



Internet 101: Basics and beyond

Your guide to getting online

Welcome to the expansive world of the internet—a global network that simplifies communication, expands educational opportunities, and provides entertainment. This guide introduces you to the basic steps and precautions needed to navigate this digital universe efficiently and safely.

Getting Started

To access the internet at home, you'll need a stable connection facilitated by an Internet Service Provider (ISP). Here are detailed steps to get connected:

Choosing an ISP

The selection of an ISP can significantly impact your internet experience. Research ISPs available in your area to find one that offers reliable service and good customer support. Consider factors such as download and upload speeds, data caps, and contract terms.

Installation Process

After selecting an ISP, they will typically arrange a time to install the necessary equipment. This usually includes a modem, which connects to the ISP's network, and a router, which broadcasts the Wi-Fi signal in your home. The installer will ensure that all equipment is properly set up and functioning before they leave.

Connecting Devices

- **Wi-Fi:** Most devices now connect to the internet via Wi-Fi. You'll need to select your network from the Wi-Fi settings on your device and enter the password provided by your ISP.
- **Ethernet:** For a more stable and secure connection, consider using an Ethernet cable. This direct connection from your device to the router can lead to faster speeds and lower latency, ideal for activities like streaming high-definition videos or gaming.

Understanding Key Internet Terms

Navigating the internet is much easier when you're familiar with a few key terms. We've compiled a list of essential terms that will enhance your understanding and experience.

Bandwidth

Bandwidth is often referred to as the "speed" of an internet connection, but more accurately, it is the volume of information per unit of time that the internet connection can handle. It significantly affects your online experience by determining how quickly you can download files and stream video or music. Higher bandwidth means more data can flow simultaneously, which is crucial for activities like live streaming, gaming, and using high-definition video conferencing.

Browser

A web browser is software that allows you to access and navigate websites by translating HTML and other web languages into visual or auditory content that users can interact with. Popular browsers include Google Chrome, Apple Safari, Microsoft Edge, and Mozilla Firefox. Each browser offers unique features and extensions to enhance security, user experience, and performance.

Cookies

Cookies are small text files stored on your device when you visit a website. They hold data specific to a particular client and website, which can be accessed either by the web server or the client's device. This allows the service or a third-party to deliver a page tailored to a particular user, or the page itself can contain some script which is aware of the data in the cookie and so is able to carry information from one visit to the website (or related site) to the next.

Domain Name

A domain name is the human-readable address of a website on the internet. Unlike the complex numerical IP address, a domain name is a textual string designed for simplicity, such as "google.com" or "wikipedia.org." The suffix (e.g., .com, .net, .org) helps identify the type of organization or geographical location associated with the domain.

Firewall

A firewall is a security system that monitors and controls incoming and outgoing network traffic based on security rules. Operating as a barrier between a trusted network and an untrusted network, a firewall can prevent unauthorized access to or from private networks and is crucial in defending against various types of cyber threats.



5G

5G is the fifth generation of cellular network technology, offering faster speeds, reduced latency, and the capacity to connect many more devices at once. 5G networks are expected to revolutionize internet connectivity, supporting everything from smartphones to self-driving cars and enabling new applications like augmented reality and enhanced IoT (Internet of Things) ecosystems.

IP Address (Internet Protocol Address)

An IP address is a unique string of numbers separated by periods (IPv4) or colons (IPv6) that identifies each computer or device connected to a network. It functions like a home address for your computer, allowing data to be sent and received accurately between devices on a network.

Malware

Malware, short for malicious software, includes viruses, worms, trojan horses, ransomware, and other harmful computer programs that hackers use to disrupt computer operations, gather sensitive information, or gain access to private computer systems.

Phishing

Phishing is a cyber-attack that uses disguised email as a weapon. The goal is to trick the email recipient into believing that the message is something they want or need — a request from their bank, for instance, or a note from someone in their company — and to click a link or download an attachment.

Router

A router is a device that forwards data packets along networks. It connects multiple devices to the internet through one service provider. A router directs incoming and outgoing internet traffic on that network efficiently, handling the data to and from various devices so that it gets where it needs to go.

Spam

Spam refers to unsolicited digital messages, especially advertising, sent over the internet, typically to a large number of users. It is most recognized as bulk emails that promote products or services, but spam can also appear on social media, forums, and mobile phones.

VPN (Virtual Private Network)

A VPN extends a private network across a public network and enables users to send and receive data across shared or public networks as if their computing devices were directly connected to the private network. This provides significant security and privacy benefits, especially when using public Wi-Fi networks.

Wi-Fi

Wi-Fi is a technology that uses radio waves to provide network connectivity. A Wi-Fi connection is established using a wireless adapter to create hotspots — areas in the vicinity of a router that are connected to the network — allowing users to access internet services.





Internet vs. World Wide Web: What's The Difference?

While often used interchangeably, the terms "Internet" and "World Wide Web" refer to various aspects of the global network. The internet is a massive network of networks, a networking infrastructure. It connects millions of computers together globally, forming a network in which any computer can communicate with any other computer if they are both connected to the internet. The World Wide Web, or simply the web, is a way of accessing information over the medium of the Internet. It is an information-sharing model that is built on top of the internet.

Searching the Internet

The ability to search the internet effectively is a critical skill for navigating the vast amount of information available online. Here's how you can enhance your internet searches to get more relevant results.

Using Search Engines

- Selecting a Search Engine: Choose a search engine that suits your needs. Google is the most widely used because of its comprehensive indexing and speed, but other options like Bing, DuckDuckGo (which prioritizes privacy), and Yahoo! are also popular.
- Basic Queries: Start with simple, concise phrases that describe what you're looking for. The search engine uses these terms to find websites, images, videos, and news that match your terms.
- Use Keywords: Identify essential words or phrases related to your search topic. For example, if you're looking for a chocolate cake recipe, keywords might include "chocolate," "cake," and "recipe."

Refining Search Queries

- **Quotation Marks:** Use quotation marks to search for an exact phrase. This is useful when looking for specific information or quotes, e.g., "climate change statistics."
- Using Operators: Use operators like AND, OR, NOT to refine results. For example, searching "smartphones NOT Apple" will show results for smartphones that are not related to Apple.
- Advanced Search Options: Most search engines offer an 'Advanced Search' feature that allows you to narrow down your search by factors such as language, region, or the last update date.

Searching the Internet

Evaluating Search Results

- **Assessing Relevance:** Quickly scan the title and snippet (the brief preview of content shown below each result) to judge if the result matches your needs.
- **Checking the Source:** Identify the source of the information. Is it reputable or known for biased views? This can affect the reliability of the information.
- **Modification of Queries:** If the initial results aren't satisfactory, modify your search terms based on the information gathered from the first search attempt.

Beyond Basic Searches

- Using Search Tools: Use tools provided by search engines to filter results by type (like news, images, or videos), time (date of publication), and even usage rights (especially useful for finding images or content to reuse).
- Specialized Search Engines: Consider using specialized search engines for academic research (like Google Scholar), books (Google Books), or even specific databases and libraries.

Staying Safe and Maintaing Privacy

- Secure Searches: Always ensure your searches are conducted over a secure connection (look for HTTPS in the URL). Consider using privacyfocused search engines like DuckDuckGo that do not track your searches.
- Be Cautious with Personal Info: Avoid entering sensitive personal information in search engines, as this can lead to privacy issues or security risks.





How to Create a Personal Email Address

Creating a personal email address is the first step in managing your digital life. Whether for personal or professional use — or separate accounts for each — your email account connects you with the world. Here's how to sign up:

Choose an Email Provider

Popular providers include Gmail, Yahoo! Mail, and Outlook.com. Visit their websites and look for the option to create a new account. Many internet service providers also offer free basic email accounts.

HELPFUL HINT: Using a popular provider lets you keep your address for as long as you like. If you choose to use your ISP's email address, you may not be able to keep that address if you decide to switch, which could cause disruptions for you in the future.

Sign Up

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Fill out the registration form with your details, choose your unique email address, and create a secure password. TIP: It may take a few attempts to find a unique name that another user hasn't claimed.

3 Verification

Some providers may ask you to verify your identity with a phone number or another email address to keep your new email secure. Follow the instructions provided by your provider.

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Security Tip: Enable Two-Factor Authentication (2FA).

Enabling two-factor authentication strengthens your email account's security. This requires your password plus a second verification method, such as a code texted to your phone. You can activate 2FA through your account's security settings or when you sign up.

Conclusion

Understanding how to get online and stay safe are foundational aspects of digital literacy. By equipping yourself with this knowledge, you can explore the internet confidently and securely, making the most of its vast resources for learning, communication, and entertainment. As you become more familiar with the tools and terms outlined in this guide, you'll be better prepared to navigate the digital world effectively. Whether connecting with friends, conducting research, or managing your daily tasks, the internet offers endless possibilities to enhance your life. Embrace these opportunities, stay informed, and make the most of your online experience.



About Zayo:

Since 2007, Zayo has focused on creating connections. By building an expansive network, Zayo has become the leading independent provider of light-speed data transmission infrastructure, with dense, high-quality networks connecting every major market in North America. Zayo was built to serve the largest and most innovative companies in the world, providing both major enterprises and individual internet users access to all the benefits the world wide web has to offer.

Together with