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Differences Among A, CNAME, ALIAS, and URL records

What are the differences among A, CNAME, ALIAS, and URL records?



A, CNAME, ALIAS, and URL records are all possible solutions to point a host name ("name") to your site. However, they have small differences that affect how the client reaches your site.

A and CNAME records are standard DNS records. ALIAS and URL records are custom DNS records provided by DNSimple's [DNS hosting](#). Both of them are translated internally into A records to ensure compatibility with the DNS protocol.

Understanding the differences



These are the main differences:

- The **A** record maps a name to one or more IP addresses when the IP are known and stable.
- The **CNAME** record maps a name to another name. It should only be used when there are no other records on that name.
- The **ALIAS** record maps a name to another name, but can coexist with other records on that name.
- The **URL** record redirects the name to the target name using the HTTP 301 status code.

Important rules:

- The **A**, **CNAME**, and **ALIAS** records cause a name to resolve to an IP. Conversely, the **URL** record redirects the name to a destination. The **URL** record is a simple and effective way to apply a redirect for one name to another name, for example redirecting `www.example.com` to `example.com`.
- The **A** name must resolve to an IP. The **CNAME** and **ALIAS** records must point to a name.

Which one to use



Understanding the [difference between A name and CNAME records](#) will help you decide.

General rules:

- Use an **A** record if you manage which IP addresses are assigned to a particular machine, or if the IP are fixed (this is the most common case).
- Use a **CNAME** record if you want to alias one name to another name, and you don't need other records (such as **MX** records for emails) for the same name.
- Use an **ALIAS** record if you're trying to alias the root domain (apex zone), or if you need other records for the same name.
- Use the **URL** record if you want the name to redirect (change address) instead of resolving to a destination.

You should never use a CNAME record for your root domain name (e.g. example.com).

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