

Translation Lookaside Buffers (TLBs)

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special hardware to translate virtual page #s into PTEs (not physical addrs) in a single machine cycle

- Typically 4-way to fully associative cache (all entries looked up in parallel)
 - Cache 32-128 PTE values (128-512K memory)
- ➔ TLBs exploit locality : processes only use a handful of pages at a time
TLB hit rate is a very important for performances
(>99% of translations)

TLB Page Lookup

