Seminar 2

1DV020 – Server Administration

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1   Introduction

During this seminar, we will address the following topics:

- File Systems: NTFS, EXT

- Permissions, Local Users and Groups

- Storage – RAID

- File server - SMB and Samba

2   Deadline

The seminar is on the 11th of February 2015 and it is compulsory. If you cannot participate, it must be notified in advance and a written report of the seminar must be submitted no later than 3 days after the seminar. The written report should contain detailed answers to all questions in the seminar.

3 Seminar Questions

3.1 File Systems

1. Briefly describe:

   a. EXT

   b. NTFS

2. What additional functionality you get with NTFS when compared to FAT32?

3. Can more than one user to be the owner of a file or directory, motivate your answer?

   a. in Windows

   b. in Linux

4. What is NTFS mounted drives?

5. Have NTFS support for symbolic links that are in eg Linux?

6. What kind of filesystems does:

   a. Linux support to be run on?

   b. Windows support to be run on?

7. Name two disadvantages with FAT32. Could it ever be a good idea to use FAT32 or ext2 in any context?

8. What is a journaling filesystem?

3.2 Permissions, Local Users and Groups

9. What files are handling the users and groups in linux?

10. Where are the password stored in Linux?

11. What does the following linux commands do and how do you use them?

    a. chown

    b. chgrp

    c. chmod

12. Using ls -l we get the following outcome from a directory:

```
1 -rw-r--r-- 1 adam  root 0 jan 26 20:36 file1
2 -rw-r--r-- 1 bertil root 0 jan 26 20:36 file2
3 drwxr-xr-x 1 ceasar root 0 jan 26 20:36 folder1
```

   a. What char denotes it is a folder?
   b. (as superuser) What would be the permissions if you issued these commands: chmod 750 file1. Explain what changes from the original permissions setting.
   c. Including the changes from b would adam be able to access file1? If you also(as superuser) issued chown bertil file1.
   d. If you want to recursively wants to change the owner to Adam of all subfolders and files of and including fodler1 what command would you issue?
   e. file2 contains supersecret company information that only bertil should be allowed to see and change. What permissions would you have to set that only Bertil can see it? Are there any other users that you can think of that this information cannot be hidden from?

13. Explain how permission inheritance works in NTFS?

14. What is an ACL and what does it contain?

15. What is cumulative NTFS permissions?

16. What happens with the NTFS permissions when:
   a. move a file within the same NTFS volume
   b. copy a file within the same NTFS volume
   c. move a file to another NTFS volume
   d. copy a file to another NTFS volume

3.3 Storage – RAID

17. Explain what RAID is and list some different types of RAID solutions.

18. Windows has different naming for RAID solutions, explain the following disk storage methods, both how they work and when it is recommended to use:

    a. Simple

    b. Spanned

    c. Striped

    d. Mirrored

    e. RAID-5

3.4 File server - SMB and Samba

19. What are the differences on NTFS permissions and Share permissions?

    a. Why dose share permission exists when we can use the NTFS permissions instead?

20. Describe at least 3 ways to share a folder in Windows.

21. Witch are the big difference between the versions of SMB?

22. Lägg till några frågor om utdelningar i Linux