PRESENTATION

SERVERLESS IMAGE PROCESSING BY USING LAMBDA FUNCTION IN S3 BUCKETS

ACKNOWLEDGEMENT

- With the kind guidance of my teacher , Mr ABHINAV DWIVEDI . I would to express my special thanks to my teacher who gave me this golden opportunity to do this wonderful project on serverless processing application .secondly I would also like to thanks to those who helped me in completing my project.

LIST OF REQUIRED AWS RESOURCES:--

- Create source s3 bucket.
- Create destination s3 bucket.
- Create a bucket to deploy lambda function.
- Policy.
- Role for AWS lambda.

ABOUT AWS S3

AWS (Amazon Web Services) is a comprehensive, evolving cloud computing platform provided by Amazon. It includes a mixture of infrastructure-as-a-service (IaaS), platform-as-a-service (PaaS) and packaged software-as-a-service (SaaS) offerings. AWS offers tools such as compute power, database storage and content delivery services

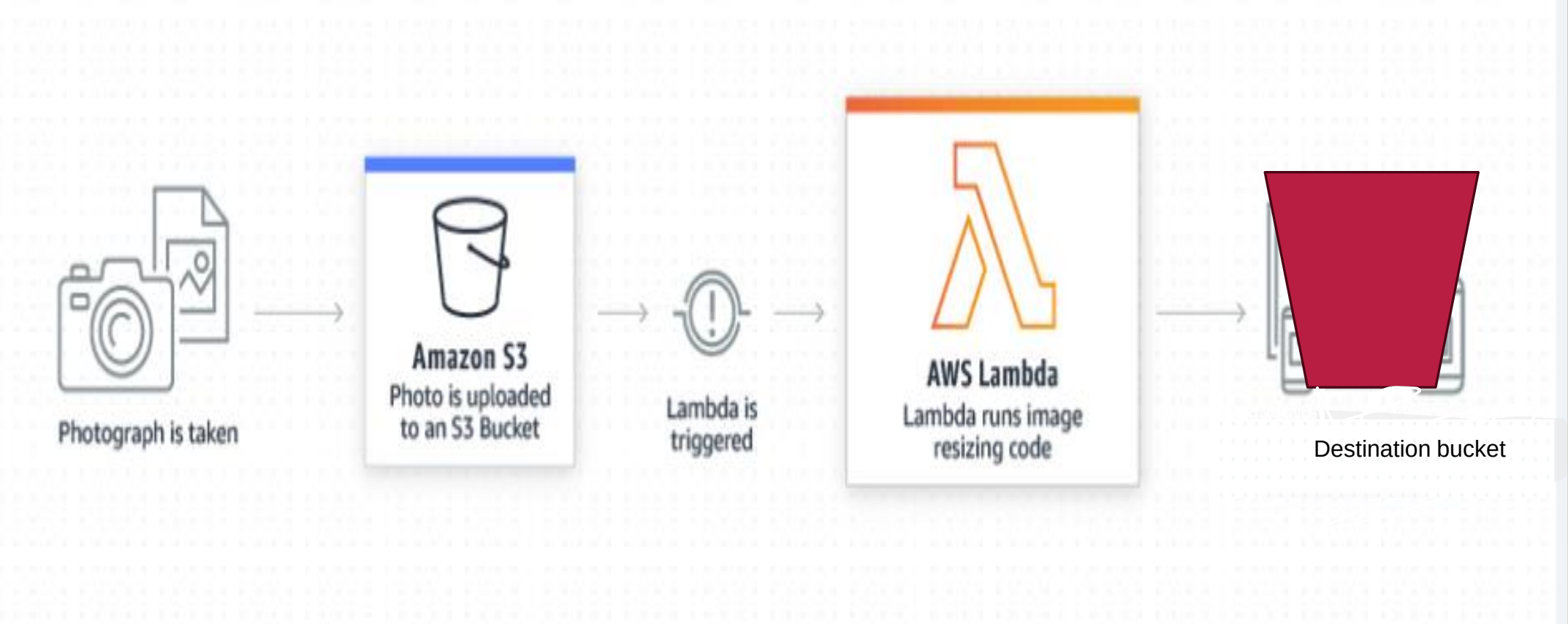
AWS LAMBDA

AWS Lambda is a compute service that runs your code in response to events and automatically manages the compute resources, making it the fastest way to turn an idea into a modern, production, serverless applications.

When building serverless application ,AWS lambda is on of the main candidate for running the application code .To complete a serverless stack we need:-

*a computing service
*a database service
*an HTTP gateway service

Architecture Diagram



***For serverless image processing application that automatically resizes image we have to follow steps given below*:-**

Step 1:sign in to AWS management console

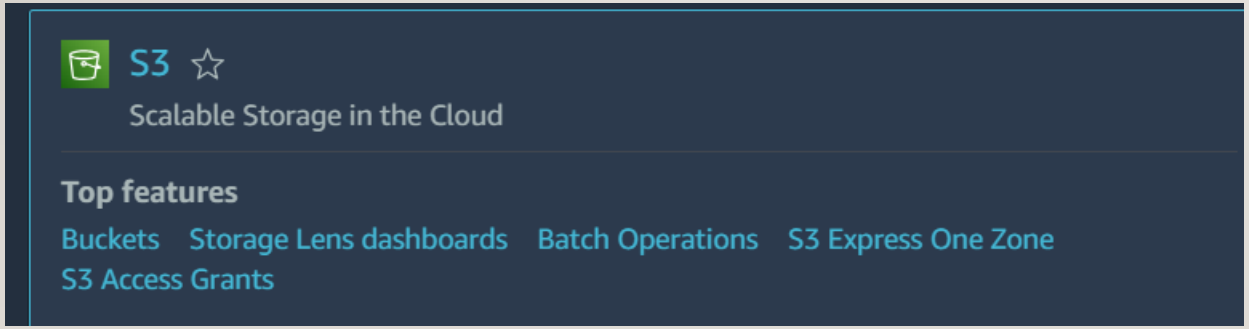
*click on open console button

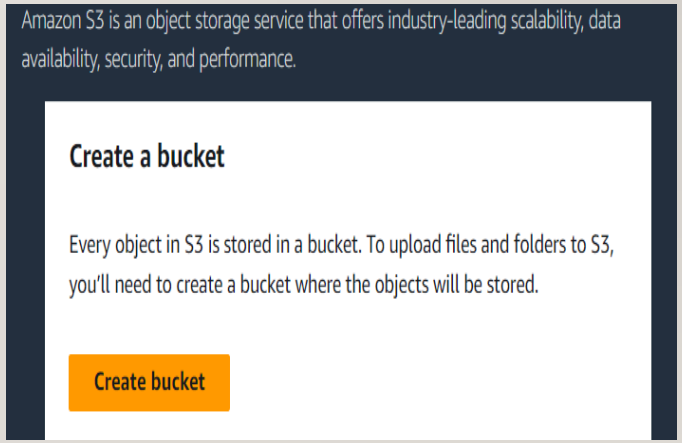
*once signed in to aws management console , set region as Mumbai.

Step 2:after getting console page in the services menu search s3

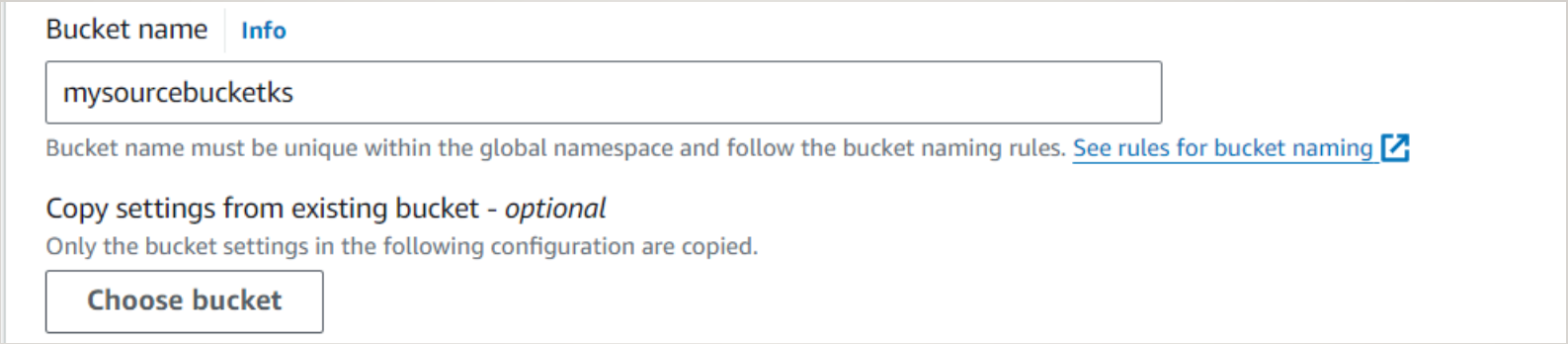
*here we have to create two buckets source and destination.

*Click on create bucket

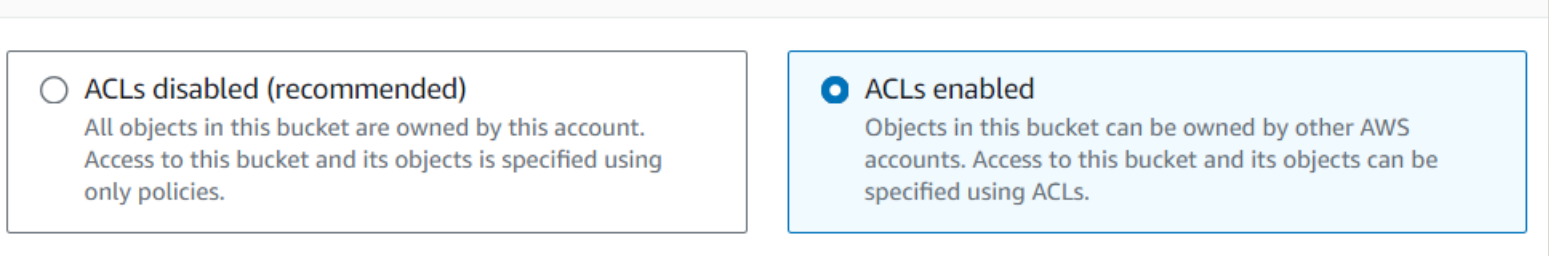




*firstly we create source bucket, enter name of source bucket



Step 3:-Put ACLs enabled



*BLOCK ALL PUBLIC ACCESS

*Leave other settings as default.

*Then click on create bucket.YOUR SOURCE BUCKET IS CREATED.

Step 4: Create one more bucket named as destination bucket same as source bucket.
*THEN YOUR TWO BUCKETS ARE CREATED.

	Name	AWS Region	IAM Access Analyzer
○	mydestinationbucketks	Asia Pacific (Mumbai) ap-south-1	View analyzer for ap-south-1
○	mysourcebucketks	Asia Pacific (Mumbai) ap-south-1	View analyzer for ap-south-1

Step 5: Now we upload one image on mysourcebucket.
*open your source bucket.
*click on upload.
*then add file.

Files and folders (1 Total, 937.1 KB)

Remove | Add files | Add folder

All files and folders in this table will be uploaded.

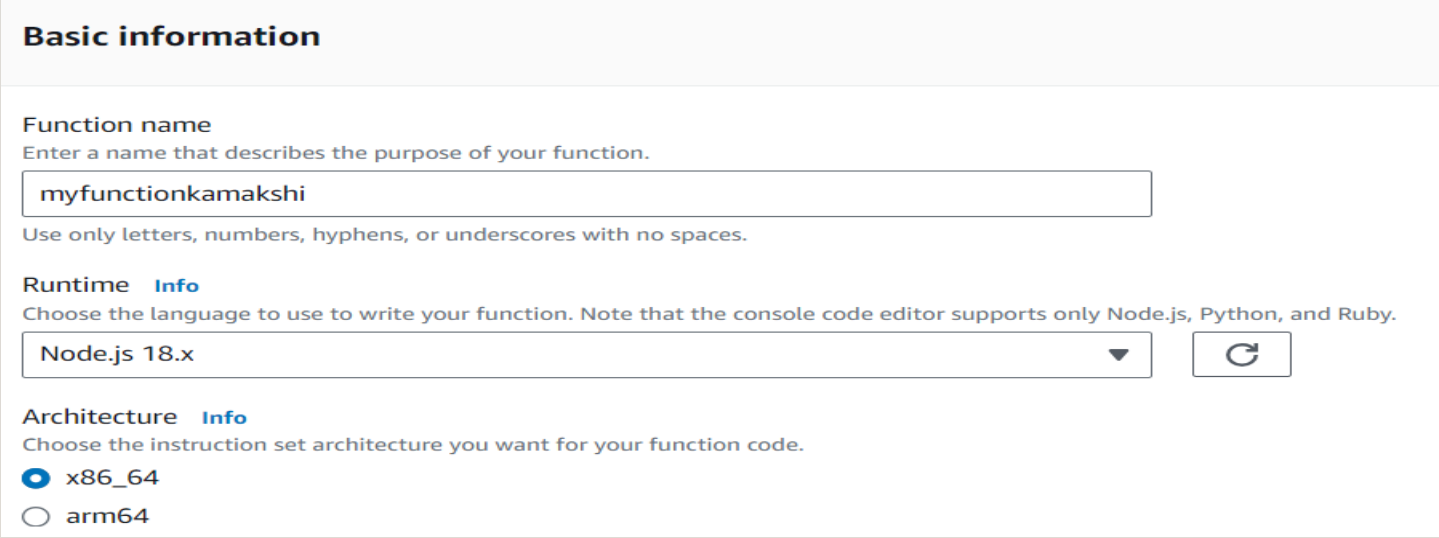
Find by name

1

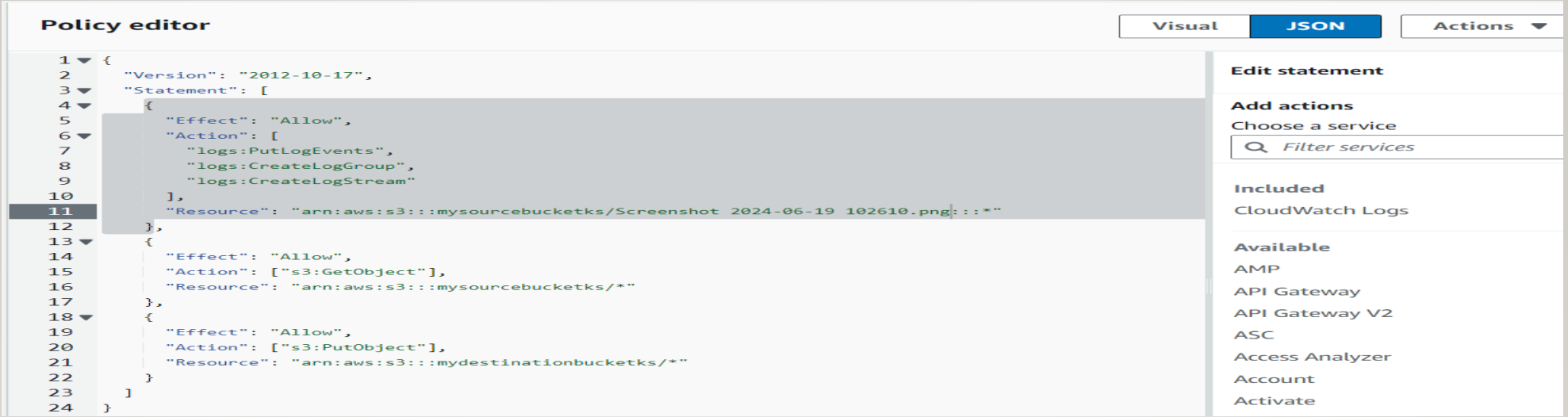
	Name	Folder	Type
☐	Screenshot 2024-06-19 102610.png	-	image/png

Step 6: after uploading image , move back to console page and search for LAMBDA function.
*Then click on create a function.

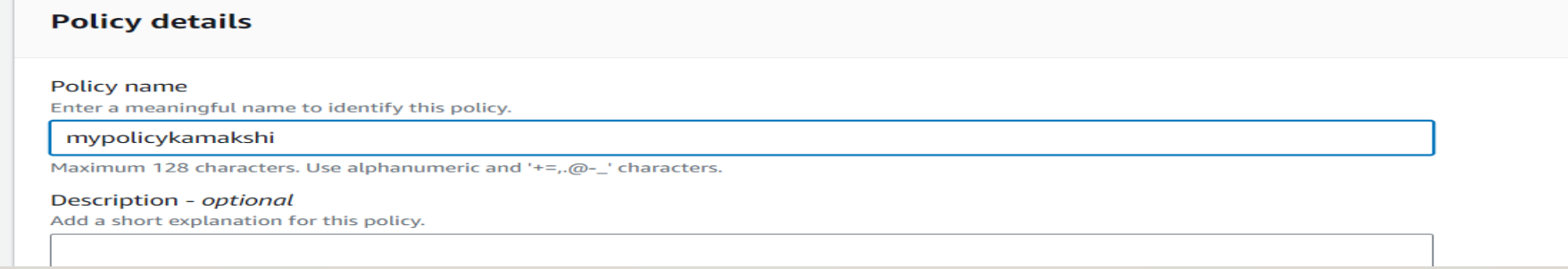
Step 7: Give function name and select runtime as (Node.js 18.x).



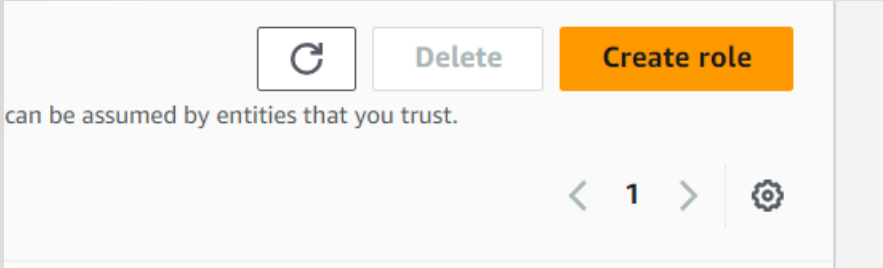
Step 8:Search IAM from the services , then click on polices given on left side , select JSON from visual and edit code , change your own ARN of source and destination bucket.

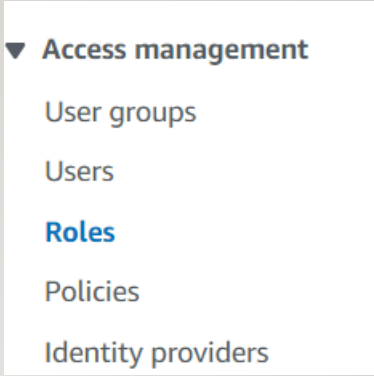


*click on create policy.

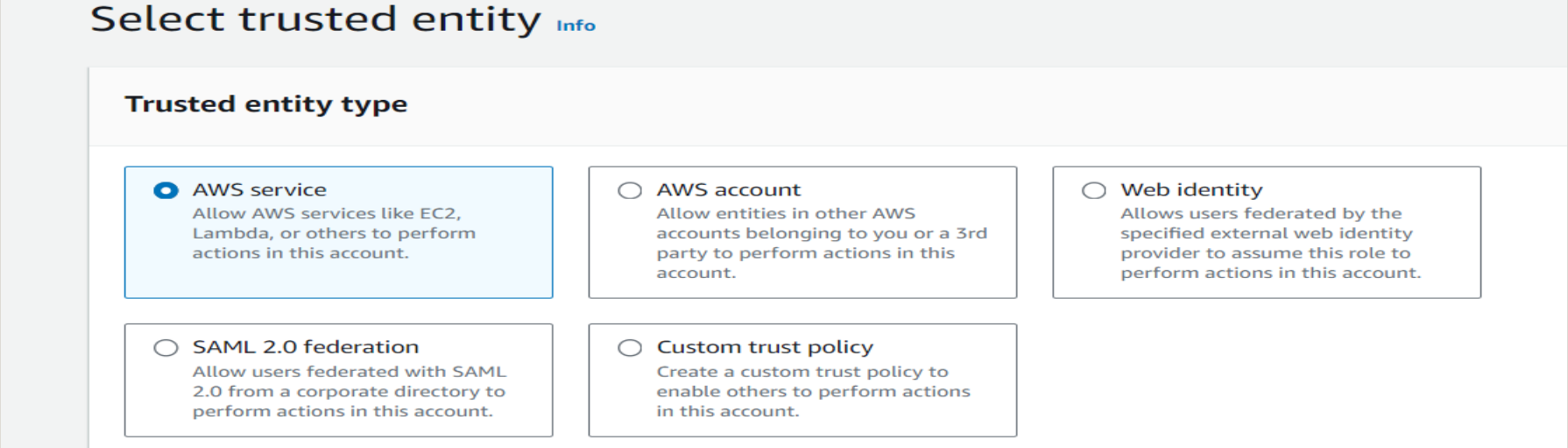


Step 9: After creating policy . Go to role on left of the page
* Click on create role

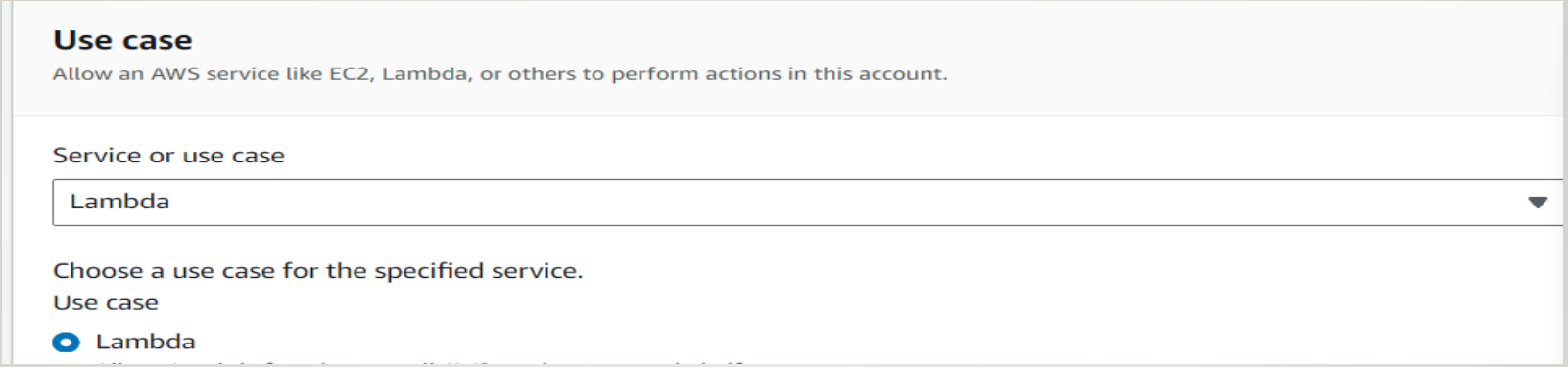




*Now choose an AWS services as trusted entity type.

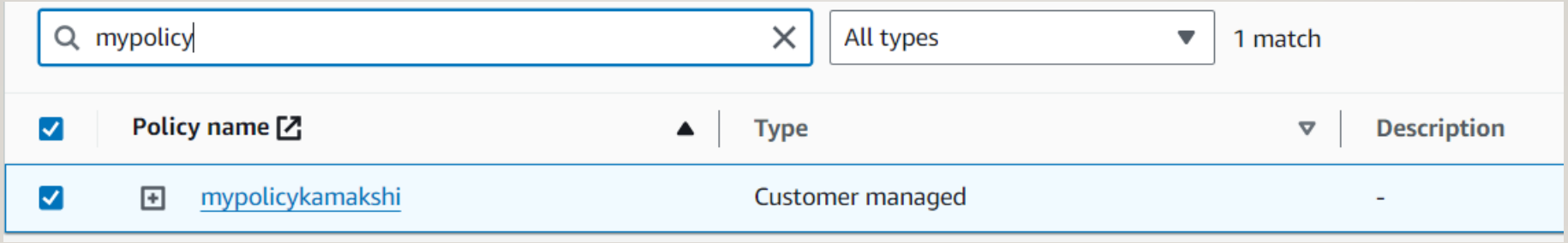


*Select Lambda in use case

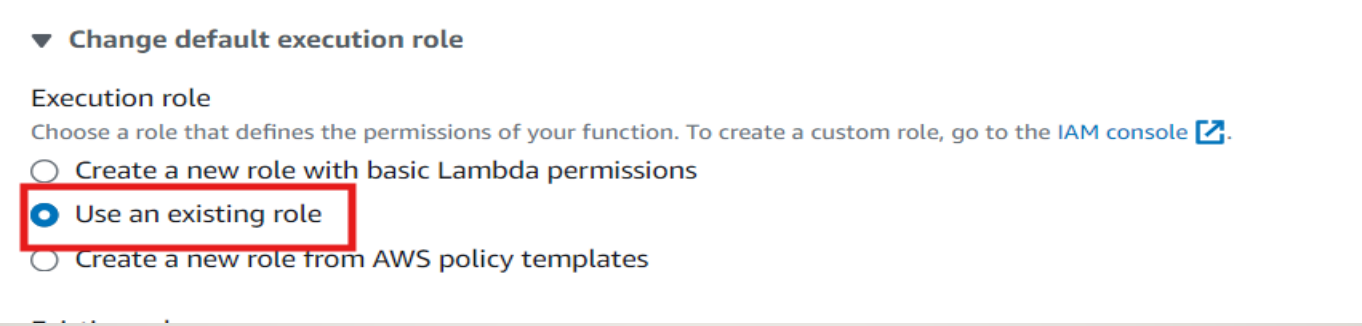


Click on next.

Filter policies , now you can see a list of policies . Here you have to select your policy .

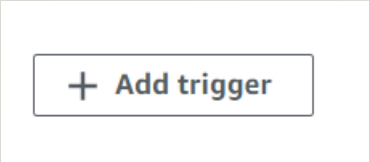


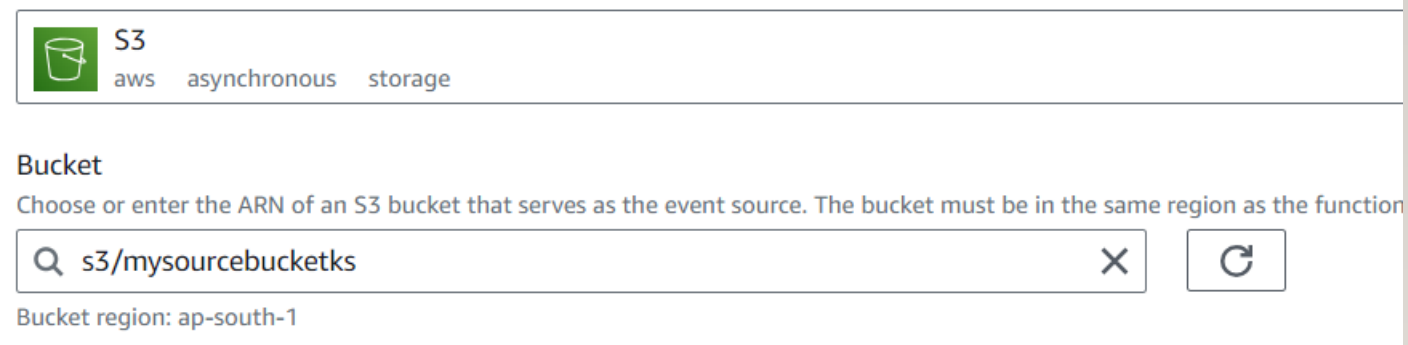
Step 10: Now go back to Lambda and choose the column of use an existing role and select your role which is we created earlier.

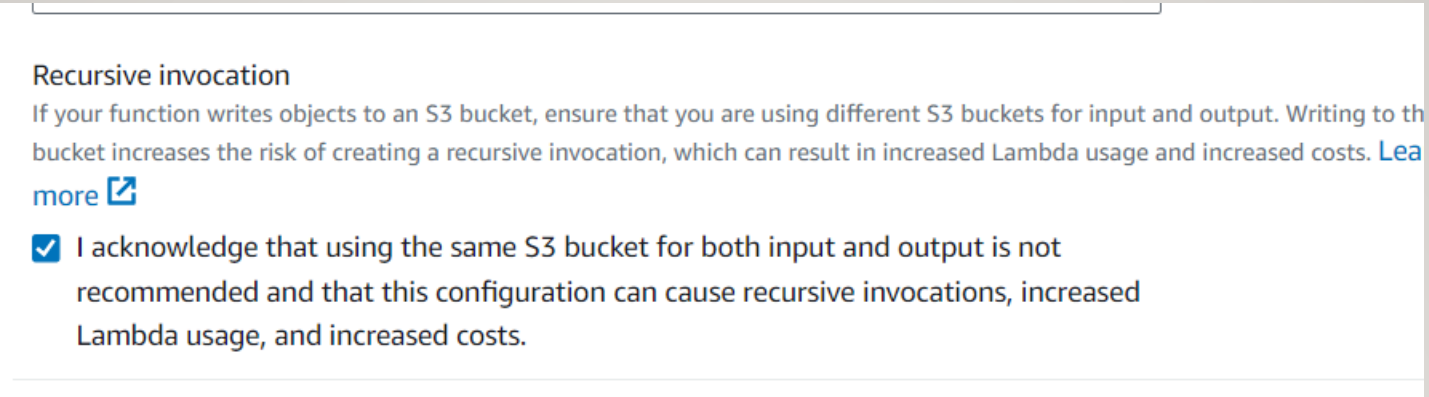


*Click on create Lambda function.

*Then click on add trigger.
Choose S3 function here..

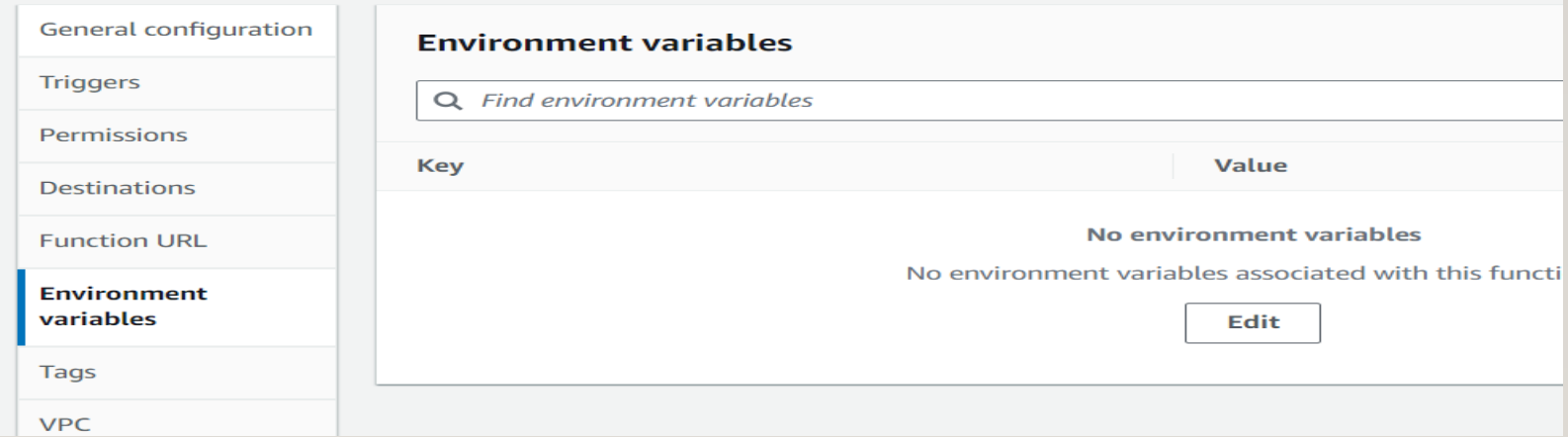




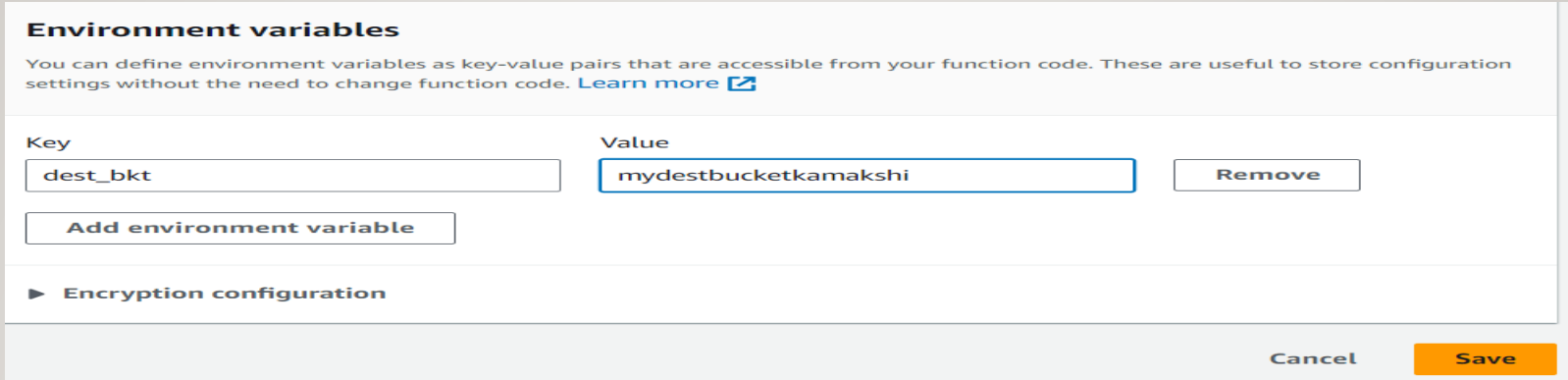


*Click on next.

Step 11:Then move to Environment Variables on left side , then click on edit.

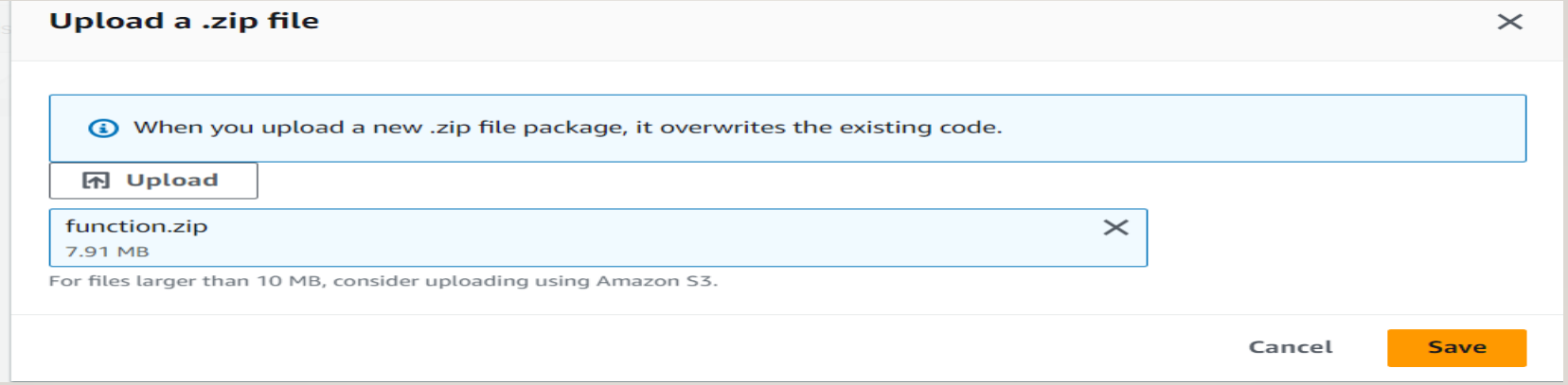


*Give name dest_bkt in key , and mydestbucketkamakshi in value column.



Click on save.

Step 12: Then go to the code interface and upload zip file.



*After uploading zip file go to the test interface and select S3 Put in template column.

*After this we get a code , and in this we have to change the source bucket name and the image name .
*Test the code.

After testing the code , the compressed image is shown in destination bucket.

Thank You

Presented by
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