EPA CA1 Oct 2017
Answer All Questions
This CA is 1 hour in duration
This CA is worth 15%

Q1 (10 marks)

How would you use the `ls` command to list in long format the contents of the `/usr/bin` directory <u>where the files are sorted by modification time, newest last / oldest first</u>.

Q2 (10 marks)

The user `epa` is trying to change directory into their Downloads directory (which they own) but get the following message:

```
[epa@localhost ~]$ cd Downloads/
bash: cd: Downloads/: Permission denied
```

Explain a possible cause for this problem <u>and how to fix it.</u>

Q3 (25 marks)

Consider the following `cpu_count.sh` bash script <u>WITH LINE NUMBERS SHOWN</u>

```
1 #!/bin/bash
2
3 cnt=`grep processor /proc/cpuinfo | wc -l`
4
5 if [ $cnt -eq $1 ] ; then
6  echo "CPU Configuration correct"
7 fi
```

Running this script produces an error:

```
[epa@localhost ~]$ ./cpu_count.sh
./cpu_count.sh: line 5: [: 4: unary operator expected
```

What is the problem here and how is it fixed?

Q4 (25 marks)

As `epa` user and from epa home directory, <u>in two commands</u>, how would you count the number of user home directories in the file system? For example, a structure such as:

```
/home/epa
/home/devuser
/home/qauser
```

would produce a count of 3.

Q5 (30 marks)

Consider the following check.sh bash script <u>WITH LINE NUMBERS SHOWN</u>:

```
1 #!/bin/bash
2
3 dirA="/home/epa"
4 dirB=`pwd`
5
6 if [ ! $dirA -eq $dirB ] ; then
7   echo "wrong directory, installation cannot proceed"
8 fi
```

This scripts checks to make sure it is being executed in "`/home/epa`". However, when it runs it produces the following error

```
[epa@localhost ~]$ ./check.sh
./check.sh: line 6: /home/epa: integer expression expected
```

What is the problem here and how is it fixed?