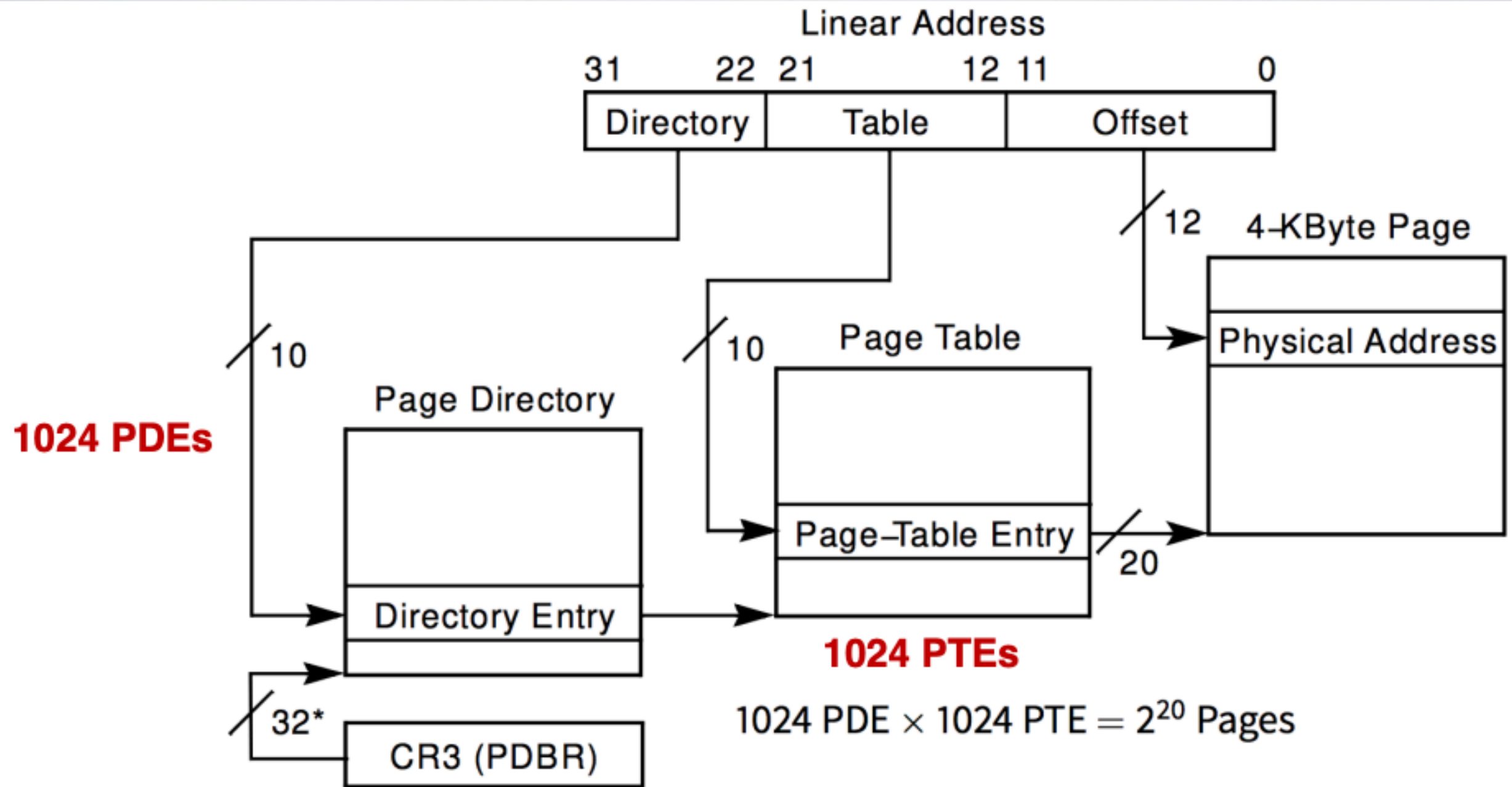


x86 Paging

- Paging enabled by bits in a control register `%cr0`
(only privileged OS code can manipulate control registers)
- Register `%cr3` points to 4KB page directory
(for Pintos, see `pagedir_activate()` in `userprog/pagedir.c`)
- Page directory has 1024 PDEs (Page Directory Entries) (see pagination details)
 - Each contains physical address of a page table
 - Each page table has 1024 PTEs (page table entries) and covers 4 MB of virtual memory
 - Each contains physical address of virtual 4K page

x86 Page Translation



*32 bits aligned onto a 4-KByte boundary