

## Reduce the VMDK File Size of the VMWare Virtual Machine

1. Shut down the virtual machine you want to reduce disk size;
2. Using SSH, connect to the console of the ESXi host the VM is registered on (you can use putty or the [built-in Windows SSH client](#));
3. Go the directory the VMDK file of your VM is located in (you can get a path to it in the virtual disk properties of the vSphere client):  
\$ cd /vmfs/volumes/datastore/test-VM

```
OpenSSH SSH client
[root@t04: /vmfs/volumes/5c6d6b2b-3d4dbee5-4d49-00109b4814c0/test_vm] ls -la
total 88201344
drwxr-xr-x 1 root root 73728 Jan 27 14:29 .
drwxr-xr-x 1 root root 81920 Jan 27 14:17 ..
-rw-r--r-- 1 root root 400 Jan 27 14:21 test_vm-014888e2.hlog
-rw-r--r-- 1 root root 4294967296 Jan 27 14:28 test_vm-d8187964.vswp
-rw-r--r-- 1 root root 270840 Jan 27 14:28 test_vm.nvram
-rw-r--r-- 1 root root 0 Jan 27 14:21 test_vm.vmsd
-rw-r-xr-x 1 root root 3444 Jan 27 14:29 test_vm.vmx
-rw-r--r-- 1 root root 0 Jan 27 14:28 test_vm.vmx.lck
-rw-r--r-- 1 root root 47 Jan 27 14:29 test_vm.vmx.f
-rw-r-xr-x 1 root root 3408 Jan 27 14:29 test_vm.vmx~
-rw-r--r-- 1 root root 5243392 Jan 27 14:28 test_vm_3-ctk.vmdk
-rw-r--r-- 1 root root 85899345920 Jan 27 17:03 test_vm_3-flat.vmdk
-rw-r--r-- 1 root root 589 Jan 27 14:28 test_vm_3.vmdk
-rw-r--r-- 1 root root 255178 Jan 27 16:54 vmware.log
-rw-r--r-- 1 root root 115343360 Jan 27 14:28 vmx-test_vm-3625482596-1.vswp
```

4. Display the contents of the virtual disk configuration file (\*.vmdk) using the `cat` command:

```
$ cat test_vm_3.vmdk
```

The size of the vmdk disk is shown in the **#Extent description** section (after the RW characters). In this case, it is **167772160** (80 GB \* 1024 \* 1024 \* 1024 / 512);

```
[root@t04: /vmfs/volumes/5c6d6b2b-3d4dbee5-4d49-00109b4814c0/test_vm] cat test_v
# Disk DescriptorFile
version=3
encoding="UTF-8"
CID=34003714
parentCID=ffffffff
createType="vmfs"

# Extent description
RW 167772160 VMFS "test_vm_3-flat.vmdk"

# Change Tracking File
changeTrackPath="test_vm_3-ctk.vmdk"
```

5. I want to reduce my VMDK disk from 80 to 40 GB. It means that I have to specify **3886080** (40 GB \* 1024 \* 1024 \* 1024 / 512) in the Extent description section. Set a new size of your virtual disk using a text editor (vi or nano);
6. I am using vi:  
\$ vi test\_vm\_3.vmdk
7. Using the down arrow key, go to the line containing the disk size and press `i` (to edit it). Specify the new size of the virtual disk. Press `ESC` to exit the edit mode and then type `wq ->` Enter to save the changes;

```
OpenSSH SSH client
# Disk DescriptorFile
version=3
encoding="UTF-8"
CID=34003714
parentCID=ffffffff
createType="vmfs"

# Extent description
RW 3886080 VMFS "test_vm_3-flat.vmdk"

# Change Tracking File
changeTrackPath="test_vm_3-ctk.vmdk"

# The Disk Data Base
#ddb
```

8. Then just clone or [migrate \(using Storage vMotion\)](#) the virtual machine to another datastore. After moving the virtual machine files, the new size of its virtual disk will be displayed in its properties.

**Tip.** If you have only one ESXi host, one VMFS datastore, you won't be able to use the Storage vMotion.

Then you can clone vmdk using this command:

```
$ vmkfstools -i test_vm_3.vmdk test_vm_3_newsize.vmdk
```

```
[root@t04: /vmfs/volumes/5c6d6b2b-3d4dbee5-4d49-00109b4814c0/test_vm] vmkfstools -i test_vm_3.vmdk test_vm_3_newsize.v
Destination disk format: VMFS zeroedthick
Cloning disk 'test_vm_3.vmdk'...
Clone: 21% done.
```

Remove the source VMDK disk, clone the remaining VMDK disk again and rename it by specifying its original name:

```
$ rm test_vm_3.vmdk
$ rm test_vm_3-flat.vmdk
$ vmkfstools -i test_vm_3_newsize.vmdk test_vm_3.vmdk
```

9. Make sure that the new size of the virtual disk is now displayed in the VM properties.

Ref:

<http://woshub.com/shrinking-vmdk-virtual-disk-vmware-esxi/>