

DIFFERENCE BETWEEN TCP & UDP PROTOCOL

What is the difference between TCP & UDP protocols of TCP/IP protocol suite.

Solution:

The 2 types of traffic in the network are based on TCP (Transmission Control Protocol) and UDP (User Datagram Protocol). Following are the differences between the two

1. TCP is connection Oriented protocol, hence a connection need to be established (using 3-way handshaking) before data is transmitted using TCP. UDP is Connectionless protocol and no connection need to be established. The packets are sent directly over the network.
2. Because connection need to be established, TCP data transfer takes more time (3-way handshaking is done for establishing connection and then for removing the connection) than data transferred using UDP.

3. Connection in the TCP is established to make the transfer reliable (acknowledgement based). Hence data transfer using TCP is reliable and UDP is non-reliable (sender does not know, for sure, if the packet has actually reached the receiver or not).
4. Header Size of a TCP packet is bigger than the UDP header.
5. TCP does the error checking also, UDP does not have an option for Error checking.
6. Packets are ordered in case of TCP (i.e they are received in the same order as they are sent).
7. Application layer protocols like HTTP, FTP, Telnet, etc. uses TCP to transmit data whereas UDP is used by protocols like VoIP, DHCP, SNMP, etc.

Source: <http://www.ritambhara.in/difference-between-tcp-udp-protocol/>