

ISP – Internet service providers

What does ISP mean?

ISP literally means *Internet service provider* or *provider*. It is a service (most of the time paid for) which allows you to connect to the Internet.

Why use an ISP?

Unless you have a specialized line (other than a telephone line), you cannot connect directly to the internet using your telephone line. Indeed, the telephone line was not designed for this:

- it was originally designed to transport "voice", i.e. a frequency modulation in the range of the voice tone
- telephone servers only know how to start a conversation from a telephone number
- unless you resort to a special service, generally it is not possible to have communication between more than two points...

So, the internet service provider is an intermediary (connected to the internet by specialized lines) which gives you access to the Internet, using a number which you enter using your modem, and which enables a connection to be established.

How does the ISP connect you to the Internet?

When you are connected to the Internet through your service provider, communication between you and the ISP is established using a simple protocol: PPP (*Point to Point Protocol*), a protocol making it possible for two remote computers to communicate without having an IP address.

In fact your computer does not have an IP address. However an IP address is necessary to be able to go onto the Internet because the protocol used on the Internet is the TCP/IP protocol which makes it possible for a very large number of computers which are located by these addresses to communicate.

So, communication between you and the service provider is established according to the PPP protocol which is characterised by:

- a telephone call
- initialization of communication
- verification of the user name (login or userid)
- verification of the password

Once you are "connected", the internet service provider lends you an IP address which you keep for the whole duration that you are connected to the internet. However, this address is not fixed because at the time of the next connection the service provider gives you one of its free addresses (therefore different because depending on its capacity, it may have several hundreds of thousand addresses.). Your connection is therefore a proxy connection because it is your service provider who sends all the requests you make and the service provider who receives all the pages that you request and who returns them to you.

It is for these reasons for example that when you have Internet access via an ISP, you must pick up your email on each connection because generally it is the service provider that receives your email (it is stored on one of its servers).

Differences between ISPs

Selecting an ISP depends on many criteria including the number of services offered and the quality of these services. So what are these criteria?

- Cover: some ISPs only offer cover in large towns, other offers national coverage, i.e. a number which is charged as a local call wherever you are calling from
- Bandwidth: this is the total speed that the ISP offers. This bandwidth is shared between the number of subscribers, so the more the number of subscribers increases the smaller this becomes (the bandwidth allocated to each subscriber must be greater than his transmission capacity in order to provide him with a quality service).
- Price: this depends on the ISP and the type of package chosen. Some ISPs now offer free access
- Access: unlimited: some ISPs offer a package where your connection time is taken into account, i.e. you cannot exceed a number of hours of connection per month, in which case the call charge is subject to a price increase (additional minutes are very expensive). Some providers even offer tariffs without subscription, i.e. only the communication is paid for (but obviously is more expensive than a local call!)
- Technical service: this is a team responsible for responding to your technical problems (also called a hotline or even customer service). ISPs generally charge for this type of service (sometimes 1.35€ for the call then 0.34€/min)
- Supplementary services:
 - Number of email addresses
 - Space made available for the creation of a personal page (HTML)
 - ...

Making sense of the different packages on offer

Internet service providers (ISP) offer increasing subscription and package types for accessing the Internet...

Free Internet, Internet without subscription which is all very tempting but how do they offer these types of free services?

- **Paid subscription with unlimited access**

This is the traditional package. It consists of paying a fixed amount each month (around 10 to 30€). With this package Internet access is unlimited, i.e. you can connect as much as you want during the month... you only pay the call charges (at the cost of a local call).

This type of package generally offers one (or more) email address as well as space to create a personal page

- **Paid subscription with limited access**

This type of package has the same characteristics as the previous one with the difference that the subscription is cheaper but the amount of connection time is limited. Beyond this limit, the cost is increased per additional period.

- **Internet access without subscription**

Warning! This service is not free of charge... It only allows you to be able to connect occasionally by paying for access with a higher per minute cost for the call. It is only suitable for people who rarely connect to the internet (very few hours a month), and does not include benefits such as space for a personal page (however free hosting is available other than with ISPs).

- **Free internet service providers**

How do these companies offer free access?

It is advertising which enables these companies to offer such packages. In fact, from the moment you connect you will see several advertising banners displayed.

Here you are gaining. Furthermore, the inconvenience caused by this type of advertising is minimal...

Resources on the subject

The website [The Providers](#) makes it possible to compare the different packages on offer.

[Grenouille.com](#) is a useful site for finding out the internet forecast, i.e. speeds observed in real time on high speed internet service provider lines.

Source: <http://en.kioskea.net/contents/713-isp-internet-service-providers>