OCEANBASE

An open source & unlimited scalable distributed database for data-intensive transactional and real-time operational analytics workloads, with ultra-fast performance that has once achieved world records in the TPC-C benchmark test. OceanBase has served over 1000 customers across the globe and has been supporting all mission critical systems in Alipay.

Architecture

OceanBase Database adopts the Shared-Nothing architecture to implement node peering. Each node has its SQL engine, transaction engine, and storage engine, and is run on a cluster of ordinary PC servers. This architecture provides benefits such as high scalability, high availability, high performance, high-cost efficiency, and high compatibility with mainstream database systems.

Published Papers

1. OceanBase: A 707 Million tpmC Distributed Relational Database System; (VLDB2022)

2. LCL: A Lock Chain Length-based Distributed Algorithm for Deadlock Detection and Resolution; (ICDE 2023)

3. OceanBase Paetica: A Hybrid Shared-nothing/Shared-everything Database for Supporting Single Machine and Distributed Cluster; (VLDB 2023)

4. Efficient Distributed Transaction Processing in Heterogeneous Networks; (VLDB 2023)

5. Functionality-Aware Database Tuning via Multi-Task Learning; (ICDE 2024)

6. F3KM: Federated, Fair, and Fast k-means; (SIGMOD 2024)

Haibei Laboratory of Ant Group

OceanBase Lab serves as the driving force behind OceanBase, dedicated to exploring the frontier core technologies of databases, expanding the boundaries of database technology, and offering customers a reservoir of technical strength for superior database products. The Lab investigates industry-leading Cloud-native distributed HTAP database technology, addressing practical database challenges and meeting the business requirements of both Ant Group and external organizations. This effort significantly enhances OceanBase's influence within the database industry. We are eager to communicate and collaborate with premier research institutions in the database field.

We are hiring: bit.ly/41qgs0x
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https://en.oceanbase.com

https://twitter.com/OceanBaseDB

https://www.linkedin.com/company/oceanbase/

https://github.com/oceanbase/oceanbase