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EXPERIMENT:18

AIM: To implement of server-client using UDP socket programming.

ALGORITHM:

Server Side:

1. Create a socket: Create a UDP socket to listen for incoming client datagrams.
2. Bind the socket to an IP address and port number: Specify the IP address and port number for the server to listen on.
3. Receive datagrams from clients: Use the `recvfrom()` function to receive datagrams from clients.
4. Process the data: Process the received datagram as required by the application.
5. Send response to the client: Use the `sendto()` function to send a response back to the client, specifying the client's IP address and port number.
6. Repeat steps 3 to 5 as required to handle multiple clients.

PROCEDURE:

Client Side:

1. Create a socket: Create a UDP socket to send datagrams to the server.
2. Send data to the server: Use the `sendto()` function to send datagrams to the server, specifying the server's IP address and port number.
3. Receive response from the server: Use the `recvfrom()` function to receive a response from the server.
4. Process the response: Process the received response as required by the application.
5. Close the socket: Use the `close()` function to close the socket.
6. Exit the program: Exit the program as required.

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No.

udp

Source

Destination

Protocol

Length

Info

552	fe80::f01f:c7ff:fee...	f002::fb	106	Standard query 0x0000 PTR _companion-link_tcp.local, "QM" question
4045	172.20.10.3	224.0.0.251	NDIS	
5915	172.20.10.3	224.0.0.251	NDIS	
689 137.413321	fe80::199:6450:e07...	fe80::f01f:c7ff:fee...	DNS	109 Standard query 0x34bc A context-enroll.ccs.mcafee.com
690 137.522389	fe80::f01f:c7ff:fee...	fe80::199:6450:e07...	DNS	109 Standard query 0x0811 AAAA context-enroll.ccs.mcafee.com
692 137.602493	172.20.10.3	172.20.10.1	DNS	199 Standard query response 0x34bc A context-enroll.ccs.mcafee.com CNNAME context-enroll.ausmcafeeccs.mcafee.com A 44.237.230.37 A 52...
693 137.614782	fe80::f01f:c7ff:fee...	fe80::199:6450:e07...	DNS	89 Standard query 0x0811 AAAA context-enroll.ccs.mcafee.com
694 137.618035	172.20.10.1	172.20.10.1	DNS	232 Standard query response 0x0811 AAAA context-enroll.ccs.mcafee.com CNNAME context-enroll.ausmcafeeccs.mcafee.com SOA ns-701.ausdns...
746 192.038230	fe80::199:6450:e07...	fe80::f01f:c7ff:fee...	DNS	212 Standard query response 0x0811 AAAA context-enroll.ccs.mcafee.com CNNAME context-enroll.ausmcafeeccs.mcafee.com SOA ns-701.ausdns...
747 192.059237	fe80::199:6450:e07...	fe80::f01f:c7ff:fee...	DNS	98 Standard query 0x6757 AAAA edge.microsoft.com
748 192.059973	fe80::199:6450:e07...	fe80::f01f:c7ff:fee...	DNS	98 Standard query 0x3f4d HTTPS edge.microsoft.com
750 192.203372	fe80::f01f:c7ff:fee...	fe80::199:6450:e07...	DNS	201 Standard query response 0x6757 AAAA edge.microsoft.com CNNAME edge-microsoft-com.dual-a-0036-a-msedge.net CNNAME dual-a-0036-a-msedge...
750 192.203372	fe80::f01f:c7ff:fee...	fe80::199:6450:e07...	DNS	225 Standard query response 0x6757 AAAA edge.microsoft.com CNNAME edge-microsoft-com.dual-a-0036-a-msedge.net CNNAME dual-a-0036-a-msedge...
751 192.210616	fe80::f01f:c7ff:fee...	fe80::199:6450:e07...	DNS	216 Standard query response 0x3f4d HTTPS edge.microsoft.com CNNAME edge-microsoft-com.dual-a-0036-a-msedge.net CNNAME dual-a-0036-a-mse...
754 204.063772	172.20.10.3	239.255.255.250	SSDP	
775 205.081132	172.20.10.3	239.255.255.250	SSDP	217 M-SEARCH * HTTP/1.1
776 205.093327	172.20.10.3	239.255.255.250	SSDP	217 M-SEARCH * HTTP/1.1

> Frame 3: 534 bytes on wire (4272 bits), 534 bytes captured (4272 bits) on interface \Device\NPF_{3AB741A0-0000-0000-0000-000000000000} (0:00:00:00:00:00:00:00)

> Ethernet II, Src: Chongqin 3a:1d:45 (72:b3:3a:1d:45), Dst: IPv6mcast_fb (01:00:05:00:00:fb)

> Internet Protocol Version 4, Src: 172.20.10.3, Dst: 224.0.0.251

> User Datagram Protocol, Src Port: 5353, Dst Port: 5553

> Multicast Domain Name System (response)

0000 01 00 5e 00 00 00 ff 74 12 b3 3a 1d 45 08 00 45 00t...:E:E

0010 02 08 06 86 00 00 ff 11 4c 4b ac 14 0a 03 40 00LK.....

0020 00 1b f4 e9 14 e9 01 f4 9c 24 00 00 84 00 00\$.....

0030 00 08 00 00 00 00 01 33 02 31 30 02 72 30 03 313 10 20 11

0040 37 32 07 69 6e 26 01 64 62 74 02 61 72 00 01 00 72 in-ad dr arpa

0050 00 00 80 01 00 00 00 78 00 17 0f 4c 41 50 54 4fx...LAPTO

0060 50 2d 62 63 41 35 37 3f 4f 54 49 05 6c 6f 63 61 6f P-RAS5070 TI local

0070 00 01 42 01 45 01 36 04 01 42 01 38 01 42 01 08 E 6 D 8 B 8

0080 46 01 31 01 32 01 42 01 44 01 36 01 44 01 38 01 F 1 2 B D 6 D 8

0090 33 01 43 01 30 01 42 01 35 01 46 01 31 01 44 01 3C 0 B 5 F 1 D

0100 34 01 30 01 37 01 30 31 34 01 39 01 30 01 34 01 4 0 7 0 4 9 0 4

0110 32 03 69 70 36 c0 20 00 0c 01 00 00 78 00 0 2 5 p s

0120 02 c0 30 01 42 01 46 01 31 31 01 37 01 44 01 31 0 B F 1 7 D 1

0130 42 01 38 01 39 01 39 01 38 01 38 01 45 01 32 01 B 8 9 9 8 8 E 2

0140 30 01 42 c0 67 00 c0 80 01 00 00 78 00 02 c0 0 B g.....x.....

0150 30 01 36 01 37 01 37 01 35 01 37 01 30 01 46 01 0 6 7 7 5 7 0 F

0160 45 01 30 01 35 01 34 01 36 01 39 01 39 01 31 01 E 0 5 4 6 9 9 1

0170 30 01 30 01 30 01 30 01 30 01 30 01 30 01 30 01 0 0 0 0 0 0 0 0

0180 30 01 30 01 30 01 30 01 30 01 30 01 30 01 30 01 0 0 0 0 0 0 8 E

0190 46 c0 87 00 c0 80 01 00 00 78 00 02 c0 38 0 F.....x.....

0200 30 00 01 80 01 00 00 78 00 04 c1 14 03 00 0 x.....x.....

0210 30 00 1c 80 01 00 00 78 00 10 29 40 70 4d 0 x.....x.....

User Datagram Protocol: Protocol
Packets: 776 · Displayed: 116 (4.9%)
Profile: Default

0251
17-01-2022

Therefore implementation of server—client using UDP socket programming.