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**A Study of DDoS Attacks and Malware Protection from New Age
Threats on Clouds**

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ABSTRACT

Every company today relies heavily on the Internet for promotion, customer acquisition, and internal operations. Unfortunately, this is not lost on cyber terrorists and organized criminal networks. Cybercriminals may prevent legitimate consumers from accessing hosted services by slowing down websites and limiting access to internal networks and data in a distributed denial of service (DDoS) attack. Distributed Denial of Service (DDoS) attacks and malware are emerging as significant threats in the realm of cloud computing, necessitating robust protection mechanisms to safeguard cloud environments. DDoS attacks, which overwhelm servers with excessive traffic to disrupt services, are increasingly targeting cloud infrastructures due to their scalability and critical role in businesses. Similarly, malware has evolved to exploit cloud vulnerabilities, spreading across virtual machines and exploiting shared resources. To combat these new-age threats, cloud providers are integrating advanced security measures like AI-driven threat detection, automated incident response, and network traffic monitoring. Additionally, zero-trust architectures and multi-layered encryption are being employed to enhance the resilience of cloud systems against these sophisticated attacks. These strategies are crucial for ensuring the integrity, availability, and security of cloud services in an era where cyber threats are constantly evolving.