### 1. Editing /etc/fstab

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| [root@Test-CDN ~]# ***vi /etc/fstab***  #  # /etc/fstab  # Created by anaconda on Wed Oct 22 19:32:44 2014  #  # Accessible filesystems, by reference, are maintained under '/dev/disk'  # See man pages fstab(5), findfs(8), mount(8) and/or blkid(8) for more info  #  UUID=245d6a72-8262-4923-becf-3f5f7f095dbc / ext3 defaults 1 1  tmpfs /dev/shm tmpfs defaults 0 0  devpts /dev/pts devpts gid=5,mode=620 0 0  sysfs /sys sysfs defaults 0 0  proc /proc proc defaults 0 0  **# add the following line ( adding new file system )**  **/dev/sdb1 /data1 xfs defaults,noatime 0 0** |

#### Mount, Unmount, fstab Explaination

On Linux, filesystems are mounted either manually or automatically. Every filesystem has a slightly different way of being mounted

**Mounting** is the process of linking a filesystem to the whole filesystem tree. For instance, on most Unixoid systems, flash-drives are mounted under a directory in /media/ or /mnt/. Then, the removable storage unit is part of the filesystem tree.

**Unmounting** is the opposite process where a filesystem is "disconnected" from the filesystem tree.

On many Unix systems, the **/etc/fstab file (commonly called the "Filesystem Table"**) **lists filesystems that will be mounted on boot-up**. Both real and virtual filesystems are listed (like the swap space). This file uses the following format template:

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| --- |
| ***device-specification mountpoint fs-type options/parameters dump pass*** |

* The specification may be a path or protocol
  + For example, to mount tmpfs, the value of this field would be "tmpfs"
  + To mount a hard-drive, the user would list the device path (like /dev/sdb3).
  + For some virtual filesystems (like procfs) the value of this field is "none".
* The mountpoint declares where the filesystem should be mounted.
* The third field declares the filesystem type. This is an important field that users must be sure to properly type.
* The options field lists the parameters that will be read by the "mount" command.
* The dump field specifies the frequency that the "dump" utility will make a backup of the filesystem. "0" indicates never.
* The last field ("pass") indicates when the "fsck" program should check the filesystem for errors. "0" means never, "1" is for the root (main) filesystem, and "2" indicates the filesystem is checked after the root filesystem.

#### Example

* # NFS

SERVER:/SHARE /media/nfs\_share nfs rw 0 0

* # CIFS

//SERVER/SHARE /media/cifs\_share cifs credentials=/root/smbpass.txt 0 0

* ## By UUID instead of device path
* # Home

UUID=7708003f-c85b-4c87-8bb9-d5c0357092bb /home ext4 defaults 0 2

* # /

UUID=7c08c477-0ed4-4794-b847-982bce578592 / ext4 errors=remount-ro 0 1

* # Swap

UUID=4236dabb-fa7d-4066-b171-91ffa7afb4f4 none swap sw 0 0

* # /boot

UUID=ba8bb222-1606-4875-a924-c2b905840e62 /boot ext4 defaults 0 2

#### NOTE

* The main idea/point of the first column is to specify the filesystem that the user wishes to mount. It can be named using UUID, device path, protocol/filesystem-type, or network share name.

Some filesystems (like swap) do not have a mountpoint. Therefore, "none" is an acceptable value for the second column