

Muhammad Risky. 2025. *Implementasi Honeypot Dengan Model Honey Network dan Intrusion Detection System Menggunakan Pentbox Pada Jaringan Wireless*. Skripsi, Program Studi Pendidikan Informatika, Fakultas Keguruan dan Ilmu Pendidikan, Universitas Trunojoyo Madura. Pembimbing : Muhlis Tahir, S.Pd., M.Tr.Kom.

ABSTRAK

Dalam era teknologi yang berkembang pesat, keamanan jaringan menjadi hal yang sangat penting untuk mencegah serangan dari pihak yang tidak bertanggung jawab. Penelitian ini bertujuan mengembangkan sistem keamanan jaringan menggunakan *Pentbox* sebagai *Honeypot* dan *Intrusion Detection System* (IDS) di SMK YPM 1 Taman. Latar belakang penelitian ini adalah maraknya serangan terhadap layanan *MySQL Server* dan *FTP Server* di jaringan *wireless* sekolah, khususnya serangan menggunakan *SQLMap* dan *Hydra*. Penelitian menggunakan model pengembangan *Waterfall* yang terdiri dari lima tahap: *Analysis*, *Design*, *Implementation*, *Testing*, dan *Maintenance*. Selain itu, pendekatan *Security Development Life Cycle* (SDLC) juga diterapkan untuk memastikan keamanan sejak tahap awal. Hasil implementasi menunjukkan bahwa *Honeypot* dan IDS berbasis *Pentbox* berhasil mendeteksi dan memblokir serangan *SQLMap* dan *Hydra*. Validasi dilakukan melalui kuesioner kepada Ahli Jaringan dan Kepala Laboratorium sekolah, dengan hasil penilaian sebelum dan sesudah penerapan mencapai rata-rata di atas 86%. Hal ini menunjukkan bahwa sistem yang dikembangkan dinilai sangat layak, efektif, dan mampu meningkatkan keamanan serta stabilitas jaringan sekolah.

Kata Kunci : Keamanan Jaringan, *Honeypot*, *Intrusion Detection System*, *Waterfall*, *Pentbox*

Muhammad Risky. 2025. *Honeypot Implementation With Honey Network Model and Intrusion Detection System Using Pentbox on Wireless Network*. Thesis, Informatics Education Study Program, Faculty of Theacher Training and Education, Trunojoyo University Madura. Supervisor : Muhlis Tahir, S.Pd., M.Tr.Kom.

ABSTRACT

In the era of rapidly developing technology, network security is very important to prevent attacks from irresponsible parties. This study aims to develop a network security system using Pentbox as a Honeypot and Intrusion Detection System (IDS) at SMK YPM 1 Taman. The background of this study is the rampant attacks on MySQL Server and FTP Server services on school wireless networks, especially attacks using SQLMap and Hydra. The study uses a Waterfall development model consisting of five stages: Analysis, Design, Implementation, Testing, and Maintenance. In addition, the Security Development Life Cycle (SDLC) approach is also applied to ensure security from the early stages. The implementation results show that Honeypot and IDS based on Pentbox successfully detected and blocked SQLMap and Hydra attacks. Validation was carried out through a questionnaire to Network Experts and Heads of the school Laboratory, with the assessment results before and after implementation reaching an average of above 86%. This shows that the system developed is considered very feasible, effective, and able to improve the security and stability of the school network.

Keywords : Network Security, Honeypot, Intrusion Detection System, Waterfall, Pentbox