Key-Value Storage Service

FAQs

Issue 01

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1 KVS Concepts

1.1 What Are the Differences Between Local and Global Secondary Indexes?

Table 1-1 compares the local secondary index and the global secondary index.

NOTE

Each index belongs to a table, which is called its base table.

Table 1-1 Comparison between the local secondary index and the global secondary index

Dimension	Local Secondary Index	Global Secondary Index
Definition	A local secondary index has the same shard key as its base table, but a different sort key. It is supported for tables with a composite primary key (shard key and sort key) and helps accelerate queries through the specified sort key.	A global secondary index has a different shard key from the base table. Each index item stores only the index data. Other data in the corresponding KV item is not included.

Dimension	Local Secondary Index	Global Secondary Index
Scenario	Suppose a user exercise table has the following fields: *username*, *city*, *duration*, *date*, and *calories burned*. In the primary index of this table, the shard key is *username*, and the sort key is *duration*. In its local secondary index, the sort key is *date*. Using these indexes together, you can quickly determine which user exercised the longest or shortest on a particular day.	Suppose a user exercise table has the following fields: *username*, *city*, *duration*, *date*, and *calories burned*. In the primary index of this table, the shard key is *username*, and the sort key is *duration*. In its global secondary index, the shard key is *city*, and the sort key is *calories burned*. Because the primary key fields (*username* and *duration* in this example) are projected into the global secondary index, you can use all these indexes together to quickly determine which user burned the most or least calories in a specific city.
Key structure	Composite primary key (shard key and sort key)	Simple primary key (shard key) or composite primary key (shard key and sort key)
Feature	A local secondary index has the same shard key as its base table, but a different sort key.	A global secondary index has a different shard key from the base table.
Consistency	When a KV item is written, a local secondary index item is automatically generated and stored with strong consistency.	When a KV item is written, an index item is automatically generated and then asynchronously written to the global secondary index with eventual consistency.
Quantity limits	Each table can have up to five local secondary indexes.	Each table can have up to 20 global secondary indexes.

1.2 What Are the Differences Between Shard Keys and Sort Keys?

Table 1-2 shows the comparison between shard keys and sort keys.

Table 1-2 Comparison between shard keys and sort keys

Dimension	Shard Key	Sort Key
Scenario	A shard key determines in which shard a KV item is stored. In a user table, for example, you can specify the *username* field as the shard key. KVS then stores KV items with the same username in the same shard.	KV items with the same shard key are stored by sort key. You can query data by sort key.
Primary keys supported	Simple primary key (shard key) and composite primary key (shard key and sort key).	Composite primary key (shard key and sort key).

2 KVS Console

2.1 What Should I Do If Time Difference Is Longer Than 15 Minutes Between the Client and Server?

Problem:

Error message "Time difference is longer than 15 minutes between the client and server" or "The difference between the request time and the current time is too large" was displayed during the use of KVS.

Cause:

For security purposes, KVS verifies the time difference between the client and server. If it is longer than 15 minutes, the KVS server will reject your requests.

Solution:

Adjust your local time (UTC) and try again.

3 KVS Operations

3.1 What Should I Do If an Error Was Reported During Table Creation?

Problem:

During table creation, an error 400 was reported due to non-parameter errors. The error message is "InvalidRequest".

Solution:

- If this error occurred when you were calling an API to create a table, use **describe-table** to query the table status (**table_status**). When the status is **creating**, send the same table creation request again (keep the table name and other parameters unchanged).
- If this error occurred when you were using the KVS console, create the table again with the table name and other parameters unchanged.

