Domains

Digital Moran
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What is A Domain Name?

A domain name is a unique name that identifies a website on the internet. It consists of a website name and a domain name extension, such as .com, .net, .org, etc. For example, google.com is a domain name.

A domain name is part of a URL (Uniform Resource Locator), which is the complete web address that directs visitors to a specific page on a website. A domain name helps users find your site easily instead of using its internet protocol (IP) address, which is a series of numbers that identifies a device on the internet.
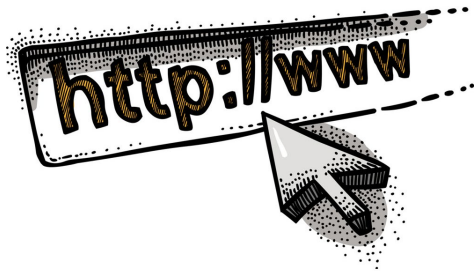
Who Controls Domains?

Domains are managed globally by the **Internet Corporation for Assigned Names and Numbers (ICANN)**. ICANN works with registries (organizations that manage specific domain extensions) and registrars (companies authorized to sell domain names) to oversee the domain name system.

When you purchase a domain, your information is stored in a public directory called WHOIS, ensuring transparency and ownership verification.

What is A Subdomain?

A subdomain is a domain name that is part of a larger domain name. It is usually separated by a dot from the main domain name. For example, in the domain name blog.domain.com, blog is a subdomain of domain.com.

A subdomain can be used to create a separate website or section within a website, such as a blog, a forum, a store, etc. A subdomain can also have its own subdomains, such as news.blog.domain.com or shop.store.domain.com.

Types of Domains

There are different types of domain names based on their hierarchy and purpose. The most common types are:

1. **Top-Level Domains (TLDs):** These are the highest level of domain names in the internet hierarchy. They are the domain name extensions that appear at the end of a domain name, such as .com, .net, .org, etc. There are over 1,500 TLDs available today.

2. **Country Code Top-Level Domains** (ccTLDs): These are TLDs that are specific to a country or a geographic region, such as .co.ke, .ug, .tz, etc. They are usually used by websites that target a local audience or want to show their origin.

3. **Generic Top-Level Domains (gTLDs):** These are TLDs that are not associated with any country or region, but rather with a generic category or purpose, such as .biz, .info, .edu, etc. They are usually used by websites that want to indicate their nature or function.
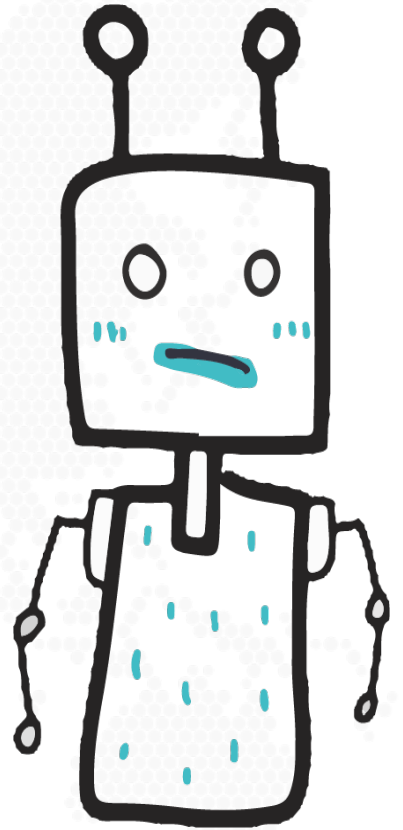
What is HTTP?

HTTP stands for **Hypertext Transfer Protocol**. It is the foundation of communication on the internet and allows web browsers and servers to exchange information. When you visit a website, your browser sends a request to the website's server using HTTP, and the server responds by sending the content back to your browser. This process allows you to see and interact with websites.

HTTP is not secure because it transmits data between the browser and server in plain text. This means that sensitive information, such as login credentials, personal data, or payment details, can be intercepted and read by attackers during transmission.

What is HTTPS?

HTTPS stands for **Hypertext Transfer Protocol Secure**. It is a more secure version of HTTP. While HTTP sends information as plain text, HTTPS encrypts the data exchanged between your browser and the server. This ensures that sensitive information like passwords, credit card details, or personal data cannot be intercepted by hackers.

To use HTTPS, websites need an **SSL Certificate** (Secure Sockets Layer). SSL certificates authenticate a website's identity and create an encrypted connection. They can be purchased from certificate providers or obtained for free through services like **Let's Encrypt**. Websites with HTTPS are easily recognized by the padlock icon in the browser's address bar, giving users confidence that their data is secure.

> Secure connection

🔒 https:// www.securesites.com ✕

> Unsecured connection

📄 http:// www.unsecuredsite.com ✕

Why is HTTPS Important?

1. **Data Security**: It protects sensitive information from being intercepted.
2. **Trust**: Visitors are more likely to trust and interact with secure websites.
3. **SEO Benefits**: Search engines like Google rank HTTPS websites higher than HTTP ones.
4. **Compliance**: Many regulations require websites to use HTTPS for secure data handling.