

AWS CLI (Command Line Interface)

Setting up IAM user

Creating User with Access-key

aws

Services

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IRRINKI SAI TEJA

Global

Support

Add user

1

2

3

4

5

Set user details

You can add multiple users at once with the same access type and permissions. [Learn more](#)

User name*

Saiteja

Add another user

Select AWS access type

Select how these users will primarily access AWS. If you choose only programmatic access, it does NOT prevent users from accessing the console using an assumed role. Access keys and autogenerated passwords are provided in the last step. [Learn more](#)

Select AWS credential type*

☒ Access key - Programmatic access

Enables an **access key ID** and **secret access key** for the AWS API, CLI, SDK, and other development tools.

☐ Password - AWS Management Console access

Enables a **password** that allows users to sign-in to the AWS Management Console.

* Required

Cancel

Next: Permissions

Set permissions & Attaching Policies

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Set permissions

Add user to group

Copy permissions from existing user

Attach existing policies directly

Create policy

Filter policies

Search

Showing 694 results

	Policy name	Type	Used as
<input checked="" type="checkbox"/>	AdministratorAccess	Job function	Permissions policy (2)
<input type="checkbox"/>	AdministratorAccess-Amplify	AWS managed	None
<input type="checkbox"/>	AdministratorAccess-AWSElasticBeanstalk	AWS managed	None
<input type="checkbox"/>	AlexaForBusinessDeviceSetup	AWS managed	None
<input type="checkbox"/>	AlexaForBusinessFullAccess	AWS managed	None
<input type="checkbox"/>	AlexaForBusinessGatewayExecution	AWS managed	None

Cancel

Previous

Next: Tags

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Add user

1 2 3 4 5

✓ Success

You successfully created the users shown below. You can view and download user security credentials. You can also email users instructions for signing in to the AWS Management Console. This is the last time these credentials will be available to download. However, you can create new credentials at any time.

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

Download .csv

	User	Access key ID	Secret access key
▶	✓ Saiteja	AKIAUL6SJKNF67VYL5BR	***** Show

Close

Installing AWS-CLI

```
# apt update
# apt install awscli -y
```

```
root@ip-172-31-18-249:~#
root@ip-172-31-18-249:~# apt install awscli -y
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following NEW packages will be installed:
  awscli
0 upgraded, 1 newly installed, 0 to remove and 3 not upgraded.
Need to get 967 kB of archives.
After this operation, 8432 kB of additional disk space will be used.
Get:1 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal-updates/universe amd64 awscli all 1.18.69-1ubuntu0.20.04.1 [967 kB]
Fetched 967 kB in 0s (32.7 MB/s)
Selecting previously unselected package awscli.
(Reading database ... 69735 files and directories currently installed.)
Preparing to unpack .../awscli_1.18.69-1ubuntu0.20.04.1_all.deb ...
Unpacking awscli (1.18.69-1ubuntu0.20.04.1) ...
Setting up awscli (1.18.69-1ubuntu0.20.04.1) ...
```

Configure AWS CLI with IAM user Credentials with specific Region

```
# aws configure
```

```
root@ip-172-31-18-249:~#
root@ip-172-31-18-249:~# aws configure
AWS Access Key ID [None]: AKIAUL6SJKNF67VYL5BR
AWS Secret Access Key [None]: kDrrehmE50HQ3vQNSUqkUcrEubakxNcAqj69YsF
Default region name [us-east-2]: us-east-2
Default output format [None]: json
root@ip-172-31-18-249:~#
root@ip-172-31-18-249:~# aws s3 ls
root@ip-172-31-18-249:~#
```

Once it is done try some aws cli commands like `# aws s3 ls`
If u have any buckets in your s3 it will list

EC2 – Elastic Compute Cloud

Create a key pair

```
# aws ec2 create-key-pair --key-name <keypair-Name> --query 'KeyMaterial' --output text > <keypair-Name.pem>
```

```
root@ip-172-31-18-249:~#
root@ip-172-31-18-249:~# aws ec2 create-key-pair --key-name MyKeyPair --query 'KeyMaterial' --output text > MyKeyPair.pem
root@ip-172-31-18-249:~#
root@ip-172-31-18-249:~# ls
MyKeyPair.pem  snap
root@ip-172-31-18-249:~#
root@ip-172-31-18-249:~# cat MyKeyPair.pem
-----BEGIN RSA PRIVATE KEY-----
MIIEowIBAAKCAQEAtoTppHbKwa8spb4PMYbxYgi29hfMDUqanx3k03jAjb7krf0
M/+N90muioD0sgT4brb4bDgG9Yuprax+YHcoFw13v24/gn6F0BgVhZId84bjbMdS
3FFu1z8ssDnLCgNb9ENEZowgVUM20AN+0bxITcTyR2hp08g10T9wo1oC81e1/ca3
qLh/0Zydwve0G6G06UipY4uT3zL7gw0EGY395TauNZnL8Tvrw0RzJvH6L4wWCM5
no0VAeGdGK9nsFLUMgj07B+sX4AAtGCcrMhY2iVfAK/5pU2+ZR0yeisY07jSkCVC
Dsv6cBYiXM1vBns2NeS4pSn99PzkLhnMLumoSwIDAQABAoIBA0EpA0Cd5TW492E+
eS1Adfy92vLBKk82ny4ZrGmQ7/IP/mLNaZ6poy75qkbHHYBk5Xfc/8cSUP95CNS
E6vyvhSoX/Zdj0a1qHK2mCE0gL6vV40w5aThA36SsbkVSGfLxPyh6UJWDRKXXqn
suuGsFz/ziiPosFnzZPisvWzV0rha52Y9N3yxGMnZ2/bZZv2U6xSUfBb0BSYHG
TR0WxrF4WI6DoBuELqndQ98fw7RGvVb5nCcJCuLqr9vxFL7Wh6/9+kT0wsvTXWrZ
/d3XpR4hCkxmKHC07r40Nny72A5HDam4kixkBuc70JovKtxLSWs3CkAUoooyc560
PXix2MkCqYEA6KcVkuF3qIESN9TQ0Wn+D41f6paNs0YzWpe4s155vbogssz3dxZ6
p4gBT6q0N2dgE72mXxv9WIT0mfDx0x9RM5PSdeLkjbzY5YW8vJSR5NGS.JN0LW0jaY
lZeIKZKVVsutk/v5vmvF0AVTjIgjIE93L1cDyokMo1/AuHARub/Rh58CgYEAAGtr
AZHdb39jTSDhI0a8MLXKs09vIT0pW75KjmTm33c+iPrn3Du0tLL05jxCf4pU2Rk
e7G1PZLWoTreVbh2WVvYTLfUcwVCxzIyRjt0bs+NpxVLSe5N08IR4u7NNWln4wHb
rk9a0Q0zJR0X0DBnmSGK8rFL/7D6XsD0mvu9UCgYBxbJvuRvP+a8bE/4ChmJor
X0JpTTMSNuRsg1GhVPU3YVn1seXn4ka0DK0PAnjJXBKEG7FibDDPtm46ZgbBE7k
xLln3KIffYxFahmM2uXx55ZxbDI1IRLPJIpJYqkUyhqQ+ZHdStfLzffVKSzWfy34w
zzx165jD0biEcubBZ1owwwKBgDzBHH8csGJAKcnVoEgaau5bLjVCRv4GcA7Aqbt
q2VJt8CMGp2bLjxIRtv7CxpJu6LHePyDILYv0K0lvnf2th36USaLZACRCU014kEc
ofWFf9Yo8DdXyjjyE4UcY0m4YTOISxLzNow3ijHx/cr7cGCu+F6+ULHK0Dcx1IoK
caYdAoGBAJLzK1em4C+Gke6L3PyGVypoBMFdr0ij4VReHesG5lw2waLzrzrDAU
VqI9S0wa3pKuu0L5zY/AV00HCJxcLIKbCc0uk+MudLYcQjX0FN3LJqtvA7wpdE0s
f+dI/Z6Fq1XiEkTnVnj7B7ffjrdUtGDgvNkGVVFYU/vJ84tF2ITx
-----END RSA PRIVATE KEY-----
root@ip-172-31-18-249:~#
```

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Ohio

Support

Key pairs (1) Info

Actions

Create key pair

Filter key pairs

<

1

>

<input type="checkbox"/>	Name	Type	Fingerprint	ID
<input type="checkbox"/>	MyKeyPair	rsa	fd:9d:5fec:30:22:e8:21:d3:73:f5:94:63...	key-061dab5831eb04203

Delete a key pair

To delete a key pair, run the `aws ec2 delete-key-pair` command, substituting `MyKeyPair` with the name of the pair to delete.

```
# aws ec2 delete-key-pair --key-name <keypair-Name>
```

```
root@ip-172-31-18-249:~#
root@ip-172-31-18-249:~# aws ec2 delete-key-pair --key-name MyKeyPair
root@ip-172-31-18-249:~#
root@ip-172-31-18-249:~#
```

Create a Security Group & Adding Inbound rules

```
# aws ec2 create-security-group --group-name <security grp Name> --description  
"<Description>"
```

```
# curl https://checkip.amazonaws.com
```

```
# aws ec2 authorize-security-group-ingress --group-id <security group Id> --protocol  
tcp --port <port Number> --cidr <ip address>
```

```
# aws ec2 authorize-security-group-ingress --group-id <security grp Id> --protocol tcp  
--port 22-8000 --cidr 0.0.0.0/0
```

```
root@ip-172-31-18-249:~# aws ec2 create-security-group --group-name my-sg --description "My security group"  
{  
  "GroupId": "sg-0390becf3cae63339"  
}  
root@ip-172-31-18-249:~# curl https://checkip.amazonaws.com  
54.205.185.239  
root@ip-172-31-18-249:~#  
root@ip-172-31-18-249:~# aws ec2 authorize-security-group-ingress --group-id sg-0390becf3cae63339 --protocol tcp --port 22 --cidr  
54.205.185.239/32  
root@ip-172-31-18-249:~# aws ec2 authorize-security-group-ingress --group-id sg-0390becf3cae63339 --protocol tcp --port 22-8000 --  
cidr 0.0.0.0/0  
root@ip-172-31-18-249:~#
```

The screenshot shows the AWS Management Console interface for a security group named 'my-sg' (ID: sg-0390becf3cae63339). The 'Details' section shows the security group name, ID, description ('My security group'), VPC ID (vpc-8b21aee0), owner (300551852875), inbound rules count (2), and outbound rules count (1). The 'Inbound rules' tab is selected, showing two rules:

Name	Security group rule...	IP version	Type	Protocol	Port range	Source
-	sg-06e9f852f5432af3c	IPv4	Custom TCP	TCP	22 - 8000	0.0.0.0/0
-	sg-09fd57b6d8e1b940a	IPv4	SSH	TCP	22	54.205.185.239/32

To view the initial information for my-sg, run the `aws ec2 describe-security-groups` command. For an EC2-Classic security group, you can reference it by its name.

`aws ec2 describe-security-groups --group-names <security grp Name>`

```
root@ip-172-31-18-249:~#  
root@ip-172-31-18-249:~# aws ec2 describe-security-groups --group-names my-sg  
{  
  "SecurityGroups": [  
    {  
      "Description": "My security group",  
      "GroupName": "my-sg",  
      "IpPermissions": [  
        {  
          "FromPort": 22,  
          "IpProtocol": "tcp",  
          "IpRanges": [  
            {  
              "CidrIp": "54.205.185.239/32"  
            }  
          ],  
          "Ipv6Ranges": [],  
          "PrefixListIds": [],  
          "ToPort": 22,  
          "UserIdGroupPairs": []  
        },  
        {  
          "FromPort": 22,  
          "IpProtocol": "tcp",  
          "IpRanges": [  
            {  
              "CidrIp": "0.0.0.0/0"  
            }  
          ],  
          "Ipv6Ranges": [],  
          "PrefixListIds": [],  
          "ToPort": 8080,  
          "UserIdGroupPairs": []  
        }  
      ],  
      "OwnerId": "300551852875",  
      "GroupId": "sg-0390becf3cae63339",  
      "IpPermissionsEgress": [  
        {  
          "IpProtocol": "-1",  
          "IpRanges": [  
            {  
              "CidrIp": "0.0.0.0/0"  
            }  
          ],  
          "Ipv6Ranges": [],  
          "PrefixListIds": [],  
          "UserIdGroupPairs": []  
        }  
      ],  
      "VpcId": "vpc-8b21aee0"  
    }  
  ]  
}
```

Delete your security group

The following command example deletes the EC2-Classic security group named.

`aws ec2 delete-security-group --group-name <security grp Name>`

```
root@ip-172-31-18-249:~#  
root@ip-172-31-18-249:~# aws ec2 delete-security-group --group-name my-sg  
root@ip-172-31-18-249:~#
```

Launch Instance

You can use the following command to launch a t2.micro instance in EC2-Classic. Replace the italicized parameter values with your own.

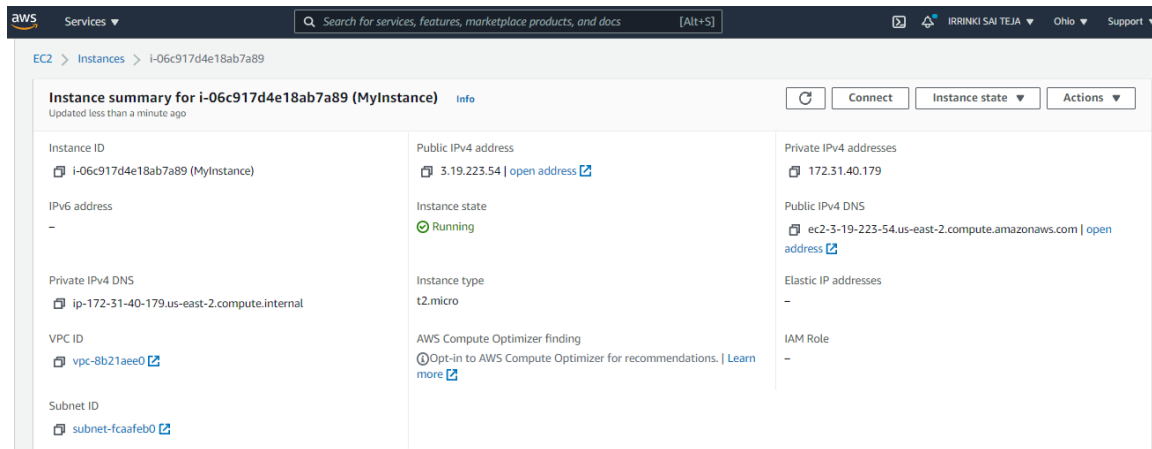
You can get the ami Id's from documentation or console for your required Instance.

```
# aws ec2 run-instances --image-id <ami-Id> --count 1 --instance-type <type> --key-name <keypair-Name> --security-groups <security grp Name>
```

```
root@ip-172-31-18-249:~#
root@ip-172-31-18-249:~# aws ec2 run-instances --image-id ami-00dfe2c7ce89a450b --count 1 --instance-type t2.micro --key-name MyKeyPair --security-groups my-sg
{
  "Groups": [],
  "Instances": [
    {
      "AmiLaunchIndex": 0,
      "ImageId": "ami-00dfe2c7ce89a450b",
      "InstanceId": "i-06c917d4e18ab7a89",
      "InstanceType": "t2.micro",
      "KeyName": "MyKeyPair",
      "LaunchTime": "2021-10-01T11:15:51.000Z",
      "Monitoring": {
        "State": "disabled"
      },
      "Placement": {
        "AvailabilityZone": "us-east-2c",
        "GroupName": "",
        "Tenancy": "default"
      },
      "PrivateDnsName": "ip-172-31-40-179.us-east-2.compute.internal",
      "PrivateIpAddress": "172.31.40.179",
      "ProductCodes": [],
      "PublicDnsName": "",
      "State": {
        "Code": 0,
        "Name": "pending"
      },
      "StateTransitionReason": "",
      "SubnetId": "subnet-fcaafeb0",
      "VpcId": "vpc-8b21aee0",
      "Architecture": "x86_64",
      "BlockDeviceMappings": [],
      "ClientToken": "0c655ce6-259c-4d00-a0e0-e533614f3b32",
      "EbsOptimized": false,
      "EnaSupport": true,
      "Hypervisor": "xen",
      "NetworkInterfaces": [
        {
          "AttachmentId": "eni-attach-4a1b1b1b",
          "DeviceIndex": 0,
          "InterfaceId": "eni-4a1b1b1b",
          "PrivateIpAddress": "172.31.40.179",
          "PrivateDnsName": "ip-172-31-40-179.us-east-2.compute.internal",
          "Status": "in-use",
          "SubnetId": "subnet-fcaafeb0",
          "VpcId": "vpc-8b21aee0"
        }
      ]
    }
  ],
  "OwnerId": "300551852875",
  "ReservationId": "r-093b89adb97b25e4f"
}
root@ip-172-31-18-249:~#
```

Add a tag to your Instance

`# aws ec2 create-tags --resources <Instance-Id> --tags Key=Name, Value=<value>`



Terminate your Instance

To delete an instance, you use the command `aws ec2 terminate-instances` to delete it.

`# aws ec2 terminate-instances --instance-ids <Instance-Id>`

```
root@ip-172-31-18-249:~#
root@ip-172-31-18-249:~# aws ec2 terminate-instances --instance-ids i-06c917d4e18ab7a89
{
  "TerminatingInstances": [
    {
      "CurrentState": {
        "Code": 32,
        "Name": "shutting-down"
      },
      "InstanceId": "i-06c917d4e18ab7a89",
      "PreviousState": {
        "Code": 16,
        "Name": "running"
      }
    }
  ]
}
root@ip-172-31-18-249:~# aws ec2 terminate-instances --instance-ids i-06c917d4e18ab7a89
{
  "TerminatingInstances": [
    {
      "CurrentState": {
        "Code": 32,
        "Name": "shutting-down"
      },
      "InstanceId": "i-06c917d4e18ab7a89",
      "PreviousState": {
        "Code": 32,
        "Name": "shutting-down"
      }
    }
  ]
}
```

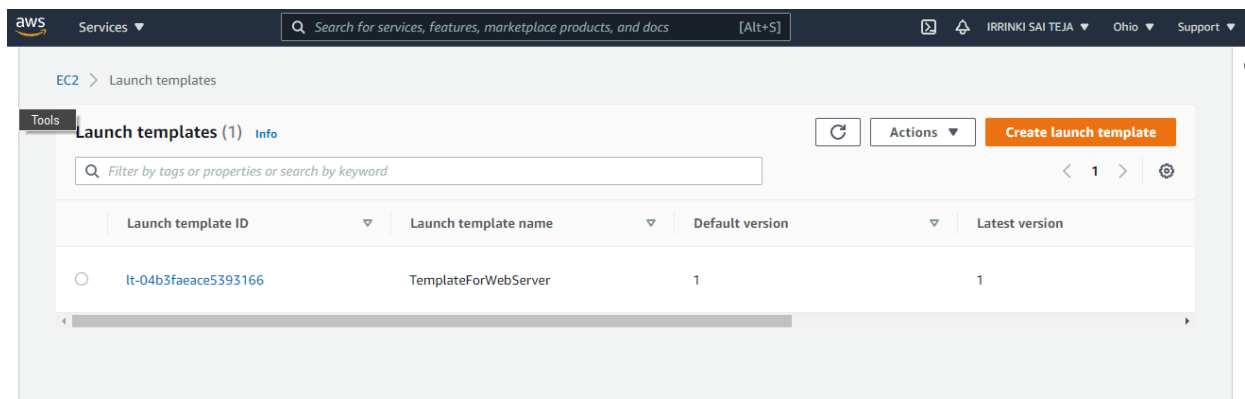
Create Launch Template

```
# aws ec2 create-launch-template --launch-template-name  
<Name>:"[{\"AssociatePublicIpAddress\":true,\"DeviceIndex\":0,\"Ipv6AddressCount\":1,\"  
SubnetId\":\"pe\":\"<Instance type>\",\"TagSpecifications\": [{\"ResourceType\":\"instance\", \"  
Tags\": [{\"Key\":\"Name\", \"Value\":\"<value>\"}]}]}
```

```
{
```

```
root@ip-172-31-30-248:~#  
root@ip-172-31-30-248:~# aws ec2 create-launch-template --launch-template-name TemplateForWebServer --version-description  
workInterfaces": [{\"AssociatePublicIpAddress\":true,\"DeviceIndex\":0,\"Ipv6AddressCount\":1,\"SubnetId\":\"subnet-e8d56383\"}], \"Im  
pe\":\"t2.micro\", \"TagSpecifications\": [{\"ResourceType\":\"instance\", \"Tags\": [{\"Key\":\"Name\", \"Value\":\"webserver\"}]}]}
```

```
{  
  "LaunchTemplate": {  
    "LaunchTemplateId": "lt-04b3faeace5393166",  
    "LaunchTemplateName": "TemplateForWebServer",  
    "CreateTime": "2021-10-05T09:15:52+00:00",  
    "CreatedBy": "arn:aws:sts::300551852875:assumed-role/My_Administation_Access/i-0b61e5a9ee0e6a8c8",  
    "DefaultVersionNumber": 1,  
    "LatestVersionNumber": 1  
  }  
}
```



Delete Launch Template

```
# aws ec2 delete-launch-template --launch-template-id <template id> --region  
<region>
```

```
root@ip-172-31-30-248:~#  
root@ip-172-31-30-248:~# aws ec2 delete-launch-template --launch-template-id lt-04b3faeace5393166 -  
-region us-east-2  
{  
  "LaunchTemplate": {  
    "LaunchTemplateId": "lt-04b3faeace5393166",  
    "LaunchTemplateName": "TemplateForWebServer",  
    "CreateTime": "2021-10-05T09:15:52+00:00",  
    "CreatedBy": "arn:aws:sts::300551852875:assumed-role/My_Administation_Access/i-0b61e5a9ee0e  
6a8c8",  
    "DefaultVersionNumber": 1,  
    "LatestVersionNumber": 1  
  }  
}
```


Creating Auto-Scaling group

```
# aws autoscaling create-auto-scaling-group --auto-scaling-group-name <Name> --  
launch-LaunchTemplateId=<template – id > --min-size 2 --max-size 5 --vpc-zone-  
identifier "subnet1-id,subnet2-id,subnet3-id"
```

```
root@ip-172-31-30-248:~#  
root@ip-172-31-30-248:~# aws autoscaling create-auto-scaling-group --auto-scaling-group-name my-asg --launch-template  
LaunchTemplateId=lt-04b3faeace5393166 --min-size 2 --max-size 5 --vpc-zone-identifier "subnet-fcaafeb0,subnet-99f418e4  
,subnet-e8d56383"  
root@ip-172-31-30-248:~#
```

The screenshot shows the AWS Management Console interface for an Auto Scaling group named 'my-asg'. The console is in the 'Details' tab, which is part of the 'Tools' section. The 'Group details' section displays the following information:

Group details		Edit
Desired capacity	2	
Minimum capacity	2	
Maximum capacity	5	
Auto Scaling group name	my-asg	
Date created	Tue Oct 05 2021 14:50:50 GMT+0530 (India Standard Time)	
Amazon Resource Name (ARN)	arn:aws:autoscaling:us-east-2:300551852875:autoScalingGroup:338a5e37-a10b-487c-a0df-bfab6c14982:autoScalingGroupName/my-asg	

The 'Launch template' section displays the following information:

Launch template			Edit
Launch template	AMI ID	Instance type	
TemplateForWebServer lt-04b3faeace5393166	-	-	

Delete your Auto-Scaling Group

```
# aws autoscaling delete-auto-scaling-group --auto-scaling-group-name < Auto -  
Scaling group Name >
```

EBS – Elastic Block Storage

Create EBS Volume

To create an empty General Purpose SSD (gp2) volume

```
# aws ec2 create-volume --volume-type <volume type> --size <size in number> --availability-zone <zone>
```

```
root@ip-172-31-18-249:~#  
root@ip-172-31-18-249:~# aws ec2 create-volume --volume-type gp2 --size 8 --availability-zone us-east-2a  
{  
  "AvailabilityZone": "us-east-2a",  
  "CreateTime": "2021-10-02T04:39:48.000Z",  
  "Encrypted": false,  
  "Size": 8,  
  "SnapshotId": "",  
  "State": "creating",  
  "VolumeId": "vol-00b2f1fb951f360a",  
  "Iops": 100,  
  "Tags": [],  
  "VolumeType": "gp2",  
  "MultiAttachEnabled": false  
}
```

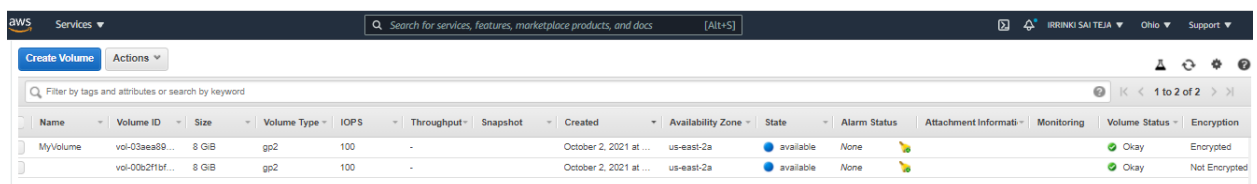
To create an encrypted volume

```
# aws ec2 create-volume --volume-type <volume type> --size <size in number> --encrypted --availability-zone <zone>
```

```
root@ip-172-31-18-249:~#  
root@ip-172-31-18-249:~# aws ec2 create-volume --volume-type gp2 --size 8 --encrypted --availability-zone us-east-2a  
{  
  "AvailabilityZone": "us-east-2a",  
  "CreateTime": "2021-10-02T04:41:31.000Z",  
  "Encrypted": true,  
  "Size": 8,  
  "SnapshotId": "",  
  "State": "creating",  
  "VolumeId": "vol-03aea89102c6ea319",  
  "Iops": 100,  
  "Tags": [],  
  "VolumeType": "gp2",  
  "MultiAttachEnabled": false  
}
```

To create a volume with tags

```
# aws ec2 create-tags --resources <volume-id> --tags Key=Name,Value=<value>
```



Name	Volume ID	Size	Volume Type	IOPS	Throughput	Snapshot	Created	Availability Zone	State	Alarm Status	Attachment Information	Monitoring	Volume Status	Encryption
MyVolume	vol-03aea89102c6ea319	8 GB	gp2	100	-		October 2, 2021 at ...	us-east-2a	available	None			Okay	Encrypted
	vol-00b2f1fb951f360a	8 GB	gp2	100	-		October 2, 2021 at ...	us-east-2a	available	None			Okay	Not Encrypted

To Delete a Volume

```
# aws ec2 delete-volume --volume-id <volume id>
```

Output: None

To create a snapshot

This example command creates a snapshot of the volume with a volume ID of <volume Id> and a short description to identify the snapshot.

```
# aws ec2 create-snapshot --volume-id <volume Id> --description "<Description>"
```

```
root@ip-172-31-18-249:~#
root@ip-172-31-18-249:~# aws ec2 create-snapshot --volume-id vol-00b2f1bfb951f360a --description "This is my database volume snapshot"
{
  "Description": "This is my database volume snapshot",
  "Encrypted": false,
  "OwnerId": "300551852875",
  "Progress": "",
  "SnapshotId": "snap-06b32fee81eaf4c40",
  "StartTime": "2021-10-02T05:32:48.998Z",
  "State": "pending",
  "VolumeId": "vol-00b2f1bfb951f360a",
  "VolumeSize": 8,
  "Tags": []
}
```

To create a snapshot with tags

```
# aws ec2 create-snapshot --volume-id <volume Id> --description 'Prod backup' --tag-specifications 'ResourceType=snapshot,Tags=[{Key=Name,Value=<value>},{Key=Database,Value=Mysql}]'
```

```
root@ip-172-31-18-249:~#
root@ip-172-31-18-249:~# aws ec2 create-snapshot --volume-id vol-00b2f1bfb951f360a --description 'Prod backup' --tag-specifications 'ResourceType=snapshot,Tags=[{Key=Name,Value=dbsnapshot},{Key=Database,Value=Mysql}]'
{
  "Description": "Prod backup",
  "Encrypted": false,
  "OwnerId": "300551852875",
  "Progress": "",
  "SnapshotId": "snap-0e3b49aad497df4df",
  "StartTime": "2021-10-02T05:34:57.578Z",
  "State": "pending",
  "VolumeId": "vol-00b2f1bfb951f360a",
  "VolumeSize": 8,
  "Tags": [
    {
      "Key": "Name",
      "Value": "dbsnapshot"
    },
    {
      "Key": "Database",
      "Value": "Mysql"
    }
  ]
}
```

To allocate an Elastic IP address for EC2-Classic

The following allocate-address example allocates an Elastic IP address to use with an instance in EC2-Classic.

```
# aws ec2 allocate-address
```

```
root@ip-172-31-18-249:~#
root@ip-172-31-18-249:~# aws ec2 allocate-address
{
  "PublicIp": "3.19.202.158",
  "AllocationId": "eipalloc-04cf0be1e14d60c78",
  "PublicIpv4Pool": "amazon",
  "NetworkBorderGroup": "us-east-2",
  "Domain": "vpc"
}
root@ip-172-31-18-249:~#
```

ELB – Elastic Load Balancer

Create-load-balancer

To create an Application load balancer

The below commands to find subnet id & Instance Id

```
# aws ec2 describe-subnets
```

```
# aws ec2 describe-instances
```

```
# aws elbv2 create-load-balancer --name <Load balancer Name>--type <type> --subnets <subnet-Id> <subnet-Id>
```

```
root@ip-172-31-18-249:~#
root@ip-172-31-18-249:~# aws elbv2 create-load-balancer --name my-load-balancer --type application --subnets subnet-99f418e4 subnet-e8d56383
{
  "LoadBalancers": [
    {
      "LoadBalancerArn": "arn:aws:elasticloadbalancing:us-east-2:300551852875:loadbalancer/app/my-load-balancer/ed73d9f8a46d2ef7",
      "DNSName": "my-load-balancer-1328327771.us-east-2.elb.amazonaws.com",
      "CanonicalHostedZoneId": "Z3AADJGX6KTTL2",
      "CreatedTime": "2021-10-02T06:54:44.040Z",
      "LoadBalancerName": "my-load-balancer",
      "Scheme": "internet-facing",
      "VpcId": "vpc-8b21aee0",
      "State": {
        "Code": "provisioning"
      },
      "Type": "application",
      "AvailabilityZones": [
        {
          "ZoneName": "us-east-2b",
          "SubnetId": "subnet-99f418e4",
          "LoadBalancerAddresses": []
        },
        {
          "ZoneName": "us-east-2a",
          "SubnetId": "subnet-e8d56383",
          "LoadBalancerAddresses": []
        }
      ],
      "SecurityGroups": [
        "sg-896dd2fc"
      ],
      "IpAddressType": "ipv4"
    }
  ]
}
```

aws Services							
Search for services, features, marketplace products, and docs [Alt+S]							
Create Load Balancer Actions							
Filter by tags and attributes or search by keyword							
	Name	DNS name	State	VPC ID	Availability Zones	Type	Created At
<input type="checkbox"/>	my-load-balancer	my-load-balancer-5a269eb6...	Active	vpc-8b21aee0	us-east-2b	network	October 2, 2021
<input type="checkbox"/>	my-load-balancer	my-load-balancer-13283277...	Active	vpc-8b21aee0	us-east-2b, us-east-2a	application	October 2, 2021

To create an Network load balancer

aws elbv2 create-load-balancer --name <Load balancer Name>--type type --subnets <subnet-Id>

```
root@ip-172-31-18-249:~#
root@ip-172-31-18-249:~# aws elbv2 create-load-balancer --name my-load-balancer --type network --subnets subnet-99f418e4
{
  "LoadBalancers": [
    {
      "LoadBalancerArn": "arn:aws:elasticloadbalancing:us-east-2:300551852875:loadbalancer/net/my-load-balancer/5a269eb6b1b5b0fb",
      "DNSName": "my-load-balancer-5a269eb6b1b5b0fb.elb.us-east-2.amazonaws.com",
      "CanonicalHostedZoneId": "ZLM0A37VPKANP",
      "CreatedTime": "2021-10-02T06:47:26.335Z",
      "LoadBalancerName": "my-load-balancer",
      "Scheme": "internet-facing",
      "VpcId": "vpc-8b21aee0",
      "State": {
        "Code": "provisioning"
      },
      "Type": "network",
      "AvailabilityZones": [
        {
          "ZoneName": "us-east-2b",
          "SubnetId": "subnet-99f418e4",
          "LoadBalancerAddresses": []
        }
      ],
      "IpAddressType": "ipv4"
    }
  ]
}
```

To register instances with a load balancer

aws elb register-instances-with-load-balancer --load-balancer-name <Load balancer Name> --instances <Instance-Id>

To Delete a Specific Load balancer

aws elbv2 delete-load-balancer --load-balancer-arn <arn end point>

```
root@ip-172-31-18-249:~#
root@ip-172-31-18-249:~# aws elbv2 delete-load-balancer --load-balancer-arn arn:aws:elasticloadbalancing:us-east-2:300551852875:loadbalancer/app/my-load-balancer/ed73d9f8a46d2ef7
root@ip-172-31-18-249:~#
```

RDS

Create-db-Instance

aws rds create-db-instance --db-instance-identifier <db - Name> --db-instance-class <db.type> --engine <Database Engine> --master-username <username> --master-user-password <password> --allocated-storage <storage in numbers>

```
root@ip-172-31-30-248:~#
root@ip-172-31-30-248:~# aws rds create-db-instance --db-instance-identifier test-mysql-instance --db-instance-class db.t2.micro --engine mysql --master-username admin --master-user-password admin123 --allocated-storage 20
{
  "DBInstance": {
    "DBInstanceIdentifier": "test-mysql-instance",
    "DBInstanceClass": "db.t2.micro",
    "Engine": "mysql",
    "DBInstanceStatus": "creating",
    "MasterUsername": "admin",
    "AllocatedStorage": 20,
    "PreferredBackupWindow": "10:06-10:36",
    "BackupRetentionPeriod": 1,
    "DBSecurityGroups": [],
    "VpcSecurityGroups": [
      {
        "VpcSecurityGroupId": "sg-896dd2fc",
        "Status": "active"
      }
    ]
  }
}
```

The screenshot shows the AWS Management Console interface for the 'test-mysql-instance'. The breadcrumb navigation is 'RDS > Databases > test-mysql-instance'. The instance name 'test-mysql-instance' is displayed at the top, with 'Modify' and 'Actions' buttons to its right. Below this is a 'Summary' section containing a table with the following data:

DB identifier	CPU	Status	Class
test-mysql-instance	6.00%	Available	db.t2.micro
Role	Current activity	Engine	Region & AZ
Instance	0 Connections	MySQL Community	us-east-2c

To delete your db-Instance

aws rds delete-db-instance --db-instance-identifier <db - Name> --final-db-snapshot-identifier <db - Name>-final-snap

```
root@ip-172-31-30-248:~#
root@ip-172-31-30-248:~# aws rds delete-db-instance --db-instance-identifier test-mysql-instance --final-db-snapshot-identifier test-mysql-instance-final-snap
{
  "DBInstance": {
    "DBInstanceIdentifier": "test-mysql-instance",
    "DBInstanceClass": "db.t2.micro",
    "Engine": "mysql",
    "DBInstanceStatus": "deleting",
    "MasterUsername": "admin",
    "Endpoint": {
      "Address": "test-mysql-instance.corr19umlnd.us-east-2.rds.amazonaws.com",
      "Port": 3306,
      "HostedZoneId": "Z2XHWR1WZ565X2"
    }
  }
}
```

S3 – Simple Storage Service

List Buckets & Objects

To list your buckets, folders, or objects, use the `s3 ls` command. Using the command without a target or options lists all buckets.

`# aws s3 ls`

```
root@ip-172-31-30-248:~#  
root@ip-172-31-30-248:~# aws s3 ls  
2021-10-04 04:31:17 saiteja-irrinki  
root@ip-172-31-30-248:~#
```

`# aws s3 ls s3://<bucket name>`

```
root@ip-172-31-30-248:~#  
root@ip-172-31-30-248:~# aws s3 ls s3://saiteja-irrinki  
2021-10-04 04:44:17 12288 .deployment-db.yaml.swp  
2021-10-04 04:44:18 126 app-secret.yml  
2021-10-04 04:44:19 176 db-CIP.yml  
2021-10-04 04:44:20 193 mc-CIP.yml  
2021-10-04 04:44:21 383 mcdep.yml  
2021-10-04 04:44:22 183 rmq-CIP-service.yml  
2021-10-04 04:44:23 602 rmq-dep.yml  
2021-10-04 04:44:25 188 vproapp-service.yml  
2021-10-04 04:44:24 793 vproappdep.yml  
2021-10-04 04:44:26 920 vprodbdep.yml
```

Create a bucket

Use the `s3 mb` command to make a bucket. Bucket names must be **globally** unique (unique across all of Amazon S3) and should be DNS compliant.

Bucket names can contain lowercase letters, numbers, hyphens, and periods. Bucket names can start and end only with a letter or number, and cannot contain a period next to a hyphen or another period.

`# aws s3 mb s3://<bucket name>`

```
root@ip-172-31-30-248:~#  
root@ip-172-31-30-248:~# aws s3 mb s3://saiteja-devops  
make_bucket: saiteja-devops  
root@ip-172-31-30-248:~#  
root@ip-172-31-30-248:~# aws s3 ls  
2021-10-04 04:37:42 saiteja-devops  
2021-10-04 04:31:17 saiteja-irrinki
```

The screenshot shows the Amazon S3 console interface. At the top, there's a navigation bar with the AWS logo, 'Services' dropdown, a search bar, and user information 'IRRINKI SAI TEJA'. Below this, the 'Amazon S3' header is visible. The main content area includes an 'Account snapshot' section with a 'View Storage Lens dashboard' button. Below that, the 'Buckets (2)' section is active, showing a table of buckets. The table has columns for Name, AWS Region, Access, and Creation date. Two buckets are listed: 'saiteja-devops' and 'saiteja-irrinki', both in 'US East (Ohio) us-east-2' region with public access and created on October 4, 2021.

Name	AWS Region	Access	Creation date
saiteja-devops	US East (Ohio) us-east-2	Objects can be public	October 4, 2021, 10:07:42 (UTC+05:30)
saiteja-irrinki	US East (Ohio) us-east-2	Objects can be public	October 4, 2021, 10:01:17 (UTC+05:30)

Copy objects

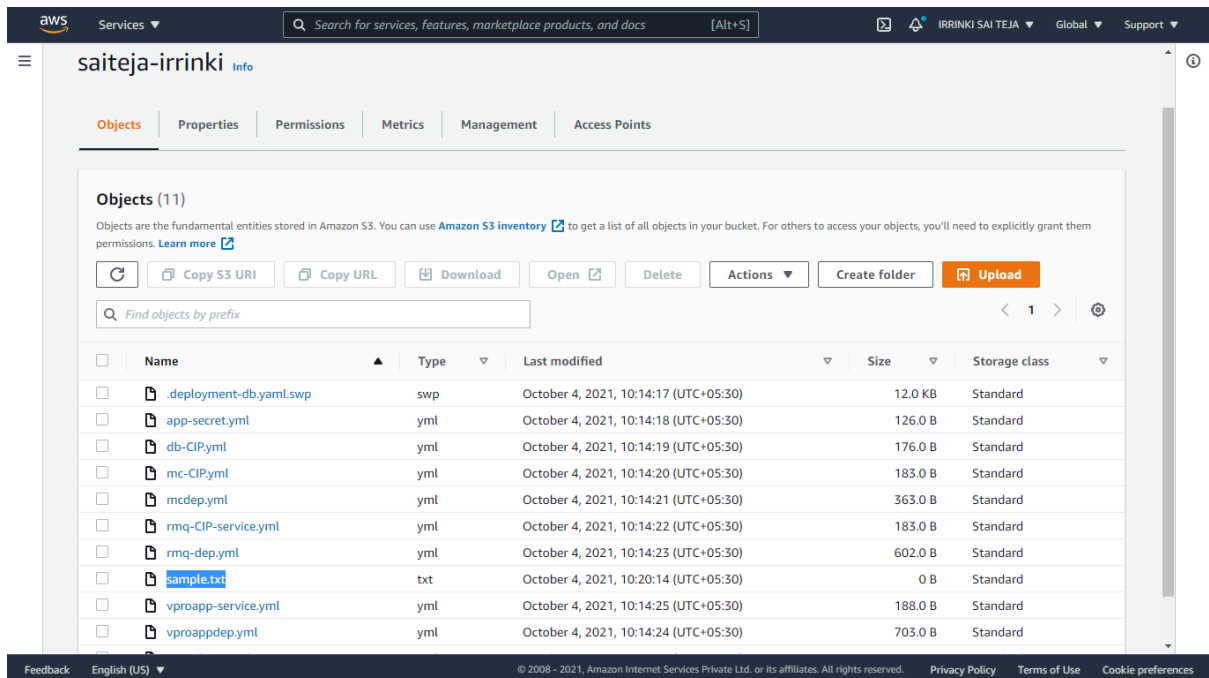
Use the `s3 cp` command to copy objects from a bucket or a local directory

```
# aws s3 cp sample.txt s3:// <bucket name>
```

```
root@ip-172-31-30-248:~#  
root@ip-172-31-30-248:~# touch sample.txt  
root@ip-172-31-30-248:~# ls  
aws awscli v2.zip sample.txt snap  
root@ip-172-31-30-248:~#  
root@ip-172-31-30-248:~# aws s3 cp sample.txt s3://saiteja-devops  
upload: ./sample.txt to s3://saiteja-devops/sample.txt
```

```
# aws s3 cp s3://<source bucket/file> s3://<destination-bucket>
```

```
root@ip-172-31-30-248:~#  
root@ip-172-31-30-248:~# aws s3 cp s3://saiteja-devops/sample.txt s3://saiteja-irrinki  
copy: s3://saiteja-devops/sample.txt to s3://saiteja-irrinki/sample.txt  
root@ip-172-31-30-248:~#
```



The screenshot shows the AWS Management Console for the bucket 'saiteja-irrinki'. The 'Objects' tab is active, showing a list of 11 objects. The objects are:

Name	Type	Last modified	Size	Storage class
.deployment-db.yaml.swp	swp	October 4, 2021, 10:14:17 (UTC+05:30)	12.0 KB	Standard
app-secret.yml	yml	October 4, 2021, 10:14:18 (UTC+05:30)	126.0 B	Standard
db-CIP.yml	yml	October 4, 2021, 10:14:19 (UTC+05:30)	176.0 B	Standard
mc-CIP.yml	yml	October 4, 2021, 10:14:20 (UTC+05:30)	183.0 B	Standard
mcdep.yml	yml	October 4, 2021, 10:14:21 (UTC+05:30)	363.0 B	Standard
rmq-CIP-service.yml	yml	October 4, 2021, 10:14:22 (UTC+05:30)	183.0 B	Standard
rmq-dep.yml	yml	October 4, 2021, 10:14:23 (UTC+05:30)	602.0 B	Standard
sample.txt	txt	October 4, 2021, 10:20:14 (UTC+05:30)	0 B	Standard
vproapp-service.yml	yml	October 4, 2021, 10:14:25 (UTC+05:30)	188.0 B	Standard
vproappdep.yml	yml	October 4, 2021, 10:14:24 (UTC+05:30)	703.0 B	Standard

Move objects

Use the `s3 mv` command to move objects from a bucket or a local directory.

```
# aws s3 mv <local file> s3:// <bucket name>
```

```
# aws s3 mv s3:// <source bucket/file> s3://<destination-bucket>
```

Sync Objects

aws s3 sync . s3://<bucket name>

```
root@ip-172-31-30-248:~#  
root@ip-172-31-30-248:~# aws s3 sync . s3://saiteja-devops/  
upload: aws/config to s3://saiteja-devops/.aws/config  
upload: aws/THIRD_PARTY_LICENSES to s3://saiteja-devops/aws/THIRD_PARTY_LICENSES  
upload: ./bash_history to s3://saiteja-devops/.bash_history  
upload: ./profile to s3://saiteja-devops/.profile  
upload: aws/README.md to s3://saiteja-devops/aws/README.md  
upload: .ssh/authorized_keys to s3://saiteja-devops/.ssh/authorized_keys  
upload: ./bashrc to s3://saiteja-devops/.bashrc  
upload: aws/dist/_codecs_iso2022.cpython-38-x86_64-linux-gnu.so to s3://saiteja-devops/aws/dist/_codecs_iso2022.cpython-38-x86_64-linux-g  
nu.so
```

Delete Objects

aws s3 rm s3://<bucket name/file> --recursive

```
root@ip-172-31-30-248:~#  
root@ip-172-31-30-248:~# aws s3 rm s3://saiteja-devops/aws --recursive  
delete: s3://saiteja-devops/aws/dist/_bz2.cpython-38-x86_64-linux-gnu.so  
delete: s3://saiteja-devops/aws/README.md  
delete: s3://saiteja-devops/aws/dist/_asyncio.cpython-38-x86_64-linux-gnu.so  
delete: s3://saiteja-devops/aws/dist/_cffi_backend.cpython-38-x86_64-linux-gnu.so  
delete: s3://saiteja-devops/aws/dist/_bisect.cpython-38-x86_64-linux-gnu.so  
delete: s3://saiteja-devops/aws/dist/_datetime.cpython-38-x86_64-linux-gnu.so  
delete: s3://saiteja-devops/aws/dist/_ctypes.cpython-38-x86_64-linux-gnu.so  
delete: s3://saiteja-devops/aws/dist/_contextvars.cpython-38-x86_64-linux-gnu.so  
delete: s3://saiteja-devops/aws/dist/_decimal.cpython-38-x86_64-linux-gnu.so  
delete: s3://saiteja-devops/aws/dist/_codecs_hk.cpython-38-x86_64-linux-gnu.so  
delete: s3://saiteja-devops/aws/dist/_codecs_iso2022.cpython-38-x86_64-linux-gnu.so  
delete: s3://saiteja-devops/aws/dist/_csv.cpython-38-x86_64-linux-gnu.so  
delete: s3://saiteja-devops/aws/dist/_codecs_jp.cpython-38-x86_64-linux-gnu.so  
delete: s3://saiteja-devops/aws/dist/_elementtree.cpython-38-x86_64-linux-gnu.so
```

Empty Bucket

aws s3 rm s3://<bucket name> --recursive

Delete Bucket

aws s3 rb s3://<bucket name>

VPC – Virtual Private Cloud

To create a VPC and subnets using the AWS CLI

- Create a VPC with a 10.0.0.0/16 CIDR block using the following create-vpc command.

aws ec2 create-vpc --cidr-block <ip address> --query Vpc.VpcId --output text

```
root@ip-172-31-30-248:~#  
root@ip-172-31-30-248:~# aws ec2 create-vpc --cidr-block 10.0.0.0/16 --query Vpc.VpcId --output text  
vpc-027a1d257e37e44e4
```

- Using the VPC ID from the previous step, create a subnet with a 10.0.1.0/24 CIDR block using the following create-subnet command.

aws ec2 create-subnet --vpc-id <vpc - Id> --cidr-block <ip address>

```
root@ip-172-31-30-248:~#  
root@ip-172-31-30-248:~# aws ec2 create-subnet --vpc-id vpc-027a1d257e37e44e4 --cidr-block 10.0.1.0/24  
{  
  "Subnet": {  
    "AvailabilityZone": "us-east-2c",  
    "AvailabilityZoneId": "use2-az3",  
    "AvailableIpAddressCount": 251,  
    "CidrBlock": "10.0.1.0/24",  
    "DefaultForAz": false,  
    "MapPublicIpOnLaunch": false,  
    "State": "available",  
    "SubnetId": "subnet-0c312202b3f26703a",  
    "VpcId": "vpc-027a1d257e37e44e4",  
    "OwnerId": "300551852875",  
    "AssignIpv6AddressOnCreation": false,  
    "Ipv6CidrBlockAssociationSet": [],  
    "SubnetArn": "arn:aws:ec2:us-east-2:300551852875:subnet/subnet-0c312202b3f26703a"  
  }  
}
```

- Create a second subnet in your VPC with a 10.0.2.0/24 CIDR block.

aws ec2 create-subnet --vpc-id <vpc - Id> --cidr-block <ip address>

```
root@ip-172-31-30-248:~# aws ec2 create-subnet --vpc-id vpc-027a1d257e37e44e4 --cidr-block 10.0.2.0/24  
{  
  "Subnet": {  
    "AvailabilityZone": "us-east-2c",  
    "AvailabilityZoneId": "use2-az3",  
    "AvailableIpAddressCount": 251,  
    "CidrBlock": "10.0.2.0/24",  
    "DefaultForAz": false,  
    "MapPublicIpOnLaunch": false,  
    "State": "available",  
    "SubnetId": "subnet-0c2c097e460dac003",  
    "VpcId": "vpc-027a1d257e37e44e4",  
    "OwnerId": "300551852875",  
    "AssignIpv6AddressOnCreation": false,  
    "Ipv6CidrBlockAssociationSet": [],  
    "SubnetArn": "arn:aws:ec2:us-east-2:300551852875:subnet/subnet-0c2c097e460dac003"  
  }  
}
```

- Create an internet gateway using the following create-internet-gateway command.

aws ec2 create-internet-gateway --query InternetGateway.InternetGatewayId --output text

```
root@ip-172-31-30-248:~#  
root@ip-172-31-30-248:~# aws ec2 create-internet-gateway --query InternetGateway.InternetGatewayId --output text  
igw-01d18281692eed98d
```

-
- Using the ID from the previous step, attach the internet gateway to your VPC using the following attach-internet-gateway command.

aws ec2 attach-internet-gateway --vpc-id <vpc - Id>--internet-gateway-id <lgw - Id>

-
- Create a custom route table for your VPC using the following create-route-table command.

aws ec2 create-route-table --vpc-id <vpc - Id>--query RouteTable.RouteTableId --output text

```
root@ip-172-31-30-248:~#  
root@ip-172-31-30-248:~# aws ec2 create-route-table --vpc-id vpc-027a1d257e37e44e4 --query RouteTable.RouteTableId --output text  
rtb-07b189a461b94b6d5
```

-
- Create a route in the route table that points all traffic (0.0.0.0/0) to the internet gateway using the following create-route command.

aws ec2 create-route --route-table-id <route table - Id>--destination-cidr-block 0.0.0.0/0 --gateway-id <lgw - Id>

```
root@ip-172-31-30-248:~#  
root@ip-172-31-30-248:~# aws ec2 create-route --route-table-id rtb-07b189a461b94b6d5 --destination-cidr-block 0.0.0.0/0 --gateway-id igw-01d18281692eed98d  
{  
  "Return": true  
}
```

- You can describe the route table using the following describe-route-tables command.

aws ec2 describe-route-tables --route-table-id <route table - Id>

```
root@ip-172-31-30-248:~# aws ec2 describe-route-tables --route-table-id rtb-07b189a461b94b6d5
{
  "RouteTables": [
    {
      "Associations": [],
      "PropagatingVgws": [],
      "RouteTableId": "rtb-07b189a461b94b6d5",
      "Routes": [
        {
          "DestinationCidrBlock": "10.0.0.0/16",
          "GatewayId": "local",
          "Origin": "CreateRouteTable",
          "State": "active"
        },
        {
          "DestinationCidrBlock": "0.0.0.0/0",
          "GatewayId": "igw-01d18281692eed98d",
          "Origin": "CreateRoute",
          "State": "active"
        }
      ],
      "Tags": [],
      "VpcId": "vpc-027a1d257e37e44e4",
      "OwnerId": "300551852875"
    }
  ]
}
```

- The route table is currently not associated with any subnet. You need to associate it with a subnet in your VPC so that traffic from that subnet is routed to the internet gateway.

aws ec2 describe-subnets --filters "Name=vpc-id,Values=<vpc -Id>

" --query "Subnets[].{ID:SubnetId,CIDR:CidrBlock}"*

```
root@ip-172-31-30-248:~# aws ec2 describe-subnets --filters "Name=vpc-id,Values=vpc-027a1d257e37e44e4" --query "Subnets[*].{ID:SubnetId,CIDR:CidrBlock}"
[
  {
    "ID": "subnet-0c2c097e460dac003",
    "CIDR": "10.0.2.0/24"
  },
  {
    "ID": "subnet-0c312202b3f26703a",
    "CIDR": "10.0.1.0/24"
  }
]
root@ip-172-31-30-248:~#
root@ip-172-31-30-248:~# aws ec2 associate-route-table --subnet-id subnet-0c312202b3f26703a --route-table-id rtb-07b189a461b94b6d5
{
  "AssociationId": "rtbassoc-091d5982a5d545780",
  "AssociationState": {
    "State": "associated"
  }
}
```

- You can choose which subnet to associate with the custom route table, for example, *subnet-0c312202b3f26703a*, and associate it using the associate-route-table command. This subnet is your public subnet.

aws ec2 associate-route-table --subnet-id <subnet-Id> --route-table-id <route table - Id>

CLEAN UP

Delete your subnets:

```
# aws ec2 delete-subnet --subnet-id <subnet-Id>
```

Delete your custom route table:

```
# aws ec2 delete-route-table --route-table-id <route table - Id>
```

Detach your internet gateway from your VPC:

```
# aws ec2 detach-internet-gateway --internet-gateway-id <lgw -Id> --vpc-id <vpc- Id>
```

Delete your internet gateway:

```
# aws ec2 delete-internet-gateway --internet-gateway-id <lgw - Id>
```

Delete your VPC:

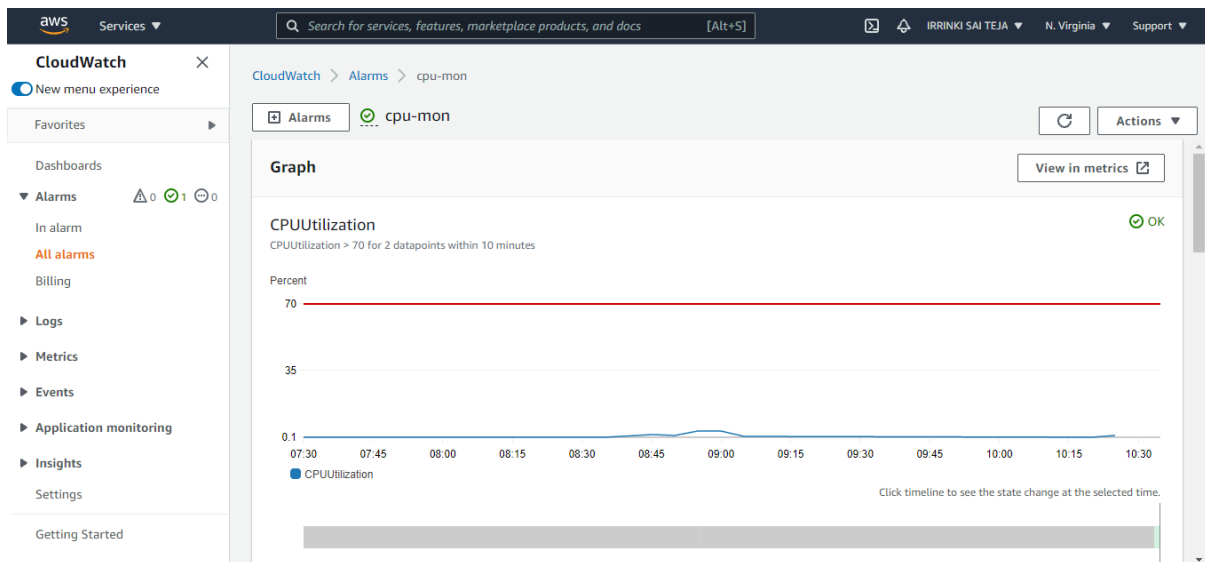
```
# aws ec2 delete-vpc --vpc-id <vpc- Id>
```

Cloud Watch

Creating Alarm

```
# aws cloudwatch put-metric-alarm --alarm-name <Alarm name> --alarm-description  
"<Description>" --metric-name <Metric> --namespace AWS/EC2 --statistic Average -  
-period 300 --threshold <70> --comparison-operator <GreaterThanThreshold> --  
dimensions "Name=InstanceId,Value=<Id>" --evaluation-periods 2 --alarm-actions  
<SNS – arn > --unit Percent
```

```
root@ip-172-31-30-248:~#  
root@ip-172-31-30-248:~#  
root@ip-172-31-30-248:~# aws cloudwatch put-metric-alarm --alarm-name cpu-mon --alarm-description "Alarm when  
CPU exceeds 70 percent" --metric-name CPUUtilization --namespace AWS/EC2 --statistic Average --period 300 --  
threshold 70 --comparison-operator GreaterThanThreshold --dimensions "Name=InstanceId,Value=i-0b61e5a9ee0e6a  
8c8" --evaluation-periods 2 --alarm-actions arn:aws:sns:us-east-1:111122223333:MyTopic --unit Percent  
root@ip-172-31-30-248:~#
```



Delete Your Alarm

```
# aws cloudwatch delete-alarms --alarm-names <Alarm name>
```

Disable your Alarm

```
# aws cloudwatch disable-alarm-actions --alarm-names <Alarm name>
```

Enable your Alarm

```
# aws cloudwatch enable-alarm-actions --alarm-names <Alarm name>
```