Subject: Re: [PATCH 0/4] swapcgroup(v2) Posted by Balbir Singh on Fri, 23 May 2008 06:45:15 GMT

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KOSAKI Motohiro wrote:

- >>> Have you seen any real world example of this?
- >> At the unsophisticated end, there are lots of (Fortran) HPC applications
- >> with very large static array declarations but only "use" a small fraction
- >> of that. Those users know they only need a small fraction and are happy
- >> to volunteer small physical memory limits that we (admins/queuing
- >> systems) can apply.

>>

- >> At the sophisticated end, the use of numerous large memory maps in
- >> parallel HPC applications to gain visibility into other processes is
- >> growing. We have processes with VSZ > 400GB just because they have
- >> 4GB maps into 127 other processes. Their physical page use is of
- >> the order 2GB.

- > Ah, agreed.
- > Fujitsu HPC user said similar things ago.

OK, so this use case is HPC specific. I am not against the swap controller, but overcommit can lead to problems if not controlled - such as OOM kill. The virtual address space limit helps applications fail gracefully rather than swap out excessively or OOM.

I suspect there'll be applications that swing both ways.

Warm Regards, Balbir Singh Linux Technology Center IBM, ISTL

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