**Multiple Command Operators**

longcompile && echo ‘success’ || echo ‘failure’

When compiling software, scheduling [backup](gloss01.html#gloss_27) jobs, or doing any other task that requires a particular program’s exit status to be a particular value, you need to use these operators:

**Note**

It’s important to remember that each of the commands has its own set of stdin, stdout, and stderr descriptors. They flow into and out of each of the commands in between the operators.

**;**—The semicolon causes all listed commands to be executed independently of each other. The following example echoes back when a long compile is done:

[**Click here to view code image**](ch06_images.html#p161pro02a)

make modules ; echo DO MAKE MODULES\_INSTALL NEXT

The commands are independently executed and neither command fails nor succeeds based on the other’s exit status.

**&&**—The double ampersand causes the second command to be executed if the first command has an exit status of 0 (success). If an exit status of nonzero (fails) is returned, the

second command is not attempted. If you’re a sysadmin and want to have a second program do something if the first succeeds, use the double ampersand like this:

[**Click here to view code image**](ch06_images.html#p161pro03a)

longcompile && mail root –s "compile complete"

This set of commands starts a long compile; if it succeeds, you get an email stating compile complete in the subject line.

 ||—The double pipe causes the second command to not be attempted if the first command has an exit status of 0 (success). If the first command has an exit status of nonzero (fails), the second command is attempted. What if you want to have a second command let you know whether a particular process failed without having to dig through the log files every morning? You could use the following:

[**Click here to view code image**](ch06_images.html#p162pro01a)

tar –czvf /dev/st0 / || mail root –s "doh, backup failed"

As you can probably guess, this command set attempts a full system backup to a SCSI tape device. Only if it fails does the root user get an email with the subject line indicating it failed.