



Microsoft Cloud for Financial Services

In A Day

Lab 02: Customer Intelligence

Step-by-Step Lab

January 2021

Contents

Overview	3
Learning Objectives.....	3
Prerequisite(s).....	3
Customer Intelligence	3
Industry Prioritized Scenarios	4
Exercise 1: Set up and Understand Dynamics 365 Customer Insights Components	5
Task 1: Create a Dynamics 365 Customer Insights Instance	5
Exercise 2: Create Azure Components and build a Data Pipeline in Azure Data Factory	13
Task 1: Create a Resource Group in Azure.....	13
Task 2: Create an Azure Storage Account.....	16
Task 3: Create a staging Azure Container for Customer Insights.....	24
Task 4: Create a new Azure Synapse Link	29
Task 5: Create an Azure Data Factory	31
Task 6: Run a Data Pipeline in Azure Data Factory	33
Exercise 3: Configure the Retail Banking Churn Model in Dynamics 365 Customer Insights.....	41
Task 1: Configure a Data Source in Dynamics 365 Customer Insights	41
Summary	49

Overview

Learning Objectives

In this lab, you will learn to do the following:

1. Explore Customer Intelligence components
2. Understand the Retail Banking Churn model
3. Build a Retail Banking Churn model

Prerequisite(s)

- Azure Subscription
- Dynamics 365 Customer Insights
- Azure Storage Explorer (recommended)

Customer Intelligence

Customer intelligence unifies important, relevant, and accurate customer information across multiple sources via Dynamics 365 Customer Insights. This solution empowers the agent to engage with customers based on relevant insights. Customer intelligence combines demographic information, financial measures, and attitudes to form financial segments and AI models. These insights help agents to quickly understand the customer.

Retail banking churn prediction is an AI-based model that helps to predict the likelihood of a customer leaving the bank or becoming dormant. To create a new retail banking churn prediction, after fulfilling the prerequisites, you can go to the Intelligence > Predictions page in the Dynamics 365 Customer Insights portal. Select My predictions to see other predictions you've created.

Prerequisites:

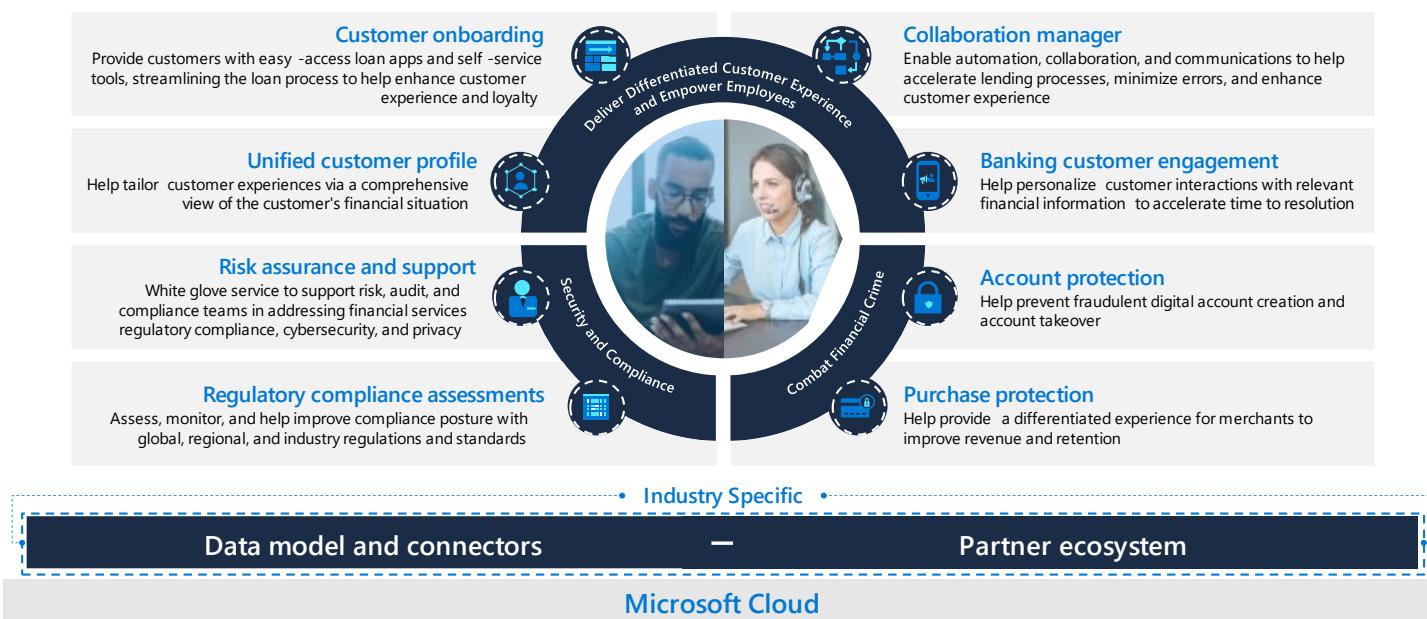
- FSI components, available within Microsoft Cloud for Financial Services in Microsoft Cloud Solution Center). More information: [Deploy Microsoft Cloud for Financial Services solutions powered by Dynamics 365](#).
- At least Contributor permissions in Dynamics 365 Customer Insights. More information: [User permissions](#).
- An understanding of what churn means for your bank. A customer is considered to have churned if all their financial holdings are canceled or their usage of their financial holdings has dropped.
- Prerequisite data: Learn more [here](#).

Industry Prioritized Scenarios

Customer Intelligence focuses on the **Deliver Differentiated Customer Experience and Empower Employees** scenario of Microsoft Cloud for Financial Services by helping personalize customer interactions with relevant financial information through banking customer engagement.

Microsoft Cloud for Financial Services

Capabilities for Retail Banking



Exercise 1: Set up and Deploy Dynamics 365 Customer Insights Components

In this exercise, you will explore the Customer Intelligence components of the Microsoft Cloud for Financial Services, create a Customer Insights instance, and deploy the Customer Intelligence capability from Microsoft Solution Center.

[Dynamics 365 Customer Insights](#) is a part of Microsoft's customer data platform (CDP) that helps deliver personalized customer experiences. The platform's capabilities provide insights into who your customers are and how they engage with your platform. Unify customer data across multiple sources to get a single view of customers.

- [Audience insights](#) helps you transform your business into a customer-centric organization. Marketing, sales, and service professionals have the insights they need to personalize experiences. Connect data from transactional, behavioral, and observational sources to create a 360-degree customer view. See results faster with a CDP designed to deliver insights that can be acted upon.

[Engagement insights \(preview\)](#) enables you to understand interactively, how your customers are using your services and products – both individually and holistically – on websites, mobile apps, and connected products. Combine behavioral analytics with transactional, demographic, survey, and other data types from Microsoft Dynamics 365 Customer Insights. Maintain full control over your customer data to ensure the highest level of data governance and compliance

Task 1: Create a Dynamics 365 Customer Insights Instance

In this task you will create a new Customer Insights sandbox environment. To set **Customer intelligence** up correctly, you must first create a Customer Insights sandbox environment and connect it to your Dataverse environment with no Data Sources specified. Once connected, you will go through [Solution Center](#) and deploy **Customer intelligence** from **Unified customer profile**, specifying the Customer Insights environment that you create in this task.

1. Using an In-Private or Incognito window, navigate to [make.powerapps.com](#).
2. Select the correct environment from the upper right **Environment** drop down.



3. Open a new tab in your internet browser and navigate to <https://home.ci.ai.dynamics.com/>.
4. Select **Audience insights** as your focus and then choose **Business accounts (B-to-C)** as your business.

Choose your focus

Deeply understand how your customers interact and experience your products and services.



Audience insights

Unify all your B2C and B2B customer data to generate AI-powered insights in real time.



Engagement insights (preview)

Understand what customers are doing on your website and mobile app with digital analytics.

Choose your business

Deeply understand how your customers interact and experience your products and services.



Individual consumers (B-to-C)

Create unified demographic profiles of each individual customer.



Business accounts (B-to-B)

Unify firmographic profiles of customer accounts with one or more role-based contacts.

Audience insights

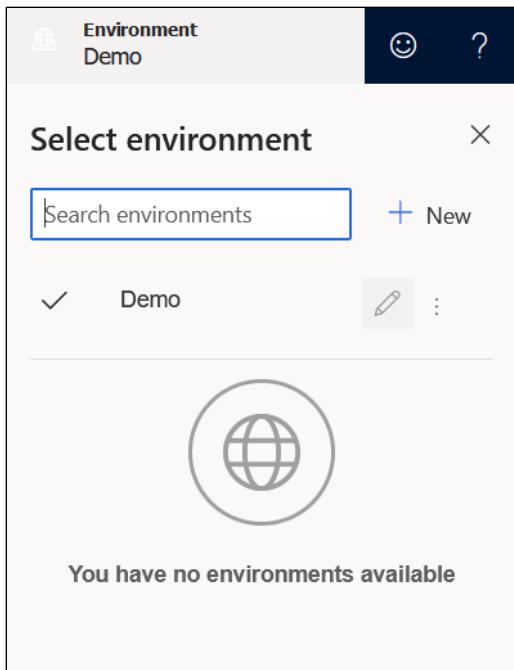
Primary target audience
Individual consumers

Good afternoon

Business accounts

✓ Individual consumers

5. Go to the environment picker and click **+ New**.



6. Fill out the following information and then click **Next**:

- Name:** Customer Intelligence
- Choose your business:** Individual consumers (B-to-C)
- Type:** Sandbox
- Region:** West US*

*Note: Region selection will defer depending on what region your instance was created

The screenshot shows the "Create an environment" wizard. On the left, a vertical navigation pane lists steps: "Basic information" (selected), "Data storage", "Microsoft Dataverse", and "Review". The main area is titled "Basic information" and contains the following fields:

- Name ***: Customer Intelligence
- Copy from existing environment (preview) - A dropdown menu labeled "Select an environment" is open.
- Choose your business ***: Individual consumers (B-to-C)
- Type ***: Trial
- Region ***: West US

At the bottom are three buttons: "Next" (highlighted in blue), "Review and finish", and "Cancel".

7. Save output data to **Customer Insights storage**.

Create an environment X

Basic information
 Data storage **Selected**
 Microsoft Dataverse
 Review

Data storage

Azure Datalake storage for your high performance Audience Insights work loads.

Save output data to *

Customer Insights storage

Back Next Review and finish Cancel

8. Input the URL for your environment, check the Configure Data sharing with Microsoft Dataverse checkbox and click **Next**.

Create an environment X

Basic information
 Data storage
 Microsoft Dataverse **Selected**
 Review

Microsoft Dataverse

Configure secure data sharing with Microsoft Dataverse based business applications.

Microsoft Dataverse environment URL

Configure data sharing with Microsoft Dataverse ⓘ

Enable data sharing (including profiles, segments, metrics, as well as entities) with Microsoft Dataverse.

Back Next Review and finish Cancel

9. Review your selections and click **Create**

Create an environment

Basic information

Data storage

Microsoft Dataverse

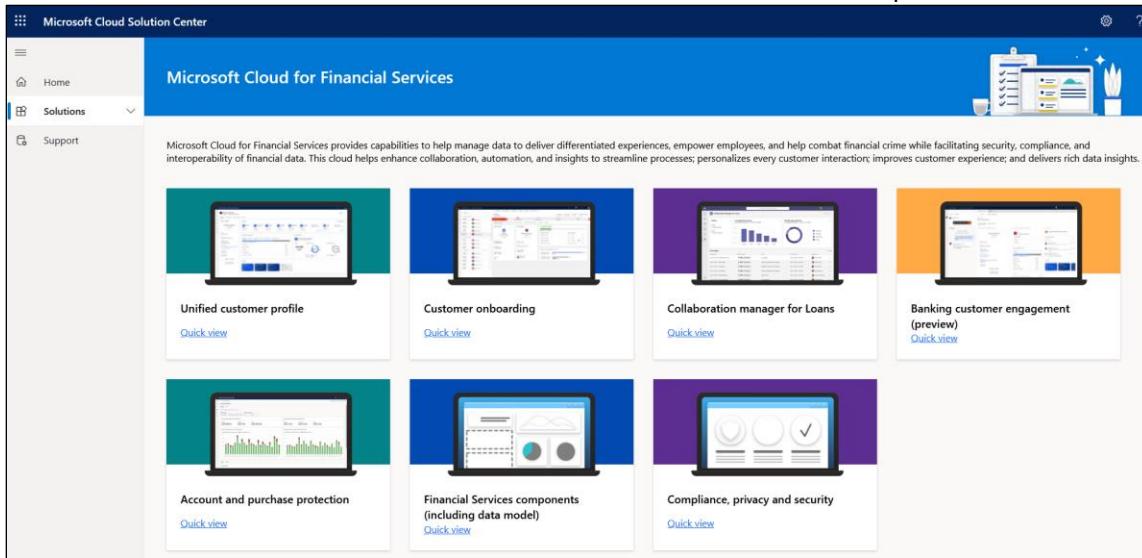
Review

Review

Basic information	Edit
Name:	Customer Intelligence
Audience type:	Individual consumers (B-to-C)
Type:	Trial
Region:	West US
Data storage	Edit
Output storage type:	Customer Insights storage
Microsoft Dataverse	Edit
Server address:	https://fsitraining.crm.dynamics.com
Enable data sharing:	Yes
Permissions identifier:	--

[Back](#) [Create](#) [Cancel](#)

10. Open a new tab in your internet browser, navigate to Microsoft Cloud Solution Center and select the Microsoft Cloud for Financial Services. Then select Unified customer profile



11. In **Unified customer profile**, select **Add all Unified customer profile** and click **Deploy**

The screenshot shows the Microsoft Cloud Solution Center interface. In the top navigation bar, 'Solutions' is selected. Below it, a search bar says 'Filter by capability' with 'Unified customer profile' selected. A blue button on the right says 'Deploy (2)'. On the left, there's a sidebar with 'Home', 'Solutions', and 'Support'. The main content area displays a card for 'Unified customer profile' with a brief description: 'Bring together financial, behavioral, and demographic data and analytics to tailor customer experiences with a 360-degree view of the banking customer.' Below this, two sub-components are listed: 'Unified customer profile app' and 'Customer intelligence'. Both have a 'Quick view' link and a checked 'Added' box.

12. Select **Sample data** and click **Next**

The screenshot shows the 'Set up solutions' wizard. The left sidebar has a tree view with 'Additional components' selected. The main pane shows a section titled 'Additional components' with a sub-section for 'Name'. Under 'Name', 'Sample data' is selected. It has a description: 'Sample data for the solution.' and an enhancement: 'Unified customer profile app'. At the bottom, there are 'Next' and 'Skip' buttons.

13. Find your Dataverse environment in the first drop-down list, then select your Customer Insights deployment in the second drop-down list. Name your deployment, agree to the terms of service and click **Next**.

Microsoft Cloud Solution Center

Set up solutions

Additional components

Set up new deployment (Selected)

Configure dependencies

Deploy solution

Success

Set up new deployment

Follow these steps to set up and deploy your new solutions

Enter Dataverse environment ⓘ

Customer Intelligence

[Create new](#)

Customer Insights Environment ⓘ

Customer Intelligence

[Create new](#)

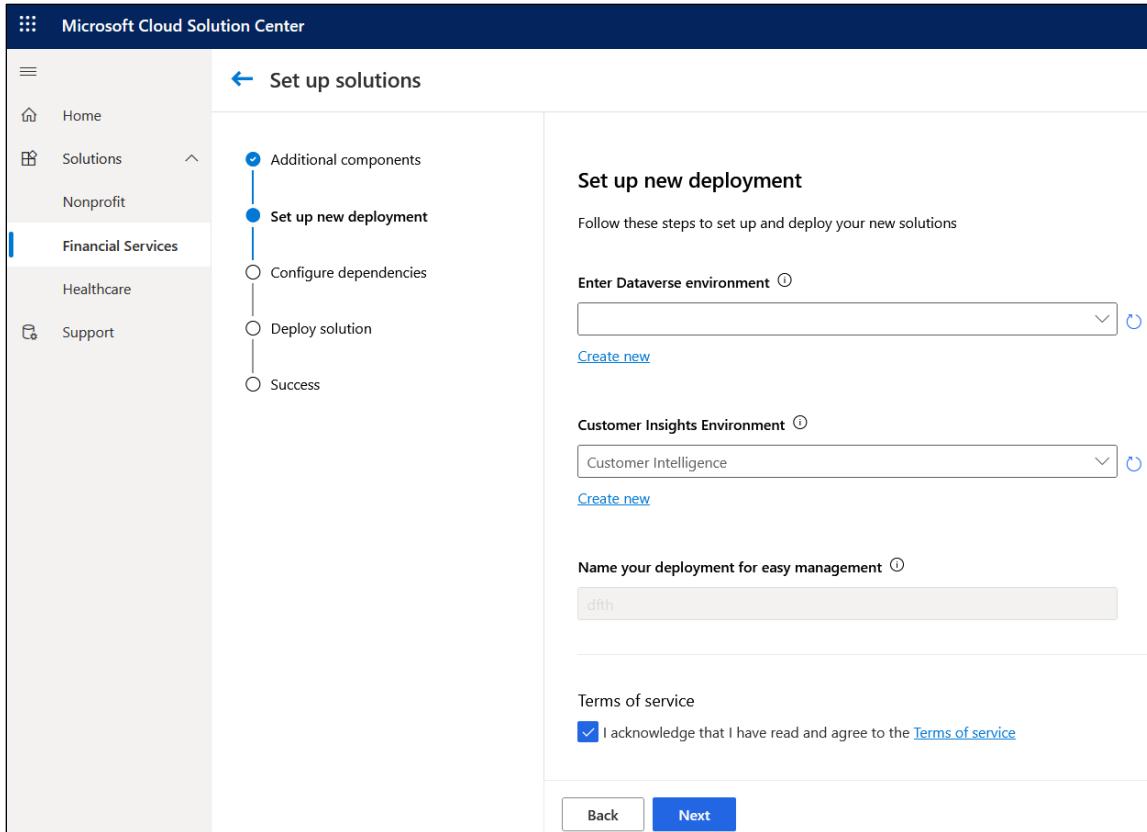
Name your deployment for easy management ⓘ

dith

Terms of service

I acknowledge that I have read and agree to the [Terms of service](#)

Back **Next**



14. Confirm everything looks correct and click Deploy

Microsoft Cloud Solution Center

Set up solutions

Additional components

Set up new deployment

Configure dependencies (Selected)

Deploy solution

Success

Configure pre-deployment dependencies

This solution has dependencies on other applications. We've run an automated check to see if the dependent applications have already been installed and configured.

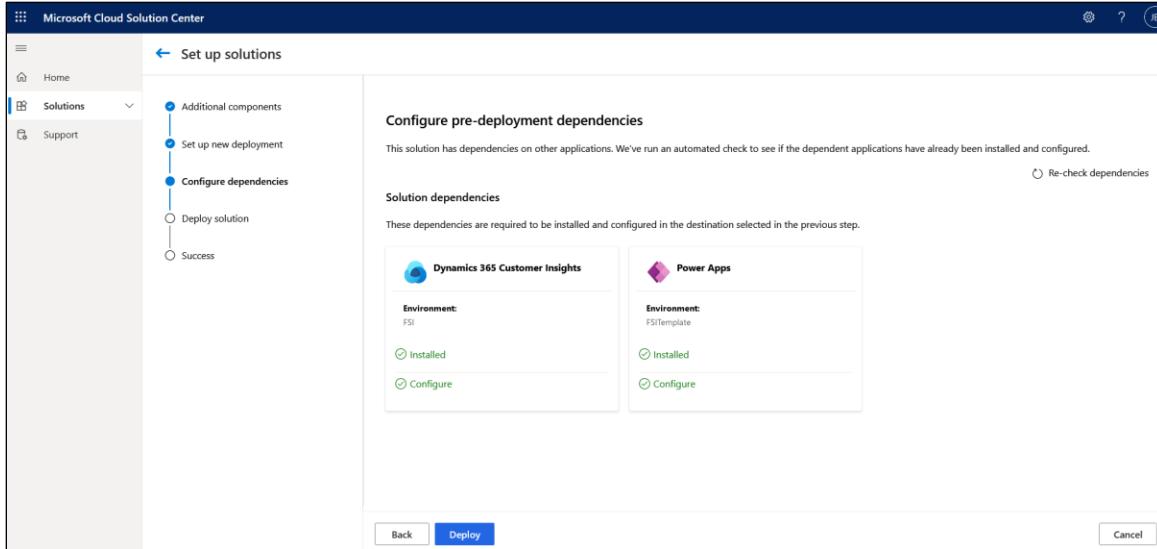
Re-check dependencies

Solution dependencies

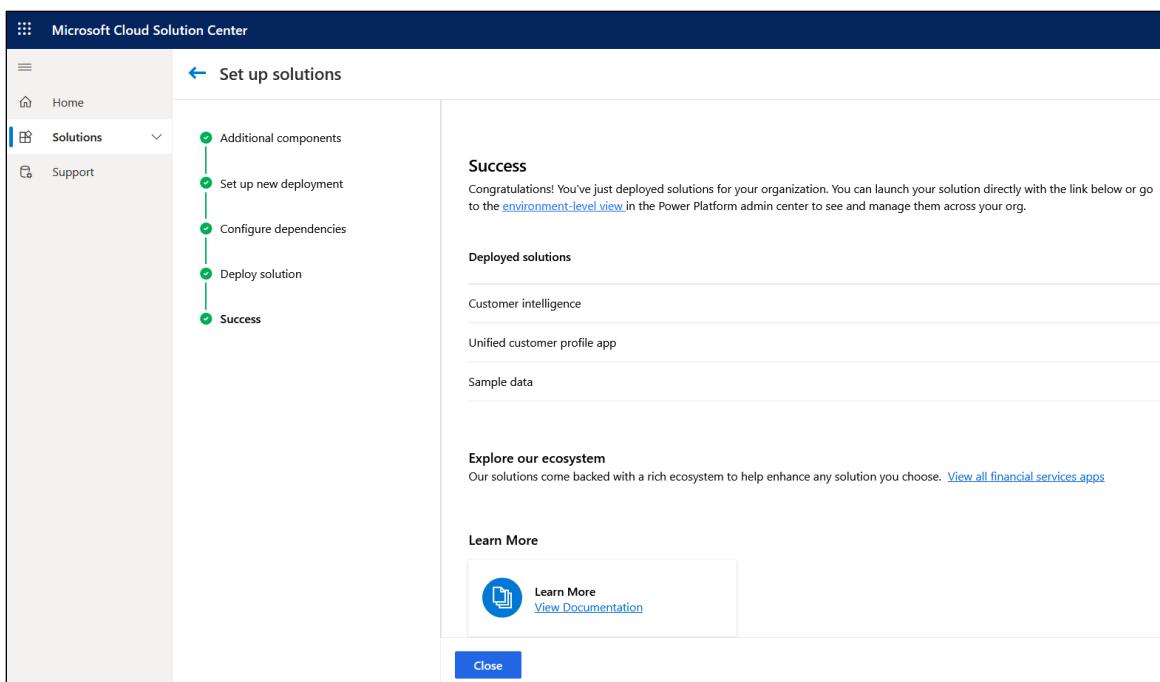
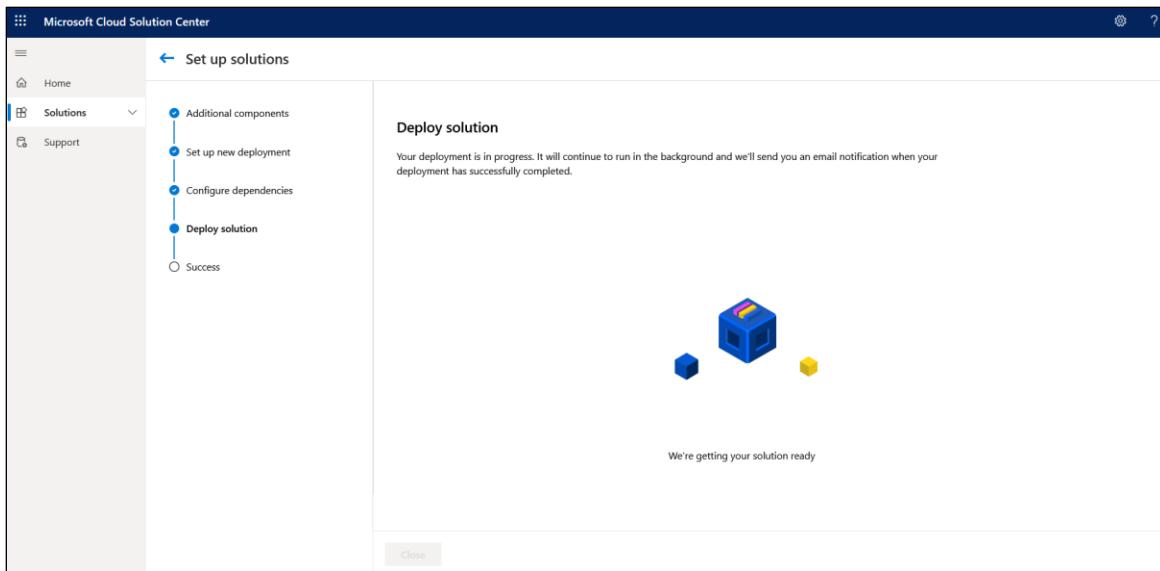
These dependencies are required to be installed and configured in the destination selected in the previous step.

Dynamics 365 Customer Insights	Power Apps
Environment: FSI	Environment: FSITemplate
<input checked="" type="radio"/> Installed	<input checked="" type="radio"/> Installed
<input checked="" type="radio"/> Configure	<input checked="" type="radio"/> Configure

Back **Deploy** **Cancel**



15. Your deployment will now begin. When it completes, you will see a confirmation



Congratulations! You have deployed Dynamics 365 Customer Insights.

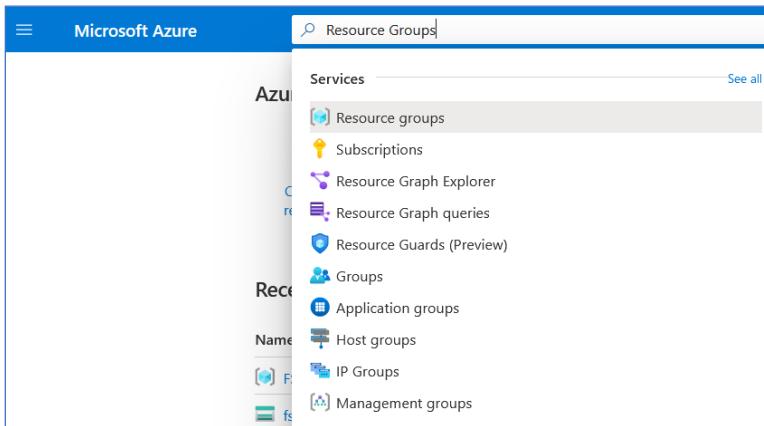
Exercise 2: Create Azure Components and build a Data Pipeline in Azure Data Factory

In this exercise you will build a Data Pipeline in Azure Data Factory in order to ingest sample data from Dataverse into an Azure Data Lake, which is a set of capabilities dedicated to big data analytics. To complete this exercise, you must have an Azure subscription with administrator privileges. To learn more about Azure Data Lakes, please reference this article on Microsoft Docs: [Introduction to Azure Data Lake Storage Gen2](#).

Task 1: Create a Resource Group in Azure

In this task you will create a Resource group to house your other Azure components. To learn more about Azure Resource groups, please reference this article on Microsoft Docs: [Manage Azure Resource Manager resource groups by using the Azure portal](#).

1. Using an In-private or Incognito window, go to [portal.azure.com](#).
2. In the search box, **search** for and select **Resource groups**



The screenshot shows the Microsoft Azure portal's search interface. A search bar at the top contains the text "Resource Groups". Below the search bar, a sidebar lists various services: Services, Subscriptions, Resource Graph Explorer, Resource Graph queries, Resource Guards (Preview), Groups, Application groups, Host groups, IP Groups, and Management groups. The "Resource groups" item is highlighted with a blue selection bar.

3. Click **+ Create** to create a new Resource group



The screenshot shows the "Resource groups" blade in the Azure portal. At the top, there is a header with "Home > Resource groups" and a "Microsoft (PowerPlatformOpenHacks.onmicrosoft.com)" link. Below the header is a toolbar with buttons for "+ Create", "Manage view", "Refresh", "Export to CSV", "Open query", "Assign tags", and "Feedback". There is also a "Filter for any field..." input field and filters for "Subscription == all" and "Location == all". The main area displays a list of resource groups, with one entry partially visible: "fsiResourceGroup" by "PowerPlatformOpenHacks" in "West US".

4. Name the new Resource group **fsiResourceGroup**, choose the appropriate Region, select **Review + Create**, and then click **Create**.

Create a resource group

Basics Tags Review + create

Resource group - A container that holds related resources for an Azure solution. The resource group can include all the resources for the solution, or only those resources that you want to manage as a group. You decide how you want to allocate resources to resource groups based on what makes the most sense for your organization. [Learn more](#)

Project details

Subscription *

Resource group *

Resource details

Region *

Review + create < Previous Next : Tags >

Create a resource group

Validation passed.

Basics Tags **Review + create**

Basics

Subscription
Resource group
Region

Tags

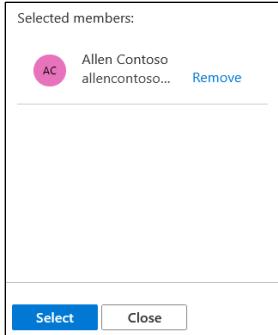
None

Create < Previous Next > Download a template for automation

- Once the Resource group is created, go to **Access control (IAM)** and click **Add role assignment**.

6. Select **Owner** and click **Next**.

7. Click **+ Select Members**, search for and select your user and then click **Select**.



8. Click **Review + assign** to assign the role.

Home > Resource groups > fsiResourceGroup >

Add role assignment ...

Got feedback?

Role Members Review + assign

Selected role Owner

Assign access to User, group, or service principal Managed identity

Members + Select members

Name	Object ID	Type
Allen Contoso	26ef2e0d-2271-4387-99e8-45defab98470	User

Description Optional

Review + assign Previous Next

Congratulations! You have created a Resource group in Azure.

Task 2: Create an Azure Storage Account

In this task, you will create a Storage account within the Resource group that you create in the previous task. An Azure storage account contains all your Azure Storage data objects and provides a unique namespace for your Azure storage data. To learn more about Azure storage accounts, please reference this article on Microsoft Docs: [Azure Storage documentation](#).

1. Navigate to the **Resource group** that you created in the previous task.
2. Click **+ Create**.

3. Scroll down the page to **Storage account** and click **Create**.

The screenshot shows the 'Create a resource' page in the Azure portal. On the left, there's a sidebar with categories like Analytics, Blockchain, Compute, Containers, Databases, Developer Tools, DevOps, Identity, Integration, Internet of Things, IT & Management Tools, Media, Migration, Mixed Reality, Monitoring & Diagnostics, Networking, Security, Storage, and Web. Each category has an icon and a 'Create | Learn more' link. The 'Storage' category is highlighted with a green border and a green arrow pointing to it from the bottom left.

Category	Icon	Description	Links
Analytics	Analytics icon	Create Learn more	
Blockchain	Blockchain icon		
Compute	Compute icon	Web App	Create Docs MS Learn
Containers	Containers icon		
Databases	Databases icon	SQL Database	Create Docs MS Learn
Developer Tools	Developer Tools icon		
DevOps	DevOps icon	Function App	Create Docs
Identity	Identity icon		
Integration	Integration icon	Azure Cosmos DB	Create Docs MS Learn
Internet of Things	Internet of Things icon		
IT & Management Tools	IT & Management Tools icon	Kubernetes Service	Create Docs MS Learn
Media	Media icon		
Migration	Migration icon		
Mixed Reality	Mixed Reality icon	DevOps Starter	Create Docs MS Learn
Monitoring & Diagnostics	Monitoring & Diagnostics icon		
Networking	Networking icon	Storage account	Create Docs MS Learn
Security	Security icon		
Storage	Storage icon		
Web	Web icon		

4. Select the **Resource group** that you created in the previous task.

The screenshot shows the 'Project details' section of the storage account creation wizard. It includes a note about selecting a subscription and resource group. A dropdown menu for 'Subscription' is open, showing the selected option. Below it, a dropdown for 'Resource group' shows 'fsiResourceGroup' selected, with a 'Create new' option available.

5. Scroll down to **Instance details** and enter the following information, click **Review + create**, and then click **Create**:
 - Storage account name:** fsistorageacct
 - Region:** The same region you selected for your Resource group
 - Performance:** Default
 - Redundancy:** Default

Instance details

If you need to create a legacy storage account type, please click [here](#).

Storage account name *	<input type="text" value="fsistorageacct"/>
Region *	<input type="text" value="(US) West US"/>
Performance *	<input checked="" type="radio"/> Standard: Recommended for most scenarios (general-purpose v2 account) <input type="radio"/> Premium: Recommended for scenarios that require low latency.
Redundancy *	<input type="text" value="Geo-redundant storage (GRS)"/> <input checked="" type="checkbox"/> Make read access to data available in the event of regional unavailability.

Review + create < Previous Next : Advanced >

Click advanced step and enable Hierarchical name space

Home > Resource groups > fsiresourcegroupwest > Create a resource > Create a storage account ...

Basics **Advanced** Networking Data protection Encryption Tags Review + create

Security

Configure security settings that impact your storage account.

Require secure transfer for REST API operations ○	<input checked="" type="checkbox"/>
Enable blob public access ○	<input checked="" type="checkbox"/>
Enable storage account key access ○	<input checked="" type="checkbox"/>
Default to Azure Active Directory authorization in the Azure portal ○	<input type="checkbox"/>
Minimum TLS version ○	<input type="text" value="Version 1.2"/>

Data Lake Storage Gen2

The Data Lake Storage Gen2 hierarchical namespace accelerates big data analytics workloads and enables file-level access control lists (ACLs). [Learn more](#)

Enable hierarchical namespace	<input checked="" type="checkbox"/>
-------------------------------	-------------------------------------

Blob storage

Enable SFTP (preview) ○	<input type="checkbox"/>
Enable network file system v3 ○	<input type="checkbox"/>
Allow cross-tenant replication ○	<input type="checkbox"/>
<small>● Cross-tenant replication and hierarchical namespace cannot be enabled simultaneously.</small>	
Access tier ○	<input checked="" type="radio"/> Hot: Frequently accessed data and day-to-day usage scenarios <input type="radio"/> Cool: Infrequently accessed data and backup scenarios

Azure Files

Enable large file shares ○	<input type="checkbox"/>
---	--------------------------

Review + create < Previous Next : Networking >

Home > fsiResourceGroup > Create a resource >

Create a storage account

Validation passed

Basics	Advanced	Networking	Data protection	Encryption	Tags	Review + create
Blob soft delete	Enabled					
Blob retention period in days	7					
Container soft delete	Enabled					
Container retention period in days	7					
File share soft delete	Enabled					
File share retention period in days	7					
Versioning	Disabled					
Blob change feed	Disabled					
Version-level immutability support	Disabled					

Encryption

Encryption type	Microsoft-managed keys (MMK)
Enable support for customer-managed keys	Blobs and files only
Enable infrastructure encryption	Disabled

Actions

- Create**
- < Previous
- Next >
- Download a template for automation

- Once the Storage account is created, go to **Access Control (IAM)**, and click **Add role assignments**.

Home > fsistorageacct

fsistorageacct | Access Control (IAM)

Storage account

Check access

View my level of access to this resource.

View my access

Check access

Review the level of access a user, group, service principal, or managed identity has to this resource. [Learn more](#)

Find

User, group, or service principal

Search by name or email address

Grant access to this resource

Grant access to resources by assigning a role.

Add role assignment

View access to this resource

View the role assignments that grant access to this and other resources.

View

View deny assignments

View the role assignments that have been denied access to specific actions at this scope.

- Search for and select **Storage Blob Data Contributor**.

Home > fstorageacct >

Add role assignment ...

Got feedback?

Role Members * Conditions (optional) Review + assign

A role definition is a collection of permissions. You can use the built-in roles or you can create your own custom roles. [Learn more](#) [Use classic experience](#)

Storage Blob Data Contributor Type : All Category : All

Name ↑↓	Description ↑↓	Type ↑↓	Category ↑↓	Details
Storage Blob Data Contributor	Allows for read, write and delete access to Azure Storage blob containers and data	BuiltinRole	Storage	View

Showing 1 of 40 roles

Review + assign Previous Next

8. Click **Members** and then click **+ Select Members**. Find your user and click **Select**.

Home > fstorageacct >

Add role assignment ...

Got feedback?

Role **Members *** Conditions (optional) Review + assign

Selected role Storage Blob Data Contributor

Assign access to User, group, or service principal Managed identity

Members [+ Select members](#)

Name	Object ID	Type
No members selected		

Description

Review + assign Previous Next

Selected members:

AC	Allen Contoso allencontoso...	Remove
----	----------------------------------	------------------------

[Select](#) [Close](#)

9. Click **Review + assign** to assign the role.

10. Go back to **Access Control (IAM)** and click **Add role assignment** again.

11. Select **Owner** and then click **Next**.

12. Click **+ Select Members**. Find your user and click **Select**.

Home > fstorageacct >

Add role assignment ...

Got feedback?

[Role](#) [Members](#) [Review + assign](#)

Selected role Owner

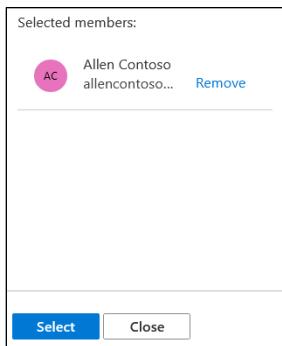
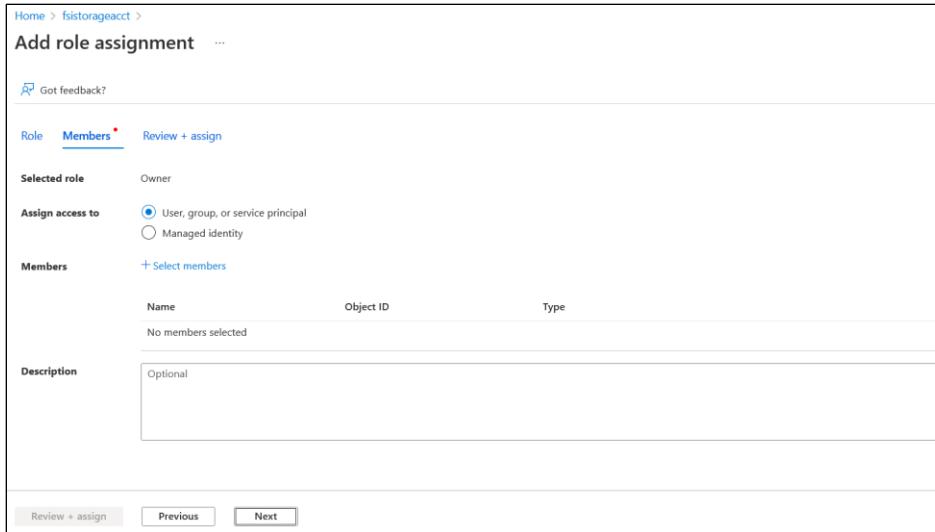
Assign access to User, group, or service principal Managed identity

Members [+ Select members](#)

Name	Object ID	Type
No members selected		

Description Optional

[Review + assign](#) [Previous](#) [Next](#)



13. Click **Review + assign** to assign the role.

Home > fstorageacct >

Add role assignment ...

Got feedback?

[Role](#) [Members](#) [Review + assign](#)

Selected role Owner

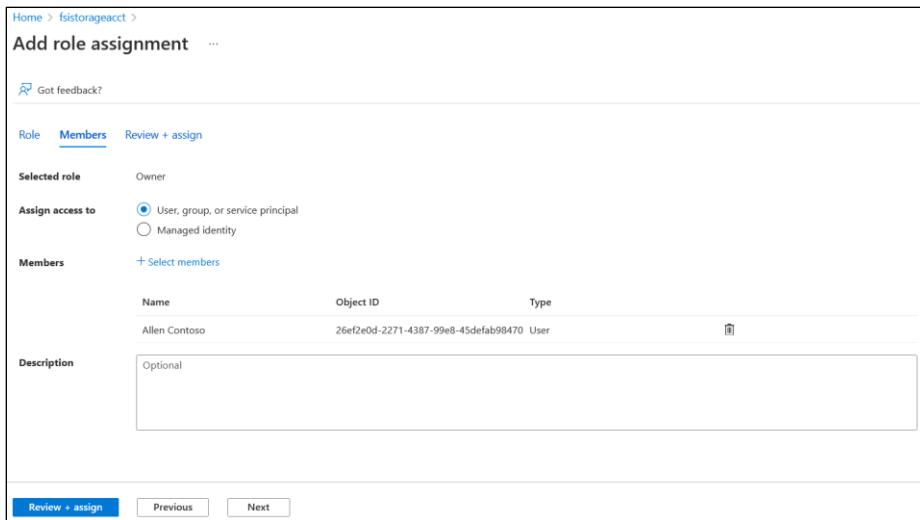
Assign access to User, group, or service principal Managed identity

Members [+ Select members](#)

Name	Object ID	Type
Allen Contoso	26ef2e0d-2271-4387-99e8-45defab98470	User

Description Optional

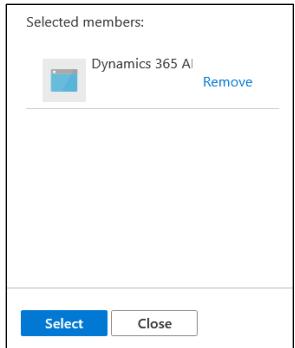
[Review + assign](#) [Previous](#) [Next](#)



14. Go back to **Access Control (IAM)** and click **Add role assignment** one more time.

15. Search for and select **Storage Blob Data Contributor. Click **Next**.**

16. Click **Members and then click **+ Select Members**. Search for and **Select Dynamics 365 AI for Customer Insights**.**



17. Click **Review + assign** to assign the role.

Home > Storage accounts > fsistorageacct >

Add role assignment ...

Got feedback?

Role Members Conditions (optional) Review + assign

Selected role Storage Blob Data Contributor

Assign access to User, group, or service principal Managed identity

Members + Select members

Name	Object ID	Type
Dynamics 365 AI for Customer Insights	00090e1a-16a2-4111-a772-ab33c17f6337	App

Description Optional

Review + assign Previous Next

Congratulations! You have created a Storage account in your Azure Resource group.

Task 3: Create a staging Azure Container for Customer Insights

In this task you will create an Azure Container from the Storage account that you created in the previous task. This Azure Container will be used as a staging area for data that will be ingested by Customer Insights. To learn more about Azure Containers, please reference this article on Microsoft Docs: [Azure Containers Instances documentation](#).

1. In the **Storage account** you created in the previous task, click **Containers**.

The screenshot shows the Azure Storage Account Overview page for the account 'fsistorageacct'. The left sidebar contains navigation links such as Overview, Activity log, Tags, Diagnose and solve problems, Access Control (IAM), Data migration, Events, and Storage browser (preview). Below these are sections for Data storage (Containers, File shares, Queues, Tables) and Security + networking (Networking, Azure CDN, Access keys).

2. Click **+ Container**, fill out the following information and click **Create**.
 - a. Name: fsicistagingcontainer
 - b. Public access level: Container

The screenshot shows the 'New container' dialog box. It has fields for 'Name' (set to 'cistagingcontainer') and 'Public access level' (set to 'Container (anonymous read access for containers and blobs)'). A note below states: 'All container and blob data can be read by anonymous request. Clients can enumerate blobs within the container by anonymous request, but cannot enumerate containers within the storage account.' At the bottom are 'Create' and 'Discard' buttons.

3. Open the newly created Container and click **Manage ACL**.

The screenshot shows the 'Settings' section of a container's properties. The 'Manage ACL' option is highlighted, indicating it is selected.

4. Under **Access permissions** click **+ Add Principal**. Search for **Dynamics 365 AI for Customer Insights** and click **Select**. Provide Read, Write and Execute permissions and click **Save**.

Security principal	Read	Write	Execute
Owner: \$superuser	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Owning group: \$superuser	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mask	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Dynamics 365 AI for Customer Insights (00090e1...)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

5. Perform the exact same steps for Dynamics 365 AI for Customer Insights under Default permissions.

Security principal	Read	Write	Execute
Owner	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Owning group	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mask	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Dynamics 365 AI for Customer Insights (00090e1...)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

6. Go to **Overview** and click **+ Add Directory**.

Authentication method: Access key ([Switch to Azure](#))
Location: fsicistaging

7. Type **Corpus** and click **Save**.

Add Directory ×

Name *

Corpus ✓

Save Cancel

8. Open the new **Corpus** directory and click **+ Add Directory**. Type **resolved**.

Add Directory

Name *

✓

Save **Cancel**

- Open the new resolved folder and click **Upload** to upload the json files that have been provided as part of this lab. These .json files will be used to transform the data for Customer Insights.

Name	Modified	Access tier	Archive status	Blob type	Size	Lease state	...
[...]							
contact.cdm.json	1/10/2022, 11:44:59 ...	Hot (Inferred)		Block blob	25.69 KiB	Available	...
contactmerge.cdm.json	1/10/2022, 11:44:59 ...	Hot (Inferred)		Block blob	542 B	Available	...
msfsi_bank.cdm.json	1/10/2022, 11:44:59 ...	Hot (Inferred)		Block blob	1.73 KiB	Available	...
msfsi_branch.cdm.json	1/10/2022, 11:44:59 ...	Hot (Inferred)		Block blob	2.34 KiB	Available	...
msfsi_customerfinancialholding.cdm.json	1/10/2022, 11:44:59 ...	Hot (Inferred)		Block blob	1.79 KiB	Available	...
msfsi_financialholding.cdm.json	1/10/2022, 11:45:00 ...	Hot (Inferred)		Block blob	7.45 KiB	Available	...
msfsi_financialholdinginstrument.cdm.json	1/10/2022, 11:44:59 ...	Hot (Inferred)		Block blob	5.11 KiB	Available	...
msfsi_group.cdm.json	1/10/2022, 11:45:00 ...	Hot (Inferred)		Block blob	1.39 KiB	Available	...
msfsi_groupfinancialholding.cdm.json	1/10/2022, 11:45:00 ...	Hot (Inferred)		Block blob	1.45 KiB	Available	...
msfsi_groupmember.cdm.json	1/10/2022, 11:45:00 ...	Hot (Inferred)		Block blob	1.76 KiB	Available	...
msfsi_lifemoment.cdm.json	1/10/2022, 11:45:00 ...	Hot (Inferred)		Block blob	1.69 KiB	Available	...

Congratulations! You have created a staging Azure Container for Customer Insights.

Task 4: Create a new Azure Synapse Link

In this task you will create a new Azure Synapse link to connect your Dataverse environment to your Azure Storage account.

1. Using an In-Private or Incognito window, navigate to make.powerapps.com.
2. Select the correct environment from the upper right **Environment** drop down.



3. Expand **Dataverse** and select **Azure Synapse Link**. Click **+ New link**.

A screenshot of the "Azure Synapse Link for Dataverse" page. On the left, there is a sidebar with navigation links: Home, Learn, Apps, Create, Dataverse (which is selected and highlighted in purple), Tables, Choices, Dataflows, Azure Synapse Link (which is also highlighted in purple), Connections, Custom Connectors, and Gateways. The main content area has a heading "Azure Synapse Link for Dataverse" and a diagram showing a green circular icon with a white 'D' and a blue hexagonal icon with a white 'S' connected by an arrow. Below the diagram, text says "You have not linked the Dataverse environment to Azure Synapse Analytics. Before you can export, link the Dataverse environment to an Azure Synapse Analytics workspace." A prominent blue "New link" button is located at the bottom right of the main content area.

4. Select your **Azure subscription**, **Resource Group**, **Storage account** and click **Next**.

A screenshot of the "New link" configuration dialog. On the left, there are two sections: "Select Storage Account" (with "fsiadstorage2" selected) and "Add Tables" (with "1 of 287 selected"). On the right, there is a "Select Storage Account" section with the following details:

- Select the storage account that you want link to the Dataverse environment. The storage account must be in the same region as your environment.
- Your environment is located in: West US
- Please attach a storage account in one of the following location(s): West US or West US 2
- Connect to your Azure Synapse Analytics workspace ⓘ

Below these are dropdown menus for "Subscription" (selected: "fsiadstorage2"), "Resource group" (selected: "FSIADResourceGroup"), and "Storage account" (selected: "fsiadstorage2"). At the bottom, a note states: "As part of linking the Dataverse environment to a data lake, you are granting the Azure Synapse Link service additional roles to your storage account. By using the Azure Synapse Link service, you agree that data may go outside of Power Apps' compliance boundary. For more information, see the Privacy Notice in the technical documentation for the service." At the very bottom are "Back", "Next", and "Cancel" buttons.

5. Filtering by keyword, search for and **add** the following **18** tables. Click **Save**.

- a) Bank
- b) Branch
- c) Contact
- d) Customer financial holding
- e) FH account
- f) FH investment
- g) FH line of credit
- h) FH loan
- i) FH saving
- j) FI card
- k) FI direct debit
- l) FI overdraft
- m) FI standing order
- n) Financial holding
- o) Financial holding instrument
- p) Group
- q) Group financial holding
- r) Group member
- s) Life event

New link

Select Storage Account
fsiadstorage2
Add Tables

Select the tables that you want to export. Only tables enabled for change tracking will be visible in the list below.

Advanced

Life event

<input type="radio"/> Table ↑	Name
<input checked="" type="checkbox"/> Life event	msfsi_lifemoment

Back
Save
Cancel

6. Once you finish adding the tables, you should begin to see the tables populate with data. This action will also create a new Azure Container in your storage account that we will then use to run our Data Pipeline in Azure Data factory.

Tables	Details	Discover hub				
Table ↑	Name	Sync status	Last synchronized on	Count	Append only	Partition
Bank	msfsi_bank	🕒 Active	01/10/2022 11:21:22 AM	1	No	Month
Branch	msfsi_branch	🕒 Active	01/10/2022 11:20:53 AM	20	No	Month
Contact	contact	🕒 Active	01/10/2022 11:20:59 AM	37	No	Month
Customer financial holding	msfsi_customerfinancialholding	🕒 Active	01/10/2022 11:20:57 AM	175	No	Month
FH account	msfsi_fh_account	🕒 Active	01/10/2022 11:20:57 AM	42	No	Month
FH investment	msfsi_fh_investment	🕒 Active	01/10/2022 11:21:00 AM	9	No	Month
FH line of credit	msfsi_fh_creditline	🕒 Active	01/10/2022 11:21:56 AM	28	No	Month
FH loan	msfsi_fh_loan	🕒 Active	01/10/2022 11:21:14 AM	30	No	Month
FH saving	msfsi_fh_saving	🕒 Active	01/10/2022 11:21:15 AM	57	No	Month
FI card	msfsi_fi_card	🕒 Active	01/10/2022 11:21:17 AM	61	No	Month
FI direct debit	msfsi_fi_directdebit	🕒 Active	01/10/2022 11:21:53 AM	20	No	Month
FI overdraft	msfsi_fi_overdraft	🕒 Active	01/10/2022 11:21:18 AM	17	No	Month
FI standing order	msfsi_fi_standingorder	🕒 Active	01/10/2022 12:14:51 PM	10	No	Month

Congratulations! You have linked Dataverse to Azure Data Lake using Azure Synapse.

Task 5: Create an Azure Data Factory

In this task, you will create an Azure Data Factory within your Azure Resource group. Azure Data Factory is Azure's cloud ETL service for scale-out serverless data integration and data transformation. To learn more about Azure Data Factory, please reference this article on Microsoft Docs: [Azure Data Factory documentation](#).

1. In Azure, **search for and select Data factories**.

2. Click **+ Create** to create a new Data factory.

3. Fill out the following information:

- Subscription:** Your Azure subscription
- Resource group:** Your previously created Resource group
- Region:** Same region as your Resource group
- Name:** myfsidatafactory
- Version:** V2

Create Data Factory

Basics Git configuration Networking Advanced Tags Review + create

Project details

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

Subscription * ⓘ

Resource group * ⓘ fsiResourceGroup

Instance details

Region * ⓘ West US

Name * ⓘ myfsidatafactory

Version * ⓘ V2 (Recommended)

4. Select the **Git configuration** tab and check **Configure Git later**. Click **Review + create**.

Home > Data factories >

Create Data Factory

Basics **Git configuration** Networking Advanced Tags Review + create

Azure Data Factory allows you to configure a Git repository with either Azure DevOps or GitHub. Git is a version control system that allows for easier change tracking and collaboration.
[Learn more about Git integration in Azure Data Factory](#)

Configure Git later ⓘ

5. Finally, click **Create** to create the Azure Data factory.

Create Data Factory

Validation Passed

Basics Git configuration Networking Advanced Tags Review + create

TERMS

By clicking "Create", I (a) agree to the legal terms and privacy statement(s) associated with the Marketplace offering(s) listed above; (b) authorize Microsoft to bill my current payment method for the fees associated with the offering(s), with the same billing frequency as my Azure subscription; and (c) agree that Microsoft may share my contact, usage and transactional information with the provider(s) of the offering(s) for support, billing and other transactional activities. Microsoft does not provide rights for third-party offerings. See the [Azure Marketplace Terms](#) for additional details.

Basics

Subscription
Resource group fsiResourceGroup
Region West US
Name myfsidatafactory
Version V2 (Recommended)

Networking

Create

< Previous

Next

[Download a template for automation](#)

Congratulations! You have created an Azure Data factory.

Task 6: Run a Data Pipeline in Azure Data Factory

In this task, you will run a Data Pipeline in your Azure Data Factory using an ARM template. This data pipeline will ingest the sample data from the Storage Container linked to your Microsoft Clouds for Financial Services Dataverse environment and move it to the staging Container to be ingested by Dynamics 365 Customer Insights. For more information on Data Pipelines, please reference this article on Microsoft Docs: [Pipelines and activities in Azure Data Factory and Azure Synapse Analytics](#).

1. In your Azure Data Factory, go to **Overview** and then click **Open Azure Data Factory Studio**.

Home > Data factories >

myfsidatafactory Data factory (V2)

Search (Ctrl+ /) Delete

Overview

Essentials

Resource group (Move) : fsiResourceGroup
Status : Succeeded
Location : West US
Subscription (Move) :
Subscription ID :

Type : Data factory (V2)
Getting started : Quick start

Getting started

Open Azure Data Factory Studio Start authoring and monitoring your data pipelines and data flows. [Open](#)

Read documentation Learn how to be productive quickly. Explore concepts, tutorials, and samples. [Learn more](#)

Monitoring

PipelineRuns ActivityRuns

Settings

Activity log Access control (IAM) Tags
Diagnose and solve problems

Networking Managed identities Properties Locks

Quick start

Alerts Metrics Diagnostic settings

2. Select your Azure Data factory from the dropdown menu and click Continue.

Select Data Factory

Microsoft Azure Data Factory is a cloud-based data integration service that automates data movement and transformation. [Learn more](#)

Azure Active Directory

Subscription

Data Factory name *

myfsidatafactory

Continue

3. Go to Manage (bottom) icon → ARM template → Import ARM Template.

Connections

Linked services

Integration runtimes

Azure Purview

Source control

Git configuration

ARM template

Author

Triggers

Global parameters

Customer managed key

Credentials

Managed private endpoints

ARM template

The Azure Resource Manager (ARM) template is a JavaScript Object Notation (JSON) file that defines the infrastructure and configuration for your project. [Learn more](#)

Azure Data Factory can be exported and updated as an ARM template artifact. [Learn more](#)

Import ARM template Update your Azure Data Factory environment by importing an ARM template. [Import on Azure portal](#)

Export ARM template Export your Azure Data Factory as an ARM template. [Export](#)

ARM parameter configuration

This configuration determines which properties are parameterized when generating the Azure Resource Manager template of this data factory. [Learn more](#)

Edit parameter configuration Determine which properties are parameterized when generating the ARM Template of this Data Factory. [Edit](#)

4. Click Build your own template in the editor

Home >

Custom deployment ...

Deploy from a custom template

Select a template Basics Review + create

Automate deploying resources with Azure Resource Manager templates in a single, coordinated operation. Create or select a template below to get started. [Learn more about template deployment](#)

Build your own template in the editor

Common templates

- Create a Linux virtual machine
- Create a Windows virtual machine
- Create a web app
- Create a SQL database
- Azure landing zone

Start with a quickstart template or template spec

Template source Quickstart template Template spec

Quickstart template (disclaimer)

5. Click **Load file** to upload the ARM Template file provided in the Lab Resources.

Home > Custom deployment >

Edit template ...

Edit your Azure Resource Manager template

+ Add resource Quickstart template Load file Download

Parameters (0) Variables (0) Resources (0)

```
1: {
2:   "$schema": "https://schema.management.azure.com/schemas/2019-04-01/deploymentTemplate.json#",
3:   "contentVersion": "1.0.0.0",
4:   "parameters": {},
5:   "resources": []
6: }
```

6. Go back to your Storage Account. Go to Access Keys and click Show keys. Copy the key1 Key

Home > Storage accounts > fsistorageacct

fsistorageacct | Access keys ...

Storage account

Search (Ctrl+ /) Set rotation reminder Refresh

Access keys authenticate your applications' requests to this storage account. Keep your keys in a secure location like Azure Key Vault, and replace them often with new keys. The two keys allow you to replace one while still using the other.

Remember to update the keys with any Azure resources and apps that use this storage account. [Learn more](#)

Storage account name: fsistorageacct

key1
Last rotated: 1/11/2022 (0 days ago)
 Rotate key
Key:

Connection string:

The screenshot shows the 'Access keys' section of the Azure Storage account 'fsistorageacct'. It displays a single key named 'key1' which was last rotated on 1/11/2022 (0 days ago). There is a 'Rotate key' button available. Below the key is a 'Connection string' field containing the URL: DefaultEndpointsProtocol=https;AccountName=fsistorageacct;AccountKey=hUu61... . The left sidebar lists various management options like Geo-replication, Data protection, Object replication, Blob inventory, Static website, Lifecycle management, and Azure search.

7. Edit the following parameters and click Save:

- factoryName: defaultValue: Your Data factory name
- lnkFSICDM_accountKey: metadata: The Storage Account Key you copied in the previous step
- lnkCICDM_accountKey: metadata: The Storage Account Key you copied in the previous step
- lnkFSICDM_properties_typeProperties_url: metadata: https://STORAGEACCOUNTNAME.dfs.core.windows.net
- lnkCICDM_properties_typeProperties_url: metadata: https://STORAGEACCOUNTNAME.dfs.core.windows.net

The screenshot shows the 'Edit template' screen for an Azure Resource Manager template. The JSON code defines several parameters:

```

1 {
  "$schema": "http://schema.management.azure.com/schemas/2015-01-01/deploymentTemplate.json#",
  "contentVersion": "1.0.0.0",
  "parameters": {
    "factoryName": {
      "type": "string",
      "metadata": "Data Factory name",
      "defaultValue": "myfsidatafactory"
    },
    "lnkFSICDM_accountKey": {
      "type": "securestring",
      "metadata": "Secure string for 'accountKey' of 'lnkFSICDM'"
    },
    "lnkCICDM_accountKey": {
      "type": "securestring",
      "metadata": "Secure string for 'accountKey' of 'lnkCICDM'"
    },
    "lnkFSICDM_properties_typeProperties_url": {
      "type": "string",
      "defaultValue": "https://fsistorageacct.dfs.core.windows.net"
    },
    "lnkCICDM_properties_typeProperties_url": [
      {
        "type": "string",
        "defaultValue": "https://fsistorageacct.dfs.core.windows.net"
      }
    ]
  }
}

```

At the bottom, there are 'Save' and 'Discard' buttons.

8. Select your **Resource group** from the dropdown menu. Fill in the remaining two parameters with the **Storage Account Key** that you copied in the previous step. Click **Review + create**.

Home >

Custom deployment

Deploy from a custom template

Project details

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

Subscription * ⓘ

Resource group * ⓘ

[Create new](#)

Instance details

Region * ⓘ

Factory Name

Lnk FSICDM_account Key *

Lnk CICDM_account Key *

Lnk FSICDM_properties_type
Properties_url

Lnk CICDM_properties_type
Properties_url

[Review + create](#)

[< Previous](#)

[Next : Review + create >](#)

9. Click **Create** to create the Data Pipeline

Home >

Custom deployment

Deploy from a custom template

✓ Validation Passed

Select a template Basics **Review + create**

Summary

Customized template
6 resources

Terms

[Azure Marketplace Terms](#) | [Azure Marketplace](#)

By clicking "Create," I (a) agree to the applicable legal terms associated with the offering; (b) authorize Microsoft to charge or bill my current payment method for the fees associated the offering(s), including applicable taxes, with the same billing frequency as my Azure subscription, until I discontinue use of the offering(s); and (c) agree that, if the deployment involves 3rd party offerings, Microsoft may share my contact information and other details of such deployment with the publisher of that offering.

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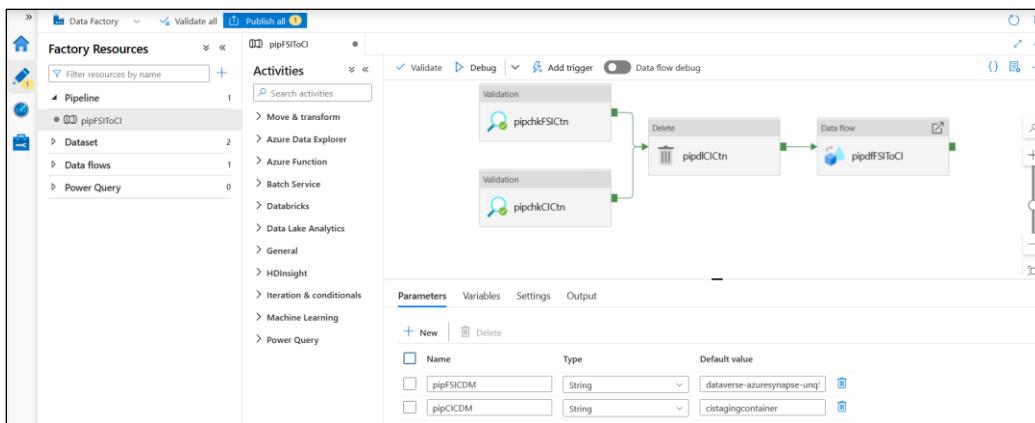
Deploying this template will create one or more Azure resources or Marketplace offerings. You acknowledge that you are responsible for reviewing the applicable pricing and legal terms associated with all resources and offerings deployed as part of this template. Prices and associated legal terms for any Marketplace offerings can be found in the [Azure Marketplace](#); both are subject to change at any time prior to deployment.

Create < Previous Next >

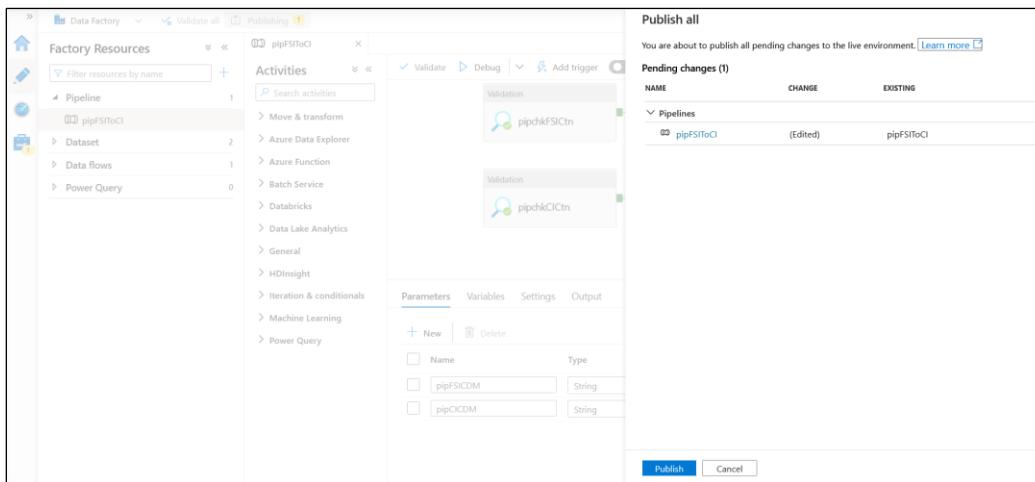
10. Go back to your **Data factory** and **refresh** the page. Click **Linked services** and you should now see two connections.

Name	Type	Related	Annotations
LinkCICDM	Azure Data Lake Storage Gen2	3	
LinkFSICDM	Azure Data Lake Storage Gen2	1	

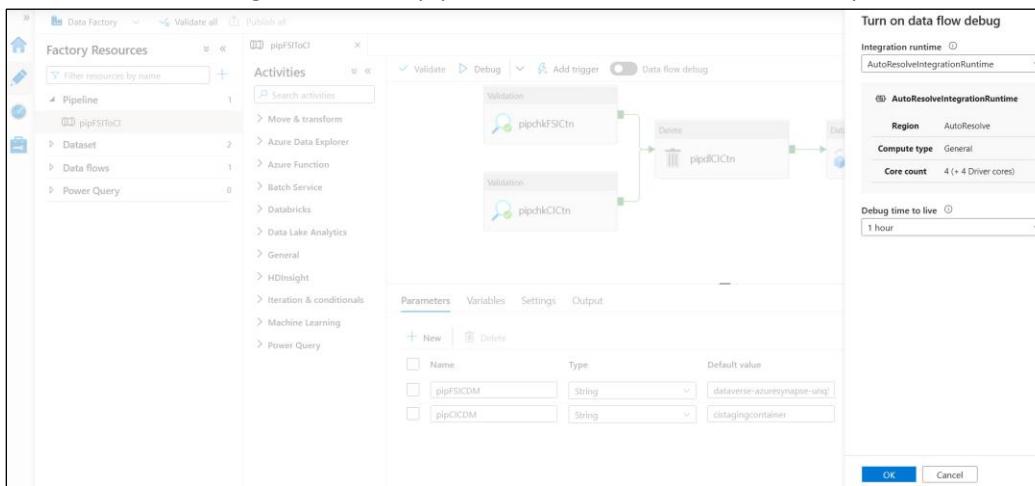
11. Click the **Author** (pencil) icon. Expand and click the **Pipeline**. Input the following parameters:
- pipFSICDM: The full name of your Storage Container linked to Azure Synapse. Example: *dataverse-AZURESYNAPSE-unqab48050868e14fef9572fa91f02ff*.
 - pipCICDM: The name of your Customer Insights staging Storage Container. Example: *cistagingcontainer*.



12. Publish your changes by clicking Publishing and then clicking Publish.



13. Turn on data flow debug by checking the **Data flow debug** field and clicking **OK**. This will provide you with a detailed error message should the pipeline fail to run. It will take a couple minutes for this to complete.



14. Once Data flow debug is turned on, click **Debug** and then click **OK** to trigger the pipeline.

Pipeline run

Parameters

Name	Type	Value
pipFSICDM	string	dataverse-azuresynapse-unq ...
pipCICDM	string	cistagingcontainer

OK Cancel

15. If the run is successful, you will receive a status of Succeeded for the Data flow.

Name	Type	Run start	Duration	Status	Integration runtime
pipdffSIToCI	Data flow	2022-01-10T20:22:11.870	00:02:06	Succeeded	AutoResolveIntegrationRuntime (W...
pipdICICtn	Delete	2022-01-10T20:22:08.703	00:00:02	Succeeded	AutoResolveIntegrationRuntime (W...
pipchkCICtn	Validation	2022-01-10T20:22:04.938	00:00:03	Succeeded	
pipchkFSICtn	Validation	2022-01-10T20:22:04.923	00:00:03	Succeeded	

16. Go back to your Customer Insights staging Storage Container to see data begin to populate in a newly created Data folder.

Name	Modified	Access tier	Archive status	Blob type	Size	Lease state
[-]					-	***
contact					-	***
contactmerge					-	***
msfsi_bank					-	***
msfsi_branch					-	***
msfsi_customerfinancialholding					-	***
msfsi_financialholding					-	***
msfsi_financialholdinginstrument					-	***
msfsi_group					-	***
msfsi_groupfinancialholding					-	***
msfsi_groupmember					-	***
msfsi_groupmoment					-	***
config.json	1/10/2022, 12:24:03 ...	Hot (Inferred)		Block blob	140 B	Available

Congratulations! You have successfully built and run a Data Pipeline in Azure Data Factory.

Exercise 3: Configure the Retail Banking Churn Model in Dynamics 365 Customer Insights

In this exercise, you will ingest the Dataverse sample data from your Azure Data Factory into Dynamics 365 Customer Insights and run the Retail Banking Churn Model.

Task 1: Configure a Data Source in Dynamics 365 Customer Insights

In this task you will configure the operationaldata data source for ingesting data into Customer Insights.

1. In Customer Insights, navigate to Data Sources and edit operationaldata

Name	Entities	Status	Refreshed
Shared (1)			
operationaldata	11	Credentials Required	Never

2. Select **Azure subscription** and then select the appropriate Subscription, Resource Group, and Storage account from the dropdown menus. For the Container field, simply type the **name** of your Container. Click **Next**.

Enter storage details

Common Data Model folder
Azure Data Lake

Connect your storage using
Azure subscription

Subscription

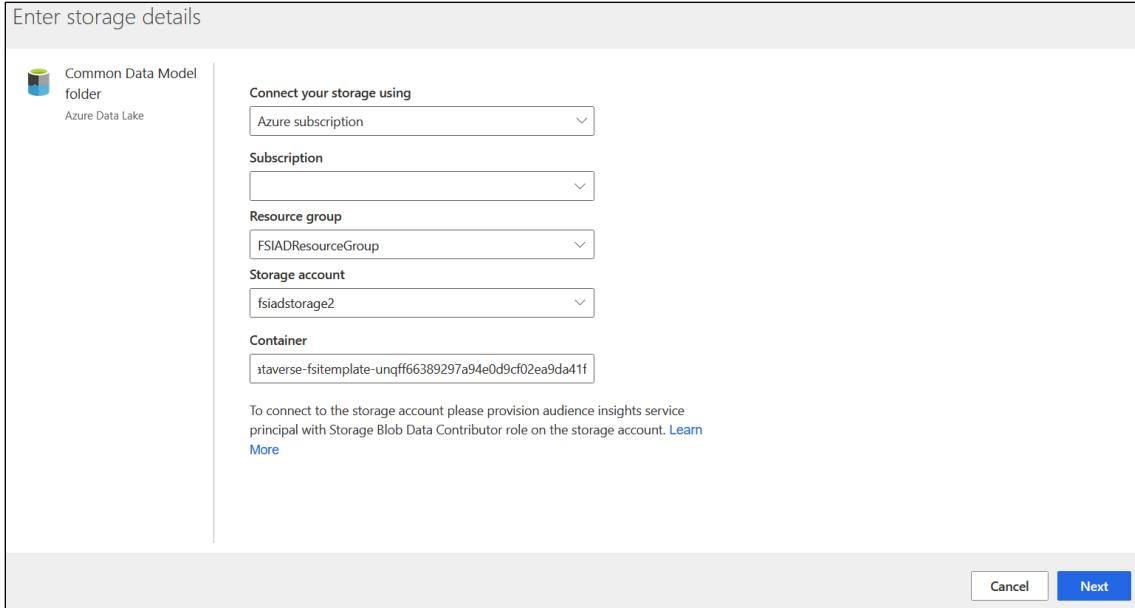
Resource group
FSIADResourceGroup

Storage account
fsiadstorage2

Container
itaverse-fsitemplate-unqff66389297a94e0d9cf02ea9da41f

To connect to the storage account please provision audience insights service principal with Storage Blob Data Contributor role on the storage account. [Learn More](#)

[Cancel](#) [Next](#)



3. Scroll down and select the **msfsi.manifest.cdm.json** file. Click **Next**.

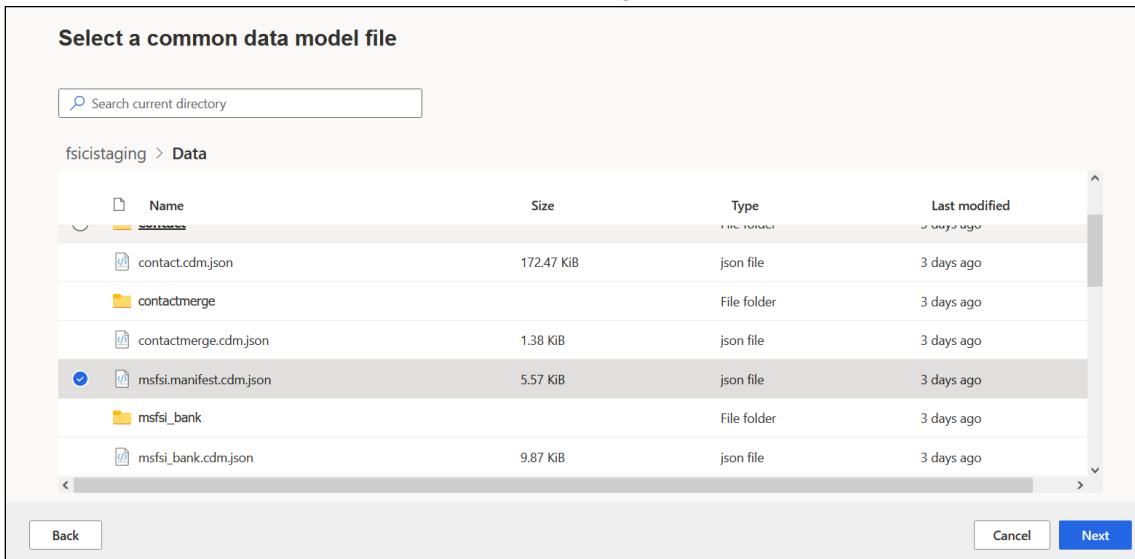
Select a common data model file

Search current directory

fsicistaging > Data

Name	Size	Type	Last modified
contact.cdm.json	172.47 KiB	json file	3 days ago
contactmerge		File folder	3 days ago
contactmerge.cdm.json	1.38 KiB	json file	3 days ago
<input checked="" type="checkbox"/> msfsi.manifest.cdm.json	5.57 KiB	json file	3 days ago
msfsi_bank		File folder	3 days ago
msfsi_bank.cdm.json	9.87 KiB	json file	3 days ago

[Back](#) [Cancel](#) [Next](#)



4. Select all Entities and click **Next**.

Common Data Model
folder
Azure Data Lake

- Entity
 - msfsi_financialholding
 - msfsi_lifemoment
 - msfsi_financialholdinginstrument
 - msfsi_customerfinancialholding
 - contact
 - msfsi_groupfinancialholding
 - msfsi_groupmember
 - contactmerge
 - msfsi_branch
 - msfsi_group
 - msfsi_bank

Back Cancel Edit Model Next

5. Select all Entities for data profiling and click **Save**.

Indicate which data entities you want to enable data profiling. ⓘ

Common Data Model
folder
Azure Data Lake

- > Entity
 - msfsi_financialholding (70 out of 70 selected)
 - msfsi_lifemoment (13 out of 13 selected)
 - msfsi_financialholdinginstrument (47 out of 47 selected)
 - msfsi_customerfinancialholding (13 out of 13 selected)
 - contact (267 out of 267 selected)
 - msfsi_groupfinancialholding (10 out of 10 selected)
 - msfsi_groupmember (14 out of 14 selected)
 - contactmerge (1 out of 1 selected)
 - msfsi_branch (20 out of 20 selected)

Back Cancel Save

6. Go back to Data Sources to view the status. The process should complete with some errors for Analysis preparation. This is normal and will not affect any future steps.

Data sources

Link consent data ↗

Manage all imported or connected customer data. For on-premises data, you'll need to [set up a gateway](#) separately. To manage connections of your data sources, access [connections](#).

Name	Entities	Status	Refreshed
Shared (1)			
operationaldata	11	⚠ Completed with errors	3 days ago

Progress details

- ✓ Data preparation 1 of 1 refreshed
- ⚠ Data sources 1 of 1 refreshed
- ⚠ Analysis preparation 0 of 1 refreshed

- Now that the entities have been mapped, go to **Unify** on the site map to run the Match by clicking **Run**.

The screenshot shows the 'Unify' interface with the 'Match' tab selected. On the left, there's a navigation sidebar with 'Audience insights' selected. The main area has three tabs: 'Map', 'Match' (selected), and 'Merge'. Below the tabs, it says 'Define your rules for the matching and deduplication process that will consolidate source records into unique customer profiles.' There are three main sections: 'Unique source records' (2), 'Matched and non-matched records' (37), and 'Matched records only' (37). At the bottom, there's a table titled 'Matched records details' with columns for Order, Name, Source records, Unique records, Records matched, and Include all records.

- Once the match is complete, you should see the following numbers for your matches.

The screenshot shows the 'Unify' interface with the 'Match' tab selected. The main area has three tabs: 'Map', 'Match' (selected), and 'Merge'. Below the tabs, it says 'Define your rules for the matching and deduplication process that will consolidate source records into unique customer profiles.' There are three main sections: 'Unique source records' (74), 'Matched and non-matched records' (37), and 'Matched records only' (37). The 'Matched and non-matched records' section includes sub-information: 'Including 0 singleton (non-matched) records' and 'Excluding 0 singleton (non-matched) records'. A success message at the top right indicates 'Successful' and 'Updated: 3 minutes ago'.

- As a final step before running the prediction model, we must now merge the records. Click Merge and then click Run Merge and downstream processes.

The screenshot shows the 'Unify' interface with the 'Merge' tab selected. The main area has three tabs: 'Map', 'Match', and 'Merge' (selected). At the top, there are several buttons: 'Run', 'Save', 'Discard changes', 'Combine fields', and 'Advanced'. A dropdown menu is open over the 'Run Merge and downstream processes' button, showing two options: 'Run Merge and downstream processes' and 'Run only Merge'. The 'Run Merge and downstream processes' option is highlighted.

- Once the merge is complete, you should see the following success message.

Unify

Map Match Merge **Merge**

Fields will appear as various customer attributes in your customer profiles. You can review and edit the following system-combined fields, or manually combine fields yourself. Any corresponding keys are automatically included.

Current matched records 37

Combined customer fields	Individual customer fields	Excluded fields
-- Fields (from 266 total) sharing the same semantic-type are grouped into a single field.	266 Fields that do not share identifiable semantic types will remain as single fields.	0

(1) Successful Updated: 7 minutes ago

11. Expand **Intelligence** on the site map and go to **Predictions**. You will now see the Retail banking churn model begin to refresh. This step may take several minutes to complete. If it does not complete after 10 – 15 minutes, try running the merge in step 9 again.

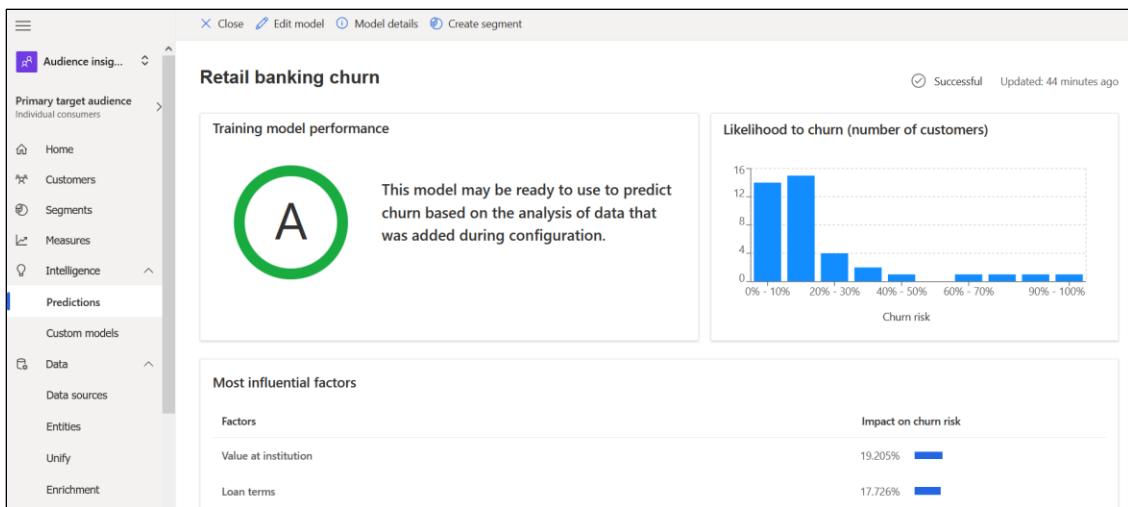
Intelligence

Create My predictions

Prediction name ↑	Prediction type	Output entity	Predicted field	Status	Edited	Last refreshed
Retail banking churn	Retail banking churn model	msfsRetailBankingChurn		Refreshing	a month ago	Never

Refresh all Search predictions

12. Open the Prediction to view the contents of the training model. Here you will three main areas:
- Training model performance** will display a letter grade of how well the model has performed.
 - Likelihood to churn (number of customers)** that can be read as X customers are Y% likely to churn.
 - Most influential factors** considered by the AI in predicting the model. This will vary depending on the data set.



13. To view a customer's full profile in Dynamics 365 Customer Insights, navigate to Customers and open any of the sample records.

The screenshot shows the 'Customer Insights' interface with a search bar and filter options. The main area displays a list of 37 customers, each with a profile picture, name, and location. Two examples are shown in detail: Rowan Gray (Sample) from Oklahoma City, 0, and Miguel Reyes (Sample) from Savannah, 0. Both profiles show basic demographic information like CustomerId, versionnumber, donotbulkemail, donotphone, and yomifullname.

The screenshot shows a detailed view of a customer profile for Rowan Gray (Sample). The left sidebar includes 'Audience insights', 'Primary target audience (Individual consumers)', 'Home', 'Customers' (selected), 'Segments', 'Measures', 'Intelligence', 'Predictions', 'Custom models', 'Data', 'Reports (Preview)', and 'Admin'. The main area shows Rowan's profile card with details like CustomerId, fname, lname, gendercode, birthdate, telephone1, emailaddress1, address, and jobtitle. To the right is an 'Activity timeline' section showing recent and historical activity, and various financial and engagement metrics like loans, assets, liabilities, net worth, and more.

14. To view the calculated churn scores, navigate to Data and then under Intelligence, open the msfsiRetailBankingChurn entity that was created when you ran the churn model.

Entities				
	Name	Source	Updated	Status
	Activities (1)			
	UnifiedActivity	Customer Insights	4 days ago	✓ Successful
	Intelligence (1)			
	msfsiRetailBankingChurn	Customer Insights	4 days ago	✓ Successful
	Measures (2)			
	Customer_Measure	Customer Insights	4 days ago	✓ Successful
	UntitledMeasure	Customer Insights	4 days ago	✓ Successful
	Profiles (1)			
	Customer	Customer Insights	4 days ago	✓ Successful
	Segments (6)			
	msfsiAffluentcustomers	Customer Insights	4 days ago	✓ Successful
	msfsiCustomeractivity	Customer Insights	4 days ago	✓ Successful
	msfsiCustomerprimarybankingrelati...	Customer Insights	4 days ago	✓ Successful

15. Click the **Data** tab to see the calculated churn score for each of the CustomerIDs in the dataset.

Customer Insights msfsiRetailBankingChurn				
	Attributes	Data		
	CustomerID	Score	Timestamp	ModelSignature
	ba03b91a28e1ab6fc6d8097ae1555e82	0.101	1/14/2022, 4:00:00 PM	v0
	fa8015b484d73059ae23e3c6cb8b1dba	0.089	1/14/2022, 4:00:00 PM	v0
	6e122bb4a4951e4824974f2fc53bc775	0.39	1/14/2022, 4:00:00 PM	v0
	8feff5695b3c03aa00eae0a9edad4a4b	0.664	1/14/2022, 4:00:00 PM	v0
	20009fd23573d1a15af471b16174550	0.123	1/14/2022, 4:00:00 PM	v0
	378aa9916a28823bc48bf26188007000	0.034	1/14/2022, 4:00:00 PM	v0
	8d0c96bf48d8ab73dbf1ac8661be2ad1	0.146	1/14/2022, 4:00:00 PM	v0
	4341e9de1430cd0459959cc1f786430a	0.124	1/14/2022, 4:00:00 PM	v0

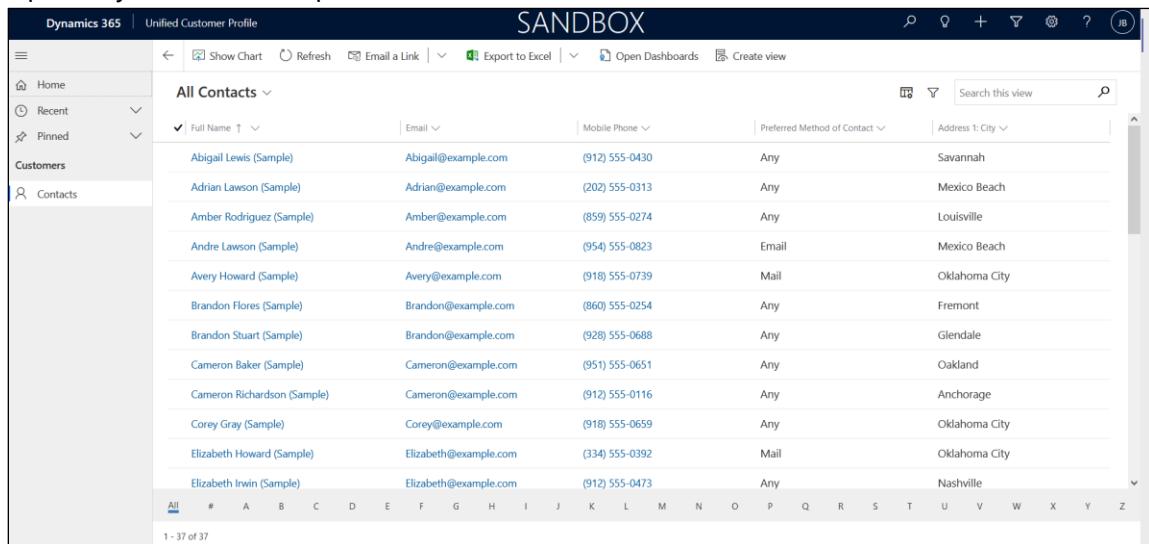
16. To view the churn score in **Dataverse**, open a new tab in your internet browser and navigate to your Dataverse environment in make.powerapps.com.
17. Go to **Apps** and then open **Unified Customer Profile**.

The screenshot shows the Microsoft Power Apps portal interface. On the left, there is a navigation sidebar with the following items:

- Home
- Learn
- Apps (selected)
- Create
- Dataverse
- Flows
- Chatbots
- AI Builder
- Solutions

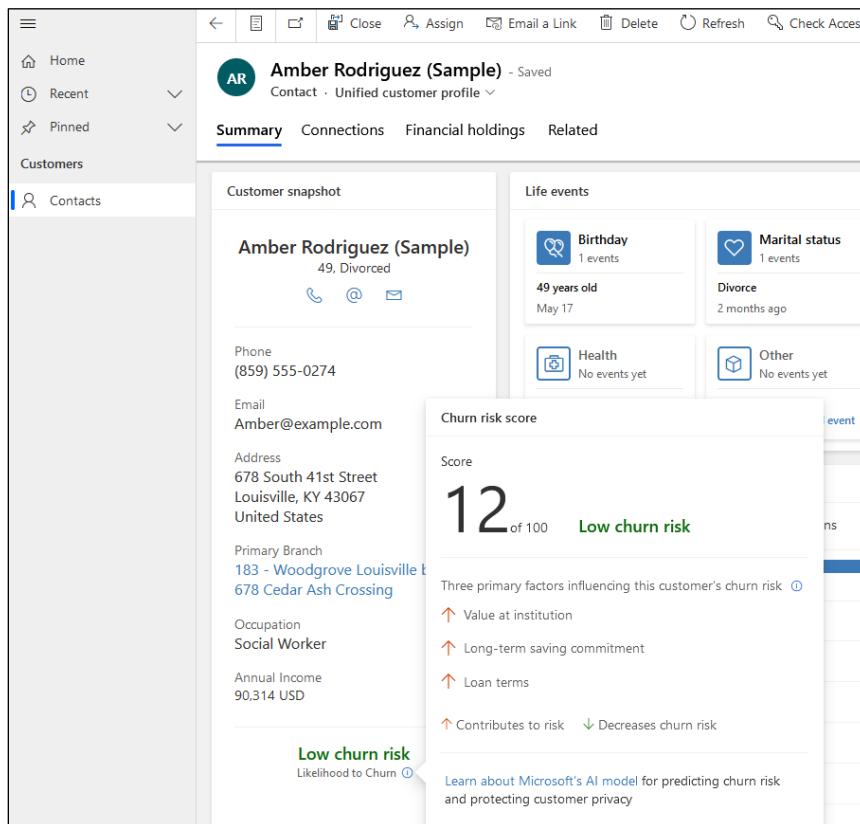
The main content area is titled "Apps" and shows a list of available apps. The "Unified Customer Profile" app is highlighted with a purple checkmark icon and is currently selected. Other listed apps include "Customer Service Hub", "Resource Scheduling", "Sales Hub", "Dynamics 365 App for Outlook", "Sales Team Member", "Customer Service workspace", and "Solution Health Hub".

18. Open any of the 37 sample contact records.



The screenshot shows the Dynamics 365 interface with the title bar "Dynamics 365 | Unified Customer Profile" and the word "SANDBOX" in large letters. The left sidebar shows navigation options like Home, Recent, Pinned, Customers, and Contacts. The main area is titled "All Contacts" and displays a grid of 37 sample contacts. Each contact entry includes a name, email, mobile phone number, preferred method of contact, and address. The contacts listed are Abigail Lewis, Adrian Lawson, Amber Rodriguez, Andre Lawson, Avery Howard, Brandon Flores, Brandon Stuart, Cameron Baker, Cameron Richardson, Corey Gray, Elizabeth Howard, and Elizabeth Irwin. The interface includes a search bar at the top right and a navigation bar at the bottom with letters A through Z.

19. Scroll down to the bottom of the **Customer Snapshot** section and click the **i** icon to see the full details of the churn score.



The screenshot shows the Dynamics 365 contact record for "Amber Rodriguez (Sample)". The top navigation bar includes options like Close, Assign, Email a Link, Delete, Refresh, and Check Access. The left sidebar shows the same navigation options as the previous screenshot. The main content area has tabs for Summary, Connections, Financial holdings, and Related. The Summary tab is active. It features a "Customer snapshot" section with contact details (name, phone, email, address, primary branch, occupation, annual income) and a "Life events" section showing birthday, marital status, divorce, health, and other events. Below these is a "Churn risk score" section. The score is displayed as "12 of 100" with the text "Low churn risk". A note states: "Three primary factors influencing this customer's churn risk: ↑ Value at institution, ↑ Long-term saving commitment, ↑ Loan terms". Another note says: "↑ Contributes to risk ↓ Decreases churn risk". At the bottom, there is a link to "Learn about Microsoft's AI model for predicting churn risk and protecting customer privacy".

Congratulations! You have successfully run the Retail Banking Churn Model in Dynamics 365 Customer Insights.

Summary

Nice work! You have completed the lab for Microsoft Coud for Financial Services - Customer Intelligence.

In this lab, you learned how to do the following:

1. Set up and understand Dynamics 365 Customer Insights Components
2. Create Azure components and build a data pipeline in Azure Data Factory
3. Configure the Retail Banking Churn Model in Dynamics 365 Customer Insights