



## How do Name Servers (NS) and DNS operate in China

The Chinese internet runs considerably faster than most other areas of the world. G4 and G5 networks are available nationally, and most locations offer free public internet. The exception in China is that Internet access is widely available and service is fast.

The Chinese internet is built for efficiency. It must have over 1.2 billion users.

Chinese name services have been designed and built as a national service in China. This is critical to a fast national internet service.

DNS lookups for domain names purchased in China respond within a few milliseconds(ms).

We strongly recommend purchasing domains for the Chinese market from a Chinese supplier. Many companies claim to be domain suppliers for the Chinese market, but do not utilise Chinese DNS.

Additionally, companies selling domains for the Chinese market recommend using a domain with the 'CN' TLD. Chinese TLDs (e.g. CN, NET.CN, COM.CN, GOV.CN, etc.) can only be used by Chinese companies since 2022 (like UK, CO.uk, GOV.UK, etc can only be used by UK companies)

There is little point in having a domain in the Chinese market unless it uses Chinese DNS servers, as they are often inaccessible within China.

International DNS (Domain Name Server) records can take two to three attempts for a browser in China to locate your website.

Access to China has been operating in China for over 20 years. We are domain suppliers that use Chinese DNS.

### A few terms for clarification

As you may be aware, there are two main parts to a domain name you need to consider when making a purchase: -

- TLD (Top Level Domain) is the part of the domain name that comes after the "DOT", e.g. **.com**, **.net**, **etc.**

- Domain is that which comes before the TLD. ", e.g., "mydomain" in mydomain.com
- The Domain name is the domain + TLD., e.g., mydomain.com

NS vs DNS;

- Name server (NS): A server available on the Internet hosting the Domain Names Service (DNS)
- Domain Name Service (DNS) – Database containing your DNS records, e.g., the IP address of your website.

Often, NS and DNS are used interchangeably. In China, many local NSs operate across multiple locations and maintain copies of the DNS databases for all domains purchased in China. This helps considerably by keeping response times fast, given the large number of internet users across a vast country.

### **Need a Chinese Name Server**

There are many NSs in China.

If you are running servers in China and need to set up access to a China DNS provider, we recommend this service (we have used it for over 18 years without issues).

114DNS – master NS 114.114.114.114 and secondary NS 114.114.115.115

Do not use overseas NS; for example,

Master 8.8.8.8 and secondary DNS 8.8.4.4 responses are slower in China

or China's national DNS service.

Master 1.2.4.8 with secondary DNS 210.2.4.8. The national China DNS servers retain DNS information for only a few seconds before deleting it.

### **What is happening with your Domain Name in China?**

The DNS lookup times for overseas-purchased domain names are too slow for the internet in China. An overseas DNS lookup takes between 300ms and 2,000ms

International DNS (Domain Name Server) records can take two to three attempts for a browser in China to locate your website.

Often, Chinese users give up and stop trying. It does not help that the local ISP displays its own website instead of your company's when it cannot resolve the DNS within 80ms.

The issue is caused by an overseas Name Service (NS) for the domain responding too slowly from outside China. After two to three attempts, the Chinese internet finds your DNS

records, and everything works as usual until the DNS record times out and the process restarts.

### **Why is it happening with your Domain Name in China**

To maintain this high-performance level, mobile and cable networks allow only a short period for a domain name to be resolved. If it is not found, it either displays a “website not found” error or a promotion page for another service (which is confusing for consumers, who typically move on).

Overseas domain name look-up time is slow, taking four to five times longer than a locally purchased domain name.

Once a domain name is found, the information is only retained for about 2 hours before it must be requested again from overseas.

### **Can an Overseas company or person use the Chinese National Names service in China?**

The rules governing the processing of domain names in China were revised in 2022.

Domains purchased in China can be managed through the Chinese National Domain Names service.

An overseas person or business can purchase a domain in China and utilise the national DNS services, helping ensure that your domain name remains accessible.

The Chinese national service also gives fast response times to international NS. You do not see DNS response issues worldwide.

The domain DNS records can point to websites and other resources outside China.

The Domain registration process is required once for the first domain. After that, all domains purchased are linked to your registration. Registration requires a copy of your passport ID and a copy of your name company certificate. Once complete, certificates of domain ownership are issued for each domain purchased.

There are two links to follow up on for more information: [Access to China Domain Name services](#) and [Domain name for the Chinese market](#).