# Answers: 6.1.2.12 Lab - Manage Virtual Memory in Windows 7 and Vista

# Introduction

In this lab, you will customize virtual memory settings.

### **Recommended Equipment**

- A computer with Windows 7 or Vista installed
- The hard drive must have two or more partitions.

Note: At least 2GB of free space is recommended on the second partition.

#### Step 1: Open System Properties

a. Click Start > right-click Computer > Properties > Advanced system settings.

0	) 🕒 💌 🕨 Control Panel 🕨	All Control Panel Items 🕨 System	n 🔻 😽	Search Control Panel	٩
	Control Panel Home	View basic information	about your compu	ıter	•
۲	Device Manager	Windows edition			
۲	Remote settings	Windows 7 Professional			
۲	System protection	Copyright © 2009 Microsof	ft Corporation. All rights	s reserved.	
•	Advanced sysfirm settings	Service Pack 1 Get more features with a new edition of Windows 7			
		System			
		Rating:	System rating is not av	vailable	
	See also	Processor:	Intel(R) Xeon(R) CPU E	5-2630 0 @ 2.30GHz 2.30	0 GHz
	Action Center	Installed memory (RAM):	2.00 GB		
	Windows Update	System type:	64-bit Operating Syste	m	
	Performance Information and Tools	Pen and Touch:	No Pen or Touch Input	t is available for this Displ	lay
		Computer name, domain, and	workgroup settings		

b. The **System Properties** window opens. Select the **Advanced** tab and click **Settings** in the Performance area.

System Properties		
Computer Name Hardware Advanced System Protection Remote		
You must be logged on as an Administrator to make most of these changes.		
Performance Visual effects, processor scheduling, memory usage, and virtual memory		
visual enects, processor scheduling, memory usage, and virtual memory		
Setting		
User Profiles		
Desktop settings related to your logon		
Settings		
Startup and Recovery		
System startup, system failure, and debugging information		
Settings		
Environment Variables		
OK Cancel Apply		

c. The Performance Options window opens. Click the Advanced tab.

Performance Options
Visual Effects Advanced Data Execution Prevention
Processor scheduling Choose how to allocate processor resources.
Adjust for best performance of:
Programs     O Background services
Virtual memory
A paging file is an area on the hard disk that Windows uses as if it were RAM.
Total paging file size for all drives: 2047 MB
Change
OK Cancel Apply

What is the current size of the virtual memory (paging file)?

# Step 2: Make virtual memory changes.

a. Click **Change** in the Virtual memory area to open the **Virtual Memory** window.

Performance Options		
Visual Effects Advanced Data Execution Prevention		
Processor scheduling Choose how to allocate processor resources.		
Adjust for best performance of:		
Programs     O Background services		
-Virtual memory		
A paging file is an area on the hard disk that Windows uses as if it were RAM.		
Total paging file size for all drives: 2047 MB		
OK Cancel Apply		

b. Remove the check mark from Automatically manage paging file size for all drives.

Virtual Memory			
Automatically mana Paging file size for eac Drive [Volume Label] C: [Local Disk] I: [ITE]	ge paging file size for all drives th drive Paging File Size (MB) <u>System managed</u> None	Ī	
Selected drive: Space available: Custom size: Initial size (MB): Maximum size (MB); System managed s No paging file	C: [Local Disk] 11417 MB	]	
Total paging file size for Minimum allowed: Recommended: Currently allocated:	16 MB 3070 MB		

What Drive [Volume Label] contains the paging file?

c. Choose the I: drive. Select the **Custom size:** radio button.

Virtual Memory			×
Automatically manage paging file size for all drives Paging file size for each drive			
Drive [Volume Label]	Paging	; File Size (MB)	
C: [Local Disk] I: [ITE]		System managed None	
1. [116]		None	
Selected drive: Space available:	I: [ITE] 4565 MB		
<ul> <li>Custom size:</li> <li>Inicial size (MB):</li> </ul>			
Maximum size (MB):			
🔘 System managed s	ize		
🔘 No paging file		Set	
Total paging file size f	or all drives		
Minimum allowed:	16 MB		
	3070 MB		
Currently allocated:	2047 MB		
		OK Canc	el

**Note**: Your drive letter and volume may be different than the example. Replace I: with the drive letter for your second partition on your PC.

What is the recommended paging file size for all drives?

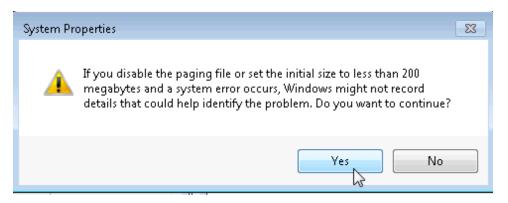
d. Enter a number smaller than the recommended file size in the **Initial size (MB)**: field. Enter a number that is larger than the Initial size but smaller than the recommended file size in the **Maximum size (MB)**: field. Click **Set**.

Virtual Memory			
Automatically mana Paging file size for eac Drive [Volume Label] C: [Local Disk]	ge paging file size for all drives h drive Paging File Size (MB) System managed 2047 - 3050		
Selected drive:	I: [ITE]		
Space available: © Custom size: Initial size (MB): Maximum size (MB);	4565 MB 2047 3050		
System managed s	ize Set		
Total paging file size for Minimum allowed: Recommended: Currently allocated:	16 MB 3070 MB		
	OK Cancel		

e. Select the C: drive. Select the No paging file radio button, and click Set.

Virtual Memory 🛛 💌			
Automatically manage paging file size for all drives Paging file size for each drive Drive [Volume Label] Paging File Size (MB) C: [Local Disk] System managed I: [ITE] 2047 - 3050			
Selected drive: C: [Local Disk] Space available: 11288 MB			
Custom size: Initial size (MB): 2047 Maximum size (MB): 3050			
System managed size     No paging file     Set			
Total paging file size for all drives Minimum allowed: 16 MB Recommended: 3070 MB Currently allocated: 2047 MB			
OK Cancel			

f. The System Properties warning message displays. Click Yes.



- g. Click OK on the Virtual Memory window to accept the new virtual memory settings.
- h. Click **OK** on the **Performance Options** window to close it.
- i. Click **OK** on the **System Properties** window to close it.

#### Step 3: Navigate back to the Virtual Memory window to verify changes.

a. The **System Properties** window opens. Select the **Advanced** tab and click **Settings** in the Performance area.

- b. The Performance Options window opens. Select the Advanced tab, and click Change.
- c. The **Virtual Memory** window opens displaying the new paging file information. Verify that your changes have been made.

Virtual Memory 🧧	×
Automatically manage paging file size for all drives Paging file size for each drive Drive [Volume Label] Paging File Size (MB)	
C: [Local Disk] None I: [ITE] 2047 - 3050	
Selected drive: C: [Local Disk] Space available: 11673 MB	
Custom size: Initial size (MB):	
Maximum size (MB):	
No paging file     Set	]
Total paging file size for all drives Minimum allowed: 16 MB Recommended: 3070 MB Currently allocated: 4094 MB	
OK Cancel	

What Drive [Volume Label] contains the paging file?

Step 4: Reset the virtual memory back to the original settings.

a. Select drive C: [Local Disk] > System managed size > Set.

Virtual Memory	x
Automatically manage paging file size for all drives         Paging file size for each drive         Drive [Volume Label]       Paging File Size (MB)         C:       [Local Disk]         I:       [ITE]	
Selected drive: C: [Local Disk] Space available: 11289 MB Custom size: Initial size (MB): Maximum size (MB):	
System managed size	
○ No paging file	
Total paging file size for all drives Minimum allowed: 16 MB Recommended: 3070 MB Currently allocated: 4094 MB	
OK Cancel	

b. Select I: > No paging file > Set.

Virtual Memory 🛛 💌			
Automatically manage Paging file size for each Drive [Volume Label] C: [Local Disk] I: [ITE]	ge paging file size for all drives h drive Paging File Size (MB) None 2047 - 3050		
	I: [ITE] 4565 MB		
Custom size: Initial size (MB); Maximum size (MB);	3050		
<ul> <li>System managed si</li> <li>No paging file</li> </ul>	ize		
Total paging file size fo Minimum allowed: Recommended: Currently allocated:	16 MB 3070 MB		
	OK Cancel		

c. Check Automatically manage paging file size for all drives, and click OK.

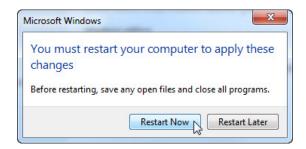
Virtual Memory 🛛 💌			
Automatically manage paging file size for all drives Paging file size for each drive Drive [Volume Label] Paging File Size (MB)			
C: [Local Disk] I: [ITE]	None None		
	I: [ITE] 4565 MB		
Custom size: Initial size (MB);			
Maximum size (MB);			
<ul> <li>System managed si</li> <li>No paging file</li> </ul>	Set		
Total paging file size fo Minimum allowed: Recommended: Currently allocated:	16 MB 3070 MB		
	OK Cancel		

d. The **System Properties** window opens informing you that a restart is required before changes will take effect. Click **OK**.



e. Click OK to close the Performance Options window. Click OK to close the System Properties window.

f. The warning message displays: You must restart your computer to apply these changes. Click Restart Now.



# Reflection

Why would you ever change the default virtual memory page file settings in Windows?