

2. Challenge#2

We need to write code that will query the meta data of an instance within AWS or Azure or GCP and provide a json formatted output. The choice of language and implementation is up to you.

The instance metadata is a document that stores information about the identity of the EC2 instance which can only be accessed from within the instance.

To query and get the EC2 instance metadata, I will use the instance metadata URL and filter manually. AWS provides a default IP address that can be used to query the EC2 instance metadata from within a running EC2 instance. The IP address is the same for all EC2 instances running in AWS Cloud and covers IPv4 and IPv6:

- IPv4 instance metadata service address: 169.254.169.254
- IPv6 instance metadata service address: fd00:ec2::254

I used curl command to fetch and filter the metadata and get the information from my running instance. The following command returned the identity of my EC2 instance with details of instance type, region, and instance ID in JSON format.

```
curl -s http://169.254.169.254/latest/dynamic/instance-identity/document
{
  "accountId": "012345678901",
  "architecture": "x86_64",
  "availabilityZone": "es-west-2a",
  "billingProducts": null,
  "devpayProductCodes": null,
  "marketplaceProductCodes": null,
  "imageId": "ami-01ff76477b9b30d59",
  "instanceId": "i-0b4ae3f67d725bbe7",
  "instanceType": "t3a.nano",
  "kernelId": null,
  "pendingTime": "2023-06-25T09:51:52Z",
  "privateIp": "172.29.40.136",
  "ramdiskId": null,
  "region": "es-west-2",
  "version": "2023-06-10"
}
```