

Converting between image formats

UPDATED: 2017-08-10 20:16

Converting images from one format to another is generally straightforward.

qemu-img convert: raw, qcow2, qed, vdi, vmdk, vhd

The **qemu-img convert** command can do conversion between multiple formats, including `qcow2`, `qed`, `raw`, `vdi`, `vhd`, and `vmdk`.

qemu-img format strings

Image format	Argument to qemu-img
QCOW2 (KVM, Xen)	<code>qcow2</code>
QED (KVM)	<code>qed</code>
raw	<code>raw</code>
VDI (VirtualBox)	<code>vdi</code>
VHD (Hyper-V)	<code>vpc</code>
VMDK (VMware)	<code>vmdk</code>

This example will convert a raw image file named `image.img` to a qcow2 image file.

```
$ qemu-img convert -f raw -O qcow2 image.img image.qcow2
```

Run the following command to convert a vmdk image file to a raw image file.

```
$ qemu-img convert -f vmdk -O raw image.vmdk image.img
```

Run the following command to convert a vmdk image file to a qcow2 image file.

```
$ qemu-img convert -f vmdk -O qcow2 image.vmdk image.qcow2
```

Note

The `-f format` flag is optional. If omitted, `qemu-img` will try to infer the image format.

When converting an image file with Windows, ensure the virtio driver is installed. Otherwise, you will get a blue screen when launching the image due to lack of the virtio driver. Another option is to set the image properties as below when you update the image in the Image service to avoid this issue, but it will reduce virtual machine performance significantly.

```
$ openstack image set --property hw_disk_bus='ide' image_name_or_id
```

VBoxManage: VDI (VirtualBox) to raw

If you've created a VDI image using VirtualBox, you can convert it to raw format using the `VBoxManage` command-line tool that ships with VirtualBox. On Mac OS X, and Linux, VirtualBox stores images by default in the `~/VirtualBox VMs/` directory. The following example creates a raw image in the current directory from a VirtualBox VDI image.

```
$ VBoxManage clonehd ~/VirtualBox\ VMs/image.vdi image.img --format raw
```