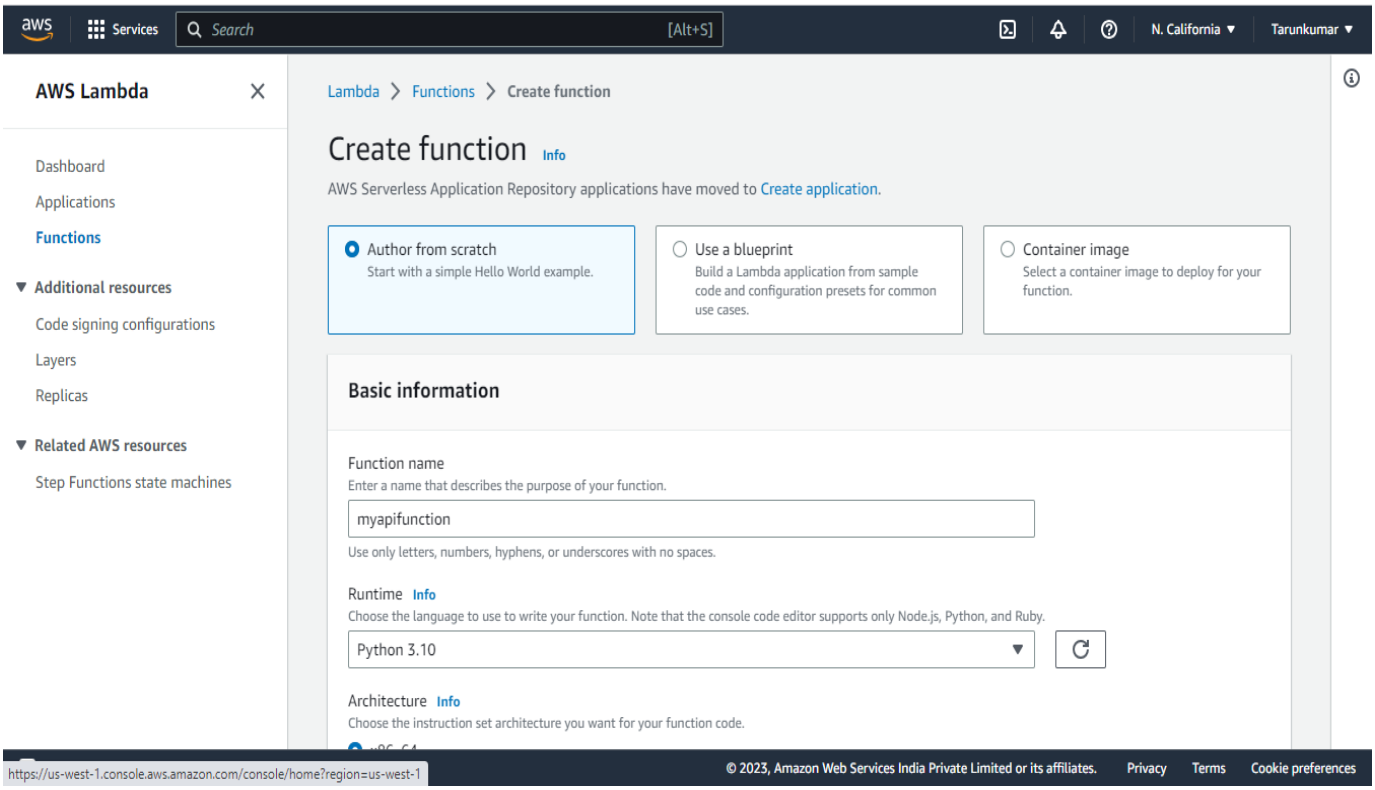
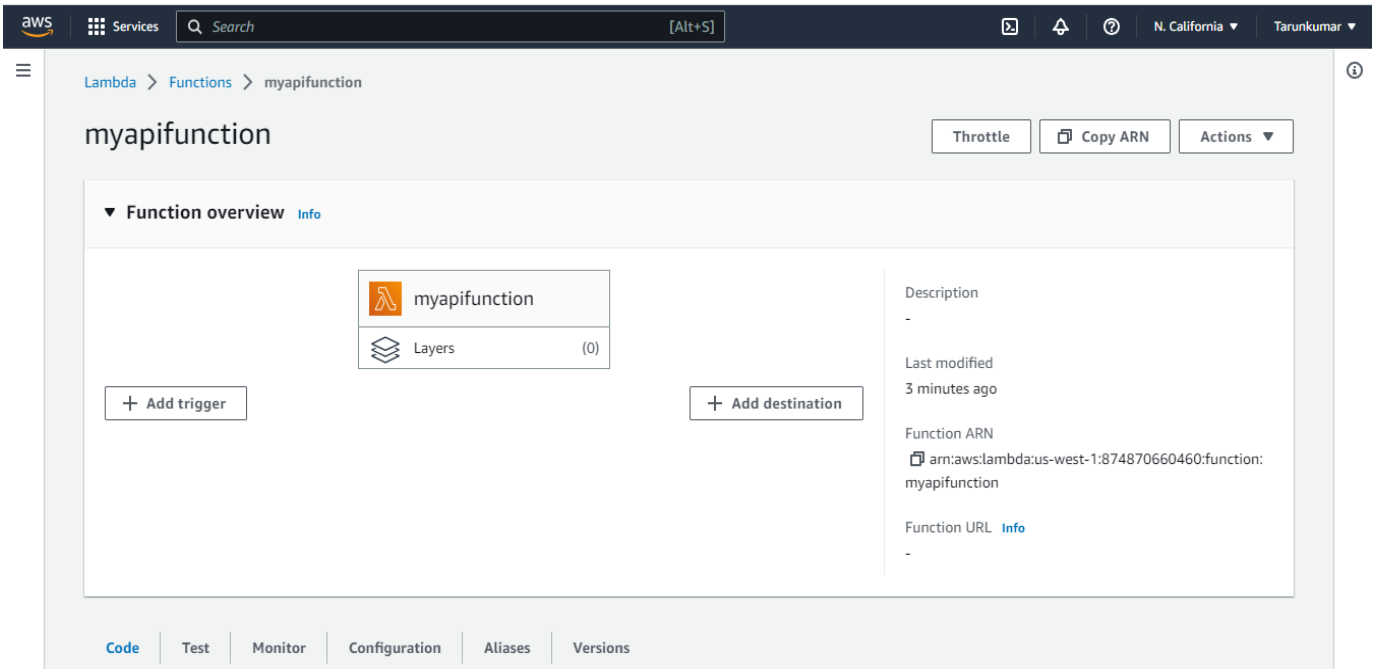
What is Api gateway and use GET method invocation with Lambda

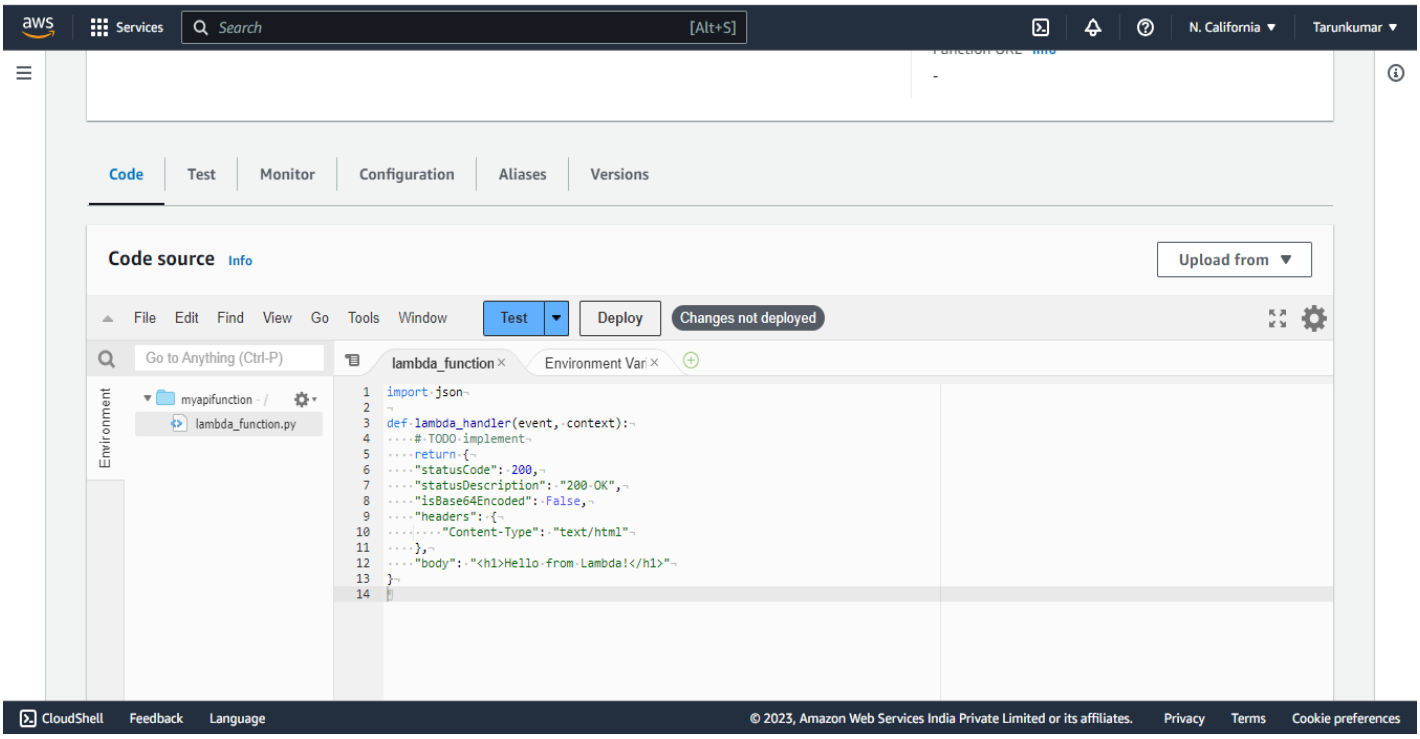
An application programming interface (API) gateway is software that takes an application user's request, routes it to one or more backend services. Amazon API Gateway is an AWS service for creating, publishing, maintaining, monitoring, and securing REST, HTTP, and WebSocket APIs at any scale.

Demonstration of GET method invocation with lambda

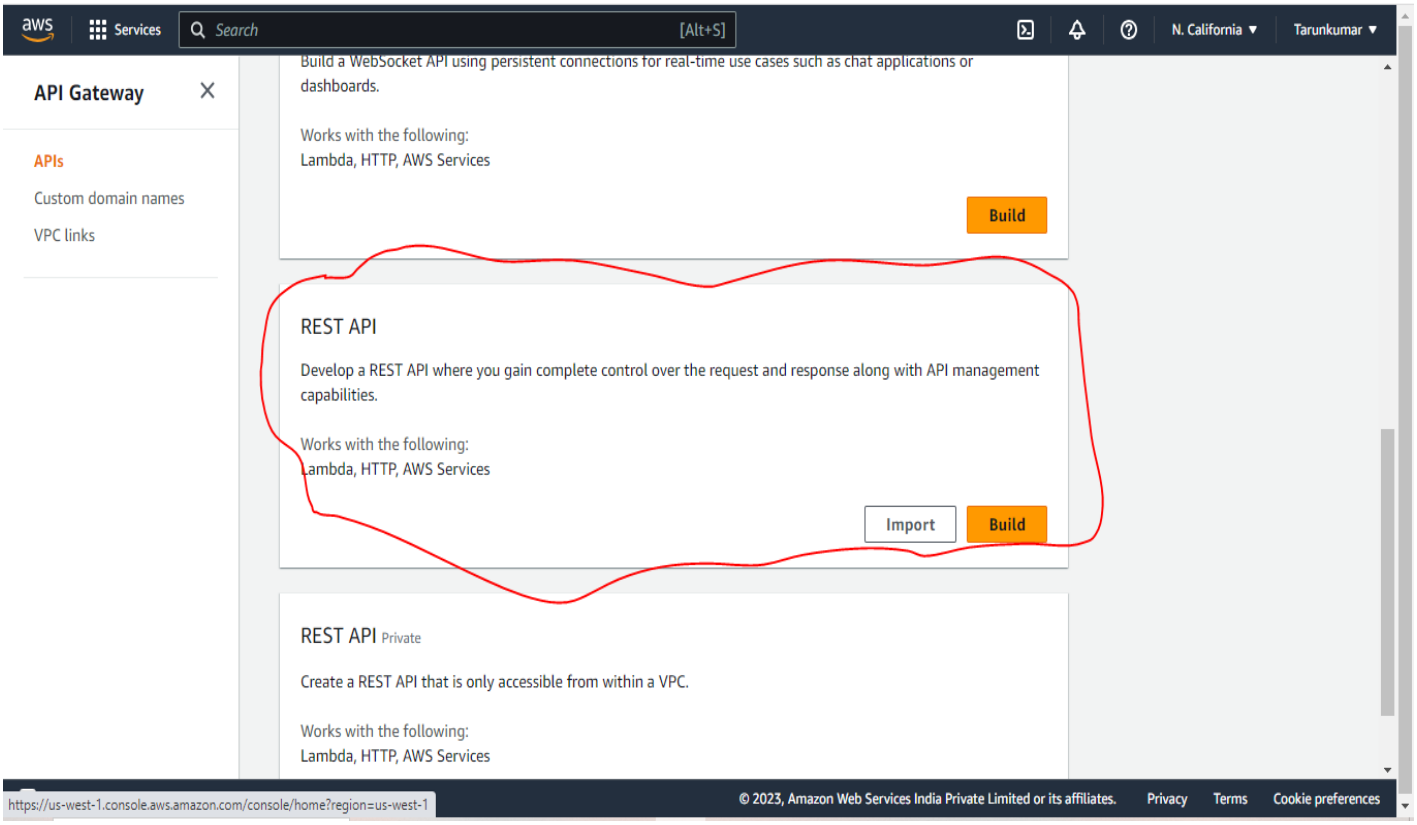
Create a lambda function



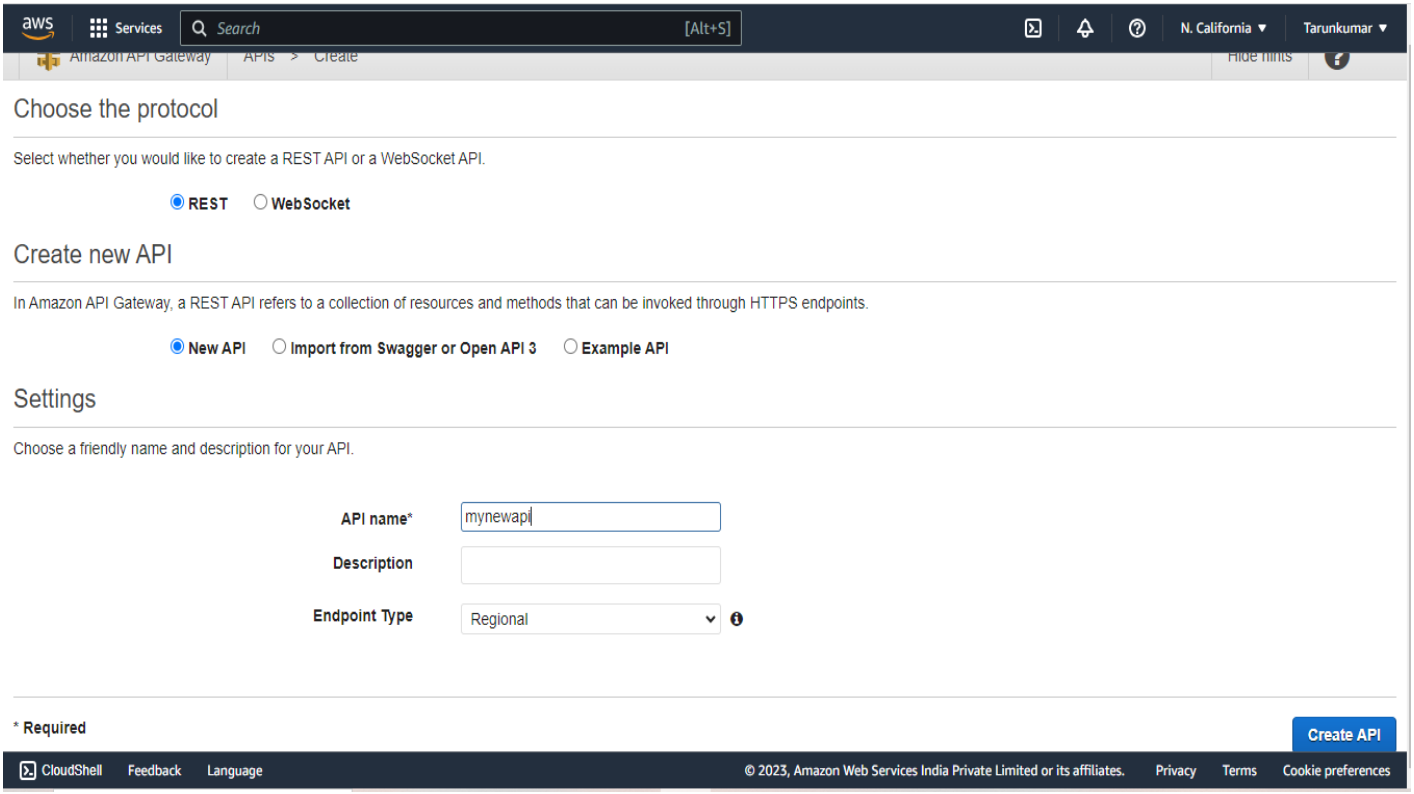




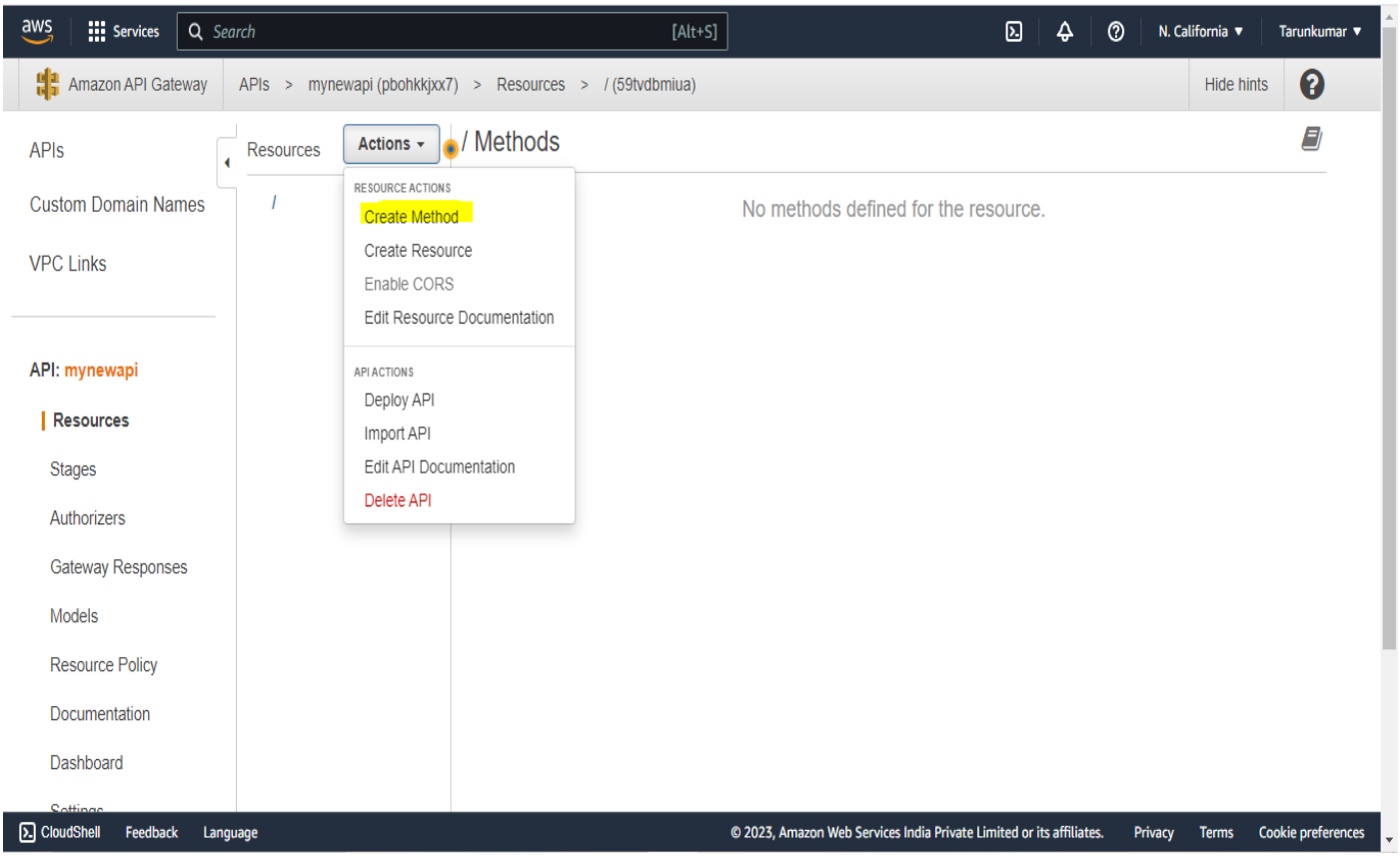
Go to API Gateway, build REST API



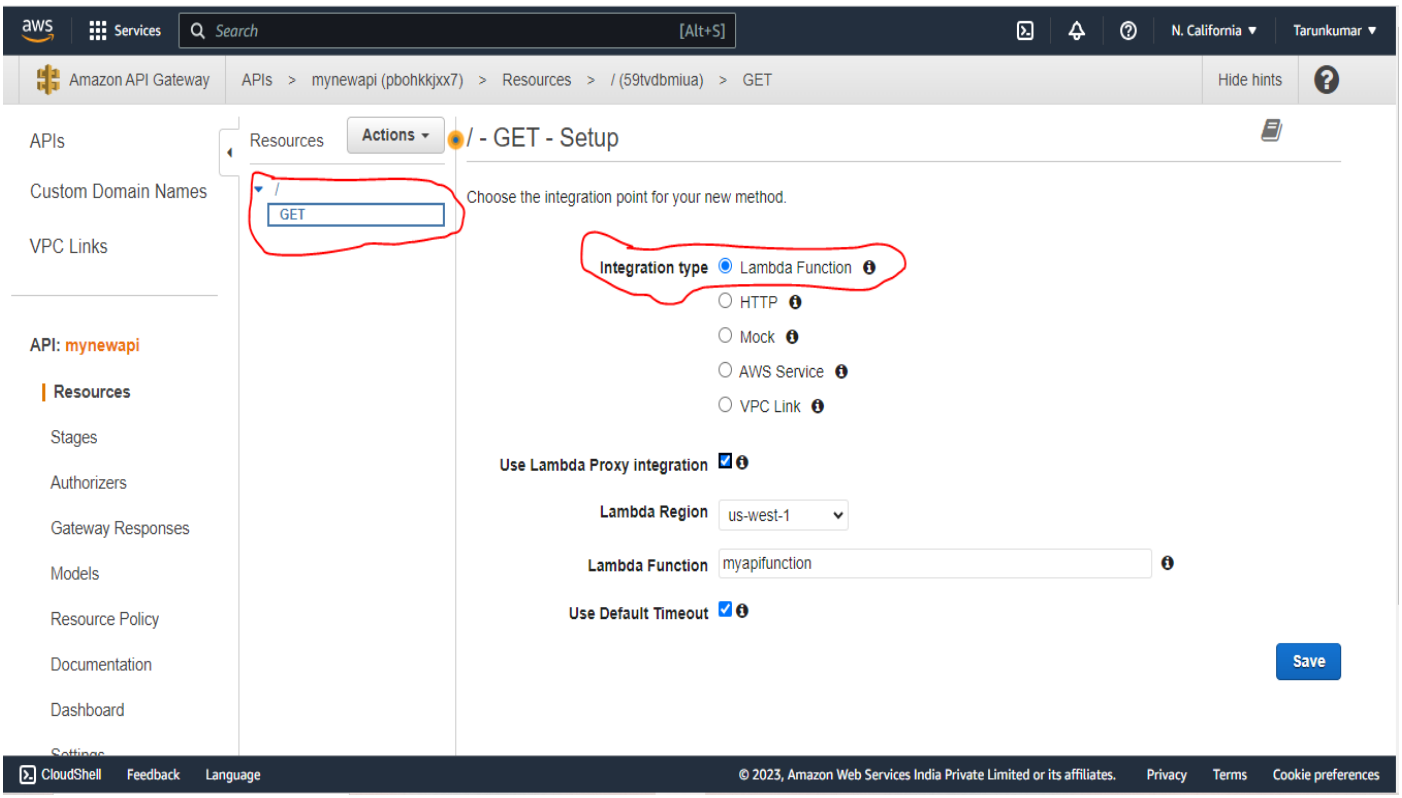
Choose a protocol and create a new API



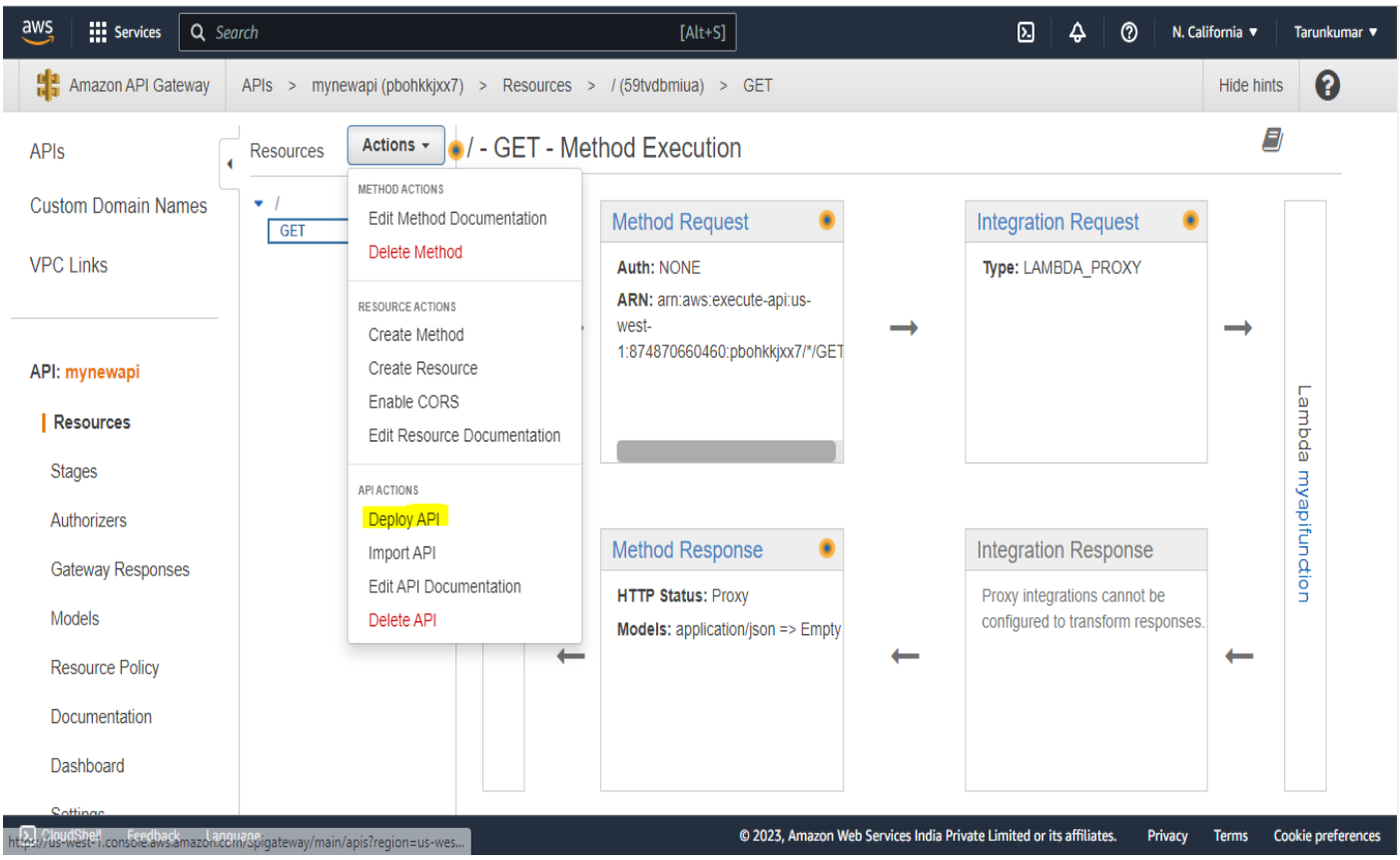
Create a method

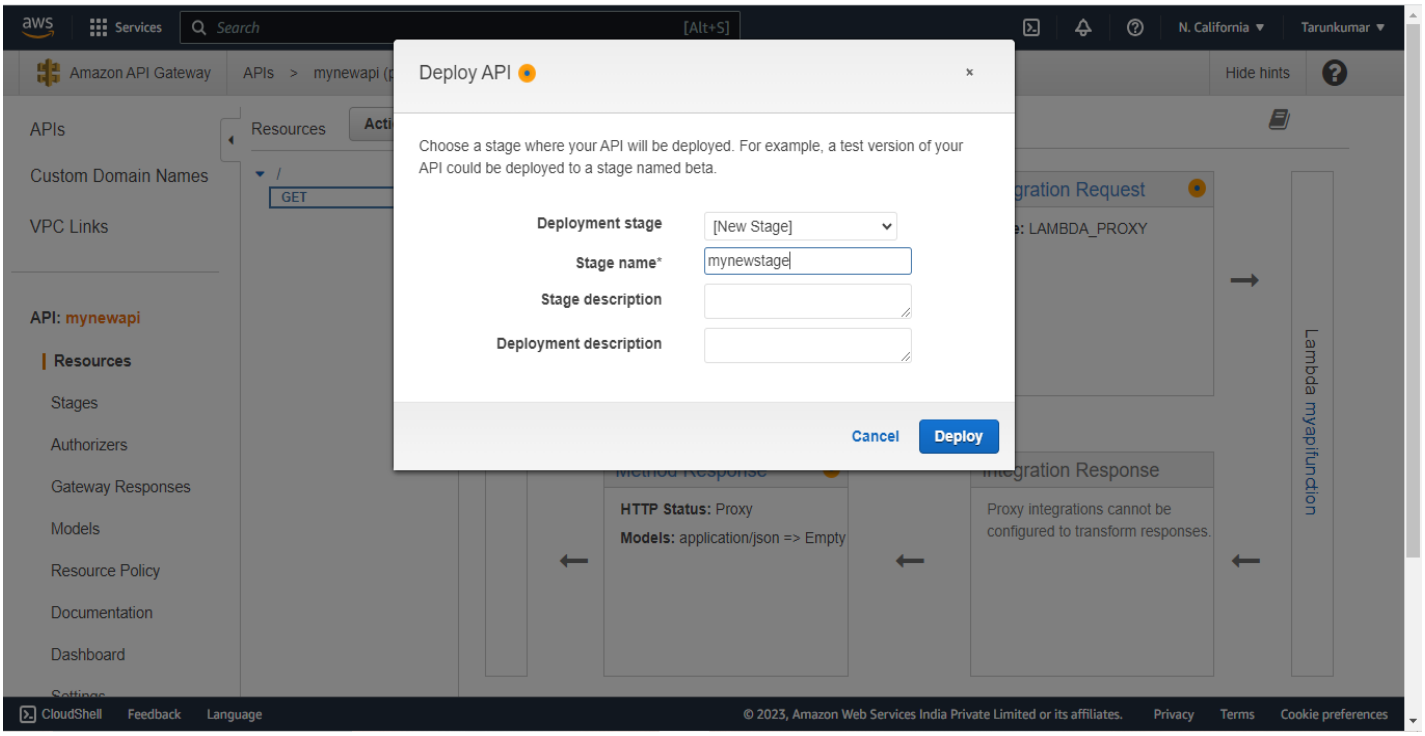


Choose the method as GET and integration type as Lambda function

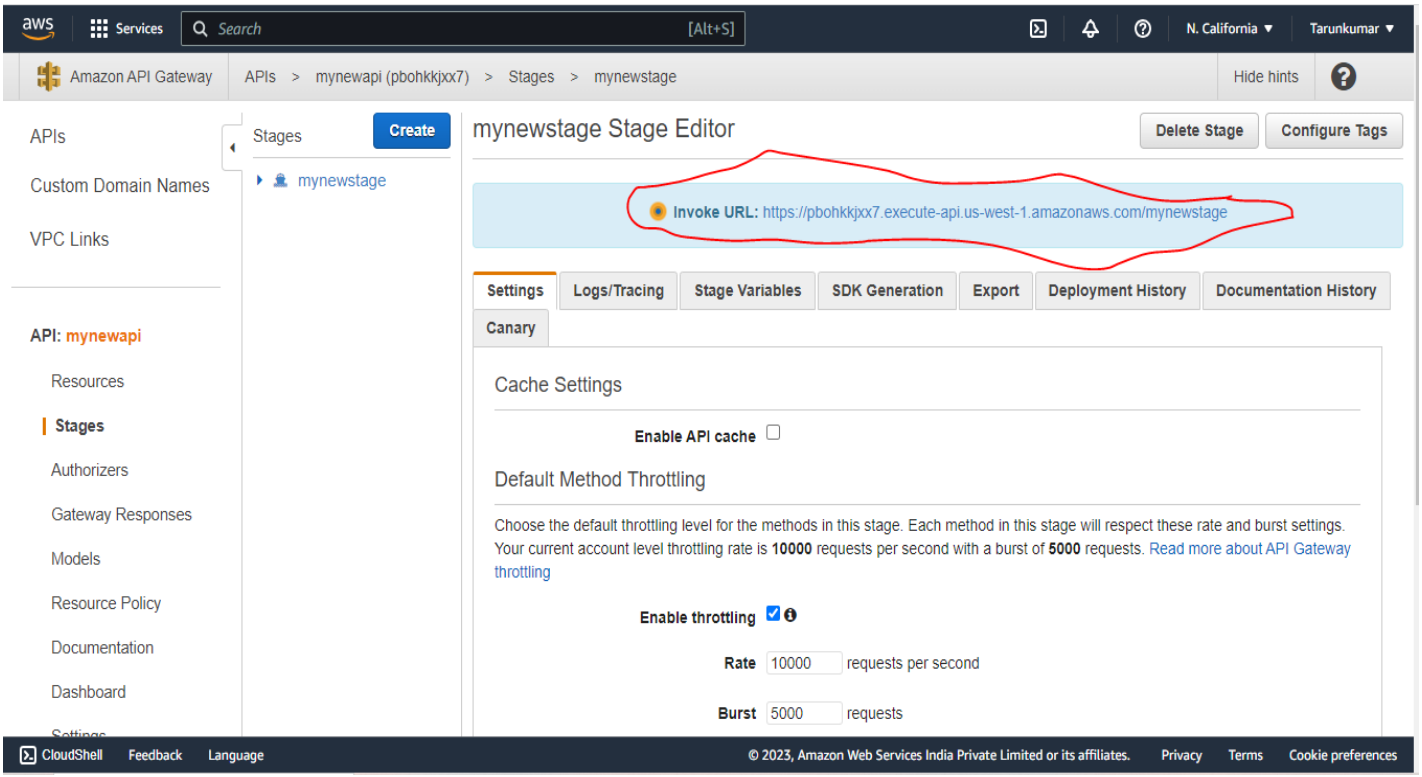


Deploy the API

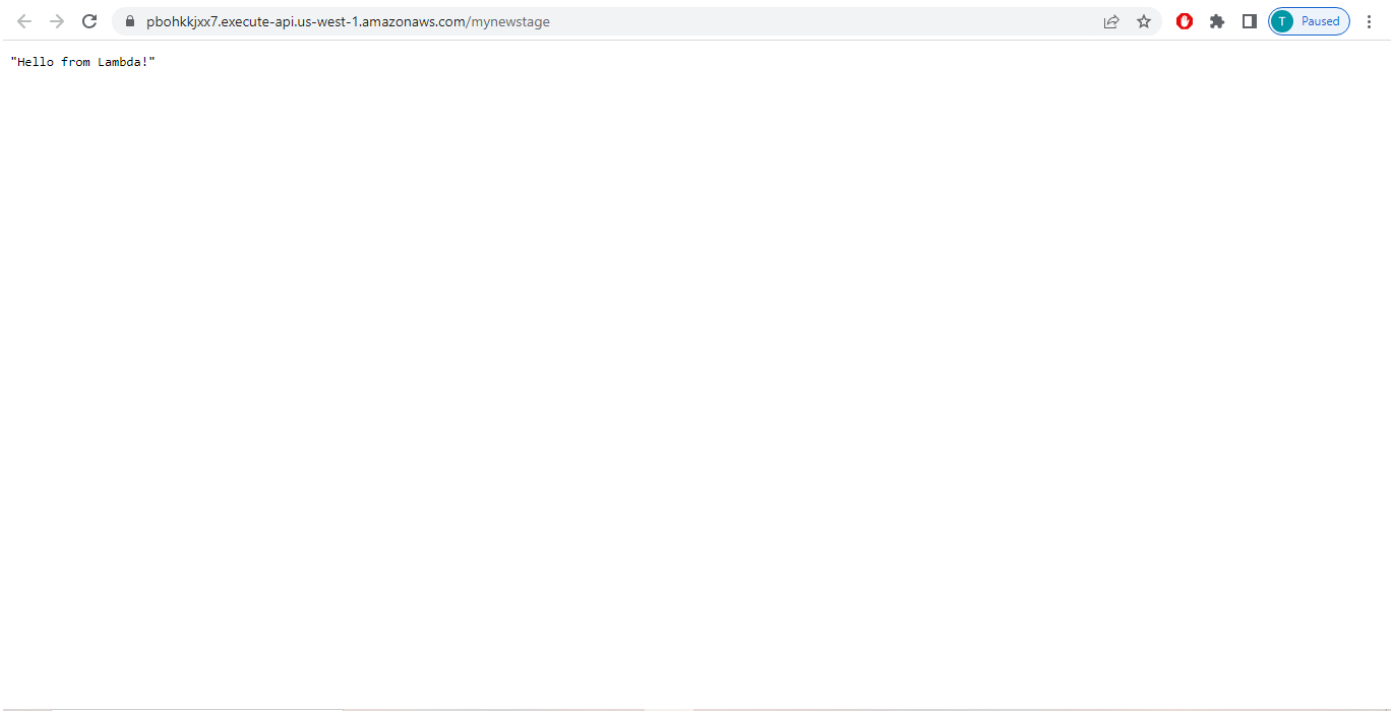




Test with the invoke URL

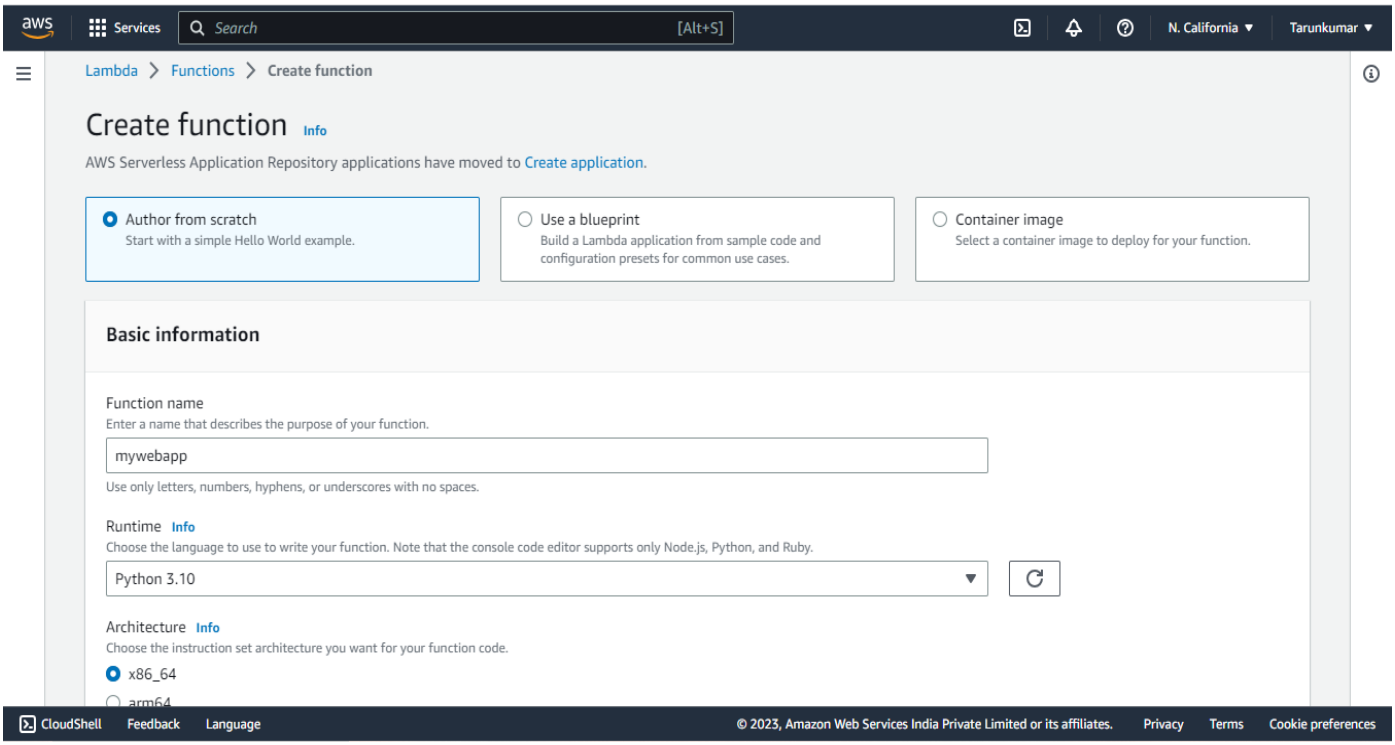


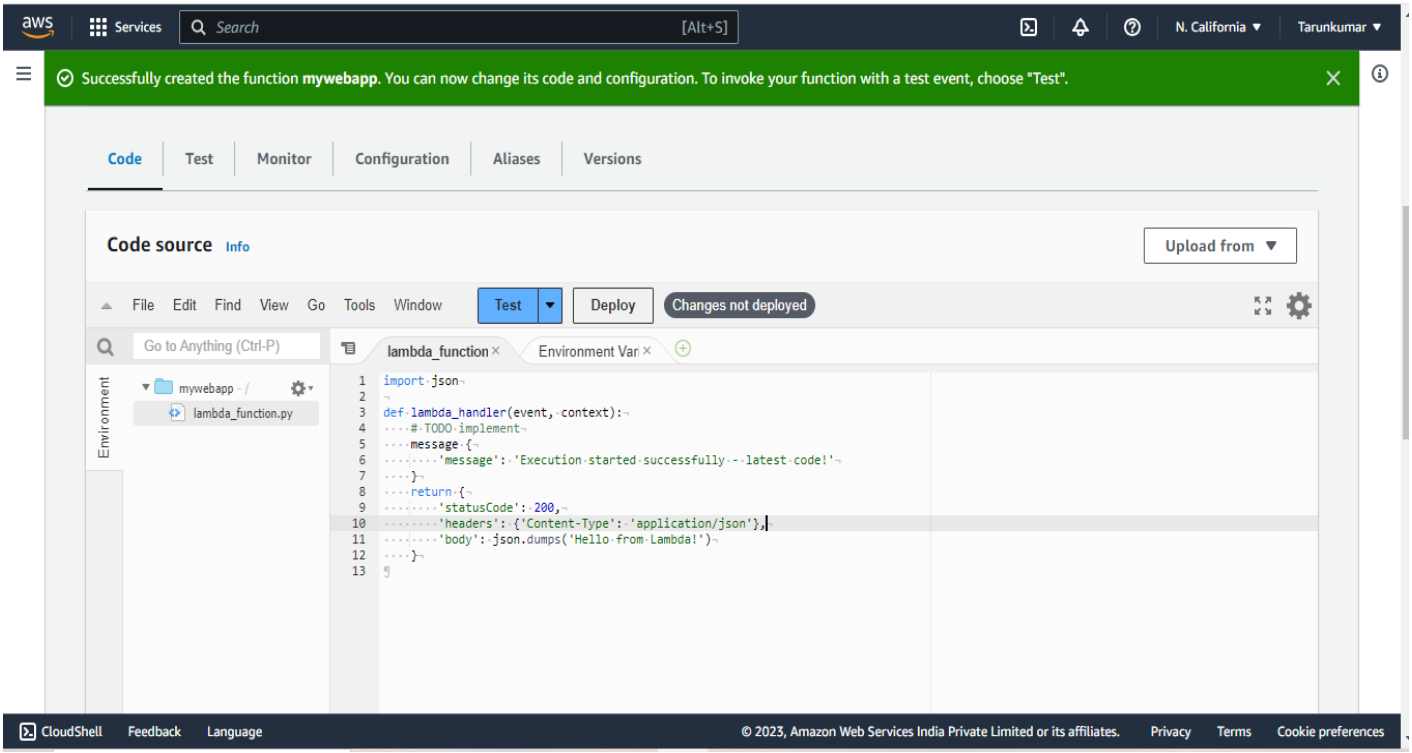
It is working.



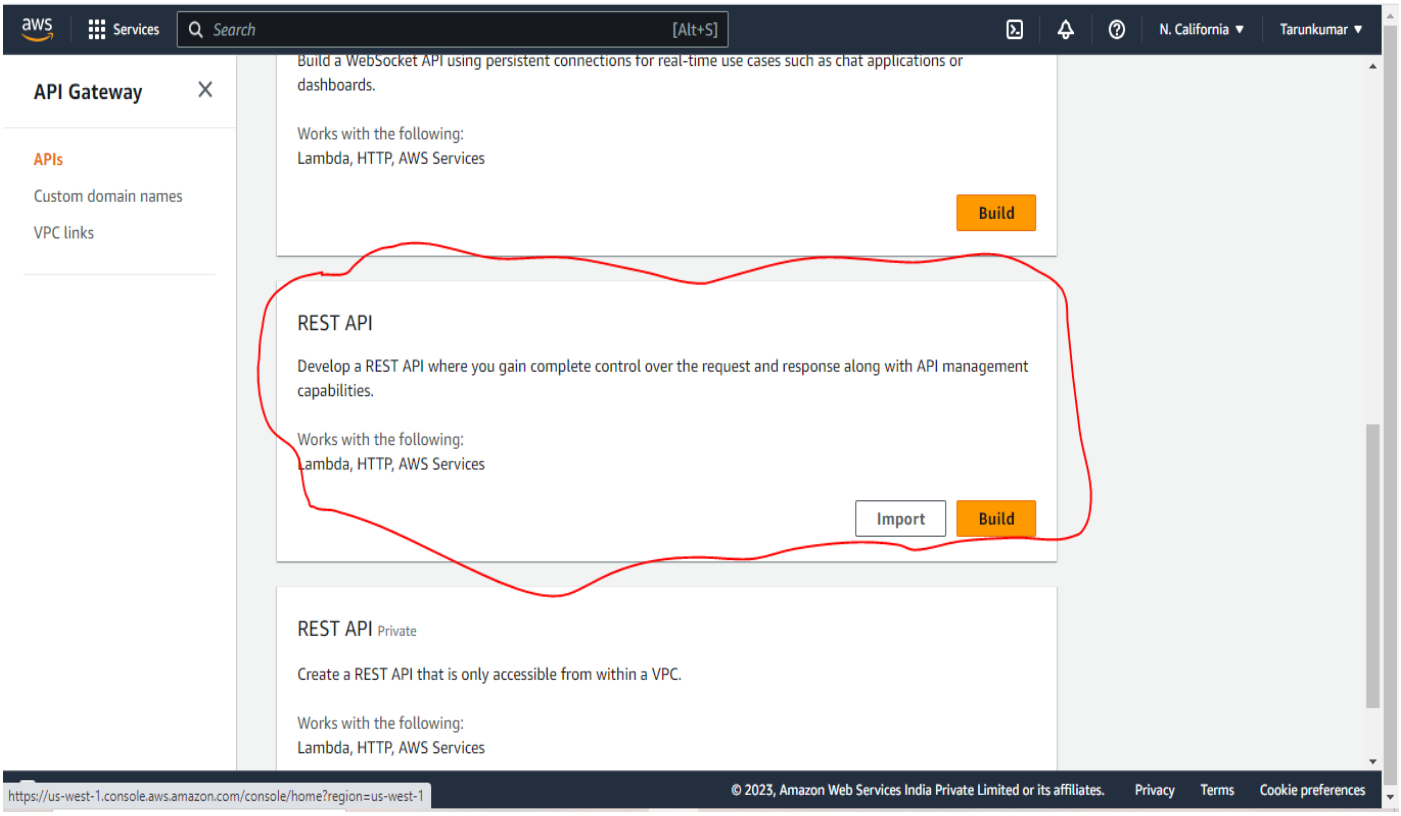
Create dev,prod,Test Stages with Stage Variabled and deploy API with Lambda Files

Create a lambda function

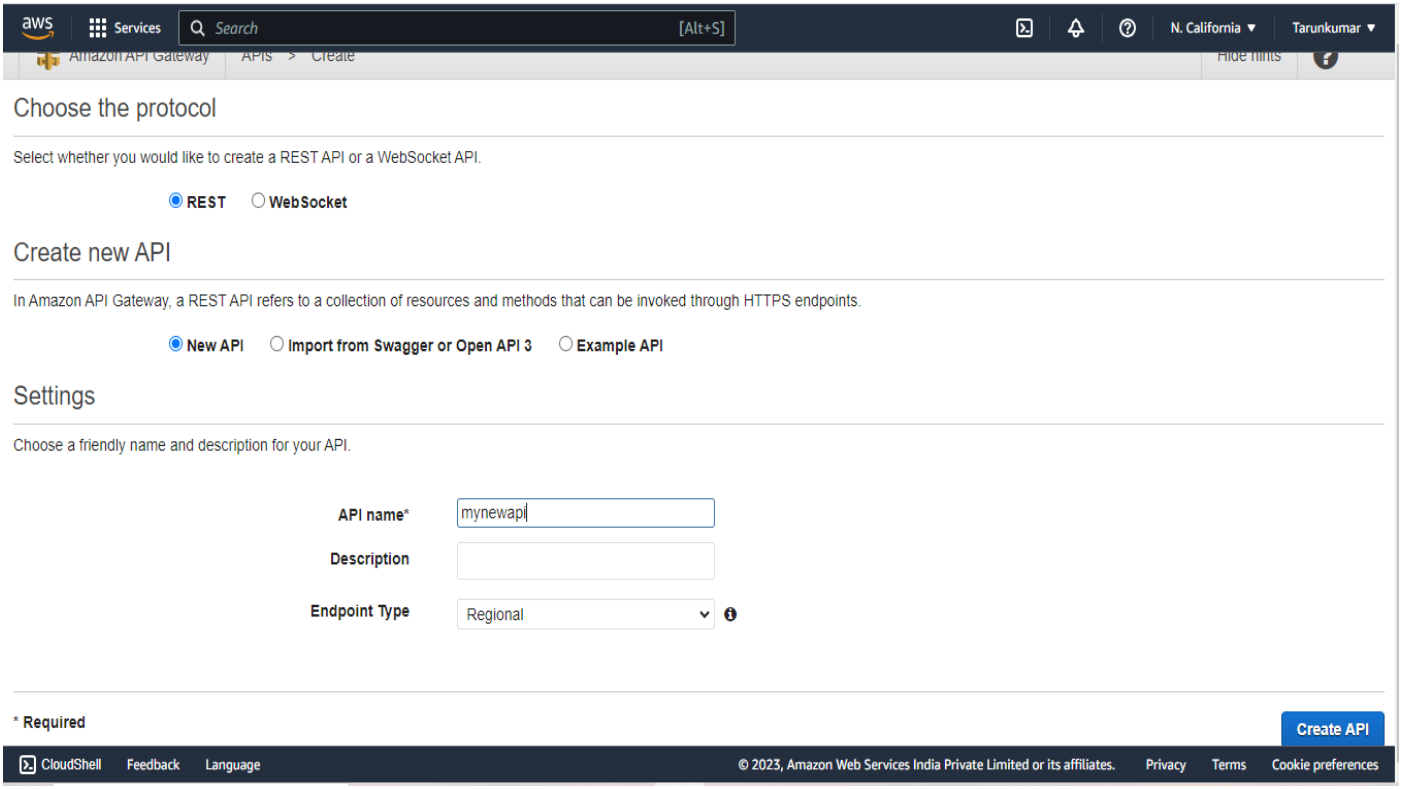


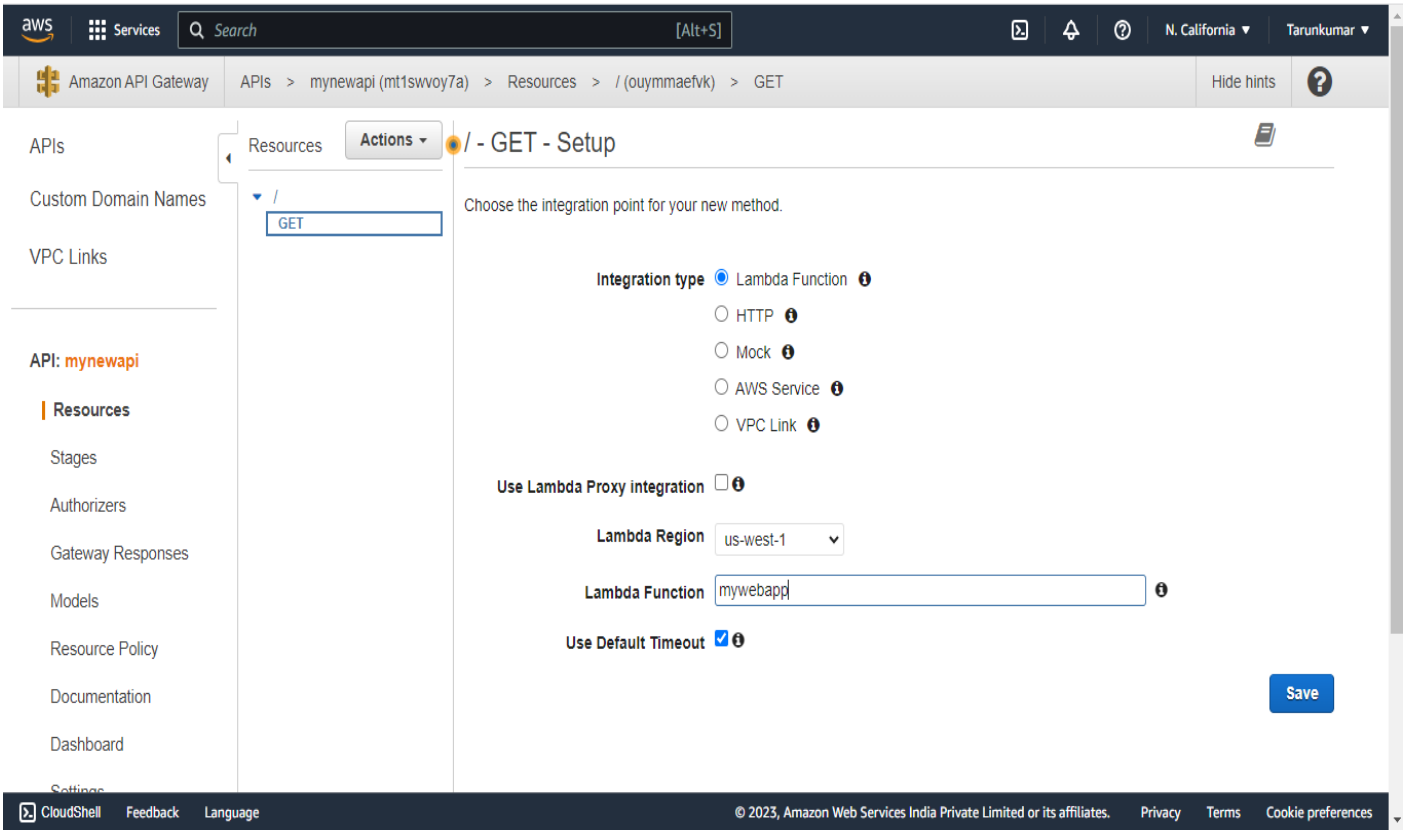


Go to API Gateway, build REST API

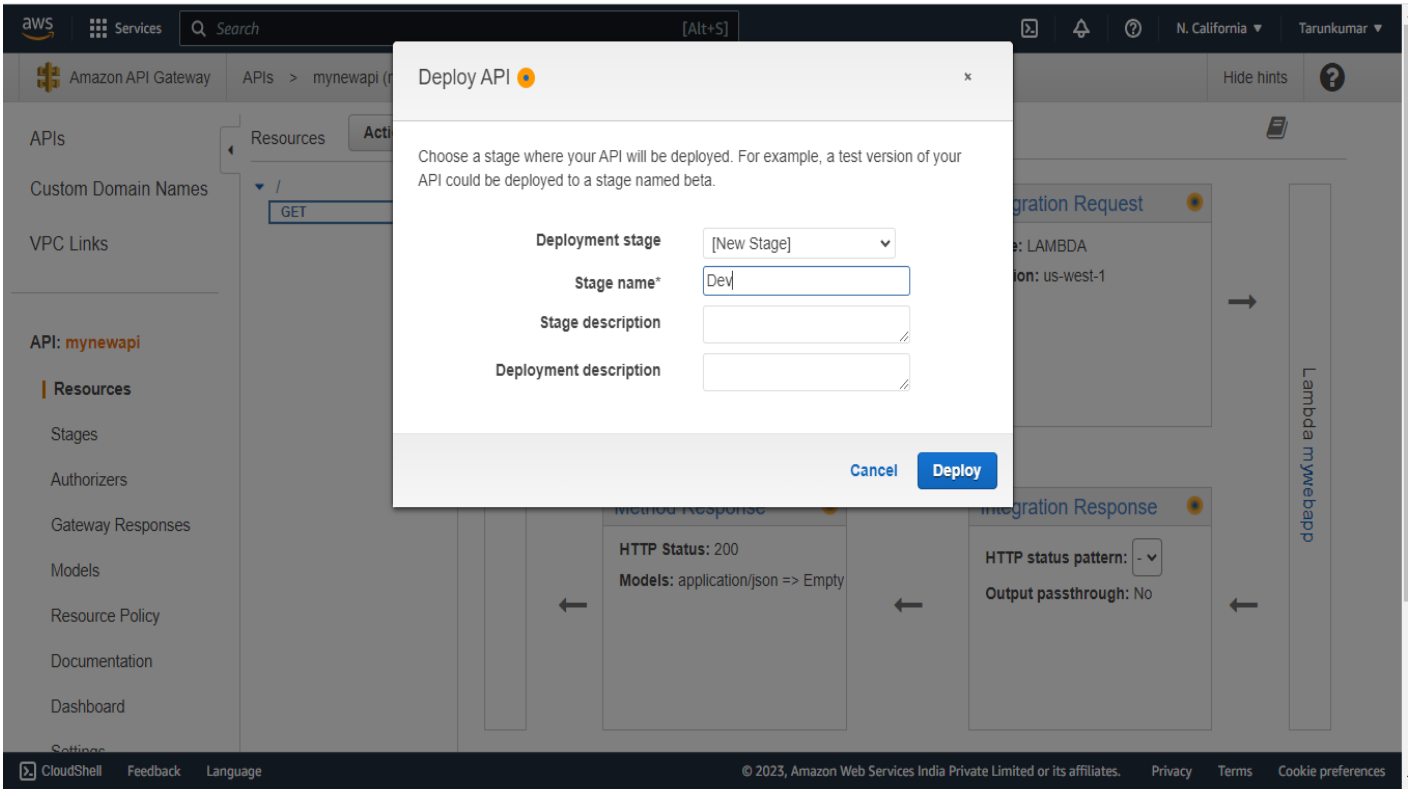


Choose the protocol and create new API

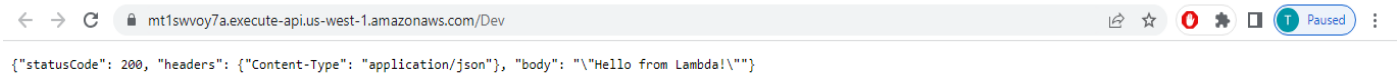




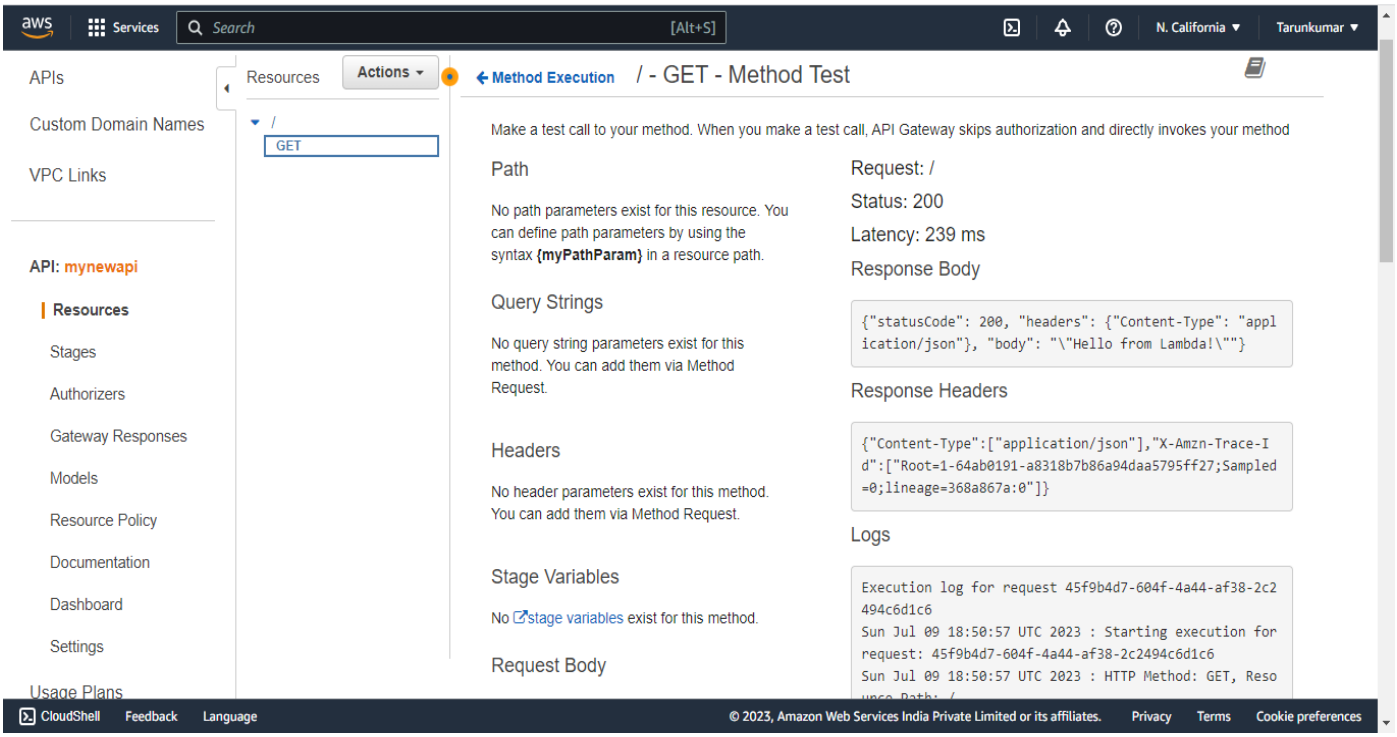
Deploy Dev stage



Dev stage works

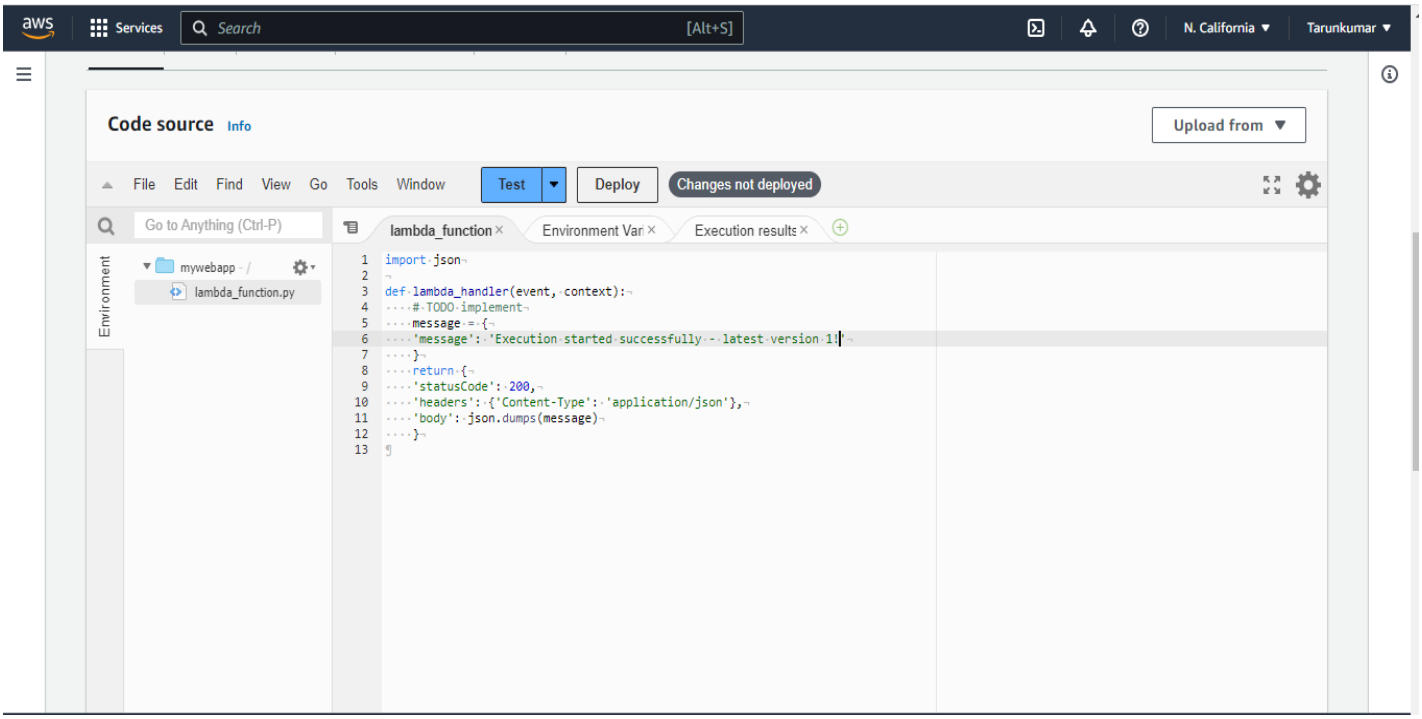


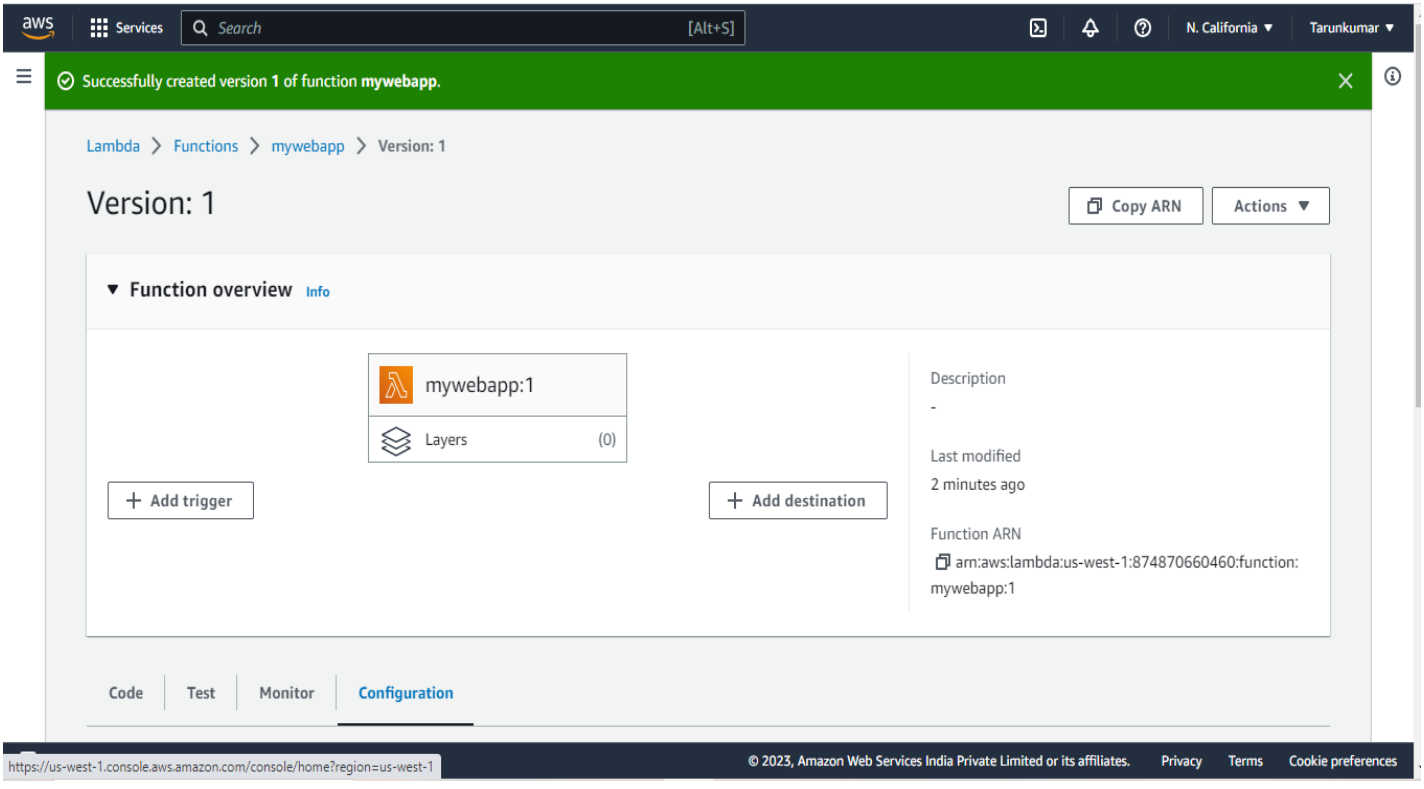
Test the method



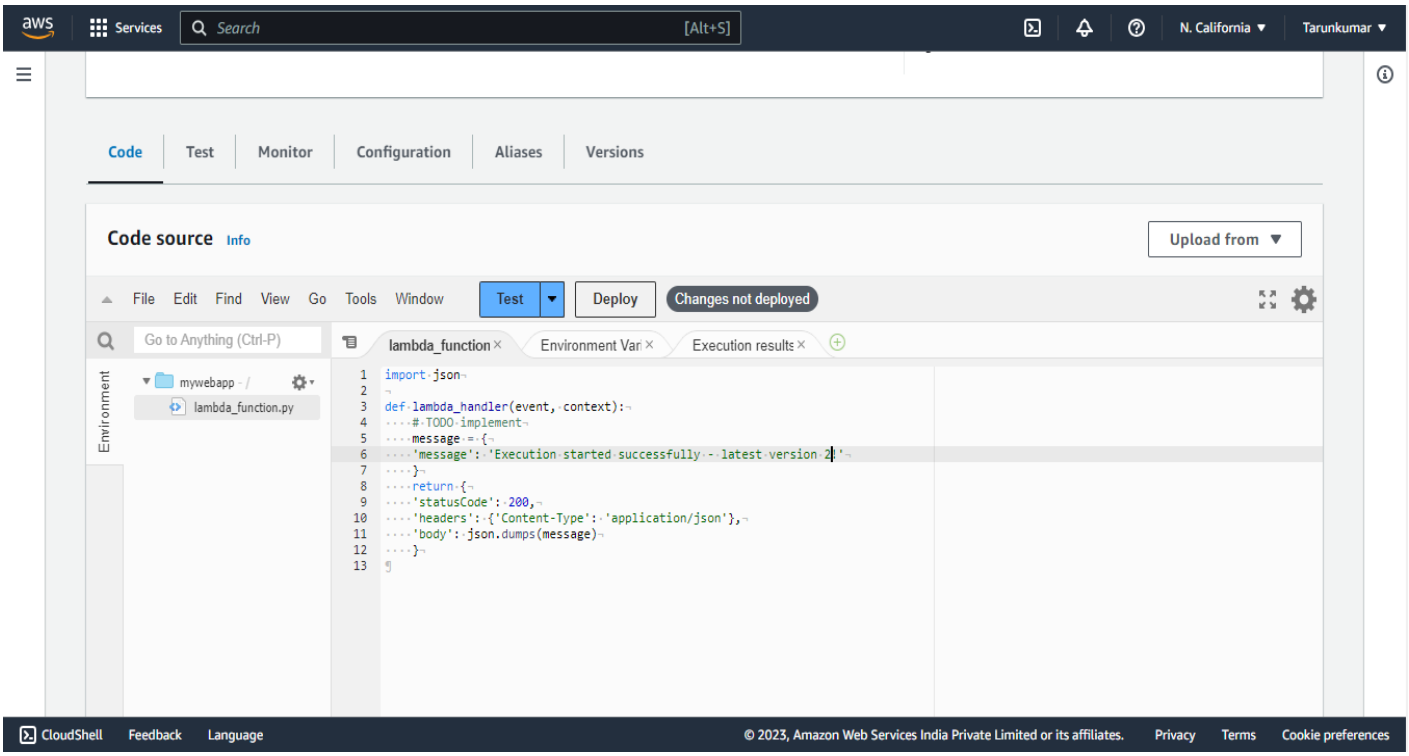
Create multiple versions of lambda function

Version 1





Version 2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File Edit Find View Go Tools Window
Test
Deploy
Changes not deployed
Go to Anything (Ctrl-P)
lambda_function
Environment Var
Execution results
Environment
mywebapp
lambda_function.py
import json
def lambda_handler(event, context):
#TODO implement
message = {
'message': 'Execution started successfully - latest version 2!'
}
return {
'statusCode': 200,
'headers': {'Content-Type': 'application/json'},
'body': json.dumps(message)
}
CloudShell
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Language
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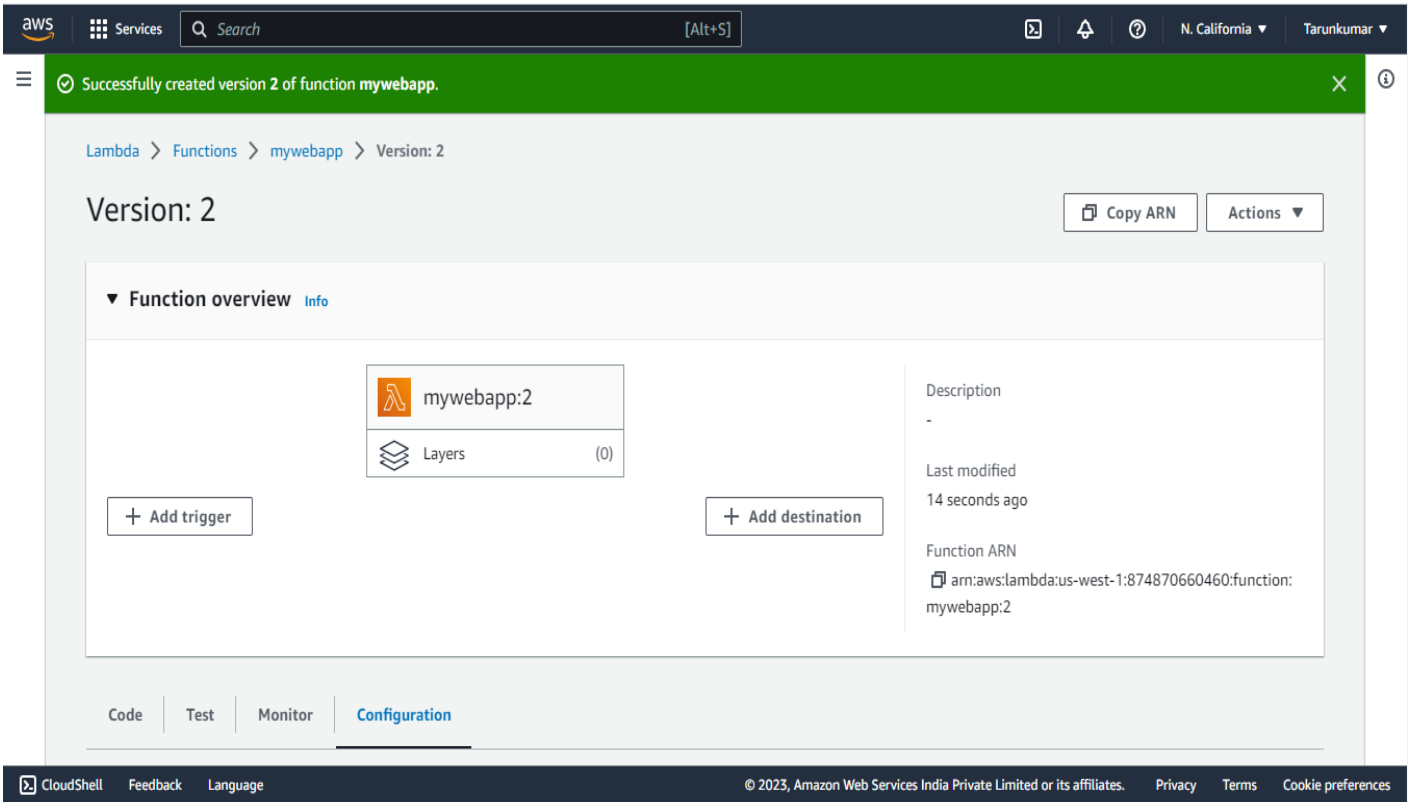
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Successfully created version 2 of function mywebapp.
Lambda > Functions > mywebapp > Version: 2
Version: 2
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Actions
Function overview Info
mywebapp:2
Layers (0)
Add trigger
Add destination
Description
-
Last modified
14 seconds ago
Function ARN
arn:aws:lambda:us-west-1:874870660460:function:mywebapp:2
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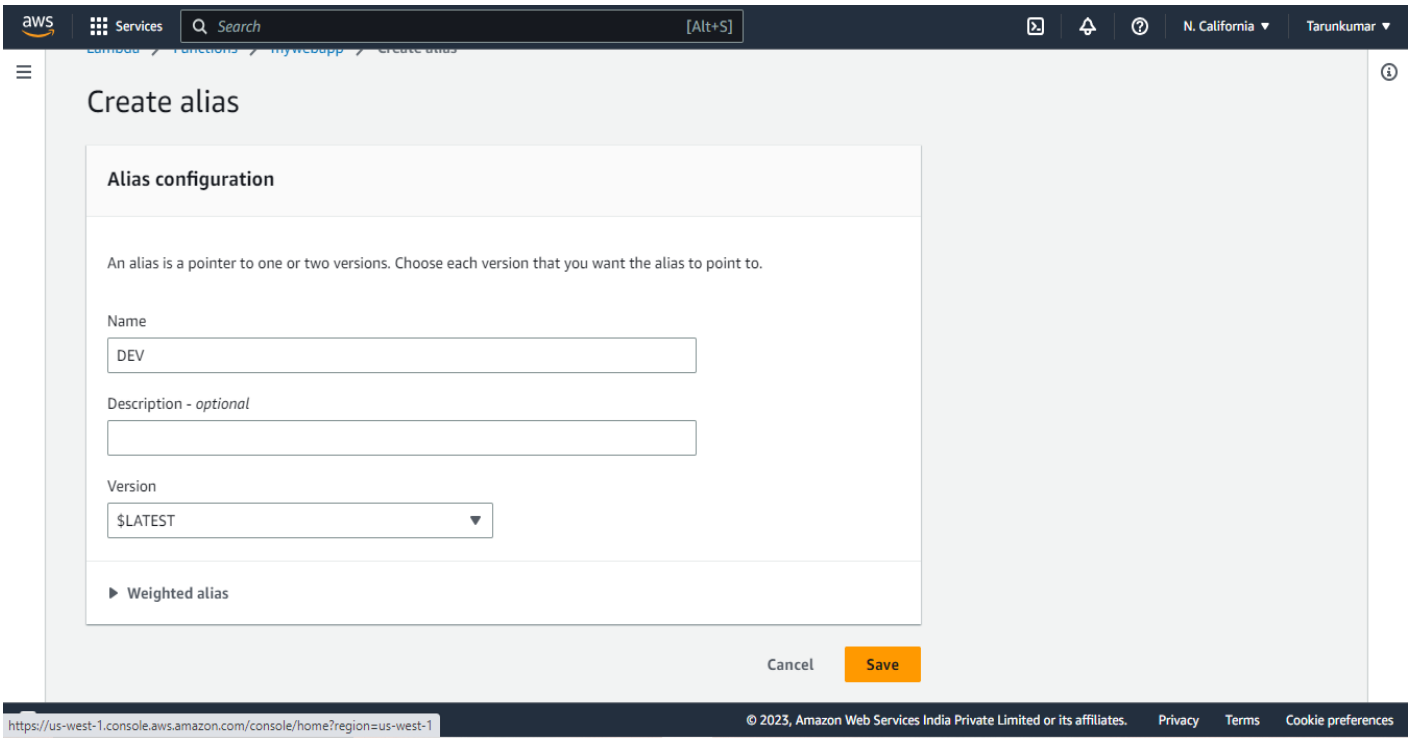
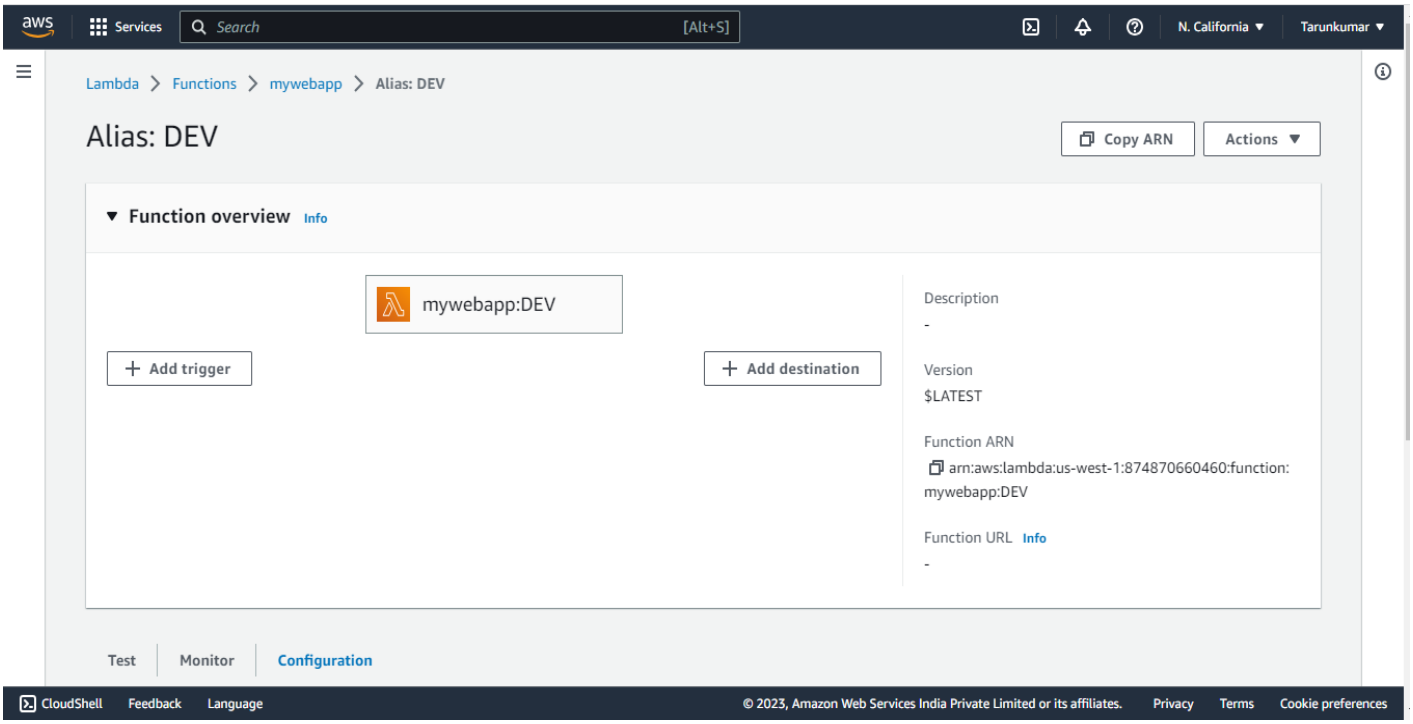
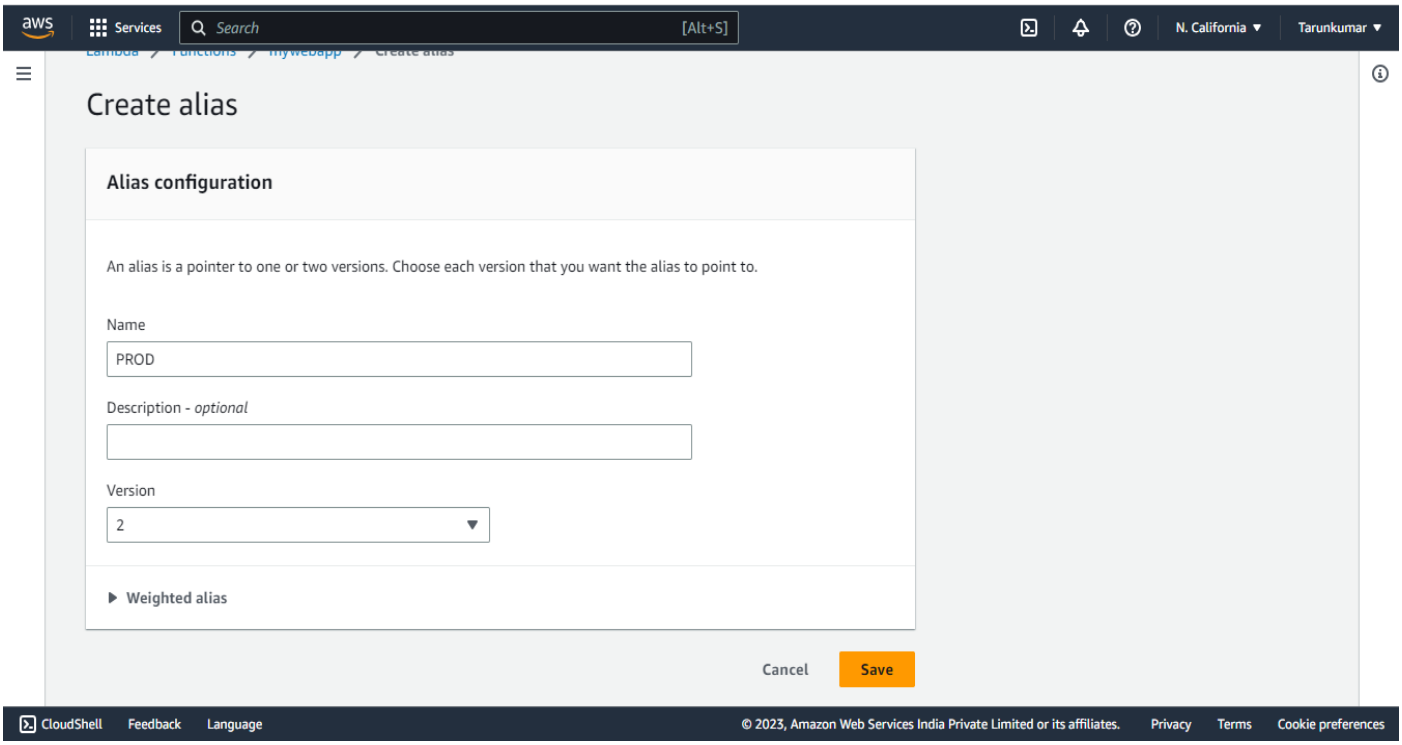
Create alias for the lambda functions

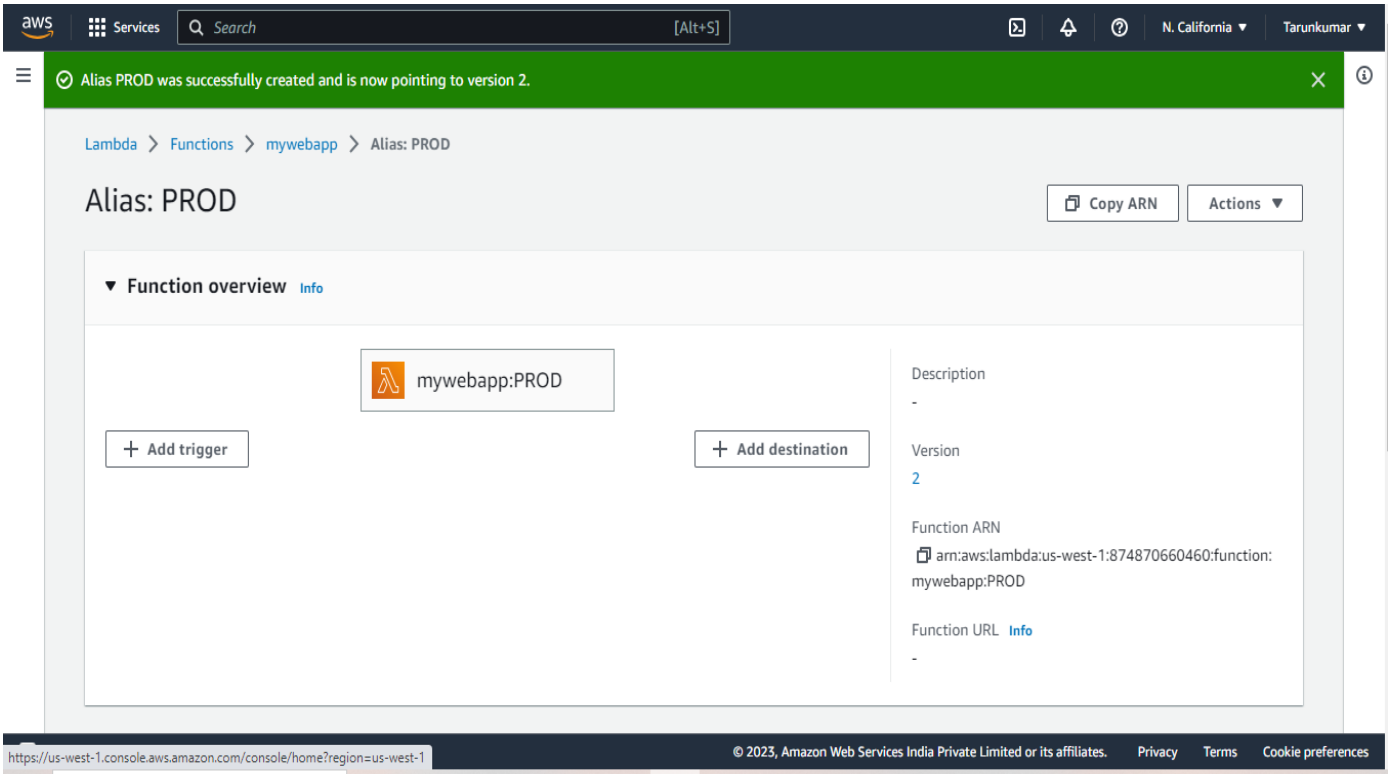
Latest version for DEV



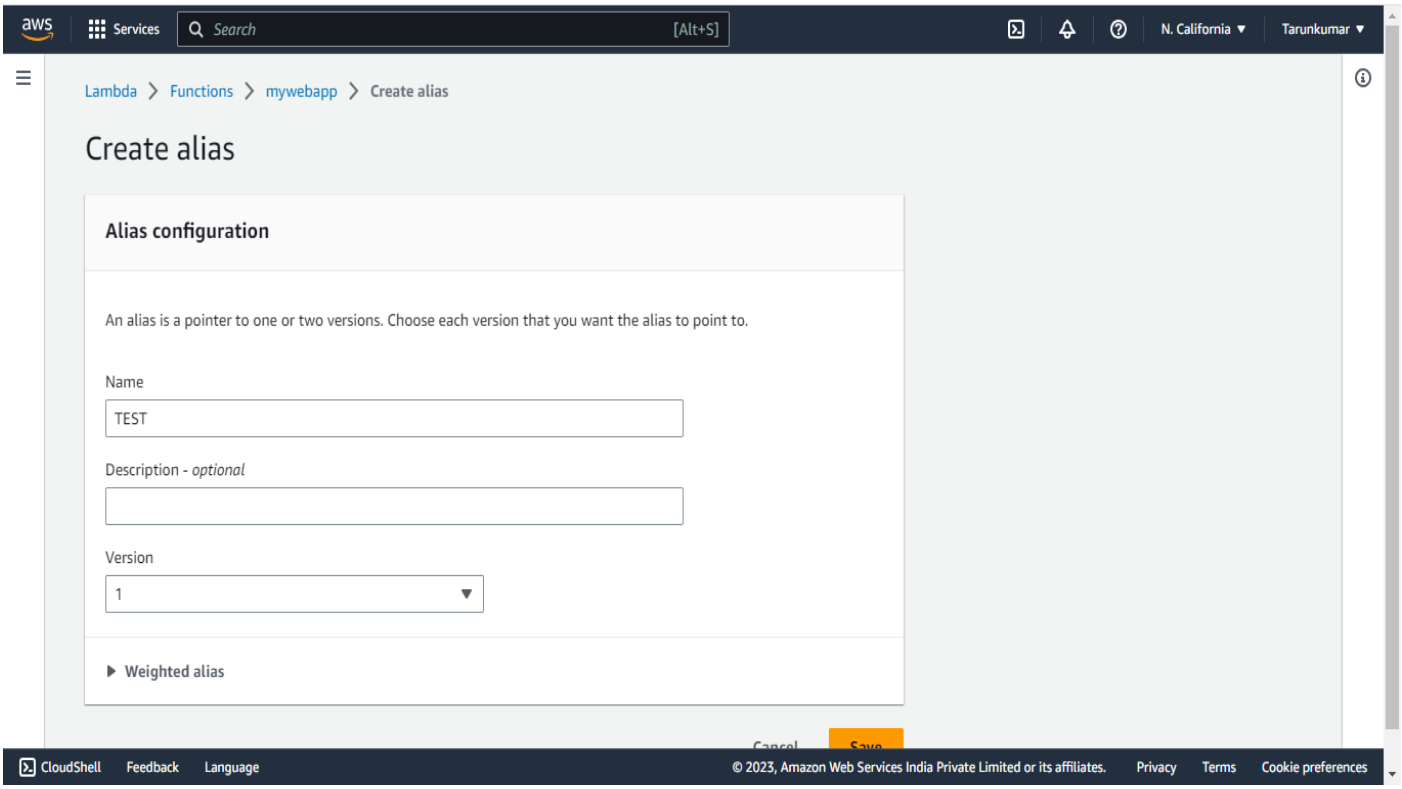


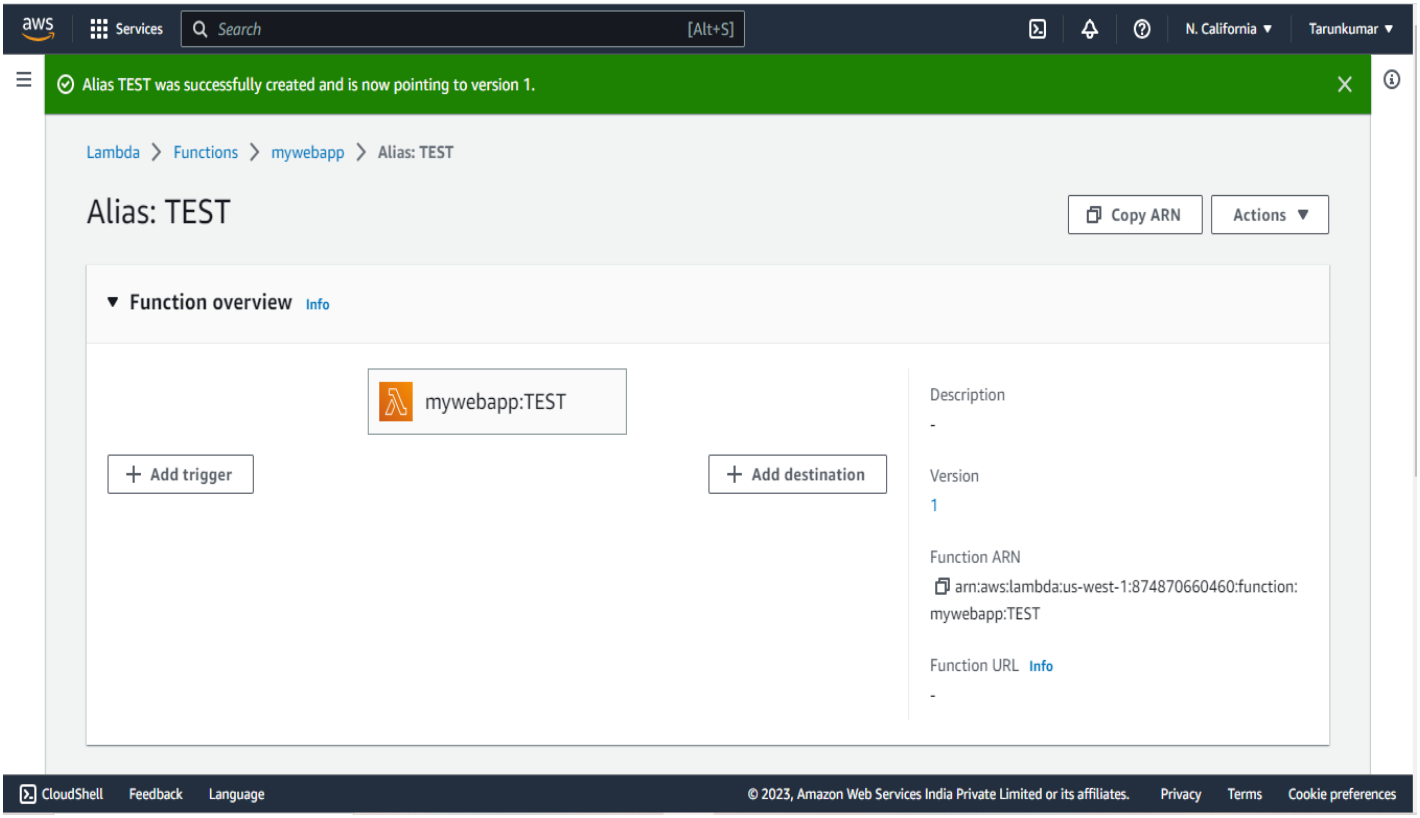
Version 1 for PROD



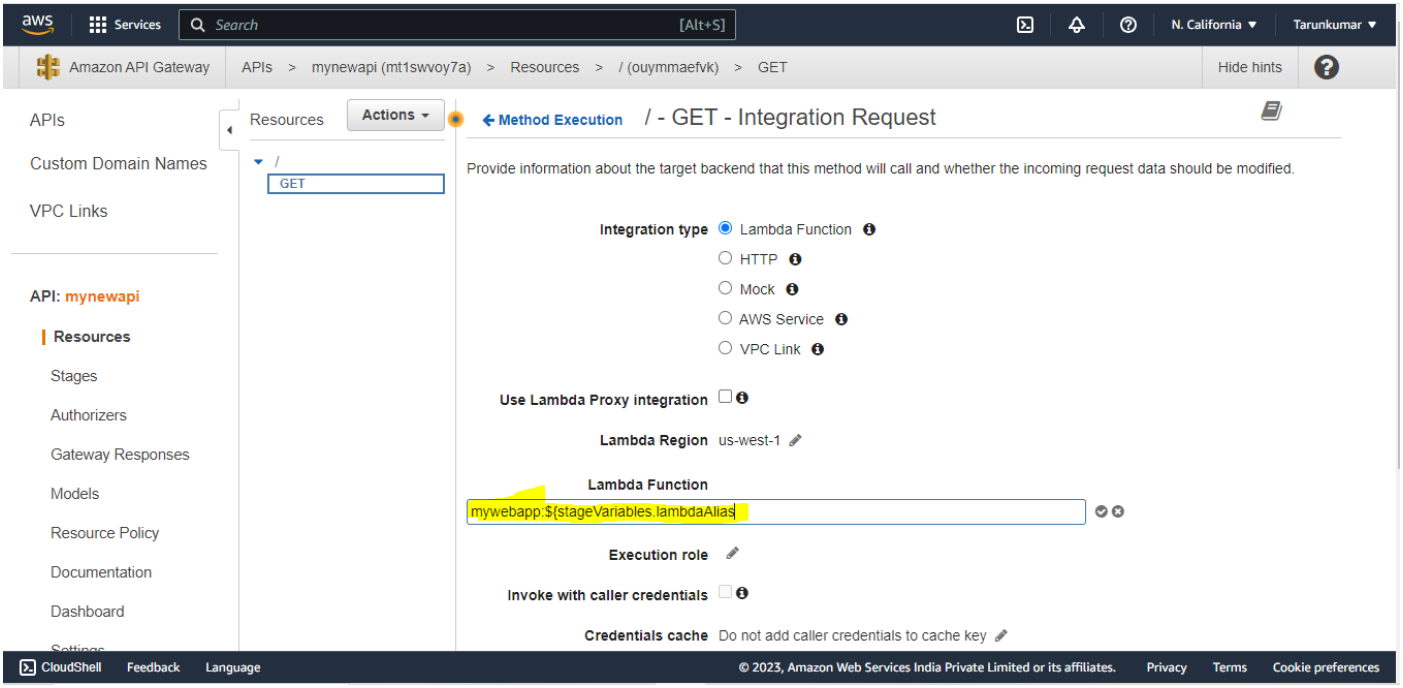


Version 1 for TEST

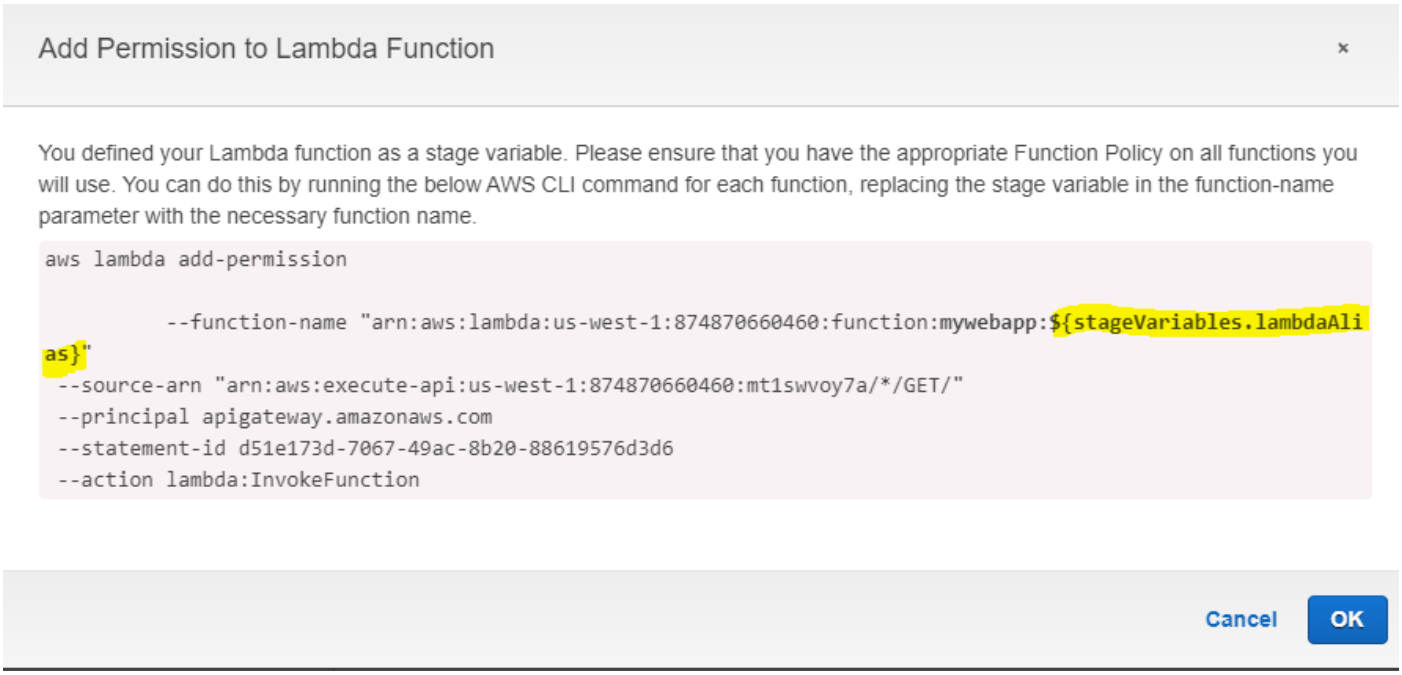




Edit the lambda function name in integration request from the GET method



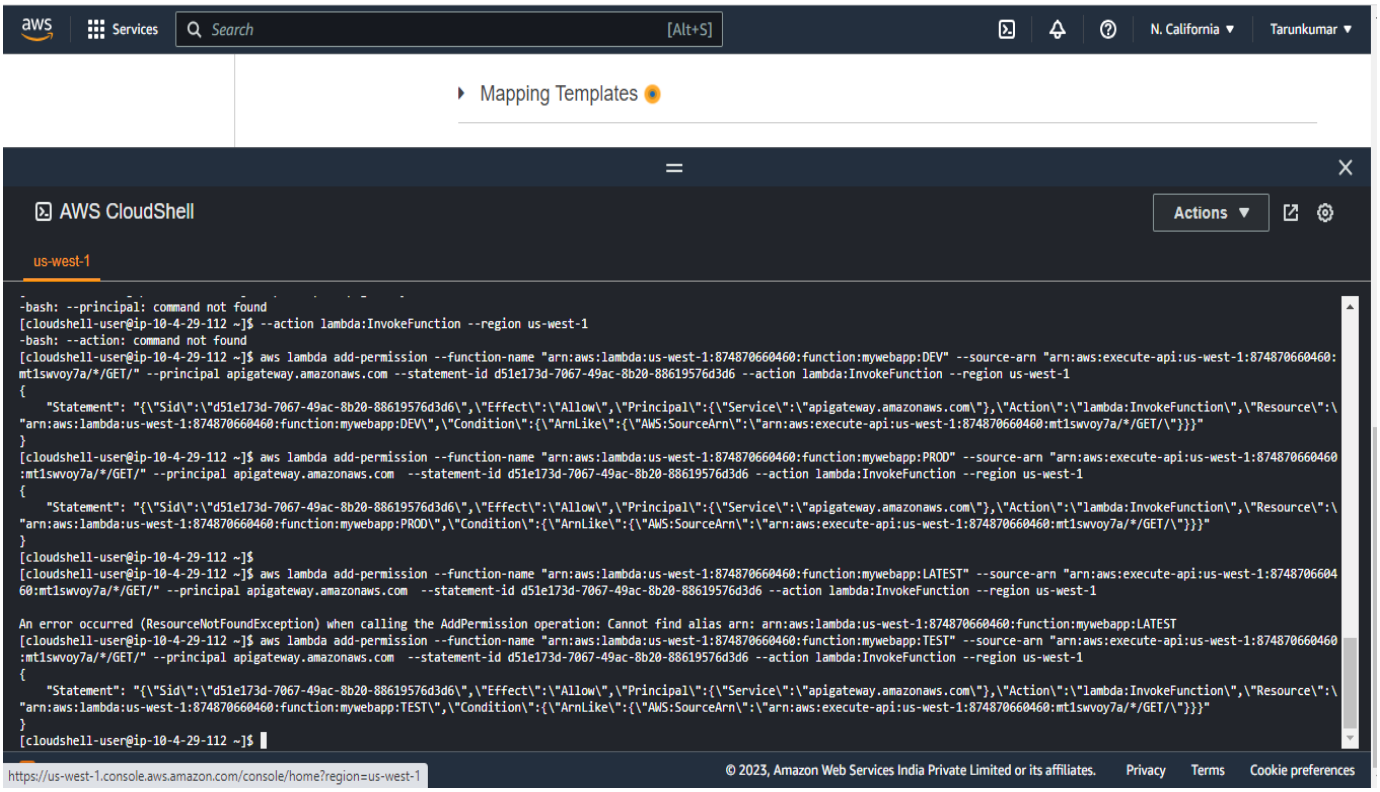
We need to create the execution role for each versions



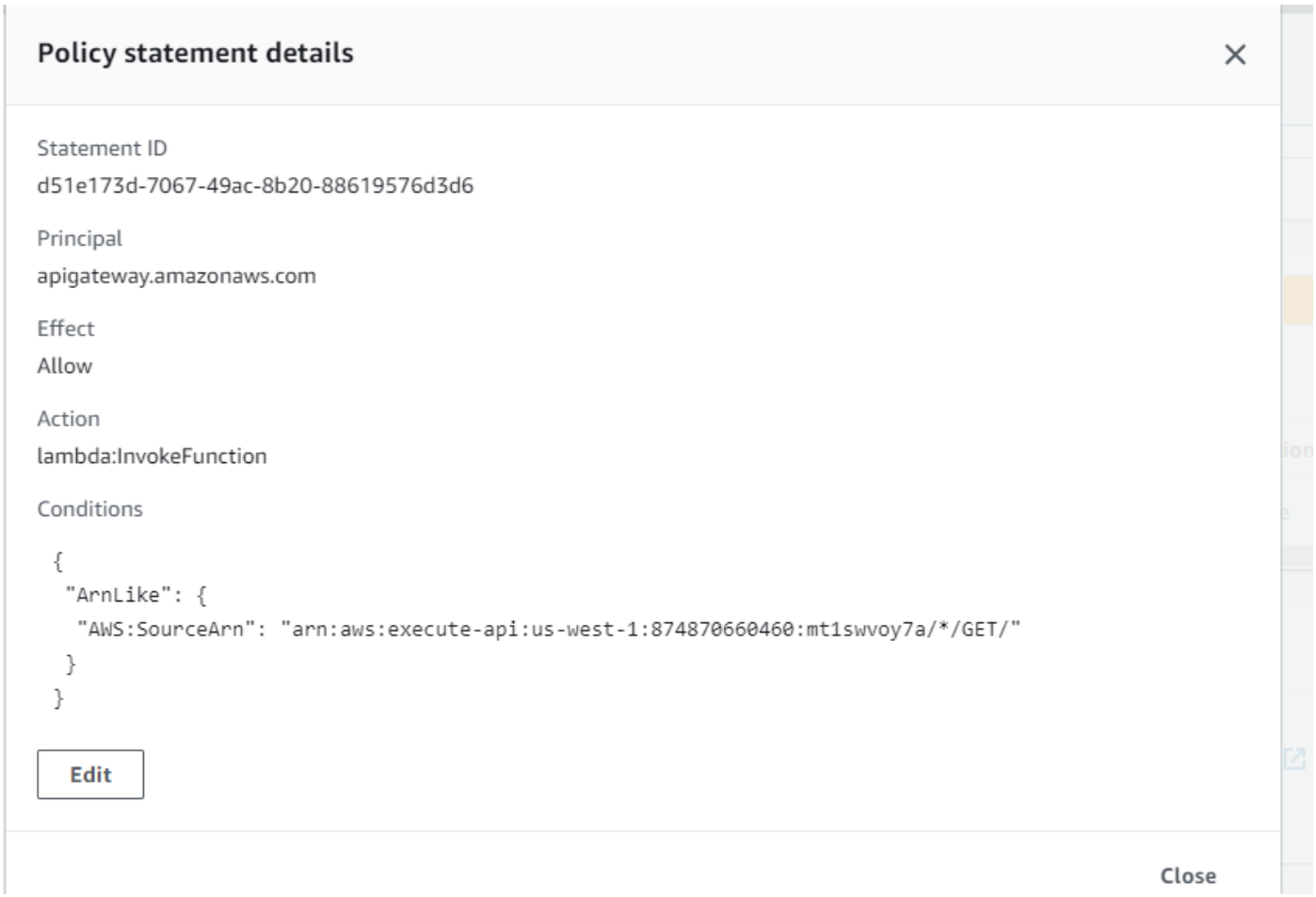
Edit the highlighted part to respective version names of the lambda function

```
aws lambda add-permission --function-name "arn:aws:lambda:us-west-1:874870660460:function:mywebapp:DEV"
--source-arn "arn:aws:execute-api:us-west-1:874870660460:mt1swvoy7a/*/GET/"
--principal apigateway.amazonaws.com  --statement-id d51e173d-7067-49ac-8b20-88619576d3d6
--action lambda:InvokeFunction --region us-west-1

aws lambda add-permission --function-name "arn:aws:lambda:us-west-1:874870660460:function:mywebapp:PROD"
--source-arn "arn:aws:execute-api:us-west-1:874870660460:mt1swvoy7a/*/GET/"
--principal apigateway.amazonaws.com  --statement-id d51e173d-7067-49ac-8b20-88619576d3d6
--action lambda:InvokeFunction --region us-west-1

aws lambda add-permission --function-name "arn:aws:lambda:us-west-1:874870660460:function:mywebapp:LATEST"
--source-arn "arn:aws:execute-api:us-west-1:874870660460:mt1swvoy7a/*/GET/"
--principal apigateway.amazonaws.com  --statement-id d51e173d-7067-49ac-8b20-88619576d3d6
--action lambda:InvokeFunction --region us-west-1
```

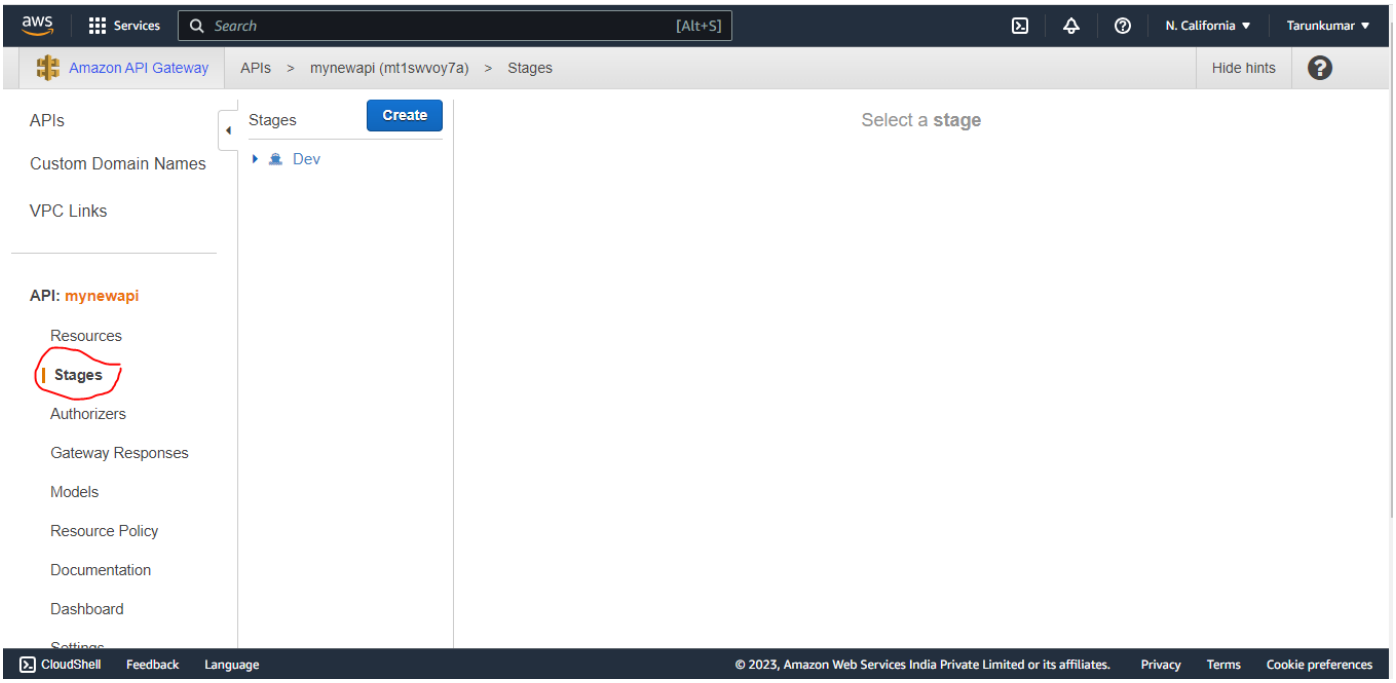
Open cloud shell and execute each commands for each versions

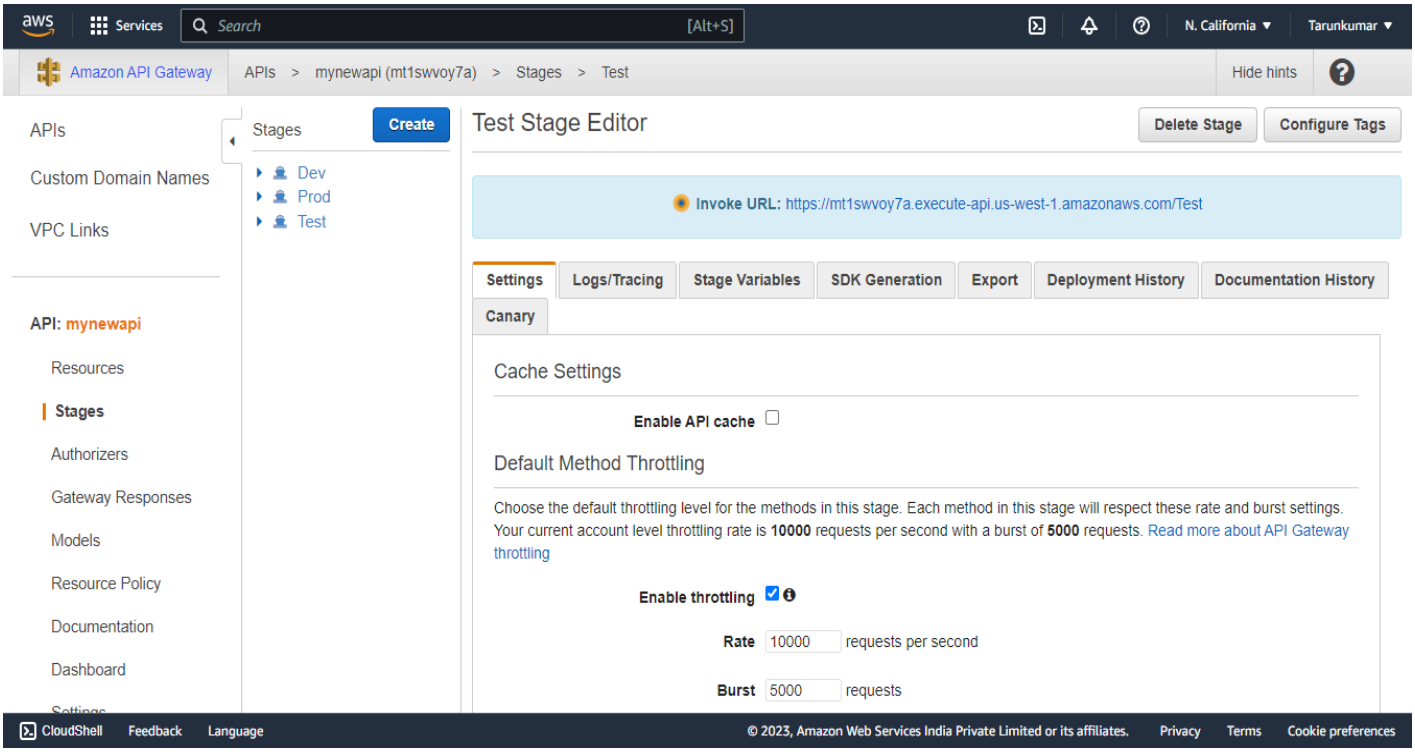


Execution role has been created for each version of lambda function

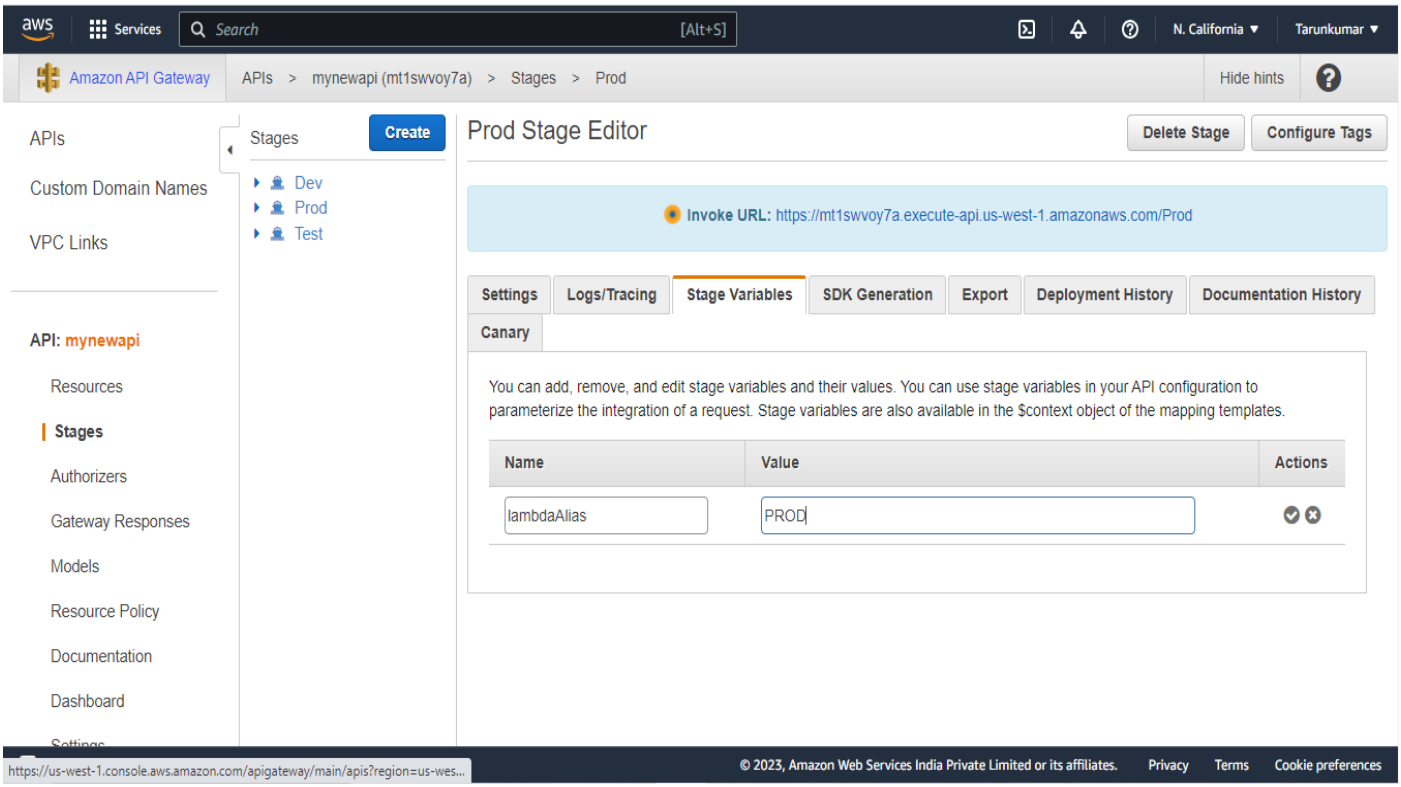


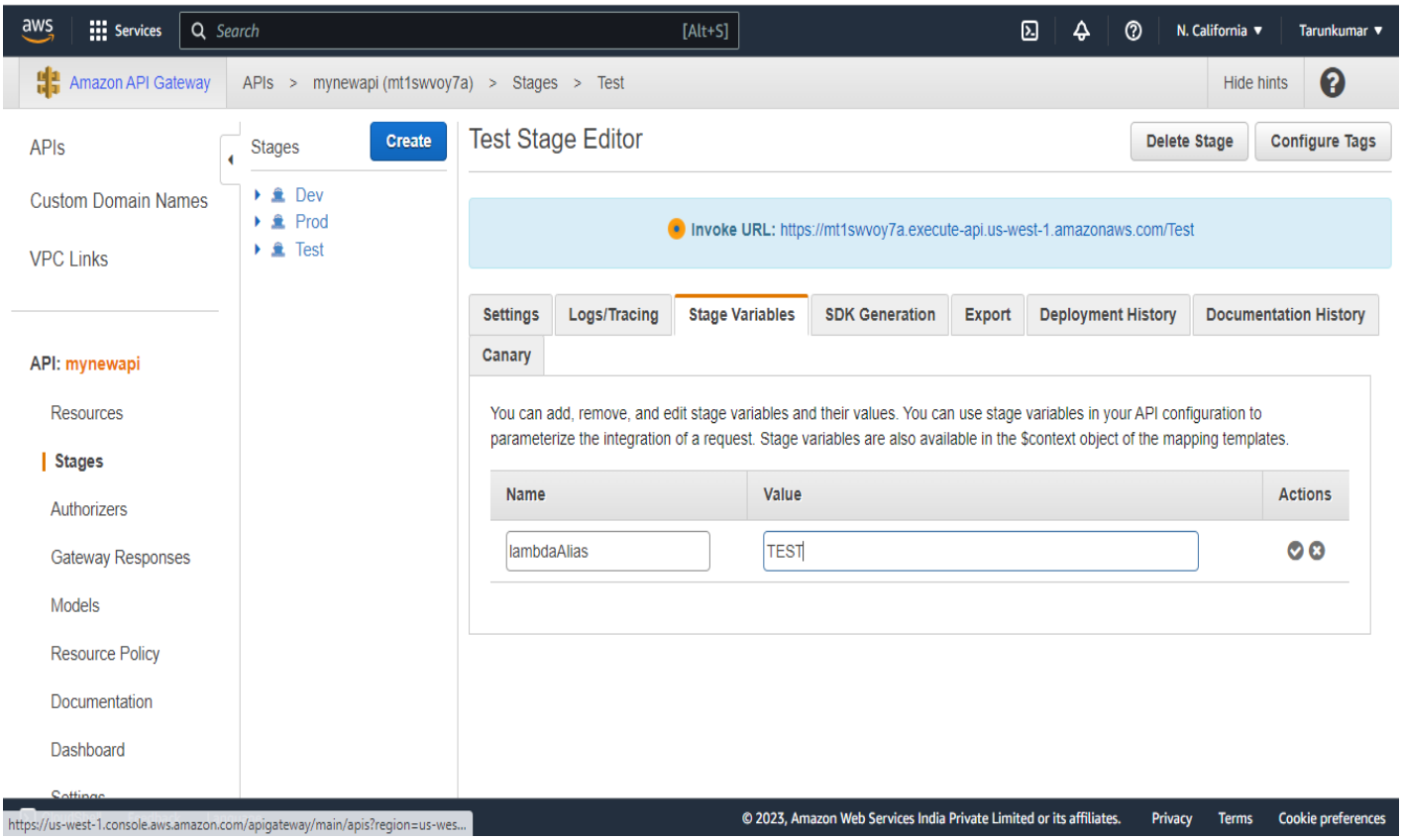
Create stages prod, test





Create stage variables for PROD and TEST

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APIs > mynewapi (mt1swvoy7a) > Stages > Test
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Models
Resource Policy
Documentation
Dashboard
Stages
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Dev
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Test
Test Stage Editor
Delete Stage
Configure Tags
Invoke URL: https://mt1swvoy7a.execute-api.us-west-1.amazonaws.com/Test
Settings
Logs/Tracing
Stage Variables
SDK Generation
Export
Deployment History
Documentation History
Canary
You can add, remove, and edit stage variables and their values. You can use stage variables in your API configuration to parameterize the integration of a request. Stage variables are also available in the $context object of the mapping templates.
Name
Value
Actions
lambdaAlias
TEST
https://us-west-1.console.aws.amazon.com/apigateway/main/apis?region=us-wes...
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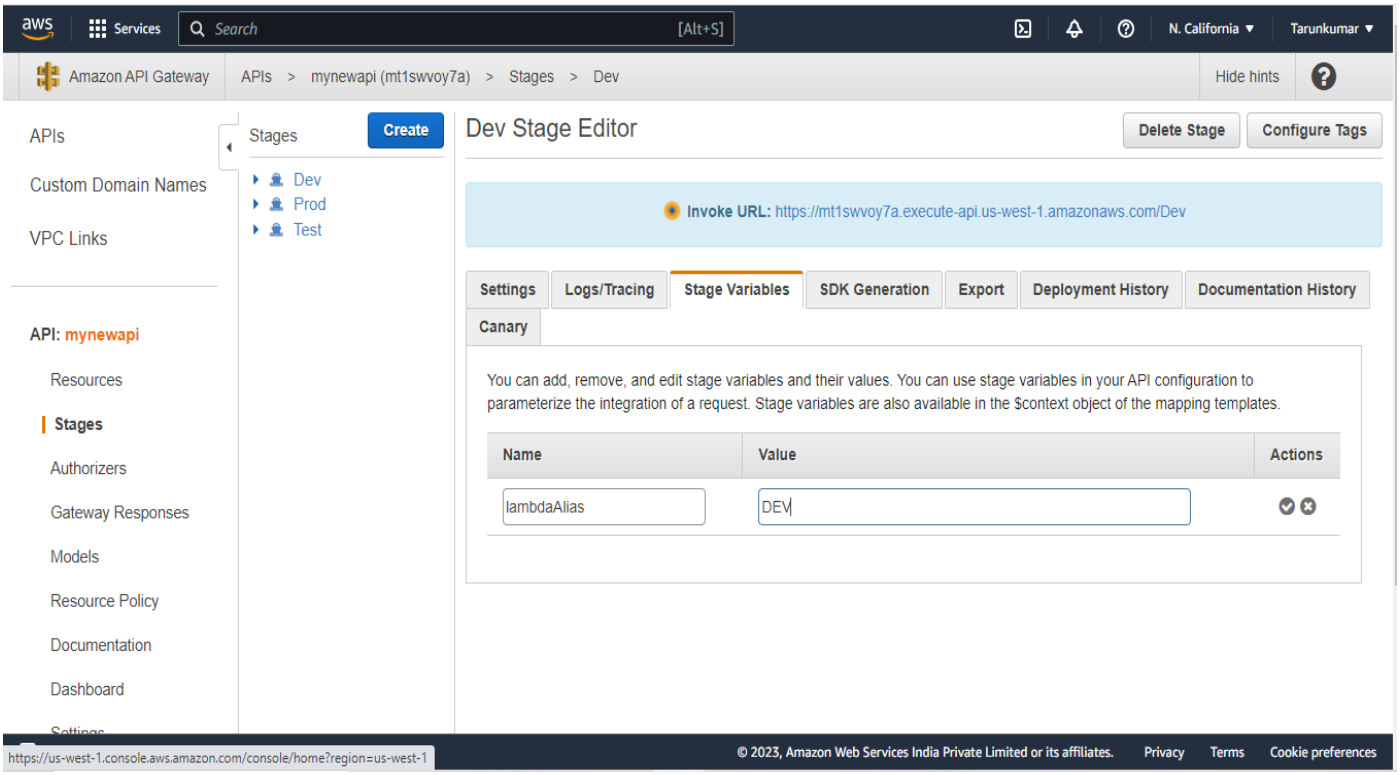
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Amazon API Gateway
APIs > mynewapi (mt1swvoy7a) > Stages > Dev
Hide hints
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Models
Resource Policy
Documentation
Dashboard
Stages
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Test
Dev Stage Editor
Delete Stage
Configure Tags
Invoke URL: https://mt1swvoy7a.execute-api.us-west-1.amazonaws.com/Dev
Settings
Logs/Tracing
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Name
Value
Actions
lambdaAlias
DEV
https://us-west-1.console.aws.amazon.com/console/home?region=us-west-1
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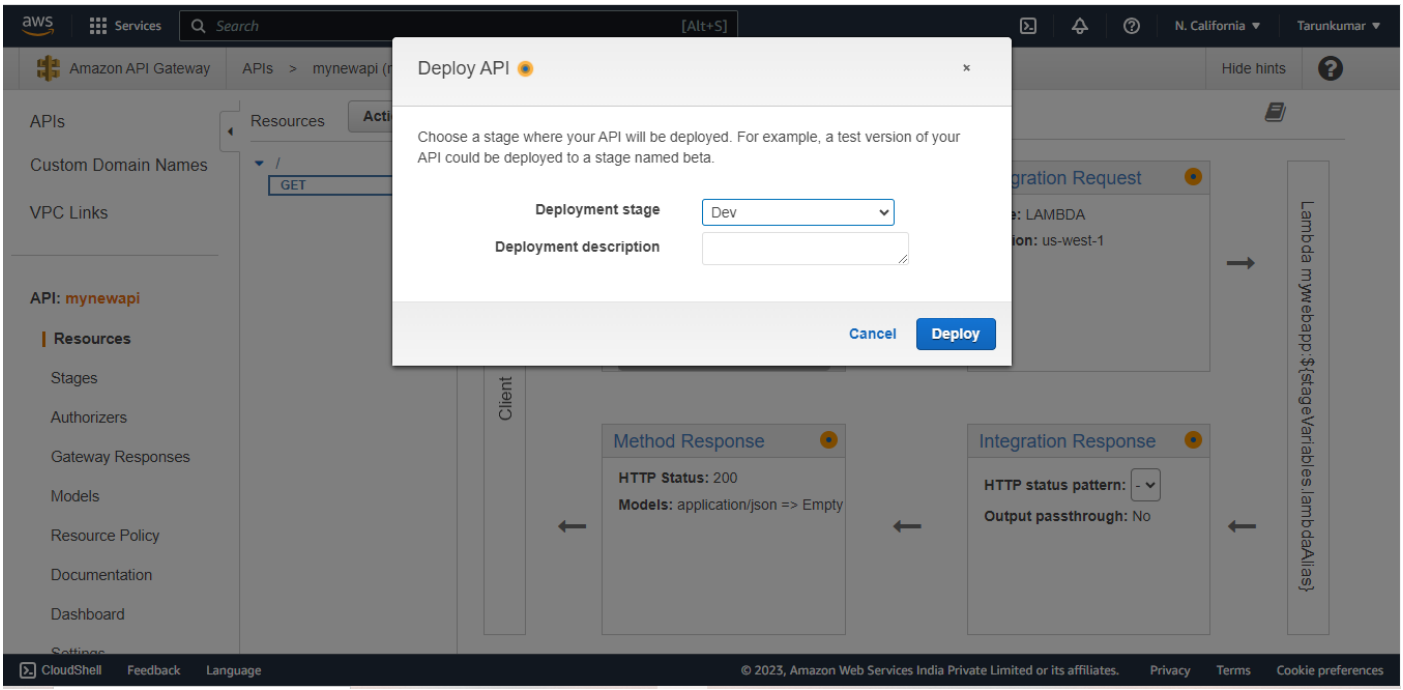
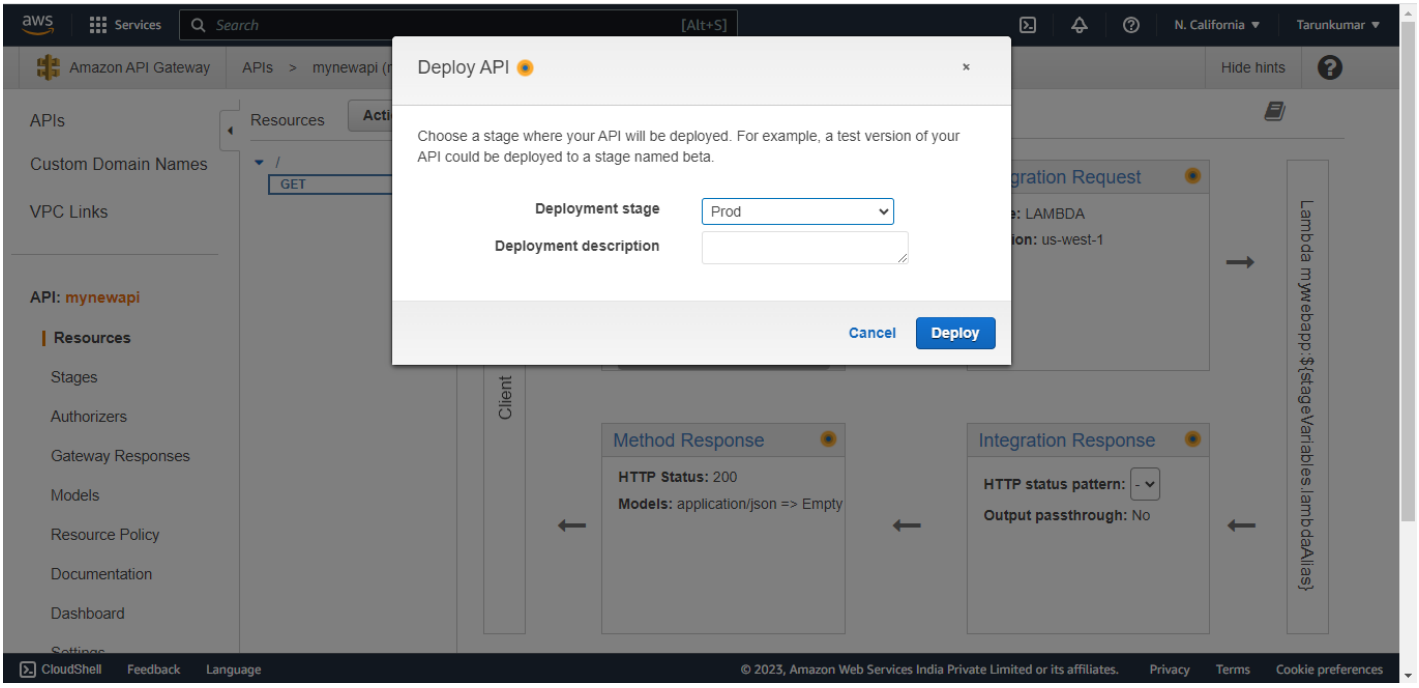
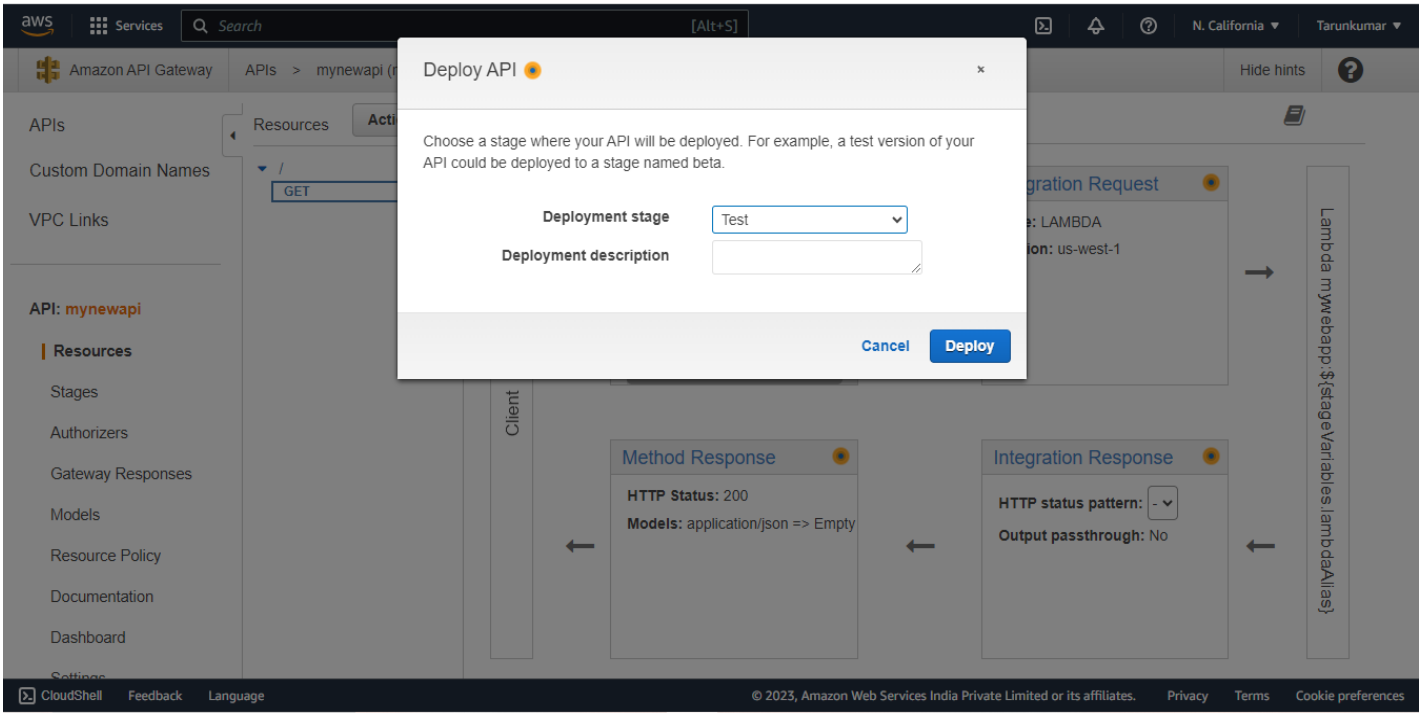
Deploy api for each stage

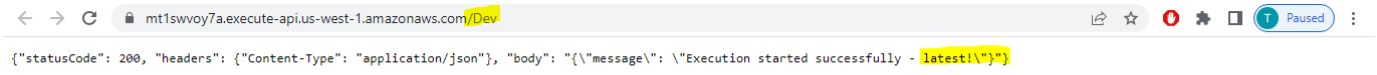




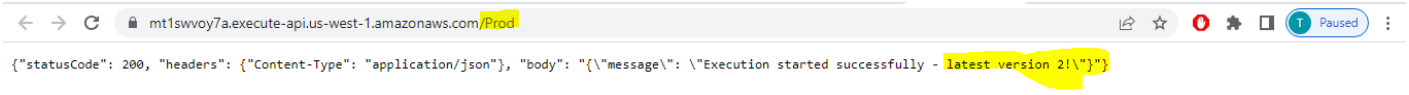


3 stages have been created and deployed successfully with 3 versions of lambda functions

Dev



Prod



Test