



Mac OS X Server Migration Guide

Includes detailed instructions for upgrading to Mac OS X Server
from AppleShare IP, Macintosh Manager, and Mac OS X Server 1.2

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How to Use This Guide

Welcome to the *Mac OS X Server Migration Guide*. This document explains the steps you need to take to successfully migrate to Mac OS X Server version 10.0 and Macintosh Manager version 2.0 from

- Mac OS X Server version 1.2
- earlier versions of Macintosh Manager or At Ease for Workgroups version 5.0
- AppleShare IP version 6.2 or later

Note: Make sure you read the appropriate sections of this guide before you install the Mac OS X Server software on a Macintosh that's already on your network, or before you add a new Mac OS X Server to your network. In some cases, there are critical steps you need to take before installation or migration.

About This Document

This guide contains the following chapters:

- Chapter 1, "Migrating the Previous Version of Mac OS X Server," details the steps to follow if you have the previous version of Mac OS X Server and want to migrate to the new version.
- Chapter 2, "Migrating Macintosh Manager or At Ease for Workgroups," explains the steps involved in migrating existing Macintosh Manager or At Ease for Workgroups users, workgroups, and documents to Mac OS X Server.
- Chapter 3, "Migrating AppleShare IP," provides information about migrating existing information from an AppleShare IP server to Mac OS X Server.

Migrating the Previous Version of Mac OS X Server

Use the information in this chapter to migrate from the previous version of Mac OS X Server (version 1.2) to the new version of Mac OS X Server (version 10.0).

Important If you are using Macintosh Manager with Mac OS X Server version 1.2 and want to migrate to Mac OS X Server version 10.0, see Chapter 2, “Migrating Macintosh Manager or At Ease for Workgroups” on page 17.

This chapter provides information for two scenarios:

- *Migrating in place:* You are installing the new Mac OS X Server software on a computer that is running the earlier version of Mac OS X Server, and you want to migrate information from the current server for reuse on the upgraded server. (See the next page.)
- *Migrating to a new server:* You are adding a new server to your network with the new version of Mac OS X Server already installed. You have another computer on the network running the previous version of Mac OS X Server, and you want to migrate information from the older server to the new server. (See page 14.)

Migrating in Place

Mac OS X Server (version 10.0) uses a different file format from that used in the previous version. For this reason, you must follow these basic steps to migrate in place to the new version:

- 1 Copy all current data files to another hard disk or partition. This includes Web and QuickTime Streaming Server files. (For information about migrating Macintosh Manager, see Chapter 2.)
- 2 Make a note of any current share points and privileges you want to re-establish on the new server.
- 3 Export user and group information to another partition using a command line utility.
- 4 Install the new version of Mac OS X Server, reformatting the server hard disk in the Mac OS Extended (HFS Plus) format.
- 5 Import the user and group information you exported.
- 6 Copy data files to the new server.
- 7 Set up share points and privileges on the new server.
- 8 Test the new server.

Here are detailed instructions for each of these steps.

Step 1: Copy all current data

Since migrating in place requires reformatting the server hard disk, first copy to another disk or partition all of the data files on your current server that you want to reuse on the new server, including

- user data files
- Web (Apache) and WebObjects information, located in `/Local/Library/WebServer`.
Note: Do not copy the file “Apache.config.” If you migrate this file to the new Mac OS X Server, you may not be able to administer the Web server. Also, see the Java Converter documentation on the WebObjects 5 Developer CD for information about migrating WebObjects applications to the new Mac OS X Server.
- QuickTime Streaming Server (QTSS) files, located in `/Local/Library/QuickTimeStreaming`. Also, if you want to migrate the relay file, copy the “qtssrelay.conf” file in `/etc`.

Note: For additional information about migrating Quick Time Streaming Server, consult the support page at www.info.apple.com/qtss

NetBoot images from Mac OS X Server version 1.2 cannot migrate to Mac OS X Server version 10.0. Recreate your old images using the default startup images provided with Mac OS X Server version 10.0.

Important To migrate Macintosh Manager information from Mac OS X Server version 1.2 to Mac OS X Server version 10.0, see Chapter 2 on page 17.

Step 2: Note current share points and privileges

If your current server has share points and privileges you want to recreate on the new server, make a note in writing of these share points and privileges.

Step 3: Export user and group information

Mac OS X Server (version 10.0) comes with a tool that you can run from the command line interface to export user and group information.

The tool, called `Mac_OS_X_Server_1.2_Export_Tool`, is located on the Mac OS X Server CD in the Tools folder.

When you run the tool, you must save the exported information in a file with the suffix “.xml” on a partition or disk other than the server partition.

To export user and group information:

- 1 Insert the Mac OS X Server CD in the CD-ROM drive.
- 2 Log in to the root account.
- 3 Open the Terminal application.
- 4 Navigate to the Tools folder on the Mac OS X Server CD by entering the following:

```
cd "/Mac OS X Server/Welcome to Mac OS X Server/Tools/"
```
- 5 Run the tool and save the results in an XML file on a partition other than the server partition. (See “Export Tool Options” on page 12.) For example:

```
./Mac_OS_X_Server_1.2_Export_Tool > /partition/exportfile.xml
```

where “partition” is the name of the partition where you want to save the file and “exportfile” is a filename of your choice.

- 6 Check the partition where you saved the export file and make sure it is there.

Export Tool Options

You can limit the user and group accounts exported to a specific range. To do this, use the `-u` and `-g` command line arguments. For example, to export only user accounts that have a user ID in the range of 100 to 199, and to export all groups, use the following command:

```
./Mac_OS_X_Server_1.2_Export_Tool -u 100,199 > exported-ug.xml
```

To export all user accounts, but limit the exported groups to those that have a group ID in the range of 200 to 500, use this command:

```
./Mac_OS_X_Server_1.2_Export_Tool -g 200,500 > exported-ug.xml
```

When specifying an ID range, the range must contain two numbers separated by a comma, and must not contain any spaces.

Note: The export tool remaps users in primary group 80 to primary group 20 for security reasons. To override this behavior, use the `-x` command line option.

Step 4: Install Mac OS X Server

Now install the new version of Mac OS X Server, following the directions on the fold-out card *Getting Started With Mac OS X Server*. Select the current server partition as the location to install the new server software, select the option “Erase destination,” and choose Mac OS Extended (HFS Plus) as the file format.

Step 5: Import user and group information

To import the user and group information you exported in step 3:

- 1 Open Server Admin.
- 2 Click Users & Groups and choose Import.
- 3 Navigate to the exported XML file, select it, and then click Choose.

Step 6: Copy data files to the new server

Copy the data files and other information for your previous server from the partition where you stored them to the new server.

- Place the Web files in /Library/WebServer.

Important For Web server files, do not copy the file “Apache.conf” to your new Mac OS X Server. If you do, you may not be able to administer the Web server.

- Place the QuickTime Streaming Server files in /Library/QuickTimeStreaming. Place the old relay file “qtssrelay.conf” in /etc/streaming/ and rename it “streamingrelay.conf”.

Note: For additional information about migrating QuickTime Streaming Server, consult the support page at www.info.apple.com/info.apple.com/support/pages.taf?product=qtss

- Place user data files in appropriate locations.

Step 7: Set up share points and privileges

Recreate the share points and privileges you noted in step 2. For instructions, check the *Mac OS X Server Administrator's Guide* or the onscreen Help.

Step 8: Test the new server

Test the new server by opening Server Admin and examining the users and groups and other content you migrated from the earlier version of Mac OS X Server.

Migrating to a New Server

To migrate from an existing Mac OS X Server to a different computer with the new Mac OS X Server already installed, you need to do the following:

- 1 On the older Mac OS X Server, use a command line utility to export user and group information to an XML file.
- 2 Create one or more tar archive files containing this XML file and a copy of all current data files you want to migrate, including Web server and QuickTime Streaming Server files. (For information on migrating Macintosh Manager information, see Chapter 2 on page 17.)
- 3 Make a note of any current share points and privileges you want to re-establish on the new server.
- 4 Use FTP service to copy the tar files to the new Mac OS X Server.
- 5 On the new Mac OS X Server, extract the files from the tar archives.
- 6 Import the user and group information you exported.
- 7 Relocate the data files.
- 8 Set up share points and privileges.
- 9 Test the new server.

Here are more detailed instructions for each of these steps.

Step 1: Export user and group information

Mac OS X Server (version 10.0) comes with a tool that you can run from the command line interface to export user and group information.

The tool, called `Mac_OS_X_Server_1.2_Export_Tool`, is located on the Mac OS X Server CD in the Tools folder.

When you run the tool, you must save the exported information in a file with a “.xml” suffix.

To export user and group information:

- 1 Insert the Mac OS X Server CD in the CD-ROM drive of the old Mac OS X Server.
- 2 Log in to the Root account on the old server and open the Terminal application.
- 3 Navigate to the Tools folder on the Mac OS X Server CD by typing the following:

```
cd "/Mac OS X Server/Welcome to Mac OS X Server/Tools/"
```

- 4 Run the tool and save the results in an XML file in a known location. (See “Export Tool Options” below.) For example:

```
./Mac_OS_X_Server_1.2_Export_Tool > /location/exportfile.xml
```

where “location” is an appropriate location and “exportfile” is a filename of your choice.

- 5 Check the location where you saved the export file and make sure it is there.

Export Tool Options

You can limit the user and group accounts exported to a specific range. To do this, use the `-u` and `-g` command line arguments. For example, to export only user accounts that have a user ID in the range of 100 to 199, and to export all groups, use the following command:

```
./Mac_OS_X_Server_1.2_Export_Tool -u 100,199 > exported-ug.xml
```

To export all user accounts, but limit the exported groups to those that have a group ID in the range of 200 to 500, use this command:

```
./Mac_OS_X_Server_1.2_Export_Tool -g 200,500 > exported-ug.xml
```

When specifying an ID range, the range must contain two numbers separated by a comma, and must not contain any spaces.

Note: The export tool remaps users in primary group 80 to primary group 20 for security reasons. To override this behavior, use the `-x` command line option.

Step 2: Create tar archive files

Now create one or more tar files that include

- any user data files you want to migrate
- Web (Apache) and WebObjects information, located in `/Local/Library/WebServer`.
Note: Do not include the file “Apache.config” in the tar file. If you migrate this file to the new Mac OS X Server, you may not be able to administer the Web server. Also, see the Java Converter documentation on the WebObjects 5 Developer CD for information about migrating WebObjects applications to the new Mac OS X Server.
- QuickTime Streaming Server (QTSS) files, located in `/Local/Library/QuickTimeStreaming`.

Note: NetBoot images from Mac OS X Server version 1.2 cannot migrate to Mac OS X Server version 10.0. Recreate your old images using the default startup images provided with Mac OS X Server version 10.0.

Important To migrate Macintosh Manager information from Mac OS X Server version 1.2 to Mac OS X Server version 10.0, see Chapter 2 on page 17.

Step 3: Note current share points and privileges

If your old server has share points and privileges you want to recreate on the new server, make a note in writing of these share points and privileges.

Step 4: Use FTP service to copy the tar files to the new server

- 1 Start up FTP service on the new Mac OS X Server. (Open Server Admin, click File & Print, click FTP, and choose Start FTP Service.)
- 2 Set up sharing for a folder on the new Mac OS X Server where you can place the files from the old server.
- 3 On the old Mac OS X Server, use FTP service to copy the tar files to the new Mac OS X Server.

Step 5: Extract the files from the tar archive

On the new Mac OS X Server, you can double-click a tar file to extract its contents.

Step 6: Import user and group information

To import the user and group information you exported in step 1:

- 1 Open Server Admin.
- 2 Click Users & Groups and choose Import.
- 3 Navigate to the exported XML file, select it, and then click Choose.

Step 7: Relocate the data files

- Place the Web files in /Library/WebServer.

Important For Web server files, do not copy the file “Apache.conf” to your new Mac OS X Server. If you do, you may not be able to administer the Web server.

- Place the QuickTime Streaming Server files in /Library/QuickTimeStreaming.

Note: For additional information about migrating QuickTime Streaming Server, consult the support page at www.info.apple.com/info.apple.com/support/pages.taf?product=qtss.

- Place user data files in appropriate locations.

Step 8: Set up share points and privileges

Recreate the share points and privileges for any user data files you migrated. For instructions, check the *Mac OS X Server Administrator's Guide* for Mac OS X Server or the onscreen Help.

Step 9: Test the new server

Test the new server by opening Server Admin and examining the users and groups and other content you migrated from the previous Mac OS X Server.

Migrating Macintosh Manager or At Ease for Workgroups

This chapter provides the information you need to migrate Macintosh Manager information or At Ease for Workgroups 5.0 information to Mac OS X Server version 10.0 running Macintosh Manager 2.0.

Note: You cannot migrate versions of At Ease for Workgroups earlier than version 5.0.

About Macintosh Manager Migration

In the new version of Macintosh Manager (version 2.0), the account information for a Macintosh Manager user is maintained in the Mac OS X Server NetInfo database. (In earlier versions of Macintosh Manager, account information for Macintosh Manager users was maintained separately from the AppleShare IP or Mac OS X Server user database.)

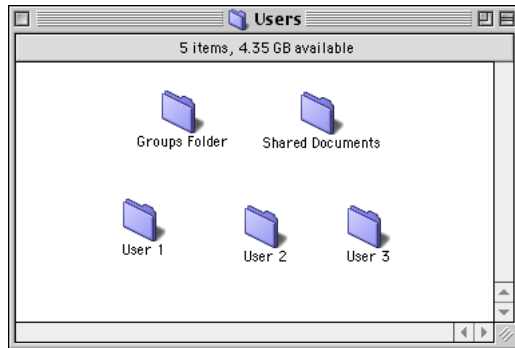
A user account in Mac OS X Server also specifies the location of the user's home directory. This is the location where Macintosh Manager 2.0 stores personal user documents and user-specific settings such as Apple menu items or preferences. (In earlier versions of Macintosh Manager, these documents and settings were kept on the volume designated as a workgroup's document storage volume. This meant that users who belonged to different workgroups with different storage volumes could have distinct sets of personal documents and settings stored on different volumes.)

The following is a more detailed description of the location of user and workgroup files in earlier versions of Macintosh Manager as compared to Macintosh Manager 2.0.

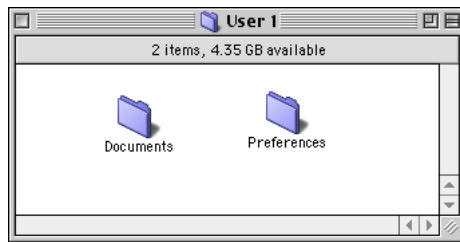
File Locations in Macintosh Manager 1.3

When you set up a workgroup in Macintosh Manager 1.3, you can designate the location for the documents created by workgroup members. This may be the same server running Macintosh Manager or a different server.

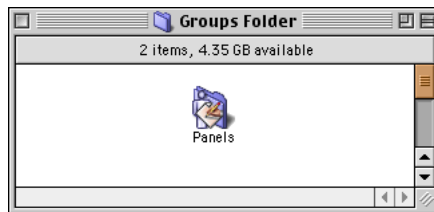
A workgroup storage volume has a folder called Users, which contains individual user folders and a Groups Folder:



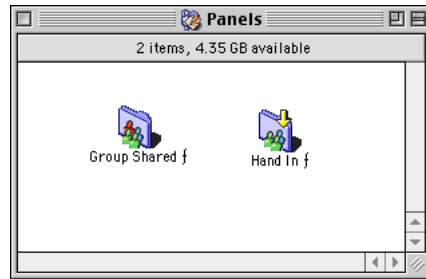
Inside each user folder is a Documents folder—where personal documents are stored—and other user-specific folders such as Preferences:



Inside the Groups Folder is a folder for each workgroup that uses the volume for storage.



Inside an individual workgroup folder are a Group Shared folder, for shared documents, and a Hand In folder, which acts as a “drop box:”



File Locations in Macintosh Manager 2.0

User accounts in Macintosh Manager 2.0 are based on the Mac OS X Server user accounts. Each user account has a designated home directory, which is set in the Advanced pane of the user settings window. (To access this pane, click the General tab in Server Admin and then use the Users & Groups module.)



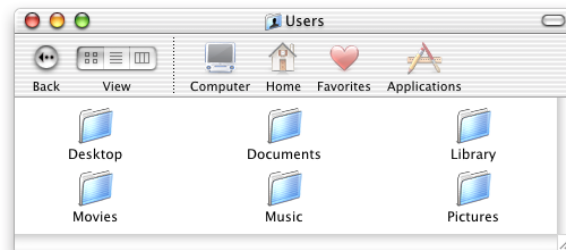
By default, the user's home directory is in the Users folder at the root of the partition where Mac OS X Server is running. (You can set this location to a different Mac OS X share point or volume.)



Inside the Users folder are the individual user folders:



Inside each user folder is the Documents folder, where Macintosh Manager 2.0 stores the user's personal documents. (The Library folder contains user-specific information such as Apple menu items and preferences):



In Macintosh Manager 2.0, workgroup shared files or hand-in files are stored on the volume designated as the workgroup storage volume.

Two-Stage Migration Process

Migrating Macintosh Manager or At Ease for Workgroups is a two-stage process:

- 1 Copy the old Macintosh Manager (or At Ease for Workgroups) information to a new Macintosh Manager share point on the Mac OS X Server. Relocate certain folders in a folder called Old MM Items.
- 2 Open the Macintosh Manager 2.0 administration program. The program automatically detects the presence of the legacy information and migrates users to the NetInfo database on the Mac OS X Server. A home directory is created for each user. The program then copies user documents and preferences from their old locations to the new home directories on the Mac OS X Server.

Script Settings

To ensure successful migration, the following three script settings must match:

- The default script for logging in and using the Macintosh Manager 2.0 administration program. (For Mac OS X Server, use the International pane of System Preferences to change this setting. On Mac OS 9, the script setting is determined by the localization of the current system.)
- The script setting for the old Macintosh Manager or At Ease for Workgroups database. This setting is determined by the localization of the system the database was created on.
- The script setting in the “Encoding for older clients” pop-up menu in the Apple file service configuration settings on the Mac OS X Server. (To access this setting, click the Access tab in the Configure Apple File Service window in the Apple file service module of Server Admin.) Do not change this setting after migration.

Two Migration Scenarios

The remaining pages in this chapter describe two basic migration scenarios:

- Migrating Macintosh Manager or At Ease for Workgroups 5.0 from an AppleShare IP server. (See page 22.)
- Migrating Macintosh Manager from an earlier version of Mac OS X Server. (See page 28.)

Migrating Macintosh Manager or At Ease for Workgroups From an AppleShare IP Server

When you migrate Macintosh Manager or At Ease for Workgroups 5.0 from an AppleShare IP server, you can migrate in place or migrate remotely.

- *Migrate in place:* You're installing Mac OS X Server on the same partition where AppleShare IP and the old version of the Macintosh Manager or At Ease for Workgroups database are installed.
- *Migrate remotely:* You're adding a new Mac OS X Server to your network. You can migrate Macintosh Manager or At Ease for Workgroups remotely over the network and leave your AppleShare IP server untouched.

Follow these steps to migrate Macintosh Manager in place or remotely from an AppleShare IP server:

Step 1: Install Mac OS X Server (optional - in place only)

If you are migrating in place, you need to install Mac OS X Server on the partition where AppleShare IP and Macintosh Manager or At Ease for Workgroups 5.0 are installed. Follow the directions on the fold-out card *Getting Started With Mac OS X Server*. Do not choose to start any services when setup is complete.

Note these requirements:

- The AppleShare IP server must be running ASIP version 6.2 or later with Mac OS 8.6 or later.
- The server must have 4 GB of free disk space. (Note that for a beige Power Macintosh G3, this space must be available in the first 8 GB of disk space.)
- The partition you install on must be formatted in Mac OS Extended (HFS Plus) format. You can check this using the Devices and Volumes tab in Apple System Profiler. If your partition is formatted in HFS, rather than HFS Plus, you must back up the partition, reformat it in HFS Plus, and then restore the partition data before installing Mac OS X Server.

Note: If the partition is RAID formatted, check with the vendor for compatibility with Mac OS X.

- Mac OS 9.1 must be installed on the AppleShare IP server if you want to support the Classic environment on the Mac OS X Server. (You can provide the Classic environment later by starting up from a Mac OS 9.1 CD and installing Mac OS 9.1 on the same partition as Mac OS X Server. Note, however, that it is not possible to run the AppleShare IP server or the older version of Macintosh Manager or At Ease for Workgroups in the Classic environment. Also note that you should only install Mac OS 9.1 if you don't need to run AppleShare IP 6.3 or earlier after restarting from an older version of the Mac OS installed on the partition.)

Step 2: Log in to the Mac OS X Server as an administrator and shut down all services

If necessary, use the Server Admin program to shut down all Mac OS X Server services.

Step 3: Run the NetInfo Domain Setup tool (optional)

Make sure the NetInfo domains for your system are configured according to your design. Use the NetInfo Domain Setup tool to do this.

Step 4: Set up the server's IP configuration

Set the final IP configuration on the Mac OS X Server, including TCP and DNS settings. (Changing the DNS or IP settings after migration may prevent user access to home directories.)

Step 5: Create a new Macintosh Manager share point

- 1 If it doesn't already exist, create a new folder in /Library called Macintosh Manager.
- 2 Open the Macintosh Manager folder and create a new folder inside it called Old MM Items. You should now have this folder structure: /Library/Macintosh Manager/Old MM Items.

Step 6: Mount the AppleShare IP server on the Mac OS X Server (optional - remote only)

If you are migrating remotely:

- 1 Go to the remote AppleShare IP server and shut down Macintosh Manager service. Use the Extensions Manager to disable the Macintosh Manager Server extension. Then restart the server.
- 2 On the Mac OS X Server, choose Connect to Server from the Go menu.
- 3 Enter the IP address or DNS name of the AppleShare IP server.
- 4 Log in to the AppleShare IP server as an administrator.
- 5 Mount the volume where the Macintosh Manager or At Ease for Workgroups database is located.

Step 7: Navigate to the old folder

Use the Finder to navigate to the old Macintosh Manager folder, or to the folder containing the folder called At Ease Items WG 5.0.

Note: At Ease Items can be shared in any share point on the server. Macintosh Manager always uses a share point named Macintosh Manager.

Step 8: Copy the information

Copy all the information in the old folder to the new Macintosh Manager folder in /Library.

Step 9: Drag a specified folder into the Old MM Items folder

Open the Macintosh Manager folder in /Library and drag a specified folder from there into the Old MM Items folder you created in step 5. The folder you drag depends on which system you're migrating from:

For Macintosh Manager 1.1–1.x:

- Folder name: Multi-User Items

For Macintosh Manager 1.0–1.0.x:

- Folder name: Macintosh Manager Items

For At Ease for Workgroups 5.0:

- Folder name: At Ease Items WG 5.0

This completes the first stage of migration.

Step 10: Start up Apple file and Macintosh Manager services

- 1 Open the Server Admin program and log in as an administrator.
- 2 Start up Apple file service and Macintosh Manager service.

Step 11: Check the disk space available for migration

When you start the second stage of migrating Macintosh Manager or At Ease for Workgroups, existing user documents and settings are automatically copied from the designated workgroup storage volume or volumes to a user's home directory. (Workgroup shared documents and hand-in documents are not copied.)

Before this copy process takes place, you should verify that there is sufficient disk space on the Mac OS X Server where the user home directories reside. Follow these steps:

- 1 Estimate the number of megabytes of data in the existing Macintosh Manager or At Ease for Workgroups user folders. (If you have more than one server for workgroup storage, you need to check each volume.)
 - a Check the size of the Users folder.
 - b Check the size of the Groups Folder inside the Users folder.
 - c Subtract the second number from the first. (Note that any folders for deleted users are not copied during migration.)
 - d If required, add the results from the various volumes in your system.

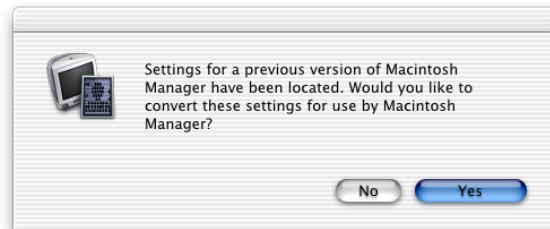
- 2 Verify that there is sufficient room on the volume that contains the home directories to complete the copy operation. After migrating, check the log files to see which user documents, if any, have not been copied to the new server.

Step 12: Open the administration program for Macintosh Manager 2.0

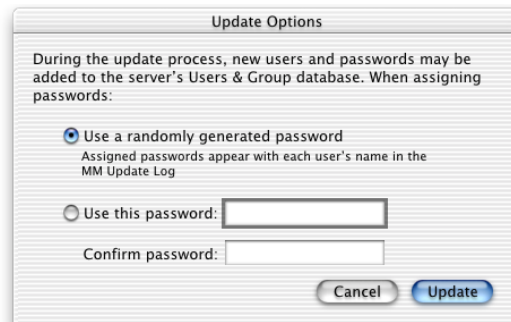
The administration program for Macintosh Manager 2.0 is located in /Applications/Utilities/.

Important You must run the Macintosh Manager administration program on a remote computer. That is, you cannot run it on the Mac OS X Server itself. If the remote computer is running Mac OS X, set the Energy Saver settings in System Preferences to “Never.”

- 1 Open the Macintosh Manager administration program on a remote computer and log in as an administrator.
- 2 A dialog asks if you want to launch the second stage of the migration process. Click Yes.



- 3 During migration, new user passwords must be created. Choose an option and then click Update.



You can choose one of these:

- “Use a randomly generated password” creates a unique password for each user. The password appears in the log file.
- “Use this password” lets you select a password that is assigned to all users.

The administration program displays a progress bar during the migration process.



User documents and settings are copied to the user's home directory. Note these points about the copy process:

- *If two user documents with identical filenames are found on separate volumes*, both documents are copied to the home directory and the name of one of the documents is modified.
- *If two sets of user settings are stored on separate volumes*, the settings with the most recent date are copied to the home directory.

During migration, the program may find that a user from the Macintosh Manager or At Ease for Workgroups database already exists in the Mac OS X Server users database on the server. If it does, the program does one of the following:

- *If login for the user is enabled and the user has a home directory*, the program assumes it is the same user and copies the user documents to the home directory.
- *If login for the user is enabled and the user does not have a home directory*, the program creates a new home directory in /Users and copies the user documents to it.
- *If login for the user is disabled and the user has a home directory*, the program enables login for the user, sets a password, and copies user documents to the home directory.
- *If login for the user is disabled and the user does not have a home directory*, the program enables login for the user, sets a password, creates a home directory, and copies user documents to the new home directory.

If a user already exists in a parent domain on a different server, the program does not enable login for a user with login disabled or create a home directory if none exists. User documents and settings are copied to the home directory if user login is enabled and if the volume with the home directory can be mounted.

Step 13: Check the log file

Once migration is complete, check the log file, which is called “MMMigrationLog.” If you used the Macintosh Manager administration program from a computer with Mac OS 9 installed, the file is at the root of the startup volume. If you used the administration program from a computer with Mac OS X installed, the file is in the home directory of the account you used to log in.

Based on the contents of the log file, you may need to

- set a password for a user
- create a home directory for a user
- clean up documents for a user when more than one workgroup volume document was copied to a home directory

Note that the document copy process may fail if a volume that stores user documents is not available at the time of migration.

Step 14: Check the new server

Here are some points to check on the new system:

- Check the settings for a sample of migrated Macintosh Manager or At Ease for Workgroups users.
- Check the workgroup volume settings for the migrated workgroups.
- Log in as various Macintosh Manager 2.0 users from a client computer.

Using the AppleShare IP Migration Utility

After migrating Macintosh Manager from an AppleShare IP server, you may want to use the AppleShare IP Migration utility to migrate certain AppleShare IP information. For example, you might need to do this if

- not all users are specified in the Macintosh Manager database. That is, you want to migrate additional users that are specified in the AppleShare IP database.
- you use any AppleShare IP share points from Macintosh Manager. For example, certain share points (such as hard disks or CDs) are mounted when a Macintosh Manager user logs in.
- you want to migrate mail users from AppleShare IP to Mac OS X Server

Directions for using the AppleShare IP Migration utility are provided in Chapter 3, “Migrating AppleShare IP,” on page 31.

Important If you use the AppleShare IP Migration utility to migrate share points and privileges, make sure the Macintosh Manager folder in /Library is still the Macintosh Manager share point.

Migrating Macintosh Manager From Mac OS X Server 1.2

Earlier versions of Macintosh Manager run on Mac OS X Server version 1.2. In this case, Mac OS X Server runs on a partition formatted in UFS format and Macintosh Manager runs on a separate partition formatted in Mac OS Extended (HFS Plus) format.

To migrate Macintosh Manager to Mac OS X Server version 10.0, two scenarios are possible:

- *Migrate in place*: Install Mac OS X Server on the UFS partition and then migrate Macintosh Manager. (See below.)
- *Migrate remotely*: Add a new computer with Mac OS X Server 10.0 already installed to your network. Migrate Macintosh Manager from the old Mac OS X Server over the network. (See page 29.)

Migrating in Place

To migrate Macintosh Manager in place:

Step 1: Install Mac OS X Server

Follow the instructions in Chapter 1 for “Migrating in Place” starting on page 10.

Step 2: Migrate Macintosh Manager

Follow the directions in this chapter starting with step 2 on page 23. Continue through step 14 on page 27.

Migrating Remotely

When you add a new computer with Mac OS X Server version 10.0 already installed to your network, you can migrate Macintosh Manager remotely.

Step 1: Prepare the old Mac OS X Server

On the existing Mac OS X Server (version 1.2) make sure that Macintosh Manager is shut down and that Apple file service is running.

Step 2: Prepare the new Mac OS X Server

- 1 Set the final IP configuration on the Mac OS X Server, including TCP and DNS settings. (Changing the DNS or IP settings after migration may prevent user access to home directories.)
- 2 Make sure the NetInfo domains for your system are configured according to your design. Use the NetInfo Domain Setup tool to do this.
- 3 Turn off all services on the new Mac OS X Server.

Step 3: Mount the old Mac OS X Server on the new Mac OS X Server

- 1 Choose Connect to Server from the Go menu.
- 2 Enter the IP address or DNS name of the old Mac OS X Server.
- 3 Log in to the old Mac OS X Server as an administrator.
- 4 Mount the HFS Plus partition where Macintosh Manager is installed.

Step 4: Migrate Macintosh Manager

Follow the instructions in this chapter starting with step 5 on page 23. Skip step 6. Continue through step 14 on page 27.

Migrating AppleShare IP

Follow the steps in this chapter to migrate information from an AppleShare IP server to a Mac OS X Server version 10.0.

Important The AppleShare IP server you want to migrate must be running ASIP version 6.2 or later with Mac OS 8.6 or later.

This chapter provides information for two scenarios:

- *Migrating in place:* You are installing the new Mac OS X Server software on a computer that is running AppleShare IP, and you want to migrate information from the current ASIP server to the Mac OS X Server. (See the next page.)
- *Migrating remotely:* You are adding a new computer with Mac OS X Server already installed to your network, which also includes an existing AppleShare IP server. You want to migrate information from the ASIP server to the new Mac OS X Server. (See page 41.)

About the AppleShare IP Migration Utility

A key component in both migration scenarios is the AppleShare IP Migration utility. This utility lets you migrate the existing AppleShare IP users and groups, share points and privileges, and mail database to Mac OS X Server.

The Migration utility does not migrate Macintosh Manager information from your existing ASIP server to Mac OS X Server. For information about Macintosh Manager migration, see Chapter 2 on page 17.

The Migration utility does not migrate ASIP Web server data to Mac OS X Server. It is possible, however, to do this “by hand,” as described in the following instructions.

The Migration utility supports partial migration of ASIP server information over the network to a Mac OS X Server. (See the section “Migrating Remotely” on page 41.)

Migrating in Place

You can migrate your existing AppleShare IP users and groups, share points and privileges, and mail database to Mac OS X Server on the same computer.

Requirements

The disk or partition on which you install Mac OS X Server must meet these requirements:

- 4 GB of free disk space. (Note that for a beige Power Macintosh G3, this space must be available in the first 8 GB of disk space.)
- The partition you install on must be formatted in Mac OS Extended (HFS Plus) format. You can check this using the Devices and Volumes tab in Apple System Profiler. If your partition is formatted in HFS, rather than HFS Plus, you must back up the partition, reformat it in HFS Plus, and then restore the contents before installing Mac OS X Server.
Note: If the partition is RAID formatted, check with the vendor for compatibility with Mac OS X.
- Mac OS 9.1 must be installed on the AppleShare IP server if you want to support the Classic environment on the Mac OS X Server. (You can provide the Classic environment later by starting up from a Mac OS 9.1 CD and installing Mac OS 9.1 on the same partition as Mac OS X Server. Note that it is not possible to run the AppleShare IP server in the Classic environment. Also note that you should only install Mac OS 9.1 if you don't need to run AppleShare IP 6.3 or earlier after restarting from an older version of the Mac OS installed on the partition.)

About Primary and Secondary Servers

If you have a primary AppleShare IP server and one or more secondary AppleShare IP servers on your network and you want to migrate all these servers to Mac OS X Server, note these points:

- You should synchronize all secondary servers with the primary server before starting migration.
- You cannot use the Migration utility to merge user data from multiple AppleShare IP servers to a single Mac OS X Server. However, you may manually copy web or user data from a secondary server using Steps 9 and 10 on page 48 in the “Migrating Remotely” section.
- You should migrate the primary server first, and then the secondary servers.

Step 1: Make a full server backup of your current ASIP server

Use your current backup program.

Step 2: Provide Internet aliases (if necessary)

During migration, the Migration utility uses the Internet alias in the AppleShare IP user account to create the required “short name” for the new user account in Mac OS X Server. If no Internet alias exists, the Migration utility generates a short name.

Before running the Migration utility, you should create an Internet alias for any AppleShare IP user account that does not have one. To do this, use AppleShare IP Admin (in ASIP 6.3) or Web and File Admin (in ASIP 6.2).

Note: If you are planning to migrate both a primary ASIP server and a secondary ASIP server, you should first provide the Internet aliases on the primary server. Then synchronize the secondary server with the primary server.

Step 3: Check for reserved user and group names

Certain user and group names in Mac OS X Server are reserved. If one of these reserved names is in use on the AppleShare IP server, you may want to modify it before running the Migration utility. In Mac OS X Server, the following names are reserved:

Name	Type	ID
DisUsersDontTouch	Group	-7
nobody	Group	-2
Unprivileged User	User	-2
nogroup	Group	-1
System Administrator	Administrator	0
wheel	Group	0
daemon	Group	1
System Services	User	1
kmem	Group	2
sys	Group	3
tty	Group	4
operator	Group	5
mail	Group	6
bin	Group	7
staff	Group	20
guest	Group	31
utmp	Group	45
uucp	Group	66
dialer	Group	68
network	Group	69
World Wide Web Server	User	70
www	Group	70
admin	Group	80
unknown	Group	99
Unknown User	User	99

Step 4: Install Mac OS X Server

Install Mac OS X Server, following the directions on the fold-out card *Getting Started With Mac OS X Server*. Select the disk or partition where the AppleShare IP server is installed as the location to install the new version of the server. (Make sure the option “Erase destination” is not checked.) At the end of the Setup Assistant, choose not to start any Mac OS X Server services when the computer restarts.

Step 5: Run the NetInfo Domain Setup tool (optional)

Before you run the AppleShare IP Migration utility, make sure the NetInfo domains for your network are configured according to your design. Use the NetInfo Domain Setup tool to do this. Note that the NetInfo domain, or, if there are multiple domains, the highest-level domain on the computer to which you are migrating should be a parent domain if you want to allow for automounting of user home directories.

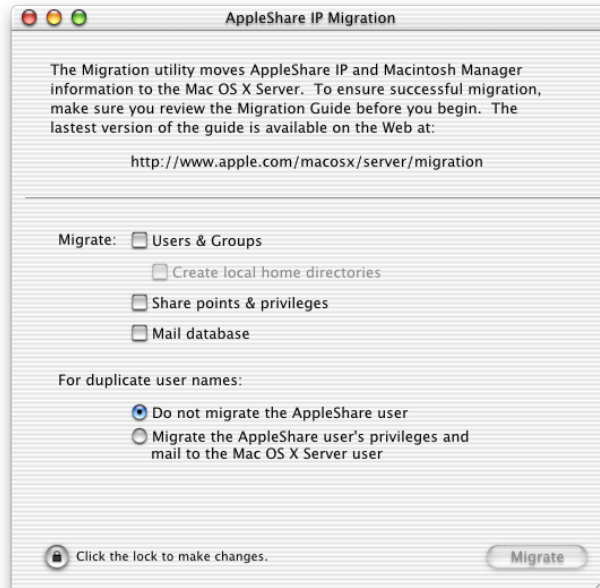
Step 6: Set up the server's IP configuration

Set the final IP configuration on the Mac OS X Server, including TCP and DNS settings. (Changing the server's DNS or IP settings after migration may prevent user access to home directories.)

Step 7: Run the AppleShare IP Migration utility

The utility is located in /Applications/Utilities/.

- 1 Double-click the AppleShare IP Migration utility icon to open the program.
- 2 Click the lock in the lower-left corner.



- 3 Enter the name and password for an administrator account and click OK.



- 4 Select the migration options. (For information on migrating Macintosh Manager, see Chapter 2 on page 17.)

If you choose to migrate users and groups, you have the option of creating local home directories for the users you are migrating. The users are migrated to the highest-level NetInfo domain on the server where you are running the Migration utility.

You can migrate users and groups without migrating share points and privileges or the mail database, but you cannot migrate share points and privileges or the mail database without migrating users and groups.

When migrating users and groups, the Migration utility checks to see if a duplicate user exists in a parent domain on a different computer. To determine what happens when a duplicate user name occurs, choose an option:

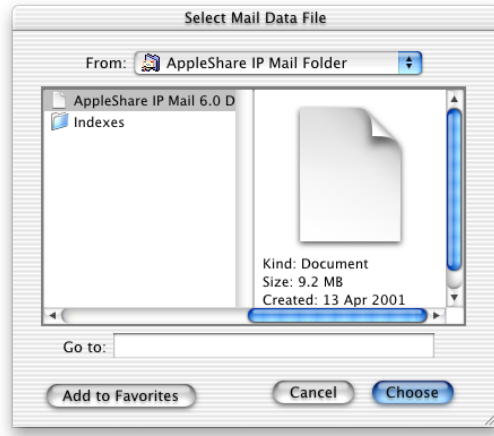
- *Do not migrate the AppleShare User:* The ASIP data is reassigned to the administrator user and the mail inbox is converted to a text file. (Choose this option if you are migrating a primary server.)
- *Migrate the AppleShare user's privileges and mail:* The ASIP data is assigned to the existing user in the parent NetInfo domain and the ASIP mail is made available to this user. (Choose this option if you are migrating a secondary server.)

Note: If a duplicate group exists in a parent domain on another computer, the membership of this group is not updated.

- 5 Click Migrate.
- 6 If you are migrating users and groups, locate the file “Users & Groups Data File” and click Choose. (The default location is the Preferences folder in the System Folder.)



- 7 If you are migrating the mail database, locate the file “AppleShare IP Mail 6.0 Data” and click Choose.

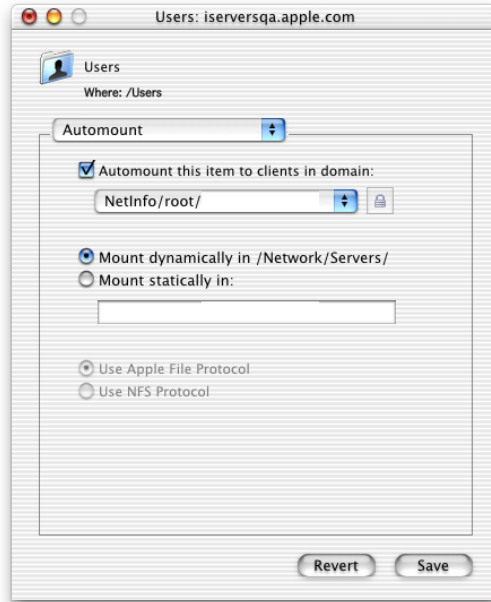


During migration, the utility displays a progress bar and status information.

- 8 When migration is complete, click Quit.

Step 8: If you created local home directories in a parent domain, enable automounting

- 1 Open Server Admin and log in as an administrator.
- 2 Click the Sharing icon in the General tab. (You will be prompted to start Apple file services if it is not already running.)
- 3 Open the Disks & Share Points menu and chose the Users share point.
- 4 Click Privileges.



- 5 Choose the NetInfo domain in which you want the share point to be mounted.
- 6 Click the lock and enter an administrator name and password for the chosen domain.
- 7 Choose the “Mount dynamically” option and click Save.

Step 9: Check the migration

- 1 Examine the log files, which are located in `/Library/Logs/Migration`. They include
 - `UserGroupsActions.log`: steps taken during user and group migration
 - `UserGroupsExceptions.log`: steps taken or not taken during user and group migration that may require additional administrative attention. For example, the Exceptions log records the detection of duplicate users and the assignment of data to the administrator or to an existing user.
 - `PrivilegesActions.log`: steps taken during privileges migration
 - `PrivilegesExceptions.log`: steps taken or not taken during privileges migration that may require additional administrative attention
 - `MailActions.log`: steps taken during mail migration
 - `MailExceptions.log`: steps taken or not taken during mail migration that may require additional administrative attention
- 2 Examine a sample of users and groups to see if the settings were migrated correctly.
- 3 Examine a sample of share points and privileges to see if the settings were migrated correctly.
- 4 Examine a sample of migrated mail accounts.

Step 10: Copy Web data to the new server (optional)

If you have Web content from the AppleShare IP server that you want to move to Mac OS X Server, follow these instructions.

For Static HTML Content

- 1 On the Mac OS X Server, delete the contents of `/Library/Webserver/Documents`.
- 2 Copy the static Web pages from the ASIP server to `/Library/Webserver/Documents`.

For Dynamic HTML Content

In general, you can achieve superior performance generating dynamic HTML pages by using the Apache Web server included in Mac OS X Server. You should first consider recoding your existing CGIs using the native Mac OS X Server Web server capabilities.

It is possible, however, to run AppleShare IP CGIs based on AppleScript on the Mac OS X Server. To do this, you need to have the Classic environment available on the Mac OS X Server. You also need to run the ACGI Enabler utility to set up Apache support for these legacy CGIs. This utility is located in `/Applications/Utilities`.

Migrating Remotely

You can use the AppleShare IP Migration utility to migrate users and groups and mail information from an AppleShare IP server to a Mac OS X Server over a network connection.

It is not possible to remotely migrate share points and privileges. (You can, however, copy files to the Mac OS X Server and then recreate share points and privileges.)

Note: Mac OS 9.1 must be installed on the Mac OS X Server if you want to use the Classic environment. (You can provide the Classic environment later by starting up from a Mac OS 9.1 CD and installing Mac OS 9.1 on the same partition as Mac OS X Server.)

About Primary and Secondary Servers

If you have a primary AppleShare IP server and one or more secondary AppleShare IP servers on your network and you want to migrate all these servers to Mac OS X Server, note these points:

- You should synchronize all secondary servers with the primary server before starting migration.
- You cannot use the Migration utility to merge user data from multiple AppleShare IP servers to a single Mac OS X Server. However, you may manually copy web or user data from a secondary server using Steps 9 and 10 on page 48.
- You should migrate the primary server first, and then the secondary servers.

Step 1: Provide Internet aliases (if necessary)

During migration, the Migration utility uses the Internet alias in the AppleShare IP user account to create the required “short name” for the new user account in Mac OS X Server. If no Internet alias exists, the Migration utility generates a short name.

Before running the Migration utility, you should create an Internet alias for any AppleShare IP user account that does not have one. To do this, use AppleShare IP Admin (in ASIP 6.3) or Web and File Admin (in ASIP 6.2).

Note: If you are planning to migrate both a primary ASIP server and a secondary ASIP server, you should first provide the Internet aliases on the primary server. Then synchronize the secondary server with the primary server.

Step 2: Check for reserved user and group names

Certain user and group names in Mac OS X Server are reserved. If one of these reserved names is in use on the AppleShare IP server, you may want to modify it before running the Migration utility. The following names are reserved in Mac OS X Server:

Name	Type	ID
DisUsersDontTouch	Group	-7
nobody	Group	-2
Unprivileged User	User	-2
nogroup	Group	-1
System Administrator	Administrator	0
wheel	Group	0
daemon	Group	1
System Services	User	1
kmem	Group	2
sys	Group	3
tty	Group	4
operator	Group	5
mail	Group	6
bin	Group	7
staff	Group	20
guest	Group	31
utmp	Group	45
uucp	Group	66
dialer	Group	68
network	Group	69
World Wide Web Server	User	70
www	Group	70
admin	Group	80
unknown	Group	99
Unknown User	User	99

Step 3: Run the NetInfo Domain Setup tool (optional)

Before you run the AppleShare IP Migration utility, make sure the NetInfo domains for your network are configured according to your design. Use the NetInfo Domain Setup tool to do this. Note that the NetInfo domain, or, if there are multiple domains, the highest-level domain on the computer to which you are migrating should be a parent domain if you want to allow for automounting of user home directories.

Step 4: Set up IP configuration for the Mac OS X Server

Set the final IP configuration on the Mac OS X Server, including TCP and DNS settings. (Changing the server's DNS or IP settings after migration may prevent user access to home directories.)

Step 5: Mount the AppleShare IP server on the Mac OS X Server

- 1** On the remote AppleShare IP server, disconnect all users and administrators and shut down the mail server.
- 2** On the Mac OS X Server, log in as an administrator and turn off all services.
- 3** Choose Connect to Server from the Go menu.
- 4** Enter the IP address or DNS name of the AppleShare IP server.
- 5** Log in to the AppleShare IP server as an administrator.
- 6** Mount the startup volume for the AppleShare IP server.

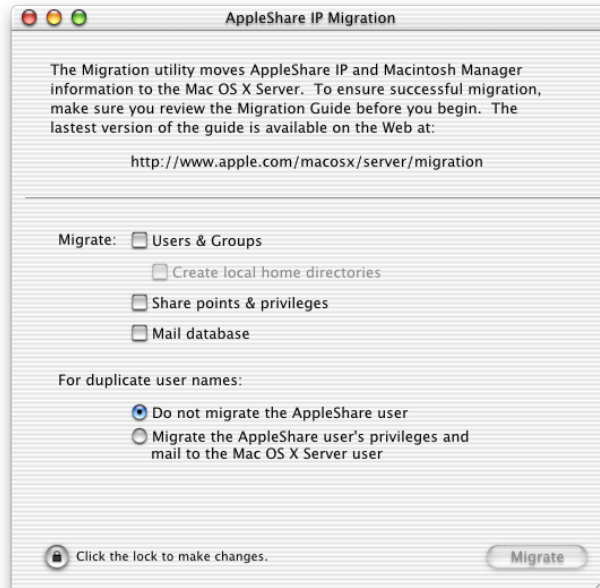
Step 6: Copy the “Users & Groups Data File” and the mail database

- 1** Navigate to the “Users and Groups Data File” on the remote AppleShare IP server. (The default location is the Preferences folder in the System Folder.)
- 2** Copy it to a local partition on the Mac OS X Server.
- 3** Navigate to the “AppleShare IP Mail 6.0 Data” file and copy it to the same local partition on the Mac OS X Server.

Step 7: Run the AppleShare IP Migration utility

The utility is located in /Applications/Utilities/.

- 1 Double-click the AppleShare IP Migration utility icon to open the program.
- 2 Click the lock in the lower-left corner.



- 3 Enter the name and password for an administrator account and click OK.



- 4 Select migration options. (For information on migrating Macintosh Manager, see Chapter 2 on page 17.)

Note: Do not choose to migrate share points and privileges. You can't use this option when migrating remotely.

If you choose to migrate users and groups, you have the option of creating local home directories for the users you are migrating. The users are migrated to the highest-level NetInfo domain on the server where you are running the Migration utility.

You can migrate users and groups without migrating the mail database, but you cannot migrate the mail database without migrating users and groups.

When migrating users and groups, the Migration utility checks to see if a duplicate user exists in a parent domain on a different computer. To determine what happens when a duplicate user name occurs, choose an option:

- *Do not migrate the AppleShare User:* The ASIP data is reassigned to the administrator user and the mail inbox is converted to a text file. (Choose this option if you are migrating a primary server.)
- *Migrate the AppleShare user's privileges and mail:* The ASIP data is assigned to the existing user in the parent NetInfo domain and the ASIP mail is made available to this user. (Choose this option if you are migrating a secondary server.)

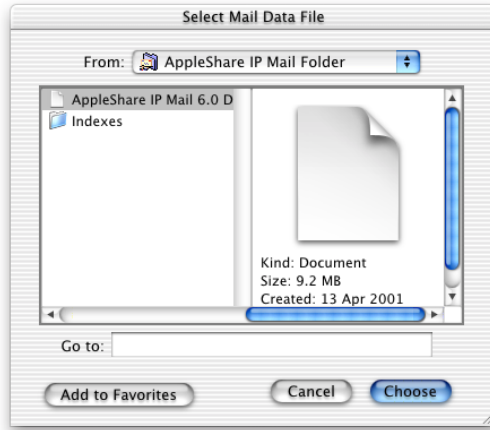
Note: If a duplicate group exists in a parent domain on another computer, the membership of this group is not updated.

- 5 Click Migrate.

- 6 If you are migrating users and groups, locate the file “Users & Groups Data File” on the local partition and click Choose.



- 7 If you are migrating the mail database, locate the file “AppleShare IP Mail 6.0 Data” on the local partition and click Choose.



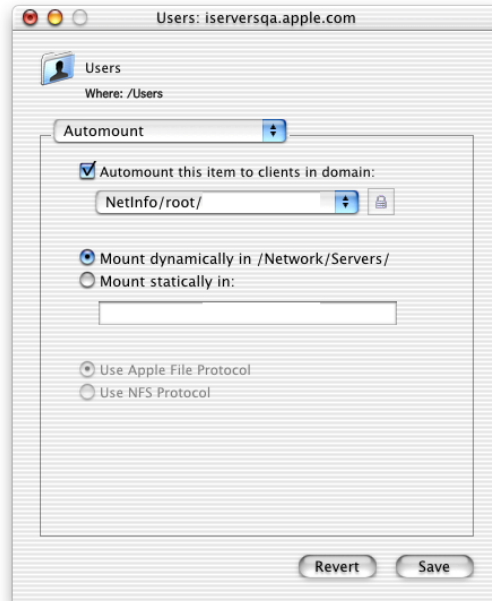
During migration, the utility displays a progress bar and status information.

- 8 When migration is complete, click Quit.

Step 8: If you created local home directories in a parent domain, enable automounting

- 1 Open Server Admin and log in as an administrator.

- 2 Click the Sharing icon in the General tab. (You will be prompted to start Apple file services if it is not already running.)
- 3 Open the Disks & Share Points menu and choose the Users share point.
- 4 Click Privileges.



- 5 Choose the NetInfo domain in which you want the share point to be mounted.
- 6 Click the lock and enter an administrator name and password for the chosen domain.
- 7 Choose the "Mount dynamically" option and click Save.

Step 9: Check the migration

- 1 Examine the log files, which are located in /Library/Logs/Migration. They include
 - UserGroupsActions.log: steps taken during user and group migration
 - UserGroupsExceptions.log: steps taken or not taken during user and group migration that may require additional administrative attention. For example, the Exceptions log records the detection of duplicate users and the assignment of data to the administrator or to an existing user.
 - MailActions.log: steps taken during mail migration
 - MailExceptions.log: steps taken or not taken during mail migration that may require additional administrative attention
- 2 Examine a sample of users and groups to see if the settings were migrated correctly.
- 3 Examine a sample of migrated mail accounts.

Step 10: Copy Web data to the new server (optional)

If you have Web content from the AppleShare IP server that you want to move to Mac OS X Server, follow these instructions.

For Static HTML Content

- 1 On the Mac OS X Server, delete the contents of /Library/Webserver/Documents.
- 2 Copy the static Web pages from the ASIP server to /Library/Webserver/Documents.

For Dynamic HTML Content

In general, you can achieve superior performance generating dynamic HTML pages by using the Apache Web server included in Mac OS X Server. You should first consider recoding your existing CGIs using the native Mac OS X Server Web server capabilities.

It is possible, however, to run AppleShare IP CGIs based on AppleScript on the Mac OS X Server. To do this, you need to have the Classic environment available on the Mac OS X Server. You also need to run the ACGI Enabler utility to set up Apache support for these legacy CGIs. This utility is located in /Applications/Utilities.

Step 11: Copy user data files to the new server (optional)

You may want to copy user data files from the AppleShare IP server to the Mac OS X Server.

- 1 Make a note of existing share points and privileges on the AppleShare IP server that you want to recreate on the Mac OS X Server.
- 2 Mount the appropriate AppleShare IP server volumes on the Mac OS X Server.
- 3 Copy the files to the Mac OS X Server.
- 4 Use Server Admin to recreate the share points and privileges on the Mac OS X Server. See the *Mac OS X Server Administrator's Guide* or the onscreen Help for instructions.