

A POX Controller Module to Prepare a List of Flow Header Information Extracted from SDN Traffic

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Abstract : Software Defined Networking (SDN) is a paradigm designed to facilitate the way of controlling the network dynamically and with more agility. Network traffic is a set of flows, each of which contains a set of packets. In SDN, a matching process is performed on every packet coming to the network in the SDN switch. Only the headers of the new packets will be forwarded to the SDN controller. In terminology, the flow header fields are called tuples. Basically, these tuples are 5-tuple: the source and destination IP addresses, source and destination ports, and protocol number. This flow information is used to provide an overview of the network traffic. Our module is meant to extract this 5-tuple with the packets and flows numbers and show them as a list. Therefore, this list can be used as a first step in the way of detecting the DDoS attack. Thus, this module can be considered as the beginning stage of any flow-based DDoS detection method.

Keywords : matching, OpenFlow tables, POX controller, SDN, table-miss

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