



CET2331 - Final Review

LOGIN AS LINUXUSER TO DO THE WORK

Question 1 - Users and Groups

Create the following users and groups (groupadd, useradd, chage, passwd).

User	User Expiry	Groups
dick	June 1, 2021	aliens,university
sally	June 1, 2021	aliens,security
harry	June 1, 2021	aliens,comm
tommy	June 1, 2021	aliens
mary		humans,university
nina		humans,university
mamie		humans
don		humans,security

Question 2 - Create Directory Structure

Create the following directories (mkdir):

```
/usr/local/thirdrock  
/usr/local/thirdrock/biggianthead  
/usr/local/thirdrock/house  
/usr/local/thirdrock/university  
/usr/local/thirdrock/roof
```

Create the file /usr/local/thirdrock/biggianthead/StonePhillips. (case sensitive) (touch).



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Question 3 - Filesystems

Use gdisk to create two 5GB partitions on /dev/sdb (/dev/sdb1 and /dev/sdb2)

Format /dev/sdb1 as ext4 (mkfs)

Format /dev/sdb2 as ext3 (mkfs)

Mount /dev/sdb1 at /usr/local/thirdrock/university (mount)

Mount /dev/sdb2 at /usr/local/thirdrock/house (mount)

Partition sdc and sdd to be used in a Linux volume group.

Create a volume group with /dev/sdc1 and /dev/sdd1.

Name the volume group practice.

Create a logical volume named lv_practice that uses 100% of the volume group

Format the logical volume as ext4

Mount the logical volume lv_practice at /usr/local/thirdrock/roof

Question 4 - Permissions and ownership (chmod/chown)

/usr/local/thirdrock - owner, group, and others have full access

/usr/local/thirdrock - the owner should be dick

/usr/local/thirdrock - the group should be aliens

/usr/local/thirdrock/biggianthead - owner and group have full access. Others have no access.

/usr/local/thirdrock/biggianthead - the owner should be dick

/usr/local/thirdrock/biggianthead - the group should be aliens

/usr/local/thirdrock/university - owner and group have full access. Others have no access.

/usr/local/thirdrock/university - the owner should be dick

/usr/local/thirdrock/university - the group should be university

/usr/local/thirdrock/house - owner, group, and others have full access.

/usr/local/thirdrock/house - the owner should be mamie

/usr/local/thirdrock/biggianthead/StonePhillips - Owner has read-write. Group has read. Others have no access

/usr/local/thirdrock/biggianthead/StonePhillips - owner should be harry



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/usr/local/thirdrock/biggianthead/StonePhillips - group should be aliens

Question 5 - find

Install the package wamerican

Using the find command with the -exec option, search /usr/share/ for the file named 'words'.

The -exec option should **copy** that file to /usr/local/thirdrock.

To check your results ls -l /usr/local/thirdrock should have the 'words' file in it.

Question 6 - grep

Using the grep command search for the string 'ip' in all files beginning with an 's' (case sensitive) and ending with .conf in the /etc directory. Redirect the output to /usr/local/thirdrock/grep1.txt. Number the lines.

You should get 12 lines of output.

Question 7 - tar and cron

Create a cron job that executes every day at 9PM as root.

The job should create a tar file in /root/

The tar file name should be thirdrock.tar.gz

The contents of the tar file should be /usr/local/thirdrock/

Manually create /root/thirdrock.tar.gz by executing the tar command by hand before adding it to your cron job.

Question 8 - installing software (apt)

Install the package iftop.



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Check your work:

```
/scripts/thirdrock-check.sh
```

Wipe it out and start over:

```
/scripts/thirdrock-clean.sh
```

Question 1 - Users and Groups

Question 1: aliens exists

aliens:x:1097:dick,sally,tommy

Question 1: university exists

university:x:1098:dick,mary,nina

Question 1: security exists

security:x:1100:sally,don

Question 1: comm exists

comm:x:1099:

Question 1: humans exists

humans:x:1036:mary,nina,mamie,don

Question 1: dick exists

Question 1: dick: Correct account expiry date 2021-06-01

Question 1: sally exists

Question 1: sally: Correct account expiry date 2021-06-01

Question 1: harry exists

Question 1: harry: Correct account expiry date 2021-06-01

Question 1: tommy exists

Question 1: tommy: Correct account expiry date 2021-06-01

Question 1: mary exists

Question 1: nina exists

Question 1: mamie exists

Question 1: don exists

Question 2 - Create Directory Structure



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Question 2: `/usr/local/thirdrock` - exists

Question 2: `/usr/local/thirdrock/house` - exists

Question 2: `/usr/local/thirdrock/university` - exists

Question 2: `/usr/local/thirdrock/biggianthead` - exists

Question 2: `/usr/local/thirdrock/biggianthead/StonePhillips` - exists

Question 3 - Filesystems

Question 3: `/dev/sdb1` - exists

Question 3: `/dev/sdb1`: is mounted

Question 3: `/dev/sdb1` is mounted at `/usr/local/thirdrock/university`

Question 3: `/dev/sdb1` is type `ext4`

Question 3: `/dev/sdb2` - exists

Question 3: `/dev/sdb2`: is mounted

Question 3: `/dev/sdb2` is mounted at `/usr/local/thirdrock/house`

Question 3: `/dev/sdb2` is type `ext3`

Question 3: `/dev/practice/lv_practice` - exists

Question 3: `/dev/mapper/practice-lv_practice`: is mounted

Question 3: `/dev/mapper/practice-lv_practice` is mounted at `/usr/local/thirdrock/roof`

Question 3: `/dev/mapper/practice-lv_practice` is type `ext4`

Question 4 - Permissions and Ownership

Question 4: `/usr/local/thirdrock` - correct owner

Question 4: `/usr/local/thirdrock` - correct group

Question 4: `/usr/local/thirdrock` - correct permissions

Question 4: `/usr/local/thirdrock/biggianthead` - correct owner

Question 4: `/usr/local/thirdrock/biggianthead` - correct group

Question 4: `/usr/local/thirdrock/biggianthead` - correct permissions

Question 4: `/usr/local/thirdrock/university` - correct owner

Question 4: `/usr/local/thirdrock/university` - correct group

Question 4: `/usr/local/thirdrock/university` - correct permissions

Question 4: `/usr/local/thirdrock/house` - correct owner

Question 4: `/usr/local/thirdrock/house` - correct permissions

Question 4: `/usr/local/thirdrock/biggianthead/StonePhillips` - correct owner



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Question 4: `/usr/local/thirdrock/biggianthead/StonePhillips` - correct group

Question 4: `/usr/local/thirdrock/biggianthead/StonePhillips` - correct permissions

Question 5 - Find

Question 5: `/usr/local/thirdrock/words` - exists

Question 6 - Grep

Question 6: `/usr/local/thirdrock/grep1.txt` - exists

`/etc/sysctl.conf:#net.ipv4.conf.all.accept_source_route = 0`

`/etc/sysctl.conf:#net.ipv6.conf.all.accept_source_route = 0`

`/etc/sysctl.conf:#net.ipv4.conf.all.log_martians = 1`

`/etc/sysctl.conf:net.ipv4.icmp_echo_ignore_all = 1`

Question 7 - tar and cron

Question 7: `/root/thirdrock.tar.gz` - exists

[your cron job is here]

Question 8 - Installing Software

Question 8: Package iftop installed - good.