Introduction to Cloud Computing – CS360

Virtual Group Hackathon Exercise : Team - 2

In order for your API to invoke your Calc Lambda function, you'll need to have an API Gateway assumable IAM role. The role you create will need to have Lambda InvokeFunction permission. Otherwise, the API caller will receive a 500 Internal Server Error response.

To give the role this permission, we have used the following code

Code :

```
{
   "Version": "2012-10-17",
   "Statement": [
      {
         "Effect": "Allow",
         "Action": "lambda:InvokeFunction",
         "Resource": "*"
      }
   ]
}
```

Next we created a Lambda function using the Lambda console.

While creating a Lambda function we chose Node.js as supported rutime code.

Code :

```
console.log('Loading the Calc function');
exports.handler = function(event, context, callback) {
   console.log('Received event:', JSON.stringify(event, null, 2));
   if (event.a === undefined || event.b === undefined || event.op === undefined) {
      callback("400 Invalid Input");
   }

   var res = {};
```

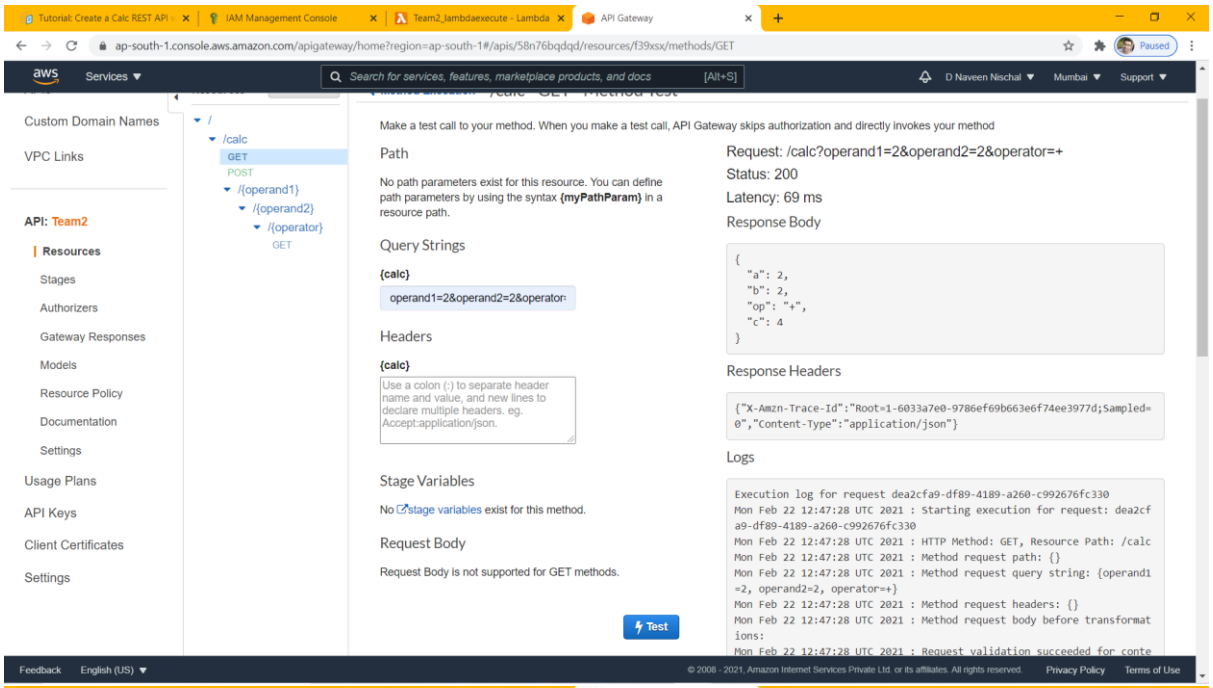
```
    res.a = Number(event.a);
    res.b = Number(event.b);
    res.op = event.op;

    if (isNaN(event.a) || isNaN(event.b)) {
        callback("400 Invalid Operand");
    }
switch(event.op)
    {
        case "+":
        case "add":
            res.c = res.a + res.b;
            break;
        case "-":
        case "sub":
            res.c = res.a - res.b;
            break;
        case "*":
        case "mul":
            res.c = res.a * res.b;
            break;
        case "/":
        case "div":

            res.c = res.b===0 ? NaN : Number(event.a) / Number(event.b);
            break;
        default:
            callback("400 Invalid Operator");
            break;
    }
    callback(null, res);
};
```

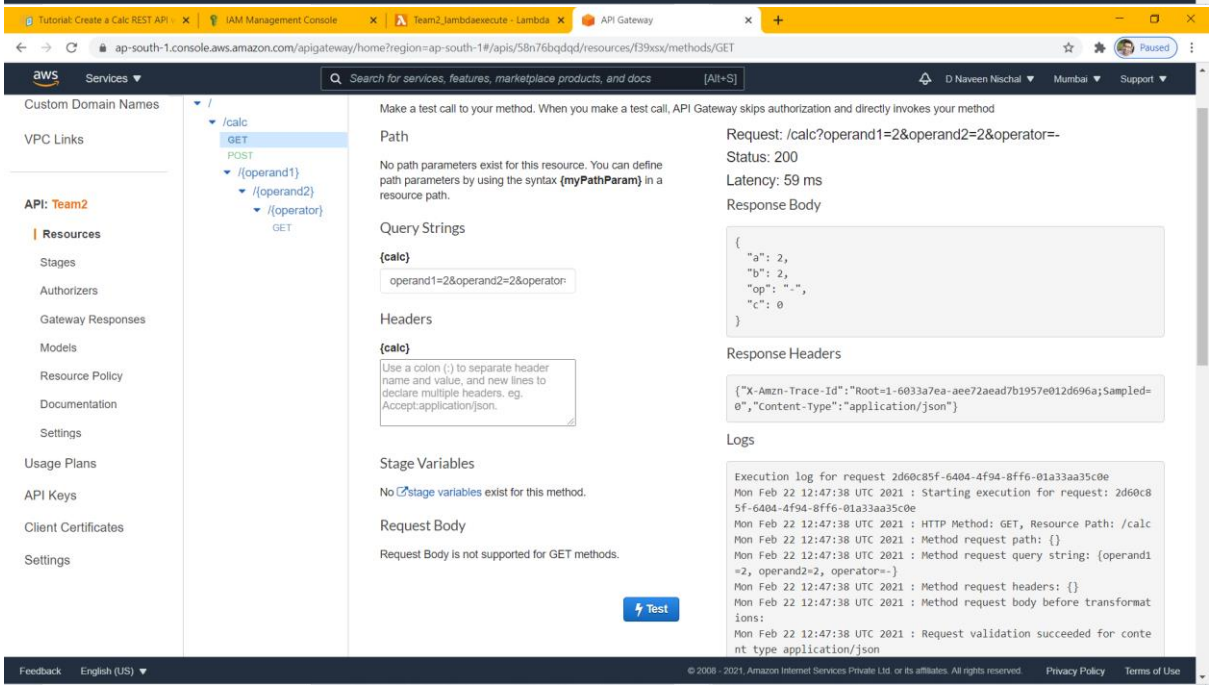
Then we tested it by creating an test event. Which worked finely.

To create an API for the Calc Lambda function you just created. In subsequent sections, we add resources and methods to it.

Integration 1: Create a GET method with query parameters to call the Lambda function

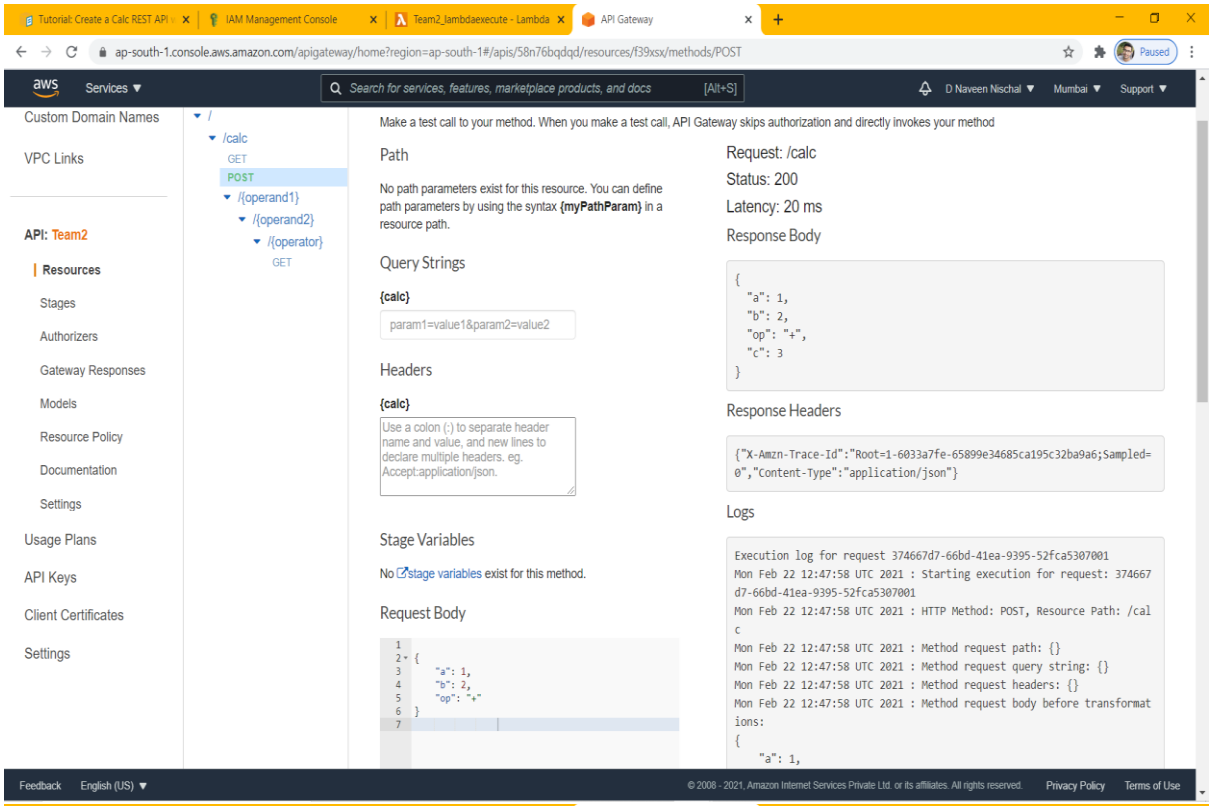
OUTPUTS :

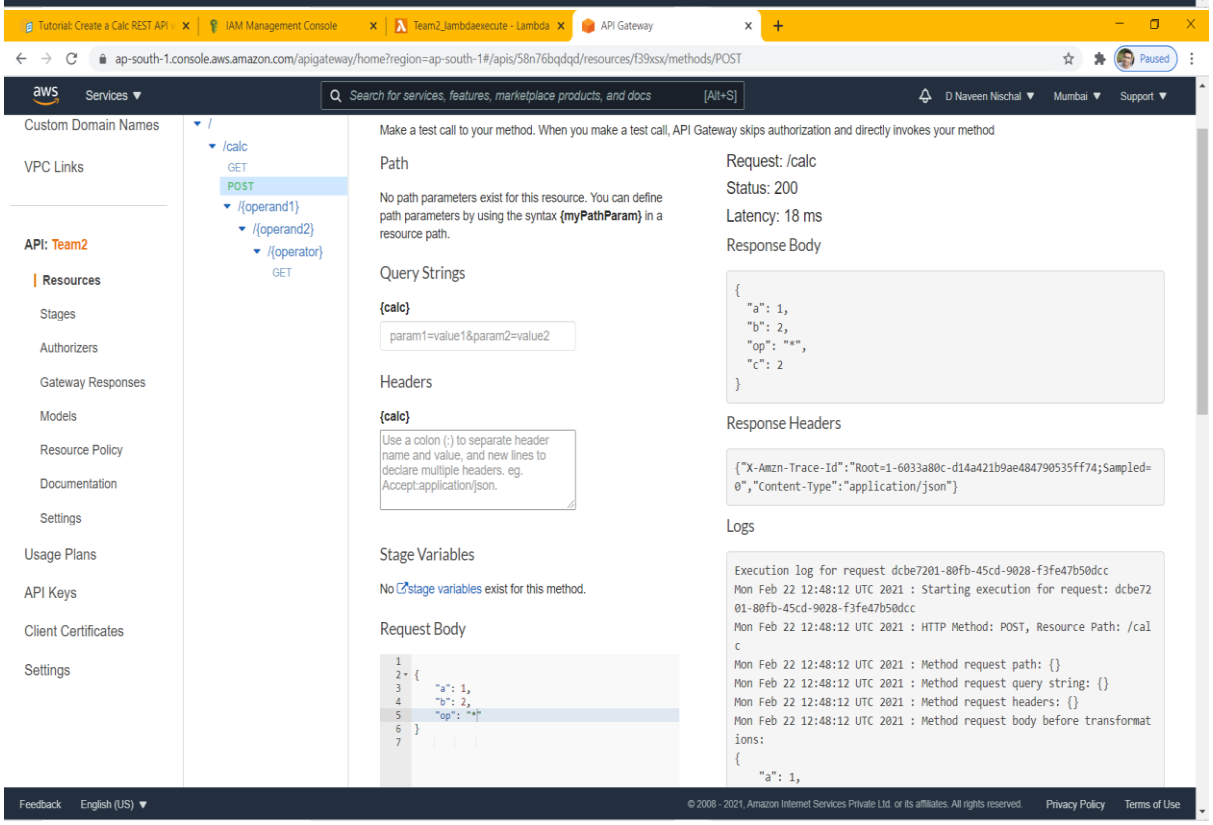




Integration 2: Create a POST method with a JSON payload to call the Lambda function

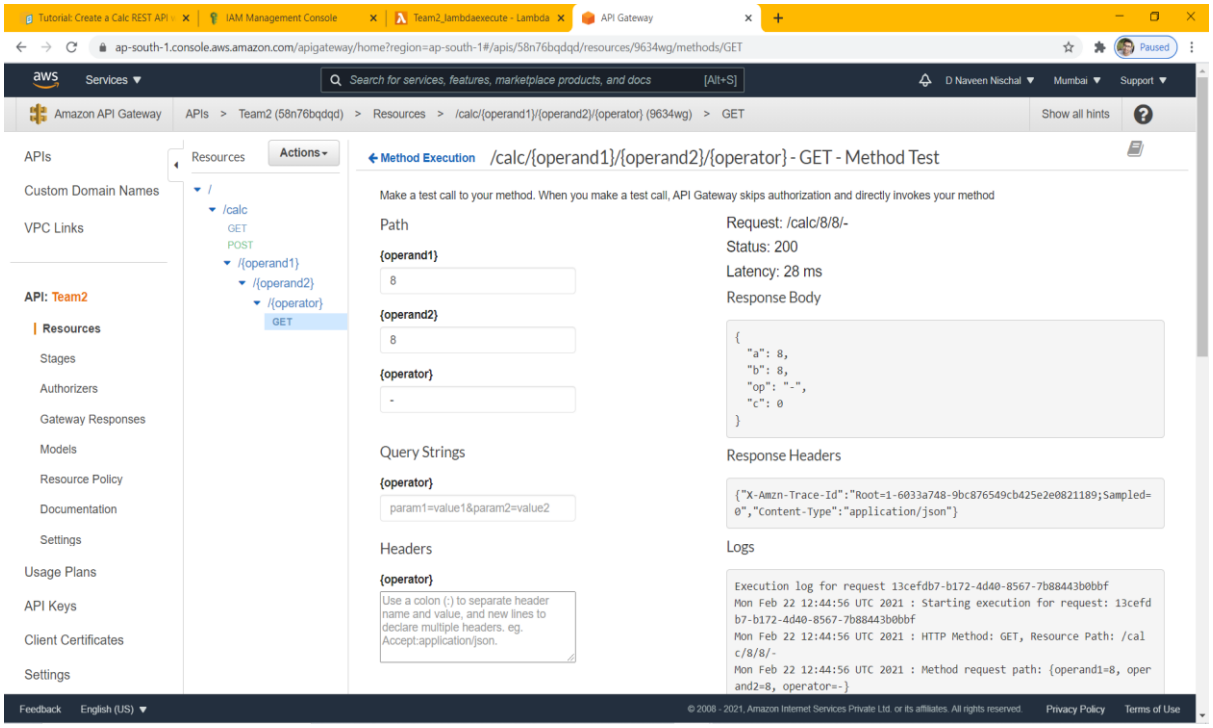
OUTPUTS :





Integration 3: Create a GET method with path parameters to call the Lambda function

OUTPUTS :



Observation and Conclusion :

Based on above outputs, we learned how to create an serverless computing through API and Lambda integration. And also we have tried this by two types of integration : 1. Lambda Integration

2. AWS Service Integration

And also we tried with both Non – Proxy integration and Proxy integration as we faced “Internal Server Error” problem.

Thank You

BY TEAM - 2

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