

What is TCP/IP Protocol and MAC Address

TCP Protocol stands for Transmission Control Protocol.

TCP Protocol is used to transfer data over Internet using IP (Internet Protocol).

IP Protocol is used to connect computers over Internet.

Every computer connected over Internet has a unique IP Address which is a unique number.

Following are some major protocols in TCP Protocol Suite.

- HTTP
- FTP
- SMTP

HTTP stands for Hyper Text Transfer Protocol and is used to send html files between server and client.

FTP stands for File Transfer Protocol and is used to send any type of file over Internet and it requires FTP Client and FTP Server.

SMTP stands for Simple Mail Transfer Protocol and is used to send Emails Over Internet.

Protocol	Default Port on which Server Listens
HTTP	80
FTP	21
SMTP	25

IP Protocol is used to connect two computers over Internet

IP Protocol has two versions

- IP v4 (IP Version 4)
- IP v6 (IP Version 6)

Ip v 4 has 32 bits

example of ip v4 address is

192.0.2.146

Ip v6 address is of 128 bits

Example of ipv6 address is

2001:db8:3333:4444:5555:6666:7777:8888

What is a MAC Address.

To connect computer to internet A NIC is required.

NIC is Network Interface Card.

MAC Address is a number associated to NIC.

Example of MAC Address is

A MAC address is a 48-bit hexadecimal address. It's usually six sets of two digits or characters, separated by colons. An example MAC address would be 00:00:5e:00:53:af

here 00:00:5e is unique for NIC Manufacturer and 00:53:af is unique for Network Interface Card.