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| Bahrain Polytechnic |
| Unix Systems |
| Lab Session 10 |
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# Lab session 10 – Sys admin

## Introduction

The lab work consists of all practical tasks which must be submitted via Moodle.

You must submit the following:

* A single zip file containing four files

**Note: Each Lab session is worth 1% of your final mark**

### **Learning Outcomes Assessed**

The following learning outcomes are being assessed in this lab session:

* Use the command-line on a UNIX system
* Manage a Linux server system (including files, processes, users)
* Write scripts to automate repetitive tasks

## Lab 10 – Tasks

1. Modify syslog.conf

Create a copy of the syslog.conf file in your home directory and name it ‘COPYsyslog.conf’.

Modify the file so that boot log files are saved to /var/log/boot/boot.log

The file ‘COPYsyslog.conf’ is to be uploaded to Moodle.

**cp /etc/rsyslog.conf COPYsyslog.conf**

**type: /boot**

**add boot to /var/log/boot.log**

1. Syslog.conf advantages

Answer the following question, type your answer in a file named ‘lab10\_q2.txt’

What would be the benefit of having a consistent syslog.conf file across all Unix and Linux operating systems?

The file ‘lab10\_q2.txt’ is to be uploaded to Moodle.

**syslogd is a system utility that offers support for the logging part and messages of the kernel. You can use this application for the local system without an internet connection, but if you want to use it remotely, you'll need a working internet connection. Simply put, it's the logging process used by Linux or Unix computers. Additionally, it is useful in that it finds system bugs, networking problems, prevents server downtime, and improves the system's reliability and consistency.**

**And it is useful to have a consistent syslog.conf file across all Unix and Linux operating systems because it can allow the administrators to find the file easily but this can increase the risk of hackers and viruses as well since the location is known.**

1. Cron job – boot warning

As a sys admin, it is useful to automate any errors or warnings which occur in the system. In this task you should create a script which will automatically email you if a warning occurs after the system boots.

Schedule a cron job so that:

* A script named ‘lab10.sh’ runs to find if “WARNING” is listed in the dmesg log file.

**dmesg | grep "WARNING" > warning.out**

* If there is a WARNING, the script outputs the warning message AND the full contents of the dmesg file in a file named ‘warning.out’.

**if [ -s warning.out ]**

**then**

**dmesg >> warning.out**

* Add a command to the script to email you the contents of warning.out. The subject of the email should be “Lab 10: *student name*”. You should send the email to:

1. yourself
2. CC one of the other students in the class

**mail -s "Lab 10: Alaa" allamah597@gmail.com -c allamah597@gmail.com < warning.out**

**fi**

* You also need to schedule a “crontab –r” inside the crontab file to take place 1 minute after the e-mail above is scheduled to be sent. This is a drastic measure we take in order to avoid any multiple transmitions of the same e-mail in the future.

**\* \* \* \* \* ~/finalpractice/lab10.sh**

* If there is no WARNING, the script does nothing.

*Hint:* You should complete two tasks – 1. Create the script as outlined above 2. Add a crontab to run the script at the correct date and time. Test both parts before submitting you final answer.

**Note :** Deadline for submission is Thursday 5pm.

## Lab10 – What you need to submit

1. A zipped, tar file named ‘Lab10.tar.gz’ should contain:
   1. COPYsyslog.conf
   2. Lab10\_q2.txt
   3. The script you created, lab10.sh
   4. A copy of the CRON entry you used(you can write this cron entry in a text file and upload the text file)

Upload this file ‘Lab10.tar.gz’ to Moodle.

#!/bin/bash

result=$(grep "WARNING" /var/log/dmesg)

if [ $? -eq 0 ]

then

echo $result > /home/Unit10/warning.out

echo "\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*denis" >> /home/Unit10/warning.out

echo $(cat /var/log/dmesg) >> /home/Unit10/warning.out

mail -s "Lab 10 : Name, id, Class" student@polytechnic.bh -c anotherstudent@polytechni.bh < /home/Unit10/warning.out

rm /home/Unit10/warning.out

#crontab -r

fi