

Implement ARP protocol. Write an ARP-Server program that listens on some UDP port for ARP-request packets that are 'broadcast' and responds to the sender of these packets with an ARP-response that contains the MAC and IP addresses of the machine. Also write an ARP-Client program that can send an ARP-Request packet as broadcast packet on UDP port. The client should provide the IP address for which the MAC address needs to be obtained.

An ARP-Cache needs to be maintained that stores the IP-MAC address maps. Aging can be implemented in this table through a programmable delay. Information in ARP-Cache is updated when an ARP broadcast request packet is received.