

Intelligent order management - Orchestration

Dynamics 365 FastTrack
Architecture Insights Series

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Senior FastTrack Solution Architect



Agenda

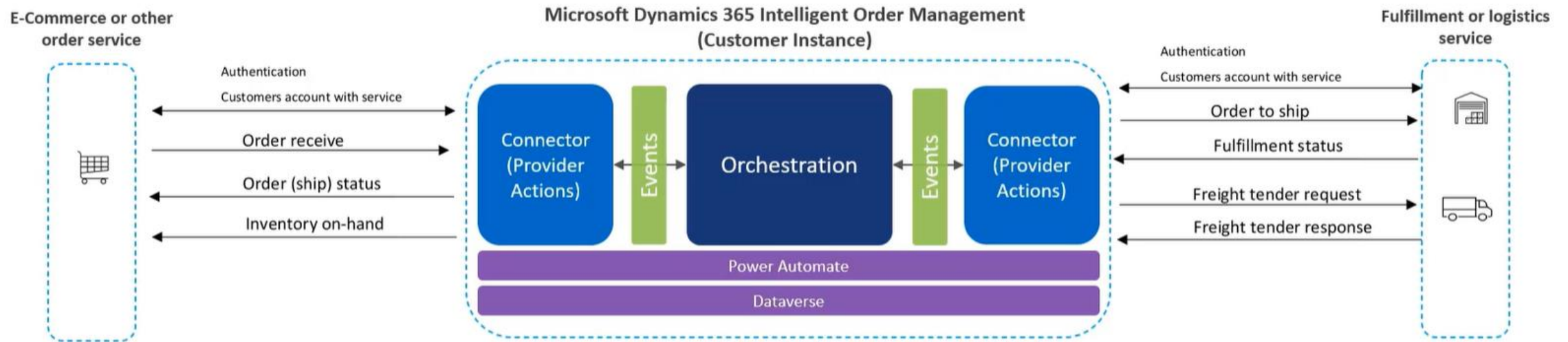
-
- Introduction to Orchestrations
 - Planning your Orchestration
 - Order Orchestration – Splitting an Order
 - Resources



Introduction to Orchestration

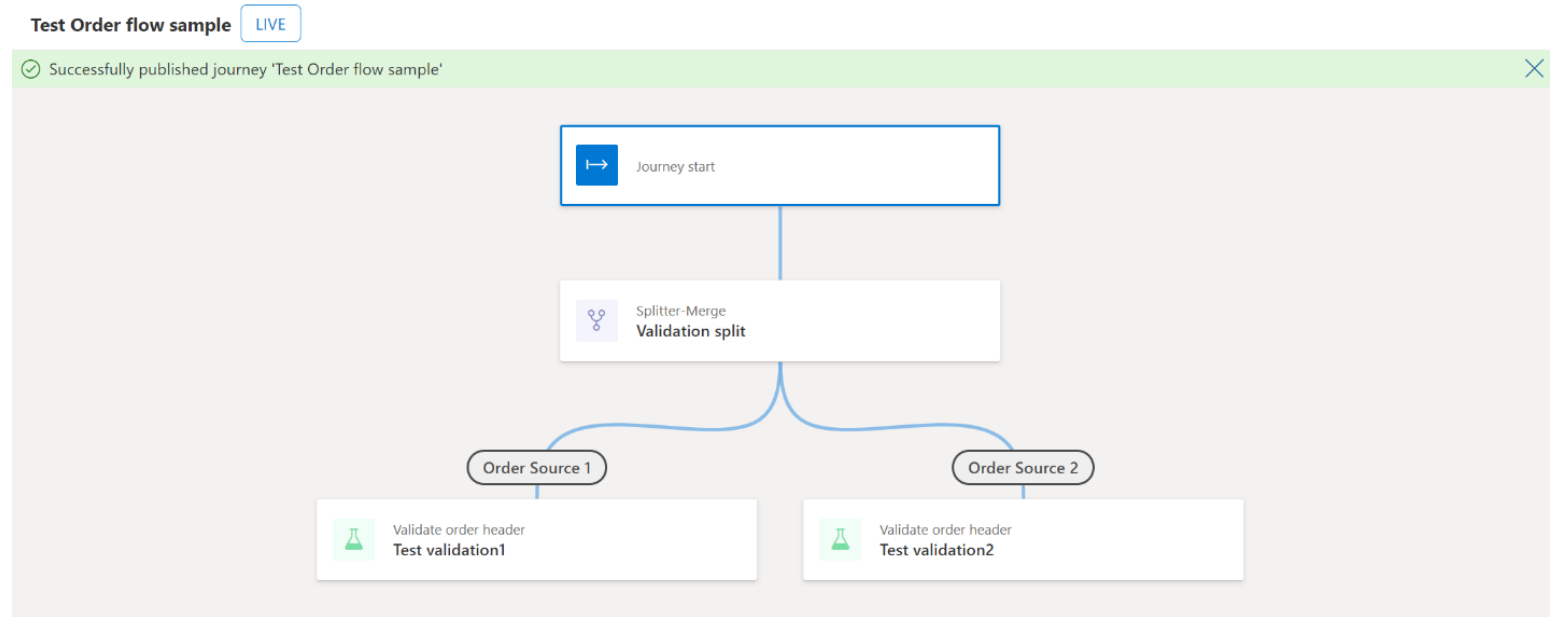


Introduction to Orchestrations




Introduction to Orchestrations


- Data flow
- Multiple flows
- Low code / No code
- Manual order orchestrations



Introduction to Orchestrations - Policies



Policies

 Validate order header

 Validate order line


Execution Policy

- Critical
- Information


Validate order header  

Name *


Action Type

Input Events
  *

Filter Policy

Execution Policies
  *















Output Events



Resume on Error
 



Introduction to Orchestrations - Actions

Actions

 Send to fulfillment and return optimization	 Inventory update on shipment
 Send fulfillment process request	 Assign fulfillment source
 Send to fulfillment	 Offset soft reserve inventory
 Soft reserve inventory	 Send sales order to fulfillment
 Send to invoice	 Calculate tax
 Determine delivery carrier	 Get delivery details
 Send order acknowledgement [EDI]	 Send order shipment notice [EDI]

Send to invoice  

Name *

Action Type

Input Events

Provider Action

Filter Policy

Output Events

Resume on Error

Perform order split

- This action will split an order based on values that have been assigned to a Split Group

Send to Invoice

- Sends orders and order lines to the billing provider.

Custom

- Allows adding user-defined actions to the orchestration flow. For example, a user-defined action can be used to orchestrate orders to a custom provider.

Introduction to Orchestrations

Send to invoice

Name *

Action Type

Send to Billing

Input Events

Look for records...

Provider Action

Filter Policy

Output Events

Send Order to Billing Provider has Su...

Send Order to Billing Provider has Fail...

Resume on Error

Select an event to trigger on error

Assign Split Group - Saved

Action Type

General

Related

Name

*

Assign Split Group

Input Entity

*

Order

Business Event Success

*

Assign Split Group for Order has Succeeded

Business Event Failure

*

Assign Split Group for Order has Failed

Target Entity

*

Order Product

Target Entity Business Event Success

Assign Split Group for Order Product has Succeeded

Target Entity Business Event Failure

Assign Split Group for Order Product has Failed

Action Type Input Business Events

Name ↑

Assign Split Group



Introduction to Orchestrations

Send to invoice

Name *

Action Type

Send to Billing

Input Events

Look for records...

Provider Action

Filter Policy

Output Events

Send Order to Billing Provider has Su...

Send Order to Billing Provider has Fail...

Resume on Error

Select an event to trigger on error

Action Type

Send to Fulfillment

Input Events

Look for records...

Fulfillment Order Shipment Booking Request has Succeeded

Creation of Fulfillment Order Succeeded

Soft Reserve Inventory of Inventory Visibility has Succeeded

Delivery Carrier Determination of Fulfillment Order Has Succeeded

Inventory Reservation for Fulfillment Order has Partially Succeeded

Send Fulfillment Order to Delivery Provider has Succeeded

Action Type Input Business Events

Name ↑

Inventory Reservation for Fulfillment Order has Partially Succeeded

Send to Fulfillment

Send to Fulfillment with Delivery Tracking

Send to Fulfillment with Shipment Booking Information



Introduction to Orchestrations

Send to invoice

Name *

Action Type

Send to Billing

Input Events

Look for records...

Provider Action

Filter Policy

Output Events

Send Order to Billing Provider has Su...

Send Order to Billing Provider has Fail...

Resume on Error

Select an event to trigger on error

Contoso Provider Filter - Saved

Rule

Condition Builder

Related

Condition

Rule Name

* Contoso Provider Filter

Rule definition

And

Provider

Equals

Contoso Provider

+ Add

Policy

Contoso Filter Policy



Introduction to Orchestrations – Other Elements

Other Elements



Condition



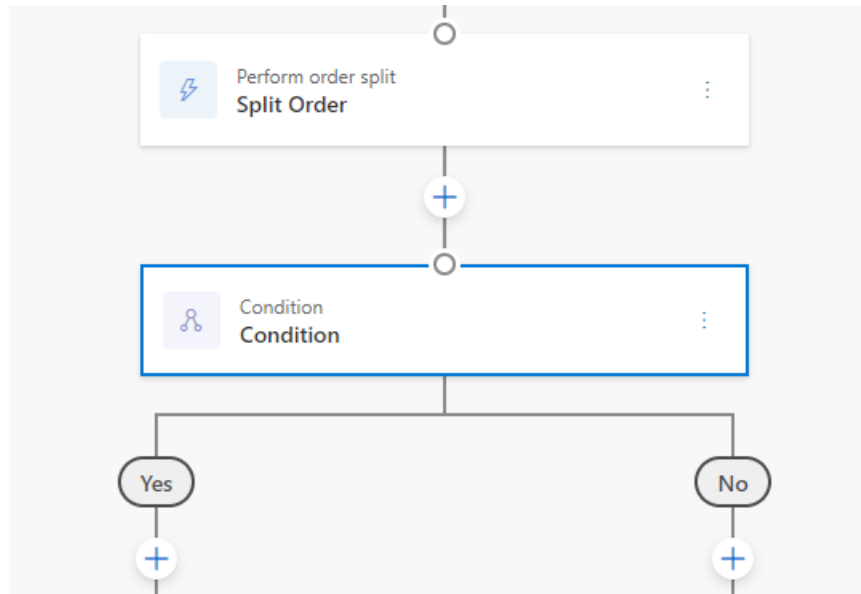
Condition-Merge



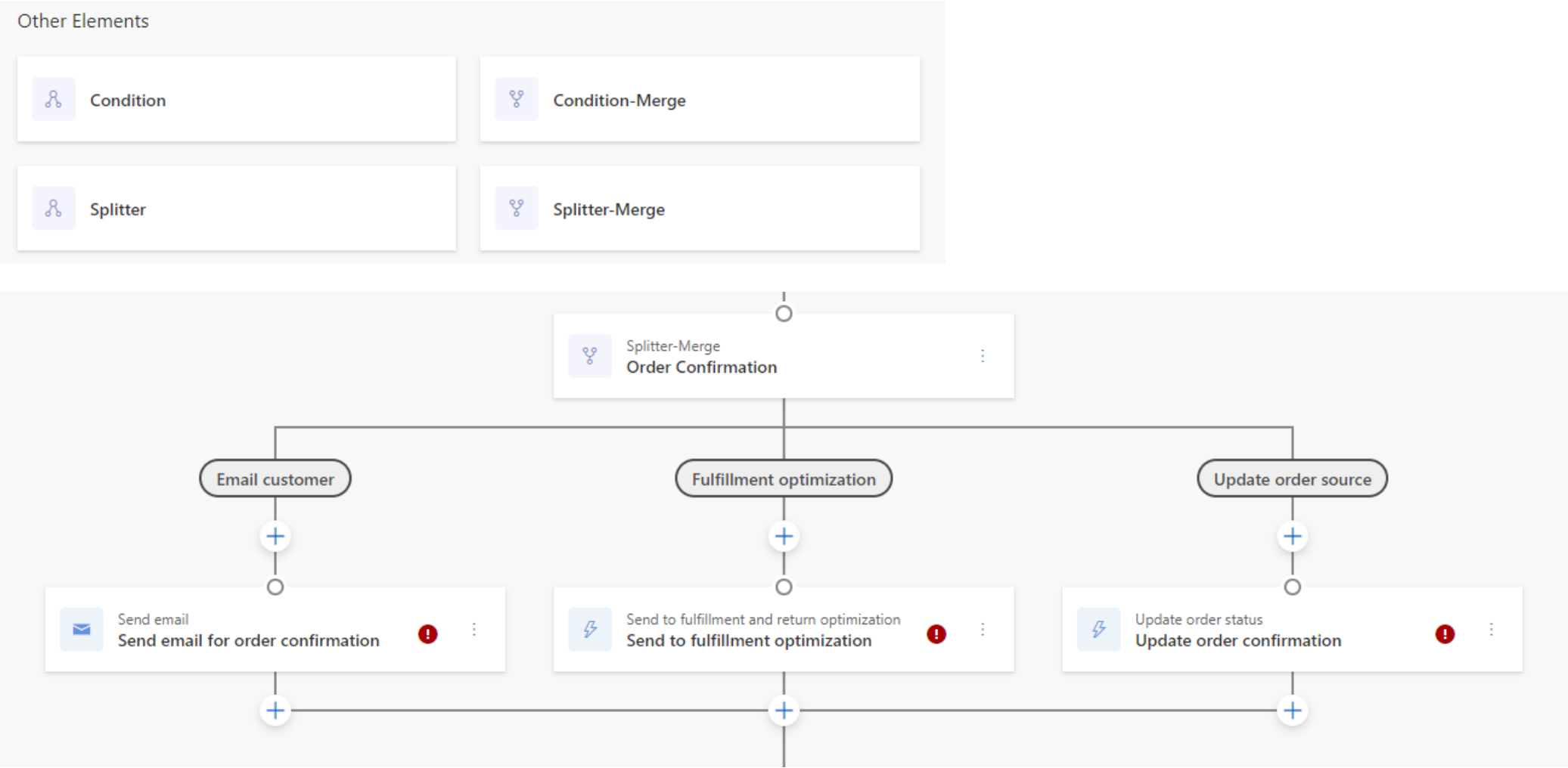
Splitter



Splitter-Merge



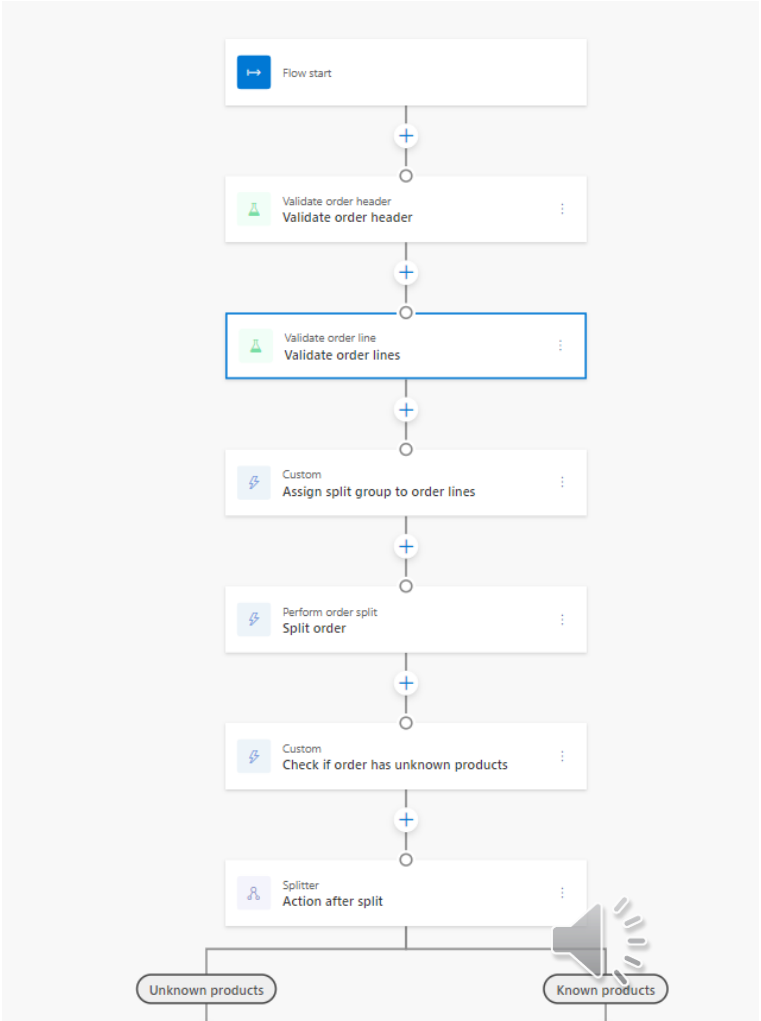
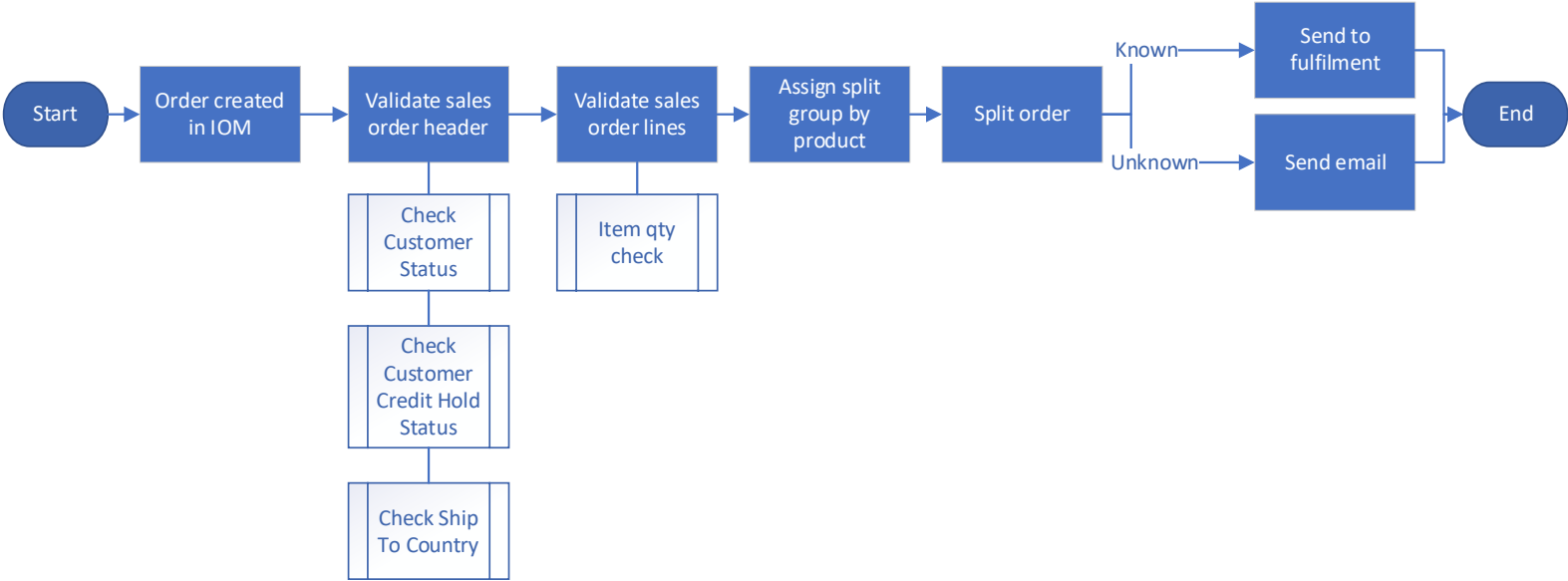
Introduction to Orchestrations – Other Elements



Planning your orchestration



Document the orchestration flow




Setting up prerequisites for splitting an order



Install the Internal Application Service provider

Provider settings > Library



Internal Application Service

Unspecified

Internal Application Service provides functionalities to support various processes across different services of Intelligent Order Management.

[See details](#)

Selected

Click on

Activate Providers

Provider Activation

Providers

Internal Application Service


Connections

Parameters and Mapping Groups

Transformations

Summary

Review



Internal Application Ser...

Internal Application Service provides functionalities to support various processes across different services of Intelligent Order Management.

Connection setup


Use the below widget to create a new connection. If a connection to this provider already exists in Power Automate, it will automatically be selected. Use the three dots on the right to select a different connection. You can view further details about your connections under Dataverse in Power Apps.

Events and actions


- Send fulfillment process request
- Process Return Fulfillment Plans
- Create Fulfillment Return Orders
- Create Return Orders
- Create Return Fulfillment Plans
- Split Order

(1) Connections

The following services use your credentials to sign into apps and create connections. A green check means you're ready to go.



Microsoft Dataverse



...

Back

Next

Install the Internal Application Service provider

Provider Activation

Providers

Internal Application Service


Connections

Parameters and Mapping Groups

Transformations

Summary

Review



Internal Application Ser...

Internal Application Service provides functionalities to support various processes across different services of Intelligent Order Management.

Parameters

Create New Split Order Lines (Yes/No/No-Optimized)

No

Mapping group

Select mapping group

Contoso Mapping Group

Back

Next

Install the Internal Application Service provider

Provider Activation

Providers

Internal Application Service


Connections

Parameters and Mapping Groups

Transformations

Summary

Review



Internal Application Ser...

Internal Application Service provides functionalities to support various processes across different services of Intelligent Order Management.

Transformations

> Parent to Split Order Header

> Order Returns Request to Dataverse Return Order

> Parent to Split Order

Display name	Provider	Source object name
Parent to Split Order	Internal Application Service	Parent Order
Transformation source type	Destination object name	Owner
JsonPayload	Split Order	Steven Koppens

Transformation source

shared TransformSourceData =
let
 customer = if Record.Field(Source,
 "_customerid_value@Microsoft.Dynamics.CRM.lookuplogicalname") = "account"
 then [#"_customerid_account@odata.bind" = "/accounts/" &
 Text.From(Source[_customerid_value]) & "]"

Back

Next



Install the Internal Application Service provider

Provider Activation

Providers

Internal Application Service


Connections

Parameters and Mapping Groups

Transformations

Summary


Review



Internal Application Ser...

Internal Application Service provides functionalities to support various processes across different services of Intelligent Order Management.

Connections installed

Service	Created	Actions
 Internal Application Service Datasource (current environment) Connection	Yes	Edit

Parameters

Create New Split Order Lines (Yes/No/No-Optimized): No

Transformations

Name: Parent to Split Order Header
Destination object: Split Order Header
Source object: Parent Order

Name: Order Returns Request to Datasource Return Order
Destination object: ReturnOrder
Source object: OrderReturnsRequest

Name: Parent to Split Order
Destination object: Split Order
Source object: Parent Order

Back

Next

Activate



Install the Internal Application Service provider

Provider Activation


Providers

Internal Application Service

Review

Review and finish

You can review, edit, or activate these providers at any time in the side menu under Providers → Installed



Internal Application Service

Provider is being activated.

Inactive

Provider Activation


Providers

Internal Application Service

Review

Review and finish


You can review, edit, or activate these providers at any time in the side menu under Providers → Installed



Internal Application Service

Provider has been activated.

Activated



Setting up Split Groups

Dynamics 365

Intelligent Order Management

SANDBOX

Communication settings

Teams settings

Email settings

Provider settings

Library

Installed

Additional settings

Orchestration settings

Flows

Policies

Business events

Data settings

Mapping

Order settings

Fulfillment setting...

Sales settings

Warehouse settin...

Returns settings (...)

Sales settings

Split groups

Manage order splitting for efficient order fulfillment.

Manage

Shipping carriers

Manage shipping carriers to support multiple order types.

Manage

Customer groups

Customer groups are used for categorizing your customers

Manage



Setting up Split Groups

Dynamics 365

Intelligent Order Management

SANDBOX

☰

Communication settings

Teams settings

Email settings

Provider settings

Library

Installed

Additional settings

Orchestration settings

Flows

Policies

Business events

Data settings

Mapping

Order settings

Fulfillment setting...

Sales settings

Warehouse settin...

Returns settings (...)

Sales settings

Split groups

Manage order splitting for efficient order fulfillment.

Manage

Shipping carriers

Manage shipping carriers to support multiple order types.

Manage

Customer groups

Customer groups are used for categorizing your customers

Manage

Active Split Groups ▾

Group By: (no grouping) ▾

✓

Name ↑ ▾

Created On ▾

Unknown Products	3/26/2023 8:27 AM
------------------	-------------------



**Creating policies to
validate the order header**



Power Apps

Policies Active Policies - Dynamic

← → ↺

iomsalabplayground.crm.dynamics.com/main.aspx?appid=86fbb140-c04b-ed11-bba1-0022480492d7&forceUCI=1&pagetype=entitylist&etn=msdyn_iompolicy&viewid=d5dd815b-5be...

🔗 ☆ ⚙️ ⬇️ 🖨️ 👤 ⋮

⋮ Dynamics 365 | Intelligent Order Management

SANDBOX

🔍 💡 + ⚙️ ? (SK)

☰

Demand planning

📊 Product insights

📊 Inventory dashbo...

📊 Operational visibil...

📦 Products

📄 Accounts

👤 Contacts

📄 Vendors

Monitoring

📊 Order anomalies

🕒 Errors

📄 Background jobs

🔔 Alerts

📄 Alert configurations

Provider

📄 Provider insights

IO Intelligent Order ... ⌵

←

📊 Show Chart + New ↺ Refresh 📊 Visualize this view

Active Policies ⌵

⚙️ Edit columns ⚙️ Edit filters

Filter by keyword

🕒	Name ⬆️ ⬆️	Created On ⌵	Version State ⌵	Status ⌵	Draft ⌵
	Assign split groups to order lines	3/30/2023 3:57 PM	Active	Published	Assign split groups to order li...
	Check if order is split on unknown products	3/30/2023 4:41 PM	Active	Published	Check if order is split on unkn...
	Known products split sales order	3/30/2023 4:34 PM	Active	Unpublished	Known products split sales ord...
	Validate order header Ship To country	3/26/2023 9:31 AM	Active	Published	Validate order header Ship To ...
	Validate product quantity	3/26/2023 9:45 AM	Active	Published	Validate product quantity

|| app.clipchamp.com is sharing your screen.

Stop sharing Hide

1 - 5 of 5

⏮️ ⏪️ ⏩️ ⏭️ Page 1 ⏭️

🌤️ 17°C Partly sunny

🪟 🔍 Search 📅 🗂️ 💬 🌐 📁 🧑‍💻 📺 📄 🖨️

⬆️ ☁️ 🌧️ 🔊 ENG US 📶 🔌 12:48 pm 31/03/2023 9

Setting up a policy for assigning split groups



← Show Chart New Refresh Visualize this view

 Edit filters







Filter by keyword

<div><div></div></div> <div>Name ↑ ▾</div>	Created On ▾	Version State ▾	Status ▾	Draft ▾
Validate order header Customer Status and Credit	3/26/2023 9:41 AM	Active	Published	Validate order header Custom...
Validate order header Ship To country	3/26/2023 9:31 AM	Active	Published	Validate order header Ship To ...
Validate product quantity	3/26/2023 9:45 AM	Active	Published	Validate product quantity


Creating the orchestration



- Accounts
- Contacts
- Vendors
- Monitoring**
 - Order anomalies
 - Errors
 - Background jobs
 - Alerts
 - Alert configurations
- Provider**
 - Provider insights
 - Library
 - Installed
- Orchestrations**
 - Flows
 - Policies


All Orchestration Flows ▼					
Logo	Name ↑	Description	Flow Type	Status	Modified On
	Contoso Returns Order		Order Orchestration	Unpublished	3/31/2023 12:49 PM
	Flow		Order Orchestration	Unpublished	3/31/2023 8:09 AM
	Sample Cancelled Order Orchestration	Handles orchestration of cancelled orders and updates order status.	Cancelled Order Orchestration	Unpublished	3/26/2023 11:45 AM
	Sample Inventory Orchestration	Check if the given inventory is present in our inventory visibility system and send a success email if it is.	Inventory Orchestration	Unpublished	10/15/2022 1:13 AM
	Sample Order Orchestration	Handles validating order headers and lines and then sending the order to fulfillment optimization and the correct fulfillment provider.	Order Orchestration	Unpublished	3/30/2023 4:11 PM
	Sample Return Order Orchestration	Handles orchestration of return orders.	Return Order Orchestration	Unpublished	10/15/2022 1:13 AM

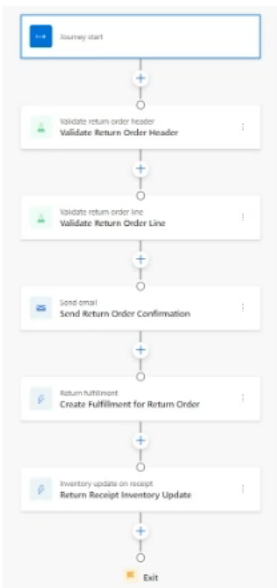
Edit columns

 Edit filters

Filter by keyword

Preview





```
graph TD; Start([Journey start]) --> J1((+)); J1 --> V1[Validate return order header  
Validate Return Order Header]; V1 --> J2((+)); J2 --> V2[Validate return order line  
Validate Return Order Line]; V2 --> J3((+)); J3 --> S1[Send email  
Send Return Order Confirmation]; S1 --> J4((+)); J4 --> R1[Return fulfillment  
Create Fulfillment for Return Order]; R1 --> J5((+)); J5 --> I1[Inventory update on receipt  
Return Receipt Inventory Update]; I1 --> J6((+)); J6 --> Exit([Exit]);
```

The flowchart illustrates the 'Sample Return Order Orchestration' process. It begins with a 'Journey start' node, followed by a sequence of tasks: 'Validate return order header' (with sub-task 'Validate Return Order Header'), 'Validate return order line' (with sub-task 'Validate Return Order Line'), 'Send email' (with sub-task 'Send Return Order Confirmation'), 'Return fulfillment' (with sub-task 'Create Fulfillment for Return Order'), and 'Inventory update on receipt' (with sub-task 'Return Receipt Inventory Update'). The process concludes with an 'Exit' node. Each task is represented by a rectangular box with a small icon on the left and a vertical ellipsis on the right. The tasks are connected by a central vertical line with circular connectors at each step.

Flow Name

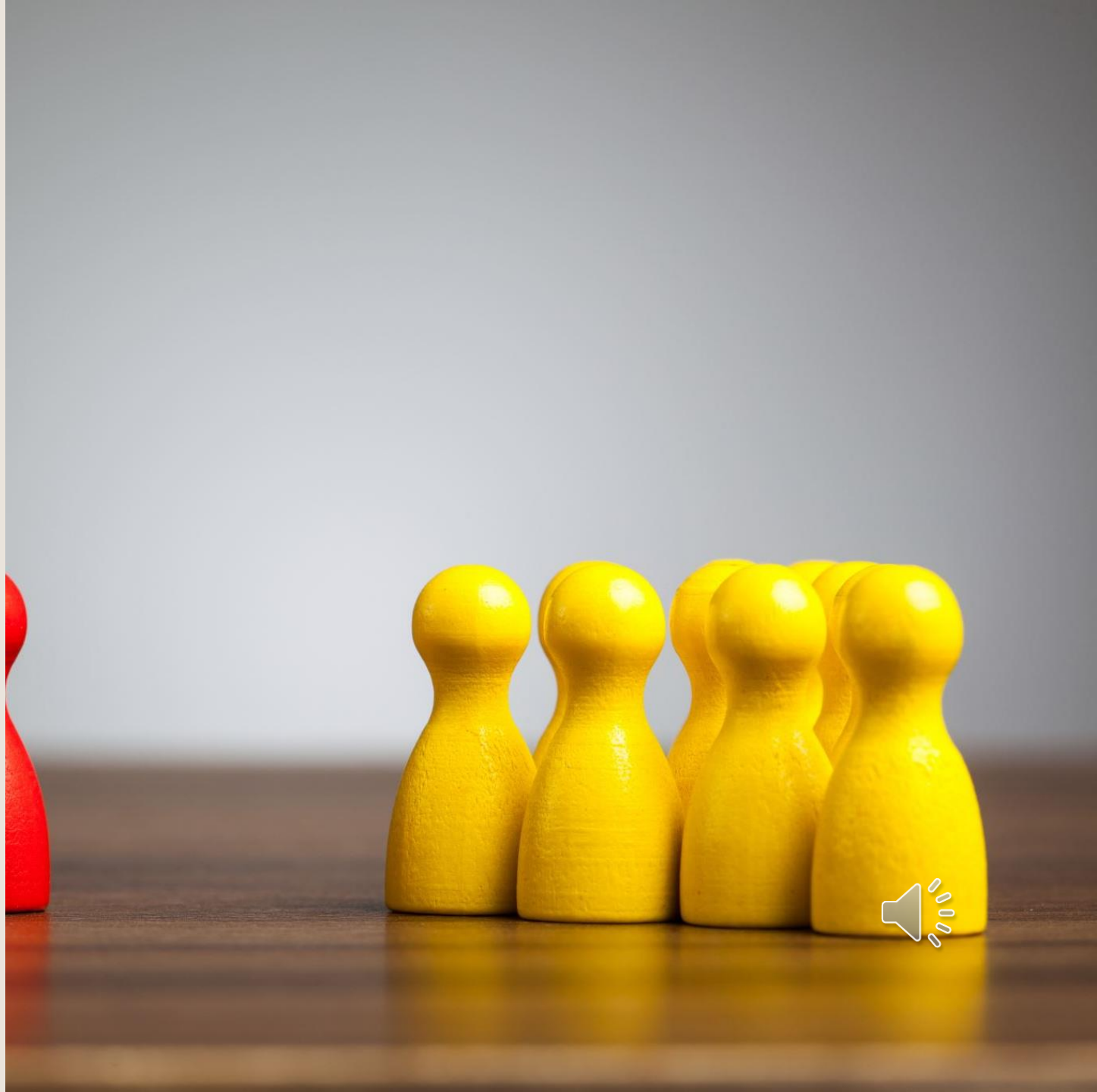
Sample Return Order Orchestration

Updated

10/15/2022, 2:13:24 AM

Walkthrough

Reviewing the split orders



Resources



Resources

- [Manual order orchestration in Intelligent Order Management | Microsoft Learn](#)
- [Set up the Internal Application Service provider | Microsoft Learn](#)
- [Dynamics 365 Intelligent Order Management | Microsoft Learn](#)
- [Create order orchestration | Microsoft Learn](#)



Thank you



