

Launch 2 instances

- Testing
- Production

Give them tag (testing, production)

Now we want our code deploy to configure webserver

Two things it require

- Code deploy agent
- Role (ec2 to contact to code deploy)

Connect to Ec2 – testing & install the agent using these steps

```
awscodedeploy

sudo yum update -y

sudo yum install -y ruby wget

wget https://aws-codedeploy-eu-west-1.s3.eu-west-1.amazonaws.com/latest/install

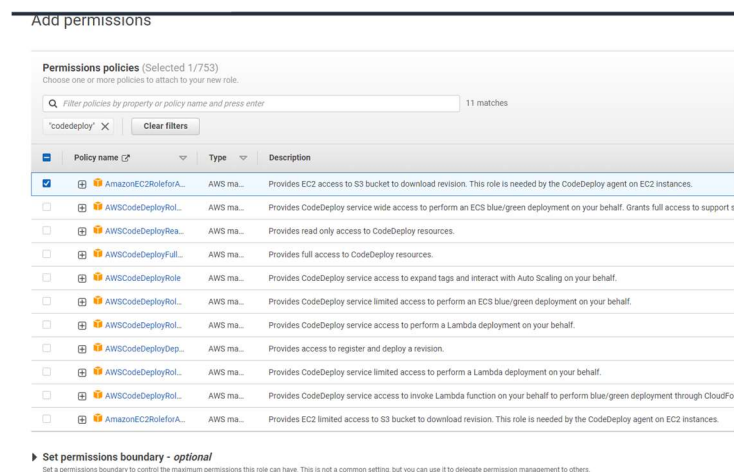
chmod +x ./install

sudo ./install auto

sudo service codedeploy-agent status
```

To give ec2 some power to connect to code deploy we need to give some role to it

Add new role Select ec2 n then



The image shows two screenshots of the AWS Management Console. The top screenshot displays the 'Instances (1/2)' page with a table of EC2 instances. The bottom screenshot shows the 'Modify IAM role' dialog for instance i-036b753a1f1192537.

Name	Env	Instance ID	Instance state	Instance type
-	prod	i-097ef123a116da269	Running	t2.micro
-	testing	i-036b753a1f1192537	Running	t2.micro

Instance: i-036b753a1f1192537

Select an instance above

Instance summary

- Instance ID: i-036b753a1f1192537
- Public IPv4 address: 65.0.17.234 | open address
- Private IPv4 addresses: 172.31.45.137
- Instance state: Running
- Public IPv4 DNS: ec2-65-0-17-234.ap-south-1.compute.amazonaws.com | open address
- Private IP DNS name (IPv4 only): ip-172-31-45-137.ap-south-1.compute.internal
- Answer private resource DNS name: IPv4 (A)

Modify IAM role

Attach an IAM role to your instance.

Instance ID: i-036b753a1f1192537

IAM role: Choose IAM role

Create new IAM role

No IAM Role

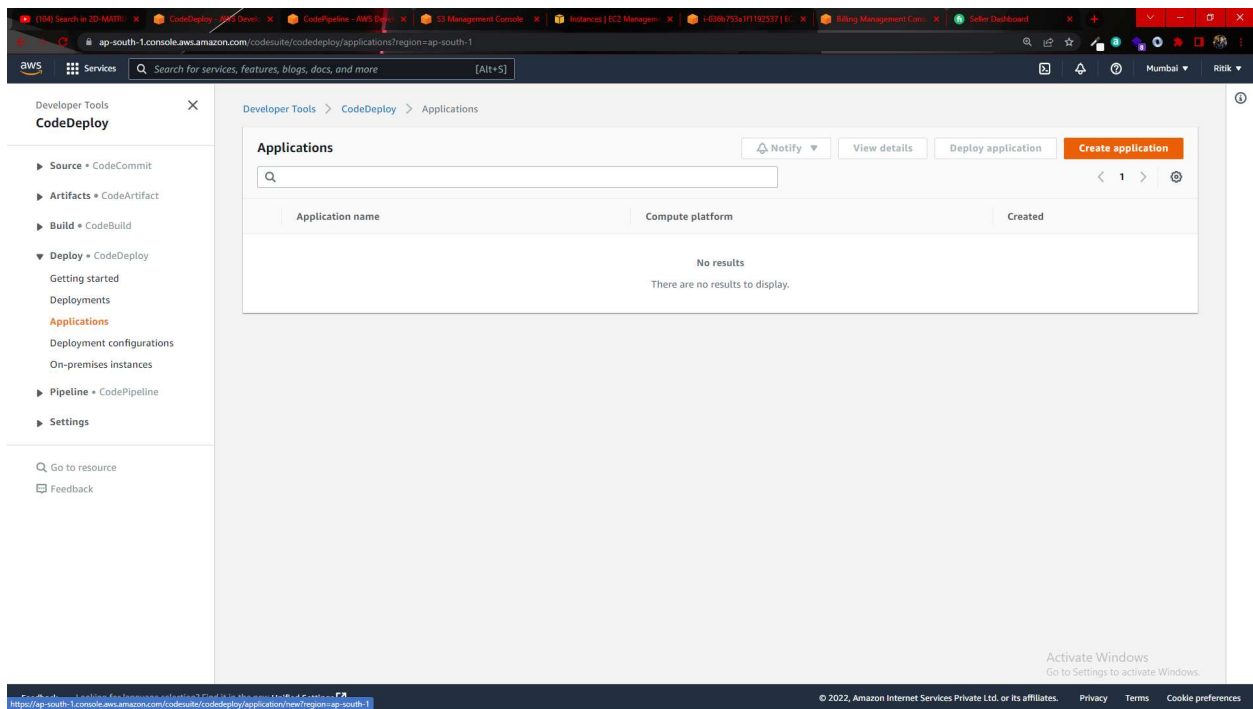
Choose this option to detach an IAM role

ec2codeplayrole2022

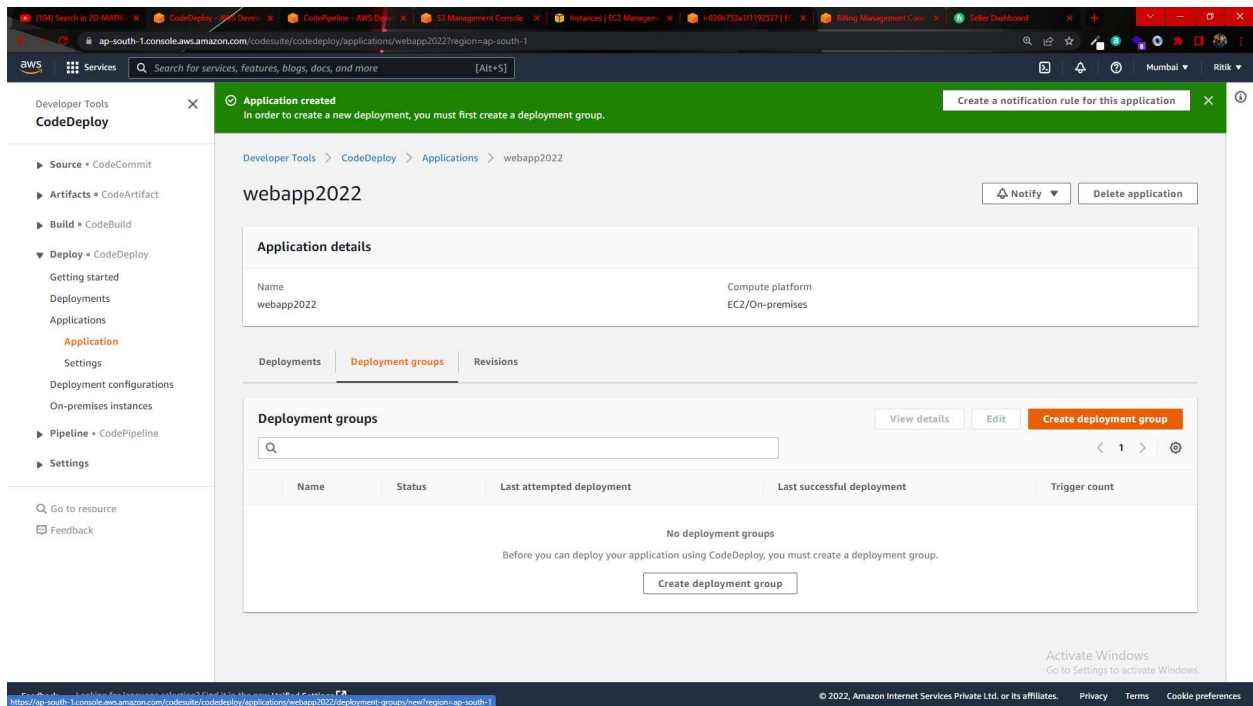
arn:aws:iam:149520388576:role/ec2codeplayrole2022

Cancel Save

Create new application in code deploy



Now create deployment group



Create code deploy role

Allow an AWS service like EC2, Lambda, or others to perform actions in this account.

- **EC2**
Allows EC2 instances to call AWS services on your behalf.
- **Lambda**
Allows Lambda functions to call AWS services on your behalf.

CodeDeploy

- Cancel **Next**

```

Dependencies Resolved

=====
Package                Arch            Version          Repository                                               Size
=====
Installing:
codedeploy-agent        noarch          1.3.2-1902      /codedeploy-agent-1.3.2-1902.noarch.tmp-20220503-3906-axf0q5 11 M
=====

Transaction Summary
=====
Install 1 Package

Total size: 11 M
Installed size: 11 M
Downloading packages:
Running transaction check
Running transaction test
Transaction test succeeded
Running transaction

pre hook : 1
Checking the ruby version.
Checking if there is already a process named codedeploy-agent running.
  Installing : codedeploy-agent-1.3.2-1902.noarch                                           1/1

post hook : 1
Check if there is a codedeployagent config file.
Start codedeploy-agent in post hook if this is a first install.
  Verifying : codedeploy-agent-1.3.2-1902.noarch                                           1/1

Installed:
codedeploy-agent.noarch 0:1.3.2-1902

Complete!
I. [2022-05-03T05:58:56.518563 #3906] INFO -- : Update check complete.
I. [2022-05-03T05:58:56.518651 #3906] INFO -- : Stopping updater.
[ec2-user@ip-172-31-40-245 ~]$
[ec2-user@ip-172-31-40-245 ~]$
[ec2-user@ip-172-31-40-245 ~]$ sudo service codedeploy-agent status
The AWS CodeDeploy agent is running as PID 3989
[ec2-user@ip-172-31-40-245 ~]$ █

```

Attach role to connect to code deploy

EC2 > Instances > i-097ef123a116da269 > Modify IAM role

Modify IAM role

Info

Attach an IAM role to your instance.

Instance ID

i-097ef123a116da269

IAM role

Select an IAM role to attach to your instance or create a new role if you haven't created any. The role you select replaces any roles that are currently attached to your instance.

ec2codedeployrole2022

Create new IAM role

Cancel

Save

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Feedback

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Deployment group name

Enter a deployment group name

100 character limit

Service role

Enter a service role

Enter a service role with CodeDeploy permissions that grants AWS CodeDeploy access to your target instances.

Deployment type

Choose how to deploy your application

☒ In-place

Updates the instances in the deployment group with the latest application revisions. During a deployment, each instance will be briefly taken offline for its update

☐ Blue/green

Replaces the instances in the deployment group with new instances and deploys the latest application revision to them. After instances in the replacement environment are registered with a load balancer, instances from the original environment are deregistered and can be terminated.

Environment configuration

Select any combination of Amazon EC2 Auto Scaling groups, Amazon EC2 instances, and on-premises instances to add

Created deployment group

Developer Tools

CodeDeploy

Source • CodeCommit

Artifacts • CodeArtifact

Build • CodeBuild

▼ Deploy • CodeDeploy

Getting started

Deployments

Applications

Application

Settings

Deployment configurations

On-premises instances

► Pipeline • CodePipeline

Settings

Go to resource

Feedback

Developer Tools > CodeDeploy > Applications > webapp2022

webapp2022

Notify Delete application

Application details

Name

webapp2022

Compute platform

EC2/On-premises

Deployments

Deployment groups

Revisions

Deployment groups

View details Edit Create deployment group

Q

< 1 > ⚙

	Name	Status	Last attempted deployment	Last successful deployment	Trigger count
<input type="radio"/>	testingenvvec2grou	-	-	-	0
<input type="radio"/>	prodgroup2022	-	-	-	0

Create pipeline to connect all the pieces

The screenshot shows the AWS CodePipeline console in the 'Add build stage' step. The pipeline name is 'finalCICDPipeline'. The service role is 'New service role' with the name 'AWSCodePipelineServiceRole-ap-south-1-finalCICDPipeline'. The 'Advanced settings' section shows 'Artifact store' set to 'Custom location' with bucket 'webbucketdevops2022' and encryption key 'Default AWS Managed Key'. The 'Next' button is visible at the bottom right.

finalCICDPipeline
No more than 100 characters

Service role

☒ New service role
Create a service role in your account

☐ Existing service role
Choose an existing service role from your account

Role name
AWSCodePipelineServiceRole-ap-south-1-finalCICDPipeline
Type your service role name

☒ Allow AWS CodePipeline to create a service role so it can be used with this new pipeline

▼ Advanced settings

Artifact store

☐ Default location
Create a default S3 bucket in your account.

☒ Custom location
Choose an existing S3 location from your account in the same region and account as your pipeline

Bucket
webbucketdevops2022

Encryption key

☒ Default AWS Managed Key
Use the AWS managed customer master key for CodePipeline in your account to encrypt the data in the artifact store.

☐ Customer Managed Key
To encrypt the data in the artifact store under an AWS KMS customer managed key, specify the key ID, key ARN, or alias ARN.

Cancel Next

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Adding source

The screenshot shows the AWS CodePipeline console in the 'Add source stage' step. The source provider is 'AWS CodeCommit' with repository name 'webrepo2022' and branch name 'master'. The 'Change detection options' are set to 'Amazon CloudWatch Events (recommended)'. The 'Output artifact format' is set to 'CodePipeline default'. The 'Next' button is visible at the bottom right.

Developer Tools > CodePipeline > Pipelines > Create new pipeline

Step 1
Choose pipeline settings

Step 2
Add source stage

Step 3
Add build stage

Step 4
Add deploy stage

Step 5
Review

Add source stage [Info](#)

Source

Source provider
This is where you stored your input artifacts for your pipeline. Choose the provider and then provide the connection details.

AWS CodeCommit

Repository name
Choose a repository that you have already created where you have pushed your source code.

webrepo2022

Branch name
Choose a branch of the repository

master

Change detection options
Choose a detection mode to automatically start your pipeline when a change occurs in the source code.

☒ Amazon CloudWatch Events (recommended)
Use Amazon CloudWatch Events to automatically start my pipeline when a change occurs.

☐ AWS CodePipeline
Use AWS CodePipeline to check periodically for changes

Output artifact format
Choose the output artifact format.

☒ CodePipeline default
AWS CodePipeline uses the default zip format for artifacts in the pipeline. Does not include git metadata about the repository.

☐ Full clone
AWS CodePipeline passes metadata about the repository that allows subsequent actions to do a full git clone. Only supported for AWS CodeBuild actions.

Cancel Previous Next

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Developer Tools > CodePipeline > Pipelines > Create new pipeline

Step 1
Choose pipeline settings

Step 2
Add source stage

Step 3
Add build stage

Step 4
Add deploy stage

Step 5
Review

Add build stage Info

Build - optional

Build provider
This is the tool of your build project. Provide build artifact details like operating system, build spec file, and output file names.
AWS CodeBuild

Region
Asia Pacific (Mumbai)

Project name
Choose a build project that you have already created in the AWS CodeBuild console. Or create a build project in the AWS CodeBuild console and then return to this task.
cicodebuild2022 or Create project

Environment variables - optional
Choose the key, value, and type for your CodeBuild environment variables. In the value field, you can reference variables generated by CodePipeline. [Learn more](#)
Add environment variable

Build type
☒ **Single build**
Triggers a single build.
☐ **Batch build**
Triggers multiple builds as a single execution.

Cancel Previous Skip build stage Next

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Adding deployment provider

Developer Tools > CodePipeline > Pipelines > Create new pipeline

Step 1
Choose pipeline settings

Step 2
Add source stage

Step 3
Add build stage

Step 4
Add deploy stage

Step 5
Review

Add deploy stage Info

Deploy - optional

Deploy provider
Choose how you deploy to instances. Choose the provider, and then provide the configuration details for that provider.
AWS CodeDeploy

Region
Asia Pacific (Mumbai)

Application name
Choose an application that you have already created in the AWS CodeDeploy console. Or create an application in the AWS CodeDeploy console and then return to this task.
webapp2022

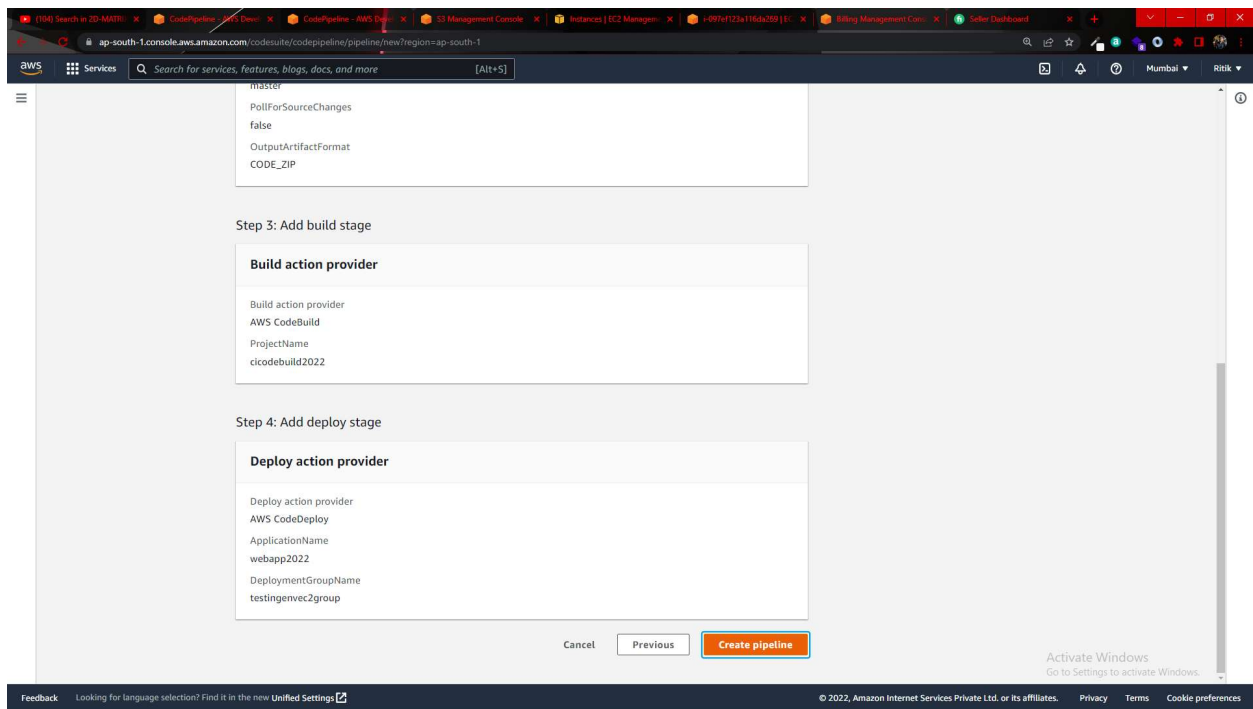
Deployment group
Choose a deployment group that you have already created in the AWS CodeDeploy console. Or create a deployment group in the AWS CodeDeploy console and then return to this task.
testingenv2group

Cancel Previous Skip deploy stage Next

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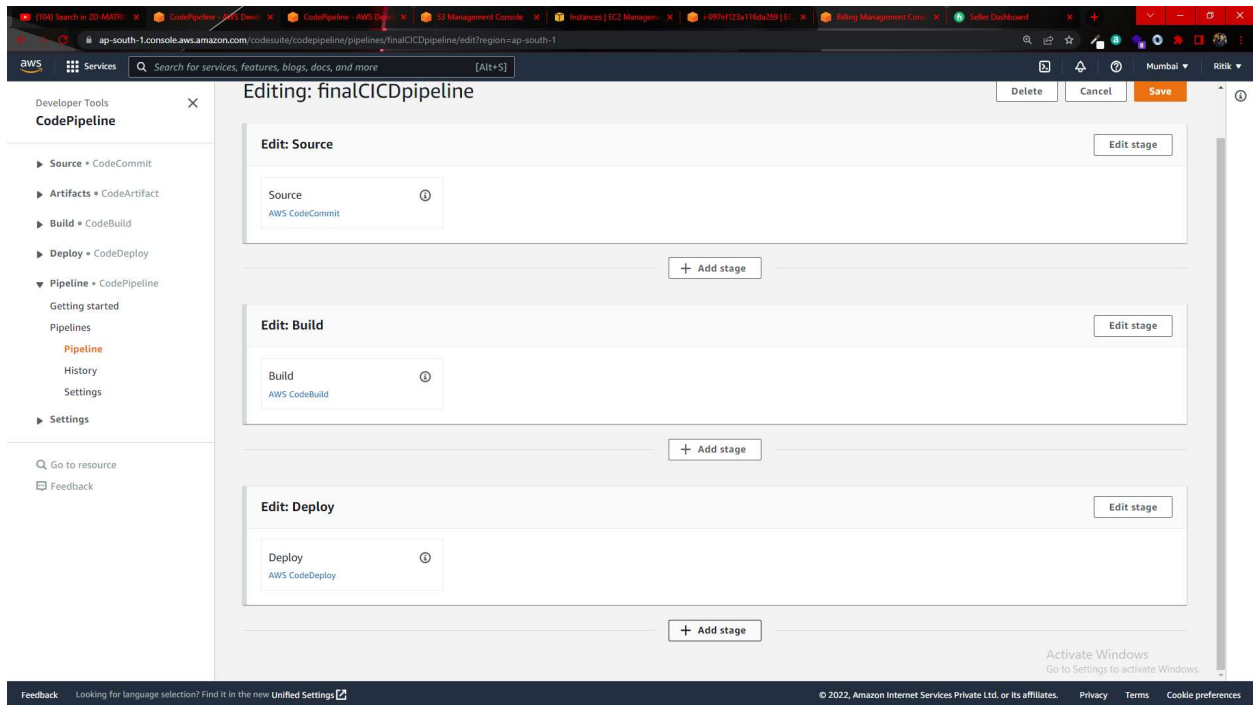


Pipeline created

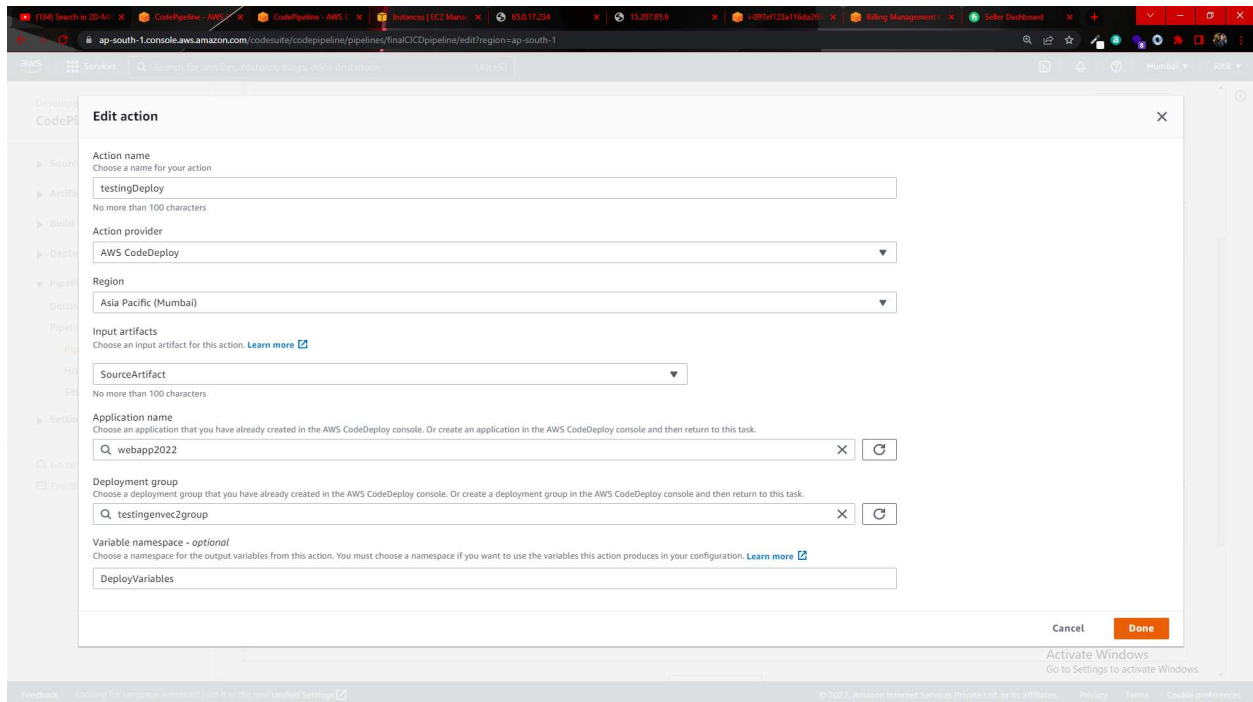
Now we can add more stages to the pipeline

We need to add the production stage and the approval stage

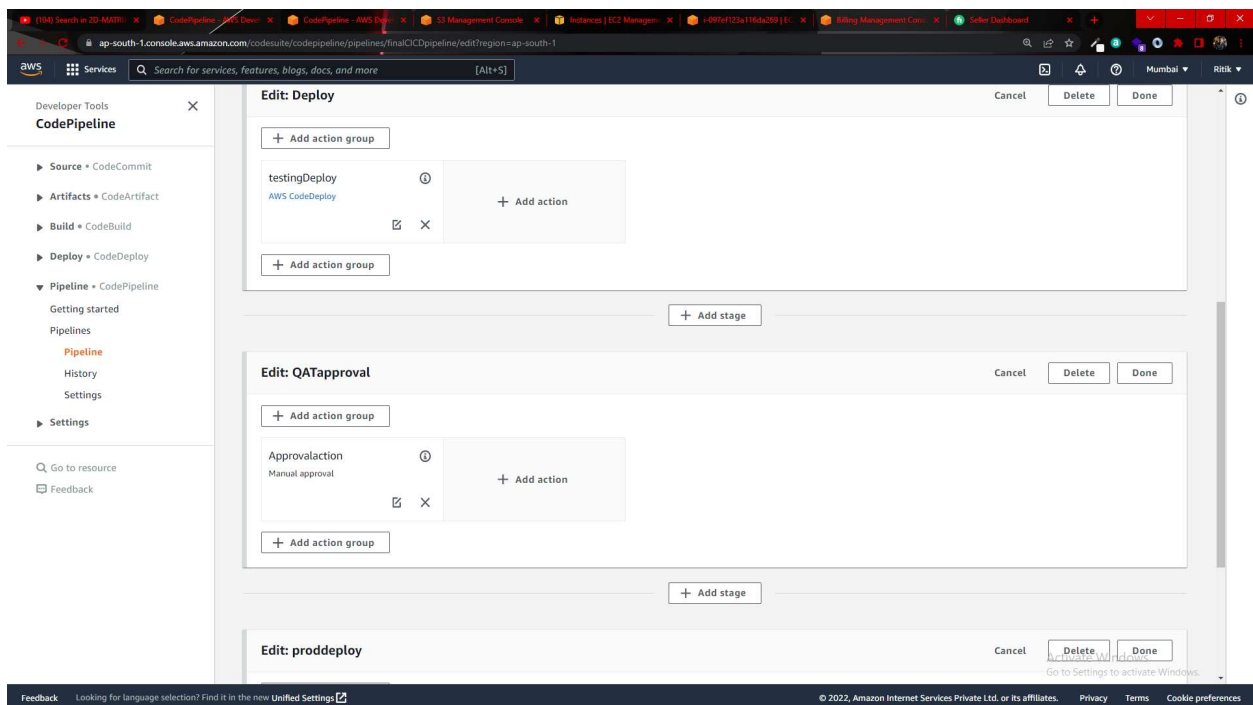
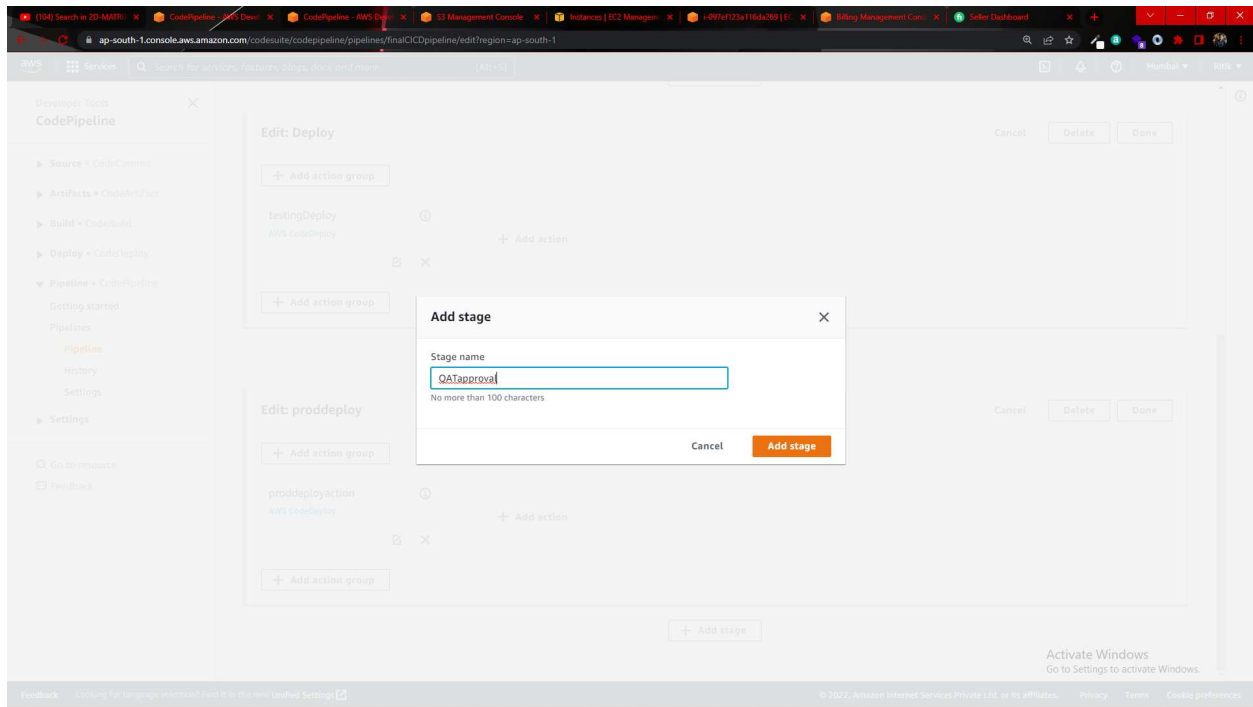
Adding prod stage



Adding action group to the stage



Between the prod deploy and testing deploy there we need a one more stage QAT approval stage



Now for configuring the webserver code deployment need the yaml configuration file.

We need to download and push those files

After pushing all the files the pipeline will automatically start and start triggering the other services.