Advanced Operating Systems

An exploration of alternative OS designs

Isitha Subasinghe

October 29, 2022

University of Melbourne

Table of contents

Introduction

What is an Operating System?

Differential Dataflow is a generalisation of Incremental Computation. It allows for incrementally updating the results of structured computations over multisets.

Related Work

- Mach
- L3
- L4
- sel4
- Barrelfish

Allocators

Here

Fragmentation

List Based Allocators

FIRST FIT BEST FIT NEXT FIT DESCRIBE ALT - BUDDY

Virtual Memory

Virtual Memory Origins of segmentation and "segmentation fault" is kinda interesting

Permissions

Permissions

ACL

WHY NOT CAPS?