

Mac OS X Support Essentials v10.4 (Tiger 101)

Course Description

Mac OS X Support Essentials is a three-day, hands-on course that provides an intensive and in-depth exploration of troubleshooting on Mac OS X. This course is designed to give you a tour of the breadth of functionality of Mac OS X and the best methods for effectively supporting users of Mac OS X systems. The course is a combination of lectures and hands-on case study exercises that provide practical real-world experience.

Who should attend?

This class is for help desk specialists, technical coordinators, service technicians, and others who support Mac OS X customers. This audience could include technical support personnel in businesses that use Mac OS X systems for general productivity or creative design, service technicians who support Mac OS X customers, and technical coordinators or power users who manage networks of Mac OS X systems for their organization—such as teachers and technology specialists who manage classroom networks or computer labs.

Prerequisites

Students should have the following prerequisite knowledge prior to attending this course:

- Basic Mac OS X knowledge
- Basic troubleshooting experience

Course Outline

Topic	Description
Chapter Introduction	1 Overview of topics covered in the course, and a summary of the certification program.
Chapter Installation	2 Mac OS X installation process and common user issues and troubleshooting techniques regarding installation.
Chapter	3 Creating user accounts for multiple users on Mac OS X and

Topic	Description
User Accounts	troubleshooting common account problems.
Chapter File Systems	4 The Mac OS X file system, including formatting of disk drives, the file system layout, and how files are managed on Mac OS X.
Chapter Permissions	5 The user and group permissions model as applied in Mac OS X.
Chapter Application Environments	6 The differences among native, BSD, Java, and Classic applications running on Mac OS X.
Chapter Command-Line Interface	7 Using the Terminal application to run BSD commands to accomplish simple administration tasks.
Chapter Network Configuration and Troubleshooting	8 Configuring Mac OS X workstations for networking, as well as troubleshoot common networking issues.
Chapter	9 Using Mac OS X to access network services, including file, mail, and web servers, as well as basic directory services. Understanding

Topic	Description
Accessing Network Services	common issues when accessing networking services.
Chapter Providing Network Services	10 Using Mac OS X to provide network services. Sharing files using AFP, SMB, FTP, and HTTP. Securing services using the Mac OS X firewall.
Chapter Peripherals	11 How peripherals are supported in Mac OS X, with an emphasis on USB, FireWire, and Bluetooth buses.
Chapter Printing	12 Configuring and troubleshooting printing on Mac OS X.
Chapter Startup Sequence	13 Troubleshooting the different stages of the Mac OS X startup sequence.
Chapter Troubleshooting	14 Using the troubleshooting flowchart and the various resources and practices to troubleshoot workstation problems. Using the skills learned in the course to troubleshoot specific equipment requirements on a computer "broken" by the instructor.

The Mac OS X Support Essentials v10.4 Exam Skills Assessment Guide

The Mac OS X Support Essentials v10.4 Exam (Prometric exam no. 9L0-401) is a computer-based test offered at Authorized Prometric Testing Centers.

The exam is the only required exam in the Apple Certified Help Desk Specialist (ACHDS 10.4 track). You must pass this exam to become an ACHDS 10.4.

The exam is one of two required exams in the Apple Certified Technical Coordinator (ACTC) 10.4 track. You must pass this exam and the Mac OS X Server Essentials v10.4 Exam to become an ACTC 10.4.

The exam lasts two hours and consists of 74 multiple-choice questions that are based on the knowledge-area objectives listed in this guide.

The score required to pass is 62 percent (46 items out of 74). 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 version 10.4.

The number of test questions drawn from each knowledge area is indicated for each topic below. Please note that although this guide divides the objectives into 13 knowledge areas, questions are presented randomly during the exam. Also note that UNIX commands and processes are shown in monotype in the exam.

Installation

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

- Recognize computers that meet the minimum requirements to run Mac OS X v10.4
- Describe how to:
 - Perform erase, update, and archive installations on various hard drive configurations
 - Configure Mac OS X v10.4 using Setup Assistant
 - Locate and install updates from Apple using Software Update
 - Identify how to troubleshoot installation issues and perform quick fixes

Users

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

- Describe how to create, configure, and manage user accounts in Mac OS X v10.4
- Describe user account and password security issues
- Identify how to troubleshoot issues with user accounts

File Systems

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

- Describe how to:
 - Manage the Mac OS X v10.4 file system
 - Format a hard drive in Mac OS X
 - Archive, compress, and encrypt files in Mac OS X v10.4
 - Securely delete files
- Recognize how the file system handles bundles, packages, and forked files
- Describe search paths, hidden folders, and system-related folders

Permissions

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

- Describe how to:
 - Manage the Mac OS X v10.4 file system
 - Control access to applications and data files with file and folder permissions
 - Identify how to troubleshoot permissions issues

Application Environments

This topic has 4 items, drawn randomly from the following objectives:

- Describe how to:
- Install, run and troubleshoot native Mac OS X applications
- Run Java applets and JNLP applications
- Use Activity Monitor to monitor applications' use of memory and processor

Command-Line Interface

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

- Identify reasons to use the command-line, and ways to access the command-line interface
- Describe the syntax of command-line commands
- Describe how to:
- Use the online manual to see the syntax and sample usage(s) for a command
- Run commands to view hidden files and folders, and to manipulate files and file attributes

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Network Configuration and Troubleshooting

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

- Describe basic networking concepts and terms
- Identify how to:
- Use Network preferences to configure Mac OS X to receive an IP address from a DHCP server, communicate with other computers on the same network, and access network services
- Use Network Diagnostics, Network Utility, and Network preferences to troubleshoot networking issues

Accessing Network Services

This topic has 13 items, drawn randomly from the following objectives:

- Describe how service discovery is implemented in Mac OS X
- Describe how to:
- Use Directory Access to configure Mac OS X to access network services via AppleTalk, SMB, SLP, NetInfo, and Bonjour
- Use the Finder to mount remote AFP, SMB, FTP, and WebDAV volumes so that files can be transferred between the local system and the server volume
- Use Directory Access to configure Mac OS X to authenticate users using an LDAP or Active Directory server
- Troubleshoot a Mac OS X computer that is not able to access a directory service parent
- Configure Mac OS X to use single signon for network services

Providing Network Services

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

- Identify how to:
- Use Sharing preferences to enable file sharing, web sharing, and FTP services
- Use Sharing preferences to configure a Mac OS X v10.4 computer so that remote clients can locate the workstation's shared volumes
- Locate the files that correspond to the computer's main website, as well as the user's website
- Turn on the firewall in the Sharing preferences, so that access through IP ports for inactive services is blocked
- Enable remote connections via ssh
- Perform quick fixes for file sharing issues

Peripherals

This topic has 2 items, drawn randomly from the following objectives:

- Identify device classes or types used in Mac OS X v10.4 to categorize peripherals
- Identify the types of drivers used in Mac OS X v10.4 to communicate with peripherals

- Describe how to:

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- Use System Profiler to identify what USB and FireWire devices are connected to and recognized by the system
- Use System Profiler to isolate and resolve a peripheral issue in Mac OS X v10.4
- Perform basic troubleshooting of peripheral issues

Printing

This topic has 4 items, drawn randomly from the following objectives:

- Describe how to:
- Connect a local printer so it will be recognized by the Printer Setup Utility, and applications can print to it
- Use Printer Setup Utility to add a network printer or print server so that applications can print to it
- Use Printer Setup Utility to troubleshoot printing issues, including printer sharing
- Use System Preferences to configure Mac OS X v10.4 to receive faxes, and allow others to send faxes through your computer
- Use the standard print dialog to send a fax from Mac OS X v10.4
- Configure a printer connected to a computer running Mac OS X v10.4, so that it is shared with Windows computers
- Install and troubleshoot a PDF Workflow solution
- Print a Postscript file to a raster printer
- Print and manage print jobs from the command line
- Describe the print flow

Startup Sequence

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

- Identify the processes that run at system startup
- Identify the location of important files and scripts used by the startup sequence
- Identify the stages of the startup sequence and their corresponding visual or auditory cues
- Describe how to troubleshoot startup issues, including startup items and login items
- Identify the stages of logging out or shutting down

Troubleshooting

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

- Describe how to:
- Gather information about a computer problem and verify the problem
- Use online tools such as AppleCare Knowledge Base and Apple Help to research a problem and its potential solution
- Use the Apple General Troubleshooting Flowchart to troubleshoot Mac OS X v10.4 problems
- Identify Apple-provided and third-party resources for troubleshooting
- Describe the difference between quick fixes and other types of fixes

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Sample Test

The Mac OS X Support Essentials v10.4 Exam (Prometric exam no. 9L0-401) is a computer-based test offered at Authorized Prometric Testing Centers. The exam is the only required exam in the Apple Certified Help Desk Specialist (ACHDS) 10.4 track.

This Sample Test presents eleven test questions similar in style and content to those presented in the actual Mac OS X Support Essentials v10.4 Exam. Reviewing these questions can familiarize you with the type of questions posed in the actual exam. Actual questions on the exam will vary in content and may be more or less difficult than these.

Please visit the Apple Certified Help Desk Specialist page (train.apple.com/certification/achds) and download the Mac OS X Support Essentials v10.4 Exam Skills Assessment Guide for a detailed description of the exam, including objectives, number of questions, time limit, and required score.

To use this sample test, answer the questions below, then refer to the answer key at the end of this document. Please note that UNIX commands and processes are shown in `monospace` in this Sample Test and in the actual exam.

Sample Questions

1. How does an administrator user delete another user in Mac OS X v10.4?
 - A. Run the `chown` command in Terminal, specifying a user to delete.
 - B. Open Network Utility, click Connected Users, select any connected user, and click the Delete button.
 - C. Open the Accounts preferences, select a user to delete, and click the Delete (minus sign) button.
 - D. Open the `/Users` folder, select a user's folder to delete, drag the folder to the Trash, and choose Empty Trash from the Finder menu.
2. You are troubleshooting a volume that is connected to your computer in target disk mode. What could present a problem?
 - A. Target disk mode volumes are locked by default.
 - B. Target disk mode volumes have no file system journal.
 - C. Keychains and preferences must be unencrypted before they can be viewed.
 - D. Volume ownership is overridden in target disk mode, so it is possible to delete vital system files.
3. What does the Repair Disk Permissions feature in Disk Utility do?
 - A. Restores permissions on all files from backups in the journal.
 - B. Restores default permissions of system files and specific applications.
 - C. Restores default permissions in two top-level directories only: `/System` and `/Users`.
 - D. Recreates the journal when Disk Utility is launched from the Mac OS X Install DVD.
4. UNIX-based applications that require the X Window System can be opened in Mac OS X v10.4 using _____.
 - A. FreeX98 for Mac OS X
 - B. WIN-X for Mac OS X
 - C. X11 for Mac OS X
 - D. Console
5. Which tool can you use to find out the number of hops between your computer and another computer on an IP network?
 - A. Traceroute
 - B. Lookup
 - C. Whois
 - D. Ping

6. You are using DHCP to distribute IP addresses on your corporate network. One of your computers has a self-assigned IP address. How can you force this computer to attempt to acquire a DHCP address? (Choose TWO.)

- A. Turn off Bonjour in the Services pane of Directory Access.
- B. Enter a new DHCP Client ID in the Network preferences and click Apply.
- C. Open the AirPort Settings utility and choose Reset Dynamic IP Networking from the Tools menu.
- D. Set a manual IP address in the Network preferences and click Apply, then change to Configure Using DHCP and click Apply.
- E. Open Network Utility and click the NetStat tool, then click "Purge and Renew" to reset all dynamic IP addresses on this computer.

7. Which step must you perform to let you access your computer remotely via SSH?

- A. Enable SSH in the Keychain Access utility.
- B. Enable the Remote Login option in Sharing preferences.
- C. Enable SSH in the Login Options pane of Accounts preferences.
- D. Add Console to the Login Items for the Admin account in Accounts preferences.

Sample Test 2

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8. About which three system components will System Profiler provide information? (Choose THREE.)

- A. installed PCI cards
- B. configured share points
- C. connected USB devices
- D. fax modem configuration
- E. connected FireWire devices

9. Chris is unable to print using a Mac OS X v10.4 computer. While examining Chris's computer, you find that the printing system is misconfigured, and lists printers that do not exist. What is a valid step to resolve Chris's printing problems?

- A. Click Reset Print Queues in Print & Fax preferences.
- B. Open a print queue in Printer Setup Utility and choose Reset from the Print Queue menu.
- C. Use the Reset Printing System command in Printer Setup Utility and add the needed printers.
- D. Use Printer Setup Utility to add an IP printer with the IP address of 127.1.1.1:63, then examine print jobs sent to it.

10. When Maria logs in on her Mac OS X v10.4 computer, a utility she recently installed launches automatically and disables her mouse and keyboard. How can Maria prevent the utility from automatically launching when she logs in?

- A. Hold down the V key while the computer starts up.
- B. Hold down the Shift key immediately after logging in.
- C. Hold down the Option key while the computer starts up.
- D. Log in as another user, and use Disk Utility to fix permissions on the boot volume.

11. The Console utility _____.

- A. displays log files
- B. enables root access
- C. invokes the command line
- D. controls monitor configuration

Sample Test 3

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Answer Key

- | | |
|-----------|--------|
| 1. C | 7. B |
| 2. D | 8. ACE |
| 3. B | 9. C |
| 4. C | 10. B |
| 5. A6. BD | 11. A |

