**Practice For Quizzes, Tests, Midterm & Final Exam**

1. Define the term Virtual Machine.
   * A Virtual Machine (VM) is **a compute resource that uses software instead of a physical computer to run programs and deploy apps**. One or more virtual “guest” machines run on a physical “host” machine.
   * a computer system created using software on one physical computer in order to emulate the functionality of another separate physical computer.
2. List the major screens (steps) in the installation of Centos7 full install DVD.
   * Localization (Date and Time, Language support, Keyboard)
   * Software (Installation Source, Software Selection)
   * System (installation destination, network and hostname)

Manual Partitioning

* + Mount Point
    1. DATA: /var/lib/libvirt/images, /home
    2. Systems: /boot, /boot/efi, /, swap

* + Device capacity
  + Device Type: LVM
  + File System: ext4

User Setting:

Root password

User creation

1. What key-combination is used to toggle the view of your running VM from "window-mode" to "full-screen-mode"?

ALT-CTRL-Enter – toggle full screen and window mode

ALT-CTRL – return from VM to host computer

1. List the steps for setting SELinux to permissive mode.

Sudo vim /etc/selinux/config

set SELINUX to permissive

restart VM

run command: getenforce or sestatus

1. What is the home directory for the user "root"?

/home/user

1. How do you determine the host name of your GNU/Linux workstation?
2. What command can display the NIC's MAC address?
3. What command is used to get a list of running processes on your newly-installed system?
4. Write the Linux command to download the on-line file: <http://linux.server.org/package.tar.gz>
5. Write a Python Shell Script to prompt the user for a directory, and then display the file types for all files in that specified directory (hint: use the **read** command and then use the **file** command and **command substitution** with the **ls** command). Test the Bash Shell script by adding execute permissions and run the Bash Shell Script.

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1. What is the name of the CentOS installation program?
2. What is the name of the file created by the CentOS installation program?
3. Which type of installation works best for confirming compatibility with hardware before installation? Why?
4. Which type of installation works best for installing large numbers of computers? Why?
5. How can you reduce the number of software updates required immediately after installation?
6. How do you start and stop virtual machines?
7. How do you SSH into your virtual machines?
8. List the steps to install a VM from:
   * Downloaded iso file
   * Network install (without kickstart file)
   * Network install (with kickstart file)
9. What is the purpose of the virsh command?
10. How to start and stop VMs using the virsh command?
11. List the steps to correctly backup your VMs to a USB disk
12. List the steps to correctly restore your VMs from a USB disk to your c7host VM.
13. How can you prompt the user for data and store into a variable?
14. Show a few examples how loops can be used to error-check when prompting the user for data.
15. What does the command **rpm -qi centos-release** do and why is it important?
16. What is the difference between **rpm -q centos-release** and **uname -a**?

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1. What is the purpose of booting into single-user mode?
2. List the steps in order to boot into single-user mode.
3. List the steps to reset a forgotten root password.
4. What is the difference between a .tgz file and a .tar.gz file? What do these stand for?
5. What is the purpose of a repository?
6. What is source code?
7. How do you build software from source code?
8. What does yum do that compiled source code does not?
9. Other than running an installed package, what commands can you issue to verify that the package was installed?
10. List the steps to remove a package via yum command.
11. List the steps to install a package using the yum command.
12. List the steps to add a repository to be used with yum.
13. What is the command to list all repositories associated with the yum command?
14. What is the command to view all repositories that have been added to-date?
15. How do you use the **sed** command to modify text?
16. What is the **Here-Document**, and how can it be used in issuing command and shell scripting?

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1. Describe all of the field in **/etc/passwd**
2. What is the command to create a user? What option to create a home directory for that user?
3. What is the command to change the full name of an already-created user?
4. What is the command to delete a user account? What option allows for the user's home directory to be removed as well?
5. What is the command to create a group? What is the command (or steps) to include a user in a newly-created group?
6. What is the purpose of **/etc/shadow**?
7. What is the purpose of **/etc/skel**?
8. What does the term run-level mean?
9. How to set the run-level of a Linux system to text-based only? How to set to graphical mode?
10. What is the command to view the status of running services?
11. What is the command to start a service (like httpd, or sshd)?
12. What is the command to stop a service (like httpd, or sshd)?
13. What is the difference between **starting** a service and **enabling** a service?
14. Can a service be stopped and started by issuing just one command?

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