

# Blue/Green Deployment

step1)let's create role for all

Go to iam role

Create a role and give

s3,codedeploy,pipeline,autoscaling

for\_ec2instance [Info](#)

Allows EC2 instances to call AWS services on your behalf.

Delete


Summary

Edit


Creation date

August 14, 2024, 11:24 (UTC+05:30)

ARN

 arn:aws:iam::381492004603:role/for\_ec2instance

Instance profile ARN

 arn:aws:iam::381492004603:instance-profile/for\_ec2instance

Last activity

-

Maximum session duration

1 hour

Permissions


Trust relationships

Tags

Access Advisor

Revoke sessions


Permissions policies (4) [Info](#)





 [Simulate](#) [Remove](#) [Add permissions](#)

You can attach up to 10 managed policies.

Filter by Type

All types

< 1 > 

<input type="checkbox"/>	Policy name <a href="#">?</a>	Type	Attached entities
<input type="checkbox"/>	 <a href="#">AmazonS3FullAccess</a>	AWS managed	1
<input type="checkbox"/>	 <a href="#">AutoScalingFullAccess</a>	AWS managed	1
<input type="checkbox"/>	 <a href="#">AWSCodeDeployFullAccess</a>	AWS managed	1
<input type="checkbox"/>	 <a href="#">AWSCodePipeline_FullAccess</a>	AWS managed	1

Create one more role for code deploy

Use case

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

Service or use case

CodeDeploy

Choose a use case for the specified service.

Use case

☒ CodeDeploy

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

☐ CodeDeploy for Lambda

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

☐ CodeDeploy - ECS

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

Another role

for\_codedeploy

Info

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

Summary

Creation date

August 14, 2024, 11:28 (UTC+05:30)

Last activity

-

ARN

arn:aws:iam::381492004603:role/for\_

Maximum session duration

1 hour

Permissions

Trust relationships

Tags

Access Advisor

Revoke sessions

Permissions policies (4)





Info

You can attach up to 10 managed policies.

Q Search

Filter by Type

All types

<input type="checkbox"/>	Policy name	Type	Attached entities
<input type="checkbox"/>	 AdministratorAccess	AWS managed - job function	2
<input type="checkbox"/>	 AmazonEC2RoleforAWSCodeDeploy	AWS managed	1
<input type="checkbox"/>	 AmazonS3FullAccess	AWS managed	2
<input type="checkbox"/>	 AWSCodeDeployRole	AWS managed	1

Step 2 : auto scaling group

Create a template

Amazon Linux

aws

macOS

Mac

Ubuntu

ubuntu

Windows

Microsoft

Red Hat

Red Hat

SUSE L

SUS

Browse more AMIs

Including AMIs from AWS, Marketplace and the Community

Amazon Machine Image (AMI)

Amazon Linux 2023 AMI

ami-0ae8f15ae66fe8cda (64-bit (x86), uefi-preferred) / ami-0e36db3a3a535e401 (64-bit (Arm), uefi)

Virtualization: hvm    ENA enabled: true    Root device type: ebs

Free tier eligible

Description

Amazon Linux 2023 is a modern, general purpose Linux-based OS that comes with 5 years of long term support. It is optimized for AWS and designed to provide a secure, stable and high-performance execution environment to develop and run your cloud applications.

Architecture

64-bit (x86)

Boot mode

uefi-preferred

AMI ID

ami-0ae8f15ae66fe8cda

Verified provider

▼ Instance type

Info | Get advice

Advanced

Instance type

t2.micro

Free tier eligible

Family: t2 1 vCPU 1 GiB Memory Current generation: true

On-Demand Windows base pricing: 0.0162 USD per Hour

On-Demand SUSE base pricing: 0.0116 USD per Hour

On-Demand RHEL base pricing: 0.026 USD per Hour

On-Demand Linux base pricing: 0.0116 USD per Hour

All generations

Compare instance types

Additional costs apply for AMIs with pre-installed software

Add sg

Security group name - required

mysg

This security group will be added to all network interfaces. The name can't be edited after the security group is created. Max length is 255 characters. Valid characters: a-z, A-Z, 0-9, spaces, and \_-:/()#,@[]+=&{}!\$\*

Description - required

Info

Allows SSH access to developers

VPC

Info

vpc-05cbd57b27d7723e0

172.31.0.0/16

(default)

↻

Inbound Security Group Rules

▼ Security group rule 1 (TCP, 22, 0.0.0.0/0)

Remove

Type

Info

ssh

Protocol

Info

TCP

Port range

Info

22

Source type

Info

Anywhere

Source

Info

🔍 Add CIDR, prefix list or security

0.0.0.0/0

✕

Description - optional

Info

e.g. SSH for admin desktop

▼ Security group rule 2 (TCP, 80, 0.0.0.0/0)

Remove

Type

Info

HTTP

Protocol

Info

TCP

Port range

Info

80

Source type

Info

Anywhere

Source

Info

🔍 Add CIDR, prefix list or security

Description - optional

Info

e.g. SSH for admin desktop

Add iam role that u created

## ▼ Advanced details [Info](#)

IAM instance profile [Info](#)

for\_ec2instance  
arn:aws:iam::381492004603:instance-profile/for\_ec2instance



[Create new IAM](#)



Add user data in advance option  
And paste it in your userdata options  
For github

Now lets create auto scaling group

## Choose launch template [Info](#)

Specify a launch template that contains settings common to all EC2 instances that are launched by this Auto Scaling group.

### Name

Auto Scaling group name

Enter a name to identify the group.

my\_auto

Must be unique to this account in the current Region and no more than 255 characters.

### Launch template [Info](#)

For accounts created after May 31, 2023, the EC2 console only supports creating Auto Scaling groups with launch templates. Creating Auto Scaling groups with launch configurations is not recommended but still available via the CLI and API until December 31, 2023.

#### Launch template

Choose a launch template that contains the instance-level settings, such as the Amazon Machine Image (AMI), instance type, key pair, and security groups.

mytemp



[Create a launch template](#)

Version

Default (1)



[Create a launch template version](#)

Description

Launch template

Instance type

Select 2 subnets

Launch template	Version	Description
<a href="#">mytempblue</a> lt-0d29e280e25c9f1d7	Default	fgfdgdggdg
Instance type		
t2.micro		

Network [Info](#)

For most applications, you can use multiple Availability Zones and let EC2 Auto Scaling balance your i the zones. The default VPC and default subnets are suitable for getting started quickly.

VPC

Choose the VPC that defines the virtual network for your Auto Scaling group.

vpc-05cbd57b27d7723e0  
172.31.0.0/16    Default

↻

[Create a VPC](#)

Availability Zones and subnets

Define which Availability Zones and subnets your Auto Scaling group can use in the chosen VPC.

Select Availability Zones and subnets

↻

us-east-1a | subnet-042c97cf54e714838 ✕  
172.31.0.0/20    Default

Attach new load balancer

## Load balancing [Info](#)

Use the options below to attach your Auto Scaling group to an existing load balancer, or to a new load balancer that you define.

☐ **No load balancer**

Traffic to your Auto Scaling group will not be fronted by a load balancer.

☐ **Attach to an existing load balancer**

Choose from your existing load balancers.

☒ **Attach to a new load balancer**

Quickly create a basic load balancer to attach to your Auto Scaling group.

### Attach to a new load balancer

Define a new load balancer to create for attachment to this Auto Scaling group.

#### Load balancer type

Choose from the load balancer types offered below. Type selection cannot be changed after the load balancer is created. If you need a different type of load balancer than those offered here, visit the [Load Balancing console](#). [↗](#)

☒ **Application Load Balancer**  
HTTP, HTTPS

☐ **Network Load Balancer**  
TCP, UDP, TLS

#### Load balancer name

Name cannot be changed after the load balancer is created.

#### Load balancer scheme

### Add new target group

If you require secure listeners, or multiple listeners, you can configure them from the [Load Balancing console](#) [↗](#) after your load balancer is created.

Protocol

HTTP

Port

80

Default routing (forward to)

Create a target group ▼

New target group name

An instance target group with default settings will be created.

myauto1

### Set desired capacity

### Desired capacity

Specify your group size.

## Scaling [Info](#)

You can resize your Auto Scaling group manually or automatically to meet changes in demand.

### Scaling limits

Set limits on how much your desired capacity can be increased or decreased.

#### Min desired capacity

Equal or less than desired capacity

#### Max desired capacity

Equal or greater than desired capacity

Next and click auto scaling grp

[EC2](#) > Auto Scaling groups

**Auto Scaling groups (1)** [Info](#) [Refresh](#) [Launch configurations](#) [Launch templates](#) [Actions](#) [Create Auto Scaling group](#)

<input type="checkbox"/>	Name	Launch template/configuration	Instances	Status	Desired capacity	Min	Max
<input type="checkbox"/>	<a href="#">myauto</a>	<a href="#">mytempblue</a>   Version Default	2	-	2	2	2

Wait for instance to launch

**Instances (1/2)** [Info](#) [Refresh](#) [Connect](#) [Instance state](#) [Actions](#) [Launch instances](#)

[All states](#)

<input type="checkbox"/>	Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone
<input checked="" type="checkbox"/>	Production	<a href="#">i-0896e185360f696ae</a>	<span>Running</span>	t2.micro	<span>2/2 checks passed</span>	<a href="#">View alarms</a>	us-east-1b
<input type="checkbox"/>	Production	<a href="#">i-0af84322874098d87</a>	<span>Running</span>	t2.micro	<span>Initializing</span>	<a href="#">View alarms</a>	us-east-1a

Now lets create a bucket

AWS Region  
US East (N. Virginia) us-east-1

Bucket type [Info](#)

☒ **General purpose**  
Recommended for most use cases and access patterns. General purpose buckets are the original S3 bucket type. They allow a mix of storage classes that redundantly store objects across multiple Availability Zones.

☐ **Directory - New**  
Recommended for low-latency use cases. These buckets use only the S3 Express One Zone storage class, which provides faster processing of data within a single Availability Zone.

Bucket name [Info](#)

codepipeline0artifact

Bucket name must be unique within the global namespace and follow the bucket naming rules. [See rules for bucket naming](#)

Copy settings from existing bucket - *optional*  
Only the bucket settings in the following configuration are copied.

[Choose bucket](#)

Format: s3://bucket/prefix

Click on create buck

General purpose buckets (1) [Info](#) [All AWS Regions](#)

Buckets are containers for data stored in S3.

[Refresh](#) [Copy ARN](#) [Empty](#) [Delete](#) [Create bucket](#)

	Name	AWS Region	IAM Access Analyzer	Creation date
<input type="radio"/>	<a href="#">codepipeline0artifact</a>	US East (N. Virginia) us-east-1	<a href="#">View analyzer for us-east-1</a>	August 15, 2024, 11:46:10 (UTC+05:30)

Now lets create an application

step 4 : let's create code deploy

Got to code deploy > application

Create application

**Application configuration**

Application name  
Enter an application name

codd\_deploy

100 character limit

Compute platform  
Choose a compute platform

EC2/On-premises

Tags

[Add tag](#)

[Cancel](#) [Create application](#)

Click on create



Now click on create deployment grp

Create deployment group

codd\_deploy

Compute type

EC2/On-premises

### Deployment group name

Enter a deployment group name

myblue

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.

Q arn:aws:iam::381492004603:role/for\_codedeploy



Attache the role that you created

### Deployment group name

Enter a deployment group name

myblue

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.

Q arn:aws:iam::381492004603:role/for\_codedeploy



### Deployment type

Choose how to deploy your application



In-place

Updates the instances in the deployment group with the latest application revision. During a deployment, each



Blue/green

Replaces the instances in the deployment group with new instances and deploys the latest application revision to

Now select your auto scaling group

## Environment configuration

Specify the Amazon EC2 Auto Scaling groups or Amazon EC2 instances where the current application revision is deployed.

☒ **Automatically copy Amazon EC2 Auto Scaling group**

Provision an Amazon EC2 Auto Scaling group and deploy the new application revision to it. AWS CodeDeploy will create the Auto Scaling group by copying the one you specify here.

☐ **Manually provision instances**

I will specify here the instances where the current application revision is running. I will specify the instances for the replacement environment when I create a deployment.

Choose the Amazon EC2 Auto Scaling group where the current application revision is deployed.

Q myauto



Select all as give in the images

### Deployment settings

#### Traffic rerouting

☐ Reroute traffic immediately

☒ I will choose whether to reroute traffic

Days

0

Hours

0

Minutes

5

Choose whether instances in the original environment are terminated after the deployment is succeeds, and how long to wait before termination.

☒ Terminate the original instances in the deployment group

☐ Keep the original instances in the deployment group running

Days

0

Hours

1

Minutes

5

#### Deployment configuration

Choose from a list of default and custom deployment configurations. A deployment configuration is a set of rules that determines how fast an application is deployed and the success or failure conditions for a deployment.

CodeDeployDefault.AllAtOnce

or

Create deployment configuration

Select your target group

## Load balancer

Select a load balancer to manage incoming traffic during the deployment process. The load balancer blocks traffic from each instance while it's being deployed to and allows traffic to it again after the deployment succeeds.

☒ Enable load balancing

Load balancer type

☒ Application Load Balancer or Network Load Balancer

Choose target groups

myauto1 ✕

☐ Classic Load Balancer

Cli on create deployment group  
Will deploy this using code pipeline

Go to pipeline click on create new pipe line

## Choose pipeline settings [Info](#)

Step 1 of 5

### Pipeline settings

#### Pipeline name

Enter the pipeline name. You cannot edit the pipeline name after it is created.

mypipeline

No more than 100 characters

#### Pipeline type

ⓘ You can no longer create V1 pipelines through the console. We recommend you use the V2 pipeline type with improved release safety, pipeline triggers, parameterized pipelines, and a new billing model.

#### Execution mode

Choose the execution mode for your pipeline. This determines how the pipeline is run.

☐ Superseded

A more recent execution can overtake an older one. This is the default.

☒ Queued (Pipeline type V2 required)

Executions are processed one by one in the order that they are queued.

☐ Parallel (Pipeline type V2 required)

Executions don't wait for other runs to complete before starting or finishing.

Service role

Select your service role

#### 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-us-east-1-mypipeline

Type your service role name



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

Select your bucket to store code file in it

#### ▼ 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

codepipeline0artifact

Q codepipeline0artifact



#### Encryption key

Select github

## Add source stage [Info](#)

Step 2 of 5

### Source

#### Source provider

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

GitHub (Version 1)



Grant AWS CodePipeline access to your GitHub repository. This allows AWS CodePipeline to upload commits from GitHub to your pipeline.

Connect to GitHub



The GitHub (Version 1) action is not recommended

Click on connect

## Source

### Source provider

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

GitHub (Version 1) ▼

Grant AWS CodePipeline access to your GitHub repository. This allows AWS CodePipeline to upload commits from GitHub to your pipeline.

Connected

✔ You have successfully authenticated your account.



## Select your repo and branch

### Repository

🔍 jannat0tech/bluegreen\_deployment



### Branch

🔍 main



### Change detection options

## Select your code deploy

## Deploy

### Deploy provider

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

AWS CodeDeploy ▼

### Region

US East (N. Virginia) ▼

### Input artifacts

Choose an input artifact for this action. [Learn more](#)

SourceArtifact ▼

No more than 100 characters

### 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.

🔍 codd\_deploy



### Deployment group

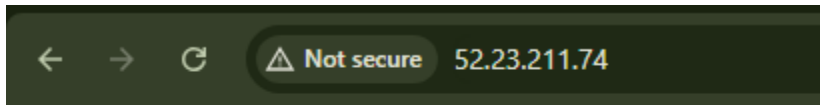
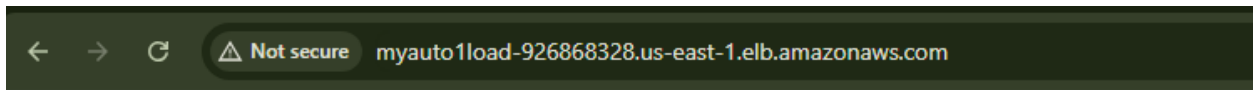
Choose a deployment group that you have already created in the AWS CodeDeploy console. Or create a deployment group in the AWS CodeDeploy console and then return to this task.

🔍 myblue



☐ Configure automatic rollback on stage failure

Click on next then click on next then click on create  
Load balancer is working fine




To see deployment click on

**Action execution details**  
Action name: Deploy   Status: In progress

Summary

Input


Status

 In progress

Last updated

6 minutes ago


Action execution ID

 65c93d00-150a-4eb9-adec-439bf2a08249

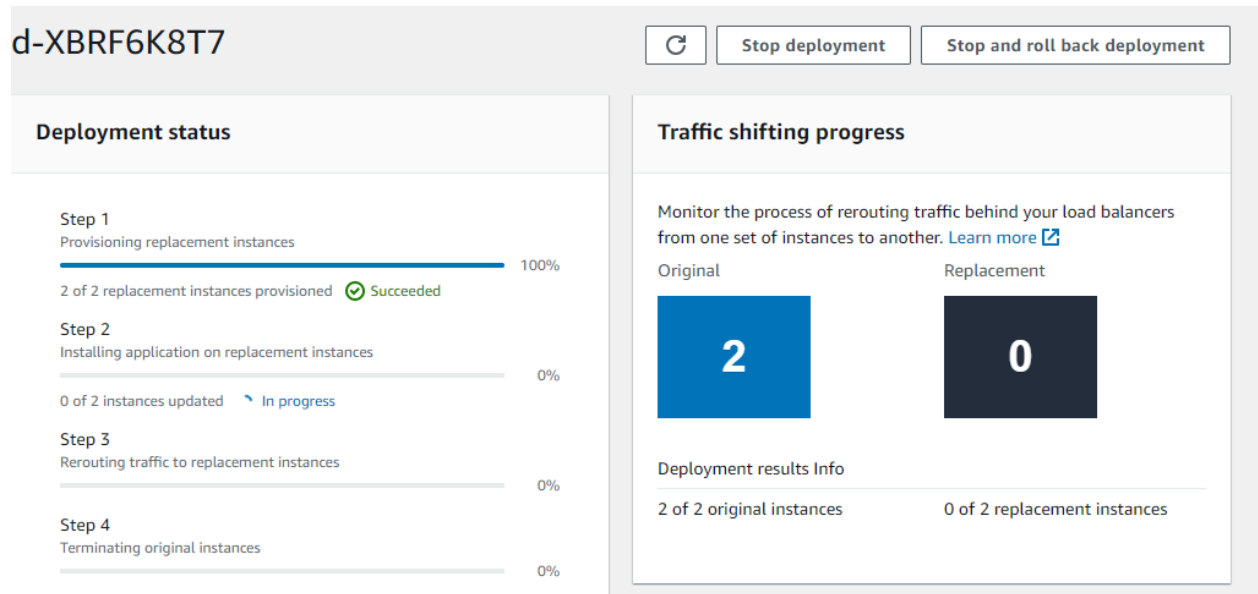
Message

0 out of 4 hosts completed

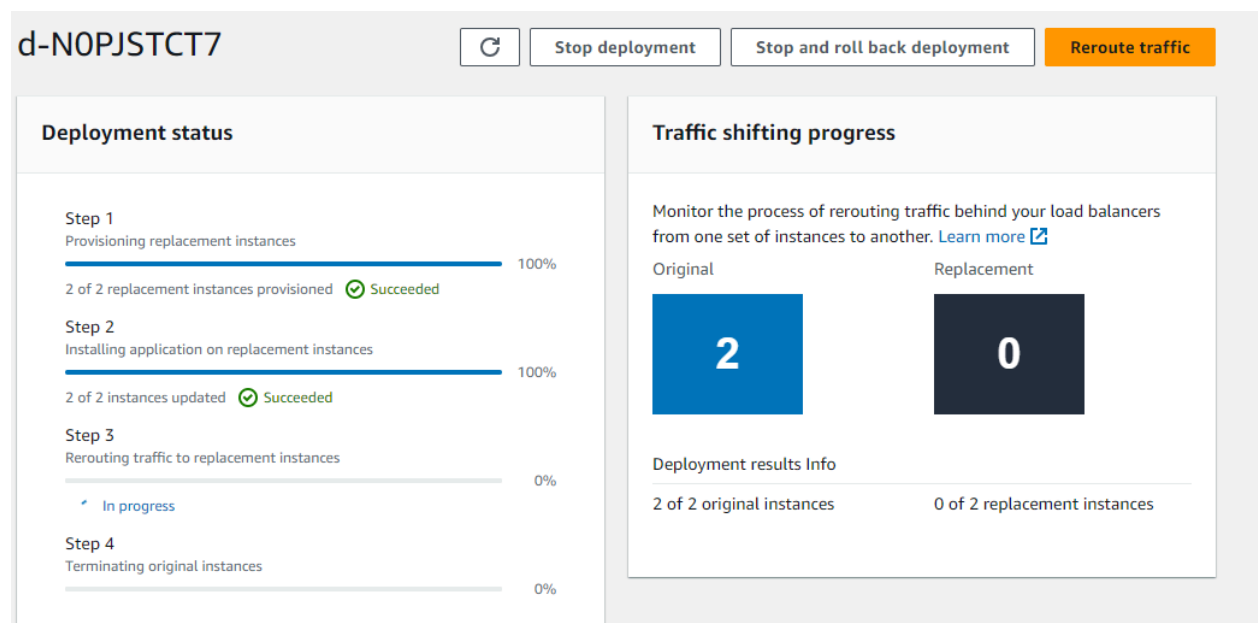
Execution details

[View in CodeDeploy](#) 

Here you can check



After some time you will see your



After that as we can see it success then our new version is deployed


Not secure107.21.154.189

☆

Welcome to the Cat Blog


Explore different cat breeds and their unique traits!

Siamese




The Siamese cat is one of the first distinctly recognized breeds of Asian cat. They are known for their slender, elegant bodies, large ears, and striking blue eyes.

Maine Coon



The Maine Coon is one of the largest domesticated cat breeds. It has a distinctive physical appearance and is known for its friendly and intelligent nature.

Persian



The Persian cat is known for its long fur and round face. They are generally quiet and enjoy a calm and peaceful environment.

Activate Windows

Click on reroute traffic on code deploy

ent


Reroute traffic

It take more times to configure the load balancer

Welcome to the Cat Blog


Explore different cat breeds and their unique traits!

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The Siamese cat is one of the first distinctly recognized breeds of Asian cat. They are known for their slender, elegant bodies, large ears, and striking blue eyes.

Maine Coon



The Maine Coon is one of the largest domesticated cat breeds. It has a distinctive physical appearance and is known for its friendly and intelligent nature.

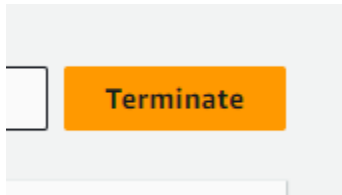
Persian



The Persian cat is known for its long fur and round face. They are generally quiet and enjoy a calm and peaceful environment.



Click on terminate



And even remove the production instance

Developer Tools > CodeDeploy > Deployments > d-11OGLRDT7

### d-11OGLRDT7

[Refresh](#) [Stop deployment](#) [Stop and roll back deployment](#) [Terminate](#)

#### Deployment status

**Step 1**  
Provisioning replacement instances  
2 of 2 replacement instances provisioned ✓ Succeeded 100%

**Step 2**  
Installing application on replacement instances  
2 of 2 instances updated ✓ Succeeded 100%

**Step 3**  
Rerouting traffic to replacement instances  
✓ Succeeded 100%

**Step 4**  
Terminating original instances  
0%

#### Traffic shifting progress

Monitor the process of rerouting traffic behind your load balancers from one set of instances to another. [Learn more](#)

Original	Replacement
0	2

**Deployment results Info**

0 of 2 original instances	2 of 2 replacement instances
---------------------------	------------------------------

All success and you are done

Developer Tools > CodeDeploy > Deployments > d-11OGLRDT7

### d-11OGLRDT7

[Refresh](#) [Copy deployment](#) [Retry deployment](#)

#### Deployment status

**Step 1**  
Provisioning replacement instances  
2 of 2 replacement instances provisioned ✓ Succeeded 100%

**Step 2**  
Installing application on replacement instances  
2 of 2 instances updated ✓ Succeeded 100%

**Step 3**  
Rerouting traffic to replacement instances  
✓ Succeeded 100%

**Step 4**  
Terminating original instances  
2 of 2 original instances terminated ✓ Succeeded 100%

#### Traffic shifting progress

Monitor the process of rerouting traffic behind your load balancers from one set of instances to another. [Learn more](#)

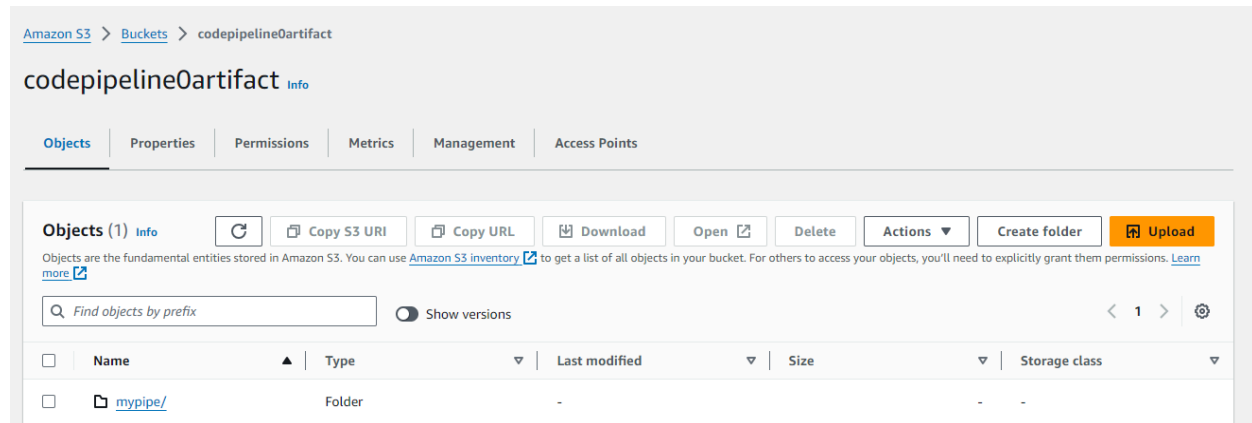
Original	Replacement
0	2

**Deployment results Info**

0 of 2 original instances	2 of 2 replacement instances
---------------------------	------------------------------

Activate Windows

Inside s3 bucket you will see your code file or artifact



Good work !!!

Keep it up !!!

Delete what server you created !!!!

Auto scaling group will be deleted automatically

Error correction

> sudo cat /var/log/user-data.log

Error was because of region

To check if the user data scripts is working or not

```
#!/bin/bash -xe

# Update and install httpd
sudo yum update -y
sudo yum install httpd -y
echo 'Hello' | sudo tee /var/www/html/index.html
sudo systemctl restart httpd

## Code Deploy Agent Bootstrap Script ##

exec >>(tee /var/log/user-data.log | logger -t user-data -s
2>/dev/console) 2>&1
AUTOUPDATE=false

function installdep() {
    if [ "${PLAT}" = "ubuntu" ]; then
        sudo apt-get -y update
```

```
    sudo apt-get -y install jq awscli ruby2.0 || sudo apt-get -y install  
jq awscli ruby
```

```
elif [ "${PLAT}" = "amz" ]; then  
    sudo yum -y update  
    sudo yum install -y jq aws-cli ruby  
fi  
}
```

```
function platformize() {  
    # Linux OS detection #  
    if hash lsb_release 2>/dev/null; then  
        echo "Ubuntu server OS detected"  
        export PLAT="ubuntu"  
    elif hash yum 2>/dev/null; then  
        echo "Amazon Linux detected"  
        export PLAT="amz"  
    else  
        echo "Unsupported release"  
        exit 1  
    fi  
}
```

```
function install_codedeploy_agent() {  
    REGION="us-east-1"  
  
    cd /tmp/  
    wget https://aws-codedeploy-${REGION}.s3.amazonaws.com/latest/install  
    chmod +x ./install  
  
    if sudo ./install auto; then  
        echo "CodeDeploy Agent installation completed"  
        if ! ${AUTOUPDATE}; then  
            echo "Disabling Auto Update"  
            sudo sed -i '/@reboot/d' /etc/cron.d/codedeploy-agent-update  
            sudo chattr +i /etc/cron.d/codedeploy-agent-update  
            rm -f /tmp/install  
        fi  
        sudo service codedeploy-agent start  
    else
```

```

    echo "CodeDeploy Agent installation script failed, please investigate"
    rm -f /tmp/install
    exit 1
fi
}

platformize
installdep
install_codedeploy_agent

```

To check if the codedeploy agent is running or not

```

[ec2-user@ip-172-31-10-149 ~]$ sudo service codedeploy-agent status
The AWS CodeDeploy agent is running as PID 14071
[ec2-user@ip-172-31-10-149 ~]$

```

