

VAST DataBase

The First Real-Time, AI-Native
Analytics Platform



The VAST DataBase is a new kind of distributed system—built to unify transactional, analytical, streaming, and vector workloads into one high-performance, real-time platform. Unlike legacy databases and lakehouse stacks designed for static data and batch jobs, VAST delivers instant, governed access to all of your data—structured, unstructured, and vector. With radically simplified operations and a flash-native architecture, VAST helps teams move faster, reduce infrastructure, and power the next generation of analytics and AI.

Unify Analytics. Eliminate Pipelines. Accelerate AI

VAST collapses the traditional data stack—warehouses, event brokers, vector databases, ETL pipelines—into a single, AI-native platform. Instead of stitching together systems, data teams can ingest, transform, and query all data directly in place. With native support for Trino, Spark, VAST SQL, and serverless functions, VAST eliminates latency, complexity, and duplication—enabling fast, composable workflows with consistent governance from source to insight.

Built for Real-Time, AI-Driven Workloads

Modern analytics and AI pipelines require instant context—not daily snapshots. VAST delivers the fastest database performance at scale by co-locating compute and storage in a flash-native, Disaggregated, Shared-Everything (DASE) architecture.



Sub-second queries on real-time data
with no staging or lag



40x faster updates vs. traditional
lakehouse architectures



Zero-copy updates and appends—no
vacuuming, no versioning, no compaction



Unified access to files, objects, tables,
and vectors in a single platform

Native Event Streaming Meets Real-Time SQL

VAST delivers the world's fastest stream ingestion system with its Kafka-API compatible Event Broker—natively integrated into the platform to eliminate the complexity of external streaming infrastructure.

Able to ingest nearly one million events per second, the VAST Event Broker streams each Kafka topic directly into a native, columnar table in the VAST DataBase—making every event immediately available for high-performance, SQL-based analytics. No external brokers, connectors, or staging layers required.

Data teams can run real-time SQL analytics or trigger serverless functions on live streams with zero orchestration overhead, enabling AI systems and applications to react to fresh data the moment it arrives.

Vector Search Without the Silos

VAST treats vectors as a first-class data type—stored directly in the VAST DataBase alongside structured metadata and raw content. This native integration eliminates the need for external vector databases, pipelines, or index management.

Users can perform hybrid queries that combine nearest-neighbor vector search with rich SQL filtering—returning precise, context-rich results in real time. The current engine uses brute-force methods to maximize accuracy and cross-modal integration, with advanced indexing on the horizon to accelerate performance even further.

Designed for retrieval-augmented generation (RAG), recommendation systems, and real-time AI agents, VAST delivers vector search without the silos—making AI-native search truly unified.



Radically Efficient Infrastructure

Speed is only part of the story. VAST is engineered for maximum infrastructure efficiency. Powered by its Disaggregated, Shared-Everything (DASE) architecture, VAST separates compute and storage without creating silos, replication overhead, or bottlenecks.

All data lives in a flash-native, massively scalable environment with built-in data reduction—drastically lowering hardware, power, and operational costs. Customers routinely consolidate multiple legacy systems onto a single VAST deployment, cutting total cost of ownership (TCO) by over 60%.

VAST eliminates storage tiers, local disk bottlenecks, and compute silos—delivering unmatched efficiency across the full stack:

- Exabyte-ready with the world's most linearly scalable architecture
- Flash-native DASE architecture enables instant access over NVMe to all data
- 60% lower TCO with infrastructure efficiency and data reduction
- 32x smaller scan sizes with VAST's Element Store compared to Parquet.

Data engineering made simple, responsive, and agile

The VAST DataBase eliminates the traditional friction that slows down data teams. Engineers can append, update, and enrich live tables continuously—without worrying about vacuuming, optimization, and maintenance. Data is always current and instantly queryable, with no need for staging, compaction, or complex reprocessing. Teams can iterate rapidly across analytical, operational, and AI-driven workflows. The result is a platform that moves as fast as your business—empowering analysts, engineers, and developers to build smarter, ship faster, and operate with confidence.

Compared to traditional lakehouse stacks, VAST delivers:



20x Faster Filtering
Performance



10x Lower CPU Utilization
**Reducing
Infrastructure Costs**



40x Faster Updates and Deletes
**Enabling Real-Time
Data Agility**

Why VAST Data

Unified Data Management

Consolidate structured and unstructured data and all analytics workloads for seamless access and faster insights.

Exabyte Scalability

Easily scale to exabyte-level datasets with high performance as data grows.

AI-Ready Infrastructure

Enable AI-driven workflows and real-time data analysis with integrated GPU accelerated I/O.

Lightning-fast Performance

Sub-second analytics performance with VAST's native Element format

Unified Security & Governance

Manage all data types and workloads under a single, unified security model.

About VAST Data

VAST Data is the leading data platform software company bringing businesses into the AI era. By accelerating time-to-insight for workload-intensive applications, the VAST Data Platform delivers scalable performance, simplifies data management, and enhances productivity. Launched in 2019, VAST has become the fastest-growing data infrastructure startup in history.

Looking to simplify your data center and unlock insights from all of your data?

Contact us at hello@vastdata.com

Trusted By Industry Leaders

PIXAR

FOX

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agoda