Installing Your Software

The following information is intended to get you up and running with Shake 4.1 as quickly as possible and covers the following topics:

Important: Be sure to review the *Before You Install Shake 4.1* document on the Shake 4.1 installation disc). For the latest information on Shake, go to the Shake website at http://www.apple.com/shake.

About the Contents of Your Shake Box

Your Shake box contains the following software and documentation.

Installation Disc

The Shake 4.1 installation disc: This is your installation disc. Use this CD to install the Shake and Apple Qmaster software and documentation.

Printed Documentation

The following printed instructional material is included in your Shake box:

- *Shake 4 User Manual:* Provides information on new features, the Shake user interface, image input and output, the compositing nodes and Node View, file formats and footage, keying, color correction and color space, using masks and transforms, working with the Curve Editor and the Time View, painting and rotoscoping tools, using filters, customizing Shake and making macros, and rendering.
- *Shake 4 Tutorials:* Provides step-by-step instructions for general Shake workflow and the user interface, basic color correction, using the Z channel, using local variables with expressions, color correction on premultiplied elements, using Keylight and Primatte, tracking, how to make a macro, and how to create a simple clean plate.

  Note: Tutorial media for use with the *Shake 4 Tutorials* is included on the *Shake 4.1* installation CD, in the *Tutorial_Media* folder.

PDF Documentation

The following PDF documentation is located in the Documentation folder on the Shake 4.1 installation disc.

- *Shake 4 User Manual*
- *Shake 4 Tutorials*
- *Shake 4 New Features*
- *Installing Your Software*
- *Apple Qmaster User Manual*
- *Truelight User Manual*

About Onscreen Help

Onscreen help (available in the Help menu) allows you to access information onscreen while you are working in the Shake or Apple Qmaster application. Onscreen user manuals are available here, as well as links to other documentation and related Apple websites.

Onscreen Documentation

The *Shake 4 User Manual, Shake 4 Tutorials, Shake 4 New Features,* and *Late-Breaking News* are accessible via the Help menu of the Shake application. The *Apple Qmaster User Manual* and Apple Qmaster *Late-Breaking News* are available in the Help menu of the Apple Qmaster application. Documentation for the bundled Truelight features is included in the Documentation folder of the Shake 4.1 installation disc. In Shake, there is also a Help button located in the Parameters tab of each function. This button opens an HTML page that describes the function. An additional HTML page that contains information on customizing Shake can also be accessed from the Help menu. These HTML pages (the function pages and the customizing section) include the same content as the *Shake 4 User Manual.*

To access Shake onscreen help:

- In Shake, choose Shake User Manual, New Features, Tutorials, or another option from the Shake Help menu.

The onscreen PDFs are interactive and contain links for easy navigation. To quickly find a specific topic, use the bookmarks or the interactive index.

Note: The Shake documentation files are also available in two other places:

- In the Documentation folder of the Shake 4.1 disk image that you downloaded.
- In the /Applications/Shake/doc folder

To access onscreen help for a specific Shake function:

1. In the Node View, click the right side of the node to load its parameters.
2. In the Parameters tab, click the Help button.

Information about the currently selected node appears in your web browser.

Note: In the printed user manual, function information is included in its associated chapters.

To access the onscreen help for customizing Shake:

- Choose Help > Customizing Shake.

Note: In the *Shake 4 User Manual*, extensive information on customizing is located in Chapter 14, "Customizing Shake."

To access Apple Qmaster onscreen help:

- In Apple Qmaster, choose Help > Apple Qmaster Help; in Apple Qadministrator, choose Help > Apple Qmaster Help; in Batch Monitor, choose Help > Batch Monitor Help. (Batch Monitor is the utility installed with the Apple Qadministrator and Apple Qmaster Client components.)

Late-Breaking News

The Late-Breaking News option in the Help menu links to a PDF document that contains information about issues with third-party hardware and software, and other known issues.

To access Late-Breaking News:

- In the Shake application, choose Help > Late-Breaking News.
- In Apple Qmaster or Apple Qadministrator, choose Help > Late-Breaking News.

Note: You must be connected to the Internet to download the *Late-Breaking News* document.

Shake 4.1 System Requirements

Before you install Shake 4.1, make sure that your Macintosh system meets the following minimum requirements.

Minimum Requirements for Desktop Hardware and Software

- Macintosh computer with 1 gigahertz (GHz) or faster PowerPC G4, PowerPC G5, or Intel Core processor
- Mac OS X v10.4.6 (or later)
- QuickTime 7.0.4 (or later)
- 512 megabytes (MB) of random-access memory (RAM)—1 gigabyte (GB) RAM or more recommended
- 1 GB of available disk space for caching and temporary files
- 32 MB of video memory and OpenGL hardware acceleration
- Display supporting 1280 x 1024-pixel resolution and 24-bit color
- Three-button mouse
- *Optional:* AJA Kona or Blackmagic DeckLink card required to preview composites on a broadcast monitor

Minimum Requirements for Render-Only Workstations

- 500 megahertz (Mhz) or higher PowerPC G4, PowerPC G5, or Intel Core processor
- Mac OS X v10.4.6 (or later)
- QuickTime 7.0.4 (or later)
- 1 GB local disk space for caching and temporary files
- 256 MB of RAM

Calculating RAM Requirements

Real-time playback is a function of RAM, processor, image size, clip length, and graphics card. In Shake, images are loaded into memory and then played back. Current systems cannot achieve real-time playback with 2K-resolution images. With sufficient RAM and a good graphics card, files of up to 1K resolution should play back in real time.

Use the following formula to determine the amount of required memory:

```
width * height * channels * bytes per channel * images = bytes
```

For example, a single 1024 x 768 RGB 8-bit (1 byte) per channel image is:

```
1024 * 768 * 3 * 1 = 2359296 bytes
```

Or, approximately 2.4 MB per frame.

Tip: To convert from bytes to megabytes (MB), divide by 1024 two times (1024 equals the number of bytes per kilobyte). Thankfully, all operating systems come with calculators. For a rough approximation, drop the last 6 digits.

An 8-bit image is 1 byte, a 10 or 16-bit image is 2 bytes, and a float image is 4 bytes.

Installing Shake

When you install Shake, its components are placed in the Applications folder of the hard disk, typically your startup disk.

Important: Be sure to review "Shake 4.1 System Requirements" on page 4 before installing Shake. Also, turn off any virus protection and security software that you may have installed on your computer.

To install Shake:

1. Insert the Shake 4.1 installation disc into your CD drive.
2. Double-click the Install Shake 4.1 icon.
3. Read the Welcome information, then click Continue.
4. Read the Software License Agreement, then click Continue and Agree.
5. Select the destination volume where you want to install Shake, then click Continue.
6. Click Install.

Note: If you have previously installed other Apple Pro Applications, this button may be labeled Upgrade instead of Install.

7 In the Authenticate dialog, enter your administrator name and password, then click OK.

8 When the installer is finished, click Close.

By default, Shake is installed into a folder named *Shake* in the Applications folder on your hard drive.

Shake Folder Contents

When Shake is installed, three icons appear within the Shake folder: *shake*, *shkv*, and *shkqtv*. The shake icon represents the Shake application, and can be placed in the Dock. The shkv icon represents the Shake Viewer application (the Flipbook player for all platforms). The shkqtv icon represents the Shake Disk-Based Viewer application (the QuickTime Flipbook player). You cannot launch shkv or shkqtv outside of Shake. When you create a standard or disk-based Flipbook in Shake, Shake Viewer is automatically launched and the *shkv* or *shkqtv* icon appears in the Dock.

To serialize and start Shake:

1 Double-click the Shake icon (if starting Shake from the Dock icon, single-click).

2 In the Licensing dialog, enter your first and last name.

Note: Entering an organization name is optional.

3 In the Serial Number box, enter the Shake 4.1 serial number printed on the front of this document.

4 Click OK.

Registering Shake

The first time you start Shake, the application prompts you for registration information. By default, the Me card information in your Address Book is automatically entered in the appropriate fields.

To register Shake to a user other than the user listed in the Me card in your Address Book:

1 Fill out the Name, Address, Organization, and Email address fields.

2 If you want information about Apple news and software updates sent to your email account, select the checkbox.

3 If you want to review Apple's Privacy Policy, click Privacy Policy.

4 When you are finished, click Register Now.

You are now ready to begin using Shake.

Note: If you decide to click the Register Later button, you will be prompted to register again after opening the application five times.

Installing and Licensing Shake for Render-Only Workstations

To install the render-only version of Shake, perform the installation as described in "Installing Shake" on page 5 on all systems intended for use as render workstations. Mac OS X render licenses are free, and do not require serial numbers or special licensing.

Installing Apple Qmaster 2.1

Apple Qmaster 2.1 is available via a separate installer on the Shake installation disc. For more information on the Apple Qmaster 2.1 components and installation, see the *Apple Qmaster User Manual*, located in the Documentation folder of the Shake 4.1 installation disc.

Minimum Requirements for Apple Qmaster 2.1

- Mac OS X v10.4.4 (or later)
- QuickTime 7.0.4 (or later)
- 160 MB available disk space for application installation.

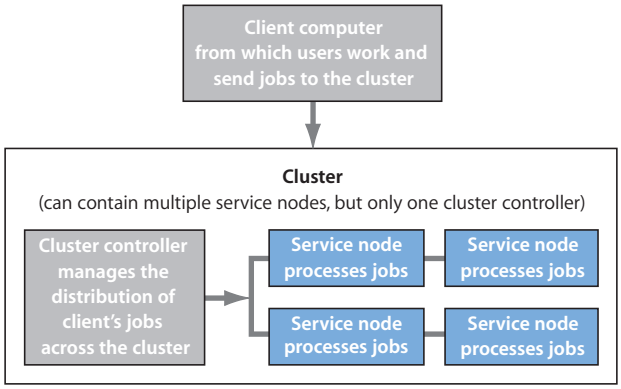
Apple Qmaster Installation Components

The Apple Qmaster 2.1 installer places Apple Qmaster and Apple Qadministrator application icons in the Applications folder, and the Batch Monitor application icon in the /Applications/Utilities folder. It also installs the Apple Qmaster Preferences pane.

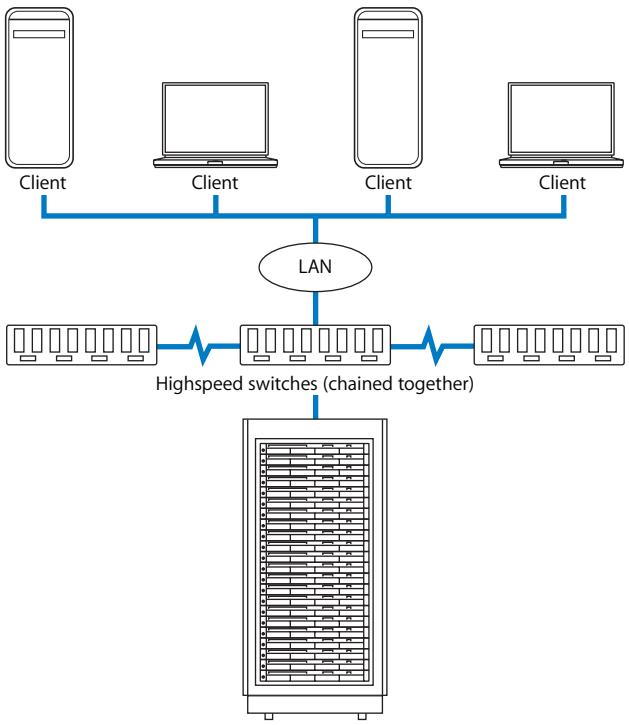
Each of these applications controls a different part of an Apple Qmaster distributed processor system:

Apple Qmaster Application/Utility	Function	Computers That Use It
Apple Qmaster application	Application used to submit jobs for distributed processing	• Client computers (any computer from which you submit processing jobs)
Apple Qadministrator application	Application used to create and administer *clusters* of connected computers	• Administrator computers (any computer you use to create and administer clusters of processing computers)
Batch Monitor application	Application used to adjust the status of processing jobs and batches	• Client computers • Administrator computers
Apple Qmaster pane in System Preferences	Settings that configure a computer to act as a *node* in a processing system or as a controller of a cluster of nodes	• Service node computers (computers that perform the actual processing of jobs) • Cluster control computers (any computer that acts as the manager of a cluster–there is only one cluster controller per cluster)

While one computer could act as a combination of client, service node, and cluster controller, keeping these functions on separate computers generally increases the speed and efficiency of processing.



Example of a network setup for distributed rendering



Rack of servers containing
cluster controller and render-only Shake service nodes,
plus rackmounted shared storage device.

For more background information about the different parts of an Apple Qmaster system and how to prepare an Apple Qmaster network, see the *Apple Qmaster User Manual* included on the installation disc.

Using Apple Remote Desktop to Create and Administer Shake Cluster Computers Remotely

You can conveniently set up and control Shake service nodes and cluster controllers over a network or over the Internet, using Apple Remote Desktop. Apple Remote Desktop, using real-time screen sharing, lets you configure and administer Shake service nodes and cluster controllers that are running Mac OS X. For example, from one computer, you can turn services on and off and mount shared storage devices on cluster computers. You can also use Apple Remote Desktop to distribute or install the software, configure headless service nodes, and control desktops from anywhere on the network. For more information, see
http://www.apple.com/remotedesktop

For details on configuring and managing service nodes, cluster controllers, and clusters, see the *Apple Qmaster User Manual*.

You can install both of the Apple Qmaster software components on any computer in your Apple Qmaster system, but you do not need to. The instructions that follow tell you how to install only the necessary components on each computer.

Important: All the computers in a cluster need Read and Write access to any computers (or storage devices) that will be specified as output destinations for files.

Installing Apple Qmaster Applications on Client and Administrator Computers

You need to install Apple Qmaster Applications on any computer that you use to submit processing jobs with Apple Qmaster, and on any computer from which you create and administer Apple Qmaster clusters. Apple Qmaster is available from a separate installer.

Note: When using Apple Qmaster, Shake is not required to be installed on client and administrator computers.

To install Apple Qmaster Applications on client or administrator computers:

1. Double-click the Install Apple Qmaster 2.1 icon.
2. Follow the onscreen instructions.

Installing Apple Qmaster Services on Cluster Computers

You need to install Apple Qmaster on cluster computers (service nodes and cluster controller computers). Keep in mind that while it is possible for each cluster to have multiple service nodes, you are only required to have one cluster controller per cluster.

On service nodes, you also need to install the application that will process batches submitted to Apple Qmaster. For Shake clusters, you can install Shake and the render license on the service nodes, since the only component of Shake that you need in a service node is its rendering capability. Shake 4.1 and Apple Qmaster 2.1 are available as separate installers. For more information on installing Shake 4.1 for rendering, see "Installing and Licensing Shake for Render-Only Workstations" on page 7. See the previous section for more information about installing Apple Qmaster 2.1.

When Apple Qmaster Services are installed, the Apple Qmaster icon appears in the "Other" group of System Preferences.

Note: See "Special Installation Instructions for Extended Node Clusters" on page 10 for information about creating an extended node cluster. You do not need to install any Apple Qmaster software on extended service nodes, but an extended node cluster does require an intermediary node that needs Apple Qmaster Services.

Special Installation Instructions for Extended Node Clusters

There is a way to use computers as service nodes even if they do not have Apple Qmaster installed. To do this, you configure an intermediary node that executes Apple Qmaster commands on other computers, called *extended nodes*. The intermediary node runs UNIX commands on the extended nodes via the SSH (secure shell) UNIX program, so that the extended nodes can process batches without having Apple Qmaster installed. This type of cluster is called an *extended node cluster*.

Note: For details on configuring and using an extended node cluster, see the *Apple Qmaster User Manual* on the Shake 4.1 installation disc.

You only need one intermediary node in an extended cluster. It can act as the cluster controller, or you can add it to another cluster that already has a cluster controller.

Important: Macintosh computers running Mac OS X v10.4 Tiger cannot be used as extended nodes.

To install Apple Qmaster 2.1 on the intermediary node:

- Double-click the Install Apple Qmaster 2.1 icon, then follow the onscreen instructions.

To install Apple Qmaster 2.1 on the extended nodes:

- Double-click the Install Shake 4.1 icon to install Shake on any computer that is intended for use as an extended node. There is no need to install Apple Qmaster software on extended nodes. Computers acting as extended nodes can operate as render-only workstations. See "Installing and Licensing Shake for Render-Only Workstations" on page 7.

About Installing Software and Saving Files

Mac OS X provides a multiuser environment so everyone has their own home directory where they can save files that aren't accessible to others. If users are working on the same projects, they need to save or place these files in a location where others can access the files.

When installing or saving files, including project files, consider who needs access to these items. Use the following to help determine where to locate files:

- *Shared folder within the Users directory:* All users have access to this folder, making this a good location to save and store files that you want others to use.

  /Users/Shared/

  For example, if you want all users to have access to the tutorial media, drag the appropriate folder from the Shake 4.1 installation disc to the /Users/Shared directory.

- *Public folder within a user's home directory:* The user must turn on file sharing in Sharing preferences so other users can access this folder.

  /Users/*username*/Public/

- *Volume roots:* All users typically have access to the volume roots, which are all of the connected volumes or hard disks. If all users need access to specific applications, such as Shake, make sure you install these applications in an accessible folder on a volume root, such as the Applications folder.

Note: For information on setting preferences and environment variables, see Chapter 14, "Customizing Shake," in the *Shake 4 User Manual*.

Setting Up a Shared Working Directory for Apple Qmaster Jobs

When using Apple Qmaster for distributed processing, all computers in a cluster must have access to a common *working directory*—the folder where Shake saves a temporary script that specifies the rendering instructions. The easiest way to designate a common working directory is to enable Apple Qmaster within the Shake user interface, then change the default workingDir path in the Render Parameters window of Shake.

To enable Apple Qmaster within the Shake interface, you must create a .h preference file and save it to the Shake startup folder.

To create the .h preference file:

1. In TextEdit, open a new file, then type or paste the following text:

```
script.uncFileNames = 0;

sys.useRenderQueue = "Qmaster";
```

2. Save the file as qmaster.h and place it in the /Users/*username*/nreal/include/startup folder.

When you start Shake, additional options now appear in the Render Parameters window when you choose the Render > FileOut Nodes command. These options allow you to specify a working directory that is accessible to all computers in a processing cluster.

To set the working directory:

1. In the Shake Node View, click the FileOut node you wish to render.
2. Choose Render > Render FileOut Nodes.

   The Render Parameters window appears.
3. Expand the renderQueue subtree.
4. Turn on the useQueue button.
5. Click the folder icon next to the workingDir parameter, and navigate to a folder that all computers in the cluster can access.
6. Click Render.

Important: All computers in a processing cluster *must* have access to the working directory. If they do *not* have access, your processing job will fail.