Appendix B

# Labs for Chapter 2: Securing and Troubleshooting Windows 7

# Lab 2.1 Identify a Hard Drive Bottleneck by Using Performance Tools

### Review Questions

1. If you determine that the hard drive is experiencing excessive use, but the Windows Experience Index says that memory is the system bottleneck, which component do you upgrade first, memory or the hard drive? Why?

Answer: Upgrade memory because low amounts of memory might be causing excessive use of the hard drive and because it is less expensive to upgrade memory than to upgrade the hard drive.

1. What values for the % Disk Time and Avg. Disk Queue Length counters of Performance Monitor collectively indicate the hard drive is a performance bottleneck?

Answer: % Disk Time greater than 80% and Avg. Disk Queue Length greater than 2

1. Based on the maximum values for both hard drive counters you measured using Performance Monitor in this lab and the criteria for the two counters given in the Activity Background section of this lab, is it indicated that the hard drive is a performance bottleneck in your system? Why or why not?

Answers may vary.

1. What can you conclude if a Windows process is constantly reading and writing to the hard drive?

Answer: The hard drive is thrashing, indicating memory is low.

1. How much free space does a hard drive need to prevent a performance slowdown?

Answer: At least 15% of the drive should be free.

# Lab 2.2 Demonstrate Homegroup Security

### Review Questions

1. List the steps to change the password to the homegroup.

Answer:

1. Open the Network and Sharing Center
2. In the left pane, click HomeGroup.
3. Click Change the password.
4. Click Change the password again.
5. Enter a new password and click Next. Click Finish.
6. Change the password on every computer in the homegroup.
7. What type of network location is required for a homegroup?

Answer: Home network

1. What are the four resources that Windows includes by default in a homegroup?

Answer: Pictures, Music, Videos libraries and Printers

1. In previous versions of Windows, a two-person icon on a folder indicated it was shared. How does Windows 7 indicate a folder is shared in Windows Explorer?

Answer: Click on the folder to see the two-person icon in the status bar at the bottom of the Windows Explorer window.

1. How many homegroups can you have on one local network?

Answer: Only one

# Lab 2.3 Use Advanced File and Folder Sharing

### Review Questions

1. Why is it necessary that Computer1 run Windows 7 Ultimate or Professional edition to implement the security used in this lab?

Answer: Because these editions of Windows provide the Computer Management function to create and manage a user group.

1. When viewing the permissions assigned to a folder, why might these permissions be dimmed so that you cannot change them?

Answer: Because the permissions have been inherited from the Windows parent object.

1. When assigning permissions to a folder, why might you include the Administrators group?

Answer: Because the administrator is often responsible for the data in a secured folder.

1. What is the difference between assigning permissions to a folder and sharing the folder?

Answer: Permissions pertain to which local user has access to the folder and sharing pertains to which network users have access to the folder.

1. What is the purpose of turning on *Use user accounts and passwords to connect to other computers* in the Advanced sharing settings window?

Answer: To cause Windows to pass the user account and password to the remote computer so that the remote computer can authenticate them.

# Lab 2.4 Create a Windows 7 Repair Disc

### Review Questions

1. Is your system a 32-bit or 64-bit operating system?   
   Answers may vary
2. Why do you think it is important to label the Windows repair disc as a 32-bit or 64-bit version?

Answer: Because a 32-bit repair disc will not work on a 64-bit system and vice versa.

1. Sometimes a computer boots directly to the hard drive even when a bootable CD is inserted in the optical drive. Explain why this happens and how you can fix the problem so that the computer boots from the CD.

Answer: The boot sequence in BIOS setup is set to first boot from the hard drive before it boots from the optical drive. The solution is to enter BIOS setup and change the boot sequence first to the optical drive and then to the hard drive. Then when you boot the system press a key to cause the system to boot from the optical drive.

1. What key on your computer do you press to access BIOS setup to change the boot sequence?

Answers may vary. Common keys to press are Del and F2.

# Lab 2.5 Explore the Repair Disc and the Windows Recovery Environment

### Review Questions

1. What are the five options available in the System Recovery Options window of Windows RE?

Answer: Startup Repair, System Restore, System Image Recovery, Windows Memory Diagnostic, and Command Prompt.

1. Which System Recovery Option should you use to solve a problem with a corrupted device driver that was just installed and causes the system to not boot?

Answer: System Restore

1. When you insert the repair disc in the drive and restart the system, the Windows desktop loads. Why did the system not boot from the disc?

Answer: You did not press a key to boot from the optical drive or BIOS setup is configured to look to the hard drive for an OS before it turns to the optical drive.

1. Which System Recovery Option should you use if the system hangs at odd times and is generally unstable?

Answer: Windows Memory Diagnostic

1. What can you conclude if you cannot load the Advanced Boot Options menu by pressing F8 at startup but you can load Windows RE by booting from the repair disc?

Answer: The hard drive is corrupted

1. Which System Recovery Option will make the least intrusive changes to the system, System Restore or Startup Repair?

Answer: Startup Repair