



Virtual Memory in a nutshell

The application does not see physical memory addresses

→ **Memory-Management Unit** (MMU) relocates each load/store at runtime

Kernel

# Program Space



MMU

Virtual Memory



Physical Memory



# Virtual Address

0x30408

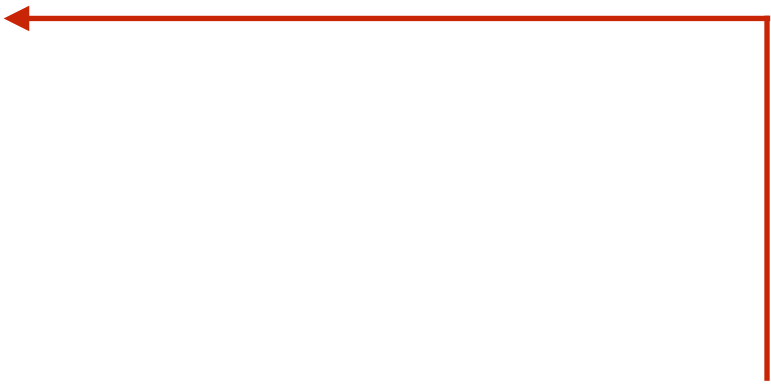


Is this address legal?

Yes, the physical  
address is 0x92408



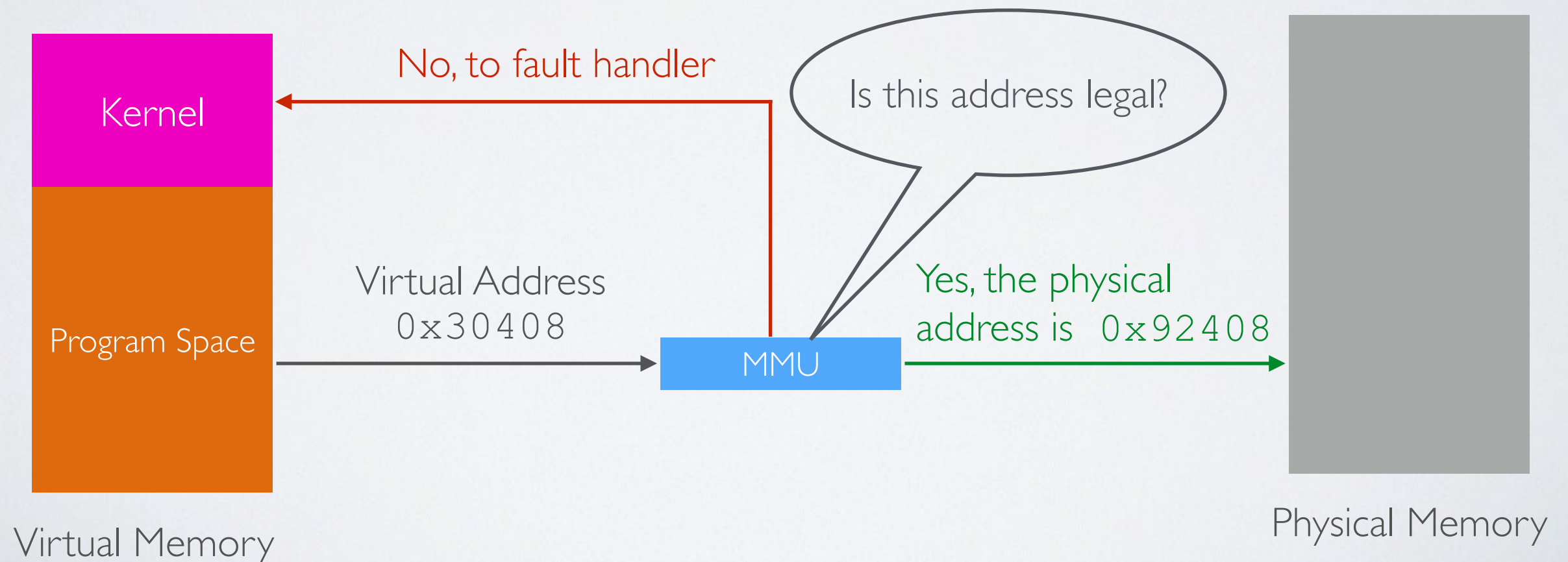
No, to fault handler



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The application does not see physical memory addresses

➔ **Memory-Management Unit** (MMU) relocates each load/store at runtime



# Virtual Memory Advantages

- ✓ Can re-locate process while running either in memory or to disk (a.k.a swap)