



An Introduction to DNS

The Domain Name System, or DNS, is the means by which computers connected to the Internet get information about each other. The individual pieces of information are known as records; each record is of a certain type. Computers look up records for a domain by asking the name server for the domain about the records relevant to that domain.

IP addresses are the numbers which identify computers to each other.

DNS record types: –

A Records

These contain a mapping from a name to an IP address. For example, there is an A record set up for "microsoft.co.uk" which points from "www" to "80.176.211.43". An A record does not in itself mean that any particular service is available from the computer at that address; it just translates the name to the IP address.

CNAME Records

These contain a mapping from one name (known as an alias) to another name (known as a CNAME, or canonical name). When a computer looks up records for the alias, it is given the records for the cname instead.

For example, if we set up a CNAME record for "microsoft.co.uk" with alias "web" and cname "www", then all queries for "web.microsoft.co.uk" would be given the information for "www.microsoft.co.uk". A cname can be a name within the same domain, as in our example, or it can be a full name, like "www.google.com."; the dot on the end shows that this is a full name.

MX Records

These say where email for a domain is to be delivered. A domain can have several MX records; each one has a priority from 0 to 100. Email is delivered to the one with the lowest number first, and to any others only if the first one cannot accept it. For example, there is an MX record for "bbc.co.uk" pointing to "mail.bbc.co.uk", with priority 10. This causes our email to be delivered to "mail.bbc.co.uk".