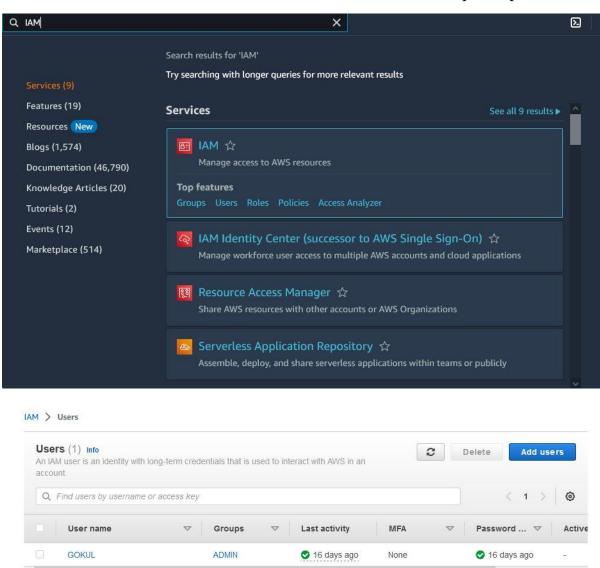
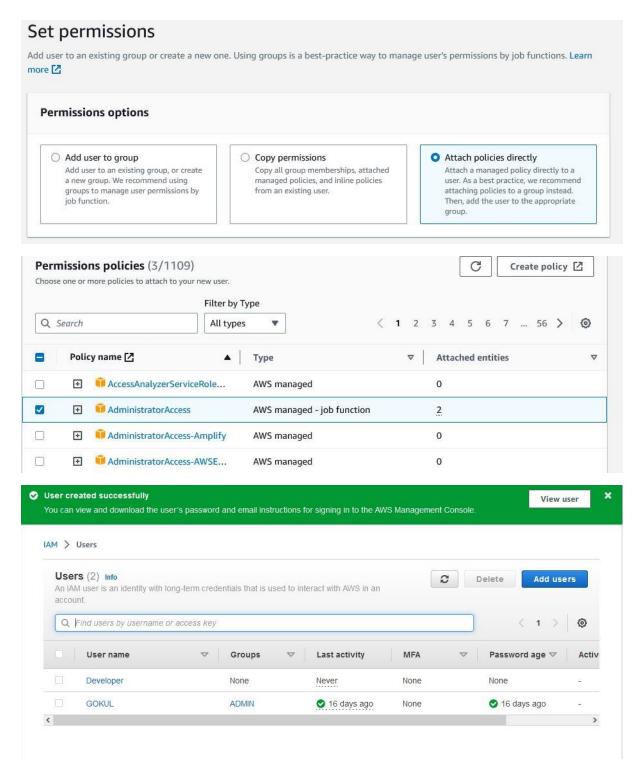
### CODE DEPLOY AND CODE PIPELINE

# Step 1: Create an IAM user account for 'DEVELOPER'

Go to IAM  $\rightarrow$  select user  $\rightarrow$  add user with CLI access and required permission.



# User details User name Developer The user name can have up to 64 characters. Valid characters: A-Z, a-z, 0-9, and + = , . @ \_- (hyphen) Provide user access to the AWS Management Console - optional If you're providing console access to a person, it's a best practice to manage their access in IAM Identity Center. If you are creating programmatic access through access keys or service-specific credentials for AWS CodeCommit or Amazon Keyspaces, you can generate them after you create this IAM user. Learn more Cancel Next



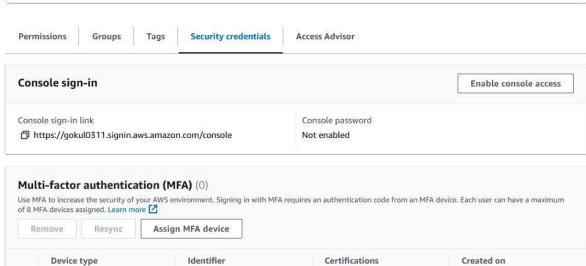
Next to give CLI access for user

Click username → security credentials → scroll down click create access key and copy paste the access key and secrete access key

Developer info

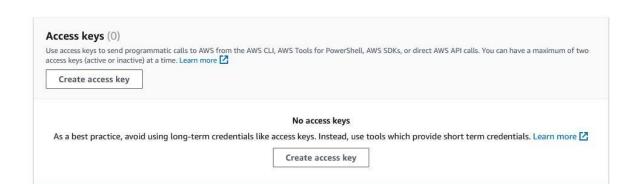
Delete

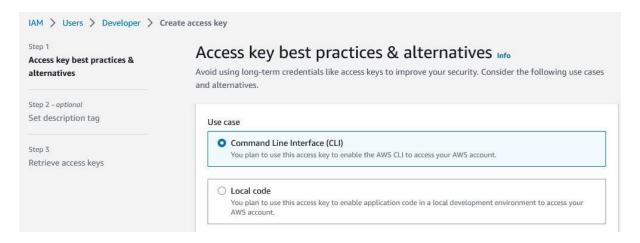


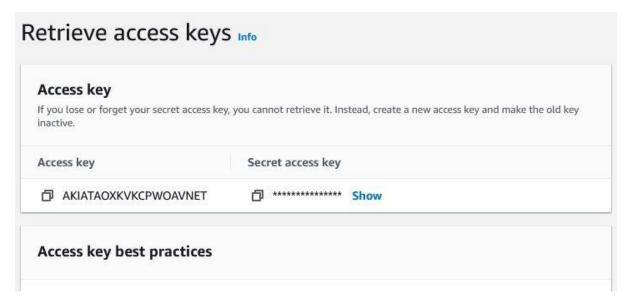


No MFA devices. Assign an MFA device to improve the security of your AWS environment

Assign MFA device

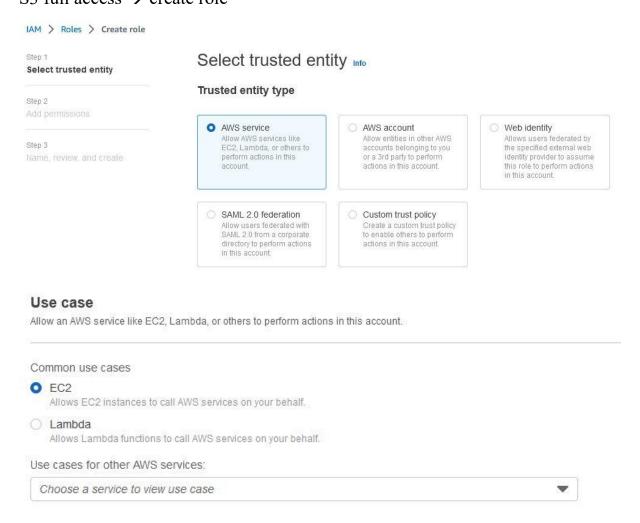




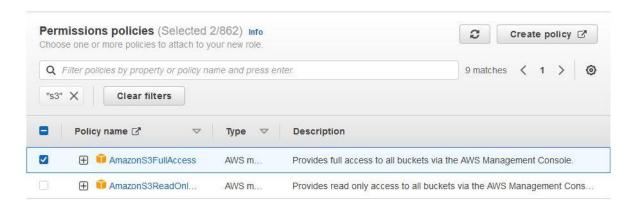


Step 2: Create IAM role [ec2 and S3 full access] for production server

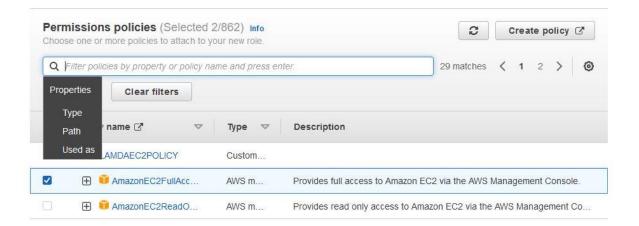
Select role → create role → aws service → select ec2 → attach policy ec2 and
S3 full access → create role



# Add permissions Info

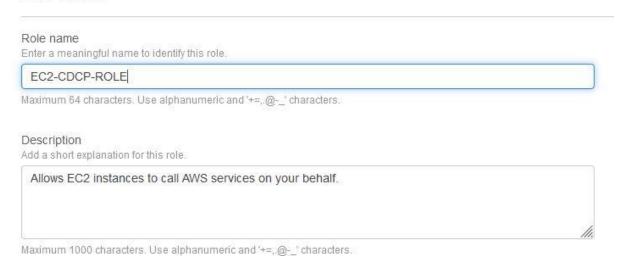


# Add permissions Info



# Name, review, and create

### Role details





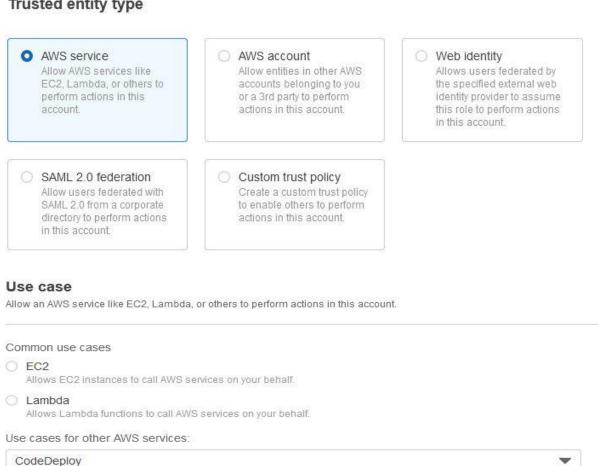
Step 3: Create IAM role for code deploy

Role  $\rightarrow$  create role  $\rightarrow$  aws service  $\rightarrow$  select other use search Code deploy  $\rightarrow$ create role

# Select trusted entity Info

### Trusted entity type

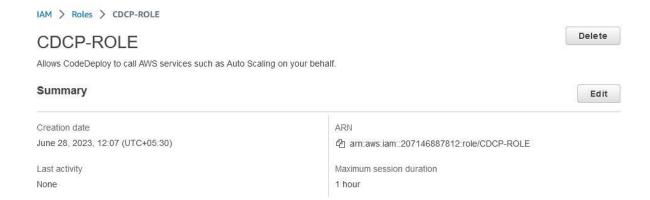
CodeDeploy for Lambda



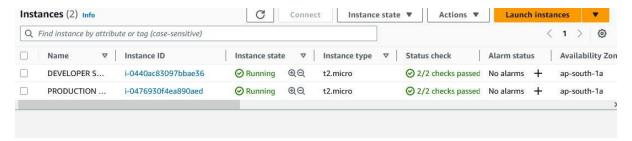
 CodeDeploy - ECS Allows CodeDeploy to read S3 objects, invoke Lambda functions, publish to SNS topics, and update ECS services on

Allows CodeDeploy to route traffic to a new version of an AWS Lambda function version on your behalf.

Allows CodeDeploy to call AWS services such as Auto Scaling on your behalf.

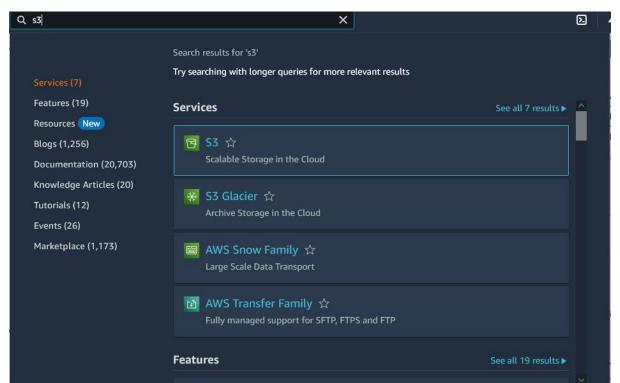


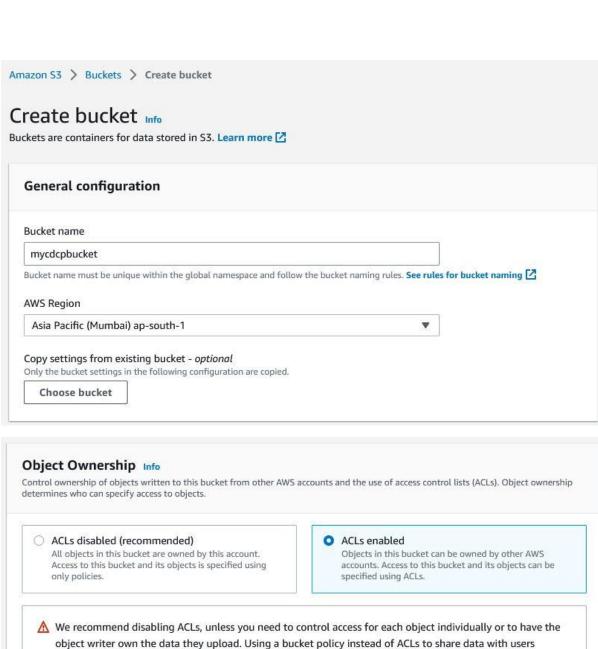
Step 4: Create a two ec2 instance in Linux i.e, developer and production server

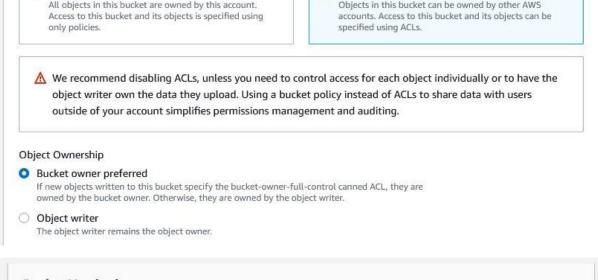


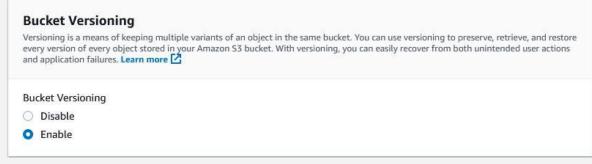
Step 5: Create an S3 bucket for copy the code from developer machine

S3  $\rightarrow$  select bucket  $\rightarrow$  create bucket with all public access, ACL enable and bucket versioning is enabled.









Step 6: To login the developer server through putty with access the CLI commands in developer server

- i) Login server with ppk key
- ii) To configure CLI → commands given below

"aws configure" → press enter

Next enter the access key, secrete access key, region, format → press enter

🧬 ec2-user@ip-172-31-33-166:~

login as: ec2-user
Authenticating with public key "linuxkey"



https://aws.amazon.com/amazon-linux-2/
4 package(s) needed for security, out of 7 available
Run "sudo yum update" to apply all updates.
[ec2-user@ip-172-31-33-166 ~]\$

ec2-user@ip-172-31-33-166:~

login as: ec2-user
Authenticating with public key "linuxkey"

\_\_| (\_\_/ Amazon Linux 2 AMI

https://aws.amazon.com/amazon-linux-2/
4 package(s) needed for security, out of 7 available
Run "sudo yum update" to apply all updates.
[ec2-user@ip-172-31-33-166 ~]\$ aws configure
AWS Access Key ID [None]:
AWS Secret Access Key [None]: ^C
[ec2-user@ip-172-31-33-166 ~]\$ aws configure
AWS Access Key ID [None]: AKIATAOXKVKCPWOAVNET
AWS Secret Access Key [None]: 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
Default region name [None]: ap-south-1
Default output format [None]: json
[ec2-user@ip-172-31-33-166 ~]\$

Step 7: Create a code for developer machine, commands given below

- i) mkdir deploy\_dir → create directory
- ii) cd deploy\_dir
- iii) mkdir sampleapp → create directory in deploy\_dir
- iv) cd sampleapp
- v) vi index.html → write html code and save

```
[root@ip-172-31-33-166 ~] # mkdir deploy dir
[root@ip-172-31-33-166 ~]# cd deploy dir
[root@ip-172-31-33-166 deploy dir]# mkdir sampleapp
[root@ip-172-31-33-166 deploy dir]# cd sampleapp
[root@ip-172-31-33-166 sampleapp] # vi index.html
Proot@ip-172-31-33-166:~/deploy_dir/sampleapp
<!DOCTYPE html>
<html>
<head>
   <title>Registration Form</title>
   <link rel="stylesheet" href="style.css">
</head>
<body>
   <div class="container">
      <h1>Registration Form</h1>
      <form>
         <label for="name">Name</label>
         <input type="text" id="name" name="name" required>
         <label for="email">Email</label>
         <input type="email" id="email" name="email" required>
         <label for="phone">Phone</label>
<input type="tel" id="phone" name="phone" pattern="[0-9]{10}" required>
         <label for="password">Password</label>
         <input type="password" id="password" name="password" required>
         <input type="submit" value="Submit" onclick="submitForm()">
      </form>
   </div>
   <script src="script.js"></script>
</body>
/html>
"index.html" 28L, 834B
                                                                  28,7
       vi appspec.yml → to write yml file and save it
 vi)
root@ip-172-31-33-166:~/deploy_dir/sampleapp/scripts
version: 0.0
os: linux
files:
  - source: /index.html
     destination: /var/www/html/
hooks:
  BeforeInstall:

    location: scripts/httpd install.sh

       timeout: 300
       runas: root

    location: scripts/httpd start.sh

       timeout: 300
       runas: root
  ApplicationStop:

    location: scripts/httpd stop.sh

      timeout: 300
      runas: root
```

```
→ to create directory in sampleapp
 vii)
       mkdir scripts
 viii)
       cd scripts
       vi httpd install.sh → to write a bash command in install httpd
 ix)
 root@ip-172-31-33-166:~/deploy_dir/sampleapp/scripts
  #!/bin/bash
  yum install -y httpd
       vi httpd start.sh → to write a bash command in start httpd
 x)
 root@ip-172-31-33-166:~/deploy_dir/sampleapp/scripts
  #!/bin/bash
  systemctl start httpd
  systemctl enable httpd
  ~
        vi httpd stop.sh → to write a bash command in start httpd
 xi)
 Proot@ip-172-31-33-166:~/deploy_dir/sampleapp/scripts
  #!/bin/bash
  systematl stop httpd
  ~
       chmod 777 * → to given full permission scripts
 xii)
Step 8: To install a code deploy agent in production server, commands given
below
   i)
         yum install ruby -y
   ii)wget https://aws-codedeploy-us-east1.s3.amazonaws.com/latest/install
```

chmod +x install

service codedeploy-agent status

./install auto

ii)

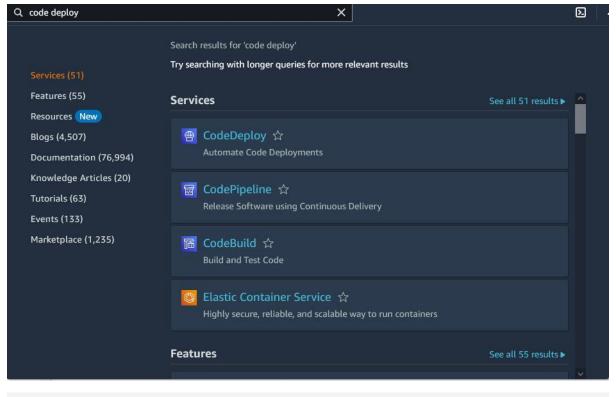
iii)

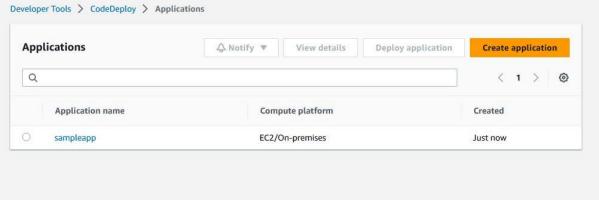
iv)

```
[root@ip-172-31-41-30 ~]# service codedeploy-agent status
The AWS CodeDeploy agent is running as PID 32546
[root@ip-172-31-41-30 ~]#
```

Step 9: Create Code deploy Application and Push the code to S3 bucket from Developer machine, commands given below

- i) cd deploy\_dir/sampleapp → to open the sampleapp directory
- ii) aws deploy create-application --application-name sampleapp then to check code deploy application is created

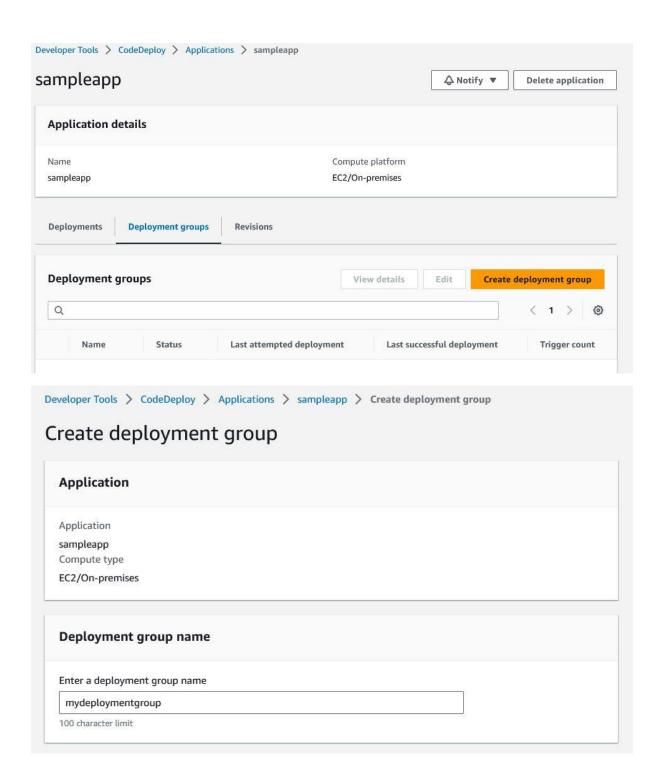


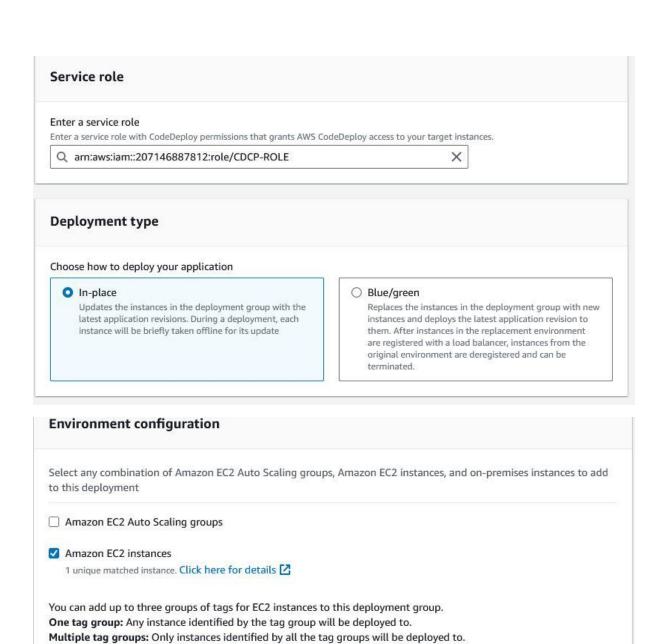


iii) aws deploy push --application-name sampleapp --s3-location s3://aws24092021/sampleapp.zip → to copy the code for s3 from developer machine

[root@ip-172-31-33-166 scripts]# aws deploy push --application-name sampleapp --s3-location s3://mycdcp bucket2806/sampleapp.zip
To deploy with this revision, run:
aws deploy create-deployment --application-name sampleapp --s3-location bucket=mycdcpbucket2806,key=sam pleapp.zip,bundleType=zip,eTag=52d236819e5bb024b07cf0cb1507e69f,version=.Uk8M5k.GFx1EdzWpx\_PIIKXfdgaX3y
9 --deployment-group-name <deployment-group-name> --deployment-config-name <deployment-config-name> --deployment-config-name> --deployment-c

Step 10: To create a code deployment group and create deployment
Select code deploy application name → create deployment group → create deployment





Value - optional

Q PRODUCTION SERVER

Remove tag

X

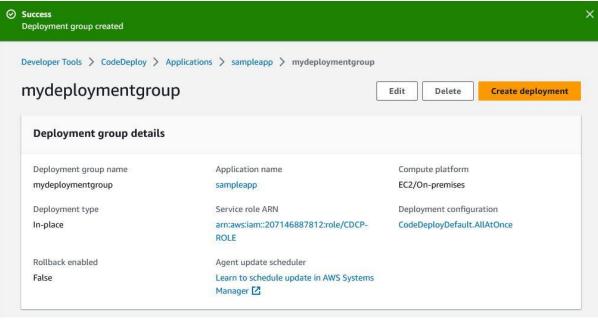
Tag group 1

Q Name

Add tag

+ Add tag group

Key



Developer Tools > CodeDeploy > Applications > sampleapp > Create deployment

Create deployment

Deployment settings

Application
sampleapp

Deployment group

Q mydeploymentgroup

Compute platform
EC2/On-premises

Deployment type
In-place

Deployment type
In-place

Revision type

My application is stored in Amazon S3

Revision location
Copy and paste the Amazon S3 bucket where your revision is stored

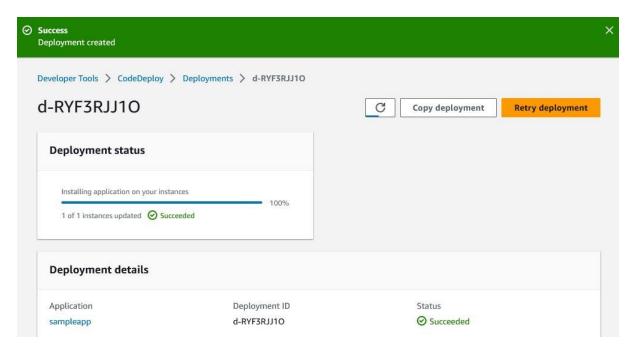
S3://mycdcpbucket2806/sampleapp.zip?versionId=.Uk8M5k.GFx1EdzWpx\_PIIK: X

Use "s3://mycdcpbucket2806
/sampleapp.zip?versionId=.Uk8M5k.GFx1EdzWpx\_PIIKXfdgaX3y9&
eTag=52d236819e5bb024b07cf0cb1507e69f"

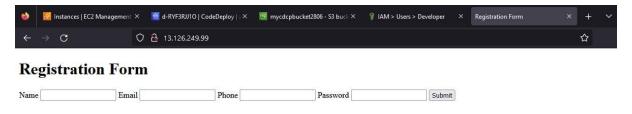
s3://mycdcpbucket2806
/sampleapp.zip?versionId=.Uk8M5k.GFx1EdzWpx\_PIIKXfdgaX3y9&

**Deployment description** 

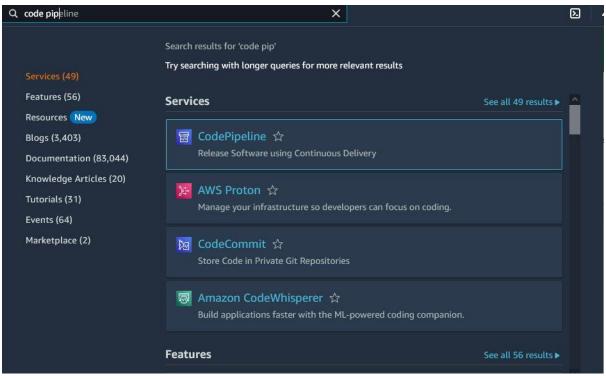
eTag=52d236819e5bb024b07cf0cb1507e69f

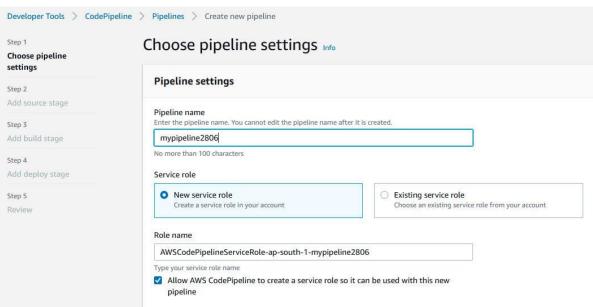


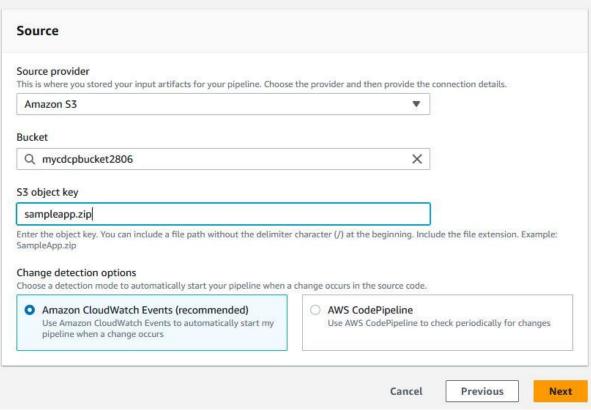
Step 11: Once deployment is succeeded to check browser with public ip address

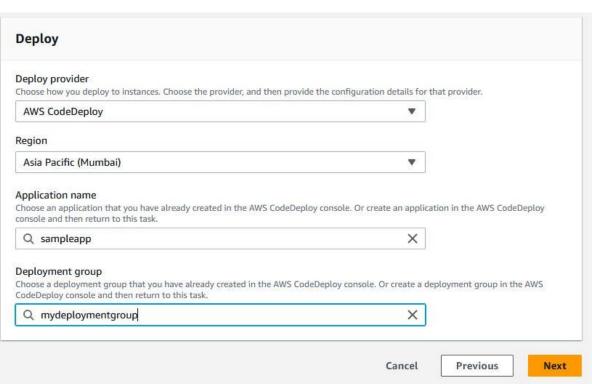


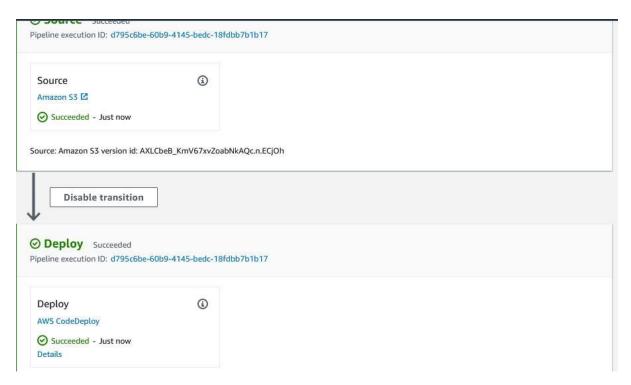
Step 12: Create code pipeline for new code will be updated in deployment group





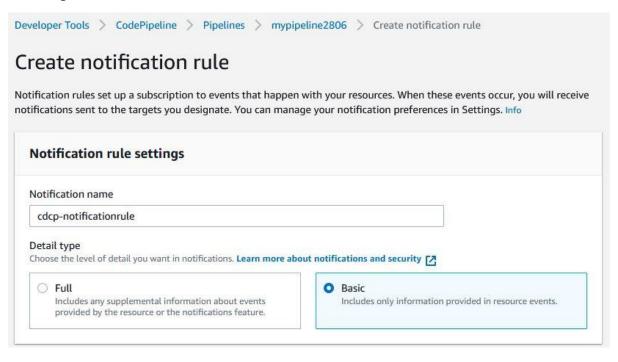


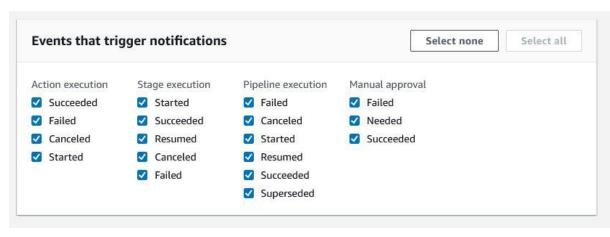


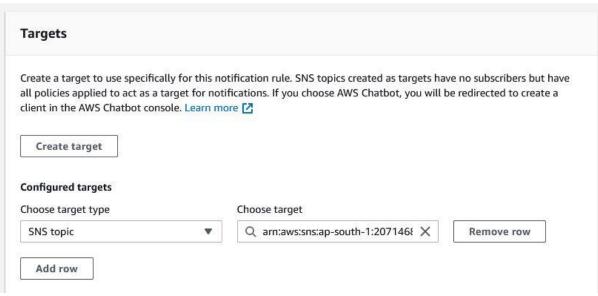


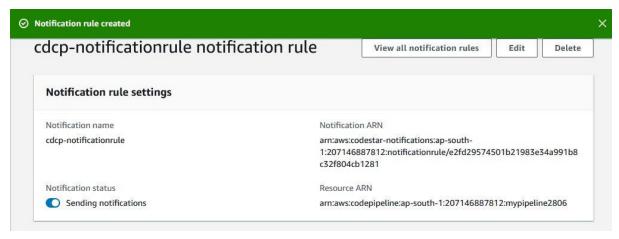
Step 13: Create a Notification for code pipeline action execution state change Code pipeline  $\rightarrow$  setting  $\rightarrow$  create a notification rule  $\rightarrow$  to fill the details  $\rightarrow$  create a SNS target  $\rightarrow$  create notification.

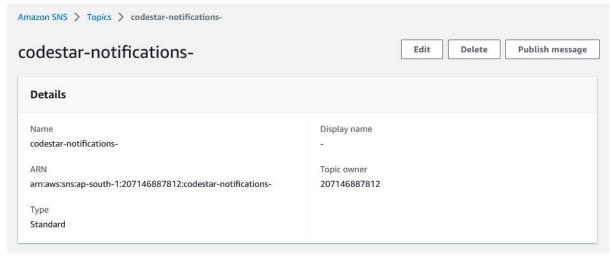
Then go to SNS  $\rightarrow$  topic is created  $\rightarrow$  subscription is create  $\rightarrow$  confirm the subscription

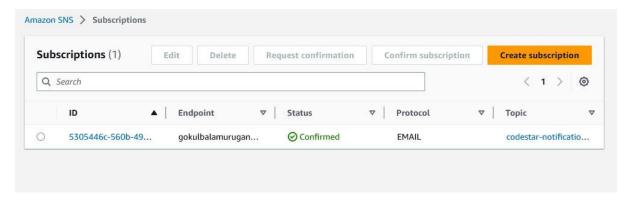












Step 14: To change the html code and copy the s3 bucket, commands given below

- i) zip -r ../sampleapp.zip .
- ii) aws s3 cp sampleapp.zip s3://aws280921

once code deployed to check the browser with public ip address and will get sns notification through subscription Email.

