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## ANSWERS TO EVEN-NUMBERED EXERCISES

2. What happens if you transfer an executable program file in ASCII mode?

The file will be corrupted: Any bytes that match a `NEWLINE` will be altered, resulting in a program that will not execute properly.

4. How would you prevent local users from logging in on a `vsftpd` server using their system username and password?

Put the following line in `/etc/vsftpd.conf`:

```
local_enable=NO
```

6. What is the difference between `cd` and `lcd` in `ftp`?

A `cd` command changes the remote working directory; an `lcd` command changes the local working directory.

8. Why is it advantageous to run `vsftpd` in a `chroot` jail?

Any program that listens for Internet connections is vulnerable to compromise. If a daemon that runs with `root` privileges is compromised, then the entire system is compromised. Although the `vsftpd` daemon does not run with `root` privileges, a malicious user may still be able to use a local `root` exploit to gain `root` access. Running `vsftpd` in the restricted environment of a `chroot` jail makes it significantly less likely that a malicious user can compromise the system. Without `root` access, the malicious user can see only other files in the `chroot` jail, rendering an attack harmless.

10. How would you configure **vsftpd** to run through **xinetd**, and what would be the main advantage of this approach?

To configure **vsftpd** to run through **xinetd**, set **listen=NO** in **/etc/vsftpd.conf**, create an **xinetd** configuration file for **vsftpd** in **/etc/xinetd.d**, and restart **xinetd**. This configuration allows you to provide finer-grained access control to the server.