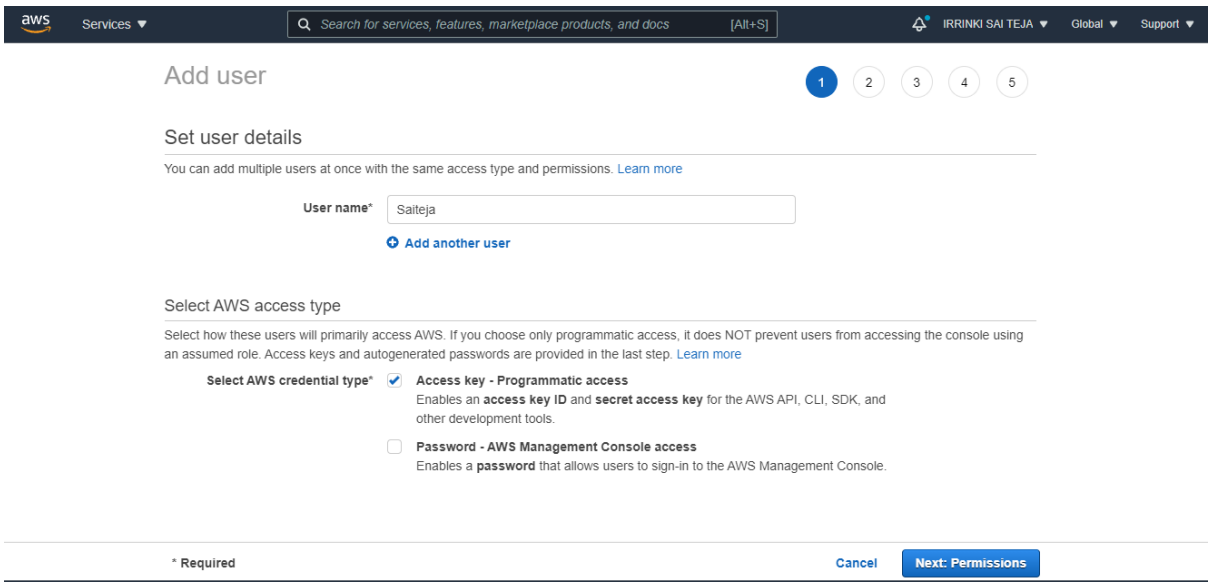
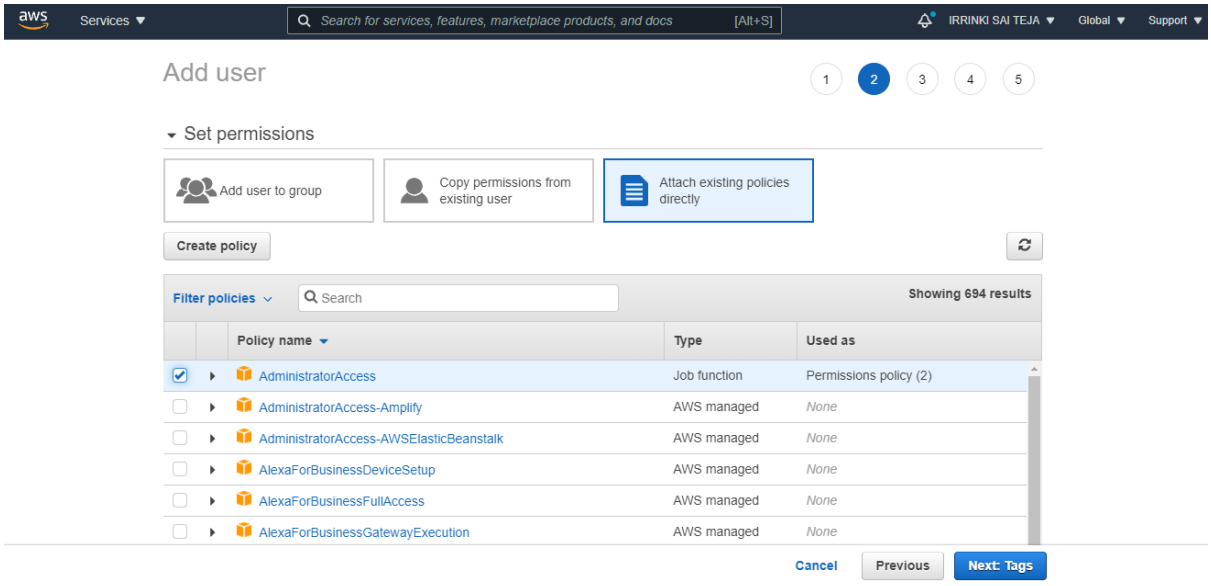
AWS CLI (Command Line Interface)

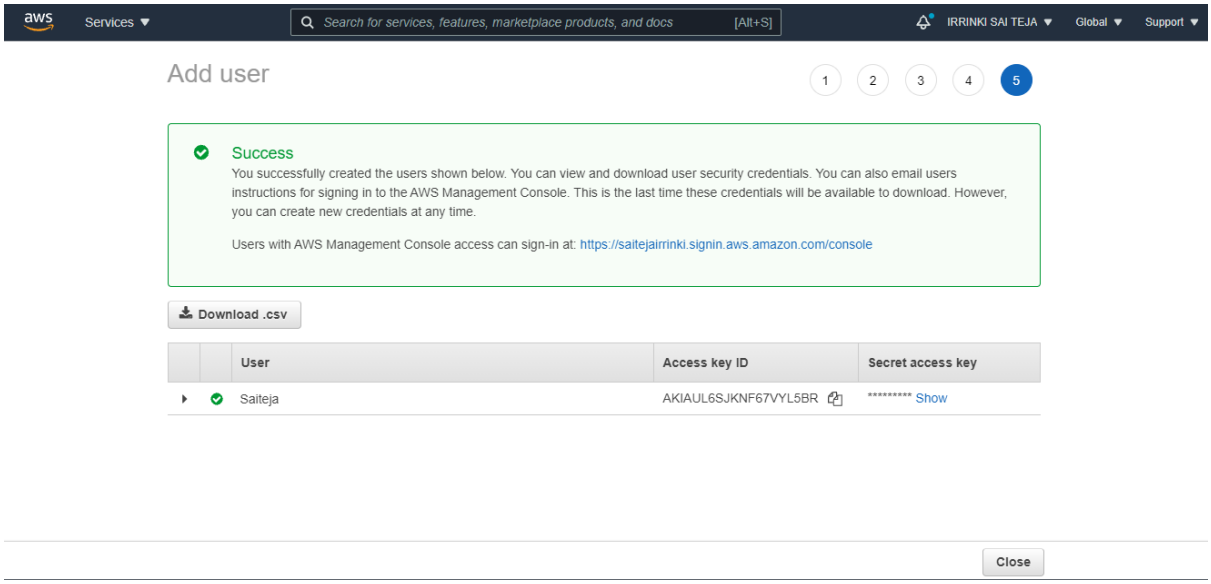
Setting up IAM user

Creating User with Access-key



Set permissions & Attaching Policies





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 [96
7 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]: 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
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:~#
```

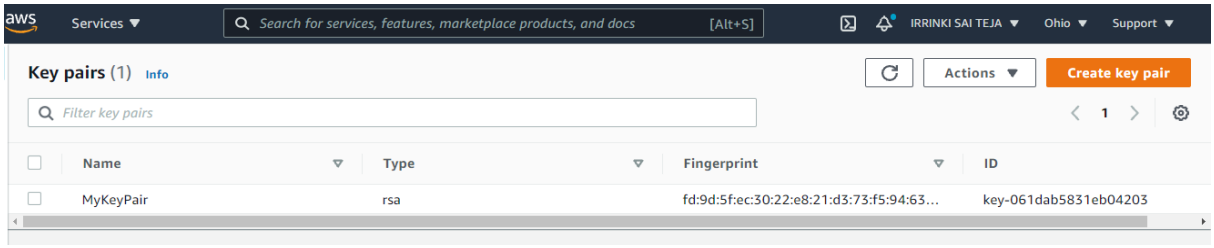
Once it is done try some aws cli commands like *# aws s3 ls*
If u have any buckets in your s3 it will list

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-----
MIIEowIBAAKCAQEAioTTppHbKwa8spb4PMYbxYgi29hfMDUqanx3kO3jAjv7krf0
M/+N90muioDQsgT4brb4bDgG9Yuprax+YHcoFw13v24/gn6F0BgVhZId84bjbMdS
3FFu1z8ssDnlCgNb9ENEZowgVUM20AN+0bxITcTyR2hpO8g10T9wo1oC81e1/ca3
qLh/0ZydwveOGGQ6UiPy4uT3zl7gwQEGY395TauNZnL8TvrawQRzJvH6l4wWCMM5
no0VAeGdGK9nsFLUMgjQ7B+sX4AAtGCcrMhY2iVfAK/5pU2+ZR0yeisYO7jSkCVC
Dsv6cBYiXM1vBns2NeS4pSn99PzklhnMLumoSwIDAQABAoIBADEpAOCd5TW492E+
eS1Adfy92vlBKk82ny4ZrGmQM7/IP/mLNaz6poy75qkbHHYBk5Xfc/0cSUP95CNS
E6vyvhSoX/Zdj0al1qHK2mCEQgL6vV4Ow5aThA36SsbkVSgflxPyh6UJWDRKXXqn
suuGsfZ/ziiPosFnxZPisvwWZvOrha52Y9N3yxGMmZ2/bZZv2U6xSUfBb0BSYHGG
TR0WxrF4WIM6DoBuElqndQ98fw7RGvVb5nCjCuLqr9vxFl7Wh6/9+kTOwsvTXWrZ
/d3XpR4hCkxmKHCo7r40Nny72A5HDam4kiXkBuc70JovKtxlSWs3CkAUooyyc560
PXix2MkCgYEA6KcVKuF3qIESN9TqQWn+D41f6paNs0YzWpe4si55vbogssz3dxZ6
p4gBT6qON2dgE72mXxv9WI0mfdXQx9RM5PSdelKjbzY5YW8vJSR5NGSJNQlWQjaY
lZeIKZKVVsutk/v5vmwF0AVTjIgJIE93L1cDyoKMo1/AuHARub/Rh58CgYEAmGtr
AZHdb39jTSDhI0a8MlXKsQ9vITQpW75KjmTm33c+iPrn3DuQtlL05jxCfq4pU2rK
e7G1PZLWoTreVbh2WVvYTLfUcwVCxziyRJt0bs+NpxVLSe5NQ8IR4u7NNWln4wHb
rK9aQqOzJR0X0DBnmsgGK8rRL/7D6XsDomvuj9UCgYBxbJvuRvP+a8bE/4GhmJor
XOJpTTMSNuRsg1GhVPU3YVn1seXn4ka0DKOPAnjJXBXEKg7FibDPDim46ZgbBE7k
xLlN3KIfYxFAhmM2uXx55ZXbDI1IRLPJIpJYqkUyhqQ+ZHdStflzfFVKSzwfy34w
zzxi65jDQbiEcubBZ1owwwKBgDzBHH8csGJAKcnVoEgaauu5bLjVCRv4GcA7Aqbt
q2VJt8CMGp2blJxIRtv7CxpJu6lHePyDIlYv0KOlvnf2th36USaLZACRCUQ14kEc
ofWFf9Yo08DdXyjyE4UcYOm4YTOISxLzNow3ijHx/cr7cGCu+F6+UlHKQDcx1IoK
caYdAoGBAJlLzK1em4C+Gke6l3PyGVypoBMFd+rQij4VReHesG5lw2waLzrzrDAU
VqI9SOwa3pKuu0L5zY/AVOQHCJxcLIKBcc0uk+MudLYcQjXOFN3lJqtvA7wpdEOs
f+di/Z6Fq1XiEkNTnvj7B7ffjrdUtGDgvNkGVVFYU/vJ84tF2ITx
-----END RSA PRIVATE KEY-----
root@ip-172-31-18-249:~#
```



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

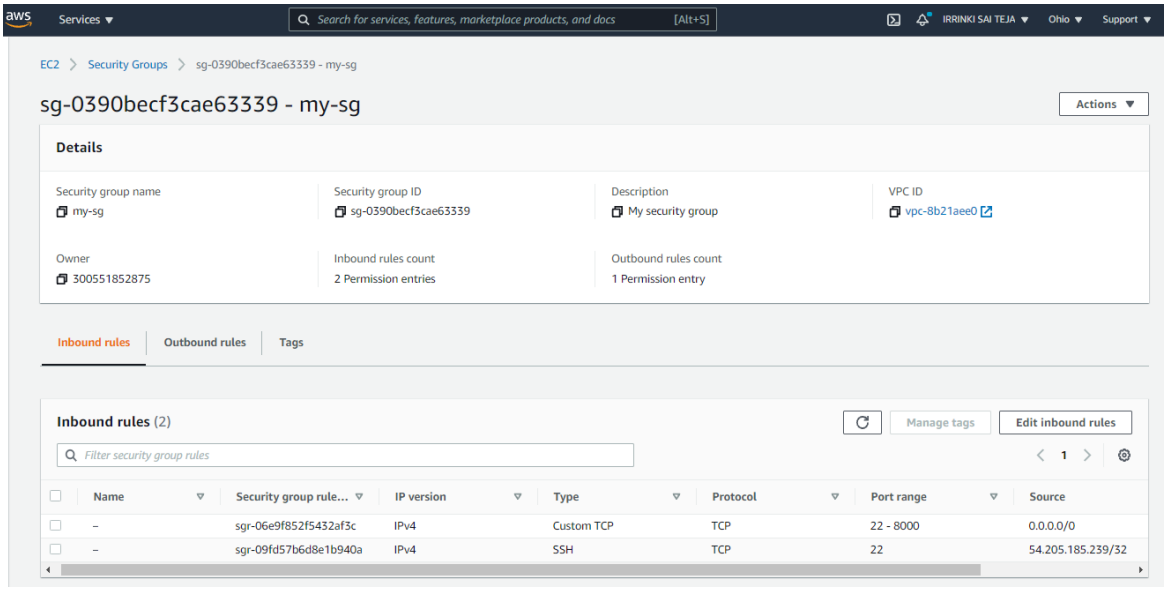
 # aws ec2 create-security-group --group-name <security grp Name> --description "<Description>"

 # curl https://checkip.amazonaws.com

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

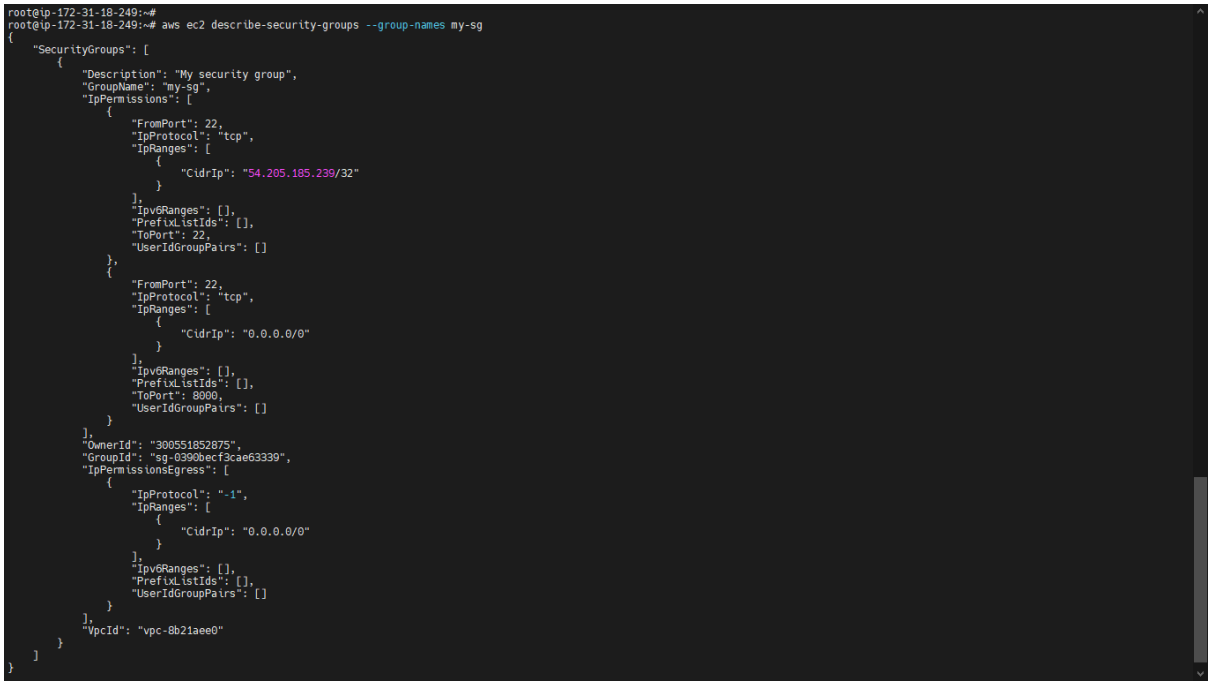
 # aws ec2 authorize-security-group-ingress --group-id <security grp Id>--protocol tcp --port 22-8000 --cidr 0.0.0.0/0

```
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:~#
```



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.

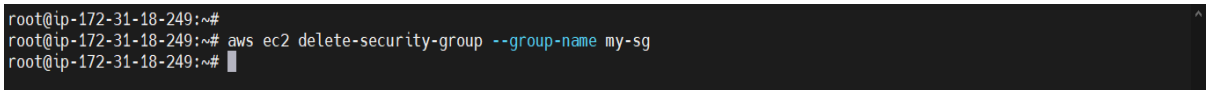
 # aws ec2 describe-security-groups --group-names <security grp Name>



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>

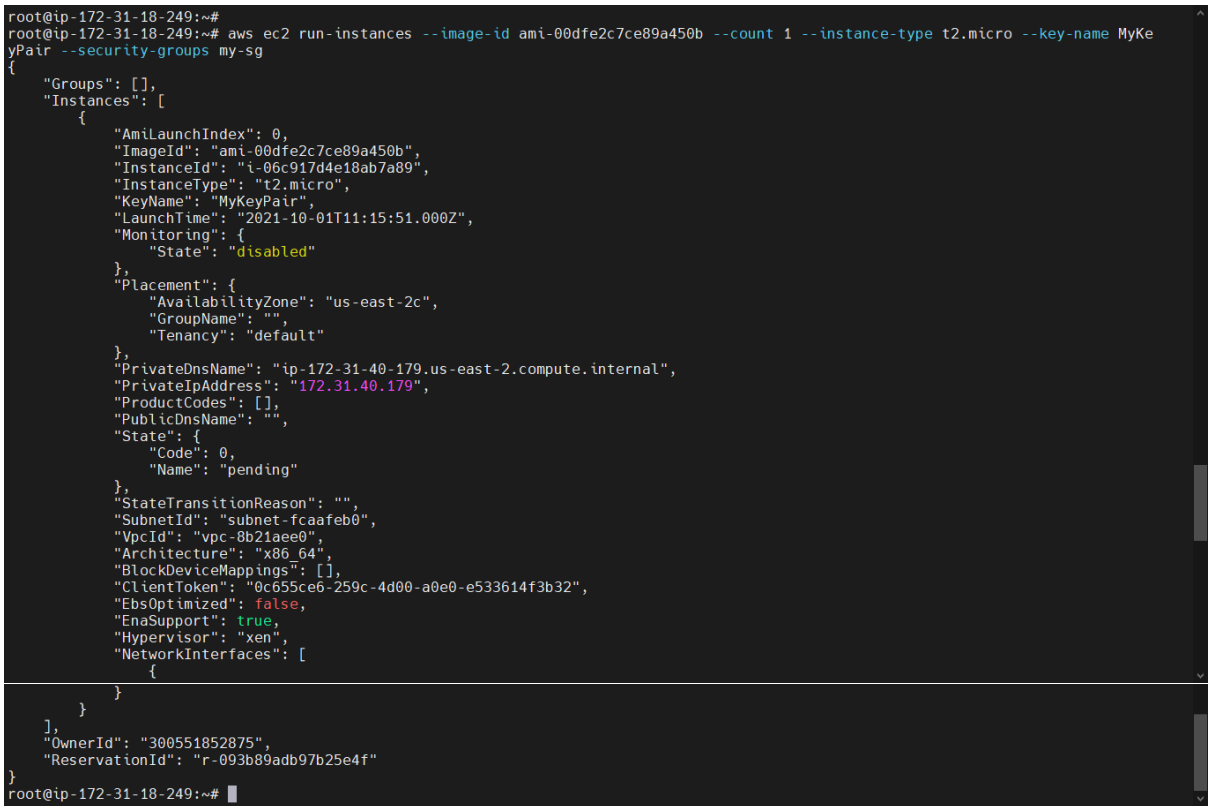


Launch Instance

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

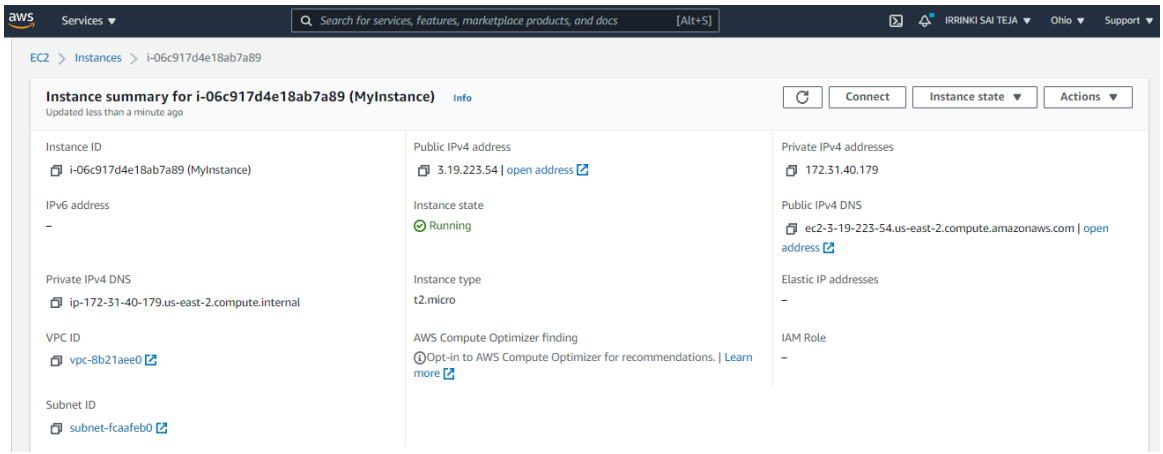
You can get the ami Id's from documentation or console for your required Instance.

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



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>

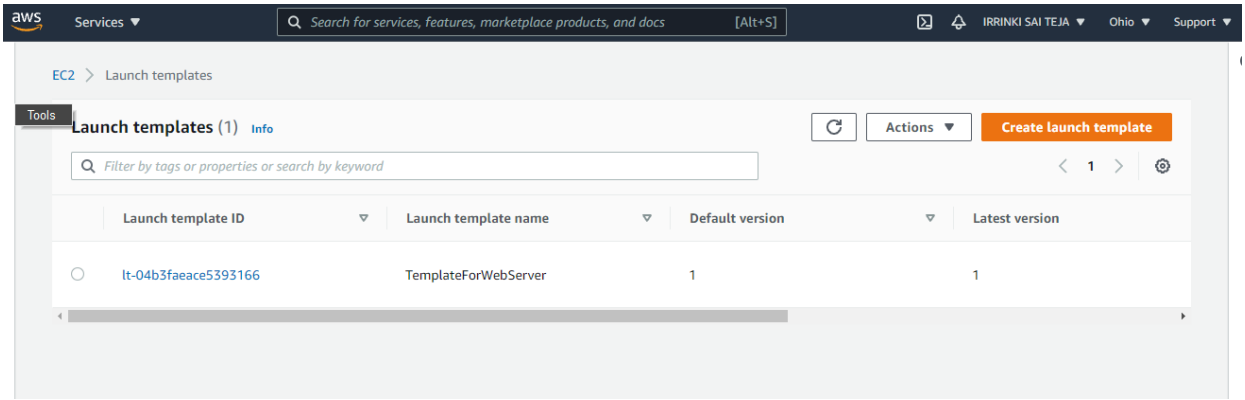
```
root@ip-172-31-18-249:~#
root@ip-172-31-18-249:~# aws ec2 terminate-instances --instance-ids i-06c917d4e18ab7a89
{
    "TerminatingInstances": [
        {
            "CurrentState": {
                "Code": 32,
                "Name": "shutting-down"
            },
            "InstanceId": "i-06c917d4e18ab7a89",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

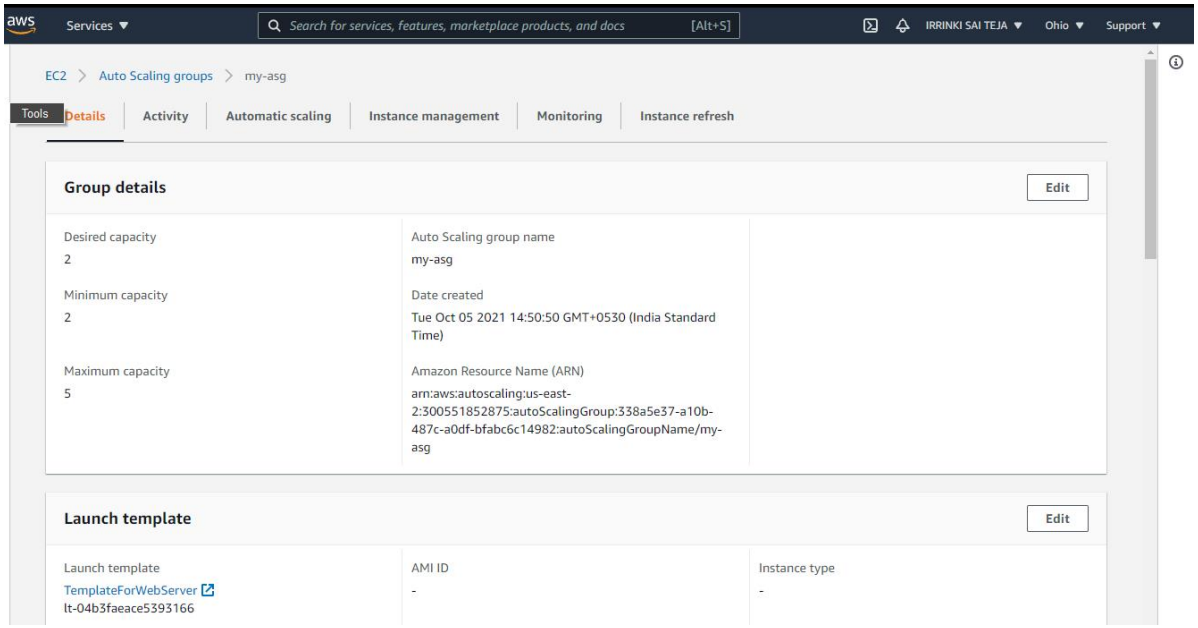
 # aws ec2 delete-launch-template --launch-template-id < template id> --region <region>

```
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:~#
```



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-00b2f1bfb951f360a",
    "Iops": 100,
    "Tags": [],
    "VolumeType": "gp2",
    "MultiAttachEnabled": false
}
```

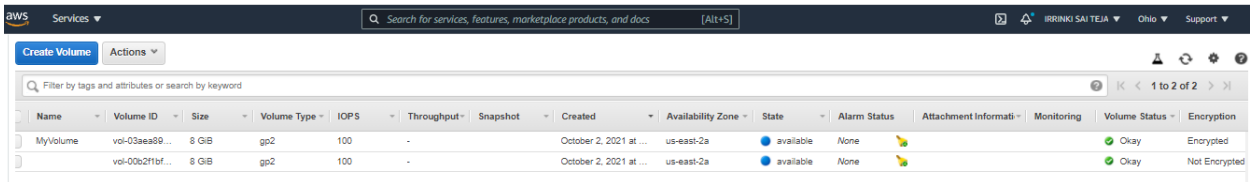
To create an encrypted volume

 # 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>



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 vol
ume 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-spec
ifications '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

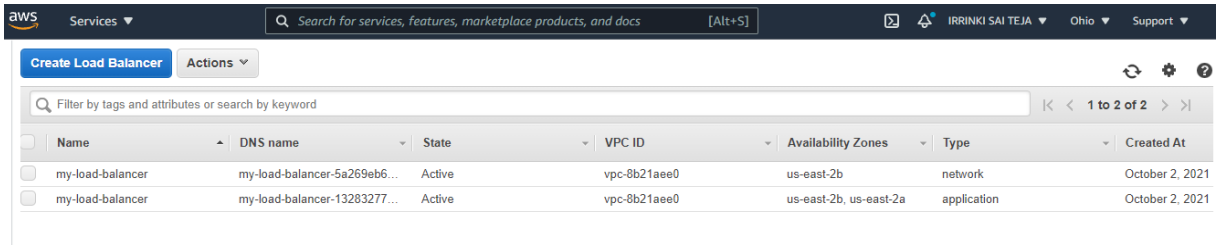
Create-load-balancer

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-99f41
8e4 subnet-e8d56383
{
    "LoadBalancers": [
        {
            "LoadBalancerArn": "arn:aws:elasticloadbalancing:us-east-2:300551852875:loadbalancer/app/my-load-balancer/ed7
3d9f8a46d2ef7",
            "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"
        }
    ]
}
```



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/5a2
69eb6b1b5b0fb",
            "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>

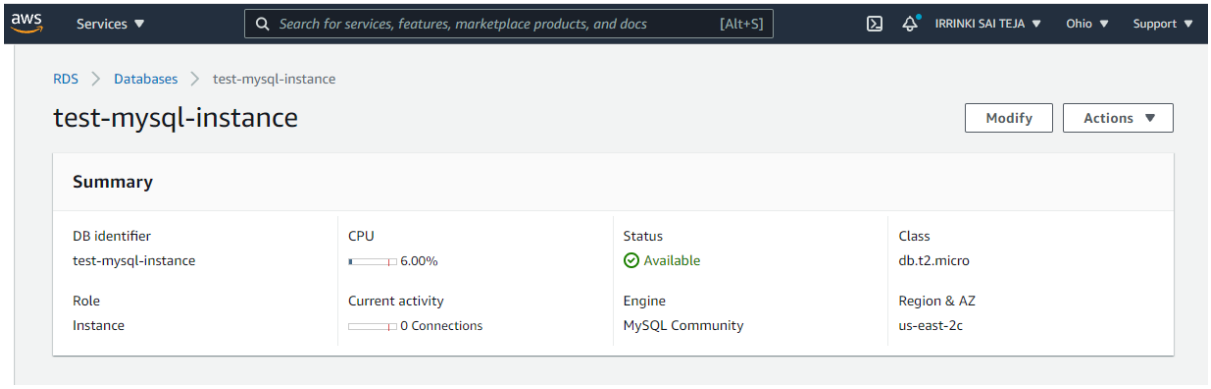
```
root@ip-172-31-18-249:~#
root@ip-172-31-18-249:~# aws elbv2 delete-load-balancer --load-balancer-arn arn:aws:elasticloadbalancing:us-east-2:300551
852875:loadbalancer/app/my-load-balancer/ed73d9f8a46d2ef7
root@ip-172-31-18-249:~#
```

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 a
dmin --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"
            }
```



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.corr19umlgnd.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        183 mc-CIP.yml
2021-10-04 04:44:21        363 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        703 vproappdep.yml
2021-10-04 04:44:26        920 vprodbdep.yml
```

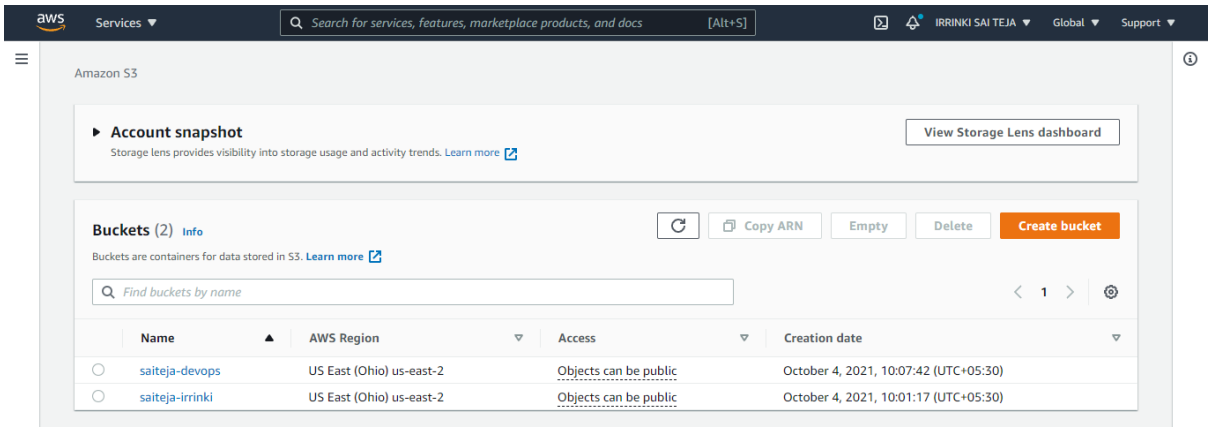
Create a bucket

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
```



Copy objects

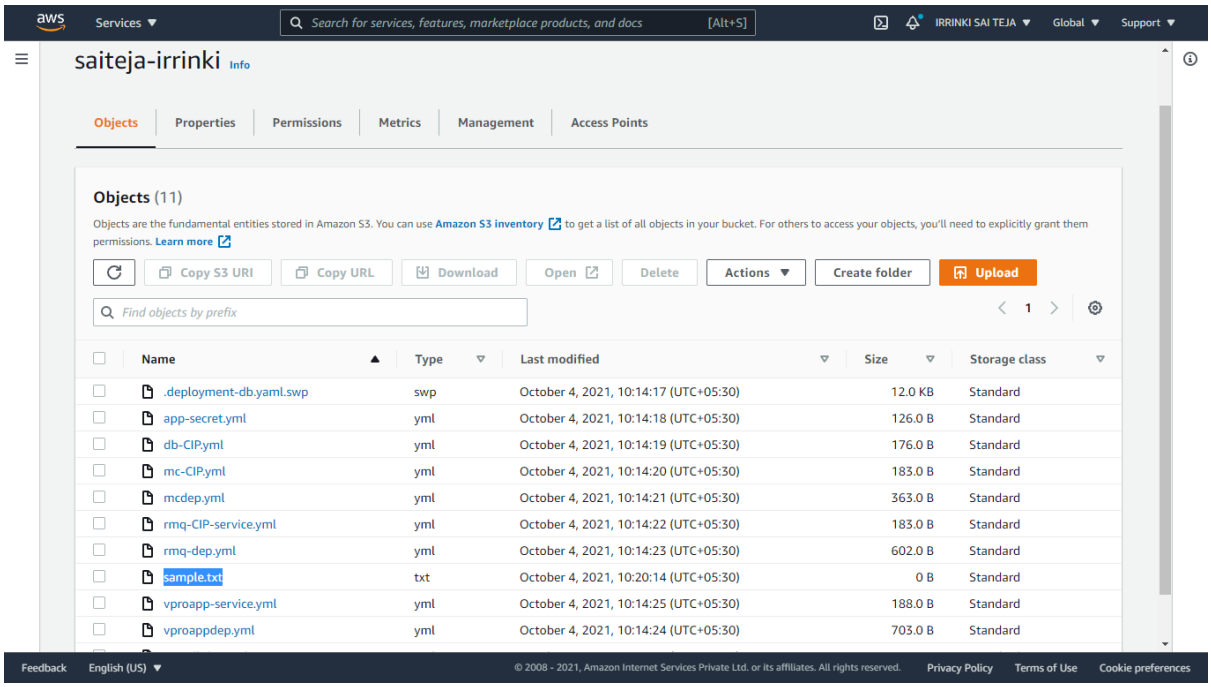
Use the s3 cp command to copy objects from a bucket or a local directory

 # 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  awscliv2.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:~#
```



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 <Igw - 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 <Igw - 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 <Igw -Id> --vpc-id <vpc- Id>

Delete your internet gateway:

 # aws ec2 delete-internet-gateway --internet-gateway-id <Igw - Id>

Delete your VPC:

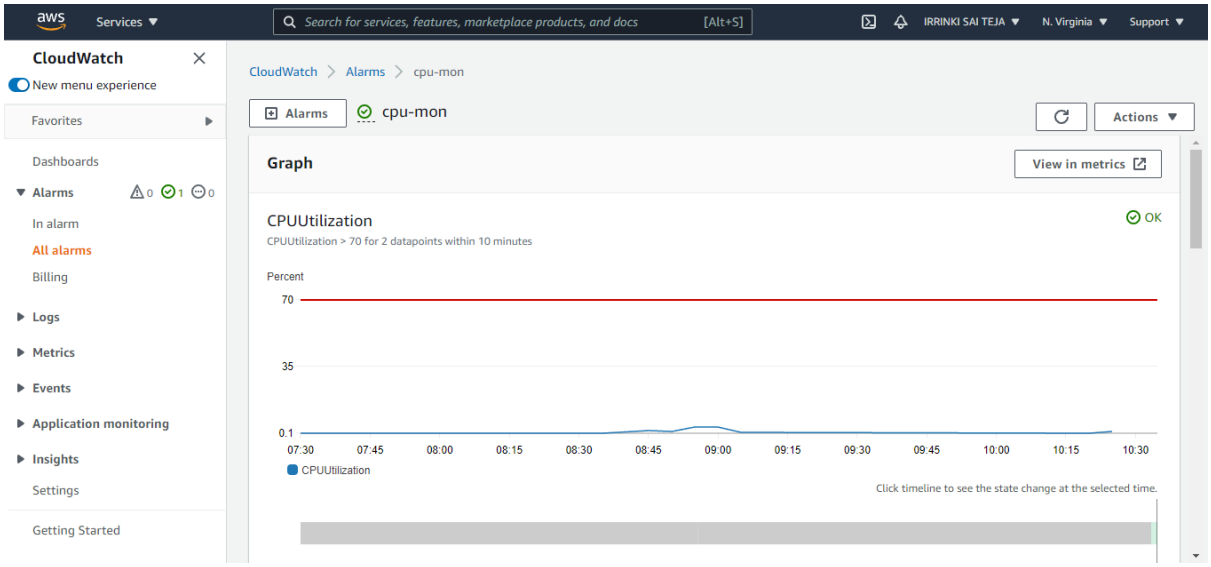
 # aws ec2 delete-vpc --vpc-id <vpc- Id>

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