

# Tech Talk

## D365 and Dataverse - Integration Overview

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# TechTalk Series

- **Session 1: Introduction & concepts – October the 2<sup>nd</sup> 2023** ←
- Session 2: Integration patterns for Dataverse – November the 4<sup>th</sup> 2023
- Session 3: Integration patterns for Finance and Operations applications – November the 11<sup>th</sup> 2023
- Session 4 – Complex integration scenarios - December the 4<sup>th</sup> 2023

# Agenda

- Introduction
- Fundamental principles
- Integration patterns
- Common applications capabilities
- Common Azure integration tools
- Security
- Roadmap
- Q/A



# Introduction

# Introduction

Dataverse and Dynamics 365 applications provide a rich set of integration options to address different business and technical scenarios. The different approaches allow for a flexible design to increase automation, improve processes optimization, reduce costs and increase security.

On a very high level, the integration options can be grouped based on the application they can be used for:

- Dynamics 365 for Finance and operations apps (e.g. DMF)
- Dynamics 365 for Customer Engagement / Dataverse (e.g. Plug-ins)
- Both (e.g. events)

Another popular categorizations is based on the flow direction (inbound vs outbound) or the decoupling pattern (synchronous vs asynchronous).

The scope of this presentation are Dataverse and Dynamics 365 apps. We will explore the integration options in more detail in the following slides.

# Integration components - Overview



Event Grid



Service Bus



Web Jobs



Data flow



Azure Function



Data Factory



Logic Apps



API management



Power Automate

Inventory  
Visibility

MES  
Integration

Demand  
planning\*

Sensor Data  
Intelligence

Pricing  
service\*

Connected  
Field Service

## Finance and Operations Apps

PunchOut  
e-Procurement

Electronic  
Reporting

Invoice  
capture

### Data entities

Data Management  
Framework

OData

Custom classes  
External endpoints

Custom services

Dual Write

Business Events  
Data Events

Virtual Table

Synapse Link

Office 365

## Dataverse

OData/Web API

TDS Endpoint

Plug-in (Synch)

WebHook

Plug-in (Asynch)

Microsoft Teams

Near real-time

Asynchronous

Synchronous

AAD Authentication

RESTful services

JSON message format



Outbound

Inbound

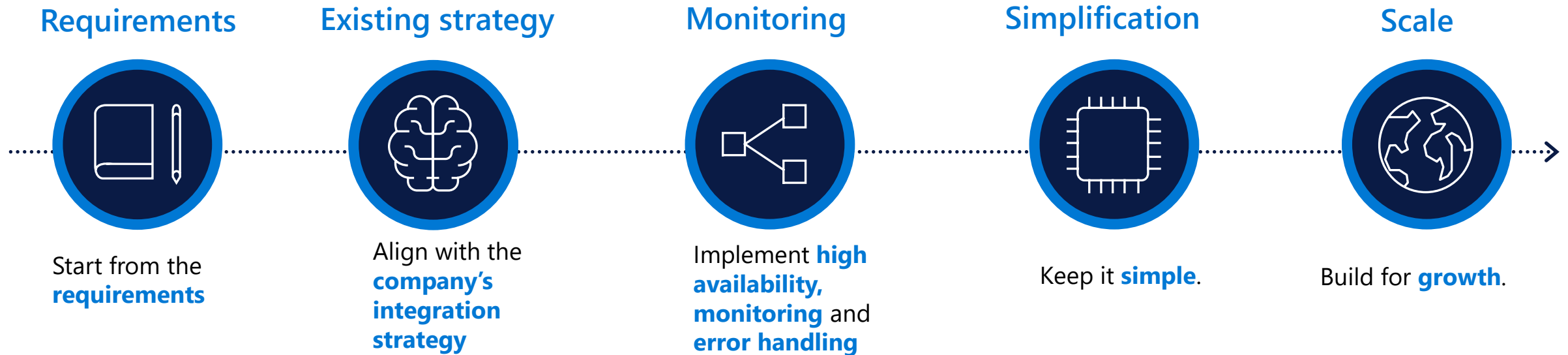
\*Preview



# Integration

## Fundamental principles

# Integration - fundamental principles





# Requirements

Always start from the requirements, they are the driver and the objective of all technical decisions

Business requirements

Technical  
requirements/limitations

Performance  
requirements

Security/Regulatory  
requirements.

# Existing strategy

Align with the company's integration strategy and keep the bigger schema always in mind.

Consider  
company's  
integration  
platform

Consider existing  
patterns/tools and  
middleware

Stay aligned with  
modern cloud  
integration  
approaches

Consider the cost  
implications

# Monitoring

## Implement High Availability, Monitoring and Error Handling

Every critical component must have High Availability

Monitoring should be integral part of the design

Error handling must be designed, tested and documented.

Notification should be considered, especially for unattended systems

# Simplification

Keep it as simple as reasonably possible

Use low-code/no-code capabilities from Power Platform and Microsoft Azure

Define uniform integration patterns

Consider using a middleware

Centralized error handling and notification systems

# Scale

## Build for growth

Scalability and  
expansion

Consider the impact of  
additional requirements  
in the long term and  
extensibility effort  
required

Consider the impact  
and cadence of updates

Selected components  
should support ALM  
tools such as Azure  
DevOps

Consider parallelism to  
overcome latency and  
service limits



# Integration Patterns strategy

# Factors to consider when choosing a pattern



## Latency

- **Synchronous:** Integration is triggered with an immediate response required.
- **Asynchronous:** Integration is triggered with a delayed response required.
  - **Near Real-Time:** Minimal latency (<1 min) is allowed between trigger and transmission.
  - **Scheduled Batch:** Integration will occur on a scheduled basis with a pre-determined recurrence.



## Frequency

- Integration request can be classified into following frequencies:
- **High:** seconds or minutes
- **Medium:** Hours or Days
- **Low:** Weeks or Months



## Message Routing

- **Point-to-Point:** Dynamics 365 to Legacy System
- **Enterprise Service Bus:** BizTalk Server, Azure Integration Services etc.
- **Broker, Hub & Spoke, or Extract, Transform, Load (ETL):** , Azure Synapse, Azure Data Factory, SQL Server Integration, Services Event Grid etc.



## Trigger

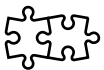
- **On-Demand/Manual:** Integration is manually initiated by either an End User or IT User.
- **Event Triggered:** Integration is triggered based on an event or condition in the source or destination system.
- **Time/Date Scheduled:** Integration is triggered based on a pre-determined schedule.

# Factors to consider when choosing a pattern



## Interaction/Operation

- **Create:** Record will be created in the destination system.
- **Read:** Integration will query the source and return a specifically requested piece of data.
- **Update:** Integration will update an existing record in the destination system.
- **Delete:** Results in the deletion of a record in the destination system.
- **Action:** Integration will trigger a system event. E.g. Calculate sales order price.



## Volume

- **Number of records per batched request:**
  - Low / Medium / High Volume



## Batching

- **Un-batched:** Individual records are sent in the integration request.
- **Batched:** Records are consolidated for transmission through the integration request.



## Transport Protocol

- Windows File Service, FTP/SFTP
- HTTP/HTTPS, WCF Web Service, SOAP Web Service
- ODBC, Direct SQL Query



# Factors to consider when choosing a pattern



## File formats & Schema/Data Dictionary

- **File Formats:** Flat file, .NET TCP, XML, JSON etc.
- **Message/API Schema:** XSD / WSDL / OpenAPI (Swagger)



## Transformation and Translation Point

- **ESB/Broker:** Occurs in the broker system during the integration process. (if no logic is required)
- **Destination:** Occurs in the destination system (if business logic is required for the transformation).
- **Source:** Occurs in the source system before the data is transmitted. (if logic is required).



## Data Mapping/Meta Data Definition

- **Canonical model:** Integration is mapped to a standardized model in a broker or ESB.
- **Application specific format:** Direct mapping between the source and destination systems.



## Error Handling & Reconciliation

- **Notifications:** Email, Dashboard, SMS etc.
- **Reconciliation Point:** Application, Middleware, Monitoring Utility etc.
- **Reconciliation tools:** Data quality services, reports, queries etc.

# Dataverse and Dynamics 365 F&O apps exposed endpoints

Endpoint	Apps	Direction	Latency	Operations	Batching available	Volume	Error handling	Best Suited for
OData	FO	Inbound	Synchronous	CRUDA	N	Low/Medium	No	Low to medium volume, a real-time, system to system integration
Web API	DV	Inbound	Synchronous Asynchronous	CRUDA	Y	Low/High	Extensible	OData v4 RESTful endpoint for any programming language that supports HTTP requests and authentication using OAuth 2.0.
Custom Service	FO	Inbound/Outbound	Synchronous	CRUDA	Y	Low/Medium	No	Low to medium volume, a real-time, system to system integration
Package API	FO	Inbound/Outbound	Asynchronous	CRU	Y	High	Yes	High volume asynchronous import/ export
Recurring Integration	FO	Inbound/Outbound	Asynchronous	CRU	Y	High	Yes	High volume asynchronous import/ export
Business/Data Events	FO DV	Outbound	Asynchronous	R	N	High	Yes	High volume status event notifications to subscribers, workflows, and outbound integrations
Synapse Link	FO DV	Outbound	Asynchronous	R	Y	High	Log	High volume data integration for Analytics
Virtual table	FO DV	Inbound/Outbound	Synchronous	CRUD	N	N/A	No	Integration of data residing in external systems without data replication.
SQL/TDS endpoint	DV	Outbound	Synchronous	R	N	Low/Medium	No	Read only access, respects Dataverse security. Should be used for analytics with PBI.
Plug-in	DV	Outbound	Synchronous Asynchronous	CRUD	Y	Low/Medium Medium/High	Yes	Event handler that executes in response to a specific event raised during processing of a Dataverse data operation. When running in sync mode, it executes as part of database transaction.
Webhook	DV	Outbound	Synchronous & Asynchronous	CUD	N	Low/Medium	Yes	Sends POST requests with JSON payload to an external service.

## Legend

Operations: C- Create, R- Read, U-Update, A-Action  
Batching available: Use endpoint on a set of records

Volume: Low – 0 to thousands, Medium – thousands to tens of thousand, High – hundreds of thousands to millions.  
Error handling: No – errors are raised but not saved, Yes – errors are captured and saved, Log – errors are logged, Extensible – can use 3rd party tools internal extension tools for handling errors.



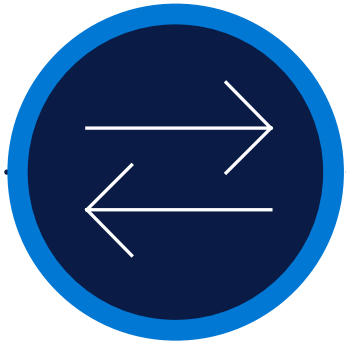
# Common Apps capabilities



# Dual-write

Provides tightly coupled, bidirectional integration between Dataverse and Finance and Operations apps.

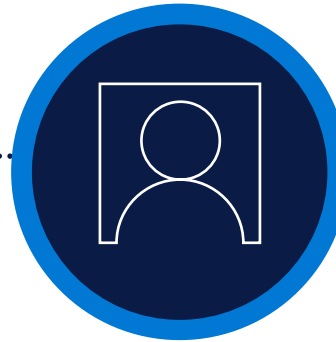
## Direction



### Outbound/Inbound

Tightly-coupled, bi-directional integration for master and reference data.

## Latency



### Synchronous/Asynchronous

Data replication across Dataverse and finance and operation apps for Create and Update events. Also available are play, pause, and catchup modes to support the system during online and offline/asynchronous modes.

## Volumes



### Low volume

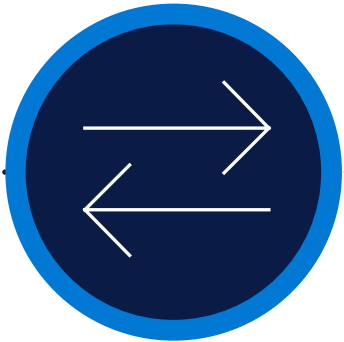
Dual-write initial sync can be a tool leveraged with data migration (see [guidance matrix](#).)  
Dual-write live sync works in the context of one transaction and with high numbers of cascading records (e.g., customers with multiple related addresses) performance testing is recommended.



# O-Data

OData endpoints are available in both Dataverse and Finance and Operations apps.

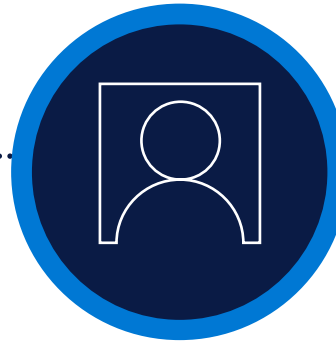
Direction



Inbound

OData is an inbound integration that exposes Dynamics 365 apps to external systems. The OData endpoint can be used for CRUD operations as well as triggering actions (business logics).

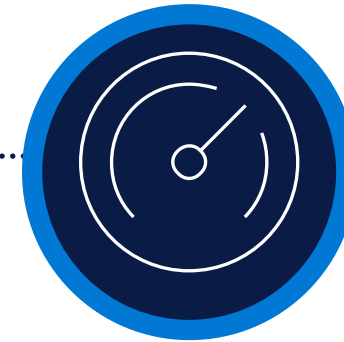
Latency



Synchronous

Message exchange is synchronous as the external system will wait Dynamics 365 response before completing the integration action. WebAPI for Dataverse has Sync/Async latency.

Volumes



Mixed volume

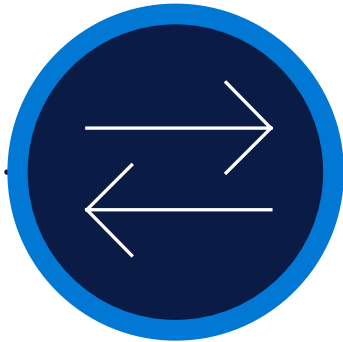
OData endpoints are designed for low/medium-volume for Finance and Operations apps, medium/high for Dataverse. **Important:** they are bound by service protection limits.



# Synapse Link Integration

Both Dataverse and Finance and operations Apps allow for integration with Azure Data Lake, Synapse and Microsoft Fabric\*.

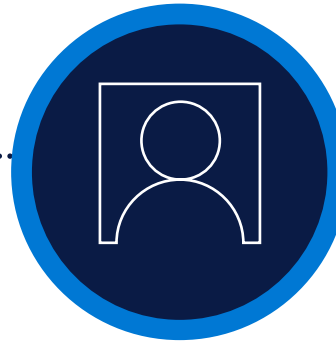
## Direction



### Outbound

Synapse Link integration is outbound only. Data is transferred outside the transactional database to be consumed by external tools.

## Latency

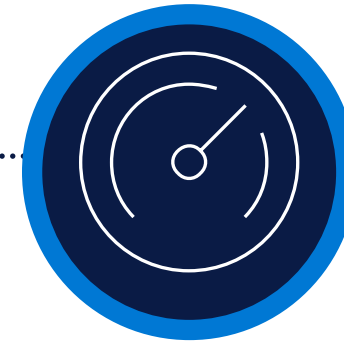


### Asynchronous/Near real-time

Synapse Link is executed asynchronously. It can be consumed in different ways which can be grouped in:

- SaaS mode: Microsoft managed mode integrated with Microsoft Fabric where the data is available  $\approx$  1 hour\*\*
- PaaS mode (BYOL): Partially managed by the customer. Target transfer delay as low as  $\approx$  15 minutes\*\*.

## Volumes



### High volumes

Azure Data Lake integration is built for high volume synchronization, in the tens of thousands records per minute.

\* in [preview](#)

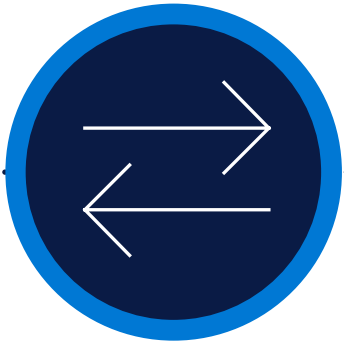
\*\*not guaranteed



# Events

Both Dataverse and Finance and operations Apps allow for event-based integration.

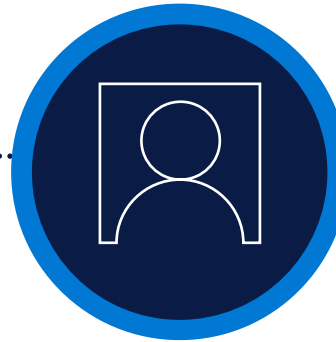
## Direction



### Outbound

Data events and Business events are emitted from the applications to be captured by external listeners.

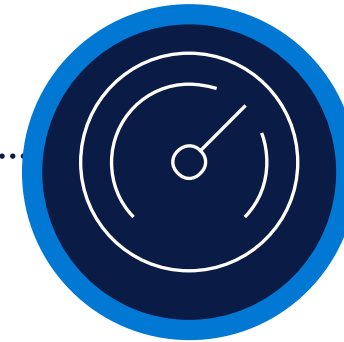
## Latency



### Near real-time

Payloads are emitted in near real time, with few seconds of delay from the events that triggered them.

## Volumes



### Medium volumes

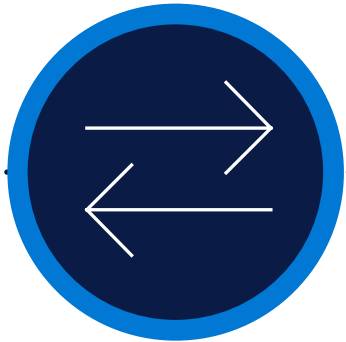
Events have service limits of 5000 events per five-minute period, up to 50000 events per hour, across all entities for a single environment.



# Virtual Tables

Enables integration of data residing in finance and operations apps by seamlessly representing that information as tables in Microsoft Dataverse, without any data replication.

## Direction

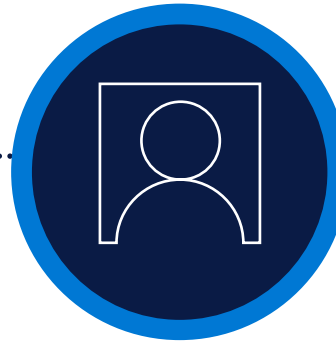


### Outbound/Inbound

Pulls data from Finance and operations OData entities JIT and displays in virtual tables in Dataverse.

Dataverse supports several external data provider connectors such as SQL Server , SharePoint, Excel, Cosmos Db\* and OData v4 providers. Custom data providers can be created to further extend the functionality.

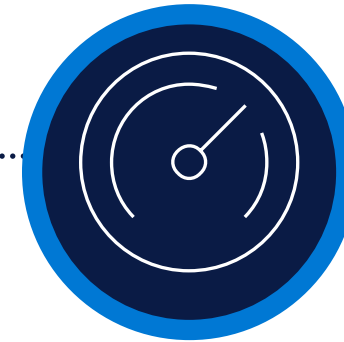
## Latency



### Synchronous

Full sync create, read, update, and delete (CRUD) operations from Dataverse and Microsoft Power Platform.

## Volumes



### Low/medium volumes

Virtual entities are designed for low/medium-volume integration.

\* in [preview](#)



# Poll

Choose the capabilities that you want to learn more about.





Azure tools

# Common technologies : Azure Service Bus

Azure Service  
Bus



## What is it ?

- **Decouple** your applications from each other
- **Distribute messages** to multiple independent back-end systems
- Protect your application from **temporary spikes in traffic**
- Scale out **ordered messaging** to **multiple** readers
- Connect your existing **on-premises systems** to **cloud** solutions

## How to start ?

- [Introduction to Azure Service Bus](#)
- [Configure Microsoft Azure \(SAS\) for integration](#)
- [Integrate Microsoft Dataverse Azure solutions - Training | Microsoft Learn](#)

# Common technologies : Azure Logic Apps

Azure Logic  
Apps



## What is it ?

- **Create and run** automated workflows with little to no code
- Provides **low-code-no-code tools** for you to develop **highly scalable** integration solutions
- Provides hundreds of **prebuilt connectors** so you can connect and integrate apps, data, services, and systems more easily and quickly

## How to start ?

- [Overview - Azure Logic Apps](#)

# Common technologies : Power Automate

Power Automate  
Flows



What is it ?

- **Automate** business processes
- Move business data between systems **on a schedule**
- Connect to **more than 500 data sources** or any publicly available API

How to start ?

- [Get started with Power Automate](#)

# Common technologies : Azure Functions

Azure Functions



## What is it ?

- A **serverless** solution that allows you to write less code, maintain less infrastructure, and save on costs.
- Allows you to use your **preferred language**
- Allows you to easily **automate deployments**
- Benefit of a set of **flexible pricing options**

## How to start ?

- [Azure Functions Overview](#)
- [Integrate Microsoft Dataverse Azure solutions - Training | Microsoft Learn](#)

# Common technologies : Azure Event Grid

Azure Event  
Grid



What is it ?

- **A highly scalable**, serverless event broker that you can use to integrate applications using events
- Filter on event type or event publish path to make sure event **handlers only receive relevant events**

How to start ?

- [What is Azure Event Grid ?](#)

# Common technologies : Azure API Management

Azure API  
Management



## What is it ?

- **Single place to manage all your APIs** across clouds and on-premises: apply authentication, authorization, usage limits, IP filtering.
- Build apps faster and deliver immediate value to your customers through API-first approaches. Decouple front-end and back-end teams through API mocking, API revisions and versioning, and automated API documentation
- Turn legacy web services into modern REST-based APIs by creating facades for your back-end services.
- Can **publish APIs as custom connectors to be consumed in Power Apps or Power Automate**

## How to start ?

- [Export APIs from Azure API Management to Microsoft Power Platform | Microsoft Learn](#)
- [Enable CORS policies for Azure API Management custom connector | Microsoft Learn](#)




# Poll

Are you familiar with the previous tools?



<https://forms.office.com/r/46iEFTXp4h>



# Integration – Security

# General guidance

## Authentication

- Azure Active Directory (AAD)
- OAuth
- Application users
- Managed Identities
- Azure Key Vault

## Authorization

- Role-Based Access Control (RBAC)

## External Security

- Encrypted channels
- External tools with dedicated security
- Hybrid security (On Premises Data Gateway)

## Compliance

- Regulatory requirements
- Internal policies

# Roadmap



# Roadmap

- Virtual Entities (Finance and Operations applications):
  - Performance enhancements
  - Simplified deployment experience
  - Improved development experience
- Synapse link
  - Simplified deployment experience
  - Simplified tighter integration with Microsoft Fabric
  - Reduce the time to initialize a table (aka. Parallel initialization)
  - Enable incremental folders (aka. change feeds)
  - Enable Managed Lake for F&O tables
  - Enum numeric values
- Dual Write
  - Asynchronous processing for DW maps
  - General quality improvements
- Plugins
  - Network isolation to connect to private, endpoint-enabled resources in Azure or resources within their network.

# Resources



# Dynamics 365 Integration Resources

## Finance and operations apps

- ✓ [Open Data Protocol \(OData\)](#)
- ✓ [Data management overview \(DMF\)](#)
- ✓ [Custom services](#)
- ✓ [Electronic reporting \(ER\)](#)
- ✓ [PunchOut e-procurement](#)
- ✓ [Invoice capture solution](#)

## Dataverse

- ✓ [OAuth authentication](#)
- ✓ [Dataverse Web API](#)
- ✓ [Perform operations using the Web API](#)
- ✓ [Plug-ins](#)
- ✓ [Webhooks](#)
- ✓ [TDS - Use SQL to query data](#)

## Common

- ✓ [Dual-write](#)
- ✓ [Business events](#)
- ✓ [Dataverse business events](#)
- ✓ [Virtual tables](#)
- ✓ [Virtual entities](#)
- ✓ [Azure Synapse Link for Dataverse](#)
- ✓ [Finance and operations data in Azure Synapse Link](#)

## Learning path

- ✓ [Integrate finance and operations apps with Microsoft Power Platform - Training | Microsoft Learn](#)
- ✓ [Integrate with Microsoft Power Platform and Microsoft Dataverse - Training | Microsoft Learn](#)
- ✓ [Integrate Microsoft Dataverse Azure solutions - Training | Microsoft Learn](#)

## Technical Talks

- ✓ [Virtual Entities for Finance and Operations apps technical talk](#)
- ✓ [Business Events Overview](#)
- ✓ [Dual-write Framework](#)
- ✓ [Prospect to Cash in Dual-write](#)
- ✓ [Export to Azure Data Lake Overview](#)
- ✓ [Export to Azure Data Lake Scenarios](#)

## Azure integration services

- ✓ [Compare Azure messaging services - Azure Service Bus | Microsoft Learn](#)
- ✓ [Azure Integration Services | Microsoft Azure](#)

# Poll

Candidate your integration scenarios for Tech Talk





# QUESTIONS

# Q/A

**Q:In terms of centralized monitoring, can we expect that in the future all Dynamics 365 standard integration patterns will drop a relevant status in i.e. Azure Application Insights?**

A:Microsoft is taking initiatives to extend the use of Application Insights and increasing the out-of-the-box options in the applications. For example, you can see this already happening in the Warehouse management <https://learn.microsoft.com/en-us/dynamics365/supply-chain/warehousing/application-insights-monitor-usage-performance>.

This effort will continue as we want to give the same level of services to all the applications and tools, including integration scenarios, however we don't have an ETA for that yet.

**Q:Why licensing is not ever a factor to consider in your things to consider when choosing an integration platform?**

A:We included the licensing in the larger "cost" factor (which should include other costs as well). This is fundamental for the upfront evaluation of the optimal design.

Please also consider that some of the components required by integration patterns may have a "pay as you go" licensing model, so costs will also vary depending on actual transaction volumes and cannot be inferred without analysing the actual requirements.

**Q:Is it true that Microsoft will eventually replace Dual Write with other means of integration?**

A:No, there is no such plan for the foreseeable future.

# Q/A

**Q:When are you planning to replace all these connectors for D365 with one and only one connector?**

A:Microsoft is looking to simplify the integration landscape as much as possible but there is not a plan for a unified single connector at the moment. Any suggestions from the community to simplify and optimize the integration landscape is very welcome.

**Q: What areas of dual write do you intended to focus on next?**

A:Dual Write team is currently focusing on the asynchronous mode and its optimization. More information will soon be available from the Dual Write team. Please follow the dedicated Yammer group for any preview and early adoption program:

[https://www.yammer.com/dynamicsaxfeedbackprograms/#/threads/inGroup?type=in\\_group&feedId=16038053](https://www.yammer.com/dynamicsaxfeedbackprograms/#/threads/inGroup?type=in_group&feedId=16038053)

**Q:Why are there no direct options for JSON (as source data format) using integration patterns like recurring or data management API (in FO)? Does Microsoft have any plans?**

A:There are currently no plans to directly support JSON format in the DMF asynchronous patterns. Those patterns were designed to deal with the most common file formats used in the customer scenarios (XMF, CSV, plain text etc....). IF JSON is required it can be easily converted from/into XML. One simple approach is to use Logic Apps which provides the functions xml() and json() to parse and convert between formats. Logic apps also provide easy ways to contact DMF endpoints.

# Q/A

**Q: Is there any plan where D365FO have native support for external events consumption?**

A: A simplified integration with the Azure eventing platform is part of the overall considerations for the Dynamics 365 and Dataverse integration optimization. At the moment, no plan has been created to provide this out-of-the box capability.

**Q: With one dynamics one platform vision, if I can handle an integration on F&O side and Dataverse side, which one is more advised?**

A: As in many of these cases, there is not a general answer. ODOP vision doesn't dictate how to deal with the current integration options, it's rather a north star on how we are going to shape the future features. Your current answer will depend on the requirements. It is very rare that Dataverse and FO integrations are perfectly equivalent. At the very least, the business process which is involved tends to be focused more on one of the applications, giving you one suggestion on how to integrate.

**Q: If I have a use case that can be fulfilled by X++ and Power Platform, which one do you recommend?**

A: In general, we advise prioritizing low-code/no-code approach when the solutions are completely equivalent. Low Code/No code is generally easier to create and maintain. That said, described in the presentation, many factors and requirements must be considered before a final decision. Even a single detail could change the pattern of choice significantly.

# Q/A

**Q: Will all integrations with FnO eventually go through Dataverse? My understanding is eventually FnO will use Dataverse as its 'database'?**

A: We have no plan to remove Dynamics Finance and Operations endpoint in the short/mid term. The long-term plan is to add more common simplified ways to create integrations with Dynamics 365 and Dataverse without having to worry about the platform. Any sunsetting of existing endpoints would eventually be a very long-term scenario and it would be slowly implemented.

**Q: Are you guys giving "Export to Data Lake" on F&O side and "Synapse Link for Dataverse" , a new name "Synapse Link for D365"?**

A: No, the official name of the feature is "Azure Synapse Link for Dataverse", we have only extended it to include finance and operations apps data in it. Export to Data Lake is a similar but separate feature available in finance and operations apps. We recommend new implementations to focus on Synapse Link and customers already on Export to data lake to start looking into the migration patterns to Synapse Link. Please follow the dedicated Yammer group for more information:

[https://www.yammer.com/dynamicsaxfeedbackprograms/#/threads/inGroup?type=in\\_group&feedId=32768909312](https://www.yammer.com/dynamicsaxfeedbackprograms/#/threads/inGroup?type=in_group&feedId=32768909312)

**Q: How do I move a business event created in F&O from one environment to another environment?**

A: Copying business events from one environment to another is not possible nor advisable. Even when a database is moved between environments, events endpoint gets disabled to prevent any unwanted external connections. For example, events from test environments could be intercepted by production listeners and vice versa). Business events must be bound and activated per-environment.

# Q/A

## **Q:Do CUD operations via Virtual Tables require license? Do I get into multiplexing issues?**

A: Yes, any interaction with Dynamics 365 applications always require licenses. This is not a multiplexing scenario, but the users are directly working with finance and operations data, so they need to be a user and have a security role in finance and operations. The exact license depends on the role assigned. For more information download the most recent licensing guide here: <https://www.microsoft.com/en-us/licensing/product-licensing/dynamics365>

## **Q:What's the difference between web hook and plugin that sends a payload to an external service? What is the difference between webhook and a plugin that posts to an http endpoint which one should i use?**

A:Plugins are a very specific concept of Dataverse, while webhooks can be seen as a more generic HTTP callback approach. A webhook can be considered a more lightweight approach, however it will be limited at the context of the event, while a plugin will be able to execute additional operations through the provided SDK. Also, plugins allow to interact with pre-event stages. If you would need to execute additional logic such as execution context transformations or validations before calling the external endpoint, plugin works better. Also consider factors such as the security for your external endpoint, is it compatible with the plugin and webhook authentication options?

## **Q:Should we anticipate enhancements around the field services area of dual write?**

A:Yes, there is roadmap to integrate Field service and Finance and operations built on top of Dual-write framework. There is no ETA yet.

# Q/A

**Q:When considering integrations between MS tools, I am deliberating over whether to prioritize the control and centralization provided by Azure Functions "Durable" or to opt for the visual tracking of Low code using multiple interconnected Logic Apps, despite the constraints in code control. Given the necessity to frequently modify and deploy components across DEV, UAT, and PROD, could you provide some insights or recommendations on which approach would be more beneficial in terms of scalability, maintainability, and overall efficiency in the development lifecycle?**

A:Azure Durable Functions and Logic Apps have different positive and negatives that come from their fundamental purpose. Azure Functions is a serverless compute service, whereas Azure Logic Apps is a serverless workflow integration platform. Simply put, Azure Durable Functions is an enhancement of Azure Function which expands the original purpose to include orchestration capabilities. Even with that, Azure Function remains a serverless solution to build applications and services by writing code. Logic Apps' main purpose instead is workflows and orchestration while providing some programmability with the low code approach. The best route is usually a combination of the two where Logic Apps is used for overall orchestration and simple transformations while delegating complex business logic to specialized tools, including services developed on Azure Function. Durable Functions can be used to further optimize the computational patterns (e.g. using Fan-out patterns). From ALM perspective, a mixed approach would probably guarantee the best results: i.e. Logic Apps would create the more stable and easier-to-manage framework that orchestrates the flows, while the detailed business logics can be created and handled using standard Azure Functions ALM. Logic Apps can also be changed and managed focusing on the logical workflow, without involving developers, while the applications contents must be carefully designed by experienced developers. Of course there are many more considerations to keep in mind when you choose the integration architecture including requirements collected, the current integration scenarios, the company integration plans etc... What would be more beneficial cannot be answered looking only at technology. Still you can refer to the documentation for some immediate comparison: <https://learn.microsoft.com/en-us/azure/azure-functions/functions-compare-logic-apps-ms-flow-webjobs#compare-azure-functions-and-azure-logic-apps>

# Q/A

**Q:How to restrict access to individual custom API or Odata end point? For ex: Expose some endpoint to one third party application and restrict access to other endpoints**

A:Both Dataverse and Dynamics 365 F&O apps, are built on and depend on MS Entra ID/Azure AD for identification and authentication. For access control, secure features like single sign-on, multi-factor authentication, conditional access can be used. Secondly, any 3rd party app that will need to access Dataverse or Dynamics 365 F&O apps endpoints after Azure AD authentication, will need to be authorized and for this, an app user with the appropriate security role will need to be created in Dataverse or Dynamics 365 F&O depending on your scenario.

Custom APIs for Dataverse, besides RBAC for the app user, can also have an additional privilege required. Learn more <https://learn.microsoft.com/en-us/power-apps/developer/data-platform/custom-api#secure-your-custom-api-with-a-privilege>.

Additionally, to the MS Entra ID and platform RBAC security, for Dataverse as a platform, there are network isolation features such as IP Firewall which is currently in preview <https://learn.microsoft.com/en-us/power-platform/admin/ip-firewall>

**Q: Why is network isolation only for plugin , it should be for any outbound calls for both platforms including business events**

A:The teams started with plugins as they are the most used connectors. The plan is to expand to more areas soon.



# Q/A

**Q: When to use data package api vs recurring integrations? I heard there are parallel execution issues with data package api, can you comment on those?**

A: Difference between package and recurring API's are described here : <https://learn.microsoft.com/en-us/dynamics365/fin-ops-core/dev-itpro/data-entities/data-management-api#choosing-an-integration-api>. For parallel package execution, please make use of Enhanced parallel package import option from Framework parameters Compatibility options tab > Data project and job compatibility option. Please find more details here : <https://learn.microsoft.com/en-us/dynamics365/fin-ops-core/dev-itpro/data-entities/data-para>

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# Thank you!

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