An Enhanced Approach for USB Security Management

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Abstract

The portability and high data transmission speeds of USB Flash drives are increasingly making them a preferable medium for data transfer and storage. These portable devices are offering users expedient access to personal and business data on the go. However, with the increased usage of these devices, the associated risks have also escalated. At present, USB devices are found to be a major source of spreading malware (malicious programs) and data exfiltration. These devices provide malicious insiders with the opportunity of stealing data inconspicuously since these can be hidden very easily due to their small size, and it is quite tricky to track their usage. This report scrutinizes the existing USB security solutions that are falling short of the requisite security targets. It is argued that the enhancement of existing USB security architecture and reworking on the security policies is the only approach to make USB sticks a secure data storage option. A novel USB monitoring system is developed here based on the identified vital security attributes, and conclusions are drawn through the comparison of the devised solution with the existing ones.