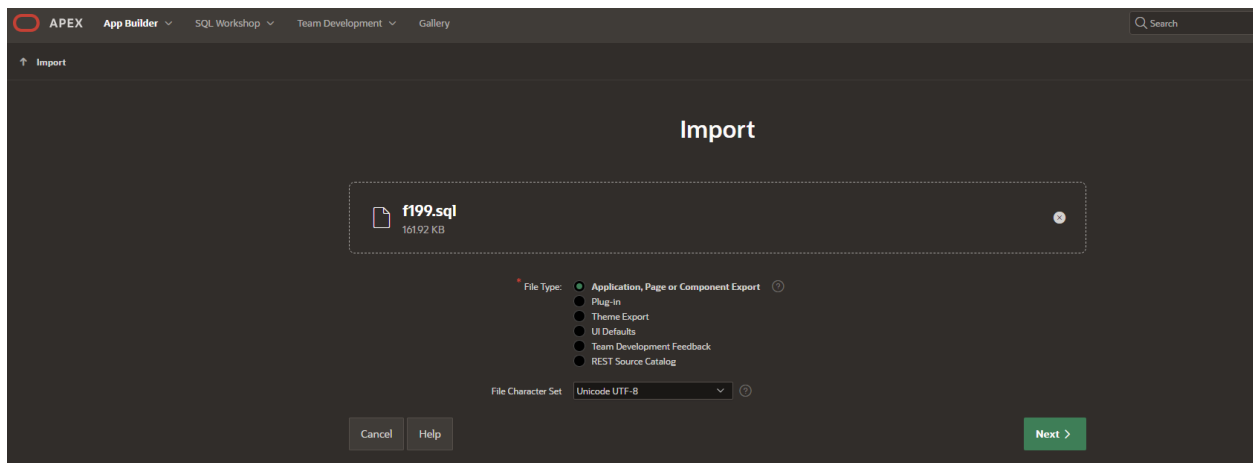


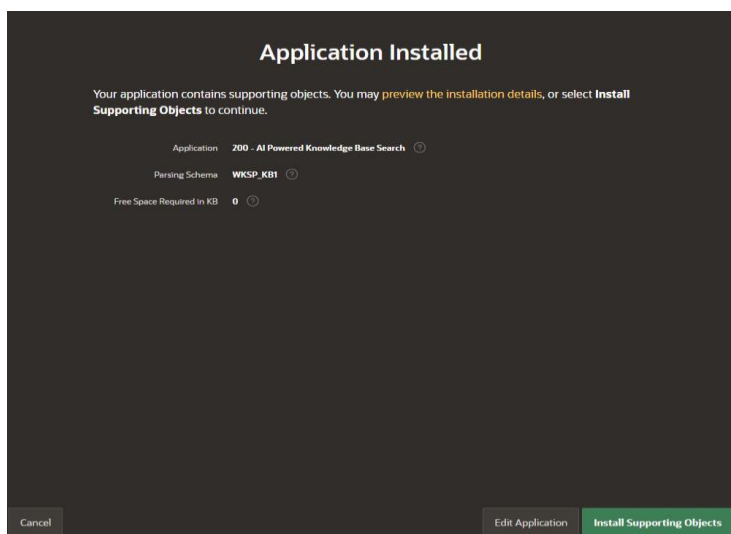
AI Powered Knowledge Base Search App – Installation Guide

Step 1. Application Installation

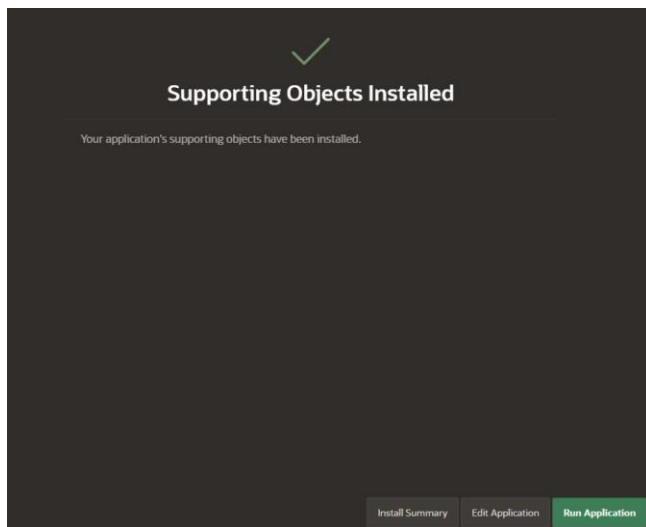
1. Create a workspace or use an existing one.
2. Login to APEX workspace.
3. Go to App Builder -> Import. Drag & Drop the app file and click on **Next** and follow the prompts to upload the app.



4. APEX will prompt to **Install Supporting Objects**. You can review the Install Summary. Once the objects are installed, a success message will appear.



5. Click **Run Application** to launch the app.



Step 2 Additional Configuration

1. This application is using Vector Search, a feature of Oracle Database 23ai. You can import and ONNX model into the Oracle Database and generate embeddings. You need to login as an administrator and grant the necessary privileges to the parsing schema: create mining model and execute on dbms_vector and dbms_cloud packages.

```
grant create mining model to YourSchemaName;  
grant execute on dbms_vector to YourSchemaName;  
grant execute on dbms_cloud to YourSchemaName;
```

2. Next step is to load the ONNX model into the database. Refer to the [documentation](#) or to [this](#) blog to download the model (all-MiniLM-L12-v2), unzip and load it. Make sure to give **"DOC_MODEL"** as model name.

Example of loading the model stored in an Object Storage bucket, using a pre-authenticated request:

```
DECLARE  
  L_PAR_URL    VARCHAR2(1000);  
  L_RESPONSE_BLOB BLOB;  
BEGIN  
  L_PAR_URL := 'INSERT_HERE_THE_LINK_TO_MODEL'  
  ;  
  L_RESPONSE_BLOB := APEX_WEB_SERVICE.MAKE_REST_REQUEST_B(  
    P_URL      => L_PAR_URL,
```

```

P_HTTP_METHOD => 'GET'
);
DBMS_VECTOR.LOAD_ONNX_MODEL(
  MODEL_NAME => 'DOC_MODEL',
  MODEL_DATA => L_RESPONSE_BLOB,
  METADATA =>
    JSON(
      '{
        "function": "embedding",
        "embeddingOutput": "embedding",
        "input":{"input": ["DATA"]}'
      )
    );
END;

```

Example of loading the model stored in an Object Storage bucket, using credentials:

■ Create the credentials

```

BEGIN
dbms_cloud.create_credential (
  credential_name => 'onnx_obj_store_cred',
  username       => '<Your username>',
  password       => '<AUTH Token>'
);
END;

```

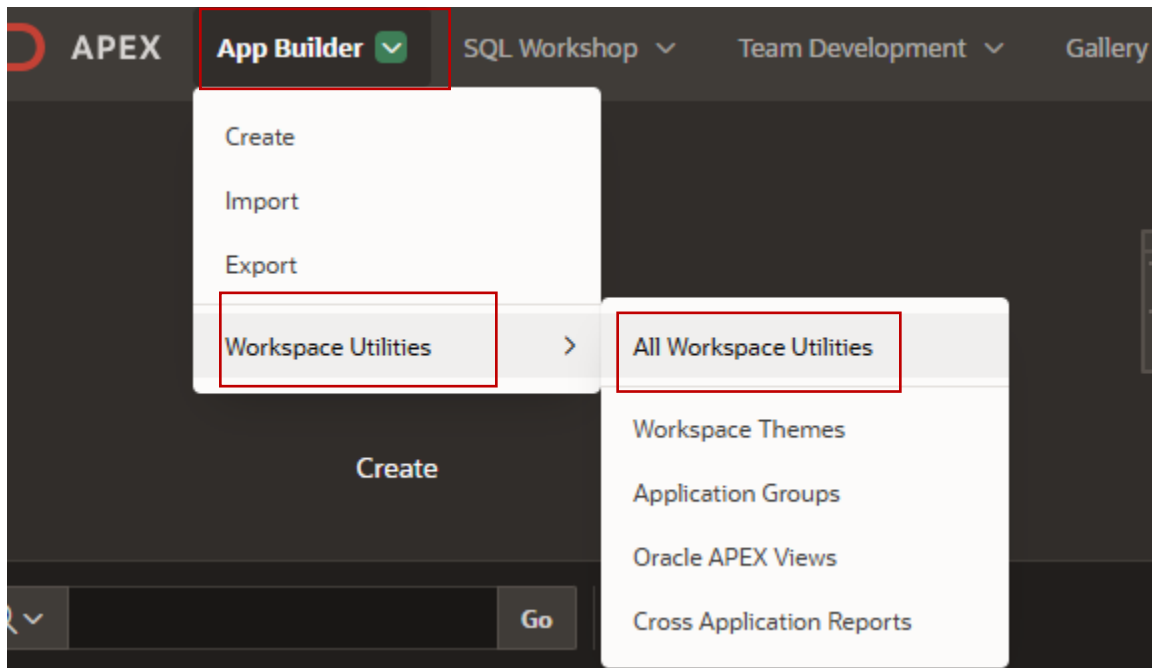
■ Load the model

```

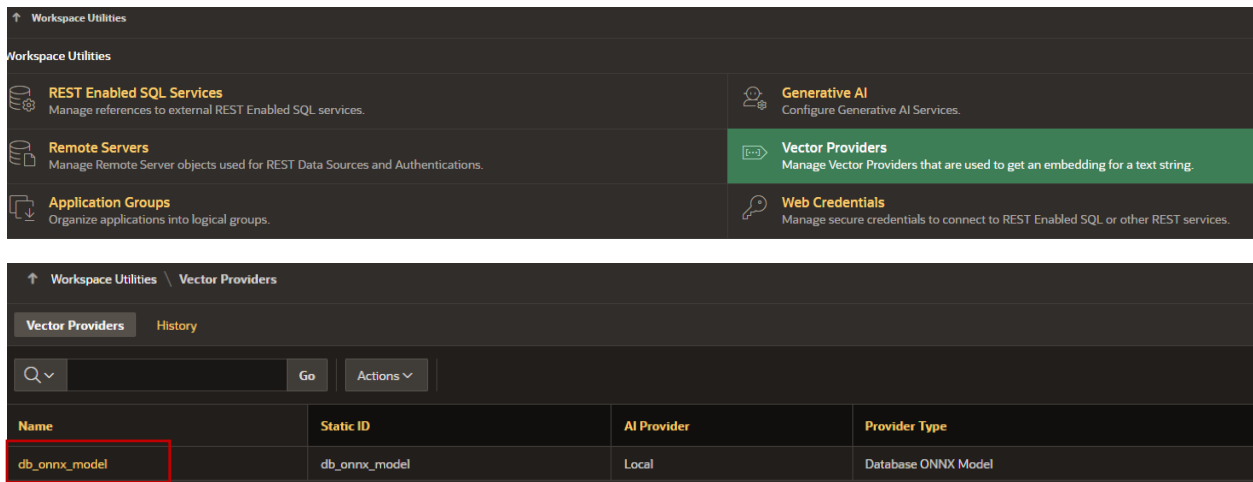
BEGIN
DBMS_VECTOR.LOAD_ONNX_MODEL(
  model_name => 'DOC_MODEL',
  model_data => dbms_cloud.get_object (
    credential_name => 'obj_store_cred', -- replace with your credential name
    object_uri     => '<Enter Your Object Storage URI>', -- blob
    metadata => JSON('{
      "function": "embedding",
      "embeddingOutput": "embedding",
      "input":{"input": ["DATA"]}'
    })
  );
END;

```

3. Modify the vector provider that was imported to point to your parsing schema. Learn more about vector providers from [this](#) blog. Click on **App Builder** -> **Workspace Utilities** -> **All Workspace Utilities**.

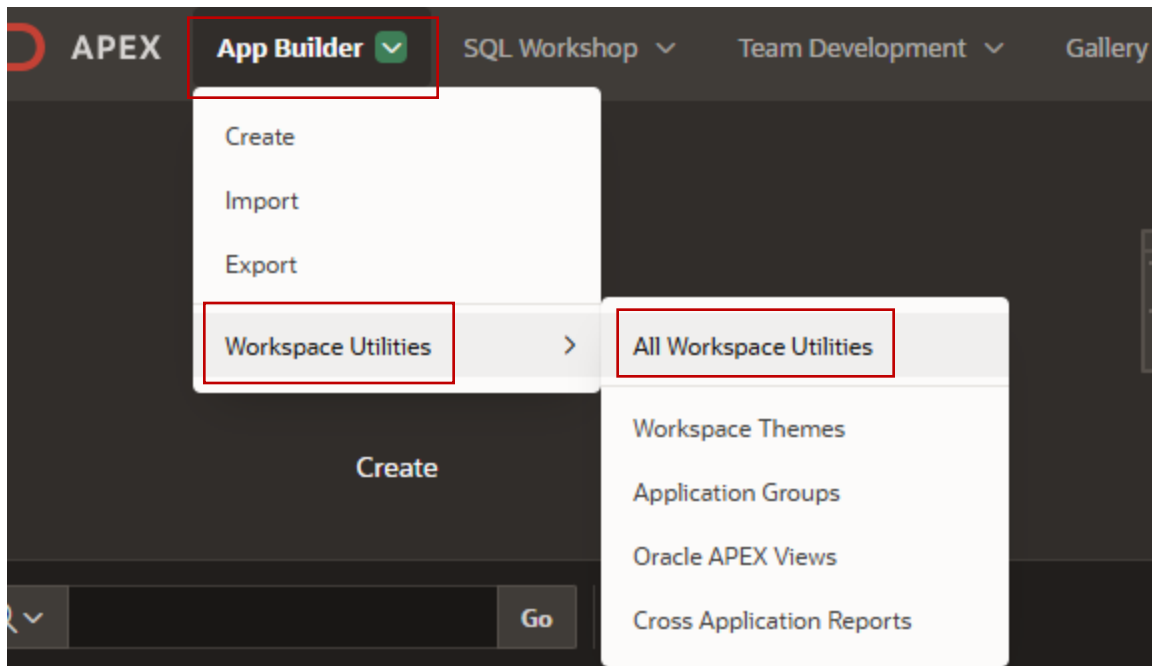


Click on **Vector Providers** and select **db_onnx_model**.

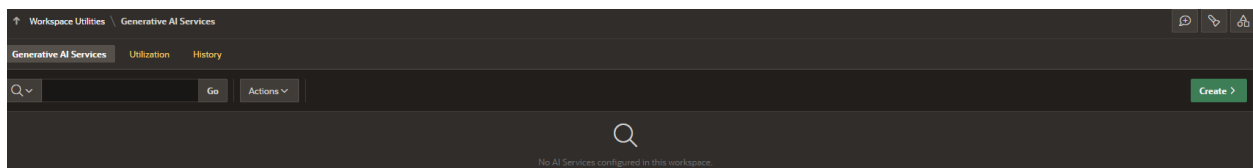
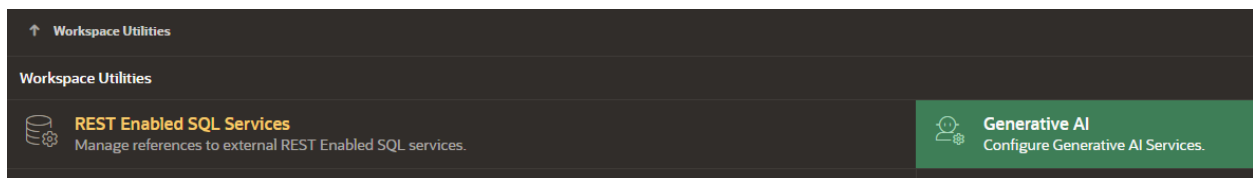


Modify the **ONNX Model Owner** to point to your schema and select the **ONNX Model Name** imported earlier. Click on **Apply Changes**.

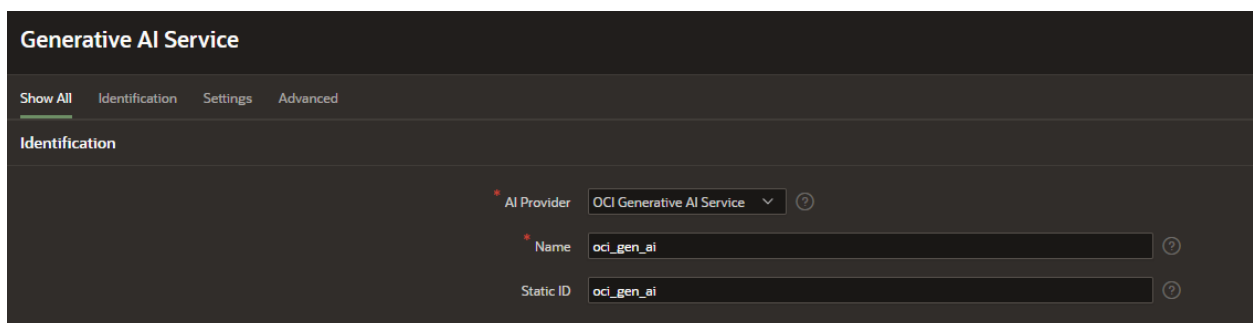
4. The application leverages APEX AI capabilities for end users. It is using the two AI dynamic actions: Generate Text with AI and Show AI Assistant. To use these capabilities, you need to configure Generative AI Services at the workspace level. You have three options: OCI Generative AI, Open AI and Cohere. Click on **App Builder** -> **Workspace Utilities** -> **All Workspace Utilities**.



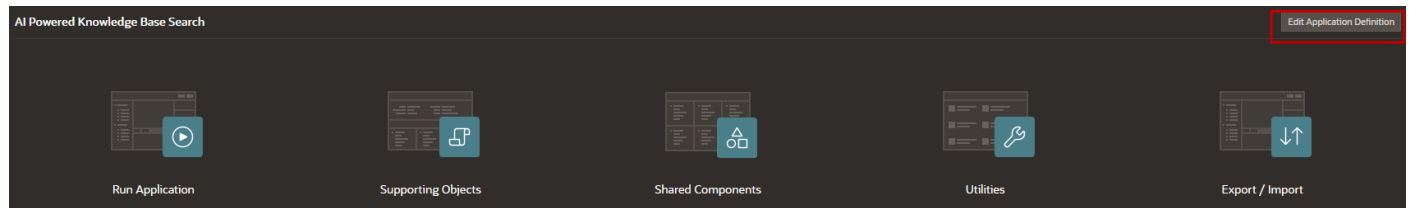
Click on **Generative AI** and then on **Create** button.



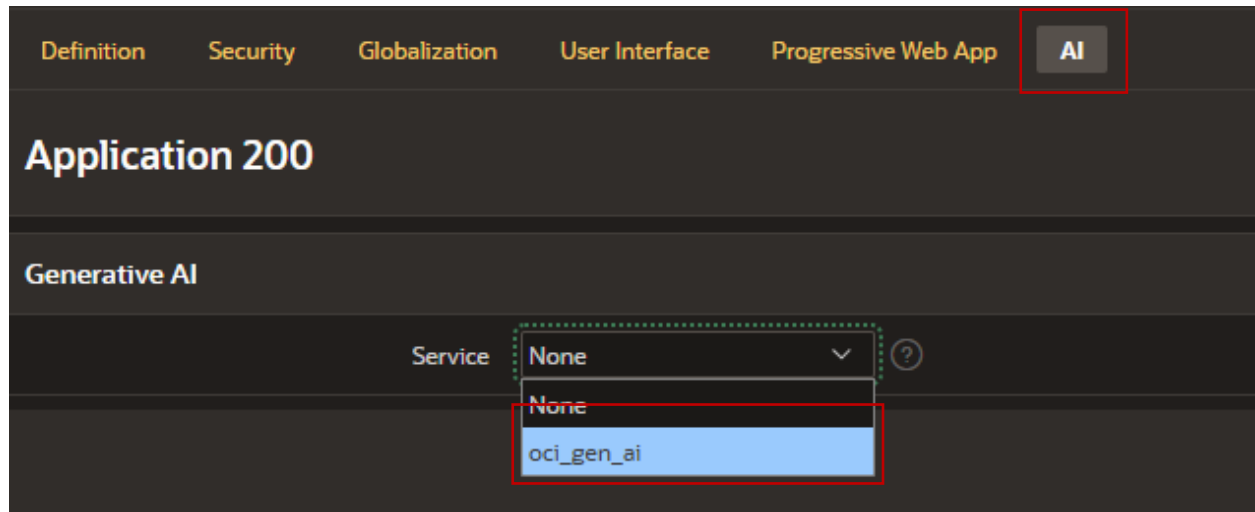
Select your AI Provider and enter the required details. Refer to the [documentation](#) for additional information. Type “oci_gen_ai” for name and static id.



Edit the application definition to have this Generative AI Service as default service. Open the application in App Builder. Click on **Edit Application Definition**.



Click on **AI** tab and select the `oci_gen_ai` service. Then, click on **Apply Changes**.



That's it! You are ready to run and explore the application. Upload PDF documents and ask questions!