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WEEK-10: ARP IMPLEMENTATION USING UDP

Aim: To study ARP IMPLEMENTATION USING UDP.

Code:

#include<sys/types.h>

#include<sys/socket.h>

#include<net/if\_arp.h>

#include<sys/ioctl.h>

#include<stdio.h>

#include<string.h>

#include<unistd.h>

#include<math.h>

#include<complex.h>

#include<arpa/inet.h>

#include<netinet/in.h>

#include<netinet/if\_ether.h>

#include<net/ethernet.h>

#include<stdlib.h>

int main()

{

struct sockaddr\_in sin={0};

struct arpreq myarp={{0}};

unsigned char \*ptr;

int sd;

sin.sin\_family=AF\_INET;

printf("Enter IP address: ");

char ip[20];

scanf("%s", ip);

if(inet\_pton(AF\_INET,ip,&sin.sin\_addr)==0)

{

printf("IP address Entered '%s' is not valid \n",ip);

exit(0);

}

memcpy(&myarp.arp\_pa,&sin,sizeof(myarp.arp\_pa));

strcpy(myarp.arp\_dev,"echo");

sd=socket(AF\_INET,SOCK\_DGRAM,0);

printf("\nSend ARP request\n");

if(ioctl(sd,SIOCGARP,&myarp)==1)

{

printf("No Entry in ARP cache for '%s'\n",ip);

exit(0);

}

ptr=&myarp.arp\_pa.sa\_data[0];

printf("Received ARP Reply\n");

printf("\nMAC Address for '%s' : ",ip);

printf("%p:%p:%p:%p:%p:%p\n",ptr,(ptr+1),(ptr+2),(ptr+3),(ptr+4),(ptr+5));

return 0;

}

Output:-

