CAPITAL MARKETS APPLICATION SUPPORT ASSIGNMENT

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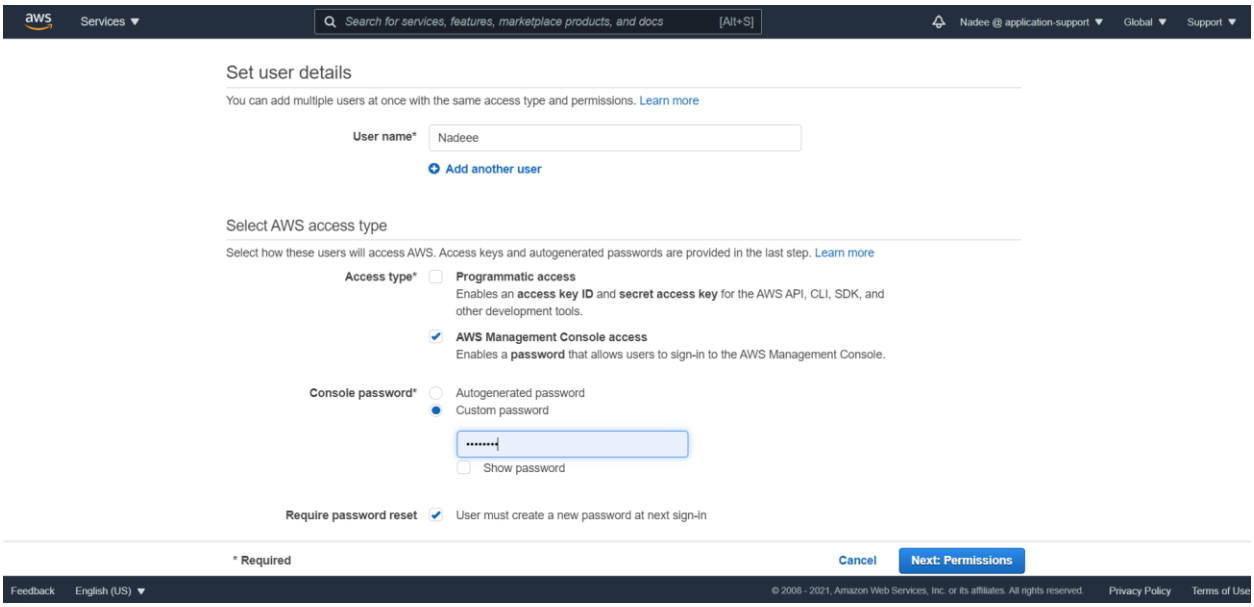
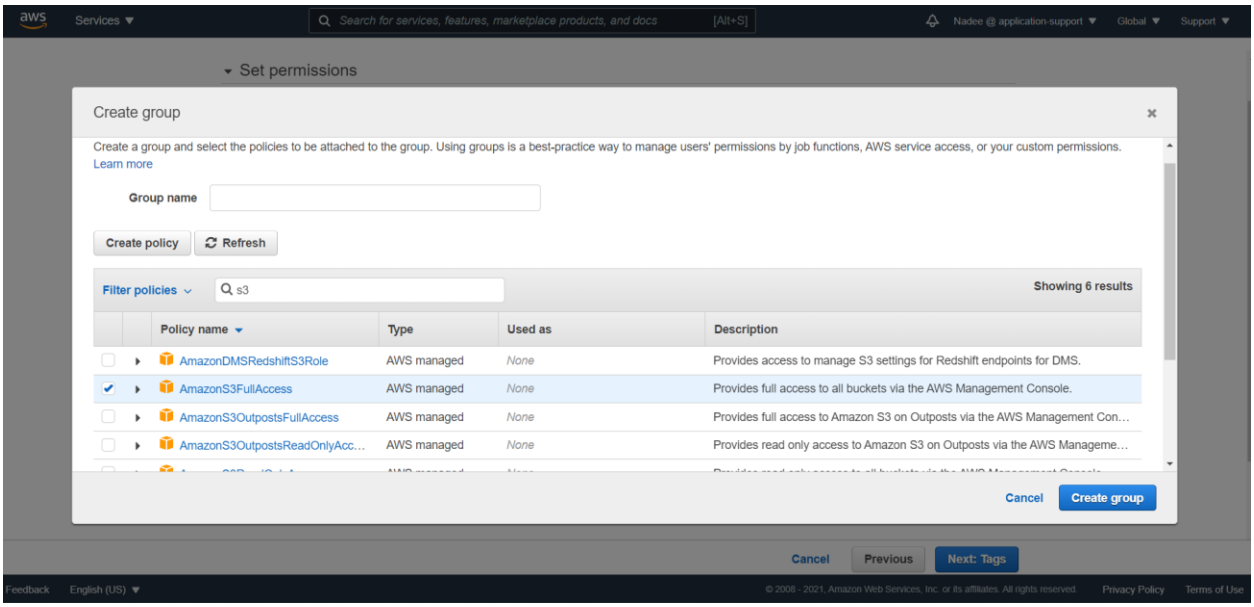
Contents

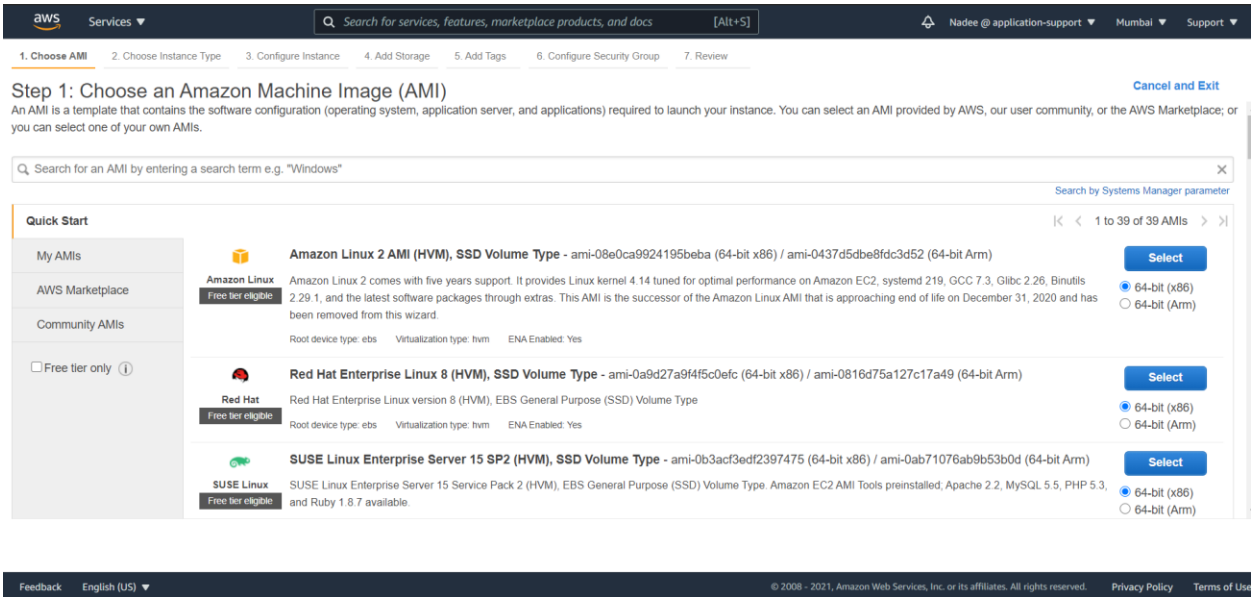
IAM User

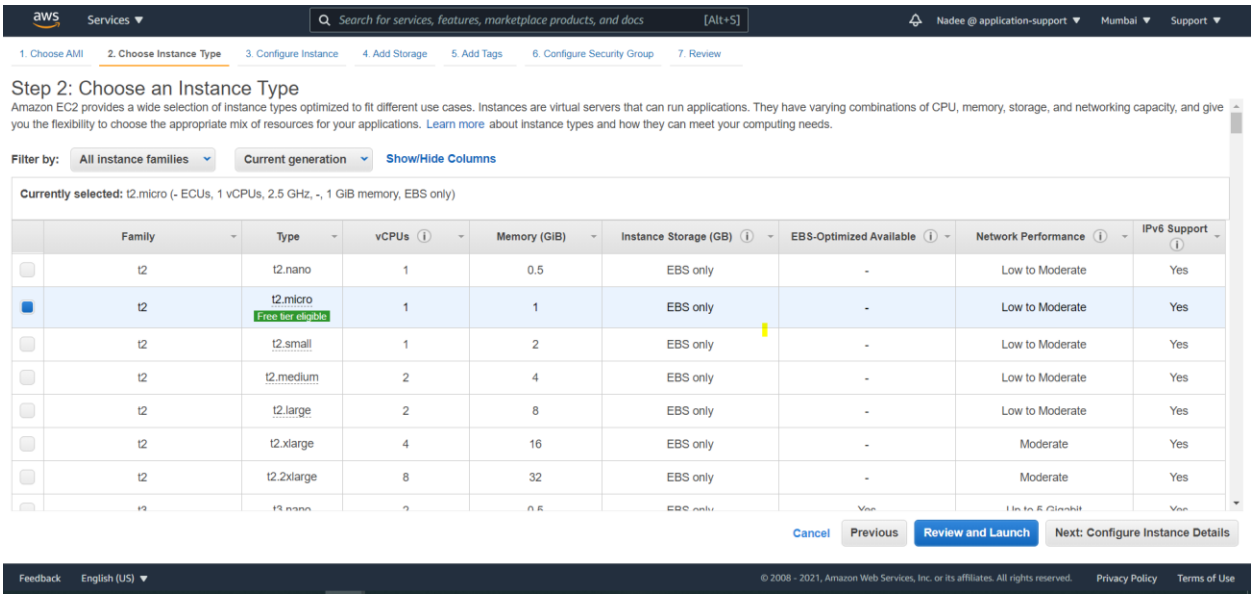


AmazonS3FullAcesss policy is attached to the newly created group.

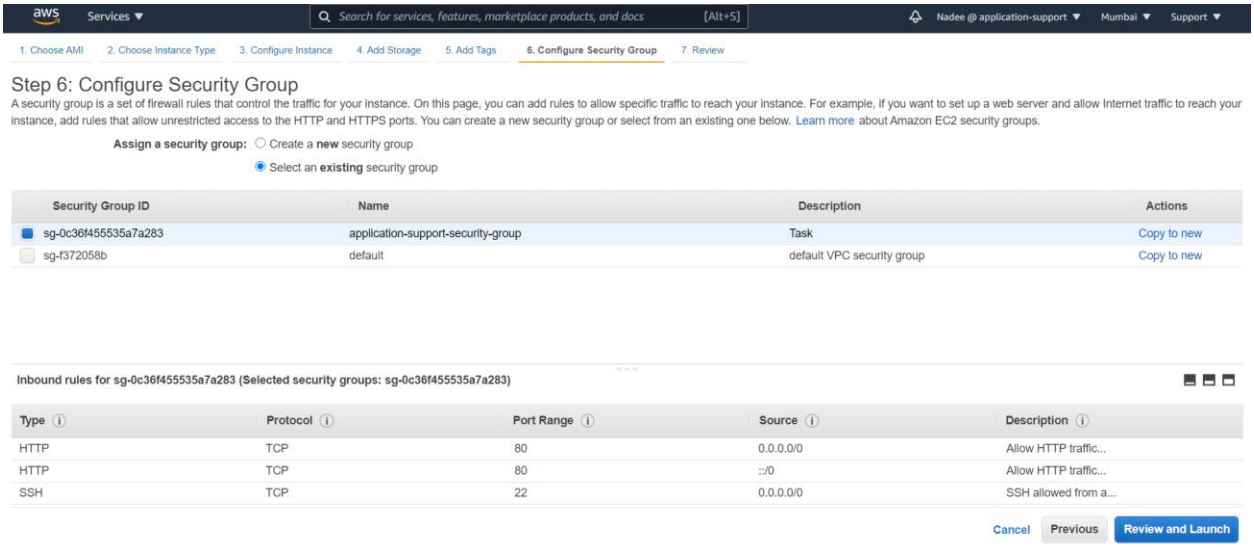


EC2 Instance



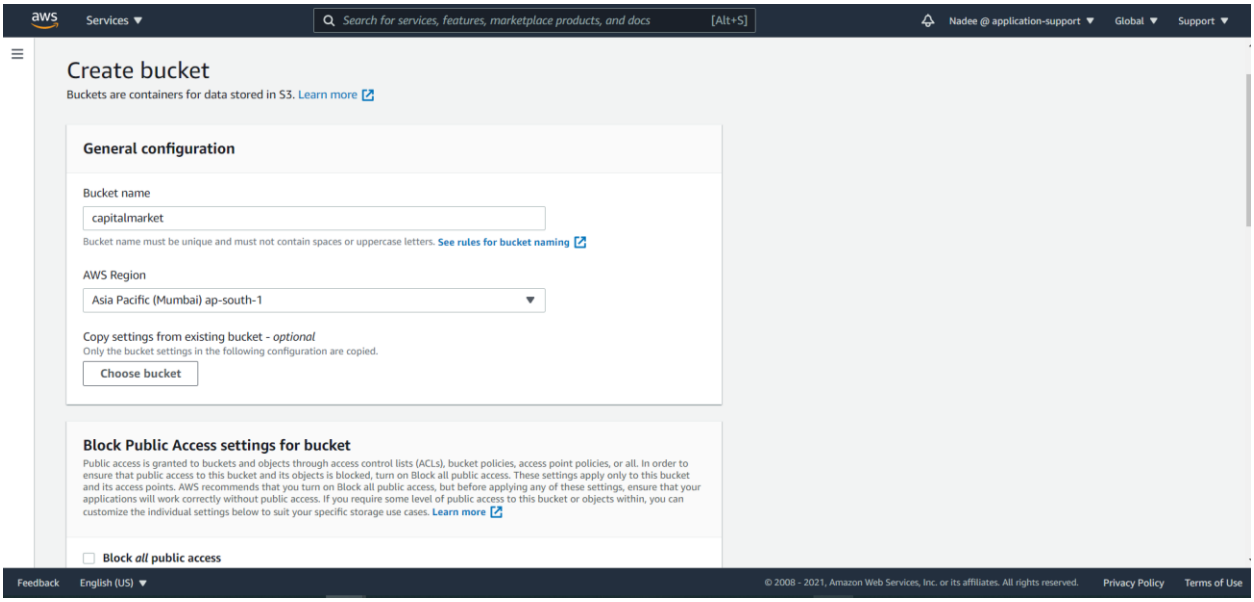


New security group is created with following inbound and outbound rules.



S3 Bucket

A S3 bucket was created to log the timestamps.

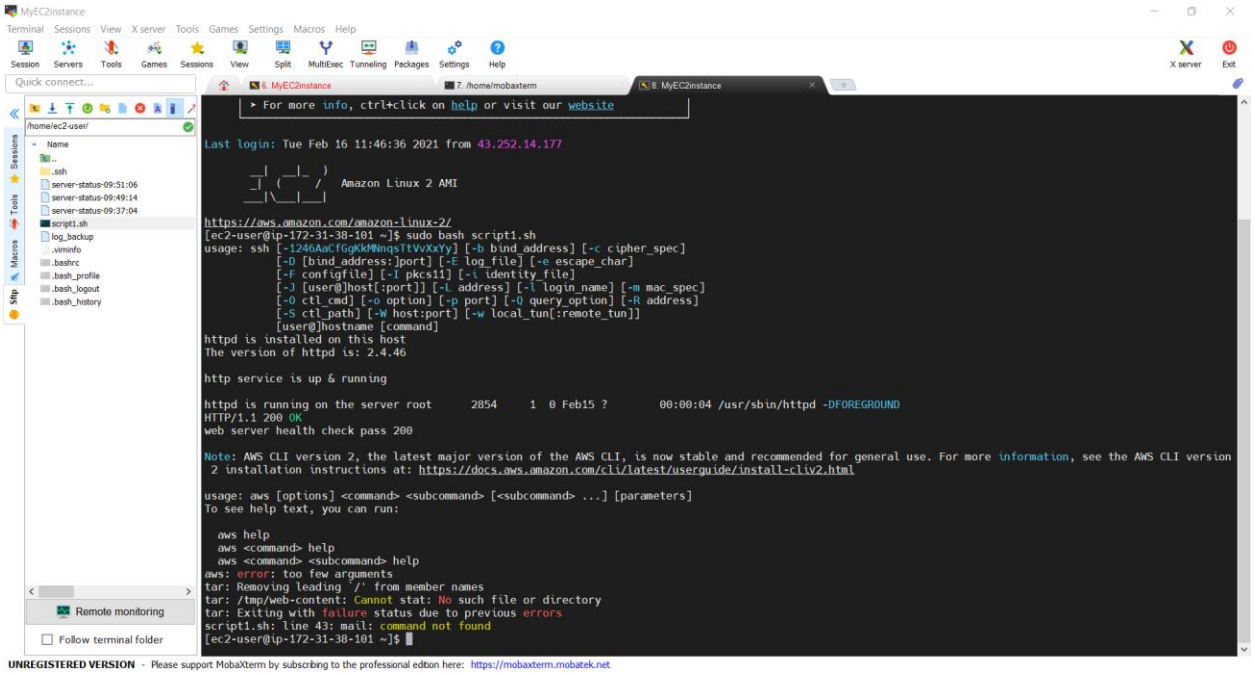


Script

```
#!/bin/bash
#shell script
status=$(echo $?)
server_health=$(curl -o /dev/null -s -w '%{http_code}'
http://localhost:80)
pid=$(ps -ef | grep httpd | grep -v grep | head -n 1)

ssh -t -o StrictHostKeyChecking=No $server_IP ;

######## check apache web server installed or not

if which httpd &>/dev/null
then
    echo "httpd is installed on this host"
    http_ver=$(httpd -v | awk -F '[ /]' '/version/ { print $4 }')
    echo "The version of httpd is: $http_ver"
else
   echo "httpd is not installed"

fi


#### add content to document root

echo "Hello Welcome to Capital Market Website !!!" >
/var/www/html/index.html

echo ""

#######check service status

systemctl status httpd &> /dev/null && echo "http service is up & running"
|| sudo systemctl start httpd &> /dev/null


###### Process ID of httpd process

echo ""
echo "httpd is running on the server $pid"

####Loading web server content using curl

if curl -I "http://localhost:80" 2>&1 | grep -w "200" ; then
    echo "web server health check pass $server_health" #### display health
with the status code
       curl -o server-status-$(date +%T) http://localhost:80 2> /dev/null

#### get web server content in to file with the timestamps
       echo ""
       aws s3 cp $filename s3://mybucket/ #### copy content to s3
```

```
else
    echo "web server is down"
       echo "web server health check falied" | mail -s "health check"
username@example.com ### email for app team
fi
```

```
#### please add IAM role for EC2 instance with S3 full access####

 ############ logs archive ################
logpath=/var/log/httpd/
tempdir=/tmp/web-content/
find $logpath/* -type -f -name "*.log" -mtime 1 -exec cp {} $tempdir/ \;
&> /dev/null
tar -cvzf log_backup -c $tempdir . > /dev/null
aws s3 cp log_backup $bucketname/web-content-$(date +%F).tar &>/dev/null
&& rm -rf web-content.tar || echo "Upload failed"  | mail -s "logs upload
failed" $emailid
rm -rf $tempdir
```



Checking the status of the web server and displaying the content with timestamps.

Supplementary requirements

Below is a cloud formation template that can be used to automate this. But this needs to be further developed.

```
Parameters:
  NameOfService:
    Description: "The name of the service this stack is to be used for."
    Type: String
Parameters:
  myKeyPair:
    Description: Amazon EC2 Key Pair
    Type: "AWS::EC2::KeyPair::KeyName"
Resources:
  S3Bucket:
    Type: 'AWS::S3::Bucket'
    DeletionPolicy: Retain
    Properties:
      AccessControl: PublicRead
      BucketName: web-server-2021
Resources:
  EC2Instance:
    Type: AWS::EC2::Instance
    Metadata:
      AWS::CloudFormation::Init:
        config:
          packages:
            yum:
              httpd: []
          services:
            sysvinit:
              httpd:
                enabled: true
                ensureRunning: true
```

```
    Properties:
      InstanceType: t2.micro
      ImageId: ami-7a11e213
      SecurityGroupIds:
        - !Ref MySecurityGroup
  MySecurityGroup:
    Type: AWS::EC2::SecurityGroup
    Properties:
      GroupDescription: Open Ports 22 and 80
      SecurityGroupIngress:
      - IpProtocol: tcp
        FromPort: '22'
        ToPort: '22'
        CidrIp: 0.0.0.0/0
      - IpProtocol: tcp
        FromPort: '80'
        ToPort: '80'
        CidrIp: 0.0.0.0/0
Outputs:
  servername:
    Description: The Public DNS for the EC2 Instance
    Value: !Sub 'http://${EC2Instance.PublicDnsName}'
```