An Internet service provider (ISP) is an organization that provides services accessing and using the Internet Internet service providers may be organized in various forms, such as commercial, community-owned

non-profit , or otherwise privately owned

The Internet was developed as a network between government research laboratories and participating departments of universities. By the late 1980s, a process was set in place towards public, commercial use of the Internet. The remaining restrictions were removed by 1995, 4 years after the introduction of the World Wide Web

Hosting ISPs

<u>Internet hosting services</u> provide email, web-hosting, or online storage services. Other services include <u>virtual server</u>, cloud services, or physical server operation.

In the simplest case, a single connection is established to an upstream ISP and is used to transmit data to or from areas of the Internet beyond the home network; this mode of interconnection is often cascaded multiple times until reaching a <u>tier 1 carrier</u>. In reality, the situation is often more complex. ISPs with more than one

point of presence

(PoP) may have separate connections to an upstream ISP at multiple PoPs, or they may be customers of multiple upstream ISPs and may have connections to each one of them at one or more point of presence.

Transit ISPs provide large amounts of bandwidth

for connecting hosting ISPs and access ISPs.

Wireless ISP

A <u>wireless Internet service provider</u> (WISP) is an Internet service provider with a network

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based on wireless networking. Technology may include commonplace Wi-Fi wireless mesh networking, or proprietary equipment designed to operate over open 900 MHz, 2.4 GHz, 4.9, 5.2, 5.4, 5.7, and 5.8 GHz bands or licensed frequencies such as 2.5 GHz (EBS/BRS), 3.65 GHz (NN) and in the UHF band (including the MMDS frequency band) and LMDS.

Network hardware, software and specifications, as well as the expertise of network management personnel are important in ensuring that data follows the most efficient route, and upstream connections work reliably. A tradeoff between cost and efficiency is possibl

Law enforcement and intelligence assistance

Internet service providers in many countries are legally required (e.g., via <u>Communications</u> Assistance for Law Enforcement Act

(CALEA) in the U.S.) to allow

law enforcement

agencies to monitor some or all of the information transmitted by the ISP, or even store the browsing history of users to allow government access if needed (e.g. via the Investigatory Powers Act 2016

in the

United Kingdom

). Furthermore, in some countries ISPs are subject to monitoring by intelligence agencies. In the U.S., a controversial

National Security Agency

program known as

PRISM

provides for broad monitoring of Internet users traffic and has raised concerns about potential violation of the privacy protections in the

Fourth Amendment to the United States Constitution

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Modern ISPs integrate a wide array of

surveillance

and

packet sniffing

equipment into their networks, which then feeds the data to law-enforcement/intelligence networks (such as

DCSNet

in the United States, or

SORM

in Russia) allowing monitoring of Internet traffic in real time.

Internet Service Provider

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