

ABSTRACT

The development of wireless network technology, especially Mikrotik-based Wi-Fi, demands efficient and secure management to maintain service quality. The configuration process of Mikrotik devices, which is still done manually in many companies, potentially causes configuration errors, bandwidth imbalance, and difficulties in real-time user activity monitoring. This study aims to develop a web-based application called NetPro Connect that automates the configuration and monitoring of Mikrotik devices to enhance network management efficiency and security. The application integrates access management, dynamic bandwidth allocation, and real-time user activity monitoring features through the Mikrotik RouterOS API. Testing using black box testing and User Acceptance Test (UAT) methods shows that the system meets user needs with an acceptance rate of 83.04%. These results demonstrate that NetPro Connect can replace manual processes with a more reliable and user-friendly automated solution, supporting the stability and optimization of company networks.

Keywords: Mikrotik, RouterOS API, Wi-Fi, Real-time Monitoring, Web-based System