

Abstract

Nowadays, the personal data privacy is a common concern for many people. Regarding privacy, there are 3 concepts that are of interest, namely availability, confidentiality and integrity. One of the already existent solutions for protecting data privacy is encryption, but this does not offer a full solution.

This paper's focus is exposing an overview of a possible Linux solution and also a Windows one which was also implemented. The implementation process of the "File Protector", the Windows solution, is also described in this thesis. The designed solution consists of a minifilter driver which encapsulates the logic for file access monitoring and blocking, a dll that exposes APIs for communication with the minifilter driver and can also be integrated by third parties, and finally a GUI.

There are four chapters in this paper, first one stating the main goals of the paper along with a summary regarding the content of the paper.

The second chapter where potential design for a "File Protector" on Linux is presented along with the Windows solution including both theoretical concepts as well as implementation details. Here are also exposed the built in mechanisms that a user can use to protect personal files in Linux and Windows. In addition, we can find in this chapter a brief outline of a Windows solution which was already implemented.

The third chapter reveals the further work which can be done in order to improve the designed Windows solution regarding performance and also extension to an enterprise environment.

Lastly, the conclusion gathers all the information through the paper restating the main ideas.

This work is the result of my own activity. I have neither given nor received unauthorized assistance on this work.