

**Game China:
What You Should Know BEFORE Joining
the World's Largest
Gaming Market**



CDS Global Cloud

<https://www.cdsglobalcloud.com>

China - The \$24B Elephant in the Room

“After decades of dominance, the world’s leader in global games revenue has changed hands from the U.S. to China. According to data revealed by the Ministry of China, revenue in China’s games sector attained \$22 billion in 2015 buoyed by the country’s 670 million internet users (almost half the population of China)—370 m of which were playing online games (larger than the U.S. population).

Notwithstanding Japan, no other country has risen as fast as China has, from a country that once banned game consoles for over a decade to the most profitable country for games in the world. By 2019, games research and analytics firm Newzoo predict gaming revenue in China to reach \$28.9 billion, with mobile accounting for \$13.9 billion. Seeing as more than half the country still yet to become internet users, the opportunity for growth is immeasurable. Now, more than ever is the golden era of gaming in China.”¹



The Chinese Games Market is estimated to reach \$29 billion in 2019, an increase of over 16% from 2016.

What You Need to Know

Launching in China

Publishing mobile games in China is more complicated than what most western developers can imagine. Because games in China are categorized as “content” and “cultural,” they have always been tightly censored in China by a number of Regulators and Ministries responsible for ensuring that Chinese values & laws are properly promoted and upheld.

As of July 1, 2016, the gaming industry in China is undergoing a major governmental review. The Chinese government is making a major effort to weed out games that infringe on copyright laws (or are outright copycat games) and games of "poor quality" that are deemed bad for Chinese citizens. Games with excessive violence, bad language, or anti-authority themes are banned. Older regulations are being more strictly enforced, and additional regulations are being added.

The first regulatory agency is SAPPRT (State Administration of Press, Publication, Radio, Film & Television). This body regulates media in the country and is responsible for censoring anything that comes under the media types listed above. Second, there is CAC (Cyberspace Administration of China), they are responsible for censorship and control of China’s Internet. Finally, there is the MOC (Ministry of Culture). This ministry is responsible for all cultural policy and is tasked with promoting, protecting, or censoring any form of cultural art.

In 2016, SAPPRT introduced a new regulation stating that **every mobile game** must be approved by SAPPRT before appearing on the Android and iOS app store. It's estimated that it this regulation could cost a small developer working with a publisher between \$3,000 and \$6,000 to get a single game approved in China.

Minimum Number of Permits Required to Publish Mobile Games in China

- MIIT Internet Content Provider Permit - per domain name (ICP Registration)
- MOC Permit for Online Culture Operations - per company (domestic companies only)
- MOC Online Censorship Approval - per game
- SAPPRT Issued Code For Online Publishing – per game
- Intellectual Property Registration – per game

"As noted, this will have big consequences on foreign developers who want to publish their games in China. Previously certain loopholes would allow you to publish your game on iOS without having to follow any Chinese Government regulations. Now that loophole may be closed, in fact, it already is for Chinese developers. Right now, foreign devs are unaffected and can still publish apps in China on the Chinese Apple App Store via iTunes connect. But should the government decide to make the July 1st regulation applicable to foreign game developers it will mean that every foreign game will need to be approved by the Chinese

Government before it goes on sale on an app store. Anyone who has already tried to launch their game in China on Android will know that it's near impossible to do so without a Chinese publishing partner. The reason for this is because Google Play is not widely used in China. Instead, there are several different Android App stores from various Chinese companies, each with varying market share. Therefore, a Chinese publisher is needed for your game to reach these app stores."²

Partnering with a Chinese publisher is a major commitment. You will be allowing them complete control of the game/games you are offering. Make sure the partner you select is someone you trust and can work with over a long time. Having a Chinese publisher will overcome a number of obstacles and get you closer to the ultimate goal of publishing in China, but there is no guarantee that they will get approval for your game or that the regulations won't change.

For your protection:

- Protect your source code - Make sure you have a written agreement with your publisher that covers how the source code is going to be used and what changes are going to be made in the game to localize it.
- Trademark the game name and any art assets or characters immediately.
- Obtain a Game Source Code Copyright from the Chinese Government – The GSCC is needed for the publisher to license your game and helps to prevent copycat games.

Game developers need to consider the games they are launching in China carefully. It is suggested that games launched in China be:

- Designed and localized for the Chinese gamer. Games built around local myths, legends, and popular TV shows are some of the top selling games.
- It is required that games launched in China **not** contain any element that:
 - Violates China's constitution
 - Violates China's religious policy (promoting cults or superstitions)
 - Insults, slanders, or violates the rights of others
 - Threatens China's national territorial unity, integrity, or sovereignty
 - Encourages or promotes the use of drugs, obscenity, gambling, or violence of any kind
 - Threatens China's security or interests
 - Promotes or encourages racial/ethnic hatred, or disparages ethnic traditions and cultures
 - Damages China's reputation or weakens ethics or maligns China's culture and traditions
 - Violates Chinese law
 - Contains any words or terms in English (this issue has just recently been reported)

If your games meet the above criteria, then it must be submitted for the approval process. Each game will have to undergo one of two review processes, standard or simplified.

The Simplified Process:

To qualify for the simplified process, your game must:

- Be owned by a Chinese citizen or company
- Be built around a very simple story or have no storyline
- Not contain any restricted subjects: politics, religion, military action, or controversial subject matter

For approval, you must:

- Submit your game to be approved at least 20 days before launch. The submittal is not a simple process (think lots of forms) and could take more than 20 days. So it is recommended that the submittal is made as early as possible.
- Seven days before launch you have to contact SAPPRFT and provide additional details including launch date and which stores your game will be on.
- If you don't launch the game within 20 days of approval, then you must contact SAPPRFT and tell them why.

The Standard Process:

If your game does not meet the qualifications for the simplified process, then you must apply for the standard process.

- Submit your game for approval as above, but again, this is not a simple process. There are a lot of forms to fill out. The Standard Process, however, could take up to 3 months (or longer).

Are There Other Options?

Not all companies are ready to dive into unknown waters. Lucrative as it appears, the lengthy legal process and the business arrangements with a local publishing partner make it tough for smaller companies to launch a game in China. Due to cultural differences, even large companies with millions of dollars invested fail in this market.

Consequently, companies often seek alternative ways to reach the Chinese market without the legal restrictions. Many companies set up servers along the east coast line of China in Singapore, Hong Kong, Taiwan, Tokyo and Seoul where the Chinese regulations do not apply. There is only one problem with this approach, and it is a big one - *performance*. Online gamers have an ultra-high sensitivity to slow frame rates or lag time. They are quick to move on to another gaming site when faced with poor web performance. With online

gaming, the competitor's site is always just a click away. When revenues depend on high performance and speed, a stable infrastructure with high availability is key.

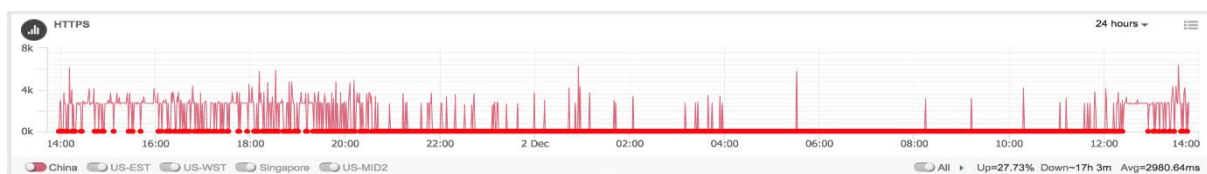
Technically, avoiding downtime lies mainly in the design of the load balancer. If in the event one server fails, another automatically picks up the load preventing downtime. Diversifying these loads across VMs, physical servers, data centers, and geographies provide additional layers of protection against systematic, large-scale outages.

Unfortunately, in this case, the server is not the primary concern, the Great Firewall is.

The Great Firewall

The Chinese government controls the gateways for Internet traffic between China and the rest of the world, making the Internet of China technically an Intranet. A handful of state-owned carriers monopolizes the Internet connectivity through the Firewall. Traffic through the Firewall is unpredictable, unreliable, and extremely expensive.

It is well known that the Great Firewall filters and censors content – blocking all content not approved. It is less well known that majority of the latency and low availability issues suffered by foreign sites is not censorship, but poor routing connections through the Firewall gateway. Packets are continually bounced back and forth from Hong Kong to Singapore to Seoul to Tokyo trying to find a gateway through the Firewall. This complicated route often causes delays in thousands of milliseconds and as much as 30% packet loss.



The graph above shows the typical downtime experienced and the page load time by a website hosted outside of China.

CDS - Your Gateway to China

Headquartered in Beijing, CDS is one of the top gaming infrastructure providers in China, hosting over 70% of the online games now in China. Reliable, flexible, and highly available, no matter if you are a multimillion-dollar publisher heavily invested in the Chinese market, or a startup studio testing the water, CDS can provide solutions for you:

- Large scale launching of your game
- Trial runs in China
- Trial run outside of China
- A global team environment

CDS Options for Gaming and Video Deployment in China

Premium Internet Routing (PIR) – The solution for the customer who needs fast, secure connectivity to China, *without hosting in China*. CDS PIR is the ideal way to test market response without a significant commitment or time or money.

ICP Registration Number: Not required

NetEx – For the customer who wants to host in China, NetEx provides country-wide access through our CDN and static caching for backgrounds, downloads, and installations. Assistance in obtaining an ICP Registration Number is available free of charge for our customers.

ICP Registration Number: Required. Each company must have a local representative with a local address and phone number.

V-IEPL – The answer for customers needing fast, secure, point-to-point connectivity to mainland China. Perfect for developers, V-IEPL requires local representation in China, but no ICP Registration Number. Like VPN, CDS' V-IEPL offers fast, reliable connectivity from anywhere in the world to mainland China.

ICP Registration Number: Not required, but a local representative with a local address and phone number is required.

CDS Global Options

Public Cloud – Flexible billing, fast to deploy, rapidly scalable, VMWare based CDS Cloud has been chosen by over 70% of the gaming companies in China for mobile, social, and casual games. CDS Public Cloud can also be an ideal starting point for new game launches, testing, and development.

Elastic Bare-Metal Cloud – Game genres, like first person shooters (FPS), that demand the same agility, automation and pay-as-you-grow flexibility as public cloud, but with the high performance and control of dedicated servers are increasingly considering bare-metal cloud environments. CDS has extensive experience hosting Bare-Metal Clouds for the top tier gaming publishers with over 10 million monthly active users. In addition, CDS has combined flexibility with its Bare-Metal Cloud solutions for customers seeking lower costs, faster deployment, and more convenience while supporting the highest security requirements.

Custom Hosting/Colocation – Large, complex games with high persistence requirements and hundreds of servers supporting a single world are often better served by colocation or a customized hosting solution. Game and player statistics that are maintained across game instances and used for competitive rankings are examples of use cases that are well suited to these infrastructure solutions.

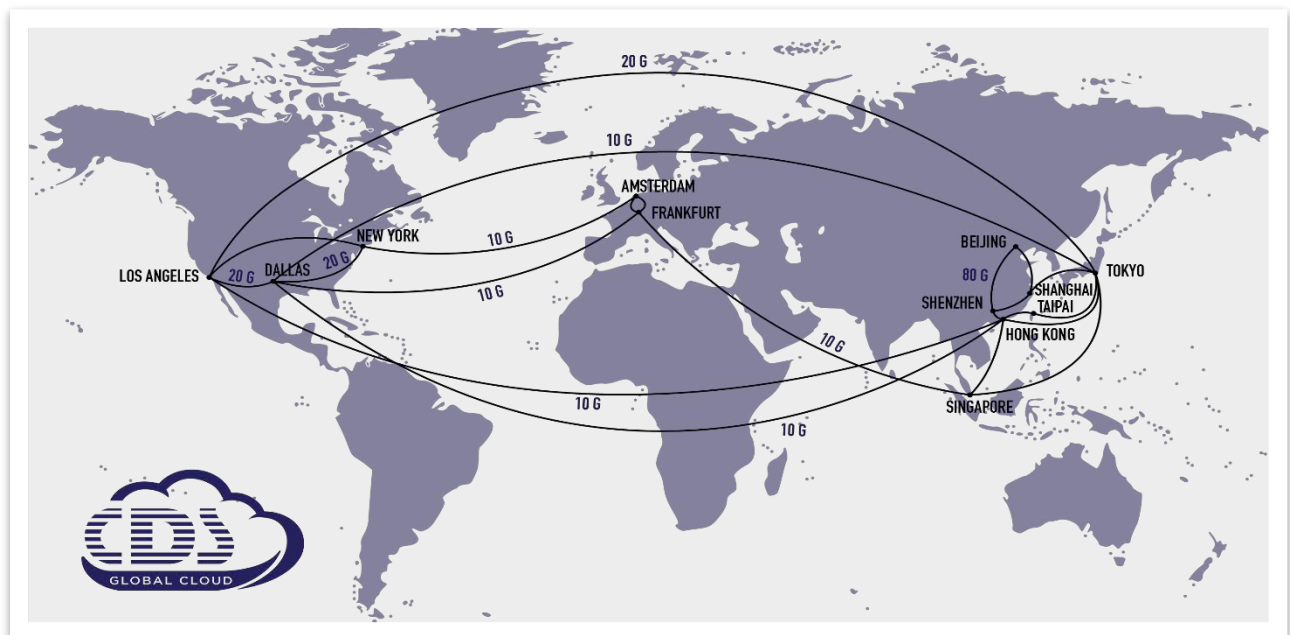
Private Cloud – CDS Private Cloud environment offers high levels of infrastructure customization and can help differentiate game performance while offsetting upfront costs

when compared to custom hosting or colocation. With 50+ locations and 2500G fiber connectivity.

CDN – CDS CDN has over 500 acceleration nodes in China, covering more than 95% of the population and connected to all major carriers: China Telecom, China Unicom, China Mobile, Education Network, Great Wall Broad Net and ten regional tier 2 carriers. CDS offers more than 2500G bandwidth resources in China and provides independent test reports.

4-Line BGP – There are four major internet providers in China: China Telecom, China Unicom, China Mobile and CERNET. All four ISPs provide nationwide overlapping coverage, but because of different target markets and history of division, each provider has their segment of customers. CDS' 4 Line BGP provides carrier-neutral services to all users preventing significant delays from congestion at the inter-networking gateways.

GPN – The CDS Global Private Network (GPN) provides reliable LAN connections among our 14 GIC data centers in China and around the world. Utilizing CDS' worldwide data centers and self-service platform, you can deploy in China in under an hour with all your servers connected by a large L2 network.



CDS Global Cloud Global Private Network (GPN)

Case Studies

Use Case 1: Developer's Environment

InMobi is a leading mobile advertising and discovery platform backed by Soft Bank and Kleiner Perkins Caufield & Byers. InMobi enables consumers to discover new products and services by providing contextual and personalized ad experiences on mobile devices. The company has offices across the world to provide local service and support in San Francisco, Bangalore, New York, Beijing, Shanghai, Tokyo, and London. With more than 872 million monthly active users, the platform requires high performance and large scale data synchronization.

The InMobi Beijing and Shanghai teams suffered from slow data transmission and unsecured data sharing.

The CDS solution allows the China-based data centers to work seamlessly with Bangalore and other locations using proxy servers and VPN technologies.

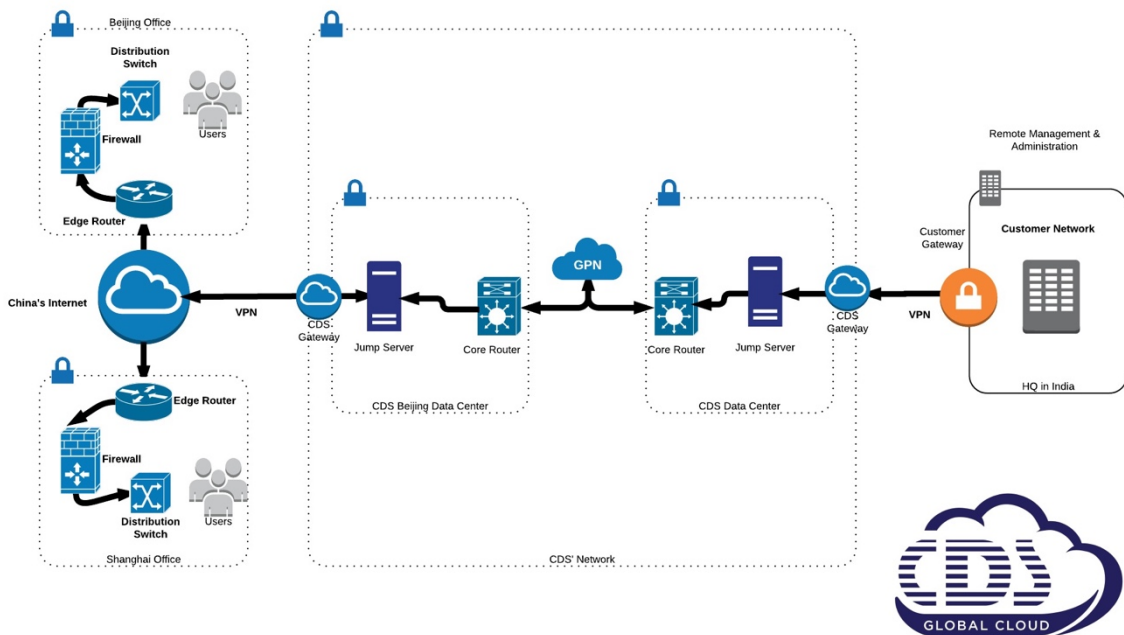
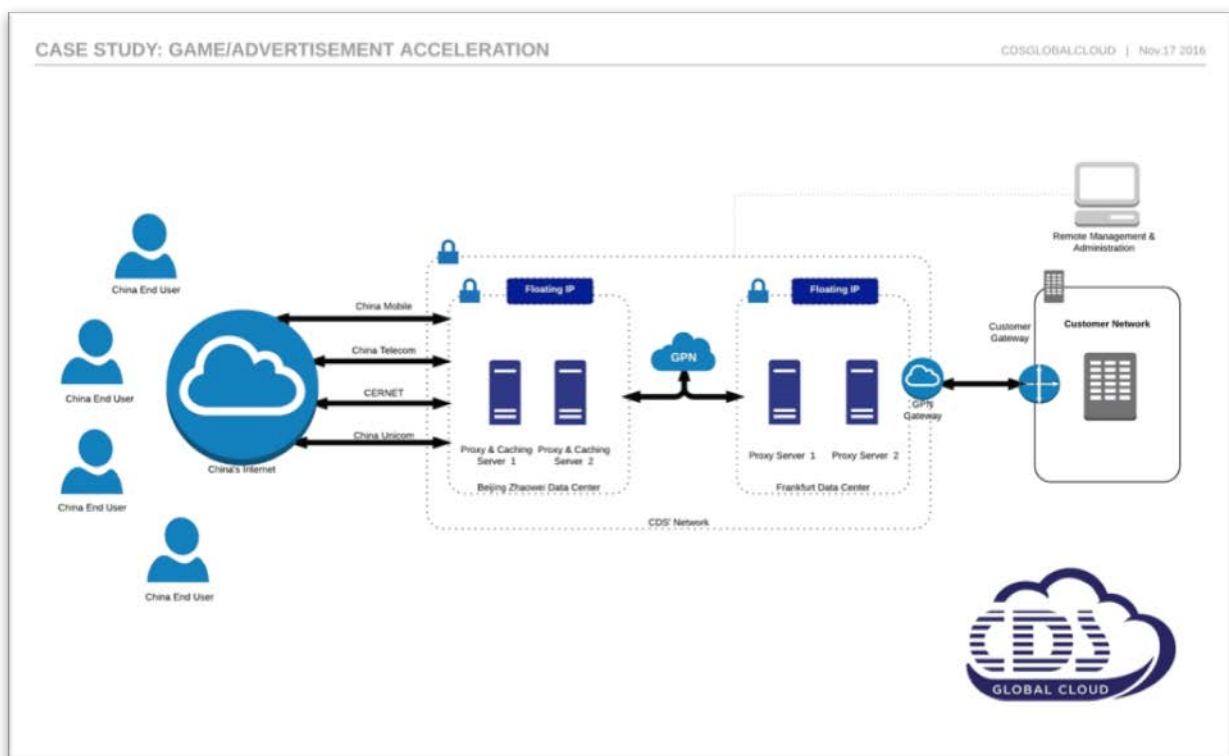


Diagram illustrating cross-border team collaboration between two InMobi teams located in China and with the InMobi team in India.

Use Case 2: Game/Advertisement Acceleration

Game companies with servers outside China can enhance game performance by using CDS' Game Acceleration Service. A group of reverse proxy servers direct the traffic from the origin game server into CDS' GPN resulting in a dramatic reduction in packet loss and decreased latency. The TCP window size remains at maximum for the allocated bandwidth, and the Chinese user experiences significant improvement in game performance.

Note: Web pages delivered to end users with HTTP (layer 7) can be cached. However, some games are delivered by TCP (layer 4) rather than HTTP for performance reasons. In this case, game data cannot be cached, but the data can be directed to the end user by our proxy server.



The user's requests are transmitted through the CDS' dedicated, layer 2 private network (GPN) to the origin server providing a faster, more stable connection and a richer gaming experience.

Use Case 3: Object (File or Game Update) Synchronization Service

CDS' Object Synchronization Service help transfers large files across the globe via CDS' GPN. This service detects and syncs files automatically, distributing files rapidly with little packet loss. This service is suitable for game installations or updates, as well as other types of files. Object Synchronization solves the problems of packet loss and latency through China's public Internet gateway.

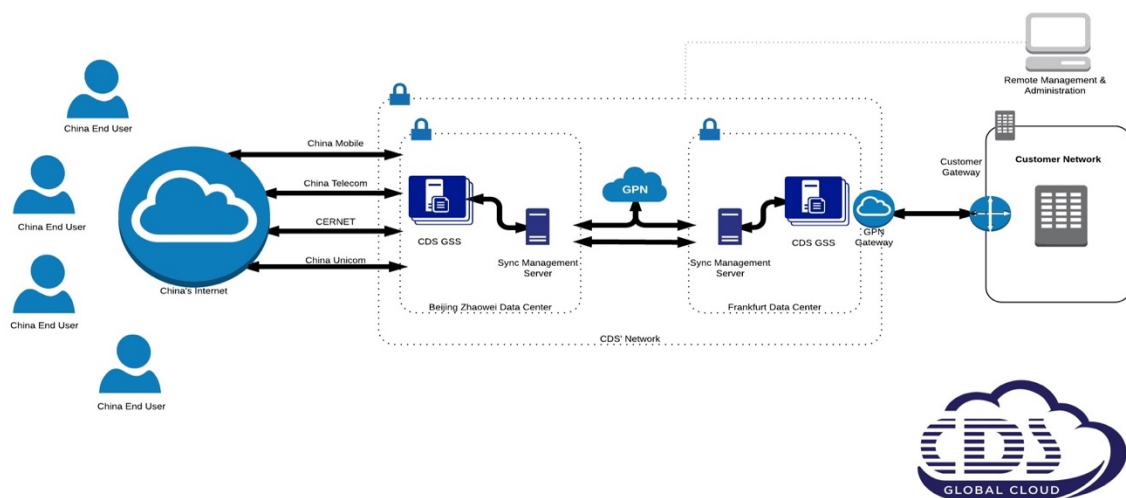


Diagram showing Object Synchronization cross-border.

¹ "How to Grow Your Mobile Game Business in China." Chartboost. Chartboost, n.d. Web. 02 Feb. 2017.

Ahmad, David.

² "Https://zhugeex.com/2016/07/the-challenge-of-publishing-a-mobile-game-in-china/." Blog post. The Challenge of Publishing a Mobile Game in China. N.p., 4 July 2016. Web.

<<https://zhugeex.com/2016/07/the-challenge-of-publishing-a-mobile-game-in-china/>>.

CDS Global Cloud Game Partners



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