KPI PARTNERS

Simplifying Data. Scaling Enterprise AI.

Synapse to Microsoft Fabric Accelerator

GenAI-powered migration from Azure Synapse Analytics to Microsoft Fabric.

Accelerate Azure Synapse to Microsoft Fabric Migration:
Up to 2X Faster, 60–80% Lower Cost.

The Modernization Challenge

Azure Synapse Dedicated SQL Pool estates require thoughtful migration to Microsoft Fabric despite dialect proximity. Distribution strategies (HASH, ROUND_ROBIN, REPLICATE), workload management configurations, PolyBase external tables, and Synapse-linked pipelines must be re-architected for Fabric's capacity model and auto clustering semantics. Manual migration fails to capture these nuances and leaves performance gains on the table.

Risks of Inaction

- Continued Synapse Dedicated SQL Pool DWU and storage costs with no feature roadmap
- Distribution strategies do not port cleanly; manual migration misses performance tuning
- PolyBase external tables and workload groups require re-architecture, not lift-and-shift
- Synapse-linked ADF pipelines fragment across tools during uncoordinated migration
- Delayed access to Fabric-exclusive capabilities: Copilot, Direct Lake, OneLake shortcuts

The KPI Partners Solution: Synapse to Fabric Migration Accelerator

A next-generation GenAI-powered, metadata-driven migration accelerator purpose-built for Azure Synapse to Microsoft Fabric:

- Assessment module that analyzes your Synapse Dedicated SQL Pool to produce timeline, resource, and cost estimates for complete migration
- GenAI-driven conversion of Synapse T-SQL into Fabric Warehouse T-SQL (highest dialect proximity, **85%+** automation rate)
- DMV-based distribution analysis preserves HASH where optimal, drops REPLICATE hints that Fabric handles automatically, flags skew-prone tables for architect review
- PolyBase external table conversion to Fabric Shortcuts (preferred) or Lakehouse-managed tables
- Automated conversion of Synapse-linked ADF pipelines to Fabric Data Pipelines
- Resource class and workload group analysis translated into Fabric capacity sizing recommendations
- Built-in validation: Syntactic checks, dry-run execution, and reconciliation between Synapse and Fabric

Our Approach

Phase 1: Intelligent Synapse Assessment

Automated scan of the Synapse Dedicated SQL Pool via sys.dm_pdw_* DMVs and catalog views to quantify scope, complexity, and cost, including distribution analysis, data skew profiling, PolyBase inventory, and capacity sizing, enabling confident executive approval.

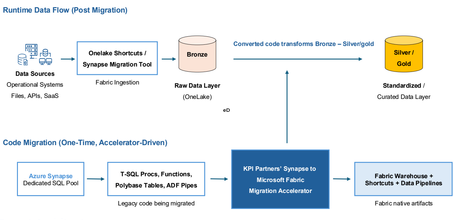
Phase 2: AI-Based Automated Conversion

GenAI-powered conversion of Synapse DDL, stored procedures, views, external tables, and linked ADF pipelines into Microsoft Fabric native artifacts with built-in validation, reconciliation, and human-in-the-loop review.

3-Week Quick Start

- Run KPI Partners' Assessment accelerator on your Synapse Dedicated SQL Pool to receive timeline, resources, and cost estimate for complete migration to Microsoft Fabric
- DMV-based skew analysis and Fabric distribution recommendation per table
- PolyBase external table inventory with Fabric Shortcut conversion plan
- Fixed-price: $10,000
- Scope: Convert 10 Synapse artifacts (60% simple tables/views, 20% medium stored procs, 20% complex linked ADF pipelines or external tables) that you select

Technical Architecture Overview



Target Architecture

Current State

- Azure Synapse Analytics Dedicated SQL Pool (formerly SQL DW)
- Hash, round-robin, and replicated tables with DWU-based capacity
- Stored procedures, views, CTAS patterns
- PolyBase external tables over ADLS Gen2
- Resource classes, workload groups, classifiers

Modernized Future State

- Microsoft Fabric as unified analytical platform
- Fabric Warehouse (T-SQL) with autoclustering for dimensional and fact layer
- Fabric Lakehouse (Delta) via OneLake for large-volume data
- Fabric Shortcuts replacing PolyBase external tables
- Fabric Data Pipelines replacing Synapse-linked ADF
- Direct Lake mode for Power BI (zero-copy over OneLake)

Infrastructure Requirements

- Microsoft Fabric capacity (F64 or higher for production)
- Azure subscription with existing Synapse and Fabric in same tenant
- Azure OpenAI deployment in client tenant
- ADLS Gen2 storage for OneLake shortcuts
- Fabric Git integration with Azure DevOps
- Minimal networking changes (same tenant migration)

Technical Benefits and Requirements

Technical Requirements	Technical Benefits
Microsoft Fabric workspace with Warehouse and Lakehouse capability	Highest automation rate (**85%+**) across all source systems due to T-SQL dialect proximity
Azure OpenAI access	DMV-based skew analysis drives optimal Fabric distribution strategy
Synapse source read access (SELECT on catalog views and DMVs)	PolyBase external tables converted to Fabric Shortcuts (zero-copy access)
Python 3.11+, VS Code or equivalent IDE	Synapse-linked ADF pipelines migrate natively into Fabric Data Pipelines
Existing ADLS Gen2 accessible from Fabric (typical)	Capacity sizing recommendations derived from Synapse workload telemetry
Azure DevOps or GitHub for artifacts-as-code	Embedded reconciliation and audit tracking per object

Success Story

Fortune 500 Retail Enterprise

Global omnichannel retailer consolidating analytics estate onto Microsoft Fabric

- **1,800+** Synapse objects (tables, views, stored procs, pipelines)
- **15 TB** data volume across dimensional and fact tables
- **2X** faster migration than prior manual approach
- Up to **95%** automation efficiency on T-SQL conversion
- **40%** improved query performance post-migration
- Completed in **~5** months end-to-end

Business Benefits

- **60-80%** reduction in migration timeline and cost over manual methods
- Up to **95%** automation efficiency given dialect proximity to Fabric Warehouse T-SQL
- DMV-driven distribution analysis ensures optimal Fabric performance
- Seamless consolidation of Synapse pipelines into Fabric Data Pipeline

Outcome

Faster migration, lower platform cost, improved query performance, and full access to Fabric-exclusive capabilities including Copilot and Direct Lake.

Testimonial

> The assessment identified distribution and skew issues we had not addressed in Synapse and corrected them during migration to Fabric. We landed on a cleaner, faster platform than we started with.
>
> **— Head of Analytics Platform**

Why KPI Partners

- Microsoft Fabric and Azure specialist partner
- Microsoft Solutions Partner for Data & AI (Azure) and Digital & App Innovation
- **75+** Azure Synapse and ADF implementations delivered
- **100+** enterprise data modernization programs
- Proprietary Fabric accelerator with reusable Synapse-to-Fabric pattern library
- Deep Synapse, PolyBase, and Azure-native migration experience

SCHEDULE A DEMO TODAY! | See how KPI Partners accelerates Microsoft Fabric modernization with measurable business outcomes.

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