Module 8 - Manage the File System

Exercise Manual

Complete the following exercises.

Exercise 1: Use the Linux File System

Exercise 2: Understand Disk Partitions

Exercise 3: Use NSS on Linux

Exercise 4: Use NCP Server and File Access

Exercise 5: Use Samba for Native Windows Access to OES Linux

Feedback

E-mail ***training@novell.com*** with the following:

Subject: *Bridging NetWare to Linux Module 8*

Exercise 1 Use the Linux File System

Complete the following:

1. Open a Terminal.
2. Create a file, enter: **touch myfile.txt**
3. List the files in the directory that begin with m, enter: **ll m***

   Notice that a file called myfile.txt was created.
4. Update the timestamp on the file, enter:

   touch myfile.txt
5. List the files in the directory that begin with m, enter: **ll m***

   Compare the information listed.
6. Switch user to root, enter: **su -**
7. Enter root's password: **novell**
8. Change back to admin's home directory, enter:

   cd /home/admin
9. Now change the ownership of the file, enter: **chown root myfile.txt**
10. List the files in the directory that begin with m, enter: **ll m***

Notice the change of ownership.

11. Rename the file to first.sh, enter:

    mv myfile.txt first.sh

12. List the files in the directory that begin with f, enter: **ll f***

    Notice the file name has changed.

13. Now change the file to be executable, enter:

    chmod +x first.sh

14. List the files in the directory that begin with f, enter: **ll f***

    Notice the execute permission has been added.

(End of Exercise)

Exercise 2 Understand Disk Partitions

Complete the following:

1. View the partitions and mountpoints that are automatically mounted at boot time, enter:

   cat /etc/fstab

2. View mounted file systems, enter:

   mount

3. A helpful command to determine how much disk space is free, is the df command. Enter:

   df -h

The -h displays the information in human readable, such as KB, MB, or GB.

4. Determine disk usage with the du command. Enter: du -sh

The -s is used to provide only summary information. The -h displays in human readable format.

(End of Exercise)

Exercise 3 Use NSS on Linux

Requirements

This lab requires two hard drives on the server or virtual machine you are using to perform the exercises.

Complete the following:

1. Open a Terminal on the OES Linux server.
2. Switch user to root, enter: **su -**
3. Enter root's password: **novell**
4. Launch the NSS Management Utility, enter:

   nssmu

   The NSS Management Utility main menu appears. You will notice that this is identical to nssmu on NetWare.
5. Select **Devices**.
6. Write down the device name for the second hard drive you have installed in the server.

7. Press **Esc**.
8. Select **Pools**.
9. Press **Insert** and create a pool named **linuxpool**.
10. With the ***device name*** that contains free space highlighted, press **Enter**.
11. Enter a partition size in MB of **1000**, press **Enter**.
12. Press **Esc**.
13. Select **Volumes**.
14. Press **Ins** and create a volume named **linuxvol**, press **Enter**.
15. From the pool list, select **linuxpool**.
16. Press **Esc** (twice) to exit nssmu.
17. From the Terminal, enter: **nsscon**
18. The NSS console will appear, enter: **nss space**
19. To close the console, enter: **exit**

You can create another NSS volume in iManager by following the same steps you use to create an NSS volume on NetWare.

(End of Exercise)

Exercise 4 Use NCP Server and File Access

Requirements

This exercise requires Windows workstation running the Novell Client for Windows.

Complete the following:

1. Open a Terminal.
2. Switch user to root, enter: **su -**
3. Enter root's password: **novell**
4. Change to the / (root) directory, enter: **cd /**
5. Create a directory named mail, enter: **mkdir data**
6. Create an NCP volume using ncpcon, enter: **ncpcon**
7. Enter: **volumes**
8. Enter the following command:

   create volume data /data
9. From a Windows workstation, right-click the red **N** in the system tray, then select **NetWare Login**.

   The Novell Client for Windows dialog appears.

10. Select **Advanced**.
11. Make sure the following is entered in the displayed fields:
    - Tree: **DA-TREE**
    - Context: **da**
    - Server: **oeslinux** or **10.0.1.1**
12. Log in as **admin** with a **novell** password.
13. From the desktop, open **My Network Places** and select **Novell connections**.
14. Locate the oeslinux server and confirm that it has the volumes **SYS** and **DATA** mounted.
15. Open **DATA** and create a folder called **project** and a folder called **reports**.
16. Grant the user geeko.da, the RWCEMF rights by doing the following:
    a. Right-click the **project** folder.
    b. Select **Trustee Rights**.
    c. Browse to and select **geeko.da**.
    d. Select **Add**.
    e. In the Trustee list at the top, select the **W**, **E**, **C**, and **M** boxes.
    f. Select **OK**.

g. Close all windows.

17. Right-click on the red **N** in the system tray and login as **.geeko.da** with a **novell** password.

    A Confirm dialog appears.

18. Select **Yes**.

19. From the desktop, open **My Network Places** and select **Novell connections**.

20. Locate the OESLINUX server and confirm that it has the volumes **SYS** and **DATA** mounted.

21. Open the **DATA** volume and confirm that you can see only the **project** folder.

22. Close all open windows on both computers.

(End of Exercise)

Exercise 5 Use Samba for Native Windows Access to OES Linux

Create a public access SMB share on your OES Linux server and access it from a Windows workstation without using the Novell Client for Windows. You can also setup controlled access shares.

Using iManager you can also enable eDirectory users to access Samba on OES Linux.

Complete the following:

1. From a Windows workstation initial login prompt, make sure **Workstation only** is selected if the workstation has the Novell Client for Windows installed; then log locally to Windows.
2. From the OESLINUX server desktop, open a terminal window.
3. Switch to root by entering **su -** and a password of **novell**.
4. Create a new directory to function as the share by entering **mkdir /sambademo**.
5. Make this share available to all users by entering **chmod 777 /sambademo**.

6. From the desktop, press **Alt+F2**; then enter **kdesu kate**; then select **Run**.
7. Enter a password of **novell** and select **OK**.
8. Select **File > Open**; then browse to and open the **/etc/samba/smb.conf** file.

You can increase the size of the text in the file by selecting the plus magnifying glass icon on the toolbar.

Note the name of the Samba server in the file. The netbios name should be %h-W. The %h variable expands to the oeslinux hostname, so the Samba server name is oeslinux-W.

9. Add the following lines to the end of the file:

   [sambademo]

   comment = OES Samba Public Share

   path = /sambademo

   read only = no

   public = yes

10. Save the file by selecting **File > Save**.

    Keep the smb.conf file opened, as you will edit it later.

11. From the terminal window, restart the Samba server by entering:

    rcsmb restart

You can also enter: **/etc/init.d/smb restart**

12. On your Windows XP workstation, select **Start > Run**.
13. Enter the path:

    \\oeslinux-W

14. Select **OK**.
15. Verify that you can see the sambademo share.
16. Create a new file in the share.
17. From the terminal window on the OESLINUX server enter:

    cd /sambademo ; ls -l

    Notice that the file you created is owned by the user **nobody**.

    This is the Linux user that public samba access maps to.

(End of Exercise)