Subject: Re: Kernel cache dentry leak?
Posted by insider on Fri, 20 Jan 2012 19:10:13 GMT
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After a last manual cache clear with echo 2 >/proc/sys/vm/drop_caches there a 2 days passed, "dentry" now holds 15174252 objects and uses 3372056K and keeps incressing...

slabtop command information:
Active / Total Objects (% used) : 15292469 / 15303649 (99.9%)
Active / Total Slabs (% used) : 851679 / 851681 (100.0%)
Active / Total Caches (% used) : 122 / 240 (50.8%)
Active / Total Size (% used) : 3232528.04K / 3234571.11K (99.9%)
Minimum / Average / Maximum Object : 0.02K / 0.21K / 4096.00K

OBJS	ACTIVE	USE	OBJ SIZE	SLABS	OBJ/SLAB	CACHE SIZE	NAME
15174252	15174204	99%	0.21K	843014	18	3372056K	dentry <<======!!!!!
24790	24759	99%	0.10K	670	37	2680K	buffer_head
20048	19762	98%	0.03K	179	112	716K	size-32
12528	12373	98%	0.08K	261	48	1044K	sysfs_dir_cache
10384	9963	95%	0.06K	176	59	704K	size-64
6816	6777	99%	0.62K	1136	6	4544K	inode_cache
4928	3144	63%	0.05K	64	77	256K	anon_vma_chain
4921	4204	85%	0.20K	259	19	1036K	vm_area_struct
4500	4425	98%	0.12K	150	30	600K	size-128
3899	3866	99%	0.55K	557	7	2228K	radix_tree_node
3411	3404	99%	1.05K	1137	3	4548K	ext4_inode_cache
3372	3354	99%	0.83K	843	4	3372K	ext3_inode_cache
3205	3184	99%	0.68K	641	5	2564K	proc_inode_cache
2862	2694	94%	0.07K	54	53	216K	Acpi-Operand
2695	1937	71%	0.05K	35	77	140K	anon_vma
1940	1116	57%	0.19K	97	20	388K	cred_jar
1740	1714	98%	1.00K	435	4	1740K	size-1024
1620	1583	97%	0.19K	81	20	324K	size-192
1440	1055	73%	0.25K	96	15	384K	filp
1380	1332	96%	0.04K	15	92	60K	Acpi-Namespace
1376	1286	93%	0.50K	172	8	688K	size-512
945	904	95%	0.84K	105	9	840K	shmem_inode_cache
612	571	93%	2.00K	306	2	1224K	size-2048
540	345	63%	0.25K	36	15	144K	size-256
510	240	47%	0.11K	15	34	60K	task_delay_info
468	287	61%	0.31K	39	12	156K	skbuff_head_cache
424	56	13%	0.06K	8	53	32K	fs_cache
420	222	52%	0.12K	14	30	56K	pid
308	298	96%	0.53K	44	7	176K	idr_layer_cache
288	231	80%	1.00K	72	4	288K	signal_cache
288	29	10%	0.08K	6	48	24K	blkdev_ioc
288	256	88%	0.02K	2	144	8K	dm_target_io
280	239	85%	0.19K	14	20	56K	kmem_cache

```
280    54  19%    0.13K     10   28         40K cfq_io_context
276    62  22%    0.03K      3   92         12K size-32(UBC)
276   256  92%    0.04K      3   92         12K dm_io
270   233  86%    2.06K     90    3        720K sighand_cache
260   238  91%    2.75K    130    2       1040K task_struct
242   242 100%    4.00K    242    1        968K size-4096
240   182  75%    0.75K     48    5        192K sock_inode_cache
202     2   0%    0.02K      1  202          4K jbd2_revoke_table
202     4   1%    0.02K      1  202          4K revoke_table
187    54  28%    0.69K     17   11       136K files_cache
168    56  33%    0.27K     12   14         48K cfq_queue
162    55  33%    0.81K     18    9        144K task_xstate
159    18  11%    0.06K      3   53         12K size-64(UBC)
153    99  64%    0.81K     17    9        136K UNIX
144    32  22%    0.02K      1  144          4K jbd2_journal_handle
124    74  59%    1.00K     31    4        124K size-1024(UBC)
120    18  15%    0.19K      6   20         24K bio-0
120    45  37%    0.12K      4   30         16K inotify_inode_mark_entry
```

Is there a way to dump contents of dentry to a file, maybe to inspect and investigate, what this cache contains?

I have tried with "dd" copy from /dev/mem to a files, but it not allows to dump full kernel memory...

Maybe this problem is related to a filesystem?
We have mounted these filesystems:

```
/dev/md2 on / type ext4 (rw)
proc on /proc type proc (rw)
none on /dev/pts type devpts (rw,gid=5,mode=620)
/dev/md0 on /boot type ext3 (rw)
/dev/mapper/vg0-vz on /vz type ext3 (rw)
none on /proc/sys/fs/binfmt_misc type binfmt_misc (rw)
beancounter on /proc/vz/beancounter type cgroup (rw,name=beancounter)
container on /proc/vz/container type cgroup (rw,name=container)
fairsched on /proc/vz/fairsched type cgroup (rw,name=fairsched)
```

Searching for a solution or a way to investigate this problem, but still unsuccessful...

Upgraded kernel to 2.6.32-042stab044.17 #1 SMP Fri Jan 13 12:53:58 MSK 2012 x86_64 x86_64 x86_64 GNU/Linux, but this not solved dentry leak problem.

Any thoughts?

Does nobody else got this problem with RHEL 6 63bit 2.6.32 ?