

Azure Data Factory SSIS-IR

oh22information services GmbH

oh22 Group

- oh22data AG
 - Data Platform & Analytics
 - CRM
 - Application Development
 - Marketing Operations
 - Azure Infrastructure
- oh22information services GmbH
 - Data Governance & Integration
 - Master Data Management and Data Quality
- oh22systems GmbH
 - IT-Infrastructure & -Administration, Compliance

Microsoft
Partner

Gold Cloud Platform
Gold Data Analytics
Gold Data Platform
Gold Application Development
Silver ISV

oh22 Group

- ~ 60 Mitarbeiter
- ~ 25 Jahre
- Standorte in Bad Camberg und Siegburg
- Enge Kooperationen mit verschiedenen Microsoft Produkt Gruppen
- Entwicklung eigener Lösungen zusammen mit Microsoft
- POC and Demo Anwendungen für Microsoft
- 3 Microsoft Data Platform MVP (Most Valuable Professional)
 - Oliver Engels
 - Tillmann Eitelberg
 - Gabi Münster
- Regelmäßige Sprecher auf nationalen und internationalen Konferenzen
- Gründungsmitglied des PASS Deutschland e.V., Microsoft Data Platform Usergroup
- Oliver Engels, Tillmann Eitelberg im Vorstand des PASS e.V.
- Aktive Teilnahme und Unterstützung der Community

oh22 Group

Microsoft
Partner

- Gold Cloud Platform
- Gold Data Analytics
- Gold Data Platform
- Gold Application Development
- Silver ISV



BISSANTZ



Tillmann Eitelberg

- Geschäftsführer
oh22information services GmbH
- Vizepräsident PASS Deutschland e.V.
- RGV PASS Regionalgruppe Rheinland
- Regional Mentor PASS Germany
- Microsoft Data Platform MVP



 @_Tillmann

Please Talk Data To Me

Der Data Platform Podcast mit Biml Ben, Mr. T und Angry Frank



Adaptive Query Processing ADF Azure Azure Data Studio **Azure Notebooks**
Azure Stack Big Data Clusters **Biml** Black Panther Business Application
Summit 2018 Data Platform **Data Platform Summit** dbatools **Docker**
Flensburger Radler Alkoholfrei GDPR **Git Hub** Ignite Jupyter Notebooks
Kubernetes **Las Vegas** Lissabon Microsoft Professional Program MPP **PASS**
Camp PASS Deutschland e.V. PASS Essentials PASS Summit **Power BI**
PowerShell Query Folding Regionalgruppen Solo SQL Management Studio
18 - Preview SQL Operations Studio **SQL Saturday** SQL Server 2019 Tabular
Tomb Raider **tSQLt** TugalIT Visual Studio Code **WDC**



Ben Weissman
Biml Ben



Tillmann Eitelberg
Mr. T



Frank Geisler
Angry Frank



12

Episoden



2894

Downloads



1275

Sendeminuten



13

Gäste

<https://www.pleasetalkdatatome.de>

SQLSaturday #880 - München

The screenshot shows a web browser window with the URL `https://www.sqlsaturday.com/880/EventHome.aspx` in the address bar. The page header includes navigation links for "SQLSaturday Home", "Sign In", and a prominent green "REGISTER NOW" button. The main content area features the event logo "PASS SQLSATURDAY MUNICH | 19 OCT 2019" and navigation menus for "Sessions", "Speakers", and "Sponsors". The central banner displays "SQLSATURDAY 880" and "Munich, Germany" in large white text. Below this, a paragraph describes the event as a free training opportunity for Microsoft data platform professionals, covering topics like data management, cloud architecture, and AI. The event date and location, "Oct 19 2019 at Microsoft Deutschland GmbH, Walter-Gropius-Str. 5, Munich, Bavaria, 80807, Germany", are highlighted in a red box. A second green "REGISTER NOW" button is positioned at the bottom of the banner.

https://www.sqlsaturday.com/880/EventHome.aspx

SQLSaturday Home Sign In REGISTER NOW

PASS SQLSATURDAY MUNICH | 19 OCT 2019 Sessions Speakers Sponsors

SQLSATURDAY 880

Munich, Germany

PASS SQLSaturday is a free training event for professionals who use the Microsoft data platform. These community events offer content across data management, cloud and hybrid architecture, analytics, business intelligence, AI, and more. This event will be held on Oct 19 2019 at Microsoft Deutschland GmbH, Walter-Gropius-Str. 5, Munich, Bavaria, 80807, Germany

REGISTER NOW

PASS CAMP 2019



03.12.2019 - 05.12.2019

Lufthansaring 1
Seeheim-Jugenheim
Deutschland

Folgende **4 Tracks für jeweils 20 Teilnehmer** stehen für die Anmeldung bereit:

Track 1: Analytics, Data Movement & Governance

Track 2: Business Intelligence

Track 3: Data Platform for DBAs

Track 4: Data Platform for Developers

Anmeldung auf der PASS Website

SQL Server Konferenz 2020

SQL SERVER KONFERENZ 2020

FROM 3 TO 5 MARCH 2020

KONGRESSCENTER

DARMSTADT, GERMANY



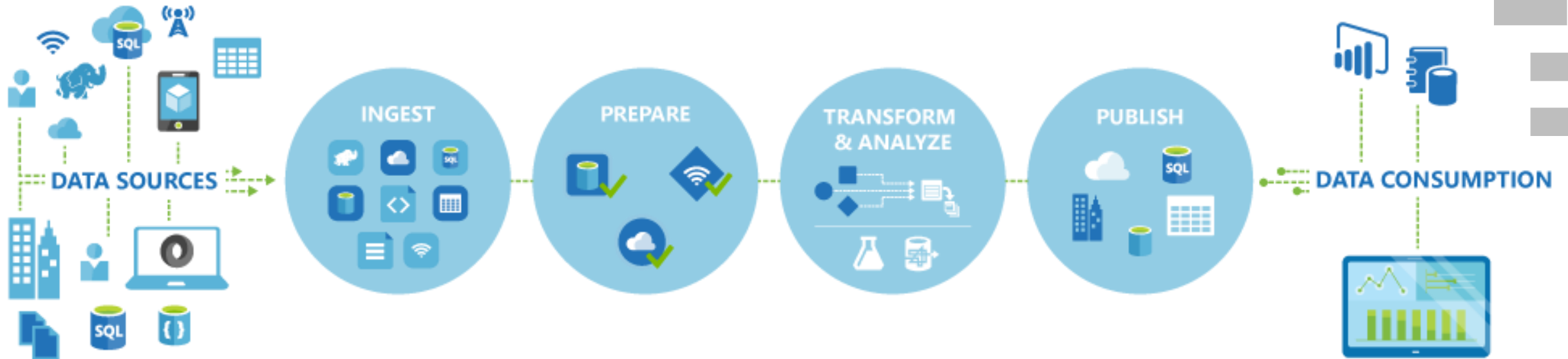
CALL FOR PAPERS is open!

3.3 – 5.3 – Darmstadt

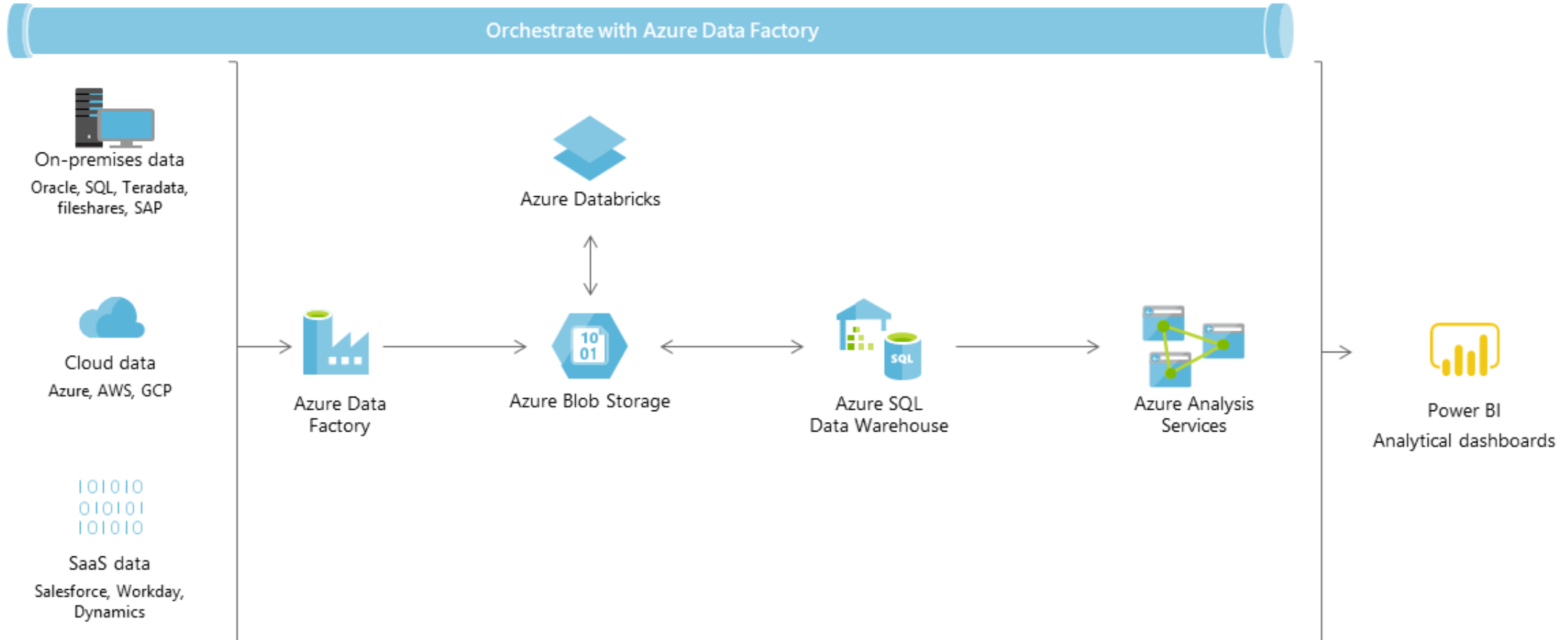
Azure Data Factory

- Cloud-based data integration service to create data-driven workflows
- Not only data integration - ADF is a complete data orchestration tool
- Serverless – no infrastructure to manage
- Integration pipelines with on-premises and cloud data
- Visual drag-and-drop UI
- Write your own Code – ARM, PowerShell, .NET, Python, REST API
- More the 70 natively supported connectors
- Integrates with other services like Azure Data Lake Analytics, Databricks, Azure ML
- SSIS package execution in Azure
- ADF V1 - service for batch processing of time series data
- ADF V2 - data processing and workflow orchestration tool

Azure Data Factory

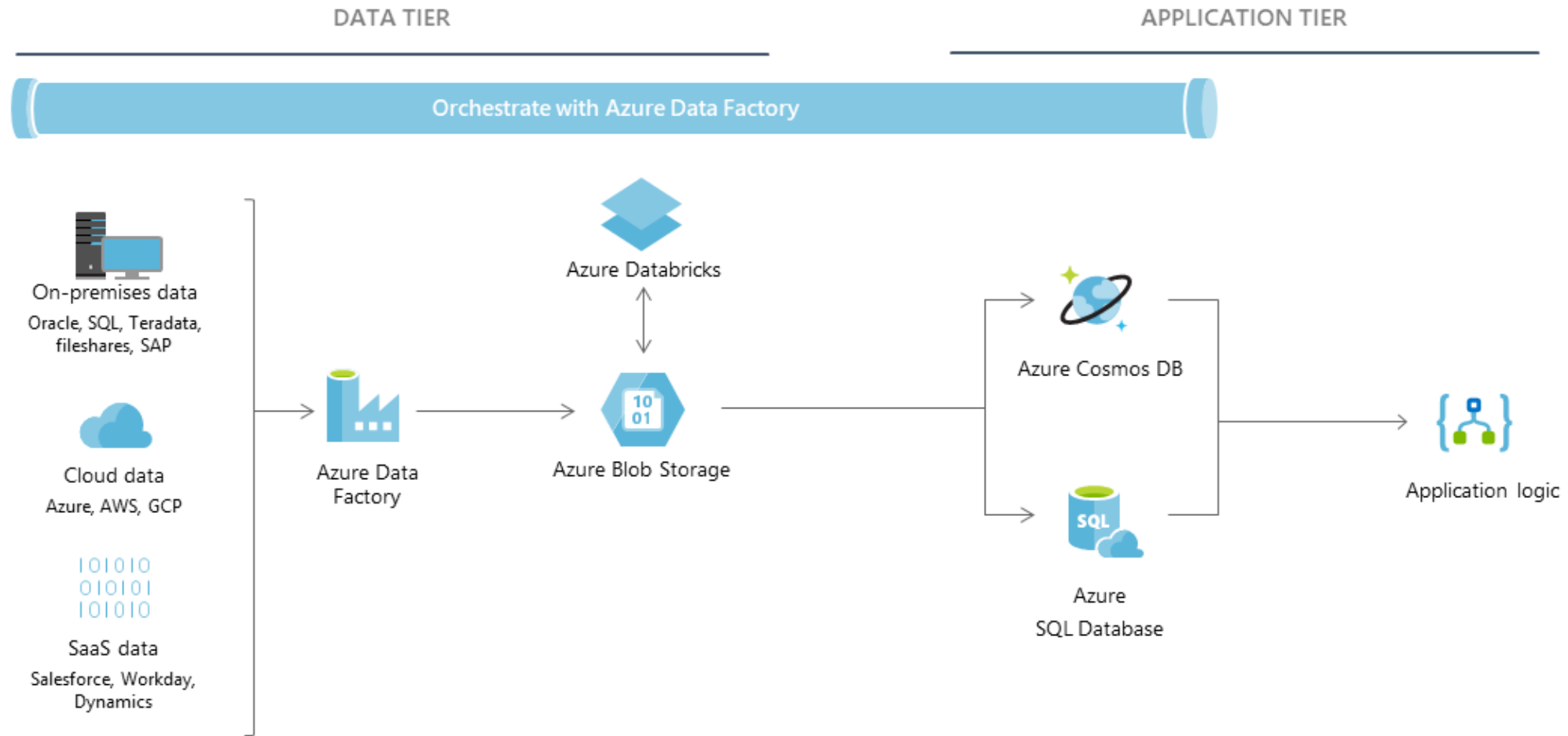


Azure Data Factory



Azure Data Factory also integrates with other services such as Azure HDInsight, Azure Data Lake, and Azure Machine Learning to allow customers to tailor the above architecture to meet their unique needs.

Azure Data Factory



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Azure Data Factory – Supported Sources/Sinks





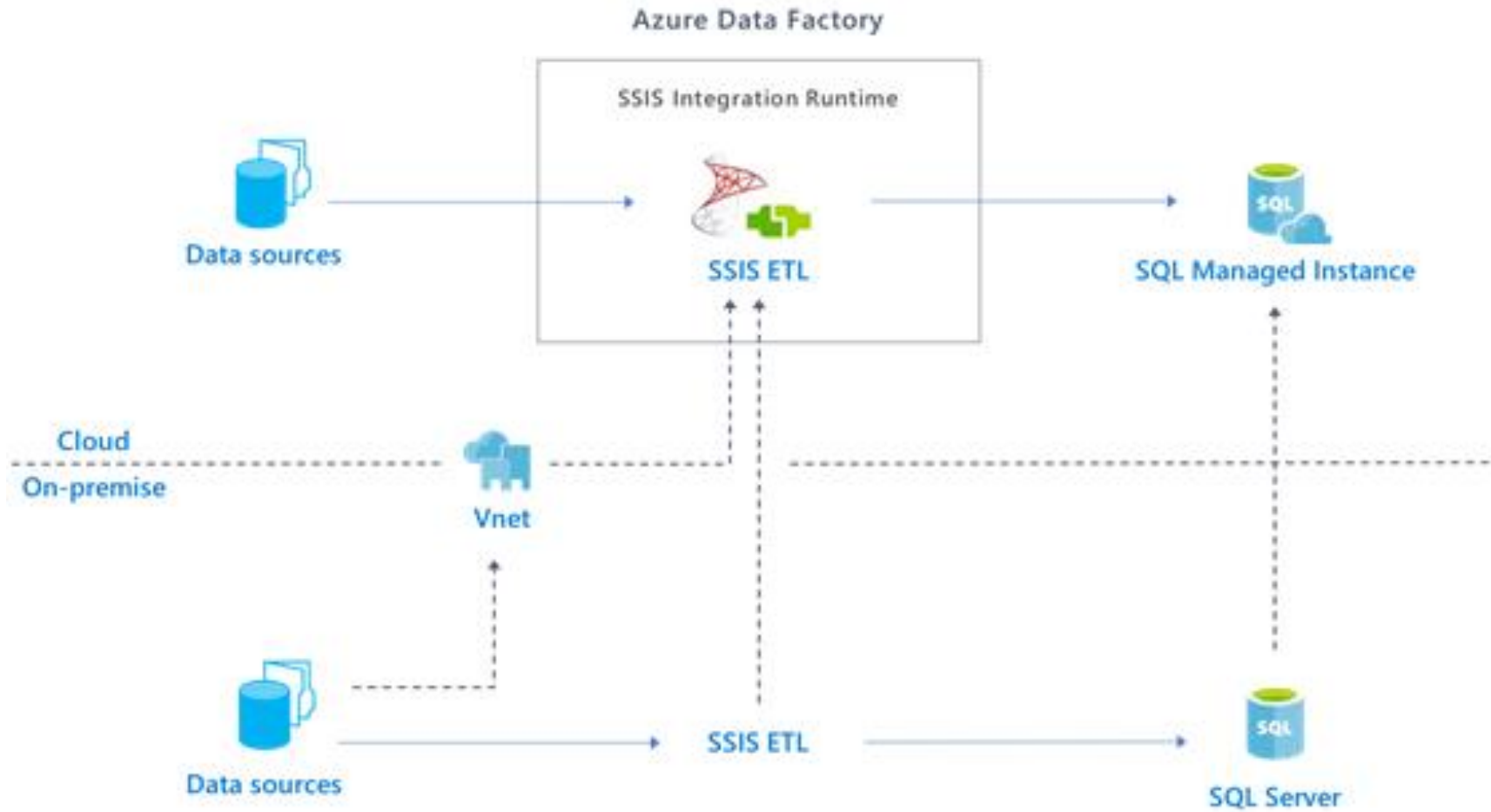
DEMO

AZURE DATA FACTORY

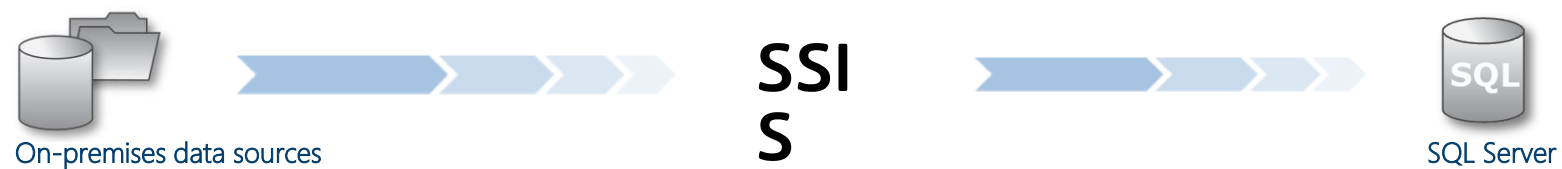
SSIS-IR

- Integration Runtime in Azure
- Fully integrated in Azure Data Factory
- Lift & Shift your SSIS Packages
- SSISDB on Azure SQL DB or Manages Instance
- SSIS Catalog Reports via SSMS
- Deployment directly from SSDT (only project deployment)
- For local development, install the azure feature pack for additional tasks and components
<https://docs.microsoft.com/en-us/sql/integration-services/azure-feature-pack-for-integration-services-ssis?view=sql-server-2017>

SSIS-IR

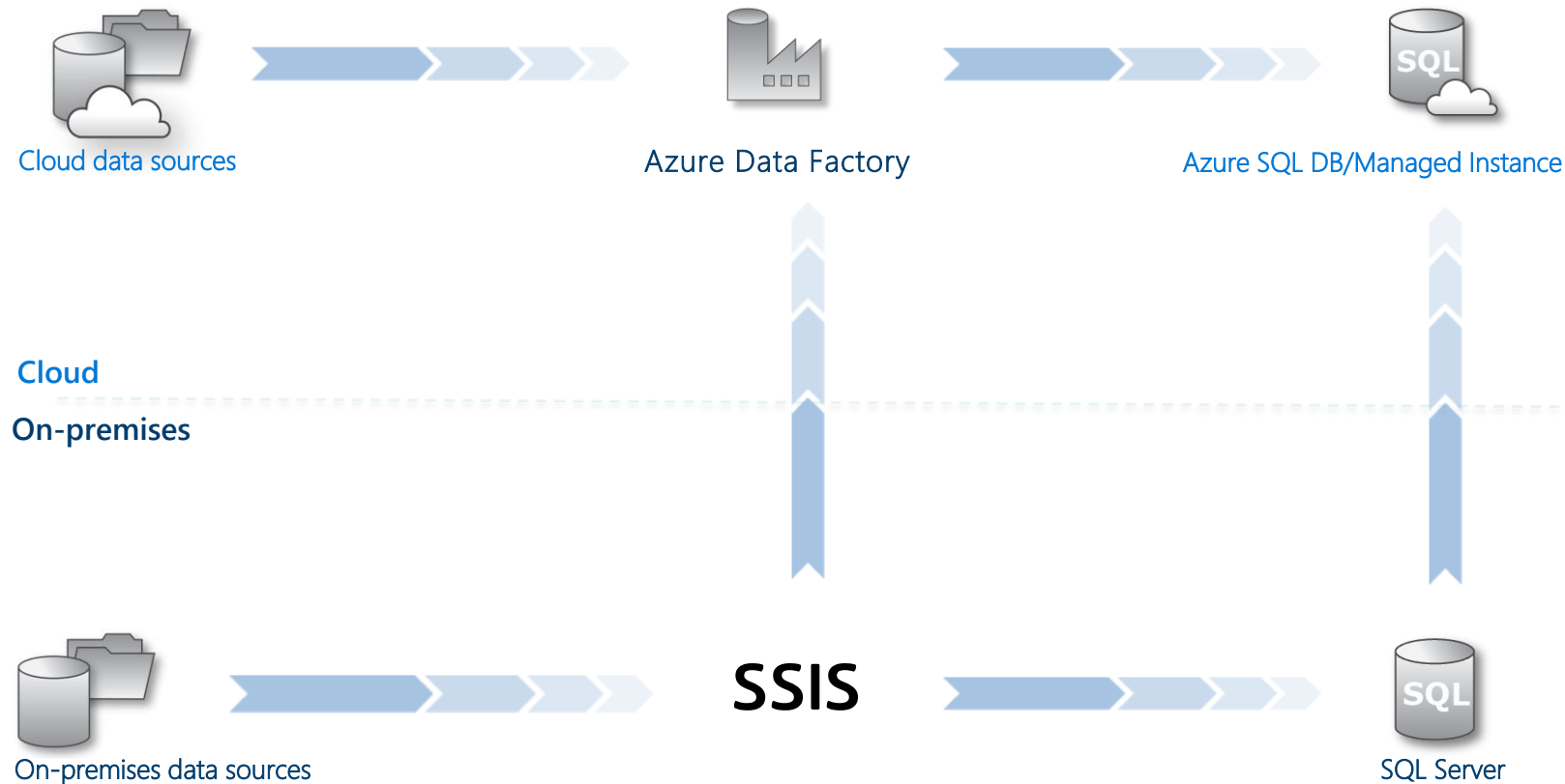


Microsoft ETL/ELT Services



- Running SSIS on premises:
 - OS: Windows/Linux
 - SCALABILITY: Scale-Out feature
 - EDITION: Standard/Enterprise
 - TOOLS: SSDT/SSMS to design/deploy/manage/execute/monitor packages
 - EXTENSIBILITY: ISVs can build components/extensions on SSIS
 - PRICING: Bundled w/ on-prem SQL Server

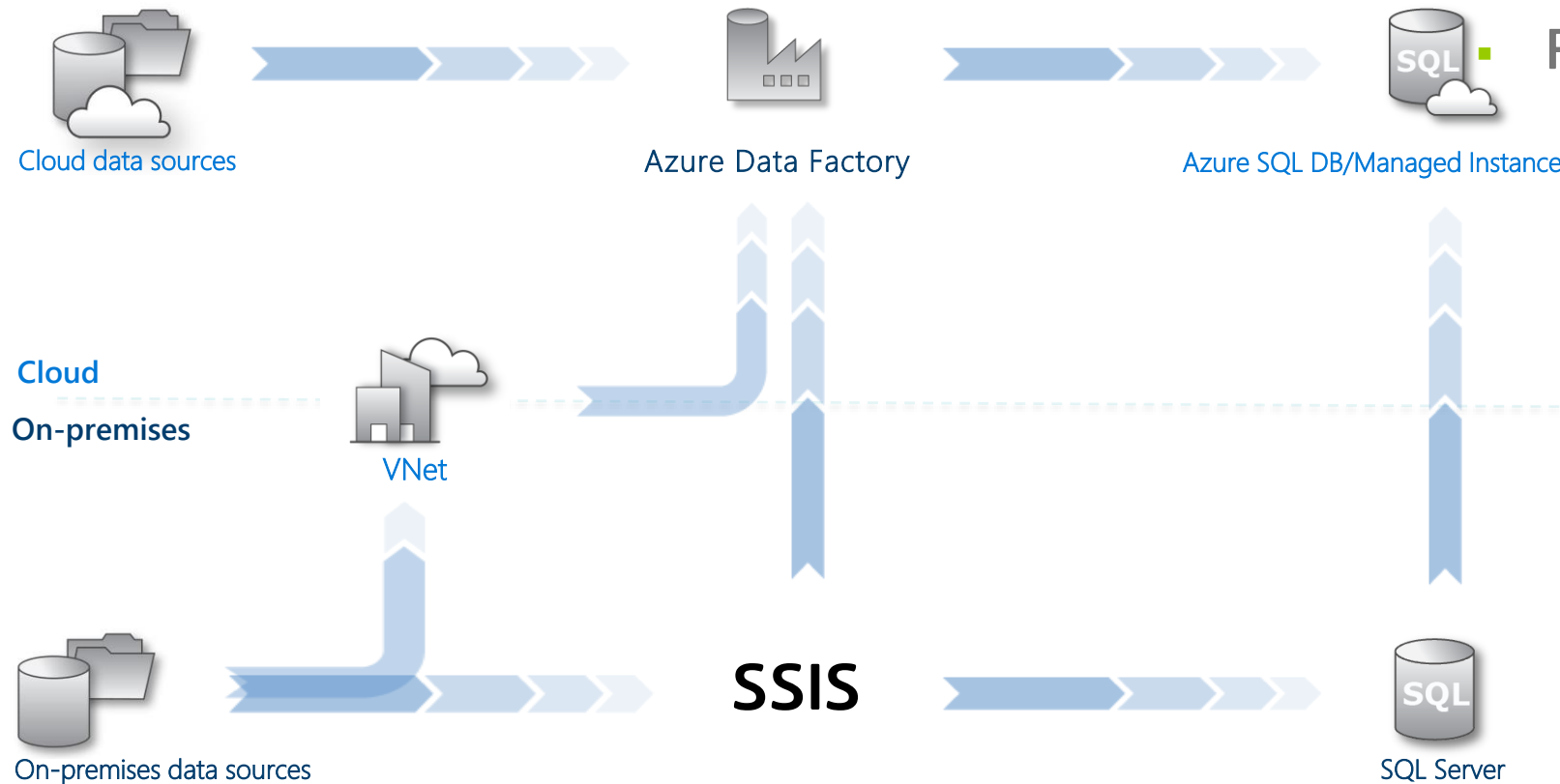
Microsoft ETL/ELT Services



Running SSIS in the cloud:

- **LIFT & SHIFT:** Use Azure SQL DB/Managed Instance (MI) to host SSISDB
- **SCALABILITY:** Use ADF to provision a managed cluster of Azure VMs dedicated to run your packages – Azure-SSIS Integration Runtime (IR)
- **EDITION:** Standard/Enterprise
- **TOOLS:** SSDT/SSMS + ADF app to design/deploy/manage/execute/monitor packages (activities)
- **EXTENSIBILITY:** ISVs can build components/extensions + SaaS on SSIS in ADF via custom setup + 3rd party licensing
- **PRICING:** Pay per hour + Azure Hybrid Benefit (AHB) to Bring Your Own License (BYOL)

Microsoft ETL/ELT Services



Running SSIS in the cloud:

- **HYBRID:** Join Azure-SSIS IR to a VNet that is connected to your on-prem network to enable on-prem data access
- **MODERNIZATION:** Schedule first-class SSIS activities in ADF pipelines via SSMS and chain/group them w/ other activities via ADF app
- **COMPLEMENTARY:** Splice/inject built-in/custom/Open Source/3rd party SSIS tasks and transformations in ADF pipelines
- **READINESS:** General Availability (GA) w/ 24/7 live-site support

Enterprise Edition – Introduction

- Enterprise Edition of Azure-SSIS IR allows you to use advanced/premium features:
 - Change Data Capture (CDC) components
 - Oracle/Teradata/SAP BW connectors
 - SQL Server Analysis Services (SSAS)/Azure Analysis Services (AAS) connectors/transformations
 - Fuzzy Grouping/Lookup transformations
 - Term Extraction/Lookup transformations
- Some of these features will also require you to install additional components, essentially customizing your Azure-SSIS IR (via Custom Setup Interface)



DEMO

SSIS-IR

Self Hosted Integration Runtime

The image shows two overlapping windows from the 'Integration Runtime Setup' wizard. The background window shows the initial selection screen with two options: 'Perform data movement and external computes' (represented by a cloud and server icon) and 'Lift-and-shift existing SSIS on Azure' (represented by a server rack icon). The foreground window is the 'Self-Hosted' configuration step, titled 'Integration Runtime Setup'. It asks the user to 'Choose the network environment of the data source/destination or external compute to which the integration runtime will connect to for data movement or dispatch activities:'. There are three options shown: 'Azure Public' (cloud icon), 'Self-Hosted' (server rack icon, which is highlighted with a blue border), and 'Linked Self-Hosted' (server rack icon with a chain link). Below these options, there is a section for 'External Resources' with a text description: 'You can use an existing self-hosted integration runtime that exists in another Data Factory. This way you can reuse your existing infrastructure where self-hosted integration runtime is setup.' At the bottom of the foreground window, there are three buttons: 'Cancel', 'Previous', and 'Next'.

Integration Runtime Setup

Integration Runtime is the native compute used by ADF to execute or dispatch activities.
Choose what integration runtime to create based on requirements.

Perform data movement and external computes.

Lift-and-shift existing SSIS on Azure.

Integration Runtime Setup

Choose the network environment of the data source/destination or external compute to which the integration runtime will connect to for data movement or dispatch activities:

Azure Public ⓘ

Self-Hosted ⓘ

Linked Self-Hosted ⓘ

External Resources:
You can use an existing self-hosted integration runtime that exists in another Data Factory. This way you can reuse your existing infrastructure where self-hosted integration runtime is setup.

Cancel Previous Next



DEMO

SELF HOSTED INTEGRATION RUNTIME

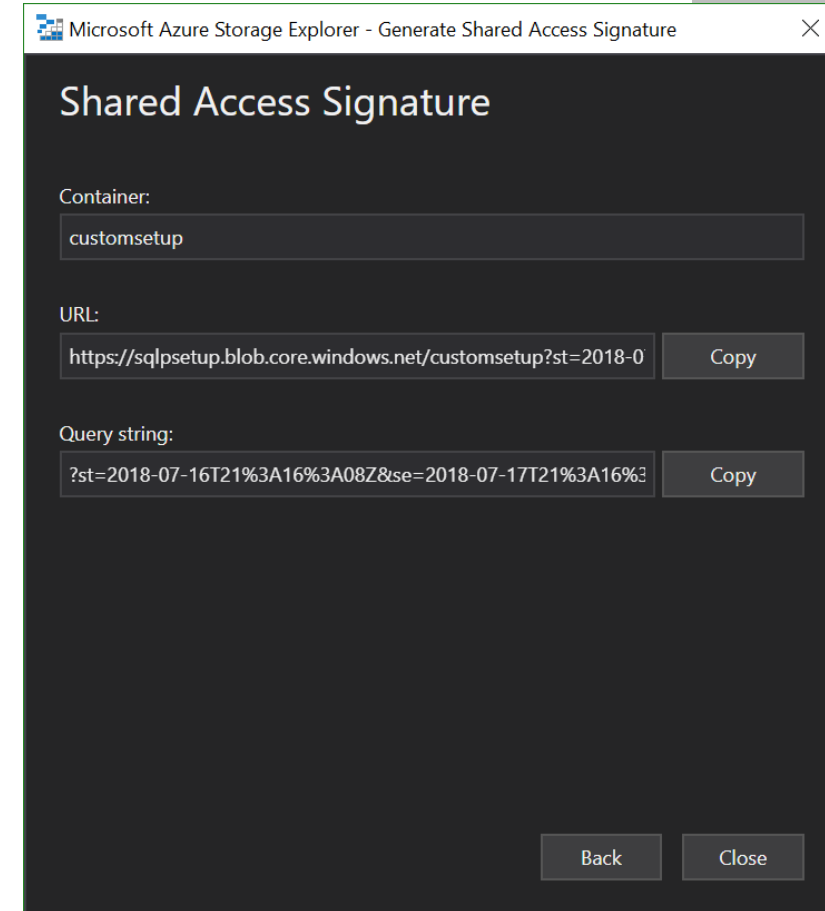
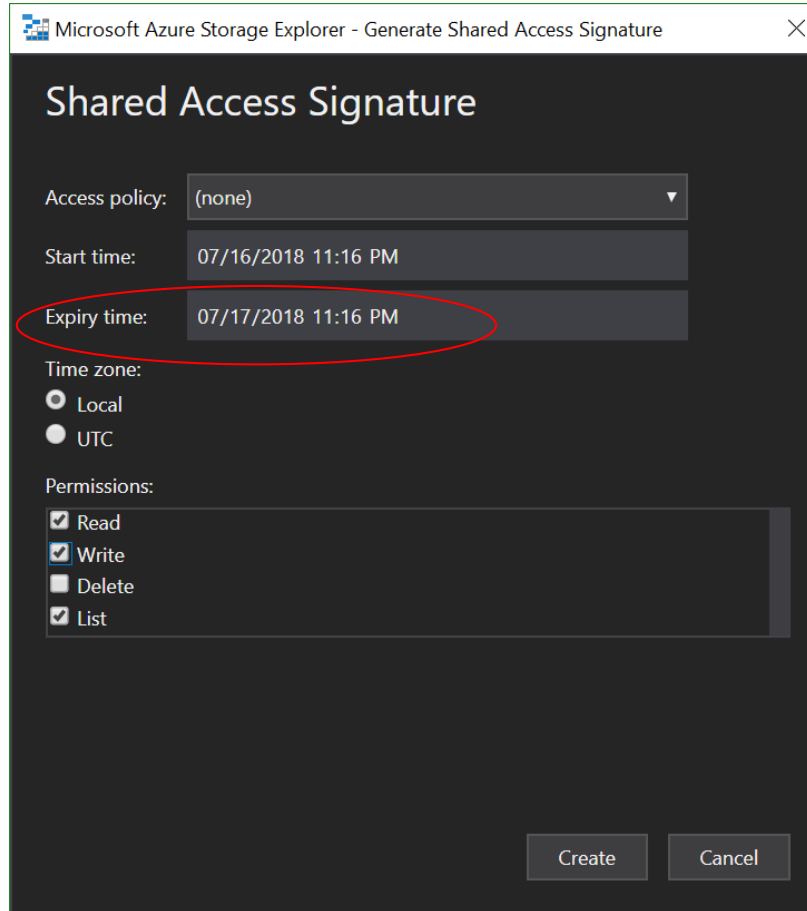
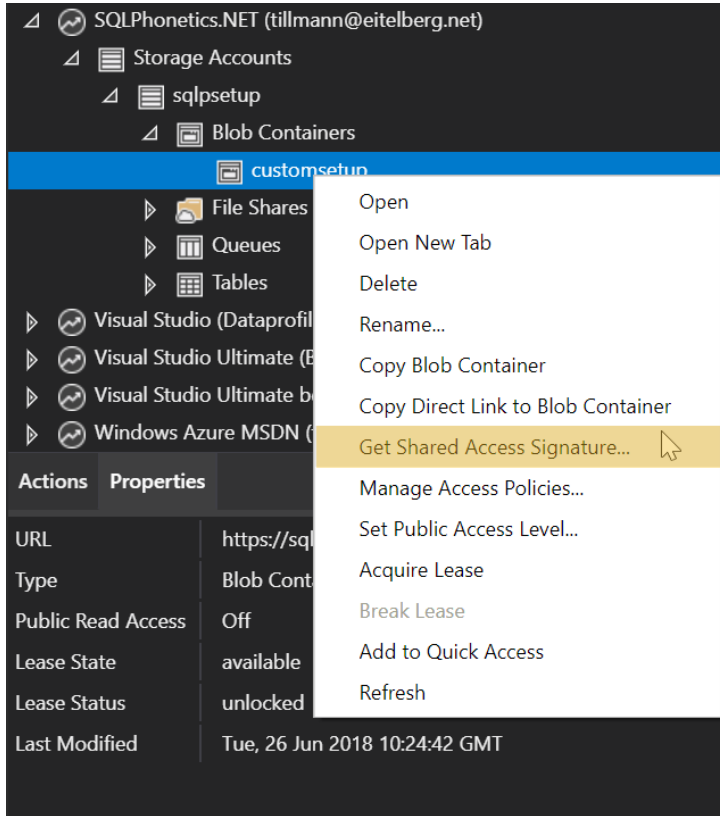
Custom Setup Interface – Introduction

- Custom setup allows you to add your own setup steps during the provisioning/reconfiguration of your Azure-SSIS IR to:
 - Alter the default operating configuration/environment (e.g. to start additional Windows services or persist access credentials for file shares)
 - Install additional components (e.g. APIs/assemblies/drivers/extensions)
- Instructions:
 - Prepare a script (main.cmd) + associated files and upload them into a blob container in your Azure Storage account
 - Provide Shared Access Signature (SAS) Uniform Resource Identifier (URI) of your container when you provision/reconfigure your Azure-SSIS IR
 - Each node of your Azure-SSIS IR will then download the script + files from your container and execute your custom setup with an elevated privilege
 - Upon completion, each node will upload the standard output of execution and other logs into your container
- SSIS-IR support the installation of free/paid/(un)licensed components

HEDDA.IO – Installation

```
Set-AzureRmDataFactoryV2IntegrationRuntime -ResourceGroupName $ResourceGroupName `
  -DataFactoryName $DataFactoryName `
  -Name $AzureSSISName `
  -SetupScriptContainerSasUri $MySetupScriptContainerSasUri `
  -Type Managed `
  -CatalogServerEndpoint $SSISDBServerEndpoint `
  -CatalogAdminCredential $serverCreds `
  -CatalogPricingTier $SSISDBPricingTier `
  -Description $AzureSSISDescription `
  -Location $Location `
  -NodeSize $AzureSSISNodeSize `
  -NodeCount $AzureSSISNodeNumber `
  -MaxParallelExecutionsPerNode $AzureSSISMaxParallelExecutionsPerNode
```

HEDDA.IO – Installation



HEDDA.IO – Installation

```
msiexec /i oh22is.HeddaDomainCleansing.msi /qn
```

```
msiexec /i oh22is.match.setup.msi /qn
```

```
"C:\Program Files (x86)\oh22information services  
GmbH\SQLPhonetics.NET for SSIS\oh22is.Licensing.exe"  
"<LICENSE ID>" "<PASSWORD>" "<CONTAINER>" "<BLOB  
STORAGE CONNECTION STRING>,"
```

CozyRoc - Installation

```
msiexec /i SSISPlus-x64.msi /quiet /l
    %CUSTOM_SETUP_SCRIPT_LOG_DIR%\install.log
"C:\Program Files (x86)\CozyRoc\SSIS\License.2017.exe"
    /azure /v /u {{Licensee}} /d /l
    "%CUSTOM_SETUP_SCRIPT_LOG_DIR%\license.log"
```

KingswaySoft - Installation

```
KingswaySoft.LicenseManager.exe
```

```
/a
```

```
/k XXXXX-XXXXX-XXXXX-XXXXX-XXXXX-XXXXX
```

```
/e name@company.com
```

```
/l "Company Name"
```

```
msiexec /i IntegrationToolkit-Dynamics365-x64.msi
```

```
/qn
```

```
/lv %CUSTOM_SETUP_SCRIPT_LOG_DIR%\install.log
```

```
ACCEPT_EULA=1
```

DEMO



Execute SSIS Package

The screenshot displays the Azure Data Factory (ADF) interface for configuring an 'Execute SSIS Package' activity within a pipeline named 'myPipeline6'. The interface is divided into several sections:

- Factory Resources:** A sidebar on the left showing a list of pipelines (myPipeline1 through myPipeline9) and datasets. 'myPipeline6' is selected.
- Activities:** A central pane showing a list of activity categories: Move & Transform, Batch Service, Databricks, Data Lake Analytics, General, HDInsight, Iteration & Conditionals, and Machine Learning.
- Activity Configuration:** The main workspace shows the 'Execute SSIS Package' activity configuration. The 'Settings' tab is active, displaying the following parameters:
 - Azure-SSIS IR:** myAzureSSISIntegrationRuntime
 - Windows authentication:** Checked, 32-Bit runtime: Unchecked
 - Domain:** MyDomain
 - Username:** AKV/username/latest (Azure Key Vault)
 - Password:** AKV/password/latest (Azure Key Vault)
 - Package location:** SSISDB
 - Package path:** demo/ScaleOutProject/Transformation.dtsx
 - Environment path:** e.g. FolderName/EnvironmentName
 - Logging level:** Basic (Customized is also visible)
 - Manual entries:** Checked

Execute SSIS Package

```
▪ DECLARE @execution_id bigint
▪ EXEC [SSISDB].[catalog].[create_execution]
▪     @package_name=N'TugaSample.dtsx',
▪     @execution_id=@execution_id OUTPUT,
▪     @folder_name=N'TUGA',
▪     @project_name=N'SQLPhonetics',
▪     @use32bitruntime=False,
▪     @reference_id=1,
▪     @useanyworker=True,
▪     @runinscaleout=True
▪ SELECT @execution_id
▪ DECLARE @var0 smallint = 1
▪ EXEC [SSISDB].[catalog].[set_execution_parameter_value]
▪     @execution_id,
▪     @object_type=50,
▪     @parameter_name=N'LOGGING_LEVEL',
▪     @parameter_value=@var0
▪ EXEC [SSISDB].[catalog].[start_execution]
▪     @execution_id,
▪     @retry_count=0
▪ GO
```

DEMO

Power Query Source

DEMO



HEDDA