Enterprise Knowledge Mining Solution

About this course

In this course, you will create an enterprise search solution by applying knowledge mining to business documents like contracts, memos, presentations and images. You will use Microsoft Azure AI technology to extract insights from unstructured data and expose the results in a Bot interface.

This training is two days long, but you can compress the duration with alternative agendas.

Goals

At the end of this training you will have learned:

- What Azure Cognitive Search is
- How to implement a Cognitive Search Solution
- Why this technology can be useful for any company
- When to use this solution for demos, POCs and other business scenarios

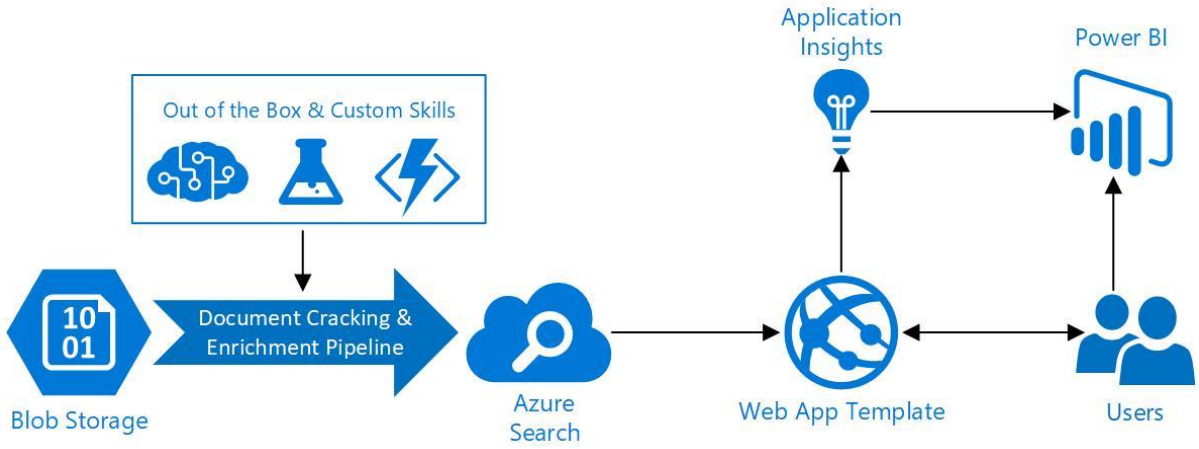
The hands-on labs will teach you how to use Microsoft Azure Cognitive Search combined with Microsoft Cognitive Services for entity recognition, image analysis, text translation and indexed search on enterprise business documents. This approach uses Artificial Intelligence to create an advanced search experience.

While this course focuses on Azure Cognitive Search capabilities, an in-depth course on building Bots and integrating various Azure Cognitive Services is available here - Azure Cognitive Services Bootcamp.

In this course we will cover these key concepts:

- Fundamentals of Azure Cognitive Search and its capabilities
- Knowledge Mining business scenarios
- Building an enrichment data pipeline for search using predefined and custom skillsets:
- Text skills like entity recognition, language detection, text manipulation and key phrase extraction
- Image skills like OCR
- Content moderation skills to detect documents with incompliant content
- Use the enriched data for an advanced search experience for business documents within an enterprise.
- Expose the knowledge mining solution using a bot interface for document search and consumption.

Architecture



Prerequisites

- Knowledge of Azure architectural components and its core services.
- The directions provided in this guide assume you have a fundamental working knowledge of the Azure portal, Azure Functions, Azure Cognitive Search, Visual Studio and Postman.
- Azure subscription - Create one for free.
- Visual Studio 2019 or later - Community edition or higher.
- Postman for making API calls.
- Power BI Desktop for reporting.
- Documents uploaded to any data source supported by Azure Search Indexer. This solution accelerator uses Azure Blob Storage as a container for source data files. You can find sample documents in the **Sample Documents** folder.
- You can automatically deploy the required resources using this button:

  Deploy to Azure

- While deployment follow the next steps:
  1. Make sure that you have the right subscription selected.
  2. Create a new resource group called **kmw-search.**
  3. Make sure the Region **East US** is selected, if not, select it.
  4. Inside the box **Resource Prefix** use your initials.
  5. In the **Location** box select **East US.**
  6. Leave other values as default and click in the **Review + Create** blue button.
  7. Once the validation has passed click the **Create** button once more.

Home >

Custom deployment

Deploy from a custom template

Basics | Review + create

Template

Customized template
8 resources

Edit template | Edit parameters

Deployment scope

Select the subscription to manage deployed resources and costs. Use resource groups like folders to organize and manage all your resources.

Subscription * : Doelker-MPN

Resource group * :

Create new

Parameters

Region * : East US

Resource Prefix * :

Storage Account Type : Standard_LRS

Hosting Plan Sku : F1

Search Service Sku : basic

Location : South Central US

Review + create | < Previous | Next : Review + create >

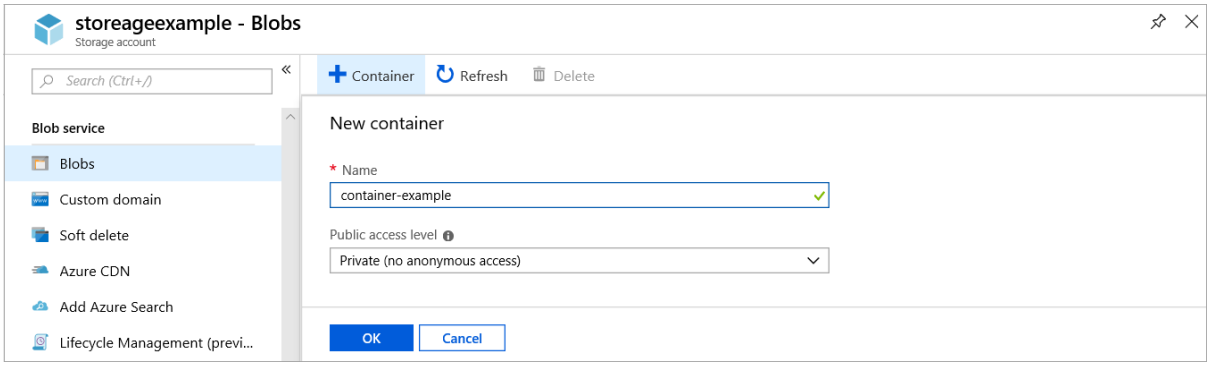
Create a container

To create a container in the Azure portal, follow these steps:

1. Navigate to your new storage account in the Azure portal.
2. In the left menu for the storage account, scroll to the Blob service section, then select Containers.
3. Select the + Container button.
4. Type a name for your new container like **sample-data**.

   The container name must be lowercase, must start with a letter or number, and can include only letters, numbers, and the dash (-) character.

5. Set the level of public access to the container. The default level is Private (no anonymous access).
6. Select OK to create the container.

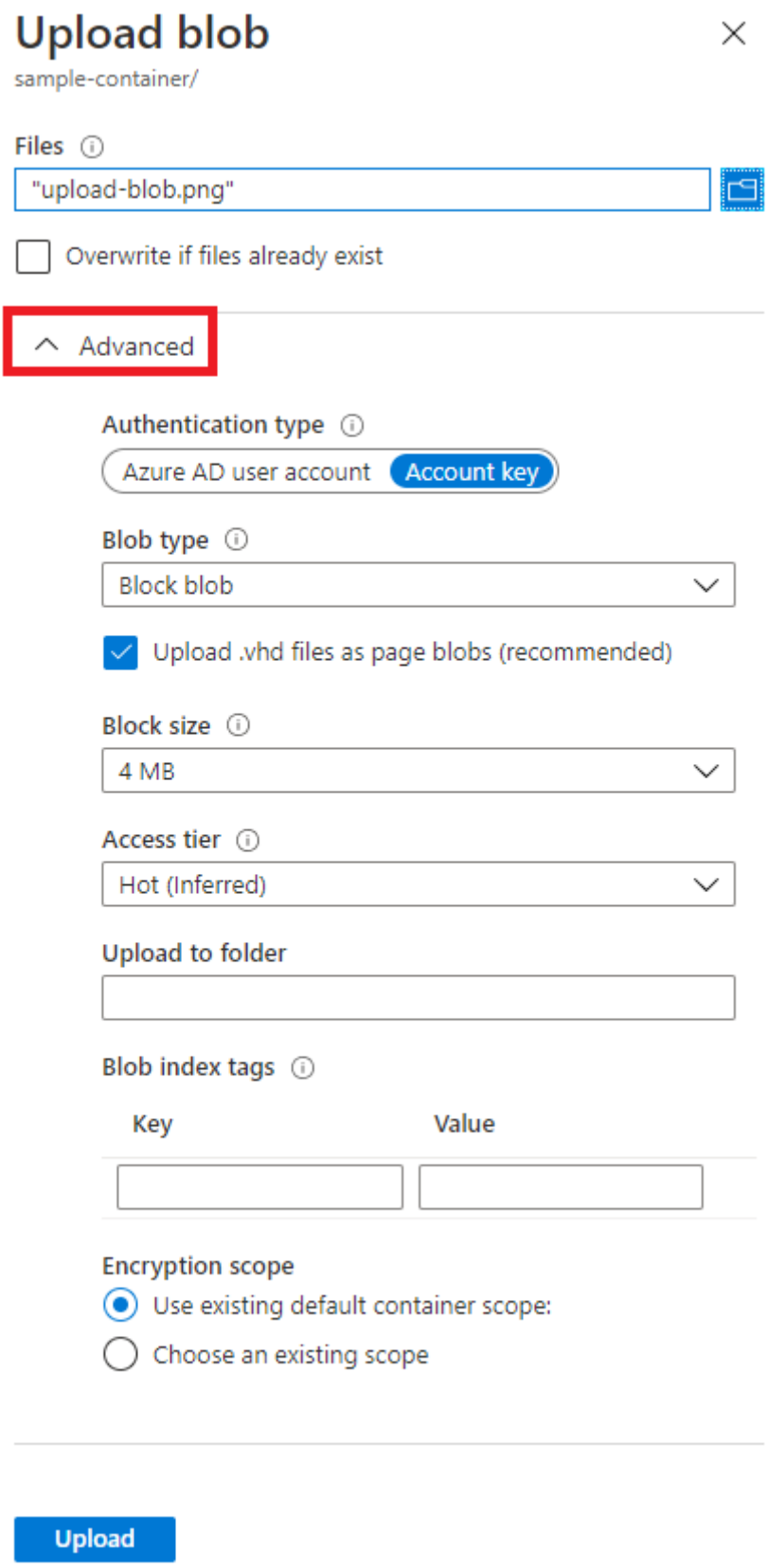


Upload your sample data.

Block blobs consist of blocks of data assembled to make a blob. Most scenarios using Blob storage employ block blobs. Block blobs are ideal for storing text and binary data in the cloud, like files, images, and videos.

To upload a block blob to your new container in the Azure portal, follow these steps:

1. In the Azure portal, navigate to the container you created in the previous section.
2. Select the container to show a list of blobs it contains. This container is new, so it won't yet contain any blobs.
3. Select the Upload button to open the upload blade and browse your local file system to find the **sample_documents** folder.
4. Select all the files inside the folder and click **open**.
5. Finally, select **Upload** to upload all the files on your container.
6. You'll see that the new blobs are now listed within the container.


Upload blob
sample-container/
Files
"upload-blob.png"
Overwrite if files already exist
Advanced
Authentication type
Azure AD user account
Account key
Blob type
Block blob
Upload .vhd files as page blobs (recommended)
Block size
4 MB
Access tier
Hot (Inferred)
Upload to folder
Blob index tags
Key
Value
Encryption scope
Use existing default container scope:
Choose an existing scope
Upload