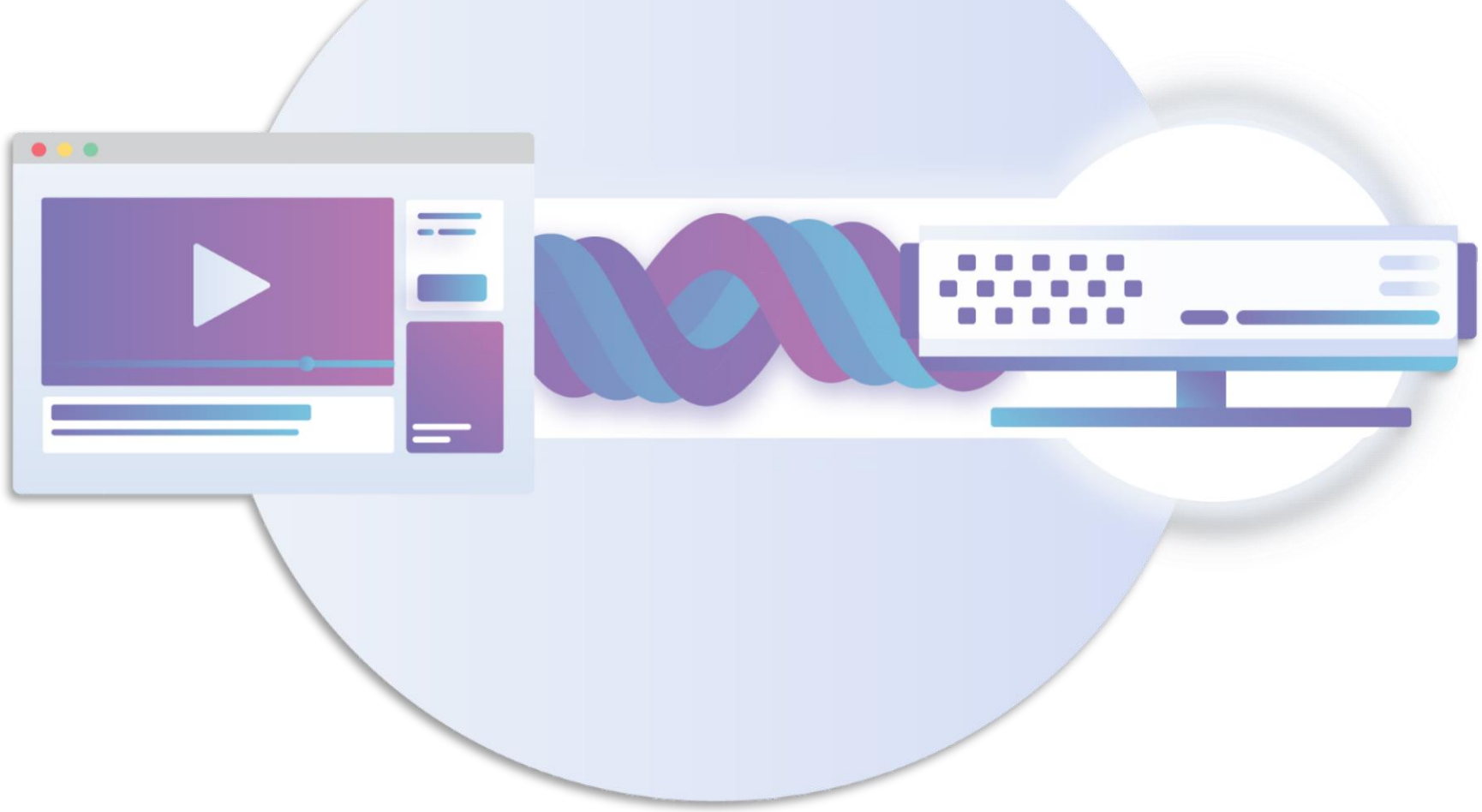
# What is the Internet?



**What is the Internet?**

Before we cover what the Internet is, we must define what a "network" is. A network is essentially a group of connected computers that are able to send data to each other. A computer network is much like a social circle, which is a group of people who all know each other, regularly exchange information, and coordinate activities together.

The Internet is a vast, sprawling collection of networks that connect to each other all over the word.  In fact, the word "Internet" could be said to come from this concept: ***inter***connected ***net***works.

Since computers and other and Internet enabled devices connect to each other within networks and these networks also all connect with each other; one computer can talk to another computer in a distant network thanks to the Internet. This makes it possible to rapidly exchange information between computers and devices across the world.

Computers connect to each other and to the Internet via various types of cables and networking infrastructure. All data sent over the Internet is translated into pulses of light or electrical signals, referred to as "bits" of data, which is then interpreted by the receiving computer. In fibre networks, the cables, and supporting infrastructure transmit these bits at the speed of light. The more bits that can pass over these wires and cables at once, the faster the Internet works. Any data sent over the Internet is divided into smaller segments called ***packets.*** These packets then travel from one source to the next using Internet Protocol (IP) and Transport Control Protocol (TCP).

TCP/IP is a suite of protocols that specify communications standards between computers and detail conventions for routing and interconnecting networks ***to ensure global interoperability and compatibility.***

**The Internet, links, URLs, the web** … people as well as the media often bounce around many online-related terms these days and you may not be entirely sure what they are. ***Your first step in getting familiar with the Internet is to understand what some of these terms mean***. Through the Internet, people can share information, use technology tools and communicate from anywhere with an Internet connection.

The Internet is also referred to as the ***World Wide Web***, or simply, ***the web.*** The web includes ***websites***, which are made up of collections of ***web pages***, just as a book is made up of chapters that contain individual pages. Websites can be informational and/or host communication/technology tools, such as chats, discussion boards videos, live streams etc or even allow you to share files with others or use software applications without having to install them on your computer.

The Internet covers almost every aspect of life, one can think of, from social networking, education and technology to entertainment and online services such as Internet banking, email etc. It also provides users with access to online retail businesses where you can shop, buy, bid for, or sell a wide variety of items in an entirely online marketplace referred to as the world of ***e-commerce.***

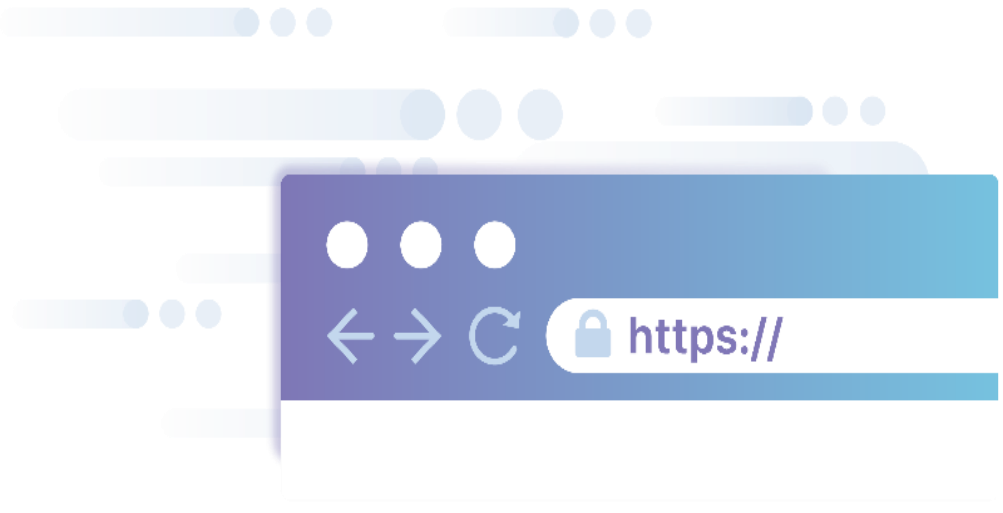
The Internet allows us to communicate with other people in remote locations. There are various ***applications,*** available on the web or for mobile download, often referred to as ***apps,*** that use the Internet as a medium for communication – some common examples of these are:

- Facebook
- Twitter
- WhatsApp
- Google+

**How do I access the Internet?**

To get around online, you use a software program called a browser on your chosen device. There are many free browsers available, such as Mozilla Firefox, Google Chrome, Microsoft Edge and Apple's Safari. Browsers offer tools to help you navigate from website to website as well as interact with them.

**What does "HTTP and HTTPS" mean and their importance to you when it comes to visiting websites?**




HTTP, or hypertext transfer protocol, is the entire backbone of the world wide web. It is the protocol used to process, render, and deliver your web pages from the server-side to your browser.

HTTP is the means through which most of the data on web pages are stored on servers and finally displayed on your device. There is one major issue with a HTTP connection — the data that is transferred over a HTTP connection is not encrypted, so you run the risk of third-party attackers stealing the information. Any information transmitted over this network via HTTP is not private, so any credit card data and sensitive information should not be submitted if you are on a HTTP page.

Unlike HTTP, HTTPS stands for hypertext transfer protocol secure and is the encrypted version of HTTP using a secure certificate from a third-party vendor to secure a connection and verify that the site is legitimate. This secure certificate is known as an SSL Certificate (or "cert"). SSL is an abbreviation for "secure sockets layer". This is what creates a secure, encrypted connection between your browser and a server. Ultimately, HTTPS provides an extra layer of security for sensitive data that you do not want third-party attackers to access and provides secure communication across the Internet or a network. This is especially important if you are engaging in **e-commerce** as your credit card data, passwords and personal data are all encrypted with an industrial-strength level layer of security

**REMEMBER to look out for the PADLOCK!**



**What is a Hyperlink?**

When you open a website, you might see coloured text or graphics that represent ***hyperlinks,*** alternatively referred to as a ***link*** or ***web link.*** A hyperlink is an ***icon, graphic***, or ***text*** that links or serves as a direct access point to another file, document, location or other online content. A text link is identifiable by coloured text, and it is usually underlined, and these often stand out from the main body of text and they are a selectable element within the electronic document.

Websites use hyperlinks to navigate online content and when you click on a link, it will take you to the target of the link and they often look like this: