## IJARSCT



International Journal of Advanced Research in Science, Communication and Technology

International Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal

Volume 5, Issue 7, May 2025



## Case Study on WannaCry Ransomware: Technical Analysis, Global Impact, and Lessons for Future Cyber Defence

Poornima Rai

Assistant Professor, Department of Information Technology, Sikkim Skill University, Sikkim. raipoornima641@gmail.com

Abstract: WannaCry, a ransomware attack that occurred in May 2017, became one of the most notorious cyber incidents in recent history. This review paper analyses the technical aspects of the WannaCry ransomware, its impact on global systems, and the lessons learned in its wake. By exploiting vulnerability in Microsoft Windows' Server Message Block (SMB) protocol, WannaCry was able to propagate rapidly across networks, encrypting data and demanding ransom in Bitcoin. This paper delves into the mechanisms of the attack, it's devastating global consequences, particularly on sectors like healthcare and telecommunications, and evaluates the existing defence measures. The paper concludes with recommendations for enhancing cyber security measures and preventing future ransomware attacks.

Keywords: WannaCry, ransomware, cyber security, patch management, cyber defence, global impact, vulnerabilities...



