01 DEEPBRAIN CHAIN - Intro

Deep Brain Chain - Distributed high-performance computing network based on blockchain technology

Most important infrastructure in the era of AI+Metaverse

Stabel, Delay-free cloud GPU computing services based on a high-performance and large-capacity.

NO.1

World's first

1400+GPU

Mainnet computing power resource

High-performance computing power network

Blockchain mainnet

GPU computing power mainnet

10+Nodes

Multiple worldwide computing nodes

10000+Users

Computing power resource adopted by users in large scales on the ground

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02 | 6 Features of the Cloud Computing Network

DeepBrain Chain on totally open-source network

Build own cloud platform based on the DeepBrain Hash Network

Multiple machine models

- DeepBrain Chain Skynet's AI training GPU resources are abundant, you can choose from 1 GPU to 128 GPU and switch at any time.

Flexible supply

- Uses elastic expansion technology to realize automatic container deployment, and quickly copy and distribute containers to multiple idle nodes during traffic peaks.

Low cost

- Through its unique token economic model, mining nodes are encouraged to provide cheap computing power resources, reducing the training cost of AI manufacturers up to 30% of the original cost.

P2P

- It matches the computing power resources of computing power demanders and computing power providers, and users do not need to bear intermediate costs.

Distributed – edge computing power

- Large-scale distributed computing power is seamlessly applied and managed in a decentralized manner, providing users with edge computing power. It realizes user information data security through blockchain technology.
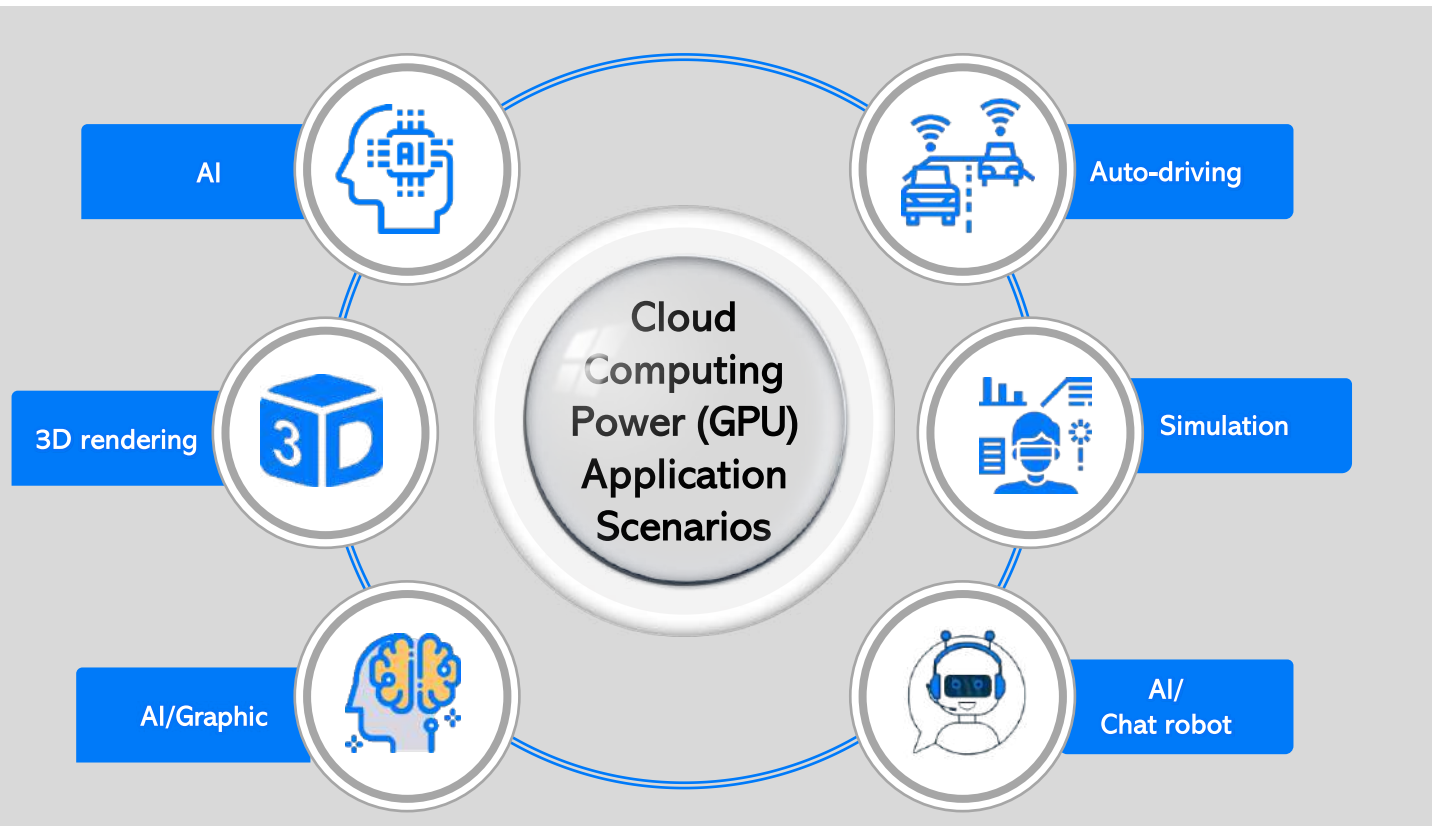
Supports multiple frameworks

- DBC AI computing power network supports many training frameworks, currently supports TensorFlow, Caffe2, PyTorch, MXNet, CNTK, H2O.

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High-performance and cloud PCs are essential in start-ups, medical care, education, game in the 4th industral revolution

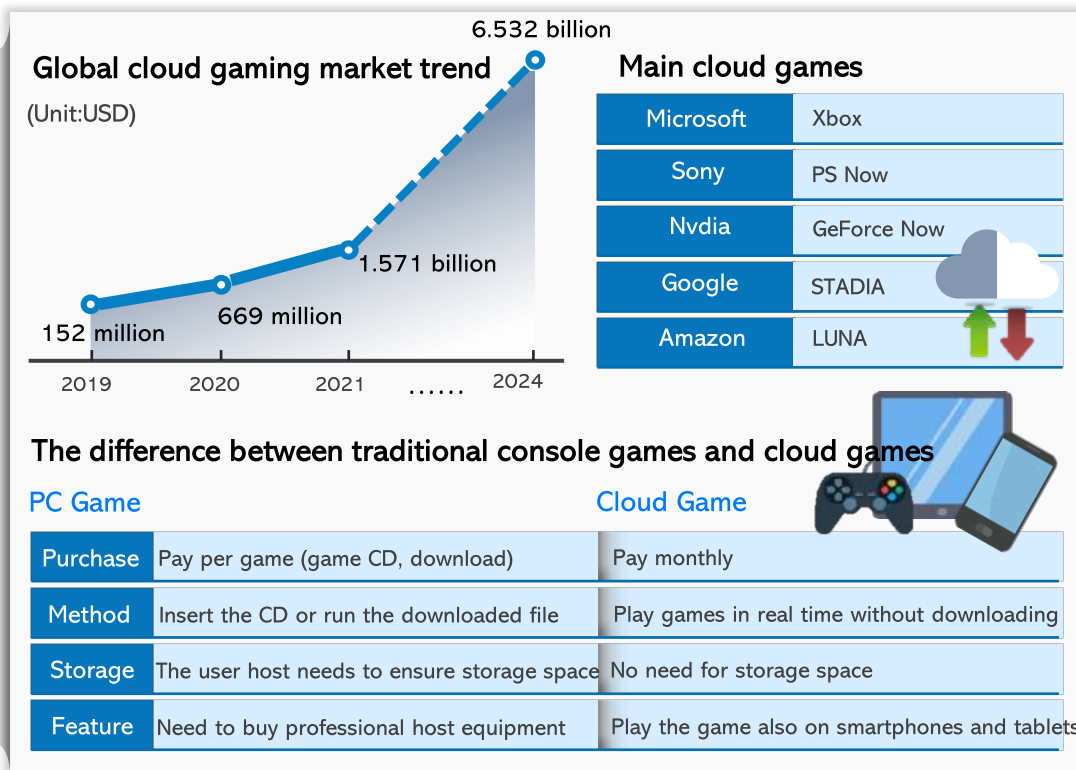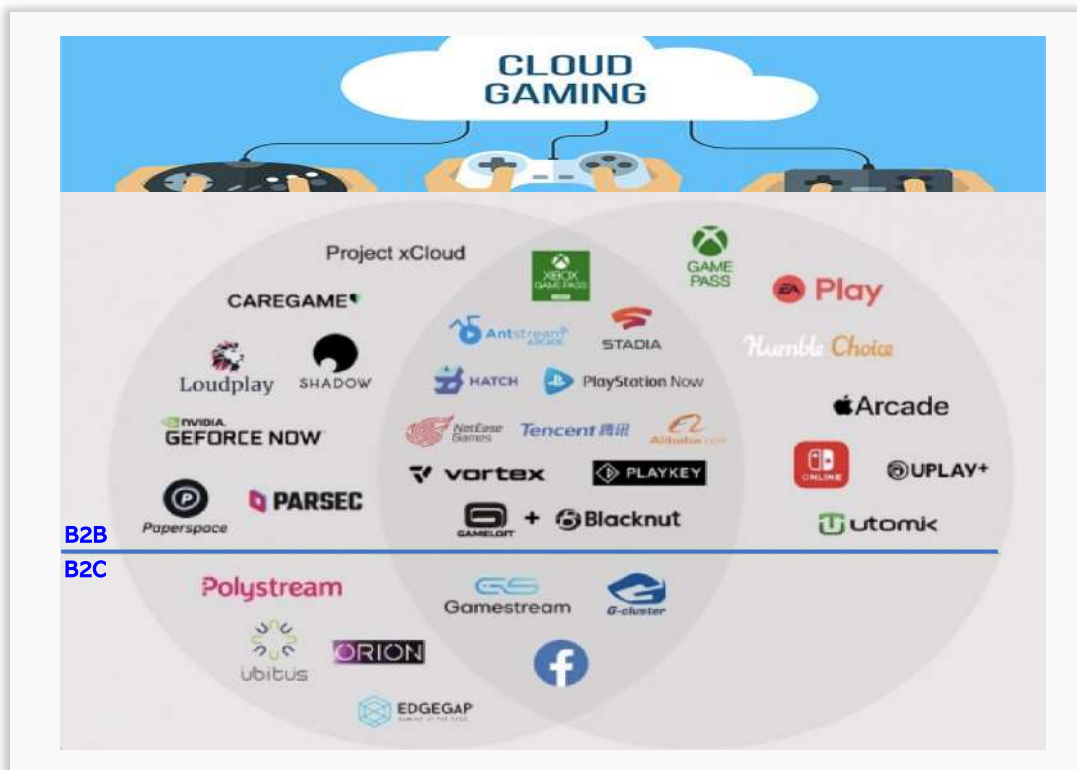**Rapid growth of the high-performance GPU server market after the launch of the ChatGPT in 2022,**

AI

Auto-driving

3D rendering

Cloud Computing Power (GPU) Application Scenarios

Simulation

AI/Graphic

AI/ Chat robot

04 Games market trends – from content to platform

The emergence of rental cloud games

- Easy access to high-performance games at low cost with the technological development, 5G network and the cloud computing
- Cloud gaming is a service that utilizes streaming technology.
- Stability is improved according to network performance without delay
- Cloud gaming is becoming more popular as PC costs increase along with GPU prices.

Global cloud gaming market trend
(Unit:USD)

- 6.532 billion (2024)
- 1.571 billion (2021)
- 669 million (2020)
- 152 million (2019)

2019 2020 2021 …… 2024

Main cloud games

Microsoft	Xbox
Sony	PS Now
Nvidia	GeForce Now
Google	STADIA
Amazon	LUNA

The difference between traditional console games and cloud games

	PC Game	Cloud Game
Purchase	Pay per game (game CD, download)	Pay monthly
Method	Insert the CD or run the downloaded file	Play games in real time without downloading
Storage	The user host needs to ensure storage space	No need for storage space
Feature	Need to buy professional host equipment	Play the game also on smartphones and tablets

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DBC Cloud computing power – High-performance PC computing power service

DBC Cloud Center provides high-performance GPU computing through a dedicated platform

- Providing various GPUs, allocating local resources, based on low-latency/high-performance network
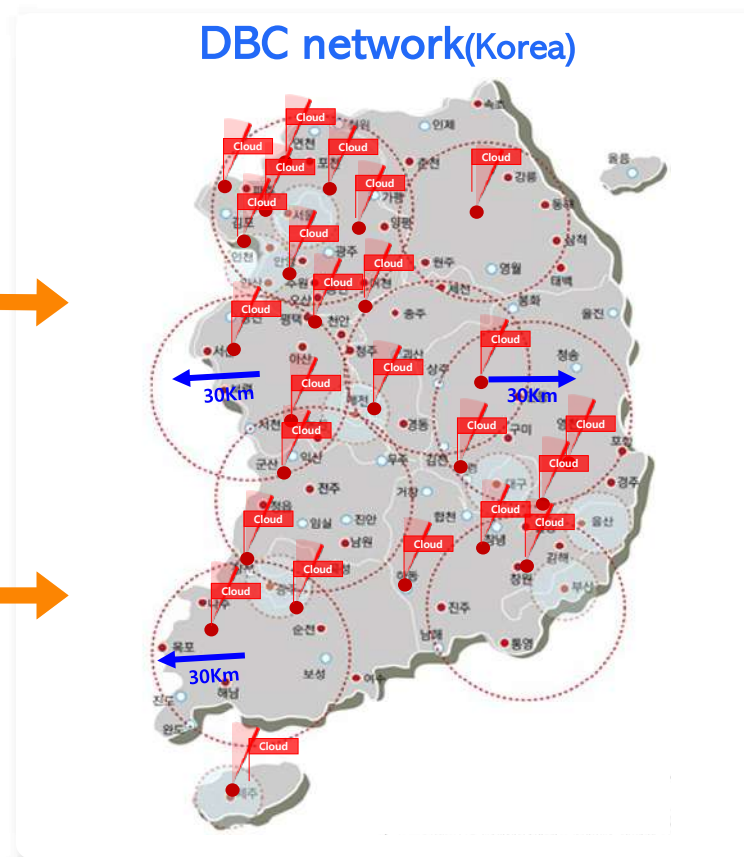- Flexibility to use anywhere, anytime with global GPU retnal platform

DBC Cloud Platform

RTX3060   RTX4060

RTX3070   RTX4070

RTX3080   RTX4080

RTX3090   RTX4090

Cloud-end(edge)configuration
(data distribution,30Km service)

DBC network(Korea)

30Km 30Km

30Km

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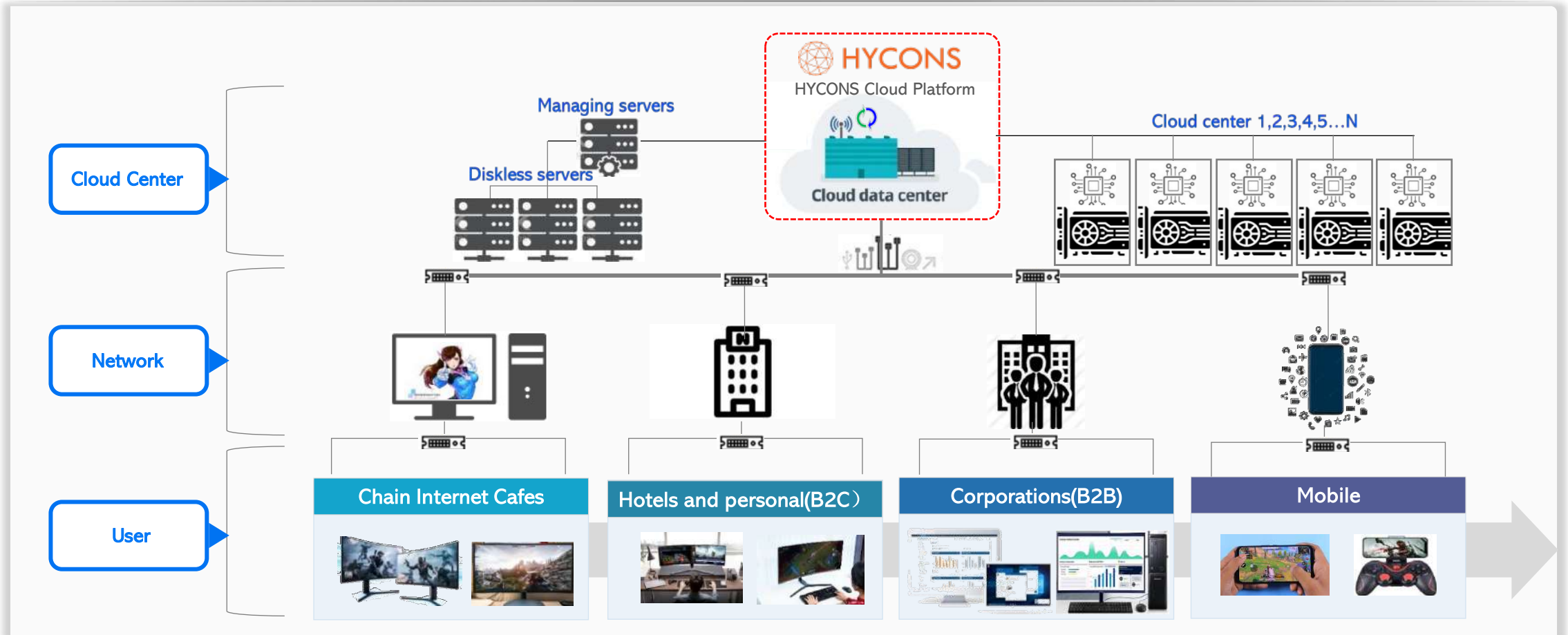## 06 DBC Cloud computing power – service structure

Automated cloud computing for service types such as **B2B and B2C and franchises**

Cloud Center

Network

User

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Cloud data center

Managing servers

Diskless servers

Cloud center 1,2,3,4,5…N

Chain Internet Cafes

Hotels and personal(B2C）

Corporations(B2B)

Mobile

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07 DBC cloud computing power businesses(service advantage 1)

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World-class **high-definition streaming technology** / e-sports level technology and **cost-competitive service**

Automatic transfer of services in case of cloud center failure (power supply, network, Internet, etc.)

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Target customer of cloud service

Chain Internet Cafes(1Gbps)

Hotels, individual(B2C,(B2B)

Mobile

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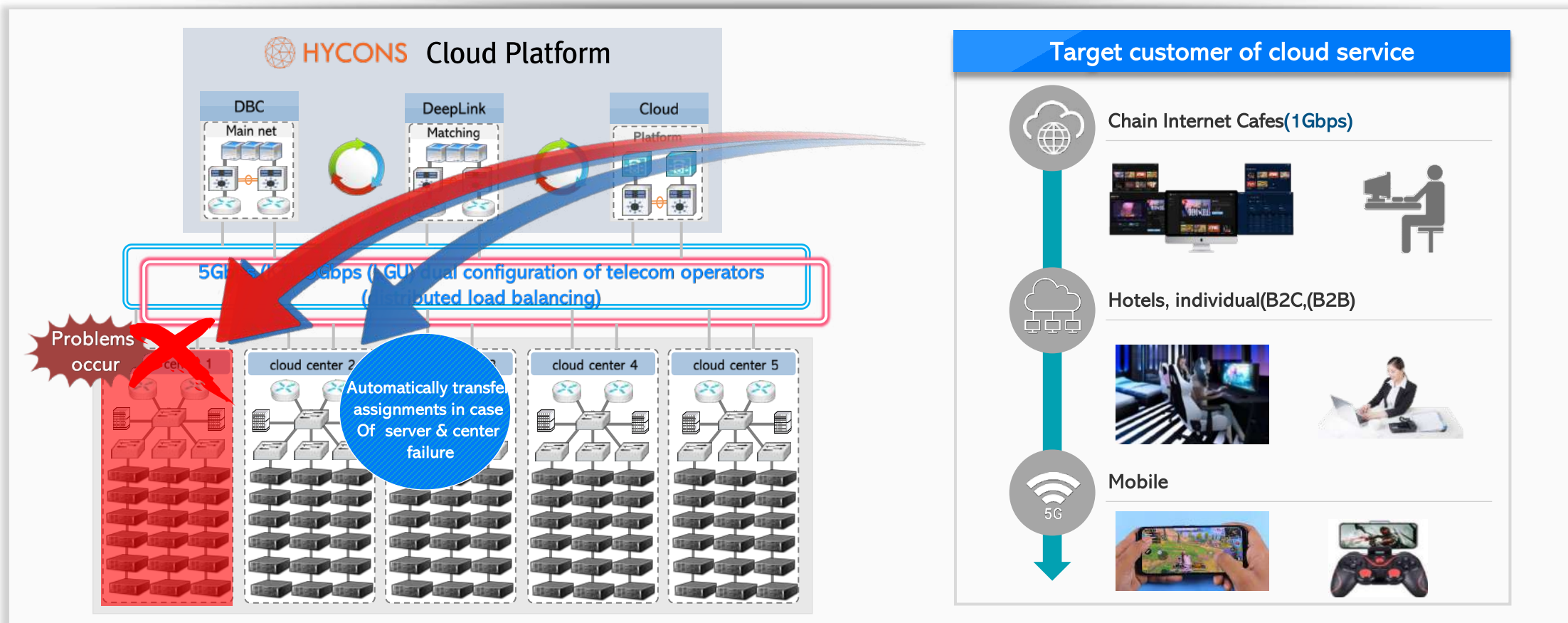
07 DBC cloud computing power businesses(service advantage 2)

Guaranteed excellent compression technology, fast response time, high-definition frame and stable data transmission

DBC Cloud Center

DBC Data center 1

DBC Data Center 2

DBC Data Center 3

DBC Cloud center services and features

1 Lossless compression technology, low cost
- World-class codec technology
- Through 95% NAT, 10Bit transmission
- Minimized network bandwidth (FHD 15-20Mbps)

2 High frame rate, speed and fast response time
- 4K 240Hz frame technology
- LAN delay up to 15ms, packet loss rate up to 5%
- Optimized for High Performance Gaming

3 HD (4K QFHD 3840*2160 transmission)
- Use AI algorithm technology to enhance visual effects when transferring large-capacity data
- Restore the most original color function

4 Reliable data transmission
- Packet loss and overload prevention technology when handling large amounts of data
- Automatic distribution processing technology when packet loss or overload occurs
- Apply streaming media optimization technology to support 5% packet loss and 100ms network delay
- Still supports high frame rate speeds

5 High security
- All data adopts DTLS1.2 encryption technology through AES256

Cloud service target customer

Chain Internet Cafes(1Gbps)
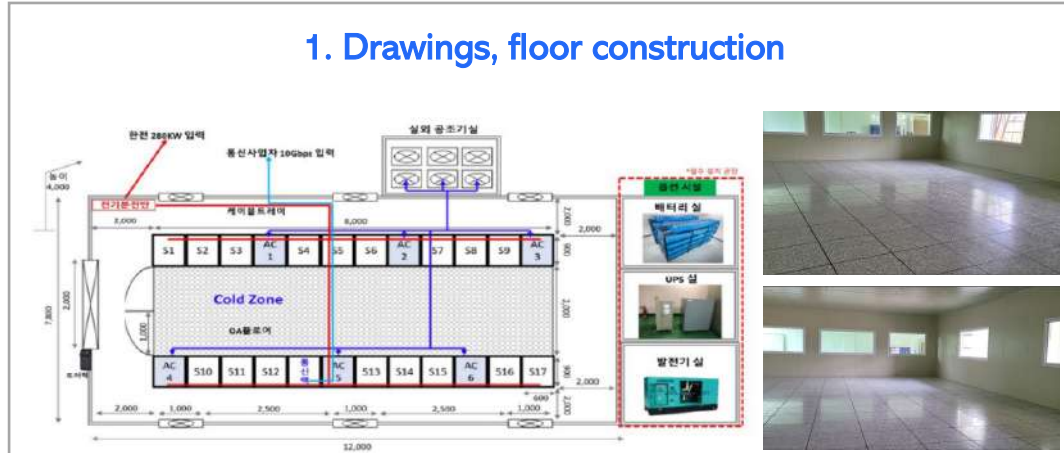
Hotels, indicidual(B2C),(B2B)

Mobile

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08 | DBC Cloud Computing Power - Cloud IDC

Korea DBC Data Center 1 (SERVER 100SET / GPU Card 400EA 2022.06 in operation)
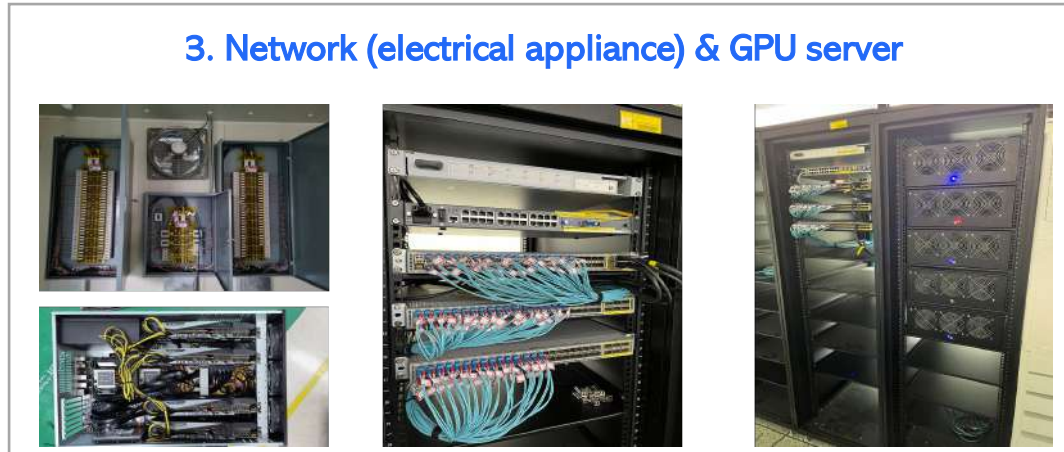
1. Drawings, floor construction

2. Server rack construction

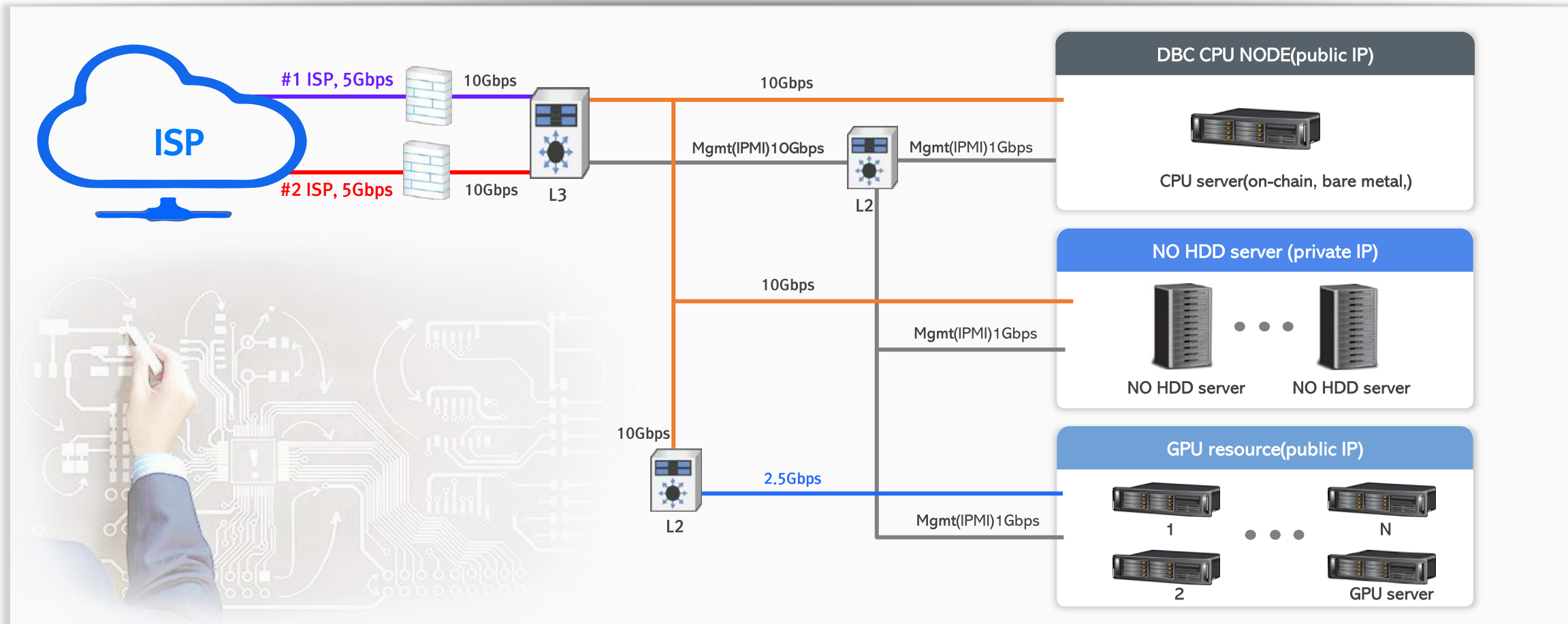### 3. Network (electrical appliance) & GPU server
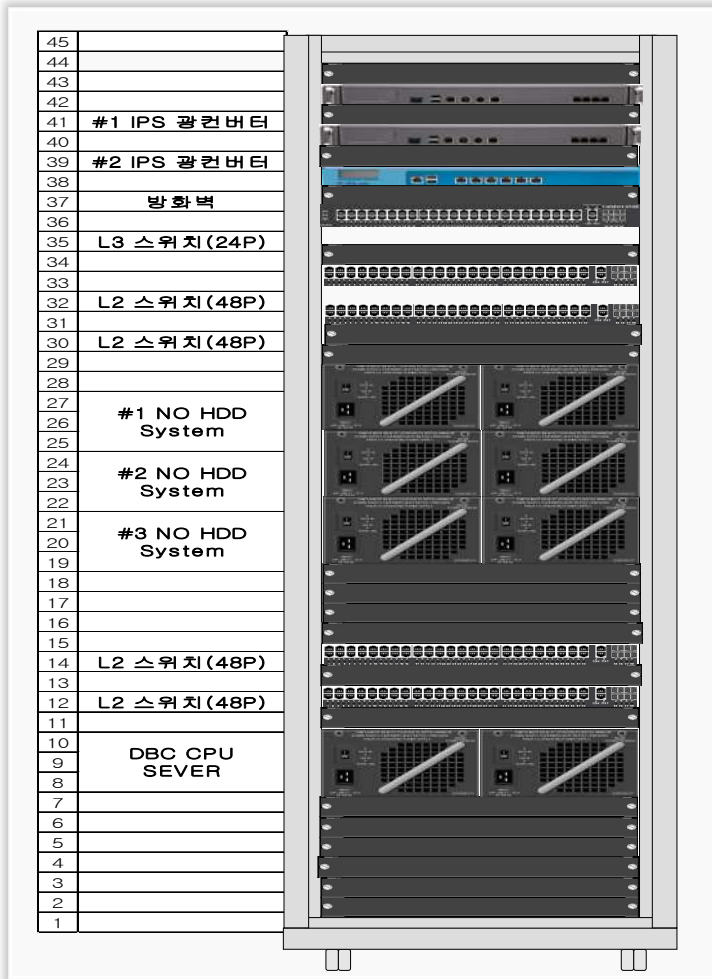

4. Cloud computing power data center

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09 DBC Cloud computing power – IDC schematic diagram

Stable and guaranteed network and hardware configuration

* IDC Recommends T3 level

ISP

#1 ISP, 5Gbps   10Gbps
#2 ISP, 5Gbps   10Gbps   L3

10Gbps

Mgmt(IPMI)10Gbps   Mgmt(IPMI)1Gbps
L2

DBC CPU NODE(public IP)

CPU server(on-chain, bare metal,)

10Gbps

Mgmt(IPMI)1Gbps

NO HDD server (private IP)

NO HDD server   NO HDD server

10Gbps
L2   2.5Gbps

Mgmt(IPMI)1Gbps

GPU resource(public IP)
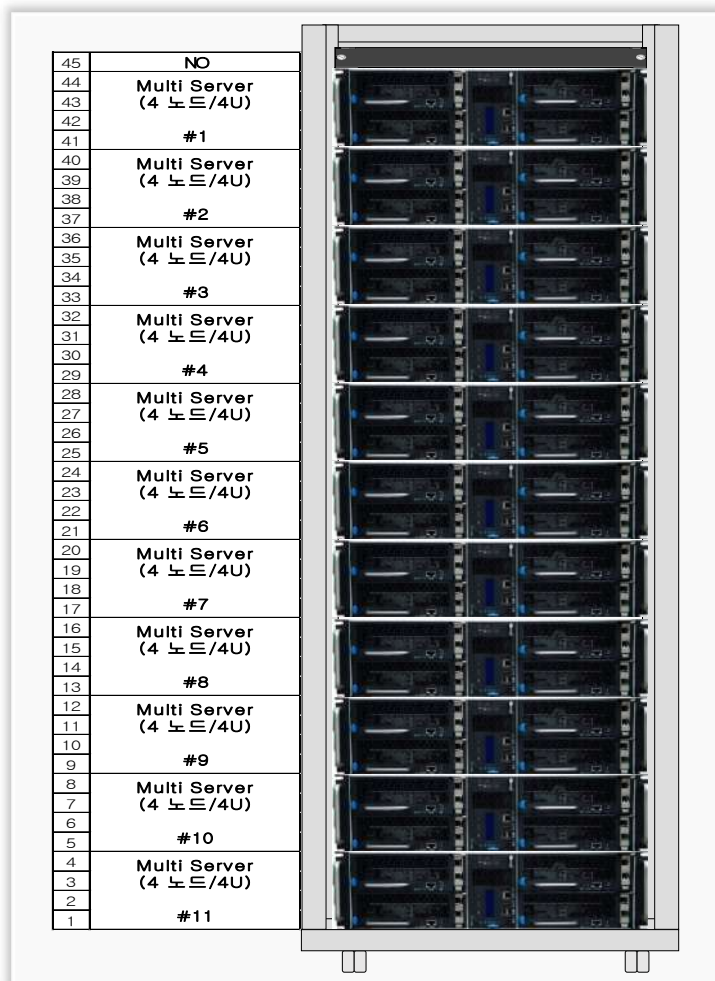
1   N
2   GPU server

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10 DBC Cloud computing power – IDC resource configuration(1)

Network/Diskless System/DBC CPU Server

Allocation	Specification		Main function	Amount	Note
1 cabinet (19″/45U) Internet equipment	Cabinet	size	600mm(width) X 2200mm(height) X 650mm(thick)	1	
	Optical transceiver	for fiber optic cable	#1.#2 Configured separately for each ISP operator (5Gbps x 2)	2	
	Firewall		Firewall&IPS&IDS	1	
	switch	L3	10Gbps 10Gbps SFP 24 API	1	
	switch	L2	10Gbps 48 API (UP 10Gbps/下 10Gbps)	4	
Server	diskless server #1.2.3	CPU	Intel® Core™ i7-11700/k/ kf 16 core 3.6-5 GHz	1	3 sets are required (500 sets as a benchmark)
		System disk	256G M.2/ Nvme	1	
		Data disk	GAME:2TB(Stripe),NO HDD OS IMG:256GB, WriteBack : 256GB	1	
		RAM	32G DDR4	1	
		motherboard		1	
		network card	10 Gbps SFP	1	
		power supply		1	
	DBC CPU server	CPU	Intel® Core™ i9-13900/k/ kf 16核3.1-5.5 GHz	1	need 1 set (DBC mainnet chain)
		System disk	1TB M.2/ Nvme	1	
		Data disk		1	
		RAM	64G DDR4	1	
		motherboard		1	
		network card	10 Gbps SFP	1	
		power supply		1	

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Multi-card server (4 nodes) specifications (compatible with GPU 20xx, 30xx, 40xx series)

Allocation	Specification		Main function	Amount	Notes
1 cabinet (19" /45U)	cabinet	size	600mm(width) X 2200mm(height) X 650mm(thick)	1	9 recommended Power 21.6Kw
	Server number	4 nodes	44 blades system	11	
	GPU number	RTX-3090	1 sheet per 1 blade system	44	
	Total power supply	26.4Kw	2.4Kw (GPU 3090 4 pieces) CRPC module per 1 blade system	4	Power supply Line 2
Multiple server (4nodes/4U) YW3044	blade system (2U)	CPU	Intel® Core™ i9-12900/k/ kf 16core3.1-5.5 GHz	4	
		System disk	one M.2 PCIex4 4.0 NVME API		
		Data disk	one 2.5inch SSD SATA3.0 disk API		
		RAM	DDR4 32G/64G According to the memory type of the motherboard	4	
		motherboard	ITX(170X170mm),network (RJ-45) 2.5Gbps x1, M.2 x1, SATA x1, USB3.0 API x1, USB2.0 API x2	4	
		Network card	1Gbps/2.5Gbps/10Gbps single-port or dual-port network card can be connected externally		
		GPU	RTX-3090 (compatible with 30xx,40xx series),(360x165x70mmx1ea)	4	
	bare metal system	Power supply	AC 220~240VAC.(9.5A,/50~60Hz) CRPS supply device (1600W). 2 for main use (1~2 for backup, optional)	2/4	support hot swap
		cooling system	Each blade system corresponds to each cooling fan attachment	4	
		shell	Standard 4U chassis, blade system standard 2U chassis (4 pieces)	1	
		Management system	Network (RJ-45) 1Gbps, blade system remote VNC management support, support IPMI2.0 (power ON/OFF, power consumption setting, temperature, fault alarm, power consumption measurement, BIOS and Windows remote update, IP change, etc.)	1	management network need to be configured separately

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10 DBC Cloud computing power – IDC resource configuration(3)

45		
44	Multi Server	
43	(6 노드/5U)	
42	#1	
41		

(rack diagram labels)

- Multi Server (6 노드/5U) #1
- Multi Server (6 노드/5U) #2
- Multi Server (6 노드/5U) #3
- Multi Server (6 노드/5U) #4
- Multi Server (6 노드/5U) #5
- Multi Server (6 노드/5U) #6
- Multi Server (6 노드/5U) #7
- Multi Server (6 노드/5U) #8
- Multi Server (6 노드/5U) #9
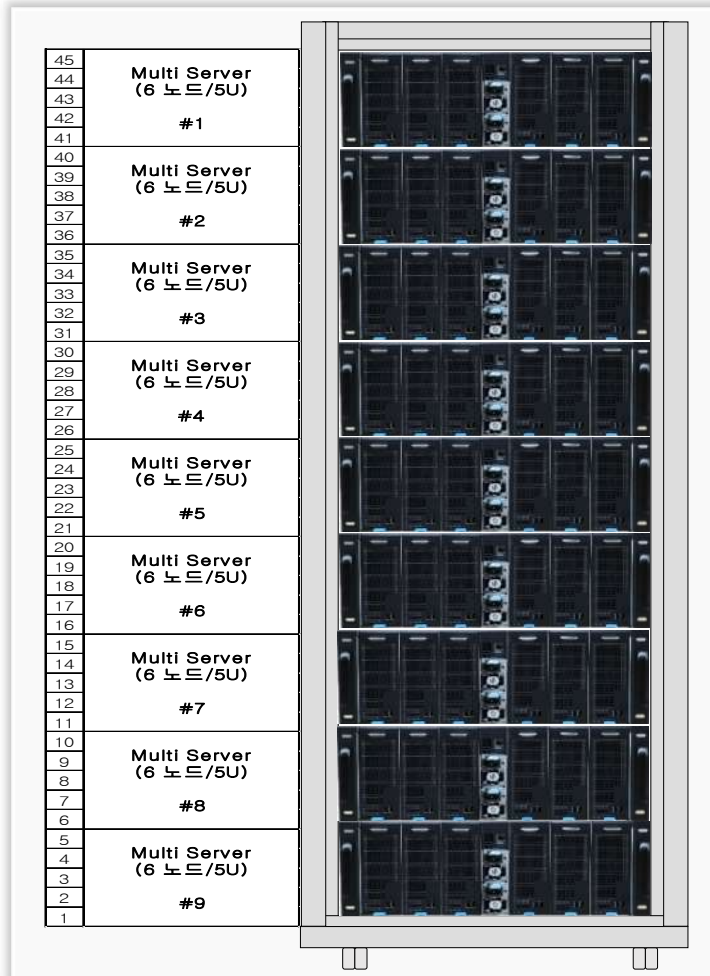
Multi-card server (6 nodes) specifications (compatible with GPU 20xx, 3060, 3070 series)

Allocation	Specification		Main function	Amount	Notes
1 cabinet (19" /45U)	cabinet	size	600mm(width) X 2200mm(height) X 650mm(thick)	1	
	Server number	6 nodes	54 blades system	9	7 recommended Power 16.8Kw
	GPU number	RTX-3060	1 sheet per 1 blade system	54	
	Total power supply	26.4Kw	2.4Kw (GPU 3060 6 pieces) CRPC module per 1 blade system	4	Power supply Line 2
Multiple server (6nodes/5U) YW5066	Blade system (5U)	CPU	Intel® Core™ i9-12900/k/ kf 16 core 3.1-5.5 GHz	6	
		System disk	one M.2 PCIex4 4.0 NVME API		
		Data disk	one 2.5inch SSD SATA3.0 disk API		
		RAM	16G/32G DDR4	6	
		motherboard	M-ATX(240x205mm),network(RJ-45) 2.5Gbps x1, M.2 x1, SATA x2, USB API x2	6	
		Network card	1Gbps/2.5Gbps/10Gbps single-port or dual-port network card can be connected externally		
		GPU	NVIDIA RTX-3060 (compatible with 20xx, 3060, 3070 series), (360 X165X70mm 1 sheet)	6	
	bare metal system	Power supply	AC 220~240VAC. (9.5A,/50~60Hz) CRPS supply device (1300W), 2 for main use (1~2 for backup, optional)	2/4	support hot swap
		cooling system	Each blade system corresponds to each cooling fan attachment	6	
		shell	Non-standard 5U chassis, blade system chassis (6 pieces)	1	
		Management system	Network (RJ-45) 1 Gbps, supports IPMI 1.0 (power on, off, blade reset, etc.)	1	management network need to be configured separately

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11 DBC Cloud Computing Power - Computing Power Resource Specifications

Multi-card server (4 nodes, 4U) product image (compatible with GPU 20xx, 30xx, 40xx series)

Front

Model:YW3044

1. 4U rack server, 445(W)x176(H)x800(D)mm
2. 4hot-swappable computing power nodes
3. Support 1+1, 2+0, 2+2 redundant power supply mode
4. Support IPMI2.0, support IPMI web management page
5. Support KVM over IP (based on VNC)
6. Support remote system upgrade
7. CRPC power module (1300W, 1600W, 2000W) xN (N=1, 2, 3)

back

Inside

1. Support 12th-13th generation Intel CPUs with a maximum TDP of 200W or above
2. Support standard CPU cooler with 2U height
3. Support 350x70x145 mm large graphics card
4. Support one 2.5 "SATA SSD
5. Support 1 NVME SSD
6. Support external network card
7. Support ITX motherboard (170x170mm)

average power usage
1. RTX3060/3070. (600W)
2. RTX3080/3090. (800W)
3. Intel CPU average value. (300W)

Multi-card server (6 nodes, 5U) product picture (compatible with GPU 20xx, 3060, 3070 series)

Front

Model:YW5066

1. 5U rack server, 445(W)x220(H)x770(D)mm
2. 6 hot-swappable computing power nodes
3. Support 1+1, 2+0, 2+2 redundant power supply mode
4. Support IPMI1.0, support IPMI web management page
5. CRPC power module (1300W, 1600W, 2000W)xN(N=2,3,4

Back

Inside

1. Support the 12th-13th generation Intel CPU with a maximum TDP of 150W or less
2. Support standard CPU cooler with 1.5U height
3. Support 350x55x145 mm large graphics card
4. Support one 2.5 "SATA SSD
5. Support 1 NVME SSD
6. Support external network card
7. Support M-ATX (240x205mm) and ITX (170x170mm)

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12 DBC cloud computing power - Internet cafe chain store service configuration

Login Package
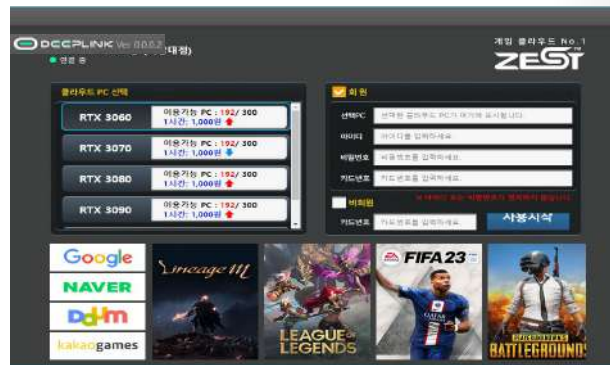
A-TYPE Mini PC

Type	Specification	Main functions
A-TAPE (Mini PC)	configuration	Monitor + Mini PC
	CPU	Intel Alder-Lake N100 (3.4GHz)
	GPU	Intel®UHD显卡(750 MHz)
	MEM	8G (DDR4/3200MHz)
	SDD	128GB
	USB	USB 3.0x2。 USB 2.0x2
	HDMI	HDMI 2.0x2 (4096x2160@60Hz)
	LAN	RJ-45 (2.5Gbps)
	Power	AC/DC 220V 50/60Hz. 12V 2A Adapter

B-TYPE all-in-one

Type	Specification	Main functions
B-TAPE (All-in-one) SG3151D04-3	configuration	Monitor IPS(31.5"),UHD(3840x2160),240Hz),16:9
	performance	1ms(MPRT).GTG 1ms,DCI P3 90%,win10/11, built-in speaker 3Wx2
	CPU	Intel Alder-Lake N100 (3.4GHz)
	GPU	Intel®UHD GPU(750 MHz)
	MEM	8G (DDR4/3200MT/s)
	SDD	128GB
	USB	USB 3.0x2, 2.0x2 Audio Jacksx2,
	HDMI	HDMI 2.0x1 (4096x2160@60Hz)
	LAN	RJ-45 (2.5Gbps), Wi-Fi 2.4G~5GHz,Bluetooth
	Power	AC/DC 220V 50/60Hz.19V/4.5A Adapter

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13 DBC Cloud Business Strategy - Korea

Starting from the **first phase of Internet cafes in 2023,** enter the market in **four phases**

Phase 1
Enter Internet Café market

The Current Situation of Internet Cafes in the Country and the Concentration in the Metropolitan Area

55%
4,522
Seoul

45%
3,765
Province

- 94.5% of Internet cafes across the country have an average daily utilization rate of less than 40%
- 8,287 Internet cafes nationwide / 3,765 Internet cafes in the metropolitan area
- The first goal in 2023. Approximately 50 Internet cafes nationwide including Seoul, Gyeonggi, and Incheon
- Each data center has a scale of 500 to 1,000 to provide computing services
- The goal is to establish 10 IDCs by the first half of 2024 (serving about 80-100 Internet cafes)
- Small-scale establishment of IDC centered in Seoul

Phase 2
Enter hotels market

National Hotel Industry Distribution

휴양콘도미니엄 : 177개 (0.6%)
관광호텔 : 1,353개 (4.6%)
숙박업 기타 : 1,430개 (4.8%)
여인숙업 : 1,729개 (5.8%)
일반호텔 : 2,195개 (7.4%)
숙박업(생활) : 5,166개 (17.4%)
여관업 : 17,669개 (59.5%)

- Fields of use that require cloud services. Hotels (hotel business)
- About 17,700 hotels in China / about 400,000 accommodation rooms. (Based on couple rooms, the cloud PC market is expected to be 800,000 units)
- Serving the national hotel market in 2024
- Expect slightly fewer complaints compared to Internet cafes
- Implementation of national installation services through B2B agents

Phase 3
Enter individual and corporation market

Current status of major shared office tenants

- Shared offices are mainly settled by IT and advertising companies
- Cost reduction effect on PC procurement for start-ups and SMEs
- More and more start-up companies are biased towards practicality, and it is expected that cloud computing services will be favored
- B2C, B2B services through network marketing
- The market size is about 2 million users

Phase 4
Enter mobiles market

The total number of monthly active users of the overall mobile game APPs

2,647만 명
모바일 게임 앱 사용자 성비
52.83% 47.17%

- The domestic mobile game market will reach 5,329.1 billion won in 2020
- Onestore continues to expand its market share with explosive growth
- Top 10 sales and mobile game markets dominated by role-playing
- 26.47 million people play mobile games every month, more than half of them are women
- The total number of users is mostly puzzles/questions and answers, and the time spent is mainly role-playing

14 The Value of Cloud Internet Café Solutions – South Korea

Maximize profit margins for internet cafés with **low cost** and **unlimited scalability**

Continuing electricity price hikes

New GPU Cards Released such as RTX-40XX

Demand for an increase in internet cafe usage fees

Declining internet cafe sales due to various environmental factors

Four major problems of existing Internet cafes

1 Electricity bill burden
- Raise electricity tariffs in accordance with government policies

2 CPU/GPU upgrade burden
- Every time a new GPU release comes with the burden of expensive GPU upgrade purchases

3 Payment method awareness
- In order to change the fixed awareness that payment is limited to less than 1,000 won
- Need a reason to change the status quo

4 Low utilization rate of PCs in Internet cafes
- Due to the pandemic, weather, etc., fewer users go to Internet cafes
- There is a problem with disposing of idle computers

Cloud Internet Cafe Chain Store (Entrepreneurship)
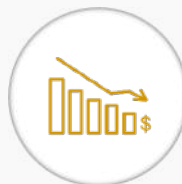
Reduce the burden of PC procurement costs
Start-up costs reduced by up to 61%

Provide high-performance computing power

Ultra-low latency game response speed

Maintenance fees "0 Won"

No desktop management costs

Increase in turnover
Set payment standards according to GPU models
All seats can be set as premium areas

Energy saving and carbon reduction
Save electricity bills and reduce carbon emissions

Pc upgrade fee "0 Won"

CPU/GPU upgrades are completed in the cloud center

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Cloud Internet Cafes Values

Reduce start-up costs and maintenance costs, without additional upgrade costs, providing the best economic benefits for Internet cafe owners

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