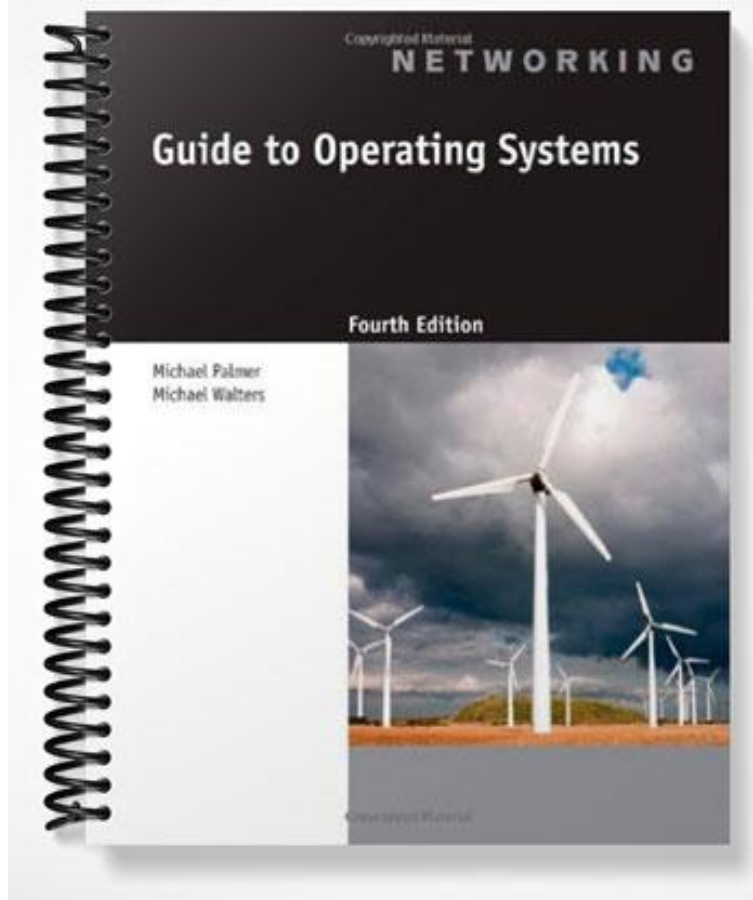


# SOLUTIONS MANUAL



## Guide to Operating Systems Chapter 2 Solutions

### Answers to the Chapter 2 Review Questions

1. The enhanced Print Management Console release in Windows Server 2003 R2 allows for:  
(Choose all that apply)

- a. remote installation of network printers
- b. ability to view general printer information
- c. remotely diagnose a printer problem
- d. ability to turn printer on and off remotely

*Answer:* a, b, and c.

2. Windows 2000 was a significant rewrite of the Windows 98 kernel. True or False?

*Answer:* False

3. A virtual folder in Windows Vista is: (Choose all that apply)

- a. a concept similar to symbolic links in UNIX/Linux
- b. a physical folder accessible by multiple users
- c. a way of organizing files based on information associated with the files
- d. called Documents on the Start Menu

*Answer:* a and c

4. The most recent Microsoft Windows server family of operating systems is the \_\_\_\_\_ family.

*Answer:* Windows Server 2008 or Windows Server 2008 R2

5. The Subsystem for UNIX-based Applications allows you to run application on the Windows server. True or False?

*Answer:* True

6. Windows Server 2008 shares the same code base with: (Choose all that apply)

- a. Windows Server 2003
- b. Windows XP
- c. Windows Vista
- d. Windows Server 2003 R2

*Answer:* c

7. Self-Healing NTFS is a process to repair disk drives on an off-line server. True or False?

*Answer:* False.

8. Probably the most exciting feature introduced by Microsoft in Windows 95 was called \_\_\_\_\_.

- a. Active Directory
- b. The Registry
- c. Plug and Play

d. Multitasking

*Answer:* c.

9. A virtual private network (VPN) is:

- a. a standalone virtual network
- b. a virtual network residing within one computer
- c. a private network that is like a tunnel through a larger network
- d. a network that can only be observed from the outside on rare occasions

*Answer:* c.

10. Kerberos security was introduced in Windows \_\_\_\_\_.

*Answer:* 2000

11. The six versions of Windows 7 are: \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, and \_\_\_\_\_ Editions.

*Answer:* Windows 7 Home Premium, Windows 7 Professional, Windows 7 Ultimate, Windows 7 Starter, Windows 7 Home Basic, and Windows 7 Enterprise.

12. Windows Server 2003 R2 and Windows Vista share the same code base and thus many of the same features. True or False?

*Answer:* False

13. Unix versions adhere to one of the two main design standards that are the \_\_\_\_\_ or the \_\_\_\_\_.

*Answer:* Berkeley Software Distribution (BSD) or System V Release 4 (SVR4)

14. The X Window type GUI interface in Red Hat Linux is called \_\_\_\_\_.

*Answer:* GNOME

15. Hyper-V is \_\_\_\_\_.

- a. the fifth version of the over drive portion on the Intel chipset
- b. a method to increase the speed of memory access on a personal computer
- c. the server virtualization code used to create multiple logical servers on one physical server
- d. Extremely fast communication over the USB port

*Answer:* c

16. Looking at Windows Server 2008 R2, which of the following statements apply: (Choose all that apply)

- a. Released in both a 32-bit and 64-bit version
- b. Shares same core operating system with Windows Vista
- c. Available in seven versions
- d. integration features with Windows XP and Windows Vista

*Answer:* c

17. What version of the Mac OS provides support for mail and calendar functions in Microsoft Exchange?

*Answer:* Mac OS X Version 10.6 Snow Leopard

18. What relatively high-speed input/output port was first supported in Windows 98?

- a. firewire
- b. USB
- c. parallel
- d. Ethernet

*Answer:* b.

19. What company supports Fedora which is a free Linux product provided with this book?

- a. Oracle (formerly Sun Microsystems)
- b. Red Hat
- c. IBM
- d. Hewlett-Packard (HP)

*Answer:* b.

20. A virtual server allows you to do which of the following:

- a. Combine multiple physical servers into one logical server
- b. Run a live and test environment on separate physical servers
- c. Setup multiple operating systems on one physical server
- d. Access multiple physical servers through one virtual console

*Answer:* c.

## **Hands-On Projects Tips and Solutions for Chapter 2**

### **Project 2-1**

In this project students use the Program Compatibility Wizard in Windows XP/Vista/7 or Windows Server 2008/Server 2008 R2. If students use Windows XP, provide them with a legacy Windows 95 program to test. Or, if they use in Windows Vista/7 or Windows Server 2008/Server 2008 R2, provide students with a legacy Windows XP program.

For the Windows XP steps:

In Step 11, the program should run, but the display will be in large print and enlarged windows because of the 640 X 480 display setting.

For the Windows Vista or Server 2008 steps:

In Step 11, the program should run, but the display will be in large print and enlarged windows because of the 640 X 480 display setting.

For the Windows 7 or Server 2008 R2 steps:

In Step 9, the program should run in a Window, unless the wizard has not automatically found the necessary settings.

## **Project 2-2**

This project enables students to use the Start Search or Search programs and files tools from the Start menu in Windows Vista/7 or Server 2008/Server 2008 R2.

## **Project 2-3**

In this project, students compare the Windows Vista and Windows 7 desktops.

In Step 2, students should note the icons on the desktop.

In Step 3, the elements students see in the Windows Vista taskbar will depend on how their systems are set up, but typically include:

- Start button
- Next to the Start button are the small icons, Show Desktop and Switch between windows
- A right-pointing arrow from which to start frequently used programs
- Buttons for open windows
- A clock on the right side of taskbar
- Multiple icons for starting programs to the left of the clock

In Step 4, students should report on the Vista Sidebar gadgets, such as a clock and other gadgets.

In Step 5, students should note the options on the Start button menu which include:

- Programs to start
- Frequently opened folders
- All Programs menu
- Start Search box
- Access options to User Name folder, Documents folder, Pictures folder, Music folder, and Games folder
- Recently accessed items
- Computer
- Network
- Connect to
- Control Panel
- Default Programs
- Help and Support
- Options to switch user, log off, lock the computer, restart, sleep, and shutdown

In Step 7, students should compare the Windows Vista icons to the Windows 7 icons. On Windows 7 systems that are set up by default, students may see a menu bar at the top of the desktop.

In Step 8, there are some significant changes to the Windows 7 taskbar. For example, there are icons just to the right of the Start button that reflect open windows and programs that can be started or that are started. Some icons, such as the Internet Explorer or Word icons show multiple open windows when the user points to the icon. Further, the clutter of icons just to the left of the clock is reduced, with an up arrow that can display icons in a separate window.

In Step 9, by default Windows 7 comes with a Sidebar.

In Step 10, the Start button menus are similar, but there are also differences. For example, Windows 7 has a Shutdown button from which to select shutdown options. Also, the Windows 7 Start button menu is less cluttered.

## Project 2-4

In this activity, students learn more about using the terminal window in Fedora and how to determine what shell is in use. They also view online documentation for the bash shell.

In Step 2, students should record the version of the GNOME Panel, which is 2.30.0 for the Fedora DVD that is included with the book.

## Project 2-5

In this project, students run applications from the GNOME desktop.

In Step 5, students should report the names of the applications they have practiced starting.

## Project 2-6

For this project, students learn to use the *find* command and the Search for Files tool in the GNOME desktop.

In Step 5, students should observe the two items found: the Desktop folder and the liveinst.desktop file within the Desktop folder.

In Step 9, students should note the number of files found, which will vary depending on the installation and usage.

## Project 2-7

This project enables students to practice using the Mac OS X Spotlight tool. You might mention to students that Mac OS X Tiger initiated the fast Spotlight search feature and Microsoft later followed suit with a similar search capability.

In Step 8, the categories of listings for iTunes include: Top Hit, Definition, Applications, System Preferences, Folders, and Webpages.

## Project 2-8

In this project, students observe the Mac OS X desktop and focus on the options of the menu bar.

In Step 1, students should note what they observe about the desktop, including the menu bar, icons, and Dock.

In Step 6, to create a folder use the New Folder option on the File menu.

In Step 9, double-click Home on the Go menu to view a window showing items in the Home folder.

## Project 2-9

For this project, students review the applications and utilities that come with Mac OS X Leopard or Snow Leopard.

In Step 3, students should list five applications out of the following possibilities:

- Address Book
- Automator
- Calculator
- Chess

- Dashboard
- Dictionary
- DVD Player
- Font Book
- Front Row
- iCal
- iChat
- Image Capture
- iSync
- iTunes
- Mail
- Photo Booth
- Preview
- QuickTime Player
- Safari
- Stickies
- System Preferences
- TextEdit
- Time Machine
- Utilities

## Solutions to the Case Project Assignments

Darts is a sporting goods company with outlets in most of the western states. This company has a network of 273 computers consisting of the following hardware:

[BEG BL]

- Eight Windows Server 2003 R2 servers
- Two Linux servers running Red Hat Linux Enterprise
- 20 computers running Mac OS X version 10.4 Tiger
- 32 computers running Windows XP
- 126 computers running Windows Vista
- 95 computers running Windows 7

[END BL]

Darts realizes that with the projected growth of their company, they need to upgrade the computers and servers on their network.

### [CASE] Case Project 2-1: Accounting Department Upgrade

The Accounting Department has all of the Windows XP computers. The accounting director wants to upgrade to Windows 7. What are the advantages of upgrading for this department in terms of the enhanced operating system functions that are available in Windows 7? What are some possible disadvantages?

**Answer:** Advantages – the student should mention the taskbar is improved and easier to use, HomeGroups, performance improvements, security improvements, Jump lists, and/or libraries as possible advantages. The student should discuss the learning curve after updating to a new operating system, resistance from the accounting technicians, and/or the media enhancements to distract them from their work as disadvantages.

### [CASE] Case Project 2-2: Legacy Billing System

If the Accounting Department does upgrade to Windows 7, will the department be able to run a legacy 16-bit billing program that was designed for Windows XP?

**Answer:** Yes, they can do this by using the Windows XP modes or Windows Virtual PC.

[CASE] Case Project 2-3: New Computer for the Marketing Department

The Marketing Department uses the Mac OS X version 10.4 Tiger computers. Because they plan to purchase new computers, what is the newest Mac operating system to which they can upgrade? What would be the advantage of this upgrade for their department?

**Answer:** The latest operating systems would be 10.6 Snow Leopard and 10.7 Lion.

[CASE] Case Project 2-4: President's Problem

The president of Darts is convinced that the processor on his Windows Vista system is overloaded. How can you help him determine if there is a problem with the processor?

**Answer:** The student should mention checking the results of the self-diagnosis routine for possible, use the Reliability and Performance Monitor, and check out the Event Viewer.

[CASE] Case Project 2-5: Chief Financial Officer's Concerns

The new chief financial officer believes that all of the Windows XP computers should be upgraded to Windows Vista because Windows 7 is too new. What are the advantages and disadvantages of upgrading to Windows Vista compared to Windows 7? Please include a discussion of the total cost of doing this (TCO).

**Answer:** The students should mention the cost of upgrading to Windows Vista and then later upgrading to Windows 7. They should also discuss the cost of lost productivity in doing two upgrades over time. There should also be a discussion about the "Windows 7 is too new" statement and why it might be accurate or not.

[CASE] Case Project 2-6: Server Upgrades

What would be the advantage of upgrading the Windows Server 2003 R2 servers, and if you recommend upgrading them, what operating system do you recommend? Why?

**Answer:** The student should discuss the Windows 2008 R2 features of enhanced Active Directory, Failover clustering, Hyper-V, Self-healing NTFS, Server Core, and Server Manager. Projected growth and security are just two of the reasons the student should mention for upgrading