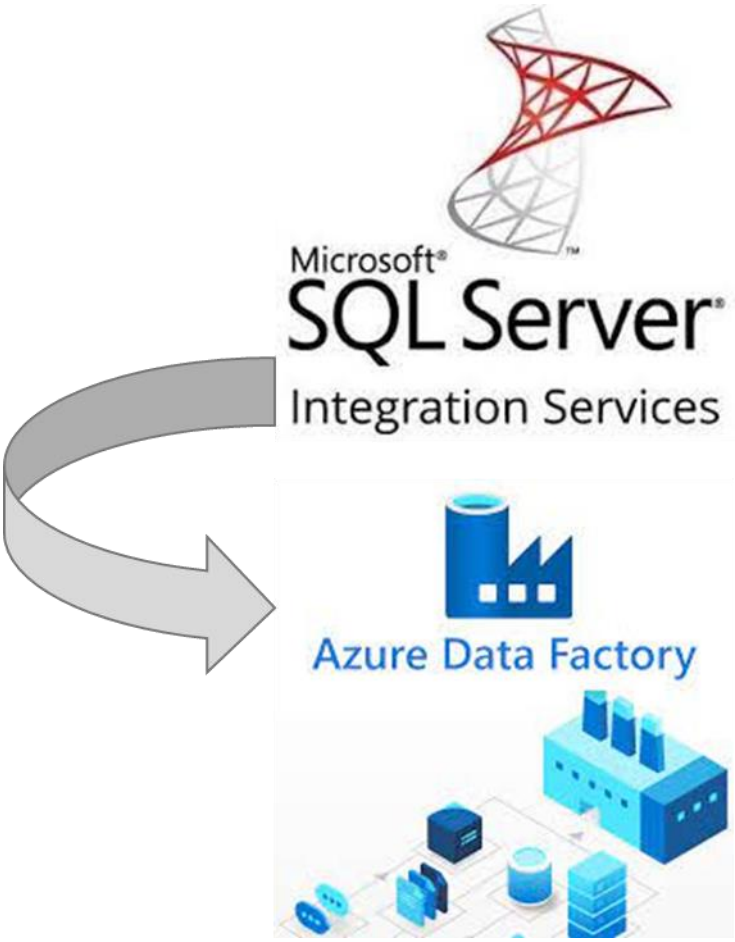

Lift & Shift SSIS Packages in Azure Cloud

ABSTRACT

This white paper explores the streamlined approach of migrating SQL Server Integration Services (SSIS) packages to Azure Data Factory (ADF) using the "Lift & Shift" methodology. The focus is on the architecture, advantages of this approach and the seamless integration with data warehouses through the ODBC connector.

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Azure Cloud Migration

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1. Introduction:

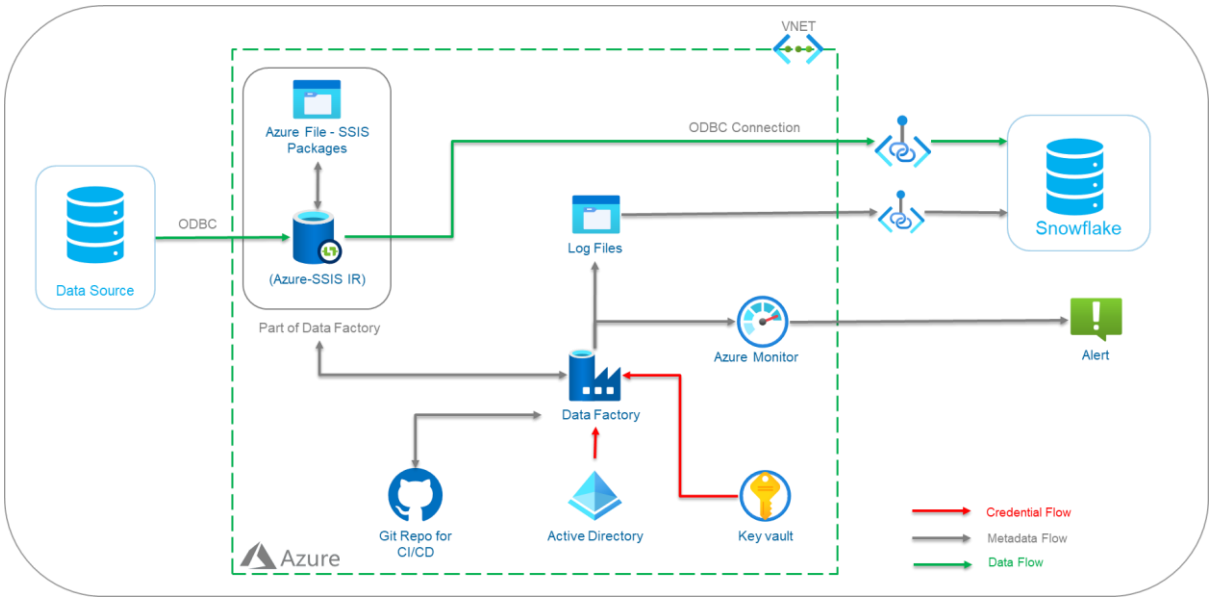
In the evolving data management landscape, migrating SSIS packages to Azure Data Factory is a strategic move for organisations seeking enhanced scalability, flexibility, and cost efficiency.

2. The Lift & Shift Approach:

The Lift & Shift approach simplifies migration by preserving existing SSIS package logic while harnessing the power of Azure's cloud infrastructure. This minimizes the effort required for migration and accelerates the transition process.

3. Architecture:

The below architecture illustrates the architecture to Lift and shift SSIS packages into ADF.



4. Solution Components:

Components	Description	Permission to User Group/User
Azure Subscription	Base container that comprises a group of related business or technical resources.	Azure Reader Role
Resource Group	Container to hold resources for the solution	Azure Contributor Role
Azure Data Factory	Cloud Integration & orchestration platform	Azure Contributor Role
Azure SSIS Integration Runtime	Execution engine for SSIS Packages	Azure Contributor Role
Azure Storage	Cloud Storage for: • SSIS packages • Snowflake driver	Azure Contributor Role
Azure Key Vault	Secrets & credential store	Azure Contributor Role
Snowflake (hosted on AWS)	Cloud Data Warehouse for the Solution.	Snowflake Read/Write Access
Snowflake ODBC Driver	Snowflake ODB driver installed on Azure SSIS Integration Runtime (Customized SSIS-IR)	N/A
Git	Git Repository for code versioning & CI/CD	Read/Write Access
Virtual Network	Virtual network	N/A
Private Link	Private link/endpoint to connect to Snowflake secretly avoiding public network	N/a

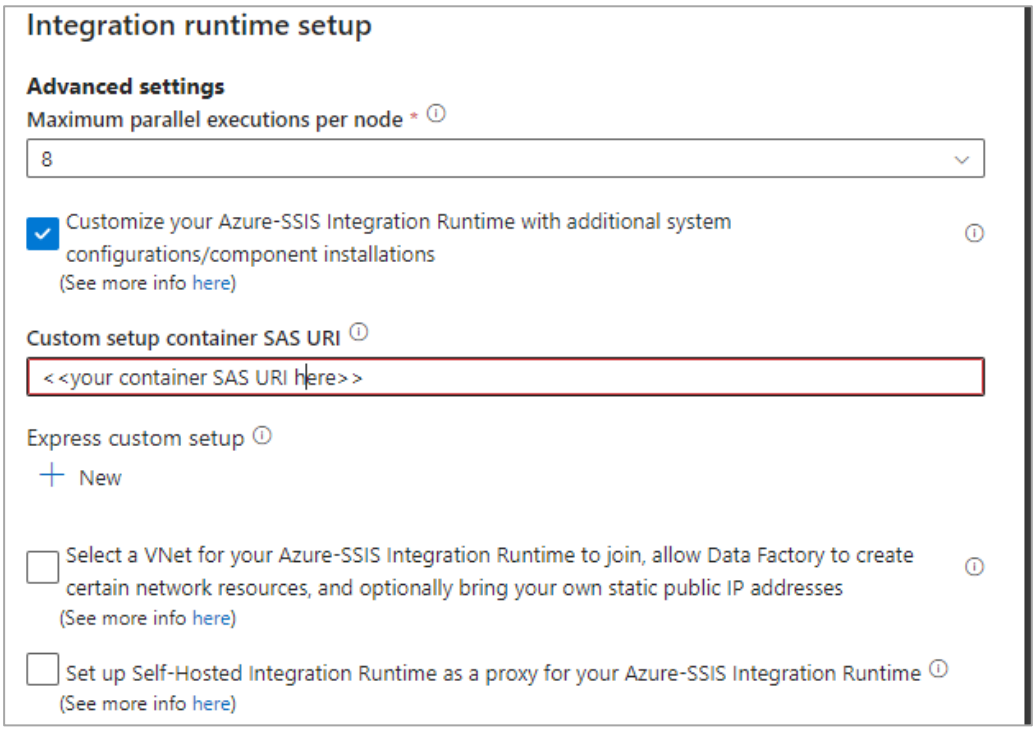
5. Connecting to Data Warehouses with ODBC:

Utilizing the ODBC connector facilitates a smooth connection between Azure Data Factory and various data warehouses. This connector ensures compatibility and efficient data transfer between Azure Cloud and ODBC datastore via **Azure SSIS Integration Runtime.**

Azure SSIS-IR with the required OBDC driver can be initiated using the following steps:

- Place the OBDC drivers required for the connections into the File Store.
- Create a config file with the name “main.cmd” in the file store. Write the command to install the driver into the main.cmd file.
- Create SAS URI for the container holding the main.cmd file & driver.

- Create the SSIS-IR mentioning the custom setup container SAS URI.



6. Benefits of Lift & Shift:

The benefits of this approach are as below:

1. Cost Efficiency: Leveraging Azure's pay-as-you-go model optimizes costs, ensuring resources are allocated efficiently.
2. Scalability: Azure's elastic scalability allows seamless handling of growing data volumes, ensuring robust performance.
3. Reduced Downtime: Minimal modifications to SSIS packages mean reduced downtime during migration, ensuring business continuity.
4. Zero Human Error: Minimal modification to SSIS packages leads to zero human error in existing business logic.

6. Conclusion:

The SSIS Lift & Shift approach to Azure Data Factory migration, coupled with the ODBC connector, empowers organizations to adapt to the demands of modern data management. This streamlined process offers a cost-effective and scalable solution while minimizing disruptions to daily operations.

7. References:

1. Microsoft documentation: Deploy and run SSIS packages in Azure - SQL Server Integration Services (SSIS) | Microsoft Learn

2. Detailed Blog: Effortlessly migrate your SSIS package to Azure cloud and seamlessly load data into Snowflake (hosted on AWS) with ease. | by Atanu Das | Medium