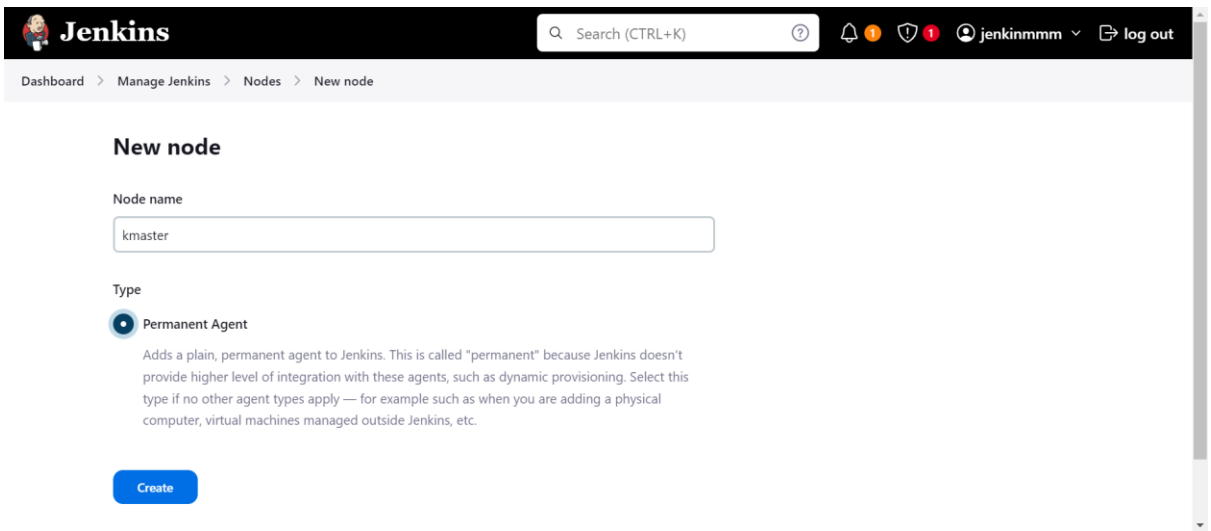
i-098ff11482ec2d17c (Kmaster)

PublicIPs: 100.26.234.168 PrivateIPs: 172.31.60.100


```
ubuntu@ip-172-31-56-161:/etc/ansible$ sudo cat /var/lib/jenkins/secrets/initialAdminPassword
b5cd8d392fb341ea8bd43e318d4d2c07
ubuntu@ip-172-31-56-161:/etc/ansible$
```

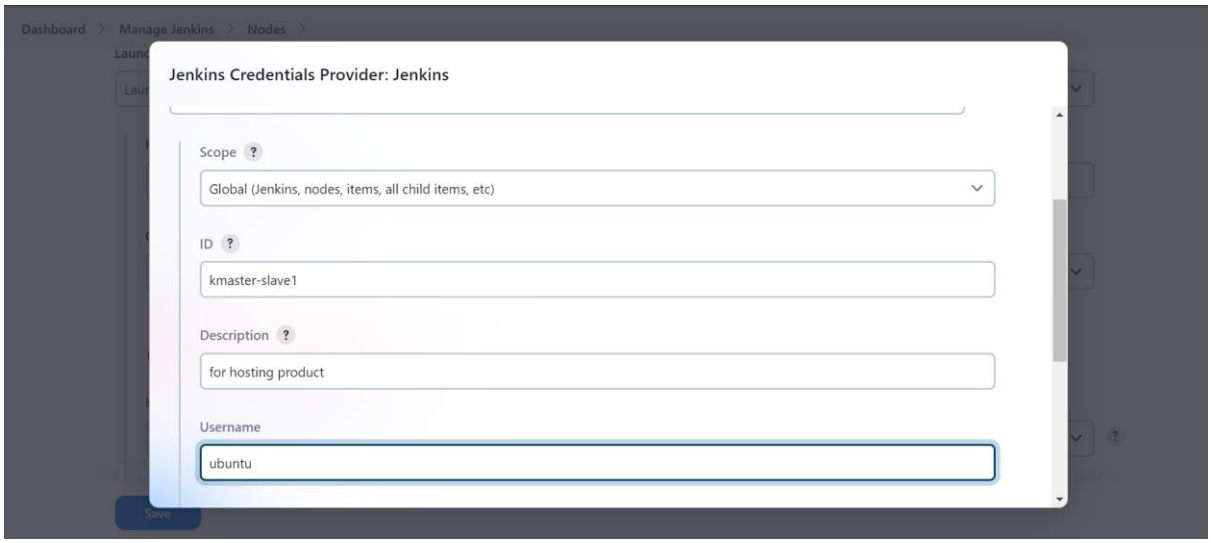

Getting Started
Getting Started
Folders
Formatter
Timestamper
Workspace Cleanup
Ant
Gradle
Pipeline
GitHub Branch Source
Pipeline: GitHub Groovy Libraries
Pipeline: Stage View
Git
SSH Build Agents
Matrix Authorization Strategy
PAM Authentication
LDAP
Email Extension
Mailer
Dark Theme
** SSH Credentials
Credentials Binding
** SCM API
** Pipeline: API
** commons-lang3 v3.x Jenkins API
Timestamper
** Caffeine API
** Script Security
** JavaBeans Activation Framework (JAF) API
** JAXB
** SnakeYAML API
** JSON Api
** Jackson 2 API
** - required dependency
Jenkins 2.440.3

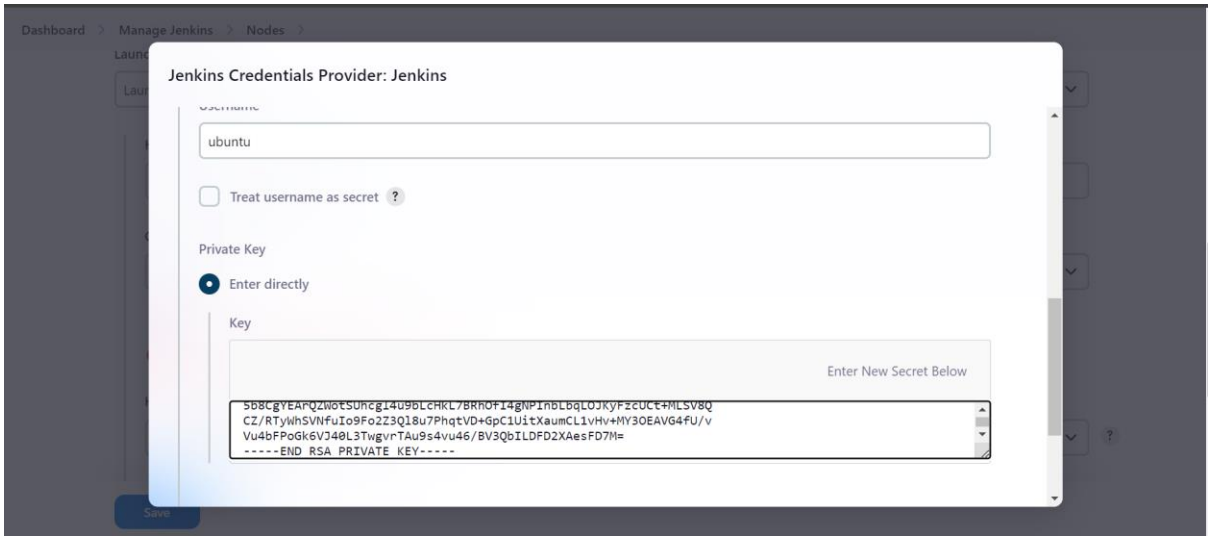

Jenkins
Search (CTRL+K)
jenkinmmm
log out
Dashboard
New Item
People
Build History
Manage Jenkins
My Views
Add description
Welcome to Jenkins!
This page is where your Jenkins jobs will be displayed. To get started, you can set up distributed builds or start building a software project.
Start building your software project
Create a job
Set up a distributed build
Set up an agent
Configure a cloud
Build Queue
No builds in the queue.
Build Executor Status
1 Idle
18.234.105.171:8080/manage

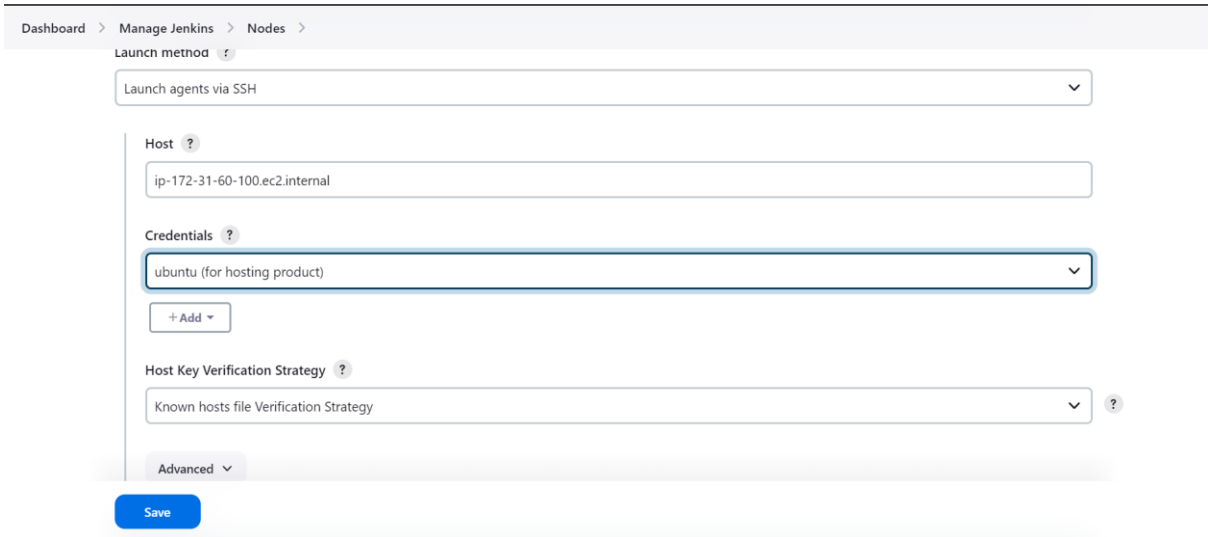

Jenkins
Search (CTRL+K)
jenkinmmm
log out
Dashboard
Manage Jenkins
Nodes
New node
New node
Node name
kmaster
Type
Permanent Agent
Adds a plain, permanent agent to Jenkins. This is called "permanent" because Jenkins doesn't provide higher level of integration with these agents, such as dynamic provisioning. Select this type if no other agent types apply — for example such as when you are adding a physical computer, virtual machines managed outside Jenkins, etc.
Create

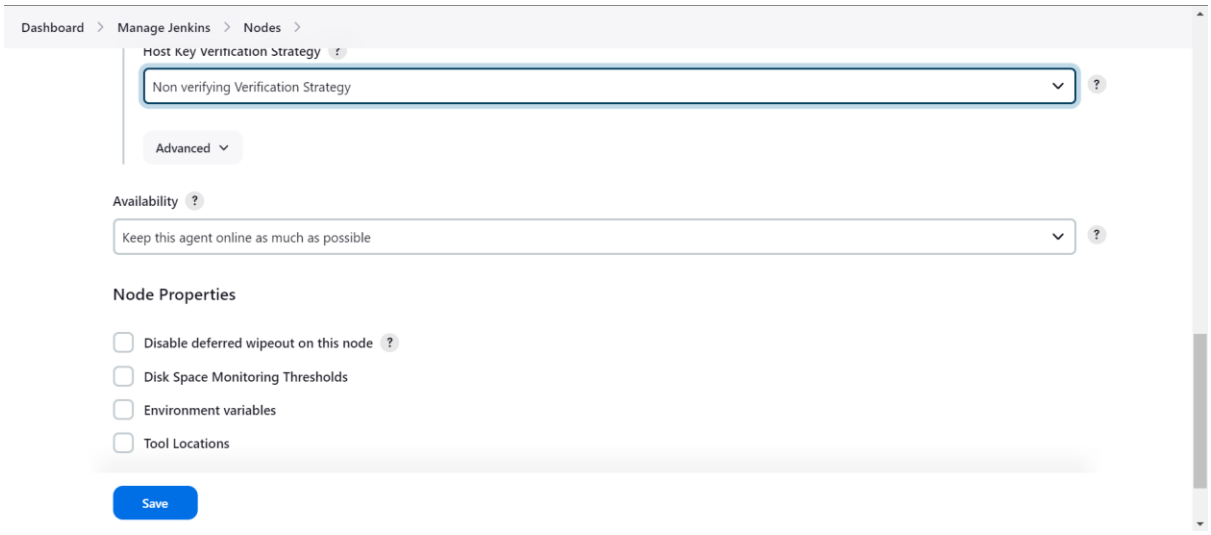

Dashboard > Manage Jenkins > Nodes >
Description ?
for hosting application
Plain text Preview
Number of executors ?
1
Remote root directory ?
/home/ubuntu/jenkins/
Remote directory is mandatory
Labels ?
Save

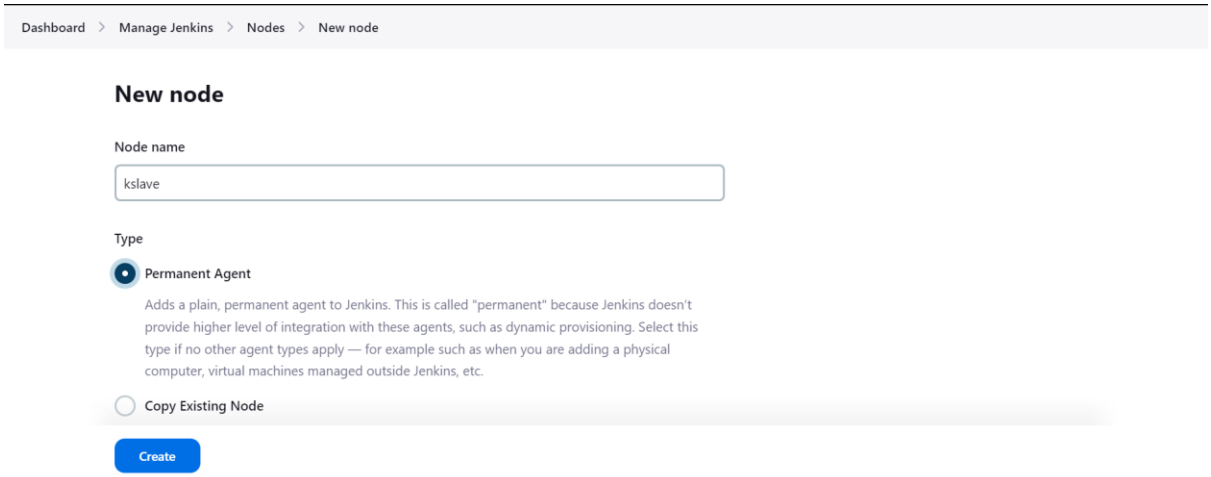

Dashboard > Manage Jenkins > Nodes >
Jenkins Credentials Provider: Jenkins
Add Credentials
Domain
Global credentials (unrestricted)
Kind
SSH Username with private key
Scope ?
Global (Jenkins, nodes, items, all child items, etc)
ID ?


Dashboard > Manage Jenkins > Nodes >
Jenkins Credentials Provider: Jenkins
Scope ?
Global (Jenkins, nodes, items, all child items, etc)
ID ?
kmaster-slave1
Description ?
for hosting product
Username
ubuntu

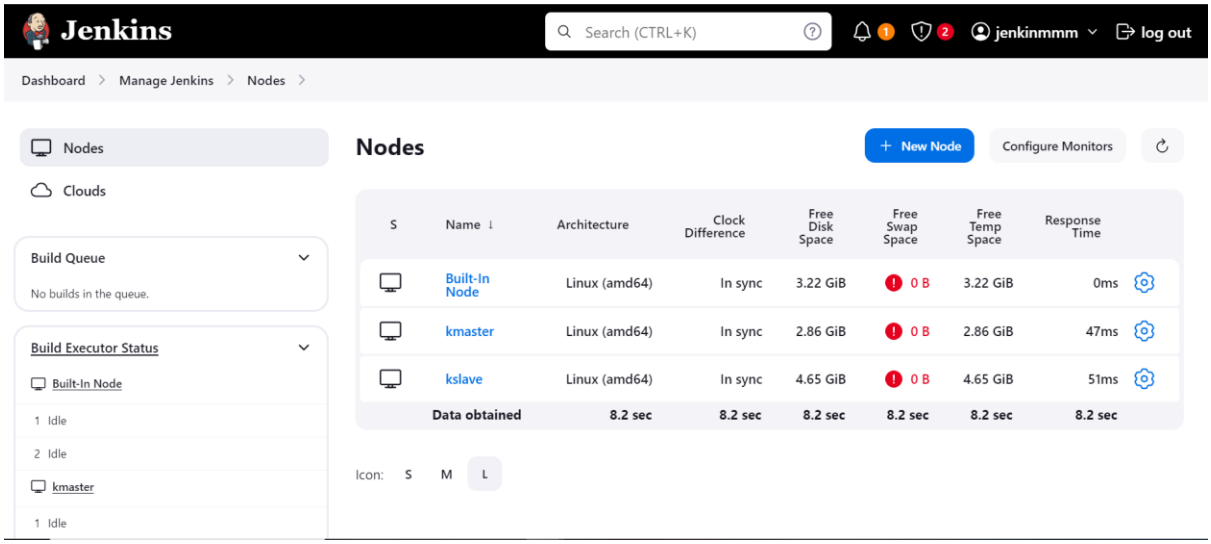

Dashboard
Manage Jenkins
Nodes
Jenkins Credentials Provider: Jenkins
ubuntu
Treat username as secret
Private Key
Enter directly
Key
Enter New Secret Below
CZ/RTyWhSVNfuIo9Fo2Z3Ql8u7PhqtVD+GpC1UitXaumCL1vHv+MY3OEAVG4fU/v
Vu4bFPoGk6VJ40L3TwgvrTAu9s4vu46/BV3QbILDFD2XAesFD7M=
-----END RSA PRIVATE KEY-----

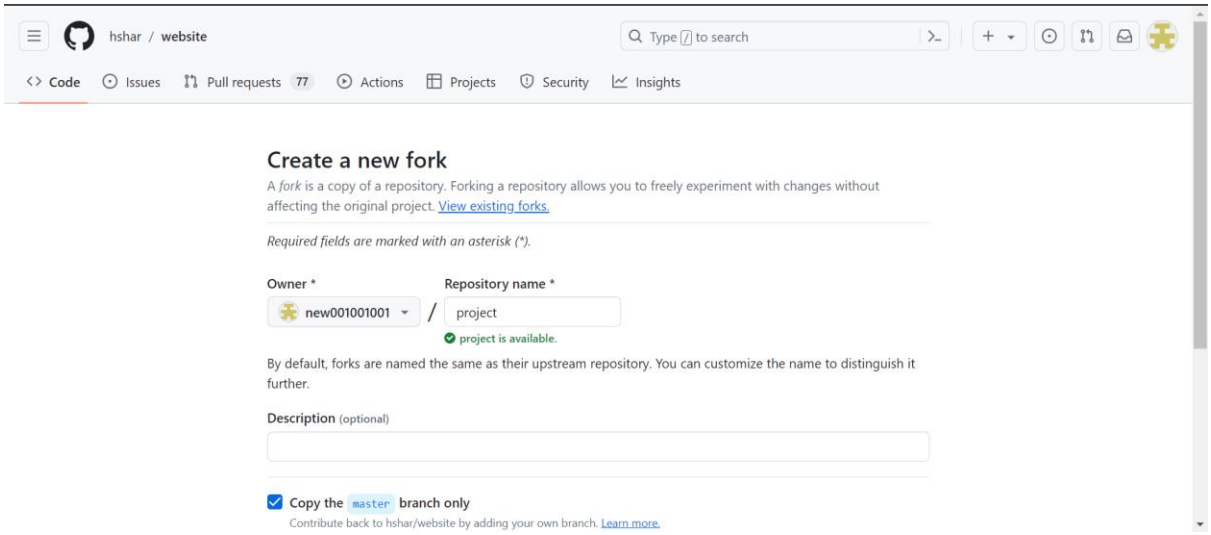

Dashboard
Manage Jenkins
Nodes
Launch agents via SSH
Host
ip-172-31-60-100.ec2.internal
Credentials
ubuntu (for hosting product)
+ Add
Host Key Verification Strategy
Known hosts file Verification Strategy
Advanced
Save

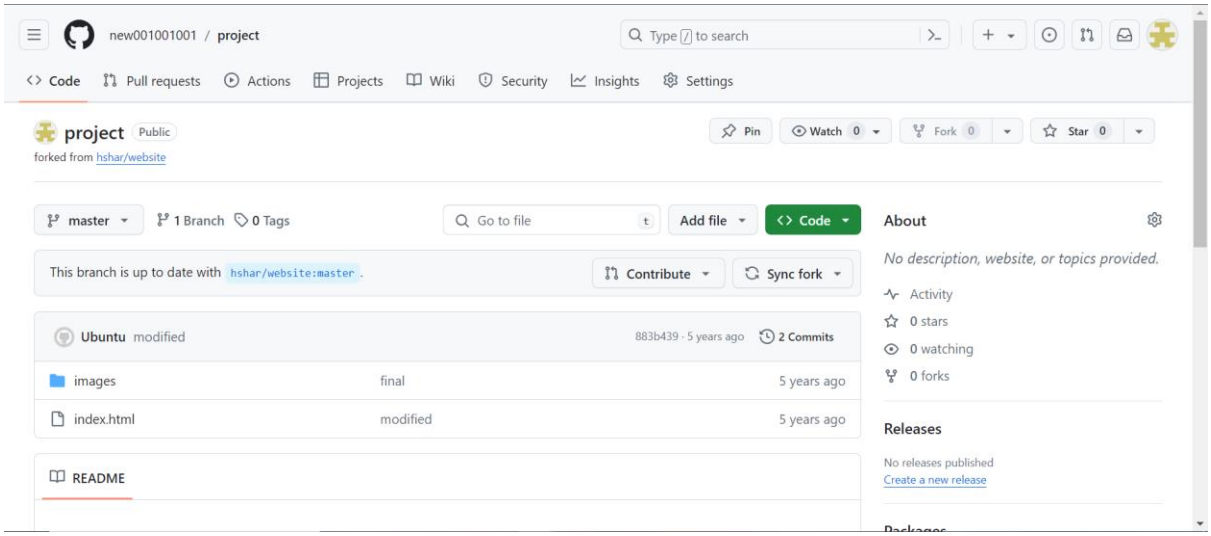

Dashboard
Manage Jenkins
Nodes
Non verifying Verification Strategy
Advanced
Availability
Keep this agent online as much as possible
Node Properties
Disable deferred wipeout on this node
Disk Space Monitoring Thresholds
Environment variables
Tool Locations
Save


Dashboard > Manage Jenkins > Nodes > New node
New node
Node name
kslave
Type
Permanent Agent
Adds a plain, permanent agent to Jenkins. This is called "permanent" because Jenkins doesn't provide higher level of integration with these agents, such as dynamic provisioning. Select this type if no other agent types apply — for example such as when you are adding a physical computer, virtual machines managed outside Jenkins, etc.
Copy Existing Node
Create


Dashboard > Manage Jenkins > Nodes >
Launch method
Launch agents via SSH
Host
ip-172-31-59-168.ec2.internal
Credentials
ubuntu (for hosting product)
+ Add
Host Key Verification Strategy
Non verifying Verification Strategy
Advanced
Save


Jenkins
Search (CTRL+K)
jenkinmmm
log out
Dashboard > Manage Jenkins > Nodes >
Nodes
Clouds
Build Queue
No builds in the queue.
Build Executor Status
Built-In Node
1 Idle
2 Idle
kmaster
1 Idle
Nodes
+ New Node
Configure Monitors
S
Name
Architecture
Clock Difference
Free Disk Space
Free Swap Space
Free Temp Space
Response Time
Built-In Node
Linux (amd64)
In sync
3.22 GiB
0 B
3.22 GiB
0ms
kmaster
Linux (amd64)
In sync
2.86 GiB
0 B
2.86 GiB
47ms
kslave
Linux (amd64)
In sync
4.65 GiB
0 B
4.65 GiB
51ms
Data obtained
8.2 sec
8.2 sec
8.2 sec
8.2 sec
8.2 sec
8.2 sec
Icon: S M L


hshar / website
Type / to search
Code
Issues
Pull requests 77
Actions
Projects
Security
Insights
Create a new fork
A fork is a copy of a repository. Forking a repository allows you to freely experiment with changes without affecting the original project. View existing forks.
Required fields are marked with an asterisk (*).
Owner *
Repository name *
new001001001
/
project
project is available.
By default, forks are named the same as their upstream repository. You can customize the name to distinguish it further.
Description (optional)
Copy the master branch only
Contribute back to hshar/website by adding your own branch. Learn more.


new001001001 / project
Type / to search
Code
Pull requests
Actions
Projects
Wiki
Security
Insights
Settings
project
Public
forked from hshar/website
Pin
Watch 0
Fork 0
Star 0
master
1 Branch
0 Tags
Go to file
t
Add file
Code
This branch is up to date with hshar/website:master .
Contribute
Sync fork
Ubuntu modified
883b439 · 5 years ago
2 Commits
images
final
5 years ago
index.html
modified
5 years ago
README
About
No description, website, or topics provided.
Activity
0 stars
0 watching
0 forks
Releases
No releases published
Create a new release


ubuntu@ip-172-31-56-161:~$ git clone https://github.com/new001001001/websit.git
i-04e0bbd94427a10c5 (machine1-terraform-ansible-jenkins)
PublicIPs: 18.234.105.171 PrivateIPs: 172.31.56.161
CloudShell
Feedback
© 2024, Amazon Web Services, Inc. or its affiliates.
Privacy
Terms
Cookie prefere

```
ubuntu@ip-172-31-56-161:~$ git clone https://github.com/new001001001/websit.git
Cloning into 'websit'...
remote: Enumerating objects: 8, done.
remote: Total 8 (delta 0), reused 0 (delta 0), pack-reused 8
Unpacking objects: 100% (8/8), 82.67 KiB | 10.33 MiB/s, done.
ubuntu@ip-172-31-56-161:~$ ls
main.tf  main.tf.save  terraform.tfstate  websit
ubuntu@ip-172-31-56-161:~$
```

i-04e0bbd94427a10c5 (machine1-terraform-ansible-jenkins)

PublicIPs: 18.234.105.171 PrivateIPs: 172.31.56.161


```
ubuntu@ip-172-31-56-161:~$ git clone https://github.com/new001001001/websit.git
Cloning into 'websit'...
remote: Enumerating objects: 8, done.
remote: Total 8 (delta 0), reused 0 (delta 0), pack-reused 8
Unpacking objects: 100% (8/8), 82.67 KiB | 10.33 MiB/s, done.
ubuntu@ip-172-31-56-161:~$ ls
main.tf  main.tf.save  terraform.tfstate  websit
ubuntu@ip-172-31-56-161:~$ cd websit/
ubuntu@ip-172-31-56-161:~/websit$ ls
images  index.html
ubuntu@ip-172-31-56-161:~/websit$ git branch
* master
ubuntu@ip-172-31-56-161:~/websit$
```

i-04e0bbd94427a10c5 (machine1-terraform-ansible-jenkins)

PublicIPs: 18.234.105.171 PrivateIPs: 172.31.56.161


```
ubuntu@ip-172-31-56-161:~$ git clone https://github.com/new001001001/websit.git
Cloning into 'websit'...
remote: Enumerating objects: 8, done.
remote: Total 8 (delta 0), reused 0 (delta 0), pack-reused 8
Unpacking objects: 100% (8/8), 82.67 KiB | 10.33 MiB/s, done.
ubuntu@ip-172-31-56-161:~$ ls
main.tf  main.tf.save  terraform.tfstate  websit
ubuntu@ip-172-31-56-161:~$ cd websit/
ubuntu@ip-172-31-56-161:~/websit$ ls
images  index.html
ubuntu@ip-172-31-56-161:~/websit$ git branch
* master
ubuntu@ip-172-31-56-161:~/websit$ sudo nano dockerfile
```

i-04e0bbd94427a10c5 (machine1-terraform-ansible-jenkins)

PublicIPs: 18.234.105.171 PrivateIPs: 172.31.56.161

```
  GNU nano 4.8                          dockerfile                          Modified
FROM ubuntu
RUN apt update
RUN apt-get install apache2 -y
ADD . /var/www/html
ENTRYPOINT apachectl -D FOREGROUND

^G Get Help  ^O Write Out  ^W Where Is  ^K Cut Text  ^J Justify  ^C Cur Pos  M-U Undo  M-A Mark Text
^X Exit      ^R Read File  ^\ Replace   ^U Paste Text ^T To Spell ^_ Go To Line M-E Redo  M-6 Copy Text
```

i-04e0bbd94427a10c5 (machine1-terraform-ansible-jenkins)

PublicIPs: 18.234.105.171 PrivateIPs: 172.31.56.161


```
ubuntu@ip-172-31-56-161:~$ git clone https://github.com/new001001001/websit.git
Cloning into 'websit'...
remote: Enumerating objects: 8, done.
remote: Total 8 (delta 0), reused 0 (delta 0), pack-reused 8
Unpacking objects: 100% (8/8), 82.67 KiB | 10.33 MiB/s, done.
ubuntu@ip-172-31-56-161:~$ ls
main.tf  main.tf.save  terraform.tfstate  websit
ubuntu@ip-172-31-56-161:~$ cd websit/
ubuntu@ip-172-31-56-161:~/websit$ ls
images  index.html
ubuntu@ip-172-31-56-161:~/websit$ git branch
* master
ubuntu@ip-172-31-56-161:~/websit$ sudo nano dockerfile
ubuntu@ip-172-31-56-161:~/websit$ ls
dockerfile  images  index.html
ubuntu@ip-172-31-56-161:~/websit$ sudo nano deploy.yaml
```

i-04e0bbd94427a10c5 (machine1-terraform-ansible-jenkins)

PublicIPs: 18.234.105.171 PrivateIPs: 172.31.56.161


```
  GNU nano 4.8                          deploy.yaml                         Modified
apiVersion: apps/v1
kind: Deployment
metadata:
  name: project-deployment
  labels:
    app: project
spec:
  replicas: 2
  selector:
    matchLabels:
      app: project
  template:
    metadata:
      labels:

^G Get Help  ^O Write Out  ^W Where Is  ^K Cut Text  ^J Justify  ^C Cur Pos  M-U Undo  M-A Mark Text
^X Exit      ^R Read File  ^\ Replace   ^U Paste Text ^T To Spell ^_ Go To Line M-E Redo  M-6 Copy Text
```

i-04e0bbd94427a10c5 (machine1-terraform-ansible-jenkins)

PublicIPs: 18.234.105.171 PrivateIPs: 172.31.56.161

```
ubuntu@ip-172-31-56-161:~/websit$ sudo nano svc.yaml
```

i-04e0bbd94427a10c5 (machine1-terraform-ansible-jenkins)

PublicIPs: 18.234.105.171 PrivateIPs: 172.31.56.161


```
  GNU nano 4.8                          svc.yaml                          Modified
apiVersion: v1
kind: Service
metadata:
  name: my-websit
spec:
  type: NodePort
  ports:
    - targetPort: 80
      port: 80
      nodePort: 30008
  selector:
    app: project

^G Get Help  ^O Write Out  ^W Where Is  ^K Cut Text  ^J Justify  ^C Cur Pos  M-U Undo  M-A Mark Text
^X Exit      ^R Read File  ^\ Replace   ^U Paste Text ^T To Spell  ^_ Go To Line M-E Redo  M-6 Copy Text
```

i-04e0bbd94427a10c5 (machine1-terraform-ansible-jenkins)

PublicIPs: 18.234.105.171 PrivateIPs: 172.31.56.161

CloudShell Feedback © 2024, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie prefere

```
ubuntu@ip-172-31-56-161:~/websit$ git status
On branch master
Your branch is up to date with 'origin/master'.

Untracked files:
  (use "git add <file>..." to include in what will be committed)
        deploy.yaml
        dockerfile
        svc.yaml

nothing added to commit but untracked files present (use "git add" to track)
ubuntu@ip-172-31-56-161:~/websit$ git add .
```

i-04e0bbd94427a10c5 (machine1-terraform-ansible-jenkins)

PublicIPs: 18.234.105.171 PrivateIPs: 172.31.56.161

CloudShell Feedback © 2024, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie prefere

```
ubuntu@ip-172-31-56-161:~/websit$ git status
On branch master
Your branch is up to date with 'origin/master'.

Untracked files:
  (use "git add <file>..." to include in what will be committed)
        deploy.yaml
        dockerfile
        svc.yaml

nothing added to commit but untracked files present (use "git add" to track)
ubuntu@ip-172-31-56-161:~/websit$ git add .
ubuntu@ip-172-31-56-161:~/websit$ git commit -m "added required files"
```

i-04e0bbd94427a10c5 (machine1-terraform-ansible-jenkins)

PublicIPs: 18.234.105.171 PrivateIPs: 172.31.56.161


```
 Committer: Ubuntu <ubuntu@ip-172-31-56-161.ec2.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. Run the
following command and follow the instructions in your editor to edit
your configuration file:

    git config --global --edit

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

    git commit --amend --reset-author

 3 files changed, 38 insertions(+)
 create mode 100644 deploy.yaml
 create mode 100644 dockerfile
 create mode 100644 svc.yaml
ubuntu@ip-172-31-56-161:~/websit$
```

i-04e0bbd94427a10c5 (machine1-terraform-ansible-jenkins)

PublicIPs: 18.234.105.171 PrivateIPs: 172.31.56.161

CloudShell Feedback © 2024, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie prefere

Enter an item name

productionjob

» *Required field*

Freestyle project

Classic, general-purpose job type that checks out from up to one SCM, executes build steps serially, followed by post-build steps like archiving artifacts and sending email notifications.

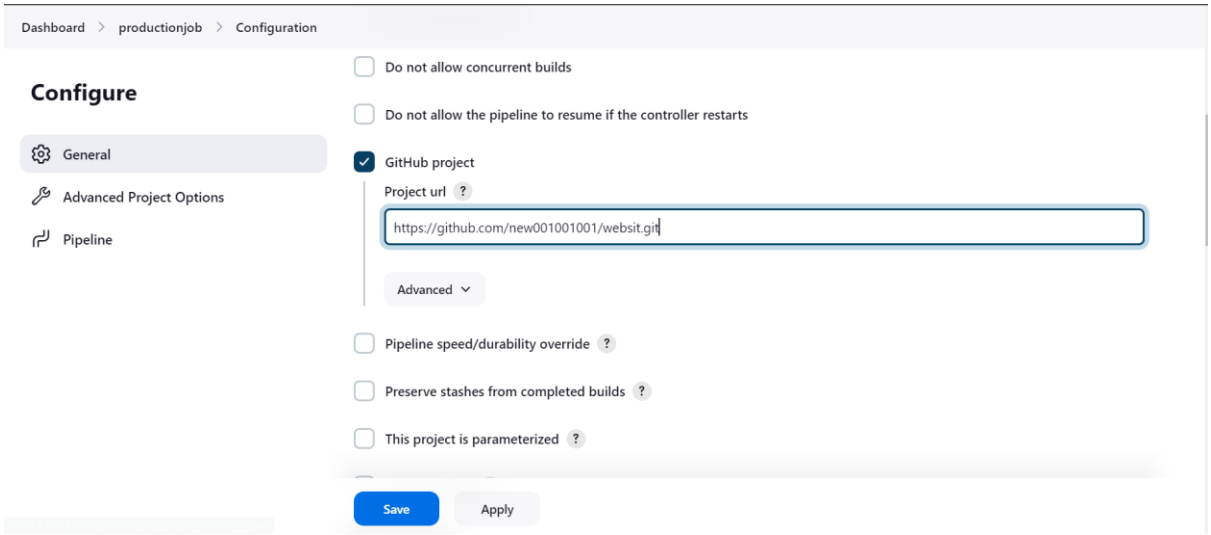
Pipeline

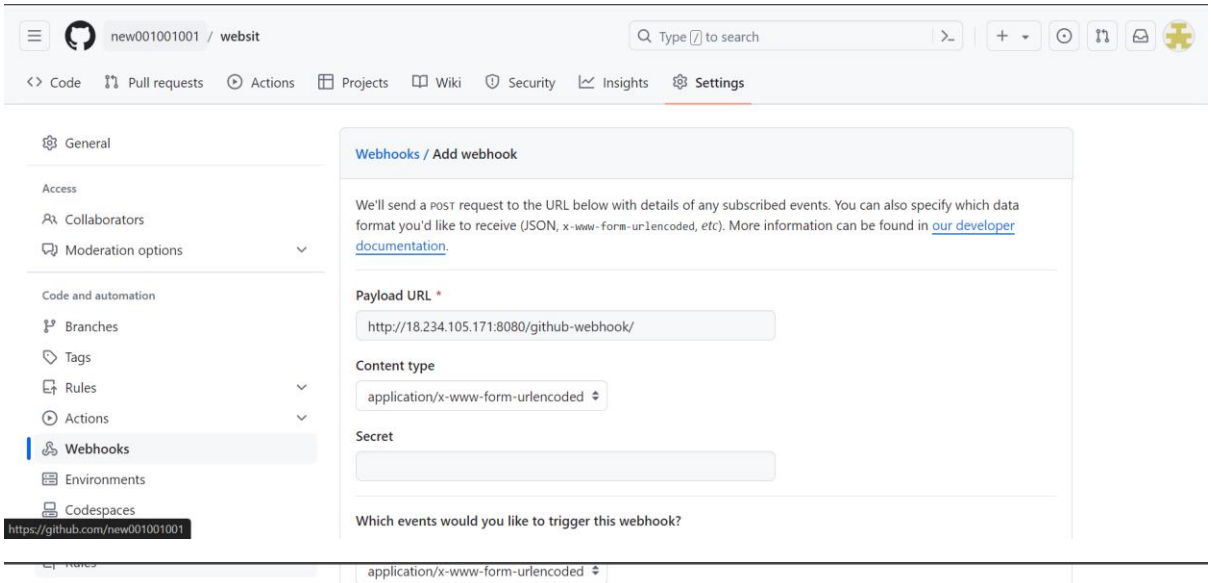
Orchestrates long-running activities that can span multiple build agents. Suitable for building pipelines (formerly known as workflows) and/or organizing complex activities that do not easily fit in free-style job type.

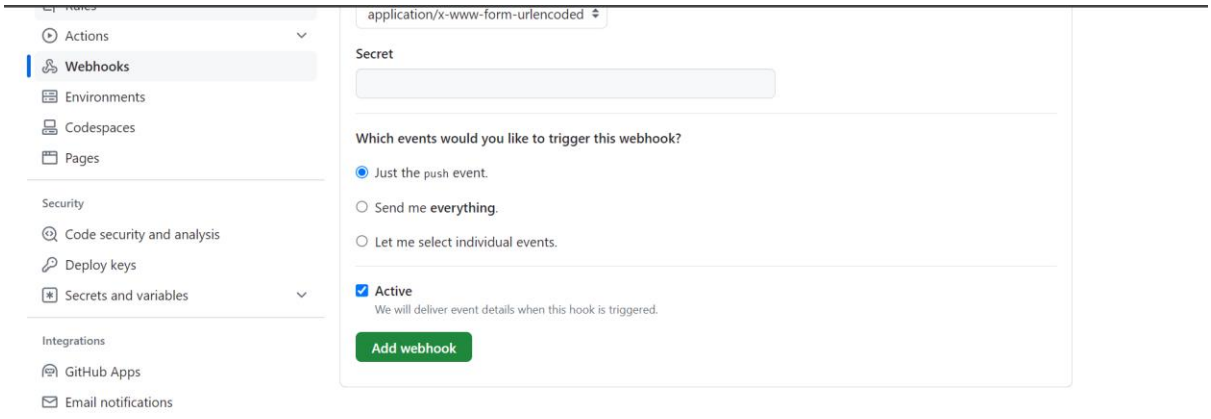
OK

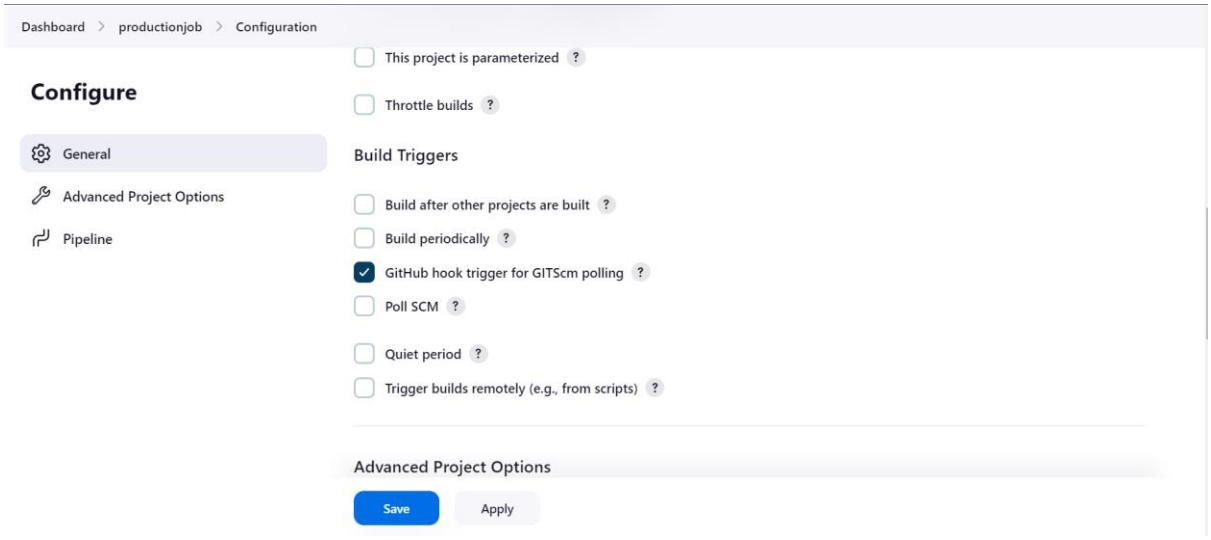
Multi-configuration project

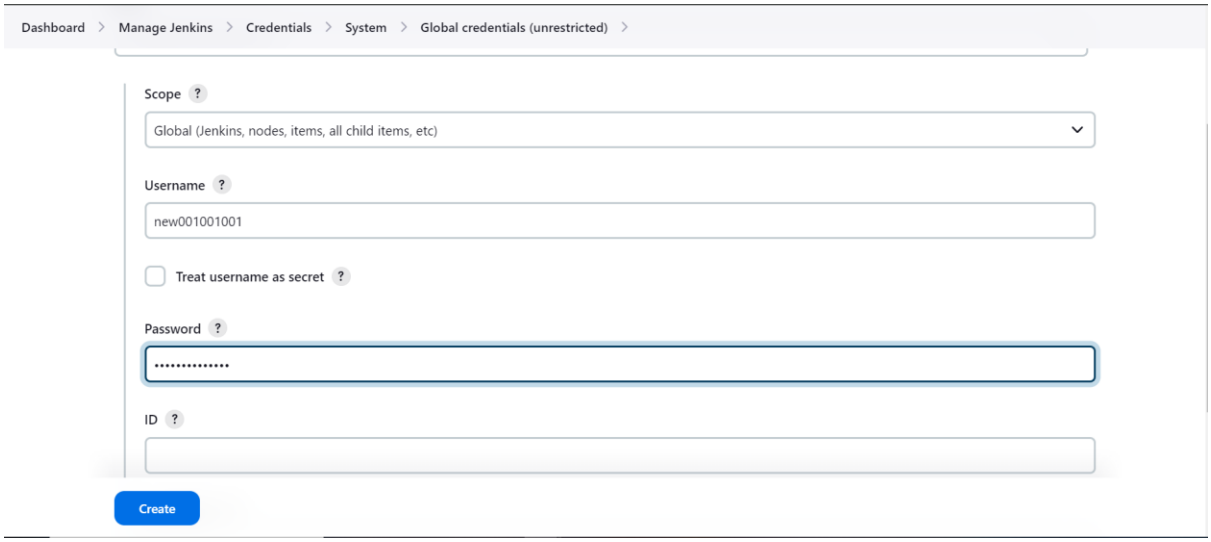
Suitable for projects that need a large number of different configurations, such as testing on multiple environments, platform-specific

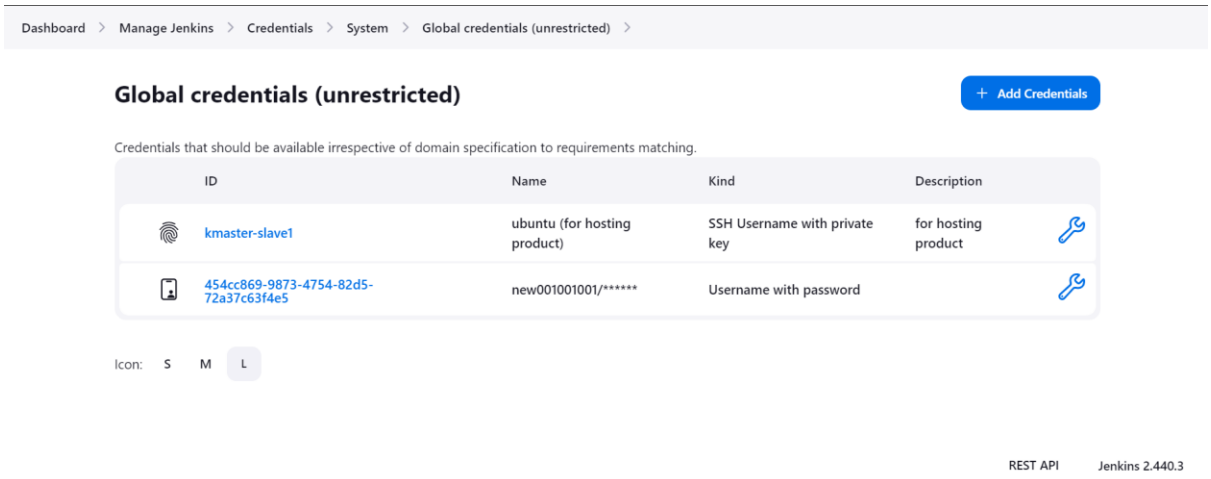


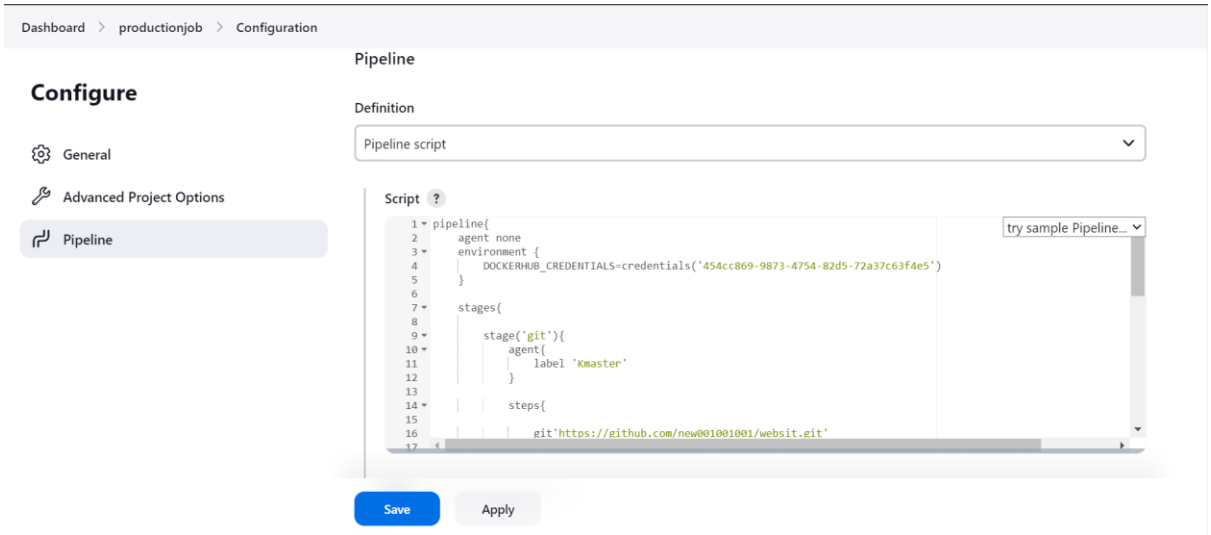


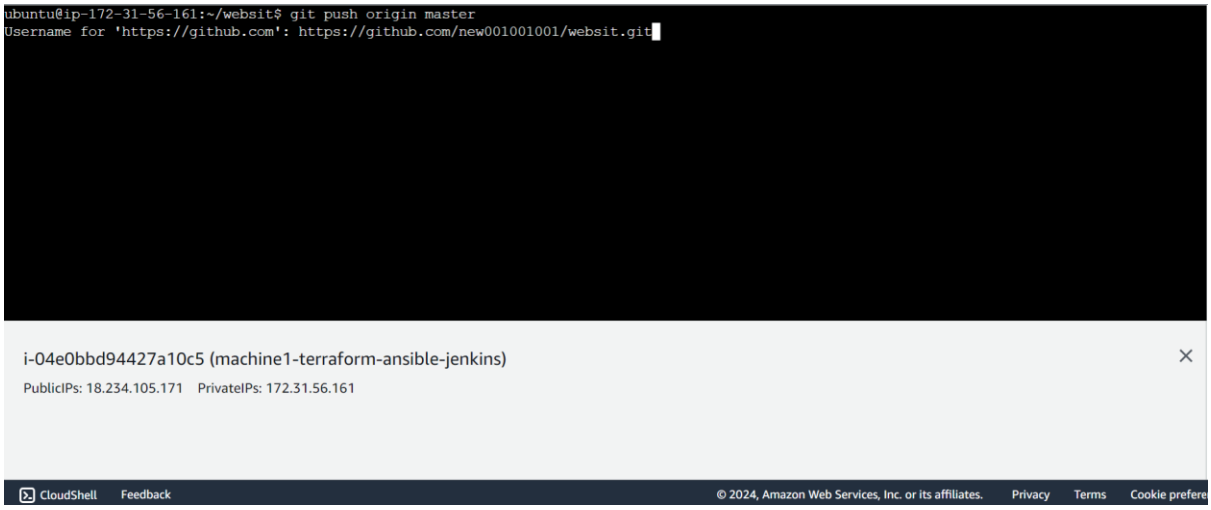



Dashboard > productionjob > Configuration
Configure
General
Advanced Project Options
Pipeline
This project is parameterized
Throttle builds
Build Triggers
Build after other projects are built
Build periodically
GitHub hook trigger for GITScm polling
Poll SCM
Quiet period
Trigger builds remotely (e.g., from scripts)
Advanced Project Options
Save
Apply

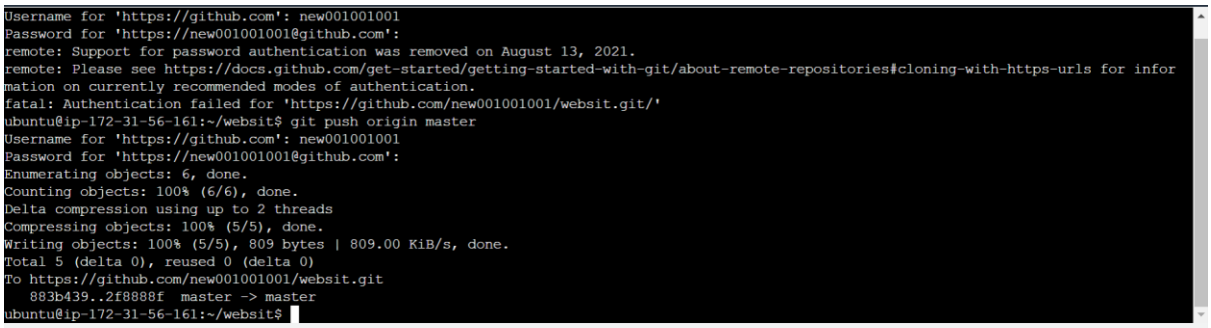

Dashboard > Manage Jenkins > Credentials > System > Global credentials (unrestricted) >
Scope
Global (Jenkins, nodes, items, all child items, etc)
Username
new001001001
Treat username as secret
Password
ID
Create

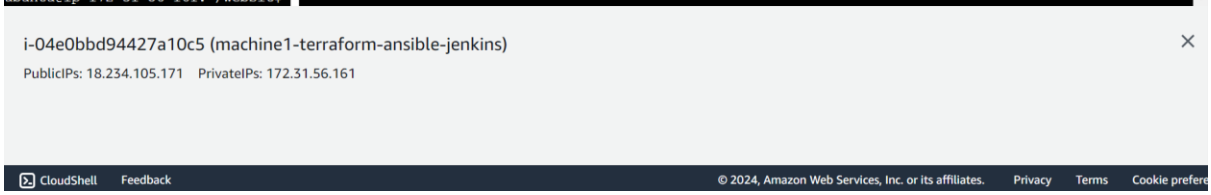

Dashboard > Manage Jenkins > Credentials > System > Global credentials (unrestricted) >
Global credentials (unrestricted)
Add Credentials
Credentials that should be available irrespective of domain specification to requirements matching.
ID
Name
Kind
Description
kmaster-slave1
ubuntu (for hosting product)
SSH Username with private key
for hosting product
454cc869-9873-4754-82d5-72a37c63f4e5
new001001001/******
Username with password
Icon: S M L
REST API
Jenkins 2.440.3

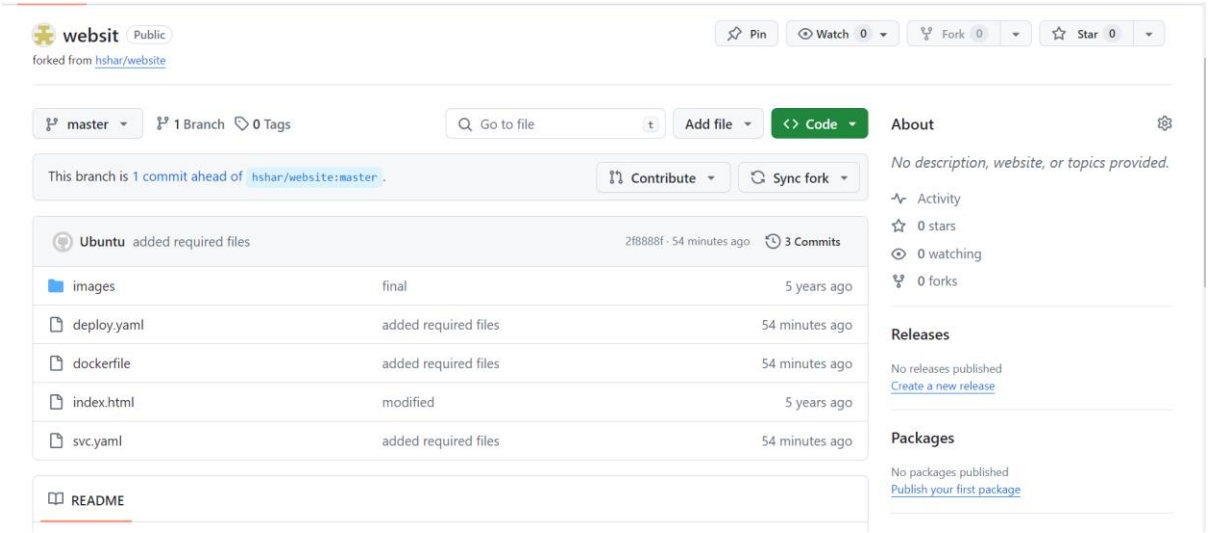

Dashboard > productionjob > Configuration
Configure
General
Advanced Project Options
Pipeline
Pipeline
Definition
Pipeline script
Script
try sample Pipeline...
pipeline{
agent none
environment {
DOCKERHUB_CREDENTIALS=credentials('454cc869-9873-4754-82d5-72a37c63f4e5')
}
stages{
stage('git'){
agent{
label 'Kmaster'
}
steps{
git'https://github.com/new001001001/websit.git'
Save
Apply

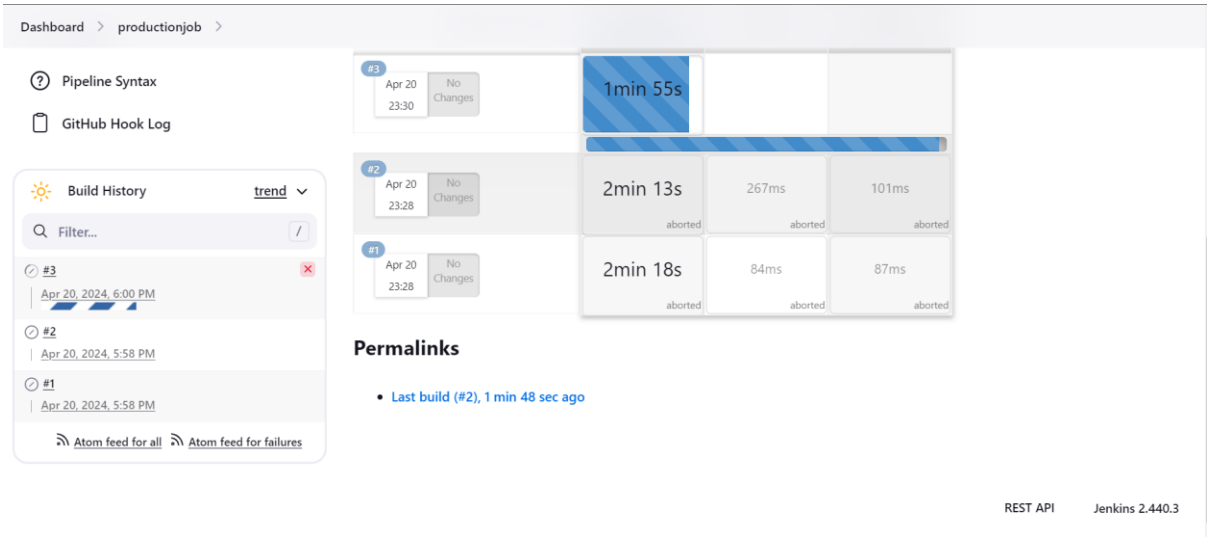

ubuntu@ip-172-31-56-161:~/websit$ git push origin master
Username for 'https://github.com': https://github.com/new001001001/websit.git

i-04e0bbd94427a10c5 (machine1-terraform-ansible-jenkins)
PublicIPs: 18.234.105.171 PrivateIPs: 172.31.56.161
CloudShell
Feedback
© 2024, Amazon Web Services, Inc. or its affiliates.
Privacy
Terms
Cookie prefere


Username for 'https://github.com': new001001001
Password for 'https://new001001001@github.com':
remote: Support for password authentication was removed on August 13, 2021.
remote: Please see https://docs.github.com/get-started/getting-started-with-git/about-remote-repositories#cloning-with-https-urls for infor
mation on currently recommended modes of authentication.
fatal: Authentication failed for 'https://github.com/new001001001/websit.git/'
ubuntu@ip-172-31-56-161:~/websit$ git push origin master
Username for 'https://github.com': new001001001
Password for 'https://new001001001@github.com':
Enumerating objects: 6, done.
Counting objects: 100% (6/6), done.
Delta compression using up to 2 threads
Compressing objects: 100% (5/5), done.
Writing objects: 100% (5/5), 809 bytes | 809.00 KiB/s, done.
Total 5 (delta 0), reused 0 (delta 0)
To https://github.com/new001001001/websit.git
883b439..2f8888f master -> master
ubuntu@ip-172-31-56-161:~/websit$


i-04e0bbd94427a10c5 (machine1-terraform-ansible-jenkins)
PublicIPs: 18.234.105.171 PrivateIPs: 172.31.56.161
CloudShell
Feedback
© 2024, Amazon Web Services, Inc. or its affiliates.
Privacy
Terms
Cookie prefere


websit
Public
forked from hshar/website
Pin
Watch 0
Fork 0
Star 0
master
1 Branch
0 Tags
Go to file
t
Add file
Code
This branch is 1 commit ahead of hshar/website:master.
Contribute
Sync fork
Ubuntu added required files
2f8888f · 54 minutes ago
3 Commits
images final 5 years ago
deploy.yaml added required files 54 minutes ago
dockerfile added required files 54 minutes ago
index.html modified 5 years ago
svc.yaml added required files 54 minutes ago
README
About
No description, website, or topics provided.
Activity
0 stars
0 watching
0 forks
Releases
No releases published
Create a new release
Packages
No packages published
Publish your first package


Dashboard
productionjob
Pipeline Syntax
GitHub Hook Log
Build History
trend
Filter...
#3
Apr 20, 2024, 6:00 PM
#2
Apr 20, 2024, 5:58 PM
#1
Apr 20, 2024, 5:58 PM
Atom feed for all
Atom feed for failures
#3
Apr 20
23:30
No Changes
1min 55s
#2
Apr 20
23:28
No Changes
2min 13s
267ms
101ms
aborted
#1
Apr 20
23:28
No Changes
2min 18s
84ms
87ms
aborted
Permalinks
Last build (#2), 1 min 48 sec ago
REST API
Jenkins 2.440.3


Hello world!
GitHub