

How To Add A USB Disk As VMFS Datastore In ESXi 6.7

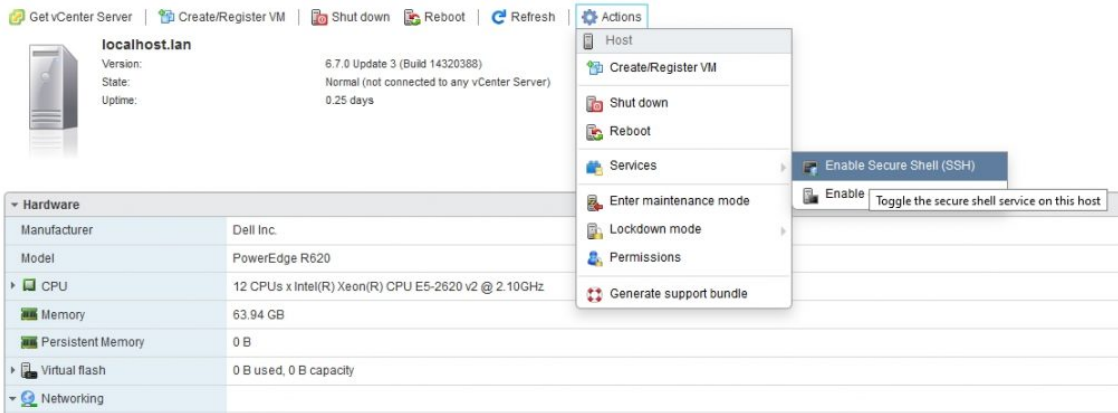
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Note

Please note that in the ESXi 6.7 version, USB devices larger than 2TB are not supported.

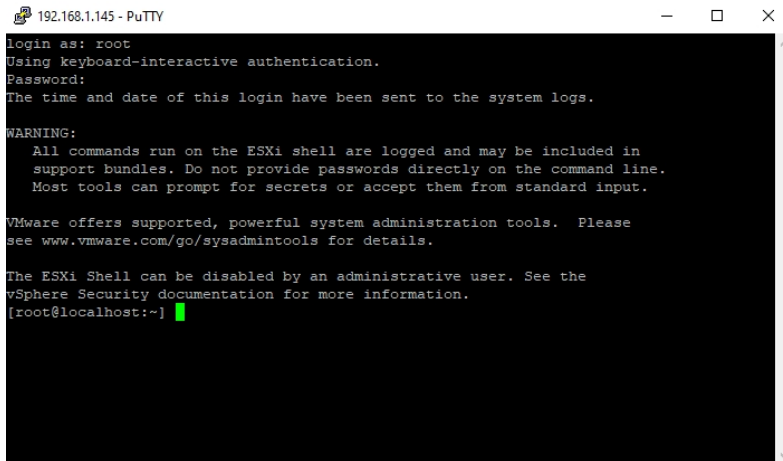
Step One – Enable SSH Access To ESXi Host

Connect to ESXi IP address, go to Actions and then select Services and Enable Secure Shell (SSH).



Step Two – Connect To ESXi Host Using SSH

With your preferred SSH client, mine is Putty, start a connection to the ESXi host.



Step Three – Stop USB Arbitrator

You have to stop USB Arbitrator Service. The service is used to passthrough the USB devices from hosts to a virtual machine. Once stopped, you will not be able anymore to passthrough USB devices to VMs.

```
# /etc/init.d/usbarbitrator stop
```

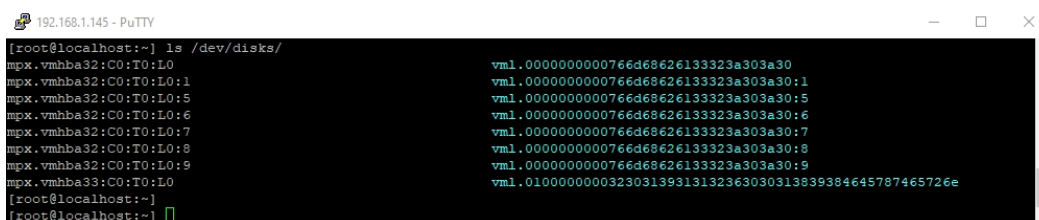
To maintain the stopped status of the service after reboot, insert the command:

```
# chkconfig usbarbitrator off
```

Step Four – Plug In The USB Device To The ESXi Host And Get The Device Identifier

Connect USB device to the ESXi host. Then get the device identifier by issuing the following command in Putty:

```
# ls /dev/disks/
```



First USB device is the stick which is booting the ESXi software, so the second device is the USB Disk that we'd like to use for the datastore – mpx.vmhba33:C0:T0:L0

Step Five – Write A Label To The Device

Write a gpt label to the USB device using its ID

```
# partedUtil mklabel /dev/disks/<deviceID> gpt
```

Step Six – Create Partition

In order to create the partition, we need to have a few info:

1. The start sector: 2048
2. The GUID for VMFS: AA31E02A400F11DB959000C2911D1B8
3. The end sector. This one should be calculated.

To calculate the end sector, we'll issue the following command first:

```
# partedUtil getptbl /dev/disks/<deviceID>
```



```
192.168.1.145 - PuTTY
[root@localhost:~] partedUtil getptbl /dev/disks/mpx.vmhba33:C0:T0:L0
gpt
243201 255 63 3907029168
[root@localhost:~]
```

Use this formula to get the end Sector:

$$243201 * 255 * 63 - 1 = 3907024064$$

Or you can use this formula:

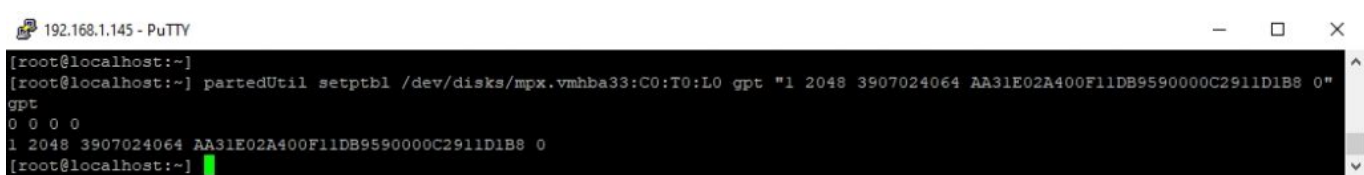
```
# eval expr $(partedUtil getptbl /dev/disks/<deviceID> | tail -1 | awk '{print $1 " \" \" $2 \" \" $3}') - 1
```



```
192.168.1.145 - PuTTY
[root@localhost:~] eval expr $(partedUtil getptbl /dev/disks/mpx.vmhba33:C0:T0:L0 | tail -1 | awk '{print $1 " \" \" $2 \" \" $3}') - 1
3907024064
[root@localhost:~]
```

Now we have all the info and we can create the partition using the command:

```
# partedUtil setptbl /dev/disks/<deviceID> gpt "1 2048 <endSector> AA31E02A400F11DB959000C2911D1B8 0"
```

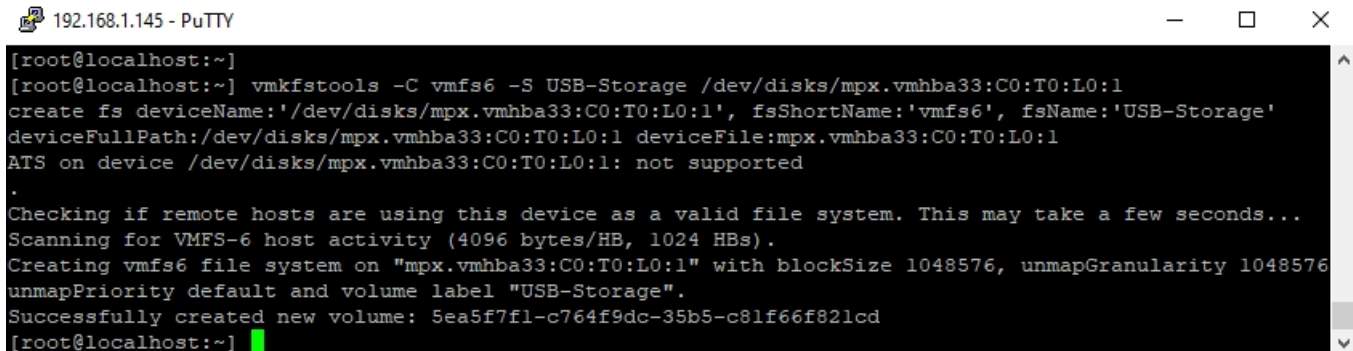


```
192.168.1.145 - PuTTY
[root@localhost:~] partedUtil setptbl /dev/disks/mpx.vmhba33:C0:T0:L0 gpt "1 2048 3907024064 AA31E02A400F11DB959000C2911D1B8 0"
gpt
0 0 0 0
1 2048 3907024064 AA31E02A400F11DB959000C2911D1B8 0
[root@localhost:~]
```

Step Seven – Format Partition With VMFS6

We'll format the partition now with VMFS6. Please be aware that we have "1" after the deviceID.

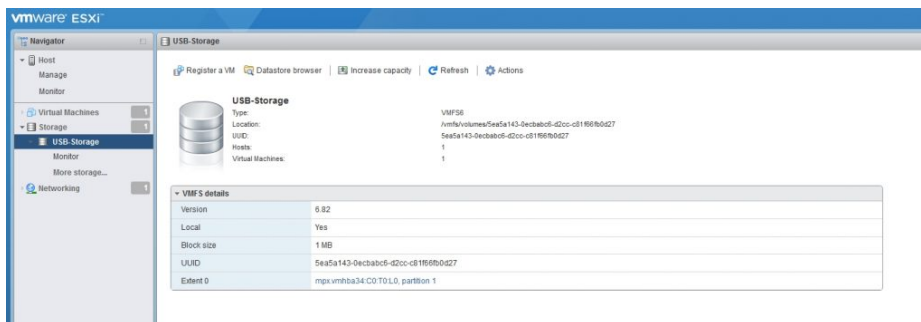
```
# vmkfstools -C vmfs6 -S USB-Storage /dev/disks/<deviceID>:1
```



```
192.168.1.145 - PuTTY
[root@localhost:~] vmkfstools -C vmfs6 -S USB-Storage /dev/disks/mpx.vmhba33:C0:T0:L0:1
create fs deviceName:'/dev/disks/mpx.vmhba33:C0:T0:L0:1', fsShortName:'vmfs6', fsName:'USB-Storage'
deviceFullPath:/dev/disks/mpx.vmhba33:C0:T0:L0:1 deviceFile:mpx.vmhba33:C0:T0:L0:1
ATS on device /dev/disks/mpx.vmhba33:C0:T0:L0:1: not supported
.
Checking if remote hosts are using this device as a valid file system. This may take a few seconds...
Scanning for VMFS-6 host activity (4096 bytes/HB, 1024 HBs).
Creating vmfs6 file system on "mpx.vmhba33:C0:T0:L0:1" with blockSize 1048576, unmapGranularity 1048576
unmapPriority default and volume label "USB-Storage".
Successfully created new volume: 5ea5f7f1-c764f9dc-35b5-c81f66f821cd
[root@localhost:~]
```

Step Eight – Check Datastore In ESXi

Return to ESXi and check the Storage tab. You should see here the new Datastore.



We have managed to add the USB-Disk as VMFS Datstore and we can now deploy VMs on it. I will proceed with the installation of vCenter Appliance.

Source

[USB Devices as VMFS Datastore in vSphere ESXi 6.0](#)

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