[AWS]

AWS Training Session No.2

Summary 23-02-2024

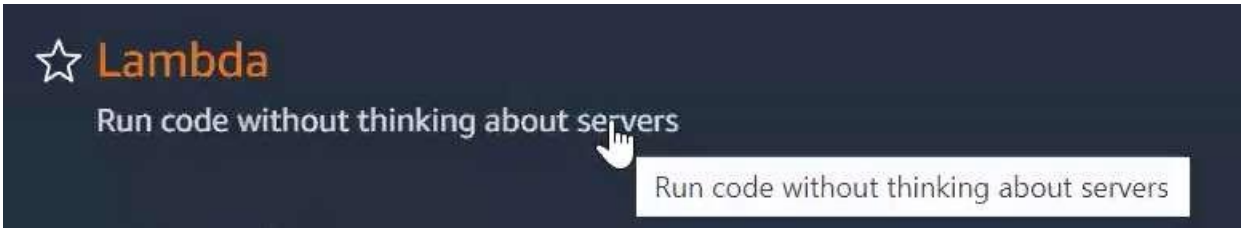
- **Computation complexity** means optimizing the resources like CPU, RAM, etc.

- Being a Cloud Engineer, two aspects are concerned i.e. **cost** and **management** of services. Let's understand an example to understand the value of these both.
- If you want to run a Python app to mail on EC2(AWS), as soon as the task is completed (mail is sent), we stop the instance to save the cost because it EC2 instance is running which causes the cost. Again, to send the mail we have to start the instance and so on…
- The conclusion is that it is slow management to use the service. And this management is not fully optimized.

- According to the above scenario, the conclusion is that we are required to run the app only when we need to send mail.
- Therefore the AWS model comes into play to solve the problem where **pre-provisioning** is provided by the cloud we just have to deploy our app, in this case cloud will charge only for the app running time.

- If the program is run for 10 sec, the cloud charges for only 10 sec. This time is called **compute time.**

- **Provisioning**- setup on hardware and OS with Run time environment, libraries, webserver etc.
- In this cloud model, from the user's point of view, it looks like we don’t have to manage the server, the cloud fully manages the services on our behalf.
- **Serverless**: the services managed fully by the cloud are categorized as Serverless services. E.g. Lambda.



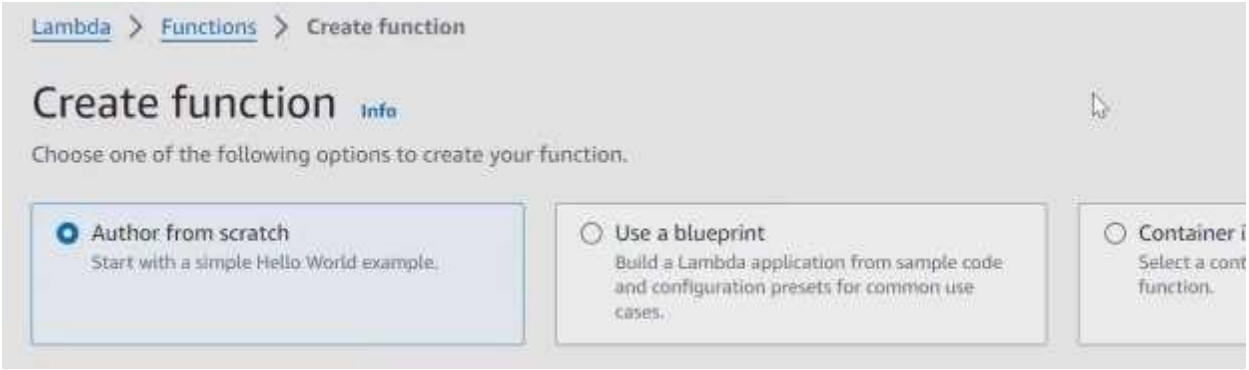
- **Micro-services –** the app is not given in as a single program instead n number of functions are given to the cloud engineer by the developer. Every function is a micro-service and the required micro-service is called at a time accordingly.

- To execute the micro-service or function, AWS cloud has **serverless Function-as-a-service** i.e. Lambda is used.

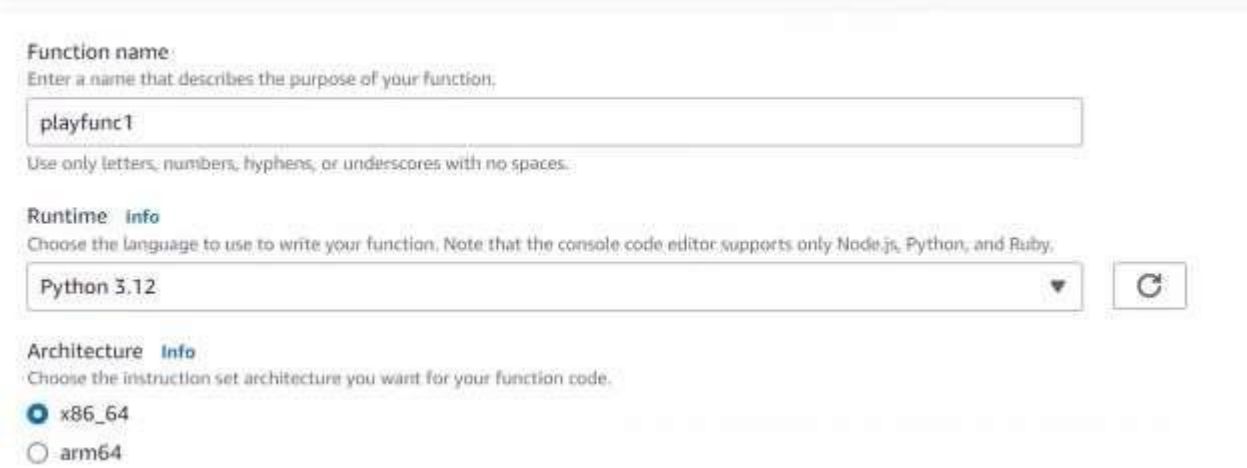
- Create a Lambda function:

  1. Click on “Create a function”

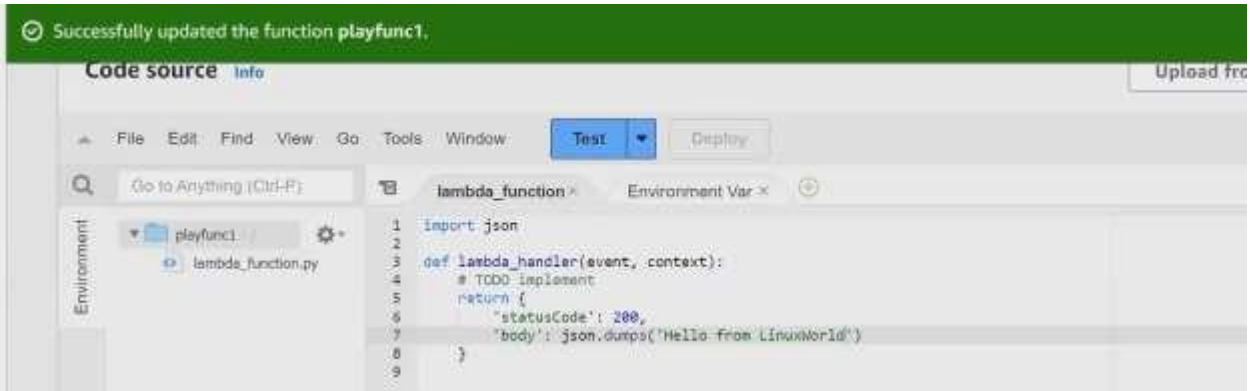
  2. Choose “Author from scratch”



3. Give the name of a function and choose Runtime then click on “Create function”:



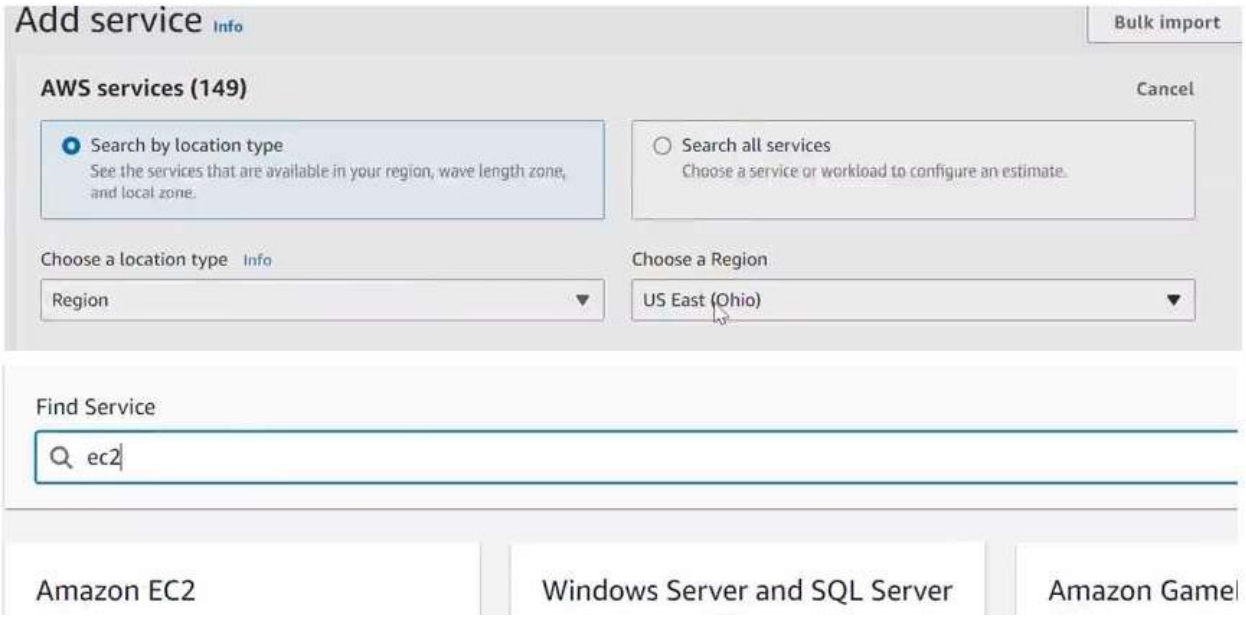
4. Here we copy our code, deploy, and click on test to run the code:



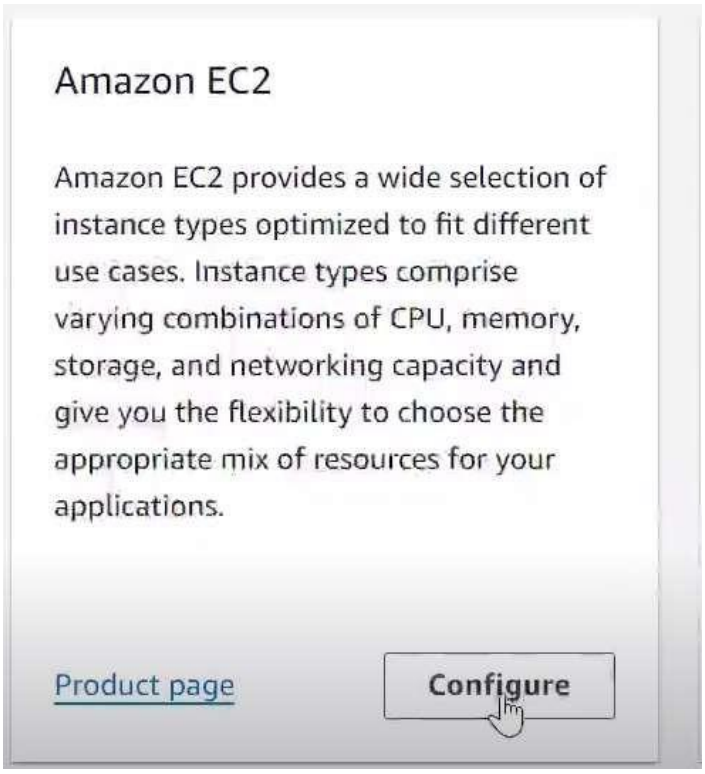
- In the Execution result we can see the Billed Duration time, for this time and memory size charge will be generated.

- **AWS pricing calculator**: used to create the estimated cost of service by adding the details of service.

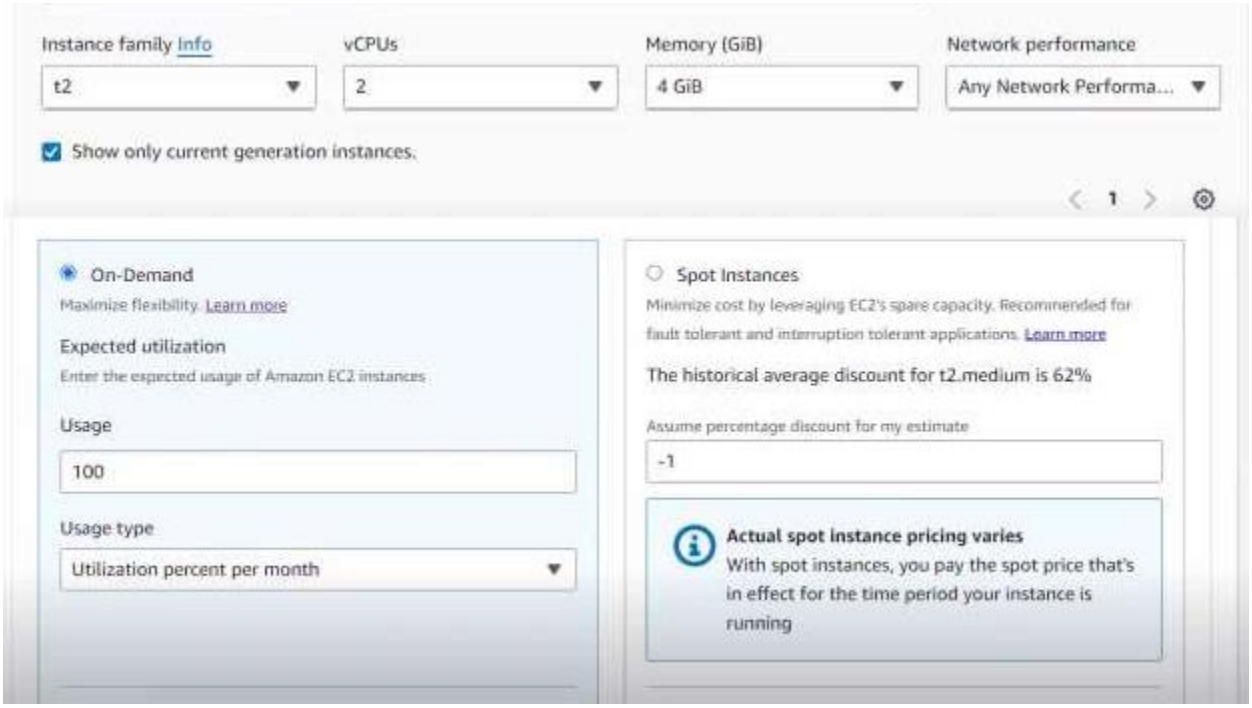
1. Add the service e.g. ec2 and region.



2. Click on “Configure”

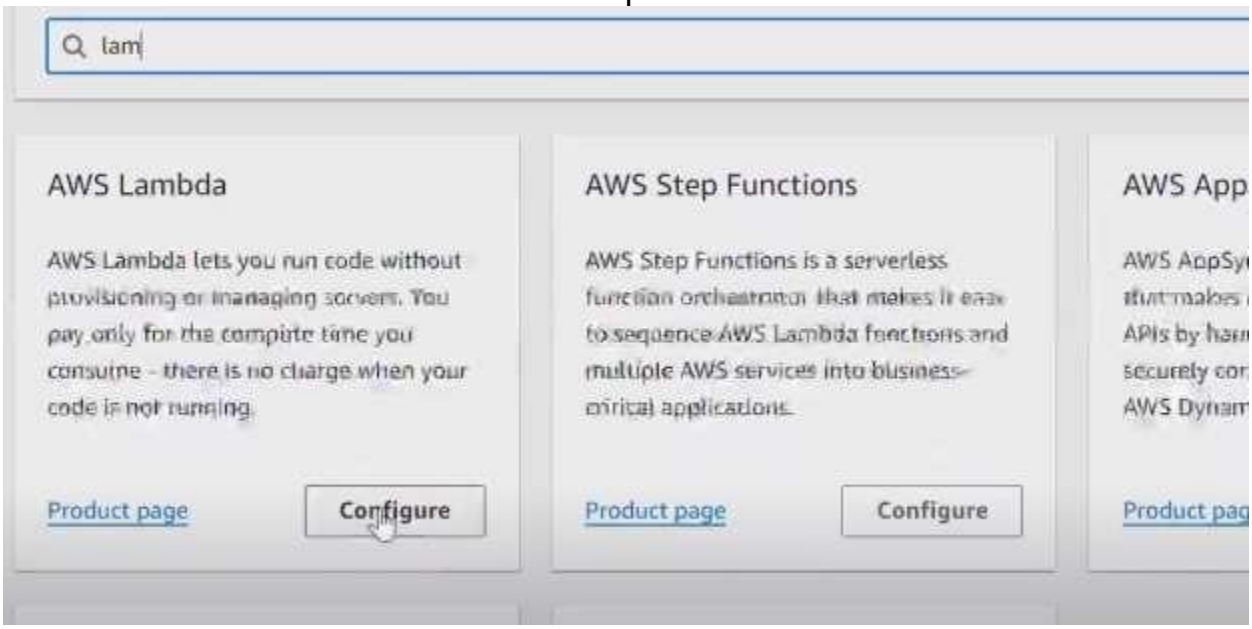


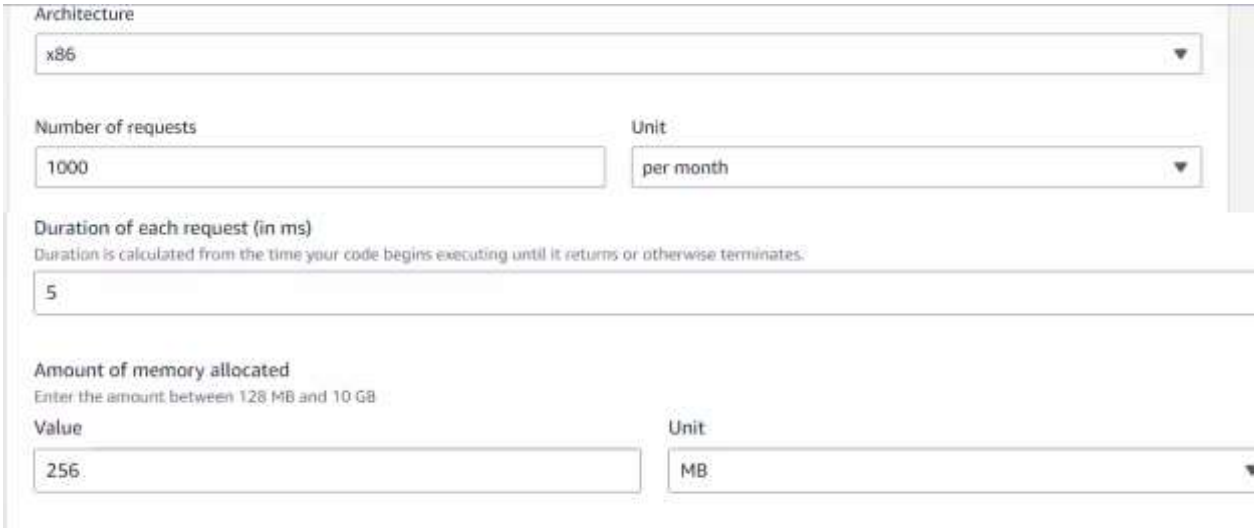
3. Add the ec2 instance details.



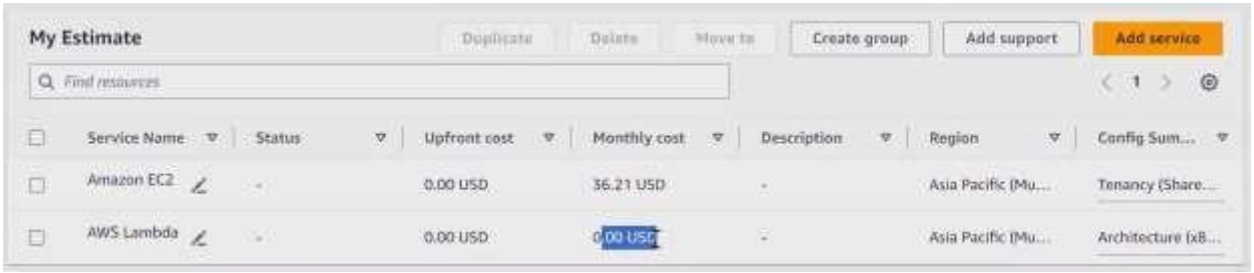
4. Click on add service

5. Add service lambda and add the required details.





6. Click on “save and view summary” and we can see the estimated cost for both of the services.



Task 2: Explore **AWS pricing calculator**, and create estimate cost of some services(ec2, lambda and more) and compare.