



AICON

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1. INTRODUCTION

The characteristic of the 3rd industrial revolution was the exchange of information, and the Internet was used as its core technology. The characteristic of the 4th Industrial Revolution is that beyond this, numerous data are generated and meaningful information is produced. The subject of data production extends from humans to objects and the data is produced as meaningful information.

Data economy is at the core of the 4th industrial revolution. This term means that data generates economic value, and it can be said that a lot of data and technology that converts it into meaningful information have led to the data economy. Big data plays an important role in the 4th industrial revolution in this regard. Big data can be defined as 3V, which are Volume, Velocity and Variety. This technology analyzes a lot of data at high speed and provides it as meaningful information. The scope of the analysis is wide and even includes unstructured data. After all, big data is leading the data economy by quickly analyzing a large amount of diverse data and providing meaningful information.

In addition to 3V, Validity and Veracity are also mentioned as the characteristics of big data. The Validity factor considers whether the data is used accurately without prejudice, and the Veracity factor considers whether the data used is reliable. They can be regarded as new characteristics because they do not overlap with existing characteristics. Therefore, strictly speaking it can be said that the characteristics of big data are extended from 3V to 5V.

However, there is a problem. We cannot impose Veracity and Validity on AI and IoT. We need a technology that can embody it within big data, and blockchain is suggested as the answer. As a decentralized platform, blockchain is a technology in which everyone participating in the system shares agreed data. P2P networks and consensus algorithms are applied to blockchain, and these two technologies are extended to the validity and veracity of big data.

Therefore, the combination of blockchain and AI can provide validity and veracity of data. Blockchain shows the source of the data underlying AI analysis. It also certifies that the data is trusted due to consensus.

In addition, it is possible to implement decentralized AI. Blockchain has a principle that participants have all shared data. This allows AI to be used individually. In the existing centralized system, all data is concentrated in one place, and the data is also analyzed in one place. However, in blockchain, participants can decide the scope of analysis. This is because the analysis results are shared and

participants can receive them. The convergence of these two promising technologies is causing a paradigm shift in a wider direction.

AICON project is a platform that provides computing resources of distributed cloud hardware & software (mining pool) and idle resources of PCs or smartphones to individuals and companies that need AI analysis based on AI Blockchain. This is based on a distributed system that borrows idle resources such as CPU, GPU, MEMORY, STORAGE, etc. of nodes from the network through a Horovod-based supercomputer and pays AICON tokens as reward. Its first purpose is to provide individuals and businesses with a distributed cloud environment combined with blockchain, and to enhance security and reduce data processing costs by storing, managing, and processing data in a decentralized environment. Its second purpose is to make all individuals, companies, and developers around the world to perform Deep Learning & Machine Learning through AI framework provided by AICON project by providing reliable AI analysis of big data through the convergence of blockchain technology and artificial intelligence (AI) technology.

As many users can more easily access artificial intelligence (AI) using existing proven open sources and use it for work or business, individuals can enhance their work capabilities, companies can increase productivity, and many platform developers can develop their own platform according to their concept using AICON solution. We are rushing to commercialize it by rapidly applying the convergence of blockchain and AI open source to the AICON project, and we are ready to grow into a global AI blockchain company.



2. AICON Private Blockchain

AICON Blockchain is a Hybrid Blockchain that combines Private Blockchain and Public Blockchain. In general, Public Blockchain can secure the transparency of data through decentralization among all nodes, but it is slow, while Private Blockchain aims for fast and high performance, but it is difficult to significantly expand the number of nodes. AICON Blockchain selected Hybrid Blockchain considering fast performance, decentralization, and scalability.

AICON Private Blockchain basically has Server Duplex (HA) that provides Hyperledger Fabric. The Hyperledger Blockchain allows access to the network privately to only certain people, and can construct a fast network through the operation of a small number of authorized nodes. It can be also combined and compatible with Public Blockchain. Distributed Ledger Technology (DLT), which provides the best network security, scalability, confidentiality, and performance in modular blockchain architecture, is embodied in Hyperledger Fabric. To activate an authorized network, Hyperledger Fabric provides a membership service that manages user IDs and authenticates all participants in the network. The access control list is used when an additional layer of authorization is provided through the approval of specific network operations.

Hyperledger Fabric provides the same authorized network for users who need private and confidential transactions. Private channels are the path of limited messaging and can be used to provide privacy and confidentiality to a specific subset of network members. Members who are not explicitly granted access to the channel cannot see or access any data, including channel information.

Hyperledger Fabric assigns network role by node type. In order to provide synchronism and parallelism to the network, Transaction execution is divided into Transaction order and Commit. If the transaction is executed before ordering, each peer node can process multiple transactions at the same time. Through this simultaneous execution, processing efficiency of each peer is increased and transaction delivery for the ordering service is accelerated. In addition to being capable of parallel processing, Peer Node is freed from consensus workload because the division of works does not bear Node Ordering for transaction execution and ledger maintenance needs. One process runs independently from the other nodes.

Chain code application program is a code that is called by a specific type of transaction in a channel. It is distinct from the chain code that defines the operating parameters for the entire channel. The chain

code of life cycle and configuration system defines the rules for the channel.

Hyperledger Fabric embodies a modular architecture that provides network designers with functional choice. For example, specific algorithms for ID, ordering and encryption can be connected to any Hyperledger Fabric network. As a result, a universal Blockchain Architecture that can be adopted by any industry or public domain can be operated beyond market, regulatory and geographic boundaries.

The Shared Ledger of Hyperledger Fabric consists of two parts. One part is the World State, the ledger database that stores the ledger state at a specific point in time, and the other part is the Transaction Log that records the current values of all transactions and updates the records in the world state. Therefore, the ledger is a combination of world state and transaction log records. Since the ledger has an alternative data store for the World State, the transaction log records the before and after values of the ledger database in use in the blockchain network without the need to plug.

Smart contracts of Hyperledger Fabric are written using chain code, and when interacting with the ledger, the corresponding application is called by an application outside the blockchain. In most cases, the chain code only interacts with the database component of the ledger and the World State, not the Transaction Log. Chain code is embodied in several programming languages.

Depending on the network required, B2B (Business-to-Business) network participants are very sensitive to the amount of information they share. For other networks, the protection of personal information may not be their primary concern. In Hyperledger Fabric, personal information is a major requirement for operation, and it supports a relatively open network.

Even if a transaction is among other participants in the network, the transaction must be recorded in the ledger in the order of occurrence. To do this, the order of the transactions needs to be established and the malicious transaction can be rejected in the ledger. Hyperledger Fabric is designed to allow the person who started the network to choose the consensus mechanism that shows best the relationship that exists between participants. As with privacy, there are various requirements. The highly structured network in the relationship is transformed into a Peer-to-Peer network.

Assets vary from tangible assets such as real estate and hardware to intangible assets such as contracts and intellectual property. Hyperledger Fabric provides the function that can modify assets using chain code transactions. Assets are marked as a collection of key-value pairs in the Hyperledger Fabric, and changes in the state are recorded as transactions in the channel ledger.

Chain code is software that defines the asset and the transaction instructions for modifying it. Chain

code implements rules for reading or changing key-value pairs or other state database information. The function of chain code is executed for the ledger's state database and is initiated with a transaction proposal. The execution of the chain code is submitted to the network and the key-value is applied to all peer ledgers.

The ledger is a record that prevents changes to all fabric states. A state transition is the result of chain code calls that participants submit. Through the creation of the key-value of the asset, each transaction result is contributing to the ledger. The ledger consists of blockchain that stores unchangeable records in blocks and State database that maintains the current Fabric state. There is one ledger per channel, and each peer stores a copy of the ledger for each channel.

Hyperledger Fabric uses a ledger for each channel, and a chain code which can modify the current state of the asset is used. Assuming that all participants are operating on one common channel, it can be shared across the entire network. Or, it can be privatized to include only a specific set of participants. In the latter scenario, the participants separate transactions and ledgers by creating separate channels. The chain code that reduces the gap between total transparency and privacy can only be installed on peers that need to access the asset state to read and write. To increase the security of the data, the values in the chain code are partially or wholly encrypted using a common encryption algorithm such as AES before being added to the ledger.

Hyperledger Fabric supports a transaction network where all participants know their identity. The public key infrastructure is used to generate encryption certificates connected to an organization, network component, end user or client application. As a result, data access control is manipulated and controlled at a wide network and channel level. The authorization concept of Hyperledger Fabric helps address scenarios where privacy and confidentiality are important concerns along with the existence and function of the channel.

In shared ledger technology, consensus is used as a synonym with a specific algorithm within a single function. However, consensus is more than just agreeing on the order of transactions, and this differentiation plays a basic role in the entire transaction flow, from proposals and guarantees to ordering and verification. Consensus is defined as a complete single verification of the accuracy of the series of transactions that make up a block. Consensus is achieved when the order and results of block transactions meet explicit inspection criteria. These confirmation and balances occur during the transaction cycle, and these policies including the use of warranty policies that guarantee specific members and system chain codes which must guarantee a particular transaction class must be implemented and maintained.

Before the block containing the transaction is added to the ledger, the current status of the ledger is confirmed. In addition to numerous approval, validity, and version tests, identity verification is performed in all directions of the transaction flow. The access control list is embodied in the hierarchical structure of the network, and the payload is repeatedly signed, verified, and authenticated when the transaction proposal passes through other architecture components. In conclusion, consensus is not limited to ordering agreed in a series of transactions, but rather it is achieved as byproduct of verification during the process from resolution to acceptance of the transaction proposal.

Blockchain network through Fabric consists of one membership service, a number of verified peers and unverified peers. Through all these components, one or multiple chains are operated.

Functionally unverified peers are a subset of verified peers. The simplest blockchain network is composed of one verified peer. This topology is usually suitable as an environment for development. This topology cannot use consensus algorithms. Therefore, the consensus module with basic setting is applied.

In the case of an operating environment or a development environment, a blockchain network should be constructed using various verified peers and unverified peers. Unverified peer in this configuration is a node that plays roles including event processing, REST API service management, etc. Verified peers share data including all events, transactions, etc. that occur in the blockchain network.

Each blockchain network consists of verified peers and unverified peers. Various blockchains for a variety of purposes can be constructed with this combination



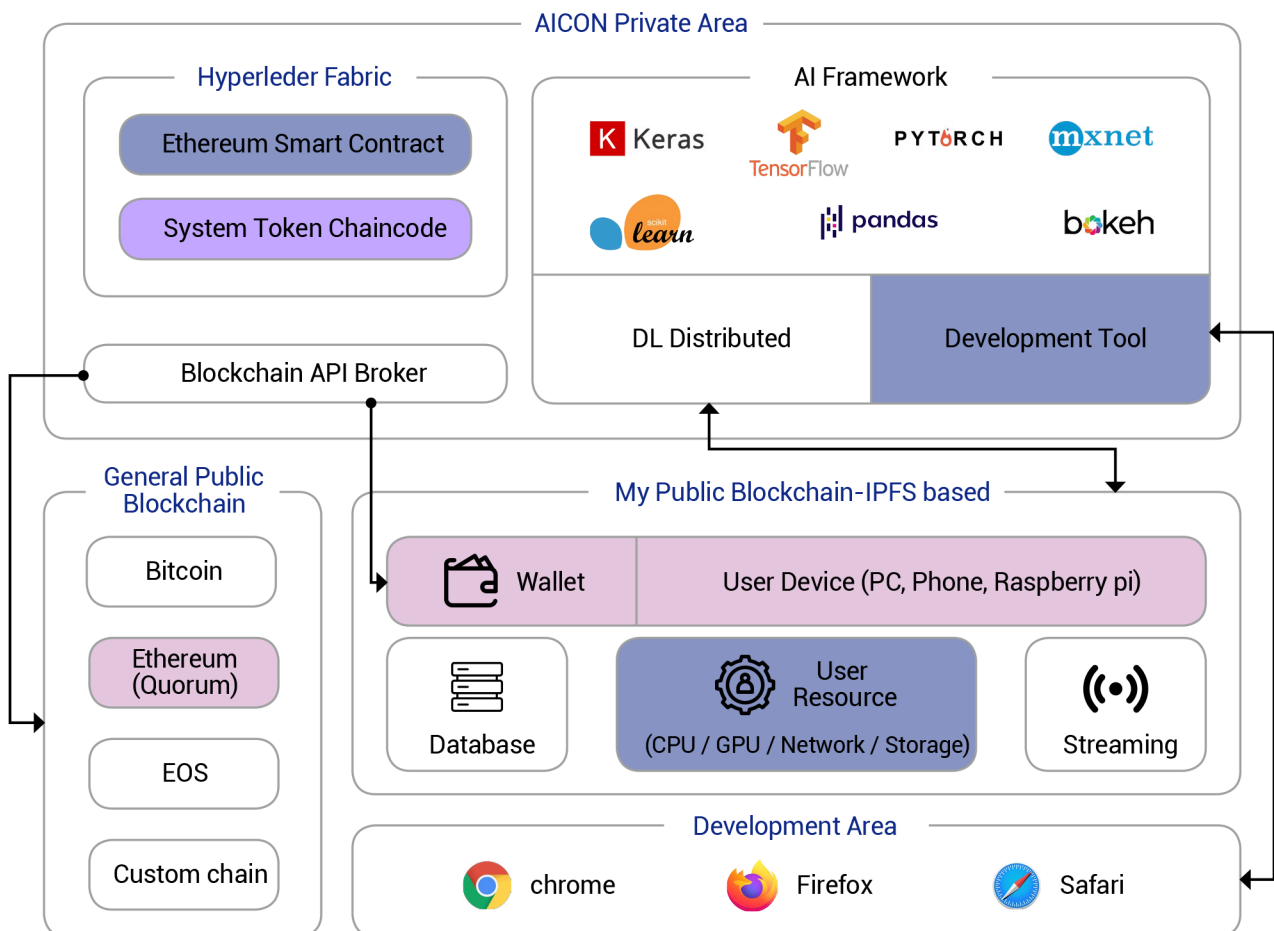
Ai-dapps / CEO

- T company Brokerage firm retail, manager 4y
- B company movie investment company, CEO 4y
- B company blockchain main net develop, hardware wallet develop, CSO 2y

CEO *Hu tain*



3. AICON Blockchain whole Architecture



AICON Blockchain is largely divided into 'AICON Private Area' and IPFS-based 'MY Public Blockchain', and it supports 'General Public Blockchain' connected with 'MY Public Blockchain'.

'AICON Public Blockchain' basically has Server Duplex (HA) which provides Hyperledger Fabric, combines Ethereum Smart Contract and System Chain code on EVM (Ethereum Virtual Machine) in Hyperledger Fabric through Blockchain API Broker, and is designed to enable system compatibility between Hyperledger Fabric and multiple Ethereum Platforms through the application of two types of contracts.

In other words, AICON Blockchain can select and apply one contract according to the type of work

required by external developers and users from the two contracts through communication with the outside using the Blockchain API Broker. It is applicable when fast data processing such as payment or asset management is required, and it is designed to provide developers with various development tools and to make it easy for companies and individuals to use AICON solutions as an open platform.

'AI Framework' consists of a three-stage deep learning framework. The 1st Floor consists of 'Keras', and the 2nd Floor consists of Google 'Tensorflow', Facebook 'Pytorch', and Amazon 'Mxnet'. The 3rd Floor consists of 'ONNX (Model exchange)'. In conclusion, the framework is constructed so that the three major clouds are compatible.

Deep Learning is performed using 'Keras', Google 'Tensorflow', Facebook 'Pytorch', and Amazon 'Mxnet' on the 1st Floor and the 2nd Floor, and Machine Learning is performed on the 2nd floor using 'Scikit learn', 'Pandas', and 'Bokeh'. Specifically, 'Scikit learn' performs machine learning, 'Pandas' performs data organization, and 'Bokeh' performs ML/DL statistical analysis and data analysis while performing data visualization functions in the library.

A. Horovod

In addition, if the 3rd floor 'Horovod' is used, distributed training can be easily implemented by adding a small amount of code. 'Horovod' is a framework that supports distributed training by using multi-GPU in Tensorflow, Keras, Pytorch, and MXNet. 'Horovod' is based on Bandwidth Optimal All-reduce Algorithm Paper and operates in a ring-all reduce method optimized for bandwidth use.

First, one worker process per GPU has a model to learn, and after reading a certain amount of data, it calculates the data for its own model learning. In other words, each worker has a model, reads training data, and finally calculates Gradients for model update through forward and backward. Afterwards, each worker exchanges gradients with each other in a ring-all reduce method and update the model using the average of the collected gradients. In addition, AICON Blockchain develops and distributes DL Distributer itself to build a Super Computing environment.

B. Jupyter Notebook

Visualizations can be created and shared through Jupyter Notebook, and it is possible to modify interactively the shared code and data collections. 'It combines code, comments, multimedia, visualizations, and more into an interactive document called 'notebook', allowing it to be shared, reused, and reworked. It is also carried out through a web browser, so it is possible to host the Jupyter Notebook itself on its local system or on a remote server.

Most of the codes sharing methods provided by cloud services are not interactive. However, the code can be checked and executed directly in the web browser and the results can be displayed using Jupyter Notebook, and since the code is fixed, the feedback provided directly from the browser can be reflected, edited in real time, and then executed again, and a notebook may be embedded in a user control device that can be used as a code input source.

If there is a code that you want to explain about the operation method by line as you send and receive real-time feedback, it can be built into Jupyter Notebook, and the biggest advantage is that the code continues to work. Since it supports such an environment where developers can access the Jupyter Notebook web from outside and directly perform coding, testing, and deploying, there is no need for complicated development using a separate tool.



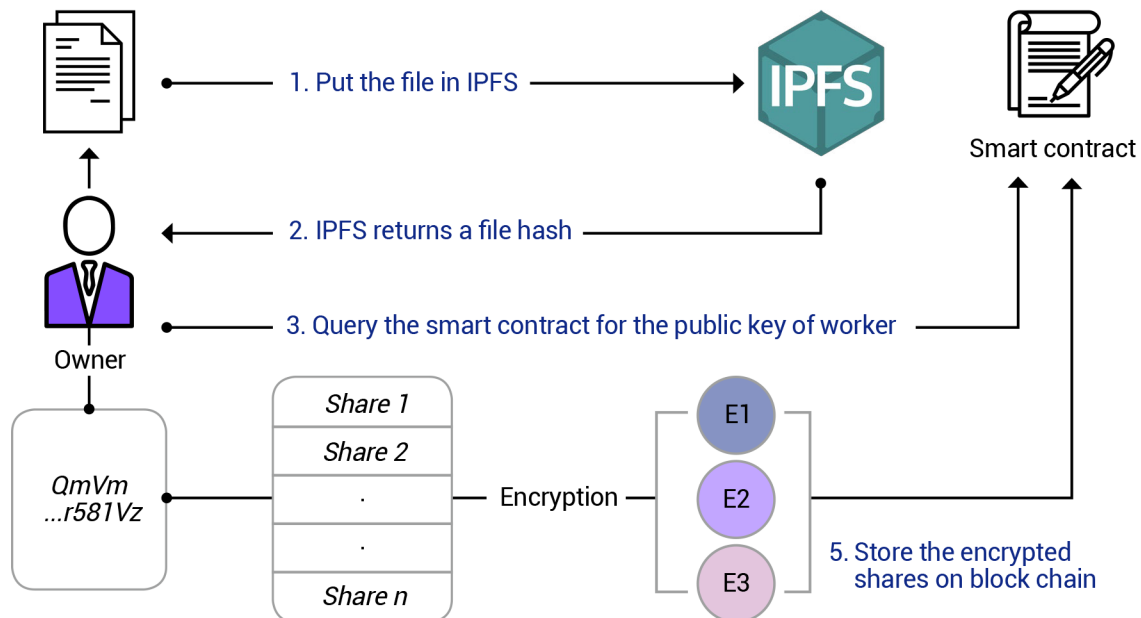
4. General Public Blockchain

Public Blockchain of AICON consists of 'General Public Blockchain' and IPFS-based 'My Public Blockchain'. As mentioned earlier, AICON Blockchain is a Hybrid Blockchain that combines the advantages of Private Blockchain and Public Blockchain, and it communicates with Custom Main Net chains such as Bitcoin, Ethereum, EOS, etc. through 'Blockchain API Broker' of Private Blockchain.

It supports various mainnet coins through communication with the Public Blockchain Platform formed in the 'General Public Blockchain Area'. For example, when it is interlocked with the EOS mainnet that requires high speed, it enables fast data processing by communicating with the 'System Token' of AICON Private Blockchain through the 'Blockchain API Broker' of the Private Blockchain. In the case of Platform Business projects that require fast processing such as payment, transportation, and finance, Platform Business can be easily managed by simply connecting to the Hybrid Blockchain of AICON without configuring a separate private chain.



5. IPFS-Based My Public Blockchain

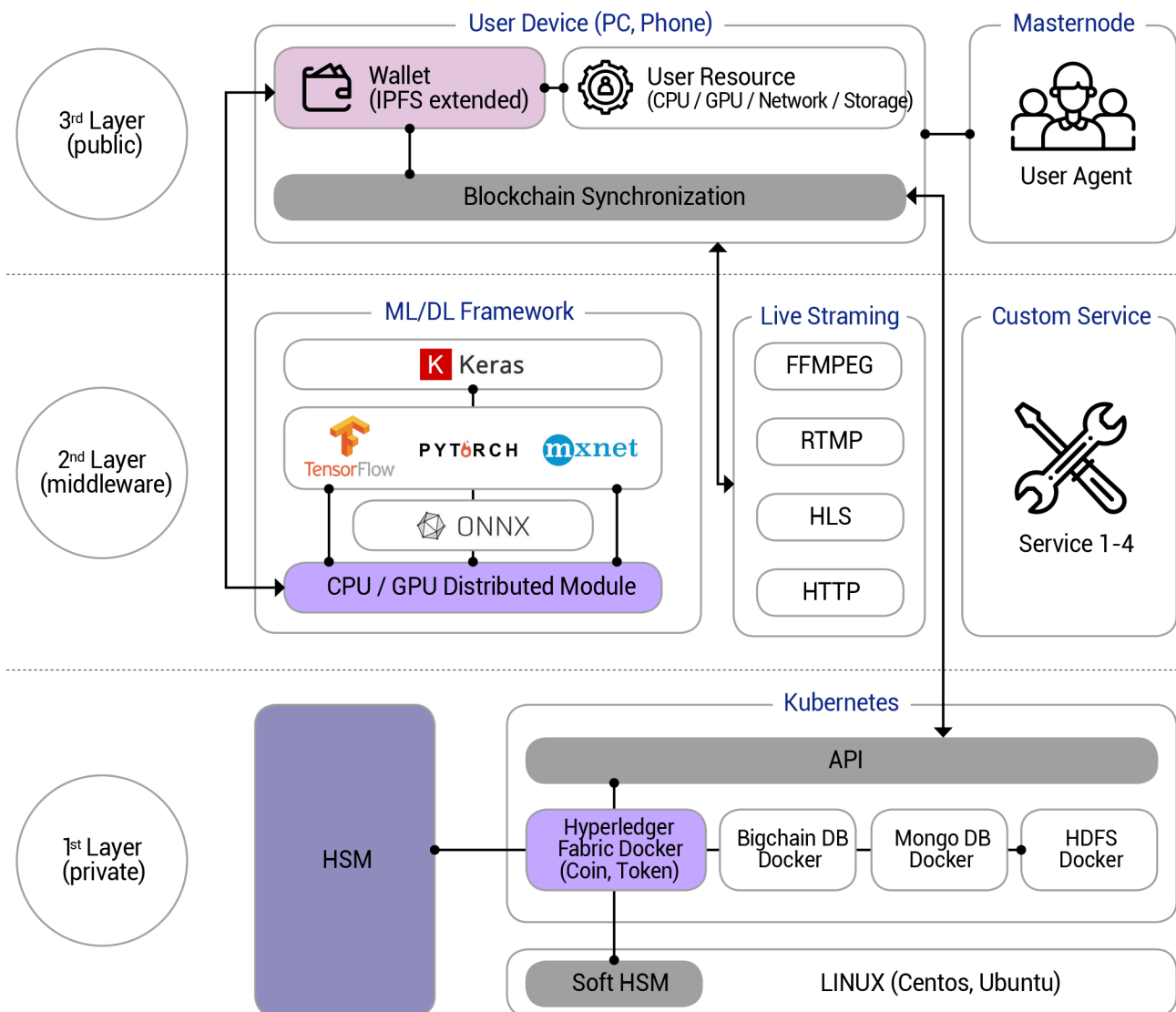


4. Split the file into n shares and randomly choose keys for encryption

'My public blockchain Area' of AICON Blockchain is based on IPFS. IPFS stands for 'Inter Planetary File System' and it is a distributed file system. IPFS is a Hyper Media Protocol that is processed by files and IDs, and it is a distributed file system created to connect all computer devices with the same file system. Since it is a structure that fetches file fragments from multiple computer nodes at the same time, the existing bandwidth cost can be reduced by more than 60% and it is also open and not centralized.

We basically build 'IPFS Full-database' in 'Wallet' using 'User Resource' such as CPU, GPU, Network, Memory, Storage, etc. And in the future, we plan to continue deploying with the plug-in method. Users can be rewarded by installing 'Wallet' and sharing resources and clients can reduce data processing costs by utilizing the resources provided by users.

6. AICON Blockchain detailed Architecture



AICON Blockchain consists of a total of 3 layers. The first layer is based on the Linux operating system and runs in the Kubernetes Platform environment. Kubernetes open source platform supports container configuration and automation of operations, and requires no manual process to deploy and expand containerized applications. In addition, it is possible to provide service without stopping. Clusters can be managed efficiently and the entire host can be expanded. In this structure, as the

'private area' continues to grow, the Linux OS combined with Kubernetes continues to grow.

Docker in the form of an image is supported in Kubernetes, which acts as a container. Since Linux has multiple versions and it is difficult to install all Deep Learning Frames in a private chain area, you can configure Docker to reserve containers in a cluster of virtual machines and run the desired images right away. First of all, 'Hyperledger Fabric Docker' will be installed, and it will perform tasks related to Coin and Token. In consideration of security, we sample and link the coin generated externally, and then operate it in linkage. Depending on the system, if there is more data embedded in the DB, the internalization process is not easy, so the Big chain DB chained to the DB is used. Hadoop HDFS can be executed in order to process large data such as big data in a private DB. Hadoop HDFS can be used if you only want to process large-capacity big data without needing a blockchain. In addition, you can prevent hacking from outside by configuring the 'Trust Zone' in the Linux OS and installing a software security module (SSM) to enhance security.

A. ML/DL Framework

ML/DL Framework is composed of the world's top three frameworks, Google 'Tensorflow', Facebook 'Pytorch', and Amazon 'Mxnet'. It makes high level 'Keras' so that developers can perform library work more conveniently. In the case of Deep Learning Framework, the key is to make it easier for developers to perform ML/DL tasks in an easier and more comfortable environment. The ML/DL model hub is configured separately, and the video model, voice model, and text model are supported in a variety of ways, so that all developers can develop using the ML/DL model by just selecting the model although not knowing the language.

B. Master Node Method

In Horovod, it is important to configure the environment so that the network is constantly maintained according to the amount of data. AICON project requires that ML/DL should be implemented in a private environment due to speed and security issues. Therefore, users who participate in the private environment must continuously provide a large amount of resources so that Horovod can embody the Super Computing environment. Users can participate as a Node in the AICON project using a personal smartphone and PC or distributed cloud hardware and software (Mining Pool) provided by AICON. Master Node method is needed to provide constant resource and to prevent situations in which a task requested by a client is difficult to be performed properly due to insufficient resource. If a few authorized people participate as master node in a private environment rather than performing the responsibilities of the master node in the existing public environment, the super computing environment will remain stable and at the same time, the amount of resource provision will increase through systematic node management.




7. BUSINESS MODEL

A. AI Automation Analysis Solution

DCS (D-Cloud Contents Service) is a service platform that performs AI analysis in distributed cloud environments. DCS provides AI analysis capabilities in distributed cloud environments using resources (CPU, GPU, Memory, Storage) of cloud devices deployed across the country. Figures for user input data are analyzed and displayed in graph and table form, and analysis reports such as accuracy and time required are provided through the analysis model provided.

DCS provides convenience for anyone to easily analyze big data while also providing high-performance features for AI professionals. It provides new business opportunities for individuals, businesses and institutions seeking to improve the quality and performance of existing services by combining AI analysis technologies.


LOGIN SIGN UP 가격정책



DCloud Contents Service

빅데이터 분석을 위한 TOOL을 제공합니다.
분산형 클라우드 시스템 클러스터링을 통해 빅데이터 분석의 성능을 극대화 시켜줍니다.

SIGN UP





빅데이터 분석

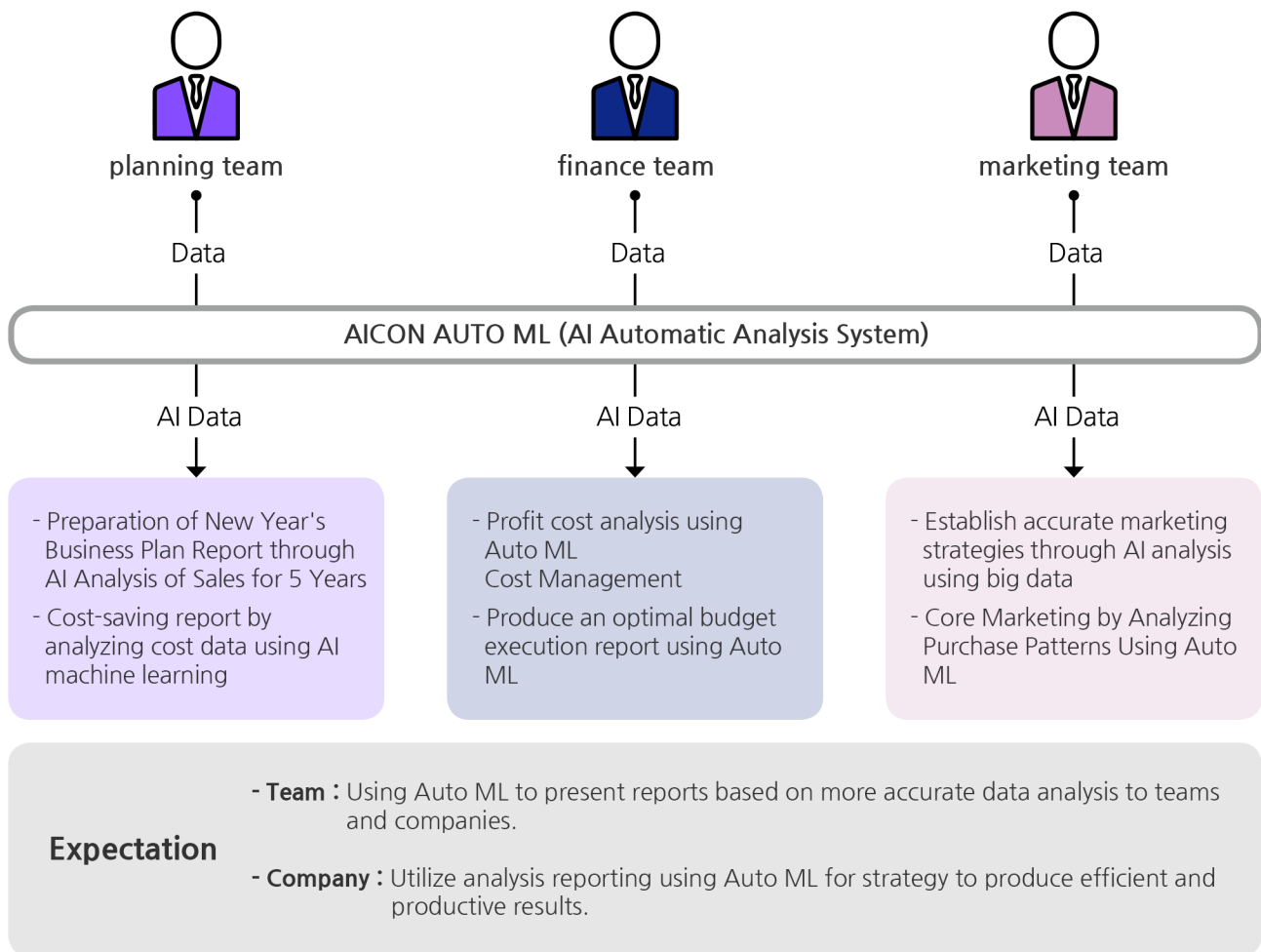
다수의 분산 클라우드가 연결되어 중앙 처리 장치, 저장공간, 데이터 등의 모든 가용 자원들을 공유하여 데이터 분석이 이뤄집니다. 데이터로부터 유용한 규칙, 지식 표현 또는 판단 기준 등을 추출하여 스스로 학습하는 과정을 거쳐게 됩니다.

- ✓ 대량의 데이터를 빠른 속도로 분석
- ✓ 분석한 데이터를 여러대의 컴퓨터로 효율적인 빅데이터 분석 지원
- ✓ 여러대의 컴퓨터 클러스터링을 통한 빅데이터 분석

PRICING

Starter 5K Get started with chat	Pro 5K Most features for growing businesses	Enterprise The power of our full platform
\$399*/mo 	\$799*/mo 	Custom pricing with millions of MAU
Starter includes : - Modern messaging essentials - Basic moderation - Ticketed support * Overages may apply	Pro includes all Starter features and : - Message translation - Advanced moderation & filters - Ticketed support * Overages may apply	Enterprise includes all Pro features and : - Data export - Option for dedicated servers - Priority support

Starter Get started with chat	Starter includes : Modern messaging essentials / Basic moderation / Ticketed support
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Enterprise The power of our full platform	Enterprise includes all Pro features and : Data export / Option for dedicated servers / Priority support



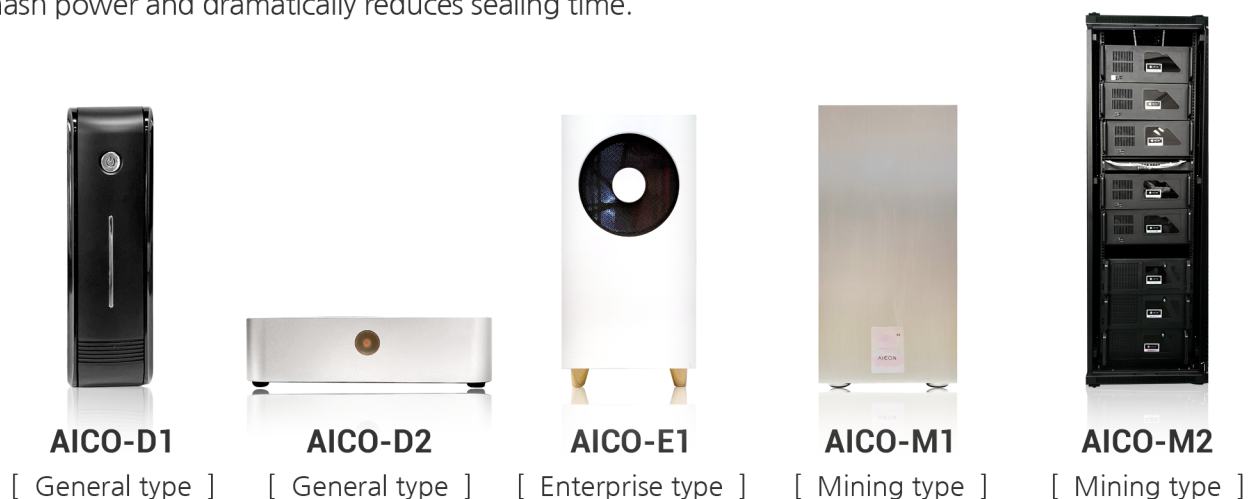
AI is not a system that provides 100% correct answers, but rather a system that can make predictions closest to the correct answer. Depending on the purpose for which the 'correct answer' is used from the business point of view, the area of application can be expanded indefinitely. Regardless of the size of the company, the scope of artificial intelligence services is expanding in startups, SMEs, and large companies. However, many companies are struggling to adopt AI solutions because of the high cost and difficult usage. The Data owned by companies and individuals or externally available data from simple documents to audio, image, and video files can be accessed through AI automation analysis solutions to make it easier and simpler to obtain desired AI analysis results. Developers working in each company, government, and industry can connect with the platform through AICON's Auto ML solution because it can be easily used on the web without installing and executing complex development processes and frameworks, The AICON project performs step-by-step management according to the process to stabilize the Auto ML service, establishes governance for improving and maintaining deep learning performance, and continuously aggregates statistical data.

B. Blockchain Distributed Cloud

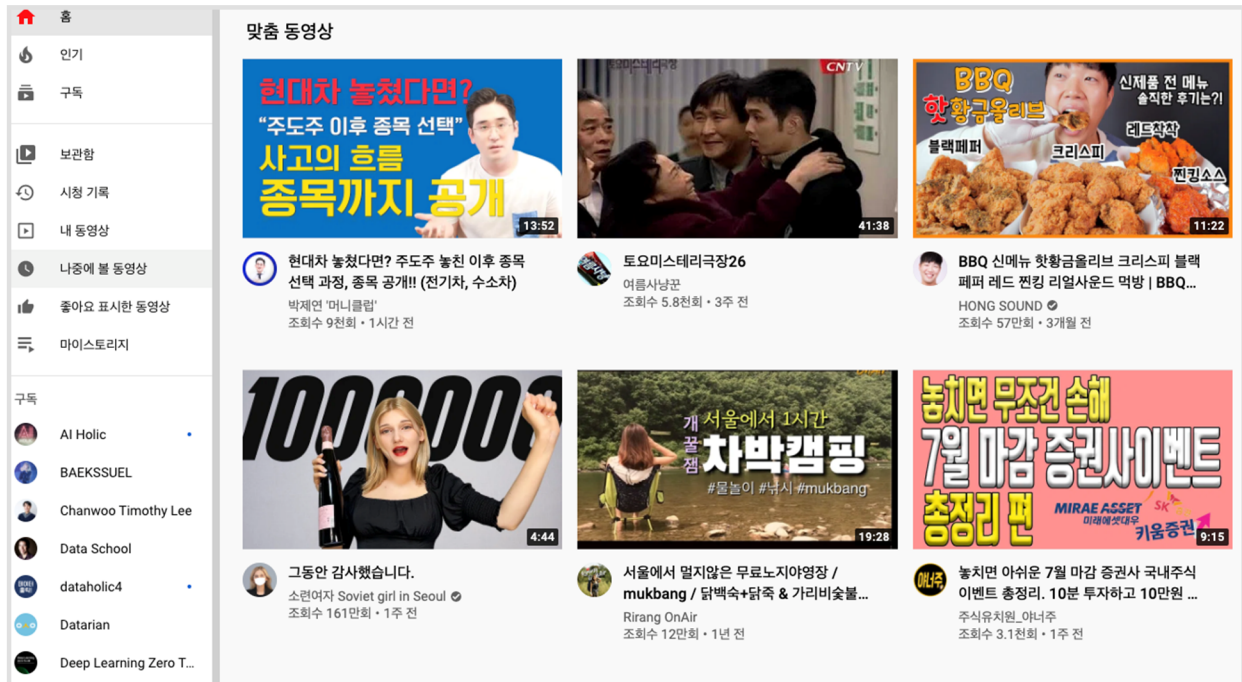
A new paradigm appears thanks to the fusion of the 4th industrial technologies and the data era has arrived. Due to the mutual combination of Artificial Intelligence (AI), Internet of Things (IoT), and Big Data technologies, companies around the world feel the need for efficient data management and analysis so they are responding to it quickly. However, while global companies are focusing on strengthening their competitiveness through AI analysis, they face some concerns. In the case of artificial intelligence analysis using a centralized cloud system such as AWS, Google Cloud, Azure, etc., there are concerns that problems including high data processing cost, loss of control, and data loss due to single point error may occur. The AICON project built a blockchain-based distributed cloud environment to solve the problems of centralized cloud services.

Distributed Cloud (D-Cloud) Cluster provides individuals and companies with a distributed cloud environment combined with blockchain, enhancing security and reducing data processing costs through storage, management, and processing of AI data in a decentralized environment. As the more participants (nodes) join in blockchain network the more data processing costs reduces, the AICON project will maximize the performance of distributed environment through rapid hardware & software supply and D-cloud system clustering. D-Cloud hardware of AICON is an extended concept of IPFS, which can be used to analyze and process artificial intelligence (AI) data using computing resources beyond sharing file fragments across multiple PCs or hardware.

AICON's D-Cloud hardware model consists of five types: <AICO-D1>, <AICO-D2>, <AICO-E1>, <AICO-M1>, and <AICO-M2>. General models <AICO-D1> and <AICO-D2> process document and natural language processing AI deep learning data and are used in file sharing and document security platform distribution environments. The enterprise model <AICO-E1> is capable of image and image AI deep learning as well as simple text. It is an optimal model for companies to take advantage of low-cost, high-efficiency distributed clouds. It is also made available to real-time streaming service platform operators. The mining model <AICO-M1> is a model designed to mine cryptocurrency. More than 80% of computing resources are only used for mining, making it profitable. The mining model <AICO-M2> is a model designed to mine Filecoin (FIL). Its own Mining Management System maximizes effective hash power and dramatically reduces sealing time.



Content streaming



- ✓ IPFS-based file sharing
- ✓ Share content such as movies, entertainment, and drama
- ✓ File sharing in YouTube format

The traditional HTTP method was to find the address where the data was located and get the content you wanted at once. On the other hand, IPFS uses a hash value that converts the contents of the data to find content that is stored distributed across various computers around the world, and then cleaves the data into fragments, and then works by combining them into one.

File Sync Drive

Drag files to the local **drop box** folder

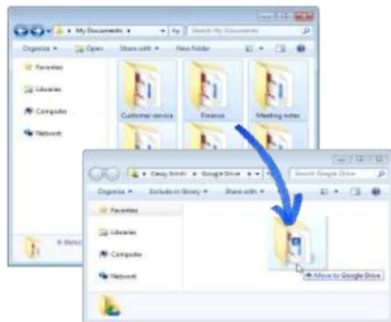
Drag files stored on your local computer to the Dropbox folder



Synchronization

Files displayed as sync symbol indicate the status of syncing without completing sync to Dropbox

Checked files show files that have been successfully synced, so you can access Dropbox from any browser



Drag files to local **drive** folder

Drag files stored on your local computer to the Google Drive folder

Even if a folder is composed of several subfolders, the drive automatically synchronizes the folder structures.

Synchronization

Files marked with a sync symbol indicate that the drive is not syncing and is being synced.

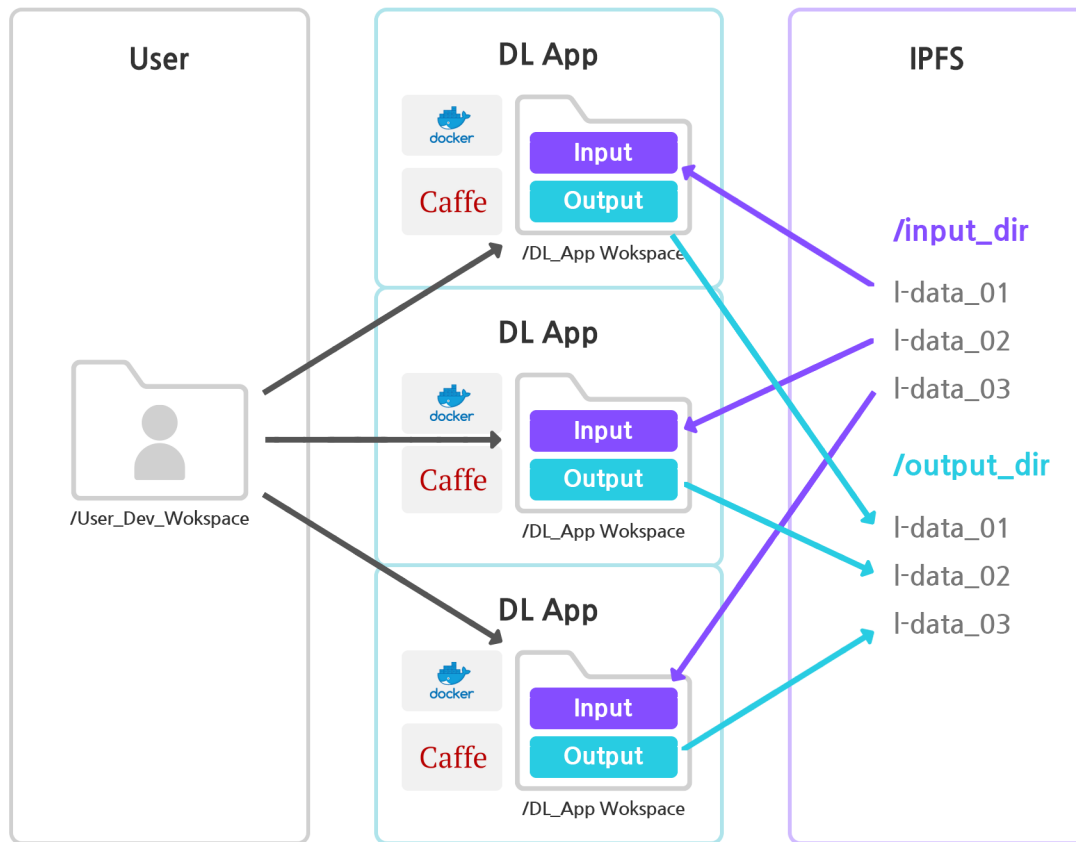
Checkmarked files show files that have been successfully synced, so you can access Drive from any browser



- ✓ IPFS-based efficient distributed through low-cost, file synchronization
- ✓ Synchronize files in NAS format

The HTTP based on a centralized system, where data processing is performed through a central server, can be inefficient and costly if there is a considerable distance. Whereas, with the IPFS we are able to reduce the current bandwidth costs by more than 60 percent at the time of processing the data since its structure imports the file pieces at the same time from multiple computer nodes. AICON distributed cloud also addresses the inefficient problem of uploading, downloading, and synchronization of data subsets for a cloud server's limited storage capacity through NAS-format file synchronization.

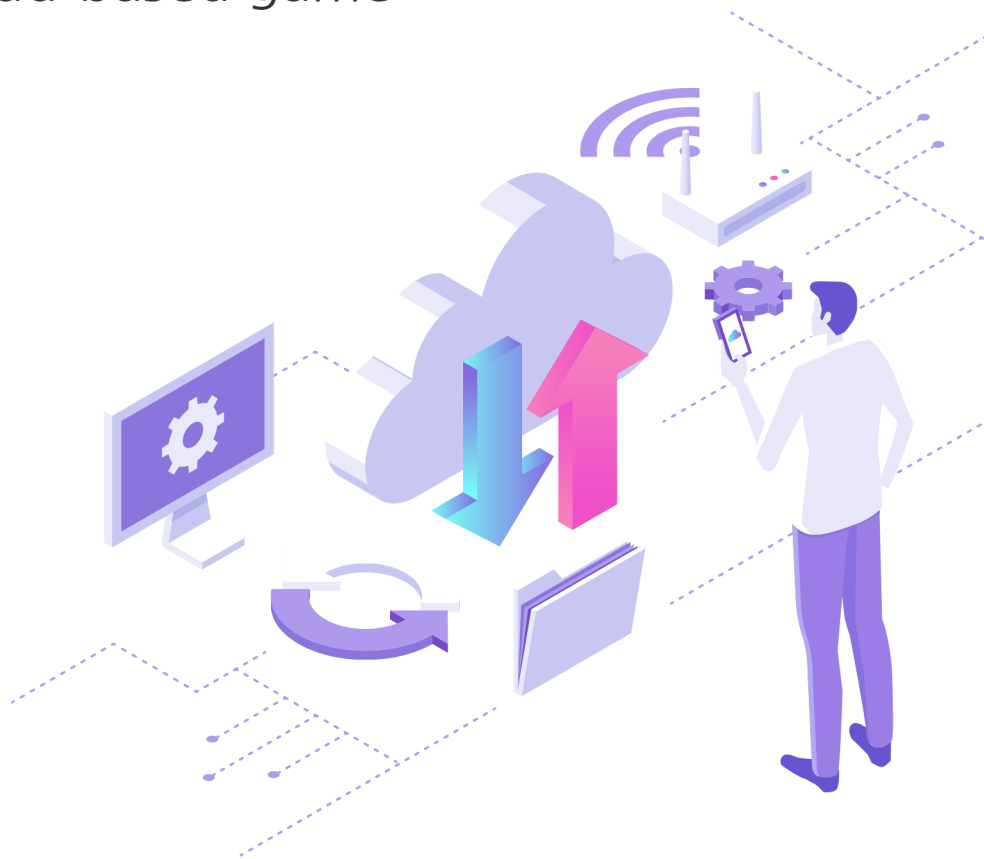
Distributed AI



- ✓ Several computer clustering used for distributed data analysis, machine learning, deep learning
- ✓ Analyze large amounts of data at high speeds
- ✓ Build efficient machine running and deep learning through multiple computers with analyzed data

AICON distributed cloud divides a number of problems into multiple pieces and clusters large parallel processing, which is the way to process multiple pieces at a time. A large number of distributed clouds are connected to the central processing unit, the storage space, and all available resources such as data that are shared to conduct data analysis. The process of learning performed by extracting useful rules, knowledge expressions, or judgment standards from the data.

Cloud-based game



- ✓ No game installation, no update process
- ✓ The game works on the cloud, not dependent on the machine's computer performance
- ✓ A multiple number of distributed cloud resolves network connectivity latency

Cloud games use cloud computing technology to send the player's operating signal, and receive and output the video and voice signals sent from the server, so you can enjoy high-quality games at any time. In addition, the cloud game works not based on the computer performance of the device, but within the cloud, without the need to install or update the game.

The current cloud game has a long input delay, which is a hindrance to the game that must be immediately reflected in the input and results. This means that it will overcome connection latency with multiple distributed clouds scattered around the country.

IoT(Internet of Things)

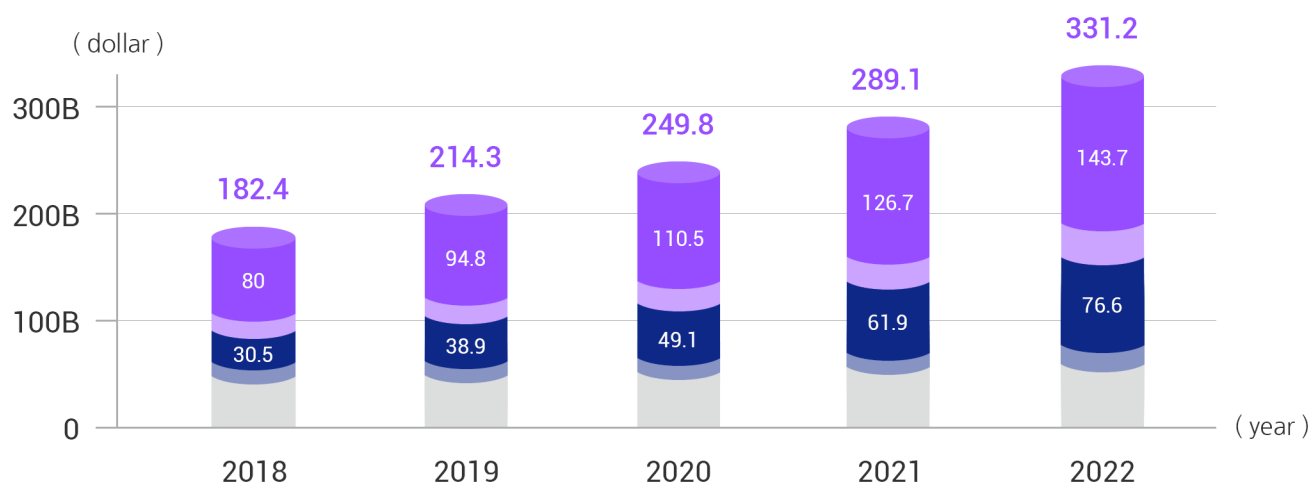


- ✓ Blockchain-based technologies IoT reliability verification
- ✓ Providing AI analysis services through data collected by devices
- ✓ The IoT (Internet of Things) Data Processing takes place in the nearest distributed cloud

Internet of Things is a technology that creates an environment that attaches sensors to things and delivers data to the internet in real time. A number of Internet of Things device's operating system doesn't have the correct security features, or not the appropriate update has been made, making it vulnerable to hacking. The introduction of blockchain technology in the field of Internet of Things has the effect of building trust, reducing costs, and expanding security.

The blockchain and the Internet of Things platform connect the data acquired by the Internet of Things through a blockchain proxy to convert the data into a blockchain form and store it in the network. When the data is measured on the device, it is directly connected to the blockchain network and is operated on a complete distributed basis.

Worldwide Cloud Service Revenue and Prospects



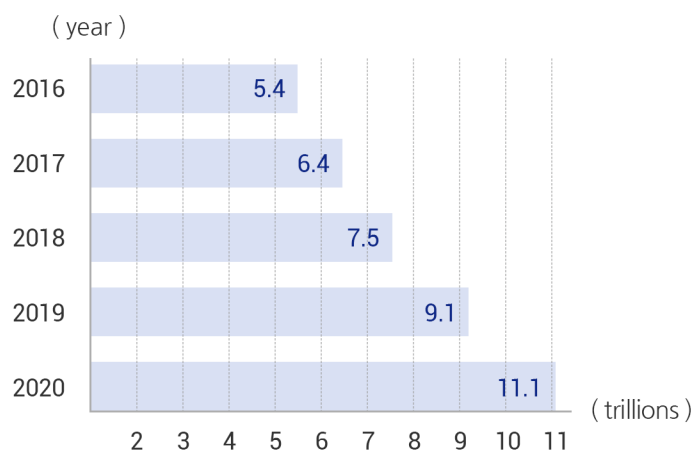
Domestic Cloud Service Revenue and Prospects



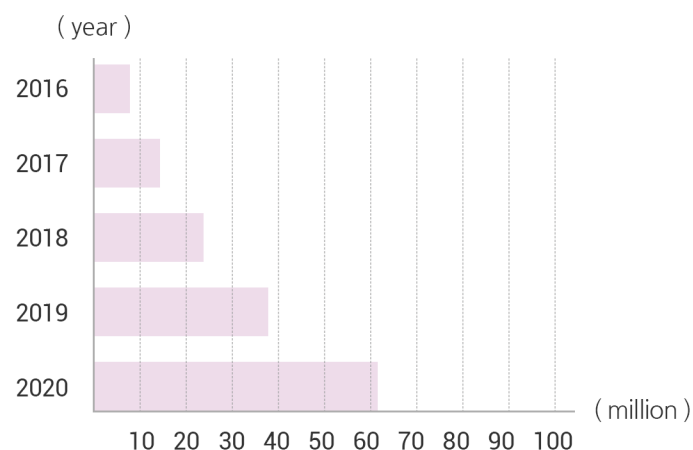
- : Cloud Application Services (SaaS)
- : Cloud Application Infra Services (PaaS)
- : Cloud system Infra Services (IaaS)
- : Cloud Management and Security Services (BPaaS)
- : Cloud Business Process Services (BPaaS)







According to market researcher Gartner, the size and growth of the cloud service market will be about three times the growth of overall IT services by 2022. It predicted that global cloud market size will continue to grow at 17.6 percent per year, while domestic cloud market size will grow 20.5 percent faster annually.

The size of the domestic AI market



The size of the global AI market



	 AI	 Cloud
 Microsoft	Launch data predictive analysis service 'Azure Machine Learning'	Enterprise Cloud Azure service
 Google	Acquisition of a company 'deep mind' specializing in running machines and neuroscience systems	Strategically apply Google Cloud Services to the retail industry
 IBM	Artificial intelligence computing with machine learning technology Building an ecosystem based on 'Watson'	World's fifth-largest cloud occupancy expanding its market share through the acquisition of 'Red hat'
 AICON	Blockchain-based AI Automation Analysis Solution to Launch My AutoML	Blockchain-based decentralized cloud implementation, Building a Distributed Environment with IPFS

Cloud market size

Worldwide cloud infrastructure spending and annual growth
Canalys estimates, Q4 2019

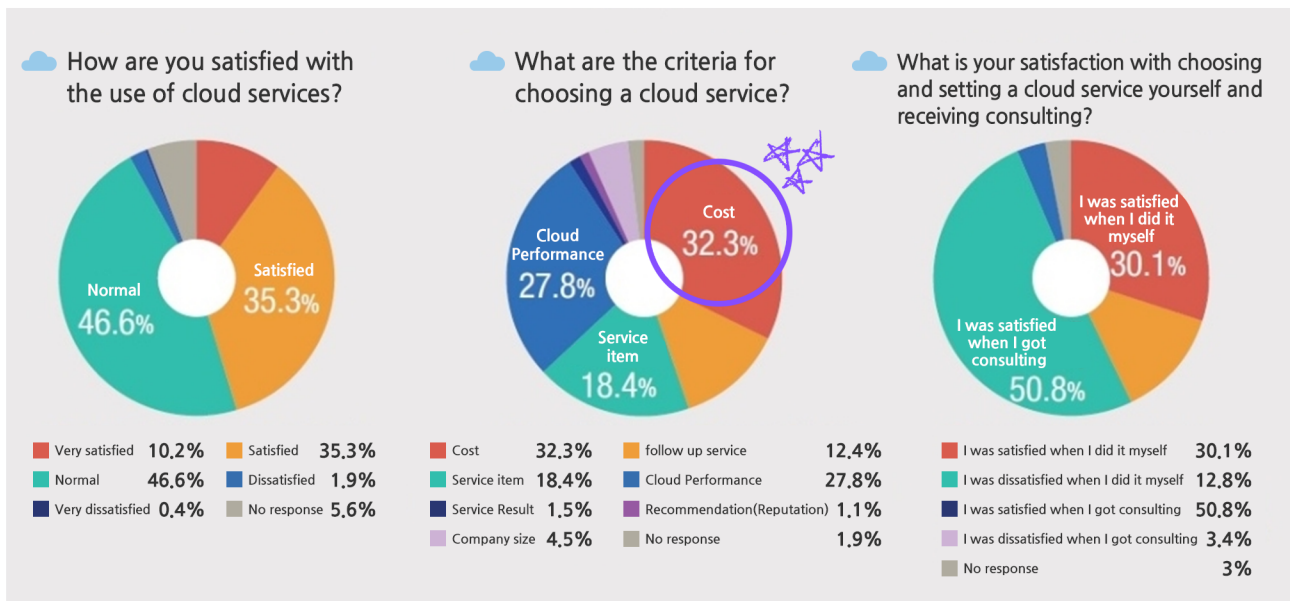
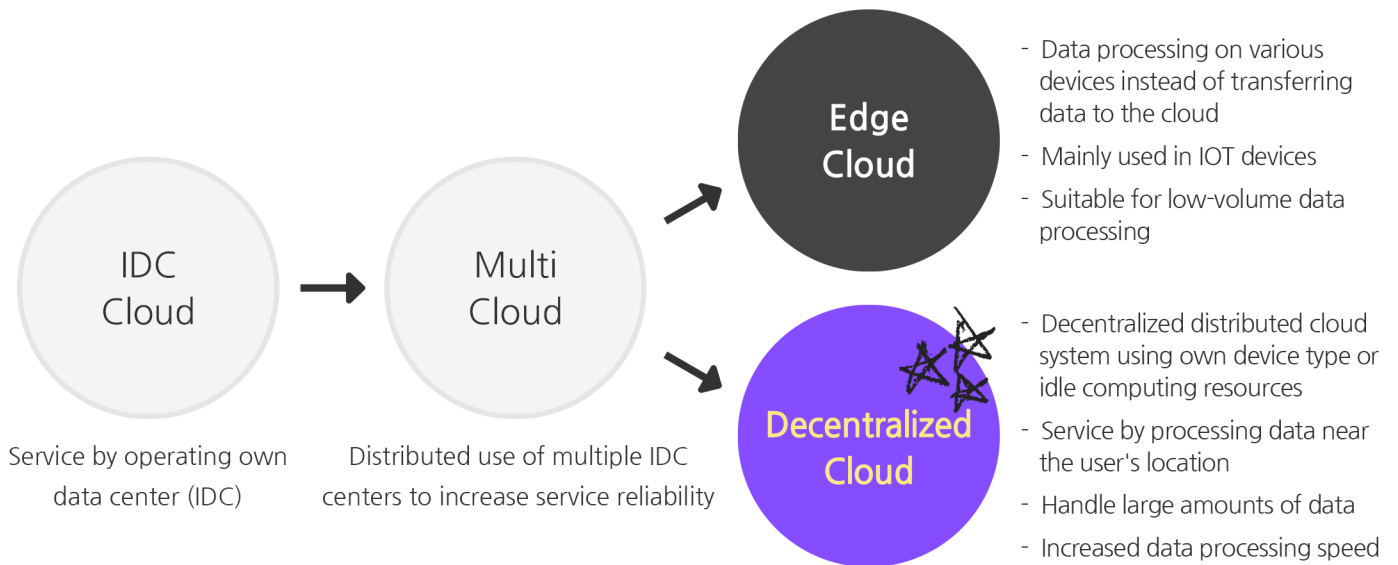
Cloud service provider	Q4 2019 (US\$ billion)	Q4 2019 market share	Q4 2018 (US\$ billion)	Q4 2018 market share	Annual growth
AWS	9.8	32.4 %	7.3	33.4 %	33.2 %
Microsoft Azure	5.3	17.6 %	3.3	14.9 %	62.3 %
Google Cloud	1.8	6.0 %	1.1	4.9 %	67.6 %
Alibaba Cloud	1.6	5.4 %	1.0	4.4 %	71.1 %
Others	11.6	38.5 %	9.3	42.4 %	24.4 %
Total	30.2	100.0 %	22.0	100.0 %	37.2 %



Note : percentages may not add up to 100% due to rounding
Source : Cnanlys Cloud Channels Analysis, January 2019

After analyzing the performance of major cloud companies announced by the Canalys Market Research Institute, the global cloud infrastructure service market in 2019 is estimated to be about \$107.1 billion. 2019 Q4's cloud market share with Amazon AWS 32.4%, Microsoft AZURE 17.6%, Google's GCP with 6% and Alibaba's cloud 5.4%.

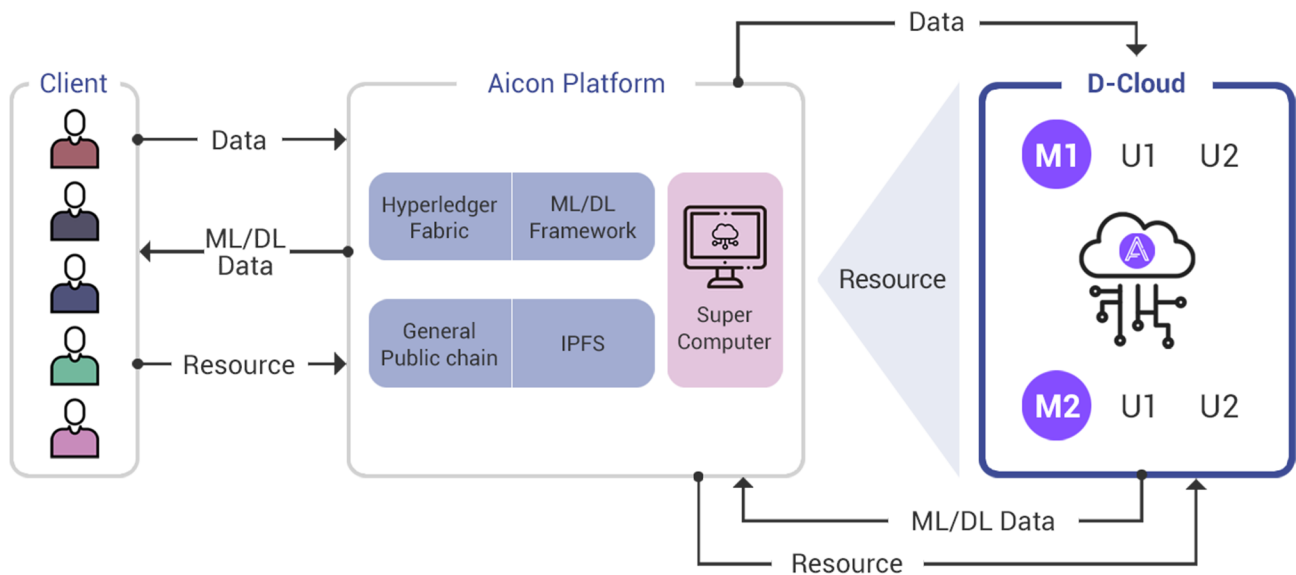
Cloud market change flow





8. AICON ECOSYSTEM

A. AICON Blockchain Economy



ECONOMY CYCLING

1. Clients provide data for ML/DL.
2. The data is stored on the client server in AICON PLATFORM.
3. Users transmit ML/DL data to AICON WALLET STORAGE installed on PC or smartphone.
4. ML/DL FRAMEWORK refines data and derives results using decentralized resources provided by users.
5. ML/DL DATA is delivered to the clients.

B. AICON PLATFORM

i. Data Provider (Clients)

Subjects requiring ML (Machine Learning)/DL (Deep Learning) can be individuals, companies, developers, and governments. Data providers provide data to AICON PLATFORM in order to obtain necessary results through ML/DL analysis. Data providers can receive decentralized resources and analyze the data using Super Computing technology of AICON PLATFORM, thereby reducing the cost of massive resources required for ML/DL. They pay for the data analysis through AICON TOKEN, and if they open and disclose the data, they may receive a separate reward through the data exchange.

ii. AICON PLATFORM

This is a GATEWAY, which plays a key role in the AICON Blockchain ecosystem. This provides the necessary FRAME and TOOL for ML/DL in HYPERLEDGER FABRIC-based PRIVATE CHAIN, and also provides clients with the necessary resources for ML/DL analysis of distributed resources of users using SUPER COMPUTING technology

iii. Resource Provider (User)

This is a provider of resources in the AICON Blockchain ecosystem. This can be an individual or a company, and provides idle resources such as CPU, GPU, Memory, Storage, etc. to the client through the AICON Platform using a PC or smartphone owned by the user. By providing idle resources, resource providers can receive AICON Tokens as rewards.

C. AICON D-Cloud

AICON D-Cloud hardware (AICO-D1) can store, manage, and process large amounts of data in a blockchain-based distributed environment, and is designed to enhance security and reduce data processing costs. Maximizes performance through distributed cloud system clustering compensate for the disadvantages of existing centralized cloud systems. And the more network participants (nodes), the more the data processing cost is continuously reduced.

Decentralized cloud systems run on the blockchain and provide security through partitioning, making the network much more secure than the current infrastructure provides. Even if an attacker can access a block of data, it is difficult to penetrate because it is only part of the file.

AICON D-Cloud hardware (AICO-D1) implements a distributed cloud by providing CPU, GPU, and storage, and consists of a hardware type (distributed cloud hardware) and a software type (mining pool) using idle computing resources of nodes.

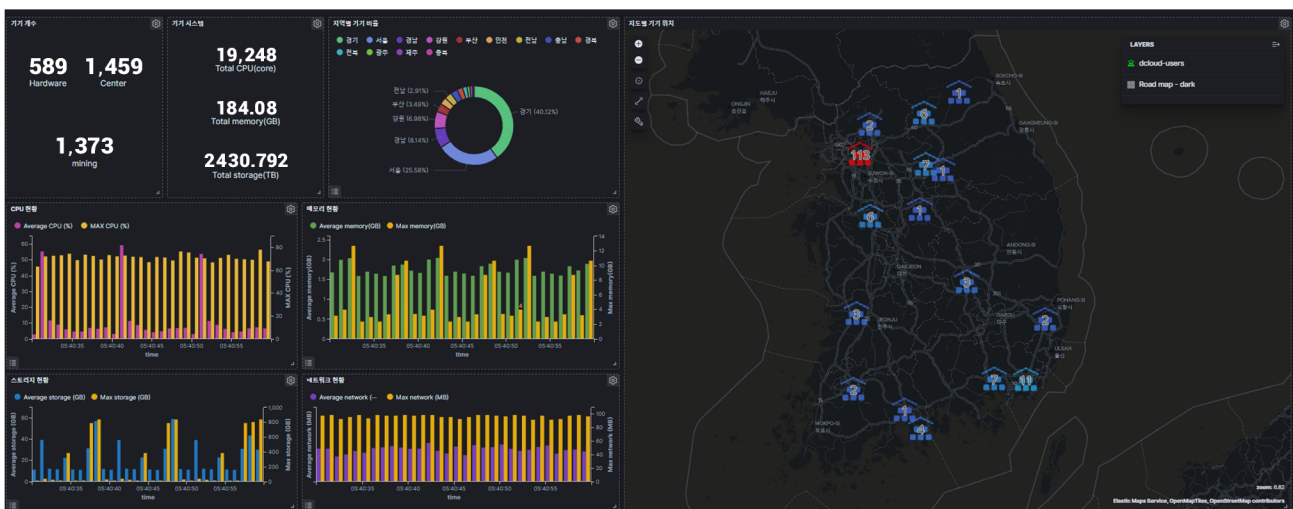
Data in AICO-D1 is expanded to IPFS-based large data processing. Not only is the file fragment distributed to several computers or hardware, but also computing resources are used for data analysis and processing. The public chain is based on IPFS, and the private chain is linked to the AI framework.



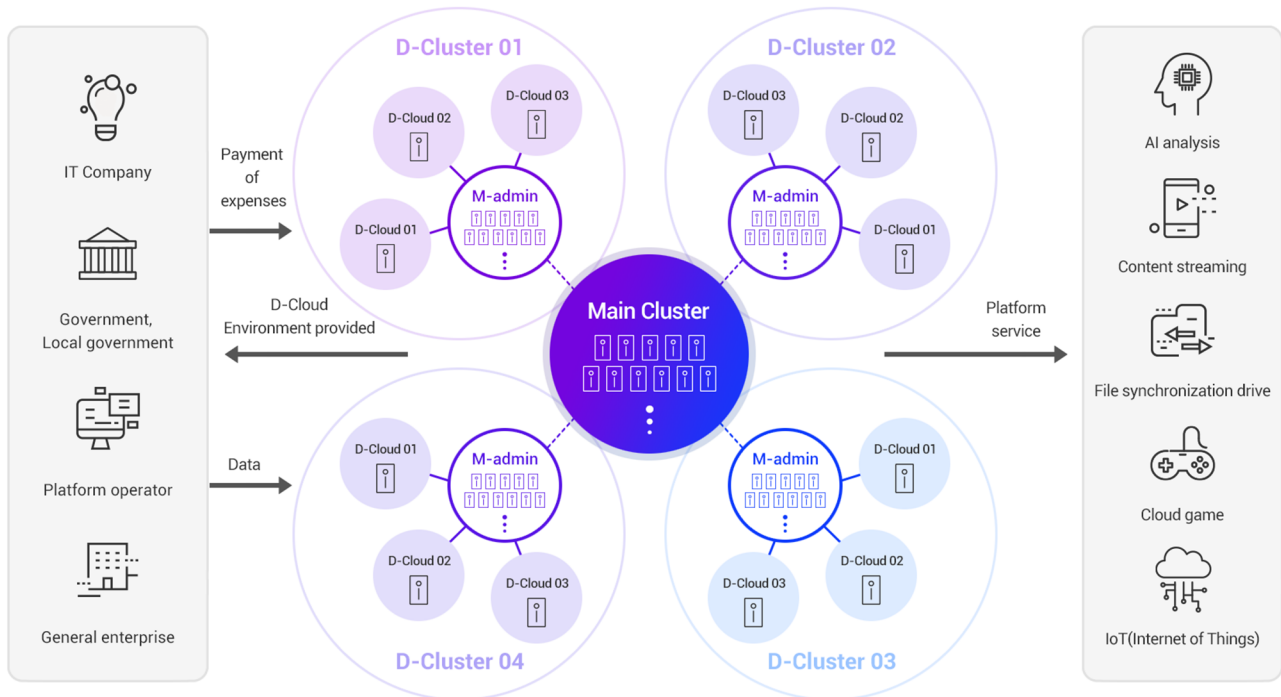
AICON D-Cloud status

The AICON Project began deploying D-Cloud hardware in September 2020. As of September, 500 hardware units were distributed, and 1,900 units as of October and 3,400 units as of March 2021 were distributed and operated in various parts of the country. AICON D-Cloud is available for storage, memory, network, and CPU in the cloud, with more than 3,400 deployed in cities and provinces (based on 2021.3.16). It has 184.08 TB of memory, 2430.792 TB of storage data, 19,249 CPU (core) resources, and will process more data in the future. As the data industry grows, the cloud market, which has to store a huge amount of data, will also grow, and the AICON distributed cloud will also grow in value.

The AICON project aims to distribute a total of 200,000 units, 100,000 units each, to China and Dubai, starting global sales of D-Cloud in the second half of 2021. It will expand its distributed environment in Southeast Asia based on China and expand its distributed environment in Europe and Russia based in Dubai to establish a global network.



AICON D-Cloud Cluster



AICON distributed clusters connect AI blockchain technology and cloud services to provide reliable big data AI analytics to all individuals and businesses. End users will be rewarded with AICON tokens from their AICON Wallet by providing computing idle resources over the D-cloud. Companies, governments, municipalities, and platform operators pay for the service within the AICON platform and are provided with a D-Cloud environment.

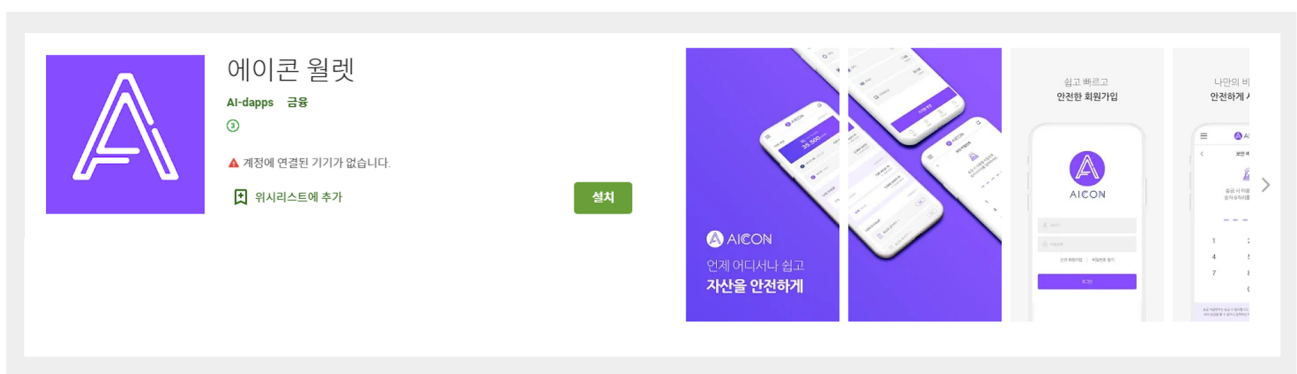
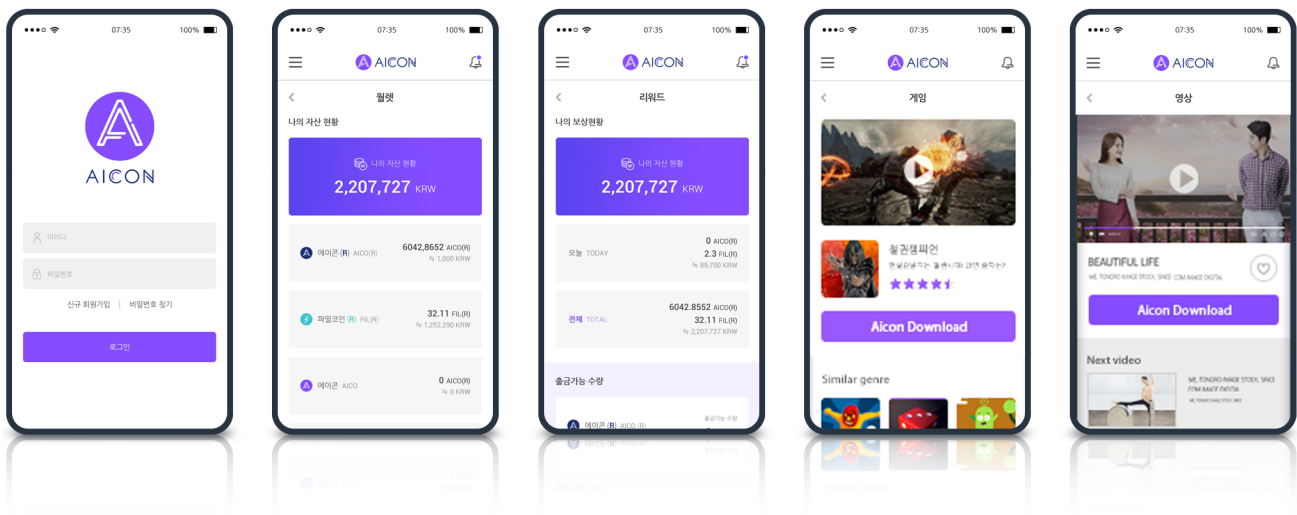
Users will receive AI analytics, document security, content streaming, real-time streaming, and file synchronization drive services through the D-Cloud.

D. AICON wallet

AICON Cloud Platform MAU 22,000

Google Play Store AICON Wallet Application

The AICON wallet app features cryptocurrency transfer capabilities and allows D-Cloud real-time computing resource delivery verification and resource delivery compensation. Compensation is paid daily through the AICON wallet. Since AICON tokens during the initial period of the project follow the protocol implemented with the ERC-20 specification, token investors and users can use the existing Ethereum wallets. It cannot be forged using a distributed blockchain network that generates smart contracts and is built to protect personal information. As the AICON's own mainnet is implemented within the mid- to long-term timeframe, tokens based on ERC-20 are exchanged for its own coins. From then on, it will be controlled by its own Wallet protocol, not by the Ethereum Wallet.



Participated in the 2020 AI International Exhibition

The AI EXPO KOREA 2020, held at COEX, is a glance at all of AI's latest technologies and platforms, solutions, and AI-based business models, including the business strategy of AI companies at home and abroad, as well as the application and introduction strategies that will lead to innovation during the Fourth Industrial Revolution.

The AICON project will participate in AI EXPO KOREA 2020 to showcase AI-based distributed clouds. We have released the general model(AICO-D2)for distributed cloud server business, the enterprise model(AICO-E1)for low-cost processing of large data processing, and the mining model AICO-M1 for cryptocurrency mining.



Participated in the 2021 AI International Exhibition

The AICON project participated in the International Artificial Intelligence Exhibition (2021 AI EXPO KOREA) held at COEX in Seoul and introduced the DCS (D-Cloud Contents Service) v1.0 solution, a service platform that performs AI analysis in distributed cloud environments.

In this international artificial intelligence competition, 138 companies from eight domestic and foreign countries and 187 booths were held to showcase various AI technologies. Through the AI analysis solution of DCS, we had time to communicate with customers by explaining and introducing the overall process of analyzing data and how to share files based on IPFS.



AICON Yongin factory

The AICON project is manufacturing D-Cloud hardware products at its plant in Yongin, Gyeonggi Province. D-Cloud made here has been shipped to various parts of the country, increasing cloud computing resources.

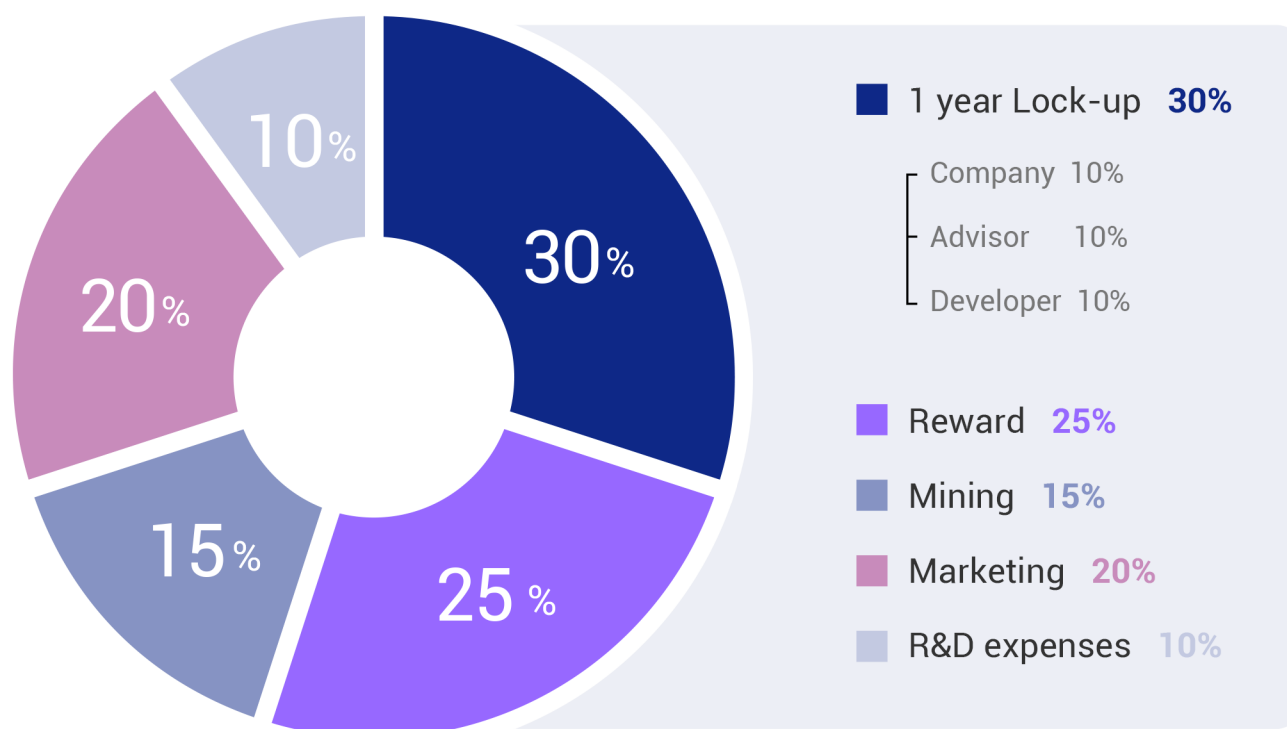
In addition, Yongin plant has entrusted management of mined hardware AICO-M1 and AICO-M2. It provides optimal hardware and software environments to avoid wasting time setting complex mining environments. It was designed and developed directly by blockchain experts, and continuous management is carried out by operating a professional management team.





9. Token Distribution

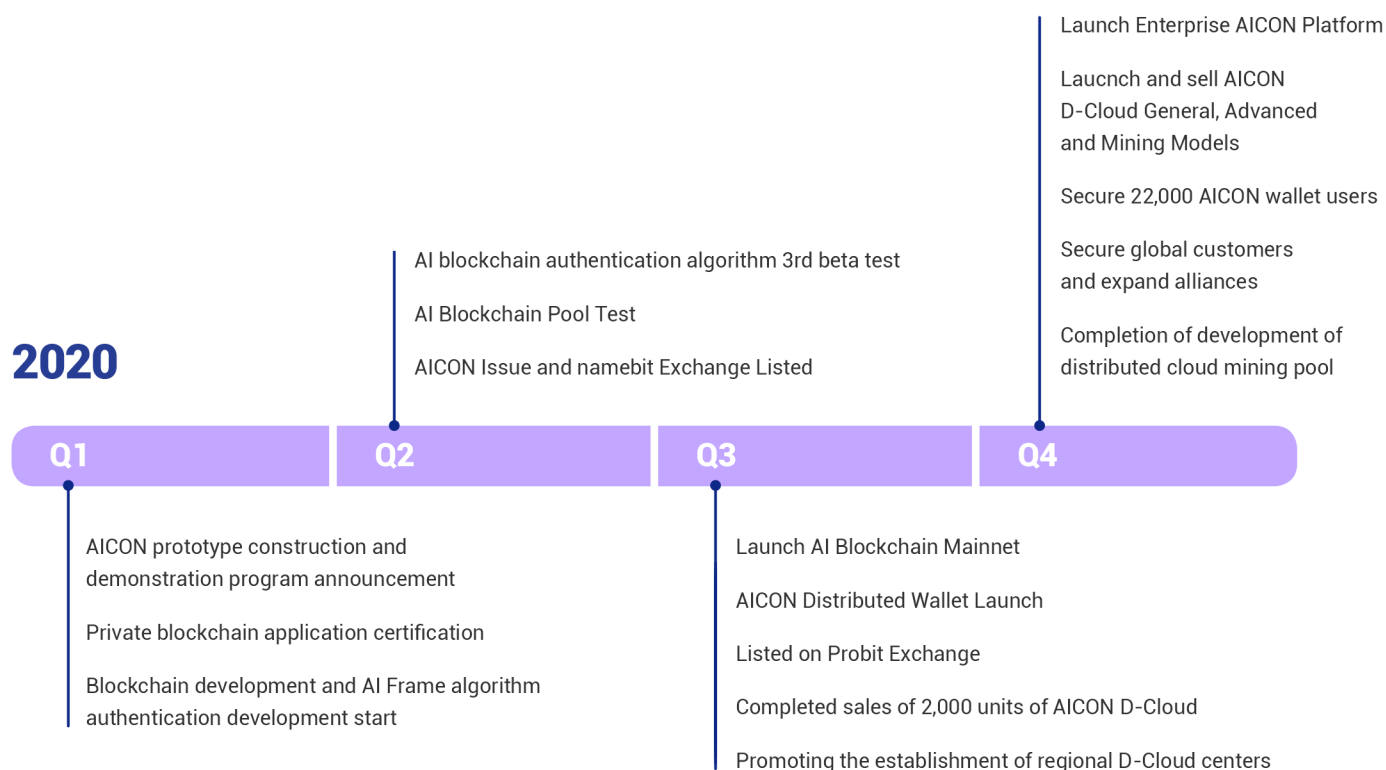
Distribution plan



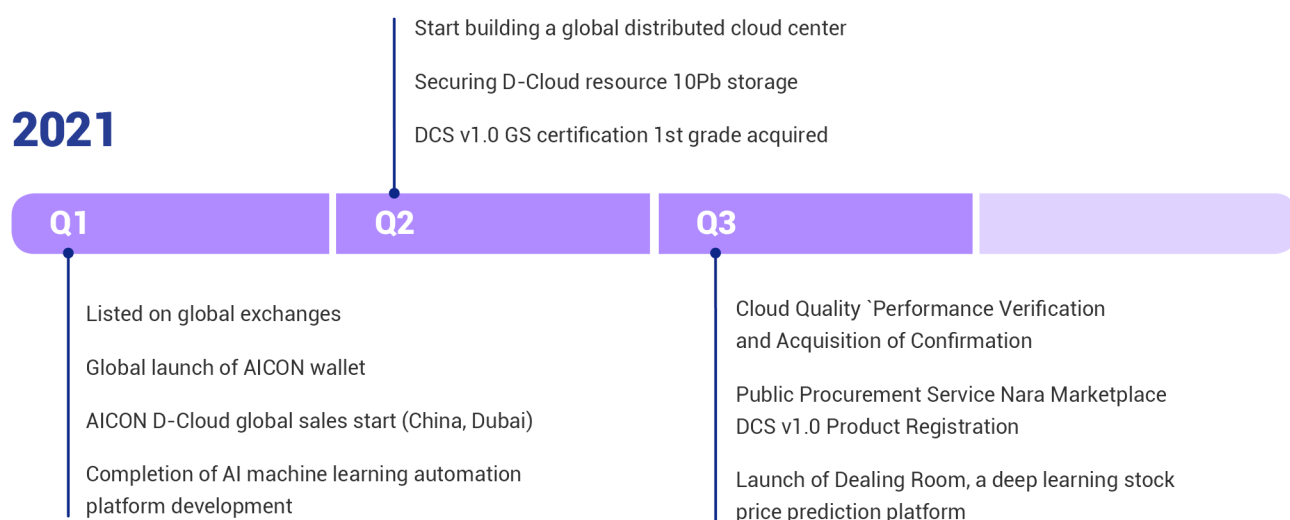


10. ROADMAP

2020



2021





11. Exemption Clause

1. The purpose of this white paper is to provide potential buyers with information about the AICON project, allowing them to decide for themselves whether to proceed with the purchase using AICON tokens (AICO). This white paper does not constitute stocks, securities, corporate assets, or any related company's sale or purchase, offer, or request.

2. This white paper contains information about AICON's business objectives and AICO, while at the same time it was written to provide information on how to access solutions based on blockchain technology. The information contained in this white paper can be modified, added or supplemented at any time.

3. The following information may not be comprehensive and does not include any elements of contractual relationships.

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15. AICON does not delegate or transfer all decisions, including ecosystem operation policies and suspensions, to others, and all decisions are made at AICON's discretion.



12. Source

Hashnet <Hyperledger Fabric> document

Yoo Seong-min IT Columnist <Why AI and Blockchain Convergence are the Trend>