

IT Essentials 5.0

5.3.4.3 Lab - Hard Drive Maintenance in Windows Vista

Introduction

Print and complete this lab.

In this lab, you will examine the results after using Disk Check and Disk Defragmenter on a hard drive.

Recommended Equipment

The following equipment is required for this exercise:

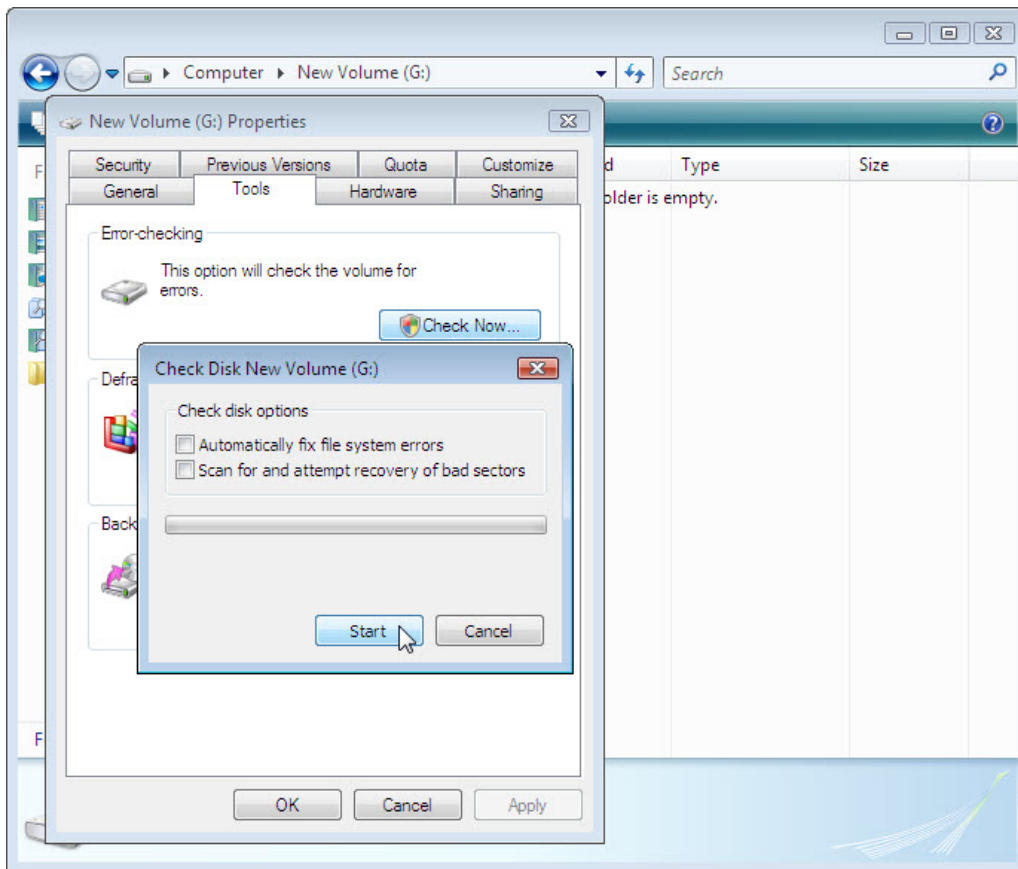
- A computer running Windows Vista
- Two or more partitions on the hard drive.

Step 1

Log on to Windows as an administrator.

Start > Computer > double-click New Volume (G:).

Note: Substitute volume and drive (G:) for the letter used in your computer.

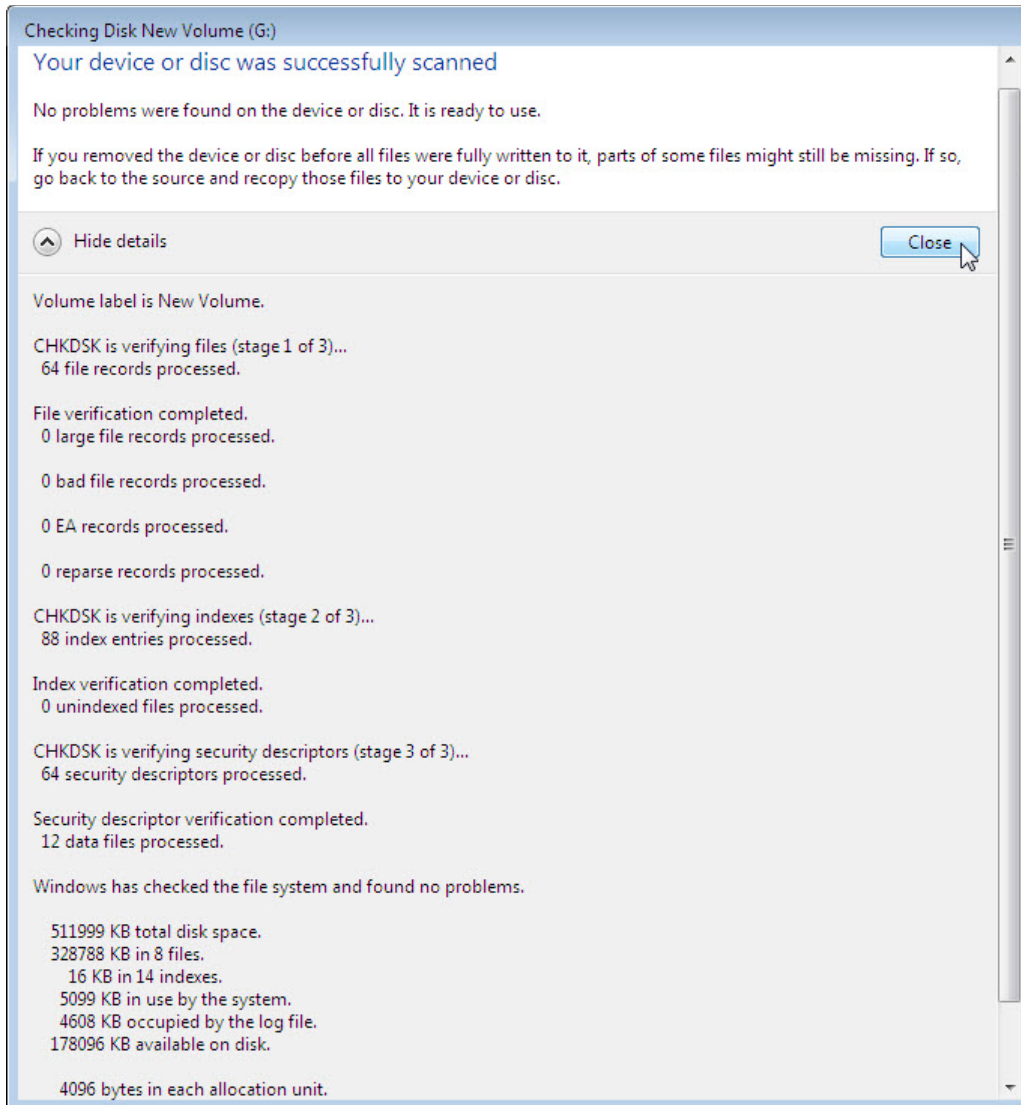


Right-click anywhere in the white space of the folder area for drive **G:** > **Properties** > **Tools** tab > **Check Now** > **Continue**.

The “Check Disk New Volume (G:)” window opens.

Make sure there is not a check mark in either check box then click **Start**.

The “Your device or disc was successfully scanned” screen appears.

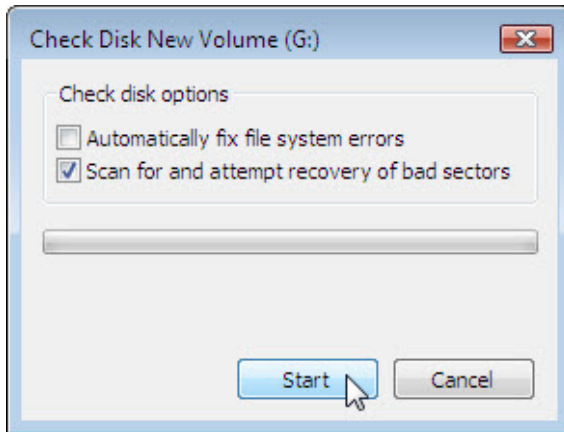


Click the expand button next to **See details**.

How many stages were processed?

Click **Close**.

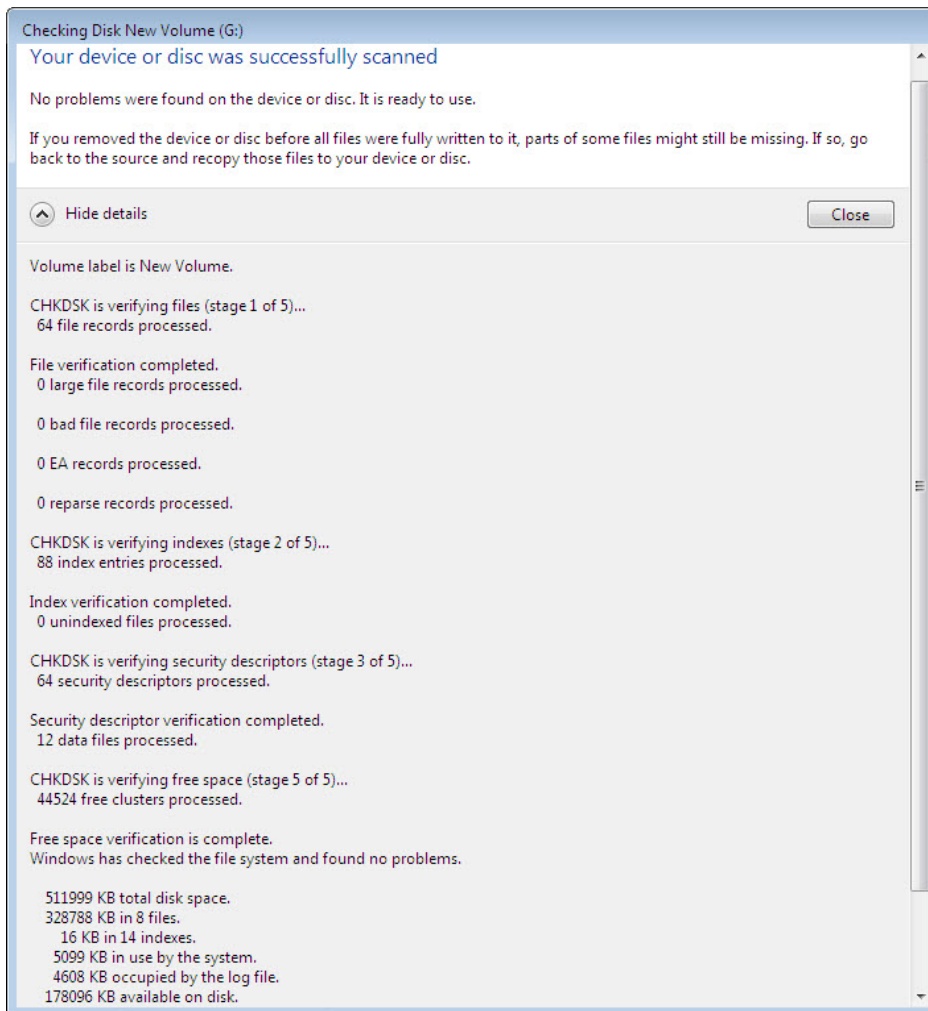
Select the **Tools** tab, and then click **Check Now > Continue**.



Remove the check mark next to **Automatically fix file system errors**.

Place a check mark in the check box next to **Scan for and attempt recovery of bad sectors** > **Start**.

The “Your device or disc was successfully scanned” screen appears.



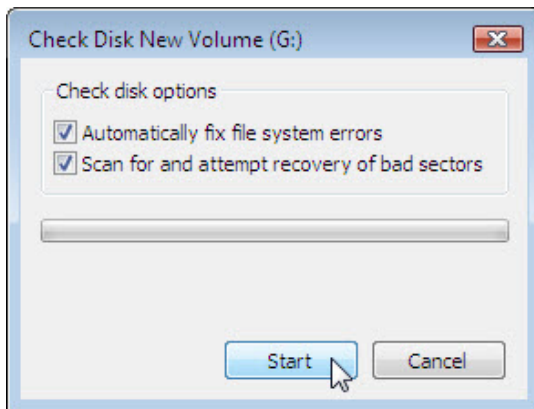
Click the expand button next to **See details**.

What stages were processed?

Click **Close**.

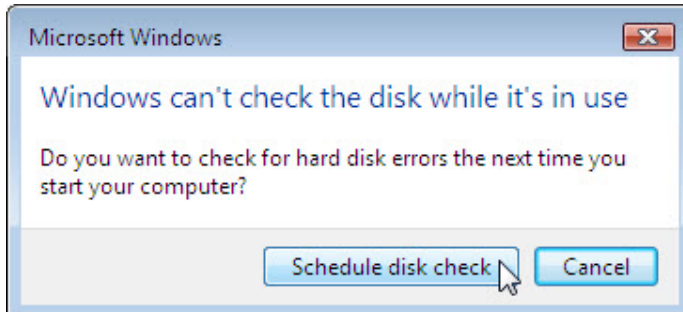
Select the **Tools** tab > **Check Now**.

Place a check mark in both check boxes.



Click **Start**.

An information window opens.



Why will Check Disk not start?

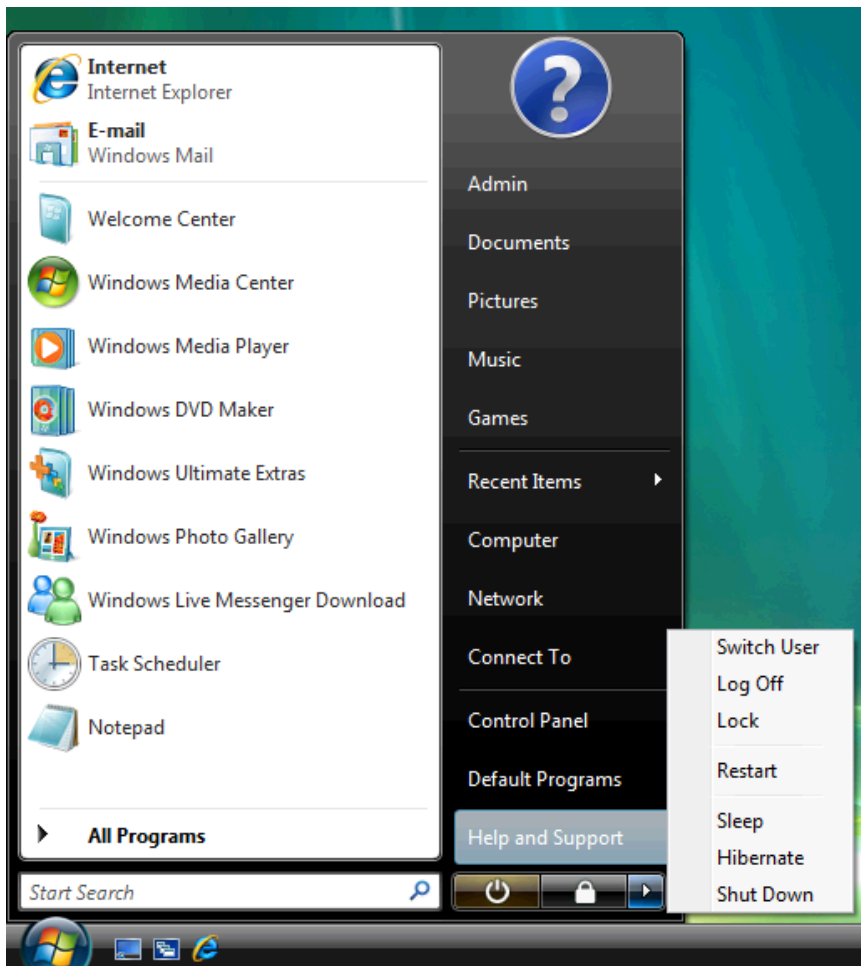
Note: This message is displayed because a boot partition will be scanned, or a non-boot partition that is going to be scanned is open.

Click **Schedule disk check** and then **OK** to close the "New Volume (G:) Properties" window.

Make sure drive G: stays open.

Note: To force CHKDSK to create a log file, when it scans a non-boot partition with no bad sectors, the non-boot partition drive must be open.

Click **Start** > hover over the right arrow button > **Restart**.



Step 2

The "Checking file system on G:" screen appears.

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Checking file system on G:
The type of the file system is NTFS.
Volume label is New Volume.

A disk check has been scheduled.
Windows will now check the disk.

CHKDSK is verifying files (stage 1 of 5)...
 64 file records processed.
File verification completed.
 0 large file records processed.
 0 bad file records processed.
 0 EA records processed.
 0 reparse records processed.
CHKDSK is verifying indexes (stage 2 of 5)...
 88 index entries processed.
Index verification completed.
 0 unindexed files processed.
CHKDSK is verifying security descriptors (stage 3 of 5)...
 64 security descriptors processed.
Security descriptor verification completed.
 12 data files processed.
CHKDSK is verifying file data (stage 4 of 5)...
 48 files processed.
File data verification completed.
CHKDSK is verifying free space (stage 5 of 5)...
121324 free clusters processed.
Free space verification is complete.
Windows has checked the file system and found no problems.

511999 KB total disk space.
21588 KB in 7 files.
 16 KB in 14 indexes.
 0 KB in bad sectors.
 5099 KB in use by the system.
 4608 KB occupied by the log file.
485296 KB available on disk.

 4096 bytes in each allocation unit.
127999 total allocation units on disk.
121324 allocation units available on disk.
Windows has finished checking the disk.
.....
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How many stages in the scan are there?

What is being verified in each of the stages?

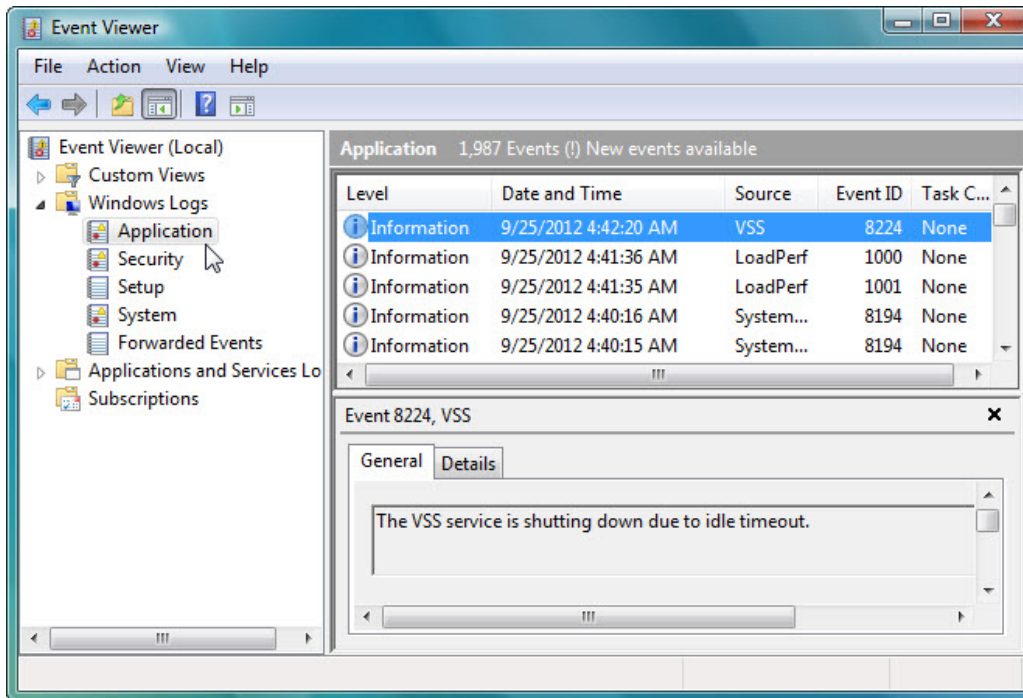
Were any problems found with the volume?

If so what are they?

Step 3

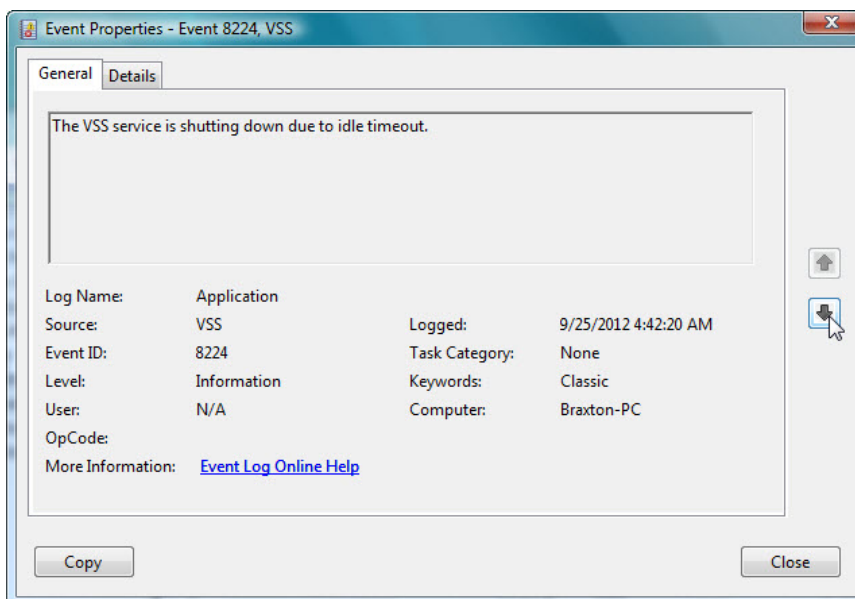
Log on to Windows as an administrator.

Start > Control Panel > Administrative Tools > Event Viewer > Continue.



In the left pane expand **Windows Logs >** select **Application**. Double-click the top event in the right pane.

The “Event Properties” window opens.



Click the black down arrow until the Disk Check event appears.

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Chkdsk was executed in read/write mode.

Checking file system on G:
Volume label is New Volume.
 64 file records processed.          0 large file records processed.      0 bad file records processed.
 0 EA records processed.             0 reparse records processed.        88 index entries processed.
 0 unindexed files processed.        64 security descriptors processed.   12 data files processed.
CHKDSK is verifying file data (stage 4 of 5)...
 48 files processed.                File data verification completed.
CHKDSK is verifying free space (stage 5 of 5)...
121324 free clusters processed.      Free space verification is complete.
Windows has checked the file system and found no problems.

511999 KB total disk space.
21588 KB in 7 files.
 16 KB in 14 indexes.
 5099 KB in use by the system.
 4608 KB occupied by the log file.
485296 KB available on disk.

 4096 bytes in each allocation unit.
127999 total allocation units on disk.
121324 allocation units available on disk.
```

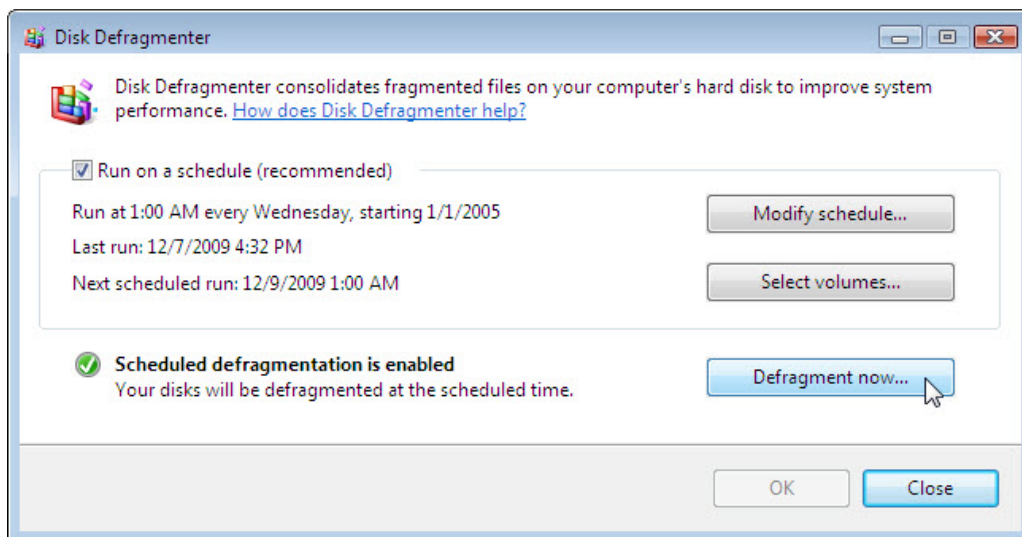
Which stages are shown as completed?

Close all open windows.

Step 4

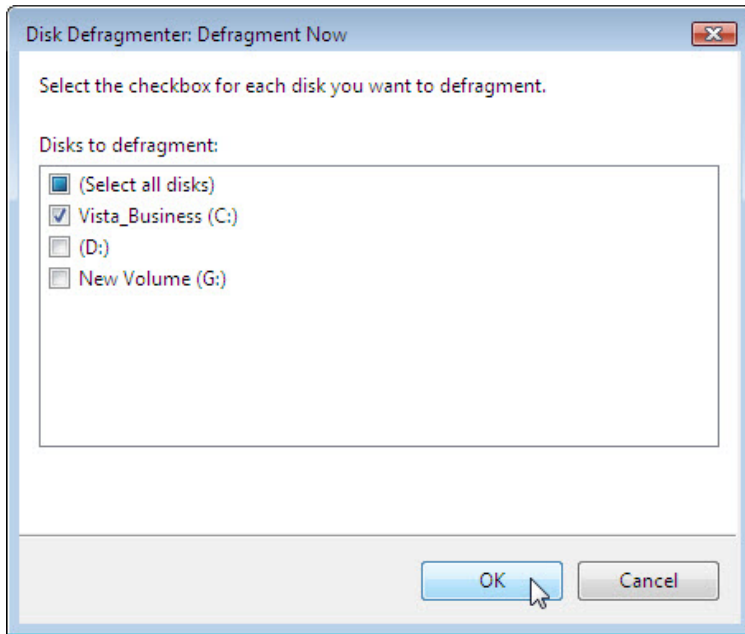
Start > My Computer > right-click drive (C:) > Properties > select Tools tab > Defragment Now button > Continue.

The “Disk Defragmenter” window opens.



Click **Defragment now**.

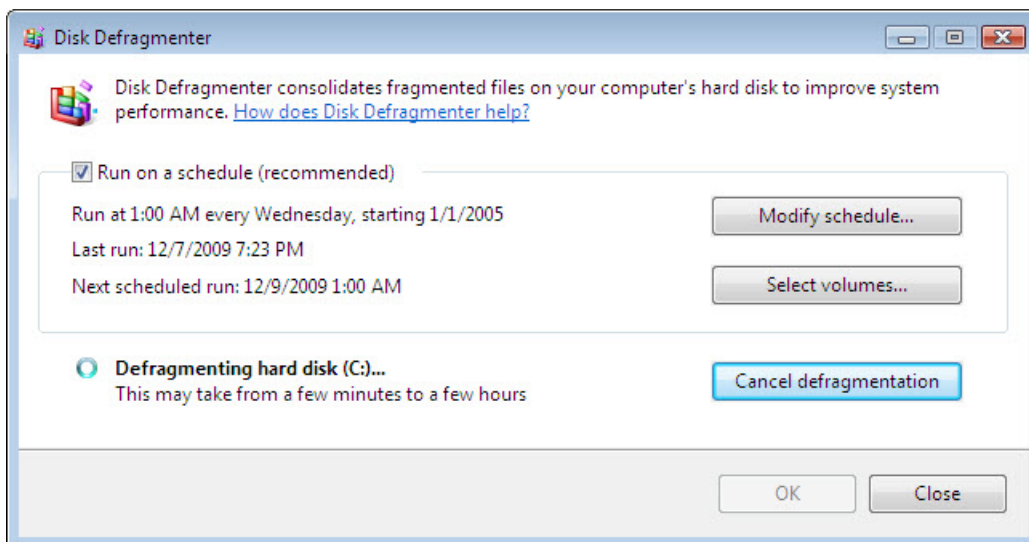
The “Disk Defragmenter: Defragment Now” window opens.



Make sure there is a check mark only next to drive (C:).

Click **OK**.

Windows starts defragmenting hard drive (C:).



When defragmenting is completed close all windows.

Note: It is not possible to view the detail of the defragmented hard drive through the GUI version of defragmenter.