## ABSTRACT

Development of information technology which is growing rapidly has changed the system. The conventional has been being modern system, especially when the internet goes on. Internet contributes to such a great way for people, companies, and the governments. Internet needs has been felt by the public, there are many evidence of it public facilities such as cafes, malls, campuses, offices and more providing internet facilities. One problem that often occurs is the uses of internet network by illegal user or which one does not provide authentication as a client. Captive portal is the one of the solution for illegal user. It do not give the way of traffic prior permission unless user register on the web. Usually the captive portal is used in wireless infrastructure areas such as hotspot, but it also can be implemented on cable network.

Captive portal is not depend on built-in security mechanisms based on 802.11b WIFI equipment to control who can be socialized into the access point. The use of captive portal to access point without WEP systems, so it is not burdening the working of access point itself. Access point work on bridge mode (not a router) and connected to a computer server that is configured as Linux router. Linux router will serve as interface between the local network to the internet network.

In this final project, it will be implement on wireless network . the implementation of captive portal will use gateway when user is not authenticated yet will forced to access authentication web and analysis the performance of captive portal level. The result showed that Captive Portal has minimum time login 6ms, Captive Portal can serve 4738 user simultaneously and has maximum transaction as 1.342.738. Even Captive Portal not as good as Mikrotik, Captive portal can manage user's bandwidth fairly, and Captive Portal also can prevent MAC spoofing attack. The result of this project is expected to be applied on public service.

**Keyword:** Captive Portal, time login, bandwidth management, server respone time, and MAC Spoofing attack.



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