



# DeBi .com

AI Digital Assets Trading Center

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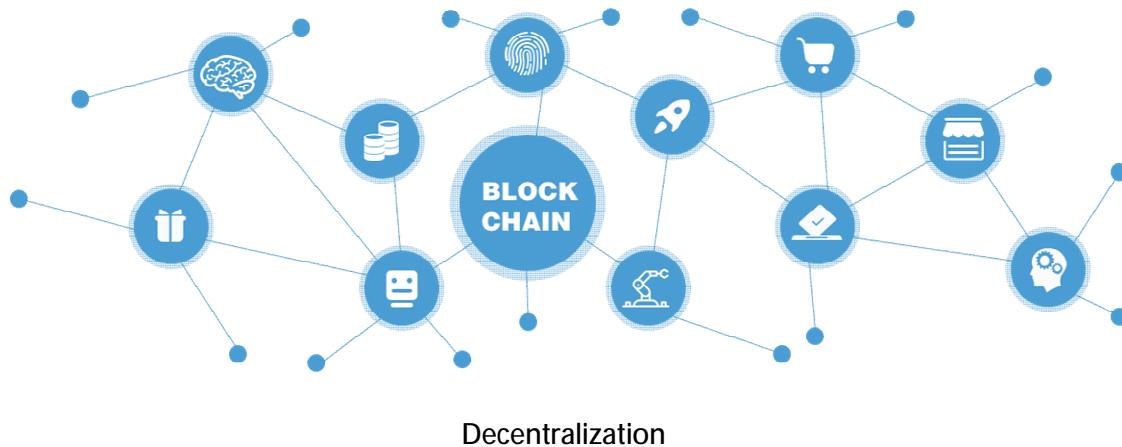
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# Preface

## An age of decentralization is coming

As the root of BTC and ETH, block chain has developed into a new financial system. In the future, as data brings assets, the block chain-based finance will be featured by an apparent trend --Tokenization. One of its goals is to realize an around-the--clock and globalized high mobility with lower cost and only by digital transaction can it be achieved.



At present, the digital transaction on the market is centralized thus many safety problem shows up. Although decentralized digital transaction is safeguarded while it isn't recognized by market out of transaction inefficiency.

In such an environment, DeBi puts forward a concept of AI digital assets trading center which combines the advantages of centralization and decentralization, off-chain and on-chain transaction. Some important assets like the finished transactions are settled on the chain while some matches of exchange are set off-chain. This kind of design can avoid the poor performance of main chain and network congestion thus reduce the transaction cost and improve users' experience. Besides the data security and privacy

from decentralization, it is also embedded with advantages from centralized digital trading exchange like fastness and convenience.

## Background

### Current situation

In 2017, the price of Bitcoin raised by 1100% and reached \$ 20000 for a single coin in December. Globally the daily trading volume of cryptocurrency is also pyramiding. In January 5<sup>th</sup>, 2018, it reached 70 billion dollars (about 443.065 billion yuan). As data analyzed, the average daily trading volume of cryptocurrency kept above 25 billion dollar (approximately 158.525 billion yuan.)

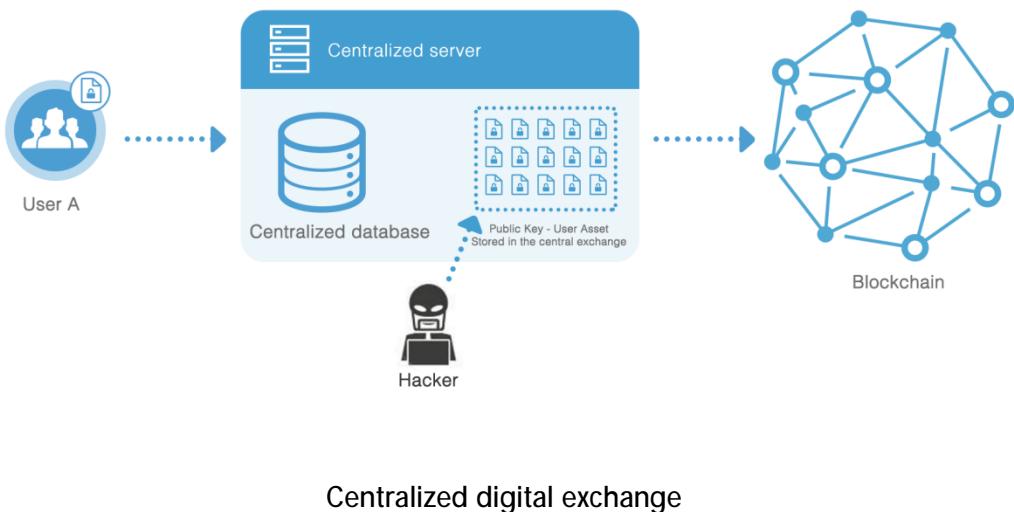
In the future, a bigger market will be born at the right time when the Tokenization is achieved. We can image the room of it in the future by having a glimpse at the current situation: 600 billion dollars for the cryptocurrency market, 5 trillion dollars for global foreign currency market, 75 trillion dollars for global share market and 120 trillion dollars for global bond market.



# Pain point in the market

## Centralized digital exchange

Today with global cryptocurrency gaining more attention , centralized exchanges with huge turnover, especially exchange platform in Korea,become more fragile and become the targets of hackers.Youbit, previously named Yapizon, lost 3861 Bitcoin in April 2017 because of hackers' attack. At that time its market value is just 5 million dollars while it is tenfold now. What's worse, Youbit suffered a heavy loss in last December and had to file for bankruptcy after losing 17%. Besides, it was reported that data of nearly 30,000 users in the biggest exchange in Korea,Bithumb, were leaked and billions of KRW was stole. At current market prices, customers lose at least \$10 million.



Centralized digital exchange

Although there are traditional and mature solutions to realize centralized digital exchange technically, and even in mass and big transactions, users can enjoy qualified service and sufficient mobility and convenience, some disadvantages of centralized digital exchange is obvious:

- Insecurity: Assets and systems are controlled and managed collectively in

centralized digital exchange, which is the guard of users' assets and has legal responsibility for it. 73% private keys of users are controlled by centralized digital exchanges and only 23% are managed by users themselves. The platform handles billions of transaction everyday and most of them are stored in server, which is appealing to hackers.

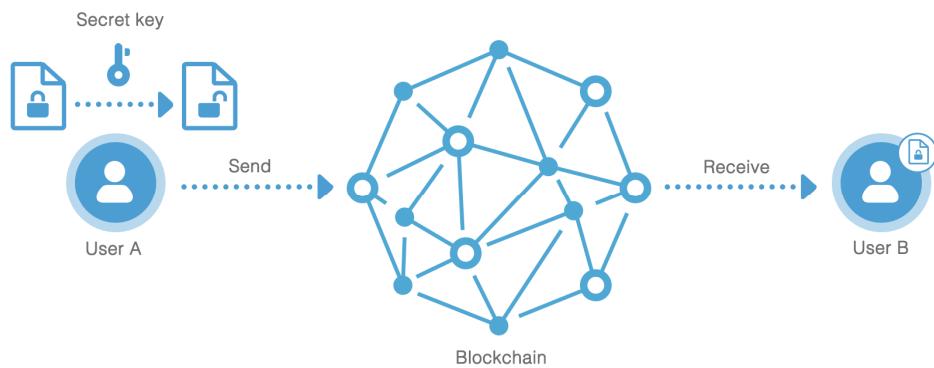
- Lack of mobility: some orders with huge volume are hard to match even in booming time. Its transaction is far less than traditional market.
- Separated marked: We can divided it into several major markets according to the mobility and there isn't a specific leader in the market. The assets are so fractional that the market cannot develop soundly.
- Users are faced with higher risks: Many problems emerge because of potential operational issues, market manipulation hardware breakdown and long waiting time.
- Lack of trust and transparency: The transaction process and actual cost are not transparent and the cost is always far more than what is published. Meanwhile many transactions have to be delayed because of improper operation in rush hours.
- Uneducated users: Many speculators in the market don't know the safe method to deal encrypted token.

## Solutions

### Decentralizing digital exchange

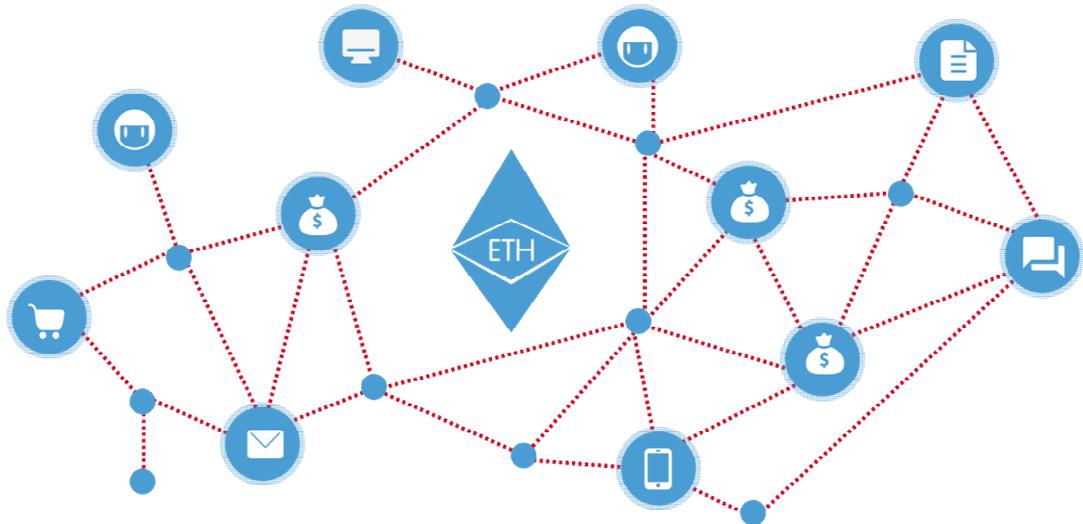
At present, although centralized digital transaction remains as the main stream, its disadvantages are clear thus many decentralized digital exchanges come out, such as OXProject、AirSwap、IDEX (Aurora Labs) and so on. The model of decentralized digital transaction is simple. Unlike centralized digital exchanges which need to deal with many non-transaction functions like account systems, KYC, exchange of legal currency , all it needs to handle are only asset management, matchmaking trading and liquidating assets. The public keys of users in the block chain are their ID and they needn't to

register their personal information, so KYC is not need to ensure personal information.



The biggest feature of decentralized digital exchange is that all its transaction are done through intelligent contract, in which asset management, matchmaking trading and liquidating assets are settled in the block chain. All these can cover the shortages of centralized user' s data and information in the exchanges.

- All the assets and transactions in the decentralized digital exchanges are driven by block chain so the its speed are slowed by the process of block chain. For example transaction in the Ethereum takes about dozens of seconds and that is not good for customers' experiences.
- The transaction costs are affected by block chain so the cost of small transaction would be very high.
- The performance of block chain in internet is poor and it cannot handle the mass and real-time transaction, so it lags behind the centralized digital exchanges both in the amount and depth of transaction, and its mobility is limited.
- Users need to be educated in how to manage both public and private keys safely. Only after that we can ensure the security of account. Otherwise they will be lost and stole again and again.



Ethereum network congestion

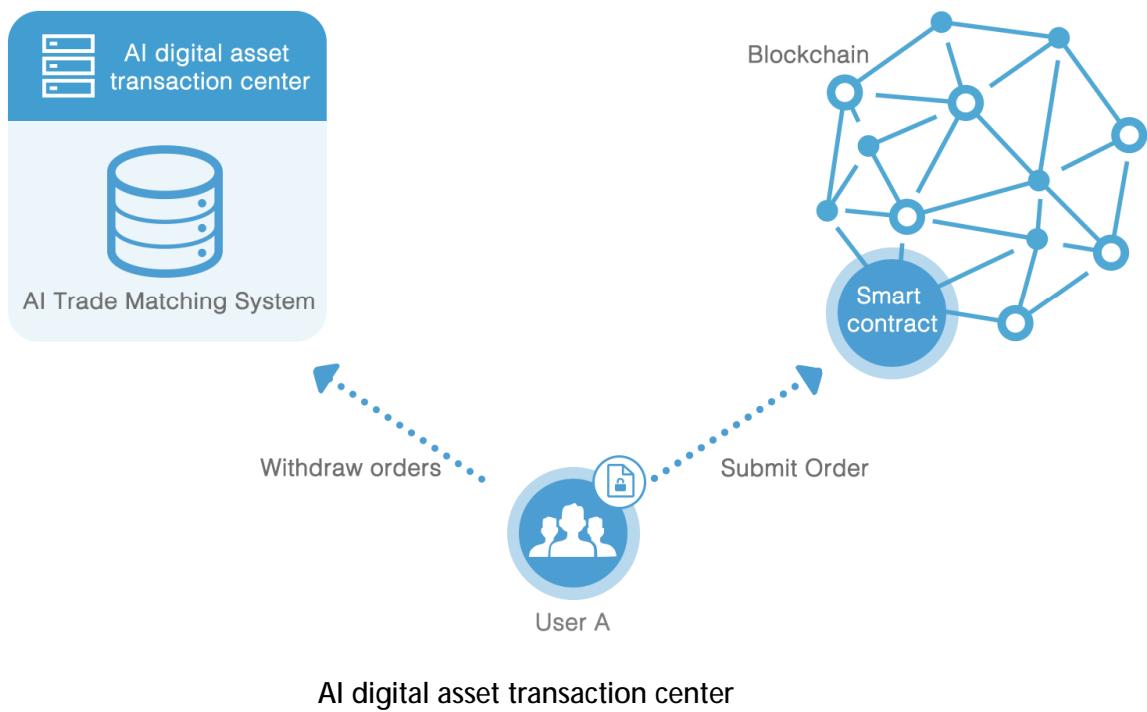
## AI digital asset transaction center

From what we have analyzed above, no matter centralized digital exchanges or decentralized ones are both have advantages and disadvantages. How to combine their advantages and avoid their disadvantages? AI model would lead the trend of digital transaction in the future.

An ideal decentralizing frame of AI are linked with AI trades matching system which can match all the orders. When all the orders are matched and intelligent contracts are verified by this system, the results of transaction will be transferred to block chain to finish the last step. The trading central of AI model not only can match the orders as soon as possible, but also can provide a better price in short time.

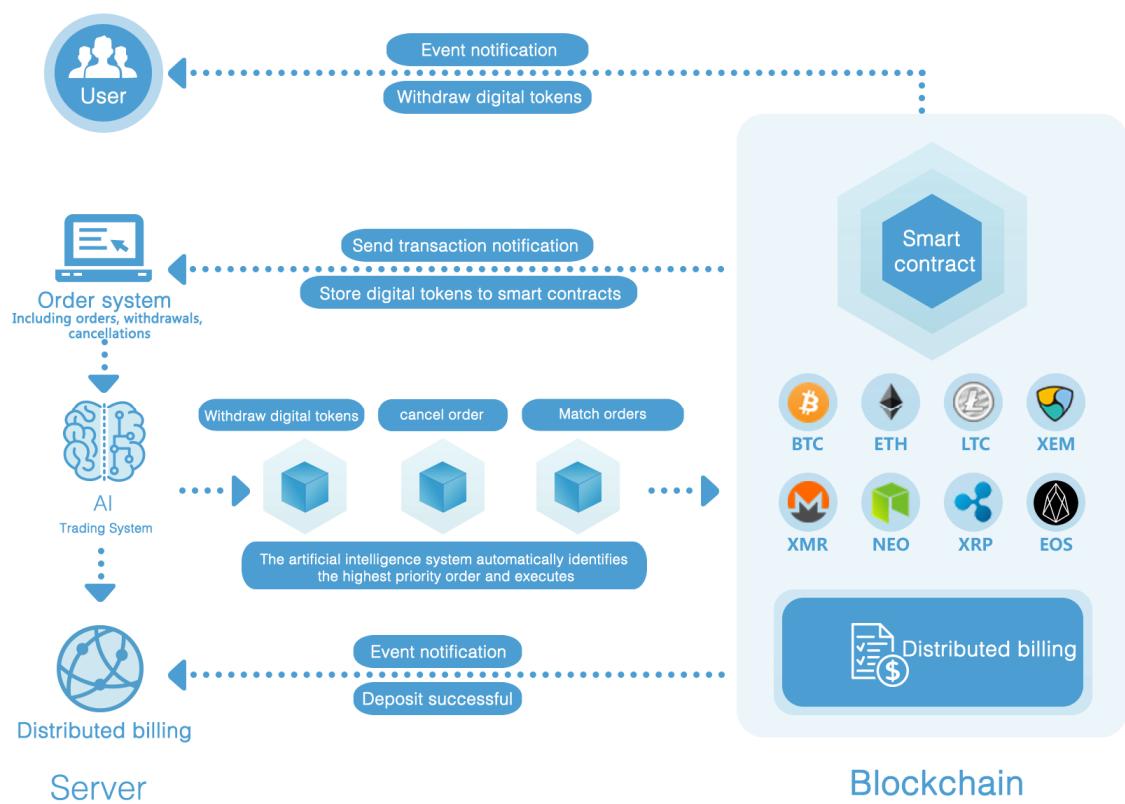
Users' digital assets can remain safe even hackers attack the servers of trading centers because they are stored in the intelligent contract and can be sent to the block chain

through intelligent contracts thus all the transaction are transparent and traceable.



# DeBi AI Digital Asset Trading Center

## Organization Chart of Trading Center



Artificial Intelligence Digital Assets Trading Center Architecture

DeBi AI Digital Asset Trading Center (hereinafter referred to as DeBi) combines the efficiency of centralized exchange and security and privacy of AI contract in decentralized exchange.

## There are three major parts in the process of transaction:

1. Users store the digital token into the intelligent contract and then send order transaction request to DeBi.
2. DeBi matches the orders through AI trades matching system. A trading order can be matched with many other order at the same time and enable consumers to make a deal with a better price. In trading center, all the orders are transferred under chain to guarantee matching efficiency.
3. Then matching system will verify the intelligent contracts of both sides and publish the results in the block chain. Trading center can't interfere the dealing if any side want to cancel it before matching.(Managers in the trading center, no matter what kind of rights they hold, can't revise the intelligent contracts and use clients' assets. Every order is sent to block chain through intelligent contracts so every one are transparent and traceable. )

Intelligent contract is a set of commitment defined in a digital form and contractors can carry out these commitment by virtue of intelligent contract.

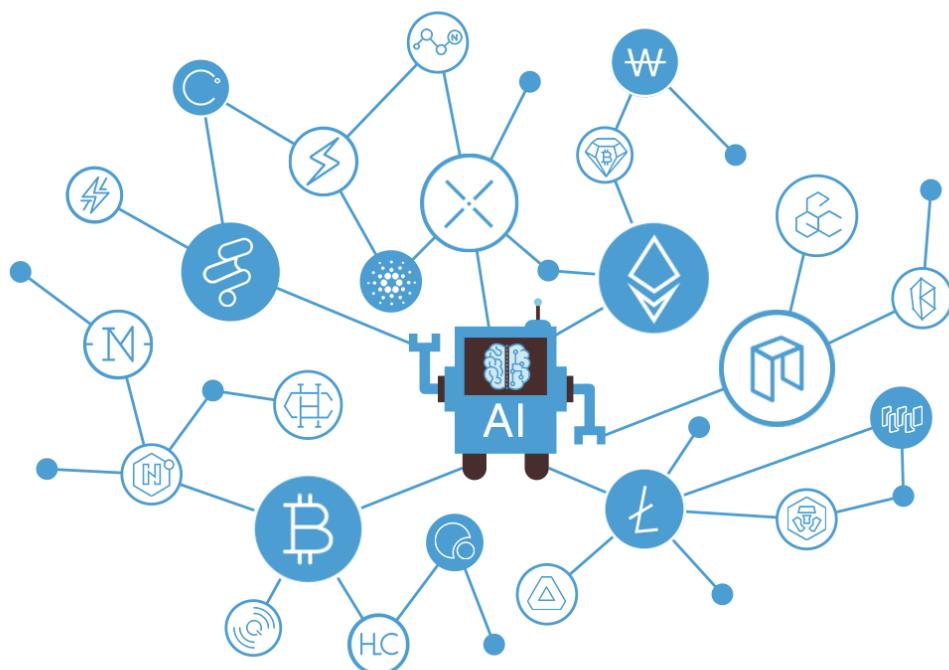
Block chain technology brings us with a decentralized, inalterable and highly dependable system. By this system, intelligent contracts can play a proper role.

DeBi exactly make good use of this features of intelligent contracts and introduces the centralized high efficient matching system so as to forge a safe and private new platform which combine the efficiency of centralized exchange and security and privacy of AI contract in decentralized exchange.

## AI Trade Matching System

At present the mainstream centralized exchanges mainly apply the one-to-one order matching system while the AI digital asset trading center in DeBi applies an AI Trade Matching System.

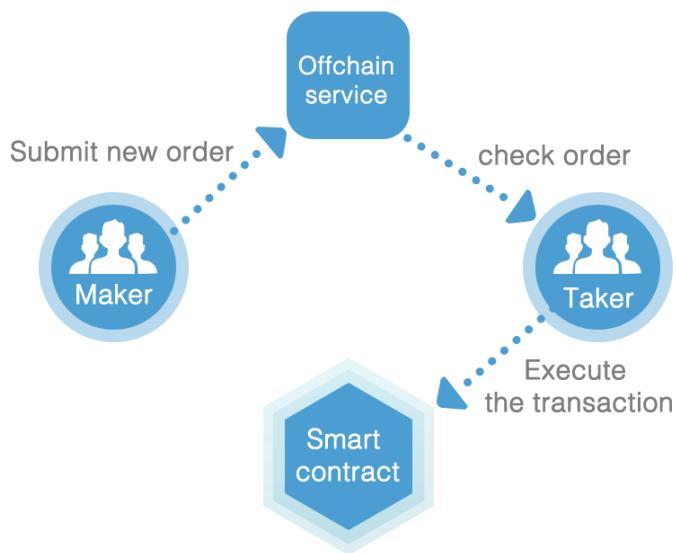
AI Trade Matching System firstly disperses orders in trading center and then matches them in block chain. When users need to make deals, system will store their token in the intelligent contract and then arrange them in a model of one-to-many. This can not only match the orders as soon as possible with a good price.



AI Trade Matching System

## The logic of trading center

Market orders can be stored both on the chain, which means they are stored in the intelligent contract, and off the chain, which means they are stored in the third party like central server. The key factor of in the operation of off-chain order is one of the core algorithm of block chain: Elliptic Curve Digital signature algorithm (ECDSA). This is a kind of asymmetric encryption algorithm, signing and sealing the order, confirming their identities, and ensuring the logical execution of the transaction.

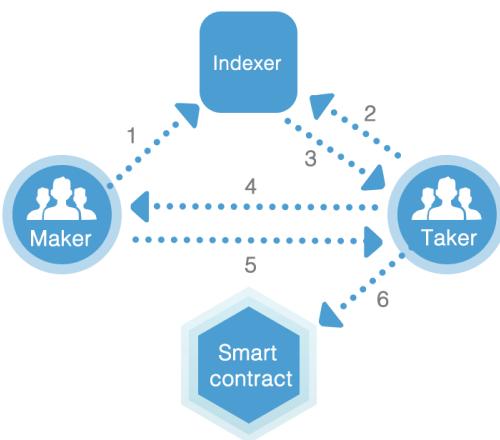


- Maker creates a new order on which clarifies the following items: ERC20 token, value, its ETH amount, buying in or selling out.
- Later, Maker signs the orders with private keys of ETH (by using ECDSA and Secp256k1, which is especially used in Bitcoin).
- Maker sends the order and signature off chain (in the digital asset trading center, this process is finished with a set of servers which can transfer JSON message by Web Sockets).
- When Taker wants to do business about this order, the information about signature and order will be sent to the functional part of intelligent contract trading.
- It is Maker who signs on the intelligent contract to verify it.
- Intelligent contract will make sure that the orders aren't overdue and are performed.

- Transfer the asset and charge the fee.

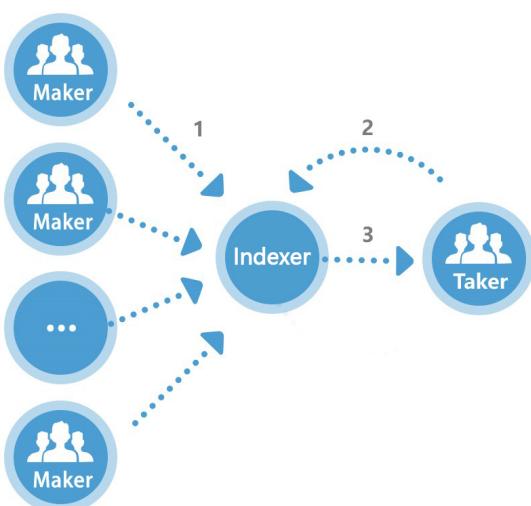
## Indexer Agreement in The Trading Center

Indexer is a kind of offline service, aggregating and matching peers based on their transaction intent: whether the potential maker and taker wants to sell and buy the token. Indexer collects this kind of “trading intents” and describes the peers based on this intents of the purchased and sold tokens. Once the receptors find their desired Maker, they will use the peer-to-peer protocol to negotiate. The order will be finished as soon as the agreement is reached between Maker and Taker.



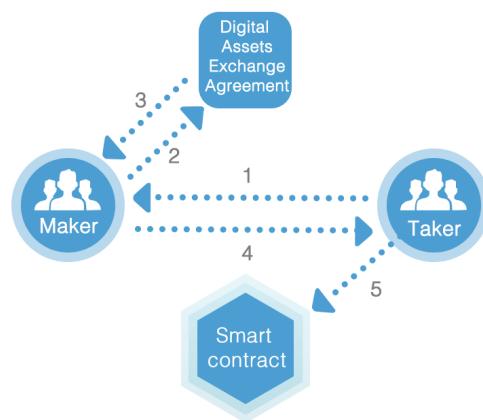
1. Maker invokes the indexer
2. Taker uses indexer
3. Indexer matched the corresponded Taker
4. Taker contacts Maker directly
5. Maker responds to Taker about this business
6. Taker pay the Maker according to the intelligent contract

One Takes can chose from many Makers and every Maker need to show their intents independently.



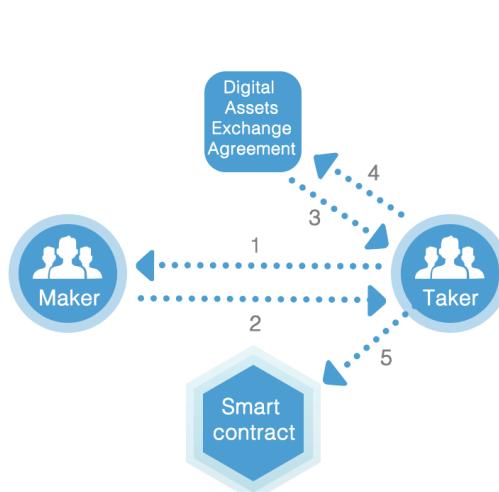
## Agreement of Digital Asset Trading Center

Agreement of digital asset trading center is a chain service and provides information about price for Maker and Taker. Before Makers fixes price and informs the Taker, Maker can tell the digital asset trading center about the price which he think is more fair. Meanwhile when gets the deal, Taker needs to check whether the price is fair or not in agreement. Agreement of digital asset trading center provides information about price to help Maker and Taker make a better pricing decision and do currency transaction.



1. Taker makes dealing request to Maker.
2. Maker gets exchange price according to this agreements.
3. The price in this agreement is sent to Maker.
4. Analyzing the price. Maker responds to Taker's requests.
5. Taker pays the bill through the intelligent contract and finishes the business.

When Taker receives the request, a similar interaction will take place between takers and agreement of digital asset trading center.



1. Taker makes requests to Maker.
2. Maker answers the requests.
3. Taker negotiates in the agreement of digital asset trading center and sets the desired price trading price from .
4. Agreement of digital asset trading center sends the price to the Taker.
5. Analyzing the price information, Takers pay the intelligent contract and finish the deal.

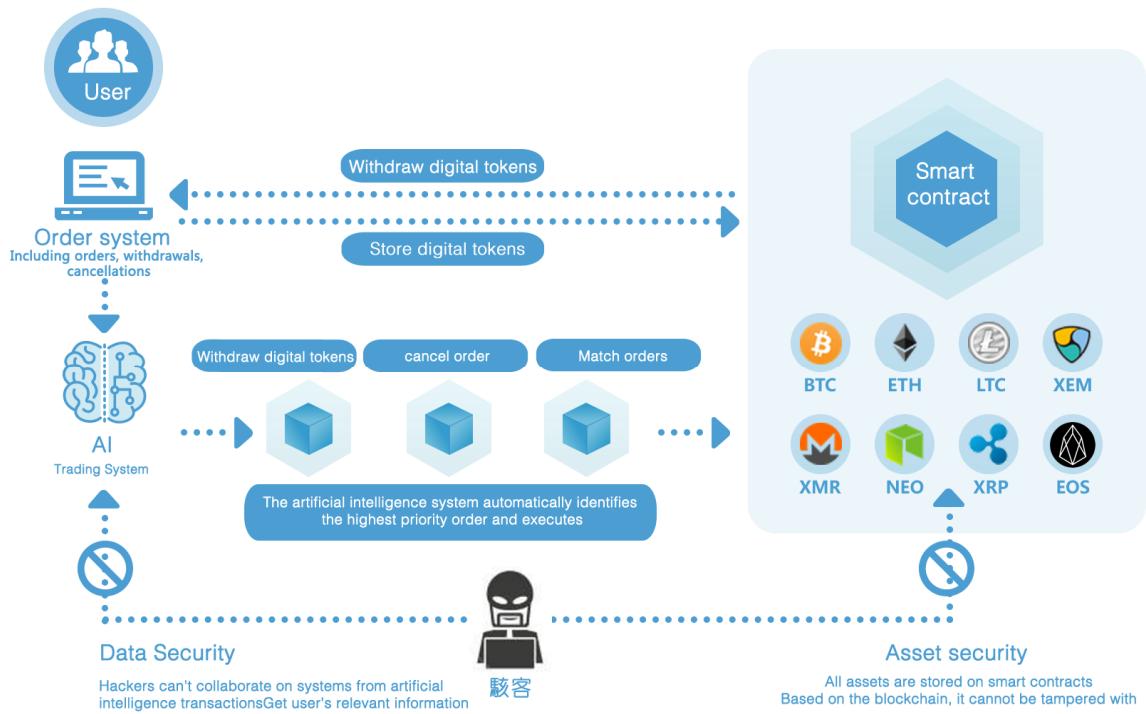
## **Program of its security and technology**

DeBi requires a totally secure trading system because all kinds of deals need to be transmitted to intelligent contract through Smart Trade. When transaction request of users is received, the orders will be sent to AI trade matching system and later the finished ones would be sent to intelligent contract and be verified. Then this deal is over.

## **Financial Intrusion-prevention System**

DeBi applies the SSL+Digital Signature Communication Mechanism, meeting the requirement of world's top financial system technology. All the data are encrypted by 3DES and stored by multi-node distributed RSA asymmetric encryption cloud storage. All the assets are protected by both public key and off-line cold key.

The matching system can only be started by the key from the manager, so even hackers manage to intrude and control DeBi, these unknown intruders would be detected by system and matching system would stop matching orders and without the private key from manager, system wouldn't be restarted. If private keys were filched by hackers, they can not change the price in the order because all the deals are recorded in the intelligent contracts and are unchangeable.

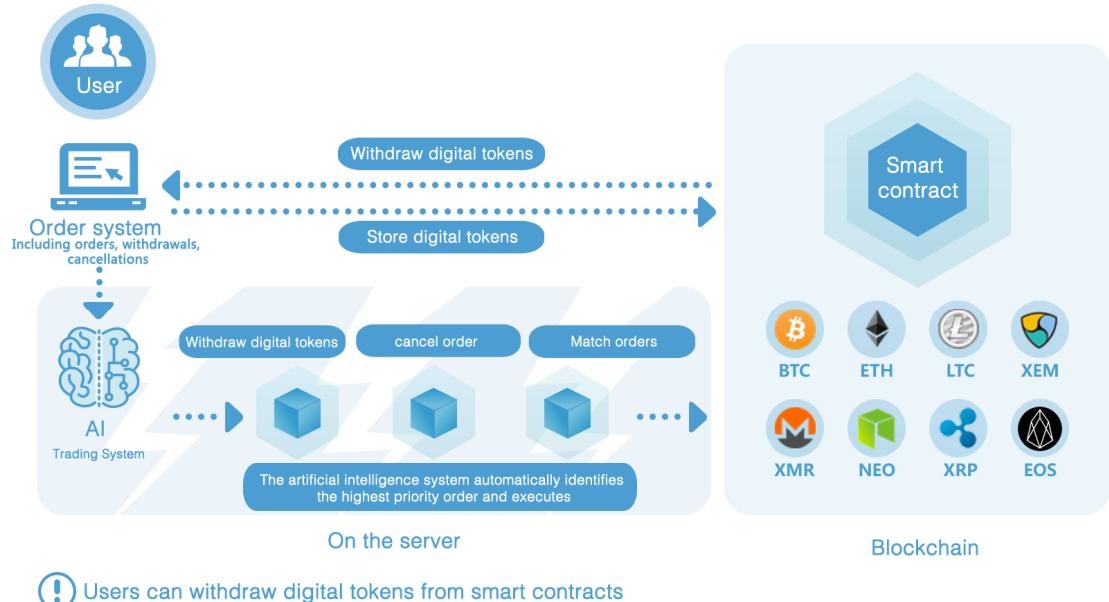


Financial grade intrusion prevention system

## Global Multi-node Retrospective Recovery

When DeBi server is in trouble, users can not deal with the orders. However all the assets of the clients are stored in the intelligent contract so users can transfer the assets to a safer place through intelligent contract.

Meanwhile, when the servers in the trading center are in trouble, DeBi would activate emergency shutdown plan in the multi-node servers group with a world class of synchronous millisecond.



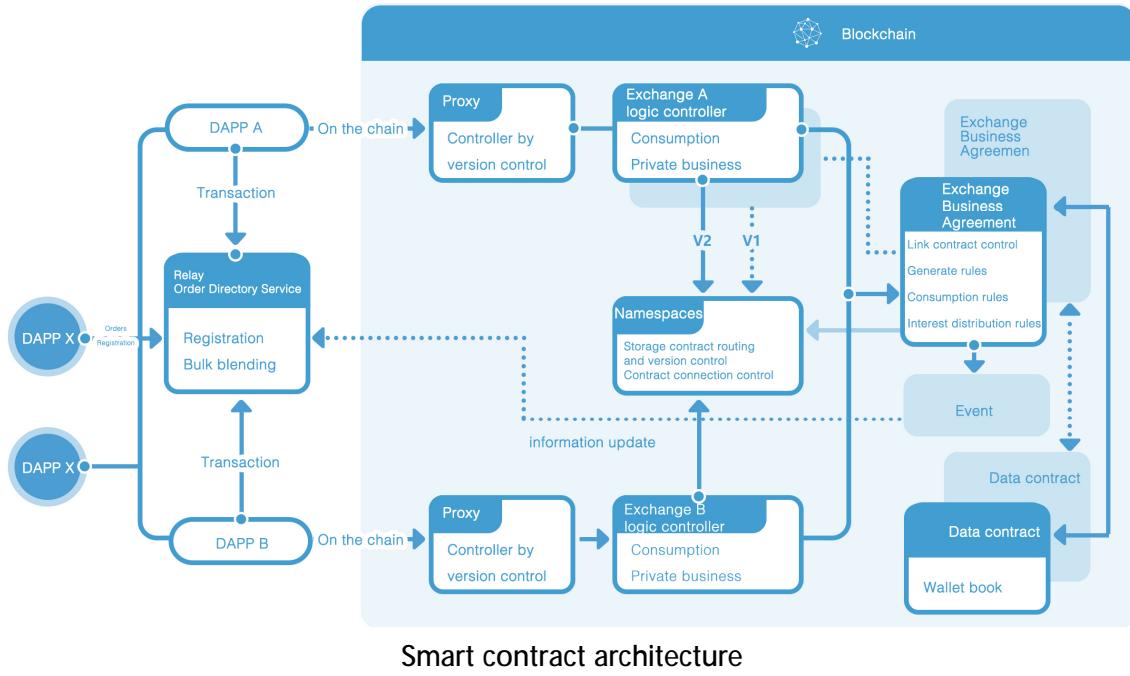
### Global Multi-node Retrospective Recovery

## DeBi Intelligent Contact

The major functions of DeBi contract are authority management, AI orders management and money withdrawing and they can only be launched by AI trade matching system.

To ensure that a transaction can be finished smoothly, first, users trading intelligent contract must be checked by AI trade matching system to make sure that users agree to the contract and sign the contract. If it is not permitted by users, all the digital assets will remain unmoved, so the clients needn't to worry that their assets would be diverted by AI trade matching system without their permission.

As for the arrangement of orders, AI trade matching system would place them in this system in a mode of one-to-many so that orders can be matched with a better price in a short time.



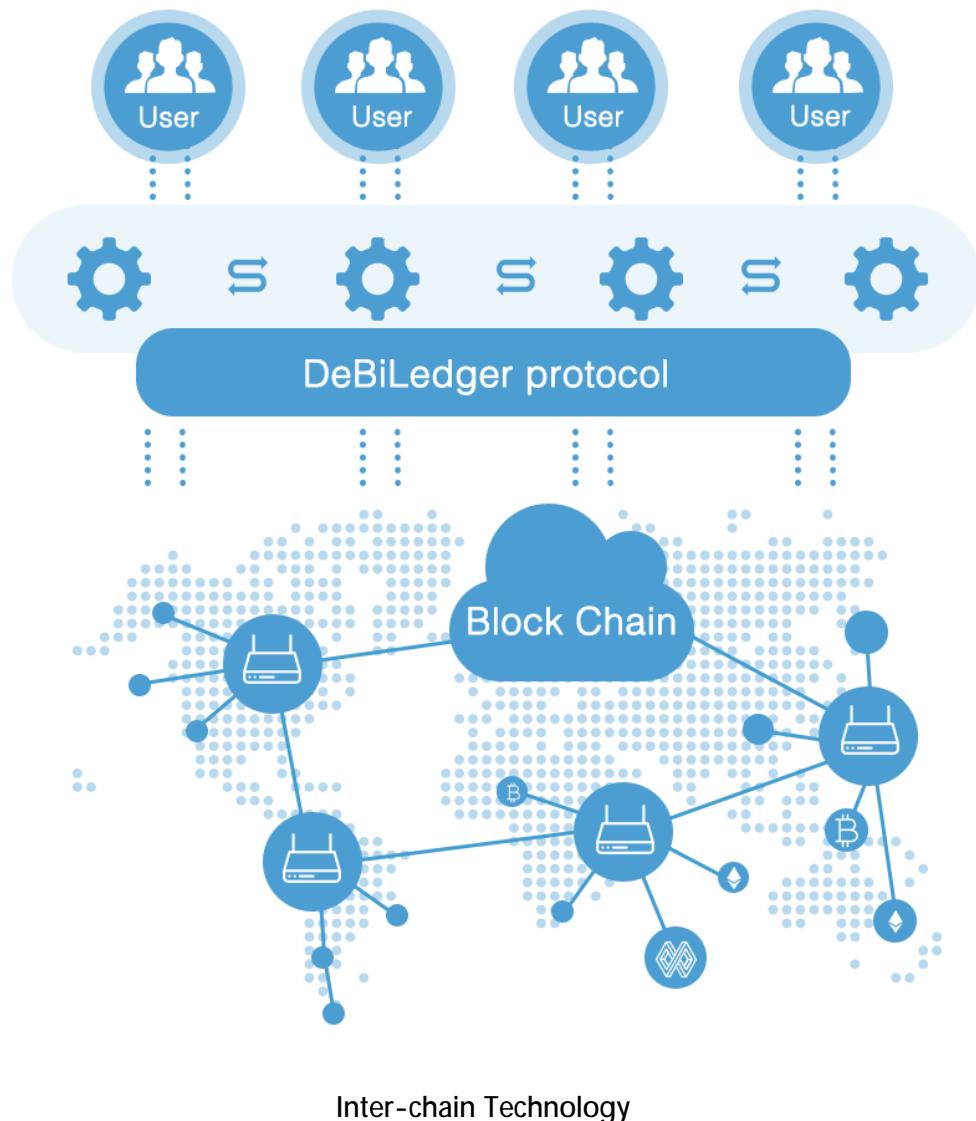
## Inter-chain Technology-- DeBiLedger

As we all know, side chain is a new kind of block chain base on the Bitcoin (ETH), just as what gold bar is to US dollars. Side chain aims to build a sound financial ecology in encrypted currency through integration, rather than rejecting the present system. It can also enable us to build various intelligent financial contract, stocks futures and other related products easily. And inter-chain technology enable users to visit public chain account book in the intelligent contract and at the same time, the side chain is built by which information about accounts can be exchanged and achieve inter-chain transaction.

For example, many problems exist in present decentralized exchanges: firstly, the transaction remains in a low level because of the limited user base; secondly, technology in the decentralized exchange is not perfect so the transaction speed is

low and users always have bad experience; thirdly, it can not achieve direct exchanges

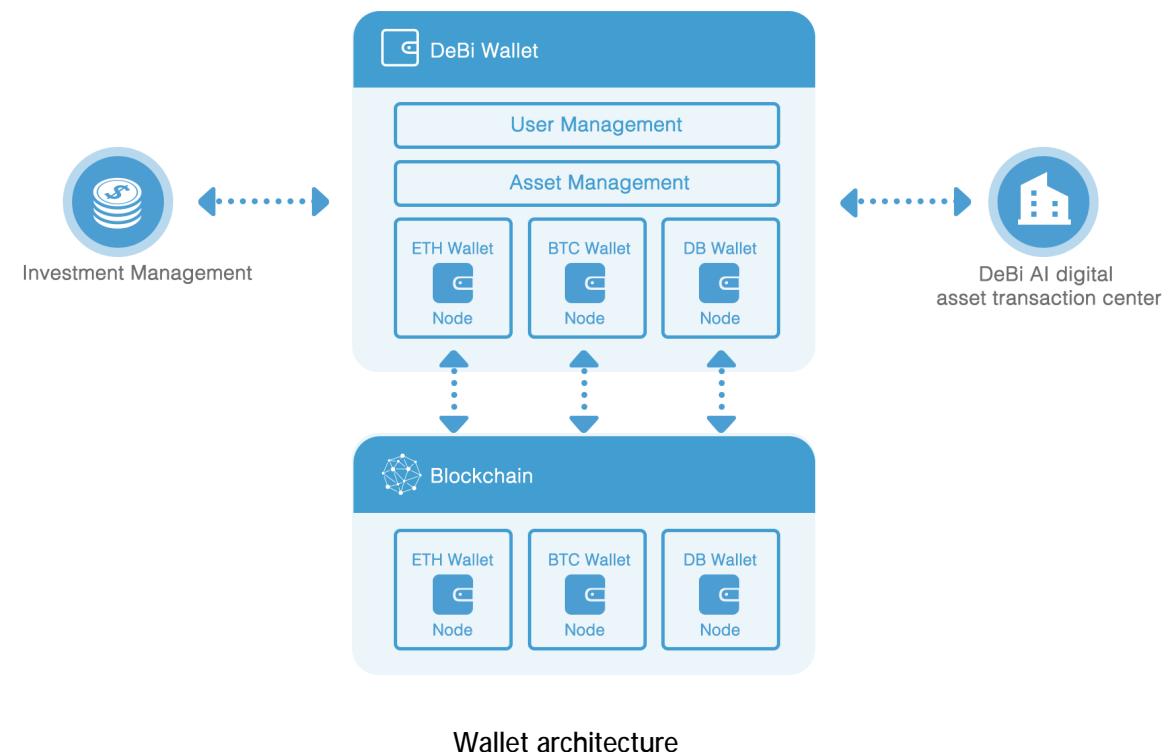
like BTC and ERC20. However DeBiLedger Agreement makes inter-chain interaction a reality to deepen and quicken the transaction and improves transaction experience. Every developer can build an efficient AI digital asset transaction center through this agreement.



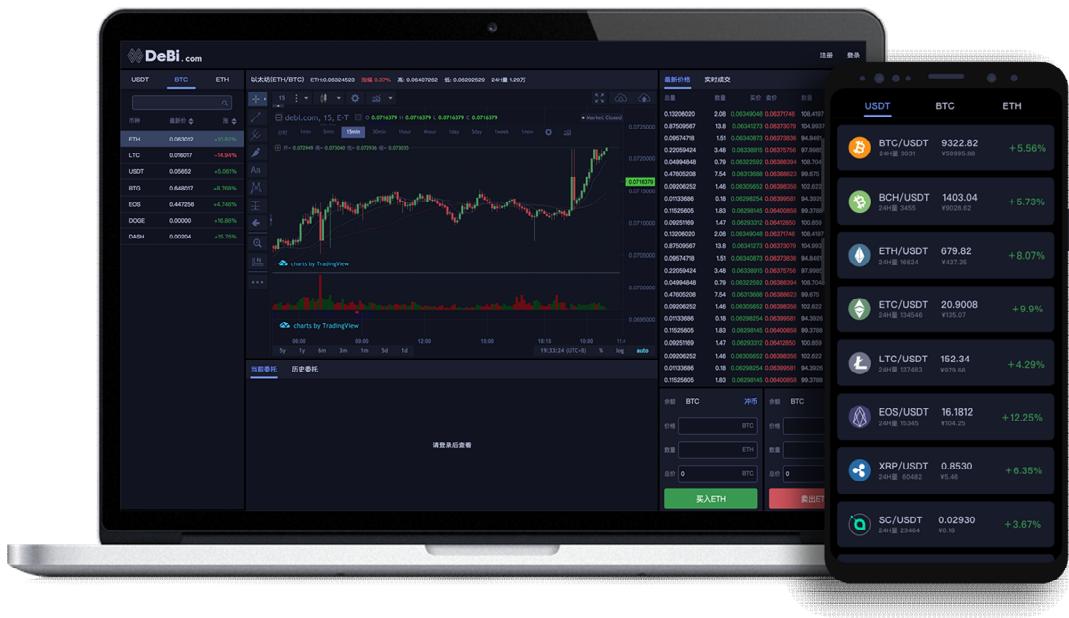
## DeBi Wallet

DeBi Wallet has good compatibility and can connect many mainstream public chain like ETH,BT, NEO and so on. Besides that, encrypted digital assets like Bitcoin and ETH are available in DeBi Wallet to achieve unified management for various digital asset.

Meanwhile, DeBi Wallet provides a secure encryption and confusion mechanism to prevent users' private keys from being stolen. Users need to enter passwords in each transaction and the finished signature would be sent to Ethernet.



# Issues of DB



## Value of DB



### Offset the service charge in the platform

Users of DeBi platform can use DB to offset the equivalent service charges directly in the pending trading.



### Exclusive rights in some activity

DB holders can enjoy the special right and benefit in the promotion events and sometimes they can gain candy coin in the online platform



### The rights of VIP

Users can use DB to purchase VIP class and get corresponding privilege like discount in service charge.



### Participate in the vote of new coin

DB holders can participate in the vote of new coin in the platform and then the platform will chose the type of coin according to the result of the vote.



### Purchase the API special service

API transaction users can buy the exclusive service with DB to promote the speed of transaction.



### Certify the margins of the merchant

Pay the margins with DB , become the certified merchant and get the exclusive certified labels and service.

# Introduction of the company

DeBi International Group Co., Ltd, the team member of which are all from the top block area, internet an finance industry, is committed to promote the application and development of the block chain and to participate in the developing of the world-class technology so as to promote the integration of the block chain and system and to improve the efficiency of the system and low down the cost.

## The constitution of the team

Our team is composed of a group of experienced professionals who are from the top enterprises in the world like Googl,Citibank, Huawei, Tencent and so on. They focus on the digital currency, block chain, system security and innovation research and development.

DeBi is committed to provide solution to some professional technologies like clock chain, digital currency, intelligent contract and matching system. With the increase of the market share, DeBi is open to all the talents who are willing to contribute to the block chain.

# Industry Background



1: The programmer has worked in developing the basic part of Linux for 15 years and have rich experience in handling the basic principle of distributed framework like distributed compute, storage, cache, database, message-oriented middleware, high

performance computing, parallel processing, virtual technology, cluster deployment, distributed task scheduling, distributed resource management and many other skills related to cloud computing. He once worked for IBM HPC and KVM programs.

2: As for the digital development and management of block chain, programmer has his own block chain pay service. Getting master degree from MIT, now he is an adviser of venture capital and also a capital partner.

He used to be senior executive in many high-tech enterprises and investment banks in America, British and Germany. He has worked in the areas of e-commerce and internet security for more than 10 years.



3: He has been engaged in the design and development of the bank and third party payment. With rich experience in dealing with millions of data, design and development of distributed clusters and high concurrent applications, and R & D and operation of large financial payment systems, he can handle over 100000 transactions per second.

4: The senior marketing team has been in Internet advertising industry for more than 10 years and has rich experience in website operating, popularizing and search engine marketing. They have deep knowledge about the profit mode of advertising alliance like Google AdSense and they once managed to get 500 million visits of a piece of advertise.



5: Our senior distributed storage engineers have worked in IT industry for more than 15 years and used to work for big IT companies and found out solutions and design framework for them. Designing and developing distributed storage system for over 5 years, they master distributed storage related technology theory, deployment and operating a distributed cloud storage platform which has more than 100 million users.

## CONTACT US



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