



Microsoft Fabric

This presentation is the property of Microsoft and is intended for informational and educational purposes only. You may use, copy, and distribute this presentation for your personal, non-commercial purposes. You may not modify, alter, or create derivative works from this presentation without the prior written consent of Microsoft. You may not use this presentation to misrepresent, defame, or disparage Microsoft or its products, services, or affiliates. You may not use this presentation to endorse or promote any other products, services, or organizations without the prior written consent of Microsoft.

By using this presentation, you agree to abide by these terms. If you do not agree, you must not use this presentation. Microsoft reserves the right to change these terms and conditions at any time without notice. Microsoft disclaims any and all warranties, express or implied, relating to this presentation, including but not limited to the accuracy, completeness, timeliness, or suitability of the information contained herein. Microsoft is not liable for any damages, losses, or liabilities arising from your use of or reliance on this presentation.

Please review the terms of use posted in the content library.

#FABCONSQLCON2026

FABCON

Microsoft Fabric
COMMUNITY CONFERENCE

SQLCON

Microsoft SQL
COMMUNITY CONFERENCE

ATLANTA MARCH 16 - 20, 2026

Sound off.
The mic is all yours.
Influence the product roadmap.

Join the Fabric User Panel



Share your feedback directly with our
Fabric product group and researchers.

<https://aka.ms/JoinFabricUserPanel>

Join the SQL User Panel



Influence our SQL roadmap and ensure
it meets your real-life needs

<https://aka.ms/JoinSQLUserPanel>



Empowering Lakehouse Solutions with Fabric Warehouse

Christian Henrik Reich

(Christian) Henrik Reich

- Sr Solution Engineer @ Microsoft
- Redi-School teacher. Teaching Microsoft AI & ML Tech immigrant and refugee women in Denmark
- Ex-Pluralsight assessment test author
- Øredev conference program committee member since 2019 (Malmö)
- Agile Global Summit 2025 program committee member (Tallinn)
- Pass Data Community Summit Program committee member 2023 & 2025 (Seattle)
- Holding 23 active and 3 historical Microsoft Certificates
- Been developing almost everything 😊

Delta and Parquet: Integer, GUID/UUID or SHA256 as ID?

 Christian Henrik Reich · 4 min read · May 7, 2024

 9  1    



Lakehousing: A Schema-change strategy beyond Spark's mergeSchema


 Christian Henrik Reich · 7 min read · May 12, 2025

 44     



Spark performance: Let cache() or persist() handle your temporary data when possible

 Christian Henrik Reich · 6 min read · Jul 19, 2024

 6  1    



Microsoft Fabric: Consider making spark.createDataframe obsolete in your Spark Notebook solutions

 Christian Henrik Reich · 5 min read · May 4, 2025

 26     



Delta and Par GUID/UUID or

Christian Henrik Reich 4 min read

9 Q 1



Spark perform persist() handl data when pos

Christian Henrik Reich 6 min read

6 Q 1



Microsoft Fabric: Introduction to 3D programming

Christian Henrik Reich 5 min read · Jun 5, 2025

Q



```
136 axes = fig.add_subplot(111, projection='3d')
137
138 clear_mattplot_axes(axes)
139
140 precalc_animation = animation.FuncAnimation(fig, partial(ani
141 precalc_animation.save("textured_cube_with_edges.gif", write
142
143 plt.close(fig)
144
145 Image(filename="textured_cube_with_edges.gif")
146
```

[11] ✓ 15 sec - Command executed in 15 sec 867 ms by Henrik Reich on 10:07:55 PM, 6/05/25



na-change k's



ider making e obsolete in solutions

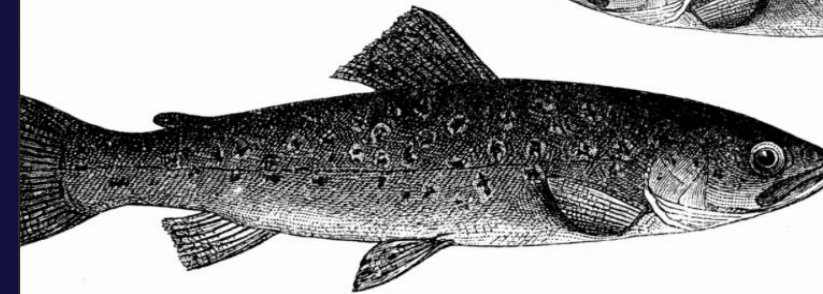
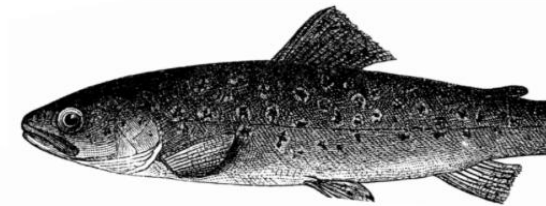


O'REILLY

The Data Engineer's Guide to Microsoft Fabric



Building Modern
Lakehouse Solutions



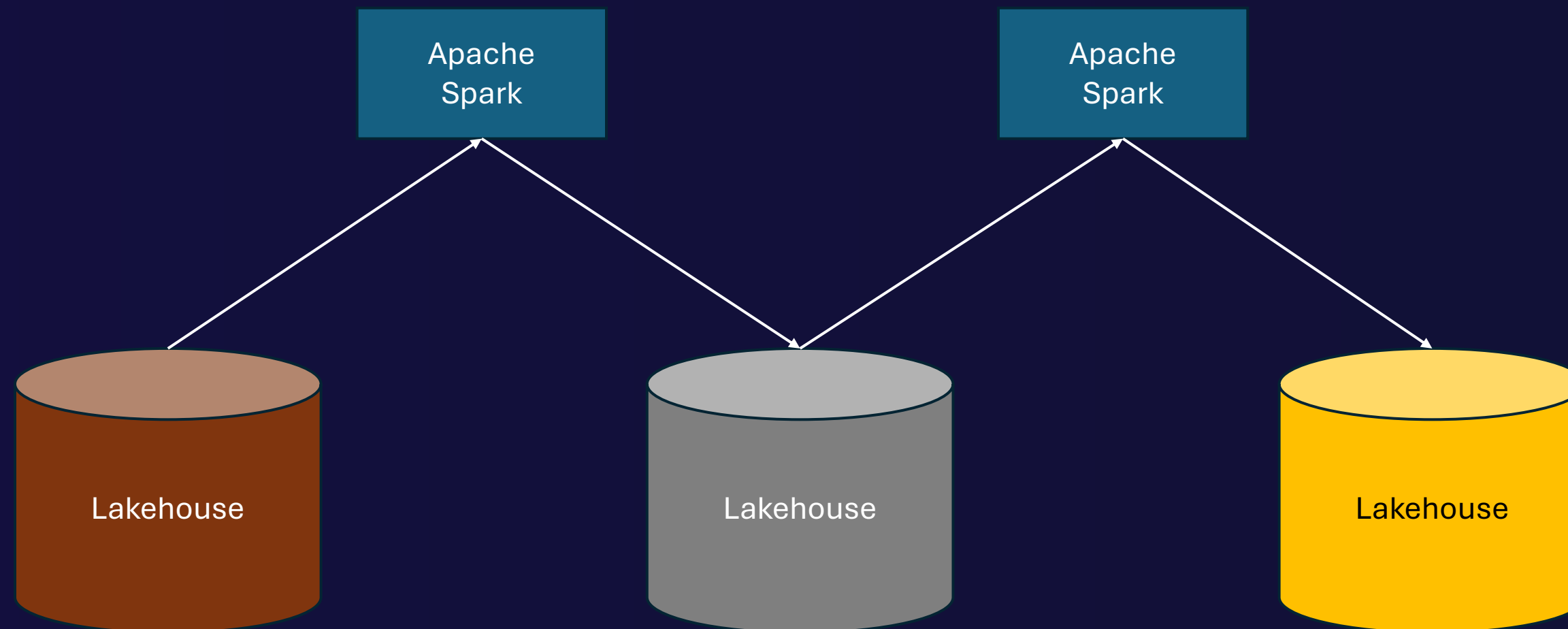
Christian Henrik Reich

Agenda

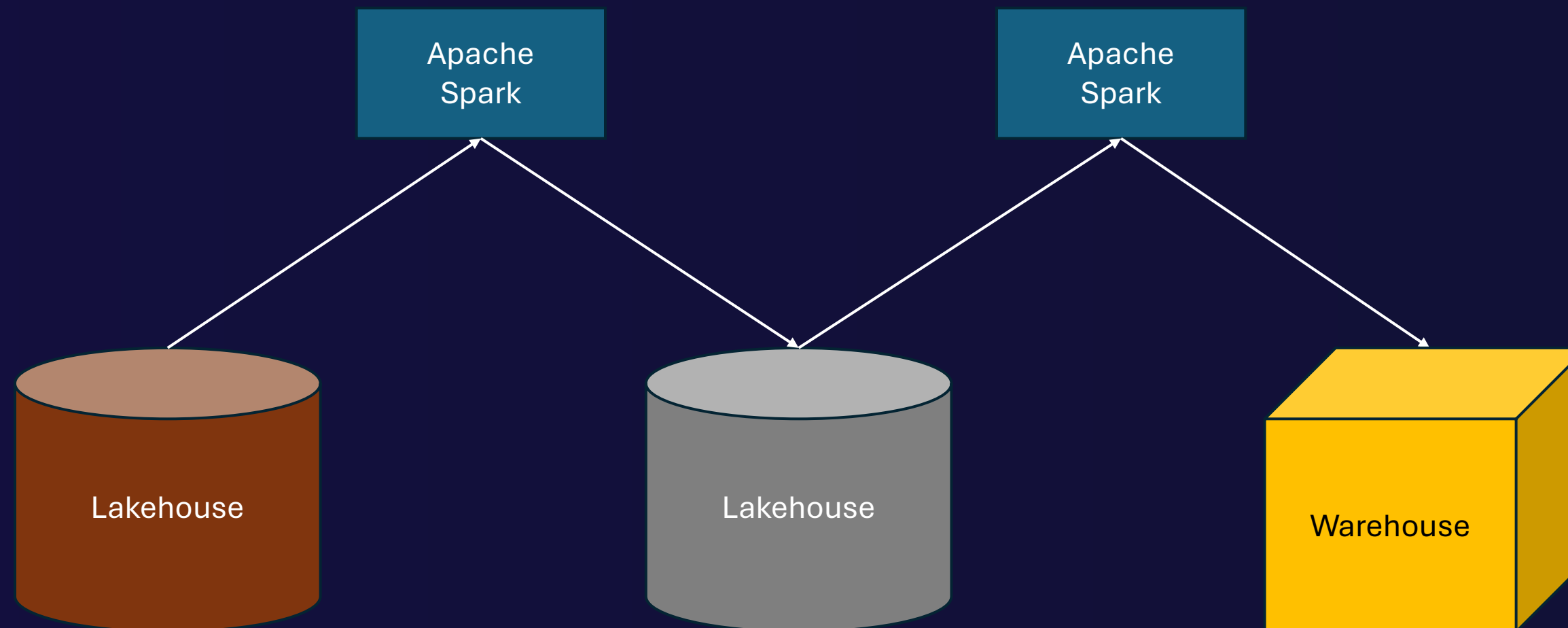
- Setting the Scene and Debunking Myths
- Internals
- Query Plans (+ demo)
- Observability (+ demo)
- Interoperability (+ demo)
- Q&A

Setting the Scene

The Lakehouse Solution



The Lakehouse Solution with Warehouse



Debunking myths

“Fabric Warehouse is behind Spark and Lakehouses”

“Fabric Warehouse is behind Spark and Lakehouses”

- Depends, we have the same features need to build a solution

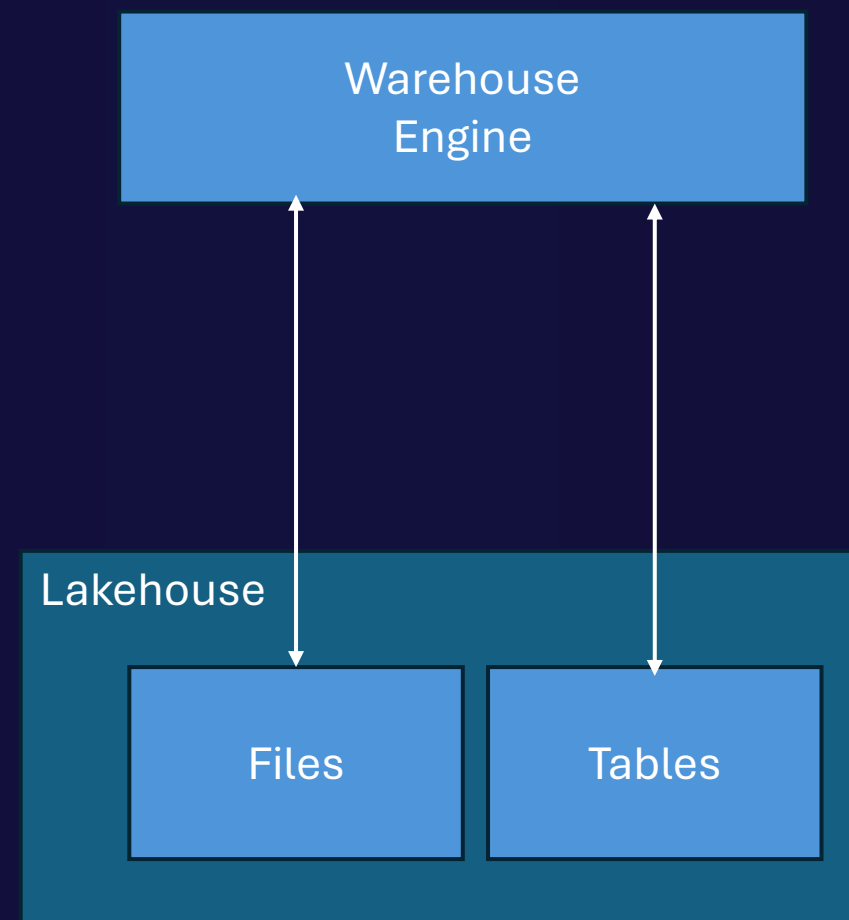
“Fabric Warehouse is rebranded Synapse Dedicated Pools”

“Fabric Warehouse is rebranded Synapse Dedicated Pools”

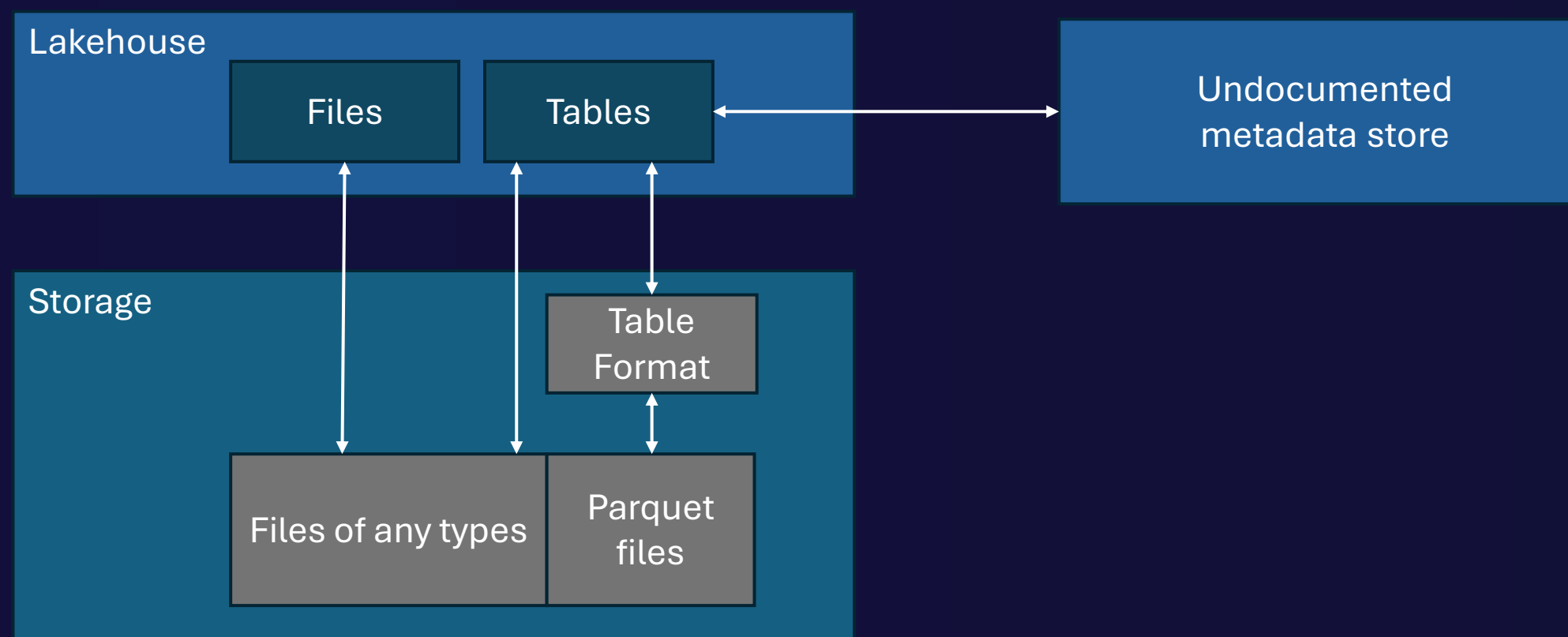
- No, Fabric Warehouse is a rewritten service with fully elastic compute.

“Fabric Warehouse is not getting the attention from Microsoft”

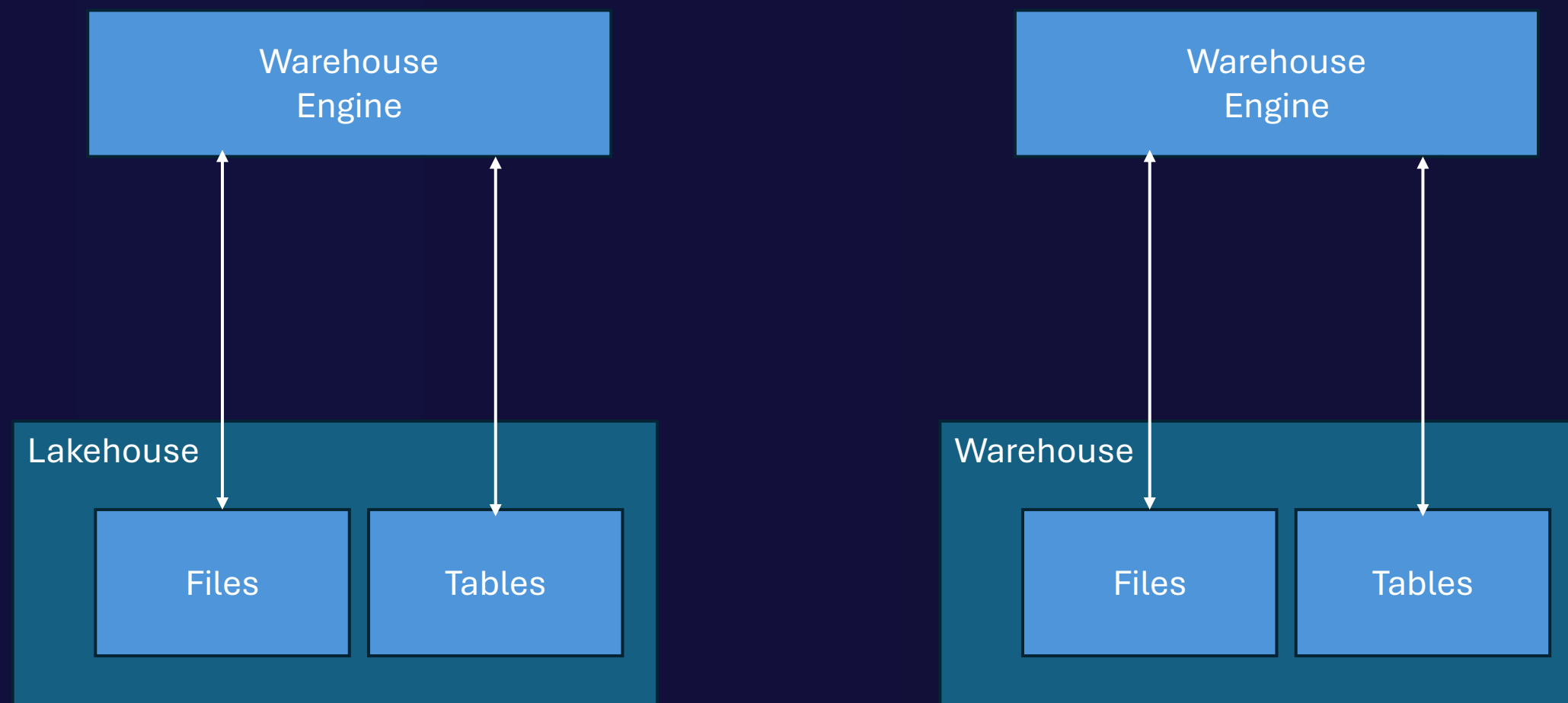
SQL Analytics Endpoint or Fabric Warehouse



OneLake – Metadata store



SQL Analytics Endpoint or Fabric Warehouse



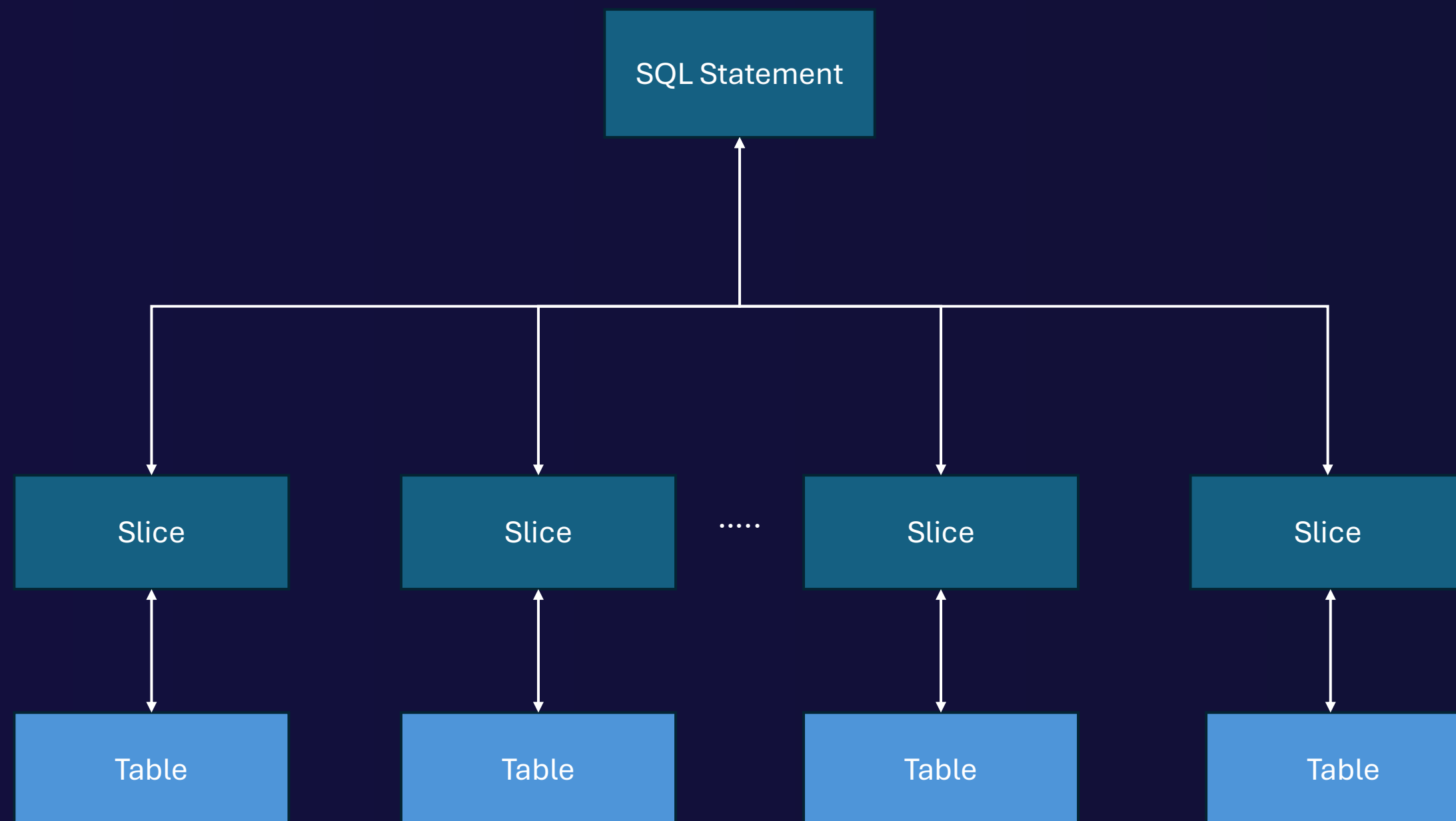
Highlighting Differences in Endpoint Discovery and Data Management

- SQL Analytics Endpoint
 - Discovery
 - Lakehouse owns data

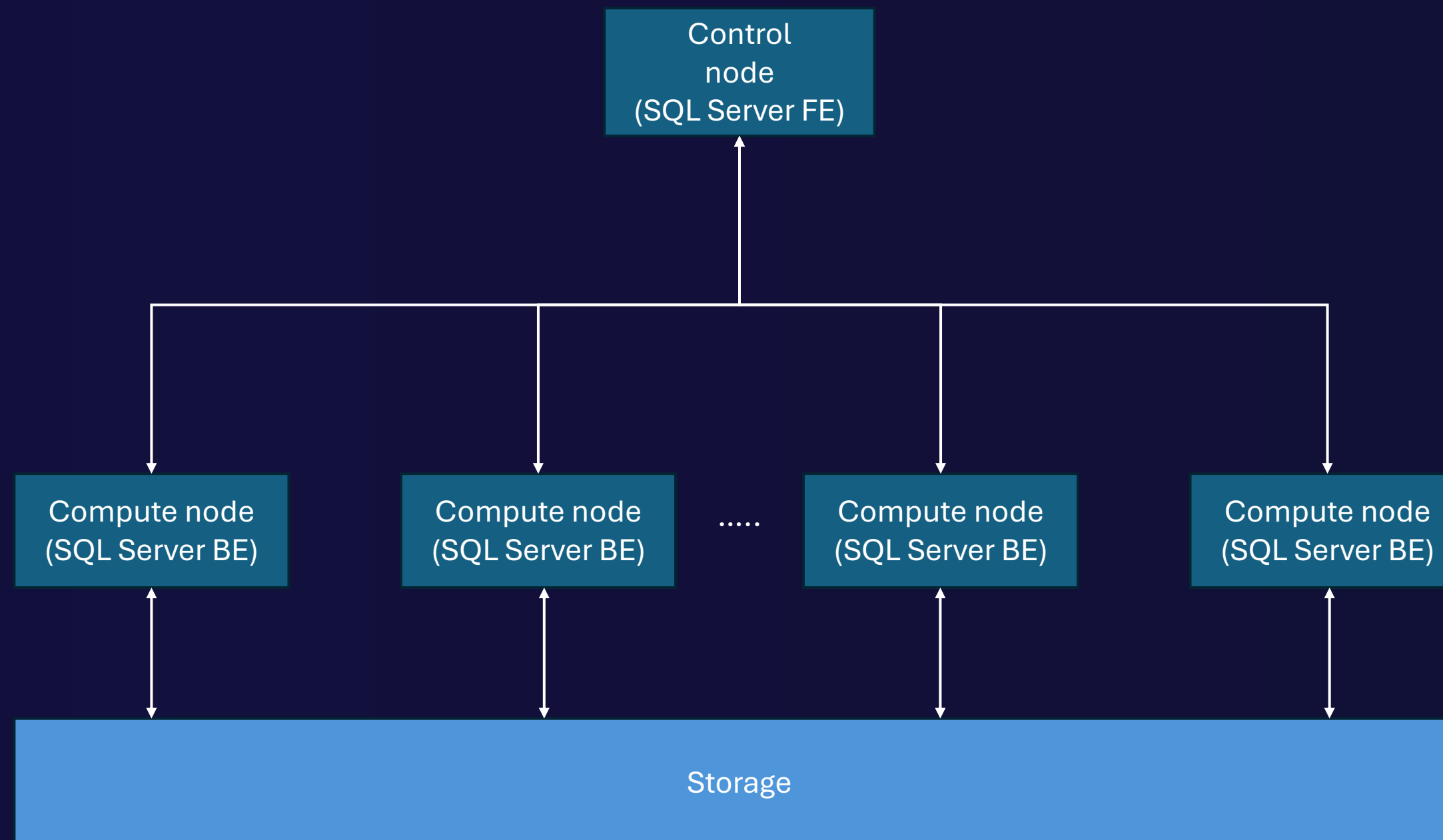
- Fabric
 - ID Column
 - Restore Point
 - Multi-table ACID transactions
 - Warehouse owns data
 - Cluster & Partitioning*

Internals

Synapse Dedicated Pools



Synapse Dedicated Pools






RESEARCH-ARTICLE X in   

POLARIS: the distributed SQL engine in azure synapse




Authors:  [Josep Aguilar-Saborit](#),  [Raghu Ramakrishnan](#),  [Krish Srinivasan](#),  [Kevin Bocksrocker](#),  [Ioannis Alagiannis](#),  [Mahadevan Sankara](#),  [Moe Shafiei](#),  [Jose Blakeley](#),  [Girish Dasarathy](#),  [Sumeet Dash](#), +
39 [Authors Info & Claims](#)

[Proceedings of the VLDB Endowment, Volume 13, Issue 12](#) • Pages 3204 - 3216
<https://doi.org/10.14778/3415478.3415545>

Published: 01 August 2020 [Publication History](#)




RESEARCH-ARTICLE | OPEN ACCESS X in   

Query Decorrelation in the Fabric Data Warehouse










Authors:  [Nicolas Bruno](#),  [César Galindo-Legaria](#),  [Milind Joshi](#) [Authors Info & Claims](#)

[SIGMOD/PODS '25: Companion of the 2025 International Conference on Management of Data](#) • Pages 297 - 309
<https://doi.org/10.1145/3722212.3724448>

Published: 22 June 2025 [Publication History](#) [Check for updates](#)




RESEARCH-ARTICLE | OPEN ACCESS X in   

Unified Query Optimization in the Fabric Data Warehouse











Authors:  [Nicolas Bruno](#),  [César Galindo-Legaria](#),  [Milind Joshi](#),  [Esteban Calvo Vargas](#),  [Kabita Mahapatra](#),  [Sharon Ravindran](#),  [Guoheng Chen](#),  [Ernesto Cervantes Juárez](#),  [Beysim Sezgin](#) [Authors Info & Claims](#)

[SIGMOD '24: Companion of the 2024 International Conference on Management of Data](#) • Pages 18 - 30
<https://doi.org/10.1145/3626246.3653369>

Published: 09 June 2024 [Publication History](#) [Check for updates](#)

RESEARCH-ARTICLE | OPEN ACCESS X in   

Extending Polaris to Support Transactions

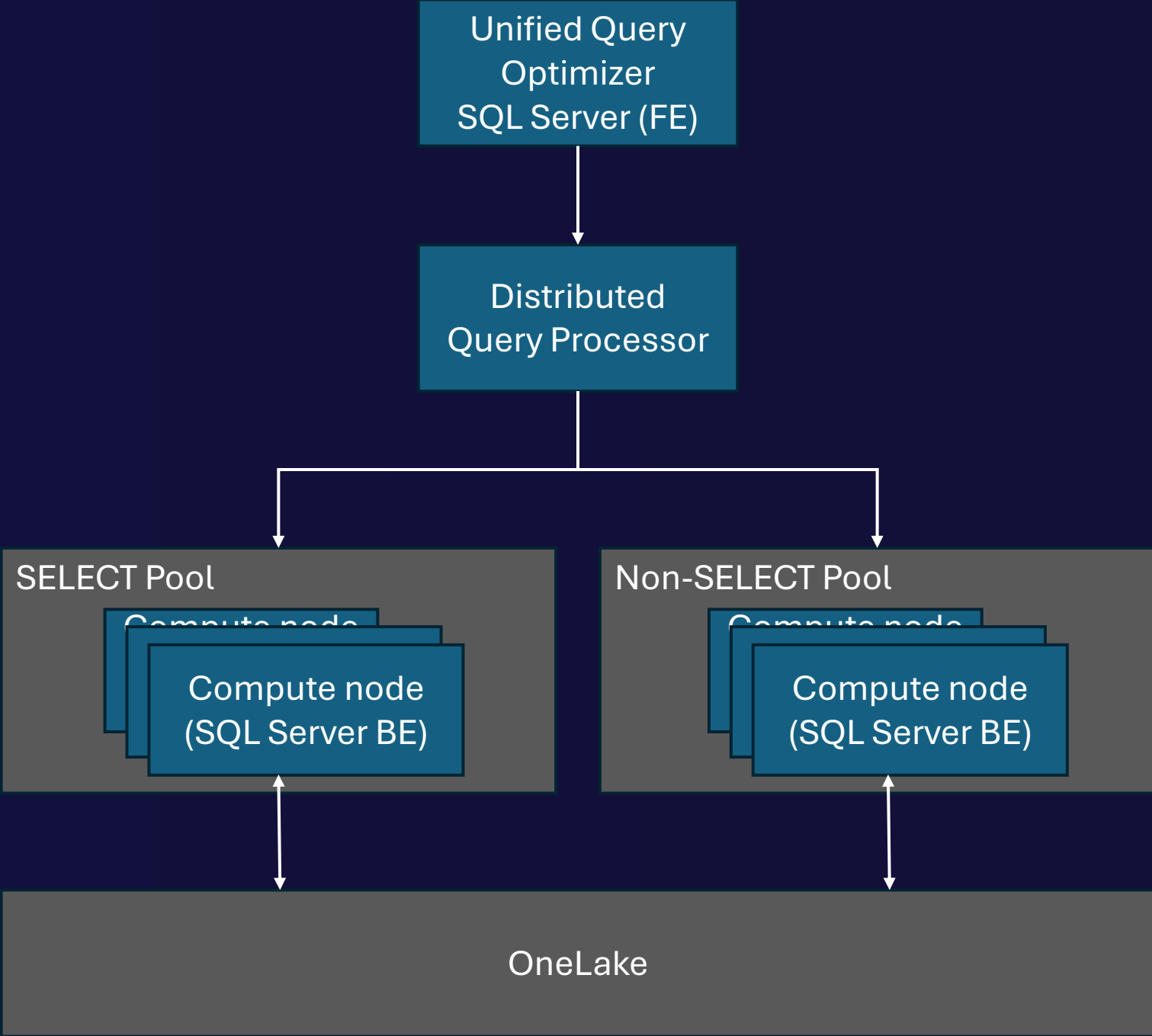
Authors:  [Josep Aguilar Saborit](#),  [Raghu Ramakrishnan](#),  [Kevin Bocksrocker](#),  [Alan Halverson](#),  [Konstantin Kosinsky](#),  [Ryan O'Connor](#),  [Nadejda Poliakova](#),  [Moe Shafiei](#),  [Haris Mahmood Ansari](#),  [Bogdan Crivat](#), + 10 [Authors Info & Claims](#)

[SIGMOD '24: Companion of the 2024 International Conference on Management of Data](#) • Pages 321 - 333
<https://doi.org/10.1145/3626246.3653392>

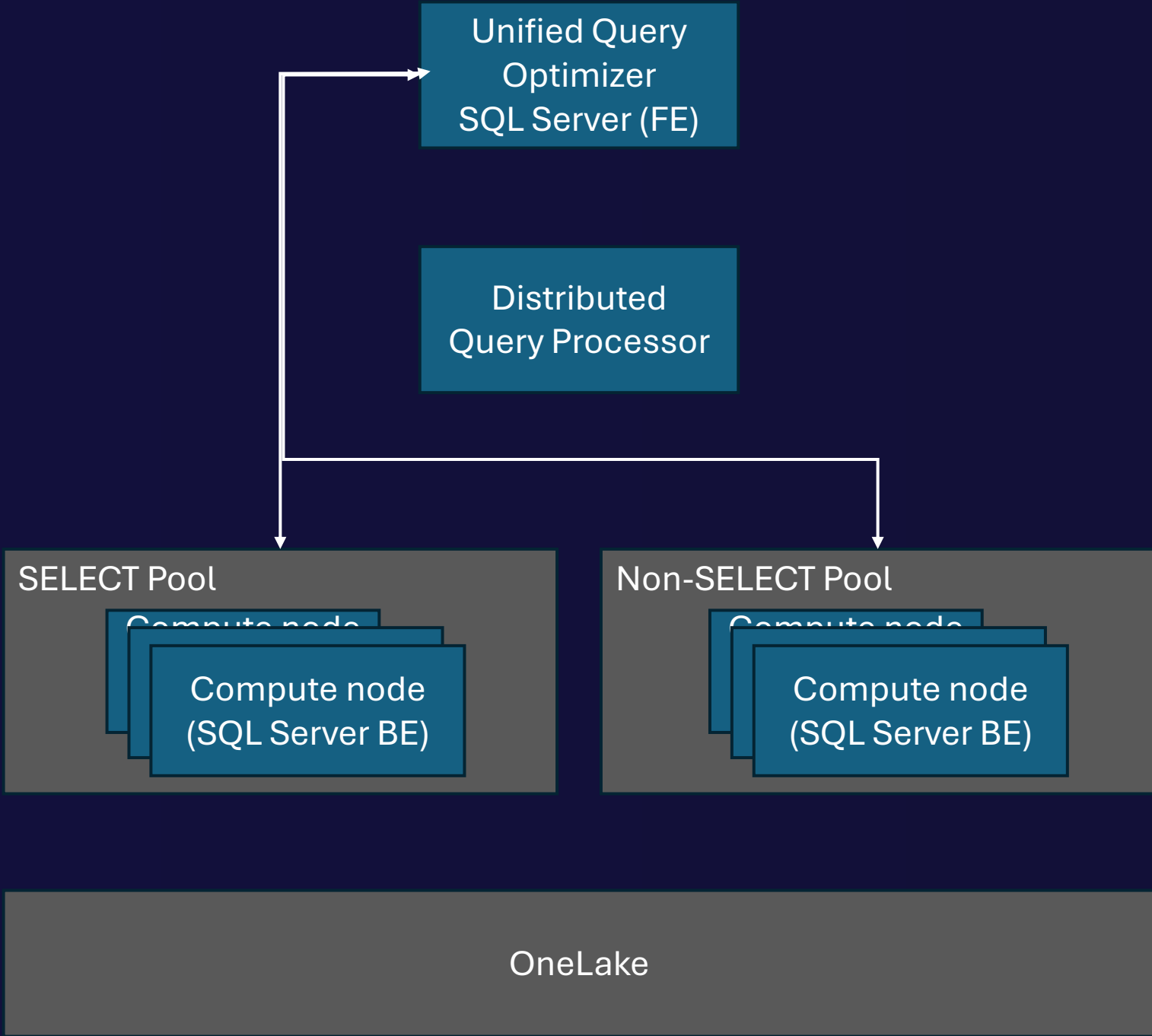
Published: 09 June 2024 [Publication History](#) [Check for updates](#)

* Can be found here: <https://dl.acm.org>

Fabric Warehouse – Data channel



Fabric Warehouse



Learnings from Internals

- Fabric Warehouse is an evolution of Synapse Analytics Dedicated Pools
- Fabric Warehouse is closer to the Polaris White Papers
- The scale out compute is very flexible and resilient
- Fabric Warehouse has less considerations compared to Dedicated Pools (and Spark)

Query Plans

Learnings from Query Plans

- The plans gives an overview what the engine is processing
- Read bottle-necks like failed predicate push-down can be discovered
- Gives a SQL Server look and feel
- Currently, the query plans are simpler than SQL Server plans

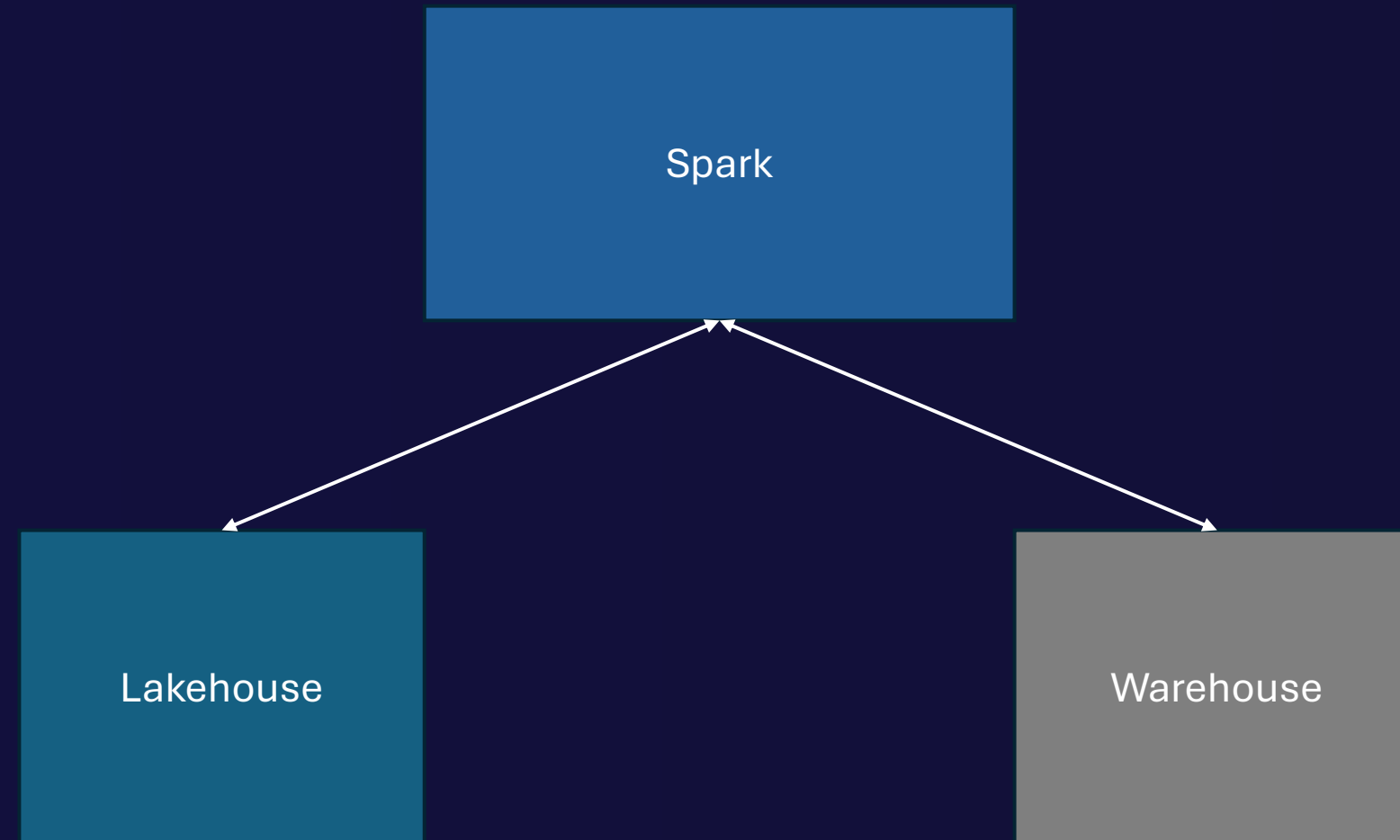
Observability

Learnings from Observability

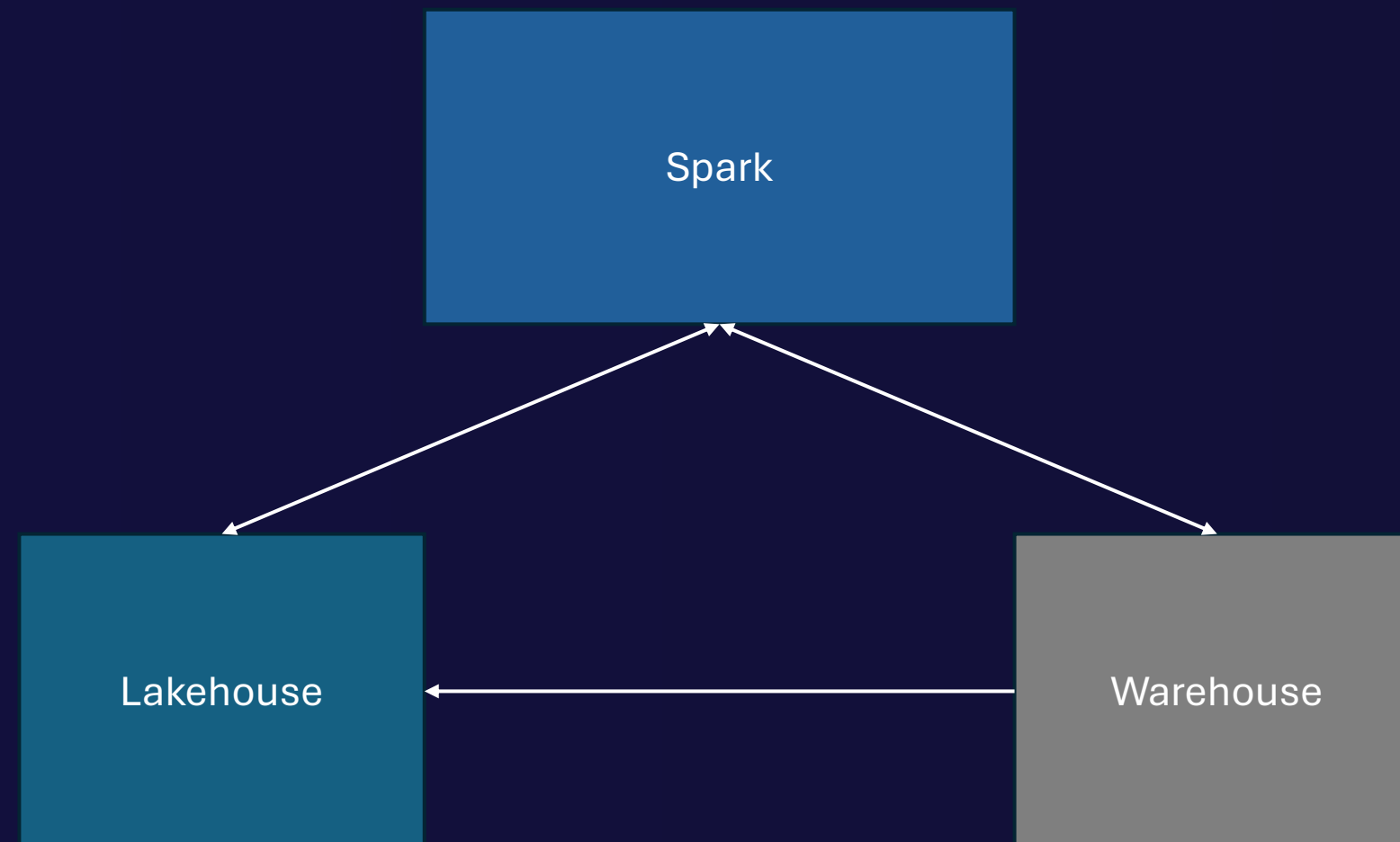
- We can draw a history of querying
- We can trace long running query for inspection

Interoperability

Interoperability between Warehouse, Spark, and Lakehouse



Interoperability between Warehouse, Spark, and Lakehouse



Learnings from Interoperability

- It is easy to access Lakehouses from Warehouses
- Synapse.sql can load Warehouses, with the need for refresh

Key Learnings

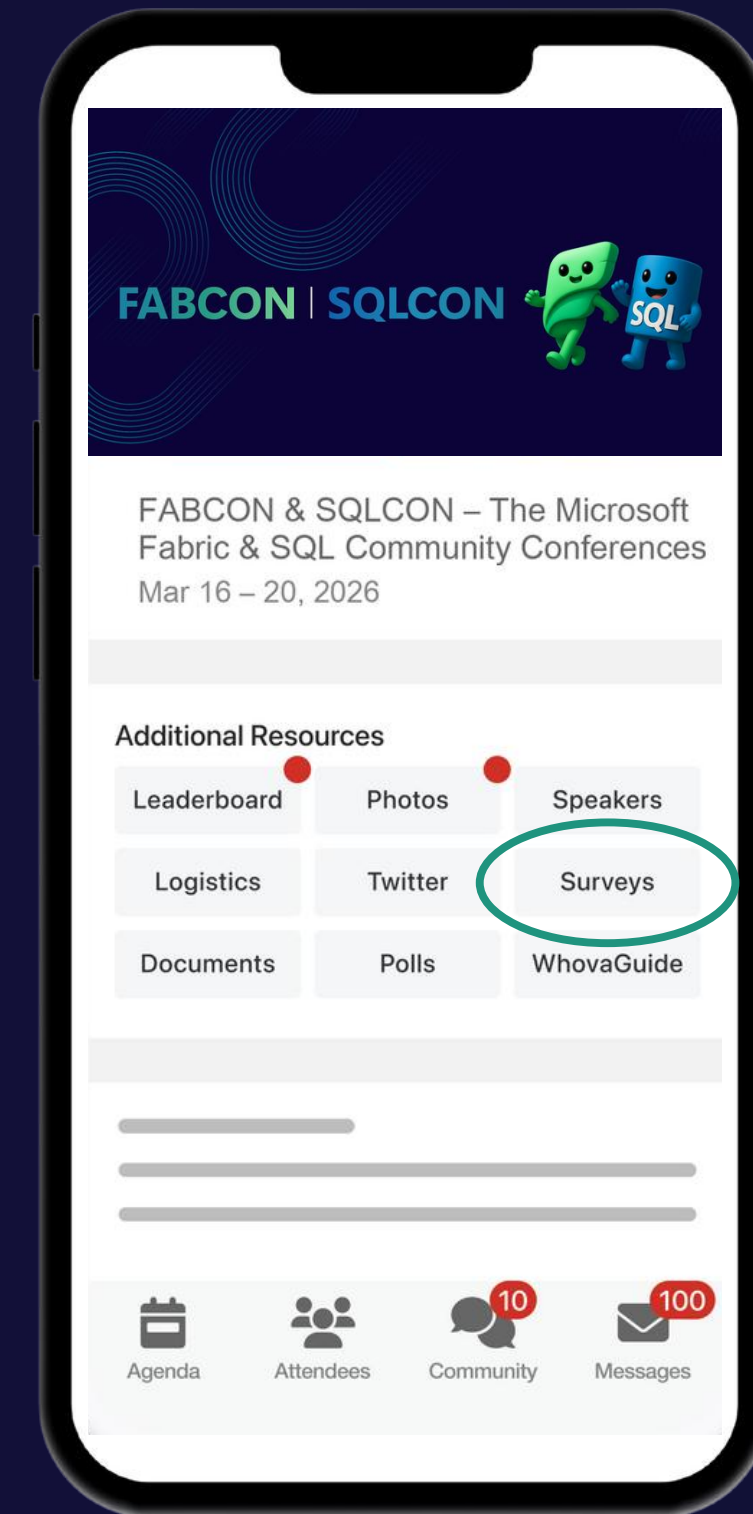
- Fabric Warehouse
 - Fabric Warehouse is **not a rebrand**, but an **architectural evolution** of the Dedicated Pool lineage
 - Query optimization, execution, and recovery live within the **same engine boundary**
 - Engine behavior becomes more predictable when **data layout and optimization are not externalized**
- **Why Considering Warehouse over SQL Analytics Endpoint for Gold**
 - **Restore Points** operate at *warehouse scope*
 - Enables atomic rollback across multiple Gold tables
 - SQL Analytics Endpoint relies on table-level Delta time travel
 - **Multi-table ACID transactions** are native
 - Critical for fact/dimension consistency and late-arriving data
 - Query optimizations are **owned by the Warehouse engine**
 - Endpoint performance depends on upstream Lakehouse file layout and compaction
 - Lower sensitivity to **file fragmentation and sync latency**

Q&A

How was the session?



Complete Session Surveys in
Whova for your chance to WIN
PRIZES!



Get Two Fabric Certifications for FREE

Attendees of FABCON can take the Fabric Analytics Engineer or Fabric Data Engineer exam for free. Be part of the 2 fastest growing role-based certifications in Microsoft history.

Request your voucher by March 23, 2026.

<https://aka.ms/fabcon/cert100>

