Network Programming

Client Algorithms and Issues

Note: **This class lecture will be recorded!**
If you do not consent to this recording, please do not ask questions via your video, audio or public chat; send your question to the instructor using the private chat.

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Client Software - Simple

▶ Why is client software conceptually simpler than server software?

Server Address

▶ How can the client find the server's hostname and port number?

▶ Advantages and disadvantages of each method?

▶ Most common method?

Command-Line Argument

▶ int main(int argc, char *argv[])

▶ What data type are the arguments?

▶ How can the program determine if the user entered a hostname or IP address?

Protocol and Port Number

▶ getprotobyname()

▶ Correct port number

  ▶ Pass as Command-line argument

  ▶ Pass service name as argument

    ▶ getservbyname()

TCP Client Algorithm (Alg 6.1)

▶ Find the IP address and protocol port number of the server

▶ Allocate a socket

▶ Connect the socket to the server

    ▶ Specify that the connection needs an arbitrary port number

▶ Communicate with the server using the application-layer protocol

▶ Close the connection

UDP Client Algorithm (Alg 6.2)

▶ Find the IP address and protocol port number of the server

▶ Allocate a socket

▶ Specify that the connection needs an arbitrary port number

▶ Specify server to send communication

▶ Communicate with the server using the application-layer protocol

▶ Close the connection