CSE321: ENTERPRISE NETWORK TECHNOLOGIES (Windows / Linux)

Assignment

Due: Friday 6 June2008

Name.……………………………   Registration # …………………………

Question 1:   Introduction to Linux (20 marks)

1. Which of the following are NOT standard Linux shells (tick one or more):

    ☐ bash   ☐ awk   ☐ csh
    ☐ perl   ☐ tcsh   ☐ sh
    ☐ ash   ☐ crash   ☐ zsh

    [5 marks]

2. What is the difference between the /etc/bashrc file and the .bashrc file?

    [3 marks]

3. What is a *run level*? How many run levels are there on a typical Linux system?

    [2 marks]

4. Which of the following directories are NOT typically found on Linux systems:

    ☐ /etc   ☐ /mount   ☐ /sbin
    ☐ /home   ☐ /var/log   ☐ /usr/local
    ☐ /lib   ☐ /temp   ☐ /sys

    [5 marks]

5. What are the file permissions represented by each of the following octal modes (underline the permissions that are granted):

755	user – read/write/execute	group – read/write/execute	other – read/write/execute
555	user – read/write/execute	group – read/write/execute	other – read/write/execute
660	user – read/write/execute	group – read/write/execute	other – read/write/execute
644	user – read/write/execute	group – read/write/execute	other – read/write/execute

    [5 marks]

Question 2:   Shell & Scripting (20 marks)

1. What are two ways you can execute a shell script when you do not have execute access permission to the file containing the script?

[3 marks]

2. Can you execute a shell script if you do not have read access permission?

[2 mark]

3. Write a shell script that displays the current date and time followed by the login ID of the current user, and also appends these details to the end of a file called '/tmp/logfile'.

[5 marks]

4. Write a shell script that:
    a) Recursively scans all files and subdirectories from a user-specified path, and lists only those files that end in '.bak' or '.tmp'.
    b)   Asks the user if they would like to delete the listed files, and deletes the files if requested.

[5 marks]

5. Write a shell script that outputs the name of the current shell that is executing it.

[5 marks]

Question 3:   Administration (20 marks)

1. Describe the sequence of steps that you would take to <u>manually</u> create a new user account (e.g., for user *alice*); this description must include the complete entry that is added to the passwd file for this new user.

[5 marks]

2. The hashed login passwords are not stored in the /etc/passwd file.
    Which file are they stored in?

[1 mark]

    Why are they not stored in /etc/passwd?

[1 mark]

3. Suppose that some applications are installed in the '/usr/local/bin/special' directory. Describe what steps you would take to include this folder in the default program search path for all users.

[5 marks]

4. An administrator wants to copy a program from one Linux system to another. He copies the program from the first Linux system onto a USB disk and then copies the program from the USB disk into the '/bin' directory of the second Linux system. When the users try to run the

program, the shell shows an error message "Permission denied" and does not run the program, although users have read access to the program.

What is the most likely reason for the error?

[5 marks]

What command should be issued to fix the problem?

[2 marks]