

## Server latency time estimator using multi-threaded socket programming

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*Abstract:* World Wide Web and Internet has become indispensable in our modern life and it has emerged as a globally pervasive means for information exchange and it changed the way how business was conducted before. Internet has become increasingly common and necessary to perform everyday tasks. Some of the real-time applications used in the Internet speeds up the communication process by connecting the users to the closest servers. This process of client clustering and server selection is crucial to deliver the responses quickly and satisfy the client expectations. Latency is the most commonly used primary metric to determine the network proximity and response time of a request. We have a lot of latency approximation tools in the market however, none of them offer a perfect balance of scalability, measurement time and maintainability. This paper proposes a solution using socket programming by sending a TCP packet to the server for latency estimation and this is accomplished with multi threads to overcome the scalability issues. With this improved coverage of latency estimation, it becomes easier to detect the low latency connection and hence improve the real-time interaction of clients with the servers on the Internet.