**DNS basics**

When using Google Cloud services, you might occasionally need to change your domain's [DNS](https://support.google.com/a/answer/#A) settings. Here are some common terms you might encounter, along with how they apply to Google services. See also [Domain name basics](https://support.google.com/a/answer/2573637).

* [DNS](https://support.google.com/a/answer/#A)
* [MX Record](https://support.google.com/a/answer/#J)
* [TXT Record](https://support.google.com/a/answer/#T)
* [CNAME Record](https://support.google.com/a/answer/#K)
* [A Record](https://support.google.com/a/answer/#H)
* [NS Record](https://support.google.com/a/answer/#I)
* [Time To Live (TTL)](https://support.google.com/a/answer/#TTL)
* [Uniform Resource Locator (URL)](https://support.google.com/a/answer/#U)
* [Example DNS configuration](https://support.google.com/a/answer/#E)

**DNS**

DNS stands for *Domain Name System*. This system is essentially the phone book of the Web that organizes and identifies domains. While a phone book translates a name like "Acme Pizza" into the correct phone number to call, the DNS translates a web address like "www.google.com" into the physical IP address—such as"74.125.19.147"—of the computer hosting that site (in this case, the Google homepage).

When using Google Cloud services, you periodically need to modify your DNS settings to set up various tools and services. You do this by changing various types of DNS records. You change your domain's MX records, for example, to direct email for your G Suite domain to Google's mail servers.

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**MX Record**

Mail Exchange (MX) records direct a domain's email to the servers hosting the domain's user accounts. To set up Gmail with G Suite, you need to point your MX records to Google mail servers. Multiple MX records can be defined for a domain, each with a different priority. If mail can't be delivered using the highest priority record, the second priority record is used, and so on.

To configure your domain's MX records to point to Google servers, see [About MX records](https://support.google.com/a/answer/33352).

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**TXT Record**

A TXT record is a DNS record that provides text information to sources outside your domain, that can be used for a number of arbitrary purposes. The record's value can be either human- or machine-readable text. With Google Cloud services, TXT records are used to [verify domain ownership](https://support.google.com/a/answer/60216) and to implement email security measures such as [SPF](https://support.google.com/a/answer/33786), [DKIM](https://support.google.com/a/answer/174124), and [DMARC](https://support.google.com/a/answer/2466580).

To add and modify TXT records for your domain, see [About TXT records](https://support.google.com/a/answer/2716800).

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**CNAME Record**

A CNAME or Canonical Name record links an alias name to another true or *canonical* domain name. For instance, *www.example.com* might link to *example.com*. With Google Cloud services, you use CNAME records to customize a G Suite service address or the address of a web site built with Google Sites.

To add and modify CNAME records for your domain, see [About CNAME records](https://support.google.com/a/answer/112037).

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**A Record**

An A or Address record (also known as a host record) links a domain to the physical IP address of a computer hosting that domain's services. With Google Cloud services, you can add an A record to [enable your "naked" domain address](https://support.google.com/a/answer/2518373).

To add and modify A records for your domain, see [About A records](https://support.google.com/a/answer/2576578).

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**NS Record**

Name server (NS) records determine which servers will communicate DNS information for a domain. Generally, you have primary and secondary name server records for your domain. When using Google Cloud services, you may configure NS records that point to Google servers for DNS queries.

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**Time To Live (TTL)**

The TTL is a value in a DNS record that determines the number of seconds before subsequent changes to the record go into effect. Each of your domain's DNS records, such as an MX record, CNAME record, and so on, has a TTL value. A record's current TTL determines how long it will take any change you make now to go into effect. Changes to a record that has a TTL of 86400 seconds, for example, will take up to 24 hours to go into effect.

Note that changing a record's TTL affects how long it will take any *subsequent* change to happen. We recommend setting a TTL value of 3600, which tells servers across the Internet to check every hour for updates to the record. The shorter TTL will only take effect after the prior period expires. This means that next time you update the record, your change will take up to one hour to go into effect. To make subsequent changes happen even more quickly—for example, if you think you might want to quickly revert a change—you can set a shorter TTL, such as 300 seconds (5 minutes). Once the records are configured correctly, we recommend setting a TTL value of 86400, which tells servers across the Internet to check every 24 hours for updates to the record.

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**Uniform Resource Locator (URL)**

A URL is the web address of a resource on the Internet. This is the address you type in a browser to visit a particular web site. For example, the URL of the G Suite Help Center is http://support.google.com/a.