Subject: Optimizing resources from /proc/user_beancounters
Posted by Brad Alexander on Fri, 14 Oct 2011 15:12:17 GMT
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I know this is has probably been discussed ad nauseum, but I haven't found what I'm looking for yet, so I thought I would ask here.

I have been running OpenVZ for a few years, but in the last couple of weeks, I have noticed over the past couple of weeks that several VMs were getting out of spec settings, mainly dcachesize growing too large.

These VMs started on a Debian openvz box, and as my virtual infrastructure grew, I started using a pair of proxmox-ve machines (which is Debian-lenny based as well), which are clustered.

I have 8 VMs that were created over time, some on 32-bit host machines, some on 64-bit. Thus, some have /proc/user_beancounters that look like:

```
     1:  kmemsize            13775736
15028224       48811846         51254098            63446
       lockedpages             0
447         393216        393216            0
       privvmpages           15152
105895         426752          439252              0
       shmpages              648
1304          21504         21504            0
       dummy                 0
0          0         0           0
       numproc               47
72         240         240             0
       physpages            166345
425143          0      2147483647            0
       vmguarpages            0
0        426752      2147483647          0
       oomguarpages          6374
97683         426752       2147483647             0
       numtcpsock            44
48         360         360             0
       numflock              1
7          188         206            0
       numpty                0
2          16        16           0
       numsiginfo            1
27          256         256            0
       tcpsndbuf          525744
1026352        4212558         6014798             0
       tcprcvbuf          524552
3052984        4212558         6014798             0
```

```
        othersockbuf            46240
65808        1126080         2097152             0
        dgramrcvbuf             0
101600          262144          262144             0
        numothersock            75
82          360             360             0
        dcachesize          9997638
10000000        8000000         10000000            0
        numfile             508
695          9312            9312             0
        dummy               0
0           0           0           0
        dummy               0
0           0           0           0
        dummy               0
0           0           0           0
        numiptent           20
20          128             128             0
```

While others have effectively unlimited barrier and limit settings:

```
    7:  kmemsize            93292551        107253760
9223372036854775807  9223372036854775807             0
        lockedpages             0
16          393216          393216              0
        privvmpages         299033
413214          524288          536788              0
        shmpages            68          724
9223372036854775807  9223372036854775807             0
        dummy               0
0           0           0           0
        numproc             86
108          1024            1024            0
        physpages           321589
496217              0  9223372036854775807             0
        vmguarpages             0
0           524288  9223372036854775807             0
        oomguarpages            155305
180405          524288  9223372036854775807             0
        numtcpsock          13          17
9223372036854775807  9223372036854775807             0
        numflock            3           9
9223372036854775807  9223372036854775807             0
        numpty              0
2           255             255             0
        numsiginfo          1
15          1024            1024            0
        tcpsndbuf           226720          329312
```

9223372036854775807	9223372036854775807		0
tcprcvbuf	277072	5662864	
9223372036854775807	9223372036854775807		0
othersockbuf	43928	66680	
9223372036854775807	9223372036854775807		0
dgramrcvbuf	0	5648	
9223372036854775807	9223372036854775807		0
numothersock	63	69	
9223372036854775807	9223372036854775807		0
dcachesize	88045648	101016538	
9223372036854775807	9223372036854775807		0
numfile	360	605	
9223372036854775807	9223372036854775807		0
dummy	0		
0	0	0	0
dummy	0		
0	0	0	0
dummy	0		
0	0	0	0
numiptent	20	20	
9223372036854775807	9223372036854775807		0

I have three questions. First, I know that leaving everything unlimited is a quick path to running out of resources on the host machine. That said, I've been having troubles recently with the VMs with "normal" settings. It started out with dcachesize going out of spec, which, when I adjusted it, within an hour, I started getting out of memory errors, requiring me to up the kmemsize...This then caused problems on another "normal" VM, and so forth.

As I said, I know setting everything to unlimited is probably not recommended, so what is the recommended way to set the proper values for user_beancounters? Every time I change values in user_beancounters, something else comes unglued, except for the ones that have unlimited kmemsize and dcachesize.

Is there a tool to set up the values based on the use of the particular VM? Is there any more information I need to provide?

Thanks,
--b