

Operating Systems Project Proposal

How Security differs between normal General-Purpose OS and Real Time OS

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Project Outline

In this project we will compare how security is implemented and managed in general-purpose operating systems (GPOS) and compare this again how security is implemented and managed in real-time operating systems (RTOS). We will also analyze potential security issues in both RTOS and GPOS.

Key Areas

Access Control - we will compare how both operating systems control access to each part of the computer.

Security Issues due to real time constraints - We will analyze how a potential security may issue due to the fact that RTOS's need to respond quickly so they have less time to analyze the situation.

Memory - we will compare how RTOS's and GPOS's handle memory management and how their actions could lead to potential security defects.

Deliverable Outline

The final project will be a research paper. One team member will research GPOS and the other will research RTOS. We will then collaborate to highlight the difference and importance of the security is implemented across the platforms.

Access Control

- a. GPOS Access Control
- b. RTOS Access Control
- c. Comparison of Access control

Security Issues due to real time

- a. GPOS Security Issues
- b. RTOS Security Issues
- c. Comparison of Security Issues

Memory Management

- a. GPOS Memory Management

- b. RTOS Memory Management
- c. Comparison of Memory Management