4 Installation

First make a harddisk with the proper system and other software on one of the client computers. You should keep at least 5 Mb diskspace free for SimpleWave to be able to replace busy files. Put the System Folder on the first level (root). To make sure each extension creates the files it needs (like MacTCP), you need to startup with this system at least once before installing SimpleWave.

WARNING
If you have installed virus protection software you must make sure SimpleWave is allowed to create and modify files.

Store original on file-server

Copy the entire contents of the client harddisk onto a file-server volume and put it inside a folder which is shared. You should not use the system for the client computers also as the system for the file-server.

Because you can't create a folder called “Desktop Folder” on the server, you can use the name “DT Folder” instead. The Desktop Folder is an invisible folder which holds all items shown on the desktop. Because its name is reserved by the system software, SimpleWave knows about the name “DT Folder” and updates the real Desktop Folder on the local disk with the contents of the “DT Folder” in the master folder.

With the examples below I will show you how I have set up the configuration to use SimpleWave.

Determining the source filepath

Below is the view you would get when looking on the server computer after the master copies for the client computers are copied to it:

he “Classic II Disk” folder contains the full harddisk contents (including the system folder) for the Classic II computers. The “LC475 Disk” folder has the same for the LC475 computers. So, the path to the disk for the LC 475 is:

Server Disk:Students Server:Master Disks:LC475 Disk:

But to users logging onto the server the path is:

Students Server:Master Disks:LC475 Disk:

I will refer to this folder containing the original files and folders as being the “master folder”. We will use this last path to tell SimpleWave were to find the master folder. This will be covered later. You can forget about the first path since that is not the path as seen by any user with normal privileges to the server.

The master folder can contain all the files and folders you like as long as the folder levels don't go too deep. I think with twenty or more folder levels SimpleWave may get into trouble.

Setting up access to the file-server

You can allow SimpleWave to use guest access to the server or you can create a special user account (say, “SimpleWave”) with or without a password. I suggest using a password. Even though it is stored unencrypted inside SimpleWave, it still makes it a little bit more difficult for users to log-in when they shouldn't.

Using a special user account allows you, the administrator, to differentiate between normal guest log-ins and SimpleWave automatically logging in. In addition you can disable SimpleWave by disabling privileges to the server for this username.

Next set the access to the folders. SimpleWave needs at least “See Folders” AND “See Files” access. If you leave one of these or both off, the folder will be skipped and the copy on the client disk will not be checked and updated. If you set up a special user account I suggest you only give it access to the master folder(s).

Remember to disable the Change Password privilege on the file-server. Also set the maximum number of connections to the number you want. If SimpleWave cannot connect however, it will simply retry again at the next startup.

If you don't want to have a separate dedicated file-server computer for use with SimpleWave then set the client computer up to mount the same volume at startup, with the username and password the user enters. You can have the user connect to the server by marking the checkbox in the window which is shown when you connect to the file-server through the Chooser. Then, at every startup, the user is asked to enter his/her name and password.
If you do, make sure the master folder path and privileges still allow SimpleWave to see the master folder and its contents.

You can use a welcome message on the server because it is supressed by SimpleWave when mounting the volume containing the master folders.
If your file-server has the option enabled to “disable log-in after x attempts”, then you should reconsider this. Annoyed users may discover this and disable all copies of SimpleWave simply by entering an incorrect password for the SimpleWave username. Which is a lot easier than the real password…

Configuring SimpleWave

WARNING
Do not end a field of the resources listed below with the return or enter key. This will cause an invalid path or name to be stored.

Once the master copy has been placed on the server, and the access to the server has been setup with the path to the master folder known, you need to use ResEdit to put the configurations into a copy of SimpleWave. To do so, launch ResEdit and open a copy of the SimpleWave system extension you have on your startup harddisk.

ith the current version of SimpleWave there are three resource types you can modify:
• DFSL (locations resource);
• DFSP (preferences resource).
• DFSS (settings resource)
You shouldn't change any of the other resources.

The resources of type 'DFSL' list the locations and names of the disks and folders needed (called the “locations resource”). The 'DFSP' resources contain several preferences (“preferences resource”) to change the behaviour of SimpleWave, some of which you can modify but others not. Adding one or more 'DFSS' resources is optional. These resources contain the values to which some settings on the local computer must be set. For more information on the Settings Resource, see the chapter “Advanced Installation”. The other two resources are discussed below.

Setting the folder locations

Open the 'DFSL' icon and add a resource. Each computer type can be identified* by a machine type number. For example, a Classic II has value 23, and a LC 475 the value 89. When SimpleWave runs, it looks at the computer type it is running on and tries to get the configuration for that type by looking at the resource ID with the same number. If no resource is available by that number it takes resource ID number 0 (which must always be present!). Change the resource ID of the resource you created to a value equal to the machine type value for the Macintosh type it is supposed to be used on.

This scheme allows you to have one copy of SimpleWave around which behaves differently for each machine type since a B/W Classic II needs different (system) software than a color LC 475 which may have QuickTime installed. Also, the harddisk sizes are often different between the machine types but equal within each group of computers, i.e. 40 Mb for the internal disk of the (early series) Classic II compared to 80 Mb for a LC 475.

* this value is obtained from the Gestalt Manager (part of the System Software) using the gestaltMachineType selector ('mach'). See the old Inside Macintosh VI for an incomplete list of machine types and values. Or buy the new Inside Macintosh Operating System Utilities. The Gestalt Selectors List (maintained by myself) gives the full list, email me for a copy. The “Machine Types” chapter of this manual contains the relevant section of the Gestalt Selectors List. Another alternative is to use a utility like Gestalt! (by Roland Mänsson) to get the number for your computers.

Below is a locations resource displayed as you would see it when opened with ResEdit:

The name of the resource is optional but giving it the name of the computer type makes life easier!)

Now I will describe each of the fields of the locations resource:

• Zone
This is the name of the zone where the file-server with the master folder is located. For a network without zones use an asterisk. You can also use an asterisk when the server is located in the same zone as the client computers are, although the full name is fine also.

• Server
This is the name of the file-server which holds the master folders.

• Username
Contains the username to use to log-in to the file-server. It can be empty to use guest access to the server.

• Password
This should contain the password belonging to the username listed above it. Sorry, it is unencrypted so keep access to the server for the assigned user to a minimum. If no password is required then leave this field empty.

• Source Path

A sample path to the master folder was presented earlier in this manual. This path on the file-server volume is entered with this field and must consist of at least the volume name. Make sure it ends with a colon otherwise SimpleWave thinks you're talking about a file and not a folder.

• Destination Path
This field must contain the path to the location (slave folder?) where the software on the client is located. Usually this is the

Student Disk:

This will cause SimpleWave to set the volume name of the startup disk to this name whenever it has been changed. You can also use an empty path to use the startup disk without renaming the disk.

• Skip Folder
If this field isn't empty, it must contain a path to a folder which is skipped during normal checking, that is, the folder is not synchronized to any corresponding folder on the master disk. Files in this folder are only checked to see how long they have been resident there. If that time exceeds a preset delay time, then the file is deleted. The delay time can be set with the preference resource (see below). If the folder(s) don't exist they are created for you.

With the example above the folder name 'desk' is used to specify the Desktop Folder, you can do the same to get to the folder on the desktop without actually knowing the folder name. (Don't forget the trailing colon!)

• System Folder Name
If the name of the active system folder has been changed, SimpleWave would normally trash it because it isn't present by that name in the master folder. However, SimpleWave recognizes the active system folder and will simply rename it rather than trashing it. The system folder is always renamed to the name specified in this field of the locations resource.
The system folder is then also moved to the start of the destination path and will be subject to SimpleWave's actions. No colon is needed since it is not a path but a foldername.

• VM Storage filename
Because the file for the Virtual Memory storage isn't marked as “invisible” SimpleWave would normally try to trash it. Therefore, SimpleWave needs to know the name of this file to ignore it. The name of that file must be entered here. No colon is needed since it is not a path but a filename.
If you use an English system the name is “VM Storage”, but with localized system software versions the name may be different. If you leave this field empty the English name is used.

• Desktop Folder on Server
Since you can't create your own folder called “Desktop Folder” (which is an invisible folder holding the items shown on the desktop) one needs to use a different name in the master folder.

If you have a folder at the first level of the master folder with the name stored in this field, it will be remapped to the real Desktop Folder on the startup disk. Hence, every file and folder inside the folder, with the specified name, in the master folder is put on the Desktop by SimpleWave.
If you leave this field empty the name “DT Folder“ is used by default. No colon is needed since it is not a path but a foldername.

Setting the preferences

Now that we have discussed the locations resource, we go to the preferences resource. Below is the SimpleWave preferences resource as seen with ResEdit (split into smaller pieces for easier display). The values displayed in the pictures are the default settings. You can add your own resources by duplicating (copy & paste) the “General” resource, or by simply adding a resource but make sure that all (reserved) values are entered correctly. In this way, you can add more preference resources for different machine types because the numbering scheme of the resources is similar to the one used with the locations resource. But you are advised to use only one resource with ID 0.

• Sleep Value
Always 15 for computers connected by Ethernet, and 30 when connected by LocalTalk/Phonenet.

• Copybuffer size
Always 30720. Reserved, do not change.

• Time out
This is the value for the time-out of the messages in seconds. The shortest time

possible is 30 seconds. Or, to disable the time-out altogether use zero (0).

• Skip Folder delay
This field contains a positive number indicating the number of days each file is allowed to stay in the Skip Folder before it is deleted. If the field contains zero, then SimpleWave will only delete files from the Skip Folder in order to make room for other necessary files from the master folder or to reduce the size of the Skip Folder to less than the maximum allowed (see below).

• Skip Folder MaxSize
The maximum size of the Skip Folder can be set with this field. If the total size of all items in the Skip Folder exceeds the size entered with this field (in KiloBytes) then the oldest items are deleted until the total size is below this maximum size.
This option can be disabled by using the value zero (0).

• Force Restart
When this field is set to “True” a restart will be forced upon the user when a file was added to, updated or removed from a system-related folder. Otherwise the user only will be notified that a restart is needed.

• Unmount All when Done
If set to “True” SimpleWave unmounts all shared disks from the same file-server containing the master disk, as well as the master disk itself.

• Quit when Done
With this option set to “True” SimpleWave will quit, and release the memory it occupies after the initial run of checking the startup disk. Otherwise it keeps running waiting for events which may be sent to it by a future administrative program.

• Empty Trash
When this field is set to “True” the trash for the startup disk will be emptied when

checking of the disk starts. If it is set to “False” this will be skipped.

• Empty PrintMonitor Documents Folder
If this is set to “True” the contents of the PrintMonitor Documents folder is deleted when SimpleWave runs for the first time, just after startup. This causes print jobs started by previous users, but never finished, to be stopped.

• Stealth Mode
With this option set to “True” the user will not see the usual messages indicating that SimpleWave is working in the background. The messages reporting a serious error or asking to restart are not supressed.
This option can be used if you decide not to inform the users that SimpleWave is active in the background. Many users may not even notice the slowdown. Further, if users are not aware that SimpleWave is present, there will not be as much temptation to try to illegally remove it.
This option is overridden by the “Trace Messages” option below. If the Trace Messages are on the Stealth Mode is turned off.
• Trace Messages
If this field is “True” the trace messages will be displayed while SimpleWave checks the startup disk. These describe what action was performed or what went wrong. The trace messages are only in English and don't time-out. The other, normal, messages will also not time-out when this field is set to “True”.

• Log Messages
Reserved, do not change.

• Skip Folder Always Trash APPLs
When this field is set to “True” all applications inside the Skip Folder are deleted regardless of how long they have been in this folder. This allows you to prevent the users from filling the Skip Folder with games and other such applications.

• Skip Folder Gets All Stray
When this field is set to “True” files and folders which are found on the the startup disk but not in the master folder, are moved into the Skip Folder (if set with the locations resource described above). However, files found somewhere inside the System Folder are always deleted and never moved to the Skip Folder.

If this field is set to “False”, or when no Skip Folder is specified, the stray files and folders are deleted.

• Ignore Copy-Prot. For Install
If this field is set to “True” copy-protected files will be copied from the file-server if they are not present on the startup disk. However, if the file is already present on the startup disk it will not be updated while the file on the server is copy-protected.

• No Copy Alert For non-APPLs
If it is set to “True” the user will not be notified if SimpleWave would like to update a non-application file when its original on the file-server is copy-protected. Using this you can set a file (i.e. preferences file) copy protected on the server and not bother the user with annoying messages. These messages will still appear for applications. This allows for files which are specific to only one of the client computers, like preferences files (i.e. MacTCP prefs) to be left alone.

• Server Locked = Copy-Prot.
When you are using a fileserver which does not implement copy-protection (like System 7 FileSharing), this option is for you. If your fileserver does implement the copy-protection you should set this field to “False” and skip this paragraph.

If this field is set to “True” then SimpleWave treats each locked file on the file-server as if it is copy-protected thus providing all features of SimpleWave for copy-protected files. If this field is “True” then everywhere you read “copy-protected” in this manual you should read “locked”. Before turning this option on, you should search the master folder on the file-server for files which are unintentionally already locked (use “Find…” in the Finder) and unlock them first.

• Check Daily
SimpleWave normally checks the startup disk after every startup (provided the file-server is available, etc.!) but, when this field is set to “True” instead the startup disk is only checked once a day (the first startup of the day). In any case, SimpleWave always empties the trash and the PrintMonitor folder each time the computer is started, if this is set with the preferences.

Putting SimpleWave in place

When you are finished adding additional resources for other computer types, close the SimpleWave extension and quit ResEdit. Then put the SimpleWave extension into the “Extensions Folder” inside the System Folder in the master folder on the file-server you prepared earlier.

The next step is to prepare the client computers. Two items must be transferred to each computer. The SimpleWave extension (in the Extensions folder) and the SimpleWave Key (loose in the System Folder). Unregistered users must use the SimpleWave Demo Key. For more information see the “Key Files” chapter of this manual.
It is best to set up only one or two clients first, and then when you are satisfied that SimpleWave is acting as desired, to distribute the two files to the rest of the computers in your configuration. You must also give each computer a unique name using the Sharing Setup control panel.

Because SimpleWave is not designed to transfer a whole harddisk quickly to the client computers you should copy the master folder (which now contains SimpleWave) manually to each client computer once. But if you are in no hurry SimpleWave can build the disk from scratch, just put a minimal system with the AppleShare Chooser extension, the SimpleWave Key file and the configured SimpleWave on the client disk and restart (you may need additional software depending on the type of network). Rather than using the “Minimal Install” option of the Apple installer software, you should create a minimal system for this purpose by taking a copy of the System folder from the master folder and stripping it of all unessential elements. Copy this onto each client, either through the network, an external harddisk, or multiple floppies.

Then restart the client computer and from then on SimpleWave will take care of the maintenance.

Modifying the master folder

When you want to remove or add files and folders to all clients you can manipulate the master folder on the file-server directly. When doing so, first be sure that no clients are

currently undergoing a disk check with SimpleWave, since changes while checking is in progress could cause accidental deletion of essential files on the client.

When you want to make a change on all of the clients without knowing exactly in which file(s) the settings are stored, set up one client first. When finished, move all of the changed files or whole folders (system folder?) to the Master Folder on the server for propagation to the other computers. If you are installing a new application, be sure to run the application under normal conditions first so that any ancillary files, such as preference files are properly created.
With some experience you quickly know what to copy. For example when the LaserWriter printer is changed to a different one you only need to copy the “LaserWriter 8” and “LaserWriter 8 Prefs” files.

Make sure the total size of the master folder does not exceed the size of the harddisk of the client computers.

Removing SimpleWave

SimpleWave has a built-in defense against unauthorized removal. You must therefore use the “SimpleWave Remove” tool which is included in the SimpleWave distribution package. For more information, see the SimpleWave Remove section of the Tools chapter of this manual.