DNS

Overview

Domain Name System (DNS) allows a user to give servers host names instead of ip addresses. Each time a domain name (www.google.com) is given in an address instead on an ip, the browser sends a query to the set DNS server (1.1.1.1 or many others) and it performs a lookup and returns the associated ip address for the domain name. The ip is then used by the browser to connect to the server.

Records

DNS records are what is used to map the domain name to an IP address. There are several types of DNS record:

**A**

An A DNS record points a domain name directly to an IPv4 address. For example:

www.example.com A 192.312.123.154

**C-NAME**

A C-NAME DNS record points a domain name to another domain name. For example:

www.example.com CNAME blog.example.com

A common use of CNAME records is to allow www. to be used along with simply the domain name. This is done by creating an A-Record for the domain name to the IP, and creating a CNAME record for the www. address to the original domain name. For example:

www.example.com CNAME example.com

example.com A 123.452.123.321

There are a couple notes with CNAME records:

* CNAME records cannot co-exist with other records of the same name
* CNAME records shouldn’t point to another CNAME records, for performance they should be as close to the A Records as possible

**NS**

A NS DNS record delegates a subdomain to a set of name servers, allowing a user to find out about the hosts in the zone of the domain. It points from a domain name to a name server, for example:

example.com NS ns.bar.com