

Challenges Associated With Client-Server Communication

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There are many challenges associated with establishing client server based communication. The greatest of these challenges is properly setting up a host name and port number for the client and server to use in order to establish the connection. This step is much easier when the connection that is being established is only local, because if the connection is remote over multiple nodes, the INET address of the server node must be identified. The easiest way to identify a node's INET address is to use the shell command "ifconfig" in a terminal window and several configuration numbers, including the INET address, will be given. This value should then be used as the host name given to the Socket objects on either side of the connection. Another challenge faced is establishing a connection within the allowed settings dictated by a network's firewall. It was determined that the network in Alden Hall will allow a connection on any of the port numbers within 12345-12350. Finally, one last challenge associated with client server communication is being familiar with the many I/O classes that are available in Java. The more familiar one is with these packages, the easier it will be to send and receive information over the established connection. Many of the functions that are used in client server communication are very similar to simple file input and output used in more basic Java programs, the major difference is the destination for the data will be a server socket and not a specified directory. Though it is important to note that in this lab specifically the final destination was a specified directory, it just needed to be routed through the socket server first.