

Mirror Hosting: Improving Website Performance in China



CDS Global Cloud

<https://www.cdsglobalcloud.com>

Centralized Web Hosting

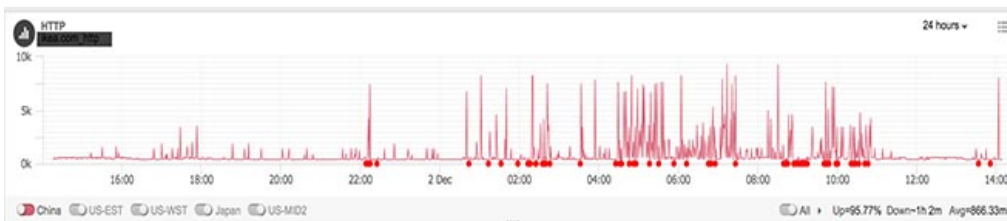
International companies commonly translate their websites into multiple languages and adopt regional URLs while hosting all the URLs on a central server. Not only is this an efficient use of resources, but it also allows for integration with ERP, logistic and CRM systems, as well as accounting and finance systems. Integration of such multiple systems requires centralized management, constant and real time communications between data bases, third party tools and/or an integrated development environment. Integrating all of these processes while hosting independent websites in multiple regions or countries and depending on data merges for integration would not only be costly, but time-consuming.

The downsides of a centralized server are latency and packet loss. In the majority of the world these issues are minor concerns, however, for those companies doing business in China latency is a nightmare.

The Challenges of Mainland China

For outside Internet traffic download speeds in mainland China are a major challenge. While users in other countries may experience minor delays due to geographical distances, users in China often experience significant delays and page failure when accessing foreign based websites.

Below are a few examples of actual data transmission showing page loading times in China from data centers not located in mainland China. The red dots indicate instances in which the page failed to load.



Commonly reported problems include:

- Access speed from China to the host is so slow that searches often result in: "Server Time Out," "Cannot Open Page," or "Domain Name Does Not Exist."
- Packet loss of 30% or greater
- Sites blocked from inside China for unknown reasons and without notification or any possibility of arbitration
- Frequent changing of the primary IP address to circumvent site blockage
- Foreign IP addresses do not rank high enough to appear in searches by Chinese search engines

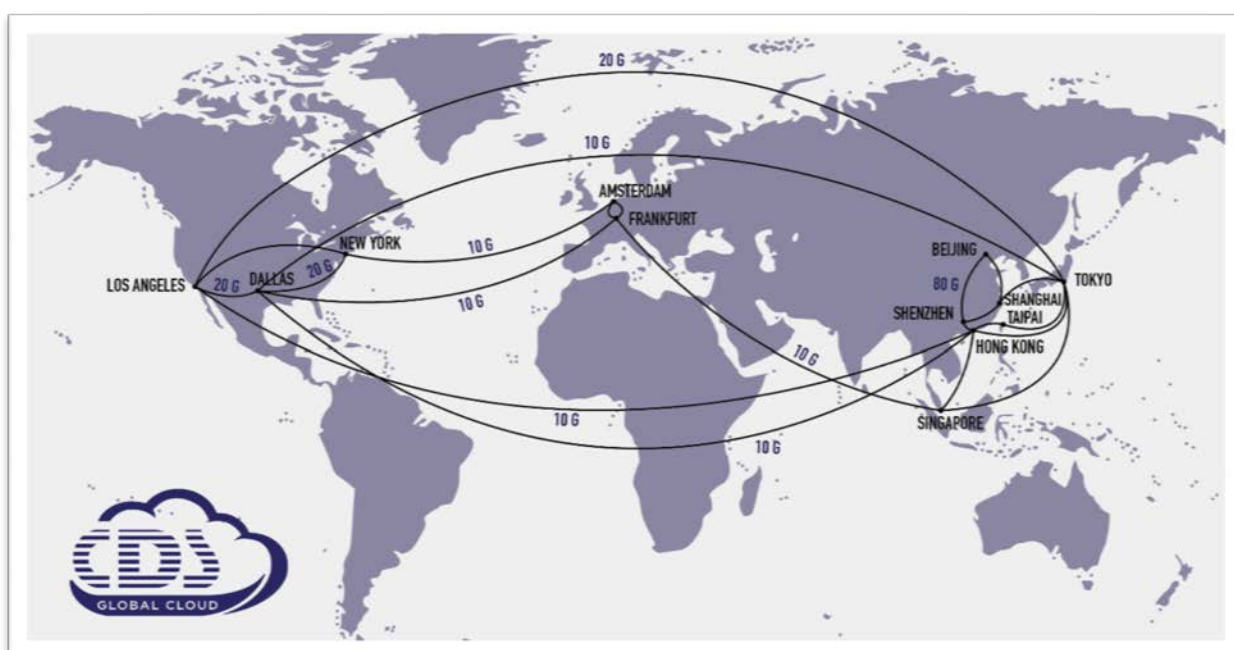
Request a free evaluation of your website's performance in China by emailing Sales@CDSGlobalCloud.com.

CDS' Solution:

The CDS Solution supports central server architecture by routing Internet traffic into mainland China through the GFW via CDS' dedicated GPN.

CDS' data centers throughout China, the United States, Japan, the Netherlands, the UAE, Germany, Hong Kong, and Taiwan are interconnected via our fiber optic Global Private Network (GPN). *This same GPN extends through the firewall into Mainland China - allowing a dedicated, Layer 2 Internet connection between China and the rest of the world.*

This Global Private Network + Global Interconnected Cloud (GPN+GIC) architecture provides a unique and straightforward solution for companies utilizing a centralized hosting model.



The Results:

1. Future site blockage is prevented - *permanently*
2. Page loading time improves to 3-4 second per page
3. SEO ranking by Chinese search engines such as Baidu is significantly improved
4. There is no disruption to the central host
5. Third party supporting systems such as Salesforce, Pardot, or Google Analytics are not affected
6. There is no security risk to the central host

Implementation is Fast and Easy

CDS:

Sets up a 1+1 Proxy/Cache server in CDS Beijing

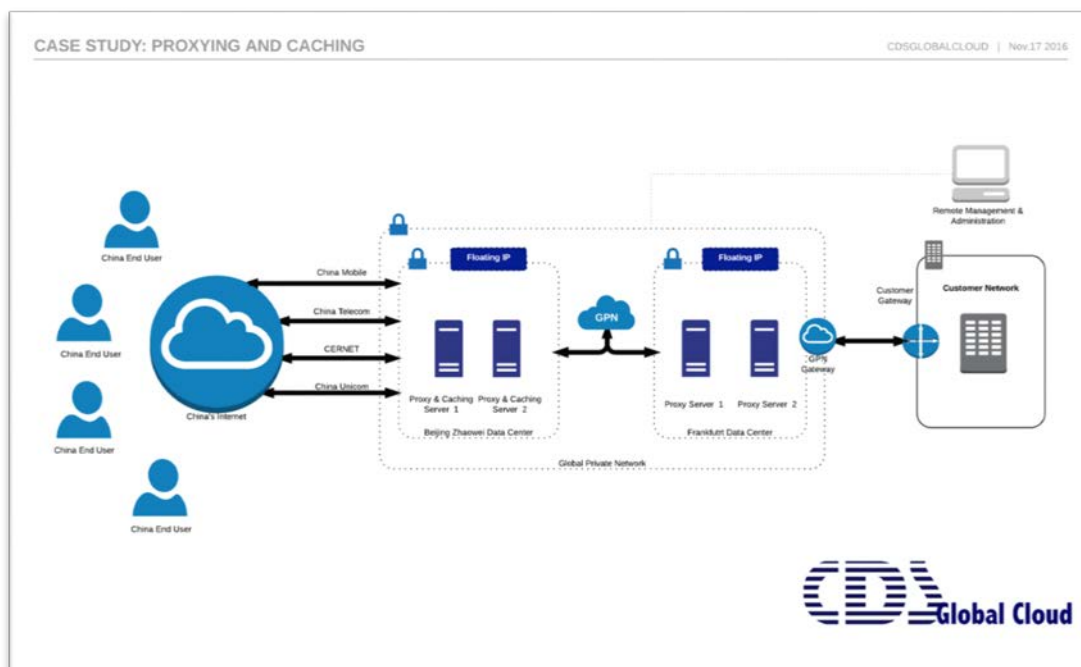
Sets up a 1+1 Proxy/Landing server in the CDS data center nearest to the client location

(Contact Sales@CDSGlobalCloud.com or visit CDSGlobalCloud.com to find the location closest to you)

Establishes a GPN connection between the server locations

The client:

Configures a DNS record for their Chinese domain name and points it to CDS' Beijing server IP address



Summary

- All Internet traffic requests from end users in China are directed to CDS servers in Beijing
- Chinese search engines such as Baidu recognize the Beijing IP address and consider the website as domestic
- Commonly accessed static content is stored on the cache server in Beijing with users obtaining content from the cache server. Full Page Load time is typically within 20ms (13ms -14ms in the reference case shown below).
- When the requested content is not available on the Beijing cache server, or in the case of dynamic content such as form requests, the request is sent via GPN to the landing server and redirected to the client's hosting server over public Internet. Or, if customer desires, via fiber to customer's data center.

The connection between the central host and CRM systems such as Salesforce and Pardot **remain the same and function the same.**

Proven Results

Sciex, a U.S. based Fortune 500 company, suffered the same issues as described above: slow response, blocked websites, and data loss. Sciex was reluctant to move their web content to China because of an integrated CRM system and cost considerations.

Utilizing the network structure outlined above, the Sciex.com.cn DNS server was redirected to the CDS Beijing IP address.

The solution went online Sept. 1, 2016. The improvement, as seen below, was substantial.

- **Up time of 100%**
- **Average Page Loading time of 13.42ms**



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