

## CIS133 – Homework 4 – Mounting

- Unless otherwise specified, all problems must be completed at the **command prompt**.
  - Number your answers with the respective problem number
  - **Always provide the exact command(s) used to complete the problem and, when requested, include each command's output.**
1. Use the fdisk command to view a list of the disks and partitions that exist on your server.
    - a. What is the size of the disk?
    - b. How many partitions exist on the disk?
    - c. Which partition is the boot partition?
    - d. As your answer to this question, include the command used to answer the above questions and its output.
  2. What file can you view to determine a partition's mount point? Display the contents of this file as part of your answer.
  3. What partition is mounted to the /home folder on your server?
  4. What is the mount point for the second partition on the disk?
  5. Unmount the partition that's mounted to the /home folder.
    - a. Show the command used and its output.
    - b. Explain *exactly* what you had to do to do this and why you had to do it.
  6. Assign a label to the partition that you unmounted in question 5 and then mount the partition to the /home folder using its label name.
    - a. Show the command used to label the partition.
    - b. Show the command used to mount the partition its output.
  7. Remove the label from the partition and then execute the command to display the partition's label.
    - a. Show the command used to remove the label.
    - b. Show the command used to display the partition's label and its output.
  8. What would be the device file name for the 2<sup>nd</sup> partition on the 1<sup>st</sup> disk of the 2<sup>nd</sup> IDE controller?
  9. What would be the device file name for the 3<sup>rd</sup> partition on the 2<sup>nd</sup> SCSI disk?
  10. Connect to an ISO image(CD) from the VMWare datastore. (At this point in the assignment you should not have changed the default mount point therefore this should be mounting to the default location.)
    - a. What is the mount point of this device?
    - b. Provide a screenshot which confirms the mount point and its contents.
    - c. Use the mount command to display the mounted devices and provide it and its output as the answer to this problem. (Your answer should include ONLY the CD's mounted information)

11. Unmount the CD device and provide the following:
  - a. The exact command used to unmount the device.
  - b. Use the mount command and provide it and its output as the answer to this problem.
  
12. Create a folder named *cdrom* in the */mnt* directory. Configure the */etc/fstab* file such that a user can manually mount the CD device to this folder.
  - a. Display the contents of the *fstab* file after you've configured and tested it.
  
13. Execute the command that will mount all devices that are defined within the */etc/fstab* file and confirm that the CD device is mounted. If the CD did not mount, make whatever modifications need to be made in the */etc/fstab* to ensure that it does mount.
  - a. What command did you use to mount all the devices?
  - b. What command did you use to confirm the CD device was mounted?
  - c. Display the contents of the *fstab* file.
  
14. Login as a 'regular' user and, from within a terminal session do the following: mount the CD device and then unmount the device.
  - a. What user did you login as?
  - b. Provide the exact command used to mount the CD device.
  - c. Display the output of the mount command after the CD device was mounted.
  - d. Provide the exact command used to unmount the CD device.
  - e. Display the output of the mount command after the device is unmounted.
  
15. Remove or REM out the mounting of the CD from the *fstab* file. Display the file's content as your answer.
  
16. Create a new virtual hard drive that you'll use within the virtual OS. Make the drive 3GB and be sure to use thin provisioning.  
Do the following with the new drive:
  - Create three primary partitions; use 1/3 the drive for each partition
  - Format each partition using the *ext4* file system
  - Create two folders at */*; name one *data* and name the other *apps*
  - Assign a label to the first partition on the disk; use the label *DATA*
  - Configure the system to automatically mount the first and second partitions at boot; the label name must be used to mount the first partition and the second partition must be mounted using the device's UUID. Do not mount the 3<sup>rd</sup> partition.Submit as your answer to this question:
  - a. explain how you determined the device name of the new hard drive
  - b. the command(s) used to partition the disk
  - c. the command(s) used to format the partitions
  - d. the command(s) used to label the partition
  - e. a command (and its output) that will confirm the partition is labeled
  - f. the command (and its output) to display the UUID number for the 2<sup>nd</sup> partition
  - f. the contents of the */proc/partitions* file
  - g. the contents of the */etc/fstab* file
  - h. the output of the mount command after the system boots.