Databricks Unity Catalog Establishes Trust and Control Over Your Data

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Abstract: As data environments become increasingly distributed across multiple clouds and systems, the challenge of maintaining consistent governance, access control, and compliance grows. Databricks Unity Catalog meets this challenge by providing a unified governance layer purpose-built for the modern data stack. It supports structured, unstructured, and federated data, spanning sources like SAP and beyond, as well as AI assets such as models, ensuring that data and AI assets are governed and fresh for decision-making AI and analytics.

Key Highlights

- Databricks Unity Catalog provides unified governance across users, data, models, agents, and dashboards and extends anywhere with federated sources.

- 51% of organizations do not trust or even distrust their data for key decision-making.[1]

- 44% of organizations are implementing data governance and AI principles into employee evaluations, emphasizing its cultural importance.

The Need for a Unified Data Governance Platform

As organizations lean into cloud-first strategies, they face growing complexity in managing data access and governance across data silos whether in data lakes, enterprise SaaS systems, or structured data sources such as SAP. While cloud provides scale and flexibility, it also introduces fragmentation where data lives in more places, under more policies, managed by more teams.

Organizations are actively prioritizing consistency in data access and policy enforcement across distributed environments. Yet the reality is:

- Policy drift across systems remains common.

- Manual governance processes don't scale.

- Confidence in data accuracy, compliance, and auditability remains too low.

With rising AI adoption, the risks associated with ungoverned data pipelines are only increasing. Organizations need a single governance fabric that can span across data, people, and systems wherever they are without the friction of centralizing it all first. Some of the challenges are:

- **Multi-cloud complexity.** Organizations operating across AWS, Azure, and Google Cloud face inconsistent governance models that require separate configurations for each environment.

- **Siloed governance tools.** Different data platforms often require different governance approaches, creating administrative overhead and security gaps.

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[1] Source: Enterprise Strategy Group Complete Survey Results, _Data Governance in the Age of AI_, June 2024. All research references in this Brief have been taken from these complete survey results unless otherwise noted.

- **Cross-platform data movement.** As data flows between systems, governance policies often fail to follow, creating blind spots in compliance and security.

With rising AI adoption, the risks associated with ungoverned data pipelines are only increasing. This creates new urgency for unified governance:

- **AI amplifies governance risks.** Models trained on ungoverned data can perpetuate biases, violate privacy regulations, or produce unreliable outputs.

- **Model drift compounds data drift.** When underlying data shifts without governance controls, AI model assumptions become outdated, requiring more robust oversight.

- **Regulatory scrutiny is intensifying.** As AI regulation evolves globally, organizations need comprehensive governance to demonstrate responsible AI practices.

Organizations need a single governance fabric with:

- Consistent policy enforcement across clouds, platforms, and data types.

- Automated governance workflows that scale with growing data volumes.

- End-to-end visibility into data lineage, usage, and compliance.

- Reduced administrative overhead through centralized management.

- Enhanced collaboration through secure, governed data sharing.

Enter Databricks Unity Catalog

Databricks Unity Catalog is a built-in governance solution that unifies discovery, access control, data lineage, audit , , secure sharing, quality monitoring, and business semantics across data and AI assets, all Databricks workspaces and beyond. It gives teams a centralized way to define and enforce policies on data whether the data is stored natively in Databricks or accessed from federated sources such as SAP.

Market Insight

56% of organizations saw improved data quality as the top outcome from data governance initiatives. This is an important goal for data used in AI initiatives.

Through its native integration with open source Delta Sharing protocol, Unity Catalog also enables secure, governed data exchange with external parties or business units across any platform. This eliminates the need to duplicate data across platforms while retaining complete control over who sees what and when.

Key capabilities include:

● **Unified catalog for data and AI:** Manage structured data, unstructured data, business metrics, and dashboards. and AI models in one place

● **Supports all open data formats**: Work with any open data format—Delta, Apache Iceberg, Parquet, and more.

● **Fine-grained governance**: Apply consistent policies across clouds and data domains.

● **Federated data support**: Govern external sources like SAP, MySQL, PostgreSQL, Salesforce, Snowflake, Amazon Redshift, Google BigQuery and more with the same control plane.

● **Automated lineage**: Gain full visibility into how data is used across the organization.

● **Quality monitoring**: Monitor data and AI quality at scale with automated quality monitoring and proactive alerts.

● **Open APIs**: Read/Write data from any external tool of your choice with open APIs and avoid vendor lock-in.

● **Business semantics**: Define and govern business metrics in one place and use across any use case for consistent business semantics.

● **Delta sharing**: Use the open sharing standard to collaborate securely and efficiently with partners, customers, and teams across tools and platforms.

Together, these capabilities help organizations scale governance to meet the demands of modern analytics, AI, and data collaboration without slowing down innovation.

Analyst Insight

Databricks Unity Catalog is an essential control layer that brings discipline, transparency, and agility to modern data architectures. As enterprises move more workloads to the cloud and distribute data across business units, functions, and geographies, the risk of inconsistent access control, policy sprawl, and audit blind spots becomes a material business concern. Unity Catalog directly addresses these challenges by offering a centralized way to define and enforce access, track lineage, and share data all without introducing the friction of traditional governance frameworks.

As organizations race to adopt AI, one of Databricks Unity Catalog's most essential innovations is its support for federated governance.

While many organizations aspire to consolidate data, the reality is that much of their most critical information remains in external systems like SAP. Unity Catalog lets organizations extend governance to that data without duplicating or moving it, ensuring that policies are applied consistently regardless of where the data resides. This capability is especially important for enterprises with strict compliance requirements or heavily siloed operational systems and as one of the foundations to prepare data for AI initiatives.

> **"** The importance of unified data governance cannot be understated for informed decision making and in any AI strategy.**"**
>
> **- Stephen Catanzano, Senior Analyst, Enterprise Strategy Group**

Another key advantage is the seamless integration with Delta Sharing. Data sharing has historically been a compliance and performance headache requiring extract/load pipelines, manual masking, or constant oversight. Databricks Unity Catalog, paired with Delta Sharing, transforms this process by enabling live, governed, and revocable data access with full lineage and policy enforcement. This means faster collaboration between teams, partners, and customers, without sacrificing control or transparency.

In short, Databricks Unity Catalog helps organizations shift from reactive, manual governance to proactive, embedded governance. It reduces risk, improves trust in data, and lays the groundwork for responsible AI and analytics. As more businesses seek to scale their data strategies without scaling complexity, solutions like Databricks Unity Catalog will be vital to delivering secure, trusted, and governed outcomes across the modern data estate.

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