

# **APPLICATION LAYER**

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## DOMAIN NAME SYSTEM:

- Provides the translation between symbolic names and addresses.
- Database that store all the domain names and corresponding IP Address for a specific top-level domain. Such as .info or .org.
- Primarily used for mapping host names and e-mail destination to IP addresses.
- Essential component of the functionality of the internet.
- Also specifies the technical functionality of the database service.
- All the computer system and resources on internet are identified by the DNS.

# ADDRESS RESOLUTION PROTOCOL(ARP)

- Protocol used for resolution of internet layer addresses into link layer addresses.
- Used for a mapping a network addresses to a physical addresses like an Ethernet addresses.
- Implemented with many combination of network and data link layer technologies.
- Provides a dynamic mapping from an IP address to the corresponding hardware address.
- ARP request is broadcast.
- ARP reply is unicast.

# REVERSE ADDRESS RESOLUTION PROTOCOL(RARP)

- Finds the logical address for a machine that knows only its physical address.
- Each host or router is assigned one or more logical address which are unique and independent.
- Requires one or more server host to maintain a database mapping.
- RARP request is created and broadcast on the local network. A network that knows all the IP addresses will respond with a RARP reply.

RARP is generally not used today since it is limited to a network segment or subnet.

# APPLICATION AND TRANSPORT LAYER

<b>Application layer defines TCP/IP application protocols &amp; how host program interface with transport layer.</b>	<b>Transport layer defines the level of service and status of the connection used when transporting data.</b>
Includes high level of protocols like DNS, HTTP, Telnet, FTP, TFTP, etc.	Includes main protocols like TCP and UDP.
Top most layer of four layer TCP/IP.	Third layer of the four layer TCP/IP.
Provides services such as network virtual terminal, file transfer, access and management, mail and directory services.	Provides services such as connection oriented data stream, support reliability, flow control, multiplexing,etc.
Deals with the aspects of application process concerned in communication.	Reliable communication between machines.

# REFERENCE

- Er. M. Dhungana Data Communication And Computer Network
- [https://en.wikipedia.org/wiki/Domain\\_Name\\_System](https://en.wikipedia.org/wiki/Domain_Name_System)
- [https://en.wikipedia.org/wiki/Reverse\\_Address\\_Resolution\\_Protocol](https://en.wikipedia.org/wiki/Reverse_Address_Resolution_Protocol)