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Mobile Botnet Detection

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Abstract: Android, being the most widespread mobile operating systems is increasingly becoming a target for malware. Malicious apps designed to turn mobile devices into bots that may form part of a larger botnet have become quite common, thus posing a serious threat. This calls for more effective methods to detect botnets on the Android platform. Hence, in this paper, we present a deep learning approach for Android botnet detection based on Support vector machine (SVM). Our proposed botnet detection system is implemented as a sym based model that is trained on 342 static app features to distinguish between botnet apps and normal apps.

Keywords: Mobile botnet detection, SVM

REFERENCES

- [1]. S. Y. Yerima and S. Khan "Longitudinal Perfomance Anlaysis of Machine Learning based Android Malware Detectors" 2019 International Conference on Cyber Security and Protection of Digital Services (Cyber Security), IEEE
- [2]. H. Pieterse and M. S. Olivier, "Android botnets on the rise: Trends and characteristics," 2012 Information Security for South Africa, Johannesburg, Gauteng, 2012, pp. 1-5. Letteri, I., Del Rosso, M., Caianiello, P., Cassioli, D., 2018. Performance of botnet detection by neural networks in software-dened networks, in: CEUR WORKSHOP PROCEEDINGS, CEUR-WS.
- [3]. Kadir, A.F.A., Stakhanova, N., Ghorbani, A.A., 2015. Android botnets: What urls are telling us, in: International Conference on Network and System Security, Springer. pp. 78–91.
- [4]. ISCX Android botnet dataset. Available from https://www.unb.ca/cic/datasets/androidbotnet.html. [Accessed 03/03/2020]
- [5]. M. Eslahi, M. V. Naseri, H. Hashim, N. M. Tahir, and E. H. M. Saad, "BYOD: Current State and Security Challenges," presented at the IEEE Symposium on Computer Applications Industrial Electronics, Peneng, Malaysia, 2014
- [6]. S. S. C. Silva, R. M. P. Silva, R. C. G. Pinto, and R. M. Salles, "Botnets: A survey," Computer Networks, vol. 57, pp. 378-403, 2013.
- [7]. A. J. Alzahrani and A. A. Ghorbani, "SMS mobile botnet detection using a multi-agent system: research in progress," presented at the Proceedings of the 1st International Workshop on Agents and CyberSecurity, Paris, France, 2014
- [8]. G. Gu, J. Zhang, and W. Lee, "BotSniffer: Detecting botnet command and control channels in network traffic," in Proceedings of the 15th Annual Network and Distributed System Security Symposium (NDSS'08), 2008
- [9]. C. Byungha, C. Sung-Kyo, and C. Kyungsan, "Detection of Mobile Botnet Using VPN," in Proceedings of the Seventh International Conference on Innovative Mobile and Internet Services in Ubiquitous Computing (IMIS), 2013, pp. 142-148

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