Task2:

(task1 updated version using efs)

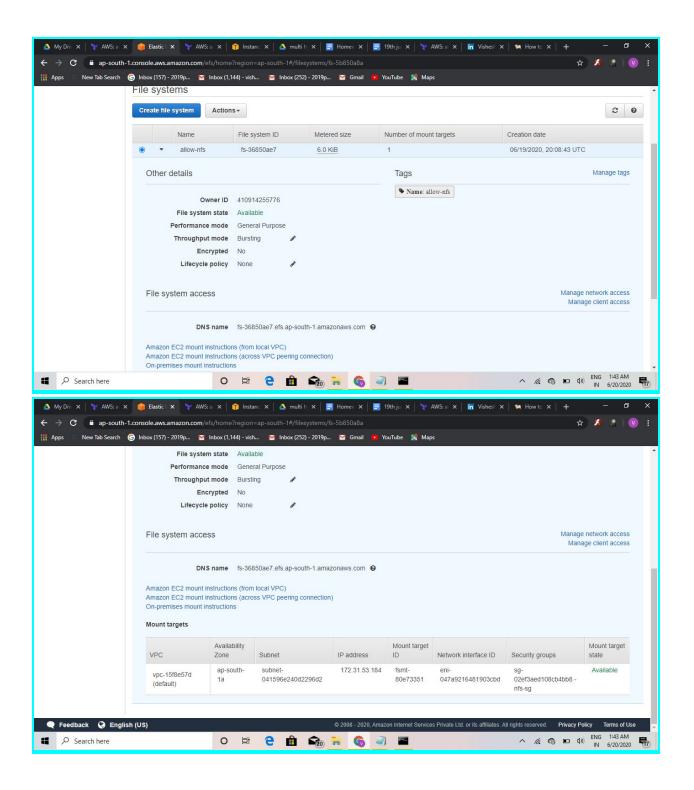
- 1. Create Security group which allow the port 80.
- 2. Launch EC2 instance.
- 3. In this Ec2 instance use the existing key or provided key and security group which we have created in step 1.
- 4. Launch one Volume using the EFS service and attach it in your vpc, then mount that volume into /var/www/html
- 5. Developer have uploded the code into github repo also the repo has some images.
- 6. Copy the github repo code into /var/www/html

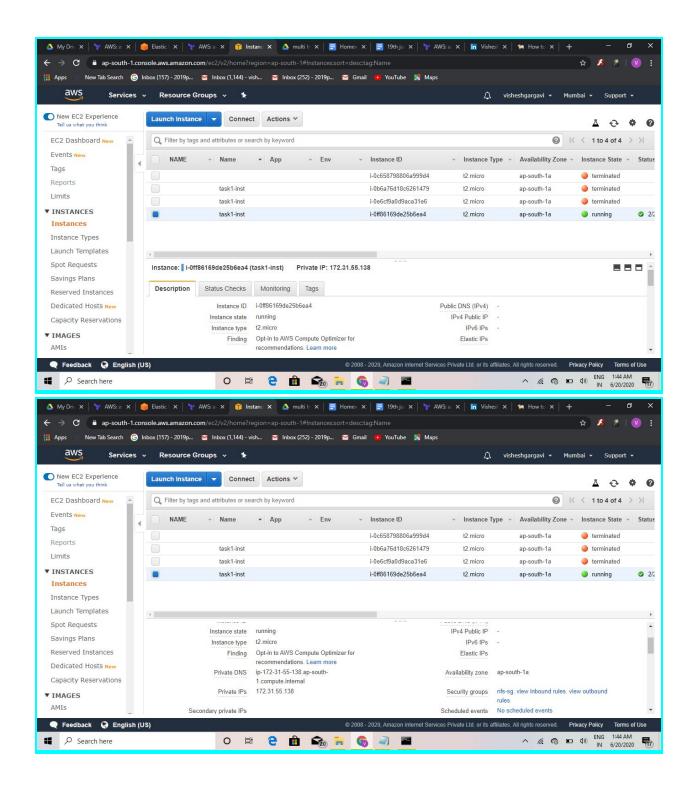
```
CODE:
provider "aws" {
 region = "ap-south-1"
 profile = "myvishesh"
resource "aws_security_group" "nfs-sg" {
 name = "nfs-sg"
 description = "Allow TLS inbound traffic"
 vpc_id = "vpc-15f8e57d"
 ingress {
  description = "SSH"
  from_port = 22
  to port = 22
  protocol = "tcp"
  cidr_blocks = [ "0.0.0.0/0" ]
 ingress {
  description = "HTTP"
  from port = 80
  to_port = 80
  protocol = "tcp"
  cidr_blocks = [ "0.0.0.0/0" ]
```

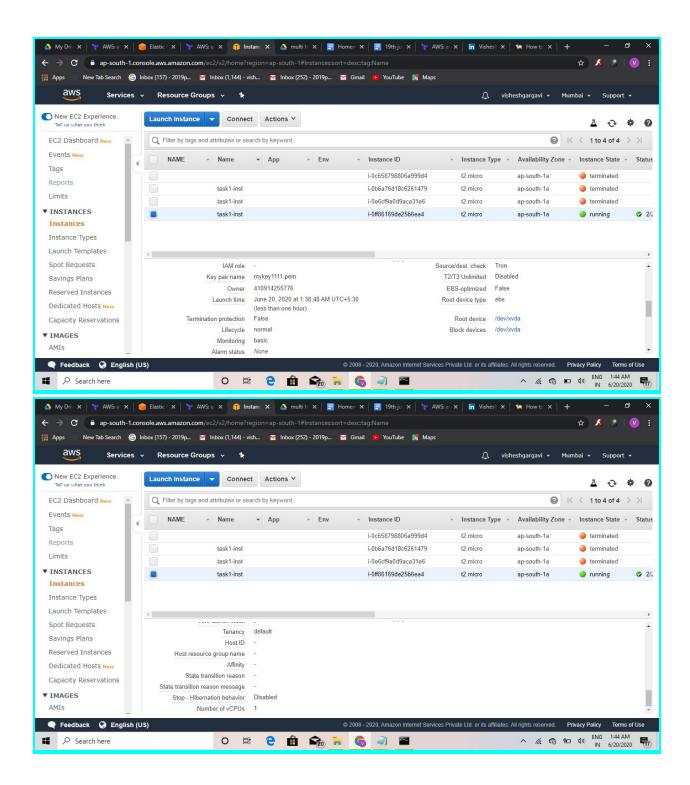
```
}
 ingress {
  description = "NFS"
  from_port = 2049
  to_port = 2049
  protocol = "tcp"
  cidr_blocks = [ "0.0.0.0/0" ]
 egress {
  from_port = 0
  to_port = 0
  protocol = "-1"
  cidr_blocks = ["0.0.0.0/0"]
 tags = {
  Name = "task1-sg"
resource "aws_efs_file_system" "allow-nfs" {
creation_token = "allow-nfs"
tags = {
  Name = "allow-nfs"
}
resource "aws_efs_mount_target" "alpha" {
 file_system_id = "${aws_efs_file_system.allow-nfs.id}"
subnet_id = "${aws_subnet.alpha.id}"
 security_groups = [ "${aws_security_group.nfs-sg.id}" ]
resource "aws_subnet" "alpha" {
          = "${aws_security_group.nfs-sg.vpc_id}"
 availability_zone = "ap-south-1a"
 cidr_block = "172.31.48.0/20"
```

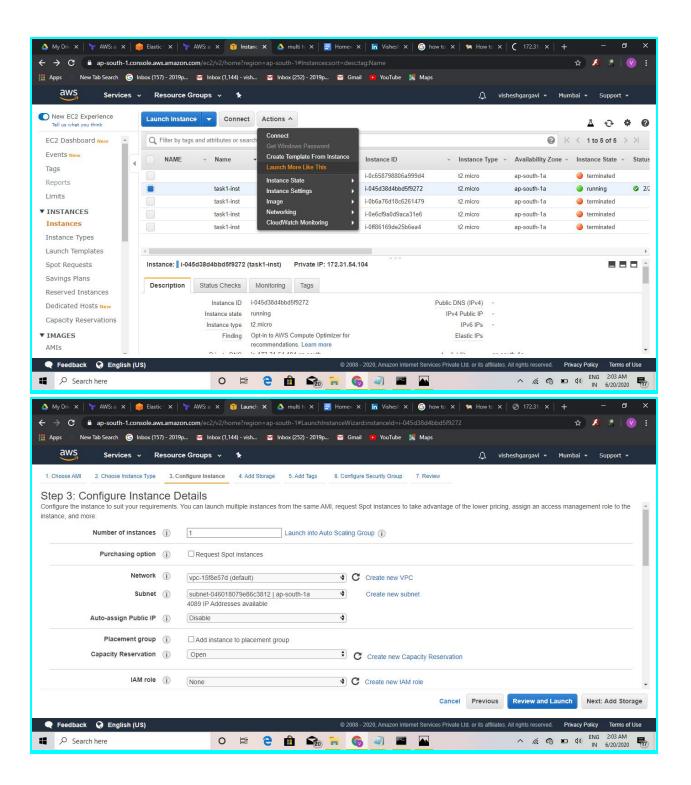
```
resource "aws_instance" "task1-inst" {
ami
          = "ami-005956c5f0f757d37"
instance type = "t2.micro"
 availability_zone = "ap-south-1a"
            = "mykey1111.pem"
 key name
 subnet_id = "${aws_subnet.alpha.id}"
vpc_security_group_ids = [ "${aws_security_group.nfs-sg.id}" ]
 user_data = <<-EOF
           #! /bin/bash
           #cloud-config
           repo update: true
           repo_upgrade: all
           sudo yum install httpd -y
           sudo systemctl start httpd
           sudo systemctl enable httpd
           yum install -y amazon-efs-utils
            apt-get -y install amazon-efs-utils
            yum install -y nfs-utils
            apt-get -y install nfs-common
            file_system_id_1="${aws_efs_file_system.allow-nfs.id}"
            efs mount point 1="/var/www/html"
            mkdir -p "$efs_mount_point_1"
            test -f "/sbin/mount.efs" && echo "$file_system_id_1:/
            $efs_mount_point_1 efs tls,_netdev" >> /etc/fstab || echo
            "$file_system_id_1.efs.ap-south-1.amazonaws.com:/
            $efs mount point 1 nfs4
            nfsvers=4.1,rsize=1048576,wsize=1048576,hard,timeo=600,retrans=2,
            noresvport,_netdev 0 0" >> /etc/fstab
            test -f "/sbin/mount.efs" && echo -e "\n[client-info]\nsource=liw" >>
            /etc/amazon/efs/efs-utils.conf
            mount -a -t efs,nfs4 defaults
            sudo yum install git -y
            cd /var/www/html
            git clone https://github.com/visheshgargavi/hybrid-task1
```

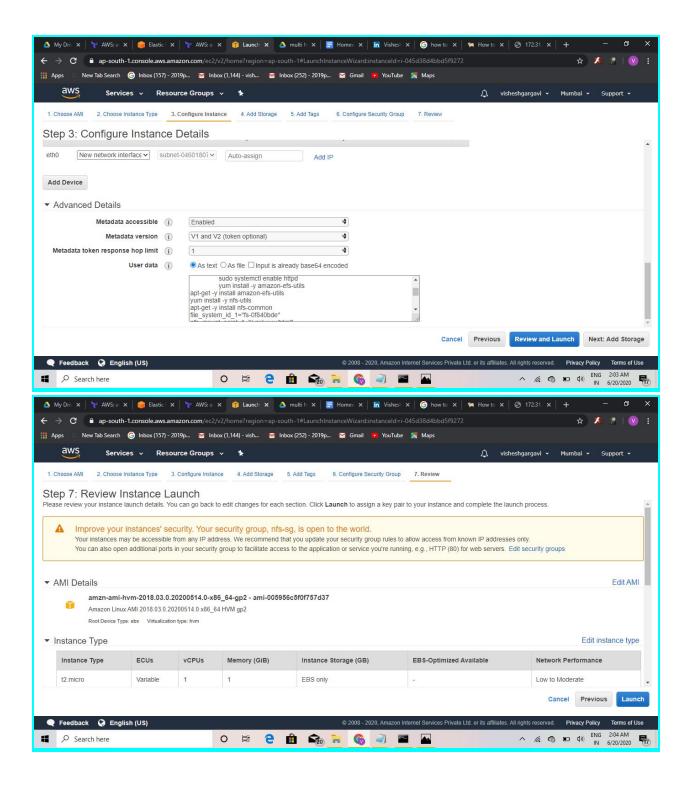
```
tags = {
    Name = "task1-inst"
    }
}
```

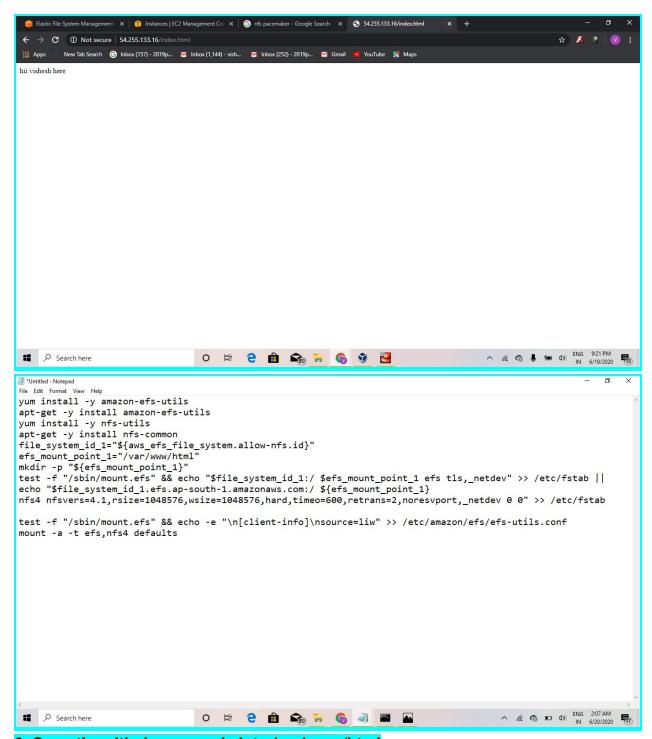












- 6. Copy the github repo code into /var/www/html
- 7. Create S3 bucket, and copy/deploy the images from github repo into the s3 bucket and change the permission to public readable.
- 8 Create a Cloudfront using s3 bucket(which contains images) and use the Cloudfront URL to update in code in /var/www/html

```
resource "aws_s3_bucket" "my-test-s3-terraform-bucket-vishesh1" {
 bucket = "my-test-s3-terraform-bucket-vishesh1"
tags = {
  Name = "my-test-s3-terraform-bucket-vishesh1"
}
}
resource "aws_cloudfront_distribution" "s3_distribution" {
 origin {
  domain_name =
"${aws_s3_bucket.my-test-s3-terraform-bucket-vishesh1.bucket_regi
onal_domain_name}"
  origin id =
"${aws_s3_bucket.my-test-s3-terraform-bucket-vishesh1.id}"
 }
 enabled
               = true
 is_ipv6_enabled = true
 comment
                = "S3 bucket"
 default cache behavior {
  allowed_methods = ["DELETE", "GET", "HEAD", "OPTIONS",
"PATCH", "POST", "PUT"]
  cached_methods = ["GET", "HEAD"]
  target_origin_id =
"${aws_s3_bucket.my-test-s3-terraform-bucket-vishesh1.id}"
  forwarded values {
   query_string = false
   cookies {
    forward = "none"
```

```
}
 viewer_protocol_policy = "allow-all"
  min_ttl
 default_ttl
                = 3600
 max ttl
               = 86400
# Cache behavior with precedence 0
 ordered_cache_behavior {
  path_pattern = "/content/immutable/*"
  allowed_methods = ["GET", "HEAD", "OPTIONS"]
  cached_methods = ["GET", "HEAD", "OPTIONS"]
 target_origin_id =
"${aws_s3_bucket.my-test-s3-terraform-bucket-vishesh1.id}"
 forwarded_values {
   query_string = false
   cookies {
    forward = "none"
 }
  min_ttl
              = 0
  default_ttl = 86400
  max_ttl
                 = 31536000
  compress
                   = true
 viewer_protocol_policy = "redirect-to-https"
```

```
restrictions {
  geo_restriction {
   restriction_type = "whitelist"
   locations = ["IN"]
 }
 tags = {
  Environment = "production"
 }
 viewer_certificate {
  cloudfront_default_certificate = true
 }
 depends_on = [
 aws_s3_bucket.my-test-s3-terraform-bucket-vishesh1
resource "aws_iam_role" "codepipeline_role" {
 name = "task"
 assume_role_policy = <<EOF
 "Version": "2012-10-17",
 "Statement": [
   "Effect": "Allow",
   "Principal": {
    "Service": "codepipeline.amazonaws.com"
   "Action": "sts:AssumeRole"
  }
```

```
]
EOF
}
resource "aws_iam_role_policy" "codepipeline_policy" {
 name = "codepipeline_policy"
 role = "${aws_iam_role.codepipeline_role.id}"
policy = <<EOF
 "Version": "2012-10-17",
 "Statement": [
   "Effect": "Allow",
   "Action": [
    "s3:GetObject",
    "s3:GetObjectVersion",
    "s3:GetBucketVersioning",
    "s3:PutObject"
   ],
   "Resource": [
    "${aws_s3_bucket.my-vishesh-bucket2.arn}",
    "${aws_s3_bucket.my-vishesh-bucket2.arn}/*"
  },
   "Effect": "Allow",
   "Action": [
    "codebuild:BatchGetBuilds",
    "codebuild:StartBuild"
   "Resource": "*"
```

```
}
EOF
}
resource "aws_codepipeline" "codepipeline" {
       = "code-pipeline"
 name
 role_arn = "${aws_iam_role.codepipeline_role.arn}"
 artifact_store {
  location = "${aws_s3_bucket.my-vishesh-bucket2.bucket}"
 type
        = "$3"
    }
     stage {
  name = "Source"
  action {
   name = "Source"
  category = "Source"
   owner = "ThirdParty"
  provider = "GitHub"
              = "1"
  version
   output_artifacts = ["SourceArtifacts"]
configuration = {
   Owner = "visheshgargavi"
   Repo = "hybrid-task1"
   Branch = "master"
    }
  }
```

```
}
stage {
 name = "Deploy"
 action {
        = "Deploy"
  name
  category = "Deploy"
             = "AWS"
  owner
            = "$3"
  provider
             = "1"
  version
  input_artifacts = ["SourceArtifacts"]
        configuration = {
   BucketName = "${aws_s3_bucket.my-vishesh-bucket2.bucket}"
   Extract = "true"
```

