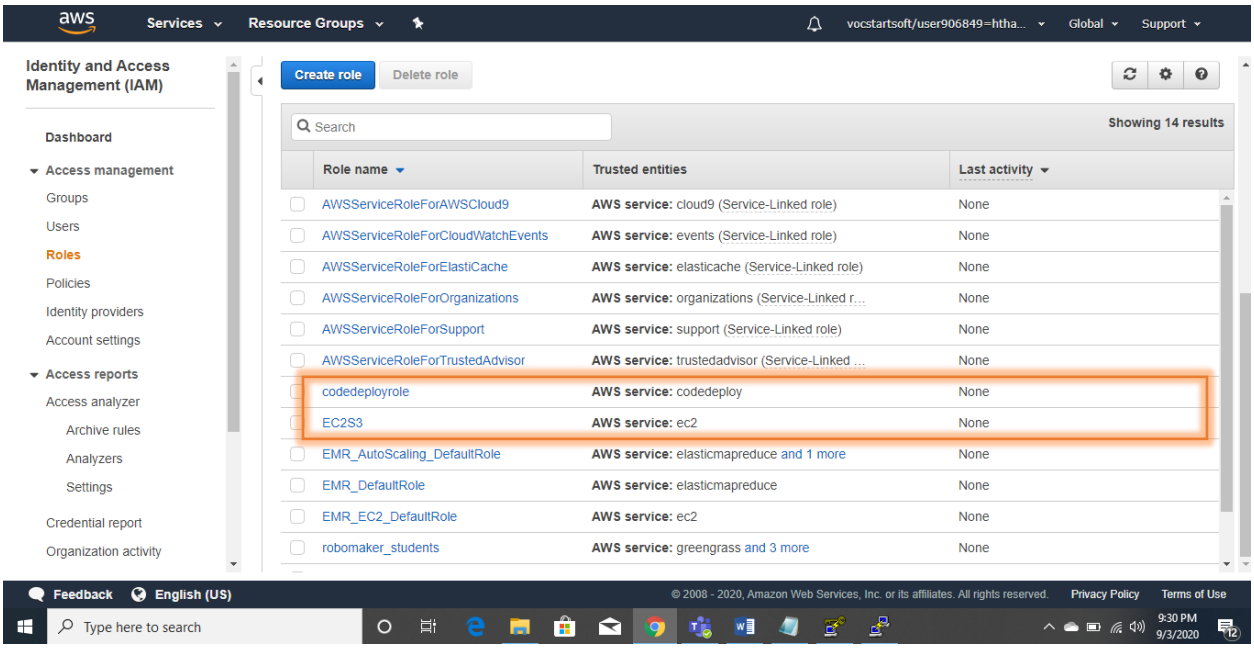
Created 2 IAM (Identity Access Management) roles

Codedeployrole and EC2S3 role

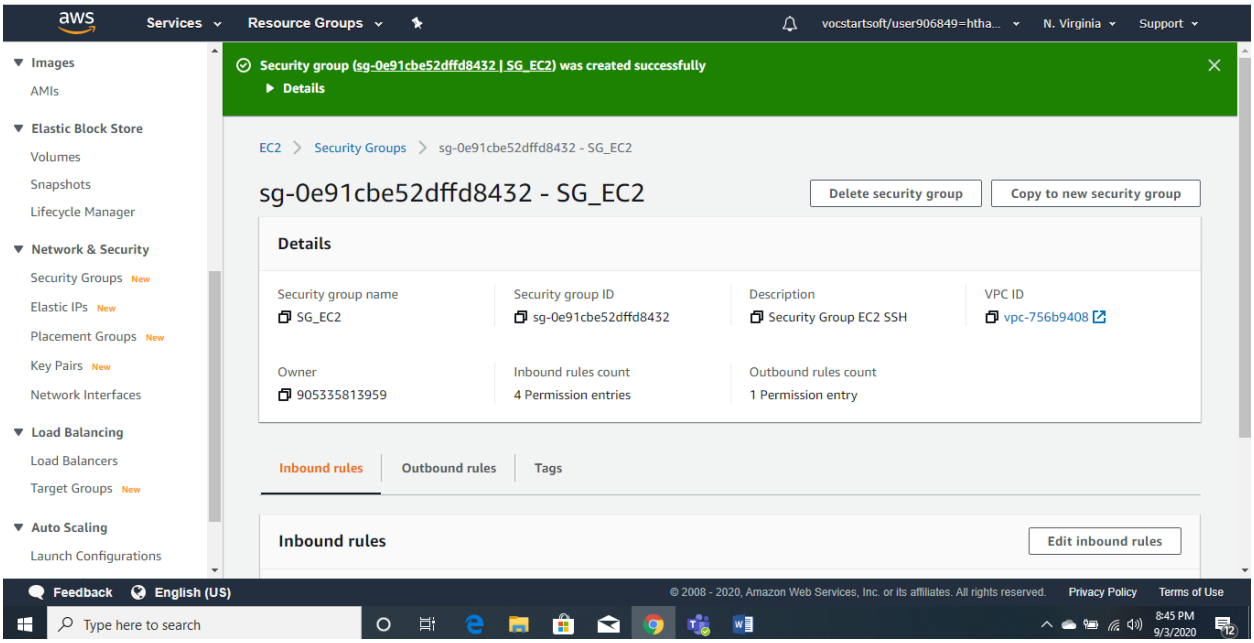
Codedeployrole was created for using it to deploy the Github code webpage to EC2 instance

EC2S3 for creating an EC2 instance using this role

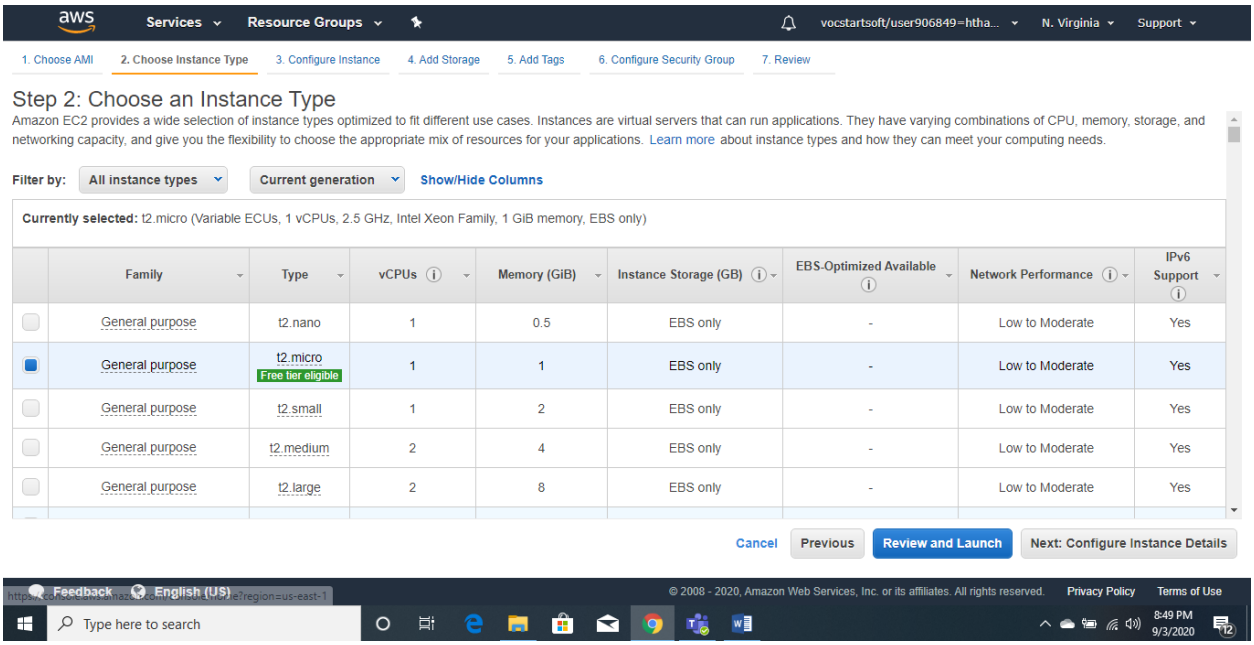


Security Group Creation

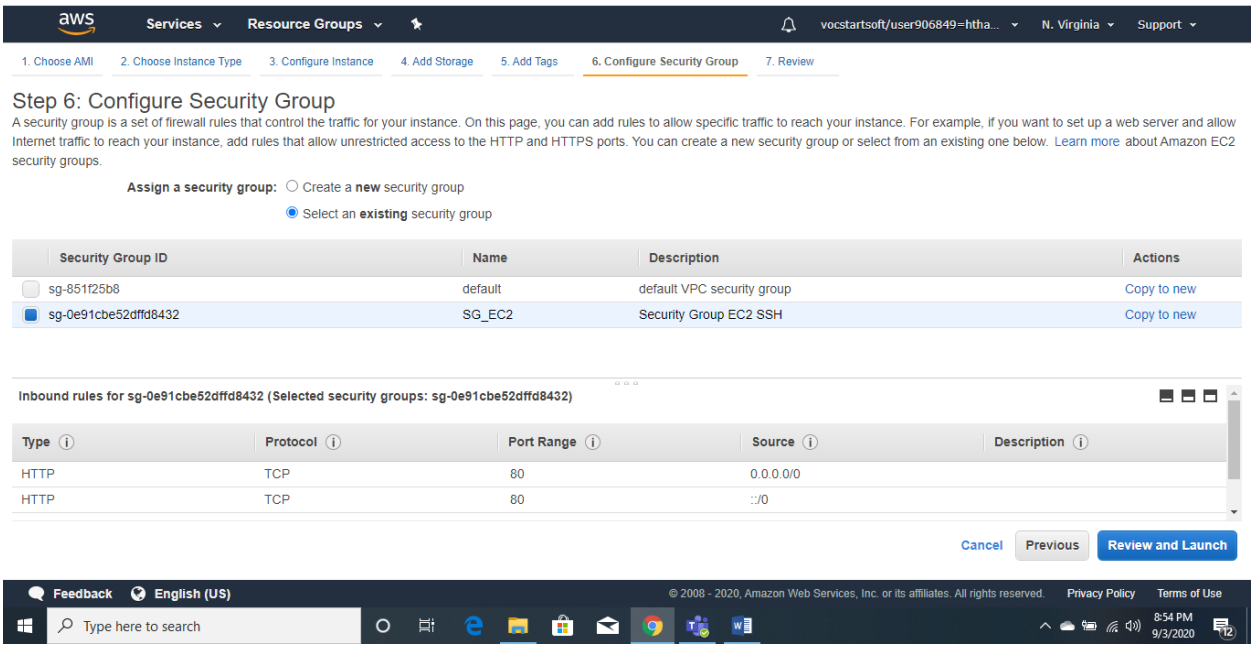
Created SG_EC2 Security group with 2 inbound rules for “SSH” and “HTTP” with “Anywhere” option as the source



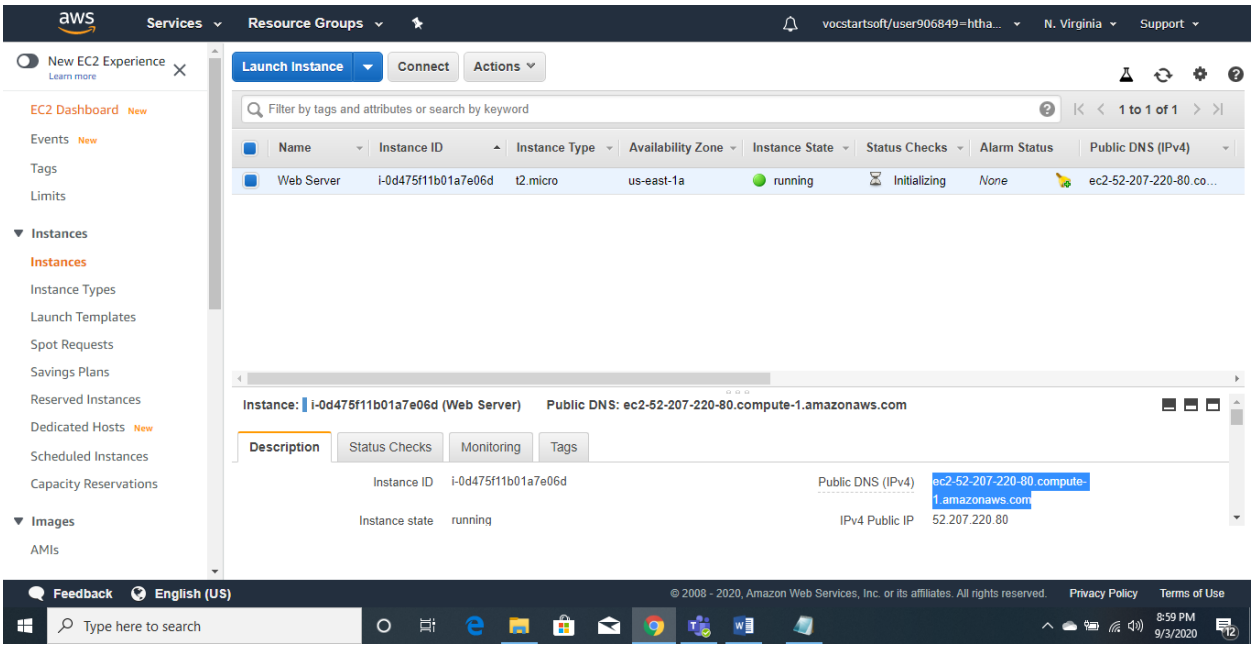
Launching the EC2 Instance



Launching the EC2 instance with the following configuration settings: “EC2S3” for IAM role for EC2 instance to read the data from the S3 bucket, Amazon Linux AMI 2018.03.0 for Amazon Machine Image (AMI), script in advance details to install codeploy agent in EC2 instance, tag with “Key” as “Name” and “Value” as “Web Server” along with selecting the Security Group as “SG_EC2”.

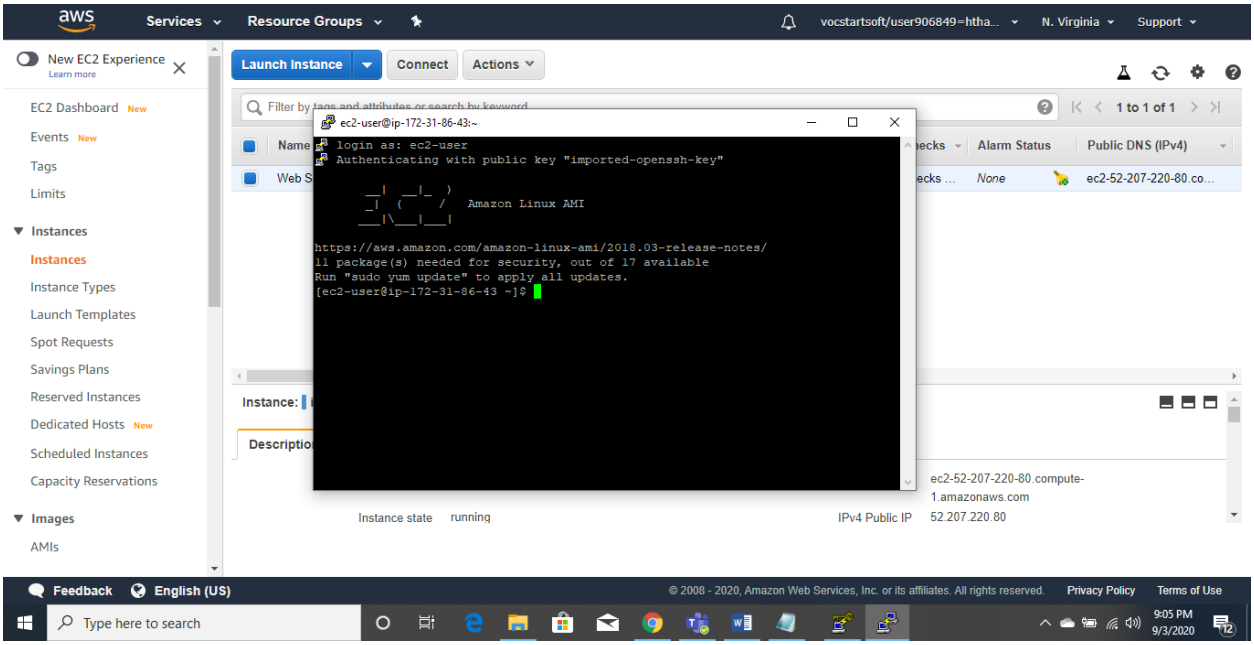


Launched Instance EC2 is running successfully.

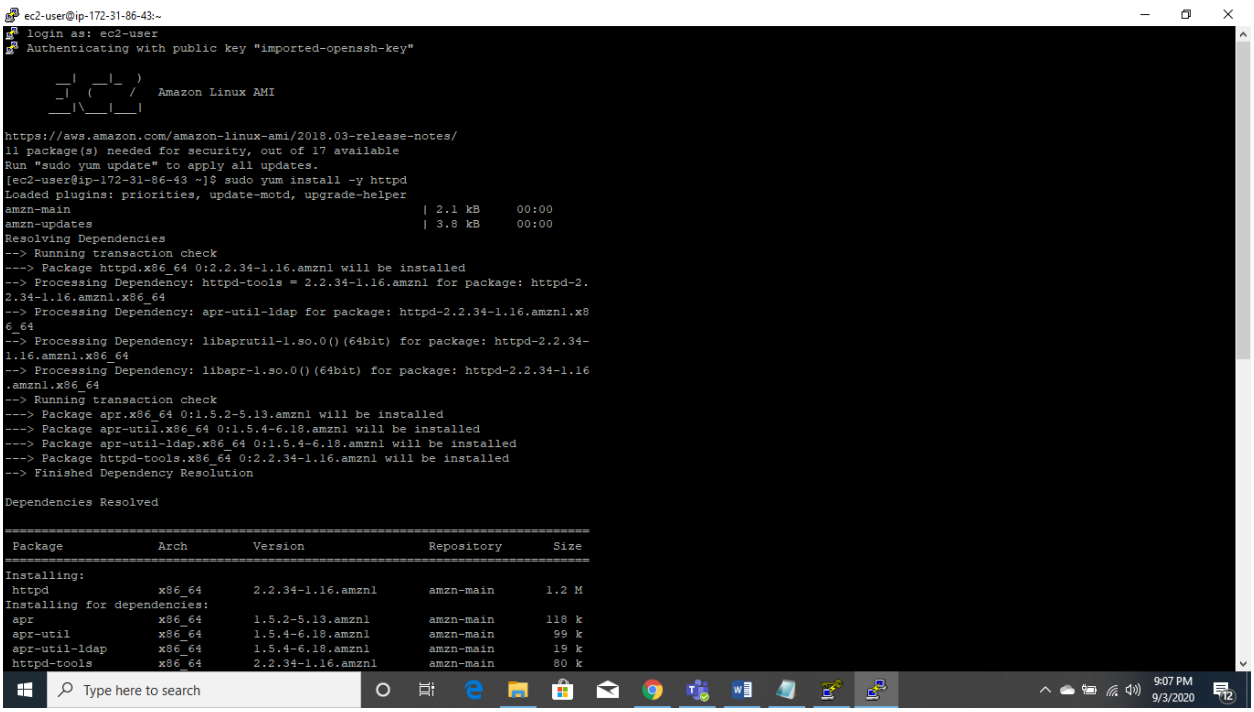


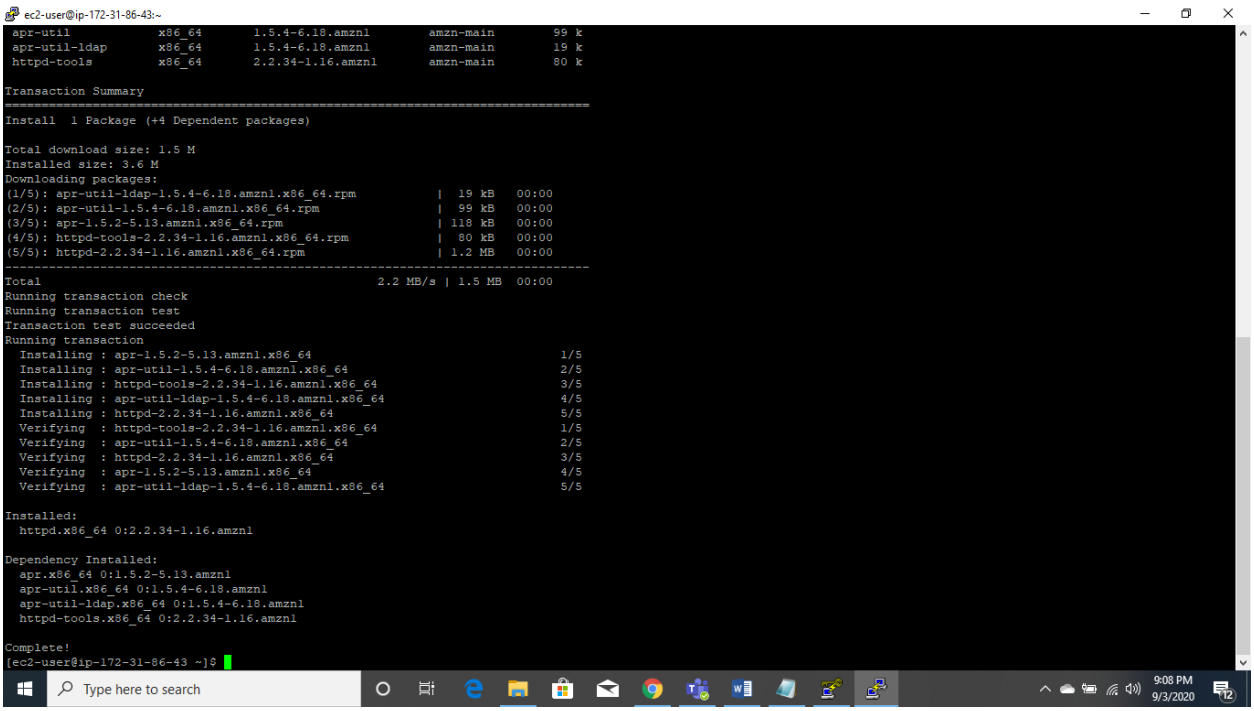
Connecting to the EC2 Instance

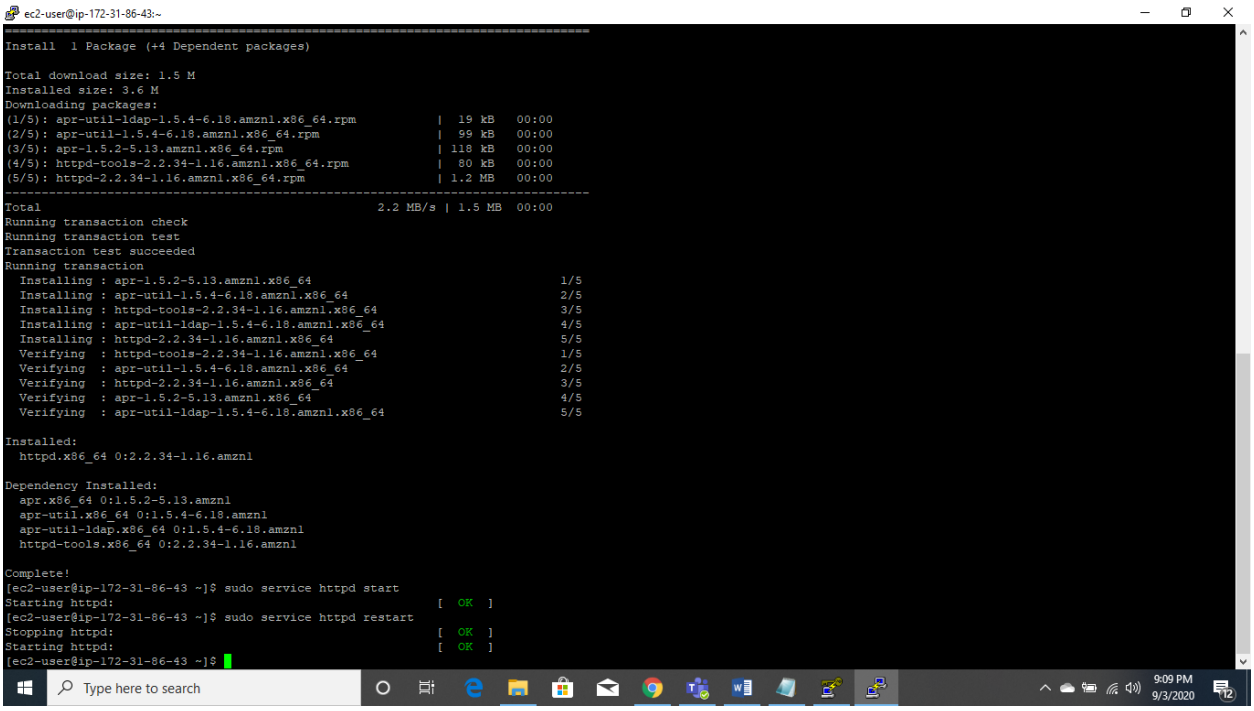
Connecting to the EC2 instance using SSH to ensure the privacy by generating the Key pairs for authenticating the login for the permitted users.



Setting up the EC2 instance to host the web page

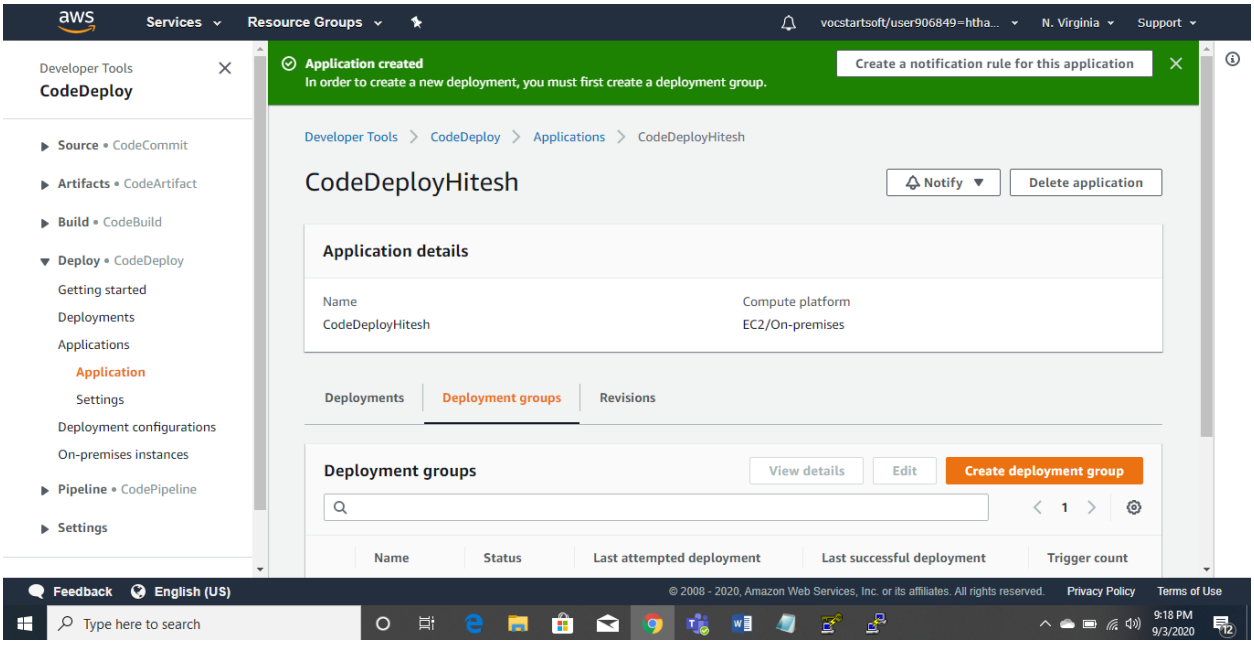



ec2-user@ip-172-31-86-43:~
apr-util x86_64 1.5.4-6.18.amzn1 amzn-main 99 k
apr-util-ldap x86_64 1.5.4-6.18.amzn1 amzn-main 19 k
httpd-tools x86_64 2.2.34-1.16.amzn1 amzn-main 80 k
Transaction Summary
Install 1 Package (+4 Dependent packages)
Total download size: 1.5 M
Installed size: 3.6 M
Downloading packages:
(1/5): apr-util-ldap-1.5.4-6.18.amzn1.x86_64.rpm | 19 kB 00:00
(2/5): apr-util-1.5.4-6.18.amzn1.x86_64.rpm | 99 kB 00:00
(3/5): apr-1.5.2-5.13.amzn1.x86_64.rpm | 118 kB 00:00
(4/5): httpd-tools-2.2.34-1.16.amzn1.x86_64.rpm | 80 kB 00:00
(5/5): httpd-2.2.34-1.16.amzn1.x86_64.rpm | 1.2 MB 00:00
Total 2.2 MB/s | 1.5 MB 00:00
Running transaction check
Running transaction test
Transaction test succeeded
Running transaction
Installing : apr-1.5.2-5.13.amzn1.x86_64 1/5
Installing : apr-util-1.5.4-6.18.amzn1.x86_64 2/5
Installing : httpd-tools-2.2.34-1.16.amzn1.x86_64 3/5
Installing : apr-util-ldap-1.5.4-6.18.amzn1.x86_64 4/5
Installing : httpd-2.2.34-1.16.amzn1.x86_64 5/5
Verifying : httpd-tools-2.2.34-1.16.amzn1.x86_64 1/5
Verifying : apr-util-1.5.4-6.18.amzn1.x86_64 2/5
Verifying : httpd-2.2.34-1.16.amzn1.x86_64 3/5
Verifying : apr-1.5.2-5.13.amzn1.x86_64 4/5
Verifying : apr-util-ldap-1.5.4-6.18.amzn1.x86_64 5/5
Installed:
httpd.x86_64 0:2.2.34-1.16.amzn1
Dependency Installed:
apr.x86_64 0:1.5.2-5.13.amzn1
apr-util.x86_64 0:1.5.4-6.18.amzn1
apr-util-ldap.x86_64 0:1.5.4-6.18.amzn1
httpd-tools.x86_64 0:2.2.34-1.16.amzn1
Complete!
[ec2-user@ip-172-31-86-43 ~]$
Type here to search
9:08 PM
9/3/2020


ec2-user@ip-172-31-86-43:~
Install 1 Package (+4 Dependent packages)
Total download size: 1.5 M
Installed size: 3.6 M
Downloading packages:
(1/5): apr-util-ldap-1.5.4-6.18.amzn1.x86_64.rpm | 19 kB 00:00
(2/5): apr-util-1.5.4-6.18.amzn1.x86_64.rpm | 99 kB 00:00
(3/5): apr-1.5.2-5.13.amzn1.x86_64.rpm | 118 kB 00:00
(4/5): httpd-tools-2.2.34-1.16.amzn1.x86_64.rpm | 80 kB 00:00
(5/5): httpd-2.2.34-1.16.amzn1.x86_64.rpm | 1.2 MB 00:00
Total 2.2 MB/s | 1.5 MB 00:00
Running transaction check
Running transaction test
Transaction test succeeded
Running transaction
Installing : apr-1.5.2-5.13.amzn1.x86_64 1/5
Installing : apr-util-1.5.4-6.18.amzn1.x86_64 2/5
Installing : httpd-tools-2.2.34-1.16.amzn1.x86_64 3/5
Installing : apr-util-ldap-1.5.4-6.18.amzn1.x86_64 4/5
Installing : httpd-2.2.34-1.16.amzn1.x86_64 5/5
Verifying : httpd-tools-2.2.34-1.16.amzn1.x86_64 1/5
Verifying : apr-util-1.5.4-6.18.amzn1.x86_64 2/5
Verifying : httpd-2.2.34-1.16.amzn1.x86_64 3/5
Verifying : apr-1.5.2-5.13.amzn1.x86_64 4/5
Verifying : apr-util-ldap-1.5.4-6.18.amzn1.x86_64 5/5
Installed:
httpd.x86_64 0:2.2.34-1.16.amzn1
Dependency Installed:
apr.x86_64 0:1.5.2-5.13.amzn1
apr-util.x86_64 0:1.5.4-6.18.amzn1
apr-util-ldap.x86_64 0:1.5.4-6.18.amzn1
httpd-tools.x86_64 0:2.2.34-1.16.amzn1
Complete!
[ec2-user@ip-172-31-86-43 ~]$ sudo service httpd start
Starting httpd: [OK]
[ec2-user@ip-172-31-86-43 ~]$ sudo service httpd restart
Stopping httpd: [OK]
Starting httpd: [OK]
[ec2-user@ip-172-31-86-43 ~]$
Type here to search
9:09 PM
9/3/2020

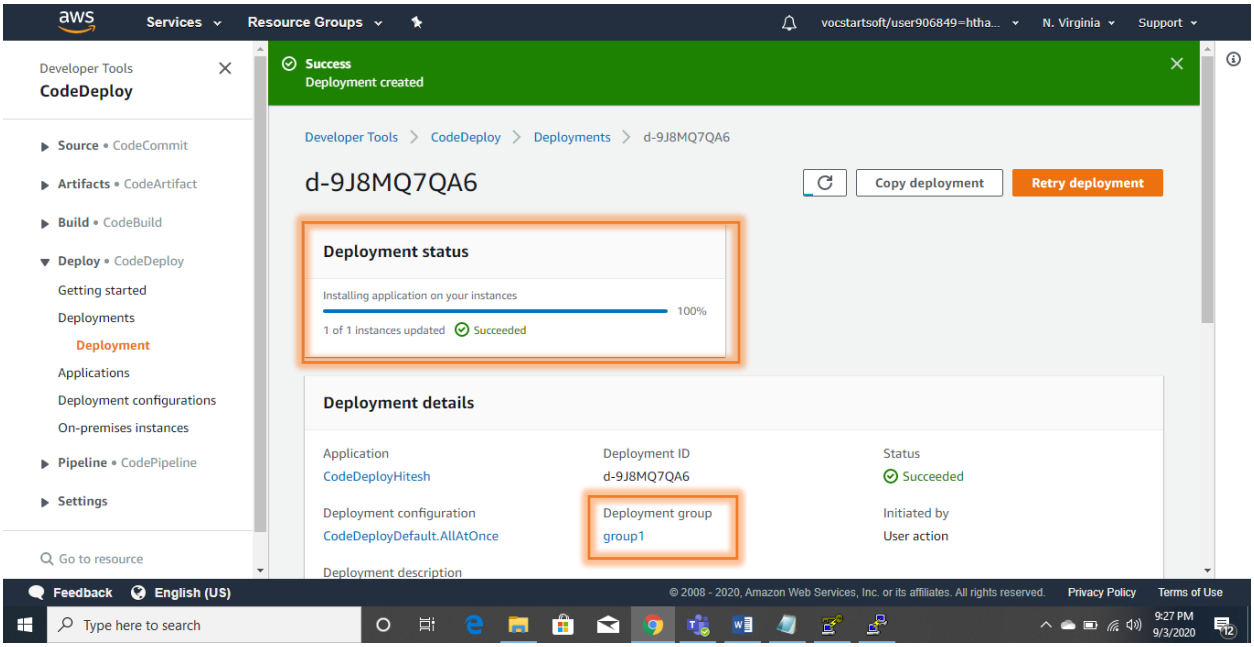
Setting up CodeDeploy to create a new application

Created a New Application CodeDeployHitesh on EC2/on-premise cloud



Deployment was successful. Created Code Deployment Group “group1” by selecting Create deployment group with Service Role as codedeployrole created at the 1st step and Deployment type as “In-place”. Configuring this Code Deployment Group with “Key” as “Name” and “Value” as “Web Server” for facilitating the EC2 instance for code deployment with deployment setting set to CodeDeployDefault.AllAtOnce along with Disabled Load Balancer.

Deployment created setting the Revision type as “My application is stored in Github” and inputting the Github token name type as “mlabouardy” along with specifying the Repository name and commit ID for the instance to know the exact Github Repository.



Using the IPV4 Public IP of the EC2 instance in the browser to access the application deployed in the AWS cloud. The deployment is successful so I was able to access the application.