

ABSTRACT

VLAN Concept Analysis and Dynamic Routing Techniques Using the OSPF Protocol in Simulation of Internet Network Configuration at the Ministry of Home Affairs

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The use of the internet network is needed by every agency, especially agencies that have large offices and many divisions/organizations in the office. In using the internet network, a local network is needed so that it can connect between organizations so that they can communicate with each other and provide security. Therefore, VLAN configuration is needed to divide the local network and dynamic routing techniques to facilitate the configuration process. Writing this report is expected to be useful for increasing knowledge and understanding of internet network configurations using VLANs and dynamic routing. The data in this report were obtained using the observation method (participant observation). The data collection is done by configuring and observing the object of research, then the data is collected by recording (screen shot). In the implementation of practical work, there are 2 topologies that are configured using the EVE-NG simulator. The first internet network topology implements VLANs, while the second topology uses dynamic routing techniques using the OSPF routing protocol. VLAN implementation aims to divide the network logically into 2 different paths on the same device. Dynamic routing techniques make configuration easier because the address recording on the device is done automatically. Based on the description of the implementation of the practical work, it illustrates that the application of VLANs and dynamic routing techniques is quite important in internet network configurations. So it is recommended for network administrators to apply VLANs and dynamic routing techniques in internet network configurations.

Keywords: *Practical Work, Simulation, Dynamic Routing, VLAN*