UNIVERSITI TEKNOLOGI MARA

SELF-PROVISION EDGE LAYER TRAFFIC MANAGEMENT WITH SOFTWARE DEFINED NETWORKING (SDN)

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ABSTRACT

Nowadays, network utilization management focusing more on centralize application or equipment such firewall and filtering tools to enable the implementation of appropriate traffic management. With such approach, bottleneck of resources happen where the application or appliances being used cannot cope with the session or traffic filtering handling demands. This is due the approach of handling the filtering management at a centralize location. As mention earlier, shaping of available bandwidth being deployed at that layer has constraint the related devices due to vast amount of connection and traffic needed to be scan and control. This research will try to develop a program for self-provision traffic fair usage handling using both SFlow and Openflow technologies. If it is successful, automatic edge layer management of traffic could be adopted in order to mitigate the needs to scan, control and filtering traffic at a single point of devices. SFlow protocol will be used as the source of details traffic information where by top source, top destination and the amount of traffic usage can be identified. From earlier identification, using openflow protocol, self-provision program will be executed in schedule to push policies to targeted switch from the controller. The program will kept on running to collect the details traffic and enforcing policies based on current network utilization. The program is automatically executed and no administrator intervention needed in order to apply the fair usage of traffic in the organization.

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