CS 444 Project 3: Encrypted Block Device

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Abstract

This assignment will involve the modification of the Linux Yocto kernel. The kernel will be modified to add a custom encrypted block device, which we will design and implement. The solution will use the Linux Kernel's Crypto API to add encryption when reading and writing data. The solution will comprise of a RAM Disk device driver which allocates blocks of memory. The solution will first be implemented in the kernel directly for ease of testing, and will subsequently be moved to a module with module parameters used for the encryption and decryption of the data. This document will provide documentation and design details for the encrypted block device driver.

Contents

1 Program Design

2 Version Control Logs

Detail	Author	Description
6379fd5	balesh2	starts write up
16247e0	balesh2	add Makefile
04671cc	balesh2	adds script to makefile to autogenerate commit log
0ef81bf	balesh2	remove changelog with make clean

3 Work Log

3.1 November 22nd, 2016 - 10:20 am

Started write up, including documentation and design of encrypted block device driver. Added script to generate version control log table from git history.

3.2 November 22nd, 2016 - 10:30 am

Added Makefile.

4 Purpose of Assignment

5 Testing Methods

6 Learning Outcomes