

ABSTRACT

Hotspot is a place that offers Internet services via wireless local area networks and use a router that connected to an Internet service provider. Typically, Hotspots use Wi-Fi technology because more flexible. To use this facility the user must have a username and password.

Used a RADIUS (Remote Authentication Dial In User Service) to manage the user login system. The service provider can commercialize the hotspot services by making internet voucher. This voucher can be limited by speed, data and time. Hotspot service providers can use the web interface login page to make a commercial media. Login web page can be replaced using a php script that is inserted in the router configuration. If the hotspot operated in any place and geographically separated, so make centralized hotspot to manage hotspot easily and make authentication, authorization, and accounting (AAA) in one device. Centralized hotspot router using a router core as a central RADIUS, Web page login settings, and network monitoring. So if user move from location to location hotspot to another hotspot but still within the same RADIUS users can still access the internet with the same username and password.

This Final Project implemented a centralized hotspot system. Use web page to display a commercial media, log on using the vouchers that have a limited value on time, speed and quota data. Loadbalancing and failover for networks with heavy traffic have been implemented with Nth method and result of utility lines up to 98.10% and the two lines of up to 98.60. Maximum delay of authentication is 142,4284 ms at 500 Kbps uplink traffic. The average delay time of sms information from the overall observations at different times with maximum results is 5 second.

Key words: hotspot, RADIUS, web page logins, loadbalancing, failover, SMS, Mikrotik.