

Constructing a Robust Architecture for Digital Asset Trading Platforms



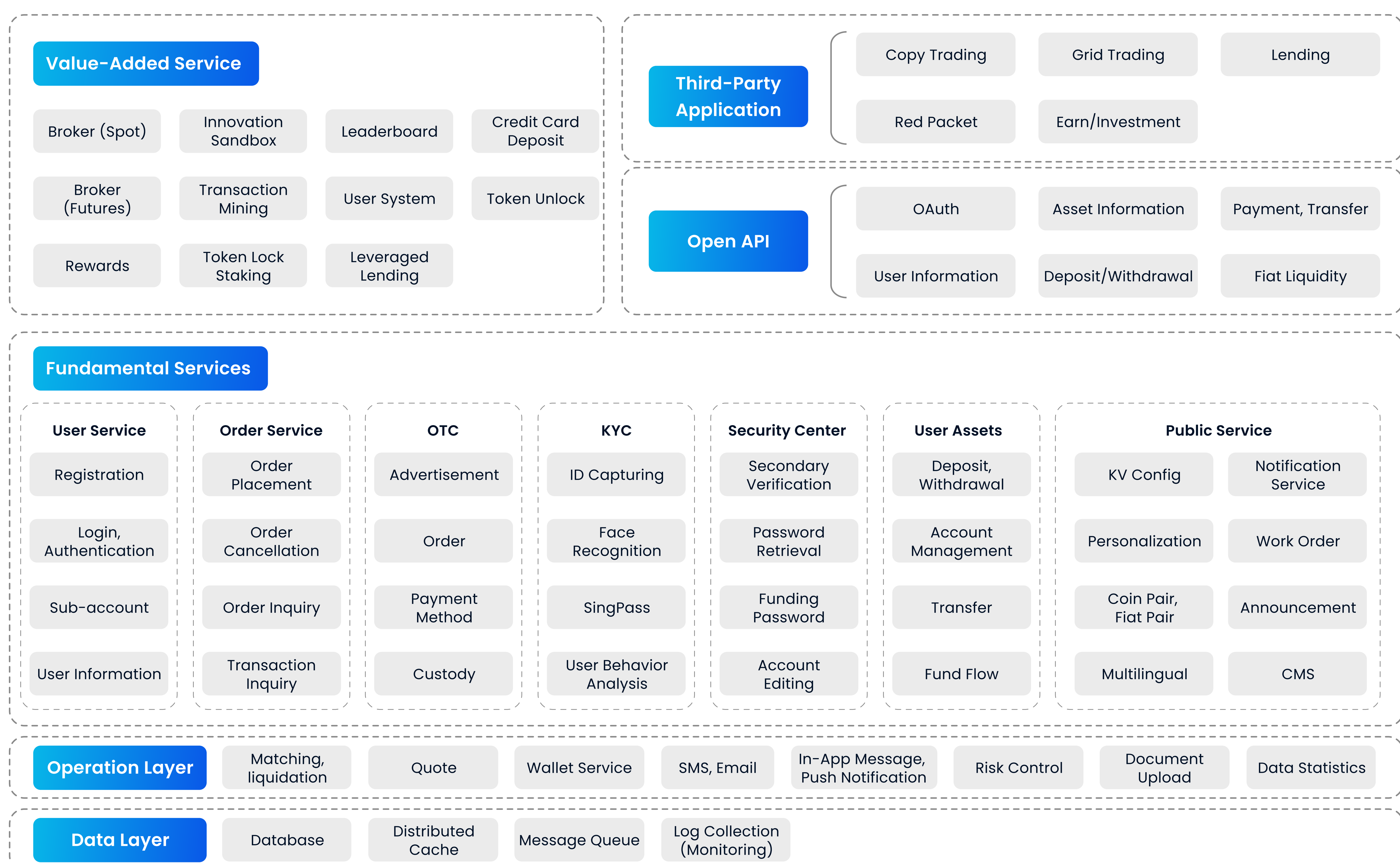
ABSTRACT

The architecture of digital asset trading software is one of the key factors influencing its success rate. It is also a major factor that attracts a wide range of investors and users. If you need to build an effective digital asset trading software architecture, then this article will provide you with a comprehensive guide on the architecture of digital asset trading software.

The architecture of digital asset trading is the core framework and infrastructure of the exchange's operation, playing a crucial role in the development of digital asset trading. It includes multiple components and modules, defining the structure, components, and interactions of the system, and provides a high-level understanding of how the system is organized and how various components work together to achieve its goals. A top-tier trading system's architecture and design should include business, system, matching, operation, wallet, risk control, security, and other aspects. Below, we will introduce the ChainUp exchange system architecture in detail.

Business Architecture: Core of the Trading System

The business architecture is the core of the trading system, responsible for handling the business logic related to trading. It includes basic services, value-added services, service layers, data layers, etc. The basic service layer provides foundational support for other levels of business, the value-added service layer provides rich value-added services for users, the service layer provides direct services to users, and the data layer provides data support for other levels of business. These four levels of business architecture are interrelated and interdependent, collectively forming the exchange's business architecture. As financial technology develops, the business architecture of exchanges will also evolve towards more digital, intelligent, and open innovation directions.



ChainUp Trading Software Business Architecture

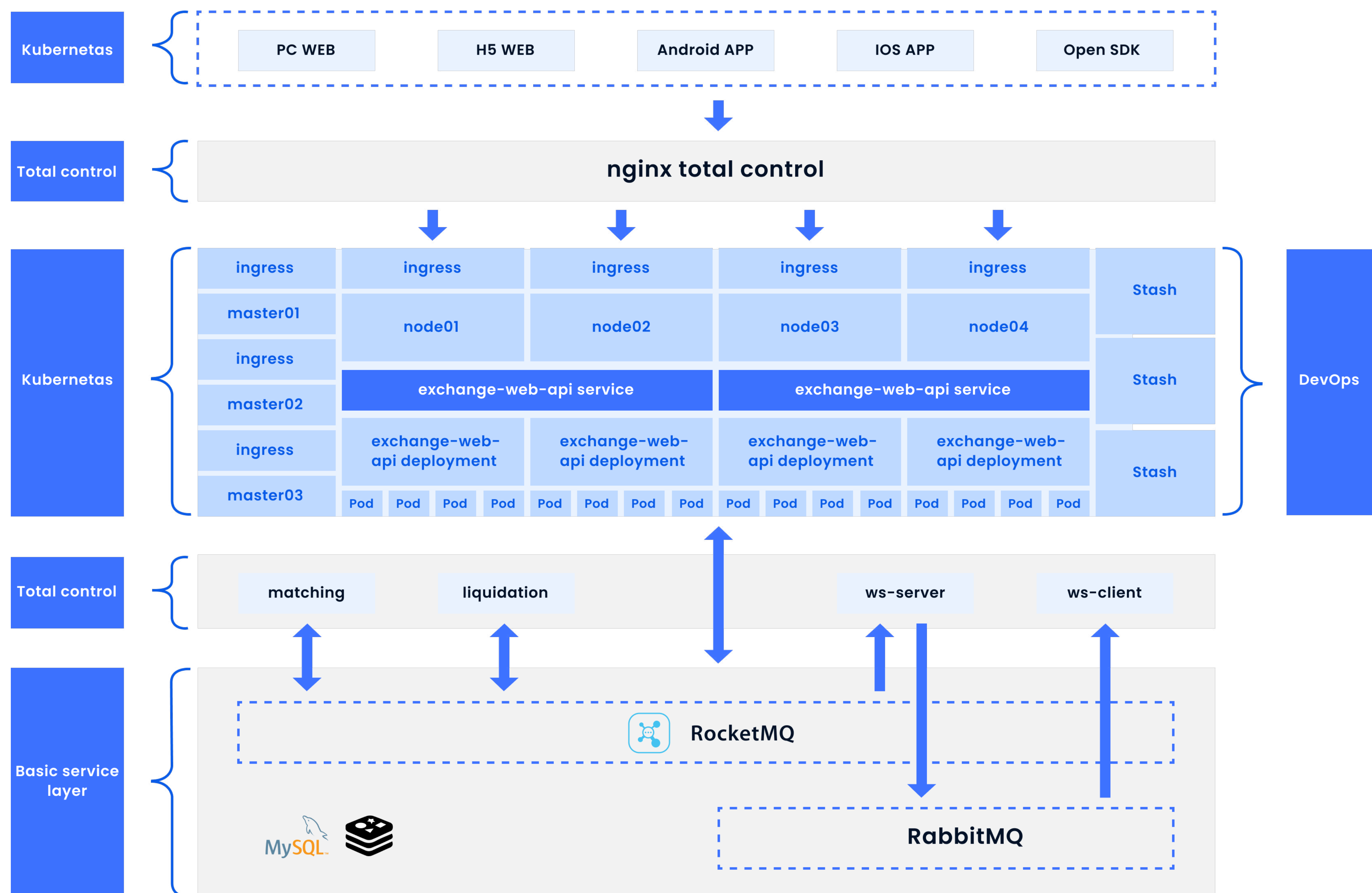
System Architecture: Backbone of Operational Efficiency

The system architecture is responsible for handling the overall architecture of the system, module division, message passing, task scheduling, etc. It includes the system's master control nodes, the cooperative working mechanism of subsystems, error handling, and fault recovery mechanisms, etc. In a SaaS system architecture, the exchange system is deployed in the cloud, with resources and services provided by cloud service providers, responsible for the system's deployment, operation, maintenance, upgrades, etc. The exchange only needs to purchase services to use, without the need to buy and maintain hardware, software, and other resources, allowing more focus on business operations. The typical SaaS system architecture is as shown below:



ChainUp Trading Software (SaaS) System Architecture

In a private system architecture, the exchange deploys the trading system itself, including hardware, software, network, and other resources, and is responsible for the system's maintenance and operation. The typical private system architecture is as shown below:



ChainUp Trading Software (Private) System Architecture