



链滴

1.1 A Brief History of Distributed Database

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1.1 A Brief History of Distributed Database (分布式数据库发展简史)

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SQL Engine of PingCAP

[Qiniu Cloud / PingCAP](#)

Distributed storage / Database engineer

Old days (20th century)

- Traditional Database
 - Interact with SQL
 - Single node / Shared everything
 - OLTP workloads

[PostgreSQL](#)、[MySQL](#)、[SQL Server](#)

单机数据库，OLTP，数据量少，业务并发不高。

Internet decades(2000s)

- Distributed middleware

[ShardingSphere](#)、[Vitess](#)

业务增多，分库分表。

- The rise of Data Warehouses
 - Interact with programming language API

[Hadoop](#)

数据量暴增，大数据兴起，不支持 SQL 交互，采用基于编程语言的计算框架。

- The rise of Data Warehouses
 - Interact with SQL
 - Distributed / Shared nothing
 - Column-oriented
 - OLAP workloads

[Greenplum](#)、[monetdb](#)

OLAP兴起，大多是分布式的，按链存储。

- NoSQL
 - Interact with key-value API
 - No transaction, No relation model, No Schema
 - High performance
 - High Availability
 - Distributed / Shared nothing

[MongoDB](#)、[HBase](#)、[Cassandra](#)

放弃关系型模型和事务，高性能，高可用，分布式。

NewSQL(2010s)

- NewSQL provides the scalability of NoSQL systems for OLTP workloads while not giving up ACID transactions
 - Interact with SQL
 - Distributed / Shared nothing

[Cloude Spanner](#)

HTAP(2010s)

- HTAP
 - Execute OLTP queries like NewSQL
 - Execute OLAP queries like a data warehouse

混合事务分析处理 (OLTP + OLAP)

And TiDB tries to bring the best to you

- An HTAP NewSQL database
 - Interact with SQL
 - OLTP & OLAP workloads
 - Distributed / Shared nothing
 - High performance
 - High Availability