



# The Mac OS X Deployment v10.4 Exam

## Skills Assessment Guide

### To Register

You are required to have an Apple Tech ID number before registering for an exam. You can apply for a Tech ID by following the instructions at [certifications.apple.com](http://certifications.apple.com). Then, to register for an exam, call Prometric toll-free at 888-APL-EXAM (888-275-3926) or register online at [2test.com](http://2test.com).

To register for an Apple Training course, please visit [www.apple.com/training](http://www.apple.com/training) or call 800-848-6398. To schedule an onsite course at your organization's location, please call 800-848-6398 or email [abouttraining@apple.com](mailto:abouttraining@apple.com).

The Mac OS X Deployment v10.4 Exam (Prometric exam no. 9L0-609) is a computer-based test offered at Authorized Prometric Testing Centers.

The exam is an elective in the Apple Certified System Administrator (ACSA) track. Successful completion of the exam earns Mac OS X Deployment 10.4 certification and also contributes 2 credits, valid for 2 years, towards Apple Certified System Administrator (ACSA) certification.

The exam lasts one hour and consists of 36 multiple-choice questions that are based on the knowledge-area objectives listed in this guide.

The score required to pass is 67 percent (24 items correct out of 36). Eight demographic questions are presented but are not scored.

To prepare for the exam, read through the objectives in this guide to determine which areas you need to review. You will not have access to any resources or references during the exam. Please note that the exam is based on Mac OS X and Mac OS X Server versions 10.4.

The number of test questions drawn from each knowledge area is indicated below. Please note that although this guide divides the objectives into seven knowledge areas, questions are presented randomly during the exam. Also note that UNIX commands and processes are shown in `monospace` in the exam.

### Deployment Strategies

This topic has 3 items, drawn randomly from the following objectives:

- Identify and compare two methodologies (imaging and packaging) for deploying Mac OS X v10.4.
- Describe how imaging and packaging methodologies of deploying Mac OS X v10.4 address a given scenario.
- Identify three solutions that address Mac OS X v10.4 deployment needs.

### Imaging

This topic has 12 items, drawn randomly from the following objectives:

- Describe how to prepare the Classic environment to be restored properly from an Apple Software Restore image for Mac OS X v10.4.
- Describe the workflow for preparing model/master Mac OS X v10.4 systems to be stored on an Apple Software Restore image.
- Identify how to use command-line utilities to prepare an image to be used by Apple Software Restore to restore a Mac OS X v10.4 system.

- Identify how to use Disk Utility to create an Apple Software Restore image of a model/master Mac OS X v10.4 system.
- Identify how to use system utilities in Mac OS X v10.4 to prepare an Apple Software Restore image with proper permissions/access controls.
- Describe the workflow for preparing model/master Mac OS X v10.4 systems to be stored on a NetBoot or Network Install image.
- Identify the image sources that can be used to create a NetBoot or Network Install image for Mac OS X v10.4.
- Identify how to use system utilities in Mac OS X v10.4 to prepare a NetBoot image with proper permissions/access controls.
- Describe how to prepare the Classic environment to be used from a NetBoot image for Mac OS X v10.4.
- Describe the role of the local hard drive when a computer is started up from a NetBoot or Network Install image in Mac OS X v10.4.
- Describe how network and local home folders are provided to user accounts when a computer is started up from a NetBoot image in Mac OS X v10.4.
- Identify how to use System Image Utility in Mac OS X Server v10.4 to create a NetBoot or Network Install image.
- Identify how to use System Image Utility in Mac OS X Server v10.4 to configure a NetBoot or Network Install image to use accounts from an accessible directory service.
- Identify how to use System Image Utility in Mac OS X Server v10.4 to configure a default user account for a NetBoot image.
- Identify how to use System Utilities to configure a user account in Mac OS X v10.4 to use a network home folder when running from a NetBoot image.

### Packaging

This topic has 7 items, drawn randomly from the following objectives:

- Describe what packages are and how they work.
- Describe what meta packages are and how they work.
- Describe three ways to customize package installations for Mac OS X v10.4.
- Describe what package receipts are and how they work.
- Identify how to use assemble a file and folder hierarchy to be used by Package Maker for creating a custom install package for Mac OS X v10.4.
- Identify how to use Package Maker in Mac OS X v10.4 to create and configure the options of a custom install package.
- Identify how to use Package Maker in Mac OS X v10.4 to create a custom distribution for a custom install package.

### Delivery

This topic has 8 items, drawn randomly from the following objectives:

- Identify how to:
  - Use a FireWire disk drive and `asx` to install Mac OS X v10.4 on a computer.

- Use a FireWire disk drive and Disk Utility to install Mac OS X v10.4 on a computer.
- Use a bootable CD or DVD and `asr` to install Mac OS X v10.4 on a computer.
- Use multicast `asr` in Mac OS X Server v10.4 to make Apple Software Restore images available on a network so that Mac OS X v10.4 can be installed on a computer.
- Use NetBoot services in Mac OS X Server v10.4 and NetRestore to make Apple Software Restore images available on a network so that Mac OS X v10.4 can be installed on a computer.
- Use the command-line utility installer to install custom installation packages on a Mac OS X v10.4 system.
- Use Remote Desktop Admin to install custom installation packages on remote computers running Mac OS X v10.4.
- Use `crontab` to configure Mac OS X v10.4 to check a server for custom installation packages that are available to download.
- Use a script `Apple Remote Desktop` to configure Mac OS X v10.4 to automatically install available packages with the command-line utility installer (`-pkg`).
- Use NetBoot services on Mac OS X Server v10.4 to make NetBoot images available on a network so that computers can start up in Mac OS X v10.4 on the image.
- Use NetBoot services in Mac OS X Server v10.4 to make Network Install images available on a network so that computers can start up from the image and install Mac OS X v10.4.
- Use Remote Desktop Admin to set the network startup disk for a Mac OS X v10.4 system so that the system will startup from a NetBoot, Network Install, or Custom Install image provided by NetBoot services on Mac OS X Server v10.4.
- Use NetBoot services in Mac OS X Server v10.4 to make Custom Install images available on a network so that computers can start up from the image and install a custom install package in Mac OS X v10.4.

## Testing and Troubleshooting

This topic has 5 items, drawn randomly from the following objectives:

- Identify how to:
  - Use system utilities in Mac OS X v10.4 to isolate and resolve file and folder permissions/access control issues with Apple Software Restore and NetBoot-type images.
  - Use system utilities in Mac OS X v10.4 to isolate and resolve Classic application issues with Apple Software Restore and NetBoot-type images.
  - Use system utilities in Mac OS X v10.4 to isolate and resolve serial number issues with Pro Apps on Apple Software Restore images.
  - Use system utilities in Mac OS X v10.4 to isolate and resolve Open Firmware issues with Apple Software Restore images.
  - Use system utilities in Mac OS X v10.4 to isolate and resolve Active Directory issues with Apple Software Restore images.
  - Use system utilities in Mac OS X v10.4 to isolate and resolve static value issues with Apple Software Restore and NetBoot-type images.
  - Use Installer to validate that custom installation packages install components properly in Mac OS X v10.4.

- Use the Installer log to isolate and resolve custom installation package issues in Mac OS X v10.4.
- Use receipts to isolate and resolve custom installation package issues in Mac OS X v10.4.
- Use package BOMs to isolate and resolve custom installation package issues in Mac OS X v10.4.
- Use system utilities in Mac OS X v10.4 to isolate and resolve file and folder permissions/access control issues with custom installation packages.
- Use system utilities in Mac OS X v10.4 to isolate and resolve Classic application issues with custom installation packages.
- Use system utilities in Mac OS X v10.4 to isolate and resolve logGen issues with custom installation packages.
- Use system utilities in Mac OS X v10.4 to isolate and resolve file system root-only installer issues with custom installation packages.

## Maintenance

This topic has 1 item, drawn randomly from the following objectives:

- Identify how to:
  - Use Software Update Server in Mac OS X Server v10.4 to provide Apple Software updates to Mac OS X v10.4 systems on a private network.
  - Use System Utilities to configure Mac OS X v10.4 to use a Software Update Server running in Mac OS X Server v10.4 on a private network.
  - Use crontab to configure Mac OS X v10.4 to automatically install downloaded software update packages.
  - Use Apple Remote Desktop Admin to provide Apple Software updates to remote Mac OS X v10.4 systems.
  - Use Apple Remote Desktop Admin to automatically identify Mac OS X v10.4 systems that need to receive updated software.
  - Use Apple Remote Desktop Admin to report the software/version status of remote Mac OS X v10.4 systems.

## For More Information

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