



Database machine

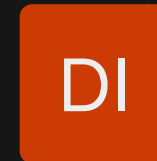


DBMS

Database management platform



Data transformation, loading, and migration



Tantor product portfolio

Enterprise data management and storage solutions

Tantor Labs



since 2016
in the international market

since 2021
in Russia

since 2022
as part of the Astra Group



The foundation of the product line is open source PostgreSQL DBMS

with in-demand functional extensions and numerous core optimizations



Active participants of the PostgreSQL community

We contribute to open source, and help organize official PG BootCamp community conferences in Russia



Technological leader of the Russian market

Breakthrough technologies in the architecture of database machines for the enterprise segment.

The most feature-rich AI-first platform on the market for managing any PostgreSQL based DBMS

Tantor products



Tantor Postgres DBMS

High-performance DBMS based on PostgreSQL

- For high-load corporate systems
- Editions: Basic, Special Edition, Special Edition 1C, Certified
- Time series aggregation (Tantor PipelineDB)
- Columnar data storage
- Anonymization mechanism



Tantor Platform

AI-first monitoring and administration center for any PostgreSQL-based databases

- Centralized management, configuration, maintenance, monitoring
- Database tuning recommendations
- Proactive incident alerts
- Advanced AI assistant



Tantor DI software

Management of data transformation, loading and migration

- Streaming data replication (CDC)
- Batch loading and data transformation
- Foundation for enterprise data warehouse (CDW)

Tantor XData ^{Gen3} Database Machine

Database machine for the most demanding information systems

- Horizontal scaling of calculations and storage
- Full-fledged HTAP (OLAP+OLTP) on a unified dataset
- 100% compatibility with PostgreSQL, extensions and business software



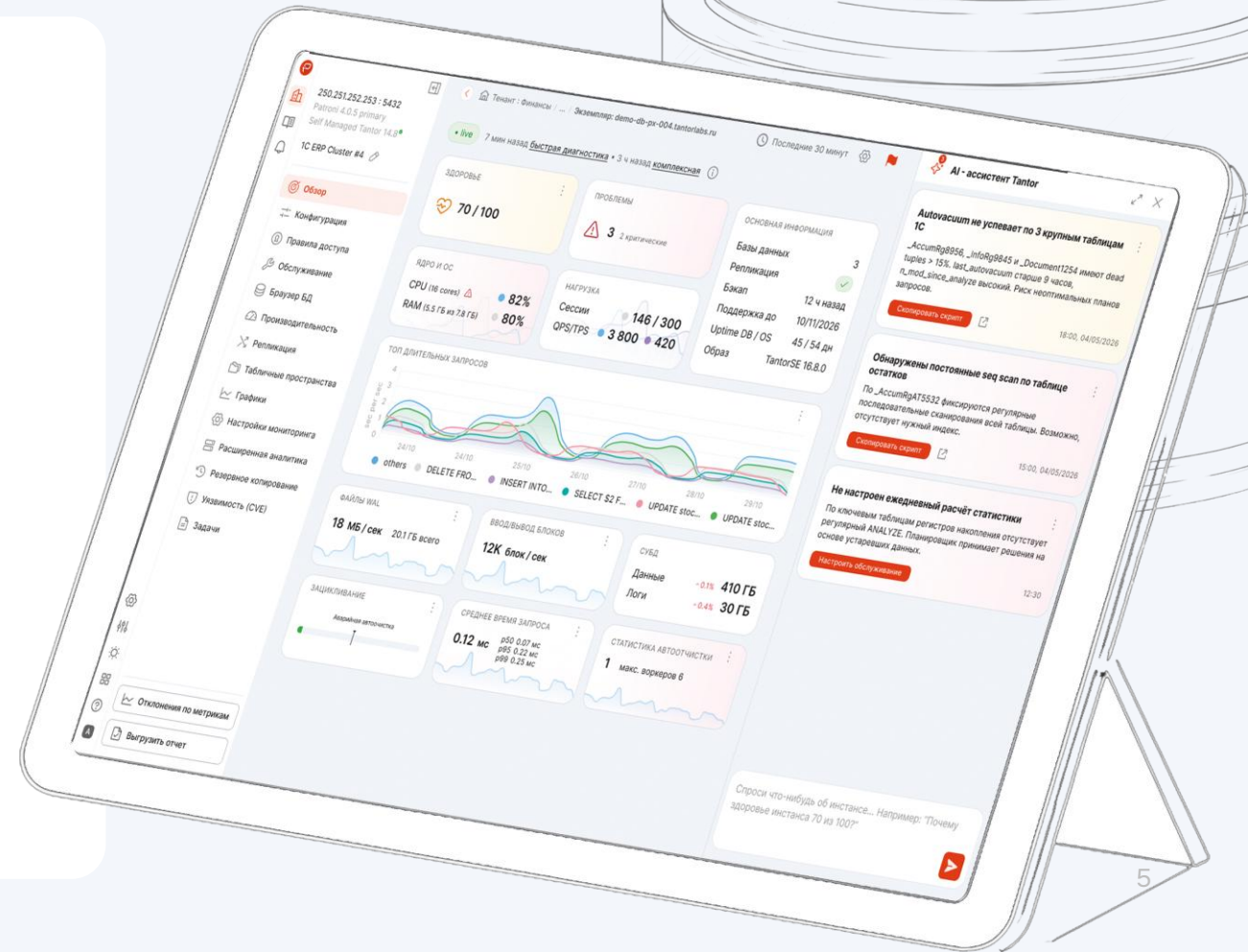


Tantor Postgres DBMS

Tantor Postgres SE DBMS

Universal DBMS for high-load OLTP systems or enterprise data storage up to 100 TB.

- PostgreSQL-based DBMS with numerous enhancements, optimizations, and additional modules
- Core enhancements and optimizations for higher performance, including for high-load 1C systems
- Advanced administration and monitoring with AI
- Enhanced capabilities to comply with information security requirements



Editions of Tantor Postgres DBMS: for various scales and types of information systems

Inherit the advantages of the open-source PostgreSQL DBMS while expanding its capabilities:



Special Edition (SE)

Enterprise-level DBMS for heavy OLTP systems or enterprise data warehouses up to 100 TB



Basic Edition (BE)

Includes a number of new features and improvements compared to PostgreSQL, as well as vendor support

Key extensions and core improvements in Tantor Postgres 18

Commit Sequence Number (CSN)



Each transaction is assigned a unique ID to track which changes are already visible to other transactions and which remain invisible.

Compression Storage Manager (CSM)



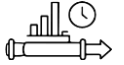
Compresses data pages directly at the storage level, significantly reducing disk footprint and I/O operations and boosting performance in high-throughput systems.

Information Lifecycle Management (ILM)



Data lifecycle management – migrating infrequently accessed data to lower-cost storage, archiving, or deleting based on policies to optimize infrastructure costs.

Tantor PipelineDB



Time series aggregation and real-time data processing using standard SQL, eliminating the need for a separate ETL layer and massive raw data storage.

Columnar storage columnar



Fast analytical processing with transactional UPDATE and DELETE capabilities, enabling data modifications without compromising consistency.

Data anonymization transp_anon



Extension for transparent data anonymization and masking in PostgreSQL-compatible databases. Ensures compliance with information security requirements by masking sensitive data without altering the underlying data in the tables.

Transparent Data Encryption (TDE)

Transparent data transformation for protection directly at the storage level. Makes data unreadable without the proper keys even with direct access to the physical medium.

Information security in Tantor products

Tantor Certified DBMS

FSTEC Certification for category 4

OS Astra Linux Special Edition

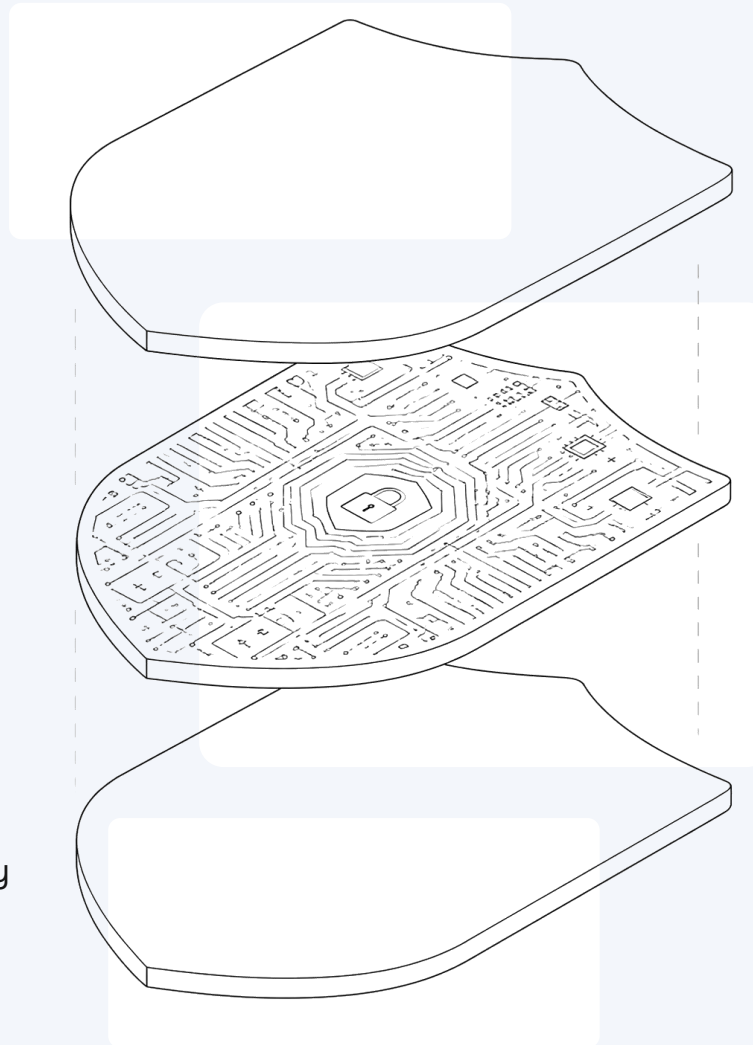
compatibility in all operating modes

pg_sec_check

a separate application for comprehensive database security auditing

Transparent data encryption (TDE)

Transparent data transformation for protection directly at the storage level. Makes data unreadable without the proper keys even with direct access to the physical medium.



Database integrity control

DBMS configuration, and permanent deletion of database objects.

(securely wiping files on external storage before deletion, purging obsolete row versions, zeroing data pages before deletion, clearing RAM before release, and clearing the Write-Ahead Log before deletion or overwriting)

Hardware security module (HSM) for cryptographic protection

Together with CryptoPro, we are integrating the CryptoPro HSM into the Tantor XData DBMS (a solution that delivers high security and performance for cryptographic operations).

Tantor PipelineDB – high-performance streamed data processing



Continuous aggregation

Filtering and transforming stream data into real-time summaries using continuous SQL queries.



Merging streams with tables

Analyzing stream data often requires context. PipelineDB enables joining stream data with historical data for real-time correlation.



Probabilistic data structures

PipelineDB supports data structures and a wide range of algorithms for approximating high-volume streams. (Bloom filters, count-min sketch, Filtered-Space-Saving top-k, HyperLogLog, and t-digest).



Queries with specified time intervals

Continuous queries over sliding time windows (1 second, 1 minute, 1 day, 30 days, etc.) with the ability to retain results or discard raw data after the window has expired.

No application code

PipelineDB processes data in real time, using only SQL. Using the continuous query mechanism, the system performs ongoing computations on stream data.

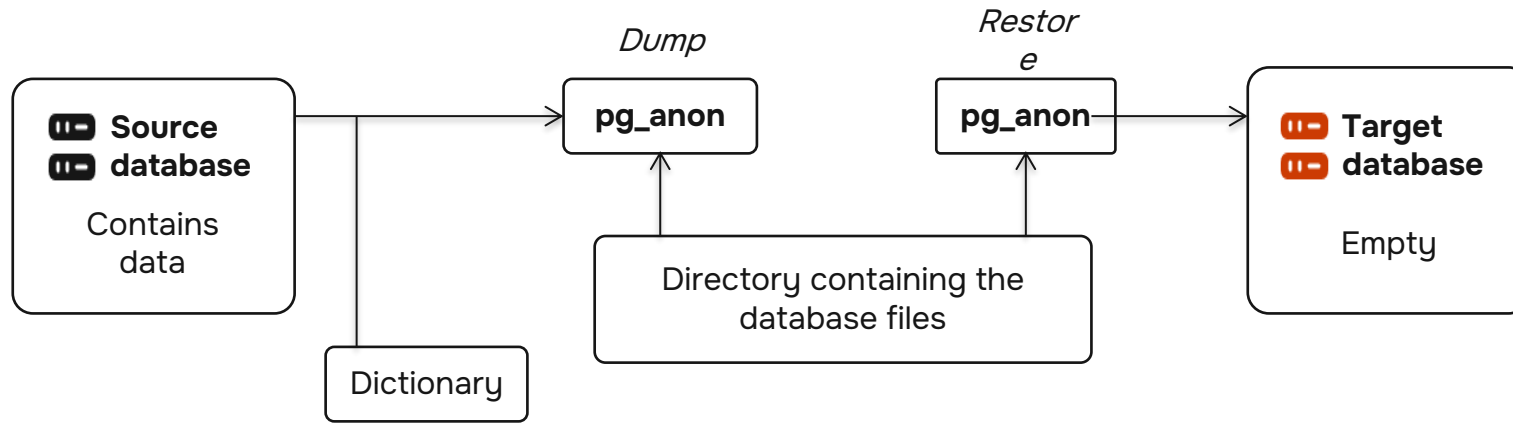
ETL within the database

PipelineDB is a standard extension of Postgres. It provides ETL capabilities. Data can be sent directly to the database and continuously transformed using SQL queries.

Reduction of data volume

PipelineDB stores only the output of continuous queries, which are gradually updated as new data arrives. The size of the database does not depend on the volume of data processed over time.

Data anonymization toolkit (pg_anon)



- Search databases for personal (sensitive) data using a meta-dictionary
- Dump and restore using a dictionary
- Creating a dictionary based on data discovery results
- Accessible via the Tantor platform UI or the command line
- Full-text search of confidential data
- Synchronizing data and schema of specified tables between source and target databases

Running scan ×

Steps: 1 2 3 4

Scan name *

Scan type *

Scan depth *

Scan result — dictionaries. Specify names

Sensitive dictionary name *

Non-sensitive dictionary name (if needed)

Next

Tantor Platform

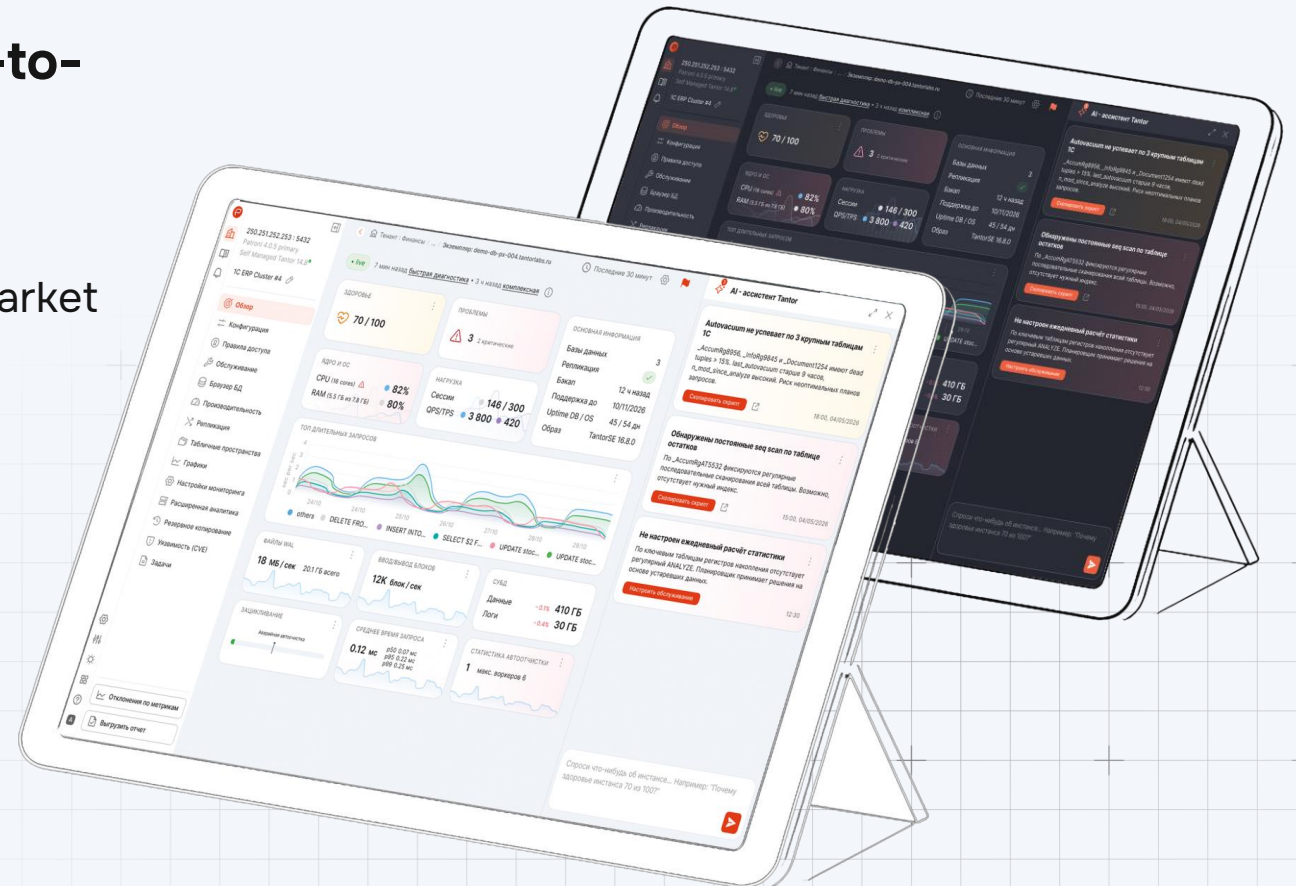
Administration, monitoring and automation of database management with advanced AI capabilities



AI-first unified management center for enterprise databases based on PostgreSQL

Maximum functionality and control for day-to-day management of PostgreSQL-based databases:

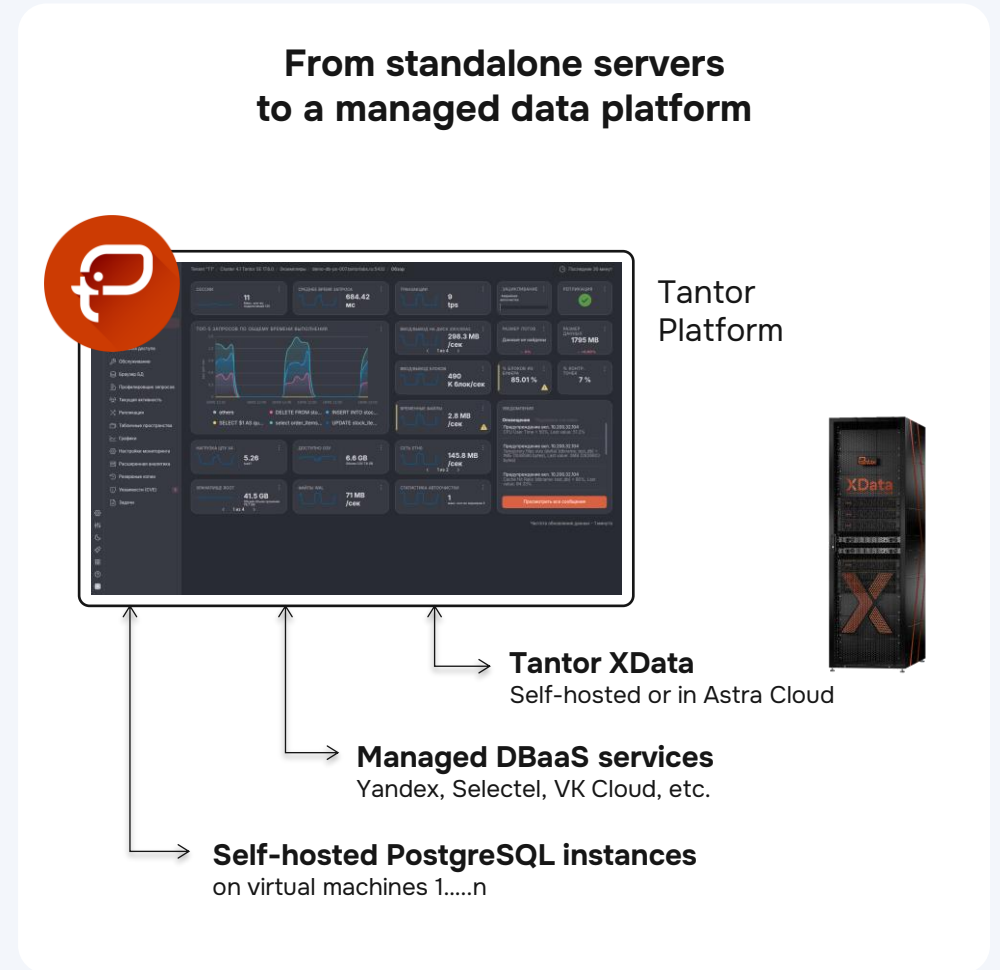
- The most comprehensive feature set in the Russian market
- Advanced AI capabilities
- Elimination of database management fragmentation
- Anonymization of sensitive data
- Optimization of database administrator labor costs
- Easy onboarding for administrators of other DBMS



Capabilities and use cases

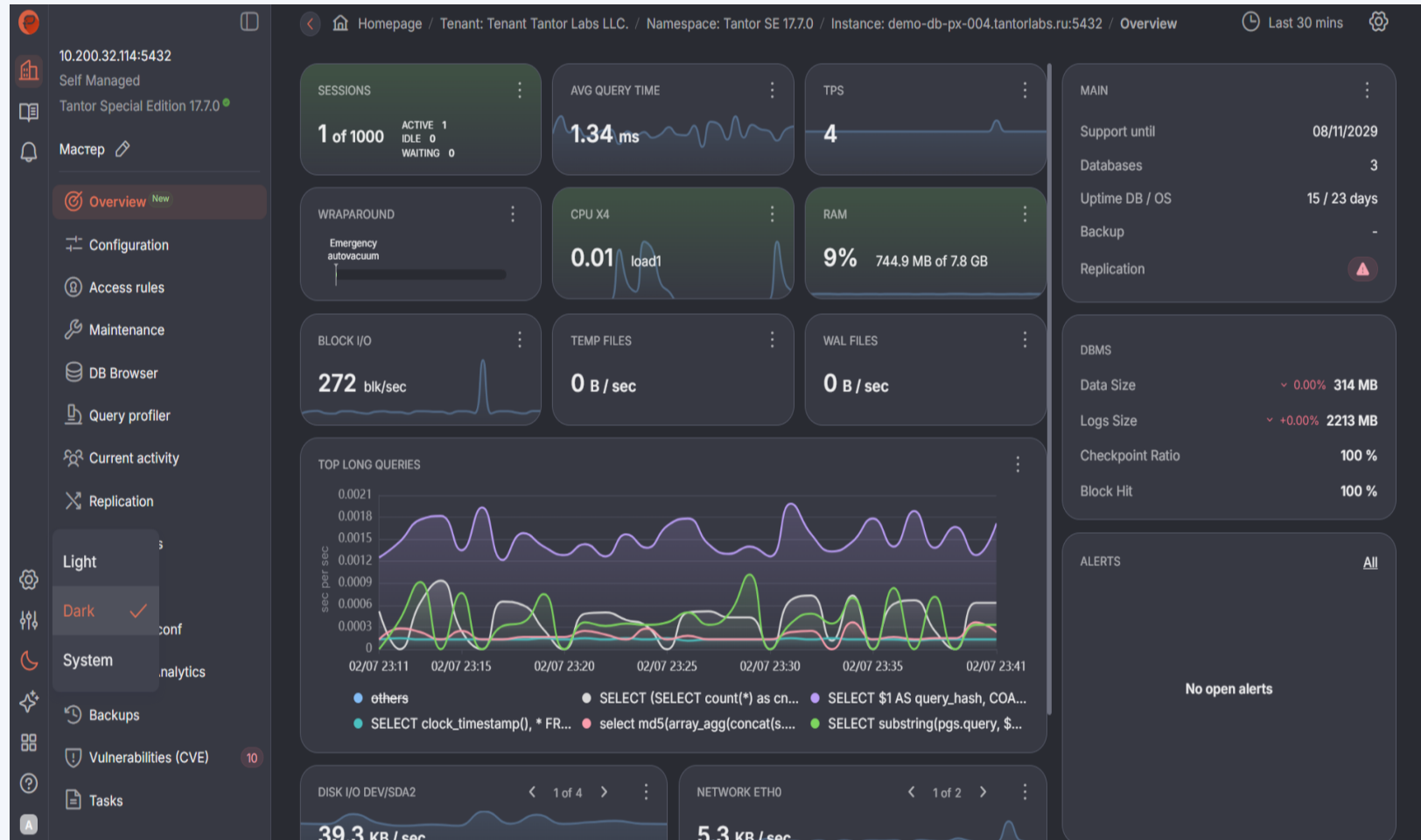
- Data masking
- Database schema
- SQL queries
- Configuration
- Maintenance
- Monitoring

- Database server tuning recommendations
- Proactive alerts for potential critical incidents
- Database schema verification, optimization recommendations
- Analysis, optimization, profiling and obtaining recommendations for improving SQL queries
- Masking of sensitive data
- Identification of suboptimal queries
- Monitoring key database metrics
- Collection, storage, and visual analysis of database logs
- Monitoring and management of fault-tolerant database clusters



Administrator dashboard

- A single pane of glass for real-time Postgres infrastructure health monitoring
- Key DBMS performance and availability metrics: Session and transaction counts, query execution times, CPU utilization, memory and disk I/O usage, network activity, WAL and autovacuum activity, and replication status
- Individual widgets: top queries by execution time, alerts for potential issues and anomalies, log and temporary file status





Engineered for mission-critical data.
Ready for your next challenge.



- Data transformation and loading



- Database management platform

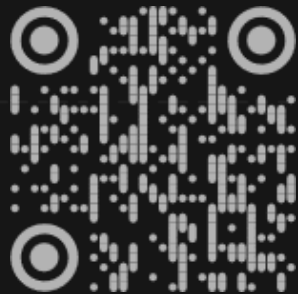


- Database machine

- DBMS



<https://tantorlabs.ru/>
https://t.me/tantor_labs



XData
Gen3

<https://tantorlabs.ru/products/xdata-gen3>