

Virtual Memory:

Address translation 3: Multilevel Page Tables

Multi-Level Page Tables

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- 4KB (2^{12}) page size, 48-bit address space, 8-byte PTE

■ Problem:

- Would need a 512 GB page table!
 - $2^{48} * 2^{-12} * 2^3 = 2^{39}$ bytes

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■ Example: 2-level page table

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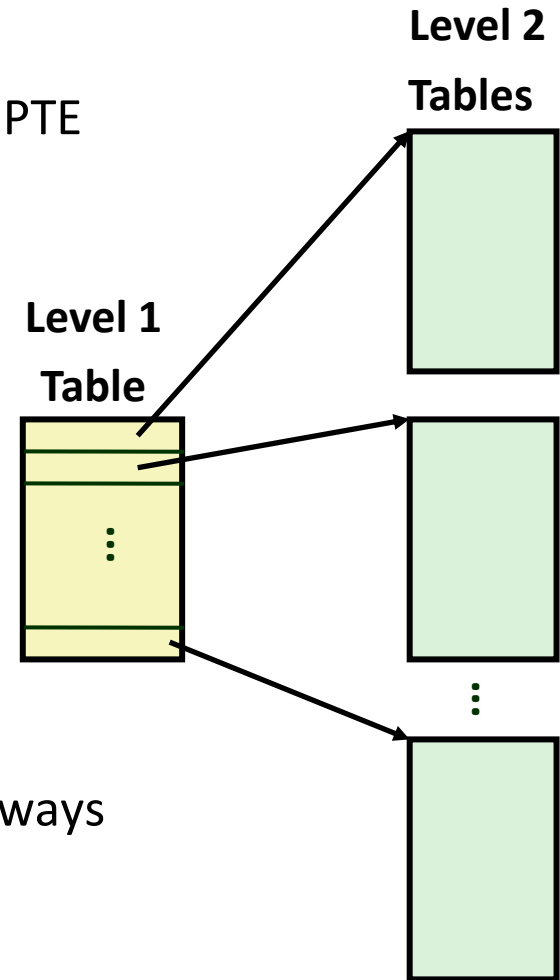
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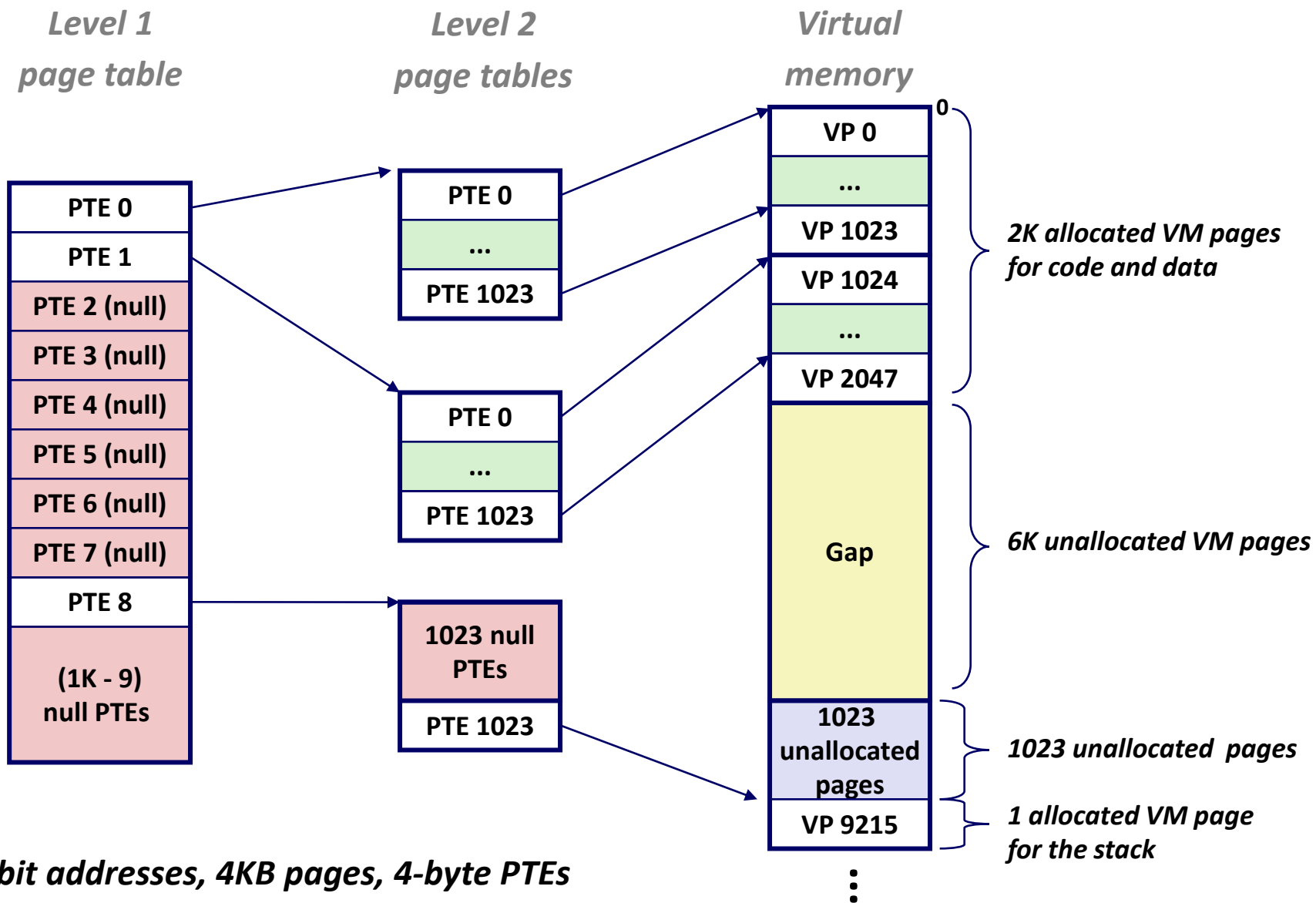
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A Two-Level Page Table Hierarchy



Translating with a k-level Page Table

