IBM watsonx.data intelligence, Data Lineage

Gain deeper visibility into the provenance of your data and its journey from source to end use

Highlights

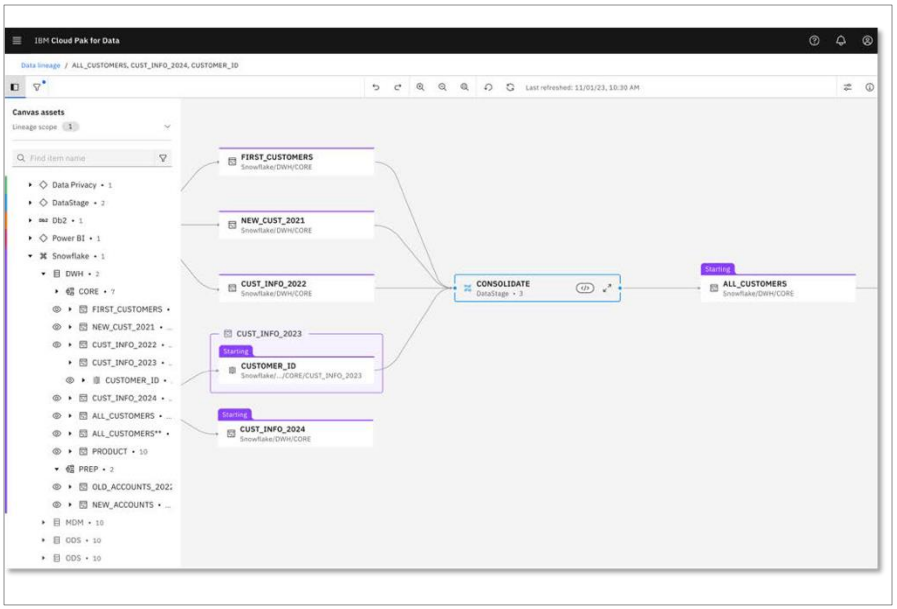
Enable regulatory compliance, conduct impact analysis, build trust in data

Deliver deeper data lineage and faster time to value

Simplify data lineage with automated scanning of third-party data flows

Data proliferation has made it challenging to trust your data. With so much data, how can you know where it came from, how it has changed, and who's using it? Poor understanding of the data journey from source to end use can have considerable consequences. As you integrate AI into your workflows, a lack of transparency around the journey of data fed into AI models can hinder auditability. A lack of visibility into where sensitive data resides can increase risks of non-compliance with data privacy and industry regulations. Data engineers could spend disproportionate time to analyze impact of planned data changes.

To overcome these challenges, you need a map that simplifies the understanding of a dataset's journey from its origin to its end use, with specific details on how data is transformed, and by whom, along the way. Data lineage is a visual representation of a dataset's journey from its origin to end use. It has evolved into the primary enterprise tool for understanding the flow of data and the contribution of each person and program throughout that data's lifecycle.



Gain visibility into your data's journey from source to end-use

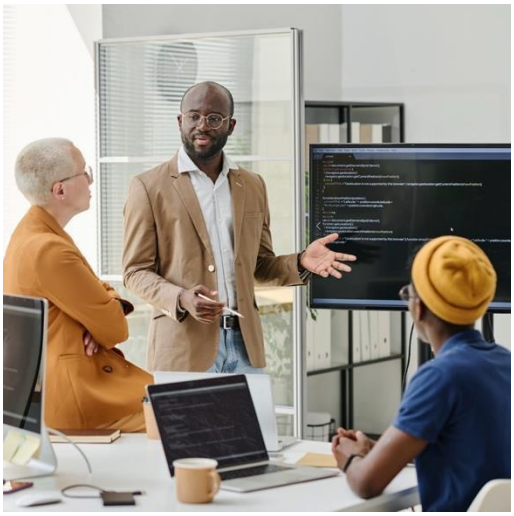
Enable regulatory compliance, conduct impact analysis, build trust in data

Data lineage is essential for modern data management and has a wide range of use cases. It's a required aspect of regulatory compliance and helps identify the origins of sensitive data, the various locations where it's stored, who can access it, and which data should be anonymized. Due to new regulations like Europe's AI Act, you need to keep detailed notes on what data is used within AI models. Data lineage allows auditors to understand what training data was used to train a model. The 2023 CEO study conducted by IBM® found the number one barrier to generative AI adoption is concerns from leadership about the lineage or provenance of data.[1]

Enterprises are constantly implementing changes to their data architecture and pipelines. Without a data lineage, it can be difficult or impossible for you to assess the impact of planned changes. Research from IBM shows that fixing a bug in production is 15 times more expensive than fixing it during the implementation phase.[2] Data lineage gives you insight into the downstream impacts of these changes before potentially costly bugs are introduced.

Data lineage can also enable analysts and data consumers to conduct root cause analysis by diagnosing issues and discrepancies in data and reports, offering you the power to speed up migration processes while undergoing digital transformation. Engineers can also gain visibility into which architectural components must be migrated at once and which don't need to be migrated at all.

Only when analysts and data scientists have a complete understanding of data can they rely on it for confident decision-making. Data lineage is a critical capability of modern data governance to deliver trust in the data used for analytics and AI by providing visibility into your data's provenance and its end-to-end journey.



Deliver deeper data lineage and faster time to value

IBM's data governance and lineage capabilities in watsonx.data intelligence deliver a business-friendly data flow mapping within the data catalog, while allowing users to explore detailed technical insights needed by data engineers. IBM can provide quicker time to value not only through the automation of previously manual processes, but also through the ability to more rapidly answer questions about whether certain data is trustworthy. Data lineage enables you to track the entire end-to-end data flow for full understanding, observability and control of your data.

Simplify data lineage with automated scanning of data flows in third-party tools

With data lineage capabilities, IBM watsonx.data intelligence can help organizations ease the amount of manual effort necessary for robust data lineage. This is achieved by providing scanners for the automated discovery of data flows in third-party tools like Power BI, and Snowflake. This information then becomes visible alongside data quality, business terms and other metadata previously available to IBM's data catalog users.

IBM watsonx.data intelligence helps you avoid the need for the time-consuming, manual creation of a data lineage. This kind of manual process can often be tedious, contain contradictory or missing information, and lead to teams relying on unsound lineages to make critical decisions.

Conclusion

As one of watsonx.data intelligence's features, Data Lineage provides quick time to value not only through the automation of previously manual processes, but also through the ability to answer questions more rapidly. This will empower you to build organizational trust in your data.

When integrated with data governance capabilities, data lineage allows users to understand technical data flows information alongside critical business metadata created in the data catalog. Examples include business terms and data quality scores.

Why IBM?
IBM has been named a leader in multiple analyst assessments, including the 2024 Gartner® Magic Quadrant™ for Data and Analytics Governance Platforms, the IDC MarketScape: Worldwide Data Intelligence Platform Software 2024, and ISG Data Intelligence Buyers Guide.[3, 4, 5]

IBM offers integrated data governance and data integration alongside automated data lineage, data quality, data privacy and entity resolution—all parts of IBM Cloud Pak® for Data, which is an open and extensible data and AI platform that can be deployed on any cloud. The integration of these capabilities within a unified environment helps streamline data governance tasks to accelerate understanding of what data means, where it comes from and how it relates to other assets.

For more information
To learn more about data lineage, contact your IBM representative or IBM Business Partner. Experience data lineage in actions - try the Interactive Demo. Or visit the data lineage webpage to explore how IBM enables the creation of a governed, compliance-ready data foundation.

1. Be a creator, not a consumer, IBM.
2. IBM System Science Institute Relative Cost of Fixing Defects, IBM.
3. Gartner Magic Quadrant for Data Analytics and Governance Platforms, Gartner, 2024.
4. IDC MarketScape: Worldwide Data Intelligence Platform Software 2024, IDC, 2024.
5. ISG Data Intelligence Buyers Guide, ISG, 2024.

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