



Microsoft Cloud for Retail

In A Day

Lab 04: Intelligent Order Management
Step-by-Step Lab

March 2022

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Overview

The Flexible fulfillment capability in the 'Build a real time sustainable supply chain' priority scenario helps Retailers optimize order management while giving their customers multiple options to engage across several channels.

Flexible fulfillment delivers on enhanced customer experience capabilities such as streamlining curbside pickup and 'buy-online-pickup-in-store' operations, while providing customers with real-time inventory and order status, and greater control of the entire order lifecycle.

To expand, the following are some of the ways Flexible fulfillment delivers on **enhanced customer experiences**:

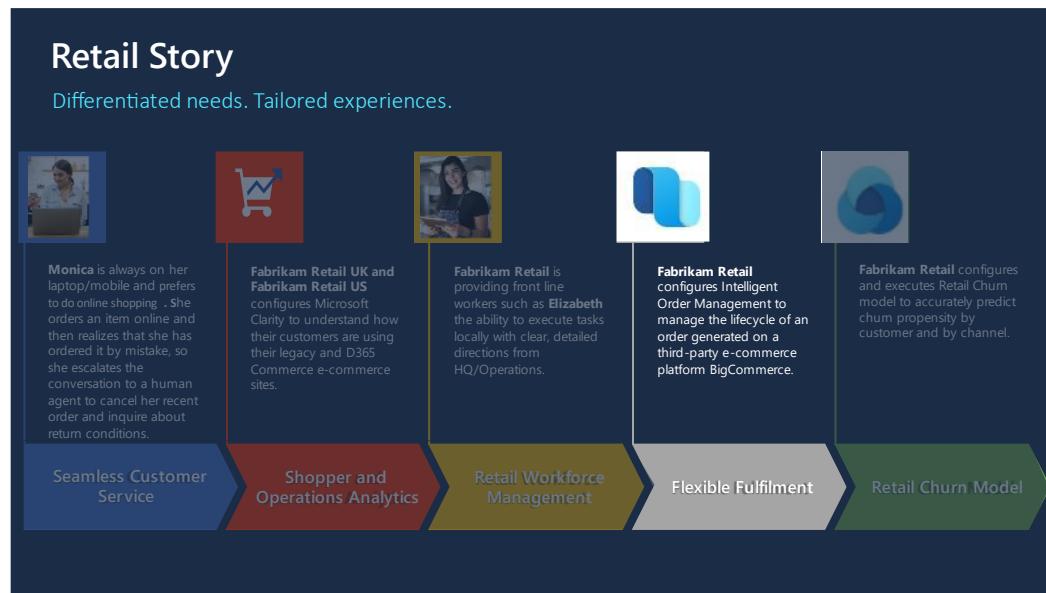
- Streamline returns management and enable flexible return scenarios
- Use AI and anomaly detection models to identify and address fulfillment constraints and improve delivery times while reducing costs
- Give customers ordering flexibility such as home delivery, curbside pickup, and pick up in-store with connected ordering and fulfillment tools
- Offer real-time inventory availability and order status with AI, providing a single solution to order-fulfillment orchestration

Capabilities connecting your customers, your people, and your data



Learning Objectives

Retail Story



This lab will focus on the retail story of Fabrikam Retail.

In the following exercises, you will be playing the role of a System Administrator, Developer, and a Retail customer.

- In Exercise 1, you will be configuring the D365 Intelligent Order Management environment.
- In Exercise 2, you will configure BigCommerce Provider in addition to configuring the internal-external mappings.
- In Exercise 3- Task 1, you will be configuring the frequency of power automate flow.
- In Exercise 3- Task 2, you will assume the role of a Retail customer, sign up for an account in the e-commerce portal and place an order. Later you will see how the order flows from BigCommerce to D365 Intelligent Order Management.
- In Exercise 4, you will assume the role of a system administrator and configure the orchestration flows and policies to validate the location of the sales orders and later you will be testing the orchestration flow.
- Exercises 5 and 6 are bonus exercises and it details the information on Reporting and Administrative operations.

Prerequisites

To complete these exercises, you'll need the following:

- Dynamics 365 Intelligent Order Management
Note – The [trial version](#) of Intelligent Order Management includes the underlying dependencies (Power Platform, Dataverse capacity etc.), however, these need consideration for production deployments. Further guidance is available [here](#).
- BigCommerce trial subscription
- Postman or CLI such as CURL for troubleshooting APIs (**optional**)

Commented [SIC1]: can we add the trial sign up link here

Commented [AS2R1]: Fixed. Thanks!

Introduction

Dynamics 365 Intelligent Order Management (IOM) is built on a modern open platform and provides the flexibility companies need today to capture orders from any order source such as online e-commerce, marketplace, mobile apps, or traditional sources like EDI (Electronic Data Interchange) and fulfill them from their own warehouse, 3PL (Third-party Logistics), stores, or drop-ship with vendors or other delivery fulfillment partners.

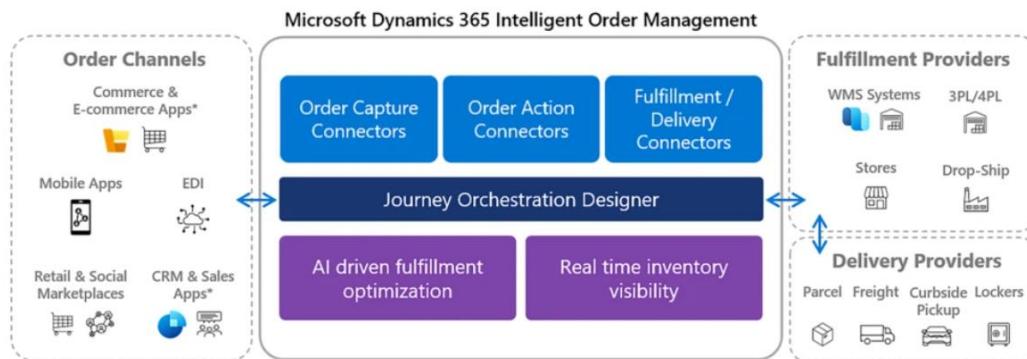
Commented [AV3]: Can we provide terminology of EDI?

Commented [AV4]: What is 3PL?

It's a common scenario for enterprises to have disparate systems for ecommerce, fulfillment, and shipping/delivery. IOM bridges these disparities and provides a single pane of glass to manage end to end lifecycle of an Order. [Extensibility features](#) allow customers to integrate IOM with their existing ecosystem of applications.

The system also helps organizations streamline the return processes. Whether returns are collected at a retail store, fulfillment center, or service center, returns can be initiated through an app, online, or at the store.

With low-code, no-code experience, IOM's orchestration designer tools allow users to model and automate the response to fulfillment constraints and leverage machine learning to influence & optimize the flow of the orders.



* Can be used with Dynamics 365 and non-Dynamics 365 applications

Lifecycle of an Order

The lifecycle of an order in Order Management can be described as a series of states and actions. Some of these might be optional or might occur in different sequences, based on the system configuration. In addition, some actions might be configured to occur automatically or to be performed manually. The main stages of an order are – order intake/creation; fulfillment; and delivery.

Intelligent Order Management helps you make order fulfillment a competitive advantage. By orchestrating and

automating fulfilment using real-time omnichannel stock data, AI, and machine learning, Dynamics 365 Intelligent Order Management lets you adapt quickly, fulfil efficiently, and deliver on your order promise.

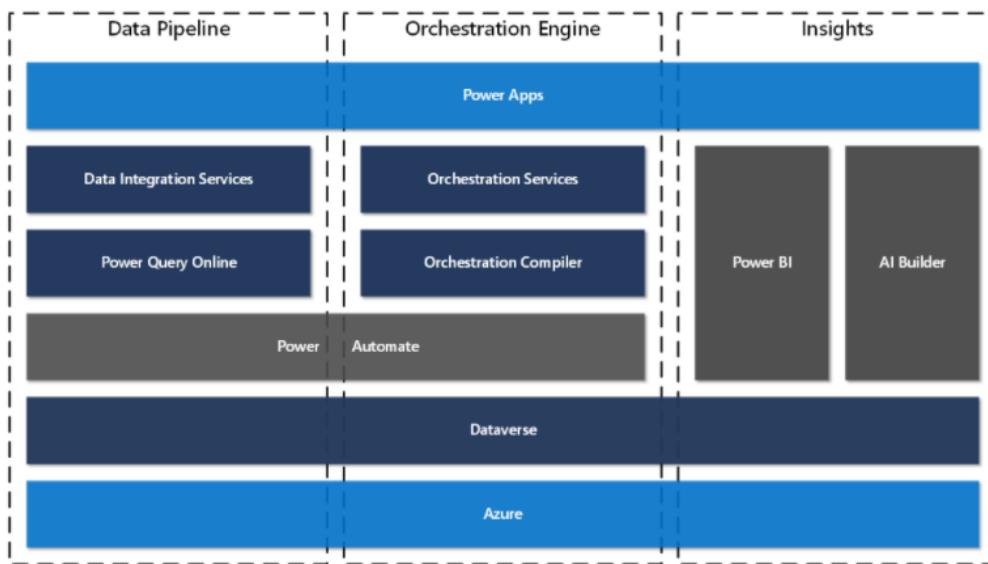
Architecture of Intelligent Order Management

Intelligent Order Management, built on Power Platform, seamlessly integrates with existing systems through the provider connector framework, providing order orchestration capabilities to help you deliver on your business strategy through order, orchestration, fulfillment, optimization, inventory visibility and fulfillment insights.

IOM shares the Common Data Model with Dynamics 365 applications to facilitate back-office application support for your customer service & sales representatives.

The core architecture of IOM has three main components:

- Data Pipeline
- Orchestration Engine
- Insights



Data pipeline consists of integration services and Microsoft Power Query online, which is a transformation engine for the connectors and the orchestration engine. The data pipeline in Intelligent Order Management provides the foundation for the providers to move data in and out of the app.

A **pipeline** is composed of:

- Provider
- Connectors

- Connection
- Data transformations
- Business events
- Provider action

Orchestration engine orchestrates a business process flow. Order-to-fulfillment flow is complex to model in a single business app, but when combined with other cloud services and supply chain partner systems, the complexity grows. To help business users in the organization to visualize and manage this complexity, Intelligent Order Management ships with a business orchestration designer. Business process flows designed with the orchestration designer are compiled into Power Automate flows when the flow is published.

Components of orchestration engine:

- Designer
- Orchestration flow types – Order Flow and Inventory Flow
- Policies
- Step

The orchestration engine's components uses an orchestration compiler to compile the business process flows into Power Automate. The orchestration builder offers low code, no code experience for building pipelines.

Commented [RG5]: @Giridhar Raj Singh Chowhan - what are those?

Under **fulfillment optimization** capabilities, you can construct unlimited fulfillment nodes, bring your own, configure the native distribution order management engine. You can set up flexible order validation rules for easy order routing. With the provider connector capabilities, you can work with warehouse management systems, 3PLs, or other fulfillment systems you've chosen for your supply chain needs, based on the connectors we will provide and also partners will provide.

In inventory **visibility**, we have a highly scalable microservice that enables real-time, on-hand inventory tracking with a global view of inventory visibility, external system access through restful APIs. And you can use it as a foundation to build available to promise processing for your business processes.

In fulfillment insights, analytics monitor order through to fulfillment supply chain, out-of-the-box, customizable dashboards to monitor key metrics. AI-based anomaly detection models provide the visibility the order from fulfillment through to delivery and communicate that to the people and the systems that need that visibility in your organization.

Insights is built on Power BI and AI Builder. Intelligent Order Management provides several dashboards to help the business user understand key order and fulfillment metrics. Machine learning is used to analyze data using models and uses advanced algorithms to find or predict patterns in data. Customers can build models using AI builder that use data from Intelligent Order Management, so that results are updated on entities used during the order and fulfillments flows. This will help decision making in orchestration flows.

Exercise 1: Configure IOM environment

In this exercise, you'll be completing the following tasks:

1. Configure mandatory Power Automate connections for IOM
2. Enable Bing Maps integration
3. Enable Timeline feature

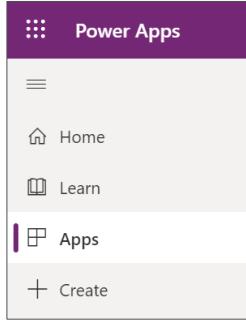
Task 1: Configure System Connections

1. Open your browser in In-Private or Incognito window, navigate to <https://make.powerapps.com/>
2. Ensure the correct environment from the upper right **Environment** drop down is selected.
Note: If you are in an instructor led training then refer to the Training Information document and choose the environment assigned to you.

Commented [AV6]: Which environment must a trainee pick?



3. Select **Apps** on the left navigation bar.



4. Select **Intelligent Order Management**.

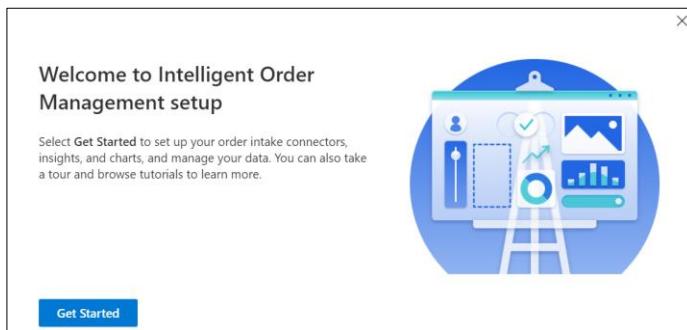
Apps

Apps Component libraries (preview)

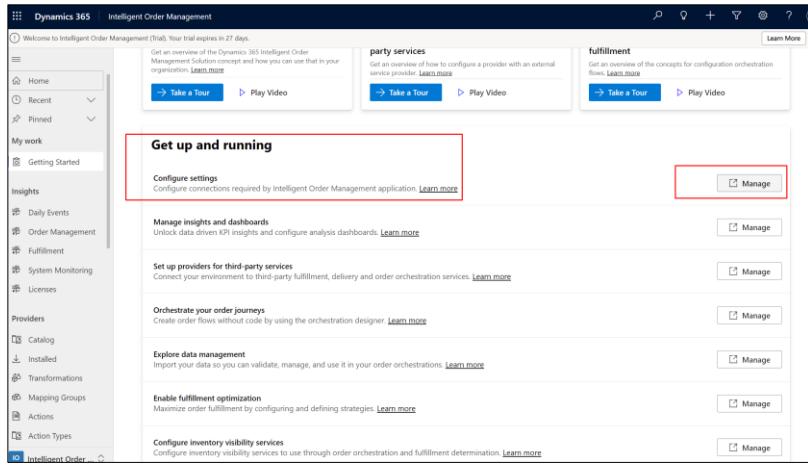
⚠️ 1 environment variable needs to be updated. [See environment variable](#)

Name	Modified
 Intelligent Order Management	... 1 d ago
 CRM Hub	... 3 d ago
 Customer Service Hub	... 4 d ago
 Dynamics 365 App for Outlook	... 4 d ago
Sales Team Member	... 4 d ago
 Customer Service workspace	... 4 d ago
 Solution Health Hub	... 4 d ago

5. Select **Get Started** button on the welcome screen in **IOM**.



6. On the Intelligent Order Management screen, click on **Getting Started** in the left navigation pane and select **Manage** on **Configure settings** to configure connections required by IOM.

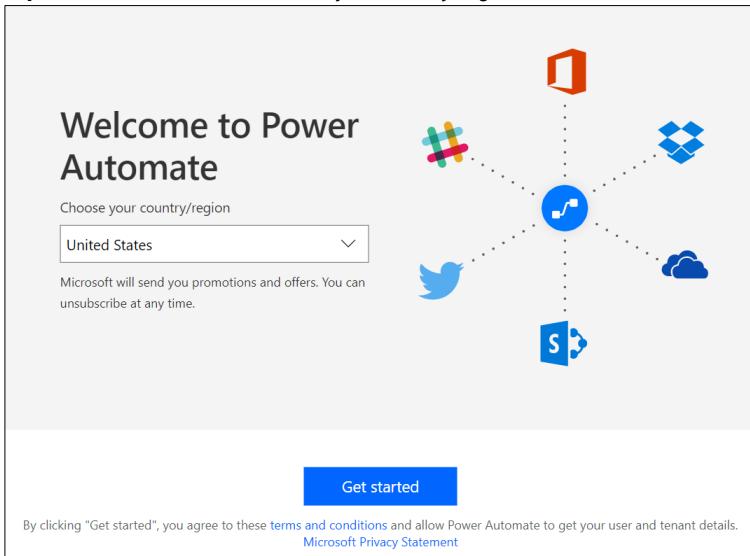


7. You should see a list of System Connection References. These are used by IOM to communicate with Dataverse, Power Automate and IOM Data Transformer. The general configuration process for each system connection is the same. Administrator privileges are required to configure these system connections.
8. Select **IOM Data Transformer** record.

9. Click on **Retrieve Link**

10. It will open up **Power Automate** portal. If you are opening **Power Automate** for the first time then you will see a welcome screen.

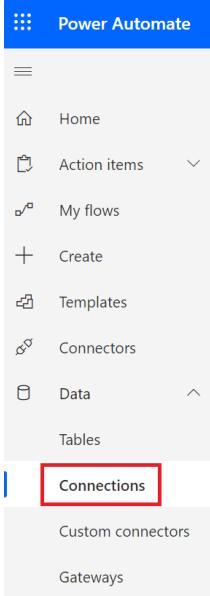
Important: Select **United States** as your country/region and then select **Get started** button for this lab.



11. Ensure the correct environment from the upper right **Environment** drop down is selected.



12. On the left pane, select **Data>Connections**.

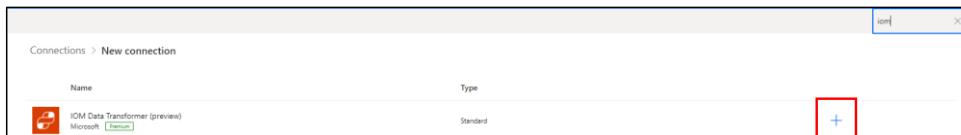


13. Select **New Connection**



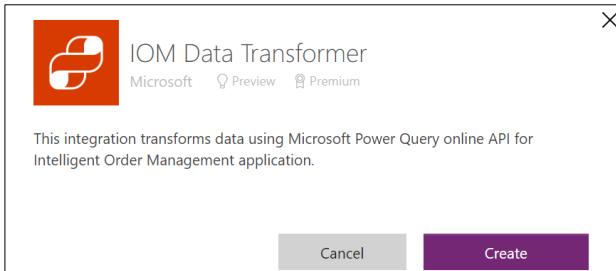
14. Search for **IOM Data Transformer** in the search bar located in the top right edge and then select **IOM Data Transformer** to add the connection.

Note: In case, you do not find the connection then close this browser tab and repeat the steps from Step 9.



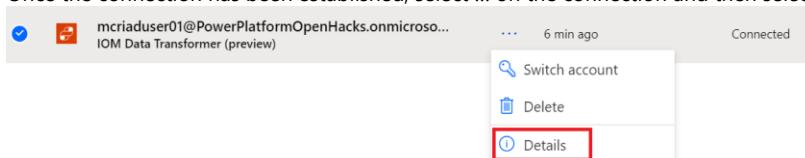
15. Click the '+' button to add the connection.

16. Select the **Create** button on the dialog box.



17. This connector will prompt for credentials. These account/connection details will be used by the IOM Data Transformer connector in the IOM Power Automate flows to transform data using Power Query online API for IOM application. For this task, you can use your In A Day user account (credentials that you are using to login to Power Apps) to establish the connection however in a customer's environment, make sure to use a dedicated service account instead of a user's account.

18. Once the connection has been established, select ... on the connection and then select **Details**.

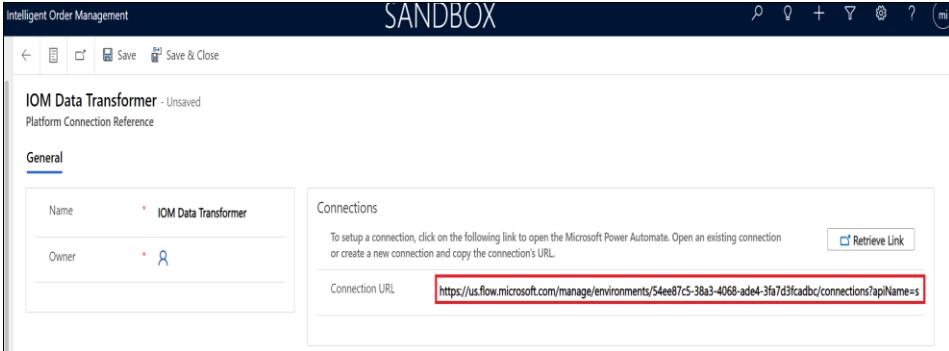


19. On the **Details** page, copy the **URL** from browser's address bar.

The screenshot shows the 'Details' page for the 'IOM Data Transformer (preview)' connection. The URL in the browser's address bar is highlighted with a red box. The page displays the connector name, description, and various connection details like status and owner.

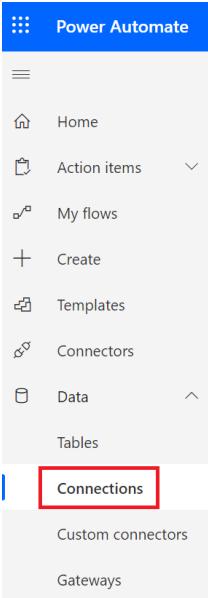
Connector name	IOM Data Transformer (preview)
Description	This integration transforms data using Microsoft Power Query online API for Intelligent Order Management application.
Status	Connected
Owner	mcriaduser01
Created	2/16/2022, 3:11:58 PM
Modified	2/16/2022, 3:12:05 PM

20. Navigate to the D365 IOM application tab page in your browser and paste the URL into the **Connection URL** field for **IOM Data Transformer** record and then select **Save & Close** on the command bar.



21. Navigate back to **Power Automate** tab page on your browser and on the left pane, select

Data>Connections.

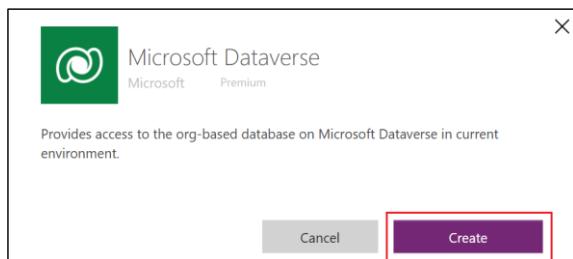


22. Select **New Connection**



23. Search for **Microsoft Dataverse** in the search bar located in the top right edge and then click on + to add the connection.

24. Select the **Create** button on the dialog box.



25. This connector will prompt for credentials. These account/connection details will be used by the Microsoft Dataverse connector in the IOM Power Automate flows to perform CRUD operations on this environment's database. For this task, you can use your In A Day user account (credentials that you are using to login to Power Apps) to establish the connection however in a customer's environment, make sure to use a dedicated service account instead of a user's account.

26. Once the connection has been established, select ... on the connection and then select **Details**.

27. On the **Details** page, copy the **URL** from browser's address bar. Save this URL in your onenote or notepad as you would require to paste the same URL in next step as well as in the next exercise.

The screenshot shows the Microsoft Power Automate Management interface. On the left, there's a navigation sidebar with options like Home, Action items, My flows, Create, Templates, Connectors, and Data. The main area is titled 'Connections > mcriaduser01@PowerPlatformOpenHacks.onmicrosoft.com'. Below this, there are tabs for 'Details', 'Apps using this connection', and 'Flows using this connection'. Under 'Details', it shows the 'Connector name' as 'Microsoft Dataverse', a 'Description' that says 'Provides access to the org-based database on Microsoft Dataverse in current environment.', and a 'Premium' status indicator.

28. Navigate to the D365 IOM application tab page in your browser and paste the same URL into the **Connection URL** field on **Microsoft Dataverse**, **Microsoft Dataverse – Application** and **Microsoft Dataverse - Integration** System Connection References records.
When you are done, you will see the System Connection References complete except for **Power Automate Management**.

System Connection References ▾	
✓ Name ↑	Status Reason ▾
IOM Data Transformer	Active
Microsoft Dataverse	Active
Microsoft Dataverse - Application	Active
Microsoft Dataverse - Integration	Active
Power Automate Management	Incomplete

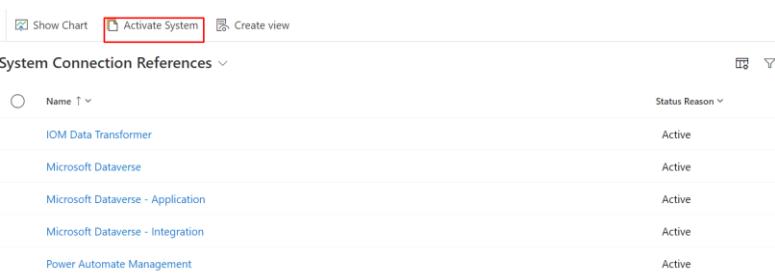
29. Navigate to Power Automate tab page in your browser and repeat steps similar to steps 20-27 to add **Power Automate Management** connection in **Power Automate**. Leave the Authentication type to "First Party" and click **Create**.

The screenshot shows a 'New connection' dialog box from the Microsoft Power Automate Management interface. The dialog has a title 'Power Automate Management' with a Microsoft logo. It contains a brief description of the connector and its purpose. Below that is a dropdown menu labeled 'Authentication Type *' which is currently set to 'First Party'. At the bottom of the dialog are two buttons: 'Cancel' and 'Create'.

30. A new window prompt will ask for credentials. These account/connection details will be used by the Power Automate management connector. For this task, you can use your In A Day user account (credentials that you are using to login to Power Apps) to establish the connection however in a customer's environment, make sure to use a dedicated service account instead of a user's account.

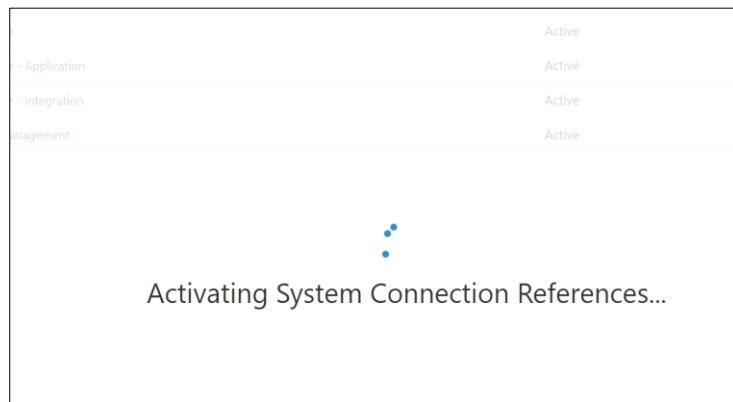
31. Finally, paste its connection url in **Power Automate Management** record in D365 IOM.

32. Navigate to D365 IOM page and once the **status reason** for all the listed **Connection References** are in **active** state, click on **Activate System** on the command bar.



System Connection References		Status Reason
Name		
IOM Data Transformer		Active
Microsoft Dataverse		Active
Microsoft Dataverse - Application		Active
Microsoft Dataverse - Integration		Active
Power Automate Management		Active

33. It takes about 5 minutes to activate all system connections. You should see the following message on the screen while connections are being activated.



Note – you may see an error if IOM is unable to activate a system connection within timeout window. If this is the case, please close the error message and retry by clicking on the Activate button. The root cause is that sometimes it can take longer than usual to activate one or more system connections thereby causing the application to raise a timeout error. If you don't see any error message in your retries then it means that the connections have been successfully activated.

Congratulations! You have finished configuring platform Power Automate connections.

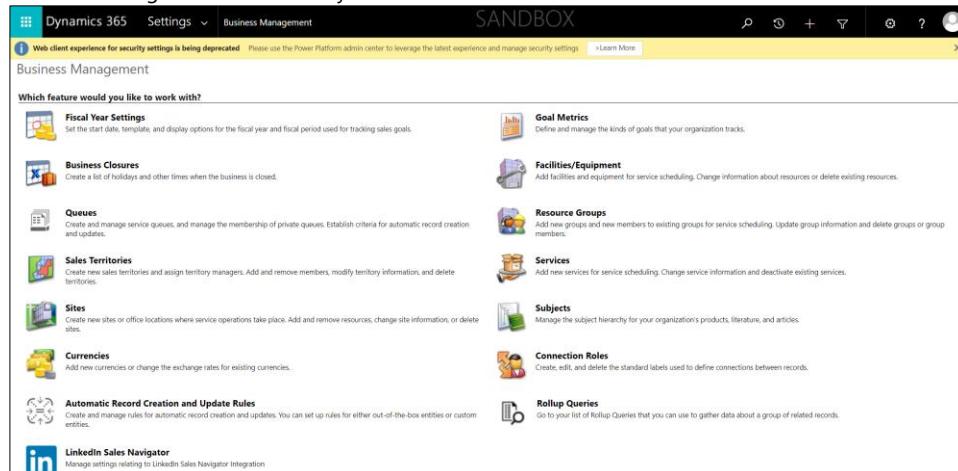
Task 2: Enable Bing Maps for IOM

Dynamics 365 Intelligent Order Management can display information about fulfillment order source and destination locations using Bing Maps. In this task, you will learn the steps to enable Bing maps for IOM.

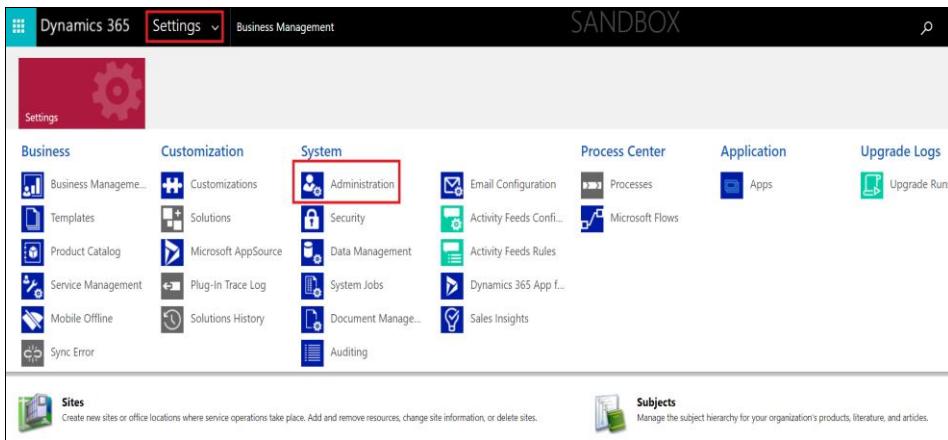
1. While in D365 IOM, select the **gauge icon** in the upper right corner and navigate to **Advanced Settings**.



2. A new window should open and navigate to Dynamics 365. It may take a while to load. If it's been longer than a minute, stop and reload the page. It should then load faster. It will land you in the Business Management section of Dynamics 365.



3. On the top command bar next to Dynamics 365, select **Settings** to open the drop-down, then select **Administration** in the third column under System.



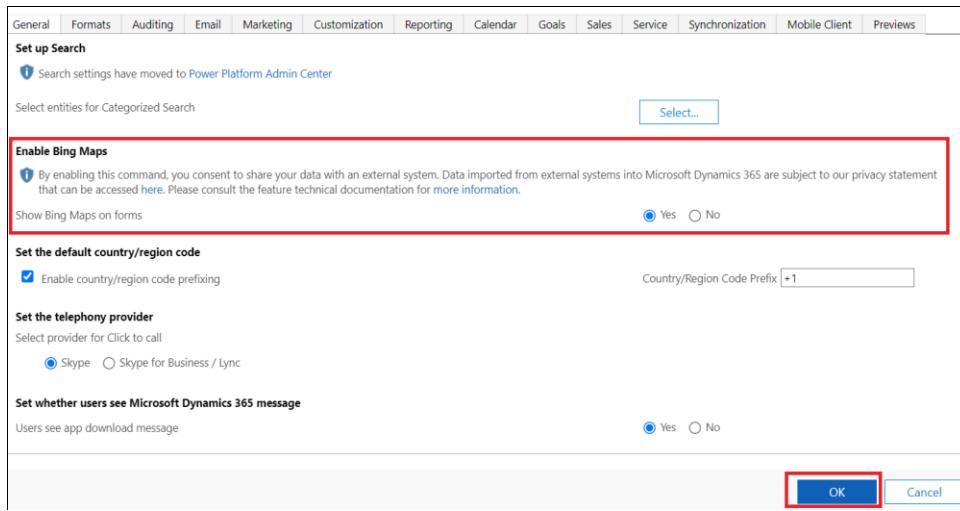
4. Select System Settings

Administration

Which feature would you like to work with?

 Auto-Numbering Specify the prefix numbers for contracts, cases, quotes, orders, articles, invoices, and campaigns. Select the suffix length for contracts, cases, quotes, orders, and invoices.	 System Settings Set the format for various values, such as numbers, dates, and times. Set Microsoft Dynamics 365 for Outlook settings.
 Languages Add or remove support for additional languages.	 Subscription Management See payment and billing options, and purchase add-ons.
 System Notifications View important system messages such as scheduled outage notifications.	 Resources In Use View details about your organization's use of storage and processing power.
 Yammer Configuration Connect Microsoft Dynamics 365 to your enterprise Yammer network.	 Virtual Entity Data Sources Add, edit, or delete connection information for external data sources.

5. On the General tab, select Yes for Show Bing Maps on forms, and then select OK.

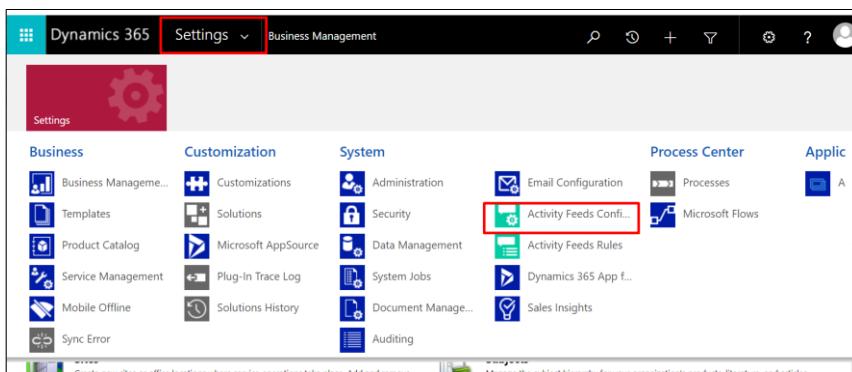


Congratulations! You have enabled Bing Maps integration which will show the information about fulfillment order source and destination locations using Bing Maps.

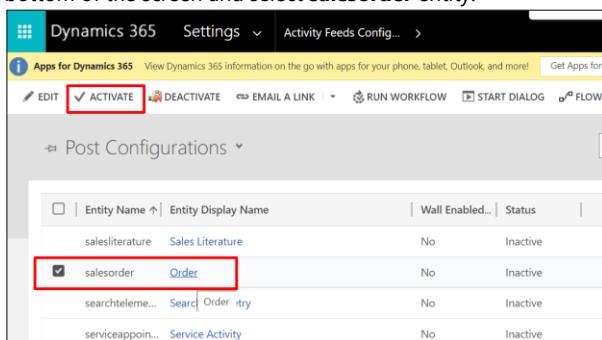
Task 3: Enable Timeline feature

This feature is targeted at improving user experience and giving users a view of timeline of business events associated with a sales order.

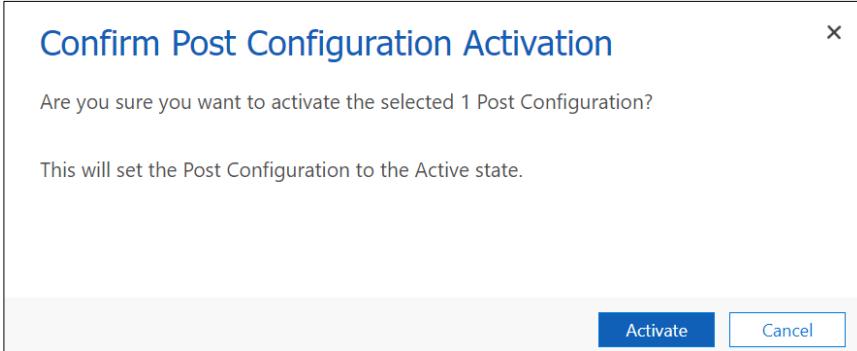
1. On the top command bar next to Dynamics 365, select **Settings** to open the drop-down, then select **Activity Feeds Configuration** in the fourth column.



2. Select **salesorder** and then click on **Activate** button. You can find Entity Name **salesorder** by either typing up the name in Search textbox on the top right corner or you can simply select "O" at the bottom of the screen and select **salesorder** entity.



3. Select **Activate** on the dialog form.



4. Once enabled, sales orders will start displaying a timeline of business events. To view timeline, click on a sales order, and you'll see **Timeline** populated.

5. Open **Intelligent Order Management** Application and Click on **Sales Orders** from Left Navigation Bar

Commented [AV7]: Need screenshots and steps for opening orders

Intelligent Order Management Orders							
	Group By:	Name	Customer	Status Reason	Total Amount	Currency	Date Fulfilled
Orders	Order ID	ORD-00000-A00001	Wide World Imports	Shipped	\$34,273.00	US Dollar	...
		ORD-00000-A00002	Aidatum Corporation	Shipped	\$80,958.00	US Dollar	...
		ORD-00000-A00003	VarArist, Ltd.	Shipped	\$46,098.00	US Dollar	10/21/2021 12:00 PM
		ORD-00000-A00004	Adventure Works Cycles	Shipped	\$40,284.00	US Dollar	10/13/2021 12:00 PM
		ORD-00000-A00005	Lamina Healthcare Com...	Shipped	\$9,543.00	US Dollar	11/13/2021 11:00 AM
		ORD-00000-A00006	Reliedoud	Shipped	\$46,435.00	US Dollar	10/14/2021 12:00 PM
		ORD-00000-A00007	Contoso Suites	Shipped	\$62,185.00	US Dollar	11/7/2021 11:00 AM
		ORD-00000-A00008	Contoso Pharmaceuticals	Shipped	\$94,297.00	US Dollar	...
		ORD-00000-A00009	Proseware, Inc.	Shipped	\$79,285.00	US Dollar	12/15/2021 11:00 AM
		ORD-00000-A00010	Lucerne Publishing	Shipped	\$3,371.00	US Dollar	10/18/2021 12:00 PM
		ORD-00000-A00011	School of Fine Art	Shipped	\$1,418,118.00	US Dollar	11/19/2021 11:00 AM
		ORD-00000-A00012	Southridge Video	Shipped	\$1,377,861.00	US Dollar	12/16/2021 11:00 AM
		ORD-00000-A00013	Humongous Insurance	Shipped	\$261,545.00	US Dollar	1/26/2022 10:00 AM
		ORD-00000-A00014	Fabrikam Residences	Shipped	\$540,597.00	US Dollar	10/22/2021 12:00 PM
		ORD-00000-A00015	Contoso Coffee	Shipped	\$840,953.00	US Dollar	11/3/2021 11:00 AM
		ORD-00000-A00016	Trey Research	Shipped	\$781,106.00	US Dollar	1/27/2022 10:00 AM

6. Click on any available Sales Order to see its details.

ORD-00000-A00000Alex Baker - Saved
Order

Summary

General	Order Products	Shipping Information
Name: ORD-00000-A00000Alex B...	Search this view	Total Amount: \$6,206.00 Active Status: Shipped Status Reason: giridhar chowhan Owner:
Order ID: ORD-00000-A00000	Product Name: Quick Kettle Default Unit (Existing Product): ea Status Reason: New Order Quantity: 93.00000 Price Per Unit: \$49.00	Date Fulfilled: 10/10/2021
Potential Customer: First Up Consultants	Product Name: Cupping Glass Default Unit (Existing Product): ea Status Reason: New Order Quantity: 38.00000 Price Per Unit: \$6.00	Shipping Method: Airborne
Primary Contact: ---	Product Name: Accu Scale Default Unit (Existing Product): ea Status Reason: New Order Quantity: 29.00000 Price Per Unit: \$49.00	Freight Terms: ---
Contact: ---	ABC 1 - 3 of 3	Address
		Ship To Street 1: 1375 3rd St
		Ship To Street 2: ---
		Ship To Street 3: ---
		Ship To City: San Diego
		Ship To State/Province: CA
		Ship To ZIP/Postal Code: 92093
		Ship To Country/Region: USA

Pricing

Payment Terms: ---	Timeline
Currency: US Dollar	+ ▾ : Get started
Price List: Master price list	Search timeline
Prices Locked: No	Enter a note..
Total Detail Amount: \$6,206.00	
Total Detail Amount (Base): \$6,206.00	
Total Amount: \$6,206.00	

Note – enabling Timeline feature does not retrospectively populate timeline of events for existing orders. However, after the Timeline feature is enabled, if an order changes states and/or goes through different states (events), those are reflected under Timeline.

Congratulations! You have completed configuring Timeline feature.

Exercise 2: Configure IOM Providers

In this exercise, you'll complete the following tasks:

1. About IOM Providers and their role.
2. Configure a Provider for BigCommerce which enables communication between IOM and third-party ecommerce platform BigCommerce.
3. Configure Internal-External Mappings in IOM.
4. Configure a first-party provider for Intelligent Fulfillment Optimization. This provider enables use of intelligent fulfillment optimization capabilities in IOM.
5. Configure a first-party provider for Inventory Visibility. This provider Enables use of inventory feasibility capabilities in Dynamics 365 IOM.

Overview of Providers

A key value proposition of Dynamics 365 Intelligent Order Management is the ability to seamlessly integrate with other systems. To do so, Intelligent Order Management uses "providers". [Providers](#) are constructs that allow you to connect Intelligent Order Management to external systems.

Intelligent Order Management providers were designed with the following properties:

- Extensibility: Providers can be extended and customized by leveraging the Microsoft Power Platform.
- Low code customization: Because providers are built on the Power Platform, customizations require little to no code.
- Scale: Providers leverage Power Automate, so providers can scale with volume of incoming messages.

Key components of a provider are:

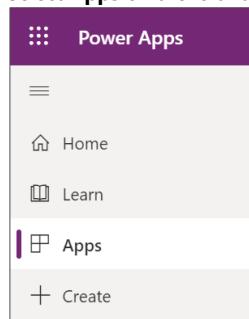
- Connection
- Business event
- Action
- Parameter
- Transformation

Task 1: Configure BigCommerce Provider

1. Open your browser in In-Private or Incognito window, navigate to [Power Apps](#).
2. Ensure the correct environment from the upper right **Environment** drop down is selected.
Note: If you are in an instructor led training then refer to the Training Information document and choose the environment assigned to you.



3. Select **Apps** on the left navigation bar.



4. Select **Intelligent Order Management**.

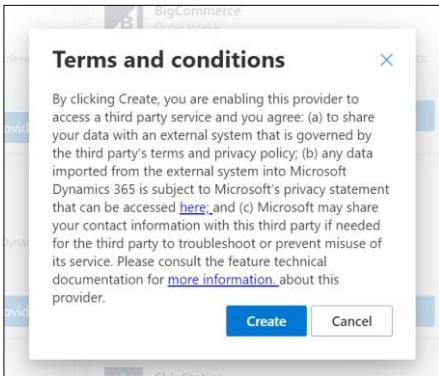
A screenshot of the Power Apps 'Apps' screen. The 'Apps' tab is selected. A red box highlights the 'Intelligent Order Management' app in the list. The table shows the following data:

Name	Modified
Intelligent Order Management	1 d ago
CRM Hub	3 d ago
Customer Service Hub	4 d ago
Dynamics 365 App for Outlook	4 d ago
Sales Team Member	4 d ago
Customer Service workspace	4 d ago
Solution Health Hub	4 d ago

- On the left pane, select Providers > Catalog. The form will display a list of pre-built Providers. IOM also supports custom providers. For our lab, we will be using BigCommerce as our source system so select **Add provider** button on **BigCommerce** tile.

The screenshot shows the Dynamics 365 Intelligent Order Management (IOM) interface. The left sidebar has a 'Providers' category selected, indicated by a red box. Under 'Providers', the 'Catalog' item is also highlighted with a red box. The main area displays a list of 'Active Provider Definitions'. One provider, 'BigCommerce Order Intake', is highlighted with a red box around its tile, and its 'Add Provider' button is also highlighted with a red box.

- To accept the terms and conditions, select **Create** button and it will take a few seconds to process.



- The system will automatically open the Big Commerce provider screen with BigCommerce connection. Select BigCommerce Connection to enable communication between Dynamics 365 Intelligent Order Management to the associated BigCommerce account.

BigCommerce - Saved
Provider

Overview Events Actions Parameters Transformations

Details

Display Name	* BigCommerce
Logo	
Owner	* mcr iaduser01
Service Type	* Order Intake

Description

Description Provides a communication channel to retrieve orders, products, and r...

Mapping

Select Mapping Refresh :

Default Mapping Group →

Connections

Connections Open :

Connection Reference Display Name ↑	Created On ↓
BigCommerce Connection	2/17/2022 10:51 AM
BigCommerce Dataverse (current environment) Connectio 2/17/2022 10:51 AM	

8. Click on **Retrieve Link**.

BigCommerce Connection - Saved
Provider Connection Reference

Overview

Overview

Connection Reference Display Name	* BigCommerce Connection
Provider	* BigCommerce
Owner	* mcr iaduser01

Description

Description Enables communication between Dynamics 365 Intelligent Order Management to the associated BigCommerce a...

Connection URL

To setup a connection, click on the following link to open the Microsoft Power Automate. Open an existing connection or create a new connection and copy the connection's URL.

[Retrieve Link](#)

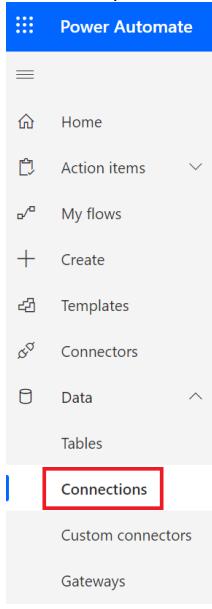
Connection URL ---

9. Clicking on **Retrieve Link** will take you to **Power Automate**. Ensure the correct environment from the upper right **Environment** drop down is selected.

Note: If you are in an instructor led training then refer to the Training Information document and choose the environment assigned to you.



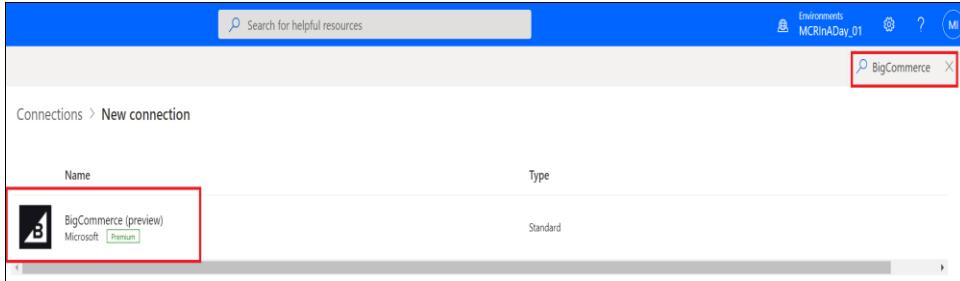
10. On the left pane, select **Data>Connections**.



11. Select **New Connection**



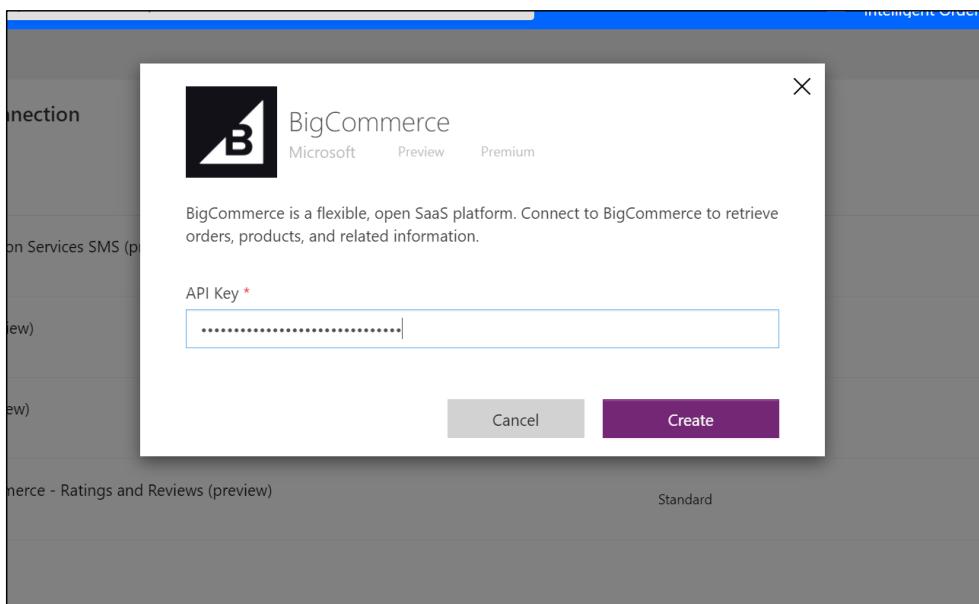
12. Search for **BigCommerce** in the search bar located in the top right edge and then select **BigCommerce** to add the connection.



13. You will be prompted for API Key. Copy/paste the API key. Once API key has been entered, select

Create.

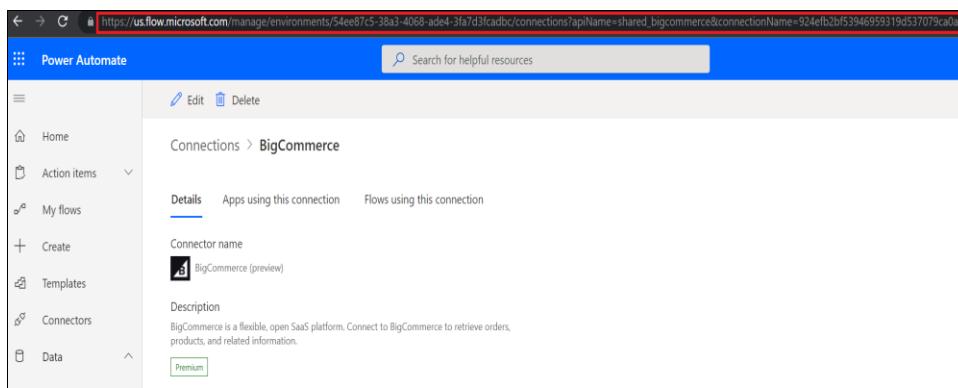
Note: If you are in an instructor led lab then provide the BigCommerce **API Key** provided by your lab instructor.



14. Once a connection has been created based on the API key, you should see the status of the connection as Connected.

Connections in Intelligent Order Management Trial		
Name	Modified	Status
BigCommerce BigCommerce (preview)	... 1 sec ago	Connected

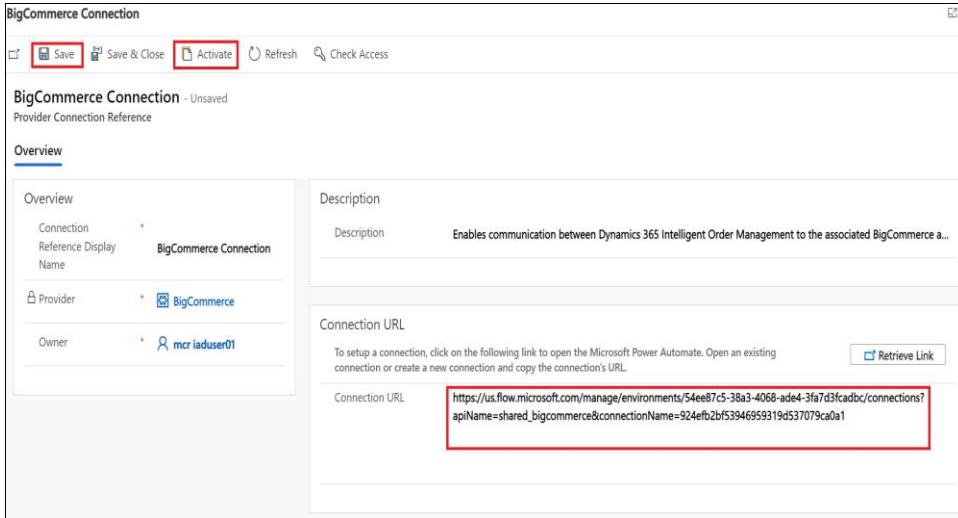
15. Click on BigCommerce connection to view the details of this connection. Copy the URL shown in the address bar of your browser.



The screenshot shows the Microsoft Power Automate interface. On the left, there's a sidebar with options like Home, Action items, My flows, Create, Templates, Connectors, and Data. The main area is titled 'Connections > BigCommerce'. It shows a single connection entry with the following details:

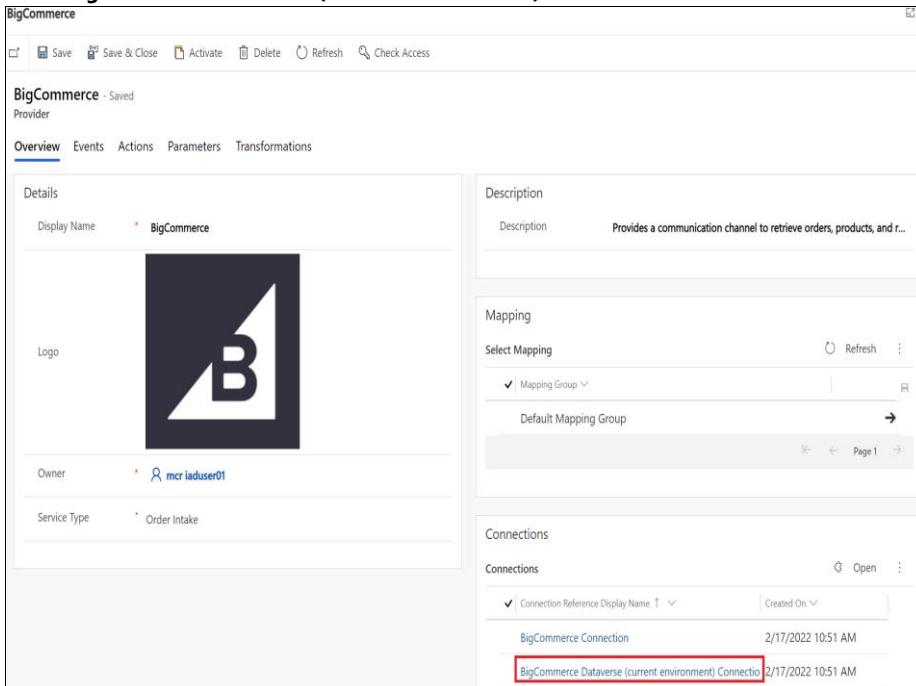
- Connector name:** BigCommerce (preview)
- Description:** BigCommerce is a flexible, open SaaS platform. Connect to BigCommerce to retrieve orders, products, and related information.
- Status:** Premium

16. Navigate to D365 IOM and paste the URL in the **Connection URL** field in BigCommerce Provider Connection Reference screen. Once pasted, click **Save** and then **Activate**. IOM will then take a 15-20 seconds to activate a Provider for BigCommerce.



17. Click **Save and Close**.

18. Select **BigCommerce Dataverse (current environment)**.



19. Paste the Dataverse connection URL used in Exercise 1->Task 1->Step 26. Once pasted, click **Save** and then click **Activate**.

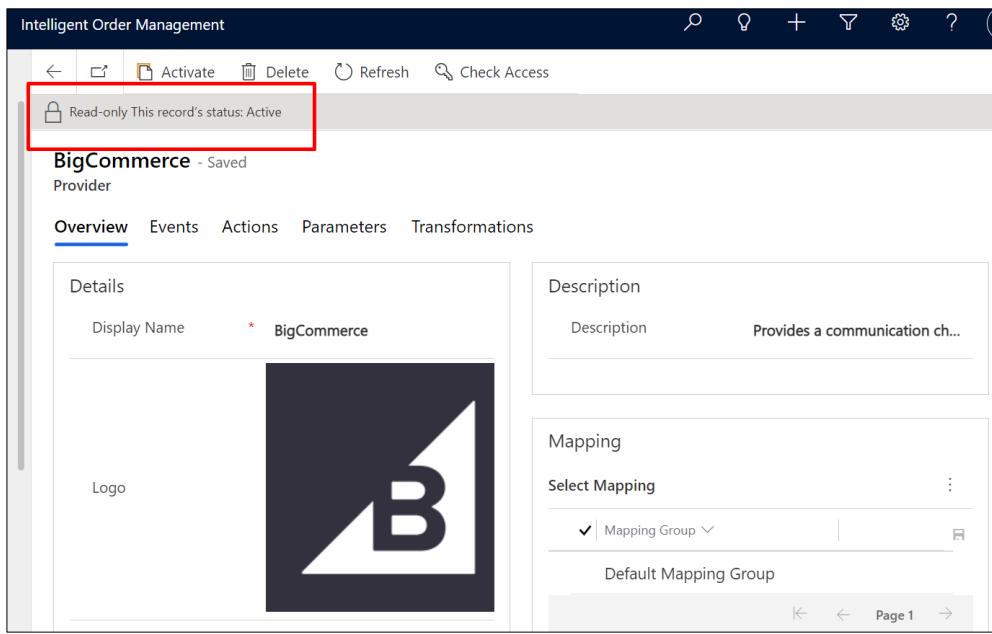
20. At this stage, you should have connections for BigCommerce and Dataverse configured and activated.

21. Click **Save and Close**.

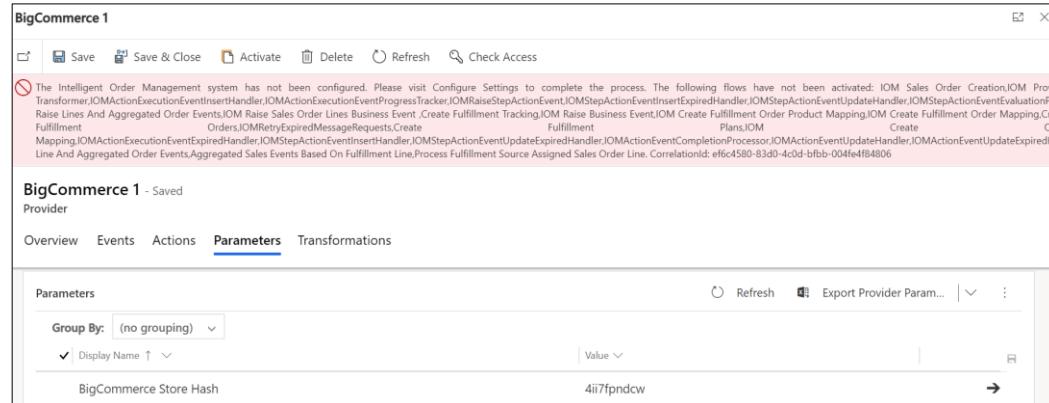
22. Switch to D365 IOM screen and On the **BigCommerce** provider screen, select **Parameters** tab and paste the store hash value provided by your instructor into the **value** field for **BigCommerce Store Hash** and then select **Save** and then **Activate**.

Note: If you are in an Instructor led training then use the store hash value provided by your Instructor.

23. If all the connections are provided correctly then you should see a message which reads that the record's status is Active.



Note - You may encounter an error message as shown in the below screenshot if the System Connections have not been configured as mentioned in the earlier exercises and tasks.



Task 2: Configure Internal-External Mappings for BigCommerce provider transformations

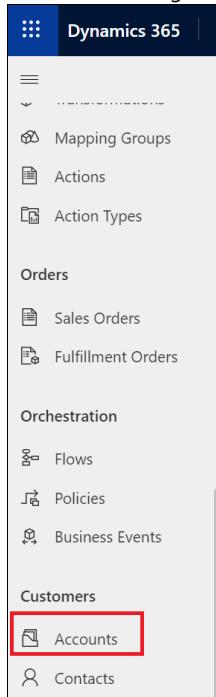
Once BigCommerce Provider has been configured, next step is to configure Mappings in IOM. Mappings enable translation of fields between third-party platforms such as BigCommerce and IOM. With the internal external ID mappings functionality, you can perform the following tasks:

- Define the relationship between identities in an enterprise across applications and operating systems.
- Use the mapping for multiple integrations.
- Enable an end-to-end visualization of mapping across multiple systems.
- Configure and add your own mapping and mapping tables.

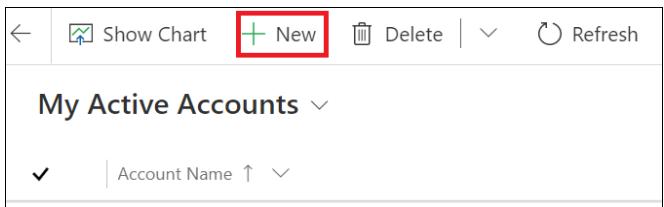
In context of BigCommerce Provider, following Internal External Mappings must be configured before orders generated in BigCommerce are visible in IOM:

- Accounts
- Products
- Price Lists
- Units

1. We would need to have a customer account to map it to BigCommerce providers. To create a customer test account, navigate to **Customers>Accounts**



2. Select **+ New** on the command bar.



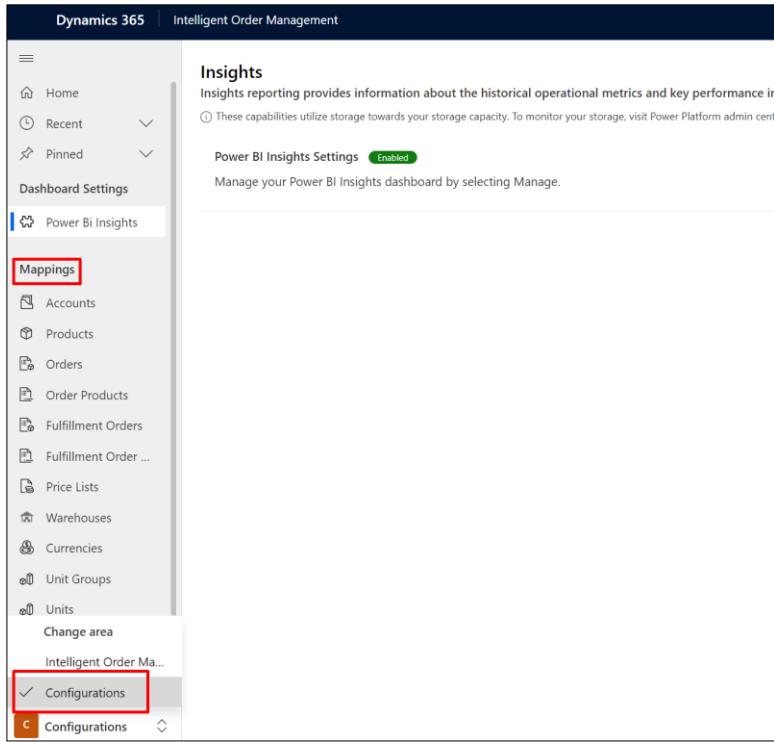
3. Enter the following fields and select **Save & Close** in the command bar.

- Account Name** : TestBCAccount
- Account Number** : TestBCAccount

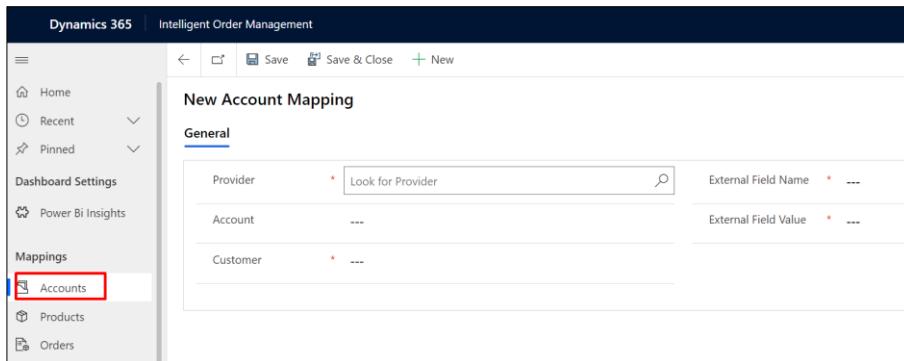
A screenshot of the 'TestBCAccount' account detail page. The top navigation bar includes 'Save', 'Save & Close' (highlighted with a blue box), 'New', and 'Open Org C'. The main title is 'TestBCAccount - Saved' under a green circular profile picture. Below it is the account type 'Account · Account'. The 'Summary' tab is selected. The 'ACCOUNT INFORMATION' section contains the following fields:

Account Name	* TestBCAccount
Account Number	TestBCAccount
Phone	---
Fax	---
Website	---
Parent Account	---
Ticker Symbol	---

4. To access Mappings configuration, On the left pane of D365 IOM, Change the area in left bottom edge of the screen from **Intelligent Order Management** to **Configurations**.



5. To configure Internal-External mapping for **Accounts**, click on New.



6. Enter the following details and then click **Save & Close**.

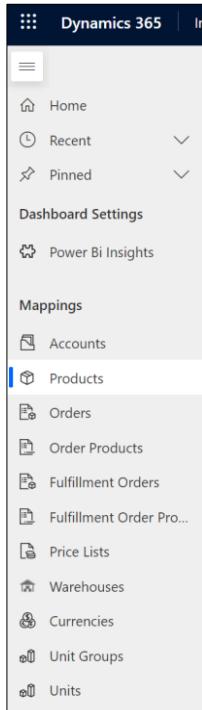
- a. **Provider** : BigCommerce
- b. **Customer** : TestBCAccount

- c. **External Field Name** : ProviderName
- d. **External Field Value** : BigCommerce

Provider	External Field Name	External Field Value
BigCommerce	ProviderName	BigCommerce

TestBCAccount		

7. Select **Save & Close**
8. To configure the product mapping, on the left pane, select **Products**.



9. Select **+New** and enter the following fields:
- a. **Provider** : BigCommerce

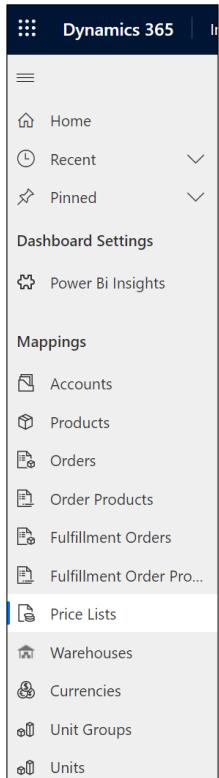
- b. **Product** : Accu Scale (We will be mapping this item to ABS from BigCommerce platform.)
- c. **External Field Name** : sku
- d. **External Field Value** : ABS

The screenshot shows the 'New Product Mapping' configuration screen. At the top, there are standard navigation buttons: Back, Forward, Save, Save & Close, New, Delete, Refresh, Check Access, and Share. The main title is 'New Product Mapping - Saved'. Below the title, it says 'Product Mapping'. There are two tabs: 'General' (which is selected) and 'Related'. The 'General' tab contains the following fields:

Provider	* <input checked="" type="checkbox"/> BigCommerce	External Field Name	* <input type="text"/> sku
Account	---	External Field Value	* <input type="text"/> ABS
Product	* <input checked="" type="checkbox"/> Accu Scale		

Note – Product Mapping step must be completed for each individual product which you expect to come through on orders from BigCommerce or any other third-party (3P) platform. If an order item doesn't have a corresponding item, then those orders will not flow through to IOM via a Provider.

10. Select **Save & Close**
11. To configure the **Price Lists**, select **Price Lists** on the left pane.



12. Select **+New** and enter the following fields and click **Save & Close**

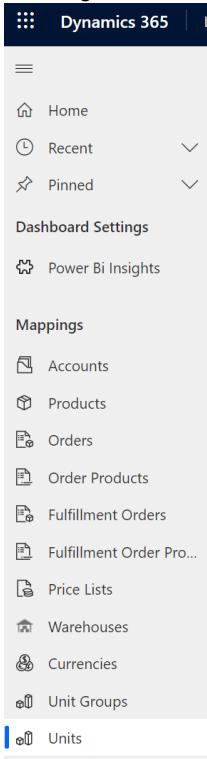
- a. **Provider** : BigCommerce
- b. **Price List** : Master price list
- c. **External Field Name** : ProviderName
- d. **External Field Value** : BigCommerce

New Price List Mapping - Saved
Price List Mapping

General Related

Provider	* <input type="button" value="BigCommerce"/>	External Field Name	* <input type="button" value="ProviderName"/>
Account	---	External Field Value	* <input type="button" value="BigCommerce"/>
Price List	* <input type="button" value="Master price list"/>		

13. To configure Units, Navigate to **Units** in the left pane.



14. Select **+New** and then enter the values as below and click **Save & Close**.

- a. **Provider** : BigCommerce
- b. **Unit** : ea
- c. **External Field Name**: unit
- d. **External Field Value**: each

New Unit Mapping - Saved

Unit Mapping

General Related

Provider	*	BigCommerce	External Field Name	*	unit
Account	---		External Field Value	*	each
Unit	*	ea			

Congratulations! You have completed configuring BigCommerce Provider and Internal-External Mappings to enable flow of orders from BigCommerce.

Exercise 3: Testing flow of orders using BigCommerce provider

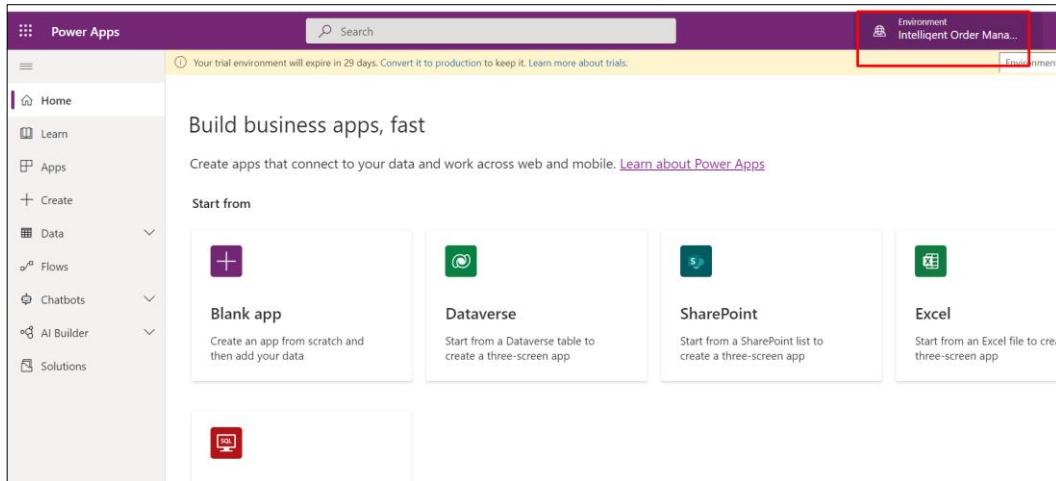
In this exercise, you'll complete the following:

1. Configuring recurrence frequency of BigCommerce pull sales order flow
2. Generate orders in BigCommerce and validate flow of orders to IOM

Task 1: Configure frequency of Flow

1. By default, the Flow which pulls the sales orders from BigCommerce is configured to run at 10-minute interval. This can be changed to suit business requirements. To configure the interval, go to <https://make.powerapps.com> and ensure that the right environment is selected.

Note: If you are in an instructor led training then refer to the Training Information document and choose the environment assigned to you.



The screenshot shows the Microsoft Power Apps home page. On the left, there's a navigation sidebar with options like Home, Learn, Apps, Create, Data, Flows, Chatbots, AI Builder, and Solutions. The 'Environment' dropdown at the top right is set to 'Intelligent Order Mana...' (with a red box around it). The main area has a heading 'Build business apps, fast' and a sub-section 'Create apps that connect to your data and work across web and mobile. [Learn about Power Apps](#)'. Below this, there's a section titled 'Start from' with four options: 'Blank app' (purple plus icon), 'Dataverse' (green camera icon), 'SharePoint' (blue SharePoint icon), and 'Excel' (yellow Excel icon). A small red box highlights the 'Environment' dropdown in the top right corner.

2. Click on Solutions and then scroll down and select Default Solution.

Power Apps						
	Search			Info	Int	Int
	Dynamics Marketing Orchestration O...	DynamicsMKT_Orc... ...	21/12/2021	1.1.3856.0		
Home	Dynamics Marketing Orchestration Engine	DynamicsMKT_Orch...	21/12/2021	1.1.3513.0		
Learn	Standard entity of segment representation/me...	DynamicsMKT_Segm...	21/12/2021	1.1.3513.0		
Apps	Dynamics Marketing Base Solution	DynamicsMKT_BaseS...	21/12/2021	1.1.3513.0		
Create	Intelligent Order Management Data Mapping	msdyn_IOMDataMa...	21/12/2021	1.0.0.526		
Data	Intelligent Order Management Order Core	msdyn_IOMOrderCore	21/12/2021	1.0.0.514		
Flows	Intelligent Order Management Order Fulfillment	msdyn_IOMOrderful...	21/12/2021	1.0.0.514		
Chatbots	Intelligent Order Management Provider Config...	msdyn_IOMProvider...	21/12/2021	1.0.0.3059		
AI Builder	Intelligent Order Management Provider Integr...	msdyn_IOMProviderI...	21/12/2021	1.0.0.3069		
Solutions	Intelligent Order Management Provider Integr...	msdyn_IOMProviderI...	21/12/2021	1.0.0.3035		
	Intelligent Order Management Provider Integr...	msdyn_IOMProviderI...	21/12/2021	1.0.0.3072		
	Intelligent Order Management Base	msdyn_IOMB	21/12/2021	1.0.0.3058		
	SCMCommon	SCMCommon	21/12/2021	1.0.0.6		
	Power Apps Checker Base	msdyn_PowerAppsC...	14/12/2021	1.2.0.122		
	Power Apps Checker	msdyn_PowerAppsC...	14/12/2021	1.2.0.122		
	Contextual Help Base	msdyn_ContextualH...	14/12/2021	1.0.0.22		
	Contextual Help	msdyn_ContextualH...	14/12/2021	1.0.0.22		
	Common Data Services Default Solution	Cr739e4	14/12/2021	1.0.0.0		
	Default Solution	Default	14/12/2021	1.0 Waiting for search results		

3. Filter the list of Flows based on **Type**. In this case, we select filter records where type is **Cloud Flow**.

Display name ↑	Name ↓	Type ↓	Ma... ↓	Last Modif... ↓	Owner ↓	Status
-	-	Cloud Flow	month ago	ek ago	SYSTEM	Off
-	-	Cloud Flow	month ago	month ago	aj singh	Off
-	-	Cloud Flow	month ago	month ago	-	Off
-	-	Cloud Flow	month ago	month ago	SYSTEM	Off
-	-	Cloud Flow	week ago	ek ago	SYSTEM	Off
-	-	Column Security Profile	week ago	week ago	SYSTEM	Off

4. The flow which pulls sales order from BigCommerce has suffix `_bigcommerce_pullsalesorder`. Select this flow to view the details.

		IOM Create Fulfillment Order Product Mapping	Cloud Function	Yes	4 days ago
		IOM Create Order Mapping	Cloud Function	Yes	4 days ago
		IOM Provider Transformer	Cloud Function	Yes	4 days ago
		IOM Raise Business Event	Cloud Function	Yes	4 days ago
		IOM Raise Lines And Aggregated Order Events	Cloud Function	Yes	4 days ago
		IOM Raise Sales Order Lines Business Event	Cloud Function	Yes	4 days ago
		IOM Sales Order Creation	Cloud Function	Yes	4 days ago
		iom_131f93e2-3259... iom_131f93e2-3259-40db-8770-ff3d7c0f350c_msdyn_bigcommerce_updateorderst...	Cloud Function	No	1 week ago
		iom_ae892aa5-ec94-4f4d-a8c8-a9bfc865d9eb_msdyn_bigcommerce_getorderprod...	Cloud Function	No	2 days ago
		iom_ae892aa5-ec94-4f4d-a8c8-a9bfc865d9eb_msdyn_bigcommerce_processsaleso...	Cloud Function	No	2 days ago
		iom_ae892aa5-ec94-4f4d-a8c8-a9bfc865d9eb_msdyn_bigcommerce_pullsalesorder	Cloud Function	No	2 days ago
		iom_ae892aa5-ec94-4f4d-a8c8-a9bfc865d9eb_msdyn_bigcommerce_updateorders...	Cloud Function	No	2 days ago
		IOMActionEventCompletionProcessor	Cloud Function	Yes	4 days ago

- Clicking on Edit opens up the editor which can be used to change configuration including schedule for this flow.

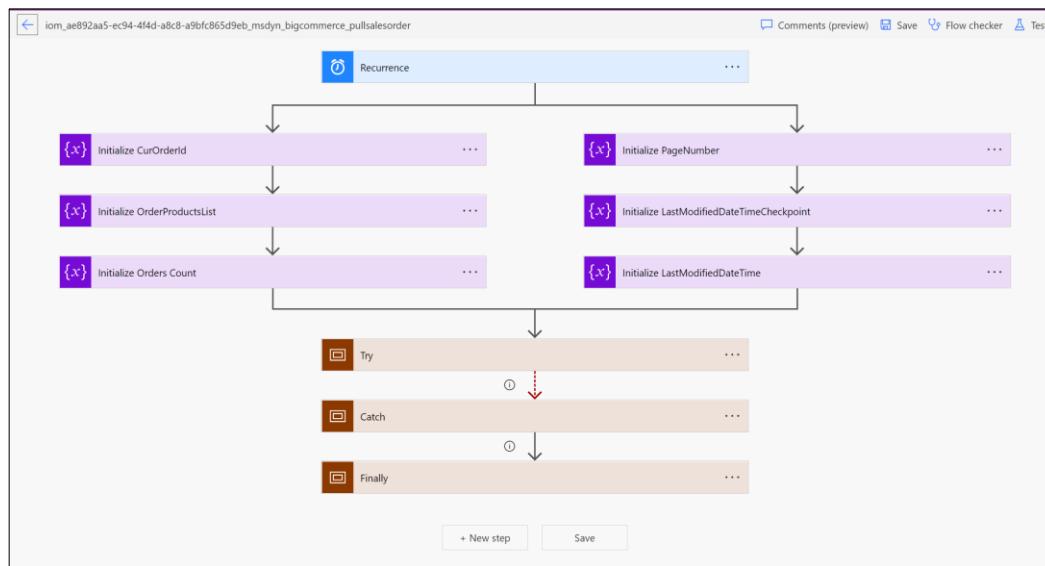
Note: You can also view history of previous runs. This can be used for troubleshooting purposes. For example, clicking on a given run gives you access to JSON output of data which was pulled back from BigCommerce. Similarly, output also gives you BigCommerce API statistics such as rate limits; quotas etc.

The screenshot shows the Power Apps portal interface. At the top, there are navigation links: Power Apps, Search, Environment (Intelligent Order Mana...), and a gear icon. Below the header, there are several action buttons: Edit (highlighted with a red box), Save As, Delete, Run, Send a copy, Submit as template, Export, Turn off, and Repair tips off. The main content area displays a flow named "iom_ae892aa5-ec94-4f4d-a8c8-a9bfc865d9eb_msdyn_bigcommerce_pullsalesorder". The flow details include:

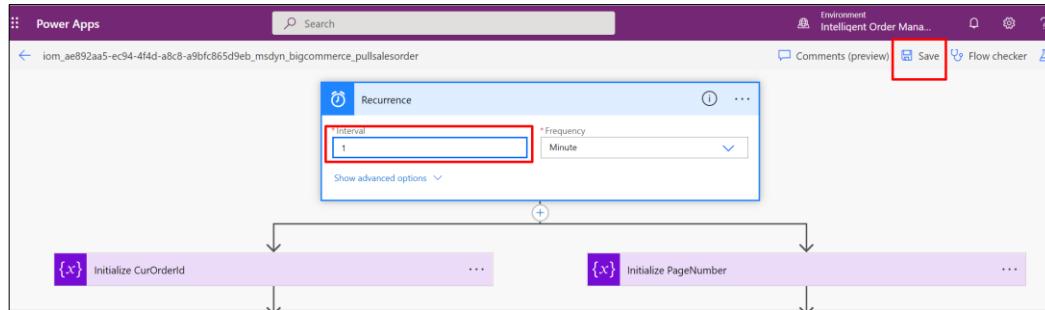
- Flow:** iom_ae892aa5-ec94-4f4d-a8c8-a9bfc865d9eb_msdyn_bigcommerce_pullsalesorder
- Status:** On
- Created:** Jan 20, 07:49 PM
- Modified:** Jan 20, 08:11 PM
- Type:** Scheduled
- Plan:** Per-user plan

On the right side, there are sections for "Connection References" (BigCommerce Connect, BigCommerce Dataverse) and "Owners" (aj singh). Below these, a "28-day run history" section is shown, which is also highlighted with a red box. It includes a "All runs" link and a table with columns: Start, Duration, and Status. One entry is listed:

Start	Duration	Status
Jan 22, 11:28 PM (0 sec ago)	15 ms	Running



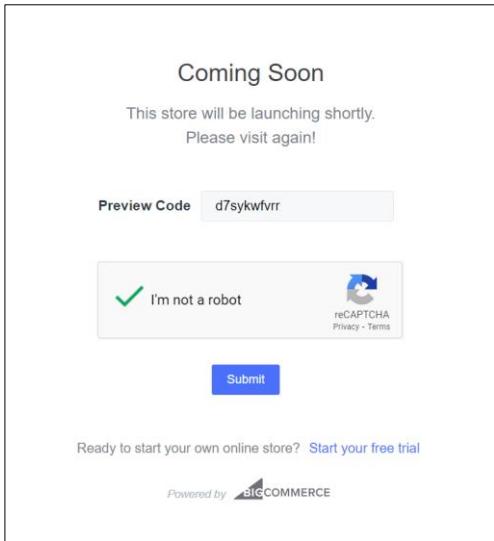
- Click on Recurrence task to change this flow to run every minute instead of default of 10 minutes and then click Save.



Task 2: Create an order in BigCommerce

You can either create an order on BigCommerce store portal or their e-Commerce portal. In this task, we will walk you through the steps to create an order via BigCommerce e-commerce portal.

1. Navigate to BigCommerce e-commerce portal store provided by your instructor.
Note: Use the e-Commerce portal link provided by your instructor.
2. If you/training team is using a BigCommerce Trial environment, then the e-commerce portal might be in private mode and expects a private preview code per browser session. Enter the **Preview code** provided by your instructor, select the check box **I'm not a robot** and then click on **Submit** button to enter the site.



3. Select **Register** on the top right edge of the portal.

A screenshot of the Fabrikam Retail website. The header includes a search bar, "SIGN IN or REGISTER" (with "REGISTER" highlighted in red), and a "CART" button. The main navigation menu lists categories: SHOP ALL, BATH, GARDEN, KITCHEN, PUBLICATIONS, UTILITY, SHIPPING & RETURNS, CONTACT US, and BLOG. Below the menu is a large image of a dining table with plates and glasses. Overlaid on the bottom left of the image is a white box containing the text "Books for Cooks".

4. Fill the required fields to create your account. You can enter a dummy value on the fields Email Address, First Name, Last Name and Address Line 1 however for other address fields, enter as mentioned below because the shipping zones in BigCommerce is configured to be United states:

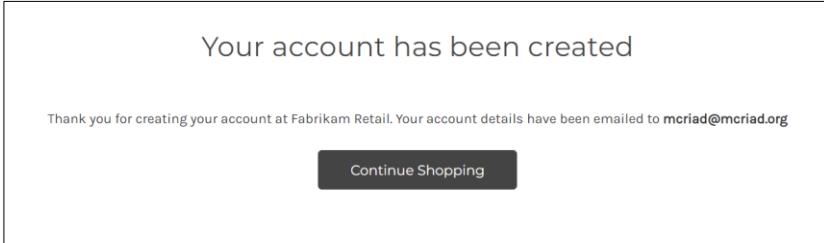
- a. **Suburb/City** : Redmond
- b. **Country** : United States
- c. **State/Province** : Washington
- d. **Zip/Postcode** : 98052

New Account

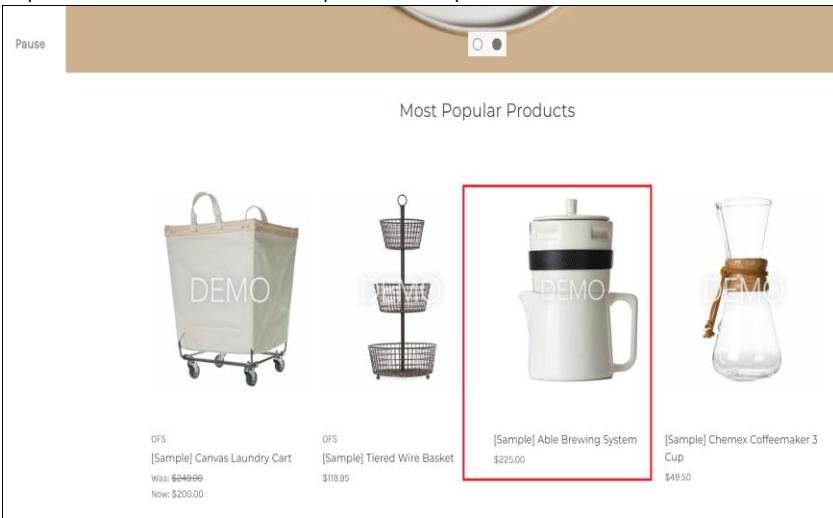
Email Address mcriad@mcriad.org	REQUIRED	Password *****	REQUIRED
Confirm Password *****	REQUIRED	First Name Test	REQUIRED ✓
Last Name MCR	REQUIRED ✓	Company Name	
Phone Number	Address Line 1 123	REQUIRED ✓	
Address Line 2	Suburb/City Redmond	REQUIRED ✓	
Country United States	REQUIRED	State/Province Washington	REQUIRED ✓
Zip/Postcode 98052	REQUIRED ✓		
<input type="checkbox"/> I'm not a robot <small>reCAPTCHA Privacy - Terms</small>			
Create Account			

5. Remember the email address and password values entered on this form and then Click on **Create Account**.

6. Click on **Continue Shopping**.



7. Select **Able Brewing System** in the homepage because this is the only product mapped in D365 IOM as part of Exercise 2->Task 2->Step 9. Once the product has been selected, click on **Add to Cart**.



8. Select **Checkout** button.

The screenshot shows a shopping cart page with the following details:

Item	Price	Quantity	Total
[Sample] Able Brewing System	\$225.00	1	\$225.00

Below the table, there are fields for Subtotal (\$225.00), Shipping (with a link to Add Info), and Coupon Code (with a link to Add Coupon). The Grand total is also shown as \$225.00. A "Check out" button is located at the bottom right, enclosed in a red box.

9. Select **Continue**.

 **Customer** mcriad@mcriad.org Sign Out

Shipping

Shipping Address

Test MCR
123
Redmond, Washington, 98052 / United States

My billing address is the same as my shipping address.

Shipping Method

Free Shipping \$0.00

Order Comments

CONTINUE

10. Select **Test Payment Provider** and enter **credit card number** as 4111 1111 1111 1111, **Name on card** as Success, any future expiration date and any value on CVV field and click on **Place order** button to confirm the order. The test payment provider validates the test credit card number and name on the card fields.

4 Payment

Test Payment Provider

Credit Card Number

Expiration

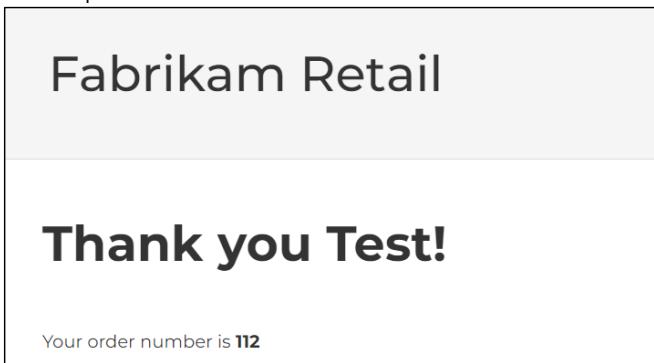
Name on Card

CVV?

Pay in Store

PLACE ORDER

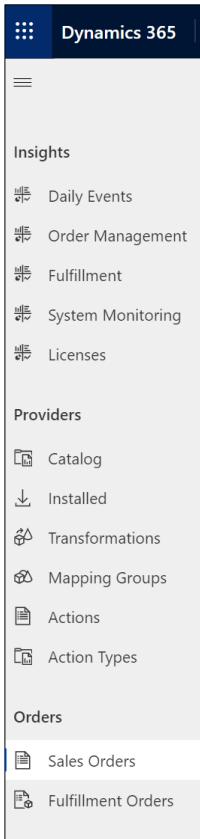
- Once the order has been successfully placed, BigCommerce will provide the order number for your order as per the screenshot below.



- The order will be waiting for fulfilment and the order data will be flowing to D365 IOM for fulfilment process within the pull frequency set in Power Automate in earlier exercise. If the frequency is updated to [1 minute, then the sales order will be created when the next poll happens.]

Commented [SIC8]: This will be a minute now? since we changed pull sales order recurrence to a minute.

- Navigate to D365 IOM and on the left navigation pane, select **Sales orders**.



14. You will notice the order on the Sales orders screen with BigCommerce order number in the Name field.

In this case, the BigCommerce order number is 112.

Intelligent Order Management Orders				
Group By: (no grouping)				
	Order ID	Name	Customer	Total Amount
>	ORD-01000-B0K5Z8	109	TestBCAccount	New \$225.00
>	ORD-01002-C1Z4P8	110	TestBCAccount	New \$225.00
>	ORD-01001-K6Z3G7	111	TestBCAccount	New \$225.00
Providers	>	ORD-01003-P6D9...	112	TestBCAccount New \$225.00

Congratulations! You have validated successful flow of an order and configured pull frequency of the flow to pull orders from BigCommerce platform.

Exercise 4: Orchestration Flows

In this exercise, you'll complete the following tasks:

1. Learn about Orchestration Flows
2. Create a Policy
3. Create an Orchestration Flow

Overview

Orchestration flows determine how data obtained from configured providers is being orchestrated. Intelligent Order Management supports the ability to define orchestration flows for different purposes such as ordering intake to fulfillment and collecting and distributing inventory visibility information. Currently, IOM supports Order Orchestration which enables users to define an end-to-end orchestration flow for orders, from order capture to fulfillment and billing.

IOM supports 3 types of orchestration flows:

The screenshot shows a modal window titled "New journey". It has a "Name" field containing "Journey" and a "Choose a journey type" section. The "Order Orchestration" option is selected, with a description: "Handles validating order headers and lines and then sending the order to fulfillment optimization and the correct fulfillment provider." Below it are two other options: "Inventory Visibility Orchestration" (unchecked) and "Cancelled Order Orchestration" (unchecked). At the bottom are "Create" and "Cancel" buttons.

Key components of an orchestration flow are policies, rules, actions, and elements:

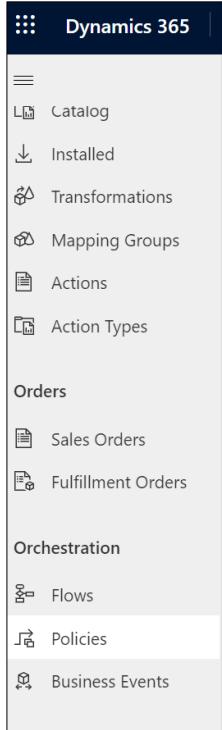
- Policies and their associated rules enable businesses to perform the following types of actions on an orchestration flow - [filter](#) the orchestration step to run based on the policy success criteria and [allows checking and updating data running](#) through an orchestration flow.
- The policies are referenced as part of [actions and elements](#). An action may reference a policy to decide the course of flow of an orchestration flow.

As part of this lab, we will create a simple **order orchestration** flow which validates an attribute associated with order header and based on the result, business can decide next course of action. Example – if the delivery address on the order is set to Seattle, then you can choose to fulfill the order from Seattle store.

The first step is to create a policy. The current experience doesn't support switching between **Orchestration Designer** and **Policy** designer view. In addition, a policy must be in **Published** state before it can be referenced in an orchestration flow.

Task 1: Create a policy

1. We will create an [execution policy](#) which checks the order delivery address and validates if it's set to Seattle.
2. In D365 IOM, select **Policies** on the left navigation pane.



3. Click on **+ New**.

A screenshot of the Dynamics 365 Policies list view. The top navigation bar includes 'Show Chart', '+ New' (which is highlighted with a red box), 'Refresh', and 'Create view'. Below the header, the title 'All policies' is followed by a dropdown arrow. A search bar contains the text 'Name ↑'. The main list area shows one item: 'Order line validation policy'. The '+ New' button is the primary focus of this step.

4. Enter the following details:

- a. **Policy Name** : Demo – check city name
- b. **Policy Type** : Execution Policy
- c. **Policy Criticality** : Information
- d. **Associated Entity** : Order

Note – Policy criticality set to **Information** does not stop an orchestration flow if condition(s) are unsuccessful. Policy Criticality set to **Critical** means that an orchestration flow will stop in case of an unsuccessful evaluation.

- Once details have been filled out, click on **Save**. Once you've saved the policy, click on **New Rules**.

- Rules have condition(s) which must be evaluated. In the **Condition Builder**, add one condition where Ship to City evaluation is done. In this case, we are validating for ship to city **Equals** Seattle. You can enter one or more rules and then add one or more **Actions**. For now, we will not add any action. Click on **Save & Close** to go back to Policy definition window.

Intelligent Order Management

Save & Close

New Rule - Unsaved

Condition Builder

Condition

Rule Name: **Validate city**

Rule definition: And

Ship To City Equals Seattle

+ Add

Policy: Demo - check city name

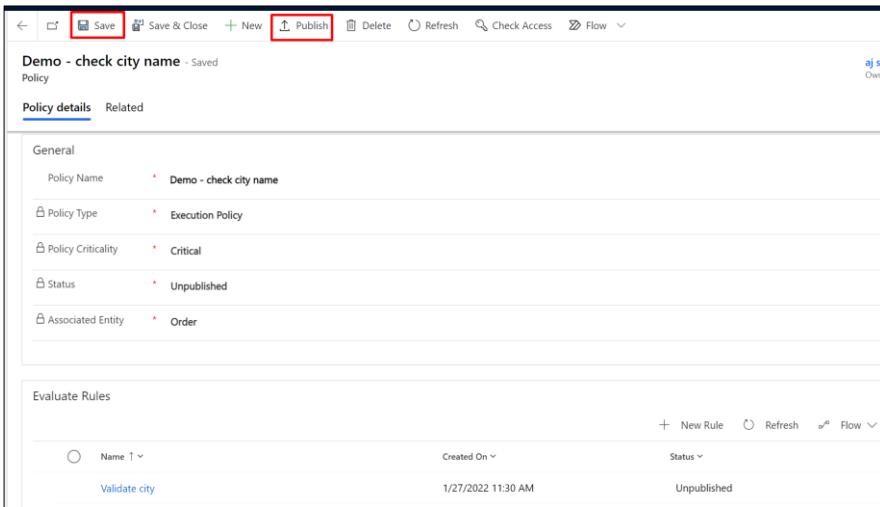
Action

Add Action: No

The screenshot shows the 'Condition Builder' interface for creating a new rule. The rule is named 'Validate city'. The condition is defined as 'And' with one item: 'Ship To City' equals 'Seattle'. A policy named 'Demo - check city name' is assigned. The action is set to 'No'.

7. In the policy definition window, click on **Save** and then click **Publish**.

Note – a policy must be published before it could be referenced in an orchestration flow.

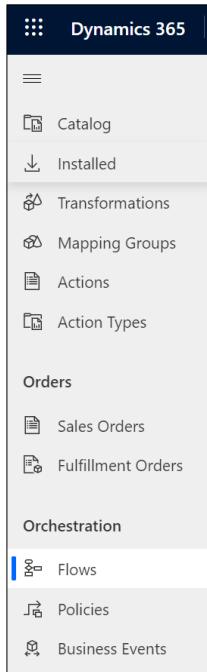


Congratulations! You have successfully created and published a policy.

Task 2: Create an Orchestration Flow

In this task, you will learn the steps to create a simple orchestration flow.

1. Select **Flows** in the left navigation pane.



2. Click on **+New** and provide the following details and then select on **Create**.
 - a. **Name** : Simple flow to validate city
 - b. **Journey type** : Order Orchestration

New journey

Name

Choose a journey type

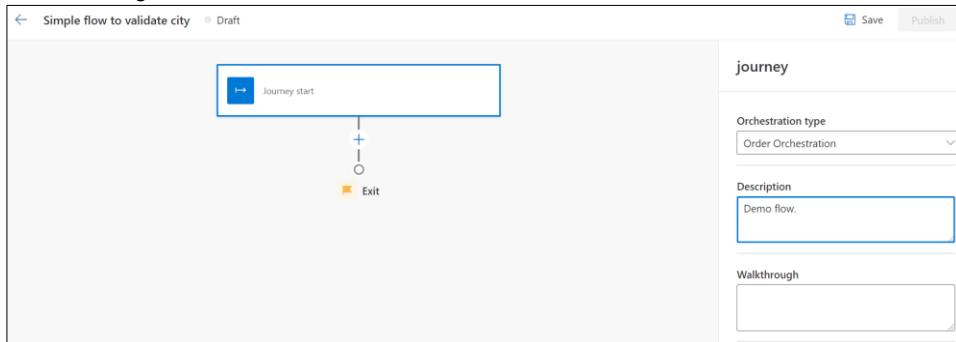
Order Orchestration
Handles validating order headers and lines and then sending the order to fulfillment optimization and the correct fulfillment provider.

Inventory Visibility Orchestration
Check if the given inventory is present in our inventory visibility system and send a success email if it is.

Cancelled Order Orchestration
Handles orchestration of cancelled orders and updates order status.

Create **Cancel**

- Click on “+” sign to add a new action.



- Select **Validate order header**.

Add an action or other element

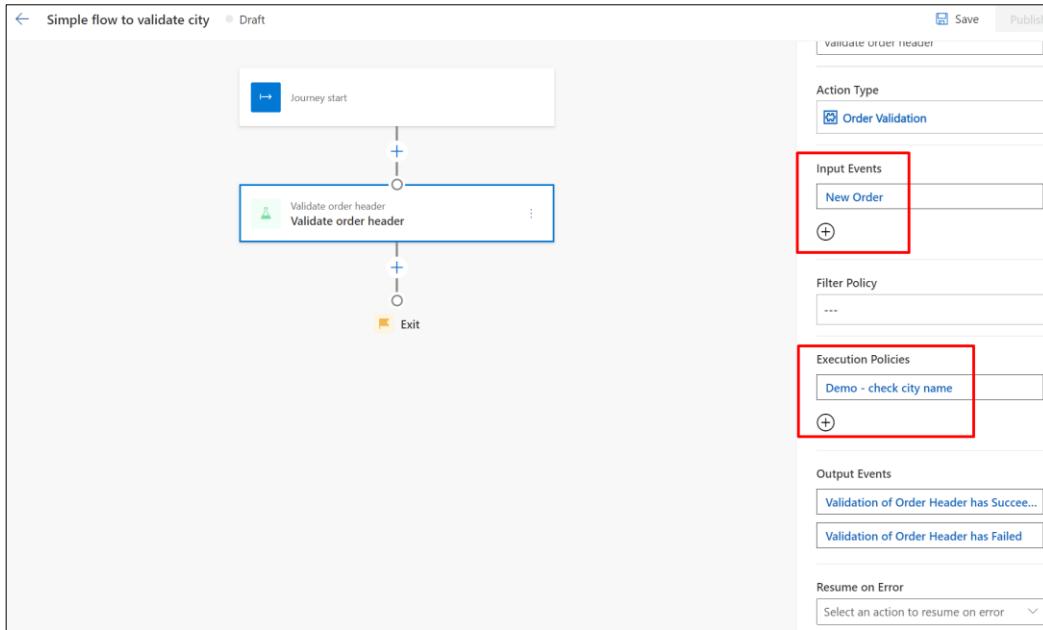
Policies

Actions

Send to fulfillment optimization	Assign Fulfillment Source
Send to fulfillment	Send to Fulfillment - Microsoft Finance and O...
Send to Invoice	Calculate Tax
Create Shipping Label	Get Delivery Details
Send Order Acknowledgement [EDI]	Send Order Shipment Notice [EDI]
Update Order Status	Validate Address

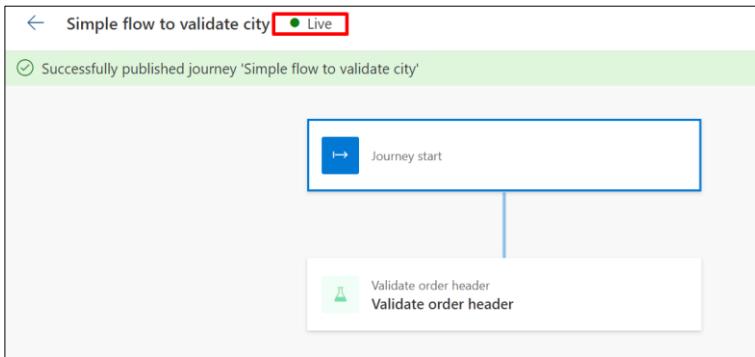
5. Provide the following values in the properties of the action:
 - a. **Name** : Validate order header
 - b. **Input events** : Select **New Order**
 - c. **Execution Policies** : Select **Demo- check city name**. This is the policy created in the earlier task.

Note – You can have more than one execution policy attached to a step if required. In this case, we have attached a single execution policy.



Note - At the bottom, you will observe a set of **Output Events**. These are the output(s) which could be passed to subsequent steps in an orchestration flow as **Input Events**.

- Once the details have been filled out, click on **Save** and then **Publish** which are located on the top right edge of the properties pane. The status of the Orchestration flow will then be changed to **Live**.



Once **Live**, all incoming sales orders will be processed by this orchestration flow, and it will validate the address city as **Seattle**.

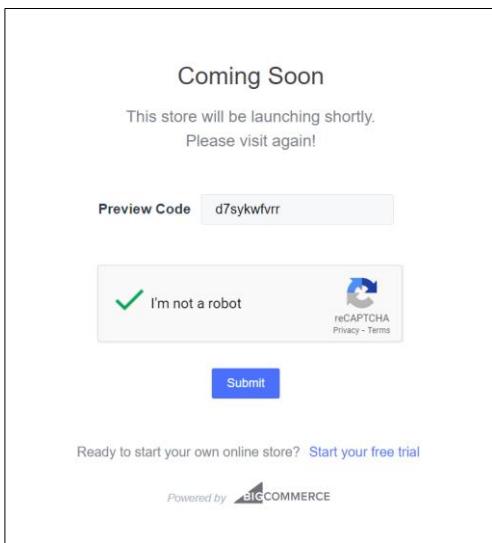
Congratulations! You have successfully created and published an orchestration flow.

Task 3: Test Orchestration Flow

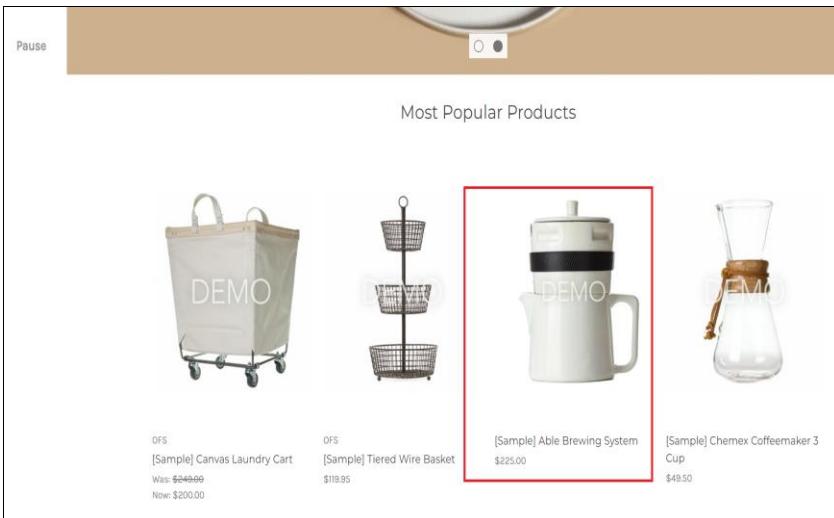
In this task, you will test the orchestration flow created in the earlier task by creating a sample order in Big Commerce by setting the delivery city as Seattle. Once the sales orders flow into IOM, the order gets validated and marked as “**Order Validated**”.

Note – While creating an order in BigCommerce, ensure that the item is **Able Brewing System** as this is the only item for which we have configured in internal-external mapping.

1. Navigate to BigCommerce e-commerce portal store provided by your instructor and sign-in with the credentials registered.
Note: Use the e-Commerce portal link provided by your instructor.
2. If you/training team is using a BigCommerce Trial environment and using this url for the first time in a browser session, then the e-commerce portal might be in private mode and expects a private preview code per browser session. Enter the **Preview code** provided by your instructor, select the check box **I'm not a robot** and then click on **Submit** button to enter the site.



3. Select **Able Brewing System** in the homepage and then click on **Add to Cart**.



4. Select **Checkout** button.

SHOP ALL BATH GARDEN KITCHEN PUBLICATIONS UTILITY SHIPPING & RETURNS CONTACT US BLOG

Home / Your Cart

Your Cart (1 item)

Item	Price	Quantity	Total
[Sample] Able Brewing System	\$225.00	<input type="button" value="▼"/> 1 <input type="button" value="▲"/>	\$225.00 <input type="button" value="X"/>

Subtotal: \$225.00

Shipping: [Add info](#)

Coupon Code: [Add Coupon](#)

Grand total: \$225.00

Check out

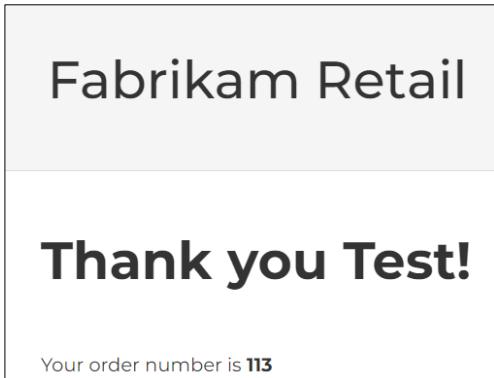
5. Select **Continue**.

The screenshot shows two sections: 'Shipping' and 'Billing'. Both sections have a checked checkbox icon and the heading 'Shipping' or 'Billing'. Each section contains an 'Interested consumer' address: 'One Main St, Seattle, Washington, 98100 / United States'. There is also a 'Free Shipping \$0.00' message and an 'Edit' button.

6. Select **Test Payment Provider** and enter credit card number as 4111 1111 1111 1111, Name on card as Success, any future expiration date and any value on CVV field and click on **Place order** button to confirm the order.

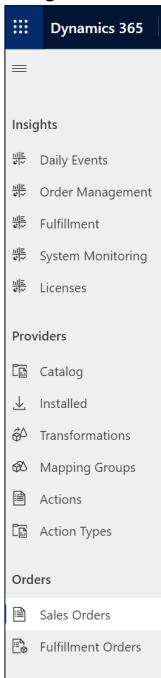
The screenshot shows the 'Payment' section with the number '4'. It features a 'Test Payment Provider' selection with a VISA logo. The payment form includes fields for 'Credit Card Number' (4111 1111 1111 1111), 'Expiration' (01/24), 'Name on Card' (Success), 'CVV' (123), and a 'Pay in Store' option. A large 'PLACE ORDER' button is at the bottom.

7. Once the order has been successfully placed, BigCommerce will provide the order number for your order as per the screenshot below.



8. The order will be waiting for fulfilment and the order data will be flowing to D365 IOM for fulfilment process [within the selected frequency of poll setup in the Power Automate flow.]
9. Navigate to D365 IOM and on the left navigation pane, select **Sales orders**.

Commented [SIC9]: one minute?



10. You will notice the order on the Sales orders screen with BigCommerce order number in the Name field.
In this case, the BigCommerce order number is 113.

11. In D365 IOM portal, go to **Sales Order** screen, you should see order#113. At this stage, orchestrator flow hasn't processed this order yet. It usually takes a minute.
12. Once an order has been validated, its status should change to **Order Validated**.

Intelligent Order Management Orders* ▾							
Group By:		(no grouping) ▾					
✓	Order ID	↓	Name	Customer	Status Reason	Total Amount	Currency
>	ORD-01004-P8J9Z2	113	TestBCAccount	Order Validated	\$225.00	US Dollar	
>	ORD-01003-P6D9...	112	TestBCAccount	New	\$225.00	US Dollar	
>	ORD-01002-C1Z4P8	110	TestBCAccount	New	\$225.00	US Dollar	

Congratulations! You've learnt about orchestration flows and how to leverage them to respond to business events related to order lifecycle.

Note: Exercise 5 and 6 are optional and informational exercises only.

Exercise 5: Reporting

In this exercise, you'll learn about the following:

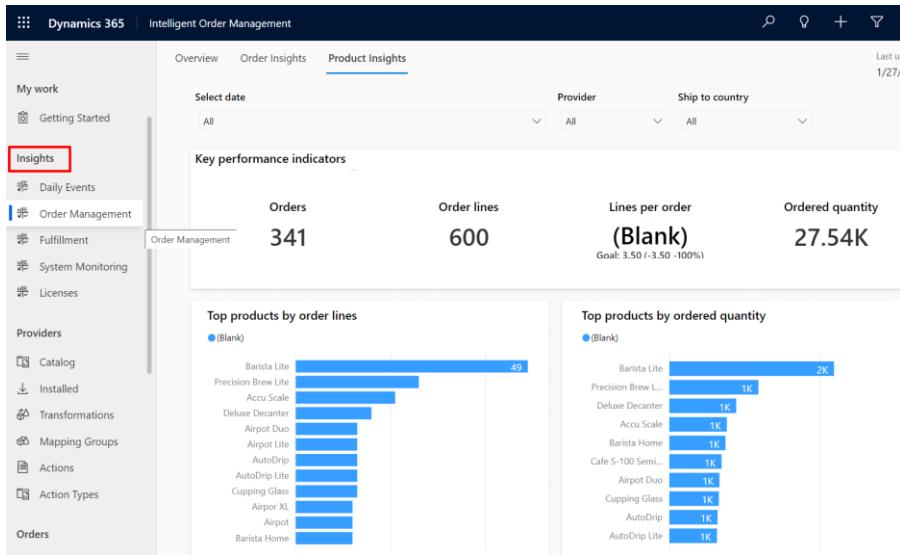
1. Power BI integration
2. Learn how to create new dashboards in IOM
3. Accessing IOM data using Power BI

There are two types of dashboard technologies available in Intelligent Order Management.

- Microsoft Unified Client Interface (UCI) dashboards: UCI dashboards can be used to visualize app data stored in Microsoft Dataverse. IOM ships with a dashboard called **Daily Events** that can be used to monitor common data required by the business user on a typical workday.
- Microsoft Power BI dashboards: Power BI dashboards can be used to visualize app data stored in Dataverse or other data sources that Power BI can work with.

Task 1: Access and create new dashboards

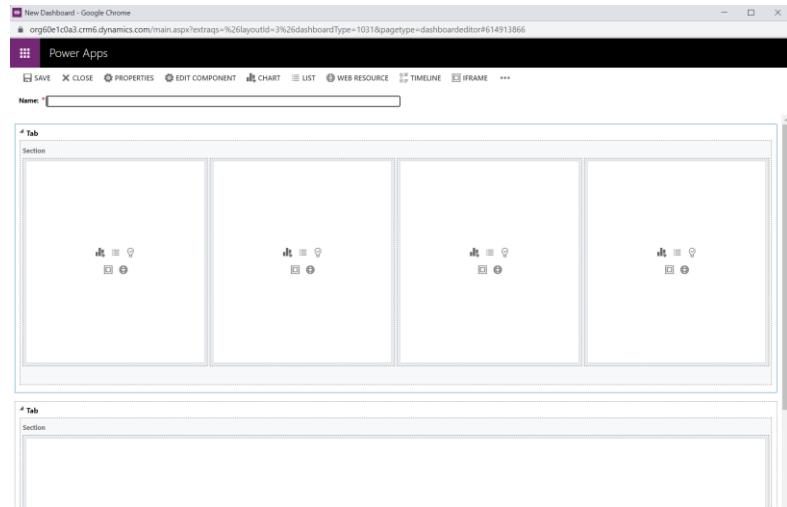
1. IOM dashboards can be accessed via IOM portal.



- From within IOM portal, one can also create new dashboards. Go to Insights > New > Dynamics 365 Dashboard.

- Choose a pre-canned layout and click on Create.

4. In the Power Apps portal, you can then create a dashboard which could reference Power BI Chart; a list; Iframe; Web Resource. Once ready, the dashboard can then be published and accessed via IOM portal. In this demo, we will name the dashboard **Demo Dashboard**.



5. To access the dashboard, click on the dropdown and select Demo Dashboard.

The screenshot shows the Dynamics 365 Intelligent Order Management interface. On the left, there's a sidebar with 'My work' and 'Insights' sections. Under 'Insights', there are several items: Daily Events, Order Management, Fulfillment, System Monitoring, Licenses, Providers, and Catalog. The main area is titled 'My Dashboards'. A dropdown menu is open, and 'Demo Dashboard' is highlighted with a red box. Below the dropdown, there's a section for 'System Dashboards' with cards for 'Daily Event - Order Management' and 'Orders by Failed Orc...'. To the right, there's a pie chart titled 'Orders Past Due' with the following data:

Status	Count
FF Seattle	2
Send to Ch...	1
Failure	1
Send to FF	1

IOM ships with a set of default dashboards as part of Insights. These are:

Dynamics 365 | Intelligent Order Management

Show Global Filter New Set As Default Re

Home Recent Pinned My work Getting Started

Insights

- Daily Events
- Order Management
- Fulfillment
- System Monitoring
- Licenses

Failed Steps Filtered

7 Mod... 1/28/2022 10:49 AM Failure FF Seattle 1/28/2022 10:49 AM Failure Send to F 1/28/2022 10:40 AM Failure Validate

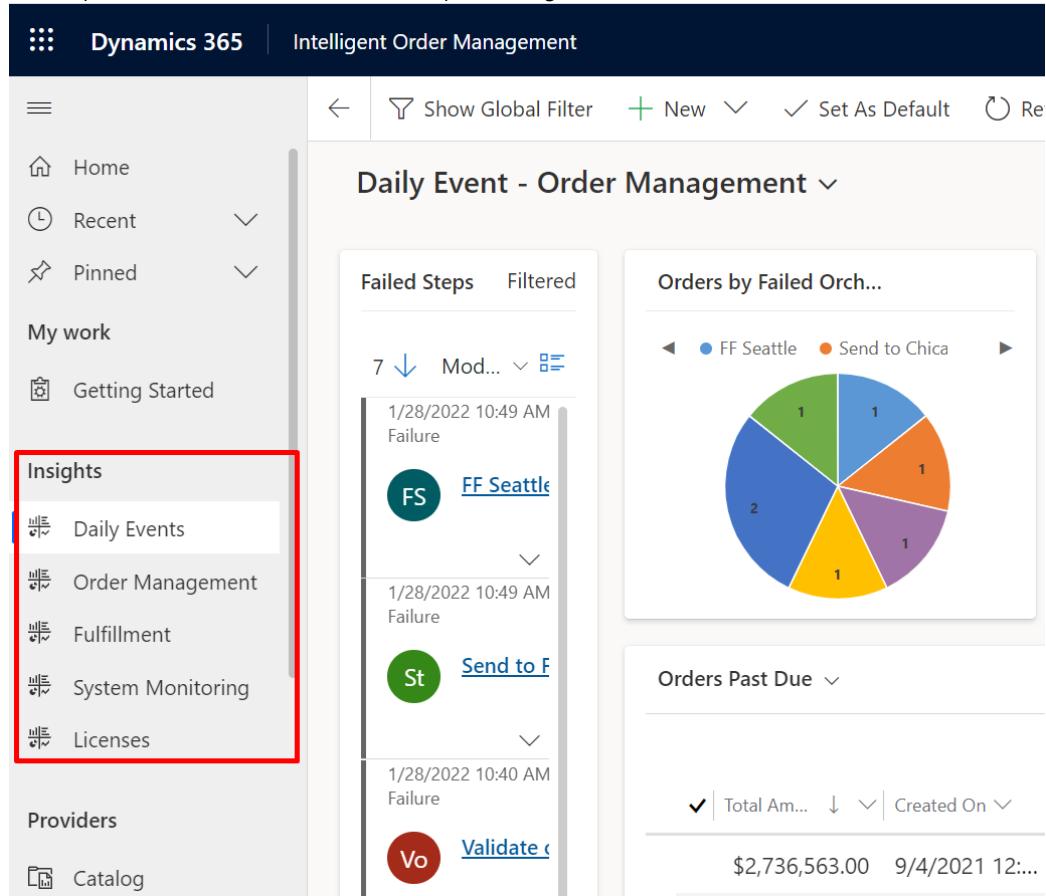
Orders by Failed Orch...

FF Seattle Send to Chica



Orders Past Due

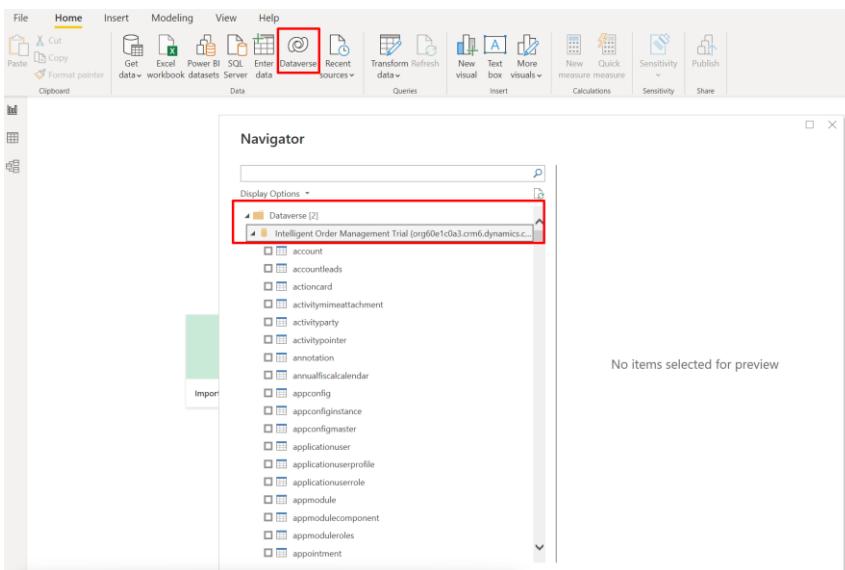
Total Am... Created On \$2,736,563.00 9/4/2021 12:...



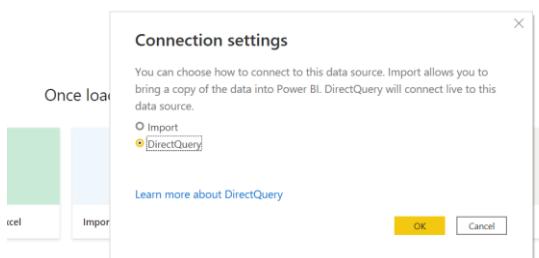
Task 2: Accessing IOM data using Power BI

Intelligent Order Management ships with a dashboard called Order Management and is based on Power BI technology. This dashboard provides longer-range insights into the order and fulfillment data moving through the app. Power BI dashboards can be used to visualize app data stored in Dataverse or other data sources that Power BI can work with.

1. In the **Power BI Desktop > New** and use **Dataverse** source. We can then select one of the Dataverse tables as a source.



2. Once table(s) have been selected, you can use DirectQuery mode for querying data in Dataverse.



Power BI enables complex data analysis scenarios where one can join data across multiple data sources to build insights. Once a report has been built, it can then be published as a dashboard for consumption by a wider audience across an enterprise.

Congratulations! You've learnt about accessing pre-canned dashboards and how to build new reports or dashboards to address complex analytics scenarios.

Exercise 6: Administration and Operations

In this exercise, you'll complete the following:

1. Learn about operational aspects of IOM and Power Platform.
2. Learn about command line features of Power Platform to perform administrative tasks related to IOM.

Operational Aspects

- **Scalability**

IOM is built on Power Platform, Dataverse and Power Automate. It itself does not have turnkey feature(s) where one can adjust scale of deployment, instead, the scale is predicated by scaling features of foundational pieces (Dataverse, Power Platform and Power Automate) and the type of [license](#).

- **Monitoring**

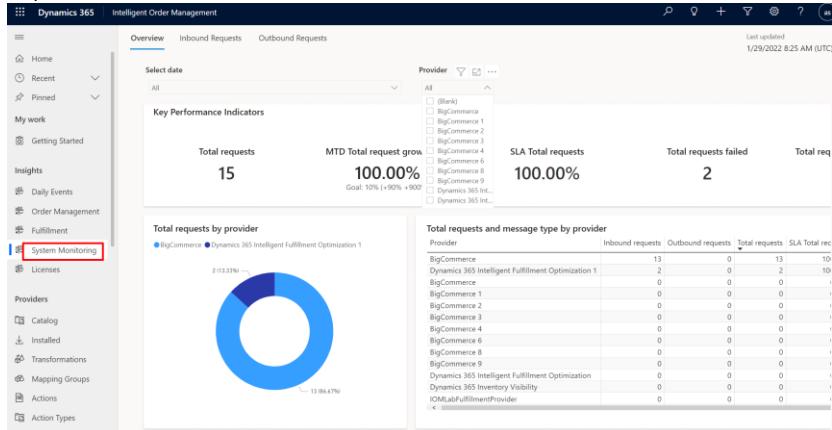
There are two ways to monitor Power Automate Flows which underpin Providers:

- <https://flow.microsoft.com> stores complete history of flows and associated runtimes. Power Automate platform, by default, stores history for 28-day run history. Clicking on a timestamp will display all the Actions and Triggers which make up a flow. The details can be used to investigate and troubleshoot issues such as long-running flows.

The screenshot shows the Microsoft Power Automate interface. On the left, there's a sidebar with options like Home, Action items, My flows (which is selected), Create, Templates, Connectors, Data, Monitor, AI Builder, Process advisor, Solutions, and Learn. The main area has a header 'Flows > iom_ae892aa5-ec94-4f4d-a8c8-a9bfc865d9eb_msdyn_bigcommerce_pullsalesorder'. Below the header, there are two sections: 'Details' and '28-day run history'. The 'Details' section shows the flow ID, owner (aj singh), status (On), created date (Jan 20, 07:49 PM), modified date (Jan 27, 12:10 PM), type (Scheduled), and plan (Per-user plan). The '28-day run history' section shows a table of recent runs:

Start	Duration	Status
Feb 1, 12:00 AM (2 min ago)	00:00:08	Succeeded
Jan 31, 11:50 PM (12 min ago)	00:00:05	Succeeded
Jan 31, 11:40 PM (22 min ago)	00:00:06	Succeeded
Jan 31, 11:30 PM (32 min ago)	00:00:12	Succeeded
Jan 31, 11:20 PM (42 min ago)	00:00:06	Succeeded
Jan 31, 11:10 PM (52 min ago)	00:00:05	Succeeded

- **Insights > System Monitoring** is a dashboard on IOM portal which surfaces metrics related to requests.



- **PowerShell Cmdlets for Power Platform**

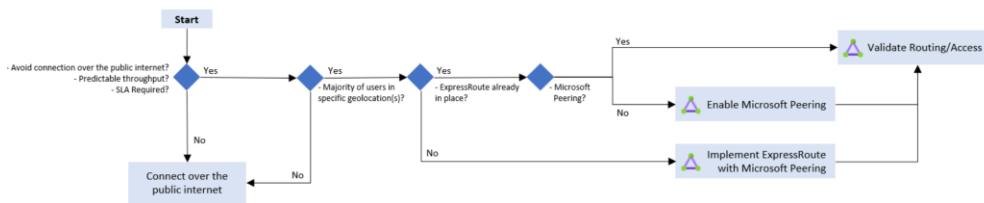
[PowerShell cmdlets](#) for app creators and administrators, you can automate many of the monitoring and management tasks. See **Automation** section for more details and examples.

• Administration

- Users can be granted access to IOM environment through the administrative capabilities of the [platform](#).
- Security can be managed by using concepts such as business units; teams and users in [Dataverse](#).
- There are **two types of backup options** –
 - [System backups](#) – these are performed continuously and production environments where Dynamics apps are deployed are retained for 28 days. Trial environments are not backed up. Restore is performed from Power Platform admin portal and backups must be restored in the same region where backup was taken.
 - [Manual backups](#) – Microsoft creates a backup when an environment is updated. Manual backups for production environments that have been created with a database and have one or more Dynamics 365 applications installed are retained up to 28 days.

- **Networking**

There are two connectivity models supported by Dynamics and Power Platform - one over public endpoint and the other over private network via ExpressRoute. We have built a flowchart to help customers guide through the decision process of choosing between the two connectivity models. Full list of considerations and recommendations for connectivity model is available [here](#).



Connecting to Dynamics IOM over public endpoint

A default deployment of IOM is accessed using public endpoint. Connectivity is over HTTPS and data is encrypted using certificate generated and managed by Microsoft.

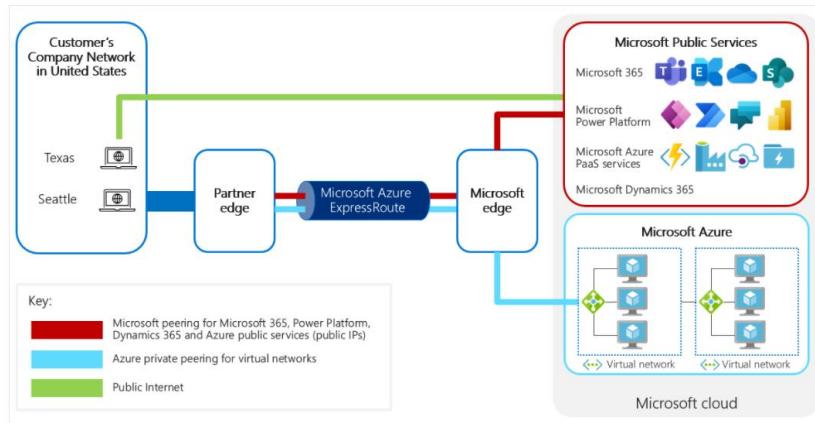
Administrators can change the name of the URL via [Power Platform Admin portal](#). Using the Power Platform admin portal, Use the Power Platform admin center to review the status of your apps and solutions, apply updates, and manage your Dynamics 365 instances, solutions, and apps.

The screenshot shows the Power Platform Admin Center interface. On the left, the 'Environments' section lists 'Intelligent Order Management Trial' with its details: Region (Australia), Refresh cadence (Frequent), Type (Trial), and Organization ID (f1dabea3-7ebb-4c8b-9cb8-4e10187afdf). The 'Edit' button is highlighted with a red box. On the right, an 'Edit details' dialog is open for the same environment. It shows the 'Name' field set to 'Intelligent Order Management Trial', the 'URL' field set to 'iomtrial.crm.dynamics.com' (also highlighted with a red box), and other fields like 'Type' (Trial), 'Refresh cadence' (Frequent), and 'Purpose' (empty).

Note – In this connectivity model, the sources which IOM interacts with via Providers can be behind a firewall i.e., on a corporate network, however proxies and routing rules on the source system side must be configured to facilitate communication between resources/source systems deployed on corporate network and Dynamics IOM which is accessible over a public endpoint.

Connectivity over private network using ExpressRoute

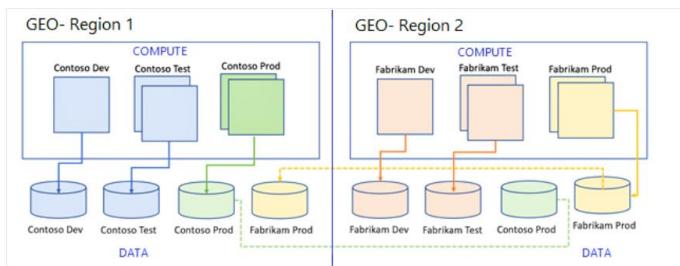
ExpressRoute enables connectivity to Microsoft Dynamics 365 and Power Platform over private network. Customers opt for this connectivity model for compliance, security, and predictable network bandwidth.



- **Business Continuity and Disaster Recovery**

Microsoft provides business continuity and disaster recovery for production instances of Dynamics 365 software as a service (SaaS) application, to provide continuity in the event of an Azure region-wide outage. Apps such as IOM run on the Microsoft Dataverse platform. A detailed set of design considerations and recommendations is available [here](#).

For production environments, a replica of the different storage services (Azure SQL and file storage) is established in the secondary region for each environment at the time of deployment. Tenant admins can deploy a production instance of a customer engagement app or Dataverse with the purchase of appropriate licenses. These replicas are referred to as geo-secondary replicas. The geo-secondary replicas are kept synchronized with the primary instance through continuous data replication. There is a small replication latency, or lag—typically less than a few minutes—between the primary data sources and their corresponding geo-secondary replicas.



- **Unplanned failover**

In an unplanned failover scenario such as primary region becoming unavailable due to a natural disaster etc., Microsoft will switch over the traffic to route to secondary instances. **In this case, RPO is approximately up to 15 minutes.**

- **Planned failover**

In the event that Microsoft determines there's a risk to the availability of the primary Azure region, for example if there's an impending hurricane, Microsoft will notify customers and switch over the traffic to route to the secondary region. Users connected to customer engagement and Dataverse apps at the time of the failover will experience a brief disruption. **There will be no data loss, because both Azure regions will be online, and data will be replicated fast enough to the secondary region.**

Task 1: Command line features

With PowerShell cmdlets for app creators and administrators, you can automate many of the monitoring and management tasks that are only possible manually today in Power Apps. Note that you can still use the cmdlets if you're not an admin on the tenant, but you will be limited to the resources you own. Cmdlets that start with the word 'Admin' are designed to be used by an administrative user account.

PowerShell Cmdlets are available as two separate modules:

- **Administrator** – targeted at administrators for administration and management operations
- **Maker** – targeted at app creators

1. Install PowerShell modules.

Note – You require admin rights to install these modules on your machine.

```
Install-Module -Name Microsoft.PowerApps.Administration.PowerShell  
Install-Module -Name Microsoft.PowerApps.PowerShell -AllowClobber
```

2. Add credentials. In this case, we are using an admin account.

Note – You can also create and use [a service principal in Power Platform](#).

```
Add-PowerAppsAccount
```

3. Once you've logged in, you can run PowerShell commands to add; edit; view details. Example – view environment details.

```
Get-AdminPowerAppEnvironment | Select-Object displayname, location, environmenttype
```

```
PS C:\>  
# List environments  
Get-AdminPowerAppEnvironment | Select-Object displayname, location, environmenttype  
-----  
DisplayName Location EnvironmentType  
-----  
Intelligent Order Management Trial (iomtrial) australia Trial  
IOM Labs (org083173a6) australia NotSpecified  
Foobar (default) australia Default
```

4. Read connections.

```
Get-AdminPowerAppConnection | select-object connection.displayName,statuses
```

connection	Displayname	statuses
Azure Blob Storage		{@status=Connected}
ajisingh@roobar326.onmicrosoft.com		{@status=Connected}
ajisingh@roobar326.onmicrosoft.com		{@status=Connected}
RequestBin		{@status=Connected}
ajisingh@roobar326.onmicrosoft.com		{@status=Connected}
ajisingh@roobar326.onmicrosoft.com		{@status=Connected}
ajisingh@roobar326.onmicrosoft.com		{@status=Connected}
iom_131f93e2-3259-40db-8770-ff3d7c0f350c_msdyn_bigcommerce_updateorderstatus		{@status=Error; target=workflowId; error=}, {@status=Error; target=workflowA...
iom_ae892aa5-ec94-4f4d-a8c8-a9bfc865d9eb_msdyn_bigcommerce_getorderproducts		{@status=Error; target=workflowId; error=}, {@status=Error; target=workflowA...
l1live.com ondemom02024outlook.com		{@status=Connected}
ajisingh@roobar326.onmicrosoft.com		{@status=Connected}
ajisingh@roobar326.onmicrosoft.com		{@status=Connected}

5. Read Flows were created when we enabled BigCommerce provider.

```
Get-AdminFlow | select-object displayName(enabled) | Where-Object displayName -match bigcommerce
```

PS C:\> Get-AdminFlow select-object displayName(enabled) Where-Object displayName -match bigcommerce	Enabled
DisplayName	-----
iom_131f93e2-3259-40db-8770-ff3d7c0f350c_msdyn_bigcommerce_updateorderstatus	True
iom_ae892aa5-ec94-4f4d-a8c8-a9bfc865d9eb_msdyn_bigcommerce_getorderproducts	True
iom_ae892aa5-ec94-4f4d-a8c8-a9bfc865d9eb_msdyn_bigcommerce_updateorderstatus	True
iom_ae892aa5-ec94-4f4d-a8c8-a9bfc865d9eb_msdyn_bigcommerce_processsalesorder	True
iom_ae892aa5-ec94-4f4d-a8c8-a9bfc865d9eb_msdyn_bigcommerce_pullsalesorder	True

Congratulations! You've learnt about administrative aspects of IOM and how to use CLI which can be used for building automation.