

**BlockCDN**

# BLOCKCDN WHITE PAPER

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## Abstract

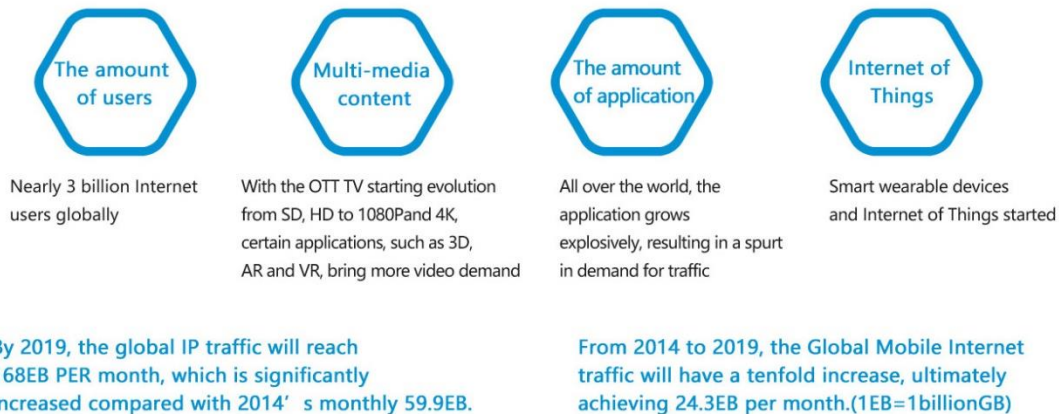
BLOCKCDN is a distributed CDN system based on Ethereum smart contract [1]. The system sets the CDN mining, smart contract settlement and CDN trading market in one. Through chain work and online checkout, BLOCKCDN calls on global network participants to share their idle devices (such as PC, routers, TV boxes, mobile phones) and provide upload traffic making Internet acceleration nodes ubiquitous. Based on Ethereum smart contract system, BLOCKCDN will not only allow users of unused broadband to share idle network devices and upload traffic then getting higher benefits without adding additional inputs, but provide cheaper, multi-nodes, and faster distributed CDN services [1] for those websites that need to speed up.

## Market

With the development of mobile Internet, video live and 4K HD video, the direct demand of users for massive data and response time has been promoted, which has led to the boom of CDN business. The CDN market is expected to grow from \$3.7034 billion in 2014 to \$12.1637 billion in 2019, with a Compound Annual Growth Rate (CAGR) of 26.9% for the period and a long time to grow at a high speed [2], according to the data from the Micromarketmonitor reports, released by the PR Web.



## The boom of traffic promotes the demand of CDN



The huge market and the high speed market growth rate gave BLOCKCDN the excellent opportunity to deepen the industry, and provided the revolutionary distributed CDN to share the economy and link the billions of people who are willing to share.

## Application scenario

BLOCKCDN's acceleration spreads almost everywhere we use the Internet, such as watching videos, playing games, shopping online and so on. There are several major application scenarios:

Streaming media live and on-demand acceleration: sports, news and major events live, Pan entertainment show, radio and television new media, etc.

File distribution acceleration: network game terminal patch update, various APP markets, software vendor content upgrade, network disk's or cloud disk's files for storage and propagation ,etc

Page acceleration: Integrated portal, news media, electric business, enterprise,etc.

## Status and Advantage

Both traditional CDN and cloud service businesses are backbone network architecture, while this structure can not expand data centers and the number of nodes in the computer room, and the CDN's acceleration capacity is limited. More deadly, as for traditional CDN, it is very expensive to build data centers and computer rooms, which is ultimately passed on to webmasters, resulting in high CDN prices.

Traditional CDN's Statuses: high price, low CDN acceleration, poor customer experience

With the development of distributed CDN, the cost of building the backbone network has been reduced, and the price of distributed CDN is much lower than that of traditional CDN. However, because the common distributed CDN is centralized, the company that operates CDN collects the cheap traffic from the user, and then sells it to the user who needs the CDN acceleration at a higher price. Ultimately CDN prices are still very high. Moreover, due to the centralised data storage, backstage counterfeit may appear, causing the miners and website owners are not guaranteed.

Common distributed CDN status: The price has reduced, but still very high, there exists the data counterfeit, the node development is imperfect and the acceleration effect needs improving.

BLOCKSDN is globally the first distributed CDN built on the Block chain [3] where

all traffic data and acceleration data are recorded and no one can tamper with it. With the help of the world's massive nodes, BLOCKCDN allows users, when accessing an accelerated website, to be assigned to the nearest node in a real-time response. Based on Ethereum smart contract, BLOCKCDN has developed a self-service CDN trading market allowing web owners and distributors to trade freely, equally and transparently. In BLOCKCDN system, the acceleration cost of the website owner is 90% lower than that of traditional CDN, and the better CDN service is available. Compared with the traditional one, the advantages of BLOCKCDN are obvious.

The following is the global traditional CDN giants: Akamai and Verizon's price comparison with BLOCKCDN:

OUTBOUND DATA TRANSFERS	Akamai CDN	Vcrizon CDN	Block CDN Guide price	Discount	Wages for Distributors
First 10 TB 2/Month	\$0.087 per GB	\$0.17 per GB	\$0.008 per GB	95% OFF	\$0.0072 per GB
First 40 TB (10-50 TB)/Month	\$0.08 per GB	\$0.15 per GB	\$0.008 per GB	94% OFF	\$0.0072 per GB
First 100 TB (50-150 TB)/Month	\$0.06 per GB	\$0.13 per GB	\$0.008 per GB	93% OFF	\$0.0072 per GB
First 350 TB (150-500 TB)/Month	\$0.04 per GB	\$0.11 per GB	\$0.008 per GB	92% OFF	\$0.0072 per GB
First 524 TB (500-1,024 TB)/Month	\$0.03 per GB	\$0.10 per GB	\$0.008 per GB	92% OFF	\$0.0072 per GB
First 4,096 TB (1,024-5,120 TB)/Month	\$0.025 per GB	\$0.09 per GB	\$0.008 per GB	91% OFF	\$0.0072 per GB

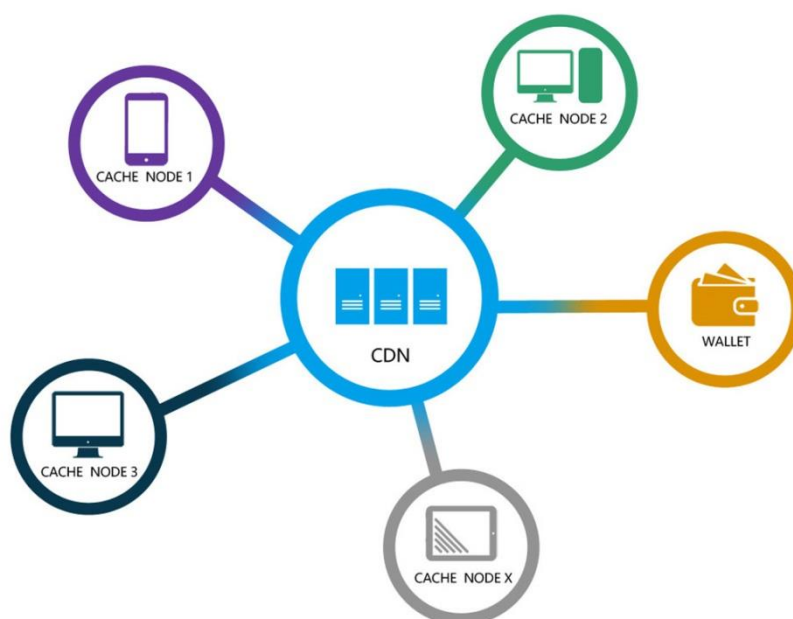
## Working principles

BLOCKCDN is an intelligent CDN node deployment software based on open-source Squid and combined with SDK and P2P technology. Give full play not only to the intelligent node scheduling of P2P and traditional CDN but to SDK for implementation of changing data series into parallel, single way into multiple one, algorithms and protocols for long-term continuous optimization , and 100%

anti-theft chain or anti hijacking. The BLOCKCDN can easily upgrade smart devices to a CDN node. Also, BLOCKCDN team fully grasps and utilizes distributed CDN, on its intelligent scheduling, hierarchical publishing dynamic deployment, dynamic defense of DDOS and other core technology advantages. It has effectively realized the accelerated services for the Internet hot areas such as: Game download, mobile applications, video-on-demand, smart hardware, live streaming, etc.

Squid open source code: <https://github.com/squid-cache/squid>

#### Operating structure:



Wallet: digital wallet to save tokens (BCDN). The wallet can purchase CDN acceleration on the self-service platform, which can be accelerated instantly by inputting the website needing speeding, the traffic volume of acceleration and the unit price of traffic.

CDN demander : purchase the CDN service in demand through the wallet

Distributors: able to provide distributed acceleration for websites, by making



idle PC, routers, TV boxes, mobile phone, BLOCKCDN mining treasure, etc become a CDN cache node, ultimately getting the corresponding BCDN tokens according to upload traffic.

Trading platform: users can purchase and sell BCDN tokens through third-party trading platforms.

The following is BLOCKCDN acceleration purchasing process:



Through trade, users can obtain BCDN tokens and keep them in the wallet. Website owners, needing acceleration, just input the acceleration domain name and traffic, and the number of BCDN tokens in the BLOCKCDN platform.

The obtain and trade process of BCND:



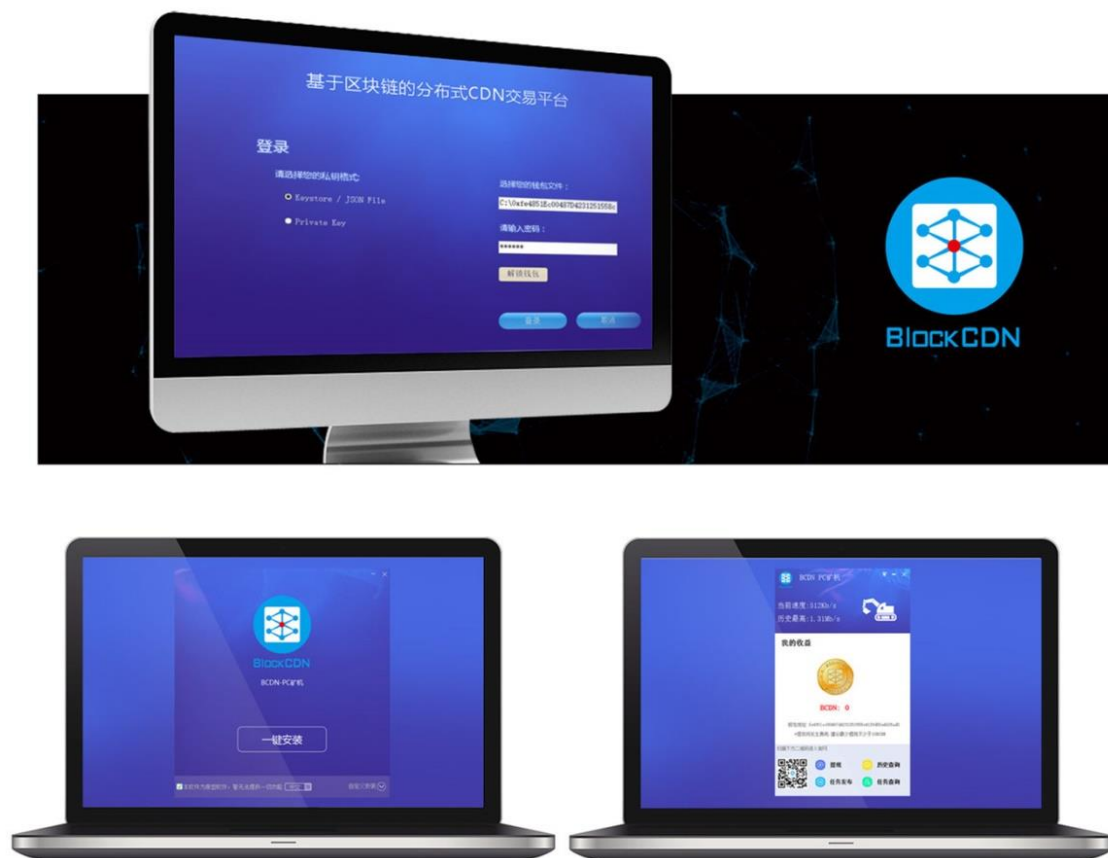
The node distributor obtains the BCDN token by uploading the acceleration traffic, according to the block chaining smart contract. He can not only save the BCDN tokens in the wallet but sell them on third-party trading platform to customers who need CDN. In addition, all the data in the process of interaction has been recorded and is available to check at any time in the block chaining, which ensures absolutely justice and protects against tampering.



# Mining client

## Software version:

The software mining client is one of the effective ways for distributors to share unused broadband. Without adding additional hardware devices and just running the mining client on the terminals able to share traffic , such as computers, cellphones and so on, people can continuously provide upload traffic throughout the day, getting equivalent BCDN tokens according to the volume of the providing traffic. Whenever walking a dog, shopping, eating or watching a movie----his nodes are all making money for him.



## BLOCKCDN mining treasure:

BLOCKCDN mining treasure is a mining hardware designed for high-end

players by BLOCKCDN, which due to the built-in mining software, can be uninterruptedly started in a day. Also, based on the intelligent DNS scheduling technology, BLOCKCDN mining is more efficient than similar products in the market. Players only connect to the computer, configure their own etheric wallet address and connect to the broadband, then BLOCKCDN mining will work automatically.

#### BLOCKCDN mining treasure:



## Super-node plan

In the development initial stage, besides the implementation of distributed CDN, BLOCKCDN encourages and will unite those capable server providers to establish the super node aiming at obtaining more qualified acceleration. In the middle of the development of BLOCKCDN, it is necessary to establish a super node for users' better acceleration experience due to the lack of terminal nodes. Super nodes can accelerate the construction of BLOCKCDN ecology.

## CDN trading market

### Automatic matchmaker:

BLOCKCDN's smart contract system provides a transparent, open and fair self-service platform. You just need to open your wallet, and you can choose the CDN service that is best for you in BLOCKCDN's self-service trading platform. The node distributors and the CDN acceleration demanders are automatically traded in the system, eliminating the profit of the middlemen and making the distributors more profitable, and the CDN acceleration demander less costly.



### BLOCKCDN development fund:

When acceleration demander purchases the CDN acceleration service, BLOCKCDN will charge 5% transaction fee as development fund, in order to provide a subsequent technology upgrading, team and platform maintenance, product innovation, and so on. Above all, it keeps the sustainable and healthy development of BLOCKCDN ecology.

## BCDN token

BLOCKCDN's token (" BCDN ") plays a key role in BLOCKCDN ecosystem. BCDN tokens are mainly used for following purposes:

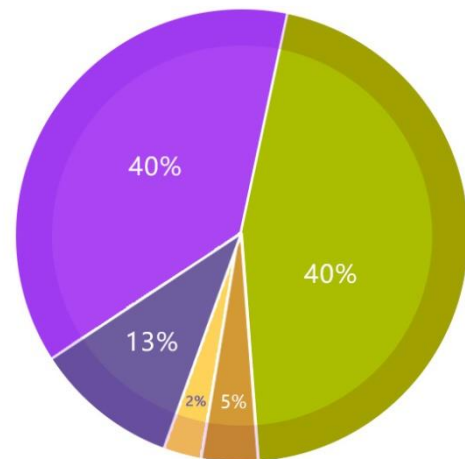
- income receipts for distributors who own unused broadband
- BLOCKCDN system circulation receipts
- In BLOCKCDN networks, necessary tokens for CDN acceleration demanders purchasing traffic.

Because BLOCKCDN uses traffic anchoring mechanism of legal tender, BLOCKCDN network will be more and more prosperous, there are more and more CDN acceleration demanders, and quantity demand for BCDN token will be increased greatly, perhaps leading to the unit BCDN price rising. While the CDN acceleration demanders purchase the same amount of traffic, the number of BCDN tokens that need to be paid will be reduced, and no increase in legal tender. This enables the CDN acceleration demanders, without adding additional cost, to enjoy the appreciation of the tokens with the development of the BLOCKCDN system.

## BCDN amount rules

The total amount of BCDN token is fixed to 1 billion, and the sum will not be increased forever, which is divided into five parts:

- distribution freely: 400 million(40%)
- Reserved for node development (BCDN mining) fund: 400 million (40%)
- Initial investors : 130 million (13%)
- Reserved for development team: 50 million (5%)
- Tax and others: 20 million (2%)

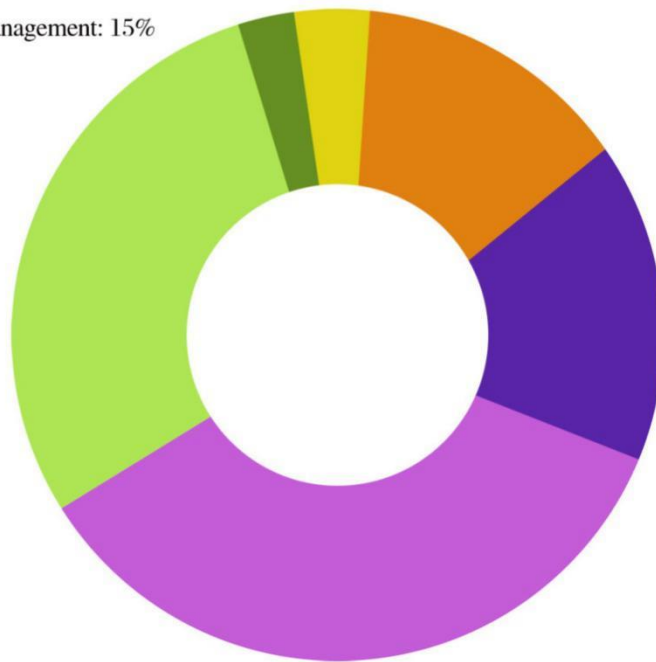


## Road map



## Fund details

- Technology development and UI: 31%
- Marketing and market: 16%
- CDN hardware development: 30%
- Technology support: 5%
- Normal output and management: 15%
- Others: 3%



## Disclaimer

This document is aimed at just giving information not providing related advice on BCDN purchase the above information or analysis do not constitute investing decisions. This document do not constitute any investment advice, intention or solicitation.



This document is not composed nor construed as providing any act of sale or any invitation to buy or sell forms of securities, nor any form of contract or commitment.

The interested users should understand and accept the risk of BLOCKCDN project perhaps due to the uncertain aspects such policy , technology, market, etc, ultimately undertaking any related results in person.

The BLOCKCDN team does not undertake any direct or indirect asset losses caused by participating in the BLOCKCDN project.

## Reference

[1] Vitalik Buterin. Ethereum White Paper : A Next-Generation Smart Contract and Decentralized Application Platform.

<https://github.com/ethereum/wiki/wiki/White-Paper>.

[2] quote from 《Securities Times》

[3]Wikipedia. Blockchain

<https://en.wikipedia.org/wiki/Blockchain>