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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/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 as `root` is compromised, the entire system is compromised. The `vsftpd` daemon does not run as `root`, but it may still be possible for a malicious user 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/vsftpd.conf`, install `xinetd`, and create an `xinetd` configuration file for `vsftpd` in `/etc/xinetd.d`. This configuration allows you to provide finer-grained access control to the server.