OMNI-DATA PLATFORM

Accelerate insights and launch on-demand workloads
with the EDB Postgres® AI multi-model data platform.

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THE CHALLENGES

As technology reshapes business landscapes, enterprises face increasing pressure to rapidly adapt to diverse data management challenges. These include evolving customer engagement requirements and emerging market demand for real-time insights and personalized customer experiences. To meet these challenges, businesses must implement agile strategies for unified management of structured, semi-structured, and unstructured data. Industries like healthcare, financial services, and telecommunications are particularly dependent on harnessing multiple data models for on-demand workloads, blending structured customer data, semi-structured logs, and unstructured images and documents. However, bringing these data models together often requires deploying multiple purpose-built databases. This results in infrastructure sprawl, added complexity, ballooning costs, and data silos — all of which limit innovation and agility.

- **Blending disparate data:** Enterprises must bring together structured, semi-structured, and unstructured data to meet market demand for next-gen applications.

- **Infrastructure complexity:** Managing different data models often requires deploying multiple purpose-built databases, which increases infrastructure sprawl and operational complexity.

- **Cost and innovation constraints:** Complexity and fragmentation lead to ballooning costs and data silos, which limit innovation and slow down the development of new solutions.

THE SOLUTION

EDB Postgres AI is an omni-data platform for on-demand business application development — unifying structured, semi-structured, and unstructured data in Postgres with built-in observability and enterprise security features. By combining seamless integration with lakehouse tables in object storage and open source Postgres support for various data models like SQL, vector, JSON, and time-series, you can rein in the sprawl of purpose-built databases and eliminate ETL (extract, transform, and load) complexity. Plus, object storage provides up to 18x cost-efficiency over solid state drive storage, and EDB's Vectorized Query Engine delivers real-time insights 30x faster than standard Postgres queries.

- **Enterprise, multi-model Postgres:** Leverage open source Postgres extensions to enable all types of data models — SQL, vector, JSON, time-series, key-value, and more — with enterprise-grade security and observability.

- **External Lakehouse Ecosystem Integration:** Connect seamlessly with unstructured data in an object storage environment that's up to 18x as cost-efficient as standard Postgres solid state drives, reducing ETL pipelines and storage costs.

- **Vectorized Query Engine:** A query engine optimized for columnar formats enables complex analytical queries across aggregate data with no lag on existing workloads — 30x faster than standard Postgres.

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THE BENEFITS

With EDB Postgres AI as your omni-data platform, you can unify structured, semi-structured, and unstructured data for on-demand workloads — all while eliminating vendor lock-in and maintaining secure, observable, cost-efficient systems.

- **Empowered decision-making:** Make faster, more informed decisions with all your organization's data unified in Postgres.

- **Faster time to insights:** Get comprehensive insights in real time with fewer ETL pipelines, reduced latency, and 30x faster analytical queries.

- **Simplified data management:** Eliminate vendor lock-in, reduce infrastructure sprawl, and improve operational agility with seamless, secure data management and robust observability across environments.

THE OUTCOMES

- Drive higher customer lifetime value. With faster, more informed decision-making and real-time insights across diverse data types, your business can rapidly innovate to meet customer demands — improving customer satisfaction and retention.

- Eliminate vendor lock-in and reduce the total cost of ownership so your organization can strategically reinvest resources into growth initiatives while maintaining long-term control over their data and infrastructure.

- Enhanced security, observability, and governance across all environments provide your business with the tools to meet evolving regulatory requirements and industry standards — meaning greater trust from customers and stakeholders.
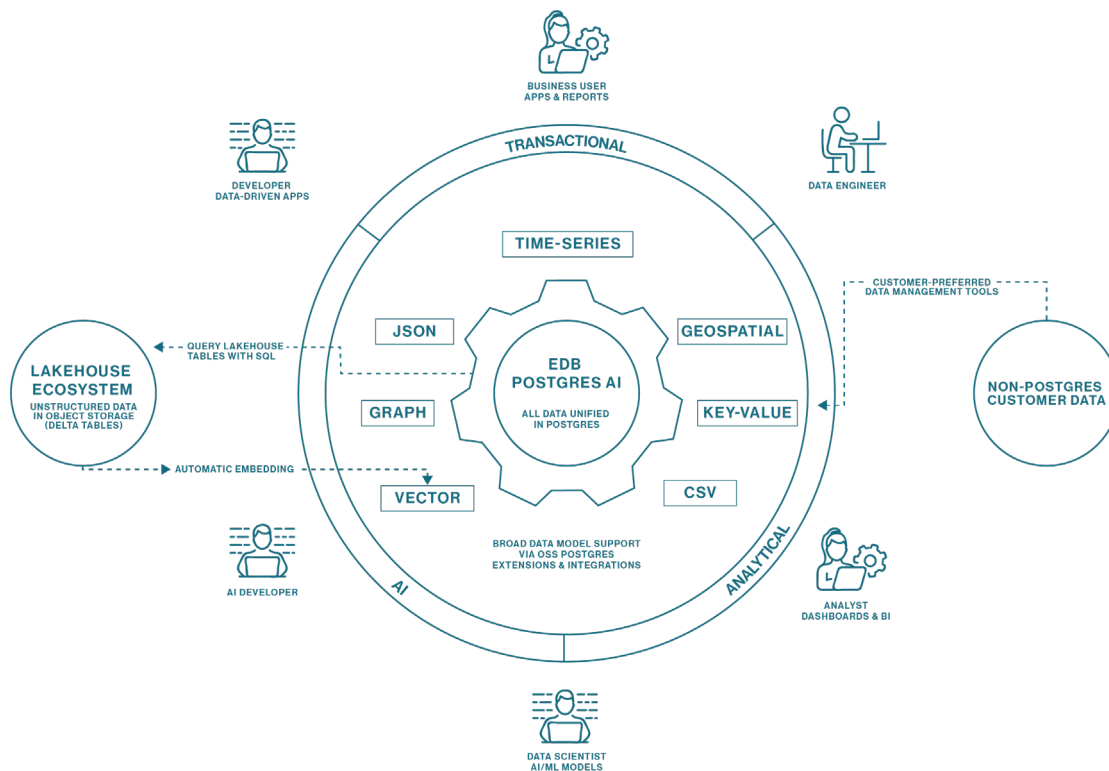

Figure 1. EDB Postgres AI enables an omni-data platform: Unify data silos, drive system consolidation, and unlock cost efficiency while accelerating innovation by your developers

FREQUENTLY ASKED QUESTIONS

Q: What is the EDB Postgres AI omni-data platform?
A: The EDB Postgres AI omni-data platform is a multi-model data solution that seamlessly integrates structured, semi-structured, and unstructured data into a single Postgres environment. It enables high-performance queries for on-demand workloads, providing real-time insights while offering secure, observable, and cost-efficient systems.

Q: What challenges does the platform solve for enterprises?
A: No more endless searching for the right database to solve your current or emerging business problems. The EDB Postgres AI omni-data platform eliminates the complexity of managing multiple purpose-built databases, which often results in infrastructure sprawl, ballooning costs, and data silos. By unifying various data models, the platform simplifies integration, reduces costs, and accelerates innovation.

Q: How does EDB Postgres AI help businesses handle different data models?
A: The platform supports a wide variety of data models — SQL, vector, JSON, time-series, key-value, and more — by leveraging open source Postgres extensions. It even incorporates unstructured data via seamless integration with cost-efficient object storage. This allows enterprises to handle all data types within a single, secure environment, eliminating the need for multiple databases.

Q: What are the key features of the omni-data platform?
A: Key features include:

- Extensible open source Postgres with enterprise-grade security, observability, and scale.

- External lakehouse ecosystem integration for seamless incorporation of unstructured data.

- Vectorized Query Engine for complex analytical queries across data in Postgres tables and objects storage with no lag on existing workloads.

Q: What benefits does the omni-data platform offer to businesses?
A: Key benefits include:

- Empowered decision-making with all your organization's data unified in Postgres.

- Faster time to insights with fewer ETL pipelines, reduced latency, and 30x faster analytical queries.

- More control via zero vendor lock-in, tighter security, and reduced TCO with 18x more cost-efficient object storage.

Q: What are the key benefits of external lakehouse ecosystem integration?
A: Integration with the lakehouse ecosystem seamlessly connects operational data in Postgres with unstructured data in a cost-efficient object storage environment that's 18x more efficient than solid state drive storage — and it enables querying of data in object storage with familiar SQL. This reduces the need for complex ETL pipelines, lowering TCO and simplifying data management.

Q: How does the Vectorized Query Engine enhance query performance?
A: The Vectorized Query Engine is optimized for columnar formats well-suited to complex analytical queries across aggregate data. It performs 30x faster, on average, than standard Postgres, allowing real-time insights without impacting existing workloads.

Q: What business outcomes can be achieved with EDB Postgres AI?
A: The platform helps businesses make faster data-driven decisions, reduces time to insights, and improves operational control by eliminating vendor lock-in. These capabilities drive higher customer satisfaction, sustainable growth, and enhanced business resilience.

Q: How does the platform reduce TCO?
A: By consolidating data into a single platform and utilizing cost-efficient object storage, the platform reduces infrastructure sprawl, lowers operational complexity, and eliminates the high costs associated with managing multiple purpose-built databases.

Q: What industries benefit the most from the omni-data platform?
A: Any business can benefit from the omni-data platform as they work to meet the modern expectations of on-demand workloads and personalized experiences. However, the benefits are especially powerful for heavily regulated industries such as healthcare, financial services, and telecommunications, where structured, semi-structured, and unstructured data must be synthesized from varied — and often sensitive — customer sources.