Machine generated alternative text:
aws 
Services v 
Christudas v 
Global V 
User name* 
Select AWS access type 
christu 
O Add another user 
Select how these users will access AWS. Access keys and autogenerated pa 
Access type* 
Programmatic access 
Enables an access key ID and 
other development tools. 
AWS Management Console ac 
Enables a password that allows 

Access key ID:

AKIAUNLLW2Q6SKREH4XS

Secret access key:

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

Users with AWS Management Console access can sign-in at: <https://303557956669.signin.aws.amazon.com/console>

<<new\_user\_credentials.csv>>

Task 1:

Machine generated alternative text:
User details 
User name 
AWS access type 
Permissions boundary 
test 
Programmatic access - with an access key 
Permissions boundary is not set 

Access key ID:

AKIAUNLLW2Q6QBAOQ2ED

Secret access key

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

Users with AWS Management Console access can sign-in at: <https://303557956669.signin.aws.amazon.com/console>

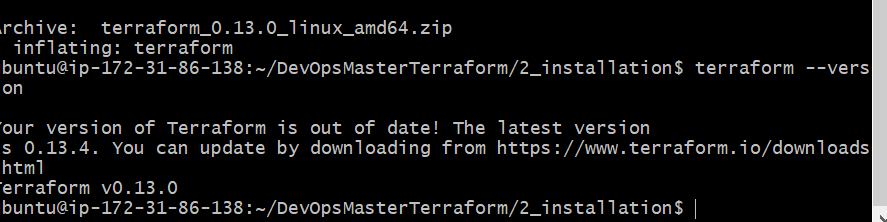
<<new\_user\_credentials (1).csv>>

TASK 2: HOW TO INSTALL TERRAFORM

git clone <https://github.com/AnjuMeleth/DevOpsMasterTerraform.git>

sh terraform\_install.sh

terraform --version



TASK 3: HOW TO INSTALL AWS CLI TO SET CREDENTIALS TO BE USED BY TERRAFORM WITH AWS CLOUD PROVIDER

1 Get the AWS CLI version 2

curl "<https://awscli.amazonaws.com/awscli-exe-linux-x86_64.zip>" -o "awscliv2.zip"

2 Unzip the file downloaded

unzip awscliv2.zip

3 Install AWS

sudo ./aws/install

4 Get the AWS version

/usr/local/bin/aws --version

Machine generated alternative text:
• Json 
creating: 
inflating: 
inflating: 
inflating: 
creating: 
inflating: 
inflating: 
aws /di st/botocore/data/cu r /2017-01-06/ 
aws /di st/botocore/data/cu r/ 2017 -01-06/pagi nators-l. j son 
aws /di st/botocore/data/cu r/ 2017 -01-06/examp1 es -1. j son 
aws /di st/botocore/data/cur/2017 -01-06/servi ce-2 . json 
aws/di st/botocore/data/braket/2019 
-09-01/ 
aws /di st/botocore/data/braket/2019-09-01/pagi nators -1. j son 
aws /di st/botocore/data/braket/2019-09-01/servi ce-2 . j son 
ubuntu@ip-172-31-86-138:-/DevopsMasterTerraform/2_insta11ationS sudo ./aws/insta 
you can now run: /usr/l ocal /bin/aws 
--versn on 
ubuntu@i p-172-31-86-138 : -/DevopsMasterTerraform/2_i nstal lati ons 

4 Get the AWS version

/usr/local/bin/aws --version

Machine generated alternative text:
you can now run: /usr/l ocal /bin/aws 
--versn on 
ubuntu@ip-172-31-86-138:-/DevopsMasterTerraform/2_insta11ationS /usr/l ocal /bin/a 
ws --versnon 
aws-c1i/2.O.57 python/ 3.7.3 Linux/5.3.O-1035-aws exe/x86_64.ubuntu .18 
ubuntu@i p-172-31-86-138 : -/DevopsMasterTerraform/2_i nstal lati ons 

TASK 4:HOW TO SET THE IAM AWS USER CREDENTIALS

TASK 4:HOW TO SET THE IAM AWS USER CREDENTIALS

1 Run the command

aws configure

2 Enter the access key, secret access

key and default region

3 View the details stored in

credentials file

cat ~/.aws/credentials

test

Access key ID:

AKIAUNLLW2Q6QBAOQ2ED

Secret access key

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

us-east-1

Machine generated alternative text:
aws configure 
Aws Access Key ID [None] : AKIAUNLLW2Q6QBAOQ2ED 
Aws secret Access Key [None) : 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 
Default region name [None): us-east-I 
Default output format [None) : 
ubuntu@ip-172-31-86-138:-/DevopsMasterTerraform/2_insta11ationS cat -/.aws/crede 
ntials 
[default) 
= AKIAUNLLW2Q6QBAOQ2ED 
aws_secret_access_key = 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 
ubuntu@i p-172-31-86-138 : -/DevopsMasterTerraform/2_i nstal lati ons 

TASK 5: HOW TO CREATE A EC2 INSTANCE IN AWS USING TERRAFORM

1 Edit the file main.tf in 5\_Ec2 folder.

vi main.tf

2 List the files

ls -al

3 Run the command to download the code for the provider in the folder where we have our Terraform configuration

terraform init

4 Do a sanity check on the code

terraform plan

5 Apply the configuration

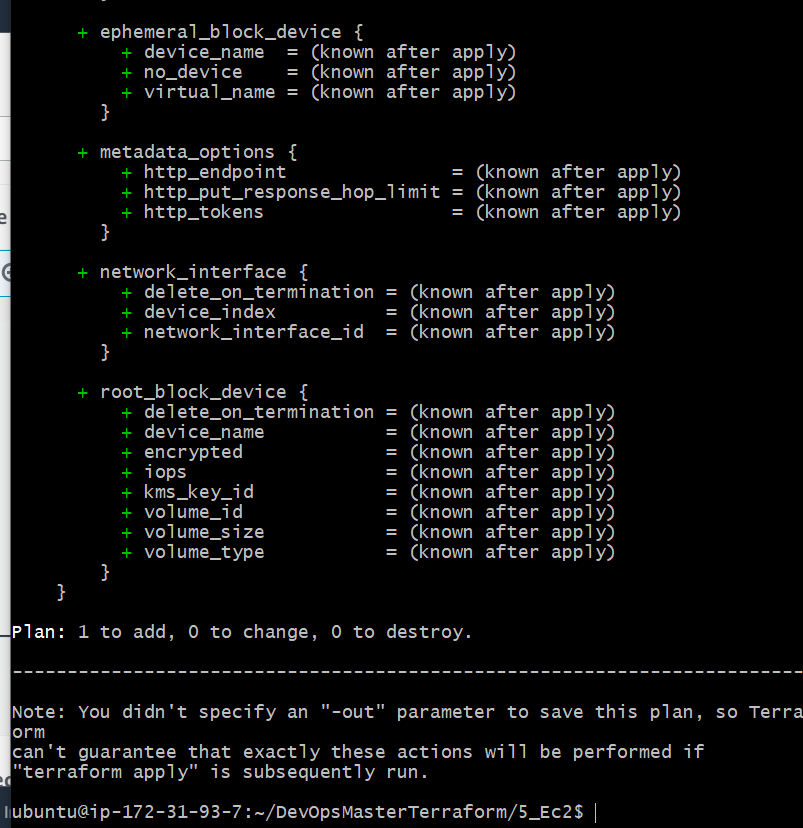
terraform apply

6 Click yes to perform the actual action

7 View the newly created server in

AWS Ec2 console

Machine generated alternative text:
•o prevent automatic upgrades to new major versions that may contain 
Ing 
hanges, we recommend adding version constraints in a requi red_provi ders 
•1 ock 
n your configuration, with the constraint strings suggested below. 
hashicorp/aws: version — 
- 3.11.0" 
•erraform has been successfully initialized! 
•ou may now begin working with Terraform. Try running 
see 
.ny changes that are required for your infrastructure. 
.nds 
hould now work. 
"terraform plan" tc 
All Terraform comr 
f you ever set or change modules or backend configuration for Terraform 
erun this command to reinitialize your working directory. If you forget 
other 
ommands will detect it and remind you to do so if necessary. 
buntu@i p-172-31-93-7 : -/DevopsMasterTerraform/5_Ec2S 



Machine generated alternative text:
aws_nnstance. examp le: creation comp I ete arter 
ZYS 
L 7 -0/ ec5Z345D3Dceaza 
Apply complete! Resources: 1 added, O changed, 
O destroyed. 
lubuntu@ip-172-31-93-7:-/DevopsMasterTerraform/5_Ec2S 

TASK 6: HOW TO CREATE A NEW INSTANCE AND TAG IT WITH A NAME

TASK 6: HOW TO CREATE A NEW INSTANCE AND TAG IT WITH A NAMe

1 Edit the file main.tf in 6\_tags.

vi main.tf

2 Apply the configuration

terraform init

terraform apply

3 We get an error no suitable

version of the provider installed

4 Run init

terraform init

5 Apply the configuration

terraform apply

TASK 7 :HOW TO

UPDATE AN EXISTING

RESOURCE IN

TERRAFORM

1 Modify the main.tf file in the

6\_tags folder. Make sure you use

your key file name in the main.tf

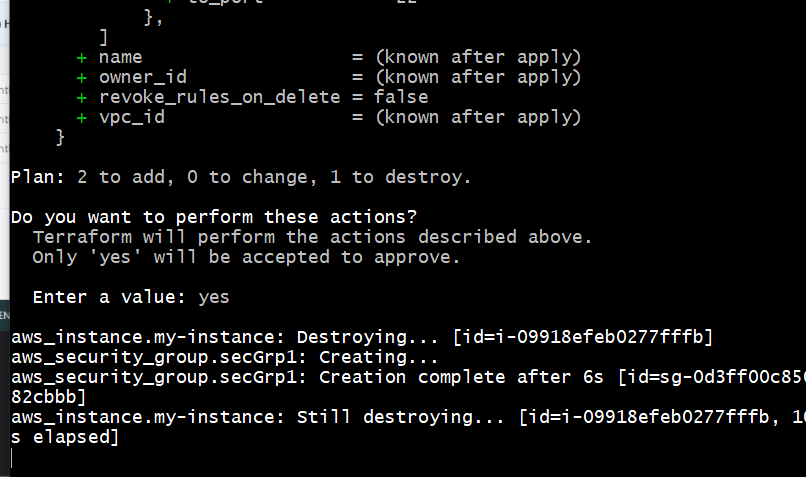
vi main.tf

2 Include the key name

key\_name = "Jenkins" // our keym=parm name eg:“Jenkins.pem"

3 Apply the Terraform configuration terraform apply

4 Enter yes



Machine generated alternative text:
DO you really want to destroy all resources? 
Terraform will destroy all your managed infrastructure, as shown above. 
There is no undo. only 'yes' will be accepted to confi rm. 
Enter a value: 
yes 
aws_securi ty_group . seccrpl: 
aws_securi ty_group . seccrpl: 
Destroy compl ete! Resources : 
Destroying. 
Ci g-Od3ffOOc85082cbbb] 
Destruction compl ete after 2s 
1 destroyed. 
ubuntu@i p-172-31-93-7 :-/DevopsMasterTerraform/6_tagS 

Machine generated alternative text:
Terraform has been successfully initialized! 
you may now begin working with Terraform. Try running 
see 
any changes that are required for your infrastructure. 
ands 
should now work. 
"terraform plan" to 
All Terraform comm 
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. 
mportS terraform import 
aws_instance . mymanualinstance i -0361baefea15e58a1 
aws_instance .mymanualinstance: Importing from ID "i -0361baefea15e58a1" . . . 
aws_instance. mymanualinstance: Import prepared! 
prepared aws_instance for import 
aws_instance .mymanualinstance: Refreshing state.. 
1] 
Import successful 
Ci d=i -0361baefea15e58a 
The resources that were imported are shown above. These resources are now 
your Terraform state and will henceforth be managed by Terraform. 
ubuntu@i p-172-31-93-7 :-/DevopsMasterTerraform/11_i mportS 

TASK 8: HOW TO ENABLE SSH ACCESS TO NEW EC2

1 Edit the main.tf file in 6\_tag

folder. Make sure you use your

key file name in the main.tf

vi main.tf

2 Include the details about the security group

resource "aws\_security\_group"

"secGrp1" {

ingress {

from\_port = 22

to\_port = 22

protocol = "tcp"

cidr\_blocks = ["0.0.0.0/0"]

}

}

3 Make use of the security ID in the

"aws\_instance"

vpc\_security\_group\_ids = [aws\_security\_group.secGrp1.id]

4 Run command to get the graph of

terraform resources

terraform graph

5 Apply the configuration terraform apply

6 Access the newly created Ec2

instance

TASK 9 : HOW TO DELETE A TERRAFORM RESOURCE

1 Destroy the instance that got

created . Make sure you are in

the same folder 6\_tag:

terraform destroy

TASK 10: HOW TO PROVISION AN EC2 INSTANCE WITH APACHE SERVICE UP AND RUNNING

1 Modify the main.tf file in 10\_apache folder.

Make sure you use your key file

name in the main.tf

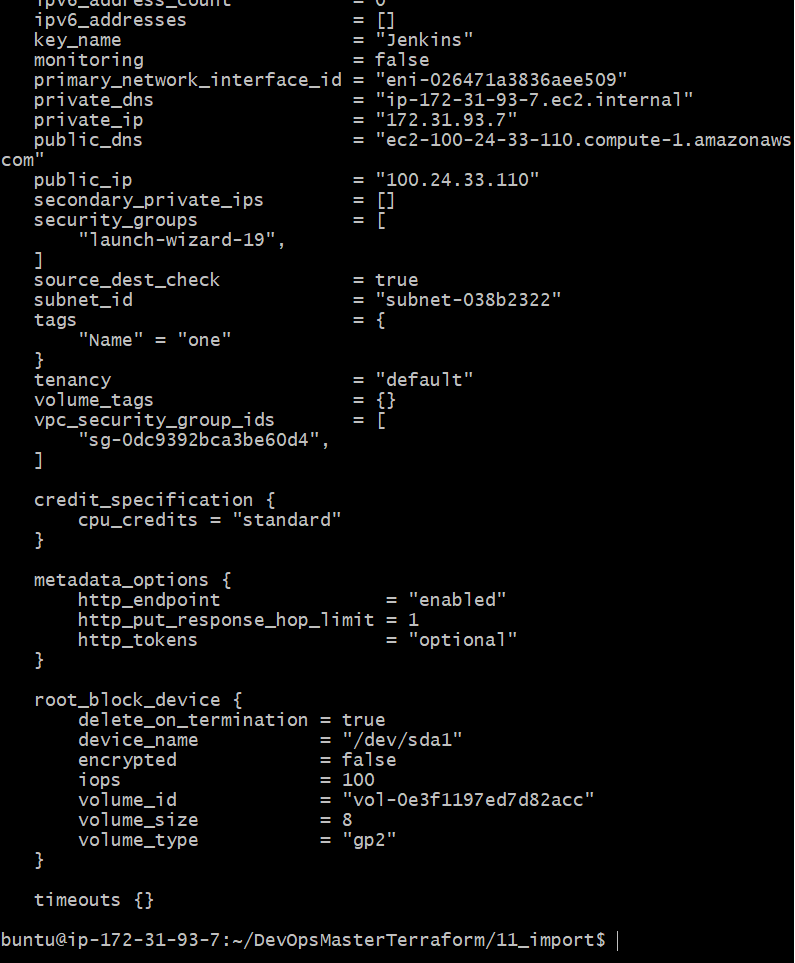
vi main.tf

2 Initialise terraform

terraform init

3 Apply Terraform configuration

terraform apply



Task 12:

TASK 12: HOW TO CREATE A S3 WHICH WILL ACT AS REMOTE BACKEND

1 Go to folder 12\_13\_state.Make sure you use your key file name in the main.tf

vi main.tf

2 Initialise terraform

terraform init

3 Apply the configuration

terraform apply

Machine generated alternative text:
force_destroy 
hosted_zone_i d 
id 
regn on 
request_payer 
webs i te_domai n 
websi te_endpoi nt 
= true 
= (known 
= (known 
= (known 
= (known 
= (known 
= (known 
after 
after 
after 
after 
after 
after 
appl Y) 
appl Y) 
appl Y) 
appl Y) 
appl Y) 
appl Y) 
Plan: 1 
server_s i de_encrypti on_confi gu rati on 
rule { 
appl de_encrypti { 
sse_algorithm = "AES256" 
versioning { 
enabl ed 
= true 
+ mfa_delete = false 
to add, O to change, O 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: 

TASK 13: HOW TO SET THE REMOTE BACKEND AS S3 BUCKET CREATED

1 Initialise the terraform

terraform init

Machine generated alternative text:
S3 buckets 
Q 
Search for buckets 
+ Create bucket 
Edit public access settings 
Empty 
Bucket name 
terraformupandrunningstatechristu 
Delete 
Access O 
Objects can be public 
All access types 
1 
Buckets 
Region 
Asia Pacific 
(Mumbai) 
Discover the console 
1 
Regions 
Date created 
Oct 18, 2020 
PM 
GMT+0530 

Machine generated alternative text:
regn on 
request_payer 
tags 
— "ap-south-l" 
— "Bucketowner" 
server_si de_encrypti on_confi guration { 
rule { 
appl de_encrypti { 
sse_algorithm = "AES256" 
versioning { 
enabl ed 
= true 
mfa_delete = false 
'1 an : 
O to add, O to change, 1 to destroy. 
DO you really want to destroy all resources? 
Terraform will destroy all your managed infrastructure, as shown above. 
There is no undo. only 'yes' 
Enter a value: 
yes 
3_bucket . terraform_state : 
techristu] 
aws_s 3_bucket . terraform_state : 
will be accepted to confi rm. 
Destroying. 
Ci d=terraformupandrunningsta 
Destruction compl ete after 2s 
Destroy complete! Resources: 1 destroyed. 
'buntu@ip-172-31-93-7:-/DevopsMasterTerraform/12_13_stateS 

TASK 15 : HOW TO CREATE A JENKINS SERVER WITH TERRAFORM

TASK 15 : HOW TO CREATE A JENKINS SERVER WITH TERRAFORM

1 Edit main.tf file in 15\_Jenkins folder. Make sure you use your key file name in the main.tf

vi main.tf

2 Initialise terraform

terraform init

3 Apply terrform

terraform apply

4 View the Jenkins server in browser http://<ipaddress>:8080

5 Destroy the terraform configurations

terraform delete

Machine generated alternative text:
in your configuration, with the constraint strings suggested below. 
* hashicorp/aws: version — 
- 3.11.0" 
Terraform has been successfully initialized! 
you may now begin working with Terraform. Try running 
see 
any changes that are required for your infrastructure. 
ands 
should now work. 
"terraform plan" tc 
All Terraform com 
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-172-31-93-7:-/DevopsMasterTerraform/15_jenkinsS 

Machine generated alternative text:
Plan: 2 to add, O to change, 
DO you want to perform these 
Terraform will perform the 
O to destroy. 
acti ons? 
actions described above. 
only 'yes' will be accepted to approve. 
Enter a value: 
yes 
creating.. . 
. seccrpl: creation compl ete after 7s 
d69828) 
aws_instance . my-instance: creating.. . 
[i d=sg-01a8cd8b73S 