Provide a method based on the combination of cloud computing and SDN to defend against DDOS attacks

maryam mohammadzadeh dogaheh*,gholamhosain ekbatanifard, asadollah shahbahrami,

Today, network security and defense against various attacks on the network, have been studied by many researchers, however, it's Yet threaten network security. One of these types of attacks is denial of service (DoS) and its distributed version (DDoS) which both trying to prevent availability of the network services for demanding users by dissipating system or network resources. In this research, network security against DDoS attacks and techniques to deal with this type of attacks, has been partly examined. With the knowledge of DDoS attacks manners and how these attacks misusing of network weak points, a software-defined security network mechanism (SNSNM) is proposed to remove or restrict the critical conditions mentioned above, and then, a prototype of SDSNM is implemented by simulating with Mininet. In order to solve the problems of complex management, generalization and stability, one solution is to applying technologies such software defined network, chord and cloud computing. Experiments on prototypes show that this new mechanism is feasible, and in case of using strict access control policies, it is impossible for DDoS attacks to reach their goals. Instead, in case of utilizing poor access control policies, location and position of attackers and hosts in botnet, which is a collection of computers that controlled by hackers, would be identified and characterized.