Operating System Feature Comparison: I/O and Provided Functionality

CS444

Spring 2016

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Abstract

This document provides an overview of key I/O operations in Windows and FreeBSD and compares them to Linux implementation.

CONTENTS

I. Introduction

A comparison of the I/O devices, schedulers and more of the Windows and FreeBSD operating systems to the Linux I/O implementation.

This document details key elements of Windows and FreeBSD I/O implementation and compares each operating system against corresponding Linux I/O implementation.

The first section of this document examines Windows I/O implementation and compares it to Linux. The second section examins FreeBSD implementation and compares it to Linux.

The conclusion provides an overview of findings from examining Windows and FreeBSD and provides a synthesis of. [1]

Reference to appendix A

II. Windows

A. Devices

B. I/O Scheduling

C. Comparison to Linux

D. PlaceHolder

III. FreeBSD

A. Devices

B. I/O Scheduling

C. Comparison to Linux

D. PlaceHolder

IV. Conclusion

My profound findings on the subject matter at hand.

APPENDIX A

EXAMPLE APPENDIX

Basic thread program example:

```
int main(int argc, char **argv) {
    pthread_t thr[NUM_THREADS];
    int i, rc;
    /* create a thread_data_t arument array */
    thread_data_t thr_data[NUM_THREADS];

    /* initialize shared data */
    shared_x = 0;

    /* create threads */
    for (i = 0; i < NUM_THREADS; ++i) {
        thr_data[i].tid = i;
        thr_data[i].stuff = (i+1) * NUM_THREADS;
        if ((rc = pthread_create(&thr[i], NULL, thr_func, &thr_data[i]))) {
        fprintf( stderr, "error: pthread_create, rc: %d\n", rc);
        return EXIT_FAILURE;
        }
    }
    /* block until all threads complete */
    for (i = 0; i < NUM_THREADS; ++i) {
        pthread_join(thr[i], NULL);
    }

    return EXIT_SUCCESS;
}
```

Code Example 1. Example Caption

REFERENCES

[1] M. E. Russinovich, D. A. Solomon, and A. Ionescu, *Windows Internals, Sixth Edition, Part 1*. Microsoft Press, 2012.

[2] R. Love, *Linux Kernel Development*. Addison Wesley, 2015.

[3] M. K. McKusick, G. V. Neville-Neil, and R. N. Watson, *The Design and Implementation of the FreeBSD Operating System, Second Edition*. Addison Wesley, 2015.