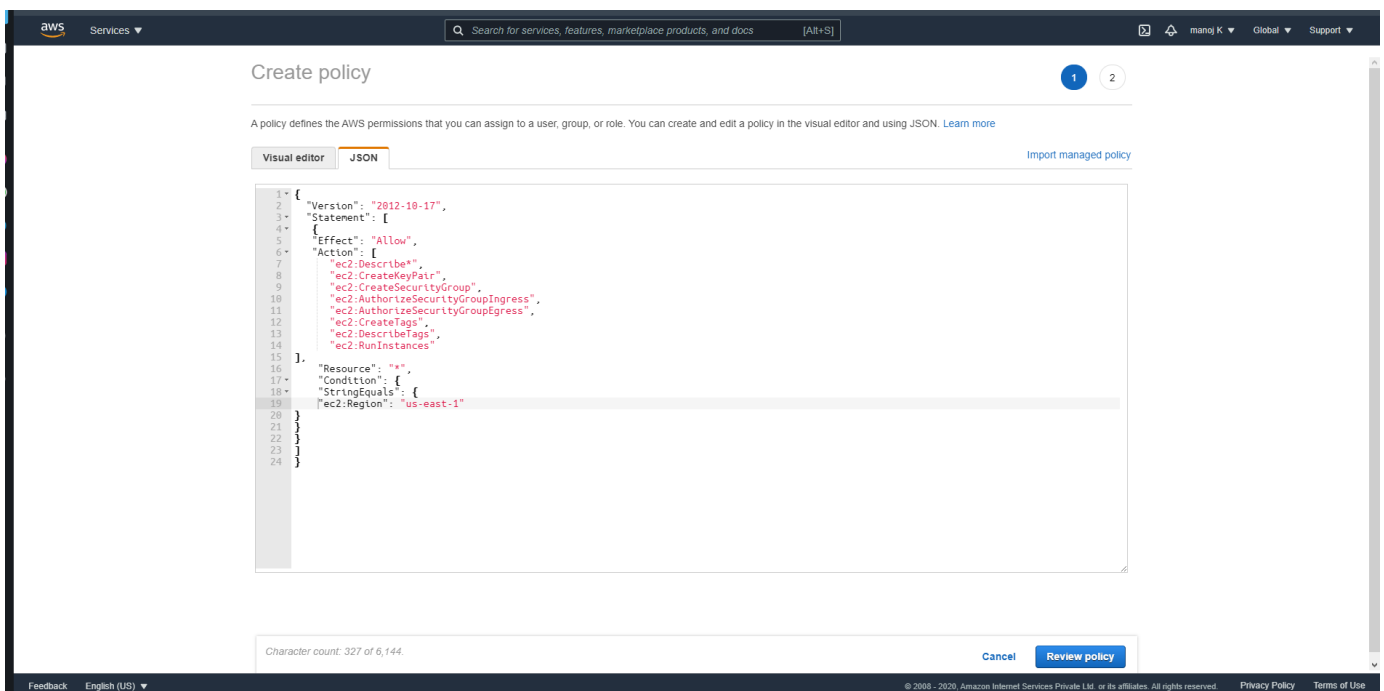


# AWS Project 3

## Provision EC2 instance with Lambda

Manoj K

Create an IAM Policy and an IAM Role.



aws

Services

Search for services, features, marketplace products, and docs

[Alt+S]

manoj K

Global

Support

Identity and Access Management (IAM)

Dashboard

Access management

Groups

Users

Roles

Policies

Identity providers

Account settings

Access reports

Access analyzer

Archive rules

Analizers

Settings

Credential report

Organization activity

Service control policies (SCPs)

Search IAM

AWS account ID: 245024665952

Policies > mypolicy

Summary

Delete policy

Policy ARN: arn:aws:iam::245024665952:policy/mypolicy

Description

Permissions

Policy usage

Policy versions

Access Advisor

Policy summary

{ } JSON

Edit policy

```
1 {
2   "Version": "2012-10-17",
3   "Statement": [
4     {
5       "Effect": "Allow",
6       "Action": [
7         "ec2:Describe*",
8         "ec2:CreateKeyPair",
9         "ec2:CreateSecurityGroup",
10        "ec2:AuthorizeSecurityGroupIngress",
11        "ec2:AuthorizeSecurityGroupEgress",
12        "ec2:CreateTags",
13        "ec2:DescribeTags",
14        "ec2:RunInstances"
15      ],
16      "Resource": "*",
17      "Condition": {
18        "StringEquals": {
19          "ec2:Region": "us-east-1"
20        }
21      }
22    }
23  ]
24 }
```

Feedback

English (US)

© 2008 - 2020, Amazon Internet Services Private Ltd. or its affiliates. All rights reserved.

Privacy Policy

Terms of Use

aws

Services

Search for services, features, marketplace products, and docs

[Alt+S]

manoj K

Global

Support

Identity and Access Management (IAM)

Dashboard

Access management

Groups

Users

Roles

Policies

Identity providers

Account settings

Access reports

Access analyzer

Archive rules

Analizers

Settings

Credential report

Organization activity

Service control policies (SCPs)

Search IAM

AWS account ID: 245024665952

Create policy

Policy actions

Filter policies

Search: mypoll

Showing 1 result

	Policy name	Type	Used as	Description
<input type="radio"/>	mypolicy	Customer managed	None	

Feedback

English (US)

© 2008 - 2020, Amazon Internet Services Private Ltd. or its affiliates. All rights reserved.

Privacy Policy

Terms of Use

aws

Services

Search for services, features, marketplace products, and docs

[AR+SI]

manoj K

Global

Support

Create role


1


2


3


4

Select type of trusted entity

AWS service  
EC2, Lambda and others

Another AWS account  
Belonging to you or 3rd party

Web identity  
Cognito or any OpenID provider

SAML 2.0 federation  
Your corporate directory

Allows AWS services to perform actions on your behalf. [Learn more](#)

Choose a use case

Common use cases

EC2

Allows EC2 instances to call AWS services on your behalf.

Lambda

Allows Lambda functions to call AWS services on your behalf.

Or select a service to view its use cases

API Gateway	CloudWatch Events	EKS	IoT Things Graph	Redshift
AWS Backup	CodeBuild	EMR	KMS	Rekognition
AWS Chatbot	CodeDeploy	ElasticCache	Kinesis	RoboMaker
AWS Marketplace	CodeGuru	Elastic Beanstalk	Lake Formation	S3
AWS Support	CodeStar Notifications	Elastic Container Registry	Lambda	SMS
Amplify	Comprehend	Elastic Container Service	Lex	SNS
AppStream 2.0	Config	Elastic Transcoder	License Manager	SWF
AppSync	Connect	ElasticLoadBalancing	MQ	SageMaker
Application Auto Scaling	DMS	Forecast	Machine Learning	Security Hub
Application Discovery Service	Data Lifecycle Manager	GameLift	Macie	Service Catalog
	Data Pipeline	Global Accelerator	Managed Blockchain	Step Functions

\* Required

Cancel

Next: Permissions

aws

Services

Search for services, features, marketplace products, and docs

[AR+SI]

manoj K

Global

Support

Create role

1

2

3

4

Attach permissions policies

Choose one or more policies to attach to your new role.

Create policy

Filter policies

my

Showing 1 result

Policy name	Used as
<input checked="" type="checkbox"/> mypolicy	None

Set permissions boundary

\* Required

Cancel

Previous

Next: Tags

aws

Services

Search for services, features, marketplace products, and docs

[Alt+S]

manoj K

Global

Support

Create role

1

2

3

4

Review

Provide the required information below and review this role before you create it.

Role name\*

myrole

Use alphanumeric and \*+.,@\_- characters. Maximum 64 characters.

Role description

Allows Lambda functions to call AWS services on your behalf.

Maximum 1000 characters. Use alphanumeric and \*+.,@\_- characters.

Trusted entities

AWS service: lambda.amazonaws.com

Policies

mypolicy

Permissions boundary

Permissions boundary is not set

The new role will receive the following tag

Key	Value
Name	myrole

\* Required

Cancel

Previous

Create role

Feedback

English (US)

© 2008 - 2020 Amazon Internet Services Private Ltd. or its affiliates. All rights reserved.

Privacy Policy

Terms of Use

aws

Services

Search for services, features, marketplace products, and docs

[Alt+S]

manoj K

Global

Support

Identity and Access Management (IAM)

Create role

Delete role

Q myl

Showing 1 result

Role name	Trusted entities	Last activity
<input type="checkbox"/> myrole	AWS service: lambda	None

Q Search IAM

AWS account ID:

245024665952

Feedback

English (US)

© 2008 - 2020 Amazon Internet Services Private Ltd. or its affiliates. All rights reserved.

Privacy Policy

Terms of Use

# Creation of a Lambda Function

aws

Services

Search for services, features, marketplace products, and docs

[Alt+5]

manoj K

N. Virginia

Support

Choose one of the following options to create your function.

Author from scratch

Start with a simple Hello World example.

Use a blueprint

Build a Lambda application from sample code and configuration presets for common use cases.

Container image

Select a container image to deploy for your function.

Browse serverless app repository

Deploy a sample Lambda application from the AWS Serverless Application Repository.

Basic information

Function name

Enter a name that describes the purpose of your function.

myfunction

Use only letters, numbers, hyphens, or underscores with no spaces.

Runtime

Info

Choose the language to use to write your function.

Python 3.8

Permissions

Info

By default, Lambda will create an execution role with permissions to upload logs to Amazon CloudWatch Logs. You can customize this default role later when adding triggers.

▼ Change default execution role

Execution role

Choose a role that defines the permissions of your function. To create a custom role, go to the [IAM console](#).

Create a new role with basic Lambda permissions

☒ Use an existing role

Create a new role from AWS policy templates

Existing role

Choose an existing role that you've created to be used with this Lambda function. The role must have permission to upload logs to Amazon CloudWatch Logs.

myrole

[View the myrole role](#) on the IAM console.

Feedback

English (US)

© 2008 - 2020, Amazon Internet Services Private Ltd. or its affiliates. All rights reserved.

Privacy Policy

Terms of Use

aws

Services

Search for services, features, marketplace products, and docs

[Alt+5]

manoj K

N. Virginia

Support

Your changes have been saved.

myfunction

function code

Info

Throttle

Qualifiers

Actions

ec2

Test

Actions

Deploy

File

Edit

Find

View

Go

Tools

Window

Test

Deploy

Environment

myfunction - /

lambda\_function.py

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

import json

import boto3

import time

from botocore.exceptions import ClientError

def lambda\_handler(event, context):

# Provision and launch the EC2 instance

ec2\_client = boto3.client('ec2')

try:

response = ec2\_client.run\_instances(ImageId='ami-0b69e66f77391e80',

InstanceType='t2.micro',

MinCount=1,

MaxCount=1,

dry\_run=False)

print(response['Instances'][0], "EC2 Instance created")

return {

'statusCode': 200,

'body': json.dumps("success")

}

except ClientError as e:

print("Detailed error: ", e)

1:1

Python

Spaces: 4

⚙

Execution Result

ⓧ

ⓘ

Status: Succeeded

Max Memory Used: 83 MB

Time: 3294.32 ms

▼ Execution results

Response:

{

"statusCode": 200,

"body": "\"success\""

}

Request ID:

"19f68f40-e891-457d-a2fa-bf9dc96f9fb"

Function Logs:

START RequestID: 19f68f40-e891-457d-a2fa-bf9dc96f9fb Version: SLATEST

["unlaunchIndex": 0, "ImageId": "ami-0b69e66f77391e80", "Instances": [{"InstanceType": "t2.micro", "LaunchTime": "2020-12-29T14:46:55.000Z", "Monitoring": {"State": "dis"

END RequestID: 19f68f40-e891-457d-a2fa-bf9dc96f9fb

REPORT RequestID: 19f68f40-e891-457d-a2fa-bf9dc96f9fb Duration: 3294.32 ms Billed Duration: 3295 ms Memory Size: 128 MB Max Memory used: 83 MB Init Duration: 344.37 ms

Runtime settings

Info

Edit

Runtime

Handler

Info

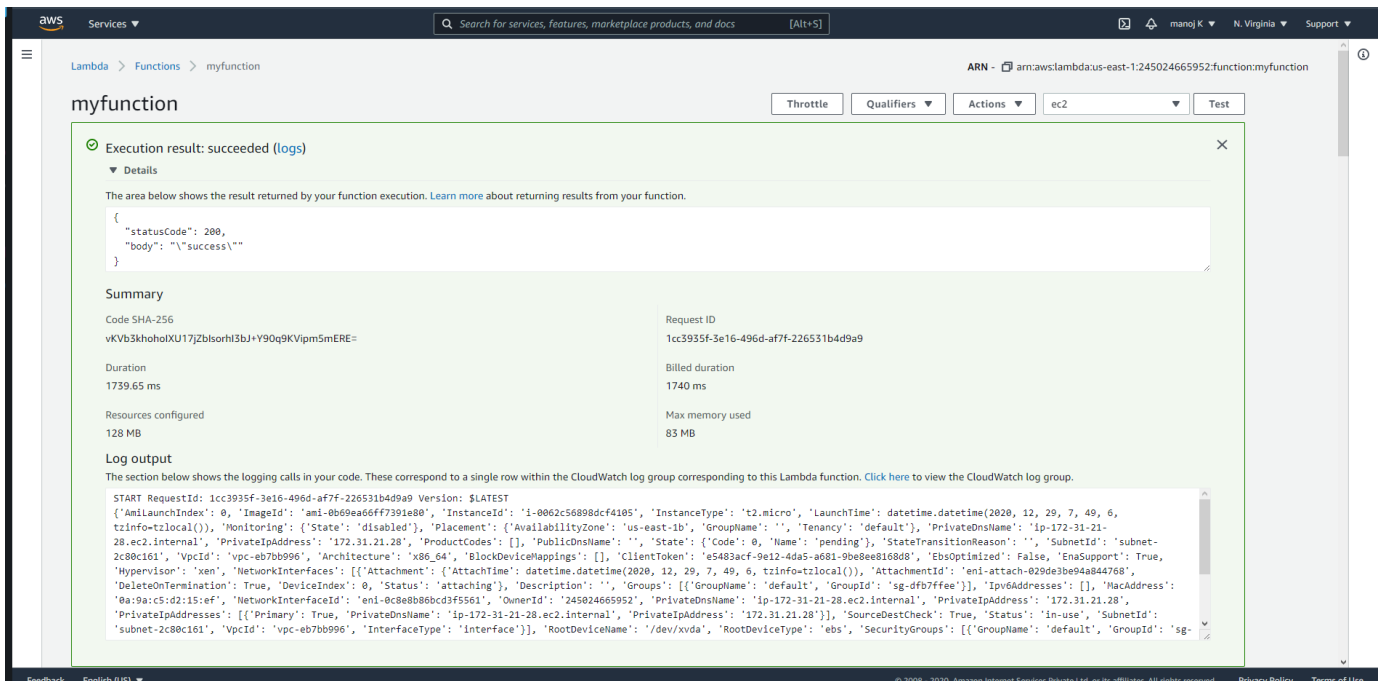
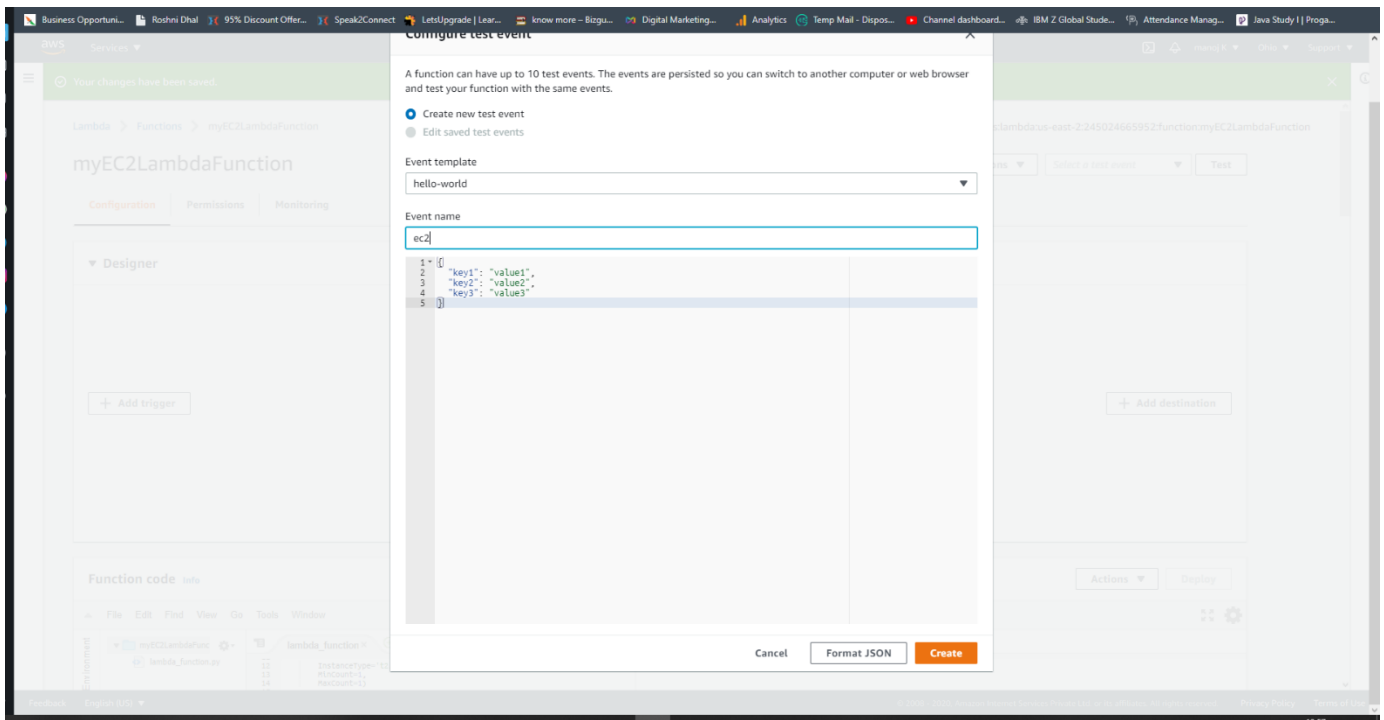
Feedback

English (US)

© 2008 - 2020, Amazon Internet Services Private Ltd. or its affiliates. All rights reserved.

Privacy Policy

Terms of Use



A screenshot of the AWS Management Console showing the details of an Amazon EC2 instance. The instance is named "i-07fa74c98539a0e86" and is in the "Running" state. It is a t2.micro instance type, located in the us-east-1b Availability Zone. The instance has a public IPv4 address of 54.85.172.181 and a public IPv4 DNS of ec2-54-85-172-181.compute-1.amazonaws.com. The instance is associated with the vpc-eb7bb996 VPC and the subnet-2c80c161 subnet. The instance summary shows the Instance ID, Instance state (Running), Instance type (t2.micro), and AWS Compute Optimizer finding (Opt-in to AWS Compute Optimizer for recommendations).

**Instances (1/1) Info**

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS	Public IPv4 ...	Elastic IP
-	i-07fa74c98539a0e86	Running	t2.micro	-	No alarms	us-east-1b	ec2-54-85-172-181.co...	54.85.172.181	-

**Instance: i-07fa74c98539a0e86**

**Details** | Security | Networking | Storage | Status Checks | Monitoring | Tags

**Instance summary Info**

Instance ID	Public IPv4 address	Private IPv4 addresses
i-07fa74c98539a0e86	54.85.172.181   <a href="#">open address</a>	172.31.25.63
Instance state	Public IPv4 DNS	Private IPv4 DNS
Running	ec2-54-85-172-181.compute-1.amazonaws.com   <a href="#">open address</a>	ip-172-31-25-63.ec2.internal
Instance type	Elastic IP addresses	VPC ID
t2.micro	-	vpc-eb7bb996
AWS Compute Optimizer finding	IAM Role	Subnet ID
Opt-in to AWS Compute Optimizer for recommendations.   <a href="#">Learn more</a>	-	subnet-2c80c161

Details of instance that is created while testing  
Lambda function