

ABSTRACT

Today's computer network technology is increasingly advanced and developing, as a result its use is increasing. More and more agencies or companies are implementing computer networks for efficiency in running their company's operations. But behind the fast internet and advanced computer networks, there are security threats that must be considered. VLAN provides convenience and efficiency in building a network. With limited devices, networks can be built larger by utilizing sub-interfaces on network devices. However, to control network usage, a system that can filter or restrict certain access is needed. So that companies or agencies can prevent users from doing things they don't want. The use of Access Lists is indispensable here. Access List offers can filter or restrict a computer access on VLAN network. Some VLAN networks can be set whether they can connect to the internet or not, and can limit communication between different VLAN routers. This research was conducted by simulating using the GNS3 simulation application. The results of the author's research show that applying an Access List to a VLAN can increase computer network protection. The results of the author's research show that applying an Access List to a VLAN can increase computer network protection.

Keywords : LAN (*Local Area Network*), VLAN, *sub interface*, *Access List*