
Subject: OpenVZ - allocation failed: out of vmalloc space
Posted by [stuartornum](#) on Wed, 05 Dec 2007 10:16:12 GMT
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Hi,

Got a slight problem on my development OpenVZ server, it has been working 100% up until 2 days ago when I did a restart.

I have 5 VE's (id 201 - 205), I was able to run all 5 with ample resources spare.

Now I can only run one at a time...?

I checked the logs and get this
Code:

```
Dec 3 18:16:17 localhost kernel: allocation failed: out of vmalloc space - use vmalloc=<size> to increase size.
```

```
Dec 3 18:16:17 localhost kernel: VE: 202: stopped
```

```
Dec 3 18:16:17 localhost kernel: VE: 202: failed to start with err=-12
```

This may help as well
Code:

```
# cat /proc/meminfo | grep Vmalloc  
VmallocTotal: 110584 kB  
VmallocUsed: 110200 kB  
VmallocChunk: 136 kB
```

Thanks in advanced

Subject: Re: OpenVZ - allocation failed: out of vmalloc space
Posted by [maratrus](#) on Wed, 05 Dec 2007 15:47:56 GMT
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Hi,

please give to us a little more information:

1. What kernel do you use?
2. What OS do you use on HN?
3. What kind of templates do you use?

Thank You!

Subject: Re: OpenVZ - allocation failed: out of vmalloc space
Posted by [stuartornum](#) on Wed, 05 Dec 2007 15:52:16 GMT
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Hi,

I am running on CentOS 4.5 kernel 2.6.18-8.1.14.el5.028stab045.1

I am using the standard OpenVZ templates of CentOS default and minimal

Some more info

free -mt

	total	used	free	shared	buffers	cached
Mem:	1007	608	398	0	47	515
-/+ buffers/cache:		46	960			
Swap:	2055	0	2054			
Total:	3062	609	2453			

Thanks for you help.

Subject: Re: OpenVZ - allocation failed: out of vmalloc space
Posted by [maratrus](#) on Wed, 05 Dec 2007 17:45:59 GMT
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Hi,

Sorry for the inconvenience but can you also attach lsmod output?

Thank You!

Subject: Re: OpenVZ - allocation failed: out of vmalloc space
Posted by [stuartornum](#) on Wed, 05 Dec 2007 18:04:53 GMT
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Hi,

lsmod

Module	Size	Used by
simfs	9068	1
vzcpt	111524	0
vzdquota	44180	1 [permanent]
xt_tcpudp	7040	0
xt_length	6016	0
ipt_ttl	5888	0
xt_tcpmss	6272	0
ipt_TCPMSS	8064	0

iptables_mangle	8576	1	
iptables_nat	13188	2	
ip_nat	22288	1	iptables_nat
ip_conntrack	60356	4	vzcpt,iptables_nat,ip_nat
nfnetlink	10648	2	ip_nat,ip_conntrack
iptables_filter	8576	1	
xt_multiport	7168	0	
xt_limit	6656	0	
ipt_tos	5760	0	
ipt_REJECT	9344	0	
ip_tables	18760	3	iptables_mangle,iptables_nat,iptables_filter
x_tables	19204	11	xt_tcpudp,xt_length,ipt_ttl,xt_tcpmss,ipt_TCPMS S,iptables_nat,xt_multiport,xt_limit,ipt_tos,ipt_REJECT,ip_tables
parport_pc	29092	0	
lp	16168	0	
parport	37960	2	parport_pc,lp
autofs4	24324	0	
sunrpc	145084	1	
vznetdev	21764	2	
vzmon	46088	3	vzcpt,vznetdev
ipv6	261280	16	vzcpt,vzmon
vzdev	7556	3	vzdquota,vznetdev,vzmon
joydev	13888	0	
dm_mirror	29648	0	
dm_mod	56984	1	dm_mirror
video	19588	0	
sbs	18468	0	
i2c_ec	8960	1	sbs
button	10512	0	
battery	13700	0	
asus_acpi	19480	0	
ac	9092	0	
usb_storage	76512	0	
uhci_hcd	25356	0	
ehci_hcd	32780	0	
intelfb	34348	1	
cfbcopyarea	7552	1	intelfb
cfbimgblt	6912	1	intelfb
cfbfillrect	7552	1	intelfb
i2c_i801	11276	0	
i2c_core	23552	2	i2c_ec,i2c_i801
snd_hda_intel	21268	0	
snd_hda_codec	144128	1	snd_hda_intel
snd_pcm_oss	43168	0	
snd_mixer_oss	19200	1	snd_pcm_oss
snd_pcm	72964	3	snd_hda_intel,snd_hda_codec,snd_pcm_oss
snd_timer	25604	1	snd_pcm
snd	52740	6	snd_hda_intel,snd_hda_codec,snd_pcm_oss,snd_mixe

```
    r_oss,snd_pcm,snd_timer
soundcore      13152 1 snd
snd_page_alloc 13832 2 snd_hda_intel,snd_pcm
r8169          31496 0
e100           36744 0
mii            9216 1 e100
ide_cd         39968 0
cdrom          38048 1 ide_cd
ext3           124040 3
jbd            61736 1 ext3
ata_piix       17416 4
libata         97176 1 ata_piix
sd_mod         22912 6
scsi_mod       131212 3 usb_storage,libata,sd_mod
```

Subject: Re: OpenVZ - allocation failed: out of vmalloc space
Posted by [vaverin](#) on Thu, 06 Dec 2007 14:07:07 GMT
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I would like to prepare the following experiment:
please remove some modules and watch Vmalloc in /proc/meminfo.

First of all I suppose intel_fb driver.

thank You,
Vasily Averin

Subject: Re: OpenVZ - allocation failed: out of vmalloc space
Posted by [stuartornum](#) on Thu, 06 Dec 2007 14:18:31 GMT
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I have managed to find what the problem was.

in /etc/vz/vz.conf

I originally had

```
## IPv4 iptables kernel modules
IPTABLES="ipt_REJECT ipt_tos ipt_limit ipt_multiport iptable_filter iptable_mangle ipt_TCPMSS
ipt_tcpmss ipt_ttl ipt_length"
```

However I wanted iptable_nat, so I added it to the list, and thats when I started getting this
Vmalloc error, so I just removed it and all VPS' are now running !!

However why does iptable_nat cause his problem?

Thanks

Subject: Re: OpenVZ - allocation failed: out of vmalloc space

Posted by [vaverin](#) on Thu, 06 Dec 2007 14:25:19 GMT

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iptables_nat really consumes vmalloc, it creates some big hashes.

But I do not think that it causes this issue, I believe some other driver eats too many vmalloc.

Could you please show /proc/meminfo before and after starting of vz service?

thank you,

Vasily Averin

Subject: Re: OpenVZ - allocation failed: out of vmalloc space

Posted by [stuartornum](#) on Thu, 06 Dec 2007 14:29:26 GMT

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Hi,

Thanks for your help.

Here is meminfo with OpenVZ NOT running

cat /proc/meminfo

MemTotal: 1031776 kB

MemFree: 878100 kB

Buffers: 15200 kB

Cached: 106688 kB

SwapCached: 0 kB

Active: 71332 kB

Inactive: 55164 kB

HighTotal: 128544 kB

HighFree: 31764 kB

LowTotal: 903232 kB

LowFree: 846336 kB

SwapTotal: 2104504 kB

SwapFree: 2104504 kB

Dirty: 0 kB

Writeback: 0 kB

AnonPages: 4644 kB

Mapped: 4096 kB

Slab: 13576 kB

PageTables: 512 kB

NFS_Unstable: 0 kB
Bounce: 0 kB
CommitLimit: 2620392 kB
Committed_AS: 18460 kB
VmallocTotal: 110584 kB
VmallocUsed: 109536 kB
VmallocChunk: 624 kB
HugePages_Total: 0
HugePages_Free: 0
HugePages_Rsvd: 0
Hugepagesize: 4096 kB

And here it is with OpenVZ running:

cat /proc/meminfo

MemTotal: 1031776 kB
MemFree: 832564 kB
Buffers: 15456 kB
Cached: 106952 kB
SwapCached: 0 kB
Active: 118128 kB
Inactive: 49088 kB
HighTotal: 128544 kB
HighFree: 688 kB
LowTotal: 903232 kB
LowFree: 831876 kB
SwapTotal: 2104504 kB
SwapFree: 2104504 kB
Dirty: 2464 kB
Writeback: 0 kB
AnonPages: 44828 kB
Mapped: 22912 kB
Slab: 16444 kB
PageTables: 1544 kB
NFS_Unstable: 0 kB
Bounce: 0 kB
CommitLimit: 2620392 kB
Committed_AS: 268868 kB
VmallocTotal: 110584 kB
VmallocUsed: 110336 kB
VmallocChunk: 100 kB
HugePages_Total: 0
HugePages_Free: 0
HugePages_Rsvd: 0
Hugepagesize: 4096 kB

Thanks again

Subject: Re: OpenVZ - allocation failed: out of vmalloc space

Posted by [vaverin](#) on Fri, 07 Dec 2007 05:15:42 GMT

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Hi Stuart,
thank You for cooperation.

As You can see VmallocUsed (109536 kB) on Your node is too high even without vz running.

Usual consuption should be like the following

VmallocTotal: 114680 kB
VmallocUsed: 5748 kB
VmallocChunk: 108532 kB

It is important to find the cause of this issue.

I believe that vmalloc was used by some module. Could You please remove kernel modules and watch /proc/meminfo?

thank You,
Vasily Averin

Subject: Re: OpenVZ - allocation failed: out of vmalloc space

Posted by [stuartornum](#) on Tue, 12 Feb 2008 11:14:36 GMT

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Hi Vasily,

Sorry for the delay, I still have the prolem with Vmalloc.

However I am unsure how to remove kernel modules.

Here is /etc/modprobe.conf

alias eth0 e100

alias eth1 r8169

alias scsi_hostadapter ata_piix

alias snd-card-0 snd-azx

options snd-card-0 index=0

install snd-azx /sbin/modprobe --ignore-install snd-azx && /usr/sbin/alsactl restore >/dev/null 2>&1

|| :

remove snd-azx { /usr/sbin/alsactl store >/dev/null 2>&1 || : ; }; /sbin/modprobe -r --ignore-remove
snd-azx

alias usb-controller ehci-hcd

alias usb-controller1 uhci-hcd

Thanks again

Subject: Re: OpenVZ - allocation failed: out of vmalloc space

Posted by [vaverin](#) on Tue, 12 Feb 2008 11:28:41 GMT

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Hi, Stuart!

Please try to stop services (i.e. vz, iptables, network, sound) -- it can lead to remove some modules.

Then please use rmmod for removing unused modules (it have '0' in 'Used by' clomn showed by lsmod).

After each attempt please look at current Vmalloc consumption (in /proc/meminfo file).

thank you,
Vasily Averin

Subject: Re: OpenVZ - allocation failed: out of vmalloc space

Posted by [stuartornum](#) on Tue, 12 Feb 2008 11:39:11 GMT

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Hi Vasily,

Thanks again for you help;

So far I have done this (the numbers are Vmalloc used, VmallocTotal is 110584 kB)

VZ On - 110272 KB

VZ Off - 109896 KB

IPtables Off - 109588 KB

rmmod snd_hda_intel

rmmod snd_hda_codec - 109392 kB

Here is lsmod again:

```
# lsmod
Module          Size Used by
ipt_LOG         10240 0
ipt_TOS         6272 0
x_tables        19204 2 ipt_LOG,ipt_TOS
vzdquota        44180 0 [permanent]
parport_pc      29092 0
lp              16168 0
parport         37960 2 parport_pc,lp
autofs4         24324 0
```



```

sunrpc      145084 1
ipv6        261280 16
vzdev       7556 1 vzdquota
joydev      13888 0
dm_mirror   29648 0
dm_mod       56984 1 dm_mirror
video       19588 0
sbs         18468 0
i2c_ec      8960 1 sbs
button      10512 0
battery     13700 0
asus_acpi   19480 0
ac          9092 0
usb_storage 76512 0
uhci_hcd    25356 0
ehci_hcd    32780 0
intelfb     34348 1
cfbcopyarea 7552 1 intelfb
cfbimgblt   6912 1 intelfb
cfbfillrect 7552 1 intelfb
i2c_i801    11276 0
i2c_core    23552 2 i2c_ec,i2c_i801
snd_pcm_oss 43168 0
snd_mixer_oss 19200 1 snd_pcm_oss
snd_pcm     72964 1 snd_pcm_oss
snd_timer   25604 1 snd_pcm
snd          52740 4 snd_pcm_oss,snd_mixer_oss,snd_pcm,snd_timer
soundcore   13152 1 snd
snd_page_alloc 13832 1 snd_pcm
r8169       31496 0
e100        36744 0
mii         9216 1 e100
ide_cd      39968 0
cdrom       38048 1 ide_cd
ext3        124040 3
jbd         61736 1 ext3
ata_piix    17416 4
libata      97176 1 ata_piix
sd_mod      22912 6
scsi_mod    131212 3 usb_storage,libata,sd_mod

```

Thanks

Subject: Re: OpenVZ - allocation failed: out of vmalloc space
 Posted by [vaverin](#) on Tue, 12 Feb 2008 12:35:53 GMT

It is still abnormal high vmalloc consumption.
please continue to remove the unused modules.
You need to found module that eats ~100 Mb vmalloc.

Subject: Re: OpenVZ - allocation failed: out of vmalloc space
Posted by [stuartornum](#) on Tue, 12 Feb 2008 13:51:39 GMT
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Hi Vasily,

Ive got it!! Actually, bit of a work around, I install the enterprise kernel, and here is meminfo:

```
cat /proc/meminfo
MemTotal:    1029844 kB
MemFree:     934252 kB
Buffers:     10608 kB
Cached:      47484 kB
SwapCached:    0 kB
Active:      48900 kB
Inactive:    25604 kB
HighTotal:   128544 kB
HighFree:    58476 kB
LowTotal:    901300 kB
LowFree:     875776 kB
SwapTotal:   2104504 kB
SwapFree:    2104504 kB
Dirty:       8 kB
Writeback:    0 kB
AnonPages:   16424 kB
Mapped:      10300 kB
Slab:        11540 kB
PageTables:   876 kB
NFS_Unstable: 0 kB
Bounce:      0 kB
CommitLimit: 2619424 kB
Committed_AS: 40264 kB
VmallocTotal: 118776 kB
VmallocUsed:  5488 kB
VmallocChunk: 113064 kB
```

Thank you for all your help, still dont know which module it was, I removed a hell of a lot too..?

Oh well, thanks again.
