3 March 2025

**Amazon Rekognition**

**VERSION: 1.0.0**

# **Overview**

Amazon Rekognition is a deep learning-based image and video analysis service that makes it easy to add powerful computer vision capabilities to your applications. It enables automatic detection, analysis, and comparison of objects, scenes, faces, text, and activities in images and videos.It leverages pre-trained deep learning models to provide high accuracy in identifying visual content, facial analysis, and object recognition — all without needing to build and train your own models.

## **Use case:**

* Detect objects, scenes, and activities in real-time using the DetectLabels API — useful in content moderation, automation, or media cataloging.
* Identify unsafe or inappropriate content such as nudity or violence using the DetectModerationLabels API — critical for social media or UGC platforms.
* Detect and recognize text in natural images (e.g., license plates, street signs, packaging) using the DetectText API.
* Perform facial analysis to detect age range, emotions, and facial landmarks using DetectFaces.
* Compare two faces and determine if they match using the CompareFaces API — helpful for identity verification.
* Celebrity recognition in media content with RecognizeCelebrities.
* Detect PPE (Personal Protective Equipment) on people in images using DetectProtectiveEquipment — useful in workplace safety monitoring.
* Moderate video and image content for adult or violent content.

# **Getting Started**

## **Prerequisites**

Before you start using the Amazon Rekognition Data Adapter, ensure you have the following:

* An account with [AWS](https://aws.amazon.com/free/?gclid=CjwKCAiApsm7BhBZEiwAvIu2Xx9XbHAMeYbCeX8b6nQO-Z5uzxDYs6WCKud8CnDECDtDCK-mKS8qIhoCaVoQAvD_BwE&trk=2738afd4-9401-4d18-8e3e-1b1c194dea07&sc_channel=ps&ef_id=CjwKCAiApsm7BhBZEiwAvIu2Xx9XbHAMeYbCeX8b6nQO-Z5uzxDYs6WCKud8CnDECDtDCK-mKS8qIhoCaVoQAvD_BwE:G:s&s_kwcid=AL!4422!3!509606977839!p!!g!!aws!12618685604!120373368136&all-free-tier.sort-by=item.additionalFields.SortRank&all-free-tier.sort-order=asc&awsf.Free%20Tier%20Types=*all&awsf.Free%20Tier%20Categories=*all)
* Volt MX Iris
* [HCL Foundry](https://manage.hclvoltmx.com/)

## **Platforms Supported**

### Mobile

#### iOS

#### Android

## **Importing the app**

## You can import Amazon RekognitionData Adapter into HCL Foundry directly from the voltmx Forge website or by importing the data adapter zip file.

## **To import the data adapter zip file, do the following:**

1. Log on to your HCL Foundry. The **Dashboard** page appears by default.
2. In the left pane, click the **API Management** menu. The **APIs** tab opens by default.

## A screenshot of a computer Description automatically generated

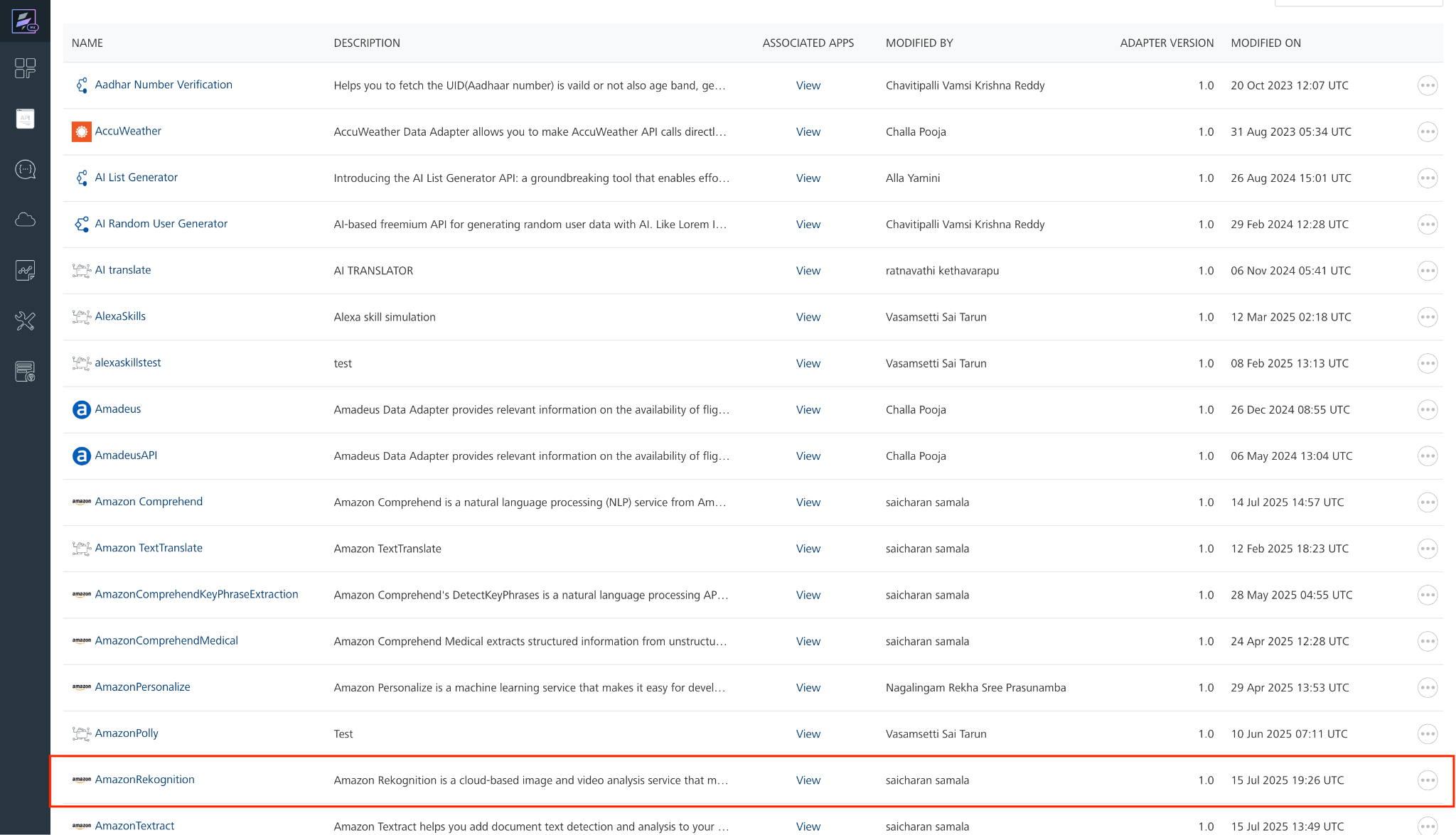
## Click the **Custom Data Adapters** tab. The **Custom Data Adapter** page appears.

## 

## Click **Import**. The **Import Data Adapter** dialog appears.

## A screen shot of a computer Description automatically generated

1. Click **IMPORT FROM HCL FORGE**. The **Import Data Adapter** from **HCL Forge** dialog appears with a list of available data adapters.
2. Click **Import**. **Amazon Rekognition** data adapter is listed on the **Custom Data Adapters** page.



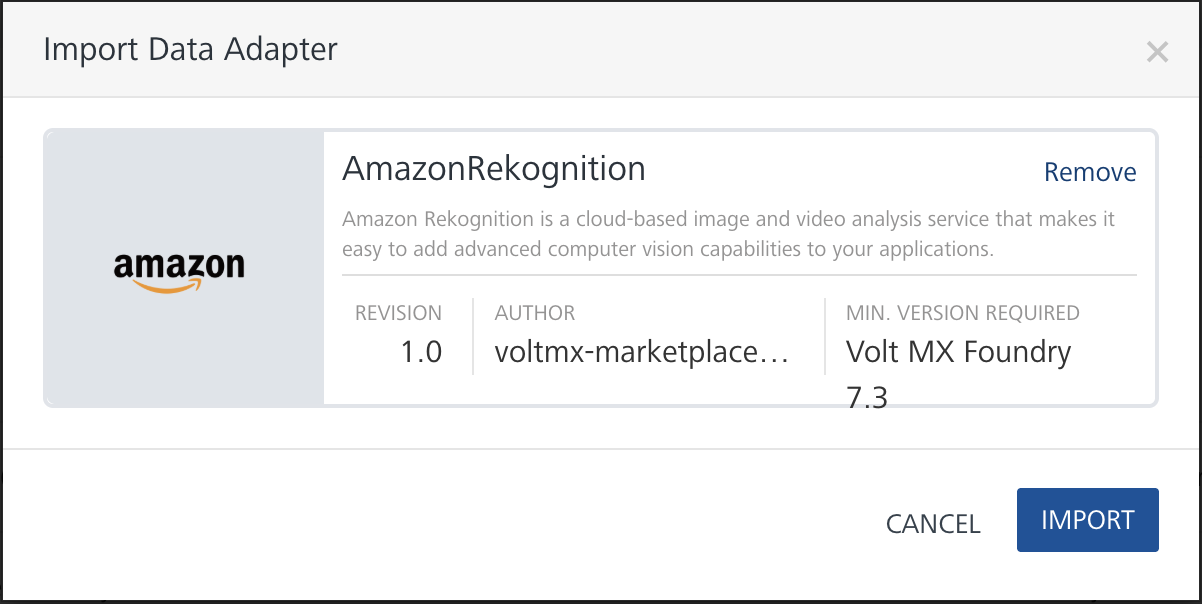
**To import the data adapter zip file, do the following:**

1. Perform steps 1 to 4 in the above procedure
2. Drag the data adapter zip file into the **Drag a Data Adapter** box.

Or

Click **browse**. The **Open** dialog appears.

Navigate to the location where you downloaded the data adapter (zip file) on your computer, select the data adapter, and click **Open**. The **Import Data Adapter** dialog shows the selected data adapter.

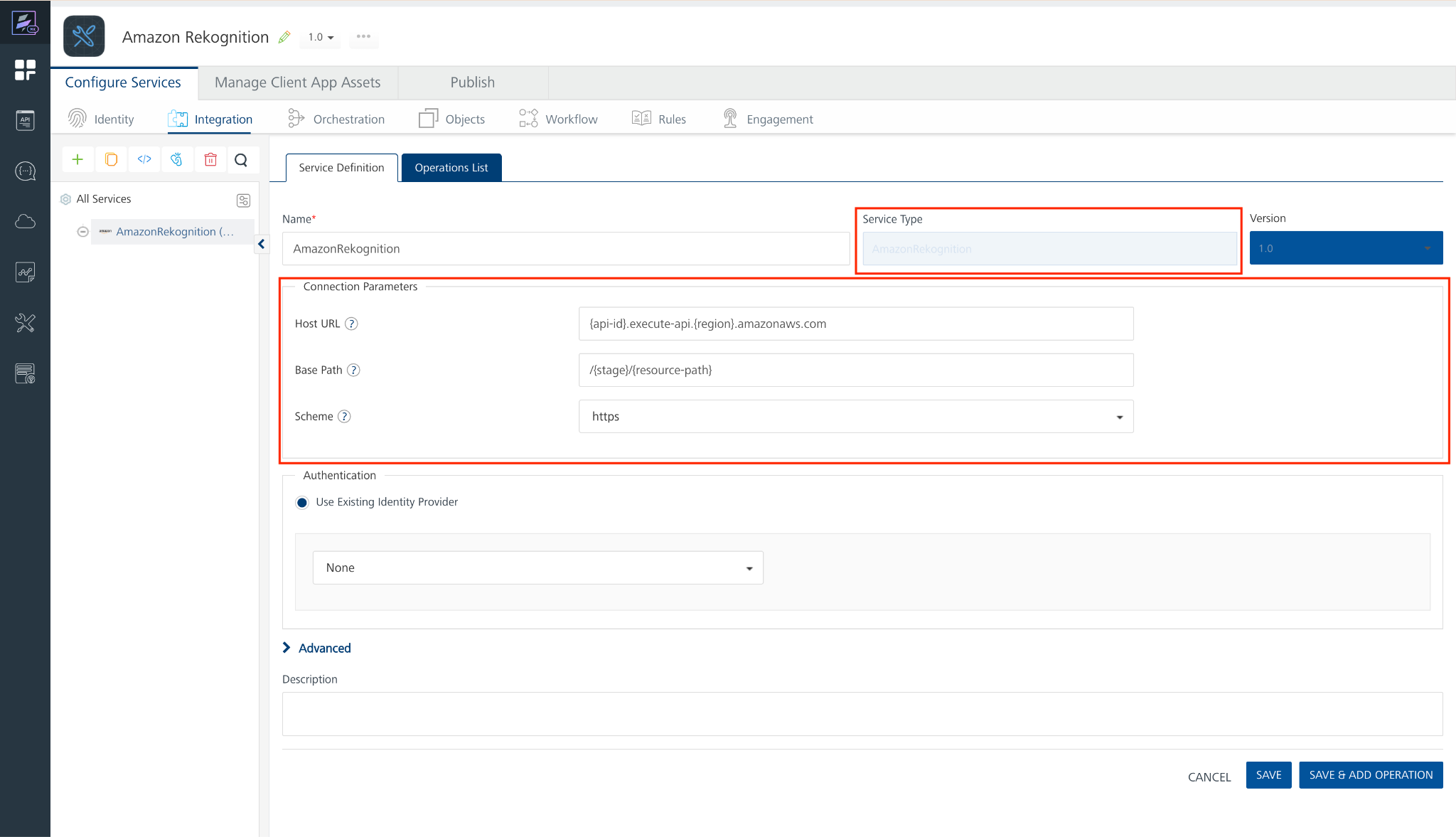


## **Creating an Integration Service with Amazon Rekognition:**

After you import Amazon RekognitionData Adapter into Foundry, you must create an integration service with service type as Amazon Rekognition .

**To create an integration service with Amazon Rekognition, do the following:**

1. Log on to your HCL Foundry. The **Dashboard** page appears by default.
2. In the left pane, click the **API Management** menu. The **APIs** tab opens by default.
3. Click the **Integration** tab. The **Integration** tab opens with a list of existing integration services.
4. Click **CONFIGURE NEW**. The **Service Definition** tab opens.
5. In the **Name** box, type a unique name for your service.
6. From the **Service Type** list, select **Amazon Rekognition.**



1. Replace the Host URL and Base Path values, then click 'Save'.

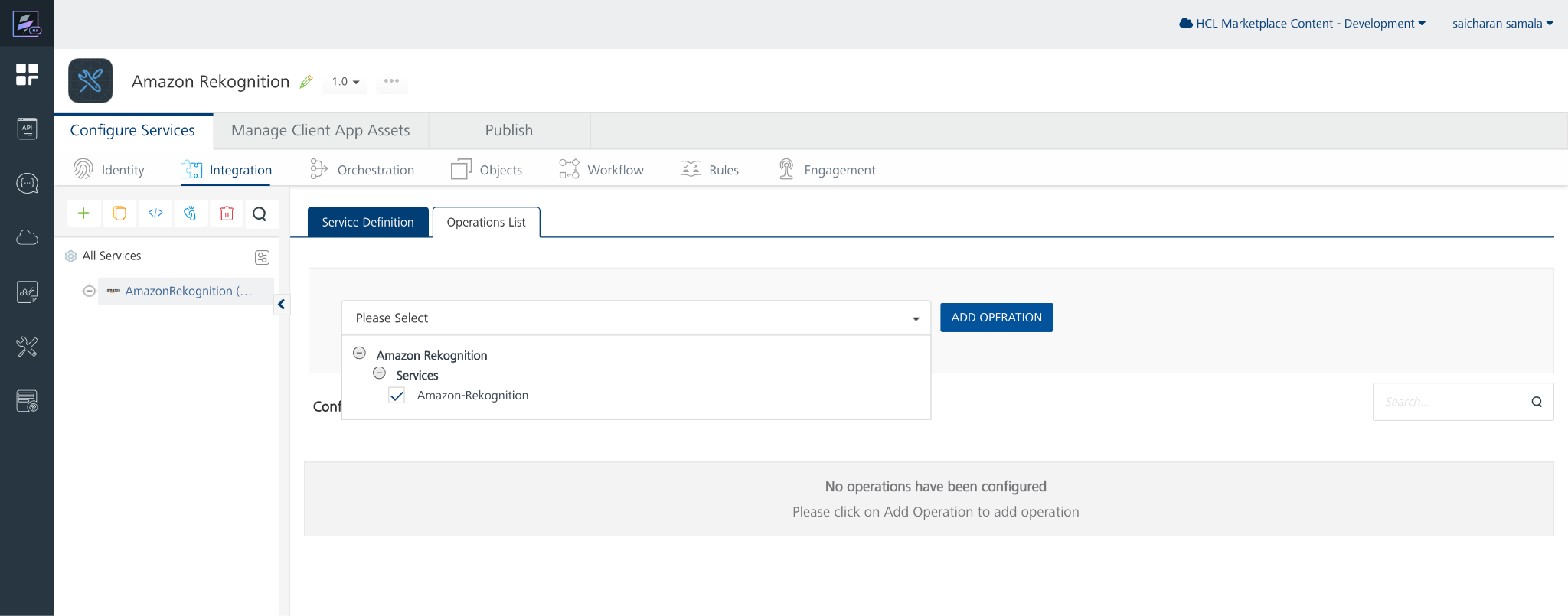
## **Creating an Operation**

To make any API call in the HCL Foundry console, you must create an operation for the respective API and then execute the operation. Executing an operation involves making the API call and displaying the response.

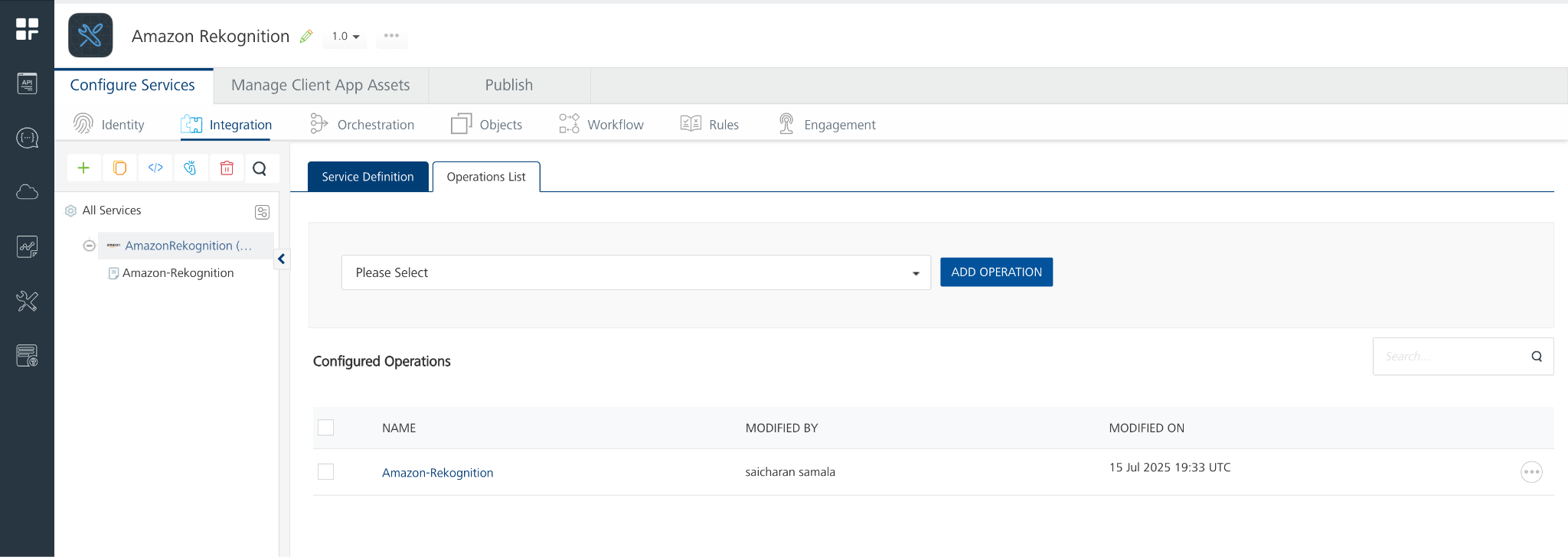
This section provides steps to create an operation for the **Amazon Rekognition** API.

Steps to create an operation for the **Amazon Rekognition** API:

1. Log on to your HCL Foundry. The **Dashboard** page appears by default.
2. In the left pane, click the **API Management** menu. The **APIs** tab opens by default.
3. Click the **Integration** tab. The **Integration** page appears with a list of existing integration services.
4. From the list of integration services, select the integration service that you have created with service type as **Amazon Rekognition**. The **Service Definition** tab of the selected integration service opens by default.
5. Click the **Operations List** tab. The **Operations List** tab opens.



1. Select **Amazon-Rekognition** and Click Add Operation.



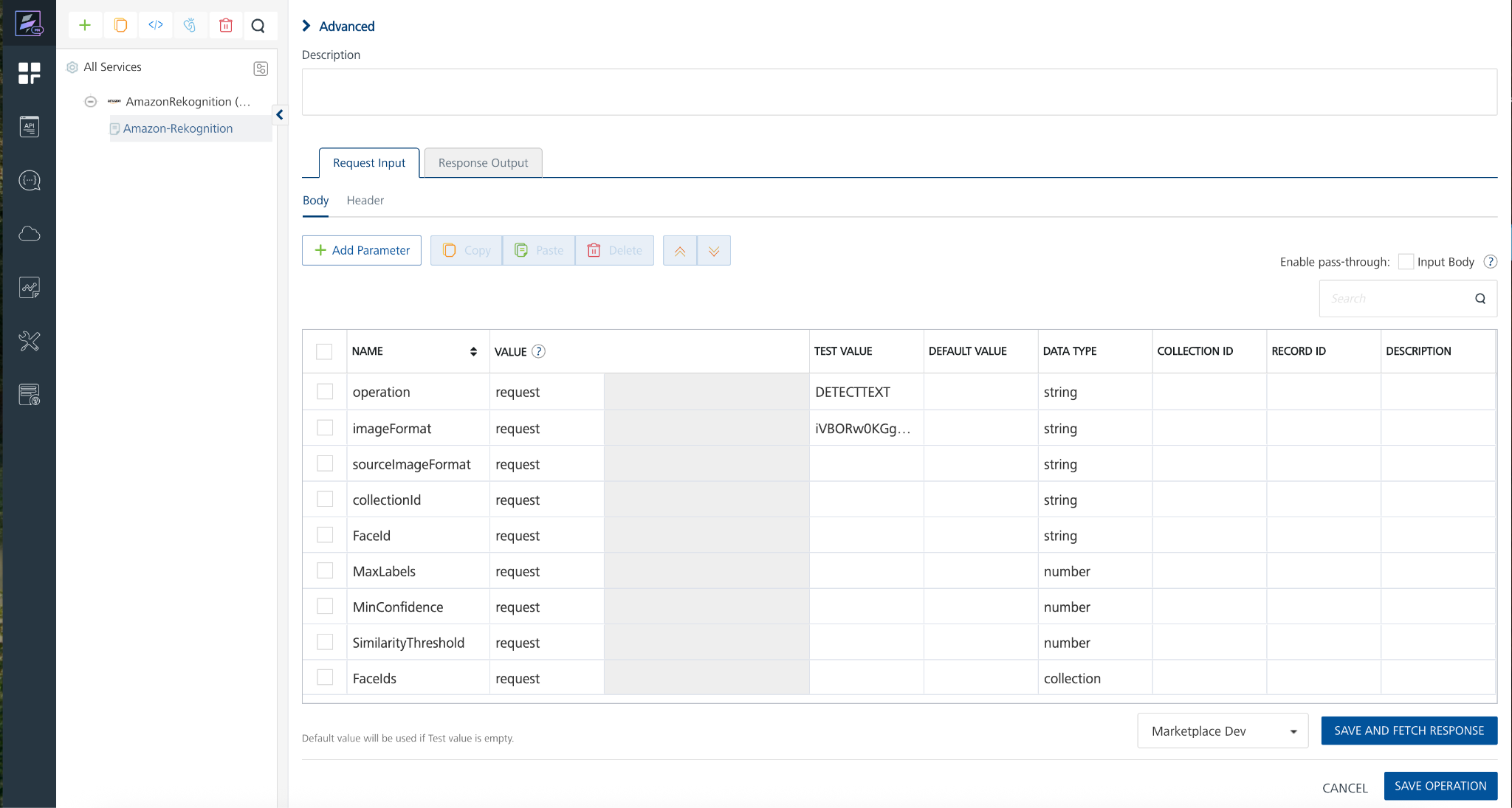
## **Executing Operation**

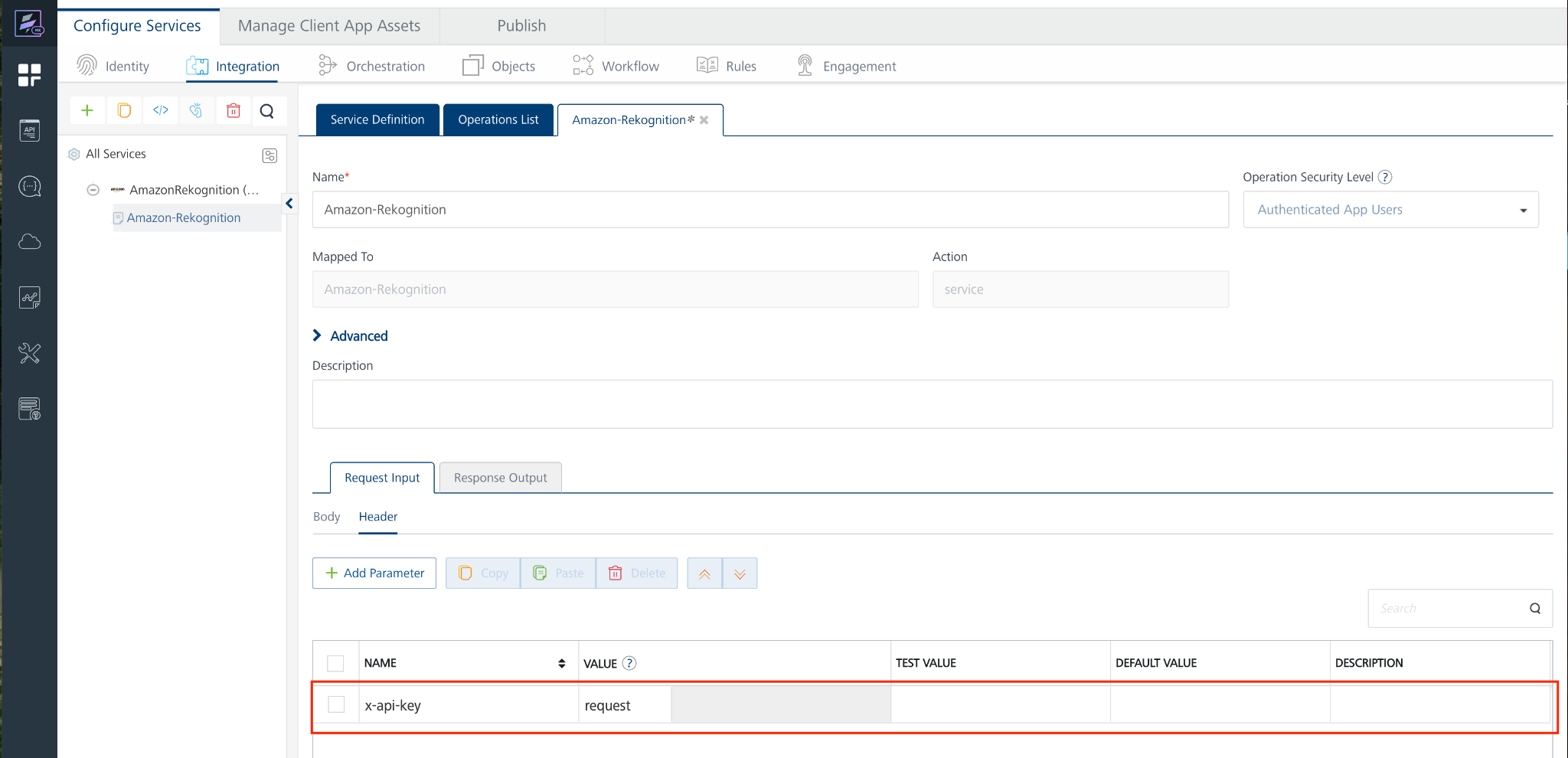
Executing an operation involves making the API call by setting the necessary parameters and displaying the response. The procedure to execute any operation is same, but the request parameters of the APIs vary. For more information on request parameters of each API refer to [link](https://docs.aws.amazon.com/textract/latest/dg/API_Operations.html).

This section provides steps to execute the **Amazon Rekognition** (explained in Creating an Operation).

**Steps to execute the Amazon Rekognition operation:**

1. Log on to your Hcl Foundry. The **Dashboard** page appears by default.
2. In the left pane, click the **API Management** menu. The **APIs** tab opens by default.
3. Click the **Integration** tab. The **Integration** tab opens with a list of existing integration services.
4. From the list of integration services, select the integration service that you have created with service type as **Amazon Rekognition**. The **Service Definition** tab of the selected integration service opens by default.
5. Click the **Operations List** tab.
6. In the **Name** box, the name of the operation is displayed by default. If you want, you can change the name.
7. In the Request Input tab, under the Body section, provide the operation name (as used in the Lambda function code) and its corresponding input parameters.



1. Enter the **X-api-key (API key)**value that is created in the Set up API Gateway in default value.  
   
2. Click **SAVE AND FETCH RESPONSE**. The **Output Result** dialog appears with the response. Otherwise, the **Output Result** shows an error.



### **D. Create an IAM Role**

1. Navigate to IAM in [AWS Console](https://aws.amazon.com/console/):
   * Go to the IAM service.
2. Create a New Role:
   * Click Roles -> Create Role.
   * Choose **AWS Service** as the trusted entity type.
   * Select Lambda as the use case.
3. Attach Policies:
   * Attach the following policies:

* AmazonRekognitionFullAccess
* [AmazonS3FullAccess](https://us-east-1.console.aws.amazon.com/iam/home?region=us-east-1#/policies/details/arn%3Aaws%3Aiam%3A%3Aaws%3Apolicy%2FAmazonS3FullAccess)
* [AWSLambda\_FullAccess](https://us-east-1.console.aws.amazon.com/iam/home?region=us-east-1#/policies/details/arn%3Aaws%3Aiam%3A%3Aaws%3Apolicy%2FAWSLambda_FullAccess)

1. Name and Create the Role:
   * Name the role and create it.

### **E. Create the Lambda Function**

1. Navigate to Lambda in [AWS Console**:**](https://aws.amazon.com/console/)
   * Open the **Lambda** service.
2. Create a New Function**:**
   * Click **Create function**.
   * Choose **Author from scratch**.
   * Provide a function name.
   * Choose **Python 3.13** as the runtime.
   * Under **Change default execution role**, select **Use an existing role** and choose the role created earlier.
3. Add Amazon Rekognition Logic**:**
   * Replace the default code with your **Lambda function logic (**[**available here**](https://github.com/HCL-TECH-SOFTWARE/volt-mx-samples/tree/main/MP/AWSLambda/AmazonRekognition)**)** and click Deploy.

### **F. Set Up API Gateway**

1. Navigate to API Gateway in [AWS Console](https://aws.amazon.com/console/):
   * Open the **API Gateway** service.
2. Create a New API:
   * Select Rest API and click Build.
   * Give a Api name and click create Api.
3. Create a Resource and Method:

* Click on Create Resource and give Resource Name.
* Select the created Resource and Click Create Method.
* Choose **POST** as the method type, select **Lambda Function** and choose your **Lambda function**.
* In **Method Request Settings**, enable **API Key Required**.
* Click **Save** and **Deploy**.
* **Deployment Stage**: Choose New Stage, give **Stage Name**
* Deploy the API.

1. Deploy the API:

* Click **Deploy API**.
* Select **New Stage** and enter a **Stage Name**.
* Click **Deploy**.

1. Create an API Key:

* In API Gateway, go to API Keys.
* Click Create API Key → Select Auto Generate.
* Give any name to the key.
* Click Save.

1. Create a Usage Plan & Associate API Key:

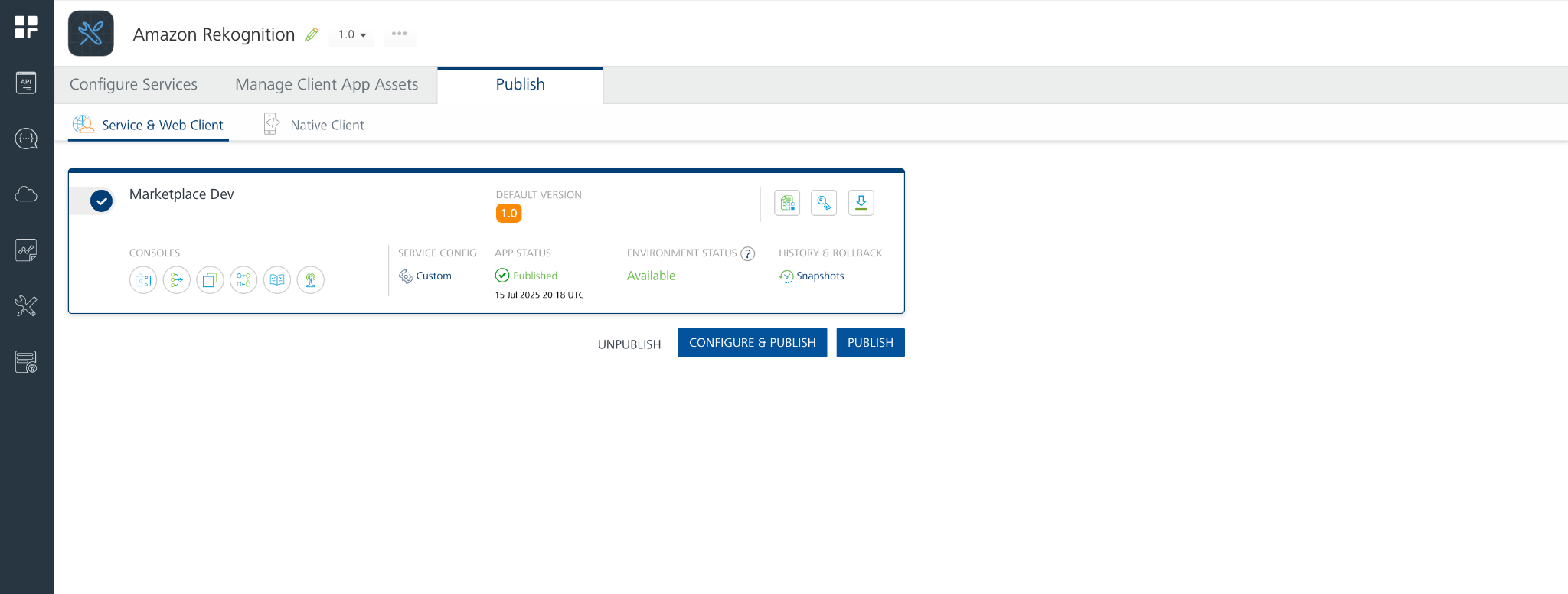
* In API Gateway, go to **Usage Plans.**
* Click **Create Usage Plan**, give Name, Enable Throttling, Enable Quota.
* Select the usage plan created, under Associated stages select Add Stage. In stage details give API name and Stage created in step-4 and click Add to Usage plan.
* Select the usage plan created, under Associated API Keys select Add API Key. In API key details under Type select Add existing key and Under API Key give API Key Name.
* Deploy Api.

1. Note the API Endpoint:

* Under **Stages**, find the **Invoke URL**.
* Replace the **Host and Paths** in your **Amazon Rekognition Adapter** with this **Invoke URL**.

## **3. Publishing the App in HCL FOUNDRY:**

After adding the Amazon Rekognition Data Adapter to your app and configuring the necessary configurations, you must publish the app to HCL Foundry. For more information, refer to [Publish a foundry app.](https://opensource.hcltechsw.com/volt-mx-docs/docs/documentation/Foundry/voltmx_appfactory_user_guide/Content/FoundryPublish.html)



**4. REFERENCES**

[Amazon Rekognition Actions](https://docs.aws.amazon.com/rekognition/latest/APIReference/Welcome.html)

**5. REVISION HISTORY**

Adapter version 1.0.0:

1. **Known Issues**

None

1. **Limitations**

None