Subject: [SOLVED] HD quota incorrect
Posted by Vadtec on Wed, 11 Feb 2009 06:15:48 GMT
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Hi,

I am running CentOS 5.2 with HyperVM (the most current from their website) with OpenVZ as installed by HyperVM (ovzkernel-PAE.i686 2.6.18-92.1.18.el5.028 reported by yum).

The issue I am having is, in HyperVM the quota I am setting doesn't seem to be getting enforced in the vps. For example, I created a CentOS 5.2 VM with 100G of HD quota. When I run df on the VM, I see:

| Filesystem | Size | Used | Avail | Use% | Mounted on |
|---|---|---|---|---|---|
| /dev/simfs | 61G | 342M | 57G | 1% | / |

Similarly, I created a VM with 2TB of HD quota and saw the same output.

Is this something to do with the fact that I am using a 4TB LVM for the VMs HD space? Or something to do with quotas?

I am at a loss as to why it would show 61G instead of the HD I allocated in HyperVM.

Any help is greatly appreciated.

Vadtec

Subject: Re: HD quota incorrect
Posted by maratrus on Wed, 11 Feb 2009 10:58:00 GMT
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Hello,

first of all we should determine if it is HyperVM or OpenVZ specific problem.

Could you please show from inside the VE

# ls -l /etc/mtab

and also VE's configuration file (/etc/vz/conf/$VEID.conf)

Subject: Re: HD quota incorrect
Posted by Vadtec on Wed, 11 Feb 2009 13:04:58 GMT
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```
[root@vps2 ~]# ls -l /etc/mtab
-rw-r--r-- 1 root root 171 Feb 10 20:32 /etc/mtab
[root@vps2 ~]# cat /etc/mtab
/dev/simfs / reiserfs rw,usrquota,grpquota 0 0
/proc /proc proc rw 0 0
/sys /sys sysfs rw 0 0
none /dev/pts devpts rw 0 0
none /proc/sys/fs/binfmt_misc binfmt_misc rw 0 0

[root@vps2 ~]# df -h
Filesystem            Size  Used Avail Use% Mounted on
/dev/simfs            59G  342M   55G   1% /
[root@vps2 ~]# ls -l /etc/mtab
-rw-r--r-- 1 root root 171 Feb 10 20:32 /etc/mtab
[root@vps2 ~]# cat /etc/mtab
/dev/simfs / reiserfs rw,usrquota,grpquota 0 0
/proc /proc proc rw 0 0
/sys /sys sysfs rw 0 0
none /dev/pts devpts rw 0 0
none /proc/sys/fs/binfmt_misc binfmt_misc rw 0 0
```

*NOTE: Some information removed to protect customers, replaced with XXX

```
[root@XXX conf]# cat 110.conf
#  Copyright (C) 2000-2006 SWsoft. All rights reserved.
#
#  This program is free software; you can redistribute it and/or modify
#  it under the terms of the GNU General Public License as published by
#  the Free Software Foundation; either version 2 of the License, or
#  (at your option) any later version.
#
#  This program is distributed in the hope that it will be useful,
#  but WITHOUT ANY WARRANTY; without even the implied warranty of
#  MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.  See the
#  GNU General Public License for more details.
#
#  You should have received a copy of the GNU General Public License
#  along with this program; if not, write to the Free Software
#  Foundation, Inc., 59 Temple Place, Suite 330, Boston, MA  02111-1307  USA
#

ONBOOT="no"

# UBC parameters (in form of barrier:limit)
# Primary parameters
AVNUMPROC="40:40"
NUMPROC="999999:999999"
NUMTCPSOCK="7999992:7999992"
```

```
NUMOTHERSOCK="7999992:7999992"
VMGUARPAGES="131072:2147483647"
# Secondary parameters
KMEMSIZE="2147483646:2147483646"
TCPSNDBUF="107374592:289400832"
TCPRCVBUF="107374592:289400832"
OTHERSOCKBUF="107374592:289400832"
DGRAMRCVBUF="107374592:289400832"
OOMGUARPAGES="131072:2147483647"
# Auxiliary parameters
LOCKEDPAGES="999999:999999"
SHMPAGES="131072:131072"
PRIVVMPAGES="131072:131072"
NUMFILE="23999976:23999976"
NUMFLOCK="999999:999999"
NUMPTY="500000:500000"
NUMSIGINFO="999999:999999"
DCACHESIZE="2147483646:2147483646"

PHYSPAGES="0:2147483647"
NUMIPTENT="999999:999999"

# Disk quota parameters (in form of softlimit:hardlimit)
DISKSPACE="104857600:104857600"
DISKINODES="52428800:52428800"
QUOTATIME="0"

# CPU fair sheduler parameter
CPUUNITS="1000"
VE_ROOT="/vz/root/$VEID"
VE_PRIVATE="lvm:VolGroup01/110"
OSTEMPLATE="centos-5-i386-afull"
ORIGIN_SAMPLE="vps.basic"
IP_ADDRESS="XXX"
QUOTAUGIDLIMIT="10000"
HOSTNAME="vps2.XXX"
NAMESERVER="XXX XXX"
CPULIMIT="800"
MEMINFO="pages:131072"
```

That information was taken from my VM. I don't see this as being a HyperVM problem. HyperVM simply configures the VM in this case. It doesn't actually control the VM to the point of saying "You will have a HD of X size today." At least thats my interpretation of how it works. This is my first go with OpenVZ and HyperVM, so I am at a loss as to where the issue may lie. I have checked the documentation for both packages and haven't been able to find anything related to this particular issue. Your help is greatly appreciated.

Vadtec

Subject: Re: HD quota incorrect
Posted by maratrus on Wed, 11 Feb 2009 13:36:19 GMT
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Hello,

please try the following

(inside VE)

```
# rm /etc/mtab
# ln -s   /proc/mounts  /etc/mtab
```

Subject: Re: HD quota incorrect
Posted by Vadtec on Wed, 11 Feb 2009 13:46:18 GMT
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```
[root@vps2 ~]# rm /etc/mtab
rm: remove regular file `/etc/mtab'? y
[root@vps2 ~]# ln -s /proc/mounts /etc/mtab
[root@vps2 ~]# df -h
Filesystem            Size  Used Avail Use% Mounted on
/dev/simfs            59G  342M   55G   1% /
[root@vps2 ~]# ls -la /etc/mtab
lrwxrwxrwx 1 root root 12 Feb 11 04:52 /etc/mtab -> /proc/mounts
[root@vps2 ~]# ls -la /proc/mounts
lr-xr-xr-x 1 root root 11 Feb 11 04:52 /proc/mounts -> self/mounts
```

That made it worse. Taking what is shown in HyperVM for the resource limits for the VM:

Resource Used  Max
Disk  342 MB  100 GB
Inode  20445  52428800
Memory  23 MB  512 MB

Why is the VM showing only 59G when it has been configured for 100G?

Thanks again,

Vadtec

Subject: Re: HD quota incorrect
Posted by maratrus on Wed, 11 Feb 2009 14:05:14 GMT
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Could you please show

- "cat /proc/mounts", "df -h" from the HN and from inside the VE
- "uname -a" from the HN
- what ostemplate did you use for VE?
- vzctl --version

Subject: Re: HD quota incorrect
Posted by Vadtec on Wed, 11 Feb 2009 14:07:59 GMT
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I powered down the VM and changed the hd quota to 10G, and this was the result after power up:

```
[root@vps2 ~]# df -h
Filesystem            Size  Used Avail Use% Mounted on
/dev/simfs            10G  342M  9.7G   4% /
[root@vps2 ~]# ls -la /etc/mtab
-rw-r--r-- 1 root root 171 Feb 11 05:11 /etc/mtab
[root@vps2 ~]# ls -la /proc/mounts
lr-xr-xr-x 1 root root 11 Feb 11 05:12 /proc/mounts -> self/mounts
```

What is showing in HyperVM:

```
Resource     Used Max
Disk  342 MB 10 GB
Inode  20443  5242880
Memory  20 MB  512 MB
```

So I powered down again and changed the hd quota back to 100G:

```
[root@vps2 ~]# df -h
Filesystem            Size  Used Avail Use% Mounted on
/dev/simfs            59G  342M   55G   1% /
[root@vps2 ~]# ls -la /etc/mtab
-rw-r--r-- 1 root root 171 Feb 11 05:15 /etc/mtab
[root@vps2 ~]# ls -la /proc/mounts
lr-xr-xr-x 1 root root 11 Feb 11 05:16 /proc/mounts -> self/mounts
```

Here is what HyperVM is showing once again:

```
Resource Used Max
Disk  342 MB 100 GB
```

Inode  20443  52428800
Memory  20 MB  512 MB

Give than HyperVm was showing 10G and the VM was showing 10G, I do not see this as a HyperVM issue. How does OpenVZ allocate HD space, and does it allocate it all at once?

Thanks,

Vadtec

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Subject: Re: HD quota incorrect
Posted by Vadtec on Wed, 11 Feb 2009 14:15:10 GMT
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From inside the VE:

```
[root@vps2 ~]# df -h
Filesystem            Size  Used Avail Use% Mounted on
/dev/simfs            59G  486M   55G   1% /
none                 4.0G  4.0K  4.0G   1% /dev
[root@vps2 ~]# cat /etc/mtab
/dev/simfs / reiserfs rw,usrquota,grpquota 0 0
/proc /proc proc rw 0 0
/sys /sys sysfs rw 0 0
none /dev tmpfs rw 0 0
none /dev/pts devpts rw 0 0
none /proc/sys/fs/binfmt_misc binfmt_misc rw 0 0
[root@vps2 ~]# cat /proc/mounts
/dev/simfs / simfs rw 0 0
/proc /proc proc rw 0 0
/sys /sys sysfs rw 0 0
none /dev tmpfs rw 0 0
none /dev/pts devpts rw 0 0
none /proc/sys/fs/binfmt_misc binfmt_misc rw 0 0
```

From the HN:

```
[root@YRH009 ~]# cat /proc/mounts
/dev/root / ext3 rw,data=ordered 0 0
/dev /dev tmpfs rw 0 0
/proc /proc proc rw 0 0
/sys /sys sysfs rw 0 0
/proc/bus/usb /proc/bus/usb usbfs rw 0 0
devpts /dev/pts devpts rw 0 0
/dev/cciss/c0d0p1 /boot ext2 rw 0 0
tmpfs /dev/shm tmpfs rw 0 0
```

```
none /proc/sys/fs/binfmt_misc binfmt_misc rw 0 0
/proc /var/named/chroot/proc proc rw 0 0
/dev/root /var/named/chroot/var/run/dbus ext3 rw,data=ordered 0 0
sunrpc /var/lib/nfs/rpc_pipefs rpc_pipefs rw 0 0
/etc/auto.misc /misc autofs   rw,fd=6,pgrp=4418,timeout=300,minproto=5,maxproto=5,indirect 0 0
-hosts /net autofs   rw,fd=12,pgrp=4418,timeout=300,minproto=5,maxproto=5,indirec t 0 0
lvm:VolGroup01/130 /vz/root/130 simfs rw 0 0
/proc /vz/root/130/proc proc rw 0 0
/sys /vz/root/130/sys sysfs rw 0 0
none /vz/root/130/dev tmpfs rw 0 0
none /vz/root/130/dev/pts devpts rw 0 0
none /vz/root/130/proc/sys/fs/binfmt_misc binfmt_misc rw 0 0
lvm:VolGroup01/110 /vz/root/110 simfs rw 0 0
/proc /vz/root/110/proc proc rw 0 0
/sys /vz/root/110/sys sysfs rw 0 0
none /vz/root/110/dev/pts devpts rw 0 0
none /vz/root/110/proc/sys/fs/binfmt_misc binfmt_misc rw 0 0
[root@YRH009 ~]# df -h
Filesystem            Size  Used Avail Use% Mounted on
/dev/cciss/c0d0p3      71G   12G   55G  18% /
/dev/cciss/c0d0p1     122M   39M   77M  34% /boot
tmpfs                 4.0G     0  4.0G   0% /dev/shm
[root@YRH009 ~]# vgdisplay
  --- Volume group ---
  VG Name               VolGroup01
  System ID
  Format                lvm2
  Metadata Areas        1
  Metadata Sequence No  10
  VG Access             read/write
  VG Status             resizable
  MAX LV                0
  Cur LV                1
  Open LV               0
  Max PV                0
  Cur PV                1
  Act PV                1
  VG Size               3.64 TB
  PE Size               4.00 MB
  Total PE              953837
  Alloc PE / Size       128 / 512.00 MB
  Free  PE / Size       953709 / 3.64 TB
  VG UUID               gfK31K-O6fx-v0NG-BBwE-rF1p-PrYj-EdCXmI
[root@YRH009 cache]# vzctl --version
vzctl version 3.0.23
```

OS template used: centos-5-x86.tar.gz from the OpenVZ web site.

Vadtec

Subject: Re: HD quota incorrect
Posted by maratrus on Wed, 11 Feb 2009 15:59:31 GMT
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Hello,

this output confused me.

I cannot see /vz as a separate partition at the same moment we see "lvm:VolGroup01/130 /vz/root/130 simfs rw 0 0". Could you possibly explain how this might happened? How did you configure the HN?

And if /vz is not a separate partition "df -h" shows only 55Gb available so no wonder we obtain the similar result inside VE.
Thank you.

Subject: Re: HD quota incorrect
Posted by Vadtec on Wed, 11 Feb 2009 19:53:10 GMT
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In HyperVM, there is an option that allows me to specify where the VM should be stored on the host machine. I have this set to lvm:VolGroup01, so as I understand it, OpenVZ should be storing the VMs in VolGroup01, not /vz...

Is this something where I should replace VolGroup01 with an ext3 formatted partition and mount it as /vz?

Vadtec

Subject: Re: HD quota incorrect
Posted by Vadtec on Wed, 11 Feb 2009 19:55:04 GMT
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Never mind, I found the answer to my question. I was mixing up Xen and OpenVZ when I created the LVM. Xen can use LVM. That makes a little more sense now.

Vadtec