

How to bring your data into Dataverse



Speaker's intro



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- Microsoft MVP – Business Applications
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Agenda

- What is Dataverse?
- Data synchronization
- Virtual Tables
- Business Events

What is Dataverse?

What is Dataverse?

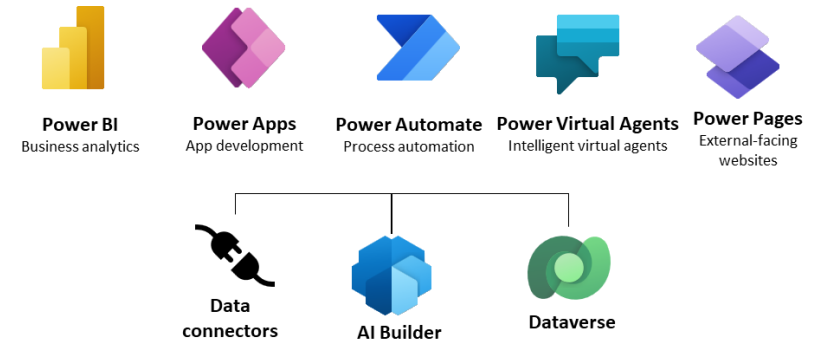
- Cloud based solution
- Structured database
- Role based security
- Integration with Power Platform
- Stored in Azure Data Lake
- API's

[Service protection API limits \(Microsoft Dataverse\)](#)

[- Power Apps | Microsoft Learn](#)

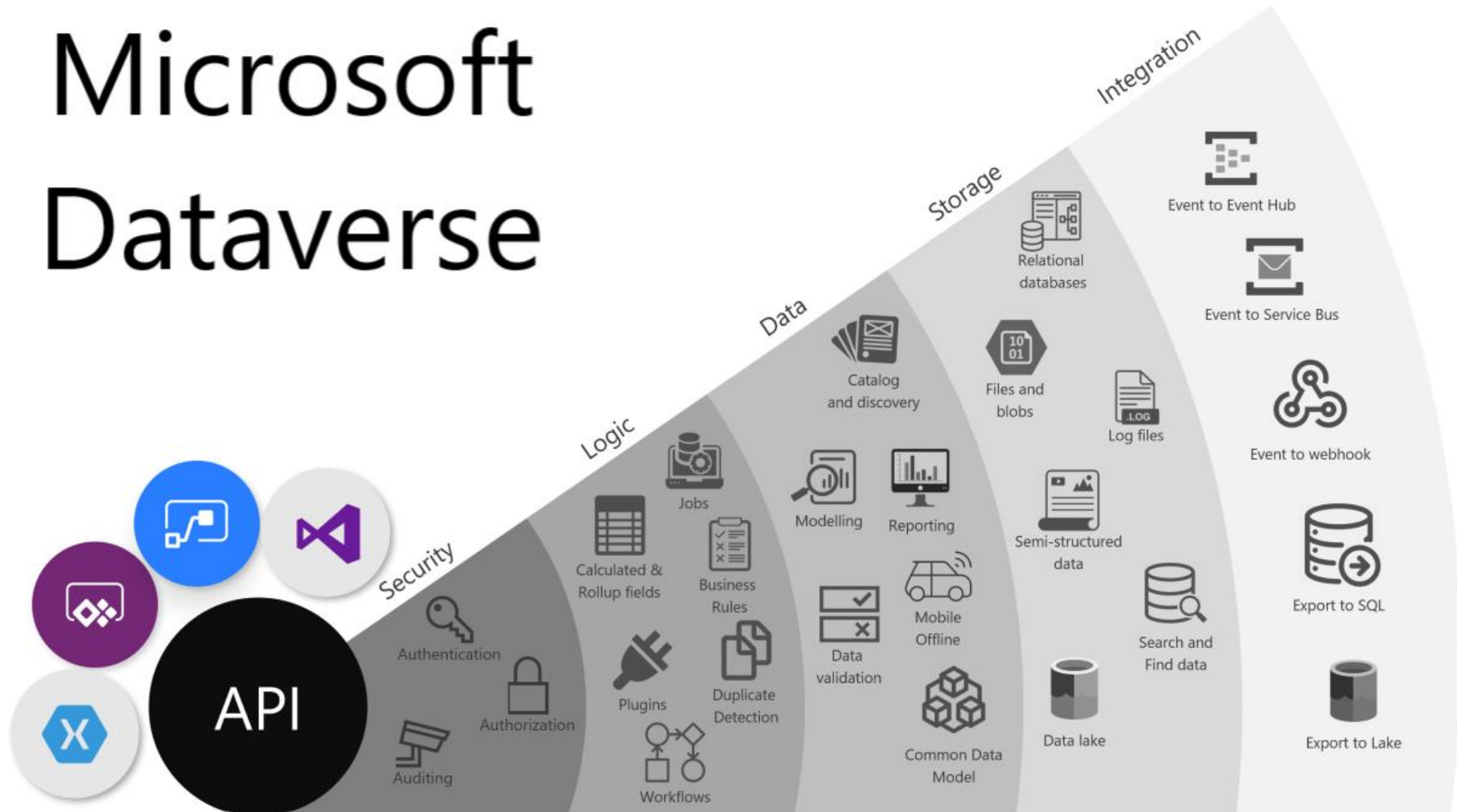


The low code platform that spans Microsoft 365, Azure, Dynamics 365, and standalone apps.



What is Dataverse?

Microsoft Dataverse



Common Data Model

- Standard Schema
- Multiple apps
- Schema is extendible

Microsoft

INTEGRATE & DISAMBIGUATE DATA WITH
THE COMMON DATA MODEL

COMMON DATA MODEL SCHEMA

Dynamics 365

CORE

- Account
- Activity
- Contact
- Currency
- Email
- Goal
- Letter
- Note
- Owner
- Organization
- Position
- Task
- ...

SALES

- Account
- Appointment
- Campaign
- Contact
- Lead
- Marketing List
- Phone Call
- Social Activity
- ...

SERVICE

- Case
- Contract
- Entitlement
- Resource
- Service
- Scheduling Group
- Task
- ...

FINANCE

- Main accounts
- General Ledger
- Budget
- Bank
- Fixed assets
- Dimensions
- ...

SUPPLY CHAIN

- Product Information Management
- Procurement
- Trade Agreements
- Sales
- Production
- Warehouse and Transportation Management
- Asset Management
- ...

COMMERCE

- Channel
- Product catalog
- Prices & Discounts
- Sales transaction
- Payment instrument
- Customer loyalty
- Worker
- ...

MARKETING

- Account
- Contact
- Event
- Marketing Email
- Marketing Page
- ...

WEB

- Link Clicks
- Web Interactions
- Web Page
- ...

PROJECT OPERATIONS

- Project Planning
- Project Resourcing
- Project Time and Expense
- Project Invoicing
- Project Accounting
- ...

HUMAN RESOURCES

- Department
- Job Positions
- Worker
- ...

GLOBALIZATION

- Tax determination and calculation
- E-invoicing & real time reporting
- Payment formats
- Tax and audit reports
- Business documents
- Fiscal integrations for fiscal
- ...

HEALTHCARE

- Patient
- Medication
- Practitioner
- Procedure
- Device
- Encounter
- Care Plan
- Episode of Care
- Risk Assessment
- ...

Account:
Business that represents a customer or potential customer.

Attributes:

- + accountNumber
- + accountRatingCode
- + createdOn
- + creditLimit
- + openDeals
- + openRevenue
- + territoryId
- + hotelGroup
- + ...

Working with subject matter & industry experts, Common Data Model is expanding to include additional business entities and concepts

Solution

- Managed solutions
 - Appsource
- Unmanaged solutions

The screenshot shows the Microsoft Dynamics 365 Solutions management interface. At the top, there are navigation options: '+ New solution', '← Import solution', '📁 Open AppSource', and '🗨️ Pub'. Below this is the 'Solutions' section header. A prominent message reads 'Set your preferred solution' with a document icon, followed by the text 'Select where your updates will be saved so your work stays organi'. Below the message are three filter buttons: 'Unmanaged' (highlighted in purple), 'Managed' (with a lock icon), and 'All' (with a document icon). At the bottom, there is a table with the following content:

Display name ▾		
Common Data Services Def...	Preferred solution	⋮
Default Solution		⋮

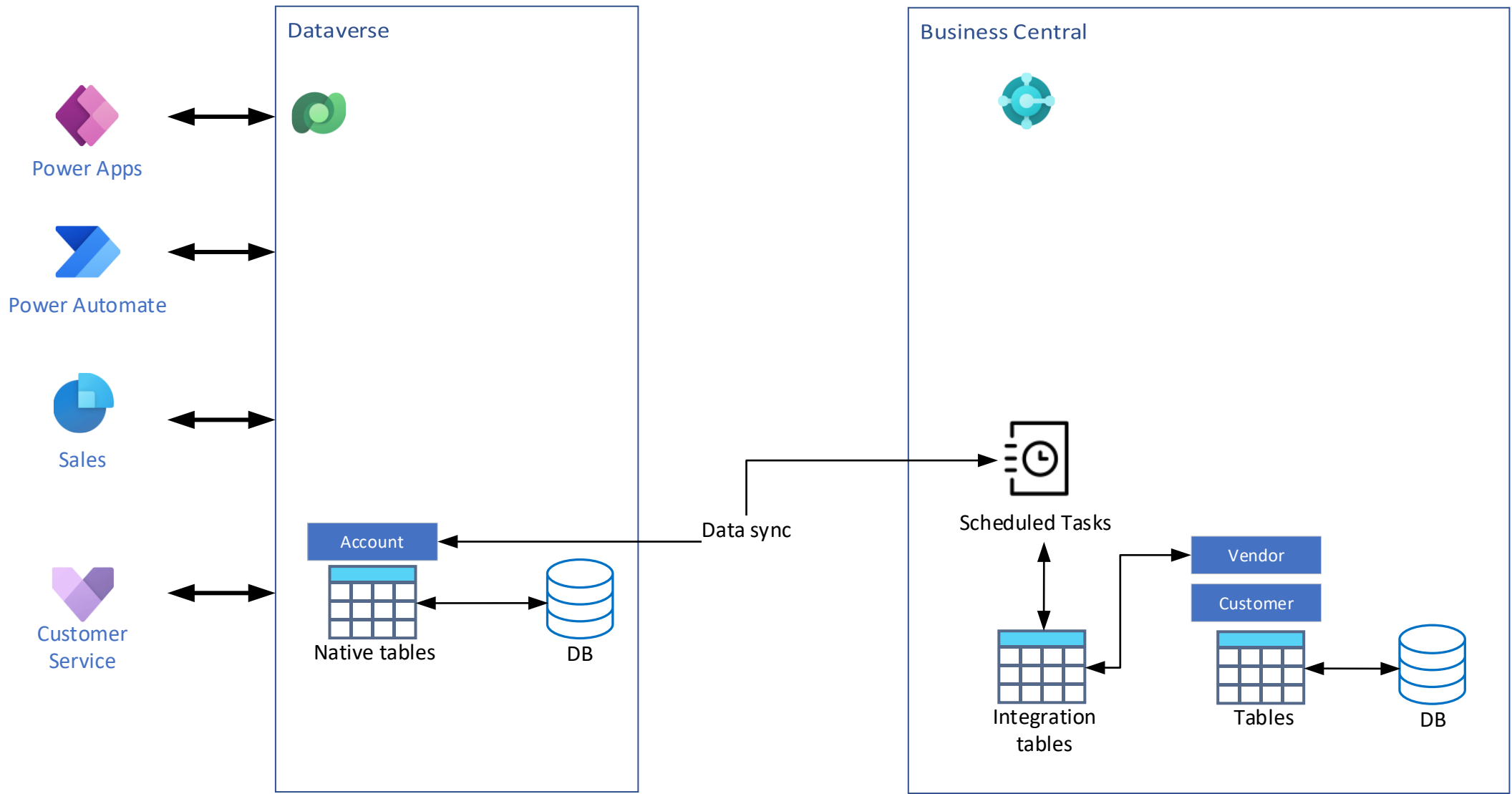
Why put your data into Dataverse?

- Multiple apps
- Shared data
- Enrich data

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Data synchronization



How it works

DEMO

Build your own

- Create table inside Dataverse
- Create Proxy table
[AL Table Proxy Generator - Business Central | Microsoft Learn](#)
- Create integration code
- Permissions inside Dataverse
- Table extensions
- Table 5331 "CRM Integration Record"



Easier ways?

- VS Code Extension
 - [microsoft/bc2dataverse: Integrate Business Central to Dataverse in a low code way \(github.com\)](#)
 - Not maintained < BC24
- BC Extension
 - [Bertverbeek4PS/DataverseSyncUI \(github.com\)](#)
- BC24 improvement



Trigger Job Queue

[Use a Power Automate flow to timely synchronize Dataverse entity changes - Business Central | Microsoft Learn](#)

The screenshot displays the configuration for a Power Automate flow named "Notify BC from Dataverse". On the left, the "Create record (V3)" action is configured with the following parameters:

- Environment: DOK
- Company: CRONUS NL
- API Category: microsoft/dataverse/v1.0
- Table Name: dataverseEntityChanges

Advanced parameters show "Showing 1 of 1" with "Show all" and "Clear all" buttons. The Entity Name is set to "account". The connection is identified as "Connected to admin@M365x27595860.onmicrosoft.com".

On the right, the flow logic is visualized on a canvas:

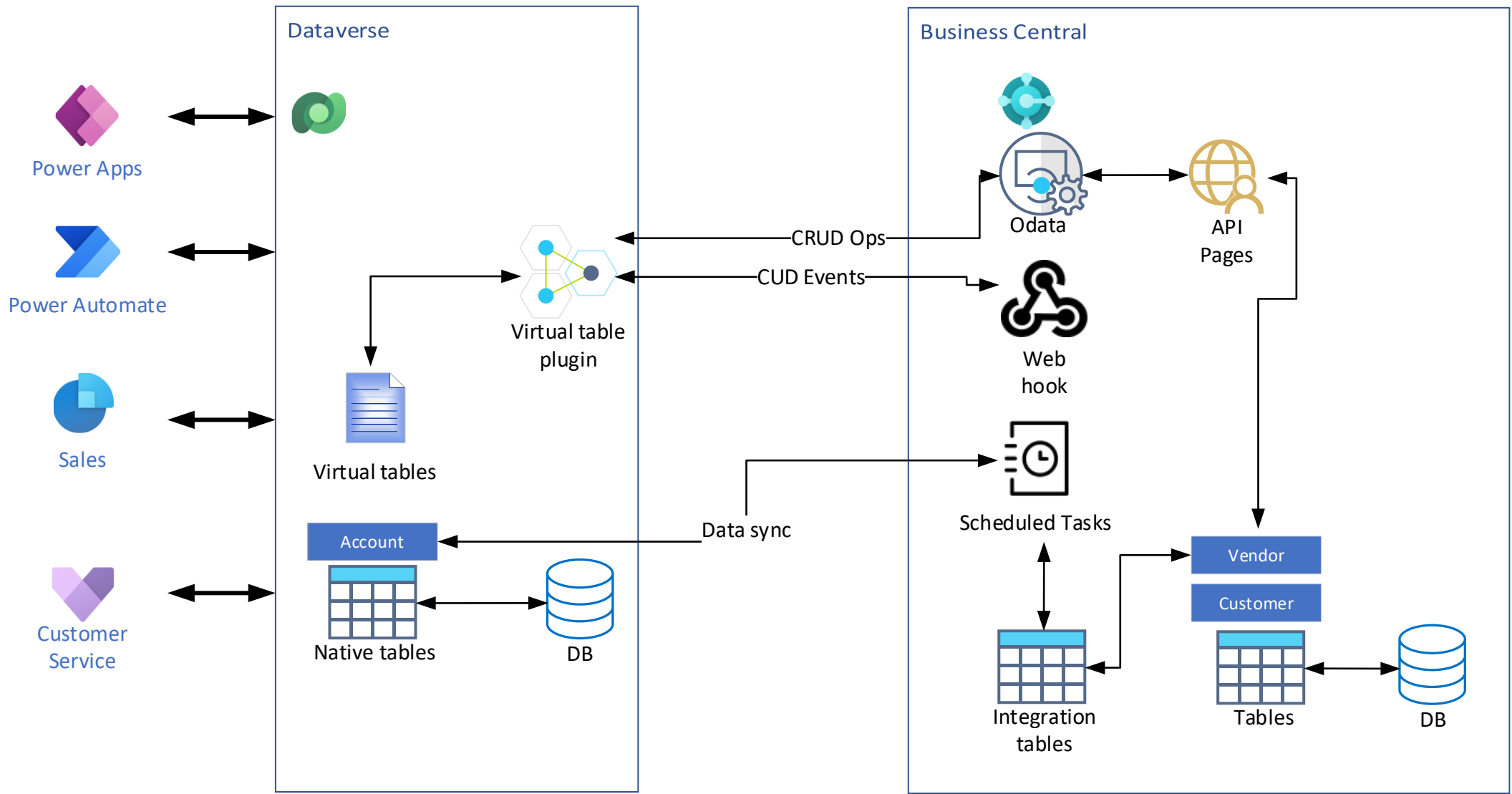
- Trigger: "When a row is added, modified or deleted"
- Action: "Get a row by ID"
- Condition: A decision step with two paths:
 - True:** Leads to the "Terminate" action.
 - False:** Leads to the "Create record (V3)" action.

Performance

- Full sync (Initial load)
 - 435 records (17 fields) into Dataverse
 - 4 min 5 sec (inserts)
- Sync times (modified)
 - 920 milliseconds (1 record change)



Virtual tables



How it works

DEMO

Tips

- Switch company
 - Table "user" column "Company"
 - Companies in table "Company" (cdm_company)

```
Patch(
    Users,
    First(
        Filter(
            Users,
            'User Name' = "admin@[REDACTED].onmicrosoft.com"
        )
    ),
    {
        Company: Company_dropdown.Selected
    }
);
```

Tips

- Trigger on Virtual Table in Power Automate

The screenshot shows the configuration for a trigger in Power Automate. The trigger is titled "When a row is added, modified or deleted" and is configured for the "Customers" table in the "Organization" scope. The selected columns are "City, Name". The configuration includes fields for "Filter rows", "Delay until", and "Run as". A plus sign icon is visible below the trigger configuration, indicating the next step in the flow.

Property	Value
* Change type	Added or Modified or Deleted
* Table name	Customers
* Scope	Organization
Select columns	City, Name
Filter rows	Enter an OData style filter expression to determine which rows can trigger t
Delay until	Enter a time to delay the trigger evaluation, eg. 2020-01-01T10:10:00Z
Run as	Choose the running user for steps where invoker connections are used

Hide advanced options ^

Send an email (V2)

Relationships

- Between synchronized data and Virtual data

- [Use synthetic relationships to expose more Business Central data in Dataverse | Microsoft Learn](#)



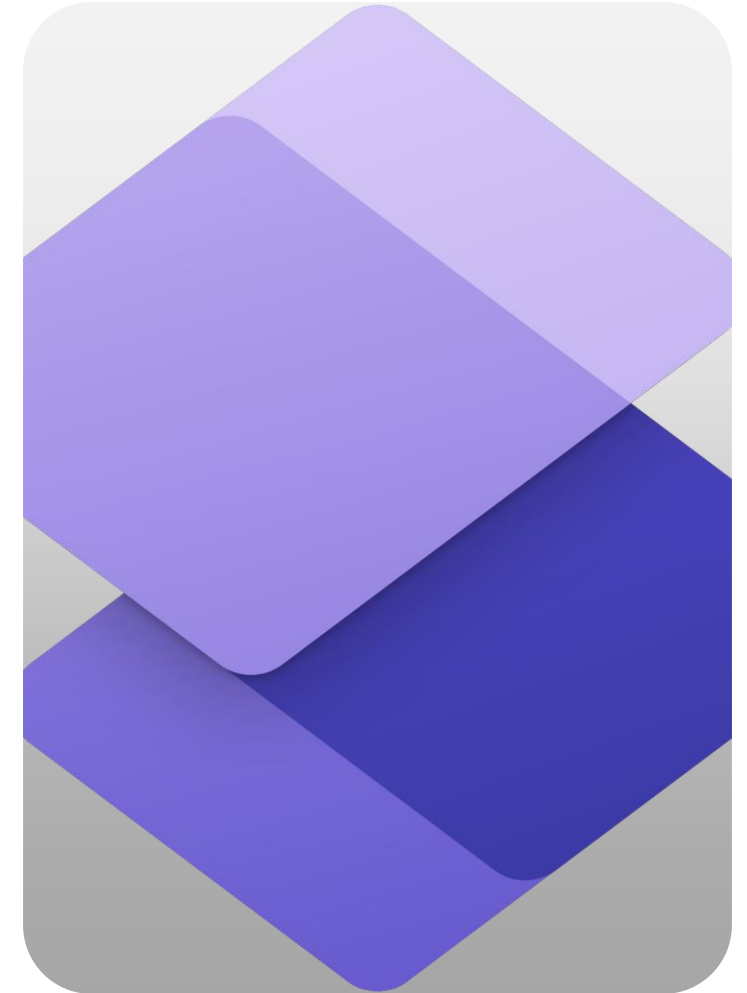
Power Pages

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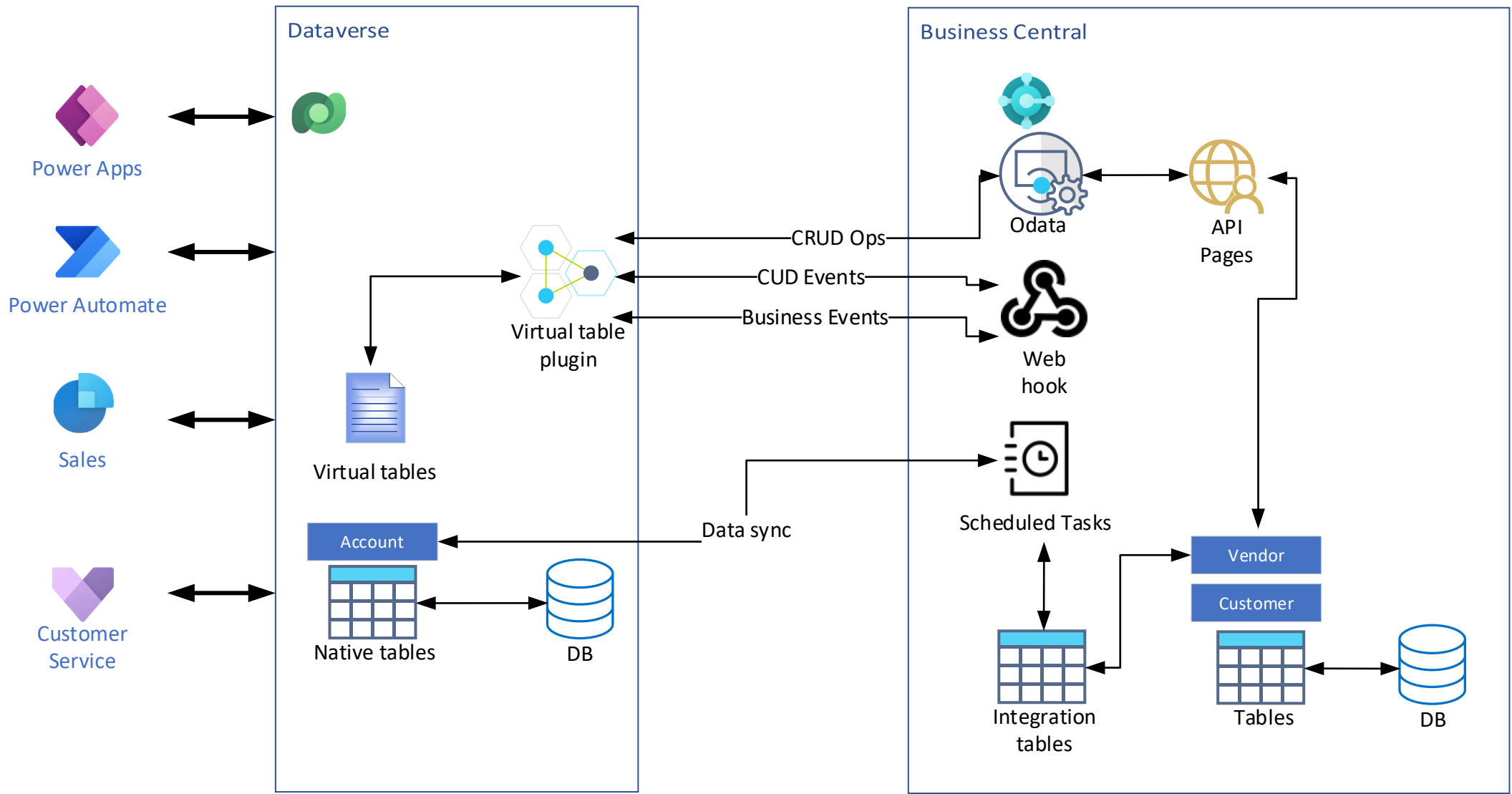
DEMO

Power Pages

- Entra ID inside BC
- Permissions in Power Pages



Business Events



Business Events

- Notify and trigger Dataverse
- AL Code:

```
7 [EventSubscriber(ObjectType::Table, Database::"Customer", 'OnAfterValidateEvent', 'Blocked', false, false)]
  0 references
8 local procedure OnAfterValidateCustomerBlocked(var Rec: Record Customer)
  var
1 [ExternalBusinessEvent('CustomerBlocked', 'Customer blocked', 'This business event is triggered when a customer is blocked for shipping
  1 reference
1 local procedure CustomerBlocked(CustomerId: Guid; Blocked: enum "Customer Blocked"; Url: Text[250]; WebClientUrl: Text[250])
1 begin
1 end;
1
1 [ExternalBusinessEvent('CustomerUnBlocked', 'Customer unblocked', 'This business event is triggered when a customer is unblocked for shipping
  1 reference
1 local procedure CustomerUnBlocked(CustomerId: Guid; Blocked: enum "Customer Blocked"; Url: Text[250]; WebClientUrl: Text[250])
1 begin
1 end;
2
21 CustomerUnBlocked(Rec.SystemId, Rec.Blocked, Url, WebClientUrl);
22 end;
23
```

Business Event

← Business Events

 When an action is performed

Parameters Settings Code View About

Catalog *

Dynamics 365 Business Central

Category *


Accounts Receivable

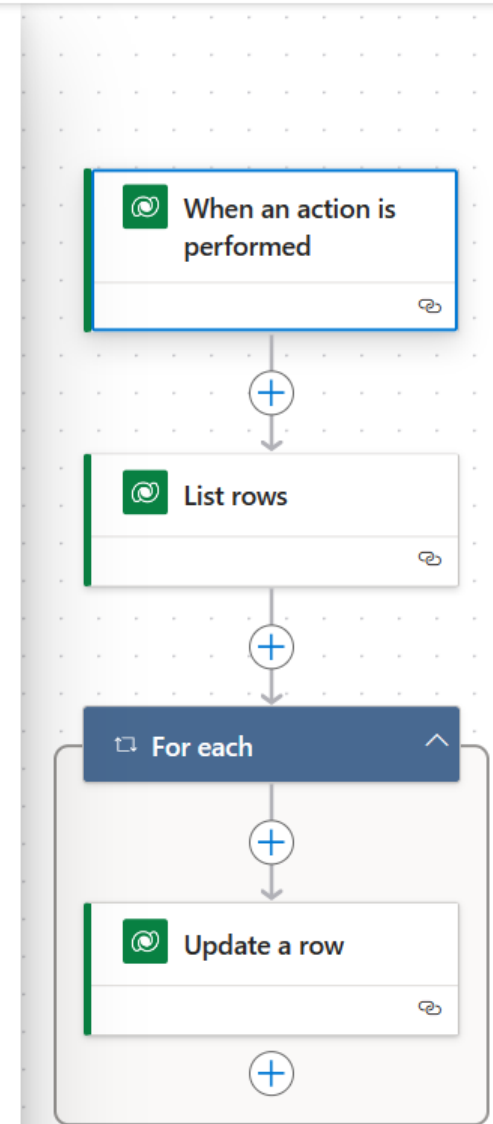
Table Name *

(none)

Action Name *

Customer blocked - 1.0

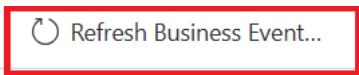
 Connected to admin@M365x27595860.onmicrosoft.com. [Change connection](#)



Tips



← ↻ Save Save & Close + New Refresh Companies Refresh Business Event... Delete Refresh Check Access View Hierarchy Share



Business Central - Saved

Business Central Virtual Data Source Configuration

General Related

Name	Business Central
Target Host	* https://api.businesscentral.dynamics.com
Environment Name	* DOK
Default Company	CRONUS NL



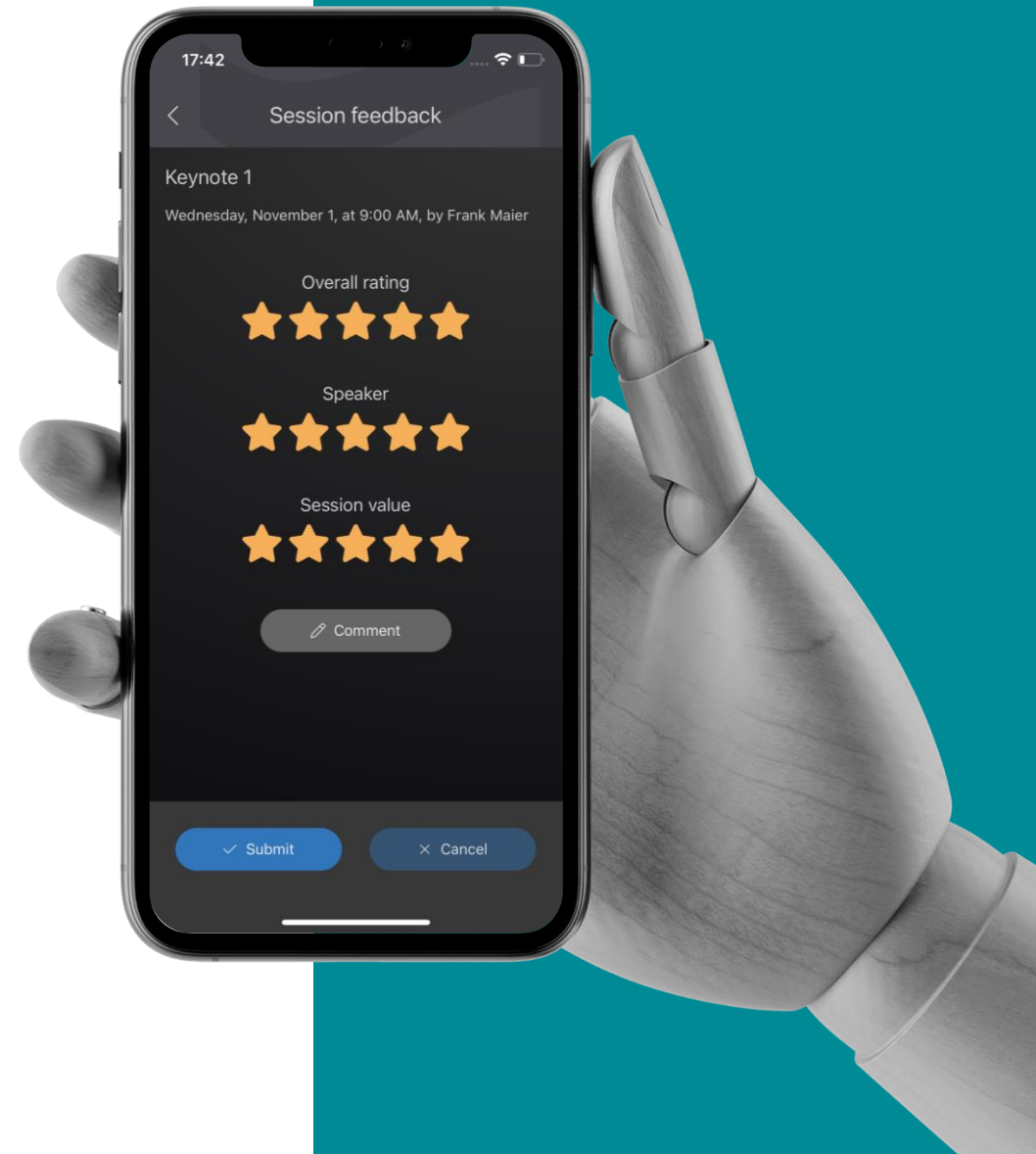
Give us Feedback!

and help us improve!

Please rate my session in the Conference App!

and leave a constructive comment.

Thank you !



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Thanks!

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