

Problems to Real-time

	Real-time	Non-real-time
CPU work	✓	✓
Context switches	✓ (avoid)	✓
Memory access	✓ (non-paged)	✓
System calls	✗	✓
Allocations	✗	✓
Deallocations	✗	✓
Exceptions	✗	✓
Priority Inversion	✗	✓

Context Switching

- Saves the state of the currently executing thread
- Loads the state of a new thread to execute
 - Registers (including machine-state-flags)
 - Stack pointer
 - Program counter
 - Address space (when switching between processes)
- Might be required to move from user-mode to kernel-mode e.g. waiting for an IO resource
- Cache contention