**Reminder:**

**chown – changes the ownership on a file/directory**

**chgrp – changes the group associated with a file or a directory**

**the ‘-R’ option makes the changes recursive.**

**The command ‘ls –l’ will show a file’s owner and group name. The file inode actually stores the owner id and group id. These are converted into readable names by a lookup in /etc/passwd. /etc/group. The command ‘ls –ln’ shows the actual numeric ids instead of the names.**

# **Scenario Based Questions**

**Login to the Linux system using the account you are given.**

**Run the command**

**sudo -i**

**This will enable you to run a series of administrative commands *as root*.**

***Please be patient, some of the commands take a minute or so to run.***

# ****Process Management****

## ****Question 1****

**As administrator run the command**

**/scenariolabs/ProcessManagement/Q1**

**The system is running slow and threatening to impede payroll’s work. The problem is thought to be a runaway process taking up all the system CPU. Identify the process and kill it.**

**Verify the system CPU usage is now back to normal, ie low levels of usage.**

**To identify a runaway process i.e. a process that has 100% cpu usage: top**

## ****Question 2 (similar to question 1, in its way)****

**As administrator run the command**

**/scenariolabs/ProcessManagement/Q2**

**The system is running slow and threatening to impede payroll’s work. The problem is thought to be a runaway process taking up all the system CPU. Identify the process and kill it.**

**Verify the system CPU usage is now back to normal, ie low levels of usage.**

**Top (NB: see that 2101 is a runaway process i.e. has 100% cpu usage)**

**Pkill -9 2010**

## ****Question 3****

**As root run the command**

**/scenariolabs/ProcessManagement/Q3**

**Recently a colleague was working on a script which ran at boot time. Its job was to launch an application. The script appeared faulty as the application did not launch sometimes, or maybe it did launch but did so with a poor configuration. The fault did not occur every time the system booted but maybe one time in ten. Your colleague eventually found out what was happening and fixed it. (The problem lay outside of the system itself.) However, it took a lot of reboots to find out what was happening and even more to verify the bug had been fixed. Your colleague arranged for the system to reboot frequently as part of testing. Sadly, your colleague is off work, sick. The system, the one you now have, is needed immediately for new work. However, it is currently rebooting every five minutes. Your job is to find out why and fix it. Remember, you have a maximum of five minutes to find and fix the fault before you are booted off. Literally!**

**If you get completely stuck with this question, you can run**

**/scenariolabs/ProcessManagement/Q3cure**

**to fix it. Good luck!**

**NB: make sure you are in root**

**Crontab -l**

**Date (NB: check the current time to compare with crontab -l)**

## ****Question 4****

Run the command

cat /tmp/hiLog

Note the time. Run the command again after waiting at least a minute, note the time changes.

The entry is generated from the command sequence

/bin/echo “hi `date`” >/tmp/hiLog

Which is run automatically every minute.

**As root run the command**

**/scenariolabs/ProcessManagement/Q4**

**Now monitor the hiLog file again. It is not being updated.**

**The ‘scenario’ is that the regular job has stopped running. They want you to fix that.**

**cat /tmp/hiLog**

**date**

**crontab -l**

**systemctl status crond (NB: tells us it is inactive)**

**systemctl start crond**

**cat /tmp/hiLog**