
Subject: Strange memory usage patterns...

Posted by [Wildy](#) on Fri, 24 Apr 2009 09:32:08 GMT

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(x-posted and translated from Russian, since the activity there is very low)

We have a problem once again...

The server layout is: 2x Xeon 5140 (4 cores total), 16 GB RAM, SAS RAID 1. Installed are: OpenVZ, Debian (in the HN and VE alike), drbd. After some days of usage the machine started to show lack of free memory, and the most of it is Inactive in /proc/meminfo. After we've killed absolutely everything (with SysRQ+E!) the memory wouldn't free.

Inside of the node are various components (the HN is clean) - apache2+php, mysql5, mail, ejabberd, bind9.

Here are the stats.

```
uname -a
```

```
Linux real2 2.6.18-openvz-13-51.3d1-amd64 #1 SMP Tue Dec 25 22:50:42 MSK 2007 x86_64  
GNU/Linux
```

```
cat /proc/meminfo
```

```
MemTotal: 16390204 kB  
MemFree: 377592 kB  
Buffers: 275640 kB  
Cached: 3262192 kB  
SwapCached: 0 kB  
Active: 5873892 kB  
Inactive: 9432296 kB  
HighTotal: 0 kB  
HighFree: 0 kB  
LowTotal: 16390204 kB  
LowFree: 377592 kB  
SwapTotal: 7815612 kB  
SwapFree: 7815576 kB  
Dirty: 3328 kB  
Writeback: 0 kB  
AnonPages: 3613180 kB  
Mapped: 73072 kB  
Slab: 552916 kB  
PageTables: 71704 kB  
NFS_Unstable: 0 kB  
Bounce: 0 kB  
CommitLimit: 16010712 kB  
Committed_AS: 5950124 kB  
VmallocTotal: 34359738364 kB  
VmallocUsed: 303316 kB  
VmallocChunk: 34359433888 kB
```

cat /proc/user_beancounters

Version: 2.5

uid	resource	held	maxheld	barrier	limit	failcnt
107:	kmemsize	7472644	9994715	36845281		39078329
0	lockedpages	0	0	35	35	0
0	privvmpages	137614	139832	262144	262144	
0	shmpages	18	18	8192	8192	0
0	dummy	0	0	0	0	0
0	numproc	25	40	239	239	0
0	physpages	117896	119132	0	9223372036854775807	
0	vmguarpages	0	0	6144	9223372036854775807	
0	oomguarpages	117896	119132	6144	9223372036854775807	
0	numtcpsock	8	34	200	200	0
0	numflock	1	9	1000	1100	0
0	numpty	0	3	16	16	0
0	numsiginfo	0	4	256	256	0
0	tcpsndbuf	139520	514024	8388608	12582912	
0	tcprcvbuf	131072	3511264	5582617	6343884	
0	othersockbuf	83992	322008	1395653	4194304	
0	dgramrcvbuf	0	44816	159835	159835	
0	numothersock	39	56	1024	1024	0
0	dcachesize	307053	378828	1536000	1920000	
0	numfile	871	1104	10000	10000	0
0	dummy	0	0	0	0	0
0	dummy	0	0	0	0	0
0	dummy	0	0	0	0	0
0	numiptent	10	10	5000	5000	0
106:	kmemsize	4920770	7640718	33554432		33554432
0	lockedpages	0	0	32	32	0
0	privvmpages	52230	77929	262144	307200	
0	shmpages	18	1026	8192	8192	0
0	dummy	0	0	0	0	0
0	numproc	22	40	100	120	0

	physpages	37441	49031	0	9223372036854775807	
0	vmguarpages	0	0	6144	9223372036854775807	
0	oomguarpages	37441	49031	6144	9223372036854775807	
0	numtcpsock	25	49	80	80	0
	numflock	1	7	100	110	0
	numpty	0	2	16	16	0
	numsiginfo	0	6	256	256	0
	tcpsndbuf	160328	543144	1048576	2097152	
0	tcprcvbuf	722872	1809864	8388608	8388608	
0	othersockbuf	2312	28472	132096	336896	
0	dgramrcvbuf	0	10768	132096	132096	
0	numothersock	2	12	80	80	0
0	dcachesize	264798	358581	1048576	1097728	
0	numfile	656	948	4000	4500	0
	dummy	0	0	0	0	0
	dummy	0	0	0	0	0
	dummy	0	0	0	0	0
	numiptent	10	10	128	128	0
104:	kmemsize	1360171	3342912	10485760	15728640	
0	lockedpages	0	16	32	32	0
0	privvmpages	19210	33829	65536	65536	
0	shmpages	0	1008	8192	8192	0
	dummy	0	0	0	0	0
	numproc	12	27	65	65	0
	physpages	6562	11308	0	9223372036854775807	
0	vmguarpages	0	0	6144	9223372036854775807	
0	oomguarpages	6562	11308	6144	9223372036854775807	
0	numtcpsock	6	11	80	80	0
	numflock	1	5	100	110	0
	numpty	0	2	16	16	0
	numsiginfo	0	4	256	256	0
	tcpsndbuf	0	30784	319488	524288	0
	tcprcvbuf	98304	1057432	1048576	2097152	
209	othersockbuf	23120	215808	212738	336896	

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35175
0 dgramrcvbuf          0          39368          1048576          2097152
0 numothersock         11          108           140           140           0
  dcachesize         123009          214092          1048576          1097728
0 numfile              638          992           2048           2048           0
  dummy              0            0            0            0            0
  dummy              0            0            0            0            0
  dummy              0            0            0            0            0
  numiptent          10           10           128           128           0
103: kmemsize         6853032          25775467          61238573          75987811
0 lockedpages          0            16            32            32            0
  privvmpages        482320          943071          1048576          1048576
0 shmpages             0            1344          8192           8192           0
  dummy              0            0            0            0            0
  numproc            40           600           600           650           521
  physpages          445994          547246          0 9223372036854775807
0 vmguarpages          0            0            6144 9223372036854775807
0 oomguarpages         445994          547246          6144 9223372036854775807
0 numtcpsock           23           589           3000           3000           0
  numflock           125          129           500           510            0
  numpty             0            1            16            16            0
  numsigninfo        0            4            256           256            0
  tcpsndbuf          732480          2659600          13841203          16777216
0 tcprcvbuf           376832          1286280          4956160          6717440
0 othersockbuf         4624          292480          309760          460800
0 dgramrcvbuf          0            2576          132096          132096           0
  numothersock         3            13            200           200            0
  dcachesize          457293          1156848          2560000          2560000
0 numfile              1326          8000           8800           8800          3852
  dummy              0            0            0            0            0
  dummy              0            0            0            0            0
  dummy              0            0            0            0            0
  numiptent          10           10           128           128           0
102: kmemsize         15004300          27179230          40529809          42986161
0 lockedpages          0            16            32            32            0
  privvmpages        221050          395998          524288          524288

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0	shmpages	0	992	8192	8192	0
	dummy	0	0	0	0	0
	numproc	79	176	239	239	0
	physpages	198442	228764	0	9223372036854775807	
	0					
	vmguarpages	0	0	6144	9223372036854775807	
0	oomguarpages	198442	228764	6144	9223372036854775807	
	0					
	numtcpsock	44	97	500	550	0
	numflock	16	81	1000	1100	0
	numpty	2	3	16	16	0
	numsiginfo	0	12	256	256	0
	tcpsndbuf	831040	3273568	8388608	12582912	
0	0					
	tcprcvbuf	603008	4730384	5582617	6343884	
0	0					
	othersockbuf	398904	1077840	1395653	4194304	
0	0					
	dgramrcvbuf	0	127416	159835	159835	
0	0					
	numothersock	226	551	1024	1024	0
	dcachesize	606340	930686	11520000	11520000	
0	0					
	numfile	3100	6778	30000	35000	0
	dummy	0	0	0	0	0
	dummy	0	0	0	0	0
	dummy	0	0	0	0	0
	numiptent	158	358	5000	5000	0
101:	kmemsize	87853961	229649570	314572800	314572800	
	0					
	lockedpages	2123	2331	2409	2409	0
	privvmpages	237523	678464	774400	774400	
0	0					
	shmpages	3491	6067	8192	8192	0
	dummy	0	0	0	0	0
	numproc	319	681	825	825	0
	physpages	107222	375679	0	9223372036854775807	
	0					
	vmguarpages	0	0	6144	9223372036854775807	
0	0					
	oomguarpages	107222	375679	6144	9223372036854775807	
	0					
	numtcpsock	124	1289	2024	2024	0
	numflock	3	519	1000	1100	0
	numpty	0	3	16	16	0
	numsiginfo	0	512	563	563	0

tcpsndbuf	4200888	17778336	40600862	45782302	
0					
tcprcvbuf	1440792	9217944	11534336	19031488	
0					
othersockbuf	261256	757392	1108607	2048576	
0					
dgramrcvbuf	0	88872	159835	159835	
0					
numothersock	234	296	512	512	0
dcachesize	915525	2337171	11520000	11520000	
0					
numfile	4246	7290	10000	10000	0
dummy	0	0	0	0	0
dummy	0	0	0	0	0
dummy	0	0	0	0	0
numiptent	14	16	128	128	0
0: kmemsize	11926576	14721714	9223372036854775807		
9223372036854775807	0				
lockedpages	43913	43929	9223372036854775807		
9223372036854775807	0				
privvmpages	11478	49790	9223372036854775807		
9223372036854775807	0				
shmpages	1292	2028	9223372036854775807		
9223372036854775807	0				
dummy	0	0	9223372036854775807	9223372036854775807	
0					
numproc	102	121	9223372036854775807		
9223372036854775807	0				
physpages	8158	15017	9223372036854775807		
9223372036854775807	0				
vmguarpages	0	0	9223372036854775807		
9223372036854775807	0				
oomguarpages	8167	15026	9223372036854775807		
9223372036854775807	0				
numtcpsock	9	14	9223372036854775807		
9223372036854775807	0				
numflock	1	6	9223372036854775807	9223372036854775807	
0					
numpty	2	2	9223372036854775807	9223372036854775807	
0					
numsiginfo	1	872	9223372036854775807		
9223372036854775807	0				
tcpsndbuf	848056	1379048	9223372036854775807		
9223372036854775807	0				
tcprcvbuf	993320	1592016	9223372036854775807		
9223372036854775807	0				
othersockbuf	62424	84352	9223372036854775807		
9223372036854775807	0				

```

dgramrcvbuf          0      430952 9223372036854775807
9223372036854775807  0
numothersock         62      82 9223372036854775807
9223372036854775807  0
dcachesize          1589698 1633831 9223372036854775807
9223372036854775807  0
numfile             2262    3261 9223372036854775807
9223372036854775807  0
dummy               0      0 9223372036854775807 9223372036854775807
0
dummy               0      0 9223372036854775807 9223372036854775807
0
dummy               0      0 9223372036854775807 9223372036854775807
0
numiptent           1438    1462 9223372036854775807
9223372036854775807  0

```

vzmemcheck

Output values in %

LowMem	LowMem	RAM	MemSwap	MemSwap	Alloc	Alloc	Alloc
util	commit	util	util	commit	util	commit	limit
1.99	10.06	23.06	15.62	3.33	19.53	3.33	52.01

uptime

19:08:12 up 13 days, 1:50, 2 users, load average: 1.78, 1.43, 1.49

If there are some UBC errors, please point to them, as I'm relatively new to OpenVZ in general.
