

Автор:

10.01.14 16:42 - Последнее обновление 10.01.14 16:45

I've had the luxury of working quite a bit with ESXi5 and how it relates to storage. With ESXi5, you can easily expand your virtual disks (VMDK file) for the VM on the fly, however there isn't a simple way to reduce the size of your drives. As I've learned, best practices for VM's is to always start small, as you can always increase later on with ease. Unfortunately, the previous administrator didn't honor this, and started everything out with 600gb drives, and only utilizing 25gb. Needless to say, my SAN was getting chewed up by VMDK's that only was using a fraction of the space allocated for it. After some research, this was the method that I use to reduce the size of the VMDK.

I should probably preface all of this that this is a dangerous procedure, and you run the risk of losing your VM, so proceed at your own risk.

Most of my VM's are windows machines, so I first need to reduce the windows partition. First I'll need to defrag the drive. Then, open up the Disk Management via the MMC console snap-in, and right click on the drive, and select Shrink. It will tell you the maximum amount that it can shrink. If you want it to shrink more, it means that certain files are locked towards the end of the disk. In my case, I was able to delete/move the user profiles off of the disk, and that's what was preventing me from reducing the disk to the size I wanted.

Great, so in this case, I was able to reduce a 600gb disk to 38gb.

Now I need to power down the VM, and SSH into the host and copy the VMDK file to make a backup of it. Hold onto these in case something goes wrong:

1

```
cp vmname.vmdk  vmname-original.vmdk
```

2

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```
cp vmname-flat.vmdk  vmname-original-flat.vmdk
```

Now let's open the vmdk within vi and modify the expected size. Towards the top, you will see a line that appears similar to the following:

1

```
# Extent description
```

2

```
RW 1258291200 VMFS "vmname-flat.vmdk"
```

The number value will need to be changed to the desired size using the following formula (x = desired size in GB):

$$\text{vmdk_size} = [x * (1024 * 1024 * 1024)] / 512$$

Because I like round numbers, I decided to make my new drive size of 40gb, so my new Extent description was as follows:

1

```
# Extent description
```

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2

RW 83886080 VMFS "vmname-flat.vmdk"

Now I need to clone the drive to get it to the new size:

1

```
vmkfstools -i vmname.vmdk vmname-new-size.vmdk
```

Assuming all goes well, I will now delete the original (because I already made a copy of it just in case), and clone the disk to the original file name:

1

```
rm vmname.vmdk
```

2

```
rm vmname-flat.vmdk
```

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3

```
vmkfstools -i vmname-new-size.vmdk vmname.vmdk
```

Now I should be able to start the VM again, and the new disk size will be shown!

- See more at: <http://www.whitneytechnologies.com/?p=270#sthash.P77AetM9.dpuf>

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{jcomments on}

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```
1 cp vmname.vmdk vmname-original.vmdk  
2 cp vmname-flat.vmdk vmname-original-flat.vmdk
```

Now let's open the vmdk within vi and modify the expected size. Towards the top, you will see a line that appears similar to the following:

```
1 # Extent description  
2 RW 1258291200 VMFS "vmname-flat.vmdk"
```

The number value will need to be changed to the desired size using the following formula (x = desired size in GB):

$$\text{vmdk_size} = [\text{x} * (1024 * 1024 * 1024)] / 512$$

Because I like round numbers, I decided to make my new drive size of 40gb, so my new Extent description was as follows:

```
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2 RW 83886080 VMFS "vmname-flat.vmdk"
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Now I need to clone the drive to get it to the new size:

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Assuming all goes well, I will now delete the original (because I already made a copy of it just in case), and clone the disk to the original file name:

```
1           rm vmname.vmdk
2           rm vmname-flat.vmdk
3           vmkfstools -i vmname-new-size.vmdk vmname.vmdk
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Now I should be able to start the VM again, and the new disk size will be shown!

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