

Internet → Internet is a network of networks. Internet was established by ARPA (Advanced Research Project Agency) of the United States Department of Defence to enable the scientists engaged on Department of Defence Projects to communicate with one another in 1965. Initially 4 sites were developed in the US, and soon grew to ten widely dispersed sites in UK and Norway.

First e-mail over the ARPAnet was the great success. The national science foundation (NSF) took over the academic community network project in the mid-1980's.

The Internet has continued to grow ever since. The traffic growth need to upgradation of the NSFnet backbone by IBM and MCI. With this upgradation, the Internet moved to modern computers and faster links. Today, the Internet has two types of backbones: —

NSFnet and Commercial Internet.

NSFnet is owned by US Federal Government which is not for commercial use.

The Commercial Internet, on the other hand, comprises several private backbones run by a number of Internet Service Providers. The users have to pay for Internet services for access through these routes.

In 1991, a set of small commercial networks was established which was named — CIX (Commercial Internet Exchange).

Internet is neither run nor owned by anyone. Every organization that is plugged into the internet is responsible for its own computers. It is more or less self-regulated. Among its advantages are — no membership fees, no censorship, no government control. The prominent disadvantage is that — when something goes wrong, there is no central control to ask for help. However, some Internet Technical Groups coordinate the Internet's basic workings. These are: —

(a) The Internet Engineering Task Force — It has a major role in the development of the Internet's communication protocols.

(b) The Internet Research Task Force (IRTF): -

It is involved in long-term research problems and technical issues.

(c) The Internet Architecture Board (IAB): -

It is involved in technical and policy issues involving the evolution of the Internet's architecture.

(d) Internet Society: - It acts as parent of the IAB. It has some goals regarding smooth operation of IAB.

Now, Internet Corporation for Assigned Names and Numbers (ICANN), established in October 1998, under the contract of United States Government, provides domain names, IP Address numbers, protocol parameter and port numbers.

The operation of the Root Server System is also co-ordinated by ICANN.

Internet Service Providers have Network Entry Points (NEP), through which users can get connected to the internet.

Types of Connections available for connecting to Internet.

There are many types of connections available for connecting to internet: -

(i) Dedicated Connection -

A leased telephone line at 56 Kbps or 64 Kbps or a T1 link at 1.544 Mbps connects a gateway computer or router/bridge or a corporate LAN/WAN to the router of an ISP (Internet Service Provider). It is also known as leased line connection. Currently it is not available due to technology upgradation.

(ii) On Demand Connection - It is more like a dedicated connection but, user has to dial-up the ISP using a modem or ISDN.

(iii) Dial-up Shell Account - A single PC user can connect to the ISP's computer. This type of connection is not uncommon for very low cost service providers to give only a UUCP connection (Unix to Unix Copy) to the internet.

Big organizations are using such type of connection for their local intranet users.

(iv) Serial Line Internet Protocol (SLIP) Account

It is also called Point-to-Point account. It is also similar to on demand type but we cannot use as a gateway to a LAN.