Chapter 1 Getting Started

Chapter Overview

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Chapter Overview

This chapter outlines the basic steps involved in using the NCSA XDIFF and XFIX programs. Specifically, the chapter discusses installing the programs and the process of using NCSA XDIFF and XFIX to maintain duplicate files on different systems.

Portions of this chapter refer you to another chapter in which the outlined procedure is discussed in detail.

Installing NCSA XDIFF/XFIX

Install NCSA XDIFF on your local system and NCSA XFIX on your remote system. Neither XDIFF nor XFIX requires any unusual installation procedures.

On UNIX Systems

Install the programs somewhere within your path. For example, you could install NCSA XFIX in /usr/local/bin. Then, define the path environment variable to include this path. To set the path to /usr/local/bin:

If you are using C shell, enter:

```
set path=($path /usr/local/bin)
```

If you are using Bourne shell, enter:

```
PATH=$PATH:/usr/local/bin
```

On MacOS Systems

As you would for any new Macintosh software, create a new folder and copy the NCSA XDIFF/XFIX applications to your hard disk. The application may also be run from a floppy disk, though your text files may grow to exceed the capacity of floppy disks.

Using NCSA XDIFF/XFIX

This section outlines the main steps involved in using NCSA XDIFF/XFIX to maintain identical text files on two machines.

In a typical editing session, you will use NCSA XDIFF/XFIX to update source code that you keep on a remote machine, but write or edit on a local machine. This process involves the following basic steps:

1. Setting up the remote and local machines so that, in all, you have four files of your original source code—two on each machine
2. Setting aside one of the files on each machine to serve as a control copy
3. Editing the file on your home machine
4. Running NCSA XDIFF to produce a file of the differences between the current, edited version of the code and the control copy
5. Transferring the resulting update file to the remote machine via FTP or Kermit
6. Running NCSA XFIX to update the original file on the remote machine to include the edits you made to the corresponding file on your local machine
7. Cleaning up the remote and local machines by replacing the old control copies of the source with your revised, current version

(See also the section entitled “Model Update Cycle,” in Chapter 4.)

Setting Up

Before you edit your original file or use XDIFF or XFIX on either your remote or local machines, you must do the following:

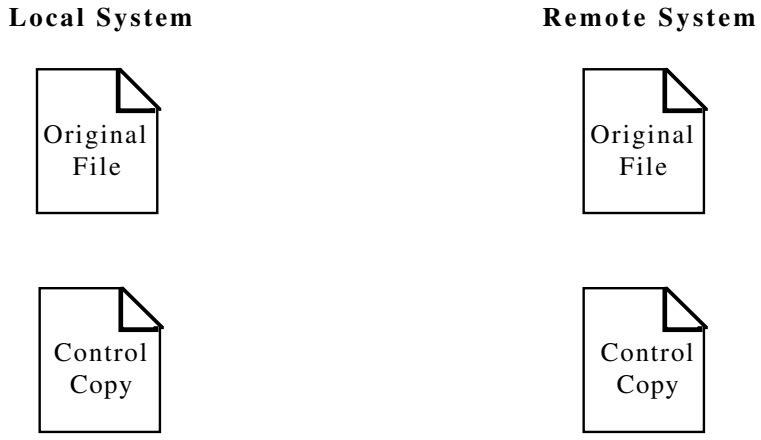
1. Make sure that you have identical versions of the file on the local and remote systems.
2. Duplicate the original file on both the local and remote systems. The duplicate files will serve as control copies of the original file.

Refer to the chapter that best describes your local or remote system,

"UNIX-Based Systems" or "Macintosh Systems," for explicit instructions on duplicating your text files.

When your setup resembles that depicted in Figure 1.1, you may edit the code as much as you like. When you are finished editing, you need to create an update file of your edits as described in the following section.

Figure 1.1 Stage 1: Setting Up



Creating an Update File

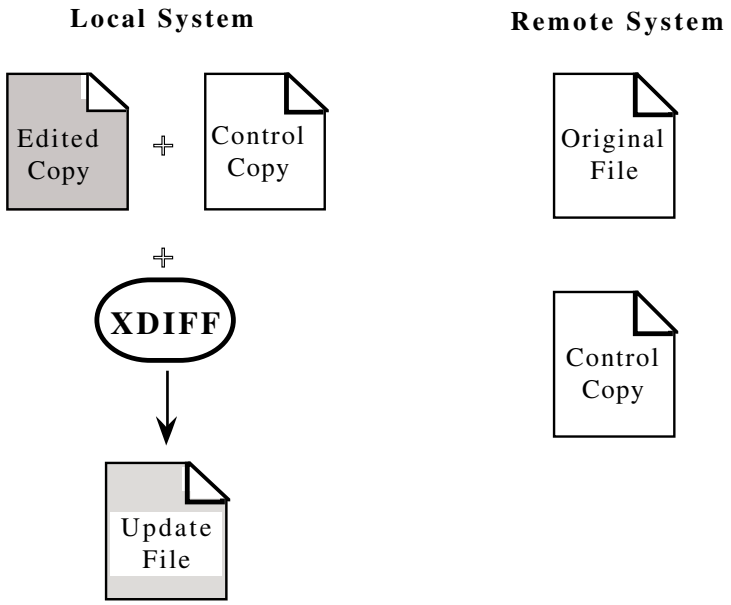
When you are ready to create an update file, you will have two unedited files on the remote machine and both an edited and control file on the local machine.

To create an update file, run NCSA XDIFF on your local machine. NCSA XDIFF compares the current, edited text file to your saved control copy of that file and writes any changes you have made to a special *update file.* NCSA XFIX uses this update file to produce a current version of the file on your remote machine.

Refer to the chapter in this manual that best describes your local or remote system, "UNIX-Based Systems" or "Macintosh Systems," for complete instructions on creating an update file.

When your setup resembles that depicted in Figure 1.2, you can FTP your update file to the remote machine and use it to update your original file located there.

Figure 1.2 Stage 2: Creating an Update File



Updating Your File on the Remote Machine

Using the update file created by NCSA XDIFF to update your code on the remote system involves the following two steps:

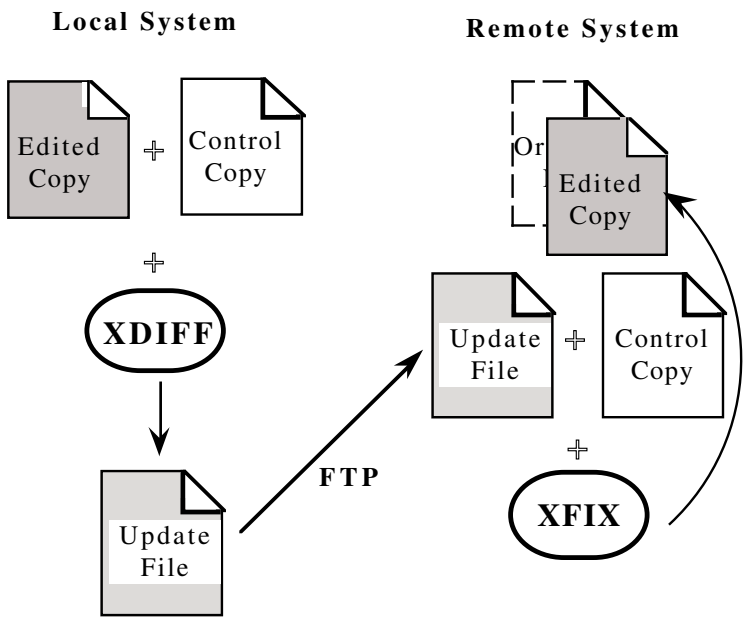
1. Transferring the update file from the local machine to the remote machine using FTP or Kermit

2. Executing NCSA XFIX

Refer to the section entitled “Updating Your File,” in Chapter 2 or 3 for complete instructions on running NCSA XFIX. NCSA XFIX is virtually the same on all systems on which it runs, with the exception of the Macintosh where the XFIX takes advantage of the graphical user interface. To update your original file, it compares a control file to the update file you uploaded from the local system.

You can either specify NCSA XFIX to overwrite the original file with an updated version of the code that is identical to the current file on the local system, or that it write the updated version to a new file. If you specify the former, after running NCSA XFIX your setup should resemble that shown in Figure 1.3, where the original file has been overwritten by the edited version created with NCSA XFIX.

Figure 1.3 Stage 3: Updating a File on the Remote Machine



Cleaning Up

After updating your file on the remote machine, you need to clean up your machines so that only the latest versions of your code are preserved. Specifically, you should delete your update files and old control files, and make new control copies of your edited text files. Neither XDIFF nor XFIX deletes update files or old control copies, though the update files may be overwritten the next time you run XDIFF. At the conclusion of your editing session, your setup should resemble that shown in Figure 1.4.

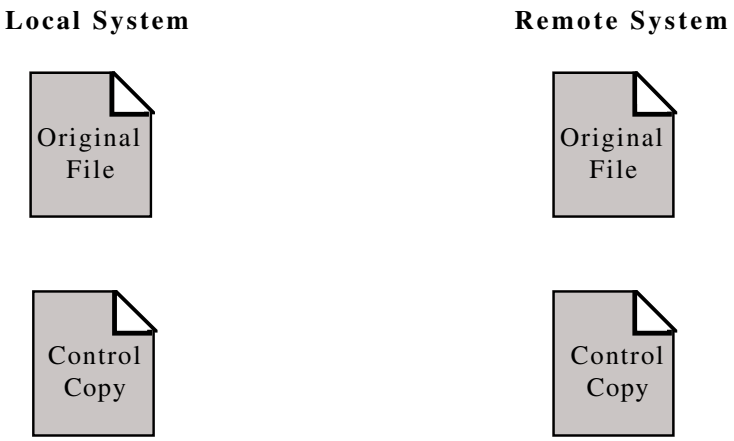



Figure 1.4 Stage 4: Cleaning Up