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# Lab 12A: Working with Dynamic Disks

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## Objectives

After completing this lab, you will be able to:

- Upgrade a basic disk to a dynamic disk.
- Create a new volume.
- Extend a simple volume.
- Mount a simple volume.

## Prerequisites

Before working on this lab, you must have:

- Knowledge about the different types of disks in Microsoft® Windows® XP Professional.
- Experience using Microsoft Management Console (MMC).

## Lab Setup



To complete this lab, you need the following:

- A computer running Windows XP Professional.
- A single hard disk partitioned with:
  - Drive C as the primary partition.
  - A minimum of 100 MB of unallocated disk space.

**Estimated time to complete this lab: 30 minutes**

## Exercise 0

### Lab Setup

Tasks	Detailed steps
1. Log on to local computer as Administrator with a password of <b>password</b> .	<ol style="list-style-type: none"> <li>Press CTRL+ALT+DEL to open the logon screen.</li> <li>Type <b>Administrator</b> in the <b>User Name</b> box.</li> <li>Type <b>password</b> in the <b>Password</b> box, and then click OK.</li> </ol>
2. Convert the C: drive to NTFS.	<ol style="list-style-type: none"> <li>Click <b>Start</b> and then click <b>Run</b>.</li> <li>In the <b>Run</b> dialog box type <b>cmd</b>, and then press ENTER.</li> <li>At the command prompt type <b>convert c: /fs:ntfs</b>, and then press ENTER.</li> <li>For each conversion message that appears press the <b>y</b> key, and then press ENTER until the message of <b>The conversion will take place automatically the next time the system restarts</b>. <ul style="list-style-type: none"> <li> <i>You will see messages that the volume needs to be dismounted, and that the conversion can be scheduled for the next time the system restarts. There may also be a message that the backups of previously installed operating systems will be deleted.</i></li> </ul> </li> <li>Close all open windows and then restart the computer. <ul style="list-style-type: none"> <li> <i>During the system restart the computer will automatically restart itself several times to complete the file system conversion.</i></li> </ul> </li> </ol>
3. Log on to local computer as Administrator with a password of <b>password</b> .	<ol style="list-style-type: none"> <li>Press CTRL+ALT+DEL to open the logon screen.</li> <li>Type <b>Administrator</b> in the <b>User Name</b> box.</li> <li>Type <b>password</b> in the <b>Password</b> box, and then click <b>OK</b>.</li> </ol>



## Exercise 1




### Upgrading a Disk

In this exercise, you will use Disk Management to upgrade a basic disk to a dynamic disk.

### Scenario

Your organization recently upgraded from Microsoft Windows 98 to Windows XP Professional as it's corporate desktop. After evaluating the new disk options that Windows XP Professional supports it has been decided that the computers running Windows XP Professional will have their disks converted from basic disk to dynamic disks.

Tasks	Detailed steps
<b>1.</b> Upgrade a basic disk to a dynamic disk, using the Computer Management console. -Disk: Disk 0.	<b>a.</b> Click <b>Start</b> , right-click <b>My Computer</b> , and then click <b>Manage</b> . <b>b.</b> In the console tree, expand <b>Storage</b> if necessary, and then click <b>Disk Management</b> .
 What is the storage type of Disk 0?  <b>Basic.</b>  <hr/> <hr/>	
 Is drive C a primary partition or a logical drive in an extended partition?  <b>Primary partition.</b>  <hr/> <hr/>	
<b>1.</b> (continued)	<b>c.</b> In the lower half of the details pane of Computer Management, right-click <b>Disk 0</b> , and then click <b>Convert to Dynamic Disk</b> . <b>d.</b> In the <b>Convert to Dynamic Disk</b> dialog box, verify that Disk 0 is the only disk selected for upgrade, and then click <b>OK</b> . <b>e.</b> In the <b>Disk to Convert</b> dialog box, click <b>Convert</b> . <b>f.</b> The <b>Disk Management</b> dialog box appears, warning that you will not be able to start other installed operating systems from any volumes on this disk. <b>g.</b> Click <b>Yes</b> . <b>h.</b> The <b>Convert Disk to Dynamic</b> dialog box appears, warning that file systems on any of the disks to be converted will be dismounted. <b>i.</b> Click <b>Yes</b> . <b>j.</b> The <b>Confirm</b> dialog box appears, informing you that to complete the conversion process the computer will now be restarted. <b>k.</b> Click <b>OK</b> to restart your computer.

Tasks	Detailed steps
<b>2.</b> Log on to the local computer as Administrator with a password of <b>password</b> . Confirm the upgrade by viewing Disk 0's properties in Computer Management.	<b>a.</b> Log on to your local computer as Administrator with a password of <b>password</b> . <b>b.</b> Click No in the System Settings Change dialog box. <b>c.</b> Open Computer Management. <b>d.</b> In the console tree, expand Storage if necessary, and then click Disk Management.
 What is the storage type of Disk 0?  <b>Dynamic.</b>  <hr/> <hr/>	
 Is drive C a primary partition or an extended partition in a logical drive?  <b>Neither it is a simple volume.</b>  <hr/> <hr/>	
 What has changed?  <b>Drive 0 has been changed from a basic disk to a dynamic disk. Drive C has been changed from a primary partition to a simple volume.</b>  <hr/> <hr/>	
<b>2.</b> (continued)	<b>e.</b> Leave Computer Management open.

## Exercise 2

### Creating a Simple Volume

In this exercise, you will create a simple volume.

#### Scenario

After converting the disks in the computers running Windows XP Professional, it was decided to increase the available size available to the users on this disk. To do this you must create a new simple volume.

Tasks	Detailed steps
<ol style="list-style-type: none"><li>1. Create a simple volume.<ul style="list-style-type: none"><li>-Size: 100 mb</li><li>-Volume Label: Data</li></ul></li></ol>	<ol style="list-style-type: none"><li>a. In the lower half of the details pane of Computer Management, right-click the unallocated space on Disk 0, and then click <b>New Volume</b>.</li><li>b. In the <b>New Volume Wizard</b>, click <b>Next</b>.</li><li>c. The <b>Select Volume Type</b> page appears.</li><li>d. Notice that <b>Simple volume</b> is the only available option.</li><li>e. Click <b>Next</b>.</li><li>f. On the <b>Select Disks</b> page, in the <b>Select the amount of space in MB</b> box, type <b>100</b> and then click <b>Next</b>.</li><li>g. On the <b>Assign Drive Letter or Path</b> page, click <b>Next</b>.</li><li>h. On the <b>Format Volume</b> page, in the <b>Volume label</b> box, type <b>Data</b>.</li><li>i. Click <b>Perform a Quick Format</b>, click <b>Next</b>, and then click <b>Finish</b>.</li><li>j. The new volume is created and formatted.</li><li>k. Leave Computer Management open.</li></ol>

## Exercise 3

### Extending a Volume

In this exercise, you will use Disk Management to extend an existing volume.

### Scenario

During your investigating on making more disk space on the disks in the computers running Windows XP Professional you have decided that you would try extending a volume rather than create a new one.

Tasks	Detailed steps
<ol style="list-style-type: none"><li>1. Extend a volume, by selecting the simple volume created in the last exercise and extending it by 25 mb. -Volume to Extend: Data</li></ol>	<ol style="list-style-type: none"><li>a. In the lower half of the details pane of Computer Management, right-click <b>Data (E:)</b>, and then click <b>Extend Volume</b>.</li><li>b. In the <b>Extend Volume Wizard</b>, click <b>Next</b>.</li><li>c. On the <b>Select Disks</b> page, in the <b>Select the amount of space in MB</b> box, type <b>25</b> and then click <b>Next</b>.</li><li>d. Click <b>Finish</b>. <i>Drive E is extended to include an additional 25 MB of disk space.</i></li><li>e. Minimize Computer Management.</li></ol>

## Exercise 4

### Mounting a New Volume

In this exercise, you will create a simple volume to be mounted to an existing folder on another volume.


#### Scenario

After creating the new simple volume on the computers running Windows XP Professional, it was noticed that the users of these computers were not utilizing the newly made available storage space. So you decided that rather than educate the users on the use of a new drive letter for data storage, you would change the setup of the new volume to use a folder name on the C: drive that the users were already used to using. Then educate the users on using that specific folder rather than a new drive letter.

Tasks	Detailed steps
1. Create a folder called <b>Mount</b> at the root of drive C for mounting the new volume.	<ul style="list-style-type: none"> <li>Create a folder called <b>Mount</b> at the root of drive C.</li> </ul>
2. Create a new simple volume, with a size of 75 mb, and mount it to the c:\mount folder. -Mount Directory: c:\mount	<ol style="list-style-type: none"> <li>Maximize Computer Management.</li> <li>In the lower half of the details pane of <b>Computer Management</b>, right-click the <b>unallocated</b> space on Disk 0, and then click <b>New Volume</b>.</li> <li>In the <b>New Volume Wizard</b>, click <b>Next</b>.</li> <li>On the <b>Select Volume Type</b> page, click <b>Next</b>.</li> <li>On the <b>Select Disks</b> page, in the <b>Select the amount of space in MB</b> box, type <b>75</b> and then click <b>Next</b>.</li> <li>On the <b>Assign Drive Letter or Path</b> page, click <b>Mount this volume in the following empty NTFS folder</b>, and then type <b>c:\mount</b></li> <li>Click <b>Next</b>.</li> <li>On the <b>Format Volume</b> page, in the <b>Volume Label</b> box, type <b>My Volume</b>.</li> <li>Click <b>Perform a Quick Format</b>, click <b>Next</b>, and then click <b>Finish</b>. <i>The new volume is created, formatted, and mounted to the C:\Mount folder.</i></li> <li>Close Computer Management.</li> </ol>
3. Examine the new volume by creating a new text file in the c:\mount folder and viewing it's properties in Explorer and a command prompt. Note the results.	<ol style="list-style-type: none"> <li>Open Windows Explorer.</li> <li>Expand <b>My Computer</b>, and then click <b>Local Disk (C:)</b>. <i>Notice that the icon for the Mount folder has changed.</i></li> <li>Open the <b>Properties</b> dialog box for the Mount folder. <i>The <b>Mount Properties</b> dialog box appears.</i></li> </ol>

Tasks	Detailed steps
<p><b>?</b> What type of folder is C:\Mount?</p> <p><b>Mounted Volume.</b></p> <p>_____</p> <p>_____</p>	
<p><b>?</b> What is the Target Folder?</p> <p><b>My Volume.</b></p> <p>_____</p> <p>_____</p> <p style="text-align: right;"><b>a.</b></p>	
<p><b>3. (continued)</b></p>	<p><b>d. Click OK.</b></p> <p><b>e. Create a new text document and name in the C:\Mount folder, and name it <b>mount1.txt</b>.</b></p> <p><b>f. Close Windows Explorer.</b></p> <p><b>g. Open a command prompt. Type <b>cd\</b>, and then press ENTER, then type <b>dir</b> and then press ENTER.</b></p> <p><i>Notice that <b>mount</b> appears as &lt;JUNCTION&gt;.</i></p>
<p><b>?</b> How much free space does the <b>dir</b> command report?</p> <p><b>Answers will vary.</b></p> <p>_____</p> <p>_____</p>	
<p><b>3. (continued)</b></p>	<p><b>h. Type <b>cd mount</b> to change directory to the C:\Mount directory, and then type <b>dir</b> and then press ENTER.</b></p>
<p><b>?</b> How much free space does the <b>dir</b> command report?</p> <p><b>Answers will vary, but somewhere around 75 mb.</b></p> <p>_____</p> <p>_____</p>	



Tasks	Detailed steps
	<p>Why is there a difference between the free space reported for drive C and the free space reported for C:\Mount?</p> <p><b>The amount of free space reported for C:\Mount is the amount of free space available on the mounted volume.</b></p> <hr/> <hr/>
<b>3.</b> (continued)	<b>i.</b> Close all open windows, and then log off.

