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# Module 9 - Monitor the Operating System

## **Exercise Manual**

Complete the following exercises.

Exercise 1: Monitor Processes on Linux

Exercise 2: Monitor Connections

Exercise 3: Monitor Server Health

Exercise 4: Monitor the Server

Exercise 5: Access Error Logs

## ***Feedback***

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

Subject: *Bridging NetWare to Linux Module 9*

## **Exercise 1    Monitor Processes on Linux**

Complete the following:

1. Open a Terminal.
2. List the processes that are running on the OES Linux server, enter: **ps aux**
3. Now look for process information for ndsd, enter:  
  
**ps aux | grep ndsd**
4. To view real-time process information, enter:  
**top**
5. Review the process information and when done, close top, enter: **q**
6. You can view a process and it's associated process, enter: **pstree**
7. Using the ps aux command, find the process id (PID) and then display the process tree. For example: **pstree 7034**
8. To view process information in a graphical utility, launch: **ksysguard**

9. Familiarize yourself with the available options for processes, select the **Process Table** tab.

*(End of Exercise)*

## **Exercise 2    Monitor Connections**

Complete the following:

1. Open a Terminal.
2. Create a file, enter: **touch testfile**
3. Edit the file, enter: **kate testfile**
4. Enter some text into the file.
5. Now check to see what processes are using that file, enter: **fuser -v /home/admin**
6. Now check for open files, enter:  
**lsof | less**
7. When done viewing the list, enter: **q**
8. Now check to see who has testfile open, enter:  
**lsof | grep testfile**
9. Save the file testfile and exit kate.
10. Monitor the connections, enter:

**W**

11. Also try the command `who`, enter: **who**
12. Now create another connection to the server, enter:  
**ssh root@localhost**
13. Authenticate using root's password.
14. Now, display connection information again, enter: **w**
15. Close all terminals.

*(End of Exercise)*

## **Exercise 3    Monitor Server Health**

Complete the following:

1. Open a web browser and enter the following:  
**https://10.0.1.1/nps/iManager**
2. Log in as **admin** with a **novell** password.
3. From the left pane, expand **Servers**.
4. Select **Monitor Servers**.
5. Browse to and select **da** as the container; then select **OK**.
6. Select **Add**.
  - Server Name: **oeslinux**
  - IP Address/DNS Name: **10.0.1.1**
  - Description: **OES Linux**
7. Leave the default Monitoring Type set to:
  - Robust Health (OpenWBEM required)
8. Select **OK**.
9. Select the link for **oeslinux** and view the server health information.
10. Select **Servers** (from the main frame).

11. Select the description **OES Linux** and view the Quick Status.
12. Select **Action > Manage Groups**.
13. Select **Add**.
14. For the Group Name, enter **Linux Servers**; then select **OK**.
15. Select the **Linux Servers** group link.
16. Select **Add**.
17. In the Server Name field, enter:  
**oeslinux**
18. In the IP Address/DNS Name field enter:  
**10.0.1.1**
19. Select **OK**.
20. Select **Groups**.  

Notice that you now have 2 groups available—Linux Servers and My Servers. The Linux Servers group only includes Linux servers, while the My Servers group can include other servers.
21. From the Groups screen, select **MyServers**.

22. (Conditional) If you have workstation or any device with an IP address, find the IP address of that device.

For example, if you have an Novell Linux Desktop workstation:

- a. Open a terminal.
- b. Enter: **su**
- c. Enter: *root's password*
- d. Enter: **ifconfig**
- e. Write down the IP address of eth0:

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23. Select **Add**.

- Server Name: **NLD**
- IP Address/DNS Name: *enter IP address from the step above*
- Description: **Workstation**

24. Change the Monitoring Type to:

- Simple Server Status (up/down status only)

25. Select **OK**.

26. Select the **Show Status Icon Legend** icon (located in the upper right corner of the screen) and review the legend.
27. Take some time to review other Health Monitor options.

***(End of Exercise)***

## **Exercise 4    Monitor the Server**

Complete the following:

1. Open a Terminal.
2. View memory usage, enter: **free**
3. Determine how long the server has been up, enter: **uptime**
4. Display CPU information, enter:  
**cat /proc/cpuinfo**
5. Display system information, enter:  
**cat /proc/sysinfo**

*(End of Exercise)*

## **Exercise 5 Access Error Logs**

Complete the following:

1. Open a Terminal.
  2. View the system error logs, enter:  
**cat /var/log/messages**
  3. Look for a specific string, enter:  
**cat /var/log/messages | grep *string***
  4. View kernel message, press:  
**Ctrl-Alt-F10**
  5. Press **Enter** a few times to create some space on the screen.
  6. Toggle back to the GUI, enter: **Ctrl-Alt-F7**
  7. From a terminal, generate an error message, enter: **ssh root@10.0.1.1**
  8. For the password, enter: **wrong**
  9. View kernel message, press:  
**Ctrl-Alt-F10**
- Notice the error message generated.

10. Now view the system log in YaST, select the **YaST** icon from the desktop or from the N (KDE Menu).
11. Authenticate with *root's password*.
12. Select **Misc**.
13. Select **View system Log**.
14. From the pull-down menu, select some of the other logs.
15. When done viewing the log, select **OK**.
16. Select **Close**.

*(End of Exercise)*

