

What Is DNS

DNS stands for Domain Name System. Think of the DNS as the phonebook of the Internet. You and your clients/visitors know websites by their URL or Domain Name. The Internet only knows websites by their numerical address or IP. When you type a domain name in your browser and submit it, your computer automatically uses DNS to look up its numerical IP address and directs you to the site you are trying to visit.

For instance, using DNS, the domain name westhost.com might translate to 206.130.96.50.

Let's go into some detail to help better understand how this works. First, we need to define some terms.

IP Address: Internet Protocol Addresses are unique numbers that allow devices to locate information on a network. Every network device has an IP address, and sometimes more than one.

Domain Names: These are easy to remember names like URLs and e-mail addresses that are associated with one or more IP addresses. Since a web page is defined by its URL, the page can move to a different IP address without affecting visitors [if the move is performed correctly].

The Internet simply wouldn't work without DNS. For most of us, remembering a long numerical address for every website we want to visit would be very difficult. Because of DNS, you don't ever have to remember the numerical addresses of websites.

Most Internet Service Providers (ISPs) have their own DNS servers that store a list of all the IP addresses and matching domains that have propagated to their network, plus a cache of IP addresses and matching domains for recently accessed servers outside the network. Each computer on each network needs to know the location of only one name server.

DNS is also used to find out where to deliver email for a particular domain.

Let's continue by breaking down each section of a Domain Name.

TOP-LEVEL DOMAINS or TLDs are the last part of a domain name. These are the letters or short abbreviations after the last period. Some examples of common TLDs are: .com .net .org .biz .edu .co.uk

SECOND-LEVEL DOMAINS are the primary customizable part of a domain name as registered by a client. Some examples are: westhost or google, or wikipedia.

Combine the TLD and Second-level and you get westhost.com, google.com, and wikipedia.com.

THIRD-LEVEL DOMAINS are also known as subdomains and CNAMEs. In a full URL path, the subdomain is written before the domain name. Some common examples are: www , mail , or cpanel.

Add the TLD and Second-Level to the Third-Level and you get: www.wikipedia.com , mail.google.com , and cpanel.yourdomain.com.

Let examine the domain <http://cp.westhost.com/>

- westhost.com is the domain name.
- COM is the Top Level Domain or TLD
- westhost is a subdivision of COM, and represents the Second-Level Domain.
- cp is a subdomain or Third-Level Domain or CNAME.