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Subject: [-mm PATCH 0/8] Memory controller introduction (v2)

Posted by [Balbir Singh](#) on Fri, 06 Jul 2007 05:20:29 GMT

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Changelog since version 1

1. Fixed some compile time errors (in mm/migrate.c from Vaidyanathan S)
2. Fixed a panic seen when LIST\_DEBUG is enabled
3. Added a mechanism to control whether we track page cache or both page cache and mapped pages (as requested by Pavel)

This patchset implements another version of the memory controller. These patches have been through a big churn, the first set of patches were posted last year and earlier this year at <http://lkml.org/lkml/2007/2/19/10>

Ever since, the RSS controller has been through four revisions, the latest one being <http://lwn.net/Articles/236817/>

This patchset draws from the patches listed above and from some of the contents of the patches posted by Vaidyanathan for page cache control. <http://lkml.org/lkml/2007/6/20/92>

Pavel, Vaidy could you look at the patches and add your signed off by where relevant?

At OLS, the resource management BOF, it was discussed that we need to manage RSS and unmapped page cache together. This patchset is a step towards that

TODO's

1. Add memory controller water mark support. Reclaim on high water mark
2. Add support for shrinking on limit change
3. Add per zone per container LRU lists
4. Make page\_referenced() container aware
5. Figure out a better CLUI for the controller

In case you have been using/testing the RSS controller, you'll find that this controller works slower than the RSS controller. The reason being that both swap cache and page cache is accounted for, so pages do go out to swap upon reclaim (they cannot live in the swap cache).

I've test compiled the framework without the controller enabled, tested the code on UML and minimally on a power box.

Any test output, feedback, comments, suggestions are welcome!

series

res\_counters\_infra.patch  
mem-control-setup.patch  
mem-control-accounting-setup.patch  
mem-control-accounting.patch  
mem-control-task-migration.patch  
mem-control-lru-and-reclaim.patch  
mem-control-out-of-memory.patch

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Warm Regards,  
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