

ABSTRACT

Number of irresponsible parties doing a lot of data destruction, data theft, data manipulation, and so forth by exploiting the 'gap' in a network. In fact, the vulnerability of a network is like leaving the door open for irresponsible parties to penetrate a network. Therefore, this final project discusses the initial steps of how to analyze vulnerabilities in a network.

In this research, scanning analysis of network vulnerability to five places performed. The purpose this analysis is to measure network risk with Network Risk Metric Method. Network Risk Metric is a vulnerability assessment method suggested by Hemanidhi, Sanonchimmanee, and Sanguansat on 2014. Lai-Hsia method is also used for comparison. Lai-Hsia method is a vulnerability assessment method suggested by Lai-Hsia in 2007.

The analysis results show that the place which has more IP host than the others triggered more vulnerability in a network. In this case, in order from the bigger ones, the first test spot, with total estimated risk of 5.32%, followed by third test spot with 4.03%, then fourth test spot with 3.09%, second test spot with 1.77% and fifth test spot with 1.45%. The Lai-Hsia method calculation shows that first place has Risk Lai-Hsia equal to 54,72%, then third place with 46,46%, fourth place with 42,61%, second place with 34,85%, and fifth place with 29.25%

Keywords : *Network Security, Security Metrics, Common Vulnerability Scoring System, CVSS, Nessus Vulnerability Scanner, Network Risk Metric, Lai-Hsia Method*