

# CONTENT DELIVERY NETWORK FOR CHINA

Just like Fedex redesigned long-haul mail and post-delivery through their spoke-hub distribution network, content delivery networks (CDN) have changed the game in online content delivery. Fedex and CDNs operate on separate models but both share a focus on leveraging strategic locations to ensure timely delivery.

A CDN is a network of nodes (or servers) distributed across different geographic locations to deliver content from your website to end-users in various geographic locations. To do this a CDN first copies and caches the contents of your website to its network of nodes. When the network receives a request it allocates a node in geographic proximity to the user's access point and sends cached content to that user. This thereby reduces latency and significantly cuts down load time. CDNs are also built to handle huge volumes of traffic and provide protection from large traffic surges by distributing traffic across multiple nodes.

China is a unique market for the provision of content delivery networks. Due to existing regulations, foreign organizations must first apply for an ICP (Internet Content Provider) license. As a legal requirement, obtaining an ICP license is a mandatory requirement if you wish to access a content delivery network or host your website in Mainland China.



19 Mbps in  
China vs  
53 Mbps in U.S.

## Load Speed in China

Fast website load speed is crucial anywhere in the world, and especially in a mobile-centric market such as China where the Internet connection is not as fast compared to other countries. In 2015, the average peak connection speed in China was approximately 19 megabits per second, whereas in the U.S. it was approximately 53 megabits per second. China possesses far fewer peering points compared to the U.S. and Europe. The lack of peering points

creates backlogs, thereby leading to slower Internet speed. On top of this, China's 710+ million Internet users are spread out over vast geographic distances, and certain rural areas still rely on 2G networks. While such a high number of nodes would not be necessary for other markets, Alibaba Cloud has as many as 500 CDN nodes in China to overcome these connectivity barriers.

**“For the immediate future, it is best to assume that websites that are hosted abroad will continue to be slower and harder to access for Chinese netizen.” China-Briefing<sup>1</sup>**



Speed up your website by first applying for an ICP license

## ICP Certification

In order to access the infrastructure to speed-up your website hosted in China via a CDN, you will first need a Chinese ICP license. An ICP (Internet Content Provider) license is a registration number that allows a website to operate on a China CDN or hosting server. To apply for an ICP license you must have a registered business in China, and this by far is the biggest challenge

for overseas applicants. If you are a foreign applicant with appropriate business registration in China, your ICP application will be managed by your China web hosting provider on your behalf. For example: Alibaba Cloud would be responsible for receiving your application materials and applying on your behalf to the relevant administrative bodies if you are our customer.



Improve website performance with regional CDN/hosting

## The Regional CDN Approach

Foreign companies can minimize problems associated with low speed and avoid applying for a Chinese ICP license by accessing infrastructure elsewhere in Asia. By leveraging servers from regions in China's proximity, such as a CDN in Hong Kong or Singapore, companies

can improve their overall speed performance in China. Nonetheless, this strategy does not eliminate latency, and is not as cost-effective as hosting on a CDN in China. CDN and hosting costs can, in fact, be higher in other Asian countries than in Western countries.



CDNs effectively manage high volumes of traffic

## Surge Traffic & Video-on-Demand Content

As mentioned earlier, CDNs can help to manage high volumes of traffic. As the world's most populous country, it is not difficult to foresee websites in China experiencing huge surges in user traffic.

will be meeting the growing appetite for on-demand video content and online streaming. As per a [recent Nielsen study](#), China is a global leader in the growth of video-on-demand (VOD) content, including downloaded or streamed content.

A major priority for content providers

**“China is at the forefront of this digital trend, with more than 4 out of 5 respondents (84%) saying that they watch some type of VOD programming. This is far greater than the number of global respondents (65%), across 61 countries that said the same.” Nielsen<sup>2</sup>**



Alibaba Cloud  
 expanding globally  
 with 30+ nodes

## Chinese Companies Going Abroad

Chinese companies are leveraging CDNs abroad to cater to the growing number of Chinese consumers accessing content overseas. Chinese-language travel booking platforms, video streaming sites, restaurant review sites, social media, and mapping services will need to rely on overseas content delivery networks to deliver content to their

international user base.

This is one of the motivations behind Alibaba Cloud's own international expansion of cloud services. Alibaba Cloud currently operates over 30 nodes around the world and is opening a string of new overseas data centers.



**As content delivery networks can drastically improve your ability to deliver content to users in China, applying for a Chinese ICP license to access China CDN services is a vital investment for your business to make.**

## References

1. China Briefing 2016  
<http://www.china-briefing.com/news/2016/07/12/weathering-chinas-cloud-computing-regulations.html>

2. Nielson 2016  
<http://www.nielson.com/cn/en/insights/news/2016/china-leading-the-advance-of-on-demand-video.html>