DNS

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Computers use numbers (IP addresses) to identify each other on a network, while humans prefer names. The Domain Name System (DNS) bridges this gap by converting domain names (like yahoo.com) into IP addresses that computers can understand.

When you type a domain name into your browser, if your computer or operating system doesn't have the IP address cached, it sends a query to a resolver server (usually your ISP). If the resolver doesn't have it, it asks the root server, which then directs it to the top-level domain (TLD) server. The TLD server then points the resolver to the authoritative name server, which finally provides the correct IP address. Once the resolver gets the IP address, it sends it to your computer and caches it for future use.