Cameleonica

safe cryptographic steganographic advanced filesystem

Conceptual Design

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Abstract

This paper describes a conceptual design of the project, that is the functionality, the semantics, the characteristics, and the quality that will be offered to end users. Rationale for some fundamental decisions is explained. Operational scenarios are presented, followed with acceptance tests to establish a basic measure of usability.

Introduction

Cameleonica project is an innovative filesystem design. Both new commands and well established commands with new semantics are given into hands of end users. Both are highly specialized and broad in application. Consider following examples.

Commiting and reverting history of changes is typical of version control systems, which are everywhere by now. Encrypting entire disks is quite common nowadays. Hiding files and even entire systems on disk is almost as common. Compressing and hashing files is a standard operation. All of these are available separately, and furthermore, all of these are implemented outside of filesystem. This project tries to reverse these two facts.