



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

China's internet is engineered for speed at a national scale — and fast DNS resolution is a core part of that design.

Overseas DNS lookups can be too slow for Chinese networks, causing “website not found” or requiring multiple attempts before a site loads.



Foundation Being seen in China articles

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Focus: DNS performance + China access

Audience: overseas businesses

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Why DNS matters in China

The Chinese internet runs considerably faster than most other parts of the world. 4G and 5G networks are available nationally, and internet access is widely available.

China's national network is built for efficiency and must support 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 can respond within a few milliseconds (ms).

Practical takeaway: If your website is aimed at users in China, use Chinese name services for your DNS records to reduce “website not found” errors and improve reliability.

Important notes about domains for China

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

Some suppliers also recommend using a domain with the `.cn` TLD. However, since June 2019, Chinese TLDs (e.g., `.cn`, `.net.cn`, `.com.cn`, `.gov.cn`) can only be used by Chinese companies and citizens.

There is little point in having a “China market” domain if it does not use Chinese DNS servers, as overseas DNS is often inaccessible or too slow within China.

A few terms for clarification

There are two main parts to a domain name you need to consider when making a purchase:

- **TLD (Top Level Domain):** the part after the dot, e.g. `.com`, `.net`.
- **Domain:** the part 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 Name Service (DNS).
- **Domain Name Service (DNS):** the 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 DNS databases for domains purchased in China. This helps keep response times fast across a vast country.



Quick checklist

Use this checklist if users in China report “website not found”.

- Are your DNS records hosted on overseas name servers?
- Do DNS lookups take more than **~80–100ms** from China?
- Do users report the site works only after 2–3 attempts?
- Is DNS cached for a short period (e.g., ~2 hours) before the issue reappears?
- Have you considered purchasing a domain in China to access Chinese national DNS services?
- Have you tested using a known reliable China DNS provider such as **114DNS**?

Note: A successful ping does not prove DNS is healthy. DNS can fail or time out even when the server is online.

Need help?

If you'd like help diagnosing DNS performance from China or setting up Chinese name services, contact support@accesstochina.com

Need a Chinese Name Server

There are many name services 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 China-facing performance — for example:

- Google DNS: `8.8.8.8` / `8.8.4.4` responses are slower in China.
- China “national DNS” (commonly cited): `1.2.4.8` / `210.2.4.8` retains DNS information for only a few seconds before deleting it.

What is happening with your domain name in China?

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

International DNS records can take two to three attempts for a browser in China to locate your website. Often, users give up and stop trying.

It does not help that the local ISP may display its own page instead of your company's site when it cannot resolve the DNS within around **80ms**.

The issue is caused by an overseas Name Service (NS) 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?

To maintain high performance, mobile and cable networks allow only a short time for a domain name to be resolved. If it is not found quickly, the network displays a “website not found” error or a promotion page for another service.

Overseas domain lookups are typically four to five times slower than locally purchased domains. Once a domain is found, the information is often retained for about **2 hours** before it must be requested again from overseas.

Can an overseas company use Chinese national name services?

The rules governing the processing of domain names in China were revised in June 2019.

Domains purchased in China can be managed through Chinese national domain name services. 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 DNS records can point to websites and resources outside China.

Registration requirements

Registration is required once for the first domain. After that, all domains purchased are linked to your registration. Registration typically requires:

- A copy of passport ID
- A copy of your company certificate

Once complete, certificates of domain ownership are issued for each domain purchased.

Related: Domain name for the Chinese market

Access to China services: Access to China Domain Name services

 Test a web page from China

 Download "Chinese name server" paper (PDF)

Access to China — how Chinese name servers and DNS affect website visibility and performance.

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