8. Conclusion

DoS attack is currently a major threat and detriment to the availability of cloud services. With each developed defense mechanism against DoS attack, an improved attack appears. Using defense mechanisms with existing authentication protocols to prevent DoS attacks in cloud-computing systems is not always effective. Therefore, this work proposed an authentication protocol to prevent external DoS attacks on cloud-computing systems. Moreover, the security effectiveness of the proposed authentication protocol via SVO logic was analyzed. This analysis proved that the proposed authentication protocol achieves the authentication requirements of an authentication protocol in cloud-computing systems.

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