Publication date:
21 Dec 2023
Author:
Guang Yang

China Telecom's eSurfing Cloud demonstrates how a telecom operator's cloud can benefit enterprises in their international expansion efforts

Brought to you by Informa Tech

Omdia commissioned research, sponsored by China Telecom

Contents

Summary

In brief

China Telecom's eSurfing Cloud achieves significant growth in China's cloud market. China Telecom Global (CTG) is expanding the cloud platform to international markets based on the experience and ecosystem of the Chinese market. The eSurfing Cloud is expected to become a bridge between local branches and the home headquarters of an international enterprise, helping the enterprise leverage its experience and resources from the home market while meeting the local regulatory requirements.

- Digital transformation demands of large state-owned companies and local governments have become a new driving force in China's cloud market. With the new dynamics, cloud businesses of Chinese telecom operators are gaining momentum in the market.

- China Telecom's eSurfing Cloud is the operator cloud business leader in China. CTG is leveraging the eSurfing Cloud services to support Chinese enterprises' international expansion through active investment in global cloud-network infrastructure, operating multi-cloud management services, and exporting the Chinese ecosystem.

- China Telecom's eSurfing Cloud could also help international enterprises meet data sovereignty requirements in China, supporting their entrance into the Chinese market.

- The eSurfing Cloud's success illustrates that telecom operators' cloud services could be a key part of an enterprise's multi-cloud portfolio, enabling efficient integration of cloud and connectivity and supporting its international expansion.

Recommendations

Recommendations for telecom operators
The success of China Telecom's eSurfing Cloud services shows that telecom operators still have opportunities to build their position in the cloud market. Telecom operators should fully leverage their service synergies of connectivity, cloud, and integration capabilities. Understanding the local regulatory environment is another advantage of telecom operators that can help them gain a position in an international enterprise's multi-cloud portfolio.

Recommendations for Chinese industry players
The international expansion of eSurfing Cloud and other Chinese telecom operators' cloud services will allow Chinese industry players to develop their international businesses, including hardware vendors, software as a service (SaaS), or platform as a service (PaaS) players. The partners of eSurfing Cloud should also prioritize the Asia & Oceania region in their global business strategies because the region is the first step in their eSurfing Cloud's international expansion.

Chinese telecom operators gaining momentum in China's cloud market

Chinese telecom operators achieving fast growth in China's cloud market

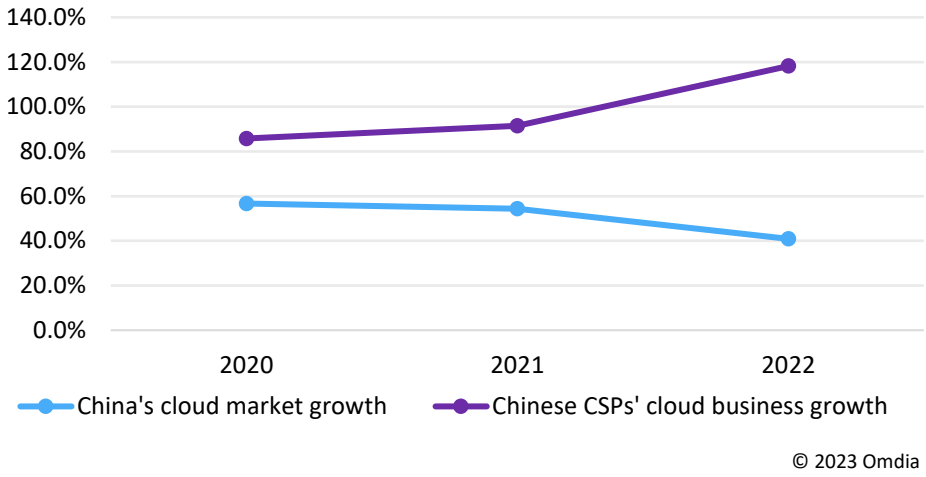
China's cloud market has been growing rapidly while the driving force is changing. Since the outbreak of COVID-19 in 2020, the digital transformation of Chinese enterprises—particularly large state-owned companies—and local governments has accelerated significantly. According to data from the China Internet Network Information Center (CNNIC), the number of remote working application users increased from 199.08 million in June 2020 to 539.62 million in December 2022. Local governments are also actively pushing the digital transformation of local governance and encouraging local small and medium enterprises (SMEs) to migrate their IT systems to cloud platforms. The United Nations E-Government Survey 2022 shows that China's E-Government Development Index (EGDI) has improved from 0.6811 in 2018 (ranking 65th out of 193 countries worldwide) to 0.8119 in 2022 (ranking 43rd out of 193 countries). From 2022 to 1H23, eight province-level Chinese governments issued more than ten policies to encourage SMEs' cloud migration.

Thus, the cloud business in China is currently being driven by the demands of state-owned enterprises and local governments, while the demands from traditional consumer internet services are decreasing. According to the China Academy of Information and Communications Technology (CAICT), China's cloud market grew by 56.7%, 54.4%, and 40.9% in 2020, 2021, and 2022, respectively. The growing cloud demands from state-owned companies and local governments also create opportunities for Chinese telecom operators in the cloud market. State-owned enterprises and local governments usually intend to use private or hybrid clouds to guarantee data security. In addition, some industrial use cases require edge clouds to implement low latency. Chinese telecom operators are often more competitive than hyperscalers in these scenarios because they are willing to tolerate lower margins from private and hybrid clouds than public clouds. They also have much richer edge computing resources.

Regulatory measures, particularly data sovereignty and security requirements, further strengthened telecom operators' position in China's cloud market. All Chinese telecom operators are state-owned, which makes it easier for them to gain the trust of other state-owned enterprises and local governments. The recent outages of the leading public cloud platform in China have presented an opportunity for telecom operators to capture a larger market share.

Therefore, Chinese telecom operators' cloud business is gaining momentum. The growth rate of telecom operators' cloud businesses was significantly higher than the market average.

Figure 1: Growth rate of cloud services in China



Source: Omdia, based on information from CAICT and MIIT

China Telecom's eSurfing Cloud leading the growth

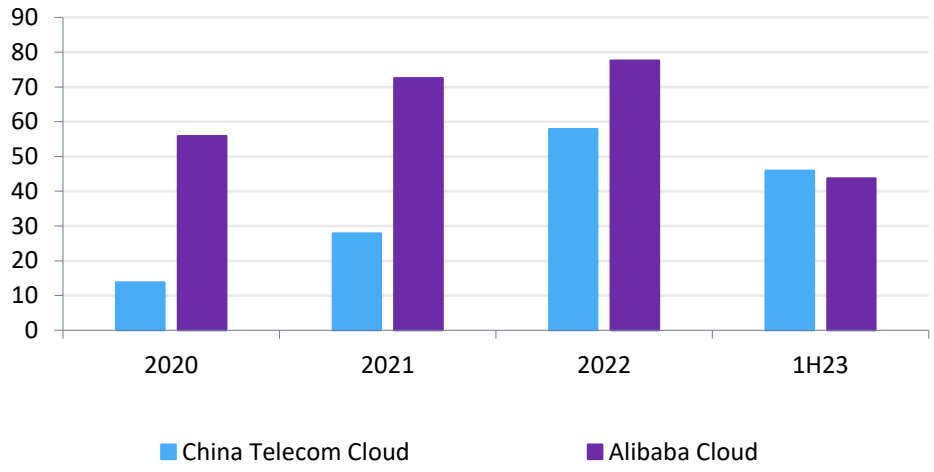
China Telecom launched its eSurfing Cloud brand in 2012. By leveraging its leading position in the enterprise connectivity market, trusted brand, and long-time customer relations, China Telecom has gained the top position among its telecom counterparts' cloud businesses.

Since 2020, China Telecom has strengthened its investment in cloud infrastructure and technology development. By the end of 2022, China Telecom has built over 700 internet data centers across China, including two super-scale cloud bases in inner Mongolia and Guizhou, China, and four key regional central cloud nodes. Data center interconnect (DCI) network is another focus of China Telecom's infrastructure investment. China Telecom has built an industry-leading DCI network for government and enterprise customers. The network connects eight major hub nodes and data centers in major cities nationwide, boasting a backbone bandwidth of over 300 Tbps. This network has become a crucial infrastructure for China's "East-to-West Computing Resource Transfer" initiative, which aims to expand cloud computing resources while reducing overall carbon emissions.

China Telecom also invests intensively in the R&D of advanced technologies. China Telecom developed the eSurfing Cloud 4.0 distributed cloud-network integration architecture that provides a unified cloud operating system, application distribution platform, and operating and management system. Based on the cloud operating system and application distribution platform, China Telecom offers new services, such as cloud laptops, cloud phones, artificial intelligence (AI) applications, and so on. China Telecom's large-scale AI model is designed for urban governance, including billion-parameter and core algorithm capabilities covering image, voice, semantics, and more. China Telecom also developed the Cloud Dam platform, which offers carrier-grade, distributed denial-of-service (DDoS) protection capabilities, serving more than 8,500 enterprise and government customers. Additionally, it has also created Security Brain, a solution that coordinates cloud-pipe-terminal, providing all-scene security protection services.

China Telecom's cloud business has grown significantly with the extensive cloud-network infrastructure and innovative technologies. Not only is it the leading cloud business among Chinese telecom operators, but it is also quickly catching up to Alibaba Cloud, which is the leader of China's cloud market. In 1H23, China Telecom's cloud business revenue has already surpassed that of Alibaba Cloud.

Figure 2: Cloud business revenue of China Telecom and Alibaba



Note: based on calendar year results

Source: Omdia, based on company's reports

eSurfing Cloud supports Chinese enterprise's international expansion

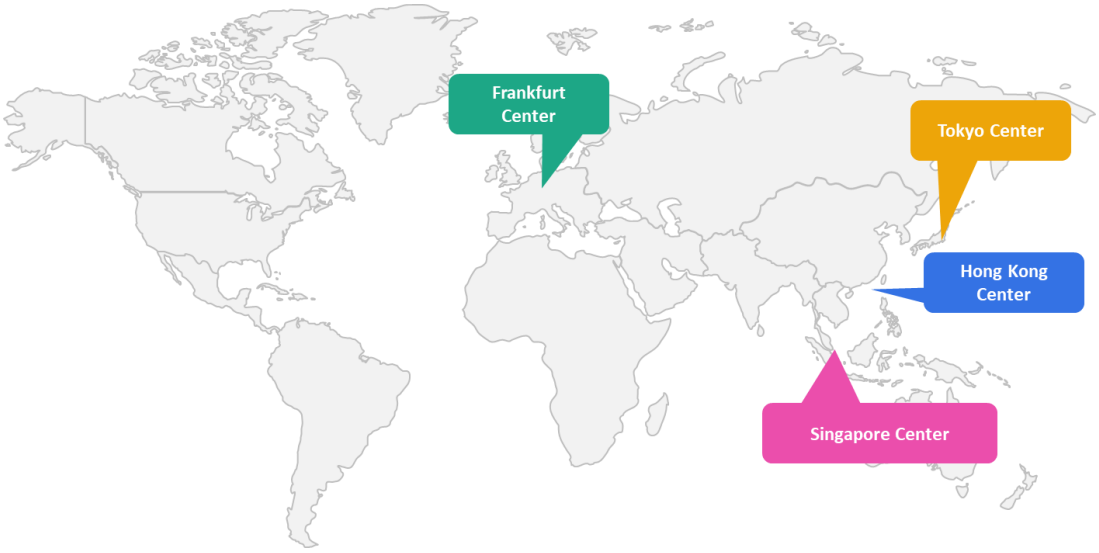
Today, China Telecom is facing increasing demands from its cloud customers to support their business developments outside of China. Meanwhile, the intensifying competition in the domestic cloud market also pushes China Telecom to eye the international market. Therefore, CTG announced its eSurfing Cloud global services in June 2023, marking the beginning of the company's international expansion for eSurfing Cloud.

The first goal of international expansion is to extend its cloud business development expertise from the domestic market to the global market to meet the demands of Chinese enterprises seeking international growth.

Investing in infrastructures

China Telecom's cloud business in China has been successful owing to its ability to leverage its advanced infrastructure to achieve an effective cloud-network synergy. Even before the official announcement of the eSurfing Cloud international expansion, CTG has actively invested in global cloud-network infrastructure. As of February 2023, CTG has deployed 26 of its owned and operated data center sites worldwide, including four core data centers in key regional markets (**Figure 3**). Additionally, CTG has expanded its infrastructure coverage with more than 300 partnership sites across all major markets.

Figure 3: China Telecom's global core data centers



Source: Omdia, based on information from CTG, as of February 2023

So far, CTG has deployed nine public cloud regions outside mainland China, including Hong Kong, Macao, Singapore, Jakarta, Hanoi, Manila, Frankfurt, Dubai, and Sao Paulo. This deployment map reflects China Telecom's strategic focus on international development, that is, anchored in Asia & Oceania and radiating worldwide. In addition to these public clouds, CTG has also deployed 30 self-owned edge clouds globally to provide local computing services.

More importantly, CTG's global connectivity infrastructure provides a solid foundation for the international expansion of eSurfing Cloud. As of February 2023, China Telecom's global connectivity infrastructure is comprised 50 submarine cables, which can deliver a total international capacity of over 117 Tbps and 229 points of presence (PoPs) around the world, including 25 ChinaNet nodes, 50 premium CN2 nodes[1], and 128 transmission nodes.

The cloud-network infrastructure is expected to empower eSurfing Cloud's international expansion and guarantee that its customers have a seamless eSurfing Cloud experience.

Managing multi-cloud

Multi-cloud has been a mainstream solution for enterprises to utilize cloud services. According to Flexera's *State of the Cloud Report 2023*, 87% of organizations have adopted multi-cloud services. As a newcomer to the cloud market, China Telecom must cater to the multi-cloud demands of enterprises. Meanwhile, multi-cloud transformation is often complex and requires much greater effort. According to Omdia's *Digital Enterprise Services Survey 2023 – Managed Cloud & Professional Services,* cloud security and support is the top concern of enterprises in their hybrid and multi-cloud transformation. The requirements for multi-cloud security and cloud environment optimization also create opportunities for telecom operators to provide multi-cloud management platforms and professional services.

[1] CN2 is China Telecom's next generation carrier network to provide high-quality internet connectivity.

Therefore, China Telecom has established win-win cooperations with global public cloud players. This allows enterprise customers to enjoy greater flexibility when choosing cloud service providers. Additionally, China Telecom has launched a multi-cloud management platform to support multi-cloud resource management and help enterprises transition gradually and smoothly from traditional IT to a hybrid and multi-cloud strategy that integrates private clouds with multiple public clouds.

CTG has established branch offices in 41 countries and regions and has built strategic partnerships with over 100 service providers and vendors globally. The company's localized service capabilities enable a fast response to customers' requests in local languages. CTG's local service teams can also assist enterprises seeking to enter a new country or regional market to understand the local regulatory requirements for data security and privacy regulation, as well as the business environment. These services and support are critical for enterprise customers when they expand their business internationally.

Leveraging Chinese ecosystem

China Telecom has created a rich ecosystem for its eSurfing Cloud services. As of the end of 2022, eSurfing Cloud had over 2,000 ecosystem partners. The domestic market has seen a lot of success with many SaaS applications and PaaS products. With the international expansion of eSurfing Cloud, CTG is actively introducing these successful applications and products to the international market. The aim is to provide Chinese enterprises abroad with a unified cloud environment and user experience similar to their headquarters in China. For example, CTG has collaborated with Lark Suite to introduce the enterprise collaboration platform developed by ByteDance to the eSurfing Cloud international marketplace.

In its 2023 Global Partner Summit, CTG has launched the SaaS Overseas Initiative and signed Eco-Cooperation Agreements with multiple partners. The initiative and cooperation agreements will further boost the ecosystem development of eSurfing Cloud in the international market.

The excellent global cloud-network infrastructure, localized service capabilities, and growing ecosystem enable CTG to support eSurfing Cloud's domestic enterprise customers with their international expansion. Recently, CTG has signed a series of agreements with large state-owned Chinese companies, such as China Life Insurance, China National Aviation Fuel, Industrial and Commercial Bank of China, and China State Construction International Holdings, to help them develop international businesses.

Considering China Telecom's strong brand in China's enterprise market and good relationship with large Chinese state-owned companies, eSurfing Cloud is expected to gain more customers in the international expansion market. eSurfing Cloud could serve as a stepping stone for Chinese enterprises' looking to expand their global business developments through cloud services.

China Telecom's eSurfing Cloud demonstrates how a telecom operator's cloud can benefit enterprises in their international expansion efforts

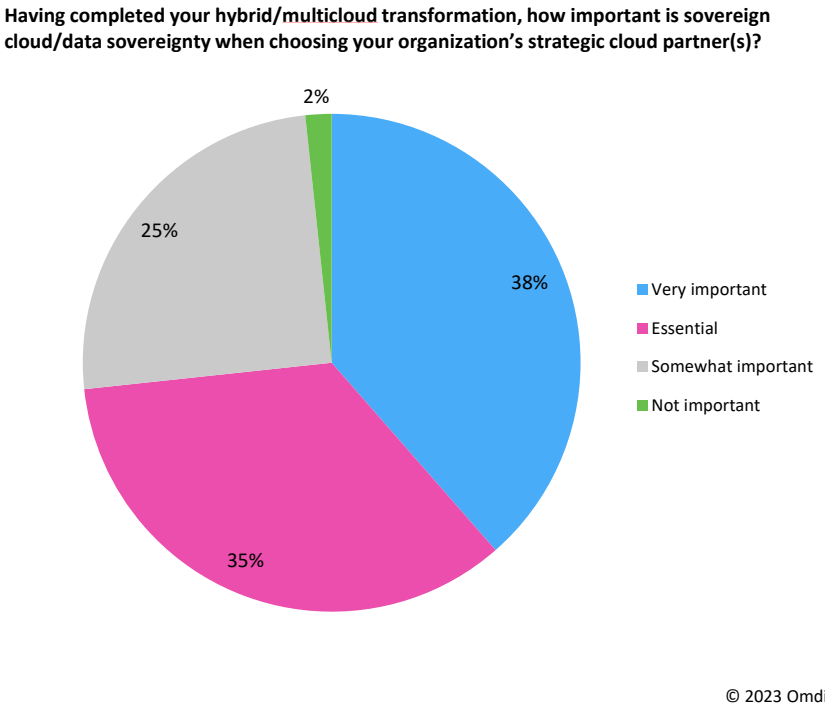
eSurfing Cloud empowers international enterprise's growth in China

eSurfing Cloud is not only a stepping stone for Chinese enterprises to enter the international market but also a platform that assists international companies develop their businesses in China, particularly to help them comply with China's regulatory requirements on data sovereignty and sovereign cloud.

The increasing adoption of cloud computing has given rise to data security and privacy concerns. This has led to the concept of data sovereignty, which asserts that data should be subject to the laws and governance structures of the nation where it is collected. Consequently, enterprises require a secure and compliant regional cloud that can help them meet the local data sovereignty requirements, known as the sovereign cloud.

According to Omdia's *Digital Enterprise Services Survey 2023 – Managed Cloud & Professional Services,* sovereign cloud or data sovereignty is very important or essential for more than 70% of organizations' cloud transformation.

Figure 4: Sovereign cloud and data sovereignty as a focus of cloud transformation



Notes: Importance differs by region, generally higher in heavily regulated countries (e.g., France, Germany); n=237 respondents having completed cloud transformation out of 359 in total

Source: Omdia

eSurfing Cloud is one of the leading cloud platforms in China and is operated by a state-owned communication service provider, China Telecom. Owing to China's data sovereignty regulations, eSurfing Cloud may be an ideal choice for international enterprises to comply with and keep up with the country's data security and privacy requirements while also driving innovations.

China Telecom's excellent global cloud-network infrastructure can guarantee service level agreements (SLAs) for international enterprises. More importantly, China Telecom's multi-cloud management services can enable enterprises to implement cross-regional deployment and operation of their IT systems. The multi-cloud management services allow international enterprises to meet China's data sovereign requirements while keeping their original cloud service platforms.

Telecom operators' clouds as a key part of multi-cloud portfolio

The success of China Telecom's eSurfing Cloud services is evident that telecom operators still have ample opportunities to build their position in the cloud market. Telecom operators can leverage their service synergies of connectivity, cloud, and integration capabilities to the fullest. Additionally, their understanding of the local regulatory environment is another advantage that can help them gain a position in an international enterprise's multi-cloud portfolio.

As discussed above, many enterprises are adopting multi-cloud services. However, there are still challenges for an enterprise to benefit from the multi-cloud strategy, such as governance and compliance issues, siloed management tools, a shortage of skilled staff, connectivity problems, and so on. The digital transformation of industries also requires an edge cloud to store and process data near its source and support innovative applications such as real-time data analytics. As a result, the need for connectivity and edge data center infrastructure will increase with the advent of edge computing.

Telecom operators can play a key role in meeting these requirements by using their connectivity infrastructure, local resources, and integrated service capabilities. An integrated connectivity and cloud infrastructure can provide enterprise customers with flexible multi-cloud connections and a reliable experience. Telecom operators can also help businesses with cost effective deployment of edge computing applications by using their site and connectivity resources. In addition, the integration service capabilities, particularly, the local service resources, are crucial for enterprises to deploy and operate digital transformation applications.

With the increasing demands for data sovereignty, it has become crucial for international enterprises to adhere to local data security and privacy requirements. Telecom operators in each country often have a long-standing history of operating in the local regulatory environment and possess a deep understanding of relevant regulations. Moreover, telecom operators' partnerships with local industry players could serve as a useful entry point for international enterprises into the local ecosystem. As such, the cloud services offered by telecom operators could be a great stepping stone for international enterprises looking to enter a country or regional market.

The success of eSurfing Cloud shows that telecom operators' cloud services could be a key part of an enterprise's multi-cloud portfolio, enabling efficient integration of cloud and connectivity while supporting international expansion.

When an enterprise enters a new country or regional market, a telecom operator's integrated connectivity and cloud services can connect local branches with the home headquarters. This allows the enterprise to use its experience and resources from the home market while also complying with local regulatory requirements.

Appendix

Methodology

The case study leverages in depth interviews with key stakeholders and a review of any available documentation such as strategic planning, RFP, implementation, and program evaluation documents.

Author

Guang Yang
Senior Principal Analyst, Service Provider Strategy and Mobile Infrastructure
guang.yang@omdia.com

Get in touch

www.omdia.com
askananalyst@omdia.com

Omdia consulting

Omdia is a market-leading data, research, and consulting business focused on helping digital service providers, technology companies, and enterprise decision-makers thrive in the connected digital economy. Through our global base of analysts, we offer expert analysis and strategic insight across the IT, telecoms, and media industries.

We create business advantage for our customers by providing actionable insight to support business planning, product development, and go-to-market initiatives.

Our unique combination of authoritative data, market analysis, and vertical industry expertise is designed to empower decision-making, helping our clients profit from new technologies and capitalize on evolving business models.

Omdia is part of Informa Tech, a B2B information services business serving the technology, media, and telecoms sector. The Informa group is listed on the London Stock Exchange.

We hope that this analysis will help you make informed and imaginative business decisions. If you have further requirements, Omdia's consulting team may be able to help your company identify future trends and opportunities.

Copyright notice and disclaimer