

# Carlos Spitzer – Blog (<http://blog.carlos-spitzer.com>)



## How to convert vmdk 3 images to qcow2 even when qemu-fails o/

by Carlos Spitzer (<http://blog.carlos-spitzer.com/author/lestrade84/>) on December 26, 2013 (<http://blog.carlos-spitzer.com/2013/12/26/to-convert-vmdk-3-images-to-qcow2-even-when-qemu-img-fails-o/>) in Red Hat (<http://blog.carlos-spitzer.com/category/red-hat/>) • 10 (<http://blog.carlos-spitzer.com/2013/12/26/how-to-convert-vmdk-3-images-to-qcow2-even-when-qemu-img-fails-o/#comments>)

Hi folks!

I've been playing a little bit with qemu-img tool 1.6.1-2 and VMDK 3 disk images. People how tried convert from VMDK to QCOW2 format may found the following problem:

```
# qemu-img convert -f vmdk -O qcow2 disk.img disk.qcow2
qemu-img: 'image' uses a vmdk feature which is not supported by this qemu version: VMDK ve
qemu-img: Could not open 'disk.img': Wrong medium type
qemu-img: Could not open 'disk.img'
```

Is it familiar for you? If it does, there is a solution.

Thanks to GitHub user erik-smit (<https://github.com/erik-smit>) there is a useful script (<https://github.com/erik-smit/one-liners/blob/master/qemu-img.vmdk3.hack.sh>) than can overpass the current qem limitation:

```
vmdk3-hack.sh
```

```

1
2  #!/bin/bash
3
4  VMDK=$1
5  FULLSIZE=`stat -c%s "$VMDK"`
6  VMDKFOOTER=${FULLSIZE - 0x400}
7  VMDKFOOTERVER=${VMDKFOOTER + 4}
8
9  case "`xxd -ps -s $VMDKFOOTERVER -l 1 "$VMDK"``" in
10    03)
11      echo -e "$VMDK is VMDK3.n Patching to VMDK2.n Run this script agai
12      echo -en '\x02' | dd conv=notrunc status=none oflag=seek_bytes si
13      ;;
14    02)
15      echo "File is VMDK2. Patching to VMDK3."
16      echo -en '\x03' | dd conv=notrunc status=none oflag=seek_bytes si
17      ;;
18    default)
19      echo "$VMDK is not VMDK3 or patched-VMDK3.n"
20      ;;
21  esac
```

As you can see, this script mutate from VMDK3 to VMDK2 and vice-versa.

So, if you want to convert new VMDK 3 images to QCOW2 or whatever other open format, you must execute this script first:


```
# chmod +x vmdk3-hack.sh
# ./vmdk3-hack.sh /var/vms/disk.img
/var/vms/cf3.img is VMDK3.
Patching to VMDK2.
Run this script again when you're done to patch it back.
```


And then, try again converting the current image to whatever other open format (in my case, qcow2)


```
# qemu-img convert -O qcow2 /var/vms/disk.img /var/vms/disk.qcow2
```


“Et voilà”, you have your qcow2 image ready to be imported/used with your qemu/libvirt infrastr


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Etienne

March 10, 2014 at 14:44

This script doesn't work in my case apparently :

```
$$ qemu-img convert -O raw vm_compil_netbox-disk1.vmdk vm_compil_netbox.ra
> qemu-img: 'image' uses a vmdk feature which is not supported by this qemu vers
VMDK version 3
> qemu-img: Could not open 'vm_compil_netbox-disk1.vmdk': Could not open
'vm_compil_netbox-disk1.vmdk': Wrong medium type
```

```
> qemu-img: Could not open 'vm_compil_netbox-disk1.vmdk'
$$ ./vmdk3-hack.sh vm_compil_netbox-disk1.vmdk
> vm_compil_netbox-disk1.vmdk is VMDK3
> Patching to VMDK2
> Run this script again when you're done to patch it back.
$$ qemu-img convert -O raw vm_compil_netbox-disk1.vmdk vm_compil_netbox.ra
> qemu-img: 'image' uses a vmdk feature which is not supported by this qemu vers
VMDK version 3289208
> qemu-img: Could not open 'vm_compil_netbox-disk1.vmdk': Could not open
'vm_compil_netbox-disk1.vmdk': Wrong medium type
> qemu-img: Could not open 'vm_compil_netbox-disk1.vmdk'
I am surprised that qemu-img thinks that vmdk version went from 3 to 3289208 !
Do you have any idea why ?
```

Reply (/2013/12/26/how-to-convert-vmdk-3-images-to-qcow2-even-when-qemu-img-fails-o/



lestrade84 (<http://www.carlos-spitzer.com>)

March 10, 2014 at 15:19

Which version of qemu-img do you have? In my case:

```
# rpm -qa | grep qemu-img
qemu-img-1.6.1-3.fc20.x86_64
```

I think it's related with vmdk file and qemu-img version.

Maybe this link can help you: <https://github.com/sciurus/vagrant-mutate/issue>  
(<https://github.com/sciurus/vagrant-mutate/issues/28>)

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Etienne

March 10, 2014 at 15:35

I have qemu-1.7.0

I got the sources from <http://wiki.qemu-project.org/download/qemu-1.7.0.tar.bz2> (<http://wiki.qemu-project.org/download/qemu-1.7.0.tar.bz2>)  
compiled it manually.

In the end I used :

```
# VBoxManage clonehd -format RAW
```

[Reply \(/2013/12/26/how-to-convert-vmdk-3-images-to-qcow2-even-when-qemu-ir](#)



**lestrade84** (<http://www.carlos-spitzer.com>)

*March 10, 2014 at 15:46*

Using VBoxManage was a very good alternative, well done.

Regarding with the issue... Could you try with 1.6.x version?

If you detect the same problem with 1.6, please open a bugzilla request on fedora channel or directly with qemu-img 1.7 public community forum.

Another way is to debug the qemu-img output in order to find out why qemu-img detects a vmdk version 3289208.. it depends on how much time you have :/

[Reply \(/2013/12/26/how-to-convert-vmdk-3-images-to-qcow2-even-when-qemu-img-fails-o/](#)



**Joel Golden**

*March 24, 2014 at 23:19*

Thanks so much for posting this. However, RHEL's version of dd doesn't support the seek\_bytes flag. Or am I missing something?

dd: invalid output flag: `seek\_bytes'

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**lestrade84** (<http://www.carlos-spitzer.com>)

*March 25, 2014 at 06:16*

Yes. I used Fedora 20 for that 😊

[Reply \(/2013/12/26/how-to-convert-vmdk-3-images-to-qcow2-even-when-qemu-img-fa](#)

b.long



April 8, 2014 at 04:08

Joel, was there a workaround for this?

[Reply \(/2013/12/26/how-to-convert-vmdk-3-images-to-qcow2-even-when-qemu-img-fa](#)



Andreas

April 8, 2014 at 09:16

Thanks for this useful workaround.

On my OpenSUSE 13.1 the script didn't work straightaway. I had to edit the lines w  
echo -en 'x02' and  
echo -en 'x03' to have a backslash before the x. (see echo man page).

[Reply \(/2013/12/26/how-to-convert-vmdk-3-images-to-qcow2-even-when-qemu-img-fails-o/](#)



Ole Sandum (@osandum) (<http://twitter.com/osandum>)

April 11, 2014 at 09:08

Thank you, Andreas.

Changing these to echo -en 'x02' and echo -en 'x03' got rid of the "VMDK  
version 3289208" symptom mentioned above.

Perhaps they got lost in WordPress formatting to begin with?

[Reply \(/2013/12/26/how-to-convert-vmdk-3-images-to-qcow2-even-when-qemu-img-fa](#)



Carlos Spitzer (<http://carlos-spitzer.com>)

September 2, 2014 at 12:58

Thanks Ole.

I've corrected the script now (it's seems there was a problem with  
WordPress editor and formats).

[Reply \(/2013/12/26/how-to-convert-vmdk-3-images-to-qcow2-even-when-qemu-](#)



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