

A Project

entitled

combox

by

Siddharth Ravikumar

Submitted to the Graduate Faculty as partial fulfillment of the requirements for the  
Masters of Science Degree in Computer Science

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May 2016

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An Abstract of  
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File storage providers on the Internet have made it non-trivial for individuals to store personal files on the file storage provider's computers. After Mr. Snowden disclosed information about the National Security Agency' (NSA) surveillance programs that allowed the NSA to access information stored on file storage provider' computers, online file storage became a non-solution for storing personal files for everyone who detested the possibility of somebody else being able to access their personal files. In the past, there have been separate efforts to come with a solution to allow individuals to use storage space provided by file storage providers in a way that it made it impossible for file storage providers and to access the files. combox is one such effort. It allows an individual to store personal files in the "combox directory" on all her computers (running GNU/Linux or OS X) and the combox program takes the files, splits and encrypts them and spreads them across file storage providers' directories. Therefore, when an individual uses storage space provided by file storage providers through combox, each file storage provider gets only a part of the file in an encrypted form.

Dedicated to the \$EDITOR I use to literally write everything.

# Acknowledgments

Dr. Robert C. Green II who gave me an opportunity to work on combox.

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# List of Abbreviations

YAML ..... YAML Ain't Markup Language

# Preface

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# Chapter 1

## Introduction

# Chapter 2

## Background

# Chapter 3

## Literature Review

# Chapter 4

## combox Architecture and Design

# Chapter 5

## Use Cases, Benchmarks, and Demonstration

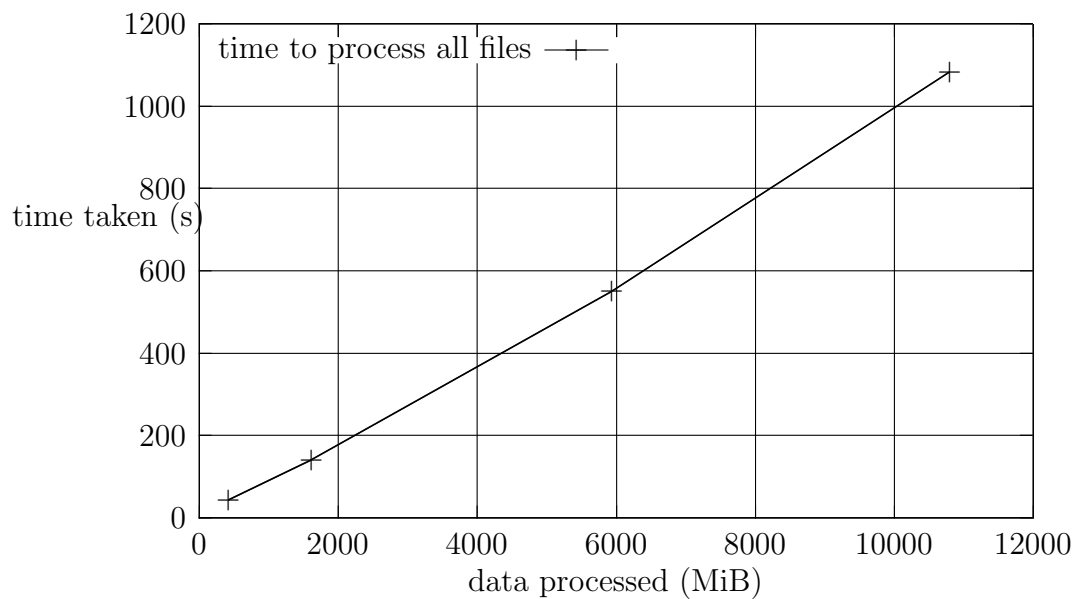


Figure 5-1: time to process all files

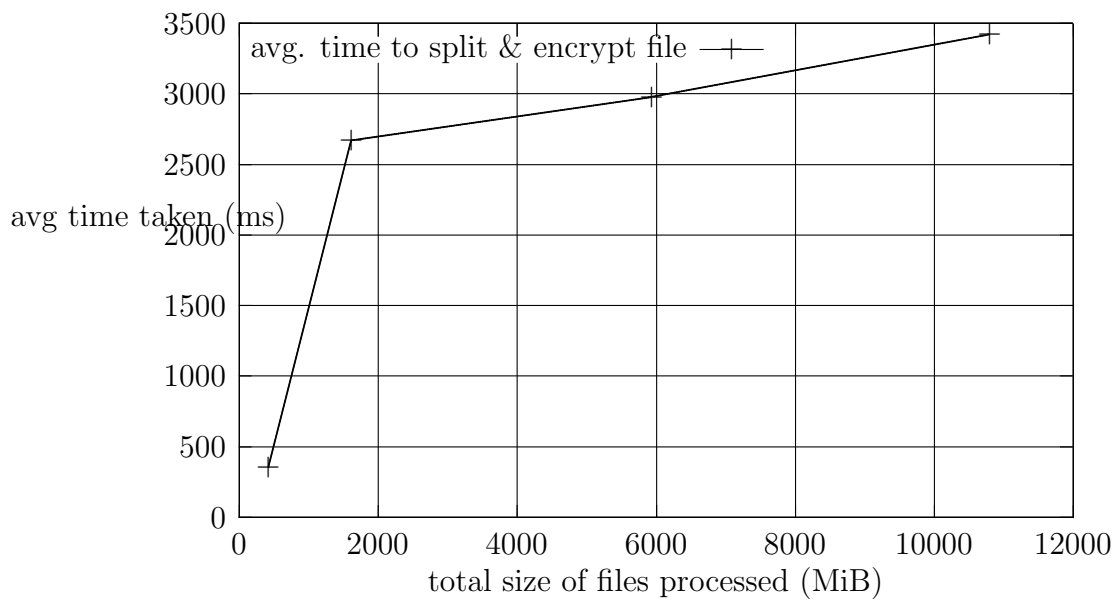


Figure 5-2: time to process all files



# Chapter 6

## Conclusion and Future Work