Guide to create and call Azure Search Service

Version 1.0

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Last updated 23 April 2021

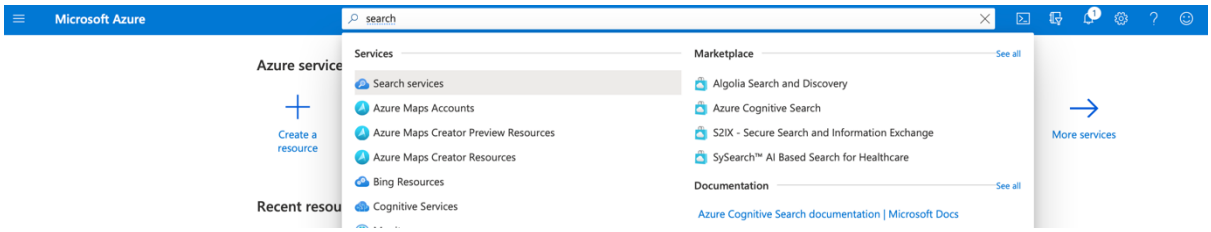
Brief Overview

In this guide, you would need to have an Azure account created in order for you to follow through the steps below. If you do not have an Azure account created, please create one before you continue. After this guide, you would be able to understand how to create a azure search service resource, import data into azure search service and create a config file to call azure search service api using python code. The code to call azure search api can be found in the notebook ***predict-emailservice-xgboost-part1-github.ipynb.***

Content Page

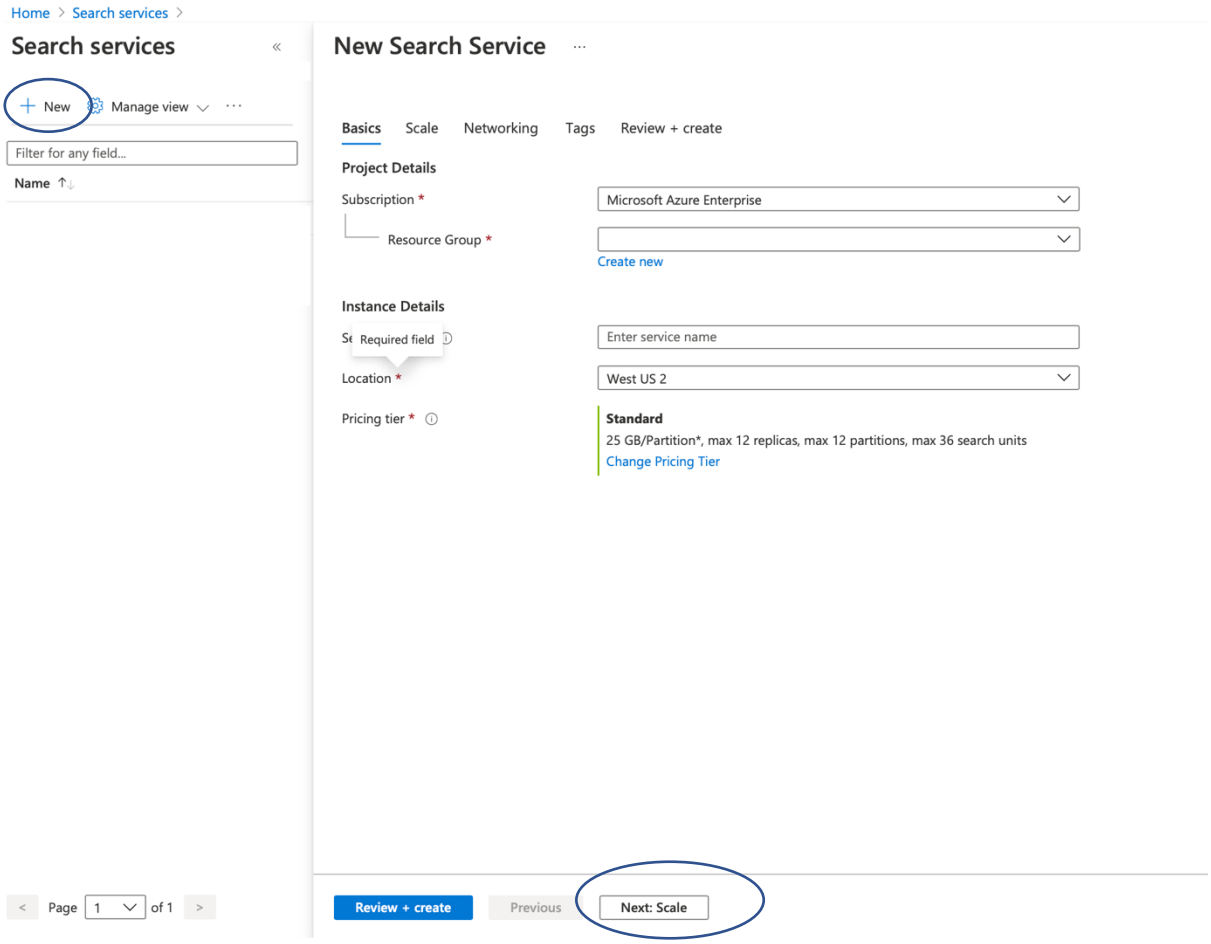
Step 1: Click on search service resource

On the top bar of the home page of portal.azure.com, type in search and click on the search service that appears at the top of this image.



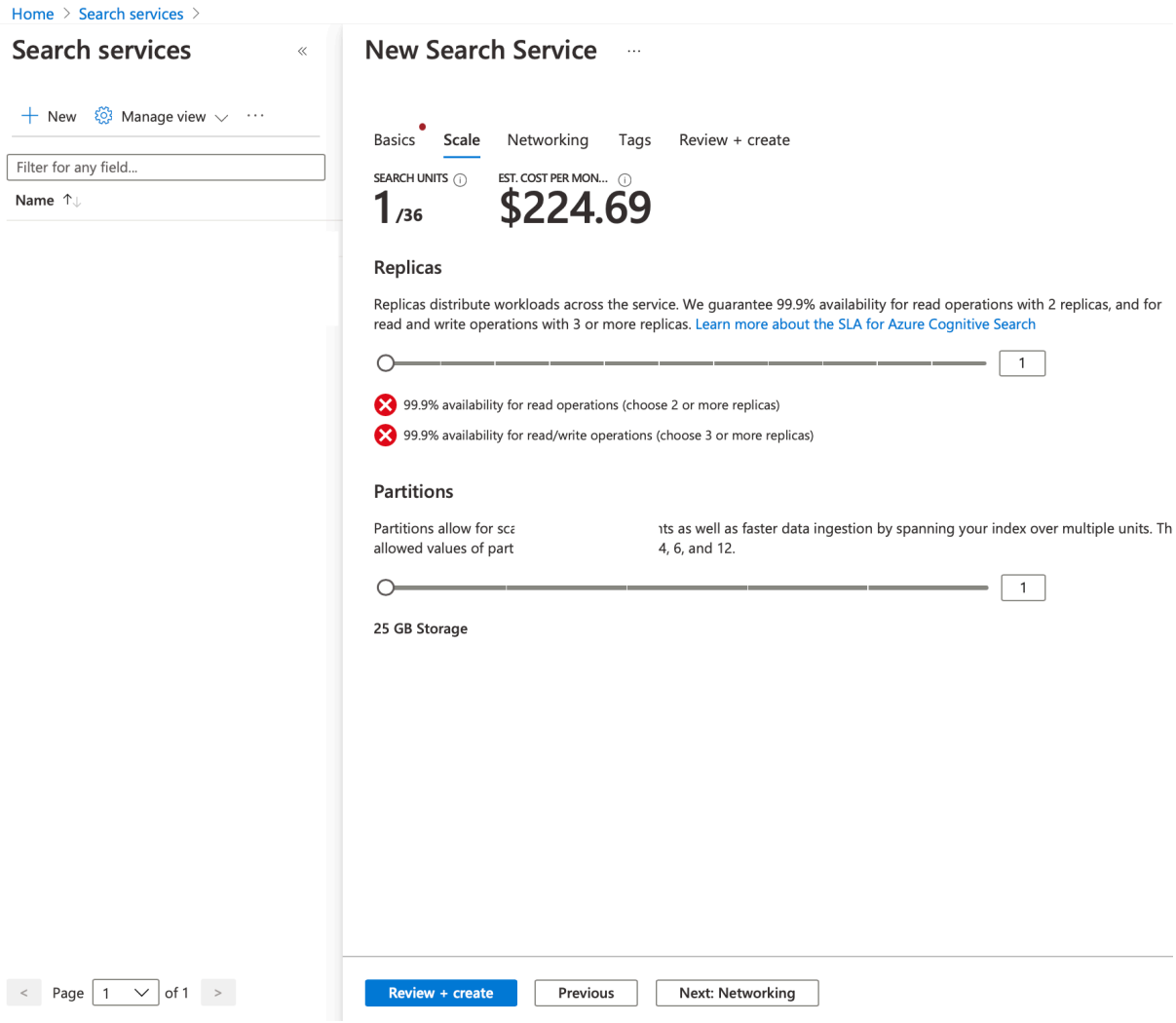
Step 2: Create basics of search service resource

Once clicking the search service icon, you would be prompted to this page. Click on new to create the search service. You would need to create a resource group if you have not done so. Resource group is like a workspace where it stores all the services that is created in azure. You can also specify the location where your search service would be located at. Different location has different pricing. In this guide, I would be using Southeast Asia and all the basic tiers. Once done, click Next: Scale at the bottom of the page.



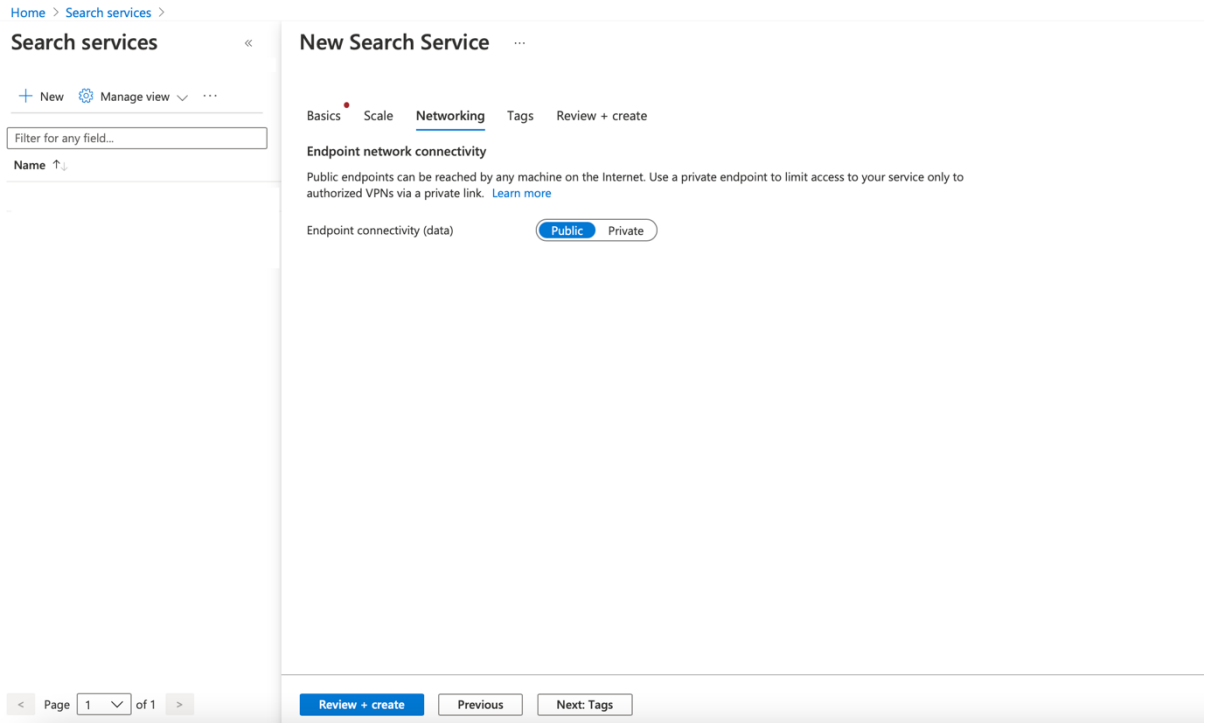
Step 3: Create scale of search service resource

Once clicking Next: Scale, you can choose the number of replicas and partitions that you would want for your search service. In this guide, I would select 3 replicas and 1 partition. After configuring what you need, just click Next: Networking.



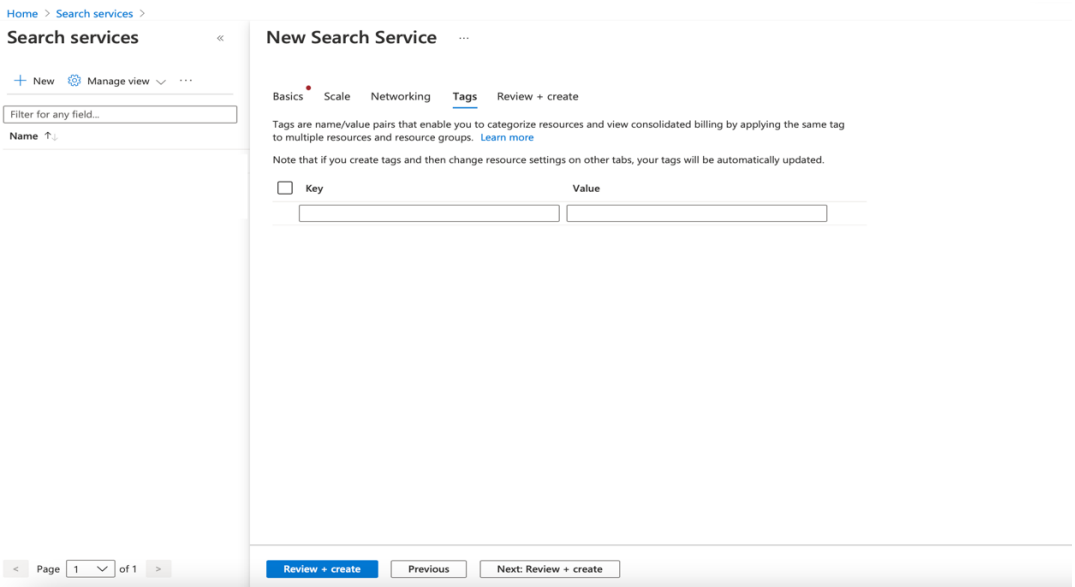
Step 4: Create networking of search service resource

Once clicking Next: Networking, you can choose public or private for the endpoint. If you do not wish to allow public to access your endpoint for api calls, you should select private. In this guide, I would be selecting public. After configuring what you need, just click Next: Tags.



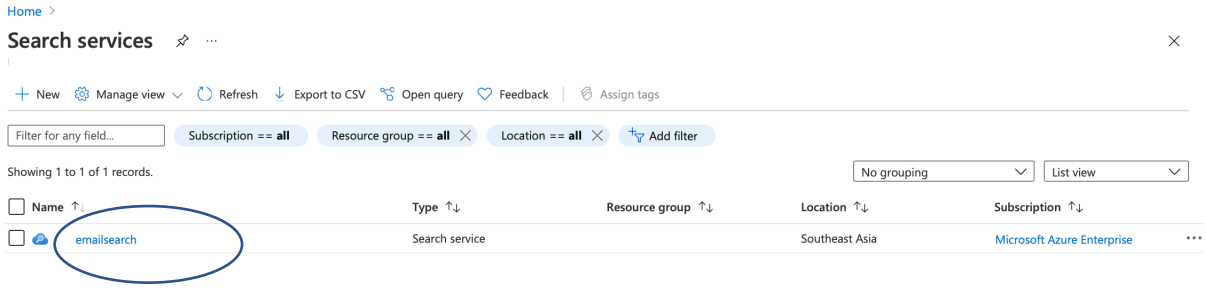
Step 5: Create tags of search service resource

Once clicking Next: Tags, you can configure the tags to associate with your resource. In this guide, I will be skipping this step as I would not need tags. After configuring what you need, just click Next: Review +create.

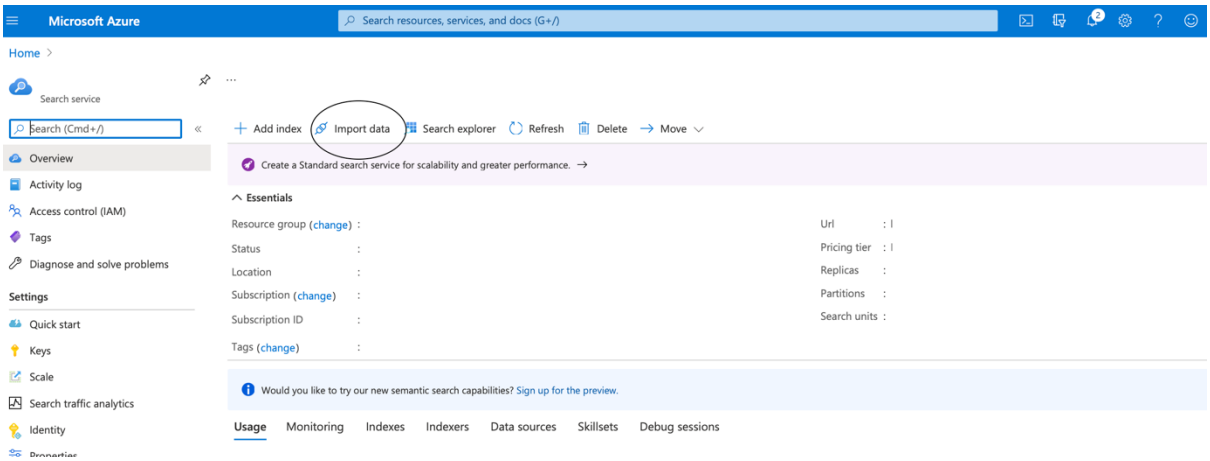


Step 6: Import Data

After reviewing and creating, it will take a few minutes to create the resource. Once the service is created, you can click on the name of the service.

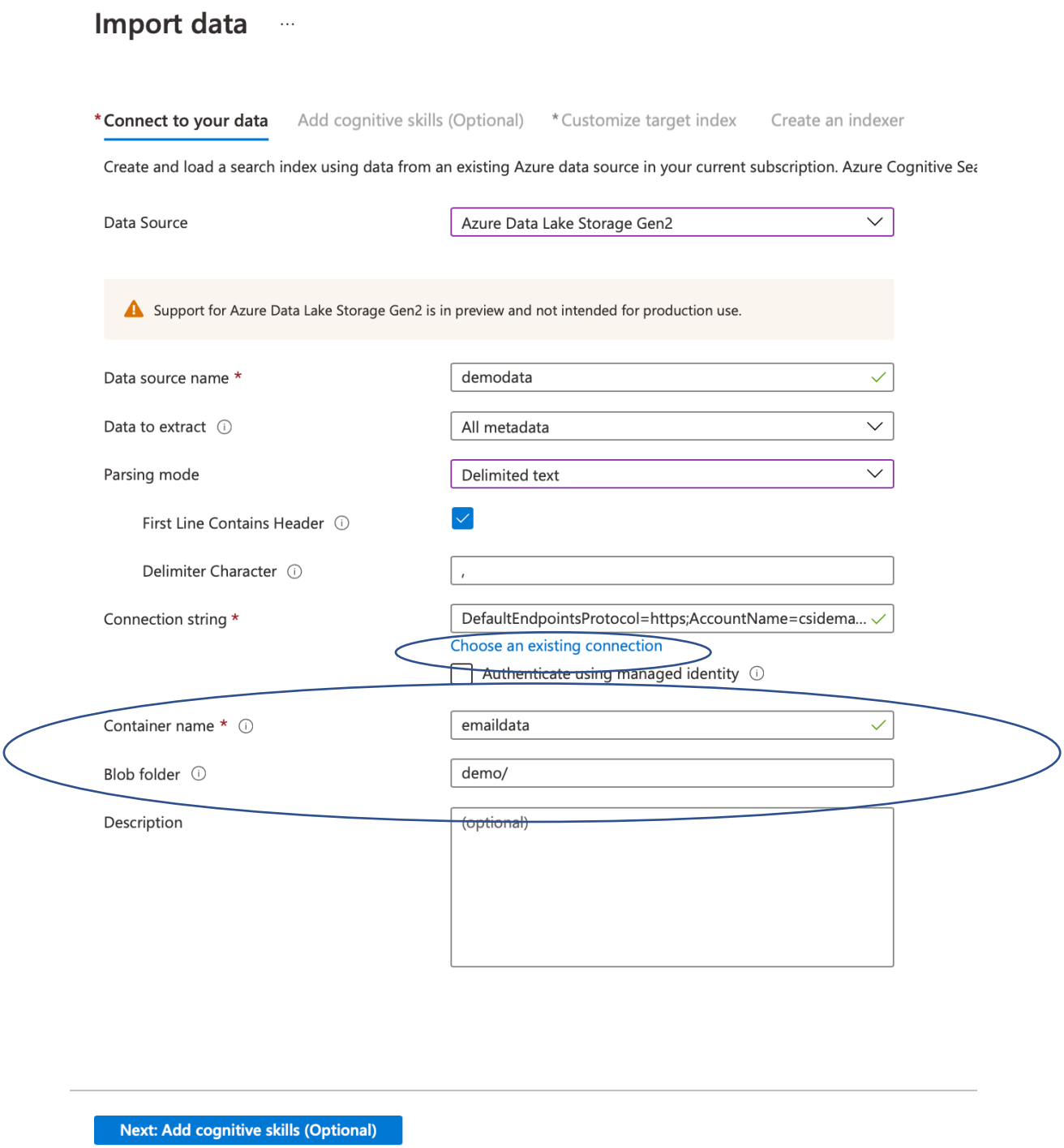


and you will be prompted to this page. Click on Import Data after creating a search service

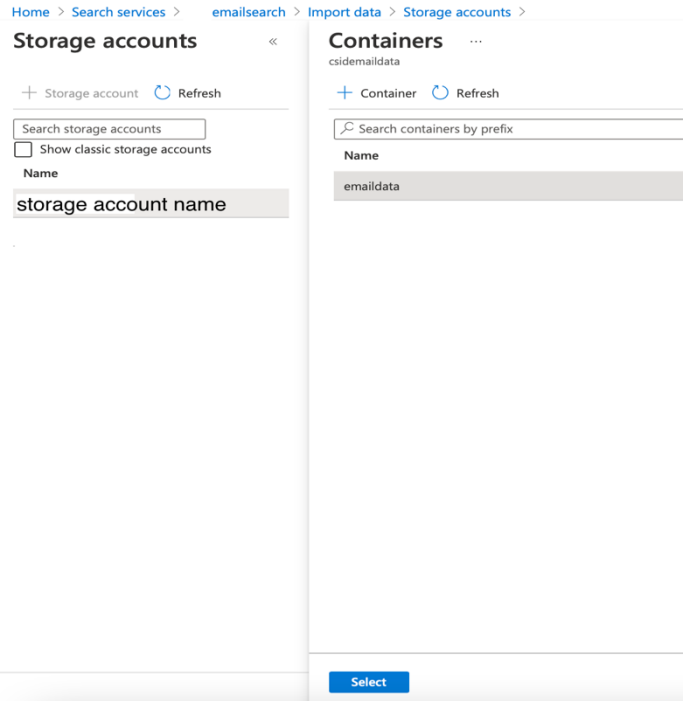


Step 7: Connect to your data

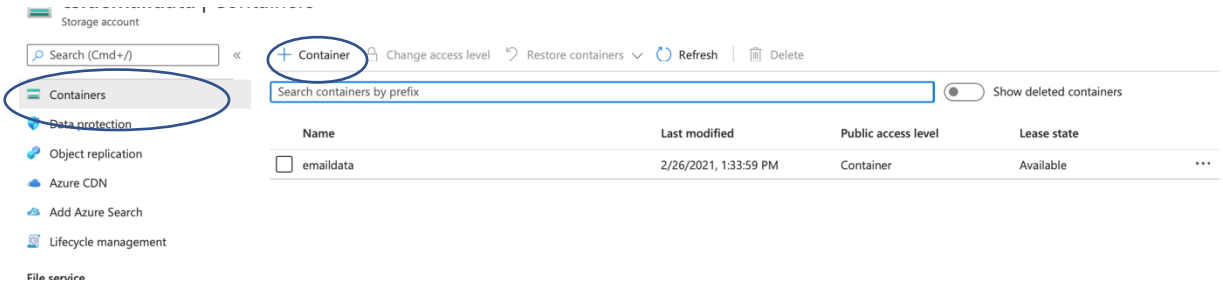
You will be prompted to choose your data location. Select the location where your data source is stored at. For my guide, I would be choosing Data Lake Gen 2 and select *all metadata* for data to extract. As my data type is in csv, you will need to select *delimited text* under parsing mode. The data source can a be a folder of files or file or table. Azure Search Service will create a dataset object which duplicates this dataset and will be reading this object when you query the service. Next select *choose an existing connection* and fill up the *container name* and *blob folder* name.
The steps to choose existing connection and creating a container and a folder in the storage account to upload data is shown below.



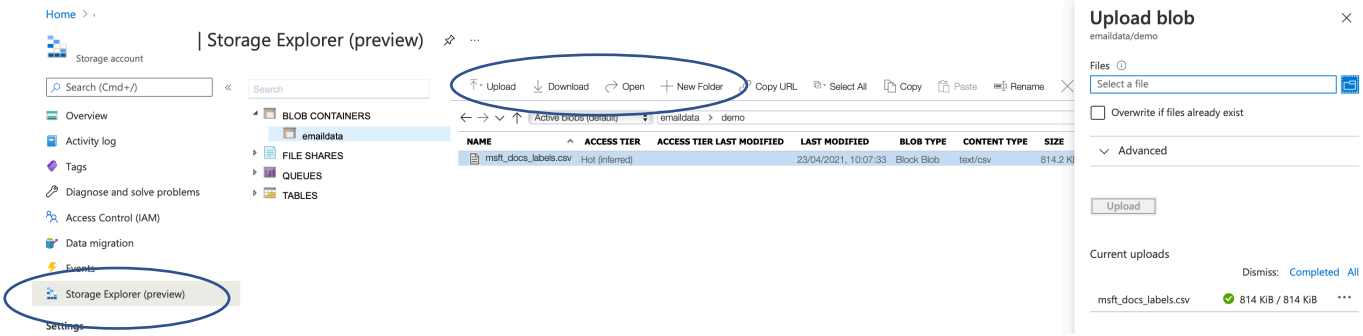
As I choose data lake gen 2 as my data source location, I would need to select my storage account and its following container. If you do not have a storage account created, create a storage account. The images below show the steps to create a container in the storage account and how to create folder and upload files in the container.



After creating a storage account, click on the name. It will prompt u to this page. click on *Containers* on the left menu-bar and *+ container* icon to create a container in the storage account.

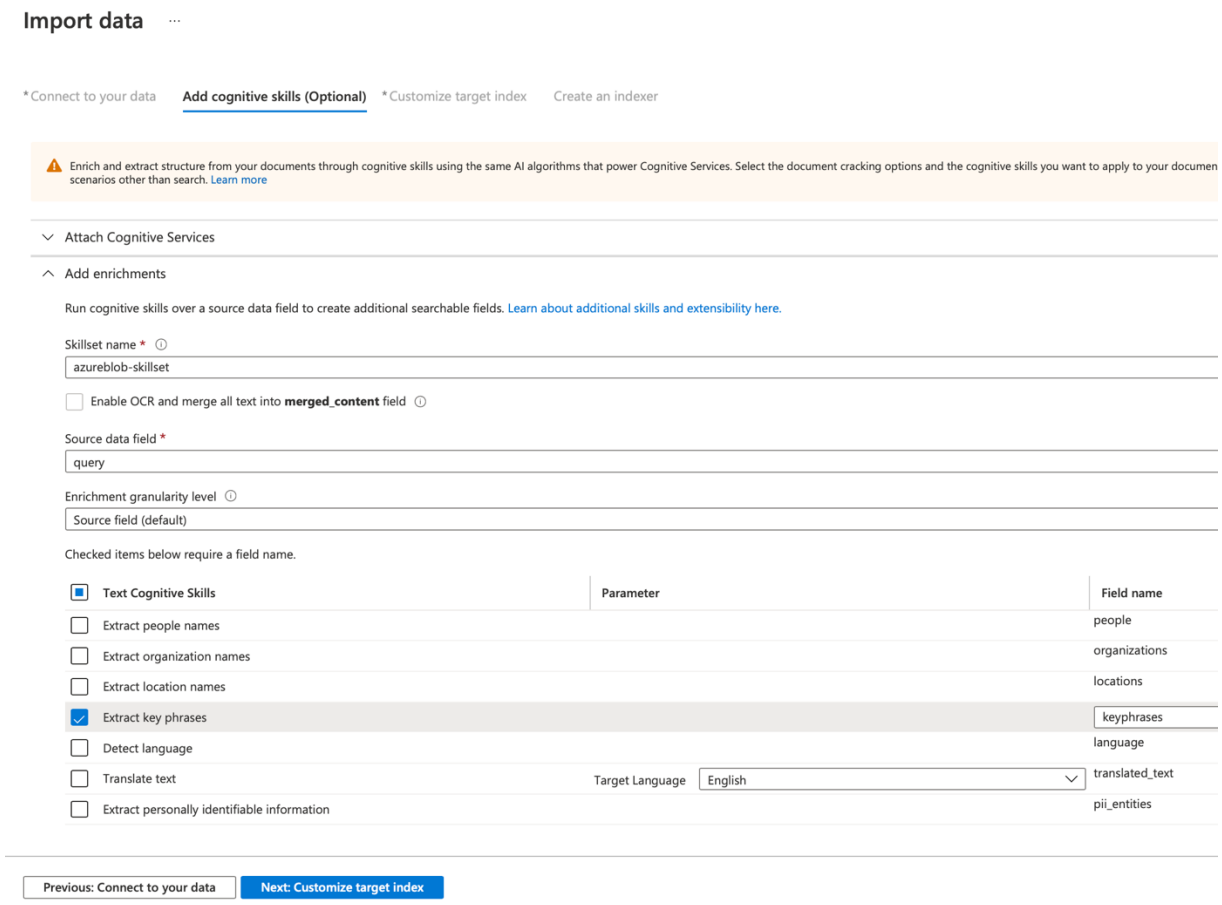


Next, click on *storage explorer (preview)* and click on *Blob containers and the* container name you just created. Create a folder and upload the data into the folder that you created in the container. In my guide, my container name is *emaildata* and the folder in this container is *demo/*. So, I would fill this information into search service *container name & blob folder* shown in the first picture in step 7 above.



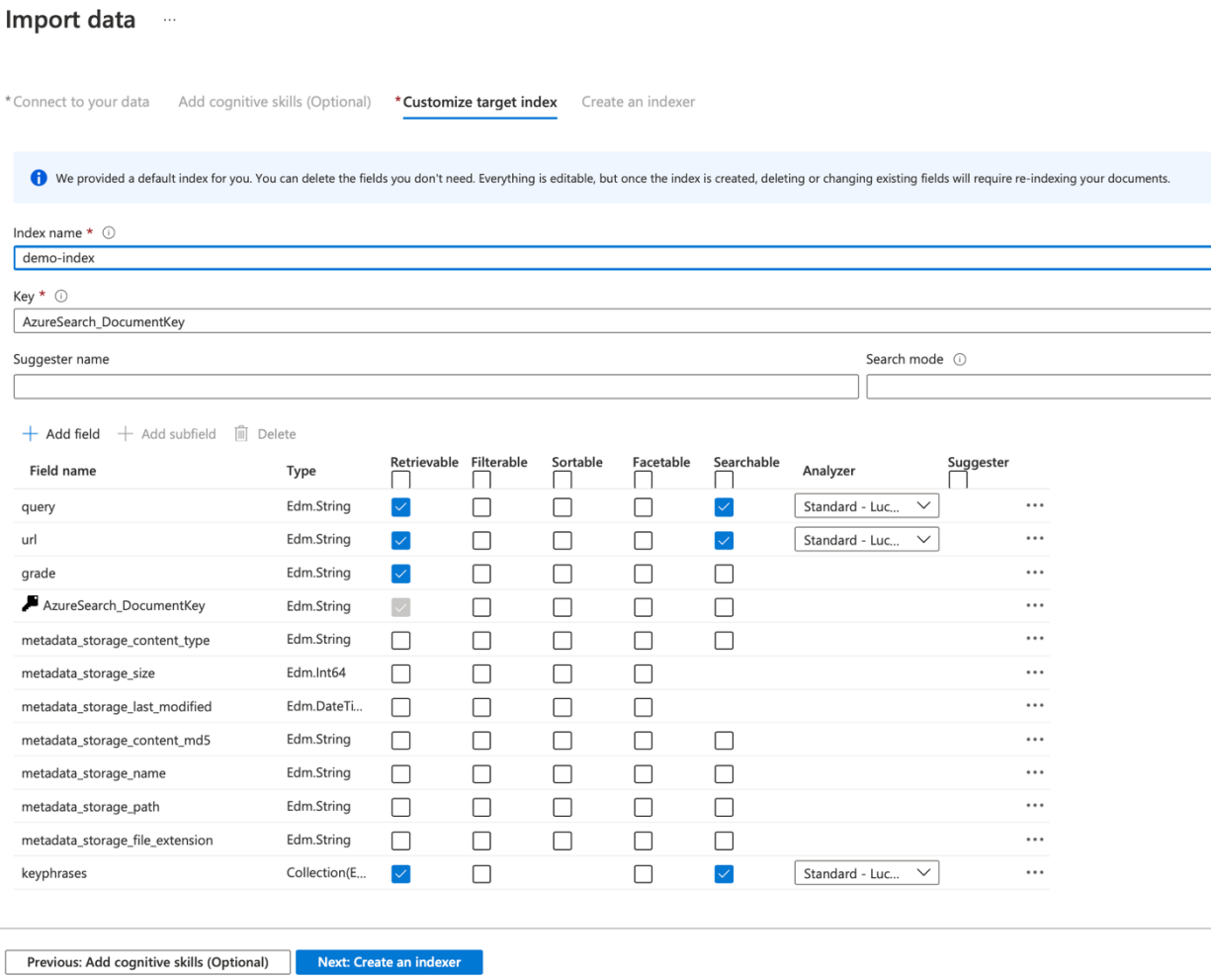
Step 8: Customize cognitive skills

After connecting to your data, I will be adding a cognitive skill *extract key phrases* under add enrichment section. The other sections are untouched. This step can be skip if you do not wish to add any cognitive skills into the service.



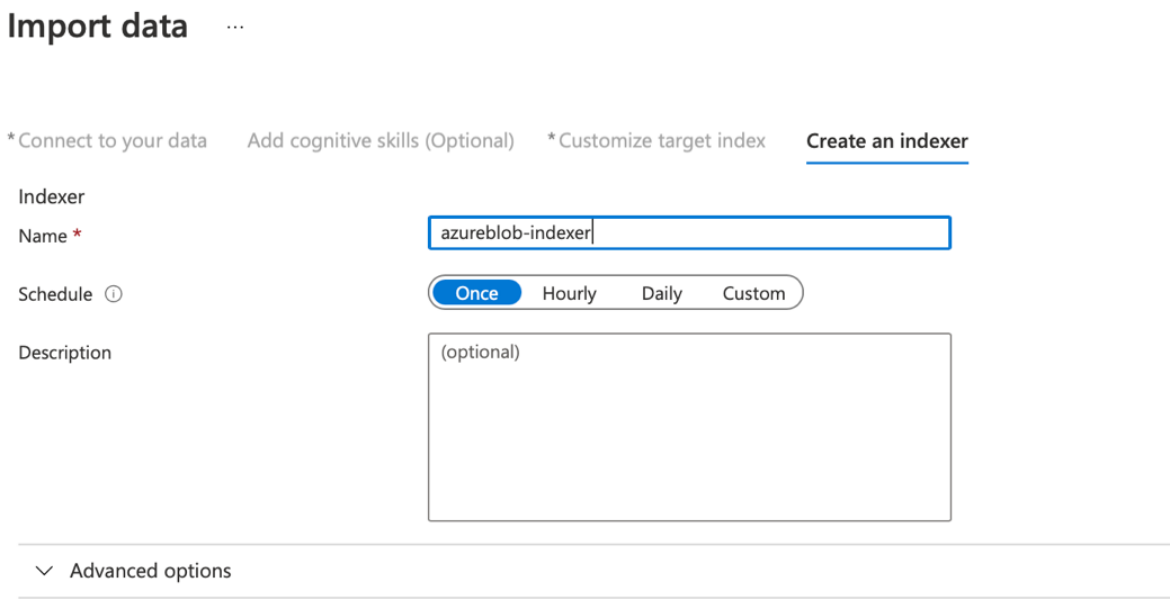
Step 9: Customize target index

In this step, the *index name* will be required when calling the API later on. The column *retrievable* is what will be shown in the output of your search query. The column *searchable* is what internally azure search service use to select the output of your search query.



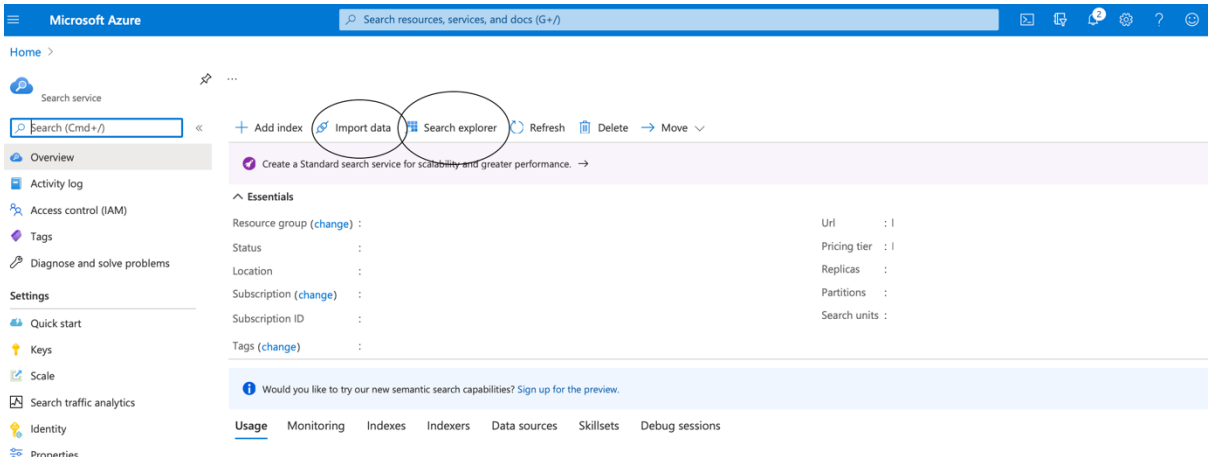
Step 10: Create an indexer

The last step of importing data will be to customize the refresh of your indexer. If your data source is in live production and would have new data coming in hourly or daily, you should select *hourly* or *daily* schedule refresh in order for your search service data to stay updated. If your dataset is fixed and will not change any time sooner, you can select *once* schedule refresh.



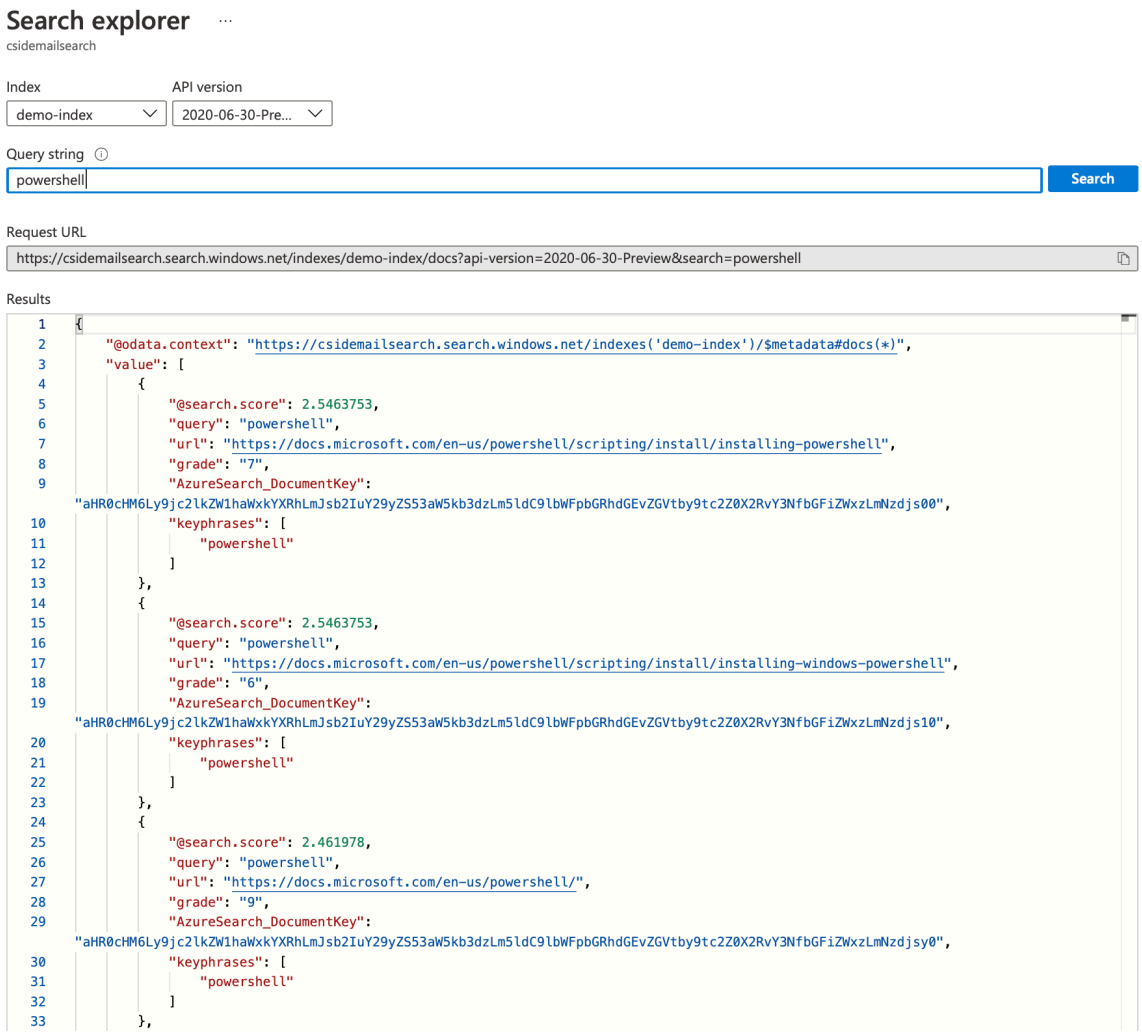
Step 11: Search Explorer

After creating the index, you will be brought back to the front page. Click on the search explorer which will produce a UI page that you can type your query.



Step 12: Search Explorer UI

In the Search explorer, you would be able to choose the API version that you would like and enter a query string that you would like to submit. The request url will be generated and results will be shown below.



Step 13: Creating Azure Search Service Config file

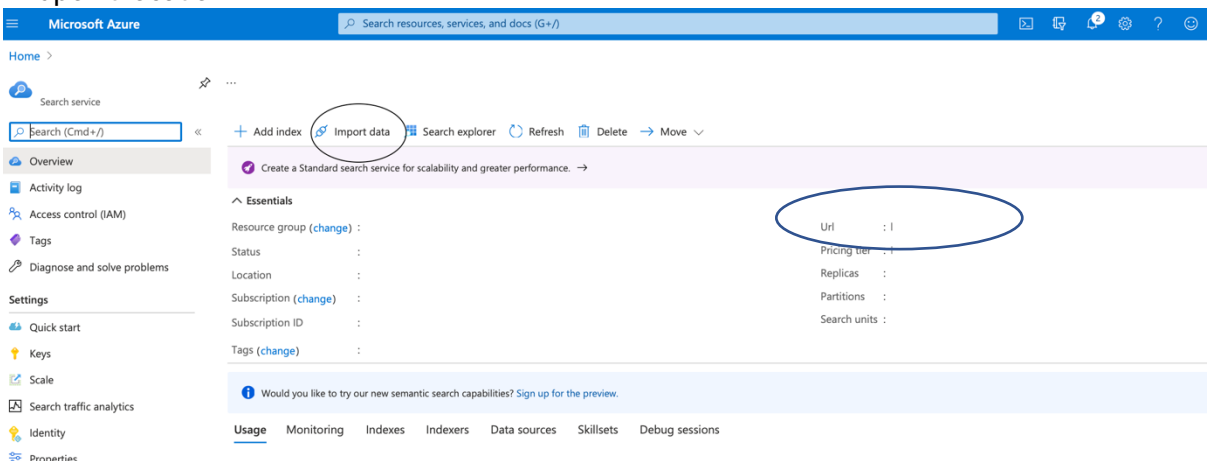
In order to call the API from azure search, you will need details of the service. The credentials you would need would be:

1. service_name (name of azure search service)
2. endpoint [the variable url in main page of azure search service shown below]
    a. starts with https://<service_name>.search.windows.net
3. api_version (choose one from search explorer UI in step 12)
4. api_key (follow picture below)
5. index_name (the name you created in step 9)

The credentials should be stored as a json format.

```
{"service_name": "<search service name>",
    "endpoint": "https://<search service name>.search.windows.net",
    "api_version": "2020-06-30-preview",
    "api_key": "<primary admin key>",
    "index_name": "<demo-index>"}
```

Endpoint location



API key location