

Review of Cyber Resilience Approaches using Intrusion Detection and Prevention Systems

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Abstract: The rapid growth of cyber threats has necessitated the development of sophisticated defensive mechanisms. Intrusion Detection Systems and Intrusion Prevention Systems are foundational components of cyber resilience frameworks. This paper reviews contemporary approaches integrating IDS/IPS to enhance organizational resilience against attacks. Key strengths, limitations, and integration strategies are examined. Results indicate that hybrid IDS/IPS frameworks leveraging machine learning significantly improve detection accuracy and response times, strengthening cyber resilience.

Keywords: Cyber Resilience, Intrusion Detection System, Hybrid Frameworks