

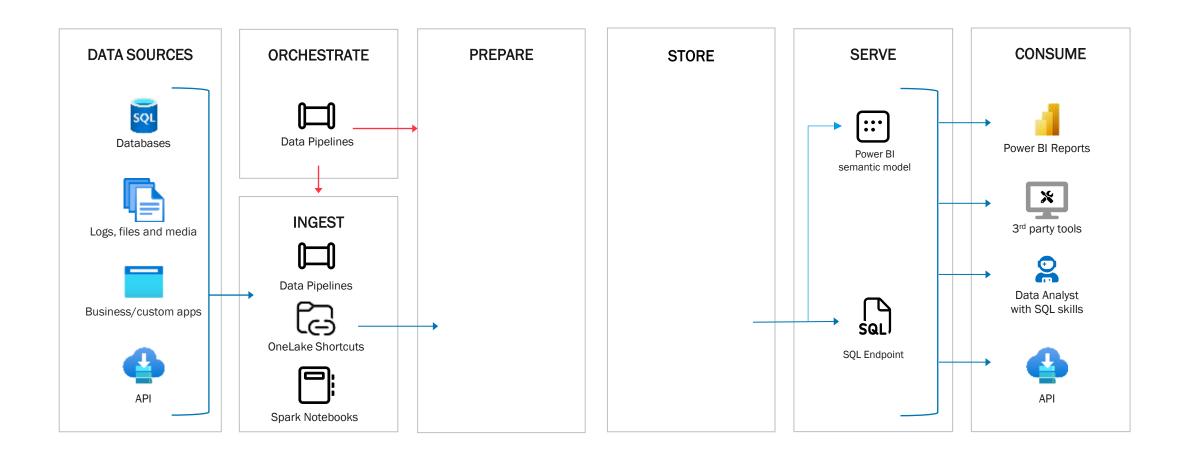
A live end-to-end demonstration of Microsoft Fabric Lakehouse

Just Blindbæk

Principal Architect and MVP, twoday, Denmark

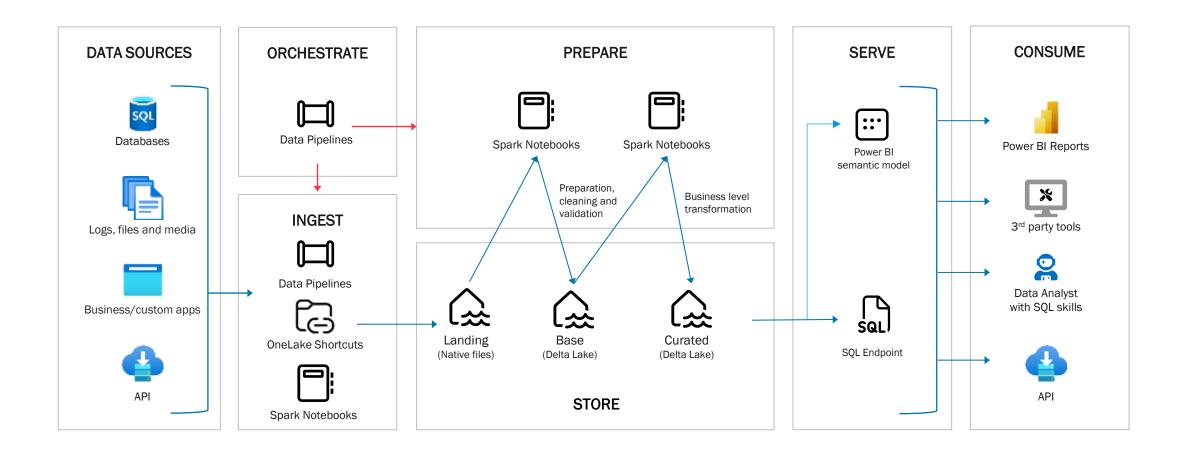


Dataflow in a Data Lakehouse Architecture



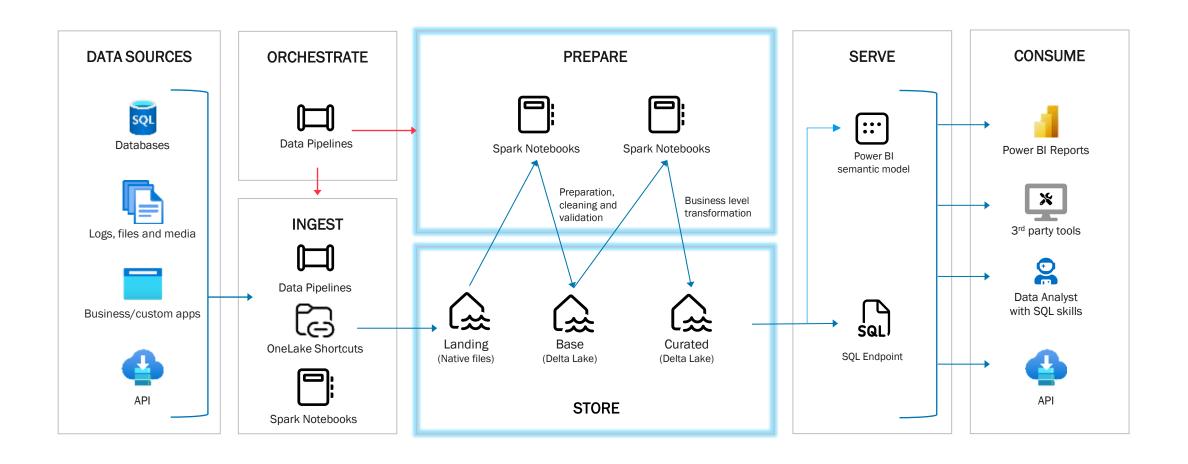


Dataflow in a Data Lakehouse Architecture





Dataflow in a Data Lakehouse Architecture







Accelerate Development using a Metadata-Driven Approach

Purpose:

- Accelerate Lakehouse platform development.
- Ensure quality and robustness.
- Simplify maintenance and operations.

Design Principles:

- Metadata-driven approach: Metadata in Azure SQL controls data ingestion and notebook processing.
- Consistent naming standards: Uniform naming conventions across the platform.
- Proven architectural decisions: Based on years of experience with data platforms.

Overview:

- Functions defined in AquaVilla_functions notebook.
- Metadata sourced from an Azure SQL Database (or JSON/YAML), resulting in a unified structure.

Key Steps:

- 1. Define Source Systems & Objects: Configure load patterns.
- 2. Define Processing Patterns: Streamline data movement.
- 3. Define Orchestration: Automate workflows.



Layers in the Data Lakehouse

The textbook example of a Data Lakehouse has three layers, where data is moved between.

LANDING



- One to one with source
- Native format for files (json, csv, xml etc)
- Parquet for columnar sources
- Data is immutable
- Store duplicate copies
- No schema validation
- Full history / "Stored forever"

BASE



- Cleansed
- Deduplicated
- · Quality enforced
- Error handled
- Renamed attributes
- Exploded/projected data
- Null values handled
- Functional history (SCD2/4)
- Keys may be applied

CURATED



- Business level data
- Consolidation logic
- Aggregated
- Structured in fact and dimensions
- Ready to serve for consumers



Want to learn more?

- Come visit twoday in the Expo Hall
 - Experts to help and answer questions
 - Two daily live demos
 - Or a private demo?
- Article:
 <u>https://www.kapacity.com/knowledge/from-ingest-to-insights-building-robust-data-lakehouses-with-microsoft-fabric</u>



twoday

Where tomorrow is made