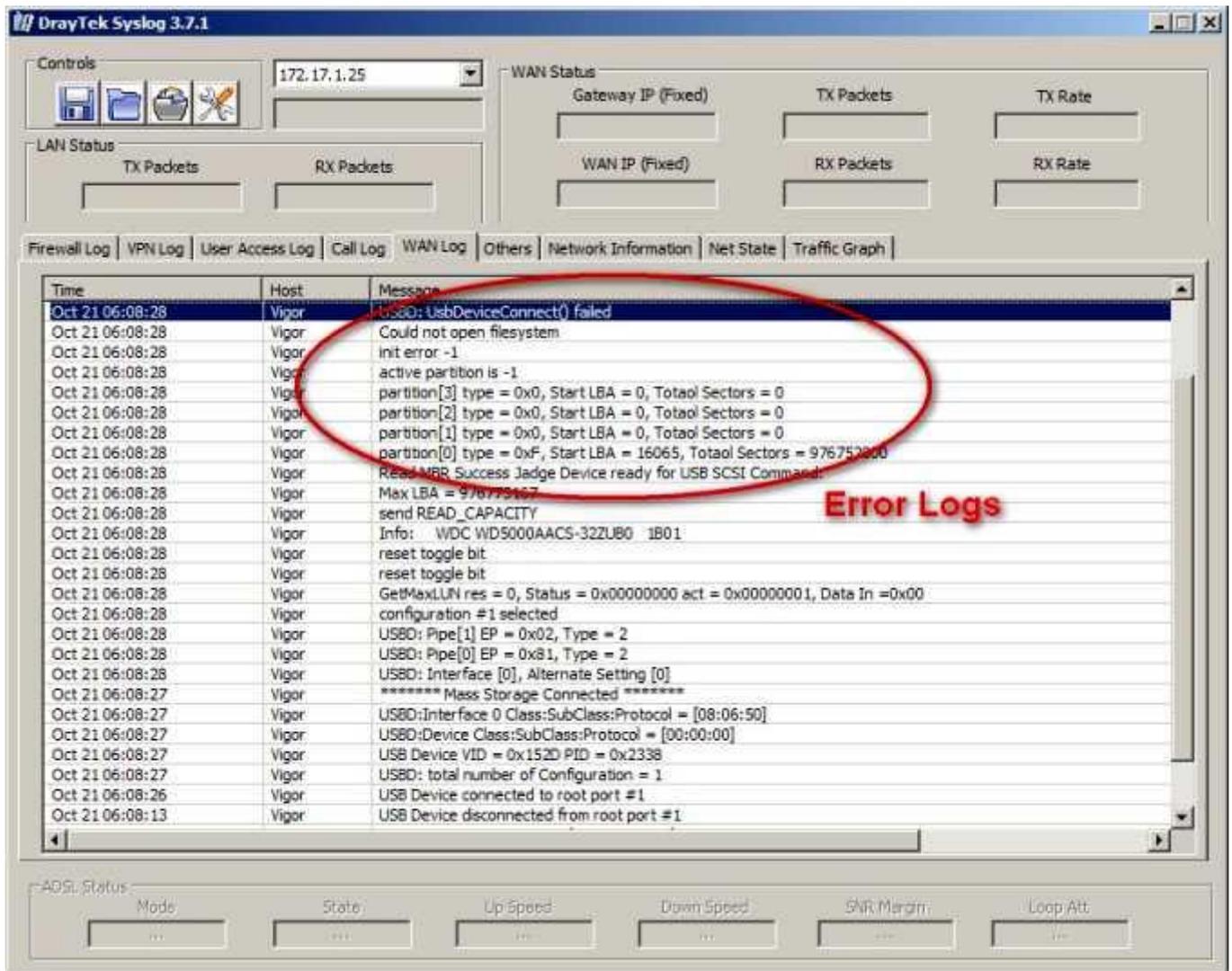


How to use Windows Disk Management to format the USB Disk

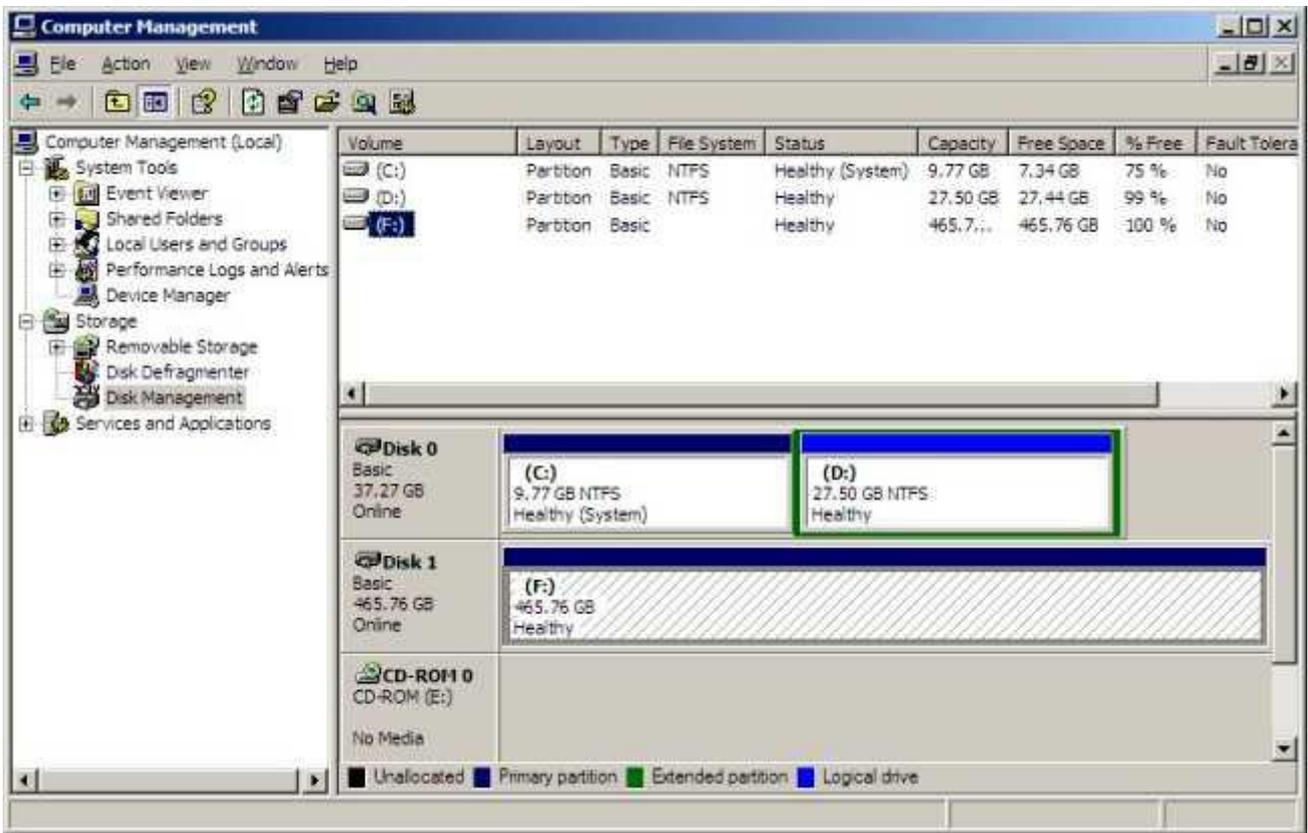
Vigor routers supports FAT32 [file system](#), but sometimes users may encounter problems even it is sure that the [USB disk](#) has already been formatted as FAT32. Like shown in the below picture, it is the syslog message that generated when a USB disk is connected to the USB port on Vigor router:



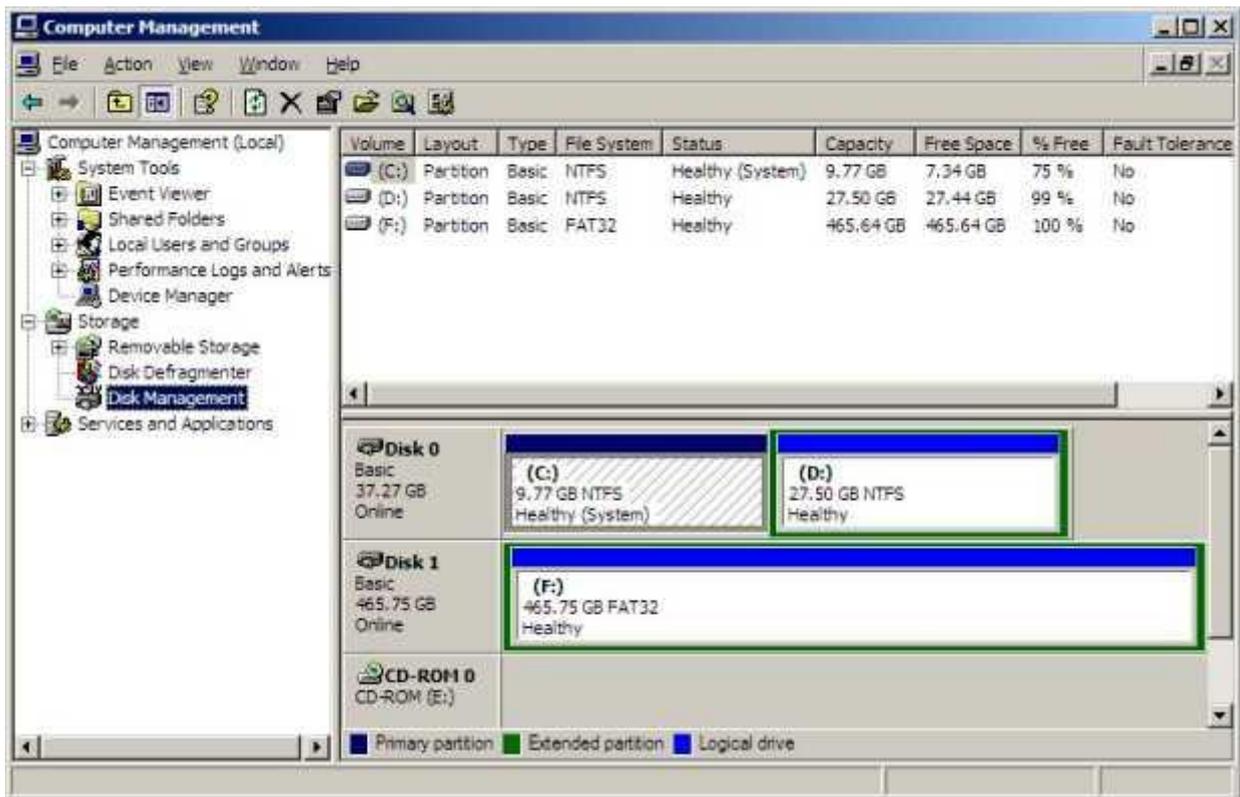
According to the syslog, the file system is 0xF (**partition[0] type= 0xF, Start LBA = ...**), and in the same time, users may find the "Connection Status" changes from Green to Red characters again and again, or disk detection failure.

This mainly happens when the USB disk is formatted as an extended partition, rather than master partition which is supported by Vigor. Users can compare the below two pictures to know about "master partition" and "extended partition" for the same [external USB disk](#).

External USB disk (Disk 1) as a master partition :



External USB disk (Disk 1) as an extended partition :

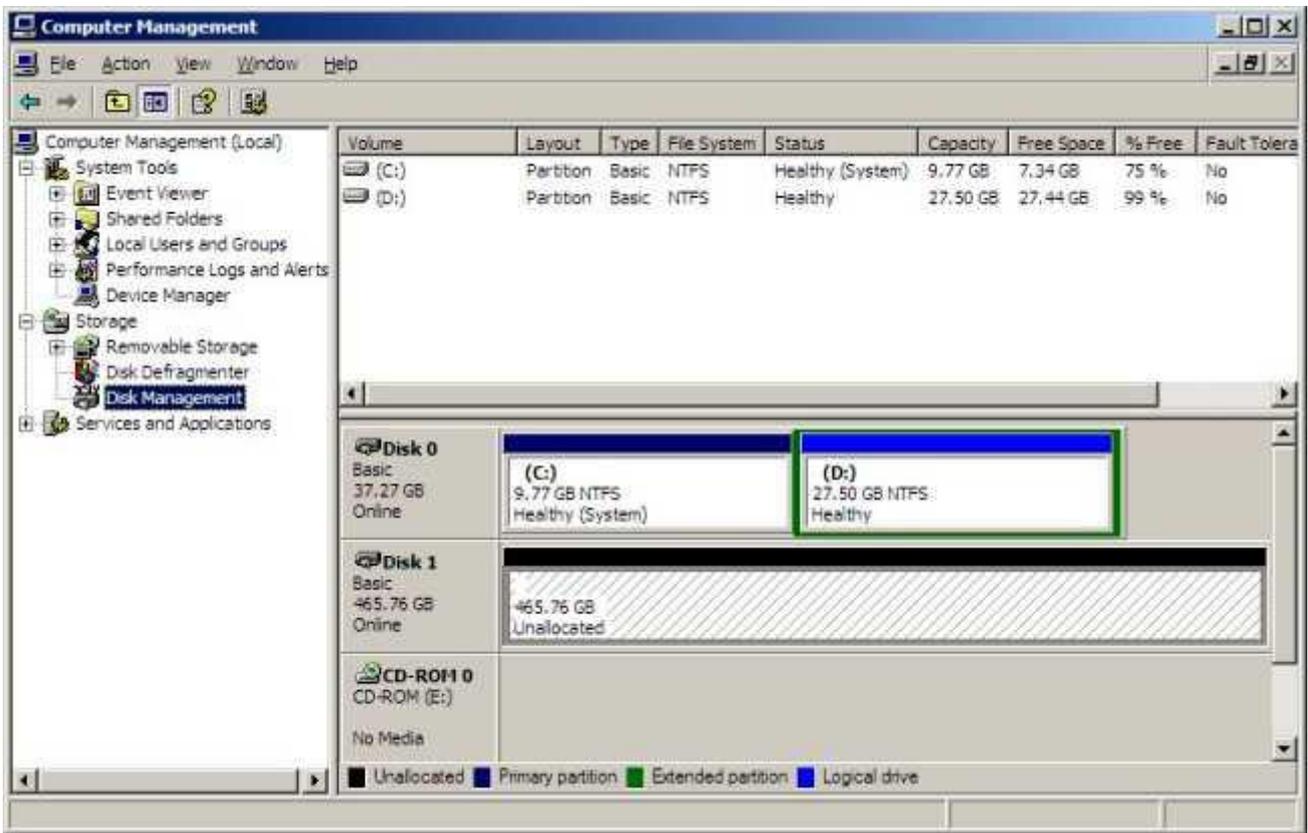


Notice that the green rim indicates extended partition. In the former picture, Disk 1 has no green rim, but in the latter picture, it has.

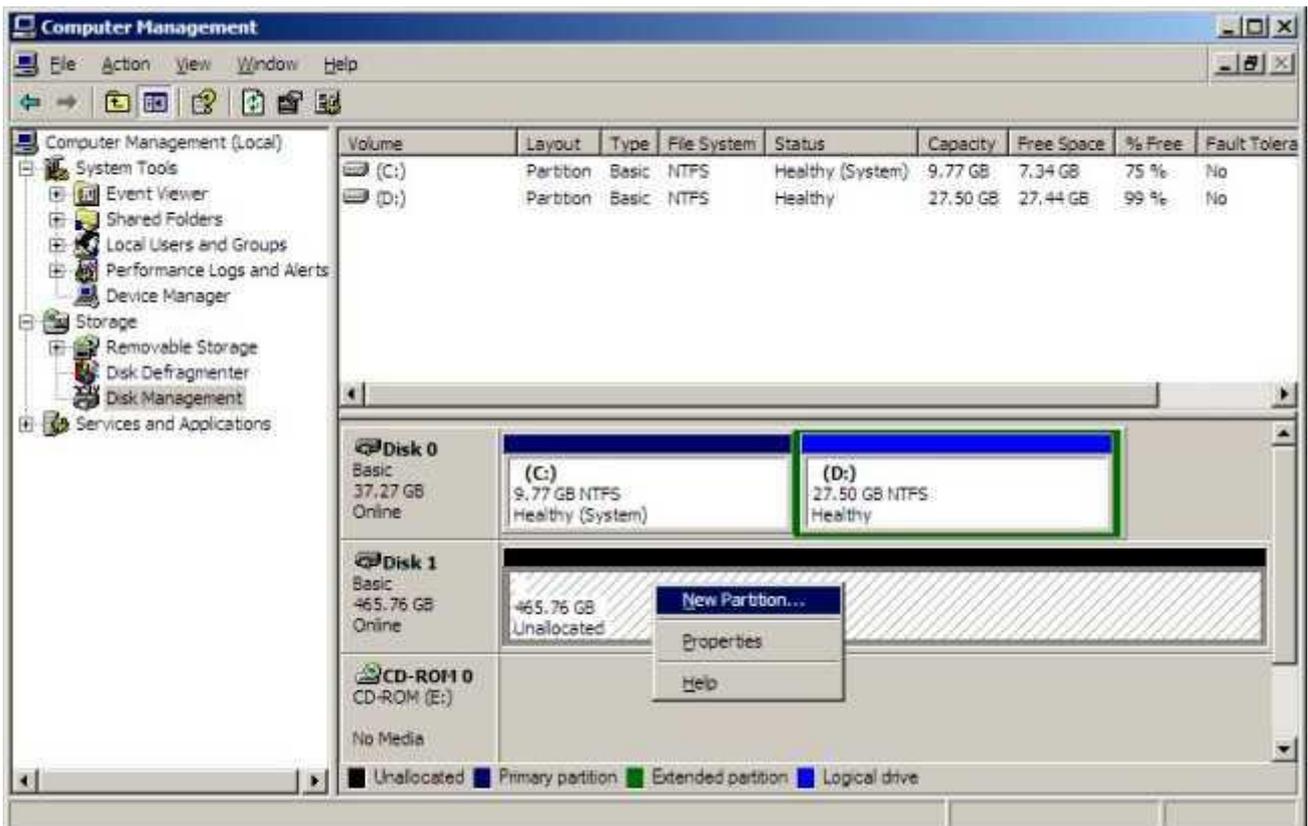
Here we mainly discuss the steps of dealing with a newly installed USB disk (format it as master partition with FAT32 file system).

1. Connect the USB disk to a USB port on the PC, and make sure it has been detected by the system.
2. Open "[Computer Manager](#)" (right-click on "My Computer" and select "Manage") and check the status of the USB disk:

Disk 1, 465.76GB, Status : Unallocated

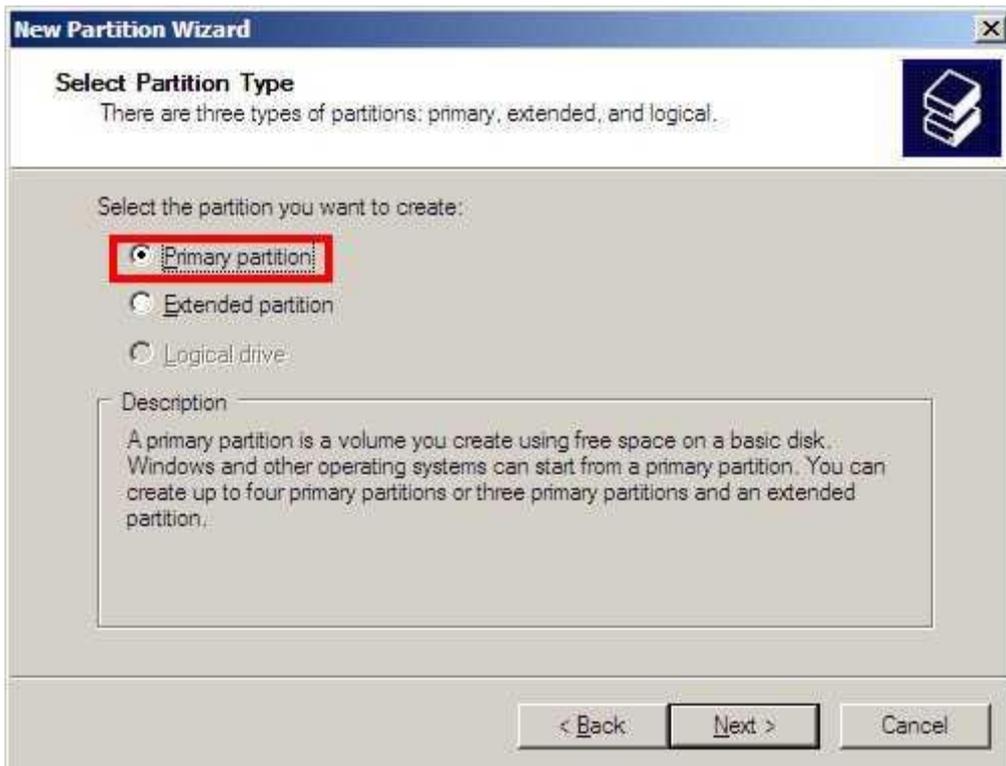


3. Right-click on the block, and start to add a new partition :



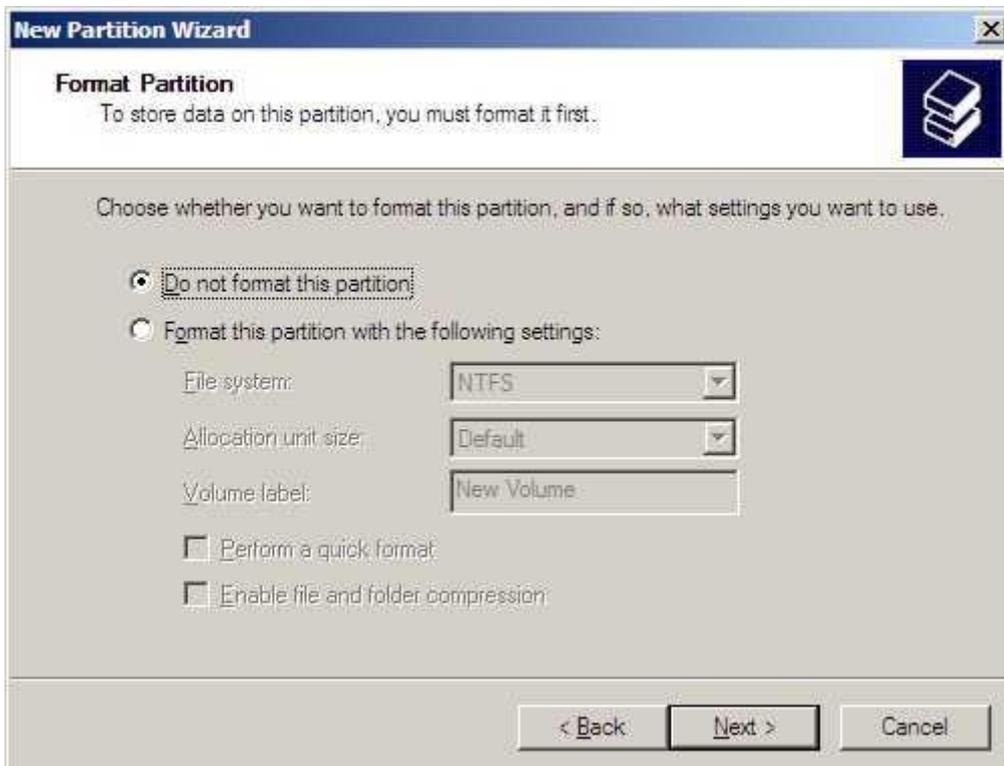


3-1. Select "Primary partition".





3-2. Choose "Do not format" and finish the procedure :



4. After the job above, the USB disk is formatted as a master partition. We need to formatted it as FAT32 file system so that it can be recognized by Vigor routers. We need to introduce a small tool here to do the job, fat32format.zip.

Download fat32format.exe and store it to a familiar path on the PC. For example, it's put in the root directory of [local disk D](#). Open Command Prompt, and check the directory to D, type command "fat32format" to know about its usage :

```
C:\ Command Prompt
Microsoft Windows [Version 5.2.3790]
(C) Copyright 1985-2003 Microsoft Corp.

C:\Documents and Settings\Administrator>d:

D:\>fat32format
Usage Fat32Format X:
Erase all data on disk X:, format it for FAT32
It is also possible to specify a cluster size for the disk, e.g
Fat32Format -c1 X: - use 1 sector per cluster ( max size 137GB for 512 bytes
per sect)
Fat32Format -c2 X: - use 2 sectors per cluster ( max size 274GB for 512 bytes
per sect )
Fat32Format -c4 X: - use 4 sectors per cluster ( max size 549GB ... )
Fat32Format -c8 X: - use 8 sectors per cluster ( max size 1TB ... )
Fat32Format -c16 X: - use 16 sectors per cluster
Fat32Format -c32 X: - use 32 sectors per cluster
Fat32Format -c64 X: - use 64 sectors per cluster
Fat32Format -c128 X: - use 128 sectors per cluster (64K clusters)
Version 1.03, see http://www.ridgecrop.demon.co.uk/fat32format.htm
This software is covered by the GPL
Use with care - Ridgecrop are not liable for data lost using this tool

D:\>
```

Then use command "fat32format X:" to format the disk to FAT32 file system (F is the disk volume name that assigned to this partition in previous steps):

Caution: Replace the character "X" with the driver letter that assigned to the USB disk. In this example, we use "F" to replace "X".

```
C:\ Command Prompt
C:\Documents and Settings\Administrator>d:

D:\>fat32format
Usage Fat32Format X:
Erase all data on disk X:, format it for FAT32
It is also possible to specify a cluster size for the disk, e.g
Fat32Format -c1 X: - use 1 sector per cluster ( max size 137GB for 512 bytes
per sect)
Fat32Format -c2 X: - use 2 sectors per cluster ( max size 274GB for 512 bytes
per sect )
Fat32Format -c4 X: - use 4 sectors per cluster ( max size 549GB ... )
Fat32Format -c8 X: - use 8 sectors per cluster ( max size 1TB ... )
Fat32Format -c16 X: - use 16 sectors per cluster
Fat32Format -c32 X: - use 32 sectors per cluster
Fat32Format -c64 X: - use 64 sectors per cluster
Fat32Format -c128 X: - use 128 sectors per cluster (64K clusters)
Version 1.03, see http://www.ridgecrop.demon.co.uk/fat32format.htm
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D:\>fat32format F:
Warning ALL data on drive 'F' will be lost irretrievably, are you sure
(y/n) :y
Size : 500GB 976768002 sectors
512 Bytes Per Sector, Cluster size 32768 bytes
Volume ID is 1512:a37
32 Reserved Sectors, 119206 Sectors per FAT, 2 fats
15258274 Total clusters
15258273 Free Clusters
Formatting drive F:...
Clearing out 238508 sectors for Reserved sectors, fats and root cluster...
Wrote 122116096 bytes in 4.96958 seconds, 24572733.772822 bytes/sec
Initialising reserved sectors and FATs...
Done
D:\>
```

Finally we may get the USB disk configured as a master partition, and FAT32 file system. You may unplug it and connect it to the USB port of Vigor routers and start to use USB Application:

