

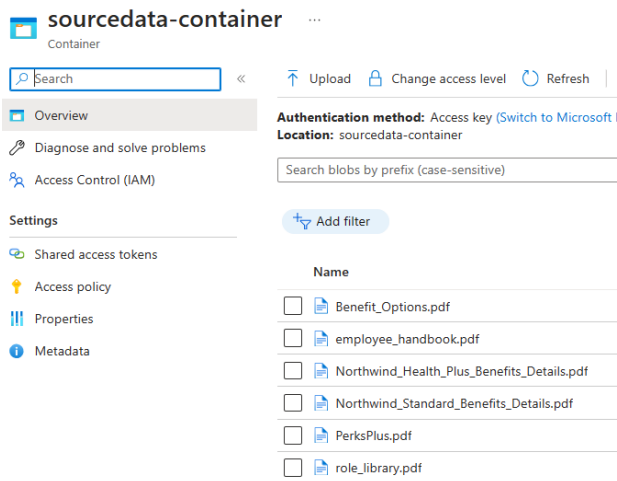
Azure AI Search - Create a Hybrid Search Solution (including vector search)

1. Prerequisites:

- Azure OpenAI service with embedding model deployed
- Azure storage account with a container

2. Upload sample data (PDF documents) to Azure storage container.

Sample data available on GitHub at <https://github.com/amulchapla/GenAI-LLMapps-lifecycle-workshop/tree/main/AzureAISearch-VectorSearch>



3. Create Azure AI Search service and create vector store

- Login to Azure Portal
- Create a new Azure AI Search service (if one doesn't exist already)
- Go to Azure AI Search service and click "Import and vectorize data". Follow the data import wizard.
 - Set up your data connection:** Connect to an external Azure Blob storage containing PDFs and other unstructured data files. You can leave Blob folder empty.

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Import and vectorize data

gptkb-thxdj6b6uiqtk

● Connect to your data

○ Vectorize and enrich data

○ Review and create

Set up your data connection

Connect to an external Azure Blob storage containing PDFs and other unstructured data files. [Learn more](#)

Subscription *

Blob storage account *

Blob container * ⓘ

sourcedata-container

Blob folder ⓘ

your/folder/here

☐ Enable deletion tracking ⓘ

☐ Authenticate using managed identity. [Learn more](#)

- ii. **Vectorize your data with Azure OpenAI:** Connect to an Azure OpenAI service and select an embedding model for vector generation.

You need Azure OpenAI service with embedding model deployed for this step. If you don't have this then complete that task first.

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Vectorize your data with Azure OpenAI

Connect to an Azure OpenAI service and select an embedding model for vector generation. [Learn more](#)

Subscription *

Azure OpenAI service * [Create a new Azure OpenAI service](#)

Model deployment *

Authentication type ☒ API key ☐ System assigned ☐ User assigned

☒ I acknowledge that connecting to an Azure OpenAI service will incur additional costs to my account. [View pricing](#)

Enrich your data with AI skills

If documents are image files, or contain embedded images, you can merge the text extracted from those images with the textual content of the documents. You will need to select an Azure AI service or create a new one in the same region as your search service to power your skills and enrich your data. [Learn more](#)

☐ Extract text from images

Advanced ranking and relevancy

Semantic ranker uses deep neural networks to provide relevant results and answers based on semantics, not just lexical analysis. [Learn more](#)

☒ Enable semantic ranker

Schedule indexing

Schedule

- iii. **Update the search index name (optional):** The wizard generates an index, indexer, data source, and skillset on your search service. You can view and independently manage these objects once they exist, but the names and many other properties are fixed for the lifetime of the object. To customize the name, change the object name prefix.

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Import and vectorize data ...
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The wizard generates an index, indexer, data source, and skillset on your search service. You can view and independently manage these objects once they exist, but the names and many other properties are fixed for the lifetime of the object. To customize the name, change the object name prefix.

Objects name prefix

Review

| | |
|-------------------------------|------------------------|
| Attached Azure OpenAI service | aoaiamuleastus2 |
| Deployment model | text-embedding-ada-002 |
| Extracting text from images | Disabled |
| Semantic ranker | Enabled |
| Indexer run schedule | Once |

- iv. **Wait for search index setup to complete.**

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[gptkb-thxdj6b6uiqtk](#) | Indexes ☆ ...
Search service

Search

«

Overview

Activity log

Access control (IAM)

Tags

Diagnose and solve problems

+ Add index

Refresh

Delete

vector

X

| Name | Document count | Vector index size | Total storage size |
|-----------------------------------|----------------|-------------------|--------------------|
| vector-hrbenefits | 410 | 2.43 MB | 12.14 MB |

- i. Enter a search term related to HR benefits and make sure you get search results.

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vector-hrbenefits

Save Discard Refresh Create Demo App Edit JSON Delete

| Documents | Total storage | Vector index size |
|-----------|---------------|-------------------|
| 410 | 12.14 MB | 2.43 MB |

Search explorer Fields CORS Scoring profiles Semantic configurations Vector profiles

Query options View

what is performance review

Results

```

1 {
2   "@odata.context": "https://gptkb-thxdj6b6uiqtk.search.windows.net/indexes('vector-hrbenefits')/$metadata#dc",
3   "@search.answers": [
4     {
5       "key": "1227e080194b_aHR0cHM6Ly9zdGF6dXJlYW1hbXU4NjExODk2NDI1S0DAuYmxvYi5jb3JlLnR0b2Rvd3MubGV0L3NvdXJzZ",
6       "text": "Performance reviews are a two-way dialogue between managers and employees. We encourage all",
7       "highlights": "Performance reviews are<em>a two-way dialogue between managers and employees.</em> We",
8       "score": 0.99560546875
9     }
10  ],
11  "@search.nextPageParameters": {
12    "search": "what is performance review",
13    "queryType": "semantic",
14    "semanticConfiguration": "vector-hrbenefits-semantic-configuration",
15    "captions": "extractive",
16    "answers": "extractive|count=3",
17    "queryLanguage": "en-US",
18    "skip": 50,
19    "vectorQueries": [
20      {
21        "kind": "text",
22        "k": 5,
23        "oversampling": null,
24        "fields": "vector",
25        "vector": []

```