SOLUTION BRIEF

EDB Postgres® AI for WarehousePG

EDB Postgres AI for WarehousePG offers scalable, open source, petabyte-scale analytics and sovereignty.

Executive summary

Is your data warehouse a strategic asset or a costly liability? Leading enterprises are too often hindered by proprietary, aging data platforms—such as Teradata or cloud-exclusive systems including Snowflake—with stifling vendor constraints, unpredictable costs, and limited flexibility for modernization.

EDB Postgres AI (EDB PG AI) provides WarehousePG, an open source, Postgres-based MPP data warehouse that removes the trade-off between sovereignty and performance—deploying on-premises, in a private VPC, or across clouds with per-core pricing that eliminates cloud-cost shock and vendor lock-in.

EDB PG AI delivers petabyte-scale analytics with up to 58% cost savings and 52% greater scaling efficiency for high-concurrency workloads compared to leading cloud platforms. High SQL parity and direct support from the builders of WarehousePG compress modernization timelines from months to weeks. And with unified observability through WarehousePG Enterprise Manager and built-in high availability and disaster recovery, your most critical workloads stay running without interruption—backed by the world's foremost Postgres experts.

Business challenge

Your data strategy is trapped between strict governance mandates, expensive cloud contracts, and the operational complexity of fragmented infrastructure. Analytics teams suffer the most, forced to work with a complex web of disconnected tools. Analysts wait on slow ETL, data scientists fight for access to siloed data, and innovation stalls because data is rarely where it needs to be. This environment creates pervasive financial and operational friction.

- **High costs and low flexibility:** Proprietary systems lead to escalating, unpredictable cloud costs and vendor lock-in that prevent strategic adaptation and force teams to ration analysis.
- **Data sovereignty, security, and compliance challenges:** Cloud-only solutions force data storage outside mandated jurisdictions, exposing your business to major compliance risks.

- **AI/ML infrastructure silos:** Innovating with AI is delayed when data scientists have to move data to separate infrastructure for training, inferencing, and deployment.
- **Risky migrations from legacy platforms:** Modernization projects often fail because they require extensive refactoring, costly reskilling of entire data teams, and months of disruption.

Enterprises demand a solution that gives them flexibility and open source economics without sacrificing performance, reliability, or sovereignty.

Solution overview

EDB PG AI redefines petabyte-scale analytics by placing sovereignty and financial control at the center with WarehousePG, an open source, petabyte-scale data warehouse that gives enterprises a high-performance escape hatch from restrictive systems. As opposed to Snowflake's cloud-only approach or Teradata's legacy lock-in, WarehousePG delivers freedom, with the advanced analytics capabilities and AI readiness customers expect as well as data they own and can deploy anywhere.

Business value

With WarehousePG, EDB PG AI delivers the strategic infrastructure control and operational agility that modern enterprises need to grow revenue and accelerate innovation.

- **Financial control and deployment sovereignty:** Reclaim economic control with per-core pricing that eliminates variable cloud credit burn and unpredictable cost spikes. Deploy your MPP warehouse on-premises, in a private VPC, or across clouds—meeting strict regulatory residency mandates without sacrificing performance. McKnight Consulting Group found WarehousePG enables organizations to redirect up to 58% of their cloud analytics spend back into strategic growth.
- **Efficient scaling for high-concurrency BI and agents:** Run every analyst query and agentic workload simultaneously against live data without unpredictable slowdowns. WarehousePG's MPP architecture distributes query execution across independent compute segments to maintain consistent throughput under peak demand—delivering up to 52% more consistent concurrency performance compared to leading cloud data warehouses, so insights and AI workloads scale as fast as your team does.
- **Accelerated modernization and AI-readiness:** Modernize from legacy infrastructure to a Postgres-based, AI-ready foundation in weeks, not months. High SQL parity and direct guidance from the builders of WarehousePG eliminate risky refactoring. Greenplum® customers have executed a seamless cluster swap in less than two hours, with zero data movement.
- **Mission-critical reliability:** WarehousePG Enterprise Manager gives operations teams a consolidated view of real-time cluster health and query performance across 12 integrated dashboards with less than 1% CPU overhead—so observability never competes with production workloads. Built-in high availability and automatic failover are native to the MPP engine, with no third-party add-ons required.

Customer success

Enterprise data leaders trust WarehousePG to deliver the stability, performance, and control required for their mission-critical analytics workloads.

Kyobo Book Centre: Reclaiming predictable cost and sovereignty

Kyobo Book Centre, the largest bookstore chain in South Korea, was seeking a strategic escape from unpredictable and soaring compute costs on its 50 TB cloud data warehouse. Kyobo adopted WarehousePG to establish cost control, gain superior performance, and meet strict data residency mandates.

> *EDB Postgres AI for WarehousePG will give us a way to rein in costs with superior performance—and we can do it with total data sovereignty.*

MNTN: Achieving enterprise stability for mission-critical ad tech

MNTN, a leading connected TV ad-tech platform, required a solution that guaranteed operational uptime and responsive support for mission-critical performance marketing. WarehousePG provided MNTN with the necessary petabyte-scale stability and performance, backed by EDB's 24x7 expert support—crucial for turning insights into competitive advantage.

> *The performance is there, the stability is there, the support is as responsive as [it] should be.*

Euronext FX: Eliminating vendor risk and reclaiming open source control

Euronext FX, a leading pan-European market infrastructure, needed to eliminate vendor lock-in and technical debt from its existing Greenplum system. WarehousePG delivered a zero-migration binary swap that immediately provided superior enterprise support and open source control across the organization's four global data centers. This seamless, lift-and-shift path ensured future-proof stability for high-volume workloads.

> *We're excited to be working with EDB Postgres AI. Its Support for Greenplum Workloads is helping us maintain control of where and how we deploy open source software.*

Key capabilities

EDB PG AI for WarehousePG delivers the power of a modern, open source data warehouse with the enterprise reliability, migration expertise, and Postgres pedigree that only EDB can provide:

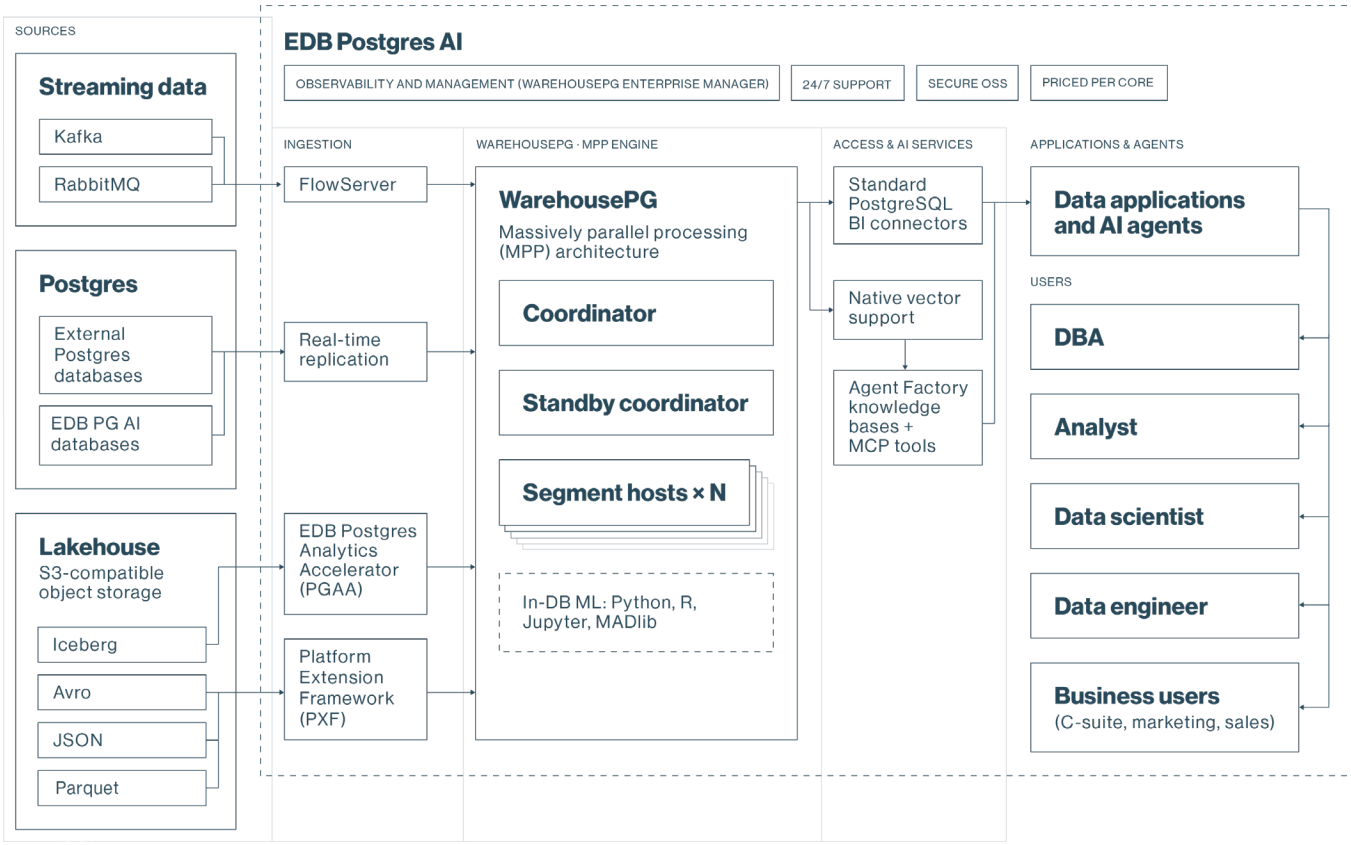
- **Massively parallel processing (MPP) architecture:** Ensure consistent scalability and long-term stability with a distributed architecture purpose-built to execute complex transformations on petabyte-scale datasets with high efficiency.
- **Zero lock-in, predictable cost model:** Maximize ROI with open source economics that deliver immediate TCO relief from proprietary software licensing fees. Plus, EDB PG AI is priced per core, eliminating the unpredictability of consumption-based cloud costs.
- **Real-time streaming ingestion (Flow Server):** Enable rapid innovation and up-to-the-second monitoring by handling high-volume event data from sources such as Kafka and RabbitMQ with Flow Server.
- **In-database AI/ML and vector capabilities:** Accelerate time-to-value for advanced analytics operations such as fraud detection and churn prediction by training models directly on your massive datasets—with MADlib for SQL users and robust in-database Python ML frameworks. Unlock new revenue streams by powering RAG applications and semantic search across unstructured data with the pgvector extension.
- **Lakehouse interoperability (PXF and PGAA):** Extend WarehousePG's analytical reach beyond the cluster. Query cold data in open formats including JSON, Parquet, and Avro from external storage such as Amazon S3 or HDFS via PXF, and execute MPP-scale queries against Apache Iceberg lakehouse tables via PGAA, all without data movement.
- **Seamless modernization:** Evolve your data infrastructure without disruption. Modernize in weeks, not months, with a simple binary swap for Greenplum workloads and high SQL parity for other legacy systems.
- **Deployment flexibility:** Meet sovereign data mandates and reduce vendor lock-in by deploying and operating across any environment—cloud, on-prem, or hybrid—for full data residency compliance.
- **Unified cluster observability:** Monitor, diagnose, and manage distributed MPP clusters from a single interface. WarehousePG Enterprise Manager surfaces real-time cluster health, query diagnostics, and resource utilization across 12 integrated dashboards—with less than 1% CPU overhead—so operations teams can shift from reactive incident response to proactive performance governance.

Technical architecture

WarehousePG is built upon the standard Postgres engine but achieves petabyte-scale analytics by utilizing an MPP architecture. This design allows WarehousePG to scale horizontally by distributing data and queries across many Postgres nodes (segments) that work together in parallel, eliminating the performance limits of a single server.

The workload is managed by a single coordinator node, which optimizes and distributes the tasks to individual segments. EDB PG AI for WarehousePG offers deployment flexibility for data sovereignty, with PXF enabling direct SQL queries against external data lakes such as S3 or HDFS, and the Postgres Analytics Accelerator extending this to native Apache Iceberg lakehouse integration—all without ETL.

Furthermore, the architecture is AI-ready, supporting in-database machine learning (via MADlib and Python ML frameworks) and high-performance vector search. For real-time data needs, Flow Server handles high-volume streaming ingestion from sources including Kafka and RabbitMQ. WarehousePG Enterprise Manager provides centralized cluster observability and query diagnostics across 12 integrated dashboards, while high availability is maintained through a standby coordinator and mirror segments.



EDB Postgres AI: The sovereign data and AI platform for the agentic enterprise

EDB PG AI brings together a unified data layer, governance, sovereign control and orchestration, and an agent runtime environment, giving enterprises a trusted foundation for AI on infrastructure they own and control. The platform unifies transactional, analytical, and AI workloads in a single Postgres-based architecture—eliminating ETL, data movement, and operational fragmentation. And you choose where and how to deploy: on-premises, cloud, managed, or certified appliance.

The outcome: production-ready sovereign AI in days or weeks, not months.

EDB POSTGRES AI

EDB Postgres® AI (EDB PG AI) is the sovereign data and AI platform for the agentic enterprise. Built on Postgres, the world's leading open source database, EDB PG AI unifies transactional, analytical, and AI workloads in a single governed architecture, on-premises and across clouds. To learn more, visit www.enterprisedb.com.