Search docs

UPDATE YOUR ACCOUNT

SHARING YOUR PRODUCTS

USING ORGANIZATIONS

DOMAIN NAMES

How Do Domain Names Work?

Change Domain Settings

Register a Domain

Renew a Domain

Transfer a Domain to Gandi

Transfer a Domain to Another Registrar

Change the Owner of a Domain

Operations for Advanced Users

Domain Name Services

Common Questions about Domain

How Do Domain Names Work?

- How a Browser Displays a Website
- Domain Name
  - Extension or TLD
  - Mid-level domain
  - Sub-domain
- IP Address
- Server
- Web Host
- Nameserver
- SSL Certificate
- Content
- Email
- Conclusion

"Visiting a website" is something that most people do every day. It is a simple phrase, but in reality it is multi-step process that involves many different and necessary pieces. If you have never built or managed a website before, you may not be aware of all the necessary pieces that are a part of this process.

How a Browser Displays a Website

The following steps describe what happens when you enter a domain name into your browser.

Step One	You type a **domain name** into the address bar of your browser.
Step Two	Your browser figures out what **IP address** is associated with that domain by talking to a series of **nameservers**.
Step Three	Your browser sends a message to the IP address it received, which is then received by the **server** for the website. A server is often managed by a **web host**.
Step Four	Your computer and the server establish a secure line of communication using an **SSL Certificate.**
Step Five	The server then sends the **content** of the website to your browser.
Step Six	Your browser displays the content of the website on your screen.

Each of the bold words above represent an important piece of the functioning of a website, and are explained in the following sections.

Domain Name

When visiting a website, you often start by typing a domain into your address bar. You may have typed "gandi.net" to get to Gandi's website.

"Gandi.net" is a domain name. A domain is made up of several different parts.

Gandi.net's core business is acting as a registrar, or a business which registers domain names on behalf of its clients.

Extension or TLD

The extension (also referred to as TLD or top level domain) of a domain name refers to the letters that come after the dot in a domain name. In gandi.net the extension is ".net". Some other common extensions include .com, .org, .gov, and .edu. There are also country based extensions, such as .fr for France or .br for Brazil. There are also a large variety of general extensions which focus on some particular topic, such as .dev, family, or .app.

When you choose an extension you are communicating something about your website to your audience. For example, for a company website you might choose .com. If you are a business in France you may choose .fr. If you are a developer you may choose a website ending in .dev. The extension is an important way for you to categorize your own website.

In order to offer registrations in a particular extension, a registrar (like Gandi) must become certified with the registry which manages that extension. For this reason, different registrars will have different extensions on offer. Gandi is proud to offer domain names in more than 700 different extensions.

Mid-level domain

The mid-level domain refers to the collection of letters (usually a word) which forms the middle of your domain name. In "example.com" the word example is the mid-level domain. This is the area where you really get to tell viewers what your website is about. You can use our domain search to see if the mid-level domain you want is available.

Sub-domain

A subdomain is the part of the website that comes before the mid-level domain. The subdomain can be used to break your website into different sections. For example, a website might have a subdomain "blog.example.com" which goes directly to the blog. Or, "shop.example.com" might take you to the website's online store.

The owner of a domain name can set whatever subdomains they wish on their domain. This can be done by editing the DNS records associated with a website. You can see more instructions on how to set up a subdomain in our page on managing your DNS records.

IP Address

The IP address is the unique number given to each computer that connects to the internet, such as 172.16.254.1 or 2001:db8:0:1234:0:567:8:1. When one computer communicates with another across the internet, they use each other's IP addresses to make sure those messages get to the right location.

Every website has a domain name and an IP address. So, why not just use the domain name? Your domain name is like your business name - it is a name you picked to represent who you are to the world. You probably don't want it to change very often. Your IP address is more like your street address. It points to a specific location on a network.

If your business is doing well you might want to move to a bigger location. You will keep the same business name, because you want people to know that you are still the same business. But, your street address will change. Likewise, if you need to move your website to a bigger server (we'll talk more about servers next) you will still want your domain name to be the same. If your domain name and your IP address were the same, you wouldn't have any way to tell your customers that you had moved to a new location.

Server

A computer which delivers the content of a website is called a server. Since you want people to see your website whenever they want, a server is a special kind of computer that is always on and always online. Imagine if people could only view your website when your own personal computer was turned on and happened to be connected to the internet. Viewers would quickly give up on your website because they would never know when it was available. The word "server" is used to refer to any kind of computer that is designed to be constantly available.

Web Host

Maintaining a server is often a difficult prospect. Keeping a computer constantly running takes a lot of maintenance. It is also important to keep the software on a server up to date to protect from potential security risks. Like any computer, servers also sometimes break and need to be replaced.

While some people do maintain their own servers, many people turn to a web host to maintain their servers for them. A web host is a company that provides space on servers which customers can rent to host their website content. The hosting company does all the work necessary to make sure the servers are properly cared for, up to date, and always on. They also have systems in place to keep websites going when an individual server breaks, when there is a power outage, or when there is especially high traffic.

Gandi's Web Hosting is an additional service that Gandi offers for users who are looking for a web host as well as a domain name. We strive to offer a service that is easy to use for beginners while also offering a wide range of technical options for more advanced users.

Nameserver

A nameserver is a special type of server that tells browsers which IP address is associated with a particular domain name. In order for different computers all across the world to find each other, there is an interconnected system of nameservers that are continually exchanging information about which IP addresses are associated with each domain name. This system, also known as the Domain Name System, is like a giant address book that tells the world where to find your website. You tell this network of nameservers where to find your website when you manage the DNS records associated with your website.

Many people find DNS records confusing at first, since they are written for computers to talk to other computers. At Gandi, we try to make your DNS records as accessible as we can, while still allowing advanced users the freedom to manage their domain just how they want. If you ever have a question about how to manage your DNS records you can check out our help pages about nameservers and DNS records, or you are always welcome to contact our support team for extra help when you need it.

SSL Certificate

When two computers send messages back and forth over the internet without encryption, the messages they send can be intercepted and read by individuals other than the intended recipients. To protect against this, website owners can create an SSL certificate which will allow them to use encryption when they send and receive data over the internet. Encryption means scrambling the message in a particular way so that only the intended recipient will be able to read the message.

Gandi offers SSL certificates to our users, and we even give you a free 1-year standard certificate with every domain purchase. If you're not sure what SSL certificate you need, check out the full explanation of what we have to offer.

Content

We have discussed many different pieces that go into a website, but we still have not discussed the primary thing most people consider when they think of a website: the content. When you visit a website, the content is sent from the website's server to your computer and displayed on your screen. This can include text, images, formatting, videos, or even interactive content. All of this information is sent from the server hosting the website to your computer, and then displayed on your screen.

For your website, the content will be something you create and then put on your server. Or, you can contract with a web developer who will help you create the content in your website. While Gandi doesn't offer custom web development services, we do offer access to Gositebuilder, a tool for building your own website without code. Or, with Web Hosting, you can install WordPress with a single click and get straight to creating content while using one of WordPress's free themes.

Email

While not a part of every visit to a website, sending and receiving email is an important part of your internet presence. When you purchase a domain name, you have the rights to any email addresses that end with that domain name (yourname@example.com, for example, where the domain name you purchased was example.com). To create an email address at a domain you purchased, we add a DNS record for your domain name that tells computers where your email should go.

Just as you need a server to host the content of your website, you also need a mail server which will send and receive your email for you.

Gandi has an email service which we make available as an additional feature for users who purchase domains from us. When you buy a domain name from Gandi you have the option to purchase email mailboxes at your domain, which are hosted by Gandi's mail servers. You can create these mailboxes in your Gandi account and we will automatically make the appropriate changes to your DNS records.

When you view a website you use a browser, and when you view and send mail you use a mail client. Just like browsers, most computers come with a built in mail client, or you can download your own. You can learn how to set up your mail client to receive email from Gandi at our mail settings page.

Some mail clients, like gmail or yahoo mail, operate through a browser. Gandi also offers two free browser based webmail clients which are already set up to work with your Gandi email, Roundcube and SOGo. These are a great choice if you are looking for a simple and quick way to access your Gandi email address.

Conclusion

In order to have a website you must have all of the pieces mentioned above. You need a domain name, a server to host your content, and IP address for that server, a nameserver to tell other computers where to find your server, and content to deliver. If you are going to send and receive email you also need a mail server. All of these pieces are essential and work together to create a functioning website.

Previous

Next

© Copyright 2024, Gandi. Built with Sphinx 4.5.0