



Databricks

UNITY CATALOG VS HIVE METASTORE - WHAT'S THE DIFFERENCE?

Databricks introduced **Unity Catalog** to modernize and simplify data governance across multiple clouds and workspaces

Let's break down how it compares to the traditional **Hive Metastore**.



Abhishek Agarwal
Data Engineer

WHAT IS HIVE METASTORE?

- ✓ Legacy metadata store for tables and schemas
- ✓ Linked to a single Databricks workspace
- ✓ Stores basic info: table names, locations, schema

Limitations:

- ✗ No centralized security across workspaces
- ✗ No column-level access control
- ✗ Harder to manage data governance at scale



Abhishek Agarwal | Data Engineer

WHAT IS UNITY CATALOG?

- ✓ Centralized metadata + security layer across all workspaces
- ✓ Fine-grained access control: tables, columns, rows
- ✓ Built-in data lineage tracking
- ✓ Supports multi-cloud environments (AWS, Azure, GCPz)

One place to manage permissions, audits, and discovery
across your entire organization!



Abhishek Agarwal | Data Engineer

KEY DIFFERENCES AT A GLANCE

Feature	Hive Metastore	Unity Catalog
Scope	Single workspace	Multiple workspaces
Data Access Control	Table-level only	Table, column, and row-level
Centralized Governance	No	Yes
Lineage Tracking	No	Yes
Multi-cloud Support	No	Yes



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EXAMPLE - MANAGING ACCESS

Hive Metastore:

- Grant SELECT on entire table only

Unity Catalog:

- Grant SELECT on specific **columns** (e.g., only customer_id and region)
- Mask sensitive fields with **dynamic data masking**
- Enable **row-level filters** (e.g., region = 'EUROPE')



WHY UNITY CATALOG MATTERS

- ✓ Simpler auditing and compliance (e.g., GDPR, HIPAA)
- ✓ Easier collaboration across teams and regions
- ✓ Stronger security without managing multiple metastores
- ✓ Prepares your environment for **Data Sharing** and **Open Table Formats** (like Delta Sharing)



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FINAL TAKEAWAY

- Hive Metastore = Good for small, single workspace setups
- Unity Catalog = Essential for **enterprise, multi-cloud, secure, and governed** Databricks deployments

If you're starting new → go with **Unity Catalog!**



Abhishek Agarwal | Data Engineer

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Abhishek Agarwal

Data Engineer



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