

- 1) What are some of the responsibilities of the System Administrator?
- 2) Why is it important to keep documentation?
- 3) Machine Life-Cycle:
 - What is machine life-cycle?
 - How do you reduce entropy to a system?
 - Why would a machine retire?
 - What would you do with the retired machine?
 - Can you just toss it out in the garbage?
- 4) You are an administrator for a lab of 100 brand new computers all with a built in hard drive with no operating system installed, DVD, network card, the same hardware specs on the same network. You want to install CentOS on all the machines.
 - Give a specific way (with some details) how you would like to handle the install to make it as easy as possible for you.
- 5) If you have a Mirror RAID system (RAID 0), do you need to keep a backup? Explain your answer?
- 6) You are asked to design a solid service for the customers of your company:
 - What would you do to keep the systems running through:
 - power failures
 - network outages
 - disk failures
- 7) Compare storing data “in the cloud” vs storing it on servers in your organization. What are some pros and cons to this?

8) For a help desk, what is the proper way for handling an incident report? You can answer it by writing down what takes place during the 4 phases.

9) You work for a company that has 15 computers. Your boss's computer, the boss's 2 secretaries, you have 2 desktop computers in your office that you use, and 10 other employees have desktops in their offices (one of these employee's is a good friend of yours).

- You want to roll out some major upgrade to these computers. What strategy would you do, to make sure that the upgrade goes with minimal problems?

10) Compare a Physical Workstation to a Virtual Desktop Infrastructure

- Cost
- Maintenance
- Storage

11) Why do servers belong in a data center? Give specifics.

12) setuid questions:

- a. What is special about an executable file owned by root with the setuid bit on?
- b. Can you name any program that we talked about in class that uses setuid?

13) File Permissions questions

Some of the contents from /etc/group

larry:x:501:larry

shirley:x:502:shirley

herbert:x:503:herbert

student:x:600:larry,shirley

```
-rw----- 1 larry student 12 Aug 21 13:06 hw.txt
```

```
-rw-rw---- 1 larry student 12 Aug 21 13:08 project.txt
```

```
-rw-r--r-- 1 larry student 12 Aug 21 13:10 manual.txt
```

Which file above, can shirley write to and why?

Can larry read the hw.txt and why?

Can herbert write to project.txt and why?

Can herbert read manual.txt and why?

14) LVM questions

For an LVM, give an explanation of the following

- LVM
- Physical Volume
- Volume Group
- Logical Volume
- File System

And for the following example, list the values for the system below:

- Physical Volume of the LVM
- Volume Group
- Logical Volume
- File System

From fdisk:

Device	Boot	Start	End	Blocks	Id	System
/dev/sda1	*	1	18	144553+	83	Linux
/dev/sda2		19	2450	19535040	8e	Linux LVM
/dev/sda4		2451	2610	1285200	82	Linux swap / Solaris

From lvdisplay

```
LV Name /dev/centos/home
VG Name centos
LV UUID 1QP9XM-vlKi-umNO-CXvV-TnZN-RCLk-e1FDIr
LV Write Access read/write
LV Status available
```

— Logical volume —

```
LV Name /dev/system/root
VG Name centos
LV UUID D1fKUJ-uU1C-jlVB-4imh-rrgy-FQu0-TC2Ssm
LV Write Access read/write
LV Status available
```

From fstab:

```
UUID=D1fKUJ-uU1C-jlVB-4imh-rrgy-FQu0-TC2Ssm / ext4 defaults 1 1
UUID=1QP9XM-vlKi-umNO-CXvV-TnZN-RCLk-e1FDIr /home ext4 defaults 0 2
```