

10000tps finally, as depicted in Fig. 4(a), which is determined by the simulated network itself. Also, as just mentioned, bigger network delay has bigger impact on the basic PoM protocol, compared with the optimized PoM protocol, regarding system latency as well, as shown in Fig. 4(b).

8 CONCLUSION

This paper proposes a blockchain-enabled network slice broker collaboration infrastructure, where multiple brokers can negotiate with each other to achieve slice resource sharing among each other. And we design a Proof-of-Majority (PoM) consensus protocol to enhance the accountability of collaboration records. Concretely, slice transactions are sorted on each broker node, and further packed into blocks to be appended to a shared ledger, which is maintained by each member in the consortium network. Different from popular consensus protocol such as Proof-of-Work (PoW) or Proof-of-Stake (PoS), our PoM consensus protocol determines a same sequence of slice trading transaction for each miner firstly, before generating each block, to guarantee block generation efficiency, as well as the robustness of the consensus process. The limitation of our work is the scalability issue when the members of the broker collaboration network changes, the consensus protocol should adjust accordingly, since majority members are changed accordingly. Improvements for such scenario are under consideration of our future work.

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