
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
```

writeable/private: 1428K - is the minimum memory which process uses and doesnt share.
Its close to size 1451K from ps in our case . ie $100 \times 1458 = 150$ Mb

Now lets 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	600000	700000		0
	shmpages	652	661	249152	249152		0
	dummy	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.
Im pretty sure about pmap method , so whats the trick ?

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