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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

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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)

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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 that's 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

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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
```

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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

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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 otemplate 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/mstab
/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,indirect 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-EdCXml
[root@YRH009 cache]# vzctl --version
vzctl version 3.0.23

```

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

Vadtec

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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.

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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

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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

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