Chapter 2 UNIX-Based Systems

Chapter Overview

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Chapter Overview

This chapter explains how to use NCSA XDIFF/XFIX on UNIX machines such as the Sun, Alliant, or Cray computers.

The chapter assumes that you are relatively experienced with your system, are familiar with file transfer procedures and editing files, and have basic file management and backup skills. For information regarding common editors or transferring files using the file transfer protocol (FTP), refer to other NCSA manuals, such as *NCSA Telnet* and the *NCSA User's Guide.*

Specifically, before using NCSA XDIFF, you should be familiar enough with your local system to run your editor and your file transfer programs successfully.

Creating Control Copies

Before you edit your file or use NCSA XDIFF/XFIX, do the following:

1. Make sure that you have identical versions of the text file on the local and remote systems.

2. Create control copies of the text files on both the local and the remote systems, as instructed in the following section.

To create a copy of your text file on a Sun, Alliant, or Cray computer, enter a command of the form:

```
cp  filename  controlfile
```

where filename is the original file on the local machine and controlfile is its duplicate. The name of the control file must always be formed by

prefixing c. to the name of the original file. For example, to create a control file of hydro.f, you would enter:

```
cp  hydro.f  c.hydro.f
```

Creating an Update File

After you edit the original file on your local machine, you can create an update file. Before creating the update file, verify that you have two unedited versions of the file on the remote machine and and both an edited and a control version on the local machine.

To create an update file, run NCSA XDIFF on your local machine. NCSA XDIFF compares the current, edited version of the file to your saved, control copy of the original file and writes any changes you have made to an update file.
To execute NCSA XDIFF, enter a command of the form:

```
xdiff  filename  updatefile
```

where filename is the edited text file and updatefile is a record of the differences between the edited text file and your control copy of the original file. According to our example, this command might be:

```
xdiff  hydro.f  Xdiff.up
```

This compares the file hydro.f to the control file c.hydro.f and produces the update file Xdiff.up, which you should upload to the remote machine when you are ready to update your file there.

Updating Your File

To use NCSA XFIX to update your file on the remote system, do the following:

1. Transfer the update file from the local machine to the remote machine using FTP or Kermit.

2. Execute NCSA XFIX on the remote machine. NCSA XFIX compares a control file with the c. prefix and the update file you uploaded from the local system to create an updated version of the original file.

To invoke NCSA XFIX on the remote system, enter:

```
xfix  filename  updatefile
```

where filename is the name of the edited file to be created, not the control file and updatefile is the uploaded update file.

For example, to update and overwrite the original file hydro.f to include the additions and edits contained in the update file Xdiff.up, you would substitute hydro.f for filename and Xdiff.up for updatefile, producing this command:

```
xfix  hydro.f  Xdiff.up
```

If this command completes successfully, then you know that the control files were in fact identical, because checksumming alerts you when it discovers that the control files on your local and remote systems are not identical. Checksumming is discussed in Chapter 4, “Helpful Hints.”

NOTE: Now is a good time to create new control copies of the file, because you can be sure that the local and remote versions are identical. To avoid confusion, create new control files on both systems at the same time.