## What is a DNS NS record?

NS stands for ‘nameserver,’ and the nameserver record indicates which [DNS](https://www.cloudflare.com/learning/dns/what-is-dns/) server is authoritative for that [domain](https://www.cloudflare.com/learning/dns/glossary/what-is-a-domain-name/) (i.e. which server contains the actual [DNS records](https://www.cloudflare.com/learning/dns/dns-records/)). Basically, NS records tell the Internet where to go to find out a domain's [IP address](https://www.cloudflare.com/learning/dns/glossary/what-is-my-ip-address/). A domain often has multiple NS records which can indicate [primary and secondary nameservers](https://www.cloudflare.com/learning/dns/glossary/primary-secondary-dns/) for that domain. Without properly configured NS records, users will be unable to load a website or application.

Here is an example of an NS record:

|  |  |  |  |
| --- | --- | --- | --- |
| **example.com** | **record type:** | **value:** | **TTL** |
| @ | NS | ns1.exampleserver.com | 21600 |

Note that NS records can never point to a [canonical name (CNAME) record](https://www.cloudflare.com/learning/dns/dns-records/dns-cname-record/).

## **What is a nameserver?**

A nameserver is a type of DNS server. It is the server that stores all DNS records for a domain, including [A records](https://www.cloudflare.com/learning/dns/dns-records/dns-a-record/), [MX records](https://www.cloudflare.com/learning/dns/dns-records/dns-mx-record/), or CNAME records.

Almost all domains rely on multiple nameservers to increase reliability: if one nameserver goes down or is unavailable, DNS queries can go to another one. Typically there is one primary nameserver and several secondary nameservers, which store exact copies of the DNS records in the primary server. Updating the primary nameserver will trigger an update of the secondary nameservers as well.

When multiple nameservers are used (as in most cases), NS records should list more than one server. Learn more about [DNS servers](https://www.cloudflare.com/learning/dns/dns-server-types/).

## **When should NS records be updated or changed?**

Domain administrators should update their NS records when they need to change their domain's nameservers. For instance, some cloud providers provide nameservers and require their customers to point to them.

Admins may also wish to update their NS records if they want a subdomain to use different nameservers. In the example above, the nameserver for example.com is ns1.exampleserver.com. If the example.com admin wanted blog.example.com to resolve via a ns2.exampleserver.com instead, they could set this up by updating the NS record.

When NS records are updated, it may take several hours for the changes to be replicated throughout the DNS.