

Protocols - Computer Networks

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Hello Ladies and Gentlemen,

We'll be learning about some important protocols today. Usually a couple of questions are asked from protocols which are easy to answer. Any doubts - speak up in comments!



==>> This article is a part of [PK Series \(IT\)](#).

Telnet Protocol

It starts a **remote session** on another machine. Login and password are usually required to gain entry to the remote system. Telnet is used mostly for accessing shared devices like Printer etc on a remote host or for using software that are only available on a single secure system. By default, connection is established over **port 23**.

Command for telnet is - " *telnet <ip address>* "

FTP

File Transfer Protocol allows a person to **transfer files** between two computers. At the back end, two connections are established. One control connection over **port 21** which remains throughout and other for file transfer, over port 22. Every time a new connection will be established for transfer. Typical ftp commands are as follows:

- **ftp <ip address>** - est. connection with ftp server
- **put, mput** - send one/more files
- **get, mget** - receive one/more files
- **hash** - indicates progress of file transfer
- **prompt** - prompts user before actual transfer of each file
- **bin, asc** - selects binary/ascii mode of transfer
- **exit** - terminates connection with ftp server

SMTP

Simple Mail Transfer Protocol is used when **email** is delivered from a mail agent like outlook or gmail application to mail server . It send messages in simple text only. It uses **port 25**.

POP3

Post office Protocol allows a mail agent to download email from mail server. Two

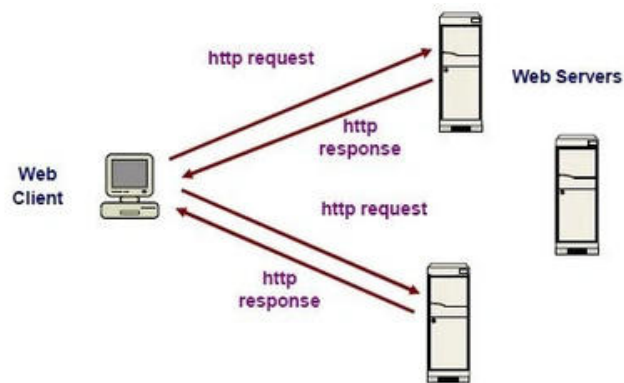
modes are used in this - 1) Delete mode - read emails and delete them. 2) Keep mode - emails remain in the mailbox. It normally uses **port 110**.

IMAP

Internet Message Access Protocol is similar in functions to that of POP3 but with some extra features. A user can check email header before downloading, a user can search contents of email for a specific string prior to downloading, a user can create, delete, or rename mailboxes on mail server, a hierarchy of mailboxes can also be created. It requires more disk space and more CPU resources than POP3 as all emails are stored on server. It normally uses **port 143**.

HTTP

Hyper Text Transfer Protocol is a protocol using which web browsers interact with the web servers. Client opens socket connection to HTTP server on **port 80** and sends HTTP requests to server. Server sends back response and closes the connection afterwards. Common status codes for HTTP are: 401 - unauthorized, 403 - forbidden, 404 - Not Found, 500- Internal Server Error.



UDP

User Datagram Protocol is used for sending packets that **doesn't guarantee delivery**. It also doesn't guarantee against lost packets, duplicate packets or out of order packets. It is used for transfer of bulk data where sequencing of packets doesn't matter much. It has a formal packet structure though with details like source, destination and size of the packet.

LDAP

Lightweight Directory Access Protocol is an internet protocol that email and other programs use to look up information from a server. It is mostly used by medium to large size organizations for example if you want to **look up contact info** or email ids of persons in your organizations, LDAP server comes into picture which fetches you all that information. It uses **port 389** by default.

Quote of the day

Destiny is not a matter of chance, its a matter of choice. - W.J Bryan

Deepak A