High-Speed File Transmission Solutions for Enterprises

Transmission around the world with the lightening-like speed

Raysync

www.raysync.io

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01

About Raysync

- High-speed and stable transmission: transmission speed is hundreds of times faster than FTP and HTTP, and transmission is not affected by network conditions.
- Cross-border transmission: file transmission is not affected by transmission distance; long-distance transmission can also guarantee ultra-high-speed transmission.
- Large file transmission: Raysync supports the high-speed transmission of the large files at TB level, which greatly reduces the transmission time.

Fields of Application

Film production and distribution

Government agencies and schools

IT Internet enterprises

Automobile manufacturing industry

Media & TV station

Bioscience and gene science

New energy industry

Audio and video processing

Legal and electronic data files

Banking and financial industry

02

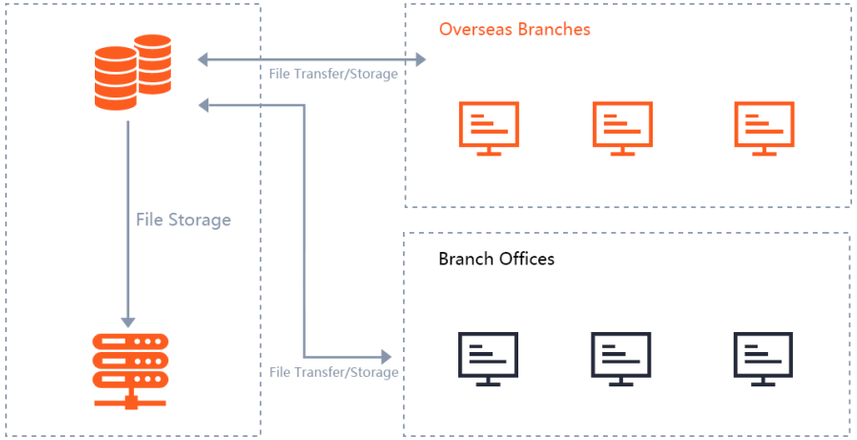
Present Situation of Enterprise File Transmission

- Slow transmission speed: in the process of large file transmission, there are some transmission problems such as low transmission speed and high latency.
- Security defects: FTP transmission is used, too many transmission ports are opened, and the firewall is attacked by hackers and viruses.
- Lack of stability: large files can't be transmitted completely, and packet loss easily occurs during transmission, which can't guarantee data integrity.

Present Situation of Enterprise File Transmission

Low Bandwidth Utilization

Low bandwidth utilization and slow uploading and downloading speed can reduce the work efficiency of enterprises.



High Latency and Packet Loss Rate

High latency, severe packet loss, and low rate when transmitting files across regions.

Starting location	Destination	Network bandwidth	FTP	Bandwidth utilization
Tokyo, Japan	Singapore	200Mbps	3.8Mbps	1.9%
San Francisco, U.S.	Singapore	100Mbps	2.2 Mbps	2.2%
Paris, France	Singapore	100Mbps	2.4Mbps	2.4%
Mumbai, India	Singapore	50Mbps	0.9Mbps	1.8%

Transmission security can not be guaranteed

- File data error
- Hard disk lost
- Information leakage
- File loss

03

Functional Characteristics of Raysync

High-speed transmission

Massive small files transmission

Rapid deployment

High data security

Easy to integrate

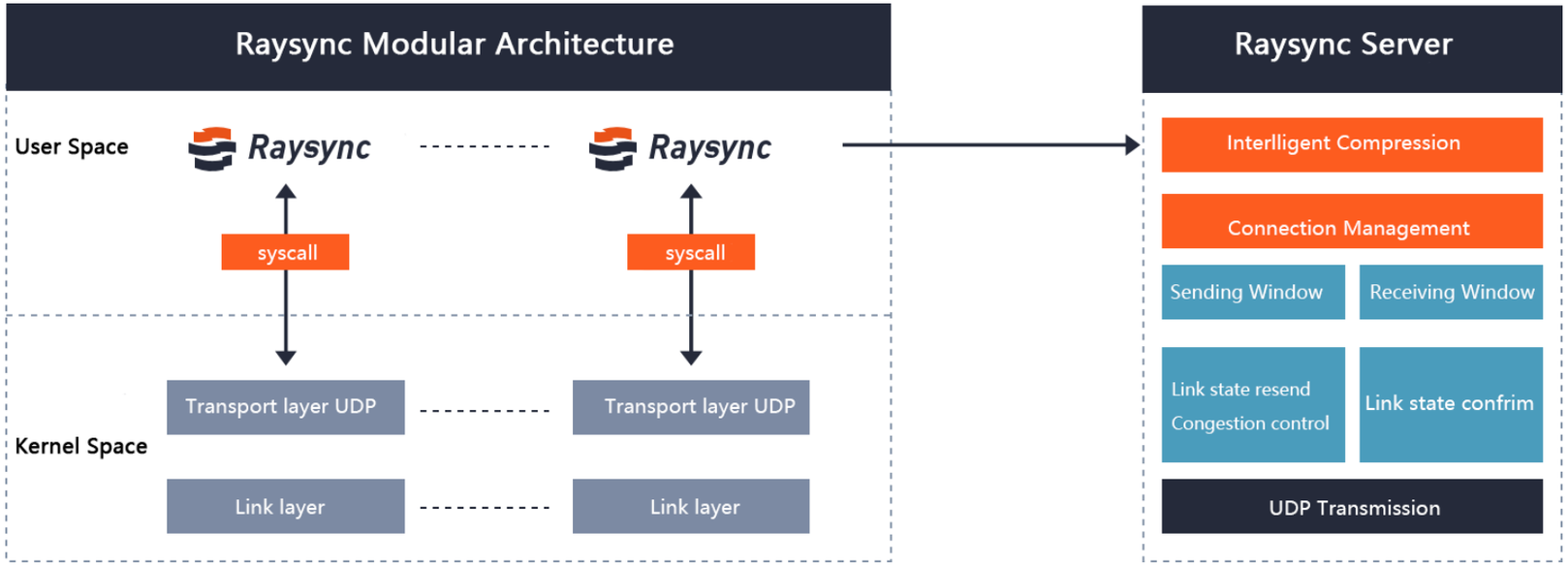
Stable and reliable

Brand new transmission protocol and breakthrough of speed limit

With the explosive growth of unstructured data, the rapid and reliable transmission of large amounts of digital information on a global scale has become a key factor for business success in the transmission industry, data transmission involves a wide range of industries, including digital media, entertainment, and genomic sequence, etc..

Enterprise teams need to collaborate remotely across the world for terabytes of data file distribution, sharing, and exchange, which require that data can be transmitted globally at a high speed.

Raysync's UDP optimization transmission technology is an innovative software that eliminates the fundamental shortcomings of traditional TCP-based file transmission technologies such as FTP and HTTP. Therefore, the transmission speed of Raysync is hundreds of times faster than FTP/HTTP, saving transmission time, no limits of file size, transmission distance or network condition, including through satellite, wireless and exiting long-distance and unreliable intercontinental links transmission.



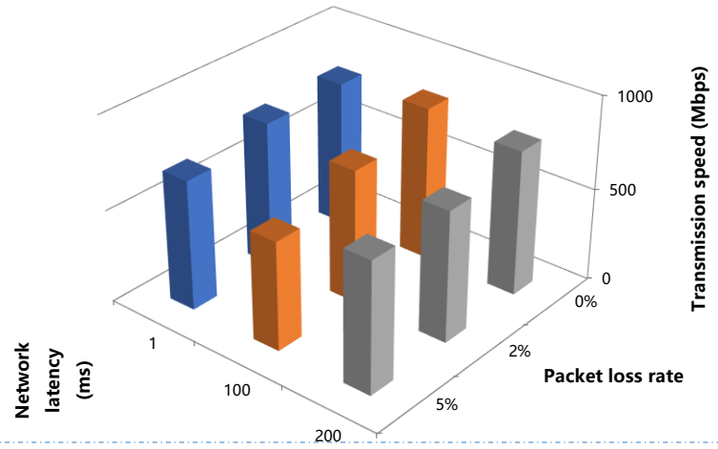
Compared with a well-known international transmission acceleration software

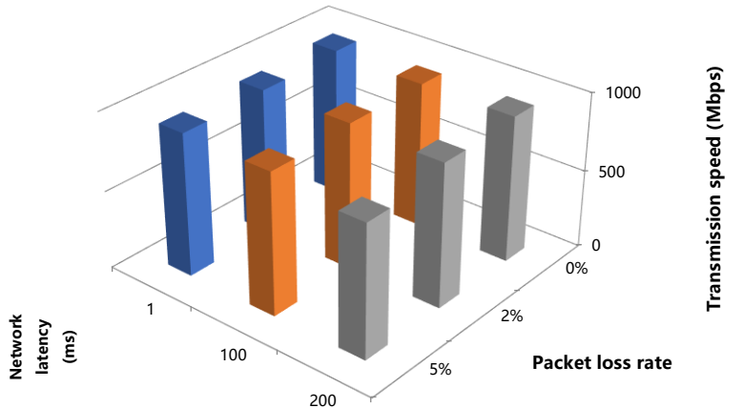
Test environment: server host is in Singapore AWS Cloud Linux environment, Centos7.4 system; client host is in Singapore AWS Cloud Window environment, WIN2008 R2 system; both internal network bandwidths are 1Gbps. Products are installed on the same server host and client host respectively.

Upload comparison

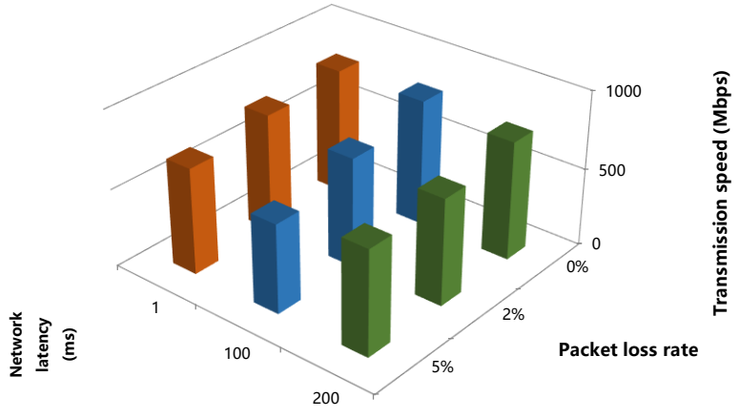
Download comparison

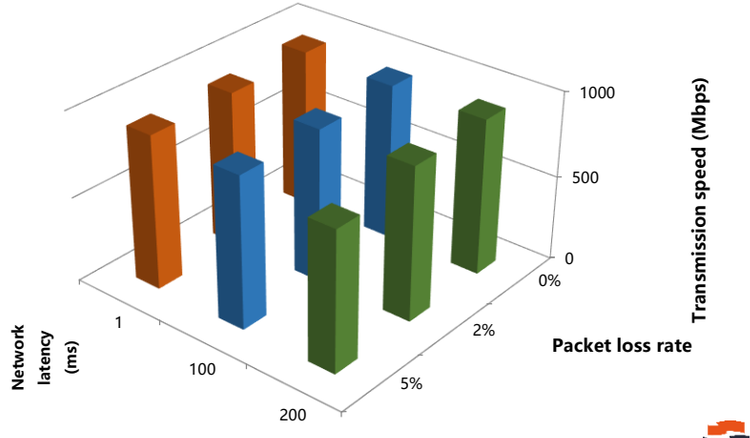
A well-known international transmission acceleration software





Raysync



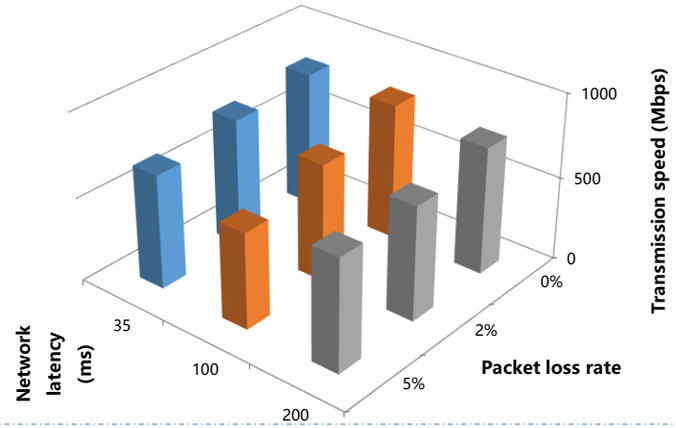


Compared with FTP transmission

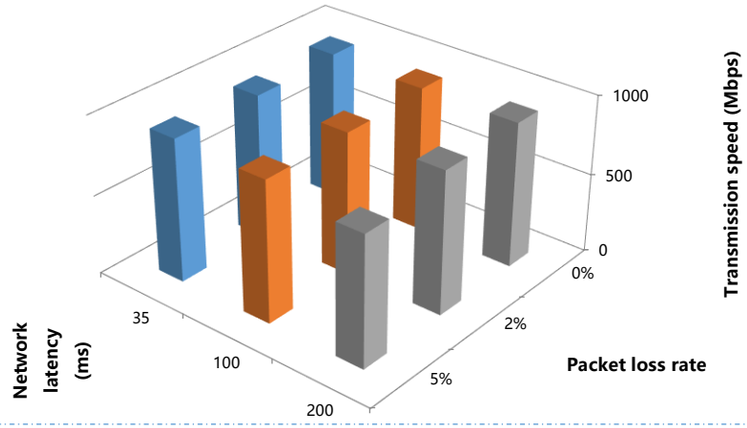
Test environment: server host is in Singapore AWS Cloud Linux environment, Centos7.4 system; client host is in Singapore AWS Cloud Window environment, WIN2008 R2 system; both internal network bandwidths are 1Gbps. Products are installed on the same server host and client host respectively.

Raysync

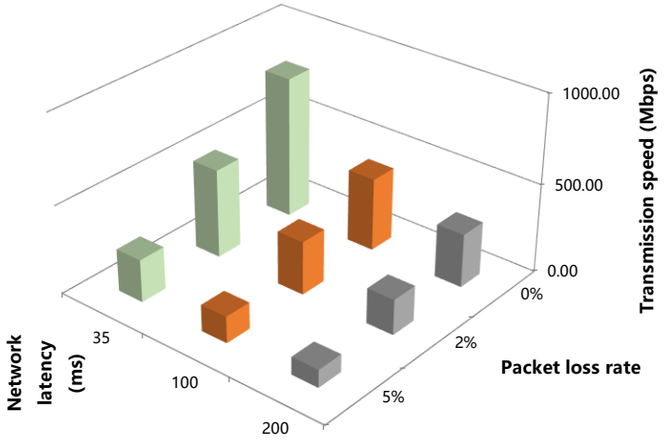
Upload comparison

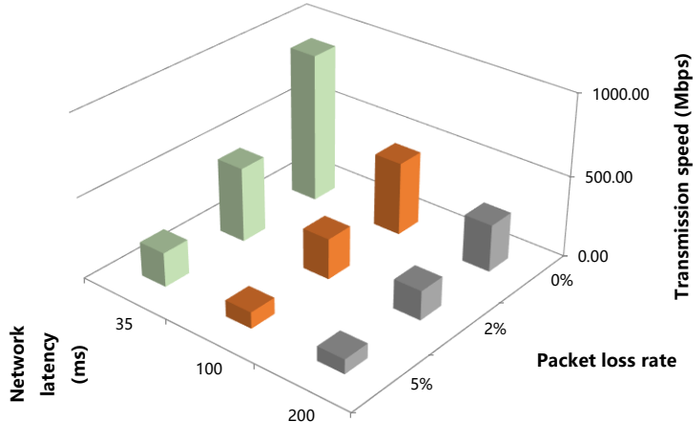


Download comparison



FTP





Raysync Transmission

High-speed transmission

Transmission speed comparison

The actual rate of file transmission of Raysync Transmission in the cross-border transmission environment.

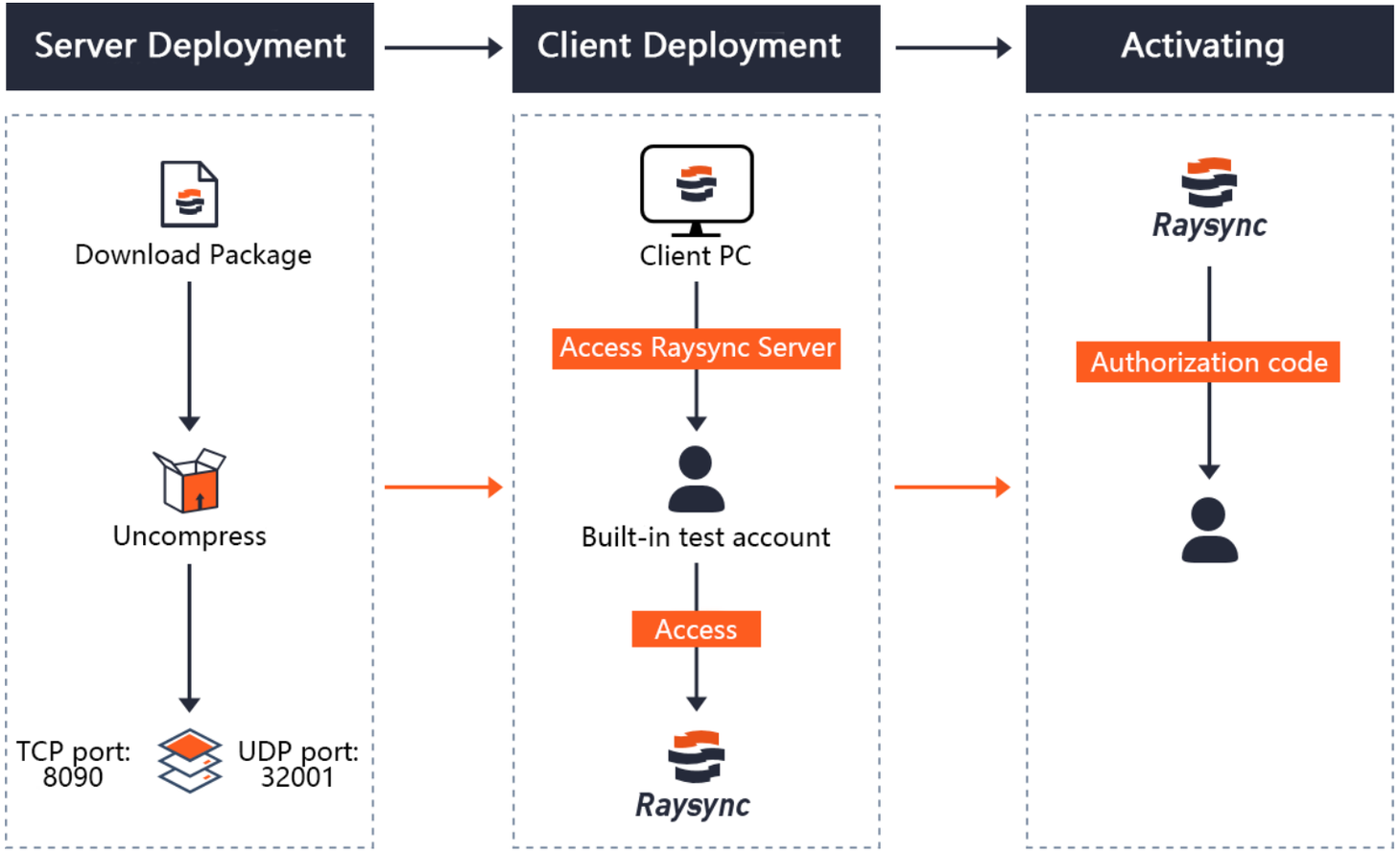
Massive small files can be transmitted at a very fast speed

Small file transmission based on Raysync, transmitted from Singapore to the United States, is faster than the transmission between two machines in the same area within the company.

(SSD)	Upload	Download
Transnational transmission speed of small files with Raysync software	4981 / sec	5293 / sec
Copying files in the same area	1532 / sec	1486 / sec

Region	Place transmission is initiated	Transmission destination	Latency (ms)	Packet loss rate(%)	FTP transfer speed (Mbps)	Raysync transmission speed (Mbps)
Domestic	Kuala Lumpur	Singapore	50~60	0.1%~0.5% (within the same operator)	20~40	98~100
Overseas	Domestic	Asia - Japan	60~80	1%~5%	5	90~95
	Domestic	Asia - India	120~200	3~10%	1.8	85~95
	Domestic	West Coast of North America - Los Angeles	120~150	1~10%	2.2	85~95
	Domestic	East Coast of North America - New York	180~250	3~15%	1.2	80~90
	Domestic	Europe - Frankfurt, Germany	150~300	3~15%	0.8	75~85
	Domestic	Southern Hemisphere - Sydney, Australia	200~350	5~20%	Almost impossible to transmit	65~75
	Domestic	Southern Hemisphere - South America, St. Paulo,Brazil	200~400	5~20%	Almost impossible to transmit	65~75

30 minutes to complete deployment



1. Server deployment: download the Raysync software package, uncompress and start on the server, open the firewall TCP port 8090 and UDP port 32001.

2. Client deployment: access Raysync server on the user's computer webpage, download and install the Raysync client, use the built-in test user to access the Raysync service.

3. Activating authorization: apply for authorization code to Raysync Technical Support.

Functional characteristics of Sync Folder

Full automatic update

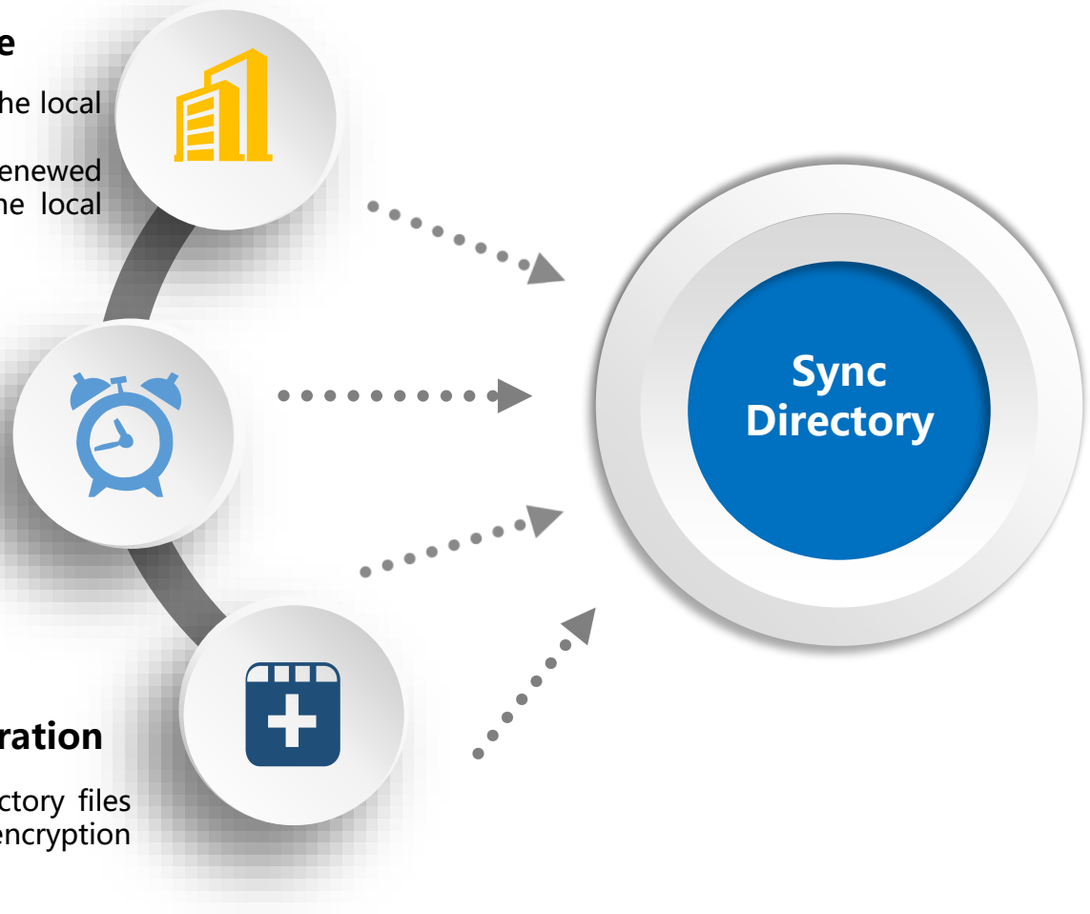
- The local directory is synchronized to the Raysync server; the content of the local directory file is automatically uploaded to the Raysync server.
- The Raysync server directory is synchronized to the local directory; the renewed directory content of Raysync server is automatically downloaded to the local directory.

User-defined time

- Users can set the synchronization time, when setting synchronization directory, users can define the synchronization time interval, after the defined time is reached, the synchronization directory automatically uploads and downloads the update operation.

Security configuration

- Provide "Enable Encryption Transmission" operation setting for the directory files that need to be synchronized; enable the encryption setting to conduct encryption transmission for the contents that need to be synchronized.



Security protection of data

TLS algorithm encryption

AES-256 financial level encryption strength to protect the privacy security of users.

FTPS encryption technology

Add SSL security features for FTP protocol and data channel.

Firewall friendly

The Raysync protocol only needs to open a UDP port to complete the communication, which is more secure compared with the lots of firewall network opening ports.

Encryption certificate configuration

Support for configuring confidential certificates to make service access more secure.

Security mechanism

- Regularly conduct CVE vulnerability risk library scanning to resolve risky code vulnerabilities.
- Use valgrind/Purify for internal storage leak troubleshooting during development.
- High-performance SSL VPN encryption is adopted and, provides multiple scenarios users security access services.

Security protection of accounts

- It adopts two-factor strong authentication system, supports USBKey, terminal hardware ID binding and other forms of password authentication.
- The passwords saved by users in the data are encrypted based on the AES-256+ random salt high-intensity encryption algorithm, even the developer cannot recover the source password through the saved ciphertext.

High integration

1) User system integration

- Support LDAP/AD domain;
- Support email system;
- Support customized docking with our customers' existing user systems.

2) Storage system

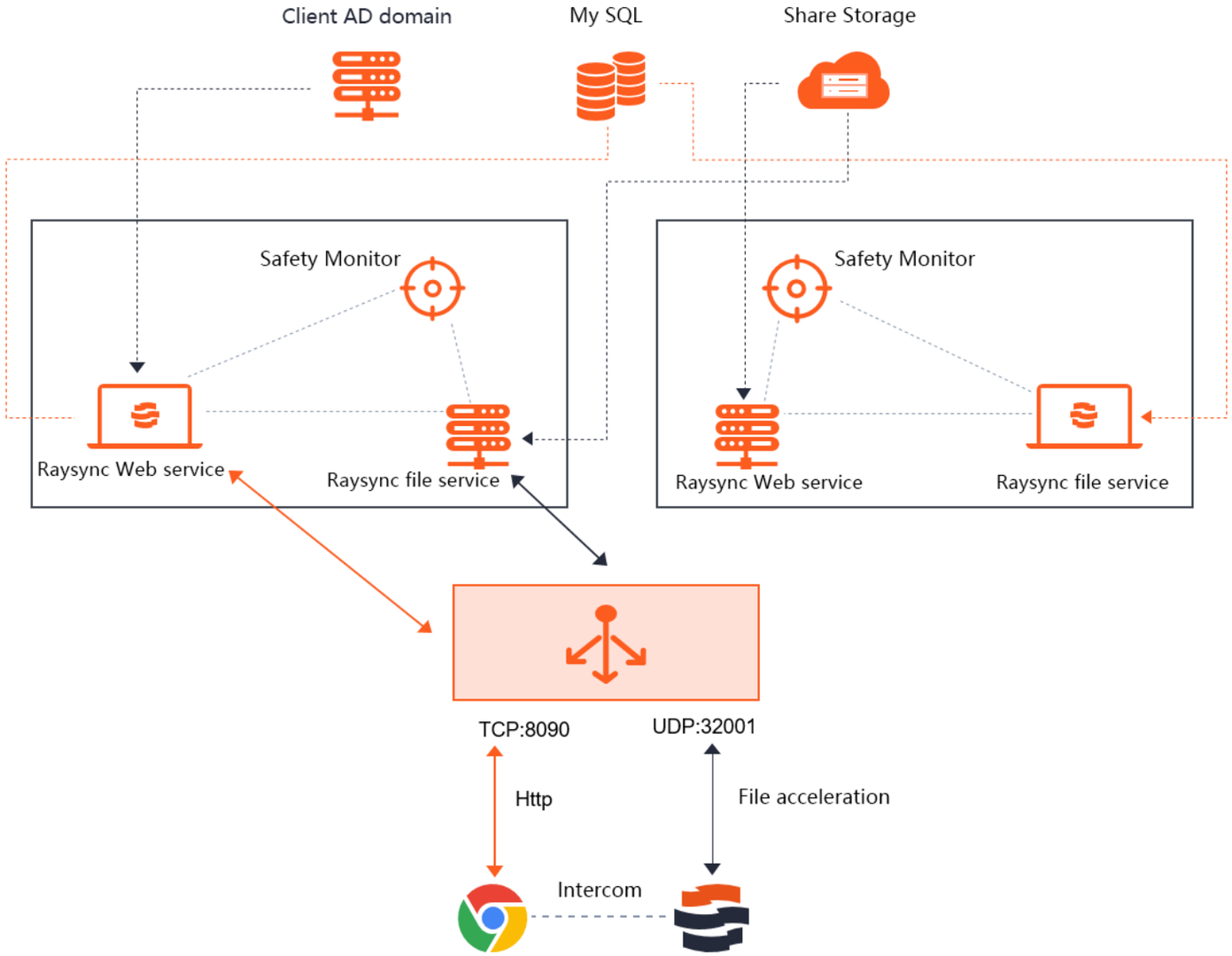
- Support for file systems (local file system and NAS network file system);
- Support for object storage.

3) Transmission capability integration

- Support for command line program integration;
- Support SDK program integration;
- Support network proxy mode integration.

4) Firewall integration

- Open 5 TCP port and 1 UDP port.



Multi-platform support and high performance indicator

Support systems

Windows Server

Linux

Performance indicator

1) The transport connection between a single client and server supports 1Gbps.
2) A single server supports 10Gbps.
3) With load balancing, it can support up to 10Gbps.

04

Industry Solutions

Raysync

Industry Solutions

Film and television production industry

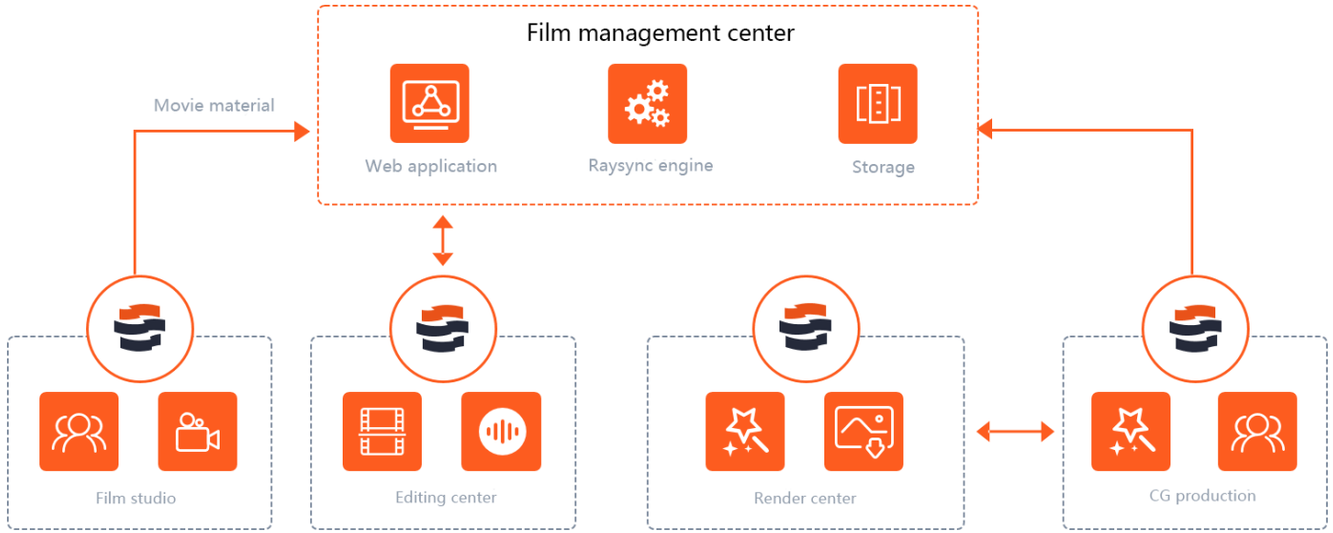
With the continuous development of film and television production technology, the quality of 2K, 4K and 8K materials has been gradually popularized. The huge material data of film and television companies needs to be transmitted, shared and managed efficiently, thus improving the overall cooperation efficiency.

Business challenges:

1. The transmission period of film and television materials is long, which can affect the efficiency of production of the industry.
2. The transmission stability is low, and the transmission of the material is easy to make mistakes.
3. Film and television production teams have a wide distribution and it is difficult for them to collaborate efficiently.
4. The materials need to be highly confidential, and the data security requirements of film and television projects are high.

Solutions:

- According to the needs of the film and television production industry, the film and television production industry solution based on ultra-high-speed transmission protocol Raysync Proxy is formulated to easily cope with the high-speed transmission of TB-level large files and massive small files.
- The whole transmission process is encrypted by SSL to ensure the transmission safety of production data, and specific operations such as the user-defined setting of use times, validity period, and use time are supported to ensure the safety of production data outgoing.
- Through the content management system, more data can be uniformly stored and managed, and massive business production and operation data is no longer a problem.
- Integrate the system with existing enterprise applications efficiently, accumulate complete data sources for the use of knowledge, centrally store and manage enterprise unstructured data and structured data, and conduct compliance and effective control.



Industry Solutions

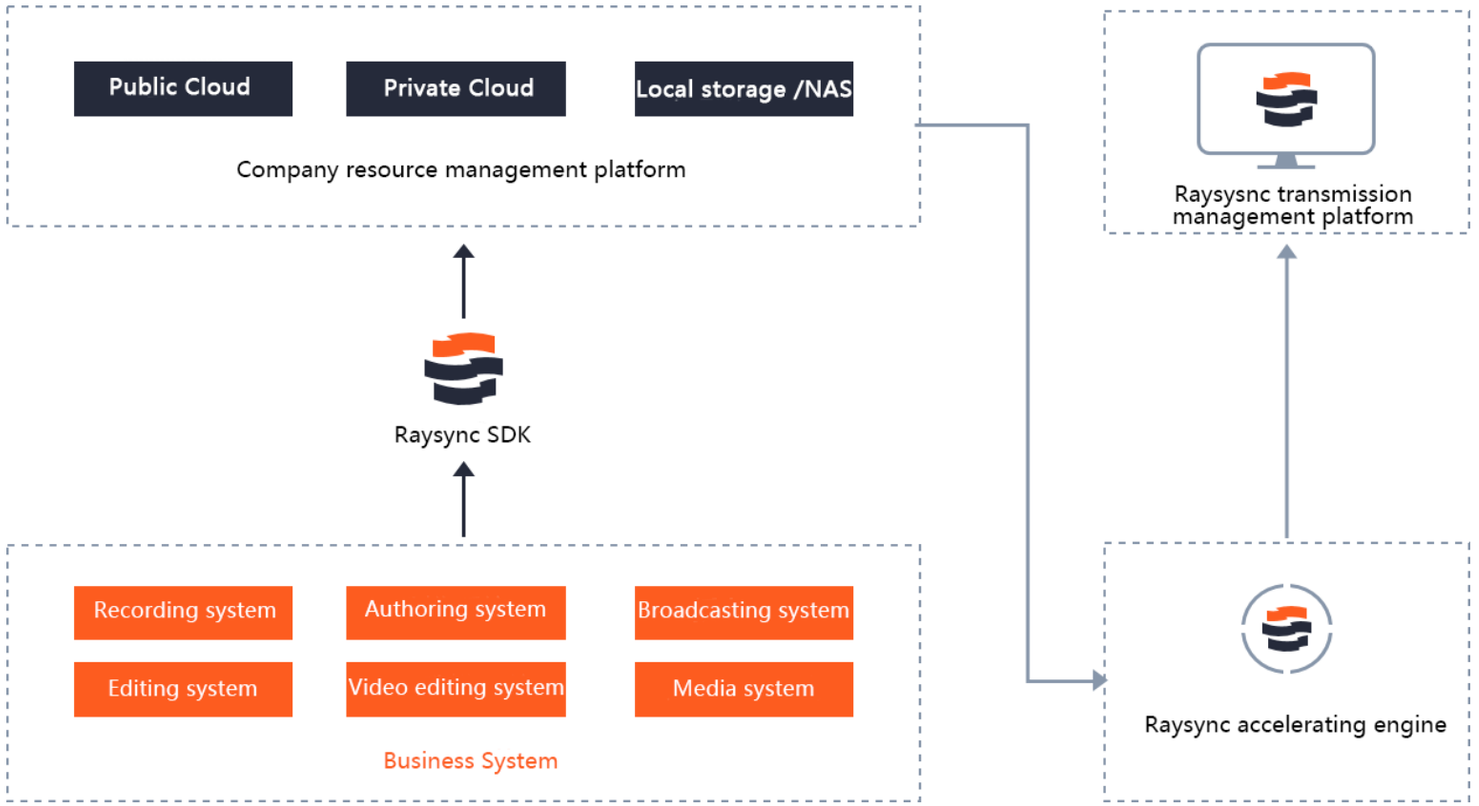
The media industry pays attention to the production, processing and dissemination of information. A large number of images, audio and texts need to ensure timely communication within the enterprise-type media organization, and realize secure and reliable content exchange and sharing between the media and external organizations.

Business challenges:

1. Latency transmission, media information cannot be broadcast in real time.
2. The content resources are too scattered, as a result, the communication is not in time.
3. Require a higher information security level to prevent leakage.

Solutions:

- In response to the needs of the media production industry, Raysync used a high-safety Raysync Proxy transmission protocol to ensure information security and real-time communication of media contents.
- Ensured timely communication between media organizations, and head office and overseas branches, and improved safety.



Industry solutions

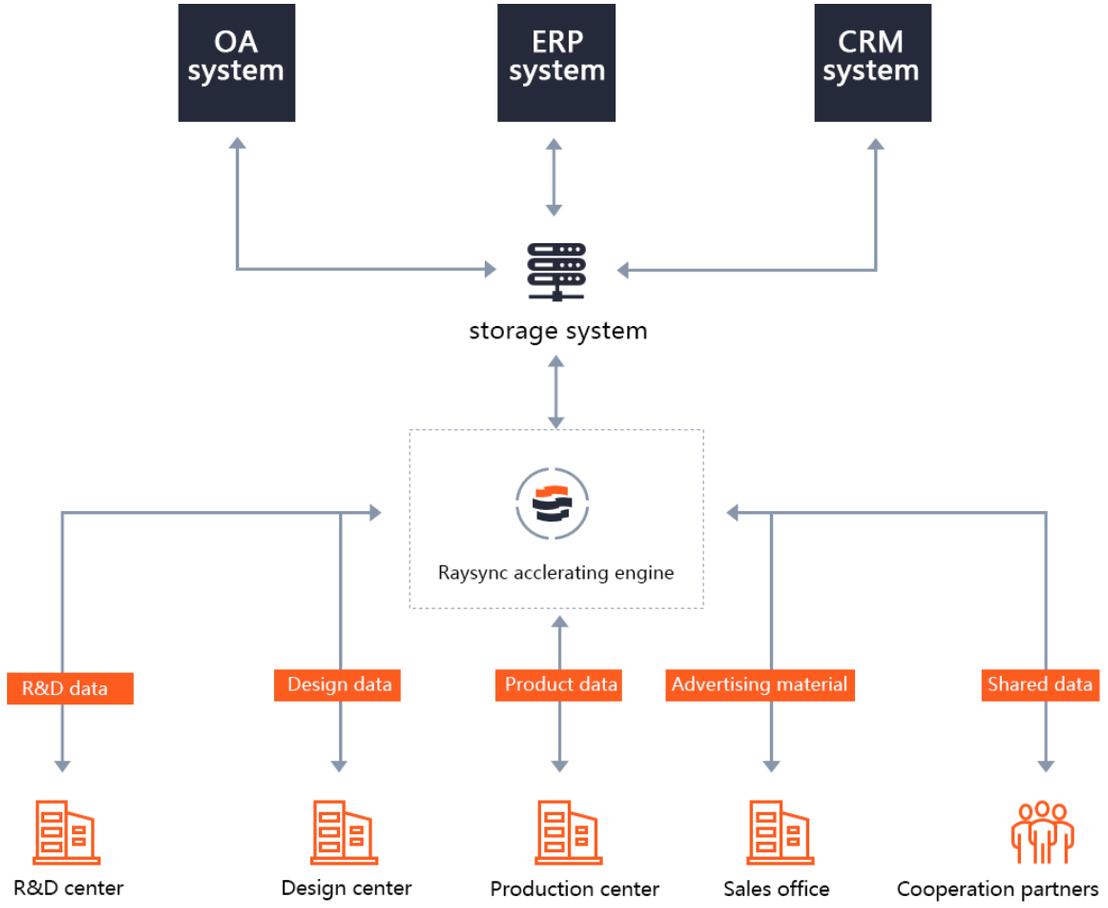
The manufacturing industry chain is long and complex, and the business processes from R&D, design, procurement, production, inventory, sales, after-sales and other links all involve the needs of efficient information transmission, information security, maintenance and management.

Business challenges:

1. The huge data transmission is slow, and the transnational business is blocked.
2. The business process is complex, which affects the efficiency of production collaboration.
3. A large number of R&D design documents lack safety management.

Solutions:

- According to the demand of the manufacturing industry, Raysync adopts the Raysync Proxy transmission protocol with high safety factors, relying on the technologies like breakpoint resume, multiple verifications, and automatic error retransmission to ensure transmission speed and quality, and realize data circulation and information sharing between manufacturing and business partners.
- The financial AES-256+SSL encryption technology ensures worry-free transmission of production data, and supports specific operations such as the user-defined setting of use times, validity period, and use the time to ensure the safety of production materials.
- Through the content management system, more data can be uniformly stored and managed, and massive business production and operation data is no longer a problem.



Industry Solutions

Publishing industry

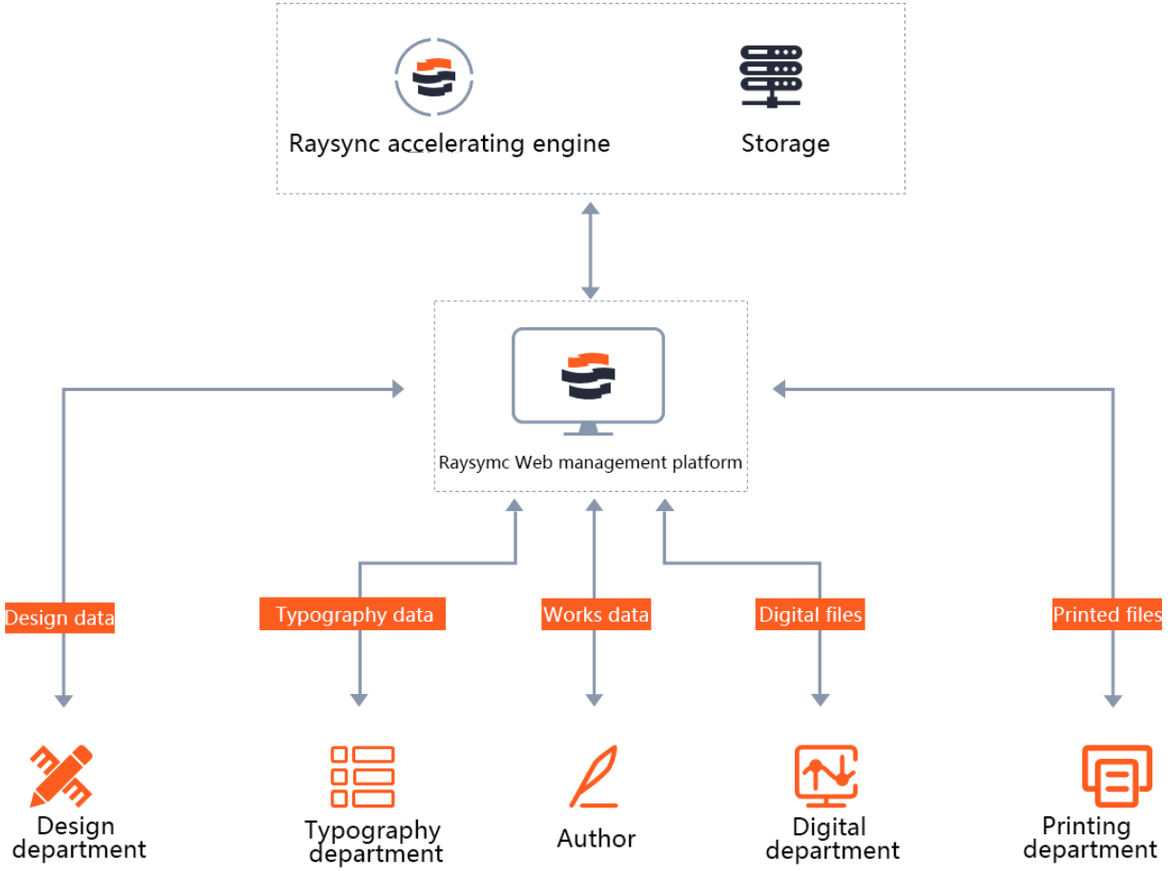
Massive manuscript resources and the time to market of books are shortened, so it is very important to improve the internal allocation efficiency of manuscript transmission, content distribution and real-time printing.

Business challenges:

1. The publishing process involves many people, and it is difficult to work together.
2. The business system is complex, and it is difficult to realize integrated and automated management.
3. The transmission reliability is poor, and the accuracy and security of the content cannot be guaranteed.

Solutions:

- Raysync intelligent transmission technology improves transmission efficiency by 100 times and realizes the efficient circulation of manuscripts.
- Multiple verifications, breakpoint resumes, and automatic retransmission of errors guarantee that the manuscript is 100% correct.
- The financial AES-256+SSL encryption scheme ensures that the manuscript content will not be stolen or leaked.
- Support deep integration into business systems, and help the publishing industry achieve integrated and automated management.




HUAWEI


Great Wall


BGI


GOODiX


FANTAWILD


OLM, Inc. OLM Digital, Inc.


TenJOY


finewave


国家 超级计算广州中心
NATIONAL SUPERCOMPUTING CENTER IN GUANGZHOU


vivo


4D BRAIN


FOX
renderfarm

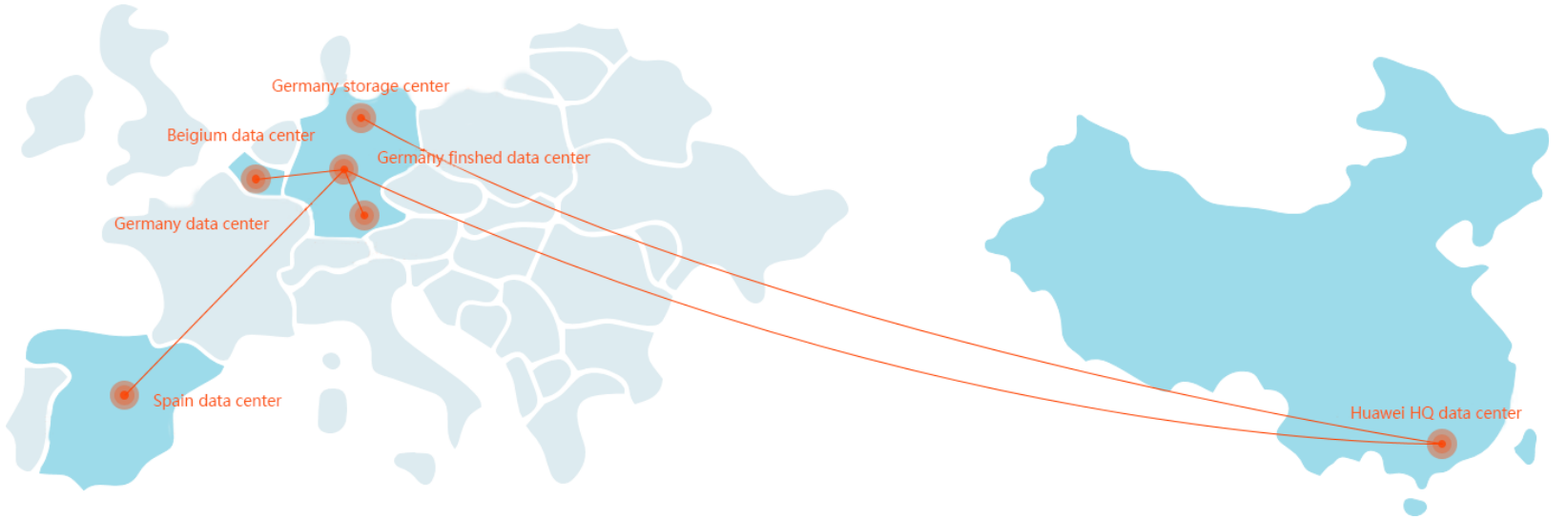
Huawei mobile phone

Customer requirement:

ChinaSoft International, Huawei's partner in Shenzhen, needs to download videos from the German source video storage center of Huawei, and transcode and re-process the videos, and then transmit the completed files to the German finished video storage center.

Solution:

The Raysync server was deployed in the German finished video storage center, and the Raysync webpage clients were deployed in the ChinaSoft International Shenzhen center to accelerate the transnational transmission through the transmission protocol independently developed by Raysync.



"Raysync has saved a lot of time for the transmission of our project. The services of its technical teams are also timely, its responses are very fast, adjustments can be made quickly if need, its team follow-up efficiency is also very high, and the overall cooperation is very good. I hope that it can provide more stable technical support in future cooperation and continue to support our project transmission. "

--- Huawei mobile phone

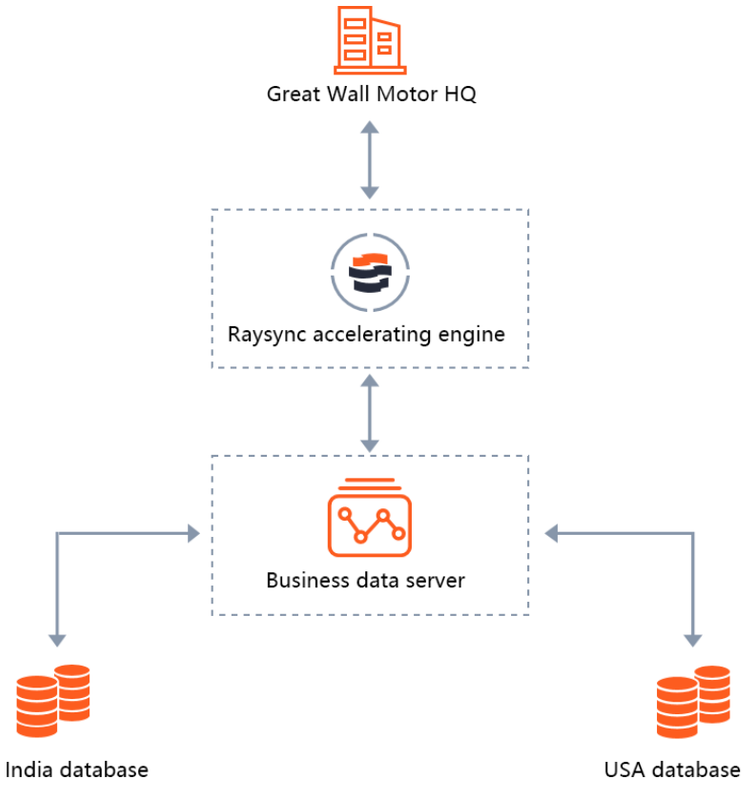
Great Wall Motor

Customer requirement:

The scope of business of Great Wall Motor spans the whole world. The head office of Great Wall Motor often needs to transmit a large amount of business analysis data to multinational branches. The long latency in transnational file transmission increases the direct communication time cost of head office and branches.

Solution:

Raysync deployed a Raysync transmission engine at the Baoding head office of Great Wall Motor Co., Ltd. to achieve multi-point transnational transmission, helping Great Wall Motor transmit business analysis data at a very high speed between Baoding head office and India or the United States branches.



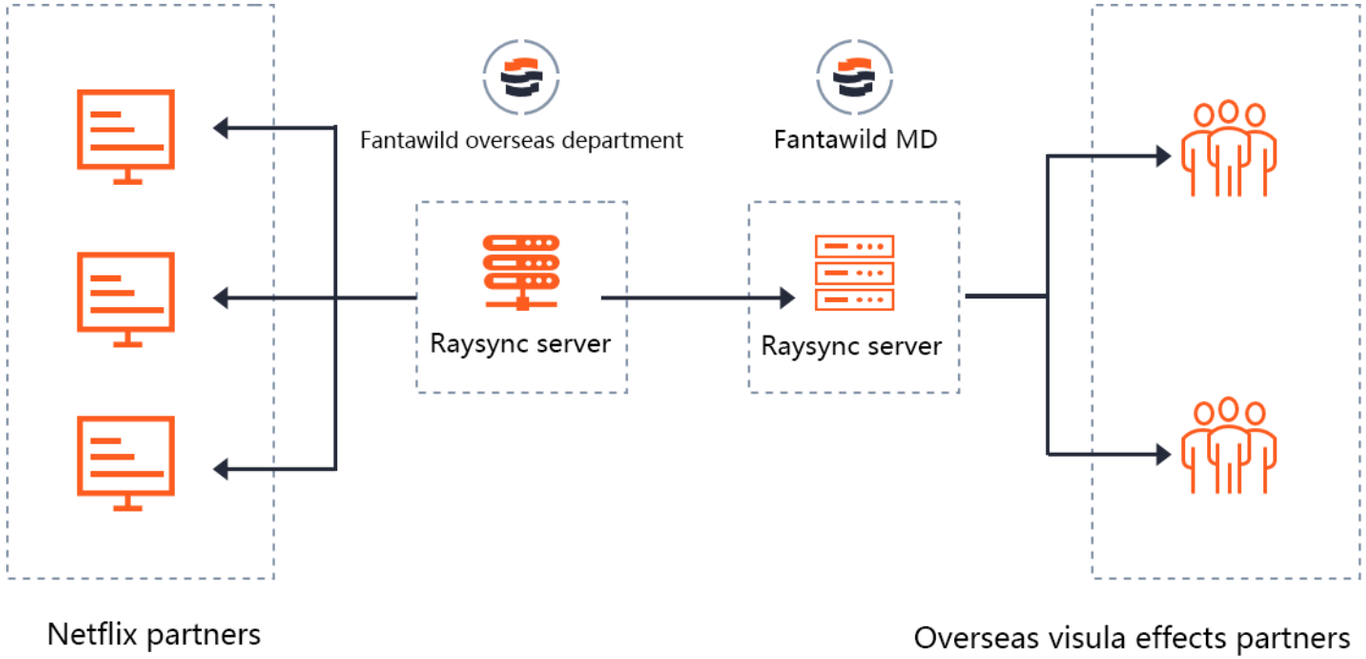
Huaqiang Fantawild

Customer requirement:

The special film system independently developed by Huaqiang Fantawild is exported to more than 40 countries and regions such as the United States, Canada, Italy, etc. Huaqiang Fantawild needs to realize the exchange of video materials between its Animation Production Department and the outsourcers, and the Distribution Department of Huaqiang Fantawild needs to distribute the finished products related to the Boonie Bears to the content providers around the world.

Solution:

In response to the needs of Huaqiang Fantawild project: multinational collaborative production and product issuances around the world, Raysync deployed a server at the head office of Huaqiang Fantawild and deployed webpage clients on the computers of overseas special effects partners and major content providers to achieve rapid interaction transmission of transnational files.



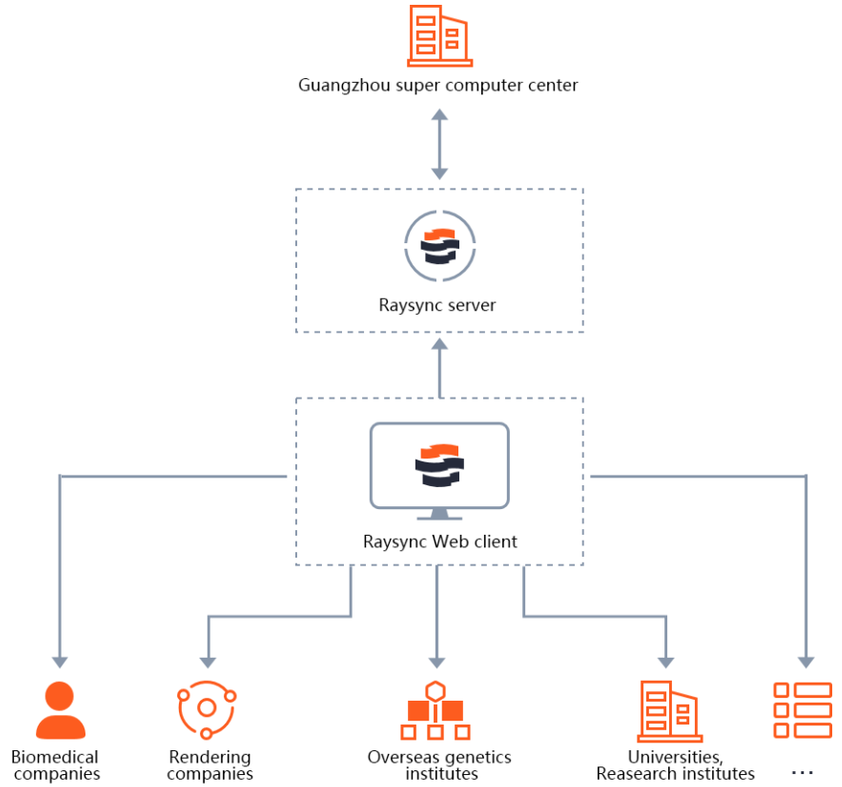
National Supercomputer Centre in Guangzhou (NSCC-GZ)

Customer requirement:

National Supercomputer Centre in Guangzhou (NSCC-GZ) needs to distribute data to various related industries.

Solution:

Raysync set up a server on a host computer of the National Supercomputer Centre in Guangzhou (NSCC-GZ) and set the webpage clients on the computers of biomedical customers, major university research institutes, animation rendering companies, and foreign genetic organizations, then a huge amount of data to be calculated were transmitted to the Raysync server from clients, and the calculated data were downloaded back to the clients from the server.



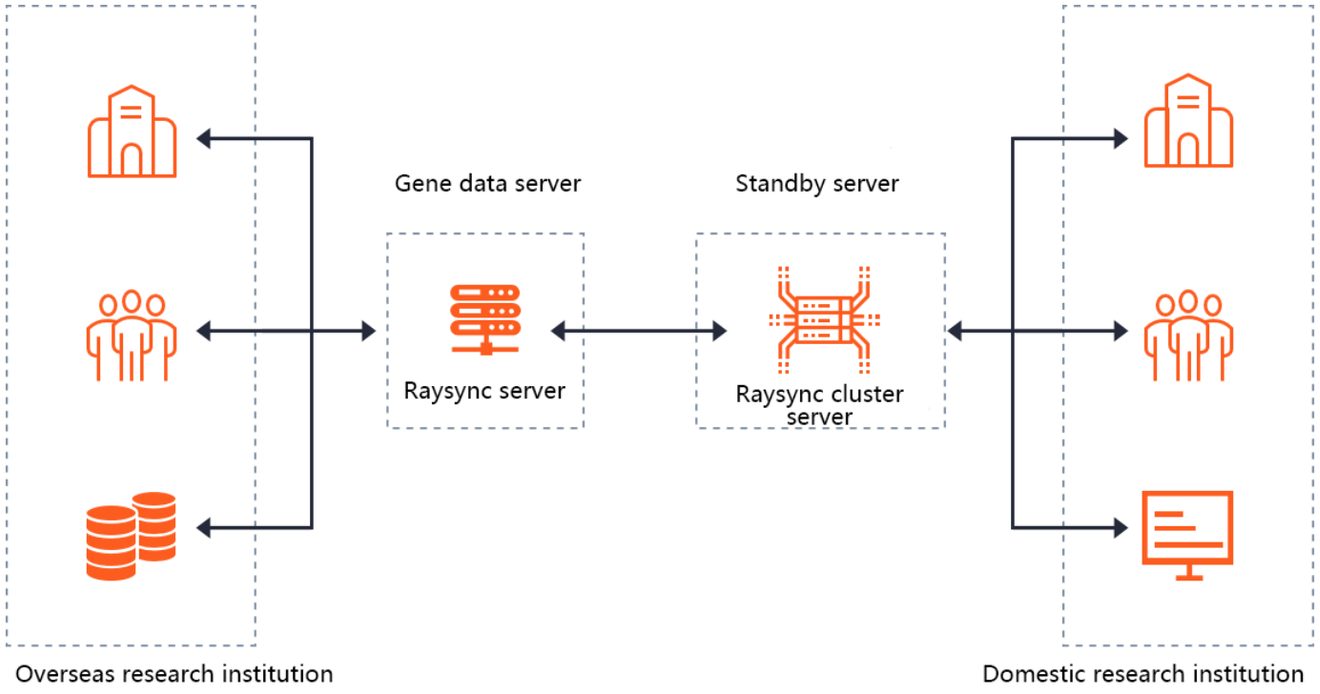
Beijing Institute of Genomics (BIG), Chinese Academy of Sciences (CAS)

Customer requirement:

Realize the reception and transmission of genetic research data of BIG Forum.

Solution:

Raysync servers were deployed in the main server and the standby server of the genomic data archive library. The research institutes at home and abroad realized accelerated transnational data transmission through the webpage clients that integrated Raysync transmission technology.



BGI

Customer requirement:

Dock the data from Beijing Institute of Genomics (BIG), Chinese Academy of Sciences (CAS), realize the reception and transmission of genetic research data of the BGI Research Group, and promote the cooperation between BGI and various industries.

Solution:

Raysync servers were deployed in the main server and the standby server of the BGI genomic data archive library. Various research institutes and internal teams realized accelerated data transmission through the webpage clients that integrated the Raysync transmission protocol independently developed by Raysync. Fast data interaction.

Fox Renderfarm

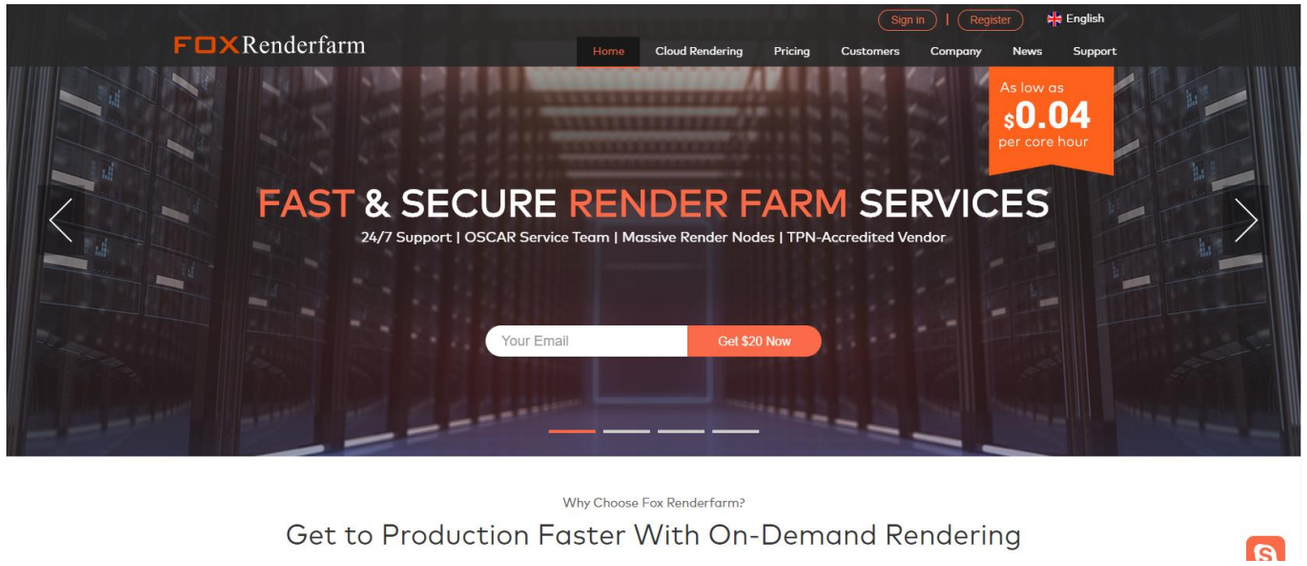
Customer requirement:

Fox Renderfarm is a leading cloud computing services provider with over 200k+ registered users and need to transfer around 30TB--40TB data daily between their platform and clients. It needs to realize many kinds of materials information interaction, such as film and television materials and architectural design materials, and upload the materials to the Fox Renderfarm rendering platform at a high speed.

Solution:

In response to the needs of Fox Renderfarm projects, Raysync used an SDK integration solution to make the users realize high-speed uploading of video materials to the Fox Renderfarm rendering platform and multi-point interaction, and accelerated transmission of video materials.

Benefited from the support of Raysync technology, Fox Renderfarm successfully passed the security audit of TPN, which is owned by MPAA and CDSA, and will provide technical support services for international users.



Thanks!

Looking forward to cooperating with you.

Raysync