

Intranet → Intranets uses Internet technology to deliver an organization's internal information. This includes integration of e-mail, FTP, Mail Server(s) and Web Servers) with the internal applications; the user interface is provided by web browsers. Of these, web servers are the most visible part of the intranet since this is where the organisation's web pages would be hosted and accessed by the client machines.

The objective of an intranet is to organise each individual's desktop with minimal cost, time and effort to be more productive, cost-efficient, timely and competitive. Using intranet, access to all information, applications and data can be possible through the same browser. All clients and servers must support the TCP/IP protocol. The intranet is a internal organization's internet network which requires a low speed local area network connectivity of 10 MBPS. Therefore, an application designed for the intranet may be checked on the internet, while those for the intranet may run in a flash on an intranet.

The Times of India implemented the first Intranet in the country in the year 1996.

An Intranet has to be designed for the specific functionality requirements of an organization.

The services provided by Intranet includes —

- Mail Services
- File Transfers
- Web Services
- Audio Services
- Video Services

The essential components of an intranet include —

- A Network

- (12)
- TCP/IP on servers and clients
 - Hardware for hosting intranet services
 - Software - Mail Server as the minimum web server for hosting web pages.
 - Mail Servers
 - Browsers

The optimal components of Intranet —

- HTML Editors
- Productivity tools which are web-aware
- E-mail Remote User Agents
- Proxy Servers
- CGI (Common Gateway Interface)
- Java
- ActiveX

An Intranet achieves the following in an organization:—

- Reduced Costs
- Reduced telephone expenses
- Easier, faster access to an information
- Easier, faster access to remote locations
- Increased access to competitive information
- Latest, up-to-date research base
- Easier access to customers and partners.
- Collaborative, group working
- Increased accuracy and timeliness of information.
- Just-in-time information.

Feature of Internet:—

Some features of Internet are —

(1) Internet is an open system — Due to open environment of internet protocols anyone can use them to write software implementations that can be used with other computers and networks running the internet protocols. The results of this competition are

- lower cost
- better performance
- better affordability
- increase in the spread of user

② Users need not belong to any special group (Internet itself does not belong to anyone) — There is no any special fees. There is not any boundation or compulsive access for customers. You can browse any content without regard to membership.

③ The World Wide Web — There are different hosts located all around the world to share their information to the whole internet network. These hosts follows the same http protocol. This protocol is also followed by the browsers so that- any information can be transferred through the network. There is no need to know from which type of host, the information is coming, since there is a common standard protocol.

Groupware → It consists of any software, application or device that allows two or more people to communicate and solve technological problems together without physically face to face appearance.

Groupware applications are e-mail, newsgroups and chat. Common groupware applications that are easily recognized by today's computer users include Lotus Notes, e-mail server systems such as — First-class and Microsoft Exchange, 24 Seven Office, Livelink and Workspot.

Categories of Groupware :— Groupware is divided into three categories :— Communication tools, Conferencing tools, collaborative management tool.

Communication tools → e-mail, FAX, Voice Mail, Web Publishing, Wikis, File Sharing etc.

Conferencing tools → Data, Voice and Video Conferencing, message boards and chat rooms or Forums etc.

Collaborative Management tool → Electronic calendars, project management systems, workflow systems, information management systems (to manage group activities) etc.

Some experts divide groupware into two categories — Time related and Place related.

When employees are using an application at the ~~the~~ same time, it is synchronous groupware; workers using the same application at the same time.

Working on the same application at different time, however, are using asynchronous groupware.

Proxy Server → If the server requires the users connected on it to share a single internet dial-up connection on the network, a proxy server is essential. Proxy server dials into the internet connection and all the nodes access the internet through it.

Data transmission in Internet →

Data transmission in Internet is controlled by using TCP/IP protocol. When ARPAnet grew large by the end of 1970s, its original set of standards and communication protocols could not support the further growth of the network. It switched to a new protocol called the TCP/IP and by 1983, all computers were using this protocol. Unix systems were using TCP/IP or UUCP protocol. Unix system could receive data by TCP/IP and transmit out by UUCP, or Vice Versa. Such types of systems known as gateway or a bridge between networks. UUCP stands for Unix to Unix Copy Protocol. Electronic mail servers are based on various protocols including SMTP (Simple Mail Transfer Protocol) and POP (Post Office Protocol) to send and receive mail-messages.

The Major tools of the Internet →

Telnet → A remote generic protocol that allows us to access a computer's terminal, essentially providing a command line interface to another system, but transmits data in plain text, making it highly insecure. It uses internet or intranet network. The syntax of this command is: -

Telnet <IP Address> <1>

rlogin → A unix/linux based command that enables us to login to a remote computer, similar to telnet but with additional features like password authentication and session management, through plain text but insecure.

rsh → It is another unix/linux based command that allows us to execute a single command on a remote computer without needing to fully log in, means that you can run a command on specific system without opening a full remote shell session.

FTP → File Transfer Protocol is used during transfer of data from one type of host to other type of host. This activity is performed automatically when someone requests for some data to download but the data is available in different location over other host in internet network.

FTP differs from Telnet in that it is not used to run programs on remote computers. It is very useful tool for sharing information by moving files between computers. The files may be of any type — text, graphics, multimedia, or binary files.

FTP also requires a login name identified by password account on the server. Some important commands used in ftp server are — get, put and bye.

WHOIS — It is a program that can be used to find information on users and sites on the Internet. A client WHOIS program on a computer can initiate search on a WHOIS server and present the result. One can also login from remote location to a public WHOIS server to get content information about the desired users or internet sites.

WWW (World Wide Web) — The WWW or the web is a system for organising, linking and providing point-and-click access among related internet files, resources and services.

In other words, it is a collection of host machines located over internet network to share their documents to the whole world through the internet network. The data can be interacted through user by the browser. Browser and Server interactions are defined by HTTP (HyperText Transfer Protocol). Uniform Resource Locator (URL) protocol specifies how individual resources are to be identified with the World Wide Web.