

The Blockchain cloud-assisted peer-to-peer algorithm (CAP algorithm) addresses the common drawbacks of existing blockchains, which consume a lot of processing power and take time for transactions, by implementing the processing of requests on the cloud. The cloud accepts the transaction request from a user through a dispatcher and sends the requests to the server. Multiple servers form a peer-to-peer network, communicating among themselves and capable of handling multiple requests simultaneously in an asynchronous way. The transaction requests are further processed by assigning a sequence number to each of the transactions based on their arrival time. Further, a hash is generated for transactions, which forms the consensus to verify transactions that form a block and are then added to the blockchain. This thesis focuses on implementing a cloud-assisted peer-to-peer algorithm and analyzing the run time when different users consecutively submit multiple transaction requests. The processing time per request has been consistent even though the number of requests has increased. This paper concludes that processing requests in the cloud could be an effective and energy-efficient solution.