

Alibaba Cloud Tablestore

Product Introduction

Issue: 20200605









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Document conventions

Style	Description	Example
	A danger notice indicates a situation that will cause major system changes, faults, physical injuries, and other adverse results.	 Danger: Resetting will result in the loss of user configuration data.
	A warning notice indicates a situation that may cause major system changes, faults, physical injuries, and other adverse results.	 Warning: Restarting will cause business interruption. About 10 minutes are required to restart an instance.
	A caution notice indicates warning information, supplementary instructions, and other content that the user must understand.	 Notice: If the weight is set to 0, the server no longer receives new requests.
	A note indicates supplemental instructions, best practices, tips, and other content.	 Note: You can use Ctrl + A to select all files.
>	Closing angle brackets are used to indicate a multi-level menu cascade.	Click Settings > Network > Set network type.
Bold	Bold formatting is used for buttons, menus, page names, and other UI elements.	Click OK.
Courier font	Courier font is used for commands.	Run the <code>cd /d C:/window</code> command to enter the Windows system folder.
Italic	Italic formatting is used for parameters and variables.	<code>bae log list --instanceid Instance_ID</code>
[] or [a b]	This format is used for an optional value, where only one item can be selected.	<code>ipconfig [-all -t]</code>

Style	Description	Example
{ } or {a b}	This format is used for a required value, where only one item can be selected.	switch {active stand}

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1 What is Tablestore?

Tablestore is a NoSQL database service that uses a variety of data models. Tablestore is developed by Alibaba Cloud and can store a large amount of structured data. Meanwhile, you can use Tablestore to efficiently query and analyze data. The distributed storage and powerful index-based search engine enable Tablestore to store petabytes of data while Tablestore guarantees a 10 million transactions per second (TPS) and a latency within several milliseconds.

Features

- Fully managed

Tablestore is a fully managed database service. You need only to focus on business research and development, without worrying about software and hardware presetting, configurations, faults, cluster scale-out, and security. Tablestore ensures high availability of your service while minimizing management and maintenance costs.

- Seamless scalability

Tablestore uses shards and load balancing to implement seamless scalability.

Tablestore adjusts the size of partitions to store more data. Tablestore can store a minimum of 10 PB of data. One table can store a minimum of 1 PB of data or 1 trillion records.

- Powerful query capabilities

Tablestore supports queries based on search indexes and global secondary indexes in addition to primary key-based queries.

- Global secondary index: predefines a model to distribute data, which improves data query efficiency.
- Search index: supports query methods such as BoolQuery, WildcardQuery, GeoDistanceQuery, and tokenization based on inverted indexes and column-oriented storage.

- High reliability

Tablestore creates multiple backups of data and stores them in different racks across different servers. When a backup fails, the system immediately uses another backup to restore data. This mechanism ensures service availability of 99.99999999% (ten 9s).

- Strong consistency

Tablestore ensures consistency among three backups. After data is written, the application can immediately read the written data.

- Highly concurrent read and write operations

Tablestore supports tens of millions of concurrent read and write queries per second (QPS).

Quick start

You can use the Tablestore console to get started with Tablestore. For more information, see [Getting started](#).

Terms

- time to live (TTL)

A data table attribute measured in seconds. This attribute indicates the validity period of data. For more information, see [Data versions and time to live](#). To save storage space and minimize storage costs, the Tablestore backend automatically clears any data whose TTL terminates.

- region

A physical data center. Tablestore is deployed across multiple Alibaba Cloud regions. You can select a region as needed. For more information, see [Regions](#).

- read/write throughput

A Tablestore attribute that is measured by read and write capacity units (CUs). A CU is the basic billing unit for data read and write operations. For more information, see [Read/write throughput](#).

Implementation modes

- Console

Alibaba Cloud provides web pages for you to manage Tablestore. To manage Tablestore instances, log on to the [Tablestore console](#).

- SDKs

Alibaba Cloud provides SDKs in various programming languages for you to use Tablestore. For more information, see [SDK overview](#).

- Tablestore CLI

Alibaba Cloud provides command-line tool Tablestore CLI for you to manage Tablestore. For more information, see [#unique_9](#).

Computing and analysis

You can perform computing and analysis on data in Tablestore.

For more information about how to combine MaxCompute with Tablestore, see [Use MaxCompute to access Tablestore](#).

Data migration for synchronization

You can migrate heterogeneous data to Tablestore without interrupting services. You can also migrate data from Tablestore to services such as OSS.

For more information about how to migrate data from Tablestore to OSS, see [Overview](#).

Billing

Billing items of Tablestore include data storage usage, reserved read/write throughput, additional read/write throughput, and Internet outbound traffic. For more information, see [Billing items and pricing](#).

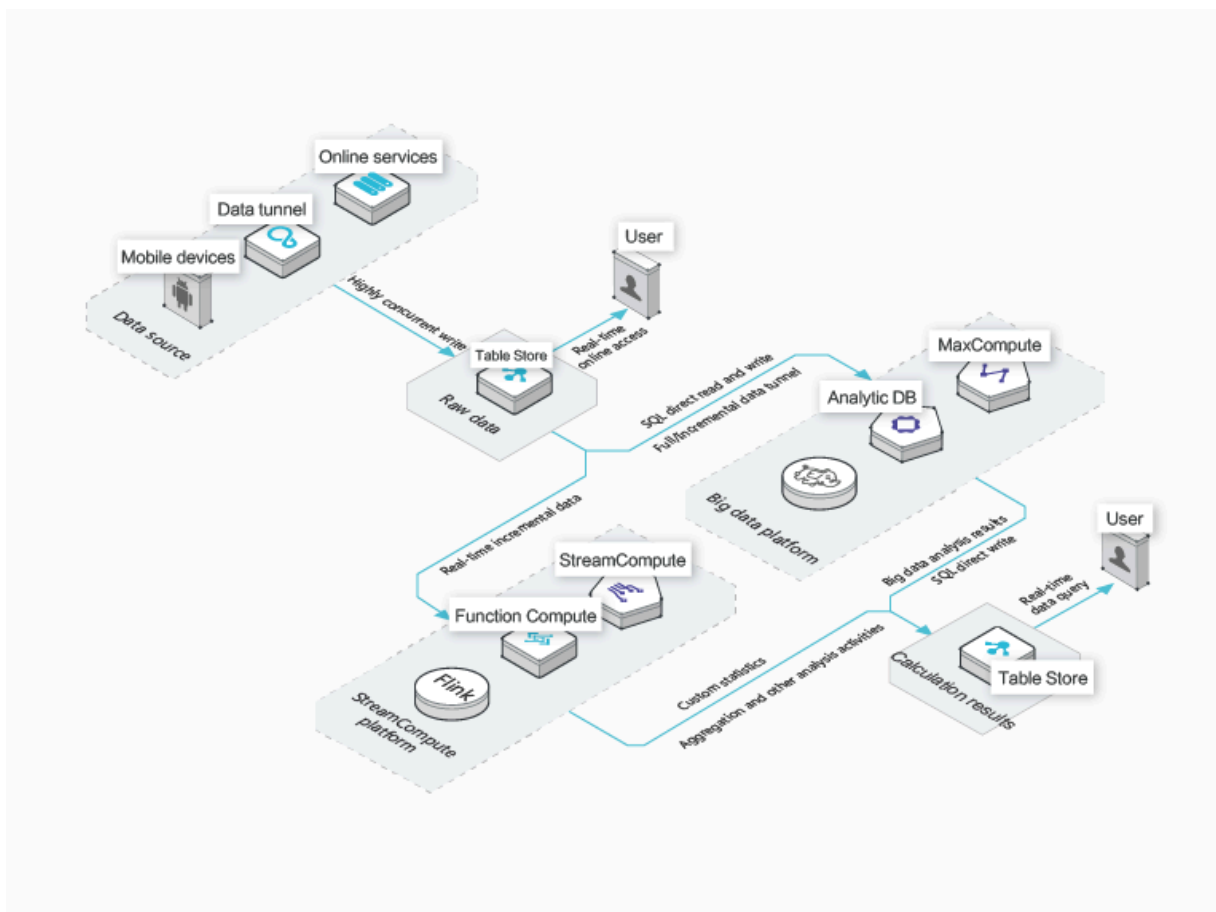
For more information about Tablestore and related resource prices, see [Tablestore Pricing](#).

2 Case studies

This document provides a variety of typical case studies for Table Store, helping you get more insight of Table Store.

Big data storage and analysis

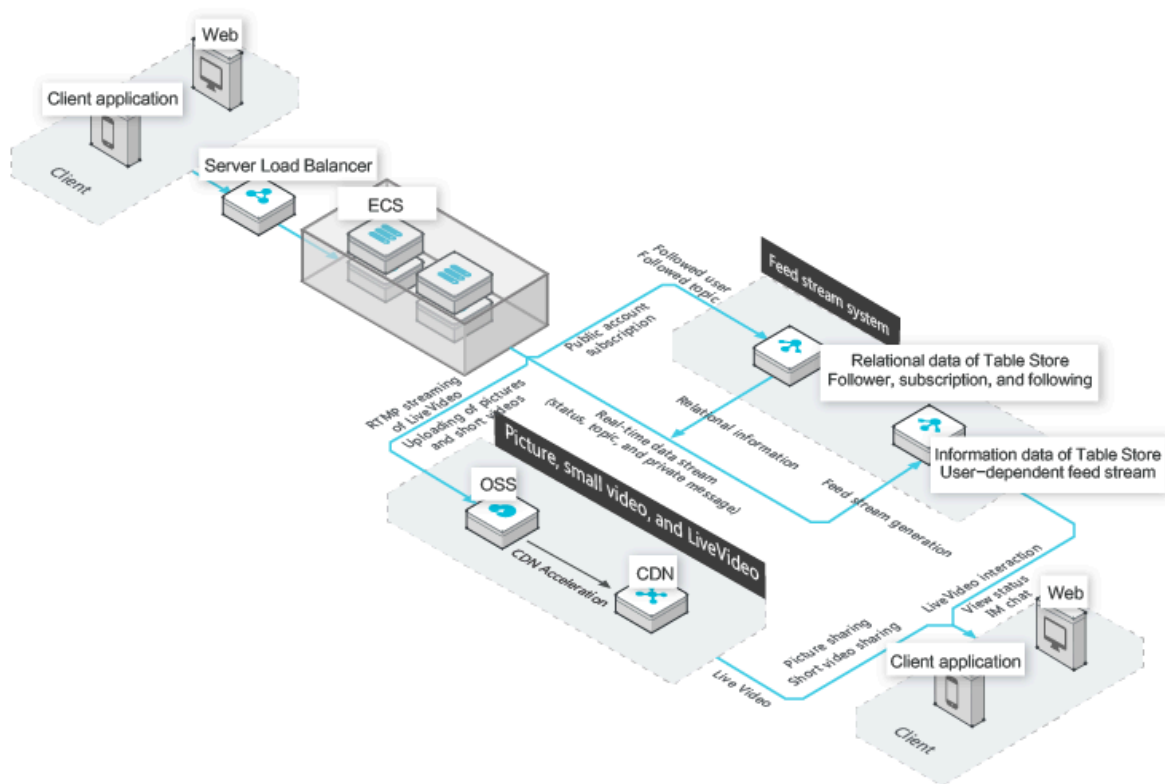
Table Store provides low-cost, low-latency, and high-concurrency storage and online access of high volumes of data. In addition, Table Store provides incremental and full data tunnels, and also SQL direct read and write on big data analysis platforms, such as MaxCompute. An efficient incremental streaming read interface is provided for easy computing of real-time data streams.



Social feed stream storage

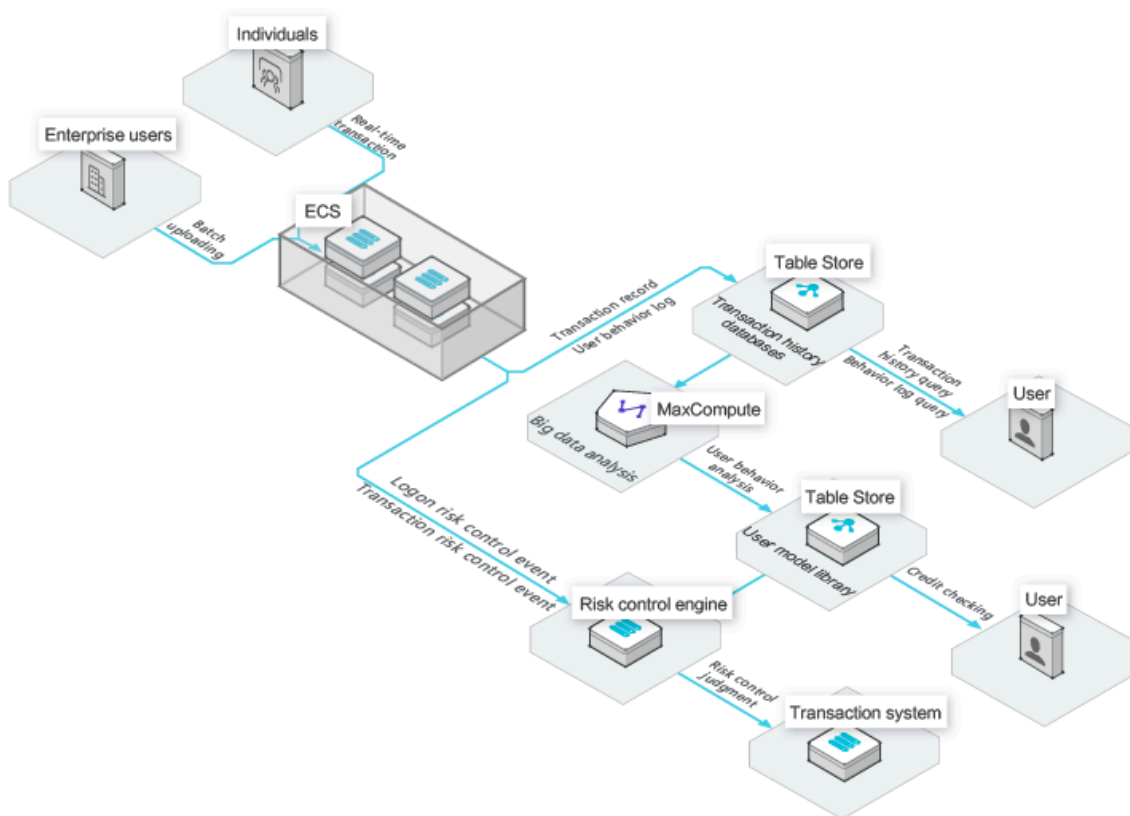
Table Store can store high volumes of social information produced by interactions between people, including instant messaging (IM) chats, comments, and threads. The elastic resources stored in Table Store are billed in Pay-As-You-Go method. At a very competitive cost, Table Store can meet the needs of applications that feature significant traffic fluctuation.

ns and high concurrency when low latency is required. Table Store stores images and videos on OSS and, with CDN acceleration, provides an optimal user experience.



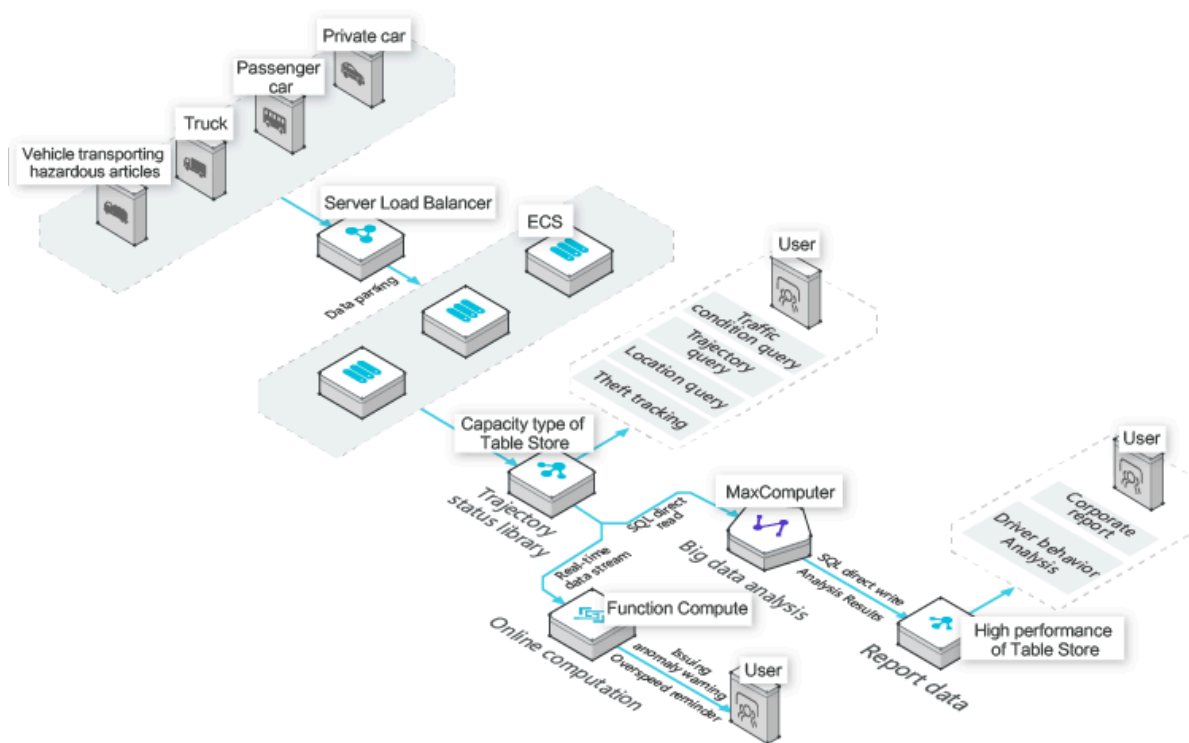
Financial risk control

The advantages of Table Store such as low latency, high concurrency, and Pay-As-You-Go billing of elastic resources combine to optimize the financial risk control system, allowing you to strictly limit transaction risks. Flexible data structures enable fast iteration of business models as market needs shift.



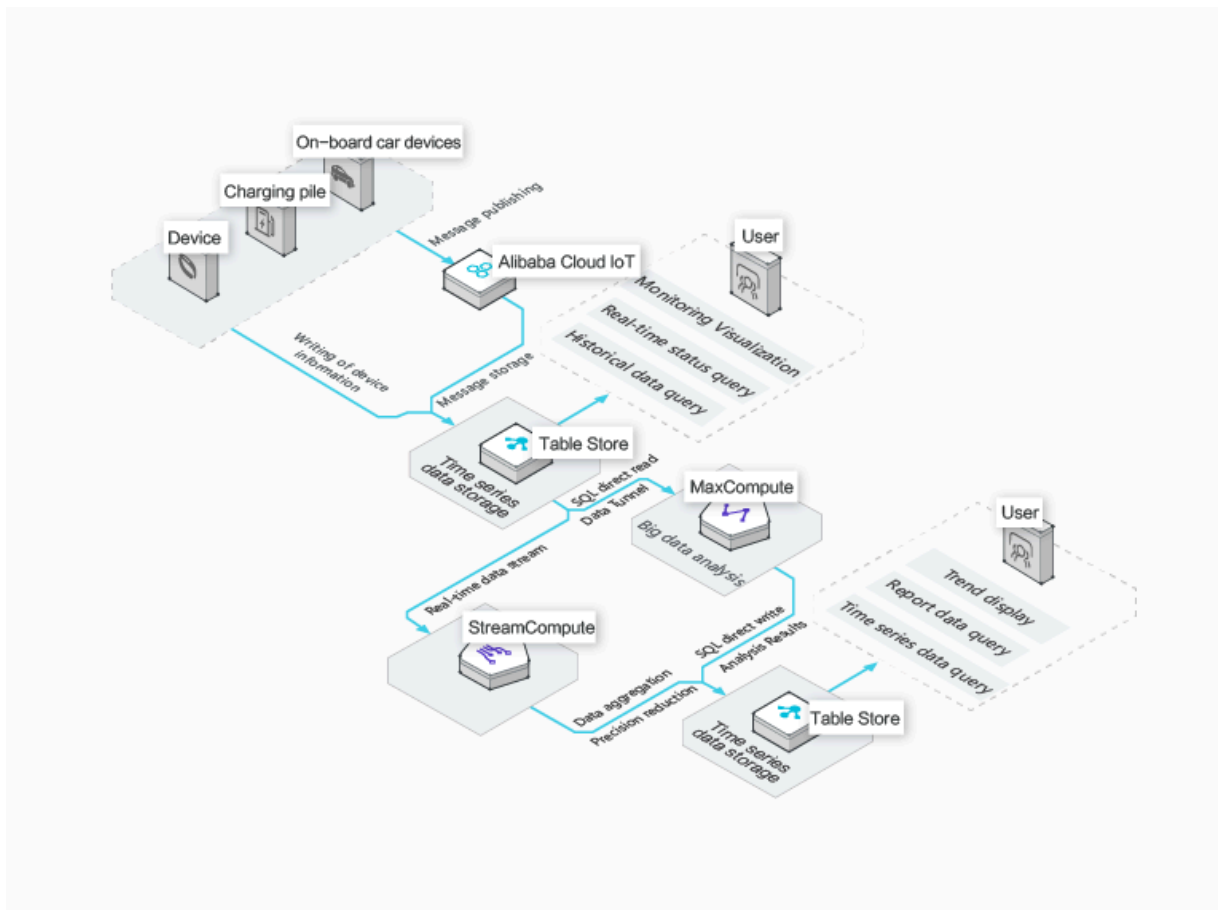
IoT data storage

A single table can store petabytes of data without distributing data in separate databases and tables, which simplifies the business logic. The schema-free data model enables easy access to the monitoring data of different vehicle-mounted devices. Table Store can be seamlessly integrated with multiple big data analysis platforms and real-time computing services for ease of real-time online query and business report analysis.



IoT time series data storage

With a single table capable of storing petabytes of data and processing thousands of queries per second (QPS), Table Store makes it easy to store the time series data of IoT devices and monitoring systems. The big data analysis SQL direct read function and the efficient incremental streaming read interface provide an easy way of offline data analysis and real-time streaming computing.



E-commerce recommendation

Table Store makes it possible for you to deal with data volumes and access performance with ease when handling a large number of historical transaction orders. Combined with MaxCompute, Table Store enables precision marketing, elastic resource storage, and Pay-As-You-Go billing. Table Store allows you to easily manage peak hours when a large majority of customers go online.

