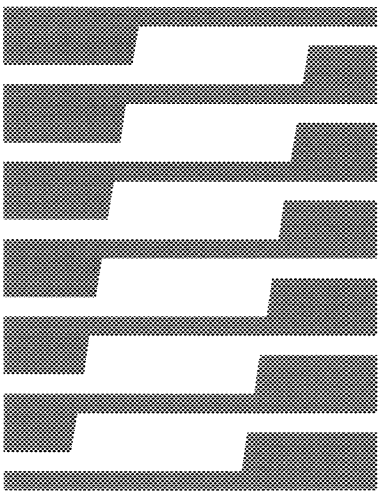
Interleaf



Technical Publishing Software

Installation

Sun / Release 3.0

This manual was prepared using the Interleaf publishing software.

© 1987 Interleaf, Inc.
Ten Canal Park
Cambridge, Massachusetts 02141
(617) 577-9800

All rights reserved.
Printed in U.S.A.
First Printing: January 1987

Interleaf, the Interleaf logo,  , Workstation Publishing Software, and Technical Publishing Software are trademarks of Interleaf, Inc.
Unix is a trademark of Bell Telephone Laboratories, Inc.

Table of Contents

Installation

Figure List

Methods

Chapter 1

Installing the Publishing Software

This chapter provides step-by-step instructions for the installation of Release 3.0 of the Interleaf publishing software on a Sun-workstation-based system. Instructions are included for both *new* Interleaf installations and for *upgrade* installations (replacements of earlier software versions).

Specifically, this chapter tells you how to:

- prepare for an upgrade installation by making a backup tape of **Release 2.5**, relocating **Release 2.5** if you intend to keep it accessible on disk, and saving any templates and graphics you added
- prepare a home directory for the publishing software
- make all workstations accessible to each other
- install **Release 3.0** of the Interleaf publishing software
- delete **Release 2.5** when you are comfortable with **Release 3.0** (upgrade sites only)

To simplify the installation of the Interleaf publishing software, we have provided an installation *script* as part of the software distribution. This is a routine that, once you initiate it, automatically proceeds through the installation step by step. Depending on your specific conditions, the script may require little input from you after you start it. When input is required, your display screen provides specific instructions about what type of information you must supply. A similar script handles print spooler installation.

Installation Procedures in Other Chapters

After installing the new publishing software, all installations, including upgrades, must follow the procedures for enabling printing (Chapter 2). In addition, the following procedures are always necessary for new installations and may be necessary for certain upgrades.

- Set up the printer hardware and start the printer (instructions packed with each printer).
- Configure the printer's own software (instructions packed with each printer).
- Establish an account for each user of the system (Chapter 3).

Optional Installation Procedures

Although not required in every situation, one or more of the following procedures may be needed to complete your installation:

- set up communications from a PC, terminal, or other serial device to an Interleaf workstation (Interleaf *Data Transfer* manual)
- install optional hardware (instructions packed with the hardware)
- add or delete a publishing software user (Chapter 3)
- change the way a user accesses the publishing software (Chapter 3)
- create a password for any user (Chapter 3)

Symbols and Conventions

Symbols and special type styles are used to distinguish different types of information in the installation instructions.

- A keystroke symbol ⊡ indicates a step that requires your input at the keyboard.
- **Boldface** characters in a command should be typed exactly as shown (except for characters enclosed in angle brackets, such as **<RETURN>**).
- *Italicized* characters in a command indicate that you should fill in the actual name of whatever the italicized word refers to. For example, if you see *printername* in the middle of a command, you should type in *your* actual printer name.
- **<RETURN>** means that you should press the return key.
- **Boldface** characters in a system message indicate information displayed exactly as shown.
- *Italicized* characters in a system message indicate information that varies from case to case.

Standalone Systems

The instructions in these chapters cover several variations that might exist in an Interleaf system. In certain cases, different procedures are described for the file server and the clients of that file server. If you have a standalone system (one workstation only), execute steps given for the file server and ignore client steps.

Preinstallation Checklist

You should have a single tape containing the publishing software. The first file on this tape is the software installation script.

There is a short list of things you should double-check before you proceed with the installation. Some of them are absolutely necessary for successful installation of the software; some make the installation operate more smoothly.

- Your system hardware must be up and running.
- UNIX must be installed on the system.
- You must be running Sun UNIX 2.*n* or 3.0 (2.*n* represents any sub-release of UNIX Release 2).
- You must be logged in as *root* to run the installation script. Other procedures require you to log in as other users. Be sure to log in as the user specified for each procedure.
- You must run the installation script on the *file server.*
- Client workstations on the system must be idle but on-line—that is, they should not be running any applications. The installation script running on the file server runs remotely on the clients at the same time.

If you are a new customer and both your hardware and software were provided by Interleaf, the publishing software is usually installed for you. If you are not sure whether your publishing software has been installed, login as *leafadm*. If a desktop does not appear, type **ops**.

If an Interleaf desktop appears in either case, the software has already been installed. You may proceed to Chapter 2 if you need to install the print spooler or Chapter 3 if you need to add or delete users. In any case, save these instructions in case you need to reinstall the publishing software.

Preparing for an Upgrade Installation

To prepare for an upgrade installation, you should:

- make a backup tape of the current **ops** hierarchy (necessary only if you do not have your original installation tape)
- save any additions you have made to the *Templates* or *Graphics* cabinets, or the *Samples* drawer
- if you plan to keep the earlier version of the publishing software on disk, move that version to another directory

Although not strictly required, we recommend that you make a backup tape of each user's desktop directory before installing the new software. Instructions for this procedure can be found in the Interleaf Release 2.5 *Installation and Administration* manual and the Release 3.0 *System Administration* manual.

Making a Backup Tape of Earlier Interleaf Software

This optional procedure is for upgrade installations only.

Be sure you have a backup tape of your current **ops** software so that you have working software in the unlikely case that you have problems installing **ops3.0**. *If you have the most recent* **ops2.5** *installation tape supplied by Interleaf, this is your backup. You can skip to* Saving Custom Templates and Graphics *on page 1-5.*

If you do not have your original tape, you should make your own backup before installing the new **ops3.0.**

To make a backup tape of the earlier ops:

1. Install a blank tape in your cartridge or reel-to-reel tape drive system.

2. Log in as **root** on the file server and change to the directory in which the publishing software was installed, usually **/usr/ops**.

   ☐ **cd /usr/ops <RETURN>**

   Use Step 3 if you have a quarter-inch cartridge drive. Skip to Step 4 if you have a half-inch reel-to-reel drive.

3. *Use this step if you have a quarter-inch cartridge tape drive.* Rewind the tape and copy **ops2.5** from your disk drive to the tape. You must specify your tape type and an additional tape-related variable in these commands. Also, be sure you include the dot at the end of the second command.

   ☐ **mt -f /dev/rst0 rewind <RETURN>**

   ☐ **tar cvbf 126 /dev/rst0 . <RETURN>**

   To be sure you successfully copied **ops2.5**, use the following command to list a table of contents for the tape. If you do not see a long listing of files, repeat Step 3 from the beginning.

   ☐ **tar tbf 126 /dev/rst0 <RETURN>**

   Continue with Step 5.

4. *Use this step if you have a half-inch reel-to-reel drive.* Rewind the tape and copy **ops2.5** from your disk drive to the tape. You must specify your tape type and

an additional tape-related variable in these commands. Also, be sure you include the dot at the end of the second command.

- **mt -f /dev/rmt0 rewind** <RETURN>
- **tar cvbf 20 /dev/rmt0 .** <RETURN>

To be sure you successfully copied the earlier **ops2.5** software, use the command below to list a table of contents for the tape.

- **tar tbf 20 /dev/rmt0** <RETURN>

If you do not see a long listing of files, repeat Step 4 from the beginning.

5. Label the tape, write-protect it by either removing the *write-enable ring* (for a reel-to-reel tape) or turning the *write-protect switch* to 'safe' (for a cartridge tape), and store it in a safe place. If you need to reinstall **ops2.5**, refer to the installation instructions for that version of the software.

Saving Custom Templates and Graphics

This optional procedure is for upgrade installations only.

Your new publishing software includes templates and graphics that you can copy and then use as they are or modify as you wish. In this release, all of these files are stored in a cabinet called *System* (the *Templates* directory is inside the *Create* cabinet). The chapter *Fundamentals* in the *Reference Manual,* Volume 1, explains the arrangement of Interleaf-supplied graphics and templates in Release 3.0.

The cabinet and its contents are owned by *leafadm,* the user in your organization who is responsible for maintaining the Interleaf publishing software. Each user has an icon on his or her desktop linked to the master *System* directory.

When the new software is installed, the old *Templates, Graphics,* and *Samples* directories, including anything you added to them, are erased from the desktop. If you want to save special items you have added to these directories, you must follow the procedure described here *before* you install **ops3.0**.

To save additions to Templates, Graphics, and Samples directories:

1. Log in on the file server as any user who has a desktop accessible on that machine and open the user's desktop. (If your file server does not include a raster display capable of running the Interleaf desktop, call Customer Support.)

   - **ops2.5** <RETURN>

2. On the desktop, *select* and *copy* anything you have added to the existing *Templates, Graphics,* or *Samples* directories and want to include in the new ones.

Paste these items on the *desktop itself.* Make a note of the files involved and the user whose desktop they are on.

3. Close the desktop. To make sure *leafadm* has permission to cut and paste on the desktop, do the following while still logged in as the desktop owner:

   - **cd** *desktoppathname* **<RETURN>**
   - **chmod 777 . clipboard.clp <RETURN>**

4. Continue the installation with *Relocating 2.5 Directories.*

5. When the installation is complete or after you install the print spooler *(Chapter 2),* continue the process of restoring the templates and graphics by logging in to the *file server* as *leafadm.*

   - **login leafadm <RETURN>**

6. As *leafadm,* open the desktop on which you stored the special graphics, samples, and templates. Since, as *leafadm,* you must open another user's desktop, you must use the **-d** option.

   - **ops -d** *-userloginname/***desktop <RETURN>**

   The desktop with the new *System* directory appears on the screen.

7. Open the *System* cabinet, open the *Graphics, Samples,* and *Create* directories, and then open the *Templates* cabinet in the *Create* cabinet. *Copy* (do not cut) the **ops2.5** graphics and templates from the desktop, and paste the copies into the new *Graphics* cabinet, *Templates* cabinet, or *Samples* drawer.

8. Once the graphics and templates transferred from **ops2.5** are added to the new **ops3.0** directories, cut the copies that are still on the desktop.

9. You may have transferred items that are already supplied in the new directories. Check for any duplications, then cut and purge the duplicates.

Relocating 2.5 Directories

This optional procedure is for upgrade installations only.

To keep two versions of the publishing software on your disk storage system, you must move **ops2.5** to a new directory. Without these steps, **ops3.0** installation will eliminate **ops2.5** on your disk.

This procedure works for most publishing software installations. If you see an error message at any point in the procedure, call Interleaf Customer Support. If your software was not installed in a directory whose pathname ends in **/ops**, you need additional instructions.

Important Note: Follow this procedure *exactly as shown*. If you combine steps, you may end up in the wrong directory.

To move and maintain access to ops2.5:

1. Log in as **root** at the file server.

   ☐ **root <RETURN>**

2. Change directories to **/usr/ops**. In most installations, this is either the home directory of the publishing software or it is connected to the home directory by a link. Once in this directory, you can use the *dot dot* shortcut to reach and move to the real home directory, even if you do not know its full path name.

   ☐ **cd /usr/ops <RETURN>**

   ☐ **mv ../ops ../ops2.5 <RETURN>**
   If either of these commands fails, call Interleaf Customer Support.

3. Change the name used to access the software.

   ☐ **mv bin/ops bin/ops2.5 <RETURN>**

4. Create a new link on the file server (or standalone). To be sure that the link is made correctly, type all of these commands exactly as shown. Be sure to use *open* quotes around **pwd**. Use of *close* quotes will cause the commands to fail. After these steps are completed, you access **ops2.5** by typing **ops2.5**, not **ops**.

   ☐ **if (‘pwd‘ != /usr/ops2.5) ln -s ‘pwd‘ /usr/ops2.5 <RETURN>**

   ☐ **if (-e /usr.MC68010) ln -s ‘pwd‘ /usr.MC68010/ops2.5<RETURN>**

   ☐ **ln -s /usr/ops2.5/bin/ops2.5 /usr/local/bin/ops2.5 <RETURN>**

   ☐ **if (-e /usr.MC68010) ln -s\<RETURN>**
   /usr/ops2.5/bin/ops2.5 /usr.MC68010/local/bin/ops2.5<RETURN>
   If this command fits on a single line of your display, you can replace \<RETURN> *with a* SPACE.

5. Insert the pathname for **ops2.5** in the file **/etc/ops2.5.struc**. This assures that when you type **ops2.5**, the system finds and uses the correct version of the software hierarchy.

   ▣ **echo "/usr/ops2.5" > /etc/ops2.5.struc** <RETURN>

   If your system is a standalone, skip to Step 7.

6. Create a new link for each *client* workstation (if any). Be sure to include a colon after the client name.

   ▣ **rcp /etc/ops2.5.struc** *clientname*:**/etc** <RETURN>

7. If you want to maintain access to the **ops2.5** templates (*Templates* cabinet, *Graphics* cabinet, and *Samples* drawer) after you install **ops3.0**, create links to these directories. The steps below must be repeated *by or for each user on the workstation where his or her desktop resides.*

   ▣ **login** *loginname* <RETURN>

   ▣ **cd** *~loginname*/**desktop** <RETURN>

   ▣ **ln -s /usr/ops2.5/Demo Samples2.5.drw** <RETURN>

   ▣ **ln -s /usr/ops2.5/Graphics Graphics2.5.cab** <RETURN>

   ▣ **ln -s /usr/ops2.5/Styles Templates2.5.cab** <RETURN>

   ▣ **rm -f Samples.drw Templates.cab**<RETURN>
   Graphics.cab Documentation.drw <RETURN>
   If this command fits on a single line of your display, you can replace \<RETURN> *with a* SPACE.

8. When you have completed the preceding steps, you must update the table of commands found in your search path to include **ops2.5.**

   ▣ **rehash** <RETURN>

9. Use the **-v** option to confirm that your Release 2.5 software is now located in the directory **ops2.5.** You should see the correct version number.

   ▣ **ops2.5 -v** <RETURN>

   Until you install Release 3.0, the link that provides default keyboard mapping is disconnected and you cannot use the publishing software. After you install Release 3.0, run **ops2.5** to confirm that you have access to it.

Preparing the Home Directory

This procedure should be followed in both new and upgrade installations.

Before you run the installation script, you should make sure that a home directory has been prepared for the publishing software, and that it has enough space for the new version of **ops**.

To prepare the publishing software directory:

1. Log in to the file server as **root**, the UNIX system administrator.

   root <RETURN>

2. Change to the default directory for the publishing software.

   cd /usr/ops <RETURN>

   If you see the message

   /usr/ops: no such file or directory

   a previous version of ops has not been installed. In this case, go to Step 3. Otherwise, skip to Step 5.

3. *If* **/usr/ops** *does not exist or if ops has never been installed on this system*, change directory to **/usr/***servername*, where *servername* is the name of the workstation you are using. You may have to create this directory.

   cd /usr/*servername* **<RETURN>**

   If you see the message

   /usr/*servername***: no such file or directory**

   you must create the directory.

   cd /usr <RETURN>

   mkdir /usr/*servername* **<RETURN>**

   cd /usr/*servername* **<RETURN>**

   mkdir ops <RETURN>

4. So that the installation script puts the publishing software in the directory you created in Step 3, create a link to the default installation directory.

   ln -s /usr/*servername***/ops /usr <RETURN>**

   If you see a message that says **/usr/ops** already exists, you can still continue with the procedure.

5. Once you have changed directories to either **/usr/***servername* or **/usr/ops**, check the available disk space in the file system in which the publishing software will be loaded. Be sure to include the dot at the end of the command.

   ☐ **df . <RETURN>**

   You see a display of space available in the file system.

Filesystem	kbytes	used	avail	capacity	Mounted on
/dev/xy0d	26511	21566	2293	90%	/usr

   You should see a line ending with **/usr** or **/usr/***servername* in the *Mounted on* column. If the number in the *avail* column is *approximately 10000* (kbytes) or more, you should be able to install the software without moving anything in the file system. If that number is at least *4000* and you still have the previous version of the publishing software installed, you should be able to install the new publishing software if you remove the old version. Any time that number is *less than 4000*, and if it is less than 10000 when the old publishing software is not on the disk, you may not be able to install the software — in this case, call Interleaf Customer Support.

Establishing Clients

This procedure is for new, multi-workstation installations. If you are installing the software on a standalone or if this is an upgrade installation, you can skip to **Installing the Publishing Software** *on page 1-12.*

For the publishing software installation to be completely successful, the server and all client workstations must be accessible to each other. You establish this relationship by including them in the file **/.rhosts**.

To enter hosts (workstations) in the /.rhosts file:

1. Log in to the file server as **root**.

2. Use **vi** to view and edit the file **/.rhosts.**

   ☐ **vi /.rhosts <RETURN>**

3. Make sure that the name of the server and all the clients appear in the file, one name per line. If any host is missing, add it to the file. If you are unfamiliar with the **vi** editor, you can use this simplified procedure. First, position the editing caret at the end of the last line of the file, and open the line so you can insert text.

   ☐ **G**

   ☐ **O**

Once the line is open, type the names of all missing hosts. Remember, each host must be on its own line, as follows:

```
servername
client1name
client2name
etc.
```

4. Once you have entered all of the host names, save the file and exit from the **vi** editor.

   - **<ESC> :wq <RETURN>**

5. Copy the new **/.rhosts** file to **/etc/hosts.equiv** so that all users have the updated host information.

   - **cp /.rhosts /etc/hosts.equiv <RETURN>**

6. Copy **/.rhosts** and **/etc/hosts.equiv** from the file server to each client.

   - **rcp /.rhosts** *clientname:/* **<RETURN>**
   - **rcp /etc/hosts.equiv** *clientname:/* **<RETURN>**

Unless you are an experienced **vi** user, the easiest way to correct a mistake you make while editing a file is to exit from the file and begin again. To exit without saving your changes, type **<ESC>** if you are still in insertion mode and then type **:quit! <RETURN>**.

Installing the Publishing Software

Figure 1-1 shows some of what you might see during an installation.

	Interleaf Installation Script for Release 3.0
	Is this system using the Unix yellow pages service? (y/n):
	Enter name of home directory (default: /usr/ops): **Home directory is /usr/ops. Please confirm. (y/n): y**
If it is a multi-workstation system...	**Testing clients of** *fileserver:* *clientname(s)* **The following clients are accessible via the network:** *clientname(s)*
	Should leaf3.0_install include all of the accessible clients? (y/n) y
	Preparing home directory.
If new software is installed over old software . . .	**All files will be cleared from /usr/ops. Please confirm. (y/n): y** **Clearing /usr/ops . . . done.**
	Tape Loading Options: **0 – Install without re-loading the software from tape** **1 – Load from Local 1/4" Cartridge Tape (/dev/rst0)** **2 – Load from Local 1/2" Reel-to-Reel Tape (/dev/rmt0)** **3 – Load from Remote 1/4" Cartridge Tape (/dev/rst0)** **4 – Load from Remote 1/2" Reel-to-Reel Tape (/dev/rmt0)** **Select tape loading option (0–4):**
If you select option 0 and the software on your system is not up-to-date . . .	**/usr/ops does not contain up-to-date software!** **Please select one of the "Load from Tape" options.**
	Reading *(1/4 or 1/2)"* **tape.**
If a remote tape server is used...	*number* **records in** *number* **records out**
	Setting up /private/ops **Setting up /etc/ops3.0.struc** **Setting up /dev** **Setting up /usr/local/bin**
If clients exist...	**Setting up** *clientnames* **. . . done.**
	Installation of the ops hierarchy is complete. **Run the printer install script to enable the print spooler.** **Then run ops to verify that it is functioning properly.**

Figure 1-1. Screen display during installation procedure

The bold type shows an Interleaf publishing software installation procedure as it would appear on a display screen after you type **leaf3.0_install**. You see the steps in shaded blocks only if the conditions described in the left column exist.

Loading and Running the Script

This procedure should be followed in both new and upgrade installations of the publishing software. Some steps designate actions you take. Others designate steps the script takes.

To install the Interleaf publishing software:

1. Log in to the file server as **root**, the UNIX system administrator. The installation cannot be run from client workstations.

   ☐ **root <RETURN>**

2. Change directory to **/tmp** so that the installation script is placed in a *temporary* directory on your disk and will be eliminated the next time you boot. Since you will not need to use the installation script regularly, there is no reason for it to take up disk space after you have installed the software.

   ☐ **cd /tmp <RETURN>**

3. Install your Interleaf tape in your cartridge or reel-to-reel tape drive system.

4. Rewind the tape and read it into your system. There are two variables for this step. First, you can use either a *quarter-inch cartridge tape drive* or a *half-inch reel-to-reel tape drive.* You must specify tape drive type and an additional tape-related blocking factor in these commands. Second, the tape drive can be served by the file server or by another *workstation* on the same network. Choose one of the four procedures and then continue with Step 5.

   If you are using a tape drive served by the file server (or a standalone) . . .

   . . . and you are using a quarter-inch cartridge drive:

   ☐ **mt -f /dev/rst0 rewind <RETURN>**

   ☐ **tar xvbf 126 /dev/rst0 <RETURN>**
   You may see a message about block size. You can ignore this message.

   . . . and you are using a half-inch reel-to-reel tape drive:

   ☐ **mt -f /dev/rmt0 rewind <RETURN>**

   ☐ **tar xvbf 20 /dev/rmt0 <RETURN>**
   You may see a message about block size. You can ignore this message.

If you are using a remote tape drive
(served by a workstation other than the file server) . . .

. . . and you are using a quarter-inch cartridge drive:

- **rsh** *tapeservername* **mt -f /dev/rst0 rewind** <RETURN>
- **rsh** *tapeservername* **dd if=/dev/rst0**<RETURN>
  bs=126b | tar xvbBf 126 - <RETURN>
  If this command fits on a single line of your display, you can replace \<RETURN> *with a* SPACE.
  You may see a message about block size. You can ignore this message.

. . . and you are using a half-inch reel-to-reel tape drive:

- **rsh** *tapeserver* **mt -f /dev/rmt0 rewind** <RETURN>
- **rsh** *tapeserver* **dd if=/dev/rmt0**<RETURN>
  bs=20b | tar xvbBf 20 - <RETURN>
  If this command fits on a single line of your display, you can replace \<RETURN> *with a* SPACE.
  You may see a message about block size. You can ignore this message.

5. The script is now read into your system and the script name, *leaf3.0_install*, is shown on your display screen. At the operating system prompt, type the script name to begin installation of the publishing software.

   - **leaf3.0_install** <RETURN>

   If you are logged in as anyone but root, the script stops the installation procedure and displays the operating system prompt. If you are logged in as **root**, installation proceeds.

   To terminate the installation at any time, hold down the CTRL key and type **c**. If you terminate the installation this way, the steps you have taken since typing *leaf3.0_install* are not saved. You must begin with Step 5 when you want to proceed with the installation.

6. Once the installation script begins, you may be asked this question:

   Is this system using the UNIX yellow pages service? (y/n)

   If your answer to this question does not reflect the actual status of the yellow pages in your installation, the success of the installation procedure will be unpredictable.

   - **y** <RETURN>

   or - **n** <RETURN>

   In either case, the installation continues.

7. Most systems set up by Interleaf include a software administrator with the user account **leafadm**. The use of a special software administration account allows you to accomplish certain tasks without becoming **root**. This minimizes the chance that a mistake you make when managing the publishing software has widespread effects in your system.

   If **leafadm** is not established before the software is installed, or it is incorrectly entered in the **passwd** file, you are given the opportunity to exit the installation script here and establish that user or to continue the installation and use **root** or another existing user as the owner of the Interleaf software.

   The user account for the Interleaf administrator, "leafadm", is not correctly established on this system. You can either exit and set up the "leafadm" account or specify another user as the Interleaf administrator and owner of the Interleaf hierarchy.

   Do you want to exit and set up "leafadm"? (y/n):

   Because of the extra safety involved, we recommend that you set up **leafadm** unless you have specific reasons not to do so.

   ⊡ **y <RETURN>**

   If you choose **y**, the operating system prompt returns. You can then go to Chapter 3 for instructions on establishing *leafadm* as a user account and begin the installation again with Step 5.

   If you use a remote tape drive, the owner of the publishing software must be an installed user on both the file server and the tape server.

8. If you choose not to establish **leafadm**, the following message appears:

   Enter the Interleaf administrator's login name. (default: root):

   You can press **RETURN** to accept the default or enter the name of any existing user. If you enter an invalid login name, an error message appears and then you are again instructed to enter the administrator's login name.

   ⊡ **<RETURN>**

   or ⊡ *loginname* **<RETURN>**

9. You are asked to confirm whatever entry you make.

   Interleaf administrator is *loginname*. Please confirm. (y/n):

   ⊡ **y <RETURN>**

   If you answer **n**, you are again asked to enter the name of the Interleaf administrator. If you answer **y**, the installation continues.

10. Next, you are asked to name the home directory for the publishing software.

    Enter name of home directory (default: /usr/ops):

    Unless you have a special reason for not using it, select the default directory by pressing **RETURN** after this message. However, if you want the software installed in a different directory, enter the directory name and then press **RETURN**.

    ⊡ **<RETURN>**

    or ⊡ *directoryname* **<RETURN>**

    If the name you provide cannot be used as the home directory, an error message appears followed by the question

    Do you want to continue? (y/n):

    You can choose to continue and provide a new directory name. If you want to use the directory you named, answer **n** to exit the script and correct the error by making the directory or changing its permissions.

    ⊡ **y <RETURN>**

    or ⊡ **n <RETURN>**

11. You are asked to confirm whatever entry you make.

    Home directory is *directoryname*. **Please confirm. (y/n):**

    ⊡ **y <RETURN>**

    If you answer **n**, you are again asked to enter the name of the home directory. If you answer **y**, the installation proceeds.

12. If you have two or more workstations, you see the following message:

    Testing clients of *fileserver:*
    clientname(s)

    If errors occur during client testing, you must decide whether to continue the installation. The section *Inaccessible Clients During Installation,* later in this chapter, describes this case.

13. You can exclude any client on your network from access to the publishing software. After you confirm the home directory for the software, you see the following question:

    The following clients are accessible via the network.
    clientname(s)

    Should leaf3.0_install include all of the accessible clients? (y/n)

☐ **y <RETURN>**

or ☐ **n <RETURN>**

If you choose to include all of the accessible clients, the installation proceeds with Step 14. If you want to exclude one or more clients, answer **n** at the prompt to get the following message for each available client:

Include *clientname*? (y/n):

☐ **y <RETURN>**

or ☐ **n <RETURN>**

14. When you have established which clients have access to the publishing software, the script prepares to install the new software in the home directory. To do so it must clear any existing files from that directory, a step for which you must provide permission. The display shows these messages. (The second or third message appears only if there are existing files.)

Preparing home directory.

All files will be cleared from *directoryname*. Please confirm. (y/n):

or **All files in *directoryname* except those in the Fonts and System directories will be cleared. Please confirm. (y/n):**

☐ **y <RETURN>**

or ☐ **n <RETURN>** (if you expect to use the *0* option in Step 15 below)

15. You are asked next what kind of tape drive you are using and whether it is local or remote.

```
Tape Loading Options:
  0 - Install without re-loading the software from tape
  1 - Load from Local 1/4" Cartridge Tape        (/dev/rst0)
  2 - Load from Local 1/2" Reel-to-Reel Tape     (/dev/rmt0)
  3 - Load from Remote 1/4" Cartridge Tape       (/dev/rst0)
  4 - Load from Remote 1/2" Reel-to-Reel Tape    (/dev/rmt0)
Select tape loading option (0-4):
```

If you install the software on a network when a client is inaccessible, the *0* option makes it possible for you to install the software on these clients later without reloading from tape. Please see the next section *Inaccessible Clients During Installation* for additional information. The *0* option checks to see if a key file is present. If this file is absent, the current software release has not yet been loaded from tape, and the following message appears:

```
/usr/ops does not contain up-to-date software!
Please select one of the "Load from Tape" options.
```

When you choose options *1 or 2,* the **ops** files begin to be read in from tape. When you choose option *3* or *4,* you must supply the name of the tape server before the **ops** files can be read in.

Enter hostname of tape server:

- *tapeserver* <RETURN>

16. Progress reports indicate the remaining setup actions performed by the script. When the installation is completed, this message is displayed:

    Installation of the ops hierarchy is complete.
    Run the printer install script to enable the print spooler.
    Then run ops to verify that it is functioning properly.
    fileserver#

17. Go to Chapter 2 and follow the instructions for print spooler installation.

18. After you have completed print spooler installation, log out, log back in as **leafadm** or any other existing user, and run **ops** to establish that the installation was successful. If you need to add a user, refer to Chapter 3.

    - **logout** <RETURN>
    - *loginname* <RETURN>

    If instead of a desktop you see a shell prompt, enter the following command:

    - **ops** <RETURN>

    To exit the desktop, press the middle mouse button, slide the mouse cursor down until the word **Close** is in reverse video on the menu, and then release the mouse button. If you are a new user, we recommend that you read *Fundamentals*, Chapter 1 of the *Reference Manual,* Volume 1, and that you read and practice the material in the *Training Manual.*

Inaccessible Clients During Installation

Although installation of the Interleaf software is likely to be smooth and without problems, certain conditions can prevent the completion of the process. If invalid information is entered, the script usually refuses to accept this information and provides a chance to re-enter valid information.

If there is a problem with a client, the screen displays the name of that client followed by an error message. Next it displays the message:

WARNING: The following clients are not accessible via the network!
clientname(s)

Next, a list of error messages and the most likely recovery method for each one is displayed.

	ERROR MESSAGE	*HOW TO RECOVER*
	Unknown host:	Enter client in yellow pages hosts database.
or	**Unknown host:**	Enter client in /etc/hosts on server.
	Connection timed-out:	Fix client Ethernet h/w and/or reboot client.
	Connection refused:	Reboot client.
	Permission denied:	Enter server name in /.rhosts on client.

In Release 3.0, you have the option of continuing with the installation even when one or more clients are not accessible. The following message and prompt are shown:

Continuing with clients down will result in those clients not having access to this software and will require the re-running of leaf3.0_install to enable them when they are again accessible.

Do you wish to continue? (y/n):

If you answer **y**, you can continue the installation as described. If you answer **n**, you exit the installation script. If you are uncertain about whether to continue under these conditions, or you receive an error message and do not understand the recovery suggestion, call Interleaf Customer Support for assistance.

The section **Establishing Clients** on page 1-10 describes the procedure for editing the **/.rhosts** file.

Removing Earlier Interleaf Software

This optional procedure is for upgrade installations only.

The only reason you might want to maintain your previous Interleaf software version after you have received the new one is for a smooth transition. In most cases, you will have no difficulty installing the new software, but maintaining what you already have offers you extra protection. We recommend that you remove **ops2.5** software as soon as you have tested **ops3.0** and are comfortable with it. Removal of **ops2.5** frees about 6 megabytes of disk storage.

Remember: documents created or saved with **ops3.0** cannot be read by **ops2.5.**

Be extremely careful when using the **rm -rf** command. Make certain you are in the proper directory and execute the command itself exactly as shown. Loss of data and the **ops3.0** software can result from incorrect execution of this command. In general, exercise extra caution when executing any **rm** command.

If you did not move the **ops2.5** software before installing **ops3.0**, it has already been removed, making this procedure unnecessary for your system.

To remove the ops2.5 software:

1. Log in to the file server as **root.**

   - **login root** <RETURN>

2. Change directory to the home directory of the **ops2.5** software and remove that software. In most cases, this home directory is **/usr**. *Be sure to execute this procedure exactly as shown. Do not combine steps or you may end up in the wrong directory.*

   - **cd /usr/ops2.5** <RETURN>
   - **cd ..** <RETURN>
   - **rm -rf ops2.5** <RETURN>

3. Remove the **ops2.5** links in **/usr/local/bin.**

   - **rm /usr/local/bin/ops2.5** <RETURN>

4. Remove the home directory pointer for **ops2.5.**

   For the file server (or standalone):

   - **rm /etc/ops2.5.struc** <RETURN>

   For each client:

   - **rsh** *clientname* **rm /etc/ops2.5.struc** <RETURN>

5. Have each user log in at the workstation where his or her desktop resides. Then have each user remove the templates directories for **ops2.5**:

   - **login** *loginname* <RETURN>
   - **cd desktop** <RETURN>
   - **rm Demo2.5.drw** <RETURN>
   - **rm Graphics2.5.cab** <RETURN>
   - **rm Styles2.5.cab** <RETURN>

Chapter 2

Print Spooler Installation

Once you have installed the Interleaf publishing software, you must install the software that controls transmission of documents to your printers. This software allows you to print using both **ops2.5** and **ops3.0**. The section *Changing /etc/printcap for 2.5 Printing* describes additional steps you may need to take.

This installation procedure enables the following types of printers to be used in conjunction with the Interleaf publishing software:

- Interleaf or Imagen Laser Printers (designated **cx** in the installation script)
- the Dataproducts LZR-2600 Laser Printer (designated **dp**)

If you are installing a different type of printer or typesetter, see the on-line Release Notes provided in the *Documentation* drawer of the *System* cabinet on the Release 3.0 desktop. If your printer is not described there or if you need more information, contact Interleaf Customer Support.

Described in this chapter are:

- the *printer3.0_install* script, which enables you to install a new printer and to make changes in other key characteristics of existing printers
- the procedure for changing the names of printers
- the procedure for changing the default printer

Before you begin print spooler installation, you must have run **leaf3.0_install**, the publishing software installation script, which is described in Chapter 1. Also, if you are installing a serial printer, use either port **ttya** or **ttyb**. If you cannot use either port, call Interleaf Customer Support.

Installation Procedure

The names of your printers are stored in two locations: a file called **/etc/printcap** and a directory called **/usr/ops/Fonts/pr,** which contains a file for each printer. The *printer3.0_install* script reads these files to determine the names of printers

available through the publishing software and then uses these names to set up printers at the operating system level in **/etc/printcap**.

If yours is a new Interleaf installation, the printer names in **/usr/ops/Fonts/pr** and **/etc/printcap** correspond after **printer3.0_install** is run.

If you have upgraded from an earlier version of Interleaf publishing software, the printer names in your **/etc/printcap** file are the names you used in the earlier version of **ops**. However, the names in **/usr/ops/Fonts/pr** are the new **Release 3.0** defaults.

You have two major choices about naming your printers.

- If you want to use the 3.0 default printer names, you should run **printer3.0_install** only. If you decide later that you want to change printer names, you can do so without running **printer3.0_install** again.
- If you want to keep the printer names you used previously or you want to change your printer names to something other than the defaults, you should first follow the *Changing Printer Names* instructions and then run **printer3.0_install**. The common default names are one or more of the following: **cx1**, **cx2**, **dp1**, and **dp2**. Other default names may be used as additional printers become available.

When completed, the installation procedure described here enables your Interleaf system to *send* documents to one or more printers. This chapter does not describe the physical setup or configuration of the printers themselves. You must complete those procedures before you can actually *print* documents from any workstation.

Changing Printer Names

Use the following procedure to change printer names. You may change printer names before or after you install the print spooler.

To change the name of a printer used with the Interleaf software:

1. Log in at the file server as **leafadm** or your designated software administrator.

   login *loginname* <RETURN>

2. Change directories.

   cd /usr/ops/Fonts/pr <RETURN>

3. List the contents of **/usr/ops/Fonts/pr**.

   - **ls** <RETURN>

   The listing shows a file for each printer. For example, if you had two cx printers, the listing would look like this:

   ```
   cx1.pr      cx2.pr
   ```

4. You rename a printer by editing its **.pr** file using the visual editor **vi**. For example, if you wanted to change the name of **cx1**:

   - **vi cx1.pr** <RETURN>

   After you enter the command, you will see the following file:

   ```
   printer name:     cx1
   network name:     cx1
   device type:      cx
   ```

5. Delete the old name.

   - Use the right arrow key to move the cursor to the name of the printer in the first line (in the example, move the cursor over the *c* of *cx1*).
   - **dw** (this command deletes both the name and any spaces after it).

6. Insert the new name.

   - **i** *newprintername* <ESC>

7. Save the new name and exit from **vi**.

   - **:wq** <RETURN>

   Unless you are an experienced vi user, the easiest way to correct a mistake you make while editing the *.pr* file is to exit from the file and begin again with *Step 4*. To exit without saving your changes, type <ESC> if you are still in insertion mode and then type **:quit!** <RETURN>.

   ---

8. Change directories to the directory in which you installed the publishing software and run the **user_tabler** program that tells the publishing software the new printer name.

   - **cd /usr/ops** <RETURN>
   - **Maint/user_tabler** <RETURN>

Print Spooler Installation

To install the print spooler for the Interleaf publishing software:

1. Log in at the file server as **root**.

   ⌨ **login root <RETURN>**

2. Enter the print spooler installation script name to begin running the program.

   ⌨ **/usr/local/bin/printer3.0_install <RETURN>**

3. If yellow pages service is available on your system, you will be asked the following question:

   Is this system using the UNIX yellow pages service? (y/n)

   If your answer to this question does not reflect the actual status of the yellow pages in your installation, the success of the installation procedure will be unpredictable.

   ⌨ **y <RETURN>**

   or ⌨ **n <RETURN>**

   If you answer **n**, installation continues with Step 7.

4. If you answer **y** to the yellow pages question, you will be asked

   Are you adding, deleting, or changing an Ethernet printer? (y/n)

   Answer **y** if any part of your installation involves an Ethernet printer.

   ⌨ **y <RETURN>**

   or ⌨ **n <RETURN>**

   If you answer **n**, installation continues with Step 7.

5. If you answer **y** to the Ethernet question, the installation continues with the following message and question:

   The yellow pages database for hosts may have to be updated. You can either supply the hostname for the yellow pages master server, in which case printer3.0_install will attempt to update the database, or you can manually update the database after printer3.0_install has completed the rest of the installation.

   Should printer3.0_install attempt the database update? (y/n):

In most cases, you should answer **y**. If you believe you should answer **n**, call Interleaf Customer Support for assistance.

- **y** <RETURN>

6. If you answer **y** to the database update question, you will see the following prompt:

   Enter the host name of the yellow pages master server:

   - *servername* <RETURN>

   When you enter the server name, the script asks you to confirm your entry.

   Yellow pages master server is *servername*. **Please confirm. (y/n):**

   If you answer **n**, you are again asked to enter the name of the master server. If you answer **y**, the installation proceeds.

   - **y** <RETURN>

7. The next message displayed by the script is

   Enter name of home directory (default: /usr/ops):

   Unless you have installed **ops3.0** in a different directory, you should select the default directory by pressing RETURN after this message. If you have installed the software in a different directory, enter that directory's name followed by a RETURN.

   - <RETURN>

   or - *directoryname* <RETURN>

   If the name you provide cannot be used as the home directory, an error message appears followed by the question

   Do you want to continue? (y/n):

   You will probably want to answer **y** and provide the correct name. If you are not certain what that name is, answer **n**, login as **leafadm**, and check your home directory. Then begin **printer3.0_install** again.

   - **y** <RETURN>

   or - **n** <RETURN>

8. Once you enter a legitimate directory, the script asks you to confirm your choice.

   Home directory is /usr/ops. Please confirm. (y/n):

   If you answer **n**, you are again asked to enter the name of the home directory. If you answer **y**, the installation proceeds.

   - **y** <RETURN>

Next, the display shows the printers available to the publishing software. If a printer has been installed before, its configuration is shown in the following format:

printername **is a** *printer description* **printer at** *address* **served by** *servername.*

For example, you might see the listing

cx1 is a serial printer on /dev/ttyb served by kermit

If a printer is new to the system, you will see this message:

printername **has not been installed**

If there are clients on the system, they are tested ensure that proper communications exist between the server and each client. You will see this message:

Testing clients of *fileserver:*
clientname(s)

If errors occur during client testing, you must decide whether to continue the installation. The section *Inaccessible Clients During Installation* later in this chapter describes this case.

9. After the clients are tested, you are given the opportunity to exclude any of the available clients from the installation.

   The following clients are accessible via the network.
   clientname(s)

   Should printer3.0_install include all of the accessible clients? (y/n)

   If you choose to include all of the accessible clients, the installation proceeds with Step 11. If you want to exclude one or more clients, answer **n**.

   ⊡ **y <RETURN>**

   or ⊡ **n <RETURN>**

10. If you choose **n** in Step 9, you will see the following message for each available client:

    Include *clientname***? (y/n):**

11. When you have established which clients have access to the printing software, the software prepares the server and the clients you have designated for the installation of the printing software.

    Preparing *fileserver.*
    Preparing *clientname(s).*

12. If the printer has been installed before, you have the opportunity to change its installation information. You will see the following message:

    Do you wish to change the installation for *printername*? **(y/n)**

    If the printer has not been installed before, you have the opportunity to install it. You will see the following message:

    Do you wish to install *printername* **at this time? (y/n)**

    If you answer **n** for the first printer, one of these two questions is repeated for the next listed printer, and so on. If you answer **n** for all of the printers, the printer installation ends and you return to the operating system prompt. If you answer **y** to this question for any printer, you are presented with a series of options for changing the installation characteristics.

    ⊡ **y <RETURN>**

Identifying the Print Server

13. If you choose to change a printer's installation, the script first asks you the following question:

    Is *printername* **served by this host? (y/n):**

    If the printer is served by the file server, type **y** and continue with Step 15. If the printer is not served by the file server, type **n** and continue with Step 14.

    ⊡ **y <RETURN>**

    or ⊡ **n <RETURN>**

14. If you answered **n** to the question in Step 13, you are then asked to

    Enter the name of *printername's* **print server:**

    Type the name of the workstation you want to act as this printer's server.

    ⊡ *servername* **<RETURN>**

    If you provide a valid name for the print server, you may see a message that says

    Retrieving /etc/printcap from *printserver*

Identifying Printer Type and Port or Address

15. The script presents a list of possible printer configurations for you to choose from. This list varies depending on the printers you identified when you ordered the publishing software.

    Available printer configurations:
    1 - Interleaf Parallel CX Printer
    2 - Interleaf Serial CX Printer
    3 - Imagen Ethernet CX Printer
    4 - Imagen Serial CX Printer
    5 - Data Products Parallel Printer
    6 - Data Products Serial Printer
    Enter printer configuration for *printername*. **(1-6):**

    Type the configuration number corresponding to the printer you are installing.

    ☐ *number* <RETURN>

16. The script then repeats the information you have just entered and asks you to confirm it.

    Printer configuration # for *printername*. **Please confirm. (y/n):**

    If you answer **n**, you are again asked to enter the configuration for that printer. If you answer **y**, the installation proceeds.

    ☐ **y** <RETURN>

    If the printer is an Interleaf or Imagen serial printer, continue with Step 17. If the printer is an Ethernet printer, continue with Step 18. If the printer is a Dataproducts or Interleaf parallel printer, continue with Step 19. If the printer is any other type, see the on-line Release Notes supplied in the *Documentation* drawer of the *System* cabinet on your Release 3.0 desktop. You may also have received special printer installation instructions in a customer letter.

17. *If you are installing a serial printer*, the script asks you to specify the serial port on the print server through which data will be sent to the printer.

    Enter device name for serial port (default ttyb):

    To choose the default device, simply press **RETURN**. We recommend that you choose only **ttya** or **ttyb**. If you want to use a different device name, call Interleaf Customer Support.

    ☐ <RETURN>

    or ☐ *devicename* <RETURN>

    If the device name you enter does not exist, an error message appears and you are again asked to enter the device name. If it exists but is already in use, the following message appears:

devicename already in use. Use it anyway? (y/n):

If you answer **y**, a new entry using that port appears in the file **/etc/printcap**. If you answer **n**, you are again asked to enter the device name.

After you make a valid choice, continue with Step 20.

18. *If you are installing an Ethernet cx printer,* you are asked to specify the printer's address. The script searches for an available address and presents it as a default.

Enter network address for _printername_ (default:_address_):

In almost all cases, you should select the default.

⊡ **<RETURN>**

There are two cases in which the system does not accept an address: if you choose an address with invalid characters, such as letters or punctuation characters other than a period; or if you choose an address that does not begin with a valid network prefix (and so is not entered in the **/etc/networks** file). Each of these conditions triggers an error message, followed by the request for an address.

After you make a valid choice, continue with Step 20.

19. *If you are installing a Dataproducts or Interleaf parallel printer*, the script asks you to specify the parallel port on the print server through which data will be sent to the printer.

Enter device name for parallel port (default lp0):

To choose the default device, simply press **RETURN**. We recommend that you choose only **lp0** (letter l, letter p, numeral 0). If you want to use a different device name, call Interleaf Customer Support.

⊡ **<RETURN>**

or ⊡ *devicename* **<RETURN>**

If the device name you enter does not exist, an error message appears and you are again asked to enter the device name. If it exists but is already in use, the following message appears:

devicename already in use. Use it anyway? (y/n):

If you answer **y**, a new entry using that port appears in the file **/etc/printcap**. If you answer **n**, you are again asked to enter the device name.

After you make a valid choice, you see the following messages.

Does this printer have a serial backchannel cable? (y/n):

A serial backchannel cable allows status information (for example "The printer is out of paper") to be passed from the printer to the host. If you answer **y**, you are asked the name of the serial backchannel port.

Enter the device name for the serial backchannel (default: ttyb)

To choose the default device, simply press **RETURN**. We recommend that you choose only **ttya** or **ttyb**. If you want to use a different device name, call Interleaf Customer Support.

⊡ **<RETURN>**

or ⊡ *devicename* **<RETURN>**

After you make a valid choice, continue with Step 20.

20. Once you establish a valid Ethernet address or interface name for your printer, you will see the following messages:

    Updating *fileserver*
    Updating *client(s)*

    If more than one printer is available, you are asked whether you want to install the next printer.

    Do you wish to install *printername* **at this time? (y/n):**

    If you answer **y**, the process that begins in Step 15 is repeated for that printer. If you answer **n**, the question is asked for each additional printer. When you have installed or specified that you will not install each available printer, the status of each is displayed and the operating system prompt returns.

    If you are installing an Ethernet printer, make a note of the hexadecimal Ethernet address in parentheses. You will need this address when you configure the controller.

21. After you complete print spooler installation, log in as any existing user, run **ops** and print something to establish that the installation was successful.

    ⊡ **login** *loginname* **<RETURN>**

    If you see a shell prompt instead of a desktop, type the following command:

    ⊡ **ops <RETURN>**

    To exit the desktop, press the middle mouse button, slide the mouse cursor down until the word **Close** is in reverse video on the menu, and then release the mouse button. If you are a new user, we recommend that you read *Fundamentals*, Chapter 1 of the *Reference Manual*, Volume 1.

Inaccessible Clients during Installation

Although installation of the Interleaf print spooler software is likely to be smooth and without problems, certain conditions can prevent the completion of the process. If invalid information is entered, the script usually refuses to accept this information and provides a chance to re-enter valid information.

If there is a problem with a client, the screen displays the name of that client followed by an error message. Next it displays the message:

WARNING: The following clients are not accessible via the network!
clientnames

Next, a list of error messages and the most likely recovery method for each one is displayed.

ERROR MESSAGE	HOW TO RECOVER
Unknown host:	**Enter client in /etc/hosts on server.**
or	**Enter client in yellow pages hosts database.**
Connection timed-out:	**Fix client Ethernet h/w and/or reboot client.**
Connection refused:	**Reboot client.**
Permission denied:	**Enter server name in /.rhosts on client.**

In Release 3.0, you have the option to continue with the spooler installation even when clients are not accessible. The following message and prompt is shown to allow you this choice:

Continuing with clients down will result in those clients not having access to the printers and will require the re-running of printer3.0_install to enable them when they are again accessible.

Do you wish to continue? (y/n):

If you answer **y**, you can continue the installation as described. If you answer **n**, you exit the printer spooler installation script. If you are uncertain about whether to continue under these conditions, or you receive an error message and do not understand the recovery suggestion, call Interleaf Customer Support for assistance.

Changing /etc/printcap for 2.5 Printing

This procedure is only necessary if you are maintaining Release 2.5 on-line.

The Release 3.0 print spooler allows you to print using Release 2.5 of the publishing software. However, for versions of 2.5 labeled 2.5.75 or higher, you may need to change the **/etc/printcap** file to print after running **printer3.0_install.**

In these versions, the printcap entries for Interleaf cx printers and Dataproducts printers must be edited. For Interleaf cx printers, entries that read

```
:printerleaf= pl2rip    -T 9
```

must be changed to read

```
:printerleaf= pl2rip    -T cx
```

For Dataproducts printers, entries that read

```
:printerleaf= pl2rip    -T 5
```

must be changed to read

```
:printerleaf= pl2rip    -T dp
```

To update /etc/printcap for ops2.5 versions 2.5.75 or greater:

1. Log in as **root** on the file server.

   ☐ **login root** <RETURN>

2. Check the version of **ops2.5** you are running.

   ☐ **ops2.5 -v** <RETURN>

   If the version shown is lower than *2.5.75* you do not need to change **/etc/printcap** and can skip this procedure. If the version shown is *2.5.75* or greater, continue with the next step.

3. Open the printcap file using the **vi** editor.

   ☐ **vi /etc/printcap** <RETURN>

4. Using either the **vi** search command or the arrow keys, locate each occurrence of **-T 9** in the file, place the cursor over the **9**, delete the **9**, and type **cx** in its place.

   ☐ **x**
   This deletes the **9**.

   ☐ **icx** <ESC>
   This inserts **cx**. *You must press the ESCAPE key to exit insertion mode.*

   ✓ Repeat for any other instances of this string.

5. Locate each occurrence of **-T 5** in the file, place the cursor over the **5**, delete the **5**, and type **dp** in its place.

   This deletes the **5**.

   ☐ **idp <ESC>**
   This inserts **dp**. *You must press the ESCAPE key to exit insertion mode.*

   ✓ Repeat for any other instances of this string.

   If you make a mistake while editing **/etc/printcap**, you can type **:q!** to exit the file without saving changes. You can then begin editing again at Step 3.

   ---

6. Write the new **/etc/printcap** file and exit the **vi** editor.

   ☐ **:wq <RETURN>**

Changing Default Printers for Open Documents

This section is relevant only if you have more than one printer, and then only if you want to change the default printer to which individual workstations send open documents.

The default printer for a document that is open on your desktop is determined by the Default Printer entry on the Printer property sheet. The default setting for this entry is either **nearest-cx** or **nearest-dp.**

If you have not already done so in a previous release of the software, you must create the file **nearest-printers.3.0** in the **/private** directory and then add the default printers to that file. Copy this file to the workstation whose Default Printer you want to change. Once you have a copy of this file on a workstation, you can edit it.

We strongly recommend that you use the same default printer for open documents that you use as the default printer for the UNIX commands **lpr, lpq,** and **lprm**. Otherwise, when you print open documents, you will have to type the longer command **lpq -P***printername* to find out if your documents are in the print queue of their default printer.

To change the default printer for printing an open document:

1. Log in as **leafadm** or your designated software administrator either directly or remotely on the workstation whose default printer you want to change.

   ☐ **login** *loginname* **<RETURN>**

2. Change directories.

   ▣ **cd /private <RETURN>**

3. You change the default printer by creating and editing the file **nearest-printers.3.0** using the editor **vi.**

   ▣ **vi nearest-printers.3.0 <RETURN>**

   You should create a file in the following format:

   ```
   cx          cx1
   dp          dp1
   mono        mono1
   iii         iii1
   ```

   (*cx* and *dp* are the types of printers, and *cx1* and *dp1* are the names of the printers.)

4. Insert the type and menu name of the new default printer.

   ▣ **o** *printertype* **<TAB>** *menuname* **<ESC>**

5. If you have more than one type of printer and want to change the default for the other type, repeat *Step 4.* You can leave unused entries as is.

6. Save the new information and exit from **vi.**

   ▣ **:wq <RETURN>**

Unless you are an experienced vi user, the easiest way to correct a mistake you make while editing the file **nearest-printers3.0** file is to exit from the file and begin again with *Step 4.* To exit without saving your changes: press **<ESC>** and then type **:quit! <RETURN>**.

Chapter 3

Adding and Deleting Users

This chapter contains instructions for the following procedures:

- adding a user (which involves adding information to the file **/etc/passwd**)
- creating a home directory for the user
- creating or changing a password for the user
- changing the way a user accesses the publishing software
- deleting a home directory
- deleting a user (deleting the user from **/etc/passwd**)

Multiworkstation systems installed by Interleaf run the UNIX Yellow Pages service, which distributes certain information, including the **/etc/passwd** file, throughout the network. The procedures described in this chapter include steps for updating the Yellow Pages database when you add or delete a user account. If you have a standalone (single workstation) system, you do not need the yellow pages and can skip these steps.

If you have a multiworkstation system and are *not* using the yellow pages, each user account must be created on each workstation that the user might need to access. Likewise, to completely eliminate a user, you must delete that user's account from each workstation that it was installed on.

If you have a new installation, you must use the procedures described here to establish real users on your system. UNIX installed by Interleaf includes one user called **demo**, a publishing software administrator called **leafadm**, and the UNIX system administrator, called **root**. Any users other than these must be added to the system.

If you are upgrading from a previous version of Interleaf software, all existing users remain active. The installation procedures for **ops3.0** do not alter the file **/etc/passwd**.

Adding a User

Before you begin the procedure for adding a user, you should have available the following information:

- the login name selected by the user
- the user's full name
- the identification number you plan to assign this user (we suggest that you begin with a number not less than 21 and increase the user ID number by one as you install each additional account)
- the number for the group to which the user belongs (normally, this is group 20, which is normally called *user* but may be called *other* for some installations)
- the home directory for the user

For a new publishing software installation, we suggest that you add all users at the same time, if possible. You can add other users as needed, but most of the steps in this procedure are the same whether you enter one or 100 users.

You add a user by appending a line to the **/etc/passwd** file. The format is

loginname::userID:groupID:fullname:/**usr**/*servername/loginname:*/**bin/csh**

Choosing a Group

When you add a new user, you must add that user to the appropriate *group* or *groups*. We recommend that you add each new user to group 20, unless that number has already been assigned to a different group prior to installation of the Interleaf publishing software. Be certain that you are using the correct group number before you proceed with the instructions for adding a user.

To list the groups available on your network (or standalone):

- **more /etc/group** <RETURN>

If **user** is listed but is not group 20, use its correct number in the procedure that follows. If the group **other** is group 20, use group 20 for new users. This is an alternative group for publishing software users on some versions of UNIX.

Choosing a Home Directory

We suggest that you set up the **/etc/passwd** file in such a way as to have the home directories of all the users centralized in the directory /**usr**/*servername*, where *servername* stands for the machine name of your file server or standalone. You may need to make this directory. However, if this is an upgrade installation

of the publishing software but not a UNIX upgrade, you will probably want to continue to centralize the home directories of new users in the same directory where you have added them in the past.

Adding leafadm

In most cases, the user **leafadm**, the publishing software administrator, is installed by Interleaf. However, you may need to add this user account.

The group for **leafadm** is normally group 10, and is called **leaf**, or in some cases **staff**. You can choose any user number for **leafadm**, as long as it is unique.

If you are adding the user **leafadm**, substitute /**usr**/*servername*/**ops** or the directory where you loaded the publishing software, for /**usr**/*servername*/*loginname* in the procedure below.

The entry in the password file for **leafadm** should be similar to the following:

```
leafadm::31:10:Interleaf System Administrator:/usr/servername/ops:/bin/csh
```

Other than the different group number and home directory name, the procedure for adding **leafadm** is the same as the procedure for adding any other user.

Adding the User to /etc/passwd

Here is an example of the procedure you use to add a user. In the example, we assume that the user's login name is *jim*, his full name *James Smith*, and his ID number *21*.

To add a user to the system:

- Log in as **root** on the fileserver (or the Yellow Pages master server).
  Usually the fileserver is the Yellow Pages master server.
- **vipw <RETURN>**
  This command opens a copy of the passwd file in the /tmp directory and invokes the vi editor.
- **G**
  The cursor moves to the last line of the file.
- **O**
  A line opens so that you can begin to type.
- **jim::21:20:James Smith:/usr/*servername*/jim:/bin/csh**
  Type a similar line for each user that is being added — one entry per line.
- If there are any blank lines left in the file, use the arrow keys to move the cursor to the blank line.

- With the cursor on that line, type **dd**. (It is not necessary to press **RETURN** to enter this command.)
- **<ESC> :wq <RETURN>**
  Writes the file and exits from the editor.
- **more /etc/passwd <RETURN>**
  Using **more**, *you can review the entry and check its accuracy, but not edit it.*

  If you have a standalone system, the user has been added. For networks running Yellow Pages, add the following steps to make the new user known throughout the network.
- Log into the Yellow Pages master server.
  The Yellow Pages master server is usually your file server.
- **cd /etc/yp <RETURN>**
- **make passwd <RETURN>**

Creating a Home Directory

Placing a home directory *name* in a user's **/etc/passwd** entry does not create that directory. The procedures below describe how you create a home directory in **/usr/***servername*. If you have chosen another location for home directories, substitute the pathname of that directory for **/usr/***servername*.

To place the user's home directory in /usr/*servername*:

- Make sure you are logged in as **root** on the file server (or the Yellow Pages master server).
- **cd /usr/***servername* **<RETURN>**
  If an error message states that there is no such file or directory, create **/usr/**servername *by typing* **mkdir /usr/**servername **<RETURN>**. *Then, you can make sure that you are in* **/usr/**servername *by typing* **cd /usr/**servername **<RETURN>**.
- **pwd <RETURN>**
- **mkdir** *loginname* **<RETURN>**
- **chown** *loginname homedirectory* **<RETURN>**
  This command makes the user the owner of his directory.
- **chgrp user** *homedirectory* **<RETURN>**
  This command puts the directory in the group user. *If this command fails, replace* **user** *with* **other** *and repeat.*
- **chmod 755** *homedirectory* **<RETURN>**
  This command gives the owner permission to read, write, and execute files in this directory while allowing group *members and* others *to read it.*

Completing the Home Directory

Now you are ready to copy the **.login** and **.cshrc** files from **/usr/ops** and to change their ownership and permissions. The **.login** file is invoked whenever the user logs in; the **.cshrc** file is used for such purposes as setting up the user's search path for finding commands and setting the default for the printer command that allows the user to see what jobs are in the queue.

To copy and change the owner, group, and permissions of the .login and .cshrc files:

- **cp** /usr/ops/.{login,cshrc} *homedirectory* <RETURN>
- **cd** *homedirectory* <RETURN>
- **chown** *homedirectory* .{login,cshrc} <RETURN>

  The new user should now be recognized by **ops**.

  To be certain that the user has been successfully added, log in as the new user. A desktop for that user should appear after you log in.
- **login** *loginname* <RETURN>

  If no desktop appears, type the following to open the desktop:
- **ops** <RETURN>

Establishing a Password

Once you add a user, you should establish a password for the user, or have the user open a virtual terminal window and establish one for himself.

To create (or change) a user's password:

- **login** *loginname* <RETURN>

  For a multiworkstation network that uses Yellow Pages:
- **yppasswd** <RETURN>

  For a standalone system or are not using Yellow Pages:

or
- **passwd** <RETURN>

  If there is an existing password, the system responds with the message and the prompt **Old password:**
- *oldpassword* <RETURN>

  After you have entered your current password correctly, you get another prompt asking you to enter the new password.
- *newpassword* <RETURN>

  The final step is to confirm the new password, in case you made a mistake, by typing it. The prompt says **Retype new password:**
- *newpassword* <RETURN>

If you type the new password the same way both times, the new password replaces the old one.

If you do not type the new password exactly the same way both times, the password is not be changed, and you see a message that says **Mismatch - password unchanged**. *If you still want to change your password, you must start from the beginning again.*

Custom Login Procedures

Disabling Direct Desktop Login

When a user holds CTRL and presses **c**, the publishing software login screen appears. On that screen, the user is prompted for a login name. If the user logs in as **root**, he or she enters an operating system shell.

The standard login setup for a publishing software user sends any user other than **root** directly to his or her desktop upon logging in. This is likely to be the most useful situation for anyone whose primary use of the workstation is for publishing software applications on one particular desktop.

Remember, shell access is always possible through the *terminal* icon on the desktop. However, if you want one or more users to access an operating system shell upon logging in, you can disable the desktop login by adding a file called **.ileaf_shell** to that user's home directory. This may be appropriate for users with administrative functions or for whom the publishing software is not the major use of their workstation. For example, you can perform this procedure for *leafadm* if you want that user to enter a shell upon logging in. If you disable direct login for a workstation or the network, you cannot restore direct login for individual users.

To disable direct login to the desktop for a user:

- Make sure you are in the user's home directory.
- **touch .ileaf_shell** <RETURN>

To disable direct login and Interleaf screensaver for a workstation:

- Log in as **root** on the workstation you want to change.
- **cp /etc/getty.sun /etc/getty** <RETURN>
- Repeat for any other workstations you want to change.

To disable direct login (but retain screensaver) throughout the network:

- Log in as **root** on the fileserver you want to change.
- **cd /usr/local/bin/ileaf** <RETURN>
- **mv login login.off** <RETURN>

Changing a User's Default ops

By default, users with the default login execute the file **/usr/local/bin/ops**. If you want one or more users to execute a different version of the publishing software or to open a desktop other than their own, you can insert these instructions in a file called **.ileaf_ops** in that user's home directory. For example, if you maintain the previous version of the software and want a user to access it, you can create the **.ileaf_ops** file, open it using the **vi** editor, and then insert the pathname **/usr/local/bin/ops2.5**. Once this file is saved, the user runs **ops2.5** immediately upon logging in.

If the command you insert in a user's **.ileaf_ops** fails, a shell is executed. The user can then reach his or her desktop by typing **ops**.

To change a user's default ops:

- ✓ Make sure you are in the user's home directory.
- ☐ **vi .ileaf_ops <RETURN>**
  An empty file opens on your display. Use the **vi** *command for inserting text to enter the name of the alternate ops.*
- ☐ **i** *pathname* **<ESC>**
  Be sure to type the full pathname of the command you want executed when this user logs in. Then save the file and exit from vi.
- ☐ **:wq <RETURN>**
- ☐ **chown** *loginname* **.ileaf_ops <RETURN>**

Deleting a User

You will, from time to time, want to delete users from your system. This is actually a two-part process. First, you must decide whether to delete the *home directory* for the particular user on his or her workstation; second, you must actually delete the user from the file **/etc/passwd** on each workstation where that user was listed.

Removing a Home Directory

In some cases, you may not want to keep the home directory of a former user. You might want to delete the home directory to make more disk space available for other users. However, the former user's desktop might contain work that someone else will continue to use. You can, and often will, simply copy the directories and documents you want from the *former* user's desktop to a *current* user's desktop.

If the former user's desktop documents and directories concern a very specific application, you might want to keep them separate instead of copying them to an existing desktop. In this case, the former user's home directory is left intact, and

others access the desktop in it by using the **ops** command with the **-d** option. The fact that you are removing that user's login does not prevent access to his or her home directory by others. However, you will no longer be able to use the tilde character as a shortcut (*~loginname*) for access to the directory when the user account is deleted.

The command used to delete a home directory should be used with extreme caution. If not used in precisely the way shown, it can permanently destroy other directories on the file system.

To delete a home directory:

- ✔ **login root** <RETURN>
- ☐ **rm -r** *~loginname* <RETURN>
  This command removes the home directory of the user you plan to delete.
- ✔ Log out of **root** (unless you are continuing with other administrative activities).

Deleting a User Account

Deleting a user account requires editing of the file **/etc/passwd**. This process is not affected by the presence or absence of a home directory for that user.

To delete a user from the system:

- ✔ Log in on the file server as **root**.
  This allows you to enter the **/etc/passwd** *file using the visual editor* **vi**.
- ☐ **vipw** <RETURN>
  A listing of each user on your system appears.
- ☐ Use the arrow keys to position the cursor at the beginning of the line containing the entry for the user you want to delete. Or search for the login name of that user by typing a slash (/) and then the login name of the user.
- ☐ With the cursor on that line, type **dd**. (It is not necessary to press **RETURN** to enter this command).
  The line containing the entry for the former user disappears. If you mistakenly deleted the wrong user, type **u** *(for* **u**ndo*) to bring back the deleted line.*

- **:wq <RETURN>**

  This command allows you to write *the new /etc/passwd file, which no longer includes the deleted user, and to exit (*quit*) from the vi editor.*

  If you have a standalone system, the user has been added, and you can log out of root. For networks running the yellow pages, add the following steps to make the new user known throughout the network.

- Log into the Yellow Pages master server.

  The Yellow Pages master server is usually your file server.

- **cd /etc/yp <RETURN>**

- **make passwd <RETURN>**

- Log out of **root.**