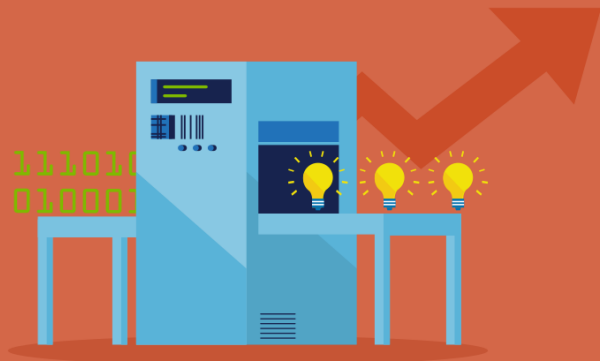# CLOUD ETL WITH AZURE DATA FACTORY & DYNAMICS 365 CUSTOMER ENGAGEMENT

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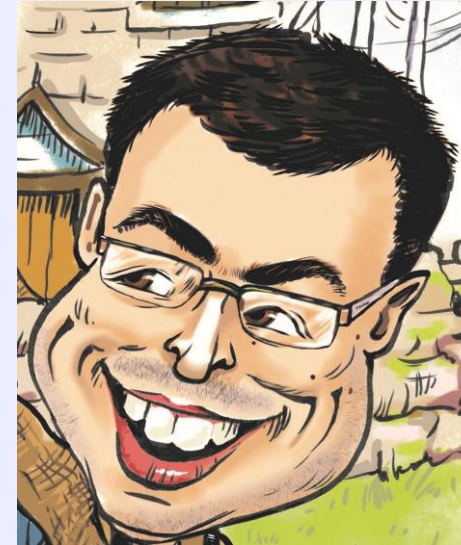
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AGENDA

- About Me

- Reviewing the current Dynamics 365 Customer Engagement (D365CE) ETL landscape

- Overview of Azure Data Factory V2

- **Demo**: A 15-minute data migration from CRM On-Premise 2013 to D365CE Online! 😅🙏

- "Notes from the Field": Limitations and Caveats with ADF

- Closing thoughts

- Q&A

ABOUT ME

- Director @ SOLO Cloud Solutions

- MCSA Dynamics 365 & BI Reporting, MCSE Business Applications & Data Management and Analytics, Dynamics 365 Sales Functional Consultant Associate

- Worked with CRM/D365 for around 4 years; previous background of SQL, C#, Office 365; currently involved as technical architect for a solution for the UK water industry, built using Power BI and Azure

- PRINCE2 PM/Agile Practitioner

- Certified Scrum Master (Scrum Alliance)
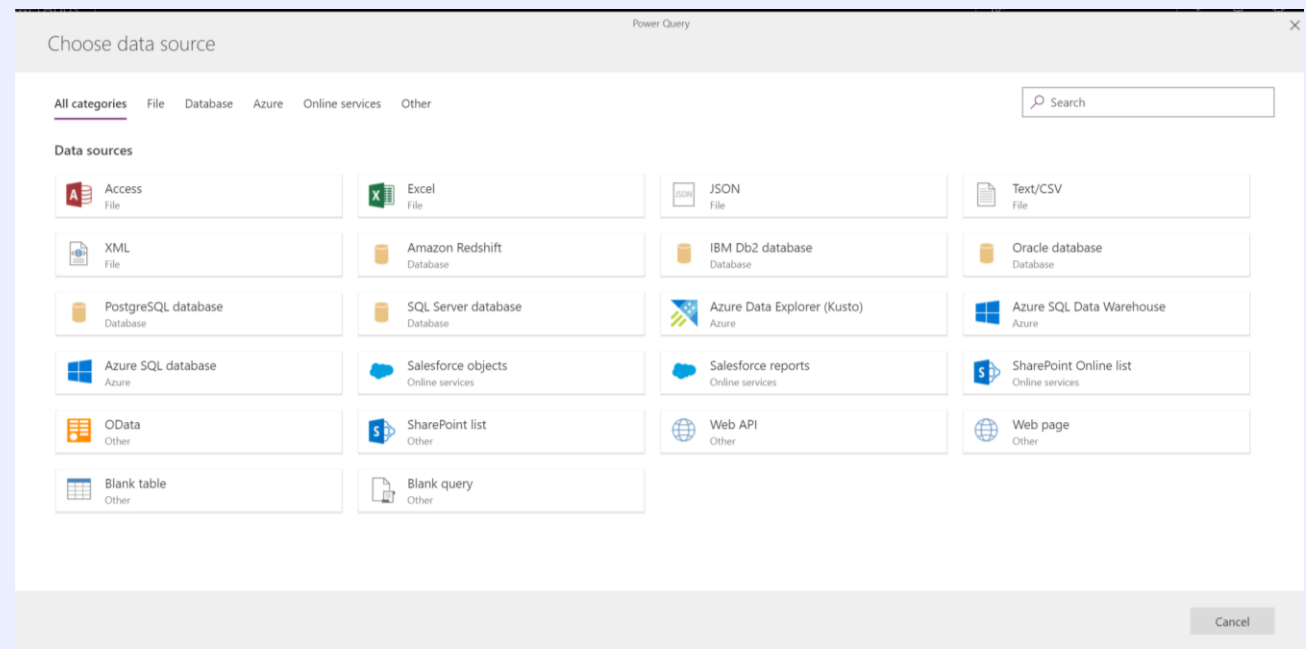
- CRMUG/D365UG NW Committee Member

THE D365CE ETL LANDSCAPE

- There are many solutions on the market today to help with our data integration needs…

- However, finding a tool that can address the following objectives simultaneously is a challenge:
  - Minimal cost investment.
  - Fully cloud based (i.e. no virtual machine/server environments)
  - Unified DevOps Experience
  - Low-Code, with full capability for bespoke code extension.

As such, businesses/organisations may end up compromising and implementing a costly solution, in terms of effort, physical cost or technical strategy.
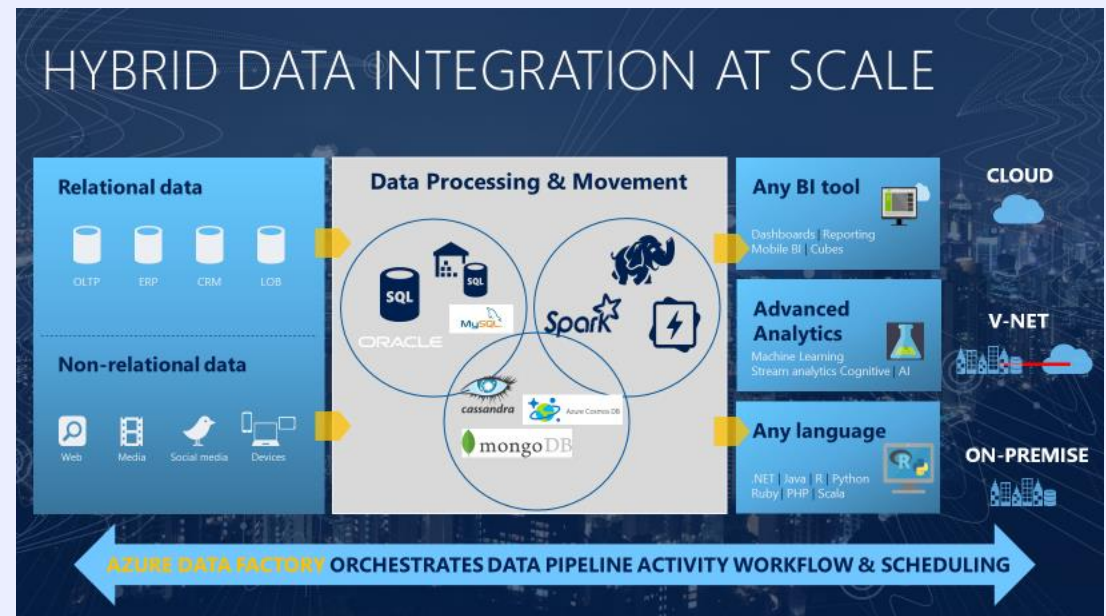
INTRODUCING AZURE DATA FACTORY V2

- Launched in mid 2015, Azure Data Factory V2 saw a major overhaul to the service.
- Designed to meet both simple and complex data integration needs.
- Managed, cloud-based service, an "SSIS killer"…
- …but with full support to lift/shift your existing DTSX workloads to the cloud with ease.

HYBRID DATA INTEGRATION AT SCALE

KEY FEATURES

Easy to Use, "low code" Development Experience

- Intuitive, drag and drop interface
- Wide range of activity/tasks available, such as Copy Data, Execute Stored Procedure, Filter data, Lookups and more!
- Affords flexible development options – in browser, Visual Studio or even via manual JSON modification.
- Data Flows (in preview) offer almost complete feature parity with SSIS.

Wider Stack Integration

- Over 80+ supported data sources, both Microsoft and non-Microsoft (Salesforce, SAP etc.) – including Dynamics 365 Customer Engagement
- Full support for leveraging Azure Functions, Azure Databricks, U-SQL, Machine Learning etc. within pipelines.
- Also has full support for running existing SSIS package in-cloud, allowing for a streamlined migration to cloud.

Full DevOps Integration

- Link directly to a GitHub/Azure DevOps repository form within Azure Data Factory.
- Create branches and pull requests with ease.
- Automatically compiles Azure Templates, that can then be leveraged as part of a Pipeline deployment.
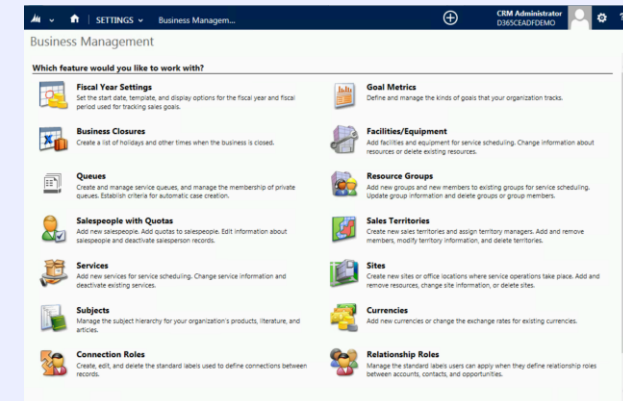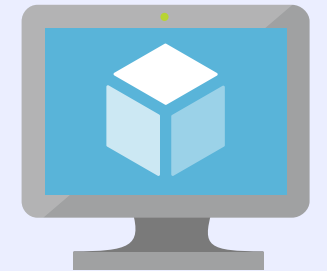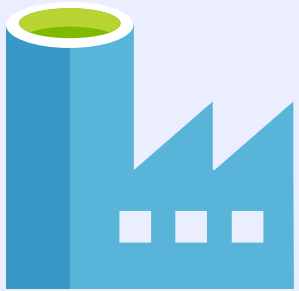
Flexible Pricing Options

- Orchestrate, execute and host multiple integration runtimes for the price of a few cups of coffee each month.
- Reduce monthly server costs from existing SSIS workloads...
- ...or bring them along and realise savings via a fully managed SSIS instance.

DEMO: THE SCENARIO

- Our organisation is currently migrating from Dynamics CRM 2013 on-premise to online.
- As part of this, existing data from the following entities need to be migrated across:
  - Account
  - Contact
  - Lead
- For each entity, it is necessary for us to perform some degree of transformation:
  - **Account**: Modify the Account Name based on the number of employees (e.g. if under 50 employees, append **– SMB** to the end of the Account name)
  - **Contact**: Append fields for contact preference, blocking all contact except via e-mail.
  - **Lead**: Filter and import **Open** Leads only
- In the demo, we will complete the entire data migration in 15 minutes or less!

DEMO: TECHNOLOGY USED

DEMO

THINGS TO KEEP IN MIND…

- Certain D365CE data types are NOT supported for Sink data sources:
  - **Owner –** Not possible to assign to a User/Team during import.
  - **Customer –** For example, not possible to associate a Quote to an Account/Contact record.

Some manipulation in CRM may be required in these situations (e.g. Post Create plug-in to assign records based on conditional logic)
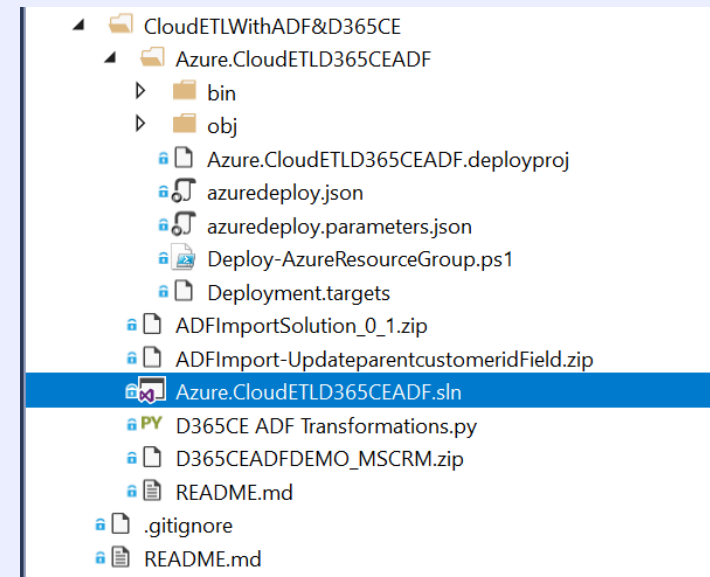
- Can only import data as part of up to 2 concurrent pipelines; errors likely to occur if this is exceeded.

- Work will be necessary to define your preferred Entity schemas, especially if working with custom fields.

- Potential learning curve for traditional SSIS developers or typical users of Scribe Online etc.

WRAPPING UP

- Similar to V2 of the Common Data Service, Azure Data Factory V2 has very much entered a mature, stable and – arguably – preferable to use state for your data integration needs.

- Provides a far more integrated, seamless DevOps experience versus SSIS.

- Allows you to achieve complex data integration needs that can be orchestrated at will and not break the piggy bank in the process ☺

SAMPLES

- Get started with Azure Data Factory using the sample scenario shown today:
  - https://github.com/JJGriffin/talk-assets/tree/master/CloudETLWithADF%26D365CE

THANK YOU FOR LISTENING! ANY QUESTIONS...?

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