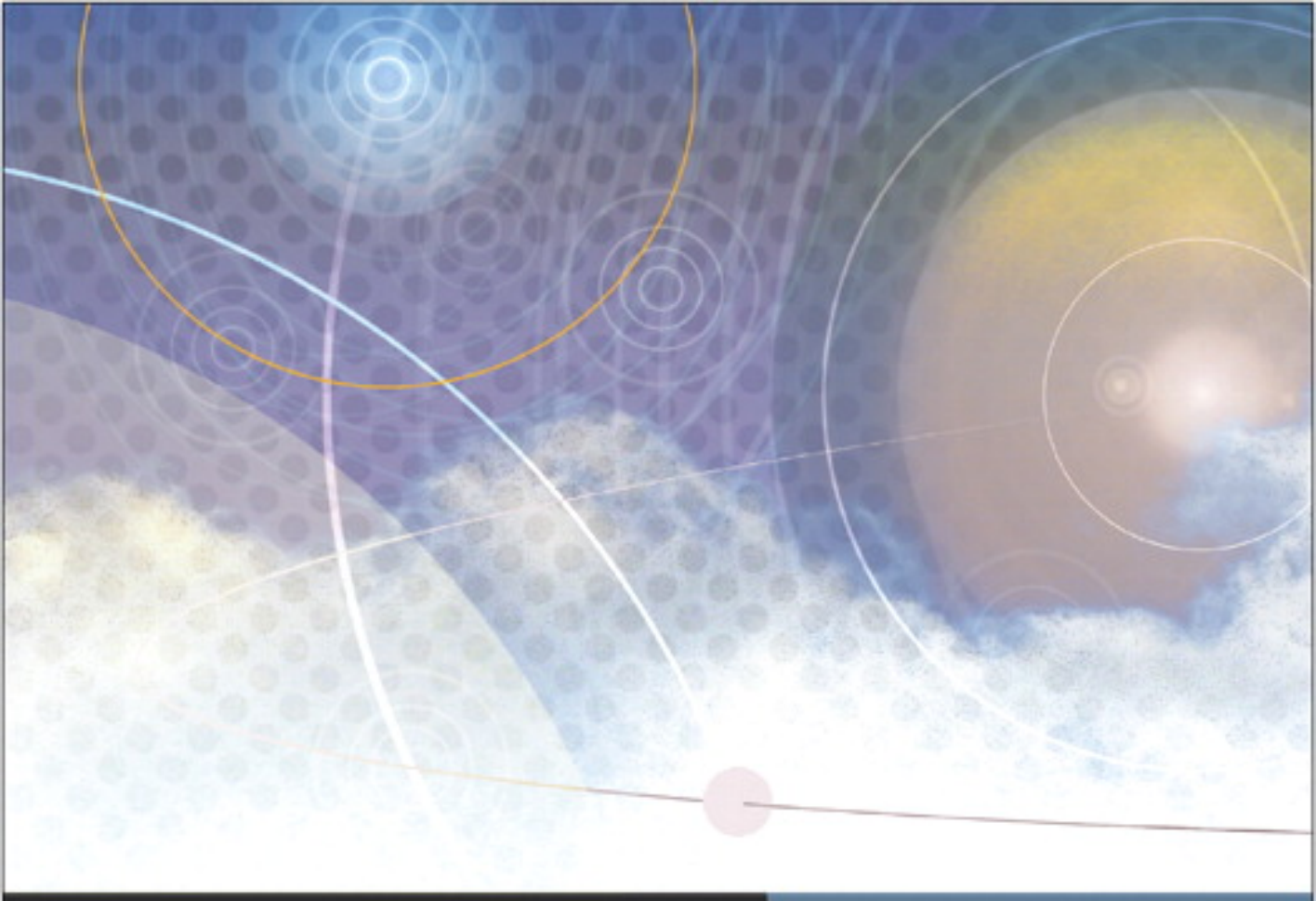

Apple Pro Training Series

OS X Support Essentials 10.10

Supporting and Troubleshooting OS X Yosemite

Kevin M. White and Gordon Davisson

Apple Certified

Certification exam preparation for:
Apple Certified Support Professional 10.10

Lesson and media files available for download

Apple Pro Training Series

OS X Support Essentials 10.10

Kevin M. White and Gordon Davisson

Apple Pro Training Series: OS X Support Essentials 10.10
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IMPORTANT: Some of the exercises contained in this guide can be temporarily disruptive, and some exercises, if performed incorrectly, could result in data loss or damage to system files. As such, it's recommended that you perform these exercises on a Mac computer that is not critical to your daily productivity.

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I could not have made this journey without the support of my family and loving wife, Michelle.

This book is dedicated to my greatest works: Logan, Sawyer, and Emily.

— Kevin White

Much appreciation to my amazing wife, Berit Benson, and her uncanny ability to sense when I needed coffee the most.

— Gordon Davisson

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Contents at a Glance

About This Guide. xxi

Installation and Configuration

Lesson 1 Install OS X Yosemite. 3
Lesson 2 Setup and Configuration. 43
Lesson 3 OS X Recovery. 87
Lesson 4 OS X Software Updates. 107

User Accounts

Lesson 5 User Accounts. 127
Lesson 6 User Home Folders. 157
Lesson 7 System Security. 175
Lesson 8 Keychain Management. 219

File Systems

Lesson 9 File Systems and Storage. 245
Lesson 10 FileVault. 287
Lesson 11 Permissions and Sharing. 311
Lesson 12 File System Troubleshooting. 341

Data Management

Lesson 13 Hidden Items, Shortcuts, and File Archives. 377
Lesson 14 System Resources. 401
Lesson 15 Metadata and Spotlight. 421
Lesson 16 Time Machine. 441

Applications and Processes

Lesson 17 Application Installation. 475

Lesson 18 Document Management. 527
Lesson 19 Application Management and Troubleshooting. 577

Network Configuration
Lesson 20 Network Essentials. 621
Lesson 21 Advanced Network Configuration. 647
Lesson 22 Network Troubleshooting. 699

Network Services
Lesson 23 Network Services. 727
Lesson 24 Host Sharing and Personal Firewall. 791

System Management
Lesson 25 Peripherals and Drivers. 837
Lesson 26 Print and Scan. 857
Lesson 27 System Troubleshooting. 899

Index. 931

Appendix A Lesson Review Questions and Answers. A-1
Appendix B Additional Resources. B-1

Bonus chapters mentioned in this eBook are available after the index.

See last page of this eBook for instructions on downloading your lesson files.

Table of Contents

About This Guide. xxi

Installation and Configuration

Lesson 1 Install OS X Yosemite. 3
Reference 1.1 About OS X Yosemite. 3
Reference 1.2 Installation Choices. 5
Reference 1.3 Before Upgrading a Previous System. 7
Reference 1.4 Preparing the System Disk. 14
Reference 1.5 Upgrading and Installing. 17
Reference 1.6 Installer Troubleshooting. 21
Exercise 1.1 Prepare a Mac for Upgrade. 23
Exercise 1.2 Upgrade to OS X Yosemite. 30
Exercise 1.3 Erase a Mac System and Install OS X Yosemite. 33
Exercise 1.4 Verify System Installation. 40

Lesson 2 Setup and Configuration. 43
Reference 2.1 Setup Assistant. 43
Reference 2.2 System Preferences. 52
Reference 2.3 Profiles. 55
Reference 2.4 System Information. 57
Exercise 2.1 Configure a New OS X System for Exercises. 60
Exercise 2.2 Configure an Existing OS X System for Exercises. 63
Exercise 2.3 Examine System Preferences. 66
Exercise 2.4 Download the Student Materials in a Classroom. 73

Exercise 2.5 Download the Student Materials Independently. 76
Exercise 2.6 Install a Configuration Profile. 79
Exercise 2.7 Examine System Information. 83

Lesson 3 OS X Recovery. 87
Reference 3.1 Startup from OS X Recovery. 87
Reference 3.2 OS X Recovery Utilities. 89
Reference 3.3 External OS X Recovery Disk. 92
Exercise 3.1 Use OS X Recovery. 93
Exercise 3.2 Create an OS X Install Disk. 99

Lesson 4 OS X Software Updates. 107
Reference 4.1 Automatic Software Updates. 107
Reference 4.2 Manual Software Updates. 114
Reference 4.3 Installation History. 117
Exercise 4.1 Manually Install Software Updates in a Classroom 118
Exercise 4.2 Manually Install Software Updates Independently. 119
Exercise 4.3 Use Automatic Software Update. 121

User Accounts

Lesson 5 User Accounts. 127
Reference 5.1 User Account Essentials. 127
Reference 5.2 User Account Management. 132
Reference 5.3 Parental Controls. 138
Reference 5.4 Login and Fast User Switching. 139
Exercise 5.1 Manage User Accounts. 145
Exercise 5.2 Create a Managed User Account. 153

Lesson 6 User Home Folders. 157
Reference 6.1 Home Folder Contents 157
Reference 6.2 Deleting User Accounts. 159
Reference 6.3 Migrating and Restoring Home Folders. 161

Exercise 6.1 Restore a Deleted User Account. 166

Lesson 7 System Security. 175
Reference 7.1 Account Passwords. 175
Reference 7.2 Resetting Passwords. 182
Reference 7.3 System Security Settings. 189
Reference 7.5 Firmware Password. 200
Exercise 7.1 Reset Account Passwords in OS X Recovery. 202
Exercise 7.2 Reset Account Passwords. 206
Exercise 7.3 Synchronize Keychain Passwords. 211
Exercise 7.4 Use a Firmware Password. 215

Lesson 8 Keychain Management. 219
Reference 8.1 Keychain Architecture. 219
Reference 8.2 Keychain Management. 221
Reference 8.3 iCloud Keychain. 229
Exercise 8.1 Manage Keychains. 234

File Systems

Lesson 9 File Systems and Storage. 245
Reference 9.1 File System Components. 245
Reference 9.2 Managing File Systems. 252
Reference 9.3 Mounting, Unmounting, and Ejecting. 263
Exercise 9.1 Repartition a Disk Dynamically. 268
Exercise 9.2 Erase and Partition a Disk. 270
Exercise 9.3 Examine Disk Ejection. 274
Exercise 9.4 Encrypt a Volume. 278
Exercise 9.5 Securely Erase Disk Data. 282

Lesson 10 FileVault. 287
Reference 10.1 FileVault Technology. 287
Reference 10.2 Enabling FileVault. 289

Reference 10.3 FileVault Recovery. 293
Exercise 10.1 Turn On FileVault. 296
Exercise 10.2 Restart a FileVault-Protected System. 301
Exercise 10.3 Use a FileVault Recovery Key. 304
Exercise 10.4 Turn Off FileVault. 308

Lesson 11 Permissions and Sharing. 311
Reference 11.1 File System Permissions. 311
Reference 11.2 Permissions for Sharing. 319
Reference 11.3 Managing Permissions 326
Exercise 11.1 Create Items with Default Permissions. 332
Exercise 11.2 Test Permissions Changes. 337

Lesson 12 File System Troubleshooting. 341
Reference 12.1 File System Inspection. 341
Reference 12.2 Troubleshoot Partitions and Volumes. 346
Reference 12.3 Troubleshoot File System Permissions. 350
Exercise 12.1 Examine Local Storage. 353
Exercise 12.2 Repair Partitions and Volumes in Target Disk Mode. 360
Exercise 12.3 Repair Partitions and Volumes in OS X Recovery Mode. . . 368

Data Management

Lesson 13 Hidden Items, Shortcuts, and File Archives. . . 377
Reference 13.1 Hidden Items. 377
Reference 13.2 Bundles and Packages. 381
Reference 13.3 File System Shortcuts. 383
Reference 13.4 File Archives. 388
Exercise 13.1 Navigate Hidden Items. 397

Lesson 14 System Resources. 401
Reference 14.1 OS X File Structure. 401
Reference 14.2 Font Resources and Font Book. 410

Exercise 14.1 Manage Font Resources. 414

Lesson 15 Metadata and Spotlight. 421
Reference 15.1 File System Metadata. 421
Reference 15.2 Spotlight Search. 427
Exercise 15.1 Examine File Metadata. 435

Lesson 16 Time Machine. 441
Reference 16.1 Time Machine Architecture. 441
Reference 16.2 Configuring Time Machine. 445
Reference 16.3 Restoring from Time Machine 452
Exercise 16.1 Configure Time Machine. 459
Exercise 16.2 Restore Using Time Machine. 465

Applications and Processes

Lesson 17 Application Installation. 475
Reference 17.1 The Mac App Store. 475
Reference 17.2 Application Environments. 490
Reference 17.3 Application Security. 495
Reference 17.4 Traditional Installation Methods. 501
Reference 17.5 Removing Installed Software. 504
Exercise 17.1 Use the Mac App Store. 505
Exercise 17.2 Use an Installer Package. 514
Exercise 17.3 Use a Drag-and-Drop Install. 517
Exercise 17.4 Remove Applications. 522

Lesson 18 Document Management. 527
Reference 18.1 Launch Services. 527
Reference 18.2 Quick Look. 532
Reference 18.3 Auto Save and Versions. 536
Reference 18.4 Document Locking. 543
Reference 18.5 iCloud Drive. 546

Reference 18.6 Automatic Resume. 552
Exercise 18.1 Use Alternate Applications. 555
Exercise 18.2 Use Auto Save and Versions. 560
Exercise 18.3 Manage Document Locking 564
Exercise 18.4 Store Documents in iCloud. 566
Exercise 18.5 Manage Automatic Behaviors. 573

Lesson 19 Application Management and Troubleshooting 577
Reference 19.1 Applications and Processes. 577
Reference 19.2 App Extensions 582
Reference 19.3 Monitoring Applications and Processes. 586
Reference 19.4 Application Troubleshooting. 591
Exercise 19.1 Force Applications to Quit. 603
Exercise 19.2 Troubleshoot Preferences. 610
Exercise 19.3 Examine Application Diagnostics. 615

Network Configuration

Lesson 20 Network Essentials. 621
Reference 20.1 Network Concepts. 622
Reference 20.2 Networks in Action. 627
Reference 20.3 Basic Network Configuration. 633
Exercise 20.1 Connect to a Wi-Fi Network. 639
Exercise 20.2 Monitor Network Connectivity 643

Lesson 21 Advanced Network Configuration. 647
Reference 21.1 Network Locations. 647
Reference 21.2 Network Interfaces and Protocols. 650
Reference 21.3 Network Services. 656
Reference 21.4 VPN Configuration 660
Reference 21.5 Advanced Network Configuration. 665
Exercise 21.1 Configure Network Locations. 676

Exercise 21.2 Configure Network Service Order 684
Exercise 21.3 Configure VPN Settings. 688
Exercise 21.4 Advanced Wi-Fi Configuration. 693

Lesson 22 Network Troubleshooting. 699
Reference 22.1 General Network Troubleshooting. 699
Reference 22.2 Network Utility. 707
Exercise 22.1 Network Troubleshooting. 713

Network Services

Lesson 23 Network Services. 727
Reference 23.1 Network Services Architecture. 727
Reference 23.2 Network Service Applications. 732
Reference 23.3 File-Sharing Protocols. 749
Reference 23.4 Connecting to File Shares. 751
Reference 23.5 Network Service Troubleshooting. 762
Exercise 23.1 Configure a Network Service Account. 768
Exercise 23.2 Use File-Sharing Services. 777
Exercise 23.3 Troubleshoot Network Services. 784

Lesson 24 Host Sharing and Personal Firewall. 791
Reference 24.1 Host-Sharing Services. 791
Reference 24.2 Screen Sharing. 796
Reference 24.3 AirDrop. 808
Reference 24.4 Personal Firewall. 814
Reference 24.5 Shared Service Troubleshooting. 819
Exercise 24.1 Use Host-Sharing Services. 821
Exercise 24.2 Configure the Personal Firewall. 828

System Management

Lesson 25 Peripherals and Drivers. 837
Reference 25.1 Peripheral Technologies. 837
Reference 25.2 Manage Bluetooth Devices. 844
Reference 25.3 Peripheral Troubleshooting. 848
Exercise 25.1 Examine Peripherals via System Information. 854

Lesson 26 Print and Scan. 857
Reference 26.1 Print System Architecture. 857
Reference 26.2 Print and Scan Configuration. 860
Sharing Printers. 868
Reference 26.3 Managing Print Jobs. 870
Reference 26.4 Print System Troubleshooting. 879
Exercise 26.1 Configure Printing. 882
Exercise 26.2 Manage Printing. 887
Exercise 28.3 Troubleshoot the Printing System. 896

Lesson 27 System Troubleshooting. 899
Reference 27.1 System Initialization 899
Reference 27.2 User Session. 907
Reference 27.3 Sleep Modes, Logout, and Shutdown. 910
Reference 27.4 Startup Shortcuts. 916
Reference 27.5 System Initialization Troubleshooting 919
Reference 27.6 User Session Troubleshooting. 923
Exercise 27.1 Examine System Startup. 924
Exercise 27.2 Use Single-User Mode. 925

Index. 931

Appendix A Lesson Review Questions and Answers. A-1
Appendix B Additional Resources. B-1

Bonus chapters mentioned in this eBook are available after the index.

See last page of this eBook for instructions on downloading your lesson files.

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About This Guide

This guide serves as a tour of the breadth of functionality of OS X Yosemite and the best methods for effectively supporting users of OS X systems. It is intended for both self-paced learners and those participating in an instructor-led course. This guide is the curriculum for the official Apple training course Yosemite 101: OS X Support Essentials 10.10, a three-day, hands-on course that provides an in-depth exploration of how to troubleshoot on OS X Yosemite. This course is facilitated by an Apple Certified Trainer and is organized into multiple lessons, each containing instructor presentations followed by related student exercises.

GOALS

- Explain how this guide is organized to facilitate learning
- Set up an environment for self-paced exercises
- Introduce Apple Training and Certification courses and exams

The primary goal of this guide is to prepare help desk specialists, technical coordinators, service technicians, system administrators, and others who support Mac users to knowledgeably address customer concerns and questions. This goal includes providing learners with the ability to return a Mac computer running OS X back to normal operation using the proper utilities, resources, and troubleshooting techniques.

Whether you are an experienced system administrator or just want to dig deeper into OS X, you'll learn in-depth technical information and procedures used by Apple-certified IT professionals to install, configure, maintain, and diagnose Mac computers running OS X.

NOTE ▶ Unless otherwise specified, all references in this guide to OS X or OS X Yosemite refer to version 10.10, which was the most current version available at the time of writing. Due to subsequent updates, some screens, features, and procedures may be slightly different from those presented in these pages. When available, you can access updates to this guide on the Update tab for the book at www.peachpit.com/apts.osxyosemite#updates.

Learning Methodology

Each lesson in this guide is designed to help experienced users become experts who are able to support other OS X users by:

- Providing knowledge of how OS X works
- Showing how to use diagnostic and repair tools
- Explaining troubleshooting and repair procedures

For example, in Lesson 20 "Network Essentials", you'll learn basic networking concepts (knowledge). You'll experience using network configuration and troubleshooting applications like Network preferences and Network Utility (tools). And you'll explore methods for resolving network issues (procedures). In addition, each lesson includes troubleshooting techniques for dealing with common issues related to the topic at hand.

This guide assumes a basic level of familiarity with OS X at the user level. This guide does not cover basic usage of the system, but a good place to start is the Apple Mac Basics support site, www.apple.com/support/macbasics/. Again, it's strongly suggested that you be comfortable using a Mac before you begin the exercises in this guide.

Lesson Structure

Each lesson in this guide contains a reference section followed by an exercise section.

> **NOTE ▶** "Note" resources, like this one, offer important information or help clarify a subject. For example, some of the exercises in this guide may be disruptive. Consequently, it's recommended that you perform these exercises on an OS X computer that is not critical to your daily productivity.

The reference sections contain initial explanatory material teaching essential concepts. The exercise sections augment your understanding of concepts and develop your skills through step-by-step instruction for both self-paced learners and the hands-on portions of an instructor-led course.

> **TIP** "Tip" resources, like this one, provide helpful hints, tricks, or shortcuts. For example, when discussing the process of downloading from the Mac App Store, you could be told how to check the progress of the download.

Throughout this guide you'll find references to Apple Support articles. These articles can be found at the Apple Support website (www.apple.com/support/), a free online resource containing the very latest technical information for Apple products. We strongly encour-

age you to read the suggested documents and search the Apple Support website for answers to any problems you encounter.

> **MORE INFO ▶** The "More Info" resources, like this one, provide ancillary information. These resources are merely for your edification, and are not considered essential for the coursework.

Lesson files and bonus materials are available online when you redeem the access code supplied with your guide at www.peachpit.com/redeem. The "Lesson Review Questions & Answers" appendix recaps each lesson through a series of questions that reinforce the material you learned in the guide. You can refer to the lessons and various Apple resources, such as the Apple Support website and documentation, mentioned in the guide. Answers are also provided to confirm your understanding of the concepts. The "Additional Resources" appendix contains a list of relevant Apple Support articles and recommended documents related to the topic of each lesson. The "Updates & Errata" document contains updates and corrections to the guide.

Exercise Requirements

This guide is written so that both the self-paced learner and those attending an Apple Authorized Training Center or Apple Authorized Training Center for Education (AATC or AATCE) can complete most of the exercises using the same techniques. Those attending the Yosemite 101 course at an AATC or AATCE will have the appropriate exercise setup provided as part of the training experience. On the other hand, self-paced learners attempting these exercises will have to set up an appropriate environment using their own equipment.

> **NOTE ▶** Some of these exercises can be disruptive—for example, they may turn off network services temporarily—and some, if performed incorrectly, could result in data loss or damage to system files. Consequently, it's recommended that you perform these exercises on an OS X computer that is not critical to your daily productivity. Apple Inc. and Peachpit Press are not responsible for any data loss or any damage to any equipment that occurs as a direct or indirect result of following the procedures described in this guide.

Mandatory Requirements

To perform the exercises in this guide, you must have some basic necessities:

- Mac computer meeting the requirements to run OS X Yosemite
- OS X Yosemite ("Exercise 1.2 Upgrade to OS X Yosemite" on page 30 includes instructions for downloading Yosemite if you do not already own it)
- A high-speed Internet connection
- Student Materials demonstration files, which can be obtained by redeeming the code provided with your guide (instructions to redeem the code and download are included in "Exercise 2.5 Download the Student Materials Independently" on page 76)

Optional Add-Ons

Most of these exercises assume access to one or more of the following additional resources (specific resources needed for each exercise are listed at the beginning of the exercise):

- An iCloud account. You can use an existing iCloud account or set up a new free account during the exercises.
- An Apple ID that can make purchases from the Mac App Store. You can use an existing account or set up a new account during the exercises. You do not have to enter a credit card or payment information to download free items.
- An erasable external USB, FireWire, or Thunderbolt disk with a capacity of at least 1 GB (or 8 GB for "Exercise 3.2 Create an OS X Install Disk" on page 99).
- An isolated network or subnet with an exercise-specific configuration. This can be facilitated with something as simple as a small network Wi-Fi router with multiple Ethernet ports. For example, the Apple AirPort Extreme (www.apple.com/airportextreme/) would be a good choice. Instructions for the general setup of an exercise network and specific instructions for the configuration of AirPort Extreme are available with the lesson files and bonus material when you redeem the access code provided with this guide at www.peachpit.com/redeem.
- A Wi-Fi interface in your computer and access to at least two Wi-Fi networks (at least one of which is visible).
- An additional Mac system running OS X Yosemite.
- A FireWire or Thunderbolt cable (as appropriate) to connect the two computers.

- Optionally, the additional Mac system can have OS X Server installed and set up with an exercise-specific configuration. Any Mac that can run OS X Yosemite can run OS X Server after purchasing it from the Mac App Store for $19.99. Specific instructions for configuring an OS X Server for exercise use are available with the lesson files and bonus material when you redeem the access code provided with this guide at www.peachpit.com/redeem.
- If your computer has a Retina display, a magnifying glass may be helpful for "Exercise 27.2 Use Single-User Mode" on page 925.

If you lack the equipment necessary to complete a given exercise, you are still encouraged to read the step-by-step instructions and examine the screenshots to understand the procedures demonstrated.

Exercise Order

The exercises in this guide are designed to be relatively independent of each other, so that you can complete them out of order or skip exercises. However, there are some exercises you must perform in the correct order:

- If your computer is not running OS X Yosemite yet, you must perform the appropriate exercises in Lesson 1 "Install OS X Yosemite" to upgrade or reinstall it.
- You must perform the appropriate exercises in Lesson 2 "Setup and Configuration" to set up your computer for any of the later exercises.
- "Exercise 5.1 Manage User Accounts" on page 145 and "Exercise 6.1 Restore a Deleted User Account" on page 166 create user accounts that many later exercises depend on.

Some exercises also have specific dependencies on other exercises; these will be listed as prerequisites at the beginning of the exercise.

Apple Training and Certification

The Apple Training and Certification program is designed to keep you at the forefront of Apple technology. Certification creates a benchmark to demonstrate your proficiency in specific Apple technologies and gives you a competitive edge in today's evolving job market.

Certification exams are delivered at Apple Authorized Training Centers around the world.

Reading this guide or attending the Yosemite 101 course will help prepare you to pass the OS X Support Essentials 10.10 Exam and become an Apple Certified Support Professional (ACSP) and/or Apple Certified Technical Coordinator (ACTC).

- ACSP certification verifies an understanding of OS X core functionality and an ability to configure key services, perform basic troubleshooting, and support multiple users with essential OS X capabilities.
- ACSP certification is designed for the help desk professional, technical coordinator, or power user who supports OS X users, manages networks, or provides technical support for the Mac.
- Students earn ACSP certification by passing the OS X Support Essentials 10.10 Exam. Visit training.apple.com/certification/osxyosemite to review the OS X Support Essentials Exam Prep Guide.
- ACTC certification verifies a foundation in OS X and OS X Server core functionality and an ability to configure key services and perform basic troubleshooting. ACTC certification is intended for OS X technical coordinators and entry-level system administrators who maintain small-to-medium networks of computers using OS X Server.
- Students earn ACTC certification by passing both the OS X Support Essentials 10.10 Exam and OS X Server Essentials 10.10 Exam. (To prepare for the latter exam, attend the Yosemite 201 course or read *Apple Pro Training Series: OS X Server Essentials 10.10*.)

MORE INFO ▶ To read OS X Technical White Papers and learn more about all Apple certifications, visit http://training.apple.com.

NOTE ▶ Although all the questions in the OS X Support Essentials 10.10 Exam are based on material in this guide, nothing can substitute for time spent learning the technology. After you read the book and/or take the class, spend time increasing your familiarity with OS X on your own to ensure your success on the certification exam.

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Lesson 4

OS X Software Updates

Adding new capabilities is the very reason "software" exists. It's expected that you will add new applications to increase the capabilities of your Mac and, as products are refined, new software updates as well. In this lesson, you will configure and use the OS X software update technology, which is an automatic method to keep all your Apple-sourced software up to date. You will also explore an alternative to automatic software updates: manually downloading and installing software update packages.

GOALS

- Configure automatic software update settings
- Automatically update Apple-sourced software
- Manually update Apple software

Reference 4.1
Automatic Software Updates

Keeping current with software updates is an important part of maintaining a healthy computer. For that reason, OS X includes an easy-to-use software update mechanism that automatically checks the Apple servers via the Internet to make sure you're running the latest Apple-sourced software. Automatic software update checking is enabled by default as soon as you start using your Mac.

Both automatic and manual software updates require an Internet connection to download update installers. The automatic software update mechanism checks only for updates of currently installed Apple-sourced software, including software included with OS X and any software purchased from the Mac App Store.

Installing Mac App Store software updates requires appropriate Apple ID authentication. If you have not previously signed in to the Mac App Store from the computer you're working on, you will be required to authenticate with an Apple ID. If a Mac App Store item was installed with a different Apple ID, and you wish to update the item, you must authenticate with the Apple ID used to purchase the original item.

NOTE ▶ Some software updates require that you also agree to a new Apple Software License Agreement.

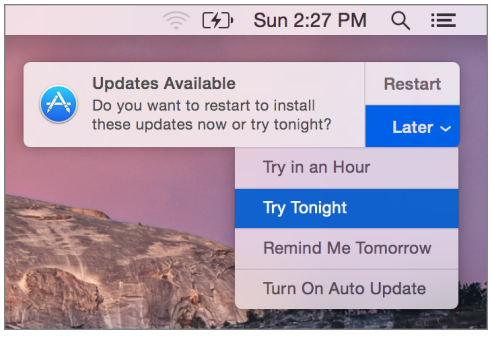
> **NOTE ▶** In OS X Yosemite, both administrative and standard users are allowed to install system software updates via the Mac App Store. If your organization restricts this type of activity for nonadministrative users, you can disable automatic software updates, as covered in "Automatic Software Update Preferences" on page 112 later in this lesson.

Automatic Software Update Behavior

OS X Yosemite features unified software updates via integration with the Mac App Store, meaning that all software you have installed from the Mac App Store, including OS X itself and applications created by either Apple or third parties, are updated from a single location. Further, software update is integrated with the Notification Center to let you know as soon as new updates are available for installation.

> **MORE INFO ▶** Although it's covered here in terms of its update abilities, using the Mac App Store to install new applications is discussed further in Lesson 17 "Application Installation".

Assuming the default settings, updates for important system files and security software are always automatically downloaded and installed. On the other hand, by default, most OS X system and Mac App Store updates are automatically downloaded in the background but not installed. In this case, when updates are ready to be installed, a Mac App Store notification displays, stating "Updates Available."

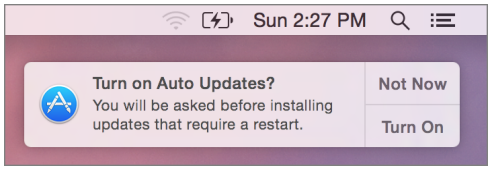


From this notification you can click Restart, which will immediately install the updates, or click Later to display a menu enabling you to defer the update until a more convenient time. This is especially useful because some system updates prevent you from using the computer while the installation completes, in addition to requiring a restart.

The last item in this menu allows you to enable automatic updates for Mac App Store items. This option is not enabled by default on new OS X systems.

> **TIP** When software updates are available, a number badge (indicating the number of available updates) will appear next to the Mac App Store icon, the Mac App Store toolbar Updates button, and the App Store selection in the Apple menu. Also, when you try to restart or shut down the computer, you may be reminded to install available updates.

Again, by default on OS X, Mac App Store updates will not automatically install. You may, however, receive an additional notification to "Turn on Auto Updates."



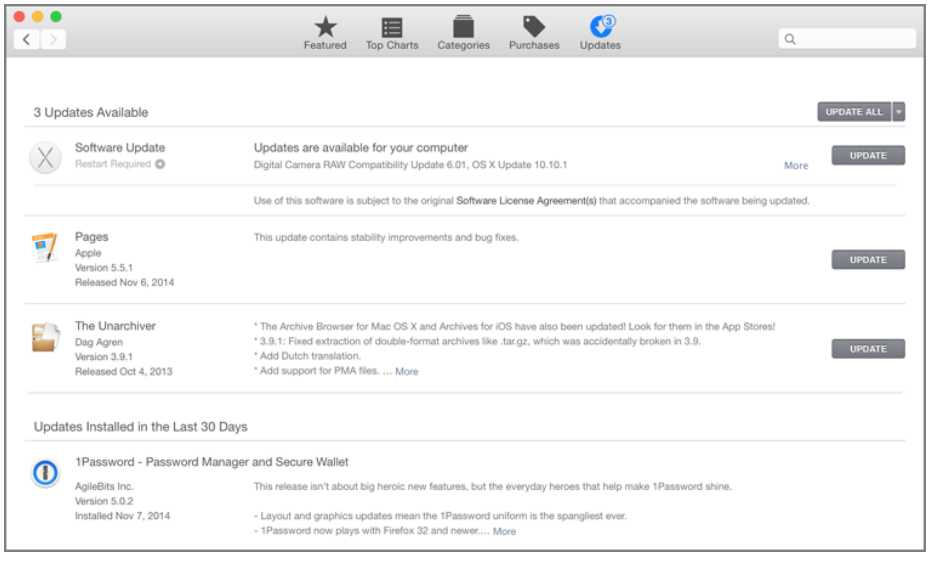
Clicking the Turn On button from this notification enables automatic installation for Mac App Store items. As stated previously, important system and security software are always updated.

After deferring updates, when you are ready to install updates or want to manually check for new updates, you can do so at any time using the following methods:

- In the About This Mac window, click the Software Update button.
- In the App Store preferences, found in the System Preferences application, click the Check Now button.
- In the toolbar of the Mac App Store, click the Updates button.

App Store Update Details

When the Mac App Store opens to show you new updates, each update is listed with information about the software update contents. The information provided includes the update name, version, and a description. Updates that require a system restart include a notice below the update's name.



As in the screenshot above, the Updates list is split into three sections:

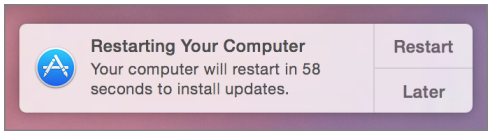
- At the very top are OS X software updates—This section contains only updates for OS X itself or updates for Apple software installed outside of the Mac App Store. (This is similar to the software update mechanism available in earlier versions of OS X.) To simplify the view, multiple software updates in this top section are hidden. You can see all the updates and their descriptions by clicking the More link next to the Update button in the top section.
- In the middle are individual Mac App Store updates—Items purchased from the Mac App Store, aside from OS X itself, always appear as separate update items. In this screenshot, both Pages and The Unarchiver require updates. Again, you can see more information about any individual software update by clicking the More link in the description.
- At the very bottom are previously installed updates—This section lists only updates installed by this user from the Mac App Store within the last 30 days. It does not list updates installed outside of the Mac App Store or by other users. A complete list of installations can be viewed using System Information, as covered in “Reference 4.3 Installation History” on page 117.

NOTE ▶ If you don't believe the items listed in the Updates view to be accurate, you can refresh available updates by choosing Store > Reload Page from the menu bar or by pressing Command-R.

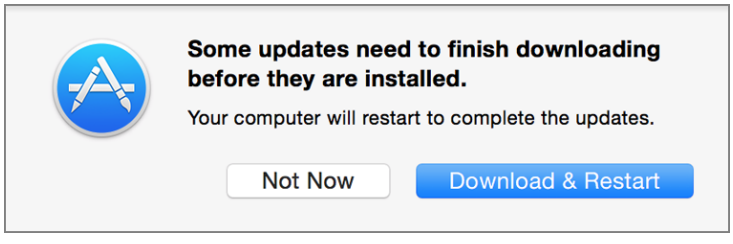
NOTE ▶ Administrators can configure a custom Software Update service to help them manage updates. If this service is configured, the Software Update area shows the name of the server and lists the available updates. Although this process is not covered in this guide, you can find out more about it in the companion guide, *OS X Server Essentials 10.10: Using and Supporting OS X Server on Yosemite*.

To install a single update, simply click the corresponding Update button, or click the Update All button to install all available updates. If none of the updates requires a restart for installation, the software automatically installs without any further interaction.

However, if any of the updates requires a restart after the install process, you are given the option to restart or again defer the installation. If the update items have already been downloaded, a notification displays.



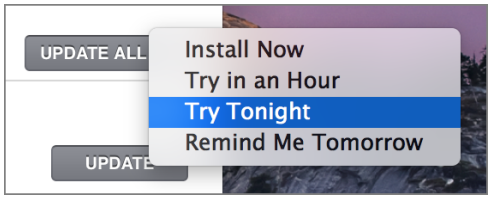
If any of the update items hasn't been downloaded, a different dialog appears so that you can confirm you want to download the items and then restart.



In either case, when you select a restart option, the system verifies the downloaded updates, logs out the current user, installs the updates, restarts the system, and then automatically logs back in to the user account that initiated the updates.

You can, of course, choose the Not Now button, but you will eventually have to restart to take advantage of the new software. Alternatively, if updates requiring a restart are already downloaded, you can choose an automatic installation option from the Later pop-up

menu in the restart notification (shown previously) or from the pop-up menu to the right of the Update All button in the Mac App Store. This allows you to automatically defer the software installation and system restart to a time when it's more convenient.



iLife and iWork Updates

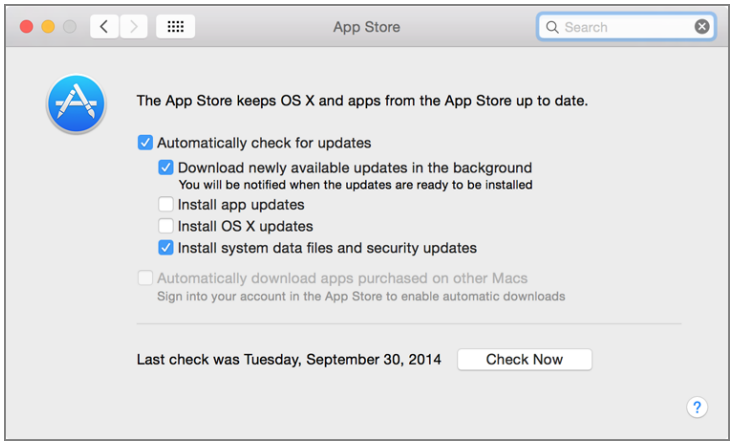
Although most new Mac systems come with the iLife and iWork apps installed, these apps will probably need to be updated. This requires that a user "adopt" or "accept" the free iLife and iWork software licenses that came bundled with the Mac by first signing in to the Mac App Store with his or her Apple ID. For more information about accepting these applications, see Apple Support article HT203658, "Alerts may occur when accepting bundled applications from the Mac App Store."

Older Mac systems upgraded to OS X Yosemite that also have a previous version of the iLife and iWork apps can upgrade, for free, to the latest Mac App Store versions. The software update process automatically detects these updates, but you have to authenticate with an Apple ID to accept the licenses for the new versions. For more information about updating these applications, see Apple Support article HT201064, "Update to newer versions of Apple apps on your Mac using the Mac App Store."

> **TIP** Once a user's Apple ID has been used to accept the license for an application, that user can install the application on any other Mac by signing in to the Mac App Store. In other words, a user can accept the iLife and iWork applications from a new Mac and then sign in on an older Mac to install the latest versions of the applications.

Automatic Software Update Preferences

App Store preferences, accessed via the System Preferences application, enable you to control the software update automation. Changes made in App Store preferences apply systemwide, to all users.



From the App Store preferences, you can enable or disable the following options:

- Automatically check for updates—When this option is enabled, the system checks for updates once a day. Note that "check" means that only a small amount of Internet bandwidth is needed to determine if updates are needed.
- Download newly available updates in the background—In this case, the update system may need to use a large amount of bandwidth to download updates. It's not uncommon for OS X system updates to weigh in at over 1 GB. Also, because this option will automatically download updates for applications purchased from the Mac App Store, systems with more applications will likely use more bandwidth.
- Install app updates—This option is not enabled by default, but, as covered previously, the system prompts you to enable this option via a notification. Once it's enabled, you are notified after new Mac App Store items are automatically updated or if you need to quit the application to apply the update. Importantly, automatic Mac App Store updates do not require a system restart.
- Install OS X updates—This option is not enabled by default, but, as covered previously, you can also enable this option via a notification. Once it is enabled, you will be notified after new OS X system items are automatically updated, as long as they don't require a restart. Again, any OS X updates that require a system restart allow you restart immediately or wait until later.
- Install system data files and security updates—If Apple deems these updates important enough that they should be always installed, it's a best practice to leave this option

enabled. Keep in mind, though, that some system and security updates require that the system be restarted.

- Automatically download apps purchased on other Macs—This feature is disabled by default. If this feature is enabled, when you are signed in to the Mac App Store with an Apple ID, new installations made from another Mac using the same Apple ID will automatically install on this Mac as well. This is handy for those who use multiple Mac systems.

In App Store preferences, you can also click the Check Now button to manually open the Updates section of the Mac App Store.

MORE INFO ▶ Standard users can be individually restricted using parental controls, which include the ability to block access to the Mac App Store. You can find out more about parental controls in Lesson 5 "User Accounts" and more about the Mac App Store in Lesson 17 "Application Installation".

Reference 4.2
Manual Software Updates

Before the Mac App Store or automatic software updates, all Mac software was acquired and installed manually. Fortunately, OS X has always featured relatively simple software installation. In fact, many applications require only that the user copy a single application file to the local Applications folder. On the other hand, more complex software may require multiple resources to be placed in a variety of specific locations on your Mac.

A prime example of a complicated software installation is any system software update. In some cases it may be more convenient to manually install an update, as opposed to using automatic software update via the Mac App Store. For example, perhaps you need to install a particularly large software update for a system with limited Internet bandwidth. It may be better to manually download the update to a portable flash disk at a location with more bandwidth, and then use the flash disk to apply the update to the Mac that needs it. An experienced OS X support specialist will always have an external disk with the most common large updates handy for just such an occasion.

TIP You have the option of manually downloading and installing Apple software updates. You can find all Apple updates at http://support.apple.com/downloads/. After you download the updates, use the Installer application to apply them.

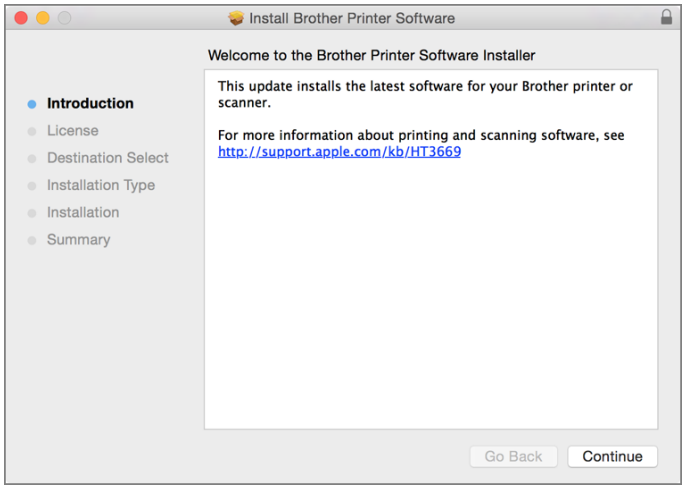
Installer Application

The Installer application makes complicated application installations simple. Often, software developers will create an "installer package" with all the instructions and resources necessary for the Installer application to set up the new software on your system.

> **MORE INFO ▶** Though it's covered briefly here, installing new applications is discussed further in Lesson 17 "Application Installation".

BrotherPrinterDrivers.pkg

Double-clicking one of these software installer packages opens the Installer application and begins the installation process. Much like the OS X installation process, the Installer application guides you through the steps necessary to install or update software. This may include agreeing to software licenses, selecting a destination, selecting package options, and authenticating as an administrative user.



Unlike the Mac App Store, the Installer application requires administrative access to install many items. This security mechanism is in place because anyone is allowed to make and distribute traditional OS X installer packages, including those who may have nefarious goals. Another mechanism in OS X, known as Gatekeeper, also provides an additional

level of protection against unknown installation packages and software. You can find out more about Gatekeeper in “Gatekeeper” on page 498.

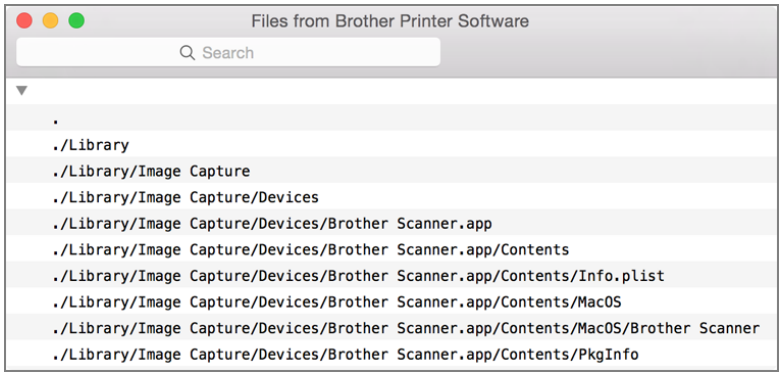
> **NOTE ▶** Third-party software developers may choose to use a proprietary, non-Apple installer for their product. These installers behave differently from the Apple Installer.

Advanced Installer Features

If you’re curious about what an installation package is actually doing to your Mac, you have two ways to find out. First, you can view the Installer log at any time while using the Installer application by choosing Window > Installer Log or pressing Command-L. The Installer log is a live view of any progress or errors reported during the installation process.

> **TIP** After installation, you can access the Installer log from the /Applications/Utilities/Console application. Once Console is open, select /var/log/install.log.

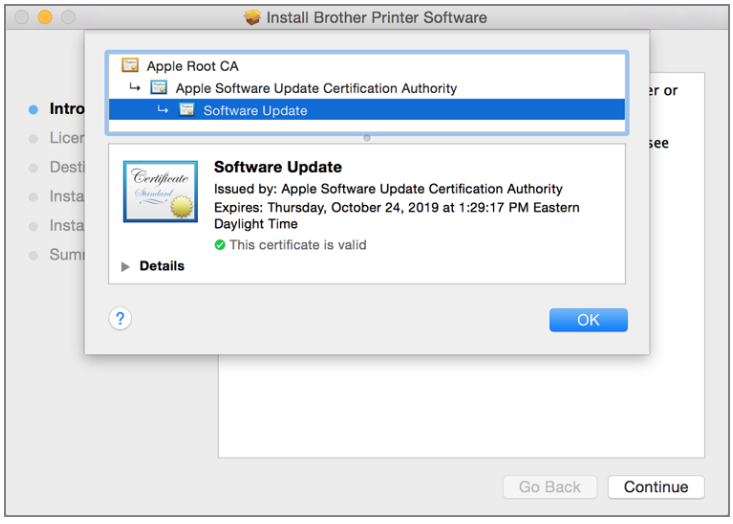
The second method allows you to inspect the content of an installer package before installation. After opening an installer package in the Installer application and passing the initial welcome and license screens, you can preview the list of files to be installed by choosing File > Show Files or pressing Command-I.



> **TIP** Save time looking for what you need by using the search field in the toolbar when examining the Installer log or file list.

Apple has endeavored to increase the security and reliability of software installation packages by supporting signed packages. These packages contain special code used to validate the authenticity and completeness of the software during installation. This makes it nearly impossible for malicious parties to insert illegitimate files in trusted installation packages.

You can recognize a signed installer package by the small lock icon in the far right of the installer window title bar. Clicking this icon displays details about the signed package, including its certificate status.

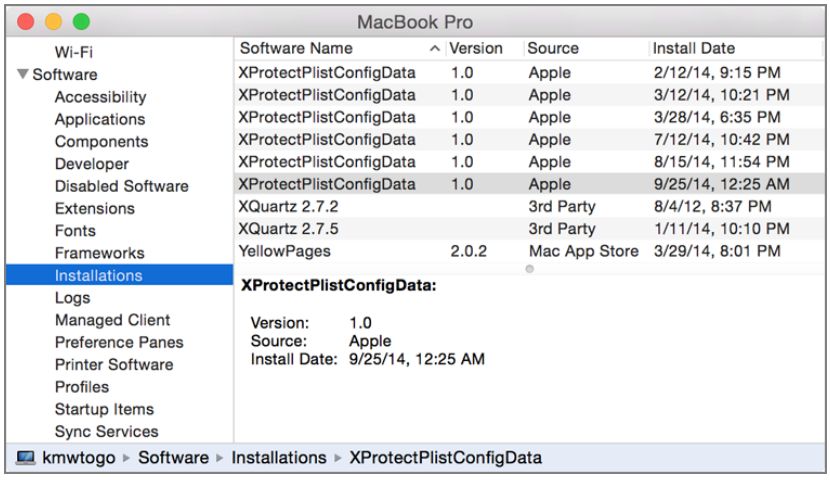


Reference 4.3
Installation History

The automatic software update mechanism in OS X makes it incredibly easy for the average user to maintain an up-to-date system—so much so that the user often isn't even aware of how many updates or installations have been applied. Yet from a support perspective, it's important to know exactly which installations have taken place.

As you may have seen, the update screen in the Mac App Store shows recently installed updates. However, this list of updates doesn't show the complete history of all installations, but only recent installations from the Mac App Store, and only for the currently logged-in user account.

Fortunately, the System Information application features a complete installation history report. To view this history, open /Applications/Utilities/System Information, and then select the Installations item in the left column. This interface shows all software installed via the Mac App Store or the Installer application, including both new and update installations from either Apple or third parties. You can see the name, version, acquisition source, and date installed.



Exercise 4.1
Manually Install Software Updates in a Classroom

Prerequisites

- This exercise is for students performing these exercises in a classroom environment. If you are following these exercises independently, perform "Exercise 4.2 Manually Install Software Updates Independently" on page 119 instead.
- You must have created the Local Admin account ("Exercise 2.1 Configure a New OS X System for Exercises" on page 60 or "Exercise 2.2 Configure an Existing OS X System for Exercises" on page 63).

If your instructor has chosen to download any software updates and distribute them as part of the student materials, you can follow these steps to install them. Your instructor will tell you whether you need to do this.

Install Updates from StudentMaterials

1 In the Finder, open the Lesson4 folder inside the StudentMaterials folder. Remember that you created a shortcut to the StudentMaterials folder in your Dock.

2 For each software update in this folder (note: your instructor may additionally specify an order in which they should be installed), do the following:

- Open the disk image file. After a short time, a new volume mounts. It contains the update package.
- Open the update package. The installer opens and walks you through the installation process.
- Continue through the installer prompts, and agree to the license agreement if required.
- When prompted, authenticate as Local Admin again (password: **ladminpw**, or whatever you chose when you created the account). Installing software updates manually requires administrative privileges.
- When each update has installed, click Close or Restart as appropriate.

3 Repeat these steps until all the updates have been installed.

4 If you did not restart, eject the disk image or disk images before proceeding. You can do this by Control-clicking in the background of the image's window and choosing Eject from the shortcut menu.

Exercise 4.2
Manually Install Software Updates Independently

Prerequisites

- This exercise is for students performing these exercises independently. If you are performing these exercises in a classroom environment, perform "Exercise 4.1 Manually Install Software Updates in a Classroom " on page 118 instead.
- You must have created the Local Admin account ("Exercise 2.1 Configure a New OS X System for Exercises" on page 60 or "Exercise 2.2 Configure an Existing OS X System for Exercises" on page 63).

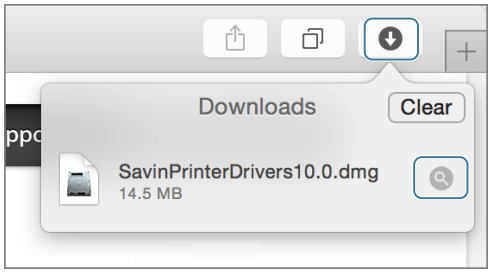
If you want to keep a copy of an update or want to install additional software (such as printer drivers) available for download from the Apple Support site, this exercise shows you how to download and install updates manually.

Download an Update from the Internet

1. Open Safari.
2. Navigate to http://support.apple.com/downloads/.

   This page shows the featured updates Apple has made available for download. If you do not see the update you want, click "Browse by Product," and then either browse for it by product category or enter its name in the Search Downloads field.

   The following screenshots use the Savin Printer Drivers package as an example, but you can choose any update for which your computer is eligible.
3. When you find the update you want to install, click its Download button.
4. Wait for the download to complete. Note that a progress indicator in the Safari Downloads button, near the top right of the window, shows the status of the download.
5. Click the Downloads (down-arrow icon) button near the top right of the window.
6. Click the View (magnifying-glass icon) button next to the update you downloaded.

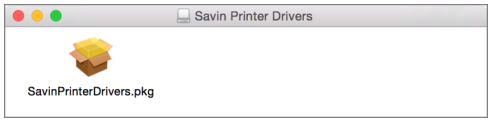


   Your Downloads folder opens in the Finder, and the disk image containing the update is selected.

Install the Update

1. Open the disk image file.

   The disk image mounts, and you will see the installer package it contains.



2 Open the installer package.

The installer opens and walks you through the installation process.

3 Continue through the installer prompts, and agree to the license agreement if required.

4 When prompted, authenticate as Local Admin (password: **ladminpw**, or whatever you chose when you created the account).

Manual software updates usually require administrative privileges to install.

5 After the update installs, click Close or Restart as appropriate.

6 If you did not restart, eject the disk image before proceeding. You can do this by Control-clicking in the background of the image's window and choosing Eject from the shortcut menu or by using the Eject button next to the disk image's name in the Finder sidebar.

Exercise 4.3
Use Automatic Software Update

Prerequisite

- You must have created the Local Admin account ("Exercise 2.1 Configure a New OS X System for Exercises" on page 60 or "Exercise 2.2 Configure an Existing OS X System for Exercises" on page 63).

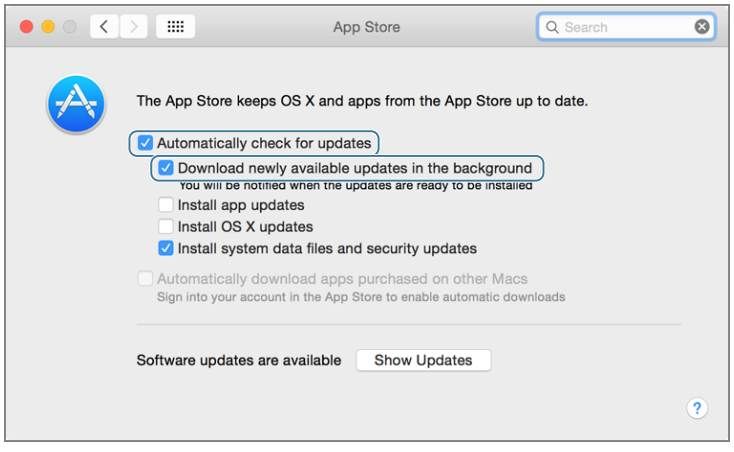
In this exercise, you will use the automatic update feature of the Mac App Store to check for, download, and install updates for OS X. You will also see how to view installed software and updates.

Check Your App Store Preferences

1 From the Apple menu, choose System Preferences.

2 Select the App Store pane.

Notice that by default the system will automatically download new updates in the background and then notify you when they are ready.



3 Quit System Preferences.

Update Your Software

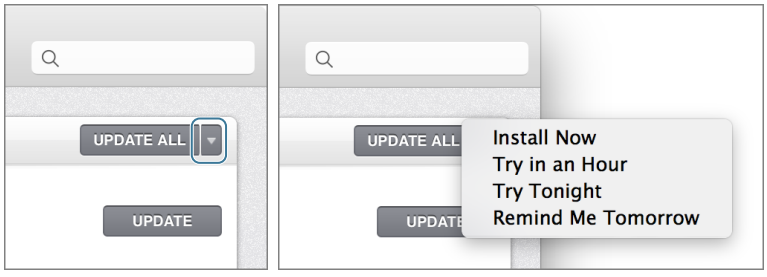
1 From the Apple menu, choose App Store.

2 In the App Store toolbar, click Updates.

The App Store checks for new software.

3 If you see a message that says “No Updates Available,” your computer is up to date. Skip the rest of this section and proceed to ““Check Installed Updates” on page 124”.

4 Click the small triangle next to the Update All button. A pop-up menu appears, with options to install updates later.



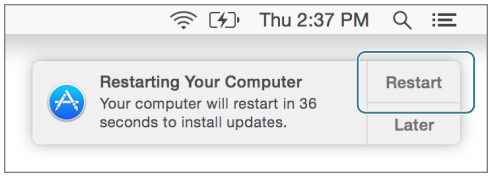
5 Click elsewhere to dismiss the pop-up menu.

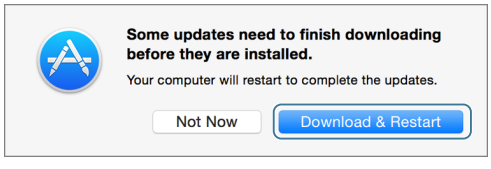
6 Decide which updates you want to install on your computer.

7 If there is more than one update, you can click More to see a detailed list. Click the Update buttons for the updates you want to install, or click Update All if you want all available updates.

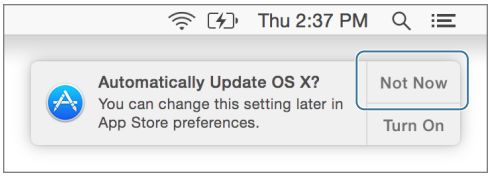
8 If any of the updates are subject to license agreements, you are prompted to agree to them. Read the agreements, and if they are acceptable, click Agree.

9 If you are prompted to restart your computer, click Restart or Download & Restart. Then, log back in to the Local Admin account, and check for more updates by repeating this exercise.





10 If a dialog appears asking if you want to automatically update OS X, click Not Now to keep your current update preference.



11 When all updates have been installed, quit the App Store.

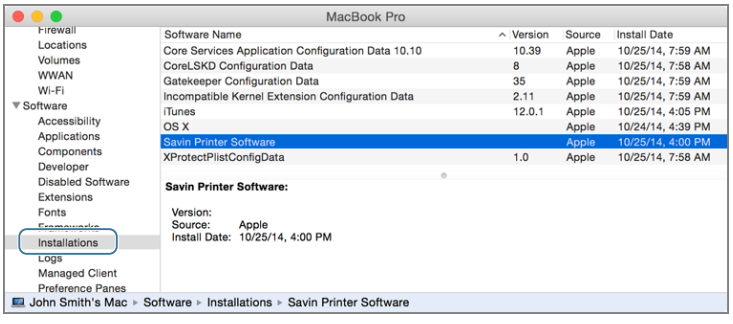
Check Installed Updates

1 Hold down the Option key while you choose System Information from the Apple menu.

System Information opens and displays its report.

2 In the Software section of the sidebar, select Installations.

A list of installed software and updates appears, including the updates you just installed. You can select specific updates from the list to get more information about them.



3 Quit System Information.

Index

Symbols

32-bit mode
  64-bit mode compared with, 580
  opening application in, 608
  simultaneous 32-bit and 64-bit support, 579
64-bit mode
  32-bit mode compared with, 580
  kernel extensions, 852
  simultaneous 32-bit and 64-bit support, 579
6to4
  OS X support for virtual network services, 654
802.11 Wi-Fi standard, 634
802.1X configuration, 671

A

About This Mac window
  in System Information, 57-58
  reviewing repair and warranty coverage for computer, 83-85
  viewing disk space usage, 454
Access control entries (ACEs)
  Drop Box folder and, 322
  permissions and, 316
Access control lists (ACLs)
  defining multiple permissions for an item, 328
  overview of, 315
  resetting permissions, 352
Accessibility settings
  security and privacy settings, 194
Account name
  user account attributes, 137
Account passwords
  types of passwords, 175
Accounts
  administrator (see Administrator account)
  configuring network service accounts, 768
  creating admin account, 63-65
  setting up computer account, 48-50, 62
  setting up new network account, 770
  testing new network accounts, 773
  user (see User accounts)
  viewing existing network accounts, 768
ACEs (see Access control entries (ACEs))
ACLs (see Access control lists (ACLs))
Action menu
  app extension uses and benefits, 583
Activity Monitor
  forcible quit via, 593, 605, 614
  monitoring processes via, 587-591
  opening app in 32-bit mode, 608
  viewing launchd hierarchy, 906
  viewing processes, 612
  viewing system processes and usage, 609
Ad hoc messaging, 749
Add Printer window
  manually configuring printers, 862
Address Book (see Contacts application)
Address Resolution Protocol (ARP)
  resolving MAC addresses to IP addresses, 627
Admin group
  administrative accounts as members of, 129
Administrator account
  creating, 63-65
  creating new, 929
  deleting user accounts, 159
  login with Apple ID, 133
  overview of, 129
  resetting user passwords as administrator, 206-209
Adobe PDF (see PDF (Portable Document Format))
Advanced network configuration
  802.1X configuration, 671
  adding network to Wi-Fi preferred list, 696
  clearing Wi-Fi preferred network list, 695
  creating Wi-Fi-only locations, 693
  manual Ethernet configuration, 675
  manual TCP/IP configuration, 665-668
  NetBIOS and WINS , 671-673
  network proxy services, 673-675
  overview of, 665
  testing Wi-Fi preferred network order, 697
  Wi-Fi configuration, 669-670, 693
AFP (Apple Filing Protocol)
  manually connecting to, 755
  manually connecting to AFP share, 782
  manually connecting to file services, 755
  OS X supported file service protocols, 750
Agents
  process types, 578
AirDisk
  indexing AirDisk volumes, 429
AirDrop
  architecture, 808
  discovery issues, 812
  overview of, 808
  using, 810

Wi-Fi sharing feature, 638
AirPrint, 861
Alias names
user account attributes, 137
Aliases
comparing types of file system shortcuts, 384
managing, 387-388
Analog modems
OS X supported network protocols, 655
App extensions
architecture of, 582
managing, 583
overview of, 582
App Store
accessing software updates, 12
account management, 481
acquiring the OS X Installer, 17
authentication requirement, 107
automatic updates , 108-109, 112
browsing, 477
checking System Preferences for, 122
code signing and, 496
creating new Apple ID, 483, 510
downloading Installer from, 30, 99
examining, 512
Gatekeeper settings, 499
iCloud Family Sharing and, 484
installing Apple ID, 481
installing apps from, 479-480
limiting access to, 488
managing iCloud Family Sharing, 484-486
managing purchases, 486-487
overview of, 475
parental control management options, 139
reinstalling application from, 524
removing installed application with Launchpad, 523
removing software, 504
requirements, 476
searching, 478
selecting app for purchase, 505-511
software updates from, 122-124
updates, 487
updates list, 109-112
updating Apple ID, 482
updating software, 503
verifying and managing Apple ID, 483
Apple Filing Protocol (see AFP (Apple Filing Protocol))
Apple Hardware Test
startup from, 917
testing for hardware failure, 348
Apple IDs
authentication, 46-47
changing local account passwords, 177-179
configuring FileVault recovery, 289
creating new, 483, 510
FileVault recovery and, 295
iCloud Family Sharing and, 485
installing, 481
installing from App Store and, 479, 508
installing software updates and, 107
logging into new account, 133, 149
managing App Store accounts, 481
managing App Store purchases, 486
purchasing apps from App Store, 509
resetting passwords, 183
resetting passwords and, 184, 295
setting up computer account, 48-50
updating, 482
user names and passwords and, 176
verifying and managing, 483
Apple Partition Map (APM)
partitioning options, 247
Apple Privacy Policy, 431
Apple Software Update (see Software updates)
AppleDouble file format, 426
troubleshooting file-sharing, 767
AppleTalk
network printers, 862
Application installation
App Store account management, 481
App Store and, 475
App Store requirements, 476
App Store updates, 487
application environments and, 490
browsing App Store, 477
copying application to Applications folder, 518
creating new Apple ID, 483
drag-and-drop, 501-502, 517
examining App Store, 512
iCloud Family Sharing, 484-486
installation packages, 502, 514
installing Apple ID, 481
installing from App Store, 479-480
installing with installer package, 514-517
Java applications, 491-493
legacy Mac applications, 491
limiting access to App Store, 488
managing purchases, 486-487
native OS X applications, 490
open source software, 494
overview of, 475
reinstalling from App Store, 524
removing applications in Finder, 525
removing applications in Launchpad, 523
removing applications with an uninstaller, 525
removing installed software, 504
searching App Store, 478
security of (see Application security)
selecting app from App Store, 505-511
testing app, 512
traditional methods, 501
UNIX applications, 491
updating Apple ID, 482
updating installed software, 503
viewing and managing Apple ID, 483
viewing installed applications, 522
X Window System applications, 493
Application registration
identifying file type, 529
Application security

bypassing Gatekeeper temporarily, 500
code signing and, 496
drag-and-drop installation and, 501
Gatekeeper system, 498-500
overview of, 495
process security, 495
quarantining files, 497-498
sandboxing and, 496
testing Gatekeeper settings, 519-522
Application Support
types of system resources, 403
Applications
64-bt vs. 32-bit, 580-582
app extension architecture, 582
application group containers, 408
checking compatibility during upgrade, 23-28
creating and locating preview preferences, 610
creating custom search query, 616
diagnostic reports, 594
diagnostics, 615
disabling/restoring preferences, 612
forcibly quitting, 593, 603
forcibly quitting using Force Quit window, 604
forcibly quitting via Activity Monitor, 605-608
forcibly quitting via Dock, 603
general troubleshooting, 591
home folder content, 159
in OS X file structure, 402
installer packages, 115
installing/removing (see Application installation)
managing, 577
managing app extensions, 583
managing corrupted preferences, 613
managing memory, 579
monitoring processes via Activity Monitor, 587-591
monitoring via System Information, 586
Notification Center Today view, 585-586
opening in 32-bit mode, 608
parental control management options, 139
peripherals supported by, 852
preference troubleshooting, 597-599, 610
process features, 578
process performance features, 578
process types , 578
processes and, 577
removing, 522
resolving corrupted preferences, 599
resource contention issues in fast user switching, 142
resource troubleshooting, 602
sandboxing, 406-408
securing (see Application security)
standards supported by OS X, 5
troubleshooting network applications, 765
verifying compatibility during upgrade, 10
viewing and editing preferences, 600
viewing diagnostic reports, 615
viewing diagnostics via Console, 595
viewing system processes and usage, 609
Architecture
Auto Save and Versions, 536
network services, 727
Time Machine, 441
Archive Utility
in Finder, 391
Archives
comparing types of, 389
creating disk image archive, 395-396
creating empty disk images, 393-394
creating zip archives, 389-390
disk images, 392
expanding zip archives, 391
installing drag-and-drop items, 502
mounting disk images, 392
overview of, 388
packages and, 381
zip archives, 389
ARD (Apple Remote Desktop)
enabling remote management, 806-807
options for screen sharing, 799
OS X sharing services, 795
screen sharing (see Screen sharing)
ATA
for internal disks, 355
Attributes
extended, 422
file type and, 528
user account, 135-137
Audio
OS X device classes, 850
previewing with Quick Look, 535
Authentication
802.1X, 671
Apple ID and (see Apple IDs)
automatic authentication of file services, 752
FileVault authentication screen, 304
Local Admin account, 151
manual authentication of file services, 753
modifying user accounts and, 172
screen sharing and, 801
types of keychain files, 220
VPN configuration, 662
Wi-Fi, 635
Authorization
iCloud devices, 232
Auto Save and Versions
architecture, 536
disabling Auto Save, 554
duplicate and Save As, 539-541
experimenting with Auto Save, 561
overview of, 536
turning off Auto Save, 576
using Auto Save, 537-539
using versions, 541-543
working with multiple versions, 562
AutoFill system
Safari, 223
Automatic Resume
overview of, 552
resuming after logout, 552
resuming after quit, 553
starting up in previous state, 911

Automatic updates
checking App Store preferences, 122
overview of, 107-109
System Preferences, 112
updating software, 503

B

Backup disks
configuring, 448-451
encryption of, 442
Time Machine, 442-443
backupd process, 443
Backups, 441
(see also Time Machine)
aging, 444
archives compared with, 388
configuring backup disks, 448-451
encrypting, 446
of data, 29
restoring directly from, 470
running out of space for, 445
selecting backup source, 97
selecting backup volume, 463-464
Time Machine format, 444
Binary
property list files formatted as, 600
Bluetooth
AirDrop and, 808
managing Bluetooth devices, 844
pairing Bluetooth devices, 845
PANs (personal area networks), 652
peripherals, 843
printers, 863
settings, 847
sharing via, 796
supported hardware network interfaces, 651
Bluetooth 1.2, 844
Bluetooth 3.0, 844
Bluetooth 4.0, 844
Bluetooth Setup Assistant, 846, 863
Bonjour
compared with DNS, 631
configuring Bonjour printers, 882-887
network host addressing, 731
overview of, 730
Boot Camp
booter selection and, 902
setup process, 254
Booter
in startup process, 904
selecting, 902
stages of system initialization, 900
troubleshooting, 920
BOOTP (Bootstrap Protocol)
as precursor to DHCP, 631
BootROM (see Firmware)
Bundles
overview of, 381
resources in, 383
Bus connections
peripheral connectivity, 838

C

Cache
deleting cache files to improve performance, 592
troubleshooting DNS service issues, 706
CalDAV
for collaborative calendaring, 743
Calendar application
as scheduling service, 740
Camera
restricting access to built-in, 139
Carbon
developing OS X applications, 490
CardDAV
account types supported by Contacts application, 744
overview of, 745
CD sharing
OS X sharing services, 794
CDFS (Compact Disc File System), 250
Cellular connections
Internet, 652
Chat services
see Messages application, 748
CIDR (CIDR (Classless Inter-Domain Routing)
configuring subnet masks and routers, 682
notation of subnet masks, 625
Clean install
erase Mac system and install OS X Yosemite, 33
erasing disk drive, 35
multiple partitions, 16
partitioning options, 15
performing, 19
preparing system disk, 14
process of, 14, 37
single partition for system volume, 16
starting up from recovery or install disks, 34
vs. upgrade, 19
Cocoa
developing native OS X applications, 490
Code signing
in application security, 496
Commands
process types, 578
Comments
using comment metadata, 435
Common UNIX Printing System
(see CUPS (Common UNIX Printing System))
Communication services
network services, 728
Compact Disc File System (CDFS), 250
Compatibility
checking hardware, firmware, and application compatibility, 23-28
software issues, 591
verifying application compatibilty during upgrade, 10
Compressed memory
memory management features, 580
Compression
monitoring via Activity Monitor, 590
Computer account
setting up, 48-50
computer account
setting up, 62
Computer names
network host addressing, 731
setting, 69-71
Computers
registering, 52
setting computer name, 69-71
Configuration profiles

energy settings, 80-83
overview of, 79
Configuring OS X System
creating admin account, 63-65
Finder preferences, 66, 69
overview of, 60
setting computer name, 69-71
trackpad/mouse preferences, 71
with Setup Assistant, 60-63
Connectivity
checking Ethernet connectivity issues, 701
checking VPN connectivity, 692
monitoring , 644
peripherals, 838
standards supported by OS X, 5
testing with ping, 709
troubleshooting network services, 820
verifying network connection, 642
Wi-Fi issues, 702
Console utility
creating custom search query, 616
examining CUPS logs, 896
uses of, 275
viewing diagnostic reports, 595, 615
viewing firewall logs, 818, 831
viewing system logs, 615
Contacts application
deleting contact imported from vCard, 466
importing vCards into, 464
managing contacts with, 744
restoring deleted contact, 467
using from iCloud, 573
Content filters
parental control management options, 139
Core Storage
Fusion Drive and, 251
managing startup volume, 355
managing volumes, 342
overview of, 250
Country settings
Setup Assistant, 44
Cover Flow view
accessing from Quick Look, 533
CPU usage
forcibly quitting processes and, 606
monitoring process usage, 588
Crashes
creating custom search query, 617
diagnosing, 594
viewing diagnostic reports, 616
CUPS (Common UNIX Printing System
device drivers, 858-860
examining CUPS logs, 896
overview of, 857
troubleshooting print system, 881

D

Daemons
process types, 578
Daisy-chained connections
USB and FireWire supporting, 841
Data
recovering from nonstarting system, 349
securely erasing , 257, 259
Database files
limitations of Time Machine, 445
Desktop
in home folder content, 158
verifying user's home folder, 174
Development
standards supported by OS X, 5
Device drivers
CUPS drivers, 858, 860
peripherals, 850
troubleshooting print system, 881
Devices (see Hardware)
DHCP (Dynamic Host Configuration Protocol)
configuring network clients, 631
creating DHCP-based network location, 678
DHCP servers, 632
DHCP service issues, 705
examining DHCP configuration, 677
network preferences and, 634
servers, 677
TCP/IP configuration, 665
turning off DHCP serivce, 677
Diagnostic reports
checking, 592
examining application diagnostics, 615
information in Setup Assistant, 51
troubleshooting applications, 594
viewing, 615
viewing via Console, 595
Diagnostics & Usage
information in Setup Assistant, 51
security and privacy settings, 194
Dictation & Speech preferences, 195
Digital cameras
OS X device classes, 850
Digital signatures
code signing and, 496
Directory
network service access issues, 821
user account attributes, 137
Disk images
comparing archiving technologies, 389
creating disk image archives, 395-396
creating empty , 393-394
installing drag-and-drop items, 502
mounting, 392
overview of, 392
saving home folder in, 160
Disk space
viewing usage information, 454
Disk Utility
creating disk image archives, 349, 395
creating disk images, 389
creating new partition scheme, 271-274
ejecting volumes as local admin, 275
encrypting disks, 260-262
erase and partition a disk, 270-274
Erase button, 36
erasing disk drive, 35
erasing disks or volumes, 15, 256
examining options in, 95
examining storage, 342
for storage management, 252

formatting/reformatting disks, 101, 253-254, 349
managing encryption password, 281
mount management, 264
overview of, 90
Repair Disk Permissions, 351
repairing partition table and volume, 362, 369
repairing system file permissions, 367, 371
repartitioning disks, 20, 254-256
repartitioning startup disk without erasing, 268
securely erasing data, 259
securely erasing entire disk, 284
securely erasing free space on volumes, 283
troubleshooting partitions and volumes, 346, 346
viewing disk information, 356-360
Disks (see Hard disks)
DisplayPort
Thunderbolt and, 843
DNS (Domain Name System)
host name, 731, 792
Lookup tool for verifying DNS lookup, 721
network services that use UDP, 626
OS X supported network protocols, 655
overview of, 629
service issues, 706
TCP/IP configuration, 665
troubleshooting with Network Diagnostics, 718-721
verifying DNS lookup, 710
Dock
forcible quit via, 593, 603
Document management
architecture of Auto Save and Versions, 536
Auto Save, 537-539
automatic resume, 552
changing default application for a file type, 557-560
choosing application for opening file one time, 556
connecting via Launch Services, 527
disabling Auto Save, 554
duplicate and Save As, 539-541
enabling iCloud features, 566
examining default behaviors, 573
exercise working with multiple versions, 562
experimenting with Auto Save, 561
experimenting with preferences, 575
identifying file type, 528
Launch Services settings, 530
locking documents from applications, 545-546
locking documents from Finder, 544
locking/unlocking documents, 543, 564-565
opening documents from iCloud, 570
overview of, 527
Quick Look, 532
Quick Look plug-ins, 535
Quick Look window options, 534
registering applications, 529
resuming after logout, 552
resuming after quit, 553
saving to iCloud (see iCloud Drive)
turning off Auto Save, 576
versions, 541-543
viewing a file using Quick Look, 555
Documentation
with System Information, 59
Documents
creating text documents, 274
home folder content, 158
resource contention issues in fast user switching, 142
searching for, 439
standards supported by OS X, 5
troubleshooting, 592
verifying user's home folder, 174
Domain Name System (see DNS (Domain Name System))
Downloads
applications from mainserver, 517
home folder content, 158
verifying user's home folder, 174
Drag-and-drop
application from StudentMaterials, 518
application security and, 501
copying application to Applications folder, 518
downloading application from Mainserver, 517
installing applications, 501, 517
installing items, 502
Drivers (see Device Drivers)
DriveSavers recovery service, 341
Drop Box
as subfolder of Public folder, 322
permissions required for opening, 336
Write Only permissions, 315
Duplicate option
copying documents, 539
DVD sharing
OS X sharing services, 794
Dynamic Discovery
of network services, 729
Dynamic Host Configuration Protocol (see DHCP (Dynamic Host Configuration Protocol))
Dynamic memory allocation
memory management features, 579

E

EFI (see Extensible Firmware Interface (EFI))
Email
Mail and Notes applications for, 737-740
services supported by Mail and Notes, 740
Encryption, 308
(see also FileVault)
FileVault settings, 50, 190-192
of backup disks, 442
of backups, 446
of disks, 260-262
of volumes, 278
turning off on Mac HD volumes, 308
Energy settings
Energy Saver , 792, 911
in configuration profile, 80-83
Environments
application environments, 490
Erase

remote erase feature, 200
Ethernet
connectivity issues, 701
MAC addresses and, 623
manual configuration, 675
OS X supported network protocols, 655
status indicators, 645
supported hardware network interfaces, 651
TCP/IP packets and, 627
Everyone
permissions ownership, 314
setting to No Access, 325
EWS protocol
Exchange-based mail service , 740
Exchange
calendar services and, 743
contact services, 745
mail services and, 740
Exclusions
Time Machine, 451, 460
ExFAT (Extended File Allocation Table), 249
Extended (journaled) volumes (see Mac OS Extended (Journaled))
Extended attributes
metadata and, 422
Extended File Allocation Table (ExFAT), 249
Extensible Firmware Interface (EFI)
firmware based on, 901
for firmware updates, 356
Extensible Markup Language (XML), 600
Extensible Messaging and Presence Protocol (XMPP), 749
Extensions
app extensions (see App extensions)
filename extensions, 528
kernel extensions (see Kernel extensions)
types of system resources, 403
Extensis Suitcase Fusion
in font management, 411
External disks
backing up to, 442
backing up volumes to, 463
permissions for nonsystem volumes, 331
reformatting, 101
External recovery disk
overview of, 92
reformatting, 100-102

F

Family Sharing
managing, 484-486
Fast user switching
changing user permissions, 337
contention issues, 142
enabling/disabling, 141, 320
examining permissions as another user, 334
login options, 140-141
overview of, 139
resolving issues in, 143-144
storage issues, 143
Faxing
troubleshooting, 880
Featured view
App Store, 477
File Allocation Table (FAT)
volume formats, 249
File archives (see Archives)
File quarantine, 498
(see also Gatekeeper)
application security and, 497-498
File server
downloading student materials from, 73
File structure
OS X, 401-402
File system permissions (see Permissions)
File system shortcuts
aliases, 384
comparing types of, 383
hard links, 385
managing aliases, 387-388
overview of, 383
symbolic links, 385
File systems
components, 245
core storage, 250
creating new partition scheme, 271-274
creating text documents, 274
ejecting disks, 263
ejecting in-use volumes, 266
ejecting volumes as local admin, 275
encrypting disks, 260-262
encrypting volumes, 278
encrypting volumes in Finder, 279
erase and partition a disk, 270
erasing disks or volumes, 256-258
examining disk ejection, 274
formatting/reformatting disks, 253-254
Fusion Drive, 251
improper unmount or eject, 267
managing, 252
metadata, 421
mount managed with Disk Utility, 264
mounting, unmounting, ejecting volumes, 263
partition schemes, 246-247
repartitioning disk dynamically, 268
repartitioning disks, 254-256
repartitioning startup disk without erasing, 268
securely erase entire disks, 284
securely erasing files, 258-260
securely erasing free space on volumes, 282
standards supported by OS X, 5
storage and, 245
storage concepts, 246
tags, 423-425
user ejecting volumes , 277
viewing permissions, 311-313
volume formats, 247-250
File systems, troubleshooting
examining files manually in target disk mode, 365
examining local storage, 353
examining storage with Disk Utility, 342
examining storage with System Information, 344
inspection, 341
overview of, 341
partitions and volumes, 346
permissions and, 350
recovering data from nonstarting system, 349
Repair Disk Permissions feature, 351
repairing home folder permissions, 372

repairing partition table and volume, 362, 369
repairing partitions and volumes in OS X Recover mode, 368
repairing partitions and volumes in target disk mode, 360
repairing system file permissions, 367, 371
resetting home folder permissions, 352
starting computer in target disk mode, 361
target disk mode and, 347
Verify and Repair feature in Disk Utility, 346
viewing disk information with Disk Utility, 356-360
viewing disk information with System Information, 354
File Transfer dialog, screen sharing and, 802
File Transfer Protocol (see FTP (File Transfer Protocol))
File-sharing
AppleDouble issues, 767
automatic authentication of file services, 752
automatically connecting file shares, 761
automatically mounting network shares, 780
browsing to file shares, 751-752
browsing to SMB share, 777
copying files to network share, 779
disconnecting mounted shares, 760
exercise using, 777
manual authentication of file services, 753
manually connecting to AFP share, 782
manually connecting to file services, 755
manually connecting to SMB or AFP, 755
mounted shares, 758
OS X sharing services, 794
protocols, 749
troubleshooting, 767
troubleshooting Services for Macintosh issues, 768
Filename extensions, 528
Files
application registration in determining file types, 529
backing up during upgrade, 11
changing default application for a file type, 557-560
choosing application for opening file one time, 556
examining file metadata, 435
examining manually, 365
identifying file type using Launch Services, 528
managing keychain files, 226
repairing keychain files, 228
restoring with Time Machine, 469
securely erasing, 258-260
storing in home folder, 333
viewing with Quick Look, 555
FileVault
configuring recovery, 289-291
enabling, 289
enabling users, 291
initiating recovery process, 294
lost recovery keys, 296
overview of, 287
recovery key, 293
recovery using Apple ID, 295
resetting user passwords, 304
restarting and encrypting, 292
restarting FileVault-protected system, 301
restoring original password, 306
technology of, 287-288
Time Machine issues, 445
turning off, 308
turning off encryption on Mac HD volumes, 308
turning on, 296
turning on using System Preferences, 296-300
unlocking protected systems, 903
using recovery key, 304
FileVault 2
addressing issues in legacy FileVault, 287
encryption settings, 50
full disk encryption, 190
recovery key at startup, 184
technology of, 287
types of keychain files, 220
FileVault, legacy
changing to FileVault 2, 297
overview of, 287
passwords, 176
resetting passwords, 185
restoring user accounts, 455
security and privacy settings, 190-192
types of keychain files, 220
Find My Mac
enabling, 47
guest accounts and, 130
security and, 197-200
Finder
accessing, 73
adding permission entries, 327
adding printers, 863
adjusting account preferences, 150
app extensions and, 582
changing permission ownership, 328
creating aliases, 387
customizing tags, 424
deleting permissions, 329
displaying file information, 436
ejecting disks, 263
encrypting disks, 261
encrypting volumes, 279
examining permissions as another user, 334
expanding zip archives, 391
exploring default permissions, 320
file- and folder-level permissions, 315
Go to Folder option, 380
hiding filename extensions, 528
identifying permissions and ownership , 313
inspecting hard links, 386
managing document locking, 544
managing parental control options, 138
managing permissions, 326
manually copying data from target Mac to storage, 349
manually restoring via, 457-458
methods for hiding items and, 378

modifying Launch Service settings, 531
modifying permission entries, 329
mounting/unmounting disks, 264
navigating hidden folders, 378
Network folder, 752
preferences, 66-69
propagating folder permissions, 330
removing applications with, 525
restoring directly from Time Machine, 470
revealing package content, 382
searching for documents, 439
securely erase option, 259, 282
testing managed accounts, 156
viewing permissions, 311
Finger tool
getting user information with, 708
Firewalls
blocking pinging, 710
personal (see Personal Firewalls)
security and privacy settings, 192
troubleshooting network services, 820
FireWire
supported hardware network interfaces, 651
target disk mode support, 348
versions, 840
FireWire 400, 841
FireWire 800, 841
Firmware
booter selection, 902
checking compatibility during upgrade, 23-28
initializing, 901
Power-On Self-Test, 901
stages of system initialization, 900
startup shortcuts, 903
troubleshooting during startup, 919
unlocking FileVault protected systems, 903
updating, 12-14, 903
Firmware Password Utility, 91
Firmware passwords
accessing, 200-202
removing, 217
setting, 216
testing, 216
types of passwords, 176
First Aid tab
Disk Utility, 351
Flags
file flags for metadata, 422
Folder permissions
restricting guest accounts, 130
sharing-only accounts, 131
Folders
backing up during upgrade, 11
copying between users, 164
examining hidden system folders, 399
examining Library folder, 397-399
home folder (see Home folders)
navigating hidden, 397
packages and bundles as special types of, 382
propagating folder permissions, 330
restoring, 172
shared, 323
Smart Folders, 432
storing in home folders, 333
Font Book
adding font for single user, 416-418
confirming font unavailable to other users, 418
disabling fonts, 412
installing fonts, 410-412
removing fonts, 415-416
resolving font issues, 413
validating fonts, 419
Font Validation window, 414
Fonts
adding for single user, 416-418
confirming unavailability to other users, 418
disabling, 412
installing, 410-412
overview of, 410
removing, 415-416
resolving issues with, 413
types of system resources, 403
validating, 419
Force Quit window, 593, 604
Forcible quit
quitting applications, 593
using Force Quit window, 604
via Dock, 603
Formatting/reformatting disks and volumes
overview of, 253-254
Frameworks
plug-ins, 851
types of system resources, 403
FTP (File Transfer Protocol)
manually connecting to, 756
OS X supported file service protocols, 750
Fusion Drive
as "Internal Drive", 253
overview of, 251

G

Game Center
parental control management options, 139
Gatekeeper
for application security, 498-500
modes of application restriction, 498
temporarily bypassing, 500
testing security settings, 519
General preferences
disabling, 554
resuming after quit, 553
Go to Folder
examining hidden system folders, 399
navigating hidden folders, 380
GPT (see GUID Partition Table (GPT))
Graphics
previewing with Quick Look, 535
Groups
administrative accounts as members of admin group, 129
application group containers, 408
local group accounts, 131
permission ownership, 314
user account attributes, 137
Users & Groups preferences, 132
Guest accounts
overview of, 130
GUID Partition Table (GPT)
partitioning options, 247

preparing for upgrade or clean install, 14
reformatting external disks, 100
switching to /from MBR, 271

H

Hangs
creating custom search query, 617
diagnosing, 594
viewing diagnostic reports, 616
Hard disks, 267
(see also Volumes)
backing up to external disks, 442
ejecting, 263
encrypting, 260-262
erasing , 35, 256-258
erasing and partitioning, 270
examining disk ejection, 274
formatting/reformatting disks, 253-254
options for internal disks, 355
permissions for nonsystem disks, 331
preparing system disk for upgrade or clean install, 14
reformatting, 349
reformatting external disks, 100-102
repartitioning, 254-256
repartitioning dynamically, 268
repartitioning startup disk without erasing, 268
securely erasing, 284
viewing disk information, 354-356
viewing disk information with Disk Utility, 356-360
Hard links
comparing types of file system shortcuts, 385
Hardware
authorization of iCloud device, 232
checking compatibility during upgrade, 23-28
examining internal devices, 855
network hardware interfaces, 651
System Preferences, 53
troubleshooting, 919
troubleshooting print system, 880
HID (human input devices)
OS X device classes, 849
Hidden items
bundles and packages, 381
examining hidden system folders, 399
Library folder, 378, 397-399
locating with Go to Folder, 380
navigating, 397
navigating hidden folders in Finder, 378
overview of, 377
package resources, 383
revealing package content, 382
Home directory
deleting, 161
user account attributes, 137
Home folders
contents of, 157-159
creating, 166-169
creating and verifying user accounts, 172
deleting user accounts, 159-161, 169
manually restoring, 164-165
migrating, 161-164
overview of, 157
repairing permissions, 372
resetting permissions, 352
restoring deleted user account, 166, 170-172
sharing, 320, 322
storing files and folders in, 333
verifying, 173
Host sharing
AirDrop and, 808
AirDrop architecture, 808
AirDrop discovery issues, 812
configuring network identification, 792
connecting to virtual display, 825-827
connecting via screen sharing, 799-802
controlling another Mac via screen sharing, 802
enabling ARD remote management, 806-807
enabling screen sharing, 798, 821
network service access issues, 820
network service communication issues, 820
overview of, 791
remotely controlling another computer's screen, 823-825
screen sharing via Messages application, 803-805
screen-sharing architecture, 797
services, 791
shared services, 794-796
testing stealth mode, 832
troubleshooting shared services, 819
using AirDrop, 810
Hot-pluggable connections
USB and FireWire supporting, 841
HTTP (Hypertext Transfer Protocol), 737
HTTPS (HTTP Secure), 737

I

iBooks
iCloud Family Sharing, 484
iCalendar files
calendar services and, 743
iChat (see Messages application)
iCloud
changing local account passwords, 177-179
configuring FileVault recovery, 289
configuring iCloud Drive, 547-549, 567
creating recovery key, 297
enabling features of, 566
enabling iCloud Keychain, 50
iMessage service, 746
installing apps from App Store, 508
locating lost devices, 197
managing Family Sharing, 484-486
opening documents from, 570
overview of, 47
resetting user passwords, 208
restoring user passwords, 307
retrieving recovery key from, 295
saving documents, 546
saving documents to, 569
saving file system tags, 424
using contacts from, 573

using iCloud Drive, 549
iCloud Drive
architecture, 551
configuring, 547-549, 567
logging into new account and, 150
opening documents, 572
overview of, 546
saving documents, 569
settings, 50
using, 549-551
iCloud keychain
device authorization, 232
managing security of, 232
resetting, 233
resetting keychain passwords, 225
security code, 230
understanding, 229
understanding user keychains, 223
IEEE (Institute of Electrical and Electronics Engineers), 840
IEEE 802.3ad, 654
IEEE-1394 (see FireWire)
iLife
software update, 112
IMAP
for receiving email, 740
iMessage service
overview of, 748
via iCloud, 746
Indexes
metadata and, 429-430
preventing Spotlight from indexing, 434
Info button (Disk Utility), 342
Info pane (Network Utility)
monitoring network traffic, 722
overview of, 707
viewing status of network hardware interface, 708
Info window (Finder)
adding new permissions entry, 327
changing permission ownership, 328
changing user permissions, 338
deleting permissions, 329
displaying file information, 436
examining permissions as another user, 334
inspecting application information, 586
inspecting hard links, 386
managing document locking, 544
managing permissions, 327
overriding Launch Services defaults, 530
viewing permissions, 311
Initializing system (see System initialization)
Input devices
HID (human input devices), 849
Inspector window (Finder)
exploring default permissions, 320
identifying permissions and ownership , 313
managing document locking, 544
overriding Launch Services defaults, 530
Install disks
creating, 99, 103-104
start up from, 34
testing, 104
Installation packages
anatomy of, 383
Apple application (see OS X Installer)
installing applications, 115
installing apps, 514
installing updates, 121
overview of, 502
Installer (see OS X Installer)
Installer packages (see Installation packages)
Installing OS X Yosemite
acquiring the OS X Installer, 17
backing up data prior to install, 29
backing up files and folders prior to upgrade, 11
checking hardware, firmware, and application compatibility, 23-28
choosing installation destination, 20
documenting network settings, 28
documenting settings, 11
downloading Installer from App Store, 30
erase Mac system and install, 33
erasing disk drive, 35
examining Installer Log, 40
on newer Mac systems, 18
options, 5-7
OS X Installer log, 22
overview of, 3
partitioning options, 15
performing clean install , 19
preparing for upgrade, 9
preparing Macs for upgrade, 23
preparing system disk, 14-17
process of, 19, 37
starting up from recovery or install disks, 34
troubleshooting OS X Installer, 21
updating Apple software during upgrade, 11
updating firmware, 12-14
upgrade preparation, 7
upgrade prerequisites, 30
upgrade process, 31
upgrade vs. clean install, 19
verifying application compatibility, 10
verifying installation process, 40
verifying installation requirements, 7-9
Instant messaging
Messages application for, 746-749
Internet
account preferences, 732
calendar services and, 743
cellular connections, 652
configuring OS X system, 61
contact services, 745
downloading software updates, 120
messaging services, 748
searching with Spotlight, 429
sharing via, 796
System Preferences, 53
testing Web access, 683
Internet Accounts preferences
configuring network service accounts, 734-737
overview of, 732
Internet Printing Protocol (IPP), 857
Internet Protocol addresses (see IP (Internet Protocol) addresses)

Internet Protocol Security (see IPSec (Internet Protocol Security))
IP (Internet Protocol) addresses
configuring network identification, 792
finding destination on local network, 627
in network communication, 624
link-local addresses, 705
multiple address availability, 656
network host addressing, 731
of Line Printer Daemon, 864
resolving DNS name to, 630
resolving MAC addresses to, 627
static addresses, 680
subnet masks, 625
TCP/IP configuration, 667
IPP (Internet Printing Protocol), 857
IPSec (Internet Protocol Security), 660, 688
IPv4
IP address standards, 624
IPv6
IP address standards, 624
ISO 9660
volume formats, 250
iTunes
iCloud Family Sharing, 484
iWork
software update, 112

J

Java
installing Java applications, 491-493
Journaled volumes (see Mac OS Extended (Journaled))

K

Kerberos
automatic authentication of file services, 752
Kernel
in system startup, 905
stages of system initialization, 901
troubleshooting, 921
Kernel extensions
app extensions contrasted to, 582
device driver implementations in OS X, 851
in system startup, 905
inspecting, 852
system initialization and, 905
types of system resources, 403
KEXTs (see Kernel extensions)
keyboard
settings, 61
Keychain Access utility, 212
managing items, 221
managing keychain files, 228
reparing keychain files, 228
resetting keychain passwords, 226
showing keychain status in menu bar, 234-236
Keychain First Aid, 213, 228
Keychain Management
architecture of keychains, 219
iCloud device authorization, 232
iCloud keychain security, 230, 232
local keychain files, 220
managing items in keychain access, 221
managing keychain files, 226
managing Safari keychain items, 223
overview of, 219
repairing keychain files, 228
resetting iCloud keychains, 233
resetting keychain passwords, 225
retrieving passwords from keychain, 238-240
showing keychain status in menu bar, 234-236
storing passwords in keychains, 237
synchronizing keychain password with account, 240-242
understanding iCloud keychains, 229
understanding user keychains, 223
Keychains
enabling iCloud Keychain, 50
resetting keychain passwords, 185, 225
reverifying keychain synchronization, 215
saving network password to, 636
saving Time Machine disk password, 442
synchronizing keychain passwords, 211
Time Machine authentication information saved to, 450
types of passwords, 176
types of system resources, 403
updating, 174
verifying synchronization of keychain passwords, 212

L

L2TP (Layer 2 Tunneling Protocol)
OS X supported VPNs, 688
over IPSec, 660
LACP (Link Aggregation Control Protocol), 654
Language & Region preferences
country and keyboard settings, 44
dictation feature and, 195
Languages
country and keyboard settings, 44
dictation feature and, 195
LANs (local area networks), 627
Launch Services
application registration, 529
file type identification, 528
overview of, 527
settings, 530
launchd
in startup process, 905
items, 906
logout process and, 915
shutdown and restart, 915
stages of system initialization, 901
stages of user sessions, 907
troubleshooting, 922
user sessions and, 908
viewing hierarchy, 906
LaunchDaemons/LaunchAgents
types of system resources, 403
Launchpad
removing applications with, 523
testing purchased app, 512

Layer 2 Tunneling Protocol (see L2TP (Layer 2 Tunneling Protocol))
LDAP
account types supported by Contacts application, 744
directory service contacts, 746
Legacy applications
installing, 491
Legacy Sites folder
sharing and, 321
Library folder
application group containers in, 408
corrupted resources in, 602
examining, 397-399
home folder content, 158
in OS X file structure, 402
navigating hidden folders, 378
preference files in, 597
verifying user's home folder, 174
Line Printer Daemon (LPD), 864
Link aggregate
OS X support for virtual network services, 654
Link Aggregation Control Protocol), 654
Link-local addressing
DHCP and, 705
Links
hard links, 385
symbolic links, 385
Local account passwords
changing using Apple ID, 177-179
changing without using Apple ID, 179
types of passwords, 175
Local Admin account
authentication, 151
configuring Time Machine, 459
creating, 145-149
creating home folder for user account, 166-169
creating new partition scheme, 271
creating text documents, 274
ejecting volumes , 275
Enable User button, 299
enabling screen sharing, 821
encrypting volumes in Finder, 279
managing user accounts, 145
repartitioning startup disk without erasing, 268
resetting user passwords, 206-209
securely erasing free space on volumes, 282
verifying user's home folder, 173
viewing diagnostic reports, 615
Local Area Networks (LANs), 627
Local group accounts
overview of, 131
Local resource domain, 405
Location Services
Find My Mac feature, 48, 197-200
Wi-Fi required for, 193
Locations
network (see Network locations)
Lock
remote lock feature , 200
Locking documents
locking and unlocking, 564-565
managing, 564
managing from an application, 545-546
managing in Finder, 544
overview of, 543
Login
fast user switching and, 140-141
safe mode login, 923
to FileVault-protected account, 302
to new account, 149
user sessions and, 907
Login keychains
types of keychain files, 220
understanding user keychains, 223
Login shell
user account attributes, 137
loginwindow
in user sessions, 907
logout process and, 915
shutdown and restart, 915
stages of user sessions, 907
troubleshooting logout and shutdown, 924
Logout
overview of, 914
troubleshooting, 923
Logs
diagnostic (see Diagnostic reports)
examining CUPS logs, 896
examining Installer Log, 40
in troubleshooting applications, 592
OS X Installer, 22
types of system resources, 404
viewing firewall history, 818
viewing firewall log, 831
viewing system logs, 615
Lookup tool
overview of, 708
verifying DNS lookup, 710
LPD (Line Printer Daemon), 864

M

MAC (Media Access Control) addresses
identifying network devices, 623
resolving to IP addresses, 627
Mac computers
installing OS X Yosemite on, 18
OS X Yosemite supported, 9
preparing for upgrade, 23
registering, 52
updating firmware, 12
Mac Dev Center
working with bundles and packages, 382
Mac OS Extended
reformatting external disks, 102
volume formats, 248
Mac OS Extended (Case-Sensitive)
volume formats, 248
Mac OS Extended (Journaled)
backing up to, 442
manually restoring via Finder, 457
metadata and, 426
partition format requirements, 20
preparing system disk for upgrade or clean install, 14
volume formats, 248
Mac OS Extended (Journaled, Encrypted)
in FileVault 2, 287
volume formats, 248
Mac OS Standard
volume formats, 248
Mail application
as email service, 737
parental control management options, 139

turning off Mail service in troubleshooting exercise, 784
Mail.app Connection Doctor
troubleshooting, 765
troubleshooting Mail service, 785
Mainserver
downloading applications from, 517
scanning, 775
Managed accounts
creating, 153-155
testing, 155-156
Manual updates
downloading from Internet, 120
installing in a classroom, 118
overview of, 114
Master Boot Record (MBR)
partitioning options, 247
reformatting external disks, 100
switching to GPT partition scheme, 271
Master passwords
overview of, 181
resetting, 186
resetting after failed login, 183
resetting user passwords , 209
types of passwords, 176
MBR (see Master Boot Record (MBR))
MDM (see Mobile Device Management (MDM))
Media Access Control addresses (see MAC (Media Access Control) addresses)
Memory
management features, 579
Menu bar
showing keychain status in , 234-236
Messages application
for instant messaging and texting, 746-749
parental control management options, 139
screen sharing via, 803-805
troubleshooting, 766
Metadata
AppleDouble file format, 426
examining file metadata, 435
file flags and extended attributes, 422
file system and, 421
file system tags, 423-425
overview of, 421
searching for documents and, 439
searching via Spotlight, 428
tags and comments, 435
Migration (transfer)
of home folders, 161-164
Migration (transfer) settings
Setup Assistant, 45
Migration Assistant
functions of, 161-164
manually restoring home folders, 164-165
migrating user data, 349
restoring via, 454
transferring user/computer information between systems, 45
Mobile Device Management (MDM)
deploying network service configuration profiles, 737
parental controls as subset of, 138
profile management, 55
Monitoring
applications via System Information, 586
network connectivity, 643
network traffic, 722
overview of, 586
processes via Activity Monitor, 587-591
Mounting/unmounting disks/volumes
ejecting disks, 263
ejecting in-use volumes, 266
ejecting volumes as local admin, 275
improper unmount or eject, 267
overview of, 263
user ejecting volumes, 277
with Disk Utility, 264
Mouse preferences, 71
Move To command
moving documents to new location, 540
Movies
home folder content, 159
verifying user's home folder, 174
Multihomed locations
creating, 684
Multilink network architecture, 656
Multiprocessing
symmetric, 578
Multitasking
preemptive, 578
Music
home folder content, 159
verifying user's home folder, 174

N

Native OS X applications
installing, 490
NetBIOS (Network Basic Input/Output System)
network host addressing, 731
OS X supported network protocols, 655
overview of, 671
NetBoot server, 917
NetInstall service
getting booter from, 904
Netstat
Network Utility tools, 708
Network Basic Input/Output System (see NetBIOS (Network Basic Input/Output System))
Network devices
areas of network issues, 700
Network Diagnostics Assistant
overview of, 706
troubleshooting DNS, 718-721
Network File System (see NFS (Network File System))
Network interfaces
defined, 622
getting interface information with Network Utility, 708
hardware interfaces, 651
multiple simultaneous, 656
Network locations
changing, 650
configuring, 648, 676
creating DHCP-based , 678
creating multihomed location, 684
creating static, 680
creating Wi-Fi-only locations, 693
examining DHCP configuration, 677
overview of, 647
turning off DHCP service, 677
Network preferences

checking network status, 701, 714
checking shared Mac network configuration, 820
configuring networks, 633
monitoring network connectivity , 644
troubleshooting network by checking , 701
verifying Ethernet status, 702
Network printers
configuring, 861
troubleshooting, 880
Network protocols
defined, 622
overview of, 654
Network resource domain, 405
Network services
access issues, 820
applications, 732
architecture, 727
areas of network issues, 700
automatic authentication of file services, 752
automatically connecting file shares, 761
automatically mounting network shares, 780
Bonjour, 730
browsing to file shares, 751-752
browsing to SMB share, 777
changing service order, 686
communication issues, 820
communications, 728
configuring network service accounts, 734-737, 768
configuring network service order, 684
contact management in Contacts application, 744-746
copying files to network share, 779
creating multihomed location, 684
deactivating, 659
defined, 622
DHCP service issues, 705
disconnecting mounted shares, 760
DNS service issues, 706
dynamic discovery, 729
e-mail services in Mail and Notes applications, 737-740
file-sharing protocol, 749
host addressing, 731
identifying, 728
instant messaging service in Messages application, 746-749
Internet account preferences, 732
list, 657
managing, 658-660
manual authentication of file services, 753
manually connecting to AFP share, 782
manually connecting to file services, 755
manually connecting to NFS, WebDAV, or FTP, 756
manually connecting to SMB or AFP, 755
mounted shares and, 758
multilink and, 656
multiple simultaneous interfaces, 656
overview of, 656, 727
Safari browser and, 737
scanning servers, 775
scheduling service in Calendar and Reminders applications, 740-743
setting up new account, 770-773
SMB, 730
software, 727
testing new account, 773
troubleshooting, 762, 784
troubleshooting file-sharing, 767
troubleshooting Mail application with Mail.app Connection Doctor, 785
troubleshooting network applications, 765
troubleshooting ports with Port Scan, 763-765
troubleshooting with Network Utility, 787-790
turning off Mail service in troubleshooting exercise, 784
using file-sharing services, 777
viewing existing accounts, 768
virtual, 653
Network settings
Setup Assistant, 45
Network Setup Assistant
in network configuration process, 633
Network Utility
accessing from OS X Recovery, 91
interface information, 708
Lookup tool for verifying DNS lookup, 710, 721
monitoring network traffic, 722
overview of, 707
ping for testing connectivity, 709, 715-718
Port Scan tool, 763-765
scanning Mainserver, 775
testing stealth mode, 832
traceroute tool for checking connections, 711
troubleshooting network services, 787-790
Networking
accessing Time Machine over networks, 458
advanced configuration (see Advanced network configuration)
automatic WPA enterprise configuration, 636
basic configuration, 633
cellular Internet connections, 652
changing network locations, 650
concepts, 622
configuring network locations, 648-649, 676
configuring OS X system, 61
connecting to Wi-Fi network, 639
creating static network location, 680-683
DHCP protocol and, 631
DNS protocol and, 629
documenting network settings, 11, 28
essentials of, 621
hardware interfaces, 651
IP addresses and, 624
joining invisible network, 641
joining visible network, 641
LAN traffic, 627
MAC addresses and, 623
monitoring connectivity via network preferences, 644

network locations, 647
network protocols, 654
network services (see Network services)
preferences, 633
router addresses, 625
standards supported by OS X, 5
subnet masks, 625
TCP protocol, 626
terminology, 622-623
testing Web access, 683
troubleshooting (see Troubleshooting networks)
verifying connection, 642
verifying network settings, 639-641
virtual private networks (see VPNs (Virtual Private Networks))
virtual services, 653
WAN traffic, 628
Wi-Fi authentication, 635-636
Wi-Fi configuration, 634-635
Wi-Fi status menu options, 637
New Technology File System (NTFS)
access control lists (ACLs), 315
volume formats, 249
NFS (Network File System)
manually connecting to, 756
manually connecting to file services, 755
OS X supported file service protocols, 750
No Access
applying to Everyone permission, 325
file and folder permissions, 315
home folder and, 334
Notes application
overview of, 739
Notification Center
integration of software updates with, 108
Today view, 583, 585
NTFS (see New Technology File System (NTFS))

O

Online Help
recovery utilities, 90
viewing for OS X Recovery, 94
Open Directory
user account attributes, 135
Open source software
installing, 494
OS X Installer
accessing from OS X Recovery, 93
acquiring, 17
advanced features, 116
downloading , 30, 99
examining , 97
examining Installer Log, 40
installing/reinstalling OS X, 90
log, 22
print drivers and, 859
software updates with, 115
Time Machine support, 20
troubleshooting, 21
types of installation packages, 502
OS X Lion
upgrading to OS X Yosemite, 6
OS X Mavericks
file system tags and, 424
upgrading to OS X Yosemite, 6
OS X Mountain Lion
backup disk support, 443
upgrading to OS X Yosemite, 6
OS X Recovery
accessing Network Utility from, 708
Disk Utility, 95
examining utilities in, 94
external recovery disk, 92
OS X Installer, 97
overview of, 87
repairing partitions and volumes, 368
repartitioning when recovery key lost, 296
Reset Password utility, 184, 350
resetting passwords, 187, 202-205
restoring entire system, 455
startup from, 87, 93, 917
Time Machine, 97
utilities, 89-92
verifying startup disk and restart option, 98
viewing online help, 94
OS X v. 10.6
upgrading to OS X Yosemite, 6
OS X Yosemite, introduction
integration through standards, 4
overview of, 3
what's new, 4
OSI (Open Systems Interconnection) model, 622
Ownership
changing permission ownership, 328
file permissions, 314

P

PAC (proxy autoconfiguration) files, 673
Packages
installation packages (see Installation packages)
overview of, 381
resources in, 383
Pairing
Bluetooth devices, 845
PANs (personal area networks)
Bluetooth and Wi-Fi, 652
Parallels Desktop
third-party virtualization tools, 654
Parental controls
creating managed account with, 153-155
limiting access to App Store, 489
management options, 138
overview of, 138-139
restricting guest accounts, 130
testing managed accounts, 155-156
Partitions
Core Storage and, 250
creating new partition scheme, 271-274
erase and partition a disk, 270
Fusion Drive and, 251
multiple, 16
repairing in OS X Recovery mode, 368
repairing in target disk mode, 360
repairing partition table and volume, 362, 369
repartitioning disks, 254-256
repartitioning dynamically, 268
repartitioning startup disk without erasing, 268
single partition for system volume, 16
troubleshooting, 346

troubleshooting installation issues, 21
understanding partitioning options, 15
Password Assistant, 180, 206-209
Passwords
accessing firmware passwords, 200-202
administrative accounts and, 129
backup encryption and, 446
changing, 177-180, 214
changing lost, 352
creating managed account with parental controls, 153
FileVault-enabled, 292
guest accounts and, 130
logging into new account, 133, 149
login options, 140
loss of login password, 293
modifying user accounts and, 172
Password Assistant, 180
removing firmware passwords, 217
Reset Password utility, 91
resetting account passwords in OS X Recovery, 202
resetting keychain passwords, 185, 225
resetting legacy FileVault passwords, 185
resetting master password, 186
resetting OS X Recovery password, 187
resetting password using master password, 209
resetting passwords after failed login, 205
resetting user passwords, 206-209, 304
restoring original password, 306
retrieving from keychain, 238-240
reverifying keychain synchronization, 215
setting firmware passwords, 216
setting up computer account, 49
storing in keychains, 237
synchronizing keychain passwords, 211, 240-242
testing firmware passwords, 216
types of, 175-177
updating keychain password, 174
verifying synchronization of keychain passwords, 212
VNC access and, 799
PayPal
App Store purchases and, 479
PCI Express
for internal disks, 355
Thunderbolt and, 842
PCL (Printer Command Language), 859
PDF (Portable Document Format)
installing PDF service, 893, 893-895
print to PDF, 892
troubleshooting print system, 880
using PDF tools, 875
Peripherals
Bluetooth, 843
connectivity, 838
device classes, 849
device drivers, 850
examining external USB devices, 856
examining internal devices, 854
examining via System Information, 854
FireWire options, 840
inspecting kernel extensions, 852
managing Bluetooth devices, 844
managing Bluetooth settings, 847
overview of, 837
pairing Bluetooth devices, 845
resource contention issues in fast user switching, 143
technologies, 837
Thunderbolt, 841
troubleshooting, 848
USB options, 839
Permissions
access control lists (ACLs) , 315
adding new permission to user or group, 327
changing on user account, 337-339
changing ownership of, 328
creating items with default permissions, 332
deleting user or group permissions, 329
Disk Utility Repair Permissions, 351
drag-and-drop installation and, 501
examining as another user, 334-337
for nonsystem volumes, 331
in hierarchical context, 316
managing, 326
managing via Finder, 326
modifying user or group permissions, 172, 329
ownership of, 314
propagating folder permissions, 330
repairing home folder permissions, 372
repairing system file permissions, 367, 371
resetting home folder permissions, 352
restricting guest accounts, 130
securing new items and, 324
seeing effects of default permissions, 333
Shared folder, 323
sharing and, 311
sharing files, 319
sharing home folder, 320-322
sharing-only accounts, 131
standard UNIX, 314
system permissions, 495
testing, 337, 339, 339
troubleshooting , 350
troubleshooting print system, 881
viewing file system permissions, 311-313
Personal firewalls
advanced configuration, 816-818
configuring, 815, 828
enabling, 828
functions of, 814
overview of, 814
testing settings, 829-831
viewing firewall history, 818
viewing logs, 831
Pictures

home folder content, 159
verifying user's home folder, 174
PIDs (Process IDs), 589, 607
Ping
Ping tool
finding connection failures and slow downs, 711
overview of, 708
testing connectivity with, 709, 715-718
testing stealth mode, 832
troubleshooting network services, 787
Plug-and-play
peripheral support, 837
Point-to-Point Protocol (see PPP (Point-to-Point Protocol))
Point-to-Point Protocol over Ethernet (PPPoE), 654
Point-to-Point Tunneling Protocol (PPTP), 660, 688
POP (Post Office Protocol)
for receiving email, 740
Port Scan tool
overview of, 708
scanning Mainserver, 776
troubleshooting network ports, 763-765
troubleshooting network services, 788, 820
Portable Document Format (see PDF (Portable Document Format))
POSIX-style permissions, 314
POST (Power-On Self-Test), 901
PostScript Printer Description (PPD), 857, 859
PostScript printing system
Apple use with Macintosh, 857
printer drivers and, 859
Power management
optimized, 579
Power Nap mode
backups during, 444
sleep modes, 913
Power-On Self-Test (POST), 901
PPD (PostScript Printer Description), 857, 859
PPP (Point-to-Point Protocol)
OS X supported network protocols, 655
TCP/IP configuration, 665
PPPoE (Point-to-Point Protocol over Ethernet), 654
PPTP (Point-to-Point Tunneling Protocol), 660, 688
Preemptive multitasking
process performance features, 578
PreferencePanes
types of system resources, 404
Preferences
automatic updates, 112
changing network service order, 686
creating and locating preview preferences, 610
disabling and restoring, 612
file system tags, 424
general (see General preferences)
Internet accounts (see Internet Account preferences)
managed corrupted, 613
network (see Network preferences)
Printers & Scanners, 860, 863, 877
replacing corrupted preference files, 592
resolving corrupted, 599
sandboxed applications, 598
Sharing preferences, 820
Spotlight, 433
system (see System Preferences)
Time Machine, 447
trackpad/mouse, 71
troubleshooting, 597-599, 610
types of system resources, 404
viewing and editing, 600
Preview
creating and locating preview preferences, 610
Preview application
app extension uses and benefits, 583
Print dialog
adding printers, 863
basic printing, 871
detailed settings and presets, 872
managing print jobs, 870
printing to printer, 888
Print jobs
basic, 871
managing, 870
settings, 872-874
Print queues
managing, 876-879, 890
opening, 867
troubleshooting print system, 879
Printer Command Language (PCL), 859
Printers
Apple supplied drivers, 858
configuring Bonjour printers, 882-887
configuring directly attached printers, 860
configuring local network printers, 861
manually configuring, 862-866
modifying configuration, 866
OS X device classes, 850
print to, 887
sharing, 795, 868
Printing
configuring, 860, 882
configuring Bonjour printers, 882-887
configuring directly attached printers, 860
configuring local network printers, 861
CUPS drivers, 858, 860
default settings, 871
detailed settings and presets, 872-874
examining CUPS logs, 896
installing PDF service, 895
managing print jobs, 870
managing printer queues, 876-879
managing with CUPS, 857
manually configuring printers, 862, 866
modifying existing printer configuration, 866
outputting to printers, 887
Print system architecture, 857
resetting print system, 897
sharing printers, 868-870
to PDF, 892
troubleshooting print system, 879-881
Privacy
Apple Privacy Policy, 431

Safari privacy, 196
security and privacy settings, 192-194
Spotlight preferences and, 433
Privileges (see Permissions)
Process Identification (PID), 589, 607
Processes
forcibly quitting, 606
monitoring via Activity Monitor, 587-591
overview of, 577
performance features, 578
types of, 578
viewing system processes and usage, 609
Profanity
parental control management options, 139
Profile Manager
in MDM, 138
Profiles
energy settings, 80-83
for system setup, 55, 56
Property list files
extension for , 597
viewing and editing preferences, 600
Protected memory
memory management features, 579
Protocols
network (see Network protocols)
Proxy autoconfiguration (PAC) files, 673
Proxy servers
configuring, 673-675
IP proxies, 655
Public folders
contents of, 157
Drop Box as subfolder of, 322
home folder content, 159
sharing and, 321
verifying user's home folder, 174

Q

Quarantine
quarantining files, 497-498
Quartz imaging system
generating PDF documents, 875
Queries
creating custom, 616
Quick Look
overview of, 532
plug-ins, 535
previewing common file types, 529
viewing files with, 555
window options, 534

R

Read & Write
access to home folder, 320
file and folder permissions, 315
permissions hierarchy, 316-319
Read Only
access to home folder, 320
file and folder permissions, 315
permissions hierarchy, 316-319
Recovery
configuring FileVault recovery, 289
of data from nonstarting system, 349
Recovery disk
start up from, 34
Recovery key
as quickest recovery method, 294
creating/recording, 298
exercise using, 304
in FileVault 2, 184
loss of, 296
options for configuring FileVault recovery, 291
resetting passwords, 304
unlocking FileVault protected systems, 293
Registration, of Mac computers, 52
Reminders application
overview of, 742
Remote Apple events
OS X sharing services, 795
Remote login
OS X sharing services, 795
Remote Management (see ARD (Apple Remote Desktop))
Repair Disk feature
repairing partition table and volume, 362, 369
repairing system file permissions, 367, 371
Repair Permissions feature
Disk Utility, 351
Reports
diagnostic, 594
in System Information, 59
viewing diagnostic reports, 595, 615
Reset Password utility, 91
changing lost passwords, 352
FileVault recovery and, 295
OS X Recovery, 187, 203
repairing home folder permissions, 373
resetting home folder permissions, 350
Resource contention
fast user switching and, 142
Resource passwords
types of passwords, 176
Resources
replacing corrupted, 592
troubleshooting application resources, 602
Restart
in troubleshooting applications, 591
login options, 140
user sessions, 915
Restore
deleted accounts, 166
deleted contact, 467
deleted user accounts, 170-172
directly from backup, 470
file using Time Machine, 469
manually restoring home folders, 164-165
previous version of document, 543
system volume, 455
Time Machine options, 452
via Migration Assistant, 454
via Time Machine, 97, 452-454, 465
Resume (see Automatic Resume)
Retina displays
resolution and, 581
Root accounts
administrators enabling, 129
bypassing permissions, 311
Root certificates, types of keychain files, 221
Routers
firewalls and, 814
network addresses of, 625
role in network communication, 629

traceroute tool for examining network hops, 711

S

Safari
checking VPN connectivity, 692
managing keychain items, 223
observing network problem, 714
overview of Safari 8, 737
parental control management options, 139
privacy and, 196
testing managed accounts, 156
testing Web access, 683, 722
troubleshooting network applications, 765
unarchiving zip files, 502
Safe Boot
startup shortcut for, 918
troubleshooting kernel, 921
troubleshooting launchd , 922
Safe Sleep
sleep modes, 912
Sandboxing
application sandbox containers, 406-408
application sandboxing, 496
preferences, 598
SATA (Serial ATA), 355
SATA disks
inspecting physical storage, 345
Save As, 540
(see also Auto Save and Versions)
process of, 540
Scanning
configuring, 860
managing, 868
scanners as OS X device class, 850
sharing scanners, 795
Schedule
Time Machine, 443
Screen sharing
architecture, 797
connecting to virtual display, 825-827
connecting via, 799-802
defined, 794
enabling, 798, 821
overview of, 796
remotely controlling another computer's screen, 823-825
remotely controlling another Mac, 802
via Messages application, 803-805
Searches, 427
(see also Spotlight)
advanced, 431-433
App Store, 478
creating custom search query, 616
for documents, 439
results of Spotlight search, 428
simple Spotlight search, 427
Spotlight plug-ins and, 430
Secure erase
entire disk, 284
free space on volumes, 282
of files, 258-260
options, 257
Secure File Transfer Protocol (SFTP), 795
Secure memory allocation
memory management features, 580
Secure Shell (SSH), 795
Secure Sockets Layer (SSL), 737
Security
application security (see Application security)
Spotlight security, 431
Security & Privacy
advanced settings, 190
configuring personal firewalls, 815
enabling FileVault and, 289
enabling users for FileVault, 292
FileVault settings, 190-192
FileVault tab, 292, 302
firewall settings, 192
general settings, 189
privacy settings, 192-194
turning off automatic sending of diagnostic reports to Apple, 595
turning on FileVault, 296
Security Code
iCloud keychains, 230, 232
Serial ATA (SATA)
internal disks, 355
Server Message Block (see SMB (Server Message Block))
Servers
downloading application from Mainserver, 517
Service set identifier (see SSID (service set identifier))
Services for Macintosh (SFM), 768
Sessions (see User sessions)
Settings
documenting critical settings during upgrade, 11
documenting network settings, 28
Setup Assistant
accepting Apple terms and conditions, 48
Apple ID authentication, 46-47
configuring OS X system, 60-63
country and keyboard settings, 44
creating user accounts, 128
diagnostic and usage information, 51
enabling FileVault and, 289
enabling Keychain feature, 50
FileVault settings, 50
Find My Mac feature, 47
iCloud settings, 47
migration or transfer settings, 45
network settings, 45
new user accounts, 134
overview of, 43
setting up computer account, 48-50
SFM (Services for Macintosh), 768
SFTP (Secure File Transfer Protocol), 795
Share button
in Quick Look, 534
Share menu
app extension uses and benefits, 582
Sharing
home folders, 319-322
permissions for, 319
preferences, 820
printers, 868
searching shared files, 429
Sharing & Permissions
changing permissions, 325
viewing permissions, 312
Sharing-only accounts
overview of, 131
Shortcuts

comparing types of, 383
file system (see File system shortcuts)
Shutdown
login options, 140
overview of, 915
troubleshooting, 923
Simple Mail Transfer Protocol (SMTP), 740
Single-user mode
startup shortcut for, 918
troubleshooting startup issues, 925
Sites (see Websites)
Sleep modes
energy settings, 792
login options, 140
Power Nap, 913
Safe Sleep and Standby, 912, 912
system sleep preventing backups, 443
Slideshows
viewing with Quick Look, 535
SMART (self-monitoring, analysis, and reporting technology), 343
Smart Folders
advanced searches and, 432
SMB (Server Message Block)
browsing to SMB share, 777
manually connecting to, 755
manually connecting to file services, 755
OS X supported file service protocols, 750
overview of, 730
printer sharing, 864
SMC (System Management Controller), 13
SMTP (Simple Mail Transfer Protocol), 740
Snapshots
making Time Machine snapshot, 465
Time Machine supporting local, 443
Software
compatibility issues, 591
compatibility issues related to 64-bit mode, 580
installing (see Application installation)
installing open source software, 494
network services, 727
removing installed, 504
updating Apple software, 11
updating installed, 503
verifying application compatibility, 10
Software updates
advanced Installer features, 116
App Store updates list, 109-112
Apple software, 12
automatic, 107-109, 112
checking installed updates, 124
checking System Preferences for App Store, 122
downloading from Internet, 120
from App Store, 122-124
installation history, 117
installing, 120
installing single update, 111
manually installing, 114, 118
overview of, 107
troubleshooting peripherals, 853
with Installer, 115
Spotlight
advanced searches, 431-433
indexed metadata , 429-430
locating troubleshooting utilities with, 707
overview of, 427
plug-ins, 430
preferences, 433-434
restore process and, 453
search results, 428
searching for documents, 439
security, 431
simple search, 427
SSH (Secure Shell), 795
SSID (service set identifier)
joining invisible network, 641
Wi-Fi and, 635
Wi-Fi connectivity issues and, 702
SSL (Secure Sockets Layer), 737
Standard accounts
creating, 145-149
login with Apple ID, 133
managing, 145
overview of, 128
Standards
integration of OS X Yosemite via, 4
Standby
sleep modes, 912
Startup, 899
(see also System initialization)
examining system startup, 924
from OS X Recovery, 87, 93
identifying steps in startup process, 924
modifying, 917
Startup items as system resources, 404
utilities, 918
Startup disks
recovery utilities, 90
repartitioning without erasing, 268
verifying startup disk and restart option, 98
Startup Manager
selecting alternate system at startup, 917
Startup shortcuts
firmware initialization and, 903
modifying startup, 917
overview of, 916
selecting alternate system, 917
Stealth mode
testing, 832
Storage, 252
(see also File systems)
Core Storage, 250
examining local storage, 353
examining with Disk Utility, 342
examining with System Information, 344
fast user switching issues, 143
file systems and, 245, 246
viewing mounted volumes, 356
Storage devices
OS X device classes, 849
Storage tab
About This Mac window, 454
Student materials
connecting to file server (Mainserver), 73
copying StudentMaterials folder to computer, 74-76
direct download when there is not access to a file server, 76-79
drag-and-drop application from, 518
installing updates, 118
overview of, 73
Subnet masks

IP addresses and, 625
TCP/IP configuration, 667
Swap usage
monitoring via Activity Monitor, 591
Symbolic links
comparing types of file system shortcuts, 385
Symmetric multiprocessing
process performance features, 578
System Administrator
root account and, 131
System disk
preparing, 14
System file
repairing system file permissions, 367, 371
System folder
examining hidden folders, 399
in OS X file structure, 402
System Information (System Profiler)
About This Mac window, 57-58, 83-85
checking hardware, firmware, and application compatbility, 23
checking hardware, firmware, and application compatibility, 23-28
checking installed updates, 124
examining external USB devices, 856
examining internal devices, 854
examining peripheral buses, 838
examining peripherals, 854
examining storage, 344
monitoring applications, 586
overview of, 57
reporting options, 59
troubleshooting peripherals, 853
update installation history, 117
updating firmware, 13
verifying application compatibility, 10
verifying installation requirements, 7
viewing disk information, 354-356
viewing installed applications, 522
System initialization
booter process, 904
examining startup, 924
firmware, 901-903
identifying steps in startup process, 924
kernel, 905
launchd, 905-906
overview of, 899
single-user mode, 925, 927
starting up in Verbose mode, 926
startup shortcut for selecting alternate system, 917
troubleshooting (see Troubleshooting system)
troubleshooting booter, 920
troubleshooting firmware, 919
troubleshooting kernel, 921
troubleshooting launchd, 922
System logs
viewing, 615
System Management Controller (SMC), 13
System permissions
process security and, 495
System Preference
trackpad/mouse, 71
System Preferences
64-bt vs. 32-bit mode and, 582
adjusting account preferences, 151
App Store, 122
automatic updates and, 112
Bluetooth , 845
creating admin account, 63-65
Dictation & Speech preferences, 195
documenting network settings, 28
energy settings, 912
examining account preferences, 151-153
examining default behaviors, 573
experimenting with preferences, 575
Finder preferences, 66-69
Language & Region preferences, 44
managing Bluetooth settings, 847
monitoring network connectivity via network preferences, 644
overview of, 52
Parental Controls, 154
resetting printing system, 897
setting computer name, 69-71
startup disk options, 902
systemwide effect, 53
Time Machine, 447
turning off Auto Save, 576
turning on FileVault, 296-300
Users & Groups preferences, 132
System processes
viewing, 609
System resource domain, 405
System resources
adding font for single user, 416-418
application group containers, 408
application sandbox containers, 406-408
confirming font unavailable to other users, 418
disabling fonts via Font Book, 412
fonts, 410
hierarchy of, 404
installing fonts via Font Book, 410-412
managing fonts, 414
OS X file structure, 401-402
overview of, 401
removing a font, 415-416
resolving font issues, 413
troubleshooting, 409
types of, 402-404
validating fonts, 419
System security
changing passwords, 177-180
changing user passwords, 214
dictation feature, 195
Find My Mac feature, 197-200
firewall settings, 192
firmware passwords, 200-202
master passwords, 181
methods for resetting passwords, 182-185
overview of, 175
Password Assistant, 180
password types, 175-177

privacy settings, 192
removing firmware passwords, 217
resetting account passwords in OS X Recovery, 202-205
resetting keychain passwords, 185
resetting legacy FileVault passwords, 185
resetting master password, 186
resetting OS X Recovery password, 187
resetting user passwords , 206-209
reverifying keychain synchronization, 215
Safari privacy, 196
Security & Privacy advanced settings, 190
Security & Privacy general settings, 189
setting firmware passwords, 216
synchronizing keychain passwords, 211
testing firmware passwords, 216
verifying synchronization of keychain passwords, 212
System volume
restoring, 455
troubleshooting, 919

T

Tags
file system, 423-425
using tag metadata, 435
Target disk mode
manual examination of files, 365
recovering data from nonstarting system, 349
repairing partitions and volumes , 360
starting computer in, 361
troubleshooting and, 347
TCP (Transmission Control Protocol)
overview of, 626
TCP ports in network communications, 728
TCP/IP protocol suite
checking network status and, 701
configuring, 627
DHCP in configuration of, 631
manual configuration, 665-668
OS X supported network protocols, 655
overview of, 626
Terminal
administrative accounts using to bypass account restrictions, 129
creating hard links in, 386
hiding items and, 378
preventing ejection of volumes, 266
repairing home folder permissions, 372
resetting passwords, 91, 203
Testing
firewall settings, 829
Gatekeeper settings, 519
managed accounts, 155-156
OS X install disk, 104
permissions, 337, 339
purchased apps, 512
stealth mode, 832
Web access, 683, 722
Text
creating text documents, 274
Texting
Messages application for, 746-749
Third-party software
removing, 504
updating, 503
Threads
monitoring, 588
Thumbnails of slides
previewing in Quick Look, 535
Thunderbolt
hardware interface, 651
peripherals and, 841
supported hardware network interfaces, 652
target disk mode support, 348
Time Capsule
backing up to, 463
security of, 442
Time Machine
architecture, 441
backing up data prior to upgrade, 11, 29
backup format, 444
configuring, 445-447, 459
configuring backup disks, 448-451
configuring exclusions, 460-463
creating recovery disk, 88
deleting contact imported from vCard, 466
disks, 442-443
examining, 97
importing vCards into contacts, 464
indexing Time Machine volumes, 429
limitations of, 445
making new snapshot, 465
manually restoring home folders, 164-165
manually restoring via Finder, 457-458
migrating information between computers, 161
options, 451
OS X Installer support, 20
overview of, 441
preferences, 447
restoring deleted contact, 467
restoring directly from backup, 470
restoring entire system, 455
restoring file with, 469
restoring from, 90, 452-454, 465
restoring via Migration Assistant, 454
schedule, 443
selecting backup volume, 463-464
Time-limits
parental control management options, 139
TLDs (top-level domains), 630
Today view
app extension uses and benefits, 583
Notification Center, 585
Top-level domains (TLDs), 630
Traceroute tool
checking network connections, 711
overview of, 708
Trackpad preferences, 71
Transmission Control Protocol (see TCP (Transmission Control Protocol))
Trash
removing software by dragging to , 504

Troubleshooting
file systems (see File systems, troubleshooting)
file-sharing services, 767
OS X Installer, 21
printing, 879-881
system resources, 409
Troubleshooting applications
corrupted preferences, 599
diagnostic reports, 594
forcibly quitting, 593
overview of, 591
preference troubleshooting, 597-599
viewing and editing preferences, 600
viewing diagnostics via Console, 595
Troubleshooting network services
exercise in, 784
overview of, 762
Port Scan tool, 763-765
troubleshooting Mail application with Mail.app Connection Doctor, 785
turning off Mail service in troubleshooting exercise, 784
with Network Utility, 787-790
Troubleshooting networks
breaking settings in troubleshooting exercise, 713
checking network preference status, 701
checking network status , 714
common issues, 701
DHCP service issues, 705
DNS service issues, 706
Ethernet connectivity issues, 701
getting interface information with Network Utility, 708
isolating three general areas, 700
Lookup tool for verifying DNS lookup, 710, 721
monitoring network traffic, 722
Network Diagnostics Assistant, 706, 718-721
Network Utility, 707
overview of, 699
ping for testing connectivity, 709, 715-718
resetting network after troubleshooting exercise, 723
testing Web access, 722
traceroute tool for checking connections, 711
Wi-Fi connectivity issues, 702-705
Troubleshooting peripherals
device drivers, 850
general troubleshooting, 853
inspecting kernel extensions, 852
overview of, 848
peripheral device classes , 849
Troubleshooting printing
examining CUPS logs, 896
prerequisites, 896
resetting system, 897
Troubleshooting shared (hosted) services
communication issues, 820
network service access issues, 820
overview of, 819
Troubleshooting system initialization
booter issues, 920
firmware, 919
kernel issues, 921
launchd, 922
overview of, 919
single-user mode, 925, 927
starting up in Verbose mode, 926
Troubleshooting user sessions
logout and shutdown, 923
overview of, 923
Safe mode login, 923

U

UDP (User Datagram Protocol)
overview of, 626
UDP ports in network communication, 728
UFS (UNIX File System), 249
Uninstaller
removing applications with, 525
removing software, 504
Universal Access
accessibility preferences, 194
Universal Disk Format (UDF)
volume formats, 250
Universal Type Server
in font management, 411
Universally Unique ID (UUID)
creating and verifying user accounts, 173
types of keychain files, 220
user account attributes, 137
UNIX
access control lists (ACLs), 315
file system shortcuts and, 383
foundation of OS X, 127
hidden items and, 377
installing UNIX applications, 491
process security and, 495
standard permissions, 314
X Window System and, 493
UNIX File System (UFS), 249
Updates, 487
(see also Software updates)
App Store, 487
firmware, 903
of installed software, 503
troubleshooting peripherals, 853
Upgrade installation
backing up files and folders prior to, 11
checking hardware, firmware, and application compatibility, 23-28
documenting settings, 11
downloading Installer from App Store, 30
preparing for, 7, 9
preparing Macs for , 23
preparing system disk, 14
prerequisites, 30
process of, 31
requirements, 8
updating Apple software, 11
updating firmware, 12-14
verifying application compatibility, 10
verifying installation requirements, 7-9
vs. clean install, 19
USB
cellular network adapters, 653
examining internal devices, 855
power issues, 853
supported hardware network interfaces, 652
versions , 839
USB 1.1, 840
USB 2.0, 840
USB 3.0, 840

User & Groups preferences
changing master password, 182
creating and verifying user accounts, 172
creating managed account with parental controls, 153, 155
creating new user account, 165
creating user accounts, 133
deleting user accounts, 169
examining account preferences, 151-153
login options, 140-141
overview of, 132
Reset Password option, 182
restoring user password, 307
turning on fast user switching, 141
unlocking preferences, 146
user account attributes, 135-137
User accounts
adjusting preferences, 150
administrative accounts, 129
attributes, 135-137
changing permissions, 337
creating, 133
creating and verifying , 172
creating home folder, 166-169
creating managed account with parental controls, 153-155
creating new administrator account, 929
creating standard account, 145-149
deleting, 159-161, 169
enabling users for FileVault, 291
examining preferences, 151-153
fast user switching, 141
fast user switching issues, 142-144
guest accounts, 130
limiting access to App Store, 489
local group accounts, 131
logging into new account, 149
login options, 140-141
managing, 132, 145
network service access issues, 820
overview of, 127
parental controls, 138-139
restoring , 166, 170-172
root account, 131
Setup Assistant, 134
sharing-only accounts, 131
standard accounts, 128
storing files and folders in home folder, 333
testing managed accounts, 155-156
trying another account in troubleshooting, 592
types of, 128
Users & Groups preferences, 132
User Datagram Protocol (see UDP (User Datagram Protocol))
User environment
stages of user sessions, 907
user sessions and, 910
User home folders (see Home folders)
User ID
creating and verifying user accounts, 173
user account attributes, 136
User resource domain, 405
User sessions
launchd, 908
login window, 907
logout, 914
overview of, 907
Power Nap mode, 913
Safe mode login, 923
Safe Sleep and Standby modes, 912
shutdown and restart, 915
sleep modes, logout, and shutdown, 910
troubleshooting, 923
troubleshooting logout and shutdown, 923
user environment and, 910
Users folder
in OS X file structure, 402
Utilities
from OS X Recovery, 89-92

V

vCards
deleting contact imported from, 466
importing into contacts, 464
Verbose mode
start up in, 926
startup shortcut for, 918
troubleshooting kernel, 921
troubleshooting launchd , 922
Verify and Repair
in Disk Utility, 346
Versions, 562
(see also Auto Save and Versions)
managing, 541-543
working with multiple, 562
Video
OS X device classes, 850
previewing with Quick Look, 535
Virtual display
connecting to, 825-827
Virtual Network Computing (see VNC (Virtual Network Computing))
Virtual Private Networks (see VPNs (Virtual Private Networks))
VLANs (virtual LANs)
OS X support for virtual network services, 654
VMware Fusion
third-party virtualization tools, 654
VNC (Virtual Network Computing), 730
controlling access with password, 799
options for screen sharing, 799
screen sharing based on, 797
VoiceOver audible assistant
login options, 141
Volumes, 267
(see also Hard disks)
ejecting in-use, 266
ejecting volumes as local admin, 275
encrypting, 278
encrypting in Finder, 279
encrypting system volumes, 292
erasing, 256-258
formats, 247
improper unmount or eject, 267
mounting, unmounting, ejecting , 263
permissions for nonsystem volumes, 331
repairing in OS X Recovery mode, 368
repairing in target disk mode, 360
resizing, adding, deleting with Disk Utility, 255

restoring system volume, 455
securely erasing free space on, 282
selecting backup volume, 463-464
troubleshooting, 346
troubleshooting system volume, 919
turning off encryption on Mac HD volumes, 308
user ejecting, 277
VPNs (Virtual Private Networks)
checking connectivity, 692
configuration profile, 661
configuring, 688
configuring VPN service, 689-691
connecting to, 688
establishing VPN connections, 664
manual configuration, 661-664
OS X support for virtual network services, 654
overview of, 660

W

WANs (wide area networks)
WAN traffic, 628
Web Proxy Autodiscovery Protocol (WPAD), 673
WebDAV
as extension of HTTP, 743
manually connecting to, 756
manually connecting to file services, 755
OS X supported file service protocols, 750
Websites
home folder content, 159
WEP (Wired Equivalent Privacy)
Wi-Fi authentication, 636
Whois tool
finding owners of DNS domain names, 708
Wi-Fi
adding network to preferred list by joining it, 697
adding network to preferred list manually, 696
advanced configuration, 669-670, 693
authentication, 635
basic configuration, 634
clearing preferred network list, 695
configuring OS X system, 61
connectivity issues, 702
creating Wi-Fi-only locations, 693
joining invisible network, 641
joining visible network, 641
Location Services and, 193
OS X supported network protocols, 655
PANs (personal area networks), 653
peer-to-peer sharing via AirDrop, 808
status indicators, 645
status menu options, 637
supported hardware network interfaces, 652
testing preferred network order, 697
verifying connectivity, 642
verifying network settings, 639
Wi-Fi Protected Access (WPA) (see WPA (Wi-Fi Protected Access))
Wide area networks (see WANs (wide area networks))
Widgets
in Today view, 586
Windows PCs
migrating information between computers, 162
WINS (Windows Internet Naming Service)
network host addressing, 731
OS X supported network protocols, 655
overview of, 671
Wired Equivalent Privacy (WEP)
Wi-Fi authentication, 636
Wireless Diagnostics
troubleshooting Wi-Fi issues, 703
wireless networking (see Wi-Fi)
Wireless, System Preferences, 53
WPA (Wi-Fi Protected Access)
automatic enterprise configuration, 636
Wi-Fi authentication, 636
WPAD (Web Proxy Autodiscovery Protocol), 673
Write Only
folder-level permissions, 315

X

X Window System
installing X Window applications, 493
Xcode
editing property list files, 601
Xcode Developer Tools, 591
XML (Extensible Markup Language), 600
XMPP (Extensible Messaging and Presence Protocol)
private messaging services based on, 749
XTS-AES 128 Encryption
in FileVault 2, 287

Z

Zeroconf standard
Bonjour and, 730
Zip archives
comparing archiving technologies, 389
creating, 389
expanding, 391
installing drag-and-drop items, 502
overview of, 389