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ANSWERS TO EVEN-NUMBERED EXERCISES

2. How would you communicate each of the following messages?

a. The system is coming down tomorrow at 6:00 in the evening for periodic maintenance.

Use the `/etc/motd` file and/or email.

b. The system is coming down in 5 minutes.

Use `wall`.

c. Jenny's jobs are slowing the system down drastically, and she should postpone them.

Use `write` or `talk`.

d. Alex's wife just had a baby girl.

Use the `motd` file and/or email.

4. How would you allow a user to execute privileged commands without giving the user the Superuser password?

You can create a `setuid` program that belongs to a group that only the user who is to execute it belongs to and that has no permissions for other users. Alternatively, you can implement `sudo` to grant the user permission to execute the file (see the `sudo` and `sudoers` man pages).

6. How can you disable SELinux?

Either use the SELinux Administration window displayed by `system-config-selinux` to disable SELinux or put the following line in `/etc/sysconfig/selinux`:

```
SELINUX=disabled
```

Then reboot the system.

8. Give the command

```
$ /sbin/fuser -uv /
```

What is this a list of? Why is it so long? Give the same command while working with **root** privileges (or ask the system administrator to do so and email you the results). How does this list differ from the first? Why is it different?

This command displays a list of processes using the root filesystem.

The list is long because all files on the system are children of root, so all processes using any file or filesystem are listed.

The first list shows only processes owned by the user who gave the command. When the command is run by a user working with **root** privileges, the output shows all processes. The lists are different because the system does not permit a nonroot user to gather information about other users.

10. Take a look at `/usr/bin/lesspipe.sh`. Explain what it does and describe six ways it works.

The `lesspipe.sh` script is a preprocessor for `less`. Search for **LESSOPEN** in the `less` man page to obtain more information on `less` preprocessors and postprocessors. This preprocessor allows you to view archived directories and compressed files on the fly, without creating intermediate files. For example, once you have set the **LESSOPEN** variable, you can view a compressed file with the command `less memo.gz` or an archived directory with the command `less myold.tar`. The `lesspipe.sh` script works with `tar`, `tar` and `gzip`, `tar` and `bzip2`, `gzip`, `bzip2`, `zip`, and `cpio` files. It also displays the change log when you ask `less` to display an `rpm` file.

12. When a user logs in, you would like the system to first check the local `/etc/passwd` file for a username and then check NIS. How do you implement this strategy?

The `/etc/nsswitch.conf` file (page 475) controls the order in which sources are consulted to fulfill a request from the system. The following entry in this file causes the system to check `/etc/passwd` first and NIS second:

```
passwd:      files nis
```