

Alibaba Cloud

LedgerDB Quick Start

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Document conventions









Style	Description	Example
 Danger	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.
 Warning	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.
 Notice	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.
 Note	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.
<i>Italic</i>	Italic formatting is used for parameters and variables.	<code>bae log list --instanceid</code> <i>Instance_ID</i>
[] or [a b]	This format is used for an optional value, where only one item can be selected.	<code>ipconfig [-all -t]</code>
{ } or {a b}	This format is used for a required value, where only one item can be selected.	<code>switch {active stand}</code>

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1.Introduction

This article introduces several core functions in the LedgerDB.

Transaction Signature

All the data stored in the ledger must be signed by multiple parties to ensure that the data is non-repudiation and tamper-proof.

- **Signature of the ledger:** The Ledger user signs the data that needs to be stored in the ledger and endorses the accounting data.
- **Signature of the ledger that is provided by the account book provider:** After the account book provider has written the data into the account book, the account book provider will provide a signed receipt to the account book user to endorse the data.
- **Signed by a third-party trusted time provider:** a third-party trusted time provider, such as the China National Time Service Center and the Greenwich Mean Time Service Center, can provide a trusted timestamp for the data stored in the ledger and endorse the timestamp for the data.

Data clue

Users can customize leads to trace the ledger data.

- **Data clue tracing:** Provides a custom clue operation, which allows users to connect the stateless Ledger data in series to trace the data.
- **Quick search for data clue:** you can quickly search for the ledger data related to this clue.
- **Quick verification of data clue:** quickly verify Ledger data based on specific clues.

Ledger member

The LedgerDB allows multiple users to use the same ledger simultaneously to achieve multi-party collaboration. The owner of the ledger becomes the Ledger administrator, who can assign and manage the members and their permissions.

Time Ledger

The Time Ledger is a ledger maintained by the LedgerDB service that is common and viewable to all LedgerDB users. It records anchor points and third-party trusted timestamps (Time Stamp Authority).

- **A time anchor is a record in the Time Ledger.** LedgerDB performs hashing on the data on all Ledger instances it maintains at a certain interval to form a unique hash value, and records this value in the Time Ledger, which is called a time anchor. Each user can witness each other's time anchors through the Time Ledger, enhancing the credibility of the ledger data.
- **The third-party trusted timestamp (TSA) is a timestamp service provided by a third-party time service with authoritative endorsement.** The LedgerDB service performs hashing on the data in the Time Ledger from time to time to form a unique hash value. The hash value is used to request the TSA service and the returned results are stored in the time book.