

Re: Allocating memory below 4G

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Pete Zaitcev (OTID3) wrote:

> [..]

> *However, I am surprised to hear that ZONE_NORMAL is "limited" on x86_64.*

> *I thought it covered all memory, with highmem being nil. Which, of course,*

> *does not help you, but I'm curious where these data come from.*

Sorry, I'd got myself all confused --- there is indeed no highmem zone on x86_64, and no "limit" on ZONE_NORMAL.

Seems that on AMD I can at least use the gart to enable my PCI device to access such pages, if I make the aperture big enough. Although sadly my particular test machine has no option to set the gart aperture in the BIOS, and in this case it seems that Linux will lose the amount of physical space equal to the aperture, which is a bit sad (256MB in my case). But at least it means my PCI device can access memory outside the 4G range

(And in response to the mem=4G suggestion, alas I really do need > 4G for the tests I'm running)

The worst issue is on Intel EMT64s, where it seems there is nothing to be done at all to allow use of 32-bit SAC PCI cards without bounce-buffers :-(