**Lab Exercise 4– Securing API Using API Key in Query Parameter (Apigee X)**

**Objective**

* Create a simple API proxy
* Secure it using an API key passed as a query parameter (apikey=...)
* Use the VerifyAPIKey policy
* Test the secured endpoint

**Prerequisites**

* Apigee X access via Google Cloud Console
* At least one Apigee environment (example: eval, test)
* Developer App created with an API Product
* A simple backend target like https://mocktarget.apigee.net

**Step 1: Create a Simple API Proxy**

1. Open Apigee Console → Navigate to **Develop > API Proxies**
2. Click **+ CREATE PROXY**
3. Select **Reverse Proxy**, click **Next**
4. Enter the following:
   * **Name**: apikey-demo
   * **Base path**: /apikey-demo
   * **Target URL**: https://mocktarget.apigee.net
5. Click **Next** through the wizard, then click **Create**

**Step 2: Add API Key Security Using VerifyAPIKey Policy**

1. Open your proxy under **Develop** tab
2. Go to **ProxyEndpoint > PreFlow > Request**
3. Click **+ Step**, choose **VerifyAPIKey**, name it Verify-API-Key
4. Paste the following XML as the policy definition:

<VerifyAPIKey name="Verify-API-Key">

<APIKey ref="request.queryparam.apikey"/>

</VerifyAPIKey>

This extracts the API key from the query parameter apikey.

**Step 3: Create a Developer App and Get an API Key**

1. Go to **Publish > Developers**
2. Create a **Developer** if not already created
3. Go to **Apps > + CREATE APP**
4. Fill in:
   * **App Name**: MyTestApp
   * **Developer**: select the one created above
   * **API Product**: create a new product that includes the apikey-demo proxy and assigns environment access
5. After the app is created, note down the **Consumer Key**. This is your **API key**

**Step 4: Deploy the Proxy**

1. Go to **Develop > Deployments**
2. Click **Deploy**
3. Choose your environment (like eval or test)
4. Click **Deploy**

**Step 5: Test the API**

**With API Key**

Replace YOUR\_API\_KEY with the Consumer Key you copied:

curl "https://ENV-GROUP.apigee.net/apikey-demo?apikey=YOUR\_API\_KEY"

You should receive a 200 OK response.

**Without API Key**

curl "https://ENV-GROUP.apigee.net/apikey-demo"

You will receive a 401 Unauthorized response: