



Introduction to Information Technology

CSC109

2020

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The Internet & Internet Services

1. Introduction;
2. History of Internet;
3. Internetworking Protocol;
4. The Internet Architecture;
8. Managing the Internet;
9. Connecting to Internet;
10. Internet Connections;
8. Internet Address;
9. Internet Services;
10. Uses of Internet;
11. Introduction to Internet of Things (IoT),
12. Wearable Computing and Cloud Computing,
13. Introduction to E-commerce,
14. E-governance, and
15. Smart City and GIS

Internet Services

❖ FTP (File Transfer Protocol)

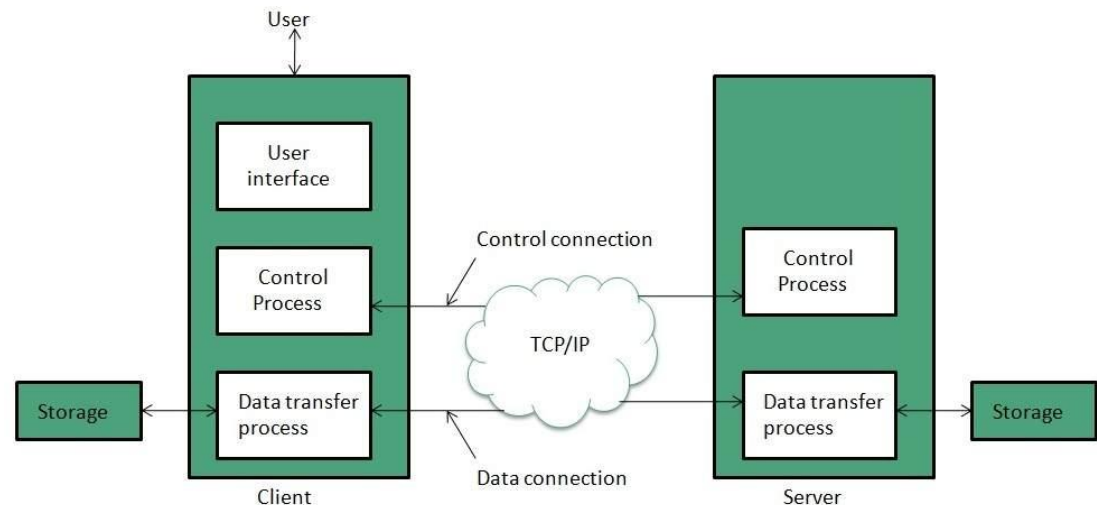
- ✓ FTP is internet tools used to copy files from one host to another.
- ✓ It gives access to directories of folders and files, allows files to be transferred between different kinds of computers.
- ✓ Can be used through application platform or web based platform.
- ✓ FTP encourages indirect use of remote computers to access shared resources.
- ✓ Can be used among Heterogeneous systems
- ✓ Can set different access rights to users.

FTP Working:

Typical client-server model

FTP client: eg: Filezilla Client

FTP Server: Filezilla Server



FTP creates two processes such as Control Process and Data Transfer Process at both ends

FTP establishes two different connections: one is for data transfer and other is for control information.

Control connection between **control processes** while **Data Connection** is made between Data Transfer process

FTP uses **port 21** for the control connection and **Port 20** for the data connection.

S.N.	Parameter	FTP
1	Operation	Transferring Files
2	Authentication	Yes
3	Protocol	TCP
4	Ports	21 – Control, 20 – Data
5	Control and Data	Separated
6	Data Transfer	Reliable

❖ Telnet (Terminal Network)

Telnet is a protocol that uses the telecommunication network facility that allows a computer to access the contents of another computer

It allows the user to access or edit files, or, issue or execute commands on the host computer

There are a number of Telnet clients having user friendly user interface.

FTP allows transfer of files from the host computer, while Telnet allows access to the computing facility of the host computer but does not allow transfer of files.

The following diagram shows a person is logged in to computer A, and from there, he remote logged into computer B.

```
C:\ Command Prompt - telnet
Welcome to Microsoft Telnet Client

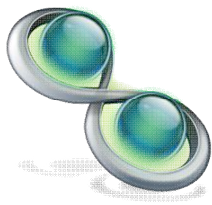
Escape Character is 'CTRL+]'

Microsoft Telnet> help

Commands may be abbreviated. Supported commands are:

c      - close           close current connection
d      - display         display operating parameters
o      - open hostname [port] connect to hostname (default port 23).
q      - quit            exit telnet
set    - set             set options (type 'set ?' for a list)
sen    - send            send strings to server
st     - status          print status information
u      - unset           unset options (type 'unset ?' for a list)
?/h   - help            print help information

Microsoft Telnet>
```



❖ IRC (Instant Relay Communication)

IRC is an APPLICATION LAYER protocol that facilitates the transfer of messages in the form of text.

uses TCP (Transmission Control Protocol)

The chat process works on a client/server networking model.

IRC clients are web based or application based programs. These clients communicate with chat servers to transfer messages to other clients.

IRC is mainly designed for GROUP COMMUNICATION.

IRC allows users to communicate in real time by text, instant sending and receiving of messages.

In IRC real identity is undisclosed, doesn't requires IM authentication.

HydraIRC, mIRC

❖ News

News

newsgroups; focused to a specific topic for discussion

People can post/read articles and also respond to articles

Different application/ platforms available.

❖ Internet Search Engines