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Subject: PHYSPAGES + SWAPPAGES limit  
Posted by [rleir](#) on Fri, 16 May 2014 14:33:34 GMT

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We are wrestling with the concepts in VSwap, PHYSPAGES and SWAPPAGES. Context: we have hundreds of containers, mostly not very active. Suppose we set all UBC parameters to unlimited, including PHYSPAGES and SWAPPAGES. What would fail first? I am guessing that a few active containers with a few large processes would get all the memory they want, up to the point when the physical server has all memory and swap in use. Then a less active container might have a process which needs a page, and it would crash with an OOM error.

Alternative: supposing we set PHYSPAGES and SWAPPAGES to not-unlimited values, but we are 'oversold' by 20%. We have seen what happens when the physical server has free memory and a process exceeds the PHYSPAGES + SWAPPAGES limit: OOM. But when the physical server has all memory and swap in use, what happens? I am guessing that (as above) a less active container might have a process which needs a page, and it has not used all its SWAPPAGES but the process would crash with an OOM error.

When I say 'oversold', it is not just  $\text{PHYSPAGES} * \text{num-containers} > \text{physical memory}$ . When you run `vzsplit`, it seems to reserve some memory for other buffers. What is `vzsplit`'s actual calculation? I will look at the source.

Thanks

Rick

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