



# Apple Qadministrator 4

User Manual

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# Welcome to Apple Qadministrator

You can use This Computer Plus and QuickClusters for most distributed processing needs. Apple Qadministrator allows you to manually create and manage specialized clusters.

This preface covers the following:

- About Apple Qadministrator (p. 5)
- About the Apple Qadministrator Documentation (p. 6)
- Additional Resources (p. 6)

## About Apple Qadministrator

The Apple Qmaster distributed processing system provides an efficient solution to your transcoding and rendering needs, handling all the work distribution and processing for you, behind the scenes. Apple Qmaster and the Apple Qmaster features of Compressor manage the processing across designated computers. They subdivide the work for speed, route the work to the computers with the most available computing power, and direct the processing.

The Apple Qmaster system uses the processing capacity of your network computers for a wide range of tasks, including transcoding and rendering for digital visual effects software packages such as Apple Shake, Adobe After Effects, and Autodesk Maya.

Compressor includes This Computer Plus and QuickCluster features that make it easy and quick to set up a distributed processing system that meets the needs of most users. It also includes Apple Qadministrator for those users in large facilities that need to set up dedicated distributed processing systems shared with multiple clients.

**Important:** Apple Qadministrator 4 is designed to work closely with Final Cut Pro X and later and Motion 5 and later. All mentions of Final Cut Pro and Motion in this document refer to these versions.

## About the Apple Qadministrator Documentation

The Apple Qmaster distributed processing system comes with various documents that help you get started as well as provide detailed information about each of the applications. (To access onscreen help for an application, open the application and choose the application's help from the Help menu.)

- *Compressor User Manual*: This comprehensive document describes the Compressor interface, commands, and menus and gives step-by-step instructions for using Compressor and accomplishing specific tasks. It is written for users of all levels of experience. The “Apple Qmaster and Distributed Processing” chapter is the primary documentation for the Apple Qmaster distributed processing system. The chapter explains how to set up and maintain a distributed processing network for use with Compressor or digital visual effects software packages. It includes information on preparing a distributed processing network, creating and administering clusters of computers, monitoring batches, and using the system from the command line. The *Compressor User Manual* is available in Compressor Help.
- *Apple Qadministrator User Manual*: This document describes the Apple Qadministrator application, providing details on creating and managing specialized clusters. The *Apple Qadministrator User Manual* is available in Apple Qadministrator Help. (To open Apple Qadministrator, choose Administer Clusters from the Apple Qmaster menu in Compressor.)
- *Share Monitor User Manual*: This brief document describes how to use the Share Monitor application to monitor the transcoding progress of batches and jobs. The *Share Monitor User Manual* is available in Share Monitor Help, Compressor Help, and Apple Qmaster Help. Share Monitor is also included with Final Cut Pro and Motion.
- *Apple Qmaster User Manual*: This document describes the Apple Qmaster client application only. This is a specialized application for submitting jobs with Shake, Autodesk Maya, and other digital visual effects software packages. The *Apple Qmaster User Manual* is available in Apple Qmaster Help. (To open Apple Qmaster, choose Create Rendering Jobs from the Apple Qmaster menu in Compressor.)

## Additional Resources

Along with the documentation that comes with the Apple Qmaster software, there are a variety of other resources you can use to find out more about the Apple Qmaster distributed processing system.

### Compressor Websites

For general information and updates, as well as the latest news on Compressor, go to:

- <http://www.apple.com/finalcutpro/compressor>

### **Apple Service and Support Websites**

For software updates and answers to the most frequently asked questions for all Apple products, go to the general Apple Support webpage. You'll also have access to product specifications, reference documentation, and Apple and third-party product technical articles.

- <http://www.apple.com/support>

For software updates, documentation, discussion forums, and answers to the most frequently asked questions for Compressor, go to:

- <http://www.apple.com/support/compressor>



As the administrator of your distributed processing network, you can set a number of cluster options and security controls. You may also want to know about failure notification and recovery features.

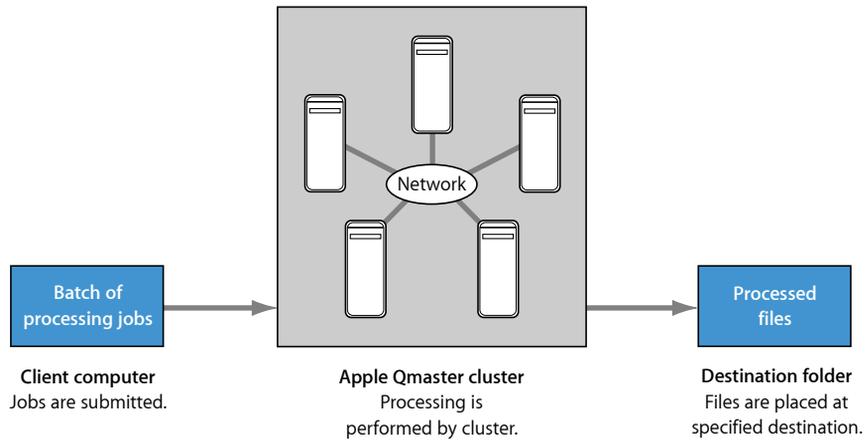
**Note:** The “Apple Qmaster and Distributed Processing” chapter in the *Compressor User Manual* is the primary documentation for the Apple Qmaster distributed processing system.

This chapter covers the following:

- The Apple Qmaster Distributed Processing System (p. 10)
- Creating Clusters with Apple Qadministrator (p. 11)
- Modifying and Deleting Clusters with Apple Qadministrator (p. 14)
- Monitoring Cluster Activity (p. 15)
- Accessing Activity Logs (p. 16)
- Setting Preferences (p. 16)

## The Apple Qmaster Distributed Processing System

Computers that submit batches to Apple Qmaster are called *clients*. An Apple Qmaster *job* is a processing task in the form of a project shared by Final Cut Pro or Motion, a Compressor or Apple Qmaster batch, a Shake file, or other commands, that uses UNIX commands to specify settings such as rendering instructions and file locations and destinations.



Although a batch can include just one job, you will typically want to submit several jobs at once for processing. Similarly, several people can use the same Apple Qmaster system at the same time, with several client computers sending batches in the same time frame. Batches are managed and distributed by the computer that is designated as the Apple Qmaster *cluster controller*.

**Note:** The “Apple Qmaster and Distributed Processing” chapter in the *Compressor User Manual* is the primary documentation for the Apple Qmaster distributed processing system.

### Clients

Batches are submitted for processing from the client computers. A *client computer* can be any computer that has Compressor, Final Cut Pro, or Motion installed and is on the same network as the cluster controller. Multiple client computers can be on the same network, using the same cluster to do the processing for various applications.

## Clusters

When a client sends batches to the Apple Qmaster system, all the processing and subsequent moving of any output files is performed by a group of Apple Qmaster–configured computers called a *cluster*. To set up Apple Qmaster services, you either configure computers to work with This Computer Plus, create a QuickCluster in Compressor, or use the Apple Qadministrator application to create one or more clusters of service nodes, with one cluster controller included in each cluster. Each computer in the cluster is connected to the other computers in the cluster through a network connection. See *Creating Clusters with Apple Qadministrator* for more information on cluster setup.

**Note:** See the Shake Support website (<http://www.apple.com/support/shake>) for an online guide to setting up a full-time “render farm,” incorporating an Xserve computer and cluster nodes.

## Service Nodes

When you combine multiple nodes into a cluster, they function as one very powerful computer because all their resources are shared. You make a computer available as a service node by configuring it in the Compressor Apple Qmaster Sharing window. The steps involved in using this window to configure a service node are described in “Configuring Service Node Processing” in the *Compressor User Manual*, available in Compressor Help.

## Cluster Controllers

The cluster controller software acts as the manager of a cluster. The cluster controller directs the distribution of batches within the cluster. It has the ability to determine the best use of the cluster resources based on work and availability variables. You make a computer available as a cluster controller by turning on the cluster controlling service in the Apple Qmaster Sharing window in Compressor. (See “Configuring Service Nodes and Cluster Controllers” in the *Compressor User Manual*, available in Compressor Help.)

## Creating Clusters with Apple Qadministrator

Once you configure managed service nodes or cluster controllers, they are visible in Apple Qadministrator, which you use to create and modify Apple Qmaster clusters. See the “Apple Qmaster and Distributed Processing” chapter of the *Compressor User Manual* for information on using the Apple Qmaster Sharing window to create managed service nodes and cluster controllers.

There are two basic steps to creating a managed cluster with Apple Qadministrator. First, you create a new cluster and choose the cluster controller. Then, you add service nodes to the cluster.

- Stage 1: Creating a New Cluster

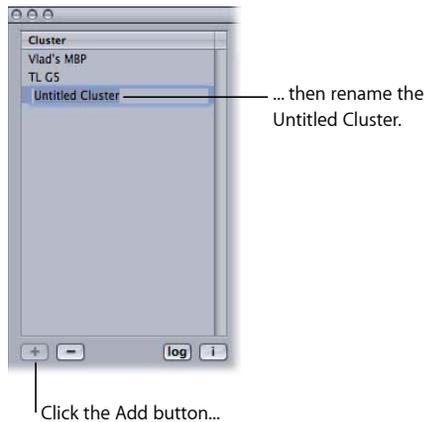
- Stage 2: Assigning Service Nodes

## Stage 1: Creating a New Cluster

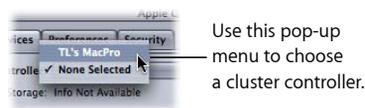
Use the following steps to create a cluster with Apple Qadministrator.

### To create a new cluster

- 1 In Compressor, choose Apple Qmaster > Administer Clusters to open Apple Qadministrator.
- 2 Click the Add (+) button.
- 3 Select Untitled Cluster and rename it. (The cluster name you create will also appear in the cluster pop-up menus in Compressor, Share Monitor, Apple Qmaster, Final Cut Pro, and Motion.)



- 4 From the Controller pop-up menu, choose a cluster controller from those available on the network.



**Note:** If a password was created for the cluster controller in the Apple Qmaster Sharing window, a password authentication dialog appears.

- 5 Optionally, create cluster passwords by clicking the Security tab and selecting and entering the passwords you want.
  - *Administrator Password:* If you create this password, administrators will need to know it in order to modify this cluster and to view this cluster's batches in Share Monitor.
  - *User Password:* If you create this password, users will need to know it in order to submit batches to this cluster and to view those batches in Share Monitor.

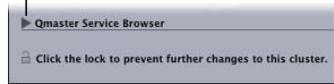
## Stage 2: Assigning Service Nodes

Use the following steps to assign service nodes to a cluster.

### To add a service node to a cluster

- 1 If the Qmaster Service Browser is not already displayed, click the disclosure triangle to see it.

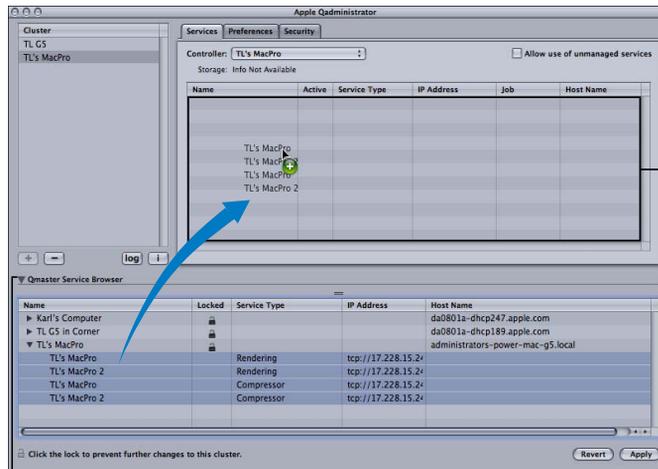
Click this disclosure triangle to see available nodes.



- 2 Add service nodes to the new cluster by dragging them from the Qmaster Service Browser list at the bottom of the window to the cluster's service nodes list.

If there is a closed lock icon next to a computer name, click the lock and enter the password that was assigned to it in the Apple Qmaster Sharing window of Compressor. Otherwise, you won't be able to drag that service node to the cluster.

Service nodes that are already assigned to another cluster are not shown.



Drag nodes to this list from the Service Browser list.

Clicking this disclosure triangle displays each instance of the services set in the Apple Qmaster Sharing window for this node.

**Note:** The computer names you see at the top level of the Name columns may appear in one of three formats, depending on your configuration: the computer name (for example, Lemur node), the Apple networking name (for example, Lemur-node.local), or the network address for the computer (for example, 02030b-dhcp45.company.com).

- 3 When you have finished adding service nodes, click Apply.

Your cluster is now ready to process batches.

**Note:** Although Apple Qadministrator currently allows you to create a cluster with unmanaged services, valid clusters require at least one managed service for the cluster to be viewable in Apple Qmaster, Compressor, and Share Monitor.

## Modifying and Deleting Clusters with Apple Qadministrator

Using Apple Qadministrator, you can change and delete clusters. Once a cluster is configured, you can use Apple Qadministrator to deactivate and reactivate the processing services on a computer in the cluster, to add a service node to the cluster, or to remove a service node from the cluster.

If you want to change the cluster controller in a cluster, you need to delete the cluster and then re-create it with a new cluster controller.

**Note:** Unless Apple Qadministrator and the QuickCluster are on the same computer, QuickClusters are not visible in Apple Qadministrator. Only managed clusters can be modified and deleted in Apple Qadministrator. Managed clusters are clusters that were created in Apple Qadministrator. QuickClusters must be modified in the Apple Qmaster Sharing window of Compressor.

### To modify a cluster

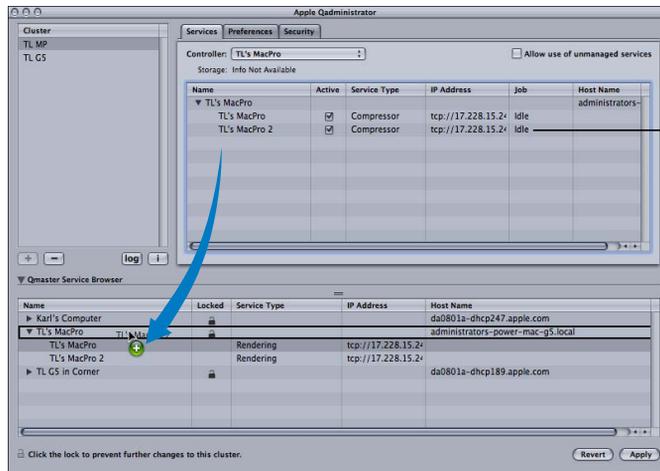
- 1 Open Apple Qadministrator.
- 2 In the Cluster list (on the left side of the window), select the cluster you want to change.

If the cluster's Service Nodes list isn't already showing individual services, click the disclosure triangle in the Name column to reveal them.

Make any of the following changes.

- *To temporarily turn off the processing services on a computer in the cluster:* Deselect the Active checkbox for that service node.

- To remove a service node from the cluster: Select the computer and drag it back to the Qmaster Service Browser at the bottom of the Apple Qadministrator window.



To remove nodes from a cluster, drag them to the Qmaster Service Browser.

- To add a service node to the cluster: Drag it from the Service Browser list at the bottom of the window to the Service Nodes list.

### 3 Click Apply.

**Note:** To turn off the service node or cluster controlling services on any computer within a cluster, see the “Apple Qmaster and Distributed Processing” chapter in the *Compressor User Manual*.

#### To change a cluster’s name in Apple Qadministrator

- 1 In the Cluster list, double-click the cluster name.
- 2 Type a new name, then press Return.

#### To delete a cluster in Apple Qadministrator

- 1 In the Cluster list, select the cluster you want to delete.
- 2 Click the Remove (–) button.

## Monitoring Cluster Activity

You can use Apple Qadministrator to find out what is happening within a cluster by examining details (such as processor usage, which batch is being processed, disk space usage, and data activity) about each node in the cluster.

#### To monitor cluster activity in Apple Qadministrator

- 1 In the Cluster list, select the cluster you want to examine.
- 2 Select a node in the Cluster Service Nodes list.

- 3 Click the Info (I) button near the bottom of the Cluster list.
- 4 In the window that appears, click the CPU, Memory, Volume Info, and I/O Activity tabs to see a variety of details about the selected node.

## Accessing Activity Logs

Apple Qadministrator provides log information for a selected service or cluster. This information is useful for troubleshooting distributed processing issues, and it can be saved to a file and processed with XML tools and UNIX scripts.

### To view or copy log information in Apple Qadministrator

- 1 In Apple Qadministrator, select the service or cluster whose log you wish to view.
- 2 Click the Log button near the bottom of the Cluster list.

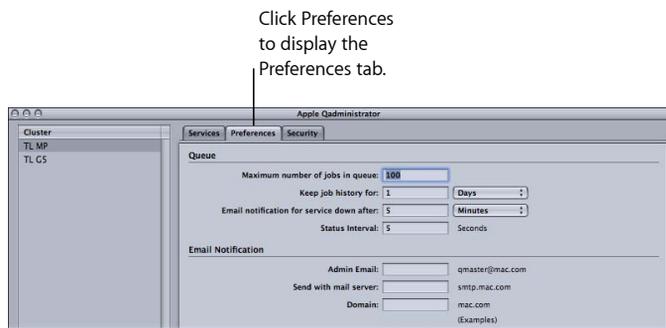
A new window appears displaying the log information for the selected service or cluster. The log file is deleted when you close the window.

## Setting Preferences

You can use Apple Qadministrator preferences to configure several aspects of Apple Qadministrator. These include setting preferences for specific clusters as well as setting preferences for using Apple Qadministrator over a wide area network.

### To set preferences for a cluster

- 1 Open Apple Qadministrator.
- 2 In the Cluster list, select the cluster for which you want to set preferences.
- 3 Click Preferences.



- 4 Set any of the preferences listed in [About the Apple Qadministrator Preferences Tab](#).

### To set preferences for using Apple Qadministrator over a wide area network

- Choose Apple Qadministrator > Preferences, or press Command-Comma (,).

## About the Apple Qadministrator Preferences Tab

You can use the Apple Qadministrator Preferences tab to configure a number of Apple Qadministrator settings.



The Apple Qadministrator Preferences tab contains the following items.

### Queue

Use the following settings to configure queue preferences in Apple Qadministrator.

- *Maximum number of jobs in queue:* Enter the maximum number of batches that can be queued up at one time for this cluster. If the maximum number is reached, the cluster does not accept new batches until there is an opening in the queue.
- *Keep job history for:* Set how long batches are listed in the History table of Share Monitor.
- *Email notification for service down after:* Set how much time should pass, after a service becomes inaccessible, before the cluster controller sends an alert message to the administrator.
- *Status Interval:* Set how often status information about this cluster should be generated and sent to Share Monitor.

### Email Notification

To have the cluster controller send service failure alerts to an administrator, enter the relevant information in the fields provided.

**Note:** The Apple Qmaster distributed processing system does not currently support SMTP servers that require authentication.

- *Admin Email:* Enter the administrator's email address.
- *Send with mail server:* Enter the administrator's mail server.
- *Domain:* Enter the cluster controller's domain.

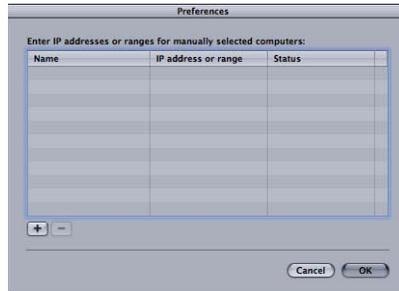
## Configuring the Wide Area Network Preferences Window

Apple Qadministrator wide area network preferences include the IP addresses for remote computers.

### To enter IP addresses or ranges for remote computers

- 1 Choose Apple Qadministrator > Preferences, or press Command-comma (,).

The Preferences window appears.



This table displays information about remote host computers.

- 2 Click Add (+).

The host address dialog appears.



Use this dialog to enter IP addresses or ranges for remote computers.

- 3 In the host address dialog, do one of the following:
  - To enter the IP address of a specific computer, select Host, complete the Host Name and IP Address fields, and click Add Host.
  - To enter a range of IP addresses, select "Host IP address range," complete the Range fields, and click Add Range.

The hosts or host ranges appear in the Host table in the main Preferences window.

- 4 Once you have finished adding or removing IP addresses to this window, click OK.