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Subject: mem leak

Posted by [kapper](#) on Thu, 24 Apr 2008 00:55:38 GMT

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hi

I suspect three openvz-servers administered by us do suffer similiar problems like  
<http://forum.openvz.org/index.php?t=tree&goto=26664>

first - all RHEL4 based openvz-servers do not have this problem here.

only RHEL5 based openvz-systems are affected.

roughly 45 days after reboot - those machines - running not a very high load - have eaten up 8 GB swap and 4 GB RAM.

stopping VEs does only free several 100 Megs. stopping openvz altogether also doesn't help - it seems the kernel is eating up all of this.

only a reboot fixes this.

latest verified kernel with this problem:

2.6.18-53.1.6.el5.028stab053.6

releases of kernels before are unknown but I remember having to reboot those boxes at least for two more times, so probably the problem was introduced during Summer 2007.

we're now running 2.6.18-53.1.13.el5.028stab053.10 - but this only for a few hours - so any suggestions are very welcome.

kindest regards

harald kapper

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Subject: Re: mem leak

Posted by [vaverin](#) on Thu, 24 Apr 2008 06:40:55 GMT

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Hi Harald,

i would note that I do not see any kernel-related problems here:  
linux kernel by design frees the memory only when it really required -- due performance optimisation reasons.

By this way kernel without any significat load will use all RAM, for example for disk cache. however when somebody will request new memory -- kernel will drop oldest cache entries (it is quite fast operations) and give this memory to application.

Thereofre from kernel point of view the situation when kernel and running userspace programs eats together all memory -- is normal.

However from userspace point of view huge swap memory usage can point to memory leak in some aplication:

Huge swap usage points to huge userspace memory consumption (kernel do not uses swap for kernel structures, swap contains only rarely used programm's data). It may be normal, or may be caused by some memory leaks in applications.

thank you,  
Vasily Averin

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Subject: Re: mem leak  
Posted by [kapper](#) on Thu, 24 Apr 2008 07:32:17 GMT  
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Dear Vaverin,  
I would absolutely agree - but....

thins on the hardware-node look bad after roughly 45 days uptime:

```
free -m
      total      used      free      shared    buffers     cached
Mem: 3946      3846       100         0         34        585
-/+ buffers/cache:415       515
Swap: 8191      8191         0
```

which similar 2.6.9 kernel based host-nodes do not share as a common resource-problem.

this view doesn't change when killing all VEs - swap is still at 8 GB USED - which is for an idle host - definitely nothing normal.

the same box after the reboot yesterday and several hours uptime:

```
free -m
      total      used      free      shared    buffers     cached
Mem: 3946      3782       163         0        201       2430
-/+ buffers/cache:1150       2796
Swap:8191         0      8191
```

also three different hardware-nodes do experience the same problem running the EL5 kernel, EL4 kernel based boxes do not suffer this very problem.

finally there are some error-messages that might enlighten anyone on this problem:

WARNING: Kernel Errors Present

[<ffffff8005ee39>] error\_exit+0x0/0x84 ...: 14 Time(s)

and on the other box

WARNING: Kernel Errors Present

[<ffffff8005ee39>] error\_exit+0x0/0x84 ...: 30 Time(s)

and the serverlog shows the outofmemory-killing going on as we invoke yum to upgrade the kernel...

```
Apr 23 23:49:22 hostname kernel: yum invoked oom-killer: gfp_mask=0x201d2, order=0,
oomkilladj=0
Apr 23 23:49:22 hostname kernel:
Apr 23 23:49:22 hostname kernel: Call Trace:
Apr 23 23:49:22 hostname kernel: [<ffffff800c6672>] out_of_memory+0x9f/0x25e
Apr 23 23:49:22 hostname kernel: [<ffffff8000eda3>] __alloc_pages+0x242/0x332
Apr 23 23:49:22 hostname kernel: [<ffffff800124c4>]
__do_page_cache_readahead+0x95/0x1d9
Apr 23 23:49:22 hostname kernel: [<ffffff8002999f>] sync_page+0x0/0x42
Apr 23 23:49:22 hostname kernel: [<ffffff8005b8d4>] getnstimeofday+0x10/0x28
Apr 23 23:49:22 hostname kernel: [<ffffff8009d3c7>] ktime_get_ts+0x1a/0x4d
Apr 23 23:49:22 hostname kernel: [<ffffff800bf752>] delayacct_end+0x5d/0x86
Apr 23 23:49:22 hostname kernel: [<ffffff80032e9c>]
blockable_page_cache_readahead+0x53/0xb2
Apr 23 23:49:22 hostname kernel: [<ffffff8002fdef>] make_ahead_window+0x82/0x9e
Apr 23 23:49:22 hostname kernel: [<ffffff80013763>] page_cache_readahead+0x17f/0x1af
Apr 23 23:49:22 hostname kernel: [<ffffff8000b992>] do_generic_mapping_read+0x126/0x3f8
Apr 23 23:49:22 hostname kernel: [<ffffff8000c917>] file_read_actor+0x0/0x13c
Apr 23 23:49:22 hostname kernel: [<ffffff8000bdb0>] __generic_file_aio_read+0x14c/0x190
Apr 23 23:49:22 hostname kernel: [<ffffff80016800>] generic_file_aio_read+0x34/0x39
Apr 23 23:49:22 hostname kernel: [<ffffff8000c633>] do_sync_read+0xc7/0x104
Apr 23 23:49:22 hostname kernel: [<ffffff80066051>] do_page_fault+0x4e9/0x7ef
Apr 23 23:49:22 hostname kernel: [<ffffff8009b432>] autoremove_wake_function+0x0/0x2e
Apr 23 23:49:22 hostname kernel: [<ffffff80061597>] __sched_text_start+0x177/0xee2
Apr 23 23:49:22 hostname kernel: [<ffffff8000af5c>] vfs_read+0xaa/0x150
Apr 23 23:49:22 hostname kernel: [<ffffff8000b125>] fget_light+0x18/0x7c
Apr 23 23:49:22 hostname kernel: [<ffffff80012c4a>] sys_pread64+0x54/0xc4
Apr 23 23:49:22 hostname kernel: [<ffffff8005e166>] system_call+0x7e/0x83
Apr 23 23:49:22 hostname kernel:
Apr 23 23:49:22 hostname kernel: Mem-info:
Apr 23 23:49:22 hostname kernel: Node 0 DMA per-cpu:
Apr 23 23:49:22 hostname kernel: cpu 0 hot: high 0, batch 1 used:0
Apr 23 23:49:22 hostname kernel: cpu 0 cold: high 0, batch 1 used:0
Apr 23 23:49:22 hostname kernel: cpu 1 hot: high 0, batch 1 used:0
Apr 23 23:49:22 hostname kernel: cpu 1 cold: high 0, batch 1 used:0
Apr 23 23:49:22 hostname kernel: Node 0 DMA32 per-cpu:
Apr 23 23:49:22 hostname kernel: cpu 0 hot: high 186, batch 31 used:125
Apr 23 23:49:22 hostname kernel: cpu 0 cold: high 62, batch 15 used:50
```

```

Apr 23 23:49:22 hostname kernel: cpu 1 hot: high 186, batch 31 used:15
Apr 23 23:49:22 hostname kernel: cpu 1 cold: high 62, batch 15 used:14
Apr 23 23:49:22 hostname kernel: Node 0 Normal per-cpu:
Apr 23 23:49:22 hostname kernel: cpu 0 hot: high 186, batch 31 used:57
Apr 23 23:49:22 hostname kernel: cpu 0 cold: high 62, batch 15 used:57
Apr 23 23:49:22 hostname kernel: cpu 1 hot: high 186, batch 31 used:36
Apr 23 23:49:22 hostname kernel: cpu 1 cold: high 62, batch 15 used:46
Apr 23 23:49:22 hostname kernel: Node 0 HighMem per-cpu: empty
Apr 23 23:49:22 hostname kernel: Free pages:      21556kB (0kB HighMem)
Apr 23 23:49:22 hostname kernel: Active:482971 inactive:471530 dirty:500 writeback:0 unstable:0
free:5389 slab:26825 mapped-file:9603 mapped-anon:844193 pagetables:10871
Apr 23 23:49:22 hostname kernel: Node 0 DMA free:10980kB min:20kB low:24kB high:28kB
active:0kB inactive:0kB present:10532kB pages_scanned:0 all_unreclaimable? yes
Apr 23 23:49:22 hostname kernel: lowmem_reserve[]: 0 3502 4006 4006
Apr 23 23:49:22 hostname kernel: Node 0 DMA32 free:9196kB min:7072kB low:8840kB
high:10608kB active:1727524kB inactive:1716528kB present:3586732kB pages_scanned:3724
all_unreclaimable? no
Apr 23 23:49:22 hostname kernel: lowmem_reserve[]: 0 0 504 504
Apr 23 23:49:22 hostname kernel: Node 0 Normal free:1380kB min:1016kB low:1268kB
high:1524kB active:204360kB inactive:169592kB present:516096kB pages_scanned:4
all_unreclaimable? no
Apr 23 23:49:22 hostname kernel: lowmem_reserve[]: 0 0 0 0
Apr 23 23:49:22 hostname kernel: Node 0 HighMem free:0kB min:128kB low:128kB high:128kB
active:0kB inactive:0kB present:0kB pages_scanned:0 all_unreclaimable? no
Apr 23 23:49:22 hostname kernel: lowmem_reserve[]: 0 0 0 0
Apr 23 23:49:22 hostname kernel: Node 0 DMA: 3*4kB 5*8kB 3*16kB 4*32kB 4*64kB 2*128kB
2*256kB 1*512kB 1*1024kB 0*2048kB 2*4096kB = 10980kB
Apr 23 23:49:22 hostname kernel: Node 0 DMA32: 31*4kB 2*8kB 18*16kB 32*32kB 7*64kB
1*128kB 0*256kB 0*512kB 1*1024kB 1*2048kB 1*4096kB = 9196kB
Apr 23 23:49:22 hostname kernel: Node 0 Normal: 105*4kB 8*8kB 10*16kB 1*32kB 3*64kB
0*128kB 0*256kB 1*512kB 0*1024kB 0*2048kB 0*4096kB = 1380kB
Apr 23 23:49:22 hostname kernel: Node 0 HighMem: empty
Apr 23 23:49:22 hostname kernel: Swap cache: add 2338321, delete 2336791, find
32746461/32778627, race 0+92+75
Apr 23 23:49:22 hostname kernel: Free swap = 0kB
Apr 23 23:49:22 hostname kernel: Total swap = 8388600kB
Apr 23 23:49:22 hostname kernel: Free swap:      0kB
Apr 23 23:49:22 hostname kernel: 1179648 pages of RAM
Apr 23 23:49:22 hostname kernel: 169401 reserved pages
Apr 23 23:49:22 hostname kernel: 73976 pages shared
Apr 23 23:49:22 hostname kernel: 1531 pages swap cached
Apr 23 23:49:22 hostname kernel: Top 10 caches:
Apr 23 23:49:22 hostname kernel: filp          : size 1617920 objsize 256
Apr 23 23:49:22 hostname kernel: page_beancounter : size 61296640 objsize 64
Apr 23 23:49:22 hostname kernel: buffer_head      : size 1445888 objsize 96
Apr 23 23:49:22 hostname kernel: radix_tree_node  : size 3624960 objsize 536
Apr 23 23:49:22 hostname kernel: size-2048        : size 1688960 objsize 2048
Apr 23 23:49:22 hostname kernel: size-128         : size 1941504 objsize 128

```

```

Apr 23 23:49:22 hostname kernel: vm_area_struct      : size  5017600 objsize    176
Apr 23 23:49:22 hostname kernel: ext3_inode_cache   : size  8697216 objsize    808
Apr 23 23:49:22 hostname kernel: task_struct      : size  1425408 objsize    2192
Apr 23 23:49:22 hostname kernel: dentry_cache     : size  5943296 objsize    248
Apr 23 23:49:22 hostname kernel: Out of memory: Killed process 12866 (apache2).
Apr 23 23:49:22 hostname kernel: Mem-info:
Apr 23 23:49:22 hostname kernel: Node 0 DMA per-cpu:
Apr 23 23:49:22 hostname kernel: cpu 0 hot: high 0, batch 1 used:0
Apr 23 23:49:22 hostname kernel: cpu 0 cold: high 0, batch 1 used:0
Apr 23 23:49:22 hostname kernel: cpu 1 hot: high 0, batch 1 used:0
Apr 23 23:49:22 hostname kernel: cpu 1 cold: high 0, batch 1 used:0
Apr 23 23:49:22 hostname kernel: Node 0 DMA32 per-cpu:
Apr 23 23:49:22 hostname kernel: cpu 0 hot: high 186, batch 31 used:125
Apr 23 23:49:22 hostname kernel: cpu 0 cold: high 62, batch 15 used:49
Apr 23 23:49:22 hostname kernel: cpu 1 hot: high 186, batch 31 used:15
Apr 23 23:49:22 hostname kernel: cpu 1 cold: high 62, batch 15 used:14
Apr 23 23:49:22 hostname kernel: Node 0 Normal per-cpu:
Apr 23 23:49:22 hostname kernel: cpu 0 hot: high 186, batch 31 used:22
Apr 23 23:49:22 hostname kernel: cpu 0 cold: high 62, batch 15 used:61
Apr 23 23:49:22 hostname kernel: cpu 1 hot: high 186, batch 31 used:36
Apr 23 23:49:22 hostname kernel: cpu 1 cold: high 62, batch 15 used:46
Apr 23 23:49:22 hostname kernel: Node 0 HighMem per-cpu: empty
Apr 23 23:49:22 hostname kernel: Free pages:      24136kB (0kB HighMem)
Apr 23 23:49:22 hostname kernel: Active:482668 inactive:471214 dirty:128 writeback:0 unstable:0
free:6034 slab:26851 mapped-file:9603 mapped-anon:844193 pagetables:10871
Apr 23 23:49:22 hostname kernel: Node 0 DMA free:10980kB min:20kB low:24kB high:28kB
active:0kB inactive:0kB present:10532kB pages_scanned:0 all_unreclaimable? yes
Apr 23 23:49:22 hostname kernel: lowmem_reserve[]: 0 3502 4006 4006
Apr 23 23:49:22 hostname kernel: Node 0 DMA32 free:11536kB min:7072kB low:8840kB
high:10608kB active:1726548kB inactive:1715316kB present:3586732kB pages_scanned:364
all_unreclaimable? no
Apr 23 23:49:22 hostname kernel: lowmem_reserve[]: 0 0 504 504
Apr 23 23:49:22 hostname kernel: Node 0 Normal free:1620kB min:1016kB low:1268kB
high:1524kB active:204124kB inactive:169540kB present:516096kB pages_scanned:6
all_unreclaimable? no
Apr 23 23:49:22 hostname kernel: lowmem_reserve[]: 0 0 0 0
Apr 23 23:49:22 hostname kernel: Node 0 HighMem free:0kB min:128kB low:128kB high:128kB
active:0kB inactive:0kB present:0kB pages_scanned:0 all_unreclaimable? no
Apr 23 23:49:22 hostname kernel: lowmem_reserve[]: 0 0 0 0
Apr 23 23:49:22 hostname kernel: Node 0 DMA: 3*4kB 5*8kB 3*16kB 4*32kB 4*64kB 2*128kB
2*256kB 1*512kB 1*1024kB 0*2048kB 2*4096kB = 10980kB
Apr 23 23:49:22 hostname kernel: Node 0 DMA32: 584*4kB 18*8kB 18*16kB 32*32kB 7*64kB
1*128kB 0*256kB 0*512kB 1*1024kB 1*2048kB 1*4096kB = 11536kB
Apr 23 23:49:22 hostname kernel: Node 0 Normal: 165*4kB 8*8kB 10*16kB 1*32kB 3*64kB
0*128kB 0*256kB 1*512kB 0*1024kB 0*2048kB 0*4096kB = 1620kB
Apr 23 23:49:22 hostname kernel: Node 0 HighMem: empty
Apr 23 23:49:22 hostname kernel: Swap cache: add 2338321, delete 2336791, find
32746461/32778627, race 0+92+75

```

Apr 23 23:49:22 hostname kernel: Free swap = 0kB  
Apr 23 23:49:22 hostname kernel: Total swap = 8388600kB  
Apr 23 23:49:22 hostname kernel: Free swap: 0kB  
Apr 23 23:49:22 hostname kernel: 1179648 pages of RAM  
Apr 23 23:49:22 hostname kernel: 169401 reserved pages  
Apr 23 23:49:22 hostname kernel: 74036 pages shared  
Apr 23 23:49:22 hostname kernel: 1531 pages swap cached  
Apr 23 23:49:22 hostname kernel: OOM killed process apache2 (pid=12893, ve=419) exited, free=6096 gen=147.  
Apr 23 23:54:21 hostname shutdown[14605]: shutting down for system reboot  
Apr 23 23:54:21 hostname init: Switching to runlevel: 6  
Apr 23 23:54:23 hostname smartd[22658]: smartd received signal 15: Terminated  
Apr 23 23:54:23 hostname smartd[22658]: smartd is exiting (exit status 0)  
Apr 23 23:54:33 hostname ntpd[6324]: ntpd exiting on signal 15  
Apr 23 23:54:35 hostname kernel: Kernel logging (proc) stopped.  
Apr 23 23:54:35 hostname kernel: Kernel log daemon terminating.  
Apr 23 23:54:36 hostname exiting on signal 15  
Apr 24 00:43:11 hostname syslogd 1.4.1: restart.

any advise is greatly appreciated  
hk

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Subject: Re: mem leak  
Posted by [vaverin](#) on Thu, 24 Apr 2008 07:49:54 GMT  
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Dear Harald,

kernel errors messages are very important. Any kernel error can lead to unpredictable results. It may be crashes or hangs, but memory leakage is also possible.

To found the real cause of the trouble we need to look at the first error message (because the following errors can be caused by previous).

Could you please check your logs about the oops messages?  
[http://wiki.openvz.org/When\\_you\\_have\\_an\\_oops](http://wiki.openvz.org/When_you_have_an_oops)

Also I can do it for You if you give me an access to your node (of course via Private Messaging)

Thank you,  
Vasily Averin

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Subject: Re: mem leak  
Posted by [kapper](#) on Thu, 24 Apr 2008 08:22:40 GMT

hi  
the kernel was:  
Linux 2.6.18-53.1.13.el5.028stab053.6 compiled by openvz for RHEL5.

now running  
Linux hwnode 2.6.18-53.1.13.el5.028stab053.10 #1 SMP Tue Apr 1 14:45:45 MSD 2008 x86\_64  
x86\_64 x86\_64 GNU/Linux

-----  
the first error happened on April 21st 10.55 localtime.

should I post the full log or simply private-message it so someone?

the log starts (very first error):

```
Apr 21 10:55:02 hwnode kernel: apache invoked oom-killer: gfp_mask=0x200d2, order=0,
oomkilladj=0
Apr 21 10:55:02 hwnode kernel:
Apr 21 10:55:02 hwnode kernel: Call Trace:
Apr 21 10:55:05 hwnode kernel: [<ffffffff800c6672>] out_of_memory+0x9f/0x25e
Apr 21 10:55:05 hwnode kernel: [<ffffffff8000eda3>] __alloc_pages+0x242/0x332
Apr 21 10:55:05 hwnode kernel: [<ffffffff80010900>] do_wp_page+0x315/0x6b5
Apr 21 10:55:05 hwnode kernel: [<ffffffff80008e8f>] __handle_mm_fault+0xf6c/0x1041
Apr 21 10:55:05 hwnode kernel: [<ffffffff80098ed5>] attach_pid+0x8c/0xb9
Apr 21 10:55:06 hwnode kernel: [<ffffffff8003cbe6>] remove_wait_queue+0x1c/0x2c
Apr 21 10:55:08 hwnode kernel: [<ffffffff80029214>] do_wait+0xad8/0xb74
Apr 21 10:55:08 hwnode kernel: [<ffffffff8006601e>] do_page_fault+0x4b6/0x7ef
Apr 21 10:55:09 hwnode kernel: [<ffffffff800f72ba>] compat_core_sys_select+0x1bf/0x1d0
Apr 21 10:55:10 hwnode kernel: [<ffffffff8005ee39>] error_exit+0x0/0x84
Apr 21 10:55:10 hwnode kernel:
Apr 21 10:55:10 hwnode kernel: Mem-info:
Apr 21 10:55:10 hwnode kernel: Node 0 DMA per-cpu:
Apr 21 10:55:10 hwnode kernel: cpu 0 hot: high 0, batch 1 used:0
Apr 21 10:55:10 hwnode kernel: cpu 0 cold: high 0, batch 1 used:0
Apr 21 10:55:10 hwnode kernel: cpu 1 hot: high 0, batch 1 used:0
Apr 21 10:55:10 hwnode kernel: cpu 1 cold: high 0, batch 1 used:0
Apr 21 10:55:10 hwnode kernel: Node 0 DMA32 per-cpu:
Apr 21 10:55:10 hwnode kernel: cpu 0 hot: high 186, batch 31 used:39
Apr 21 10:55:10 hwnode kernel: cpu 0 cold: high 62, batch 15 used:58
Apr 21 10:55:10 hwnode kernel: cpu 1 hot: high 186, batch 31 used:33
Apr 21 10:55:10 hwnode kernel: cpu 1 cold: high 62, batch 15 used:59
Apr 21 10:55:10 hwnode kernel: Node 0 Normal per-cpu:
Apr 21 10:55:10 hwnode kernel: cpu 0 hot: high 186, batch 31 used:18
Apr 21 10:55:10 hwnode kernel: cpu 0 cold: high 62, batch 15 used:50
Apr 21 10:55:10 hwnode kernel: cpu 1 hot: high 186, batch 31 used:28
```

Apr 21 10:55:10 hwnode kernel: cpu 1 cold: high 62, batch 15 used:56  
Apr 21 10:55:10 hwnode kernel: Node 0 HighMem per-cpu: empty  
Apr 21 10:55:10 hwnode kernel: Free pages: 20384kB (0kB HighMem)  
Apr 21 10:55:10 hwnode kernel: Active:796844 inactive:123293 dirty:260 writeback:12112  
unstable:0 free:5096 slab:60543 mapped-file:21985 mapped-anon:734226 pagetables:11267  
Apr 21 10:55:10 hwnode kernel: Node 0 DMA free:10980kB min:20kB low:24kB high:28kB  
active:0kB inactive:0kB present:10532kB pages\_scanned:0 all\_unreclaimable? yes  
Apr 21 10:55:10 hwnode kernel: lowmem\_reserve[]: 0 3502 4006 4006  
Apr 21 10:55:10 hwnode kernel: Node 0 DMA32 free:8452kB min:7072kB low:8840kB  
high:10608kB active:2861528kB inactive:454940kB present:3586732kB pages\_scanned:8220  
all\_unreclaimable? no  
Apr 21 10:55:10 hwnode kernel: lowmem\_reserve[]: 0 0 504 504  
Apr 21 10:55:10 hwnode kernel: Node 0 Normal free:952kB min:1016kB low:1268kB high:1524kB  
active:325976kB inactive:38232kB present:516096kB pages\_scanned:96 all\_unreclaimable? no  
Apr 21 10:55:10 hwnode kernel: lowmem\_reserve[]: 0 0 0 0  
Apr 21 10:55:10 hwnode kernel: Node 0 HighMem free:0kB min:128kB low:128kB high:128kB  
active:0kB inactive:0kB present:0kB pages\_scanned:0 all\_unreclaimable? no  
Apr 21 10:55:10 hwnode kernel: lowmem\_reserve[]: 0 0 0 0  
Apr 21 10:55:10 hwnode kernel: Node 0 DMA: 3\*4kB 5\*8kB 3\*16kB 4\*32kB 4\*64kB 2\*128kB  
2\*256kB 1\*512kB 1\*1024kB 0\*2048kB 2\*4096kB = 10980kB  
Apr 21 10:55:10 hwnode kernel: Node 0 DMA32: 313\*4kB 0\*8kB 0\*16kB 1\*32kB 0\*64kB 0\*128kB  
0\*256kB 0\*512kB 1\*1024kB 1\*2048kB 1\*4096kB = 8452kB  
Apr 21 10:55:10 hwnode kernel: Node 0 Normal: 96\*4kB 1\*8kB 1\*16kB 1\*32kB 0\*64kB 0\*128kB  
0\*256kB 1\*512kB 0\*1024kB 0\*2048kB 0\*4096kB = 952kB  
Apr 21 10:55:10 hwnode kernel: Node 0 HighMem: empty  
Apr 21 10:55:10 hwnode kernel: Swap cache: add 2307383, delete 2290105, find  
31844745/31873186, race 0+89+67  
Apr 21 10:55:10 hwnode kernel: Free swap = 0kB  
Apr 21 10:55:10 hwnode kernel: Total swap = 8388600kB  
Apr 21 10:55:10 hwnode kernel: Free swap: 0kB  
Apr 21 10:55:10 hwnode kernel: 1179648 pages of RAM  
Apr 21 10:55:10 hwnode kernel: 169401 reserved pages  
Apr 21 10:55:10 hwnode kernel: 184758 pages shared  
Apr 21 10:55:10 hwnode kernel: 17228 pages swap cached

thank you in advance  
hk

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Subject: Re: mem leak  
Posted by [kir](#) on Thu, 24 Apr 2008 08:40:27 GMT  
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Can you show us what 'top' shows on a "loaded" box?

Run top, then press 'M' (capital M, i.e. usually Shift+M), then copy-paste what you see on the screen to here.

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Subject: Re: mem leak

Posted by [kapper](#) on Thu, 24 Apr 2008 08:45:38 GMT

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hi  
absolutely - though I probably have to wait for 40 days now after rebooting all three boxes in order to get what you want.

now it shows:

```
top - 10:44:09 up 10:01, 1 user, load average: 0.06, 0.09, 0.18
Tasks: 318 total, 1 running, 317 sleeping, 0 stopped, 0 zombie
Cpu(s): 0.3%us, 0.3%sy, 0.0%ni, 99.2%id, 0.0%wa, 0.0%hi, 0.2%si, 0.0%st
Mem: 4040988k total, 3945596k used, 95392k free, 213668k buffers
Swap: 8388600k total, 0k used, 8388600k free, 2513336k cached
```

| PID   | USER | PR | NI | VIRT  | RES  | SHR  | S | %CPU | %MEM | TIME+   | COMMAND       |
|-------|------|----|----|-------|------|------|---|------|------|---------|---------------|
| 20537 | root | 15 | 0  | 339m  | 112m | 3760 | S | 0    | 2.9  | 0:13.96 | yum-updatesd  |
| 10730 | root | 15 | 0  | 121m  | 105m | 1912 | S | 0    | 2.7  | 4:17.38 | pdns_recurser |
| 8521  | 100  | 15 | 0  | 134m  | 50m  | 4504 | S | 0    | 1.3  | 8:49.31 | mysqld        |
| 12793 | 103  | 15 | 0  | 160m  | 42m  | 5640 | S | 0    | 1.1  | 0:55.73 | mysqld        |
| 20653 | root | 18 | 0  | 164m  | 27m  | 1684 | S | 0    | 0.7  | 0:10.86 | python        |
| 21154 | 33   | 15 | 0  | 41660 | 24m  | 3560 | S | 0    | 0.6  | 0:13.76 | apache        |
| 20866 | 33   | 15 | 0  | 41552 | 24m  | 3564 | S | 0    | 0.6  | 0:10.36 | apache        |
| 20860 | 33   | 15 | 0  | 41432 | 23m  | 3252 | S | 0    | 0.6  | 0:09.10 | apache        |
| 21312 | 33   | 15 | 0  | 41424 | 23m  | 3248 | S | 0    | 0.6  | 0:13.96 | apache        |
| 20699 | 33   | 15 | 0  | 40996 | 23m  | 3588 | S | 0    | 0.6  | 0:16.37 | apache        |
| 16445 | 101  | 15 | 0  | 161m  | 23m  | 5428 | S | 0    | 0.6  | 0:01.33 | mysqld        |
| 21460 | 33   | 15 | 0  | 40992 | 23m  | 3248 | S | 0    | 0.6  | 0:08.47 | apache        |
| 21341 | 33   | 15 | 0  | 40156 | 22m  | 3556 | S | 0    | 0.6  | 0:07.32 | apache        |
| 22947 | 33   | 15 | 0  | 40316 | 22m  | 3220 | S | 0    | 0.6  | 0:00.94 | apache        |
| 22672 | 33   | 15 | 0  | 40140 | 22m  | 3216 | S | 0    | 0.6  | 0:03.60 | apache        |
| 14785 | 101  | 15 | 0  | 158m  | 22m  | 5492 | S | 0    | 0.6  | 0:00.93 | mysqld        |

|            |    |   |       |      |        |   |     |         |         |
|------------|----|---|-------|------|--------|---|-----|---------|---------|
| 16420 101  | 15 | 0 | 158m  | 22m  | 5192 S | 0 | 0.6 | 0:01.37 | mysqld  |
| 20506 101  | 15 | 0 | 158m  | 21m  | 5360 S | 0 | 0.6 | 0:00.76 | mysqld  |
| 10995 101  | 15 | 0 | 158m  | 21m  | 5392 S | 0 | 0.6 | 0:01.63 | mysqld  |
| 17028 33   | 15 | 0 | 115m  | 16m  | 4176 S | 0 | 0.4 | 0:00.17 | apache2 |
| 16504 33   | 15 | 0 | 115m  | 16m  | 4036 S | 0 | 0.4 | 0:03.14 | apache2 |
| 21437 33   | 15 | 0 | 115m  | 16m  | 4020 S | 0 | 0.4 | 0:02.39 | apache2 |
| 16505 33   | 15 | 0 | 115m  | 16m  | 3996 S | 0 | 0.4 | 0:02.69 | apache2 |
| 21433 33   | 15 | 0 | 115m  | 16m  | 3996 S | 0 | 0.4 | 0:02.73 | apache2 |
| 16502 33   | 15 | 0 | 115m  | 16m  | 3960 S | 0 | 0.4 | 0:02.76 | apache2 |
| 16499 33   | 15 | 0 | 115m  | 16m  | 3952 S | 0 | 0.4 | 0:02.56 | apache2 |
| 16503 33   | 18 | 0 | 115m  | 16m  | 3952 S | 0 | 0.4 | 0:02.03 | apache2 |
| 18992 root | 18 | 0 | 122m  | 10m  | 5764 S | 0 | 0.3 | 0:00.06 | apache2 |
| 19133 33   | 18 | 0 | 122m  | 9.8m | 4744 S | 0 | 0.2 | 0:10.95 | apache2 |
| 19130 33   | 15 | 0 | 122m  | 9976 | 4728 S | 0 | 0.2 | 0:11.36 | apache2 |
| 21345 33   | 16 | 0 | 123m  | 9972 | 4712 S | 0 | 0.2 | 0:02.85 | apache2 |
| 21336 33   | 15 | 0 | 123m  | 9968 | 4704 S | 0 | 0.2 | 0:07.21 | apache2 |
| 19132 33   | 15 | 0 | 123m  | 9960 | 4712 S | 0 | 0.2 | 0:11.40 | apache2 |
| 19131 33   | 15 | 0 | 122m  | 9956 | 4720 S | 0 | 0.2 | 0:15.42 | apache2 |
| 19129 33   | 15 | 0 | 122m  | 9952 | 4708 S | 0 | 0.2 | 0:06.72 | apache2 |
| 21346 33   | 15 | 0 | 122m  | 9928 | 4664 S | 0 | 0.2 | 0:13.24 | apache2 |
| 21062 33   | 15 | 0 | 122m  | 9916 | 4660 S | 0 | 0.2 | 0:17.51 | apache2 |
| 21337 33   | 15 | 0 | 123m  | 9868 | 4620 S | 0 | 0.2 | 0:03.11 | apache2 |
| 19178 33   | 15 | 0 | 97348 | 9192 | 4544 S | 0 | 0.2 | 0:00.40 | apache2 |
| 19179 33   | 18 | 0 | 97580 | 9156 | 4536 S | 0 | 0.2 | 0:00.30 | apache2 |

|            |    |   |                   |   |     |         |         |
|------------|----|---|-------------------|---|-----|---------|---------|
| 19176 33   | 15 | 0 | 97604 9124 4512 S | 0 | 0.2 | 0:00.41 | apache2 |
| 21141 33   | 15 | 0 | 97600 8792 4148 S | 0 | 0.2 | 0:00.29 | apache2 |
| 19177 33   | 15 | 0 | 97320 8788 4176 S | 0 | 0.2 | 0:00.33 | apache2 |
| 19175 33   | 18 | 0 | 97568 8760 4156 S | 0 | 0.2 | 0:00.35 | apache2 |
| 19080 root | 18 | 0 | 97032 8692 4508 S | 0 | 0.2 | 0:00.06 | apache2 |
| 20933 33   | 15 | 0 | 82368 8692 4248 S | 0 | 0.2 | 0:00.28 | apache2 |
| 21434 33   | 15 | 0 | 97564 8684 4116 S | 0 | 0.2 | 0:00.20 | apache2 |
| 15006 root | 18 | 0 | 103m 8656 5276 S  | 0 | 0.2 | 0:00.06 | apache2 |
| 20929 33   | 15 | 0 | 82360 8536 4128 S | 0 | 0.2 | 0:00.51 | apache2 |
| 20931 33   | 15 | 0 | 82364 8528 4140 S | 0 | 0.2 | 0:00.69 | apache2 |
| 18676 33   | 15 | 0 | 81952 8412 4044 S | 0 | 0.2 | 0:00.42 | apache2 |
| 18677 33   | 15 | 0 | 81876 8228 3940 S | 0 | 0.2 | 0:00.32 | apache2 |

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Subject: Re: mem leak  
Posted by [vaverin](#) on Thu, 24 Apr 2008 08:50:44 GMT  
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Hi Harald,

oom-killer messages are not an errors,  
oom-killer kills the processes to free the memory in case when kernel cannot free it by any  
another ways

messages like "WARNING: Kernel Errors Present" -- is more interesting for me.

Could you please give me an access to your node? If not -- I would like to look at the  
/var/log/dmesg file (to understand configuration of your node) , /var/log/messages\* files (to find all  
kernel error messages) and to dmesg (to look at the current errors). Please sent it to me via PM or  
via email to [vvs@parallels.com](mailto:vvs@parallels.com)

thank you,  
Vasily Averin

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Subject: Re: mem leak  
Posted by [kir](#) on Thu, 24 Apr 2008 08:53:58 GMT  
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Yup, so far the situation looks pretty decent -- although yum-updatesd eats a bit too much memory, it's still OK.

Please re-check that in a week or two, and post your results here.

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Subject: Re: mem leak  
Posted by [vaverin](#) on Thu, 24 Apr 2008 10:49:07 GMT  
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Hi Harald,

thank you for the logs. I've found the following messages:

1) Machine check exception message:

Mar 30 12:38:04 k4 kernel: Machine check events logged  
it points to some hardware troubles. It may not be related to our current issue, but anyway -- I would recommend You to find its cause.  
Some motherboards save MCE events to the motherboard BIOS. Sometimes userspace daemon writes it to the /var/log/mce.log file.

2) disk-related issue:

Apr 10 13:50:05 k4 kernel:  
ata2.00: exception Emask 0x0 SAct 0x70000 SErr 0x0 action 0x2 frozen

...

ata2: hard resetting port  
ata2: port is slow to respond, please be patient (Status 0x80)  
ata2: COMRESET failed (errno=-16)  
ata2: hard resetting port  
ata2: SATA link up 3.0 Gbps (SStatus 123 SControl 300)  
ata2.00: configured for UDMA/133  
ata2: EH complete  
SCSI device sdb: 488397168 512-byte hdwr sectors (250059 MB)  
sdb: Write Protect is off

scsi subsystem has detected some issue, and started Error Handler to resolve it. Ideally it should not lead to any troubles, however if this operation was not handled properly then it can be the cause of the following troubles on your node.

3) unfortunately I've not found any "WARNING: Kernel Errors Present" messages in the logs.

4) I've investigate OOM killer messages and they look strange for me, I'll consult with my colleagues and tell You about result a bit later.

Thank you,  
Vasily Averin

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Subject: Re: mem leak  
Posted by [vaverin](#) on Thu, 24 Apr 2008 10:50:34 GMT  
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btw, if you have similair issue on the some other nodes -- please send me its logs too, it would be useful.

thank you,  
Vasily Averin

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