CIS133 Homework #10 –Sudo, Quota & Journctl

SUDO

1. Configure sudo on your server so that users who are members of the admins group (you create the group) will be able to sudo any host, any user and any command. Make 2 of the users previously created members of this group. Make sure that when sudoing they are prompted for *their* password, not the root user's password. Test your configuration.
    a. Display the contents of the /etc/sudoers file - be sure to highlight the entries made in the file for this problem.
    b. Display the contents of the /etc/group file
    c. Explain how you tested your configuration.

2. While logged in as one of the members of the admins group, execute the command to change a different user's password. Provide a screenshot which shows the command used and its output.

3. Create a group named acctmgr and make 2 of your users members of this group. Use different users than what was used in question 1. Configure sudo so that members of the acctmgr group have the ability to manage all users and groups on all hosts. The group must not have the ability to execute any other administrative commands. Make sure that when sudoing they are prompted for *their* password, not the root user's password. Test your configuration.
    a. Display the contents of the /etc/sudoers file - be sure to highlight the entries made in the file for this problem.
    b. Display the contents of the /etc/group file
    c. Explain how you tested your configuration.

4. While logged in as one of the members of the acctmgr group, execute the commands to create a new user named Janelle with a password of Novell. Janelle must have a home folder. In addition, make Janelle a secondary member of the acctmgr group.
    a. Provide a screenshot which shows <u>all commands necessary</u> for this problem as well as each command's output
    b. Display the contents of the /etc/group file

5. Use the journalctl file to display the end of the messages.

6. Use SUDO Aliases and configure two users with the ability to reset anyones password. Use different users than what was used in question 1 or 3. These users should not have the ability to create or change users or groups or the ability to execute any other administrative commands. Test your configuration.
    a. Display the contents of the /etc/sudoers file – be sure to highlight the entries made in the file for this problem.
    b. Display the contents of the /etc/group file
    c. Explain how you tested your configuration.

Disk Quotas

7. To begin, turn on disk quotas for users on the partition used to host home folders. Do not initially set quotas for users; just enable the ability to monitor usage.
   In addition, create three new users; name the users Qtest1, Qtest2 and Qtest3. Create home folders for the users; login as each user via the kde graphical interface.
   a. Display the content of the /etc/fstab file
   b. Display command and its output: mount |grep home
   c. While in the /home folder, execute the ls –l command.
   d. Execute the command to display the current usage for all users on the home partition. Include the command and its output as your answer to this question.

8. Configure a file/inode limit for the Qtest1 user. Set a hard limit that is a bit higher than the soft limit. Test your configuration and confirm that it works. Since you are required to test this and confirm it worked, use this user's existing usage information as a basis for your settings.
   a. What values did you use when configuring the hard and soft settings for this user?
   b. Execute the command that will display this user's existing usage and quota settings. Include the command and its output as your answer to this question.
   c. Include the command and its output that confirmed that the soft limit setting worked. Confirmation would include the message the user received when the soft limit was reached.
   d. Include the command and its output that confirmed that a hard limit setting worked. Confirmation would include the message that the user received when the hard limit was reached.

9. Configure a block limit for the Qtest2 user. Set a hard limit that is a bit higher than the soft limit. Test your configuration and confirm that it works. Since you are required to test this and confirm it worked, use this user's existing usage information as a basis for your settings.
   a. What values did you use when configuring the hard and soft settings for this user?
   b. Execute the command that will display this user's existing usage and quota settings. Include the command and its output as your answer to this question.
   c. Include the command and its output that confirmed that the soft limit setting worked. Confirmation would include the message the user received when the soft limit was reached.
   d. Include the command and its output that confirmed that a hard limit setting worked. Confirmation would include the message that the user received when the hard limit was reached.

10. Change the existing grace period for the home partition's block usage to 4 days and for the inode usage to 5 minutes.
    a. What command did you use to configure this?
    b. Include a command and its output that will confirm these settings were applied.
    c. Explain how the inode grace period of 5 minutes affects the Qtest2 user.

11. Copy Qtest1 user's quota settings to Qtest3 and to two of your other users' quota settings.
    a. Provide the command used to complete the task.
    b. How did you confirm the copy worked?

12. Execute the command to display the current usage for all users on the home partition. Include the command and its output as your answer to this question.

13. Provide an explanation of how the existing quota settings and grace periods will affect the Qtest3 user. Your explanation must identify when he/she would receive a warning as well as the two circumstances that could prevent the user from being able to store any additional files on the home partition. Be very specific in your answer.

14. Use the quotacheck command to check user quotas on the home partition. Include the option to provide a verbose output. Include the command and its output as your answer to this question. (If multiple commands were used, include all of them and their respective output as your answer to this question.)

15. Configure journaled quotas on the partition that's mounted to the home folder. Confirm that they are configured.
    a. Display the contents of the /etc/fstab file
    b. Display command and its output: mount |grep home
    c. Re-execute the command(s) used in question 15. Include the command(s) and its output as your answer.

16. Configure quotacheck to run on a schedule; you pick the schedule. The command should check user quotas on the home partition.
    a. What schedule did you configure?
    b. Provide a general explanation of how you configured the schedule.
    c. Explain how you confirmed it ran on schedule AND that the command ran successfully.
    d. For any files used, include the content of the file (screenshot is fine), the absolute path to the file, and an ls –l listing of the directory in which the file is stored.

Journalctl

For each of the below problems, execute the appropriate journalctl command. Include the command and its output as your answer for each. If there's more than one screen of output, provide the start of the output –don't provide all screens.

17. Display all journal entries for the past 5 days.

18. Display all journal entries from November 26th to November 27th.

19. Display the end of the journal and monitor its activity.

20. Display all journal entries since the last boot.

21. Display the last 20 journal entries generated by the nfs server service.

22. Display the journal entries generated by one of the users used in the sudo part of the assignment. Include as part of your answer the id command for that user so that I can see his/her UID.

Extra Credit – 20 points

Successfully configure Disk Quotas on Centos. If you opt to do this extra credit assignment please clone your existing Centos machine and use the clone. Create a 2nd virtual hard drive and configure it as a 2nd drive on the Centos machine. Format the drive and mount it to the /home folder. Local user's home folders must be in this location. (Delete any existing references to the SuseServer). Configure Quotas on the /home partition. Submit a clear and concise list of steps used to complete the task. I should be able to follow your instructions and be successful on another Centos machine. I will also test your system. If you have questions about what you need to submit, please ask before submitting.