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Subject: Weird memory numbers

Posted by [dagr](#) on Thu, 13 Sep 2007 08:03:55 GMT

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I made experiment to understand whether i can see how much memory exactly my vps consumes

I installed apache and run it with 100 start processes (prefork mpm model)

```
[[email]root@vps-10811[/email] conf]# ps -eo "sz,size,rss,vsize,pid,cmd" | grep httpd| wc -l
102
```

```
[[email]root@vps-10811[/email] conf]# ps -eo "sz,size,rss,vsize,pid,cmd" | grep httpd
1451 1244 2520 5804 30193 /vps_core/apache-2.2.3/bin/httpd -k start
1484 1376 2136 5936 32109 /vps_core/apache-2.2.3/bin/httpd -k start
1484 1376 2136 5936 32110 /vps_core/apache-2.2.3/bin/httpd -k start
1484 1376 2136 5936 32111 /vps_core/apache-2.2.3/bin/httpd -k start
1484 1376 2140 5936 32112 /vps_core/apache-2.2.3/bin/httpd -k start
1484 1376 2140 5936 32113 /vps_core/apache-2.2.3/bin/httpd -k start
1484 1376 2140 5936 32114 /vps_core/apache-2.2.3/bin/httpd -k start
1484 1376 2140 5936 32115 /vps_core/apache-2.2.3/bin/httpd -k start
1484 1376 2140 5936 32116 /vps_core/apache-2.2.3/bin/httpd -k start
1484 1376 2140 5936 32117 /vps_core/apache-2.2.3/bin/httpd -k start
1484 1376 2144 5936 32118 /vps_core/apache-2.2.3/bin/httpd -k start
1484 1376 2140 5936 32119 /vps_core/apache-2.2.3/bin/httpd -k start
1484 1376 2140 5936 32120 /vps_core/apache-2.2.3/bin/httpd -k start
1484 1376 2140 5936 32121 /vps_core/apache-2.2.3/bin/httpd -k start
1484 1376 2140 5936 32122 /vps_core/apache-2.2.3/bin/httpd -k start
1484 1376 2140 5936 32123 /vps_core/apache-2.2.3/bin/httpd -k start
1484 1376 2140 5936 32124 /vps_core/apache-2.2.3/bin/httpd -k start
1484 1376 2140 5936 32125 /vps_core/apache-2.2.3/bin/httpd -k start
1484 1376 2140 5936 32126 /vps_core/apache-2.2.3/bin/httpd -k start
1484 1376 2140 5936 32127 /vps_core/apache-2.2.3/bin/httpd -k start
.....
1451 1244 1720 5804 32217 /vps_core/apache-2.2.3/bin/httpd -k start
1451 1244 1720 5804 32219 /vps_core/apache-2.2.3/bin/httpd -k start
395 160 520 1580 5144 grep httpd
```

ps shows memory usage in tricky way , so i checked it by pmap

```
[[email]root@vps-10811[/email] conf]# pmap -d 32217
```

```
.....
```

```
mapped: 5808K  writeable/private: 1428K  shared: 48K
```

writable/private: 1428K - is the minimum memory which process uses and doesn't share. Its close to size 1451K from ps in our case . ie 100x1458 = 150 Mb

Now let's see what beancounters give us

```
[[email]root@vps-10811[/email] conf]# cat /proc/user_beancounters  
Version: 2.5
```

uid resource	held	maxheld	barrier	limit	failcnt	
10811: kmemsize	11638464	13987632	20752512	29036012		0
lockedpages	0	0	32	32	0	
privvmpages	24687	27632	60000	70000	0	
shmpages	652	661	249152	249152	0	
dummy	0	0	0	0	0	
numproc	110	119	200	200	0	
physpages	7099	7854	0	2147483647	0	
vmguarpages	0	0	60000	2147483647	0	
oomguarpages	7099	7854	60000	2147483647		0
numtcpsock	6	174	300	300	0	
numflock	3	4	100	110	0	
numpty	1	1	16	16	0	
numsiginfo	0	101	256	256	0	
tcpsndbuf	51428	206412	1319488	2524288		0
tcprcvbuf	84888	942160	1319488	2524288		0
othersockbuf	2236	9800	5036896	5536896		0
dgramrcvbuf	0	13980	232096	500000		0
numothersock	4	9	100	100	0	
dcachesize	0	0	1800000	2000000		0
numfile	1087	1398	4048	4048	0	
dummy	0	0	0	0	0	

Both privvmpages (~100Mb) and oomguarpages(~28Mb) show me numbers far from expected. I'm pretty sure about pmap method, so what's the trick?

( 2.6.9-023stab044.4-enterprise , vzctl-3.0.13-1 )

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