



Data Factory Automation

Automating creation and execution of ADF through .NET

Presented by Brian Nolan and Chris Miller



Overview

- General Idea
- Architecture
- Code
- Demonstration
- Questions
- Contact Information



General Idea

- **What is Azure Data Factory?**

- Tool to create, orchestrate, and manage data movement and enrichment

- **Idea**

- Create a process to define and execute Azure Data Factory(ADF) pipelines from a .NET application

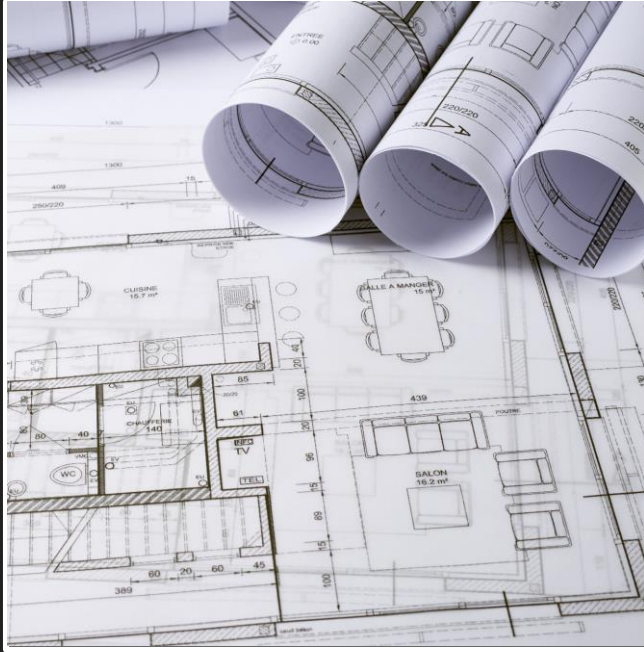
- **Why do it?**

- Automate repetitive tasks
- Reduce bugs
- Can we save time, money, reduce burnout
- Because we can

- **Azure Data Factory**

- Our example factory



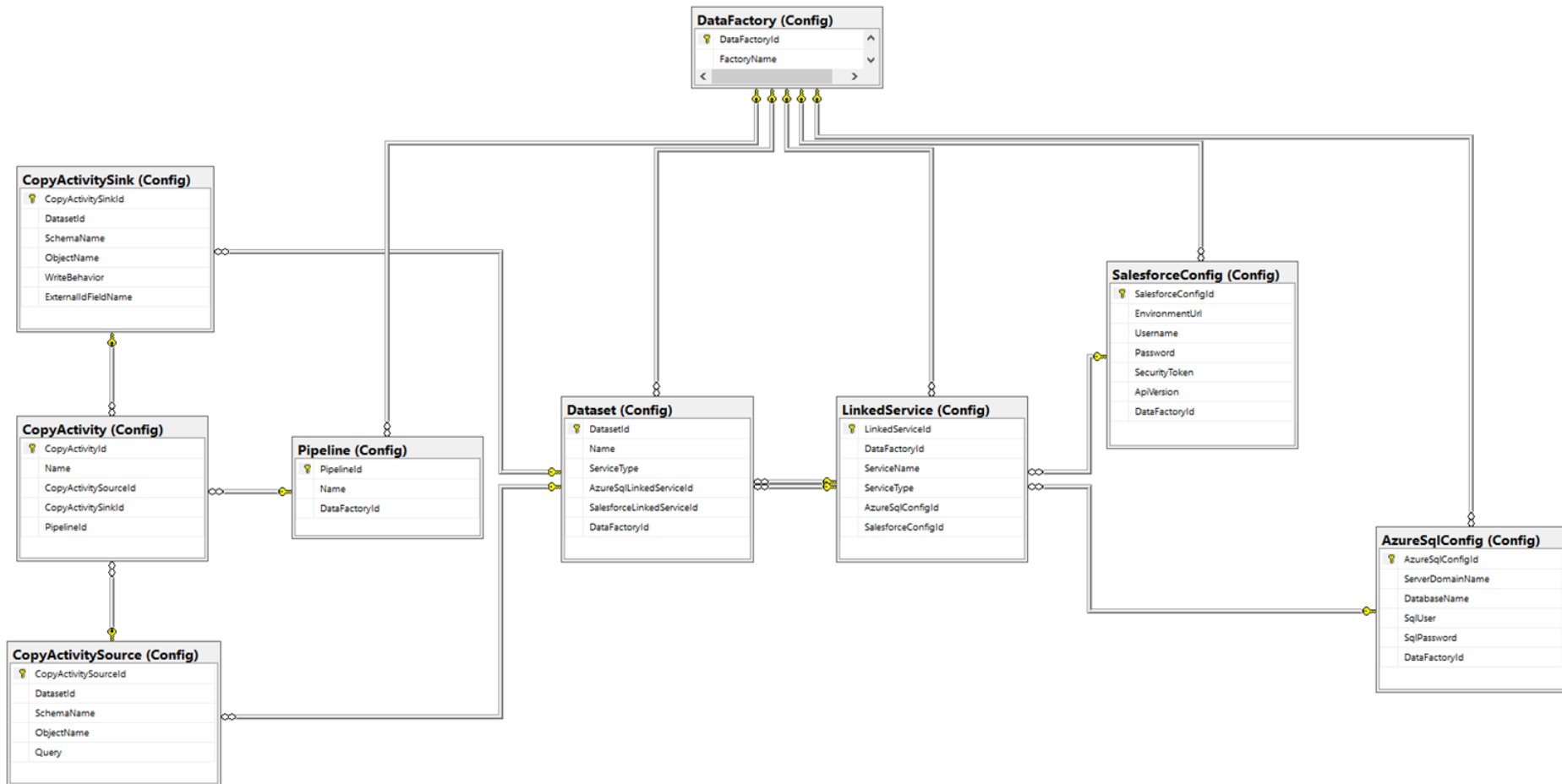


Architecture

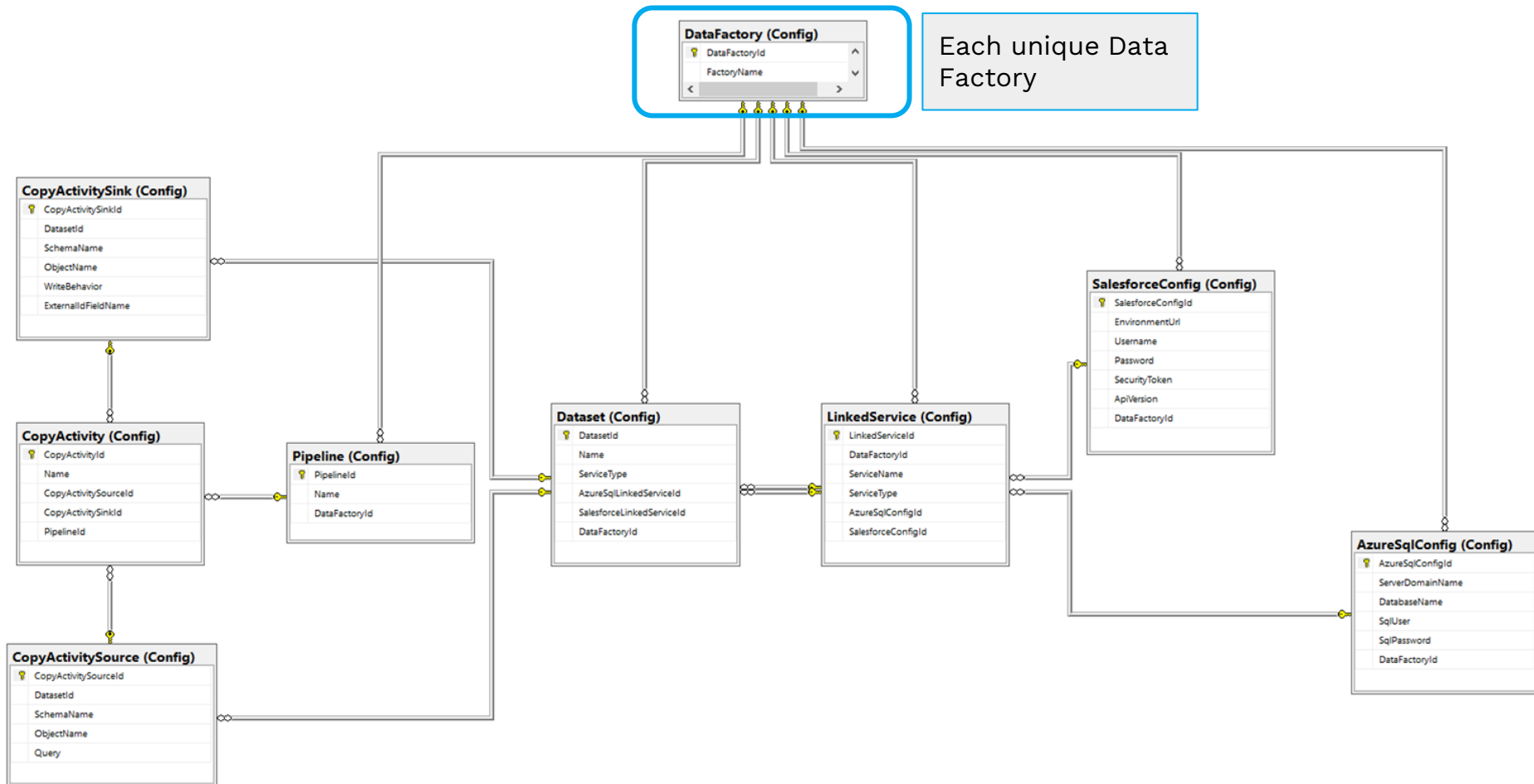
- Database
- .NET Application



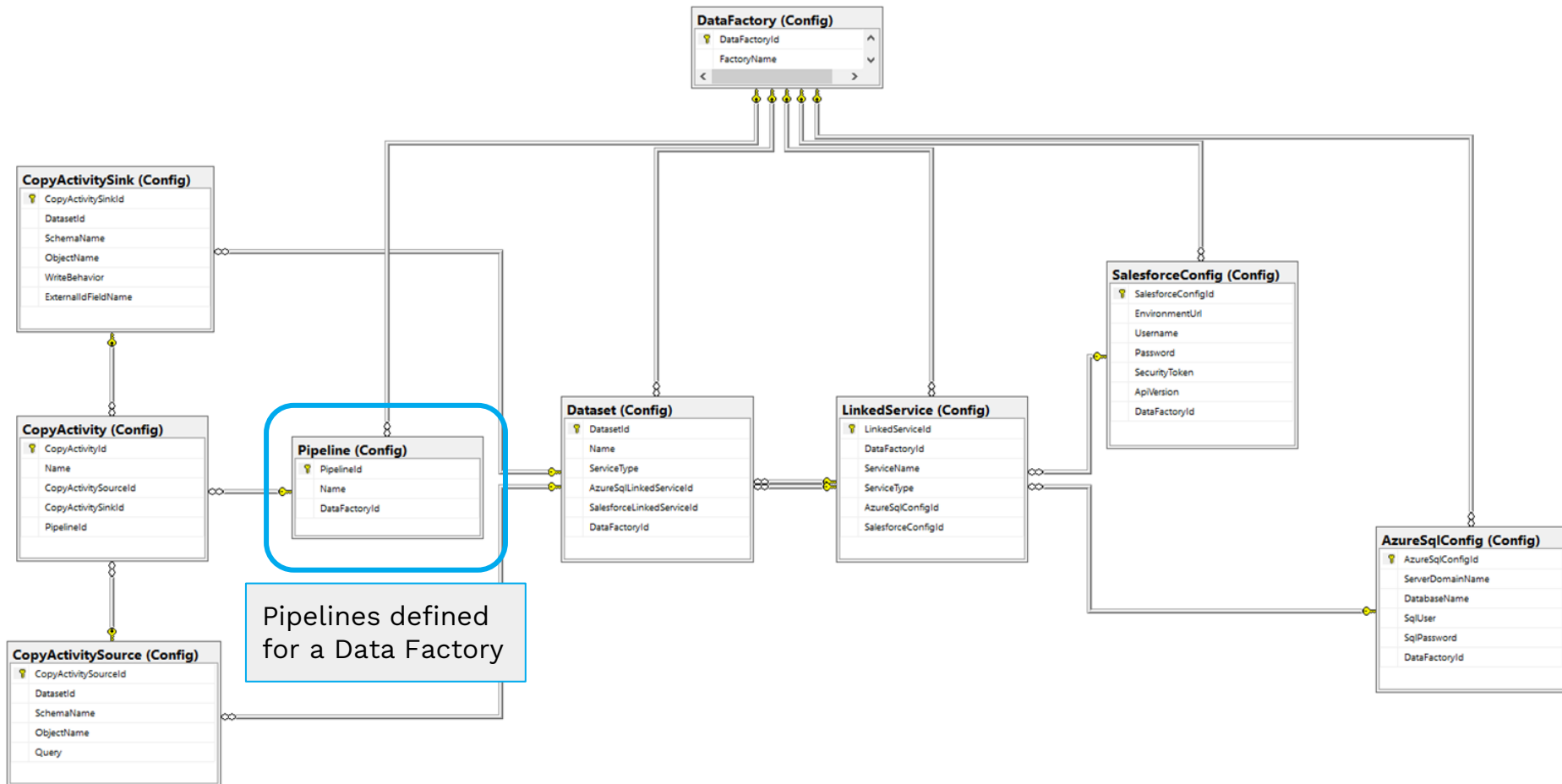
Database Architecture



Database Architecture

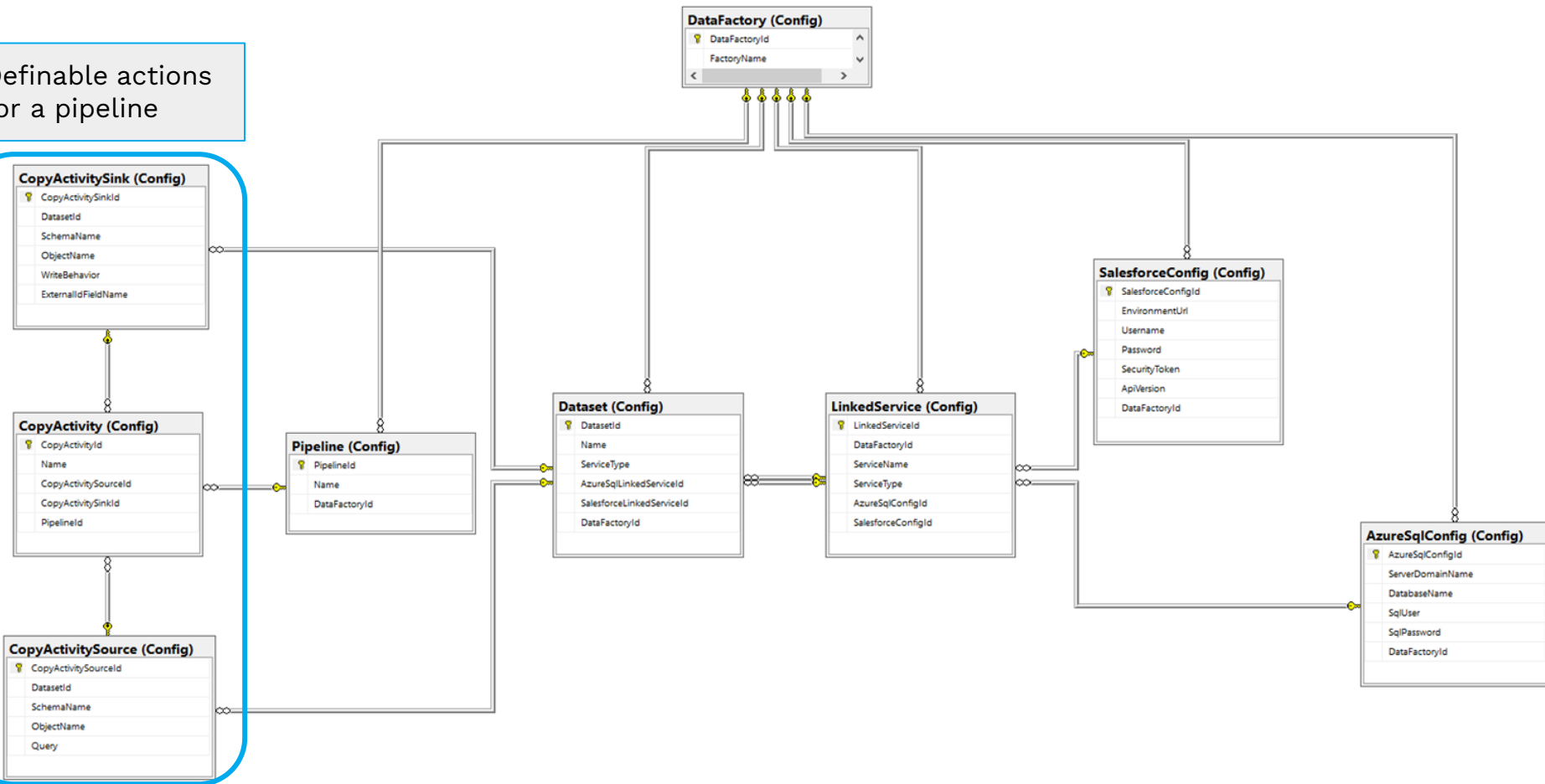


Database Architecture

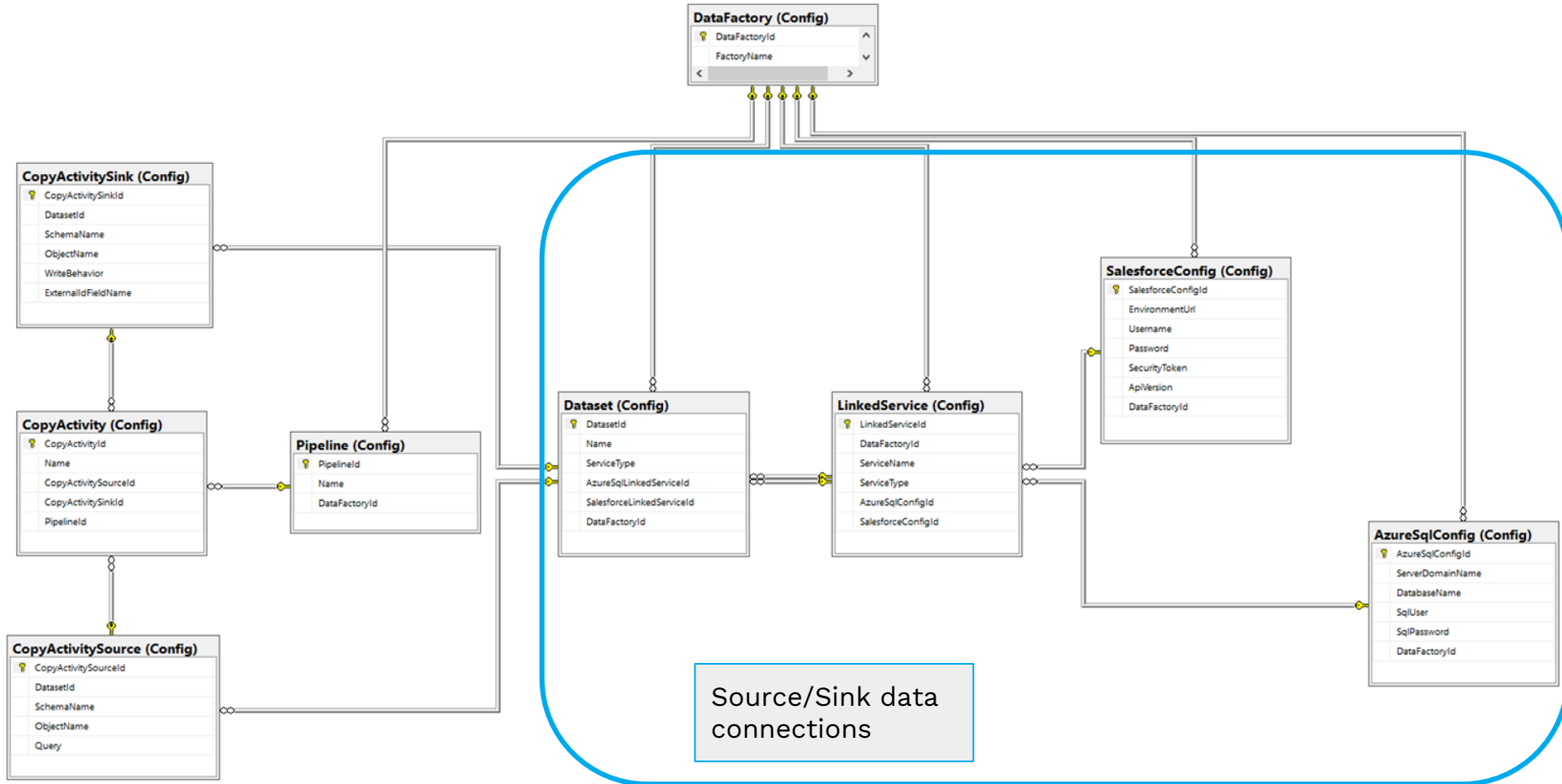


Database Architecture

Definable actions
for a pipeline



Database Architecture



Application Architecture



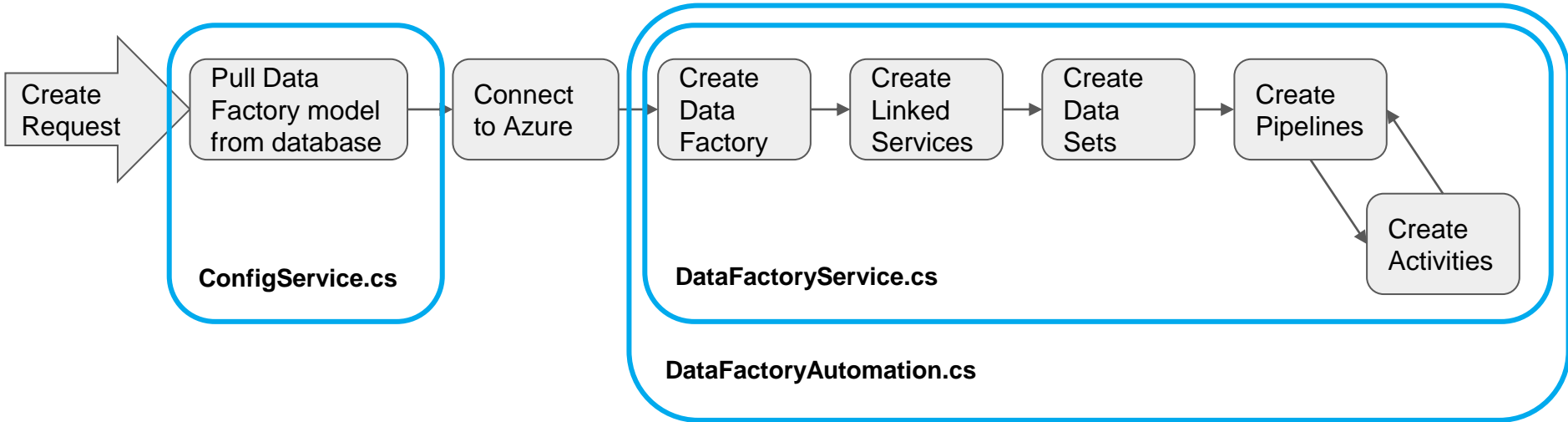
- .NET API
- Initializes database on startup
- Four endpoints
 - Get all Data Factories defined in the database
 - Create Data Factory in Azure from database model
 - Trigger pipeline execution in Azure
 - Get pipeline execution status
- Business class handles ADF creation process

Azure Tenant Setup

- Register application in Azure AD
- Note the ApplicationID, TenantID and Client Secret
- Assign Contributor role to the service principal



Application Architecture



Code Primary Classes

- ConfigService.cs - database model interaction
- DataFactoryService.cs - abstraction layer over .NET Azure library
- DataFactoryAutomation.cs - Data Factory creation processor



Demonstration

- Salesforce Demo Data
- Create a new Data Factory in Azure
- Execute the pipelines
- Check the status
- Verify data moved between systems



References



- **Quickstart: Create a data factory and pipeline using .NET SDK**
<https://learn.microsoft.com/en-us/azure/data-factory/quickstart-create-data-factory-dot-net>
- **Azure SDK for .NET**
<https://github.com/Azure/azure-sdk-for-net>
- **Azure Portal**
<https://portal.azure.com/#home>

Questions?



DOWNLOAD THE PRESENTATION





Contact Information

www.gobrio.com

Brian Nolan

bnolan@gobrio.com

Chris Miller

cmiller@gobrio.com

