

Domain Names

Written by Administrator

Saturday, 07 July 2007 09:54 - Last Updated Friday, 02 January 2009 10:47

The most basic functionality of a **domain name** is to provide symbolic representations, i.e., recognizable names, to mostly numerically [addressed](#)

[Internet](#)

resources. This abstraction allows any resource (e.g., website) to be moved to a different physical location in the address topology of the network, globally or locally in an

[intranet](#)

, in effect changing the IP address. This translation from domain names to IP addresses (and vice versa) is accomplished with the global facilities of Domain Name System (DNS).

By allowing the use of unique alphabetical addresses instead of numeric ones, domain names allow Internet users to more easily find and communicate with web sites and any other IP-based communications services. The flexibility of the domain name system allows multiple IP addresses to be assigned to a single domain name, or multiple domain names to be services from a single IP address. This means that one server may have multiple roles (such as hosting multiple independent websites), or that one role can be spread among many servers. One IP address can also be assigned to several servers, as used in [anycast](#) networking.

The following example illustrates the difference between a [URL](#) (Uniform Resource Locator) and a domain name:

URL: `http://www.example.net/index.html` Domain name: `www.example.net` Registered domain name: `example.net`