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Discussion on TCP/IP. Introduction on TCP, Layers of TCP/IP and Functions of TCP Layers

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Topics

- Introduction on TCP/IP
- Layers of TCP/IP
- Protocols used in TCP/IP
- Comparison of OSI and TCP/IP

Introduction on TCP

- TCP/IP stands for 'Transmission Control Protocol/Internet Protocol' .
- It is a communication protocol that allows the computer to share various resources across a computer network.
- It handles the reliable delivery of messages across the network.

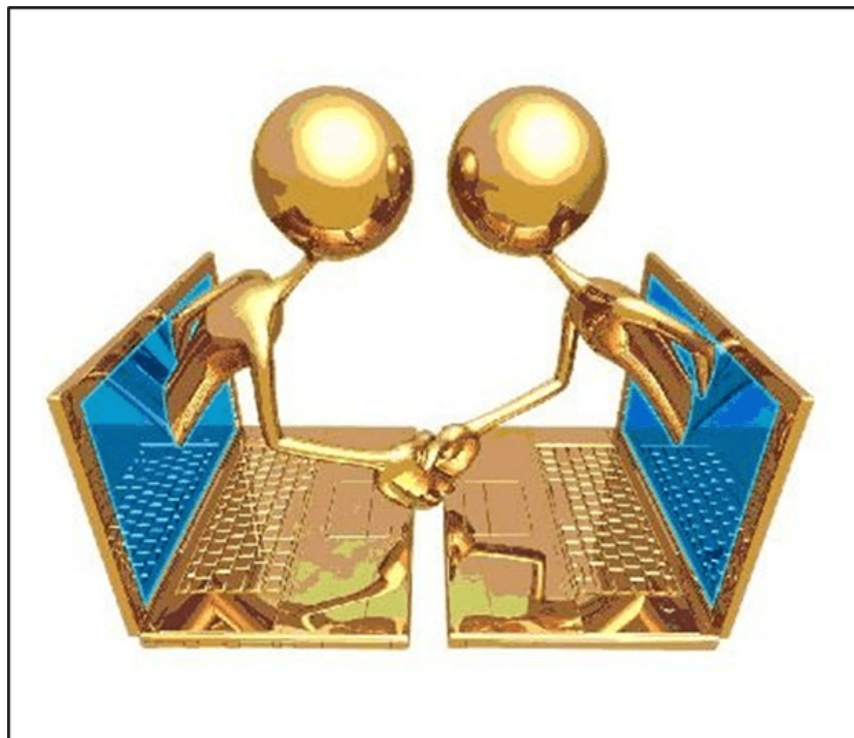


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Layers of TCP/IP

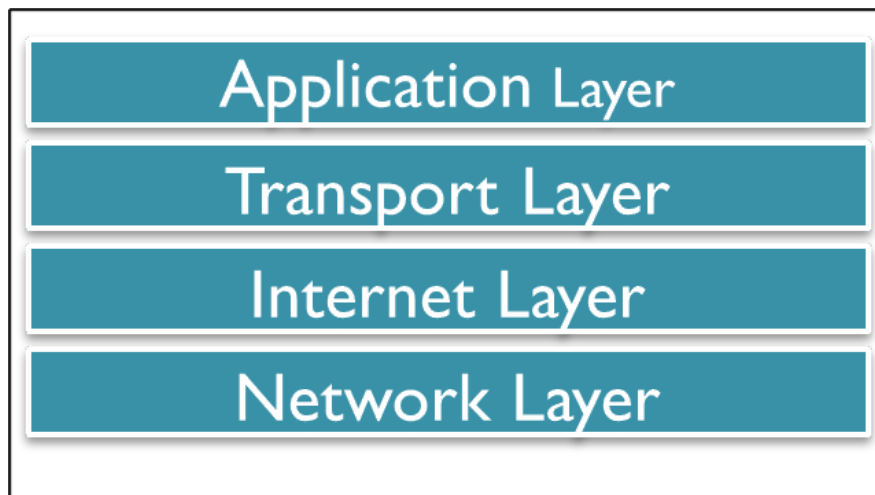
- Network Layer

- Internet Layer
- Transport Layer
- Application Layer



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Protocols Working in TCP/IP Model



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HTTP, FTP, POP3, SMTP, TCP, UDP, IP, Ethernet, ARP, IP

Full Forms

- HTTP: Hyper Text Transfer Protocol
- POP: Post Office Protocol
- SMTP: Simple Mail Transfer Protocol
- UDP: User Datagram Protocol
- IP: Internet Protocol
- ICMP: Internet Control Message Protocol
- ARP: Address Resolution Protocol

Functions of TCP Layers

Data Network Layer

- It controls all hardware devices and media.
- It provides the interconnection between different hosts and nodes in a network.

Internet Layer

- It determines the best appropriate path through the networks.
- Routing of data to next level is possible.

Transport Layer

- It is responsible for the transmission of messages and communication across diverse computer networks.
- It provides end to end data delivery.

Application Layer

It represents the data to the users.

It uses:

- HTTP & FTP: Web based
- POP3 & SMTP: Email
- SSL & TLS: Security
- SNMP: Network management

Comparison between OSI & TCP/IP

OSI	TCP/IP
Application Layer	
Presentation Layer	Application Layer
Session Layer	
Transport Layer	Transport Layer
Network Layer	Internet Layer
Data Link Layer	Network Access
Physical Layer	Layer

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MCQ

Q1. Which of the following protocol do not works under application of TCP/IP?

1. SMTP
2. FTP
3. UDP
4. POP3

Answer: C. UDP

Q2. What is the full form of ARP?

1. Address resolution protocol
2. Address resolver protocol
3. Addressing resolution protocols
4. None of the above

Answer: A. Address resolution protocol

#TCP/IP

#Layers of TCP/IP

#Protocols of TCP/IP

#Functions of TCP/IP layers

#Comparison chart between TCP/IP & OSI

-Mayank

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