
Subject: Memory Management again

Posted by [atomic](#) on Sun, 19 Feb 2006 10:34:17 GMT

[View Forum Message](#) <> [Reply to Message](#)

Hi,

i read many postings about memory restrictions and guaranteed memory sizes, so i figured out some values for standard memory sizes.

```
VMGUARPAGES="32768:2147483647" // 128MB Guaranteed
VMGUARPAGES="65536:2147483647" // 256MB Guaranteed
VMGUARPAGES="131072:2147483647" // 512MB Guaranteed
```

```
PRIVVMPAGES="64000:65536" // 256MB Burst
PRIVVMPAGES="128000:131072" // 512MB Burst
PRIVVMPAGES="256000:262140" // 1024MB Burst
```

Calculation:

VMGUARPAGES and PRIVVMPAGES values are given in memory pages.

One memory page holds 4096Bits or 4Kbyte on a x86-System.

65536 Pages * 4Kbyte = 262144Kbyte = 256Mbyte

Where "guaranteed" means the absolute minimum of available RAM, even if the node is heavily loaded,
and "burst" means the limit of allocatable RAM if there is enough free.

Here is a beancounter output of a VPS with 256Mbyte guaranteed and 1024MByte burst memory:

Version: 2.5

uid resource	held	maxheld	barrier	limit	failcnt	
3: kmemsize	3532503	4198588	16979722	18677694		0
lockedpages	0	0	829	829	0	
privvmpages	147040	149045	256000	262140		0
shmpages	11417	11433	31096	31096		0
dummy	0	0	0	0		0
numproc	100	117	800	800		0
physpages	32964	34396	0	2147483647		0
vmguarpages	0	0	65535	2147483647		0
oomguarpages	32964	34396	310967	2147483647		0
numtcpsock	24	25	800	800		0
numflock	7	10	662	728		0
numpty	1	1	80	80		0
numsiginfo	0	2	1024	1024		0
tcpsndbuf	4456	16744	2383107	5659907		0

tcprcvbuf	1204	9576	2383107	5659907	0
othersockbuf	20896	29268	1191553	4468353	0
dgramrcvbuf	0	2228	1191553	1191553	0
numothersock	24	30	800	800	0
dcachesize	322624	332280	3704295	3815424	0
numfile	719	777	6624	6624	0
dummy	0	0	0	0	0
dummy	0	0	0	0	0
dummy	0	0	0	0	0
numiptent	10	10	200	200	0

Are these values correct and expedient? What does the value "2147483647" at VMGUARPAGES mean?

2147483647 memory pages are roughly 8192 Gigabytes, is this the maximal allocatable memory size of OpenVZ?

Thanks.
