Subject: Optimizing resources from /proc/user_beancounters Posted by Brad Alexander on Fri, 14 Oct 2011 15:12:17 GMT View Forum Message <> Reply to Message

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:	kmemsiz	:e	13775	736			
150282	224	4881184	16	51254	.098		63446
	lockedpa	ges	0				
447	393	216	3932	16		0	
	privvmpa	ges	151	52			
105895	5	426752	4	39252			0
	shmpage	S	648	3			
1304	2	1504	215	04		0	
	dummy		0				
0	0		0	0)		
	numproc		47				
72	240)	240		0		
	physpage	es	1663	45			
425143	3	0	214748	33647			0
	vmguarpa	-	(
0	42675	2 2	1474836			0	
	oomguar	oages	63	374			
97683	4	26752	2147	483647	•		0
	numtcpsc	ock	44	-			
48	360)	360		0		
	numflock		1				
7	188		206		0		
	numpty		0				
2	16		16		0		
	numsigin	fo	1				
27	256	3	256		0		
	tcpsndbu	f	52574	4			
102635	52	4212558		601479	8		0
	tcprcvbuf		524552	2			
305298	34	4212558		601479	8		0

	othersockbuf	46240		
65808	11260	80 209	7152	0
	dgramrcvbuf	0		
10160	0 262	144 26	2144	0
	numothersock	75		
82	360	360	0	
	dcachesize	999763	8	
10000	000 80	00000 1	0000000	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	107253	3760	
92233	72036854775807	92233720368	54775807		0
	lockedpages	0			
16	393216	393216	0		
	privvmpages	299033			
41321	4 524288	5367	88	0	
	shmpages	68	724		
92233	72036854775807	92233720368	54775807		0
	dummy	0			
0	0	0	0		
	numproc	86			
108	1024	1024	0		
	physpages	321589			
49621	7 0 92	223372036854	775807		0
	vmguarpages	0			
0	524288 9223	37203685477	5807	0	
	oomguarpages	15530	5		
18040	5 524288	92233720368	354775807		0
	numtcpsock	13	17		
92233	72036854775807	92233720368	54775807		0
	numflock	3	9		
92233	72036854775807	92233720368	54775807		0
	numpty	0			
2	255	255	0		
	numsiginfo	1			
15	1024	1024	0		
	tcpsndbuf	226720	329312		

9223372036854775807	9223372036854	1775807	0
tcprcvbuf	277072	5662864	
9223372036854775807	9223372036854	1775807	0
othersockbuf	43928	66680	
9223372036854775807	9223372036854	1775807	0
dgramrcvbuf	0	5648	
9223372036854775807	9223372036854	1775807	0
numothersock	63	69	
9223372036854775807	9223372036854	1775807	0
dcachesize	88045648	101016538	
9223372036854775807	9223372036854	1775807	0
numfile	360	605	
9223372036854775807	9223372036854	1775807	0
dummy	0		
0 0	0	0	
dummy	0		
0 0	0	0	
dummy	0		
0 0	0	0	
numiptent	20	20	
9223372036854775807	9223372036854	1775807	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,

Subject: Re: Optimizing resources from /proc/user_beancounters Posted by JR Richardson on Fri, 14 Oct 2011 21:35:42 GMT View Forum Message <> Reply to Message

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>

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- > based as well), which are clustered.

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> 1: kmemsize 13775736 > 15028224 48811846 51254098 63446 > lockedpages 0 > 447 393216 393216 0 privvmpages 15152 > > 105895 426752 439252 0 shmpages 648 > > 1304 0 21504 21504 0 dummy > 0 > 0 0 0 numproc 47 >

> 72 240 240 0 > physpages 166345

> 0 426752 2147483647 > oomguarpages 6374

> 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

numothersock 75

262144

> 101600

262144

0

> 82	360	360	0	
>	dcachesize	9997638		
> 10000	000 80000	000 100	000000	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 effecti	ively unlimited	barrier and lir	nit settings:
>		•		
> 7:	kmemsize	93292551	10725	3760
> 92233	72036854775807	92233720368	54775807	0
>	lockedpages	0		
> 16	393216	393216	0	
>	privvmpages	299033		
> 41321		5367	'88	0
>	shmpages	68	724	
> 92233	72036854775807	92233720368	54775807	0
>	dummy	0		
> 0	0	0	0	
>	numproc	86		
> 108	1024	1024	0	
>	physpages	321589		
> 49621		223372036854	775807	0
>	vmguarpages	0		
> 0	524288 9223	37203685477	5807	0
>	oomguarpages	155305		
> 18040	5 524288	9223372036	854775807	0
>	numtcpsock	13	17	
> 92233	72036854775807	92233720368	54775807	0
>	numflock	3	9	
> 92233	72036854775807	92233720368	54775807	0
>	numpty	0		
> 2	255	255	0	
>	numsiginfo	1		
> 15	1024	1024	0	
>	tcpsndbuf	226720	329312) -
> 92233	72036854775807	92233720368	54775807	0
>	tcprcvbuf	277072	5662864	Ļ
> 92233	72036854775807	92233720368	54775807	0
>	othersockbuf	43928	66680)
> 92233	72036854775807	92233720368	54775807	0

>	dgramrcvbuf	0	5648	
> 92233	72036854775807	922337203	86854775807	0
>	numothersock	63	69	
> 92233	72036854775807	922337203	86854775807	0
>	dcachesize	8804564	101016538	ı
> 92233	72036854775807	922337203	86854775807	0
>	numfile	360	605	
> 92233	72036854775807	922337203	86854775807	0
>	dummy	0		
> 0	0	0	0	
>	dummy	0		
> 0	0	0	0	
>	dummy	0		
> 0	0	0	0	
>	numiptent	20	20	
> 92233	72036854775807	922337203	36854775807	0

>

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- > Is there any more information I need to provide?

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- > Thanks,
- > --b

Try using vzsplit to segment your VE's equally, start there and increase/decrease resources per the demand of each VE. Once you adjust your config conf files, use vzcfgvalidate to ensure your beans are adjusted propperly.

Good luck.

JR

--

JR Richardson

Engineering for the Masses

Subject: Re: Optimizing resources from /proc/user_beancounters Posted by Brad Alexander on Sat, 15 Oct 2011 14:11:28 GMT

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Thank you, JR. As it turns out, I was *severely* starving my VMs. vzsplit worked like a charm...

--b

On Fri, Oct 14, 2011 at 5:35 PM, JR Richardson < jmr.richardson@gmail.com>wrote:

- >> 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.
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- > >

>> 1:	kmemsize	13775736		
> > 15028	224 48811	1846 51254	098	63446
>>	lockedpages	0		
> > 447	393216	393216		0
>>	privvmpages	15152		
> > 10589	5 426752	2 439252		0
>>	shmpages	648		
> > 1304	21504	21504		0
>>	dummy	0		
>>0	0	0 0		
>>	numproc	47		
> > 72	240	240	0	
>>	physpages	166345		
> > 42514	3 0	2147483647		0
>>	vmguarpages	0		
>>0	426752	2147483647		0
>>	oomguarpages	6374		
> > 97683	426752	2147483647		0

```
numtcpsock
                                 44
                360
                              360
                                            0
         numflock
                                1
> >
                            206
> > 7
               188
                                           0
         numpty
                               0
> > 2
               16
                            16
                                          0
         numsiginfo
                                1
                              256
                256
                                            0
> > 27
                             525744
         tcpsndbuf
> > 1026352
                                   6014798
                                                       0
                   4212558
         tcprcvbuf
                            524552
                                                       0
> > 3052984
                   4212558
                                   6014798
         othersockbuf
                              46240
> > 65808
                 1126080
                                 2097152
                                                    0
         dgramrcvbuf
                                 0
> > 101600
                   262144
                                  262144
                                                     0
                                 75
         numothersock
> > 82
                360
                              360
                                            0
         dcachesize
                             9997638
> > 10000000
                    8000000
                                    10000000
                                                         0
         numfile
                             508
                               9312
                                               0
> > 695
                9312
         dummy
                                0
                0
                                         0
> > 0
         dummy
                                0
                                         0
                0
         dummy
                                0
                0
                            0
                                         0
         numiptent
                               20
                128
                              128
                                            0
> > 20
> > While others have effectively unlimited barrier and limit settings:
       7: kmemsize
                             93292551
                                             107253760
> > 9223372036854775807 9223372036854775807
                                                           0
         lockedpages
                                 0
              393216
                                                0
                              393216
         privvmpages
                              299033
 > 413214
                   524288
                                  536788
                                                    0
         shmpages
                                68
                                             724
> > 9223372036854775807 9223372036854775807
                                                           0
         dummy
                                0
                                         0
                0
         numproc
                               86
                                               0
                1024
                               1024
> > 108
                              321589
         physpages
> > 496217
                      0 9223372036854775807
                                                         0
         vmguarpages
                                  0
```

>>0	524288 9223	3720368547758	307 0	
	oomguarpages			
	5 524288			0
>>	numtcpsock	13	17	
> > 92233	72036854775807	922337203685	4775807	0
>>	numflock	3	9	
> > 92233	72036854775807		4775807	0
>>		0		
>>2	255	255	0	
	numsiginfo	1		
> > 15	1024	1024	0	
>>	tcpsndbuf	226720	329312	
> > 92233	72036854775807	922337203685	4775807	0
>>	tcprcvbuf	277072	5662864	
	72036854775807			0
>>	othersockbuf	43928	66680	
> > 92233	72036854775807			0
>>	dgramrcvbuf	0	5648	
> > 92233	72036854775807	922337203685	4775807	0
>>	numothersock	63	69	
> > 92233	72036854775807	922337203685	4775807	0
>>	dcachesize	88045648	101016538	
> > 92233	72036854775807	922337203685	4775807	0
>>	numfile	360	605	
> > 92233	72036854775807	922337203685	4775807	0
>>	dummy	0		
>>0	0	0	0	
>>	dummy	0		
>>0	0	0	0	
>>	dummy	0		
>>0	0	0	0	
	numiptent		20	
> > 92233	72036854775807	922337203685	4775807	0
>>				

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> JR
> --
> JR Richardson
> Engineering for the Masses
>
```