

Action Vector

Query billions of rows in milliseconds with 99.999% uptime

Lightning-Fast Analytics Database

Action Vector is a secure and highly performant analytics database built by the same team behind the Action Data Platform.

As data volumes explode, businesses in fast moving and highly regulated industries have the need to manage historical and new data in a cost-effective and scalable manner, while analyzing it in real time.

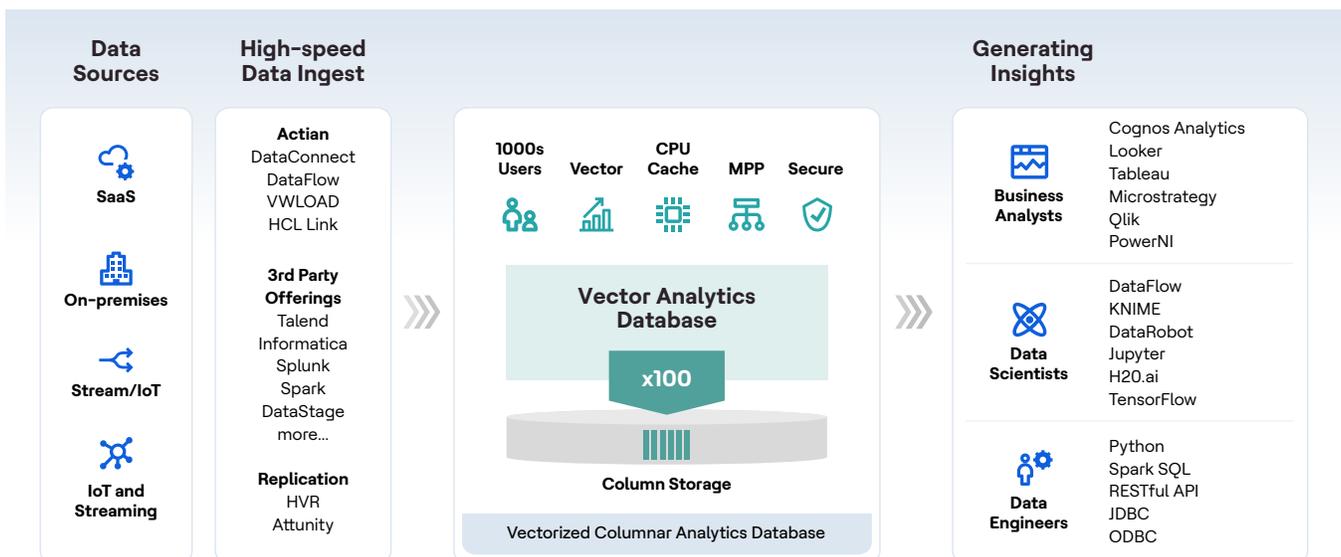
Vector supports fast analytical processing without the risk or complexity of data duplication or movement across environments, making it the ideal solution for the most sensitive workloads.

"Because Action Vector can deliver extraordinary performance using only a small number of commodity compute nodes, the solution has exceeded the performance and functionality benchmarks of Netezza while lowering overall cost of ownership. By replacing its legacy technology, the bank estimates it will save \$20 million over five years."

- Global Bank

Action Vector Overview

Support any workload or use case with millisecond latency.



*“Editorial platforms are mission-critical systems and have to provide 24/7 reliability for their users. The Méthode platform we were building might be supporting a thousand or more users in a given customer environment, so **performance, reliability, and scalability** were the characteristics we were looking for.”*

- Ismail Gazarin, CIO, EidosMedia

*“Our success is measured by the quality of experience we provide our gamers on Facebook. We’re using the Actian Analytics Platform and the Vector Analytics database to investigate consumer behavior and develop a better understanding of what makes our users play and interact. **With fast and actionable business analytics from Vector, we can deliver tailored offers and recommendations to our customers and advertising partners, and thus improve monetization of the games we develop.**”*

- Florian Douetteau, CTO, IsCool Entertainment

Maximum Performance, Speed, and Scalability

Vector can process queries on historical and real-time data with sub-second and millisecond response times allowing businesses to make fast, informed decisions with confidence.

- **Vectorized processing (SIMD)** to maximize performance of complex analytic queries.
- **Dedicated CPU core and caches** as execution memory processes data on chip and runs 100x faster than RAM.
- **Multi-core parallel execution** maximizes concurrency while enabling load prioritization using adaptive algorithms.
- **Data compression for I/O and execution efficiency** allows data to move through the system more easily.
- **Advanced columnar implementation** minimizes I/O while retrieving data from disk.
- **Column-based storage** reduces I/O to relevant columns, optimizes data compression, and delivers better cache performance with the flexibility to store indexed columns in the same block.
- **MPP architecture** results in increasing scalability and performance of queries and supports more complex analytics tasks.
- **Auto partitioning** improves the efficiency of data processing. Optimized partitioning leads to faster query execution and better resource management, allowing users to focus on analysis rather than database tuning.
- **Automatic storage indexes** enable typical OLAP queries to access only a fraction of the full data set, significantly improving query performance.

Support for Complex and Diverse Workloads

Vector enables the storage and querying of data outside of traditional structures so businesses can work with diverse datasets and analytical workloads effortlessly.

- **Spark UDFs** to enable advanced data transformations and analytics.
- **REGEX pattern matching** allows for more advanced search functionalities, enabling users to efficiently handle complex queries and improve data retrieval accuracy.
- **Advanced external tables** allow users to perform complex and customized data operations directly within their analytics workflows.
- **ML inference using TensorFlow** reduces data transfer times for real-time data analysis.

Enterprise-Class Data Security and Compliance

Vector meets the needs of businesses operating in the toughest data environments with complex security, compliance, and regulatory requirements.

- **Protect sensitive data** with encryption at rest and in transit with the ability to re-key the database with new encryption keys.
- **Dynamic data masking and column-level de-identification** provide a safe way to share data across stakeholders.
- **Phased, non-disruptive migrations** to move suitable workloads to the cloud while those that should remain on-premises run on amortized infrastructure for lower TCO.
- **Hybrid deployment flexibility** ensures that data resides wherever it's needed - on-premises, hybrid, or in the cloud.

"Actian allows us to reliably unify data for pharmacies across the Netherlands. As a result, we can confidently assist pharmacists in the daily practice of their profession."

- Paul Van der Linden, Advanced Analytics & Intelligence KNMP (The Royal Dutch Pharmacists Association)

About Actian

Actian makes data easy. We deliver cloud, hybrid cloud, and on-premises data solutions that simplify how people connect, manage, and analyze data. We transform business by enabling customers to make confident, data-driven decisions that accelerate their organization's growth. Our data platform integrates seamlessly, performs reliably, and delivers at industry-leading speeds. Learn more about Actian, a division of HCLSoftware: www.actian.com.



At-a-Glance

In-memory columnar analytics database designed for high-performance analytical queries.

The Actian Vector Advantage

Deliver zero penalty real-time updates

- True in-memory column-oriented analytics database to lower data processing costs
- Vectorized query execution to maximize performance of complex analytical queries
- Patented Positional Delta Trees (PDT) for highly-optimized management of in-memory updates
- Maximum flexibility with deployment on-premises and as a private or managed cloud on Google Cloud, AWS, and Azure

Key Features

- Highly scalable SMP or MPP architecture
- Full ACID compliance
- Zero-penalty real-time updates
- CPU cache optimization
- Column-based storage and execution
- Query result caching
- SQL-2016 compliant
- UDF support for Python, SQL, and JavaScript
- Open, industry standard data access, including Spark, ODBC, JDBC, and .NET
- On-premises and BYOL cloud deployment

Get Started

Request a **free demo** with a data expert or visit **Vector** on the web to learn more.

