

# The Web

Lots of different ways to use the internet, we all know that. But I want to cover one of the more prevalent ways that people access the internet, through the web. All websites can be accessed through the web. Websites are basically text documents that we format with HTML or HyperText Markup Language. It's a coding language used by web browsers. Web pages are generally made up of very basic components. They contain multimedia content like text, images, audio and video. When you want to navigate to a website, you would type in URL like, `www.reddit.com`. A URL which stands for Uniform Resource Locator is just a web address similar to a home address. Notice the `www` in the URL, it stands for World Wide Web. The second portion, `reddit.com` is something we call a domain name. Anyone can register a domain name, it's just our website name. Once a name is taken it will be registered to ICANN, the Internet Corporation for Assigned Names and Numbers. Once a domain name is registered with, ICANN, no one else can take that name unless it becomes available again. The last part of the URL, in this case is `dot com`. But you can also use different domain endings like `reddit.net` or `reddit.org`. The different domain name endings are standards for what type of website it might be. So a domain that ends in `.edu` is mainly used for educational institutions. Remember how computers use IP addresses to find another computer. Well, you can do the same if you wanted to find a computer on the internet. Let's go ahead and type `172.217.6.46` into a web browser and hit enter. Wait a minute, what happened? How come we're at Google's homepage? It turns out the IP address `172.217.6.46` maps to Google's homepage through a critical web protocol Domain Name System or DNS. DNS acts like our internet directory. And let's just use human readable way words to map to an IP address. The computer doesn't know what `Google.com` is. It only knows how to get to an IP address with DNS. It's able to map google's IP address with `Google.com`. Every time you go on a website, your computer is performing a DNS look up to find the IP address of the website name you typed in. This trick can be a good first step in diagnosing certain kinds of DNS issues. So if you're able to access a website by its IP address but not its human readable domain name, then there's a good bet that there's probably a problem somewhere in the DNS configuration your network is using. Understanding IP addresses can come in handy in all sorts of other situations you might encounter as an IT support specialist. The source of internet requests are usually identified by IP addresses in server logs. Many pieces of IT infrastructure need to have some kind of IP address configuration applied to them in order to work. DNS is a huge system and we'll be discussing more about it later. Now that you understand the basics of how the internet works. I'll sign off for now, and leave you in the very capable hands of my friend and colleague Jeone Spicuzza. I'll see you again in course to the bits and bytes of computer networking. But in the next lessons, Jeone is going to talk about the incredible boom of the internet age.

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