Alibaba Cloud
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Product Introduction

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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 `cd /d C:/window` command to enter the Windows system folder.
Italic	Italic formatting is used for parameters and variables.	bae log list --instanceid Instance_ID
[] or [a|b]	This format is used for an optional value, where only one item can be selected.	ipconfig [-all|-t]

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

Contents

1 What is Alibaba Cloud CloudQuotation?

Alibaba Cloud CloudQuotation is designed to make global capital markets more transparent. It provides different levels of information based on customer groups. CloudQuotation is the first of many Alibaba Cloud services geared towards the exchange markets, with services for the futures and securities exchanges planned for the future.

CloudQuotation marks the first collaboration between Alibaba Group and Nasdaq Inc. CloudQuotation provides global customers with the quotation service and the quotation data of securities and futures from stock exchanges across the US, such as Nasdaq, New York Stock Exchange (NYSE), and American Stock Exchange (AMEX), and also from Global Index Data Service (GIDS). The first product series of CloudQuotation is released for US stocks. It has the Basic Edition, Standard Edition, Standard Edition PLUS, Advanced Edition, and Advanced Edition PLUS.

- CloudQuotation Basic Edition is designed for Internet enterprises that provide financial information platforms.
- CloudQuotation Standard Edition and Standard Edition PLUS are designed for financial institutions, such as securities firms, large banks, asset management subsidiaries of fund firms and insurers, and top private equity firms.
- CloudQuotation Advanced Edition and Advanced Edition PLUS are designed for other financial institutions, such as securities firms and investment banks that hold brokerage licenses.

CloudQuotation is an end-to-end service that provides excellent user experience and efficiency at lower costs and technical requirements. It also facilitates industrial transformation, such as for digital operations, investment, and research, and helps enterprises build stable and reliable services.

CloudQuotation provides authoritative and punctual quotation data of US stocks and real-time data from GIDS. It provides different editions, ranging from Basic Edition to Advanced Edition PLUS, to meet diverse demands of customers on real-time quotation data. It integrates various capabilities of exchanges and provides one-stop services on quotation information. With benefits such as fast and reliable data transmission, powerful data computing, complete quotation data, and strict data encryption, CloudQuotation lowers the initial investment threshold, enhances overall efficiency, and facilitates digital operations for customers.

2 Benefits

Alibaba Cloud CloudQuotation is designed to make global capital markets more transparent. It provides different levels of information based on customer groups. This topic describes the benefits of CloudQuotation compared with conventional quotation services.

Data computing within nanoseconds

CloudQuotation is built on top of Alibaba Cloud Elastic Compute Service (ECS) instances, which are able to compute and process tens of millions of index data records each second.

Fast and reliable data transmission

CloudQuotation establishes a direct connection between clients and data sources, which reduces physical latency. CloudQuotation also utilizes a proprietary combination of protocols to ensure minimal packet loss. Both these features combined allow CloudQuotation to push tens of millions of quotation data records each second.

Ultra-low investment threshold

CloudQuotation is available at zero cost, which lowers the initial investment threshold for customers. The CloudQuotation ecosystem is designed to provide an end-to-end service, which provides high efficiency at near-zero investments.

Worldwide disaster recovery network

CloudQuotation is based on the enterprise-grade disaster recovery network of Alibaba Cloud that is distributed across the globe. This network provides customers with flexible disaster recovery solutions, such as multi-zone backup, local active-active, and geo-disaster recovery. CloudQuotation provides a high-quality, efficient, and stable network environment to ensure business continuity.

Complete quotation data

CloudQuotation integrates the capabilities of exchanges, providing customers with out-of-the-box services. CloudQuotation serves as a single point of contact to link customers to multiple data sources, and provides customers with the basic capabilities for investment and research based on historical delayed quotations.

Comprehensive services

CloudQuotation supports access to exchanges. It provides a simple and convenient method for customers to complete all the required processes to use these services. These processes

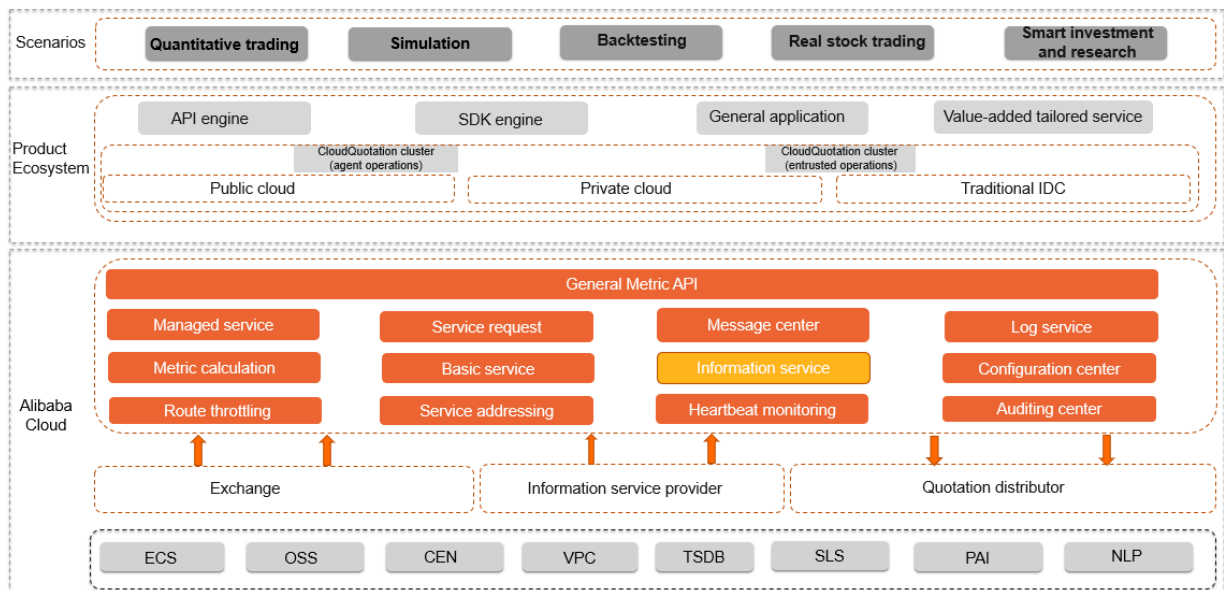include activating, applying for, reporting, and settling accounts for the services that the customers need.

Data interfaces with unified technical standards

As more institutional services are connected to exchanges, the requirements for targeted quotation services grow. However, Internet-oriented data security and services cost high. CloudQuotation provides a standard interface for customers to access the quotation services of various exchanges. CloudQuotation is flexible and scalable, and also supports phased releases. This allows customers sufficient time to update their technologies and reduces the cost of system maintenance.

Strict access control and data encryption, providing stable, secure services

CloudQuotation implements multiple security measures for data in transit, such as authentication before logon, encrypted data transmission, and secure cluster management. This effectively prevents information from being stolen and safeguards the legitimate rights and interests of customers.

3 Architecture

Scenarios	Quantitative trading	Simulation	Backtesting	Real stock trading	Smart investment and research

Product Ecosystem

API engine	SDK engine	General application	Value-added tailored service

CloudQuotation cluster (agent operations) — CloudQuotation cluster (entrusted operations)

Public cloud	Private cloud	Traditional IDC

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General Metric API

Managed service	Service request	Message center	Log service
Metric calculation	Basic service	Information service	Configuration center
Route throttling	Service addressing	Heartbeat monitoring	Auditing center

Exchange	Information service provider	Quotation distributor

ECS	OSS	CEN	VPC	TSDB	SLS	PAI	NLP

- Access to exchanges: CloudQuotation uses data sources from exchanges. All quotations for US stocks at TotalView and Nasdaq Basic are sourced from the North American POP locations of Nasdaq. These POP locations reside in Secaucus, a town in the US, and provide point-to-point stock quotations to the world. Data at Nasdaq Basic, NLS Plus, Global Index Data Service (GIDS) is sourced from leading US stock exchanges, such as Nasdaq, New York Stock Exchange (NYSE), and American Stock Exchange (AMEX).

- Index computing: CloudQuotation obtains quotation, market, and sector data from exchanges and processes the data into three common types of indexes: basic quotation indexes, sector quotation indexes, and market indexes of individual stocks.

- Product service: CloudQuotation supports access to exchanges. This allows CloudQuotation to compute, store, and transmit market, quotation, and sector indexes that are crucial for traders and investors to make informed buy and sell decisions during pre-market, regular, and post-market trading sessions. CloudQuotation provides a simple and convenient method for customers to complete all the required processes to use these services. These processes include activating, applying for, reporting, and settling accounts for the services that the customers need.

- Cluster service: Customers in CloudQuotation clusters can receive, store, and manage the indexes that are generated by CloudQuotation. Engines in CloudQuotation clusters can utilize the pull and push mechanisms to receive requests from different clients and return the requested data to the clients. The cluster service offers historical and real-time

quotations, computes personalized indexes, and supports customization of configurations such as CYQ intervals and indexes.

4 Features

CloudQuotation obtains quotations from exchanges by using the File Transfer Protocol (FTP) and processes the quotations into indexes based on massive computing. For example, if 8,000 stocks are traded for four hours per day and their quotations are updated every second, CloudQuotation needs to perform 1.2 billion computing operations per day to generate 10 Candlestick charts. In actual business scenarios, CloudQuotation also needs to compute real-time and delayed quotations as well as dozens of indexes, such as price-earnings ratios (P/E ratios), price movements, ratios of buying and selling orders, and volume gaps between buying and selling orders. This puts the number of computing operations that CloudQuotation needs to perform to more than 1.5 billion per day.

Massive computing on large amounts of quotations

CloudQuotation obtains quotations from exchanges by using the File Transfer Protocol (FTP) and processes the quotations into indexes based on massive computing. For example, if 8,000 stocks are traded for four hours per day and their quotations are updated every second, CloudQuotation needs to perform 1.2 billion computing operations per day to generate 10 Candlestick charts. In actual business scenarios, CloudQuotation also needs to compute real-time and delayed quotations as well as dozens of indexes, such as price-earnings ratios (P/E ratios), price movements, ratios of buying and selling orders, and volume gaps between buying and selling orders. This puts the number of computing operations that CloudQuotation needs to perform to more than 1.5 billion per day.

Provision of real-time quotations and indexes

Stock exchanges need to provide stable, real-time quotations and indexes for traders and investors to make informed buy and sell decisions. This is the cornerstone of their businesses. In the stock market, price changes may happen within milliseconds or microseconds, which may cause huge capital changes. For example, investors must keep an eye on whether the price of each stock approaches the upper or lower limit, so they can make informed decisions to buy or sell shares of the stock at the opportune time. Split-second decisions like these are crucial to the financial health of the investors.

Scalability to process highly concurrent queries during peak hours

Exchanges are open at specified hours. The number of visits to CloudQuotation surges during the pre-opening and trading sessions. In particular, the number of concurrent visits

within the 30-minute pre-opening session is dozens of times higher than before the closing bell. CloudQuotation can be scaled to process up to 1 million queries per second (QPS).

Active push of quotation updates in large quantities

The CloudQuotation backend actively pushes quotation updates to data feed subscribers. Quotations in the stock market are volatile. When the stock market is promising, CloudQuotation needs to serve nearly 1 million concurrent users. These users have subscribed to 20 stocks on average, and the quotations of these stocks are updated every second. CloudQuotation can push up to 10 million quotation updates per second by using data merging and cache optimization.

5 Applicability

CloudQuotation enables institutions to quickly access comprehensive, accurate, stable, and unified quotation data in the US stock market and provides various levels of financial investment services for the institutions.

Real stock trading and investment capacity

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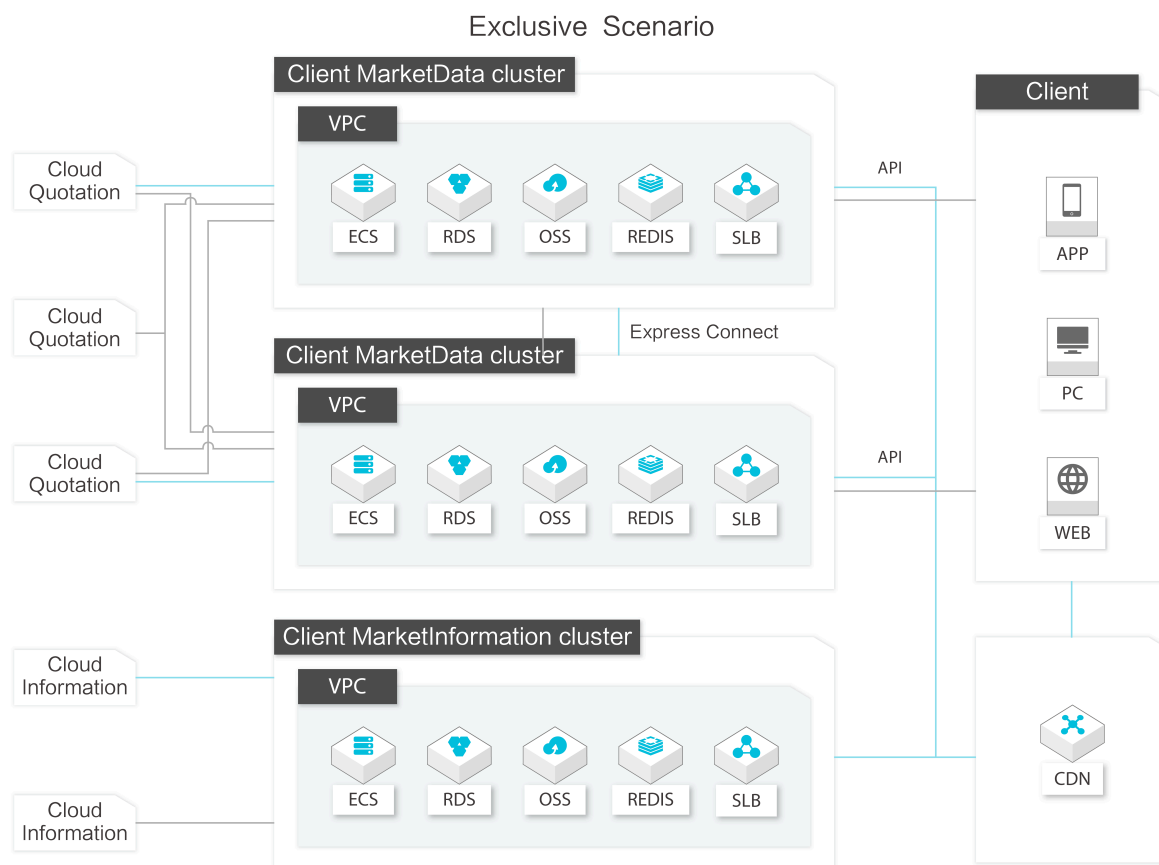**Services based on stock backtesting and transaction simulation**

CloudQuotation allows you to use historical data of mature stock markets obtained from the exchanges to verify your investment strategy. This helps you avoid expensive costs caused by bad transaction decisions and improve your research and investment capability.

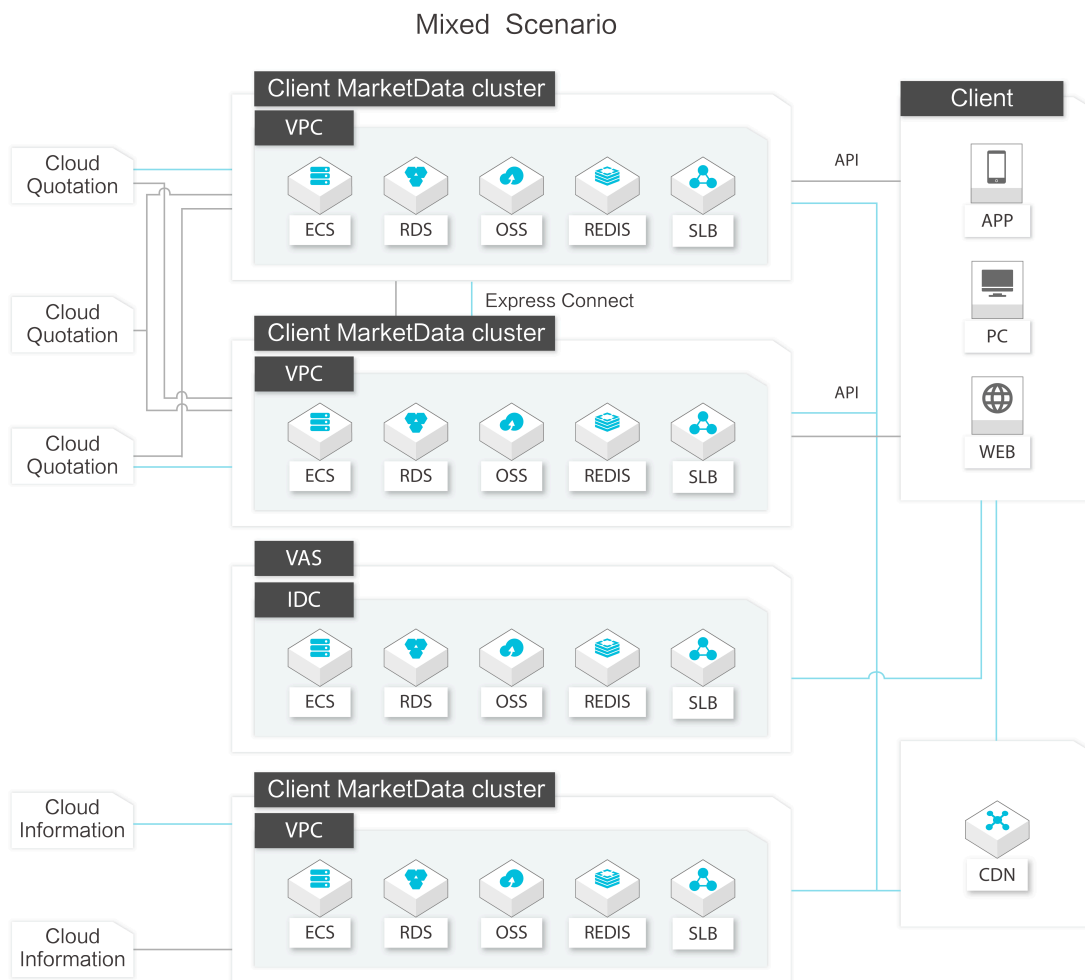**Services based on a unified technical architecture**

CloudQuotation can process global quotation data and provide you with standard, easy-to-use quotation data APIs. CloudQuotation eliminates your efforts and costs to integrate quotation data and establish a quote system.
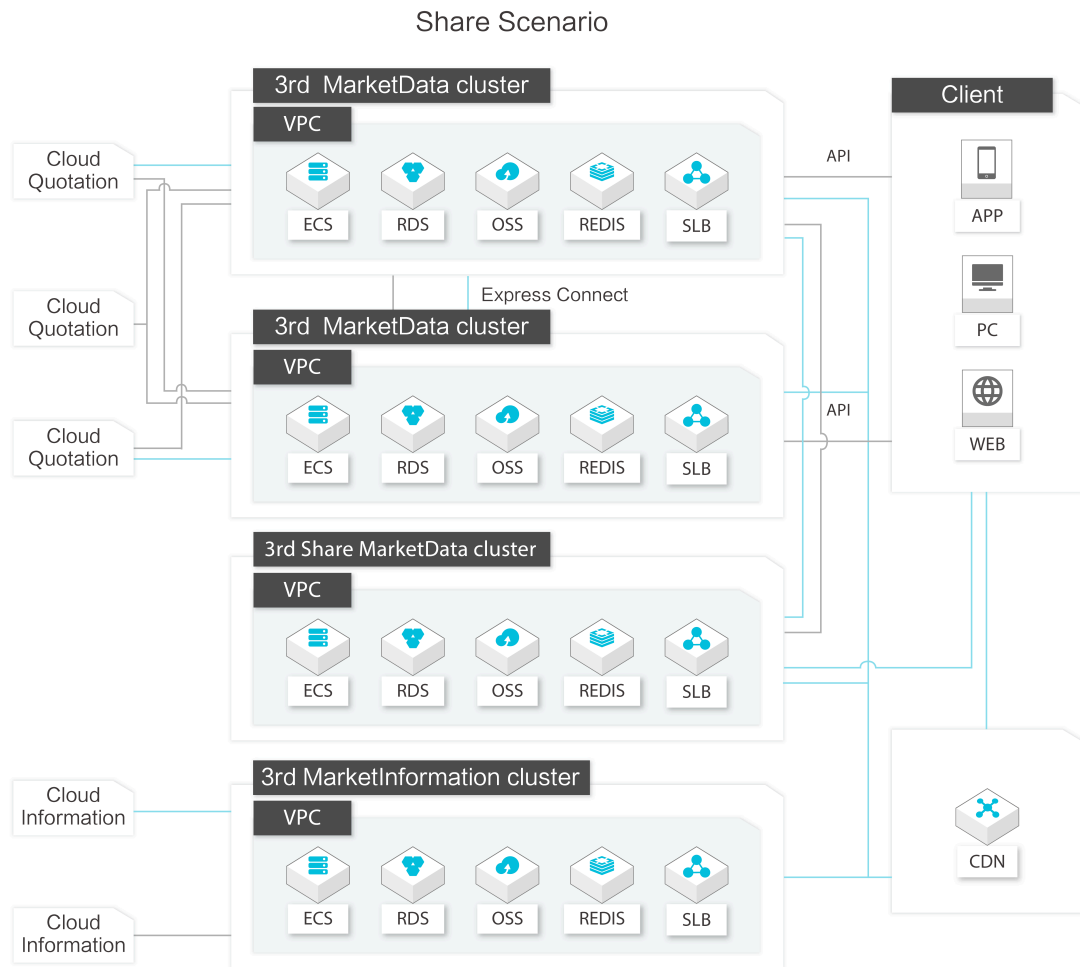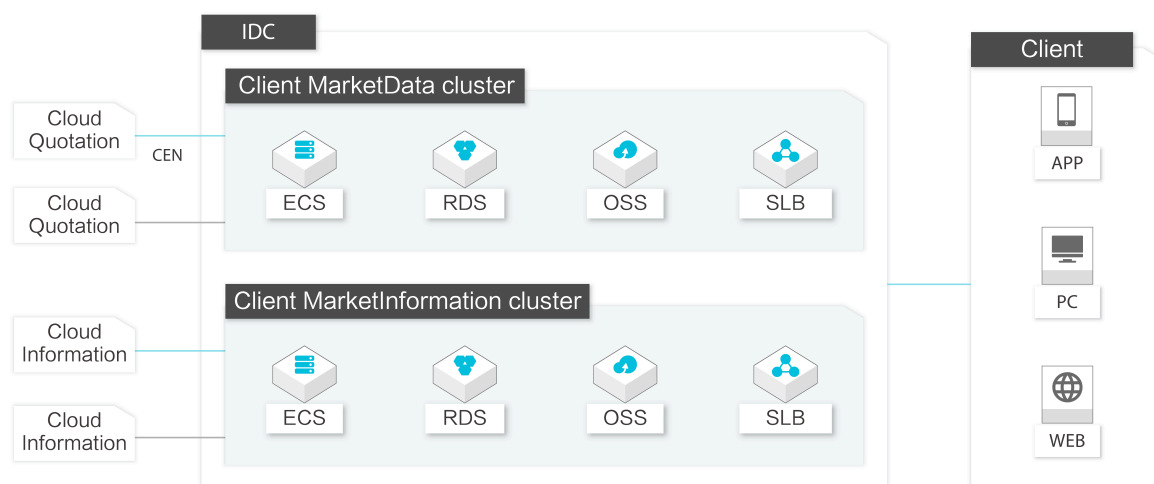
6 Scenarios

Private quotation data scenario

Open quotation data scenario

Mixed quotation data scenario

Share Scenario

Conventional quotation data scenario

BTL Scenario

7 Limits

This topic describes the limits of CloudQuotation.

Item	Scope	Description
Value-added computing capabilities	CloudQuotation offers only the general computing capabilities to process basic quotation data such as Candlestick charts, sectors, and individual stocks.	Other value-added computing capabilities are available for purchase in Alibaba Cloud Marketplace.
Value-added personalized indexes	CloudQuotation offers only Global Index Data Service (GIDS) indexes.	If customers require personalized indexes, they must purchase these personalized indexes and then submit a ticket to the responsible enterprise in the Alibaba Cloud ecosystem. This enterprise will integrate these personalized indexes into CloudQuotation.