|  |
| --- |
| Bahrain Polytechnic |
| Unix Systems |
| Lab Session 9  CRONS |
|  |
|  |
|  |

|  |
| --- |
|  |

## Introduction

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

You must submit the following:

* A single zip file, uploaded to Moodle.

**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)

## Lab 9 – Practical tasks

TASK 1 – log files

1. Create a script that when run:
   1. Reads the current GMT time [ YYYY MM DD hh mm ss ] ,

( hint: look at **date** , and the **–u** option and the **+format** options)

and based on this time stamp:

* 1. creates the following file ( use touch – the file will be an empty file )

~/logs/YYYYMMDD \_hmmss

Where:

~/logs is a **subdirectory** in your home directory –

Your script should create the directory if necessary

YYYY is the year [ eg .]

MM is the month [ 01 – 12 ]

DD is the day of the month [ 01 – 31 ]

hh is the hour [ 0 – 23 ]

mm is the minute [ 0 – 59 ]

ss is the seconds [ 0 – 60 ]

1. Using the CRONTAB facility, Have this script run once per minute – start the cron –
2. While the script is running, it watch the number of files appearing in the ~/log subdirectory.
3. After 10 minutes or so, stop the cron by editing out the line in the crontab or removing the crontab altogether.

Task 2 - Windows Task Scheduler vs. Cron

Review all the options Windows provides when setting up a Task to run on Windows.

1. Identify ONE feature, (control element), that seems interesting and is NOT provided by the UNIX cron facility.
2. Describe in words or with an example script how you could provide the chosen feature (control element) in UNIX.

## Lab9 – What you need to submit

1. The script
2. A listing of the crontab used to control the script
3. A listing of the directory ~/logs about 10 minutes AFTER you start the cron
4. A short description of a Windows task manage feature that seems interesting and NOT found in the UNIX cron system. This can be placed in a text file.

Name the tar file *Lab9.tar.gz* and submit this to Moodle.

<https://crontab.guru/>

#!/bin/bash

if [ -d ~/UnixPracticeActivities/Unit9\_Lab/logs ]

then

echo "Logs directory present."

date=`date -u +%Y%m%d\_%H%M%S`

touch ~/UnixPracticeActivities/Unit9\_Lab/logs/$date.log

else

echo "The logs directory is not present. Creating it."

mkdir ~/UnixPracticeActivities/Unit9\_Lab/logs

date=`date -u +%Y%m%d\_%H%M%S`

touch ~/UnixPracticeActivities/Unit9\_Lab/logs/$date.log

fi

Examples:

Let’s understand the above syntax with some examples

1. Schedule a cron job to execute a script called jobs.sh located in a dir called /scripts at 5 AM daily:

0 5 \* \* \* /scripts/job.sh

2. Schedule a cron job to execute a file called job1.sh located in /scripts\_dir to run twice a day at 6 AM and 6 PM:

0 6,18 \* \* \* /scripts\_dir/job1.sh

3. Schedule a script with full path /scripts/job.sh to execute every minute

\* \* \* \* \* /scripts/job.sh

4. Schedule a cron to execute on every Monday at 7 PM.

0 19 \* \* mon /scripts/job.sh

5. Schedule a cron to execute on selected months (feb, jun, and oct):

\* \* \* feb,jun,oct \* /script/job.sh

6. Run the shell script /home/script/backup.sh on March 4 at 7:25 A.M

25 7 4 3 \* /home/script/backup.sh

7. Schedule a script called backup.sh to execute at 2am daily:

0 2 \* \* \* backup.sh

8. Schedule the same script as above to run at 5 AM and 5 PM daily:

0 5,17 \* \* \* /scripts/script.sh

9.Schedule a cron to execute on every Sunday at 5 PM. The scripts path is /scripts/script.sh

0 17 \* \* sun /scripts/script.sh

10. The path to the script is the same as above. Schedule a cron to execute on selected days (sun and fri) at 5pm:

0 17 \* \* sun,fri /script/script.sh