#### CCNA Discovery

Networking for Home and Small Businesses

# Lab 1.3.2 Determining Data Storage Capacity



## **Objectives**

- Determine the amount of RAM (in MB) installed in a PC.
- Determine the size of the hard disk drive (in GB) installed in a PC.
- Determine the used and available space on the hard disk drive (in GB).
- Check other types of storage devices (floppy, CD-ROM, DVD).

## **Background / Preparation**

The storage capacity of many PC components is measured in megabytes (MB) and gigabytes (GB). These components include RAM, hard disk drives, and optical media, such as CDs and DVDs. In this lab, you will determine the capacity and space available for various computer components.

The following resources are required:

• Computer with Windows XP installed

#### Step 1: Identify the RAM in a computer

- a. With Windows XP, there are two ways to view control panels: Classic View and Category View. The options available depend on which one of these two views you are using. If you see the Switch to Category View option on the left, you are currently in the classic view mode. If Switch to Classic View is displayed, you are currently in Category View mode. For this step, you want to use Classic View mode.
- b. From the Start menu, select Control Panel. In the Control Panel, choose System to open the System Properties dialog box. Alternatively, you can get this information by clicking the Start button and right clicking the My Computer icon. Next, choose Properties from the drop-down menu.

The computer operating system and service pack information are listed in the upper part of the dialog box. The computer processor type, speed, and memory are listed in the lower portion.



c. In this example, the computer processor is a Pentium 4 processor with a clock speed of 3.20 gigahertz (GHz). Clock speed is a measurement of the number of cycles per second that a processor is capable of doing. The number of cycles impacts the number of instructions per second that the CPU can process. A higher clock speed generally means that a processor is capable of executing more instructions per second.

The computer has 448 MB of RAM available for the CPU.

d. Check your computer and determine the amount of RAM available to the CPU. How much RAM is in your computer? \_\_\_\_\_

#### Step 2: Determine the size of the hard disk drive

- a. Double-click the **My Computer** icon on your computer desktop. If you do not have a **My Computer** icon, click **Start** and choose **My Computer**.
- b. Right-click the local disk drive under the Hard Disk Drives Section (which is usually the C drive), and select **Properties**. This opens the **Local Disk Properties** dialog box. The total capacity of the hard drive is shown above the Drive C icon.

Local Disk (C:) Pro	perties	? 🗙				
General Tools Ha	ardware Norton Sharing	Quota				
<b></b>						
Type: Loca	al Disk					
File system: NTF	S					
Used space:	18,563,051,520 bytes	17.2 GB				
Free space:	56,081,362,944 bytes	52.2 GB				
Capacity:	74,644,414,464 bytes	69.5 GB				
(						
	Drive C	Disk Cleanup				
Compress drive to save disk space Allow Indexing Service to index this disk for fast file searching						
	OK Cance	Apply				

- c. Determine the size of the hard drive on your computer. What is the total size of the hard drive in GB?
- d. Keep the Local Disk Properties dialog box open for the next step.

### Step 3: Determine the free space and used space on the hard drive

a. In the **Local Disk Properties** dialog box, the used and free space is shown in both bytes and GB above the Capacity.

ocal Disk (C:) Prope	erties				?
General Tools Hard	ware No	rton	Sharing	Quota	
<b></b>					
Type: Local D File system: <u>NTFS</u>	)isk				
Used space:	18,563,0	051,52	0 bytes	17.2 (	GB
Free space:	56,081,362,944 bytes 52.2 GB			зв	
Capacity:	74,644,4	414,46	4 bytes	69.5 (	GB
	Driv	veC		Disk	Cleanup
Compress drive to s	ave disk s vice to inde	pace ex this	disk for f	ast file sea	arching
	OK		Cance		Apply

- b. What is the used space of your hard drive in GB?
- c. What is the free space of your hard drive in GB?

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#### Step 4: Check for other storage devices

a. Right-click the Start button and select Explore. Select My Computer in the left pane.

Address 😼 My Computer			
Folders	×	$\sim$	
🞯 Desktop	^	Local Disk (C:)	DVD/CD-RW Drive (D:)
🗉 📋 My Documents		-	
🖃 😼 My Computer			
🖃 🍩 Local Disk (C:)		faculty on 'phoenix' (Z:)	Removable Disk (E:)
⊞			-
🗄 🛅 Academic Renewal	Ξ		

- b. How many drive letters are shown in the window that appears?
- c. Right-click on a drive icon other than C: and select **Properties**. The **Removable Disk Properties** window appears.
- d. Select the **Hardware** tab, which provides information on each device and whether it is working properly.

Removable Disk (E:) Properties	?×				
General AutoPlay Tools Hardware Sharing					
All disk drives:					
Name Type					
TOSHIBA MK4026GAX Disk drives					
San Disk Cruzer Micro USB Device Disk drives					
SHL-DT-ST RW/DVD GCC-4243N DVD/CD-R					
⊘ Device Properties					
Manufacturer: (Standard disk drives)					
Location: Location 0 (0)					
Device Status: This device is working properly.					
Troubleshoot Properties	ור				
OK Cancel Ap	ply				

## **Step 5: Reflection**

- a. Why is it important to know the amount of RAM in your computer?
- b. Why is the size of a hard drive as well as the space being used important?