



# Microsoft Cloud for Financial Services

## In A Day

### Lab 02: Customer Intelligence

Step-by-Step Lab

January 2021

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# 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:

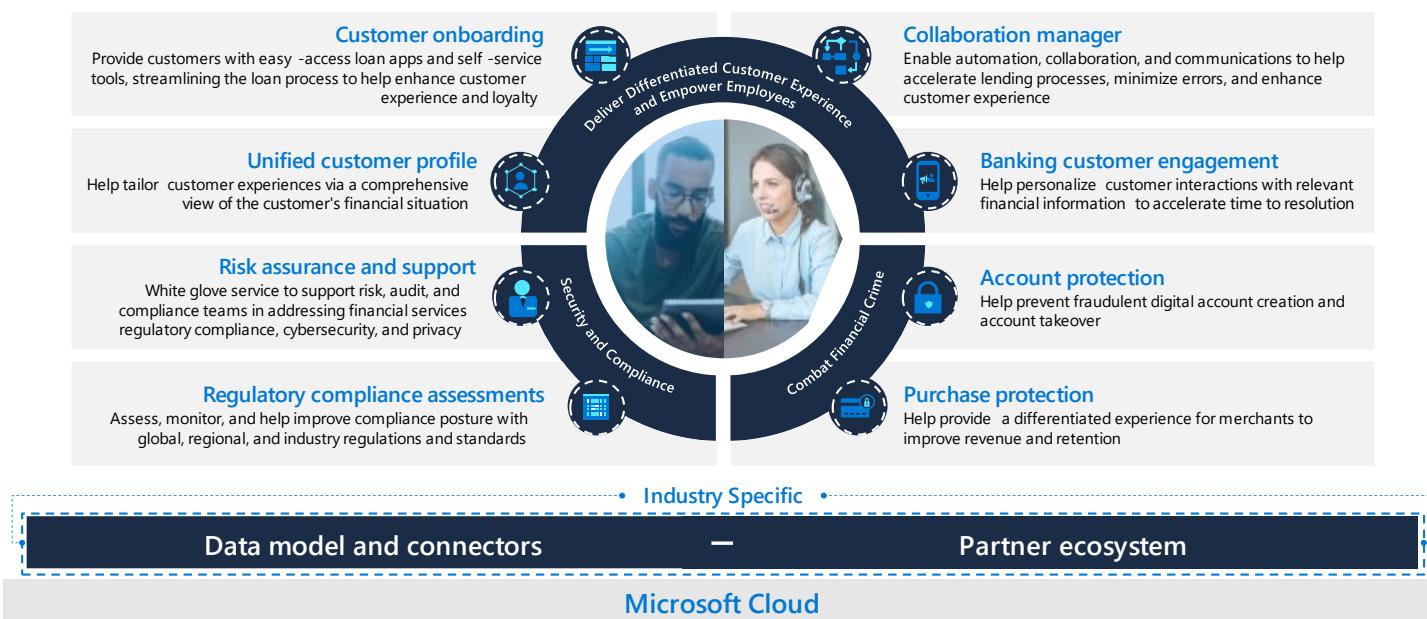
- FSI components, available within Microsoft Cloud for Financial Services in Microsoft Cloud Solution Center). More information: [Deploy Microsoft Cloud for Financial Services solutions powered by Dynamics 365](#).
- At least Contributor permissions in Dynamics 365 Customer Insights. More information: [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

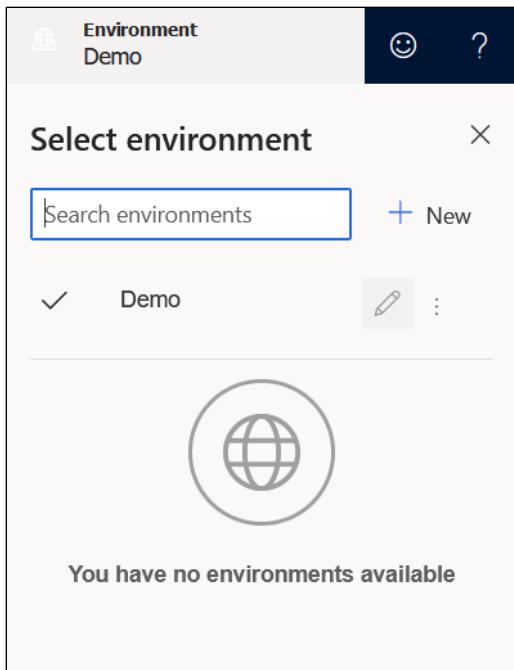


Business accounts



✓ 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

Create an environment

Basic information

Environments serve as a home base for your data and for your team.

**Name \***

Copy from existing environment (preview)  
Select an environment

**Choose your business \***

**Type \***

**Region \*** ⓘ

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

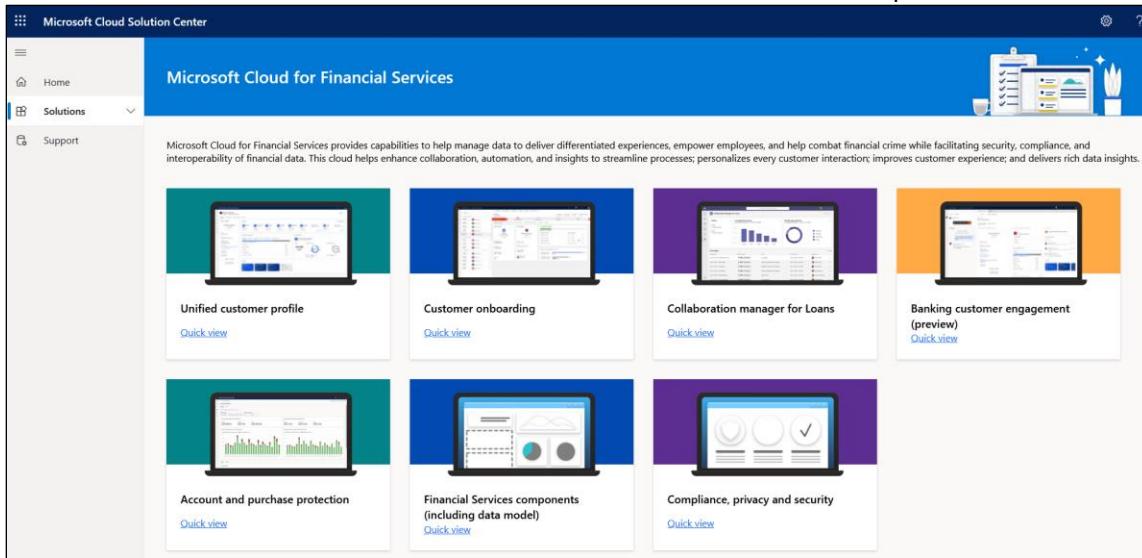
Review

**Review**

<b>Basic information</b>	<a href="#">Edit</a>
Name:	Customer Intelligence
Audience type:	Individual consumers (B-to-C)
Type:	Trial
Region:	West US
<b>Data storage</b>	<a href="#">Edit</a>
Output storage type:	Customer Insights storage
<b>Microsoft Dataverse</b>	<a href="#">Edit</a>
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 filters results by 'Unified customer profile'. A blue box highlights the 'Unified customer profile' solution, which is described as bringing together financial, behavioral, and demographic data to tailor customer experiences. Two components are listed: 'Unified customer profile app' and 'Customer intelligence'. Both components have a 'Quick view' button and a checked 'Added' status.

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

The screenshot shows the 'Set up solutions' wizard. On the left, a sidebar lists steps: 'Additional components' (selected), 'Set up new deployment', 'Configure dependencies', 'Deploy solution', and 'Success'. The main pane displays the 'Additional components' section, which allows enhancing solutions by adding components. It shows a list of components, with 'Sample data' selected. The component details show it is for sample data for the solution, enhances the 'Unified customer profile app', and has a checked 'Name' status. 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

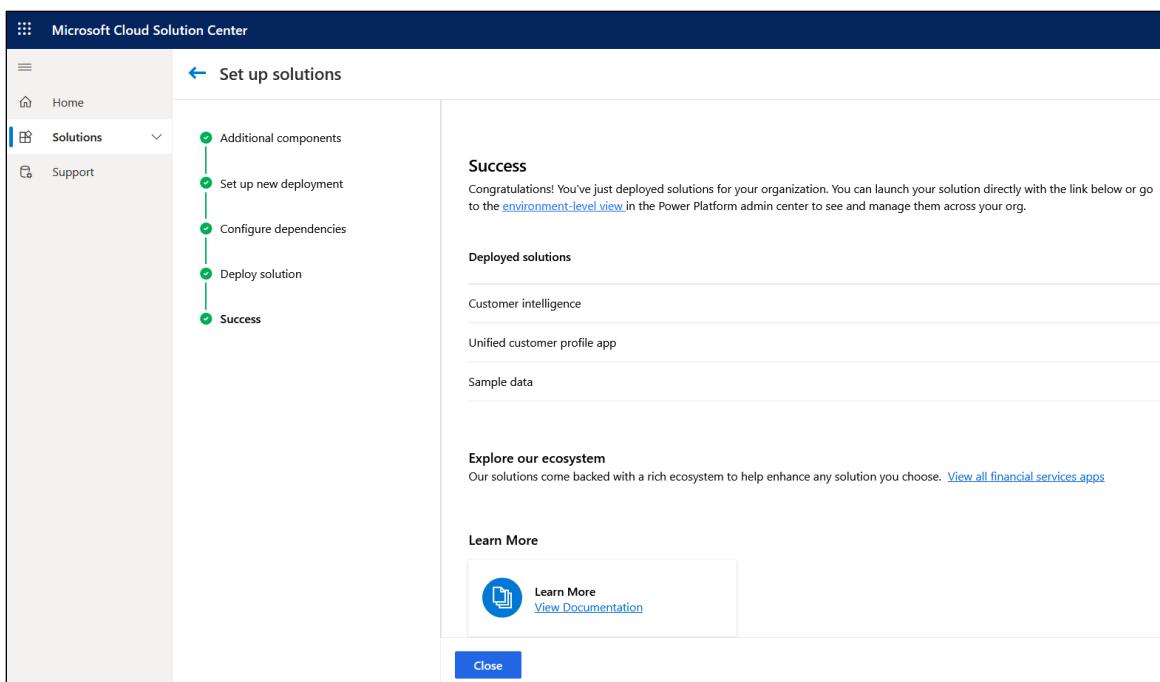
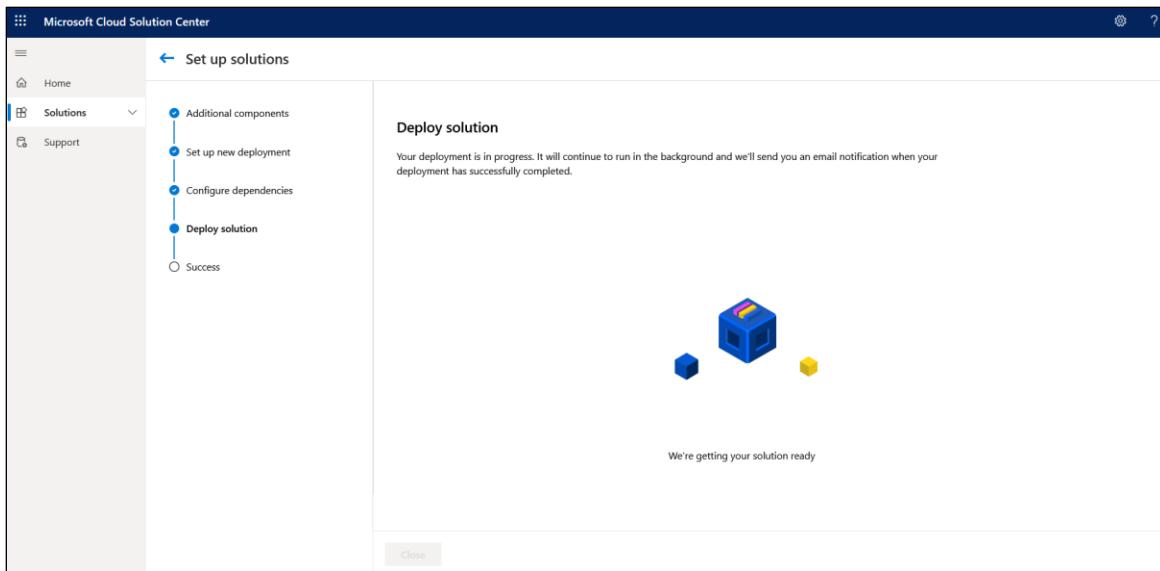
**Solution dependencies**

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

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

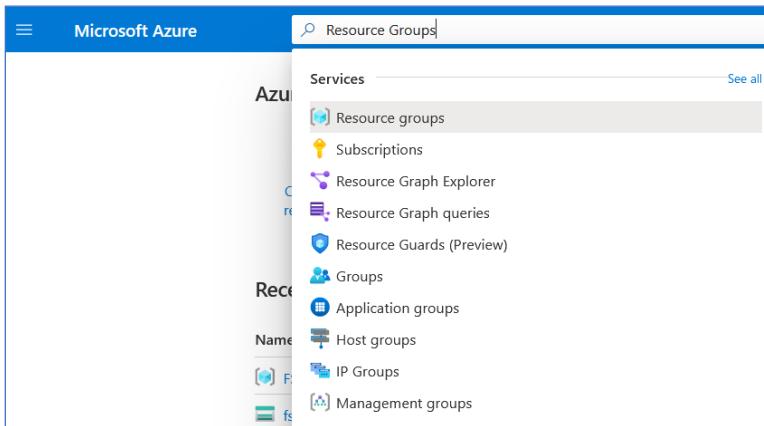
# Exercise 2: Create Azure Components and build a Data Pipeline in Azure Data Factory

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 fsiResourceGroup  
Region West US

**Tags**

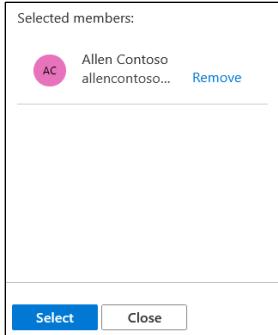
None

**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 an orange icon.

Category	Icon	Description
Analytics	Orange circle icon	Create   Learn more
Blockchain	Blue square icon	
Compute	Blue globe icon	Create   Docs   MS Learn
Containers	Blue square icon	
Databases	Blue SQL icon	Create   Docs   MS Learn
Developer Tools	Blue square icon	
DevOps	Blue lightning bolt icon	Create   Docs
Identity	Blue square icon	
Integration	Blue planet icon	Azure Cosmos DB Create   Docs   MS Learn
Internet of Things	Blue square icon	
IT & Management Tools	Blue square icon	
Media	Blue cube icon	Create   Docs   MS Learn
Migration	Blue square icon	
Mixed Reality	Blue cloud icon	Create   Docs   MS Learn
Monitoring & Diagnostics	Blue square icon	
Networking	Blue square icon	
Security	Blue square icon	
Storage	Green grid icon	Create   Docs   MS Learn
Web	Blue square 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 'Subscription' dropdown set to 'fsiResourceGroup', a 'Resource group' dropdown also set to 'fsiResourceGroup', and a 'Create new' button.

Project details	
Select the subscription in which to create the new storage account. Choose a new or existing resource group to organize and manage your storage account together with other resources.	
Subscription *	<input type="text" value="fsiResourceGroup"/>
Resource group *	<input type="text" value="fsiResourceGroup"/> <a href="#">Create new</a>

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 <span style="color: red;">*</span>	<input type="text" value="fsistorageacct"/>
Region <span style="color: red;">*</span>	<input type="text" value="(US) West US"/>
Performance <span style="color: red;">*</span>	<input checked="" type="radio"/> <b>Standard:</b> Recommended for most scenarios (general-purpose v2 account) <input type="radio"/> <b>Premium:</b> Recommended for scenarios that require low latency.
Redundancy <span style="color: red;">*</span>	<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 <span style="color: red;">○</span>	<input checked="" type="checkbox"/>
Enable blob public access <span style="color: red;">○</span>	<input checked="" type="checkbox"/>
Enable storage account key access <span style="color: red;">○</span>	<input checked="" type="checkbox"/>
Default to Azure Active Directory authorization in the Azure portal <span style="color: red;">○</span>	<input type="checkbox"/>
Minimum TLS version <span style="color: red;">○</span>	<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](#)

### Blob storage

### Azure Files

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...	<a href="#">Remove</a>
----	----------------------------------	------------------------

[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

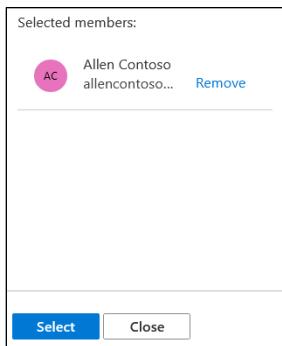
**Assign access to**  User, group, or service principal  Managed identity

**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.

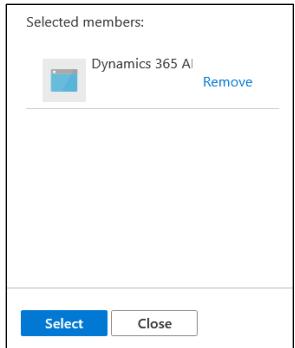
The screenshot shows the 'Access Control (IAM)' section of the Azure Storage Account 'fsistorageacct'. The left sidebar includes links for Overview, Activity log, Tags, Diagnose and solve problems, Access Control (IAM), Data migration, Events, and Storage browser (preview). Under Data storage, there are links for Containers, File shares, Queues, and Tables. Under Security + networking, there are links for Networking, Azure CDN, and Access keys. The main content area has tabs for Check access, Role assignments, Roles, Deny assignments, and Classic administrators. The 'Check access' tab is selected, showing sections for 'My access' (View my level of access to this resource), 'Check access' (Review the level of access a user, group, service principal, or managed identity has to this resource), 'Grant access to this resource' (Grant access to resources by assigning a role), 'View access to this resource' (View the role assignments that grant access to this and other resources), and 'View deny assignments' (View the role assignments that have been denied access to specific actions at this scope).

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

The screenshot shows the 'Add role assignment' page for the 'Storage Blob Data Contributor' role. The 'Members' tab is selected. It displays a table with one row for 'Storage Blob Data Contributor', which allows for read, write, and delete access to Azure Storage blob containers and data. The table includes columns for Name, Description, Type, Category, and Details. At the bottom of the page are buttons for 'Review + assign', 'Previous', and 'Next'.

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

The screenshot shows the 'Add role assignment' page again, but now the 'Members' tab is active. The 'Selected role' is set to 'Storage Blob Data Contributor'. Under 'Assign access to', the 'User, group, or service principal' option is selected. The 'Members' section shows a button '+ Select members'. The 'Description' section contains an optional text input field. At the bottom are buttons for 'Review + assign', 'Previous', and 'Next'.



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

**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      X

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](https://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**

Networking Managed identities Properties Locks

**Getting started**

Quick start

**Monitoring**

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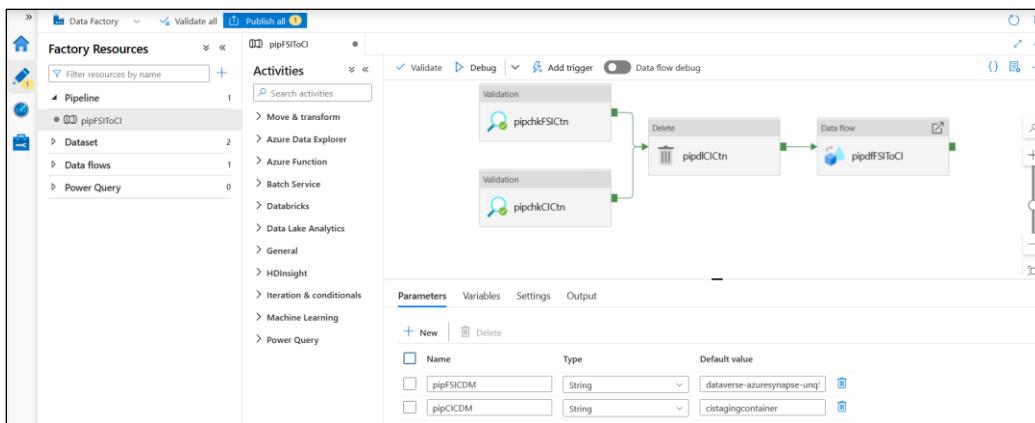
Deploying this template will create one or more Azure resources or Marketplace offerings. You acknowledge that you are responsible for reviewing the applicable pricing and legal terms associated with all resources and offerings deployed as part of this template. Prices and associated legal terms for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

**Create**   < Previous   Next

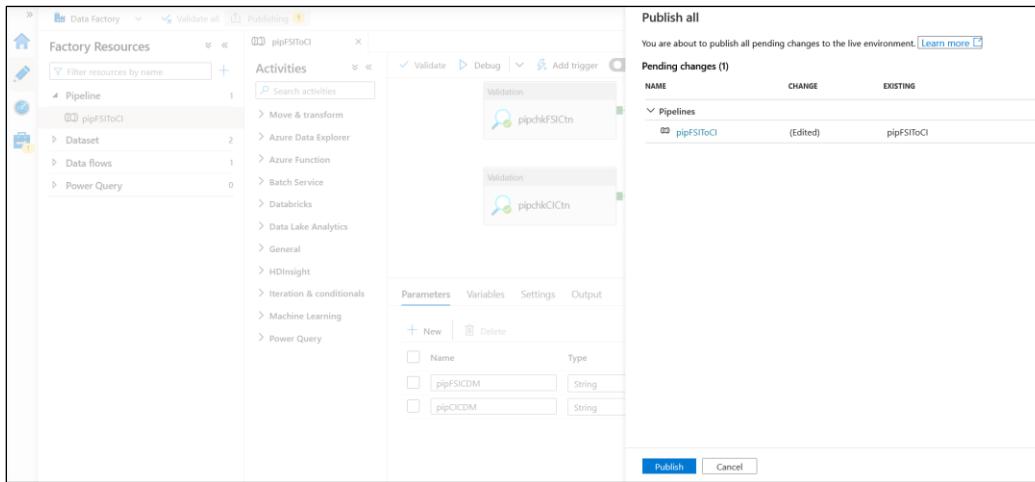
10. Go back to your **Data factory** and **refresh** the page. Click **Linked services** and you should now see two connections.

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

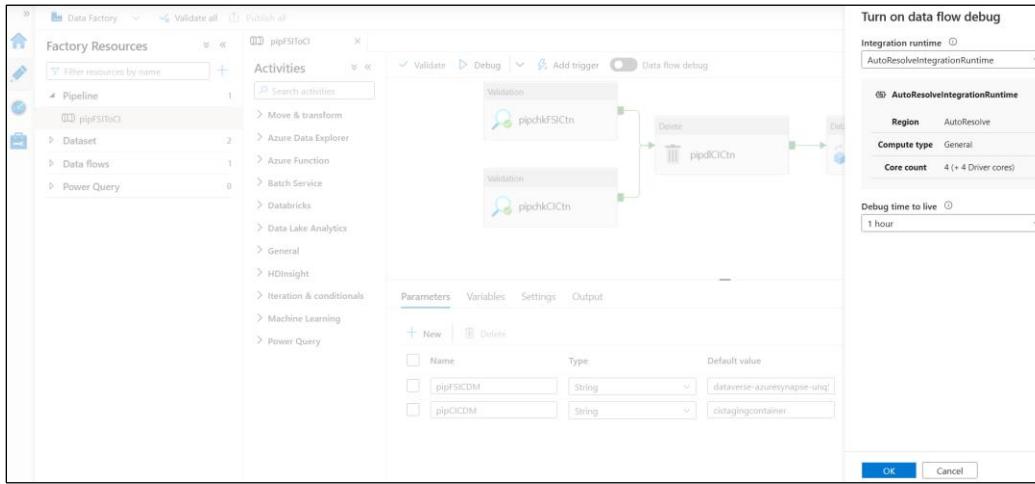
11. Click the **Author** (pencil) icon. Expand and click the **Pipeline**. Input the following parameters:
- pipFSICDM: The full name of your Storage Container linked to Azure Synapse. Example: *dataverse-AZURESYNAPSE-unqab48050868e14fef9572fa91f02ff*.
  - pipCICDM: The name of your Customer Insights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

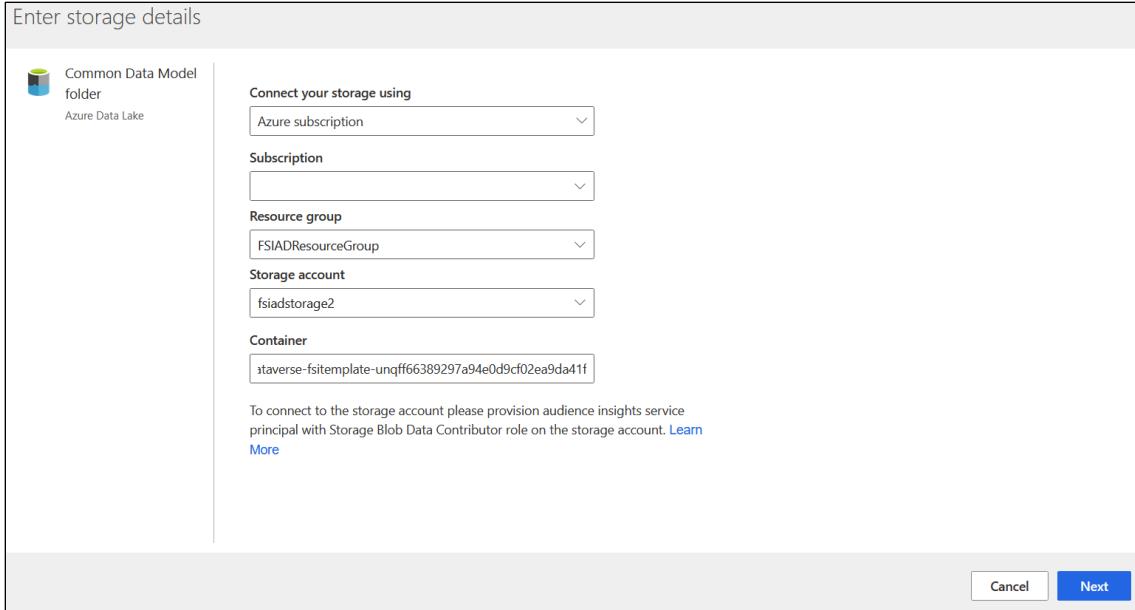
Resource group  
FSIADResourceGroup

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**.

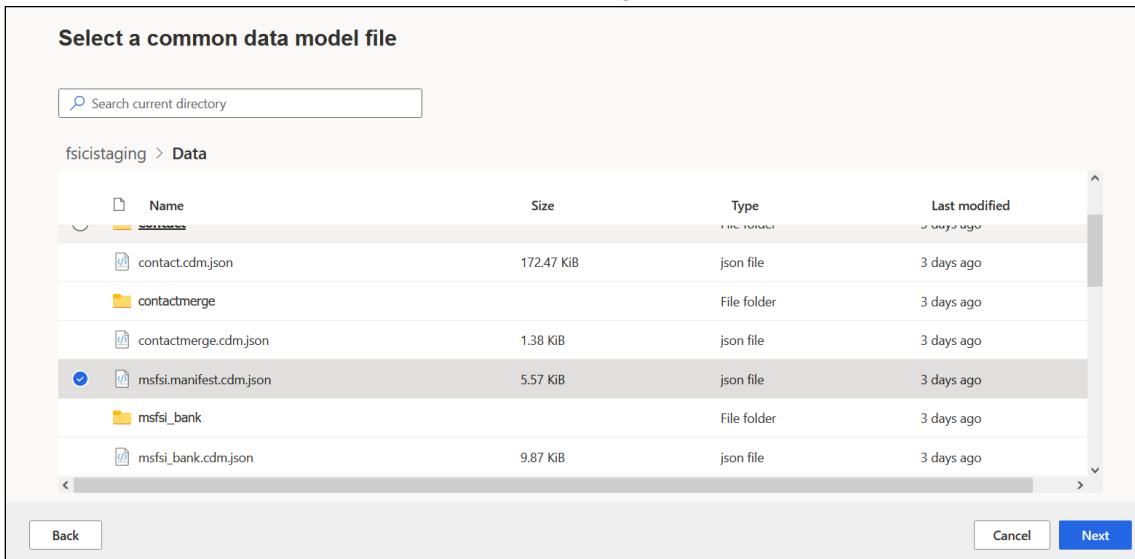
Select a common data model file

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

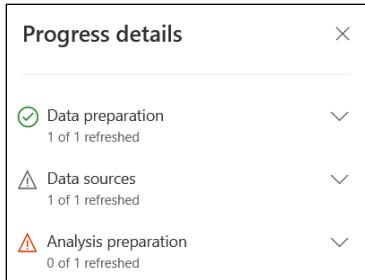
6. Go back to Data Sources to view the status. The process should complete with some errors for Analysis preparation. This is normal and will not affect any future steps.

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



7. Now that the entities have been mapped, go to **Unify** on the site map to select Source fields and then click next

**Customer Insights**

**Unify**

**Select entities and fields with customer profile data**

**123 Mapped fields**    **145 Unmapped fields**

**Intelligent mapping** (switch)

Entities	Fields
operationaldata contactmerge	Select the primary key contactid
operationaldata contact	Review mapped fields

Column ↑	Type
accountid	ID
address1_addressid	ID
address1_addressstypecode	Location.Address
address1_city	Location.City
address1_composite	Location.Address
address1_country	Location.Country

**Next**    **Save and close**    **Cancel**

**Primary target audience**: Individual consumers

- Home
- Customers
- Segments
- Measures
- Intelligence
- Data
  - Data sources
  - Entities
  - Unify** (selected)
  - Enrichment
  - Activities
  - Relationships
  - Exports
- Reports (Preview)
- Admin

Customer Insights

Primary target audience: Individual consumers

- Home
- Customers
- Segments
- Measures
- Intelligence
- Data
- Data sources
- Entities
- Unify**
- Enrichment
- Activities
- Relationships
- Exports
- Reports (Preview)
- Admin

Unify

Source fields

Duplicate records

Matching conditions

Unified customer fields

Review

Use enriched entities View last run Custom

### Set up match rules and conditions

Order	Name	Source records	Unique records	Records
1	contact : operationaldata	39	39	
2	contactmerge : operationaldata	39	39	100
	merge_identical_contacts			

78    39    39

Unique source records    Matched and non-matched records only    Matched records only

Add rule

Back Next Save and close Cancel

8. Once the match condition is set (clicking next), you should see the following numbers for your matches.

Customer Insights

Primary target audience: Individual consumers

- Home
- Customers
- Segments
- Measures
- Intelligence
- Data
- Data sources
- Entities
- Unify**
- Enrichment
- Activities
- Relationships
- Exports
- Reports (Preview)
- Admin

Unify

Source fields

Duplicate records

Matching conditions

Unified customer fields

Review

Use enriched entities View last run Custom

### Set up match rules and conditions

Order	Name	Source records	Unique records	Records
1	contact : operationaldata	39	39	
2	contactmerge : operationaldata	39	39	100
	merge_identical_contacts			

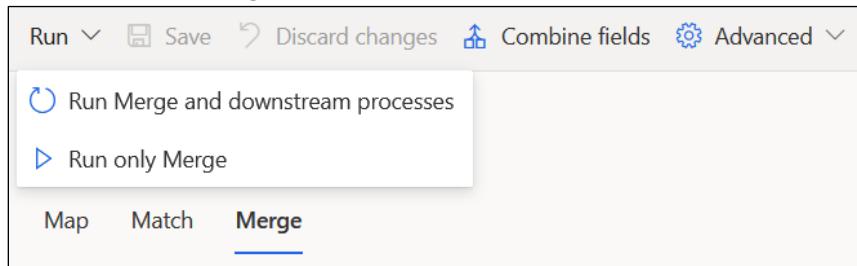
78    39    39

Unique source records    Matched and non-matched records only    Matched records only

Add rule

Back Next Save and close Cancel

9. 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.



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

Customer fields	Keys
1 Id	Entity: contact, Source: operationaldata
2 slaid	Entity: contact, Source: operationaldata
3 preferredserviceid	Entity: contact, Source: operationaldata
4 parentcontactid	Entity: contact, Source: operationaldata
5 preferredequipmentid	Entity: contact, Source: operationaldata
6 originatingleadid	Entity: contact, Source: operationaldata
7 slainvokedid	Entity: contact, Source: operationaldata
8 transactioncurrencyid	Entity: contact, Source: operationaldata

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.

The screenshots show the 'Intelligence' section of the Dynamics 365 Customer Insights interface. Both screenshots have a left sidebar with navigation options: Home, Customers, Segments, Measures, Intelligence (selected), Predictions, Custom models, Data, Data sources, Entities, Unify, and Enrichment. The main area displays a table titled 'Intelligence' with columns: Prediction name, Prediction type, Output entity, Predicted field, Status, Edited, and Last refreshed.

Prediction name	Prediction type	Output entity	Predicted field	Status	Edited	Last refreshed
Retail banking churn	Retail banking churn model	mfsiRetailBankingChurn		Refreshing	a month ago	Never
Retail banking churn	Retail banking churn model	mfsiRetailBankingChurn		Successful	a month ago	7 minutes ago

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

The screenshot shows the details of the 'Retail banking churn' prediction. The left sidebar is identical to the previous screenshots. The main area is titled 'Retail banking churn' and contains three main sections: 'Training model performance', 'Likelihood to churn (number of customers)', and 'Most influential factors'.

**Training model performance:** Shows a large green circle with a white letter 'A' and the text: "This model may be ready to use to predict churn based on the analysis of data that was added during configuration."

**Likelihood to churn (number of customers):** A bar chart showing the number of customers at different churn risk levels. The x-axis is 'Churn risk' and the y-axis is 'Number of customers'.

Churn risk	Number of customers
0% - 10%	~14
10% - 20%	~14
20% - 30%	~2
30% - 40%	~1
40% - 50%	~1
50% - 60%	~1
60% - 70%	~1
70% - 80%	~1
80% - 90%	~1
90% - 100%	~1

**Most influential factors:** A table showing factors and their impact on churn risk.

Factor	Impact on churn risk
Value at institution	19.205%
Loan terms	17.726%

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

**Customer Insights**

**Audience insights**

**Primary target audience**: Individual consumers

**Customers**

**Segments**

**Measures**

**Intelligence**

**Predictions**

**Custom models**

**Data**

**37 customers**

	Rowan Gray (Sample)	Miguel Reyes (Sam...)
CustomerID	b0ed6731dee980b13cad3a59a79f...	45428ade8ff6fe37b8ffd2d4007f88df
versionnumber	2,358,958	2,358,942
donotbulkemail	False	False
donotphone	False	False
yomfullname	Rowan Gray (Sample)	Miguel Reyes (Sample)

**Audience insights**

**Primary target audience**: Individual consumers

**Home**

**Customers**

**Segments**

**Measures**

**Intelligence**

**Predictions**

**Custom models**

**Data**

**Reports (Preview)**

**Admin**

**Back to Customers** | **Profile add-ons**

**Rowan Gray (Sample)**

Senior field supervisor  
Oklahoma City, OK, United States  
Last activity: 1/3/2026

**Activity timeline**

**RECENT (1) ▾**

- 104800003 - 1/3/2026 Rowan Gray Bachelor's degree (Sample)

**SEP 2021 (1) ▾**

- 104800001 - 9/2/2021 Rowan Gray Marriage (Sample)

**JUN 2021 (1) ▾**

- 104800004 - 6/7/2021 Rowan Gray Job started (Sample)

**JAN 2020 (1) ▾**

- 104800003 - 1/28/2020 Rowan Gray High school (Sample)

**OCT 2019 (1) ▾**

**msfsi\_Customer\_loans...** Last updated 4 days ago 0

**msfsi\_Customer\_assets** Last updated 4 days ago 67K

**msfsi\_Customer\_liabilities** Last updated 4 days ago -43,434.9

**msfsi\_Customer\_net\_w...** Last updated 4 days ago 24K

**msfsi\_Customer\_loans...** Last updated 4 days ago -43,0...

**msfsi\_Customer\_lines...** Last updated 4 days ago -125

**msfsi\_Customer\_savin...** Last updated 4 days ago 45K

**msfsi\_Customer\_invest...**

**msfsi\_Customer\_accou...**

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)	Customer Insights	4 days ago	Successful
Intelligence (1)	Customer Insights	4 days ago	Successful
Measures (2)	Customer Insights	4 days ago	Successful
Profiles (1)	Customer Insights	4 days ago	Successful
Segments (6)	Customer Insights	4 days ago	Successful
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.

CustomerID	Score	Timestamp	ModelSignature	Publisher
ba03b91a28e1ab6fc6d8097ae1555e82	0.101	1/14/2022, 4:00:00 PM	v0	Microsoft
fa8015b484d73059ae23e3c6cb8b1dba	0.089	1/14/2022, 4:00:00 PM	v0	Microsoft
6e122bb4a4951e4824974f2fc53bc775	0.39	1/14/2022, 4:00:00 PM	v0	Microsoft
8feff5695b3c03aa00ea09edad4a4b	0.664	1/14/2022, 4:00:00 PM	v0	Microsoft
200d9fd23573d1a15af471b16174550	0.123	1/14/2022, 4:00:00 PM	v0	Microsoft
378aa9916a28823bc48bf26188007000	0.034	1/14/2022, 4:00:00 PM	v0	Microsoft
8d0c96bf48d8ab73dbf1ac8661be2ad1	0.146	1/14/2022, 4:00:00 PM	v0	Microsoft
4341e9de1430cd04599f59cc1f786430a	0.124	1/14/2022, 4:00:00 PM	v0	Microsoft
Exports				

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](https://make.powerapps.com).
17. Go to **Apps** and then open **Unified Customer Profile**.

The screenshot shows the Microsoft Power Platform Apps interface. On the left sidebar, under the 'Apps' section, the 'Unified Customer Profile' app is highlighted with a purple selection bar. The main area displays a list of available apps, each with a small icon and name:

- Unified Customer Profile (selected)
- Customer Service Hub
- Resource Scheduling
- Sales Hub
- Dynamics 365 App for Outlook
- Sales Team Member
- Customer Service workspace
- Solution Health Hub

18. Open any of the 37 sample contact records.

Dynamics 365 | Unified Customer Profile SANDBOX

The screenshot shows a list of contacts in a grid view. The columns include Full Name, Email, Mobile Phone, Preferred Method of Contact, and Address 1: City. The contacts listed are Abigail Lewis (Sample), Adrian Lawson (Sample), Amber Rodriguez (Sample), Andre Lawson (Sample), Avery Howard (Sample), Brandon Flores (Sample), Brandon Stuart (Sample), Cameron Baker (Sample), Cameron Richardson (Sample), Corey Gray (Sample), Elizabeth Howard (Sample), and Elizabeth Irwin (Sample). The grid has a header row and several data rows. At the bottom, there is a navigation bar with letters A through Z and a footer note '1 - 37 of 37'.

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 contact record for Amber Rodriguez. The 'Summary' tab is selected. In the 'Customer snapshot' section, it shows her name, age (49), marital status (Divorced), and phone number (859) 555-0274. Below this is a detailed view of her life events: Birthday (1 event, May 17), Marital status (1 event, Divorce 2 months ago), Health (No events yet), and Other (No events yet). In the 'Churn risk score' section, it displays a score of 12 out of 100, labeled as 'Low churn risk'. It lists three primary factors influencing the score: Value at institution, Long-term saving commitment, and Loan terms. There is also a note about contributing to risk and decreasing 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