IT Essentials 5.0

5.3.4.2 Lab - Hard Drive Maintenance in Windows 7

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
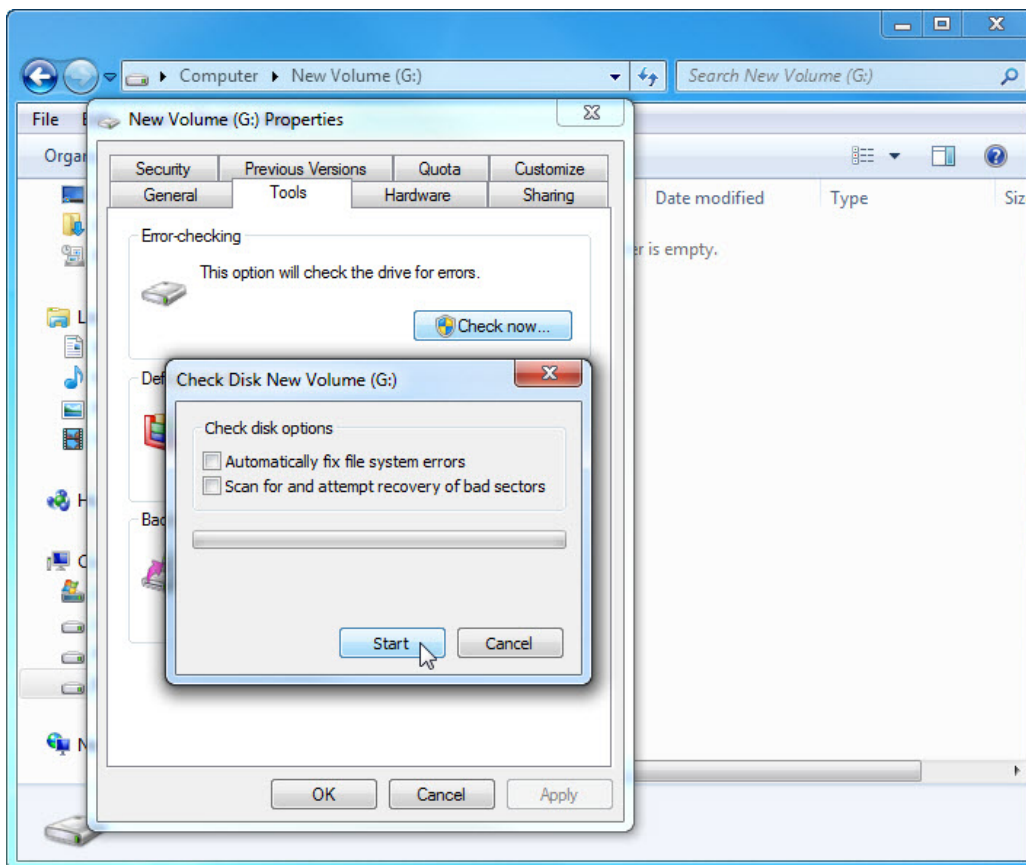The following equipment is required for this exercise:
- • A computer running Windows 7
- • Two or more partitions on the hard drive.

Step 1

Log on to Windows as an administrator.

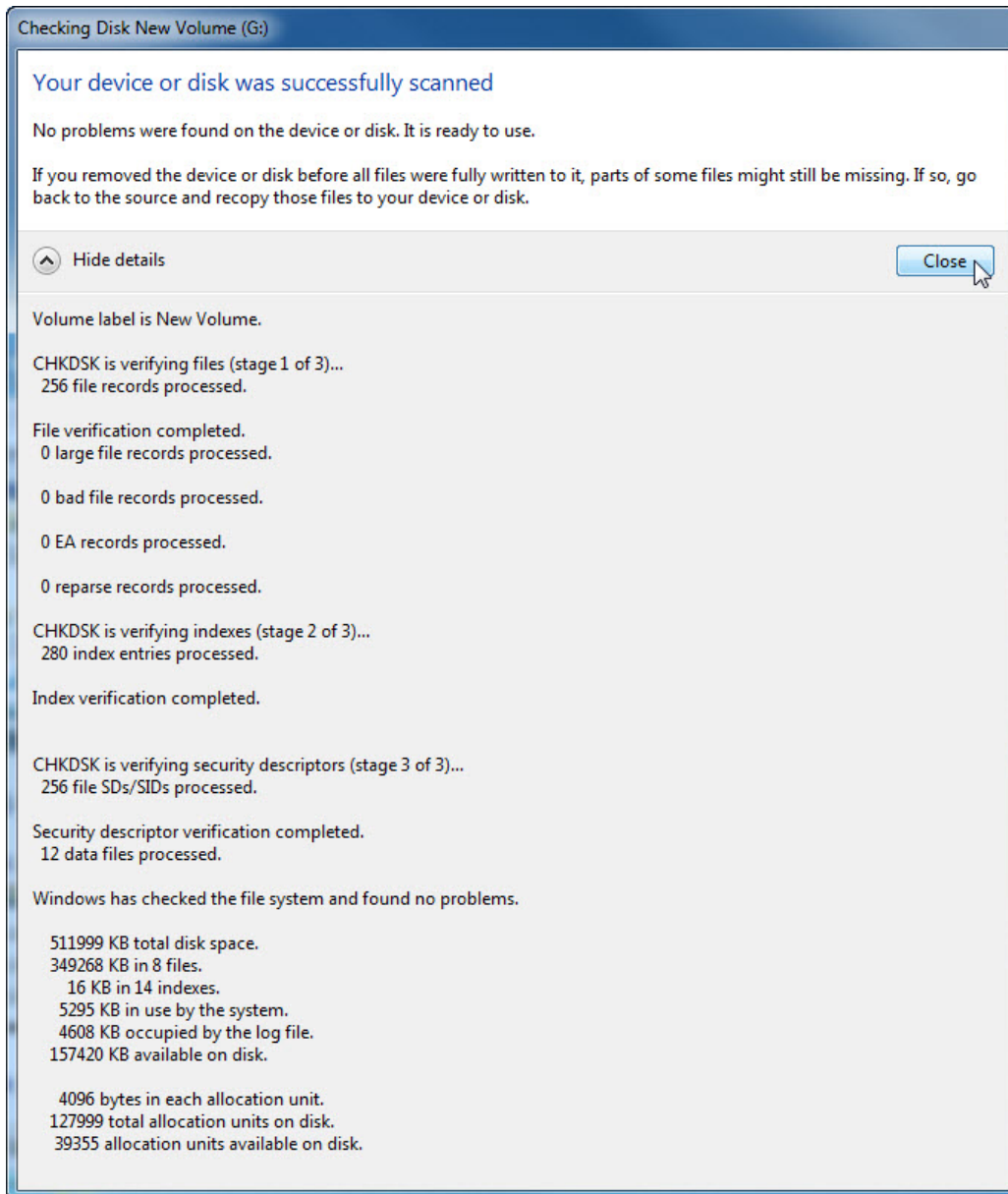**Start > Computer >** double-click **New Volume (G:)**.

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**.

The "Check Disk New Volume (G:)" window opens.
Make sure there is not a check mark in either checkbox then click **Start**.

The "Your device or disk was successfully scanned" screen appears.

Checking Disk New Volume (G:)

Your device or disk was successfully scanned

No problems were found on the device or disk. It is ready to use.

If you removed the device or disk before all files were fully written to it, parts of some files might still be missing. If so, go back to the source and recopy those files to your device or disk.

⌃ Hide details   Close

Volume label is New Volume.

CHKDSK is verifying files (stage 1 of 3)...
  256 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 3)...
  280 index entries processed.

Index verification completed.

CHKDSK is verifying security descriptors (stage 3 of 3)...
  256 file SDs/SIDs processed.

Security descriptor verification completed.
  12 data files processed.

Windows has checked the file system and found no problems.

  511999 KB total disk space.
  349268 KB in 8 files.
      16 KB in 14 indexes.
    5295 KB in use by the system.
    4608 KB occupied by the log file.
  157420 KB available on disk.

    4096 bytes in each allocation unit.
  127999 total allocation units on disk.
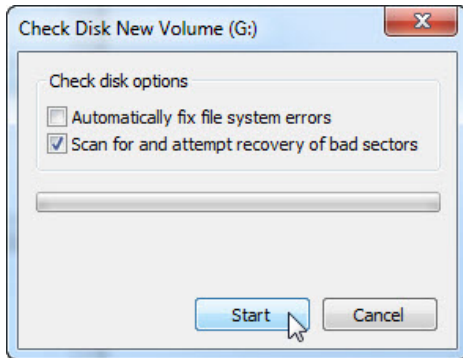   39355 allocation units available on disk.

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

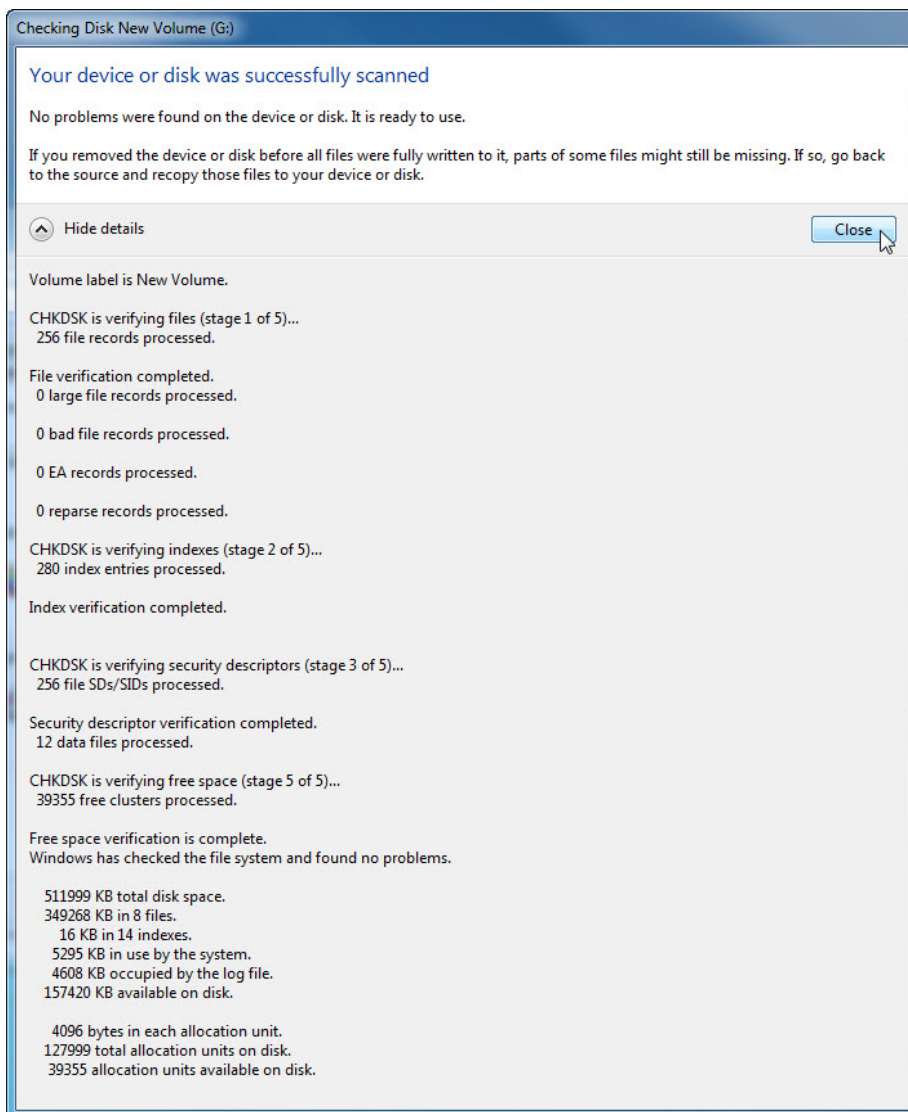How many stages were processed?

Click **Close**.

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

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

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

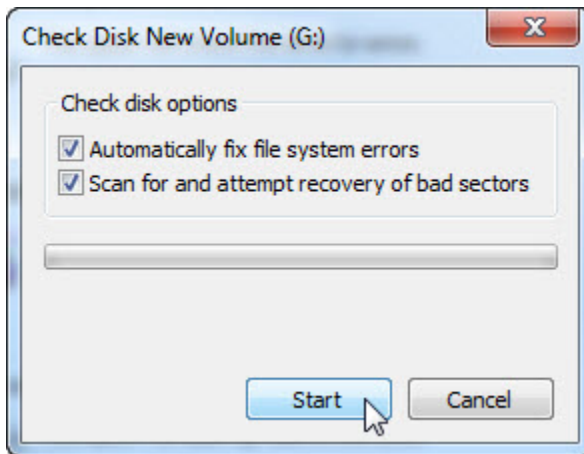The "Your device or disk was successfully scanned" screen appears.

Click the expand button next to **See details**.
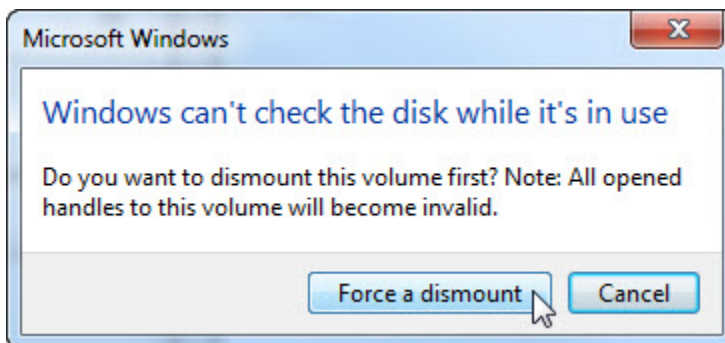
What stages were processed?

Click **Close**.

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

Place a check mark in both checkboxes.
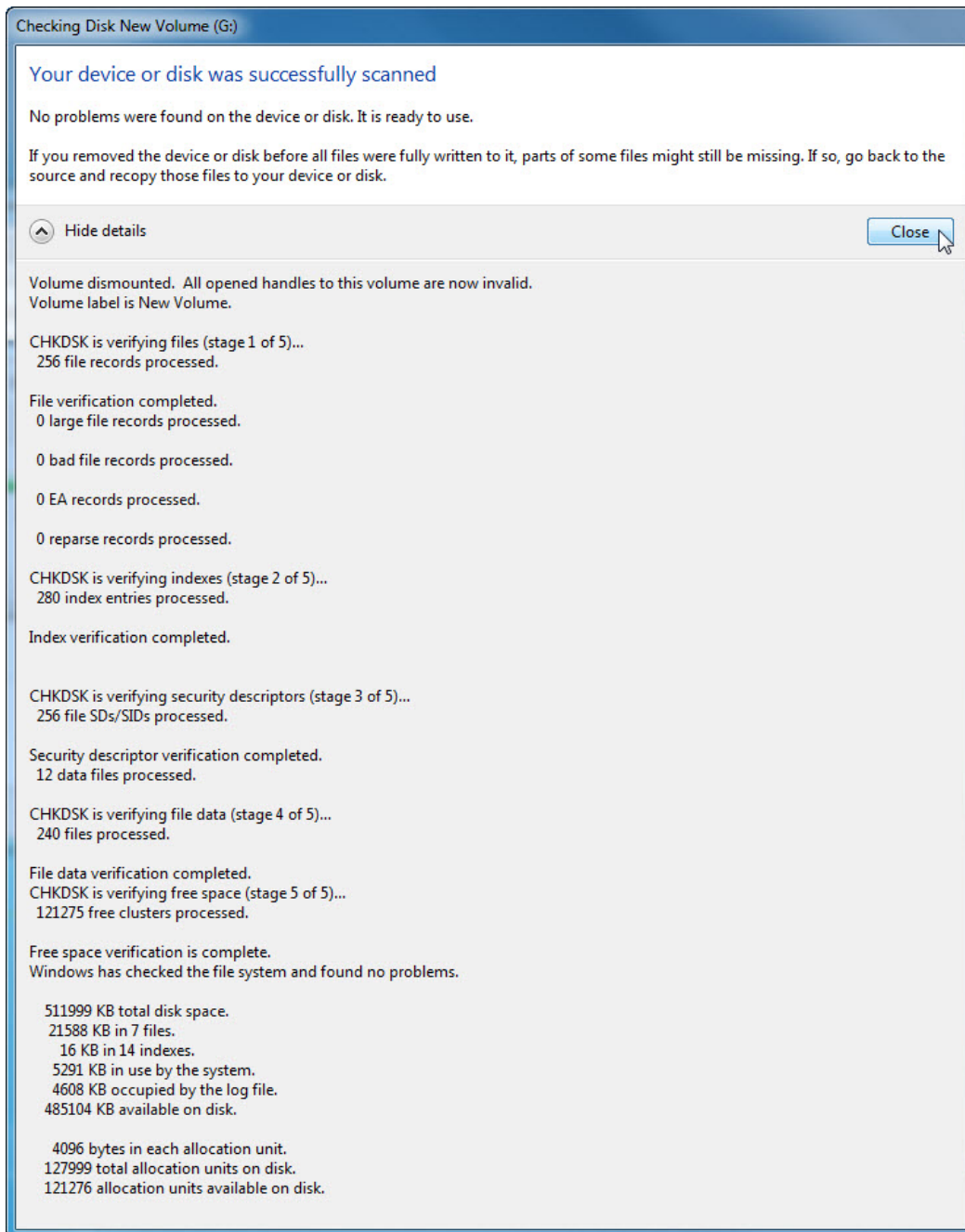
Click **Start**.

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 **Force a dismount**.

The "Your device or disk was successfully scanned" screen appears.

Checking Disk New Volume (G:)

Your device or disk was successfully scanned

No problems were found on the device or disk. It is ready to use.

If you removed the device or disk before all files were fully written to it, parts of some files might still be missing. If so, go back to the source and recopy those files to your device or disk.

⌃ Hide details   Close

Volume dismounted. All opened handles to this volume are now invalid.
Volume label is New Volume.

CHKDSK is verifying files (stage 1 of 5)...
  256 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)...
  280 index entries processed.

Index verification completed.

CHKDSK is verifying security descriptors (stage 3 of 5)...
  256 file SDs/SIDs processed.

Security descriptor verification completed.
  12 data files processed.

CHKDSK is verifying file data (stage 4 of 5)...
  240 files processed.

File data verification completed.
CHKDSK is verifying free space (stage 5 of 5)...
  121275 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.
     5291 KB in use by the system.
     4608 KB occupied by the log file.
   485104 KB available on disk.

     4096 bytes in each allocation unit.
   127999 total allocation units on disk.
   121276 allocation units available on disk.

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

What stages were processed?

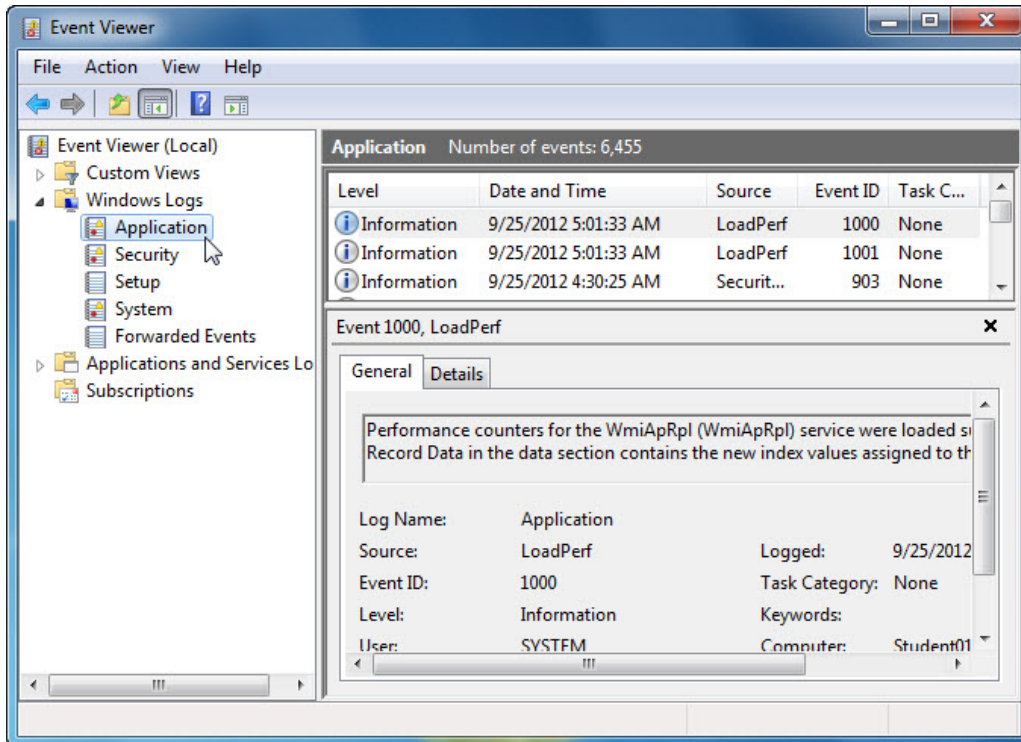What is being verified in each of the stages?

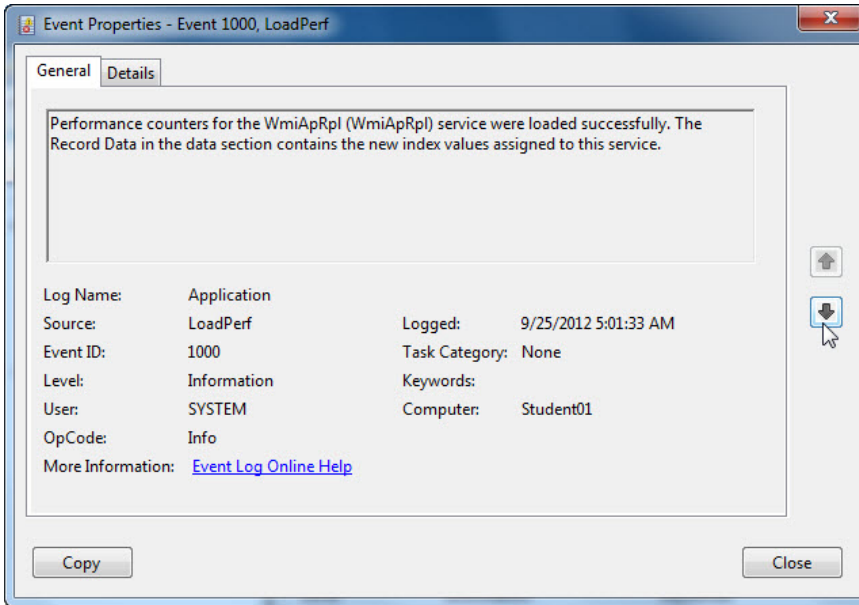Were any problems found with the volume?

If so what are they?

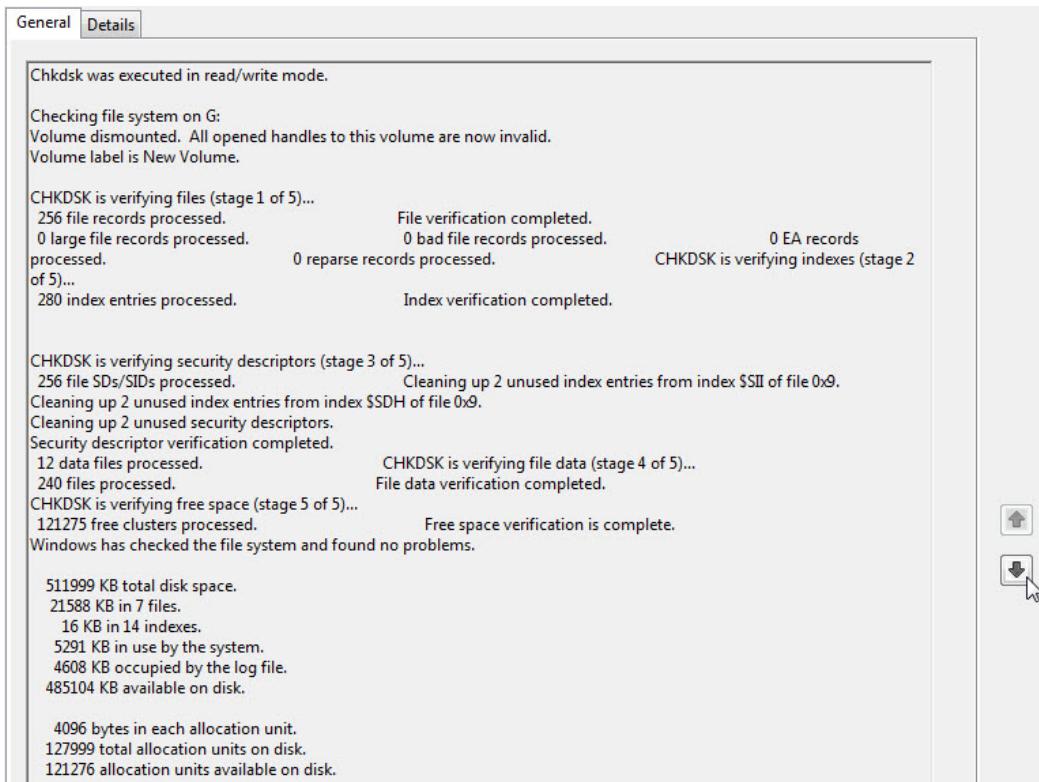Click **Close** and close all open windows.

Step 2

Start > Control Panel > Administrative Tools > Event Viewer.

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

If the displayed event is not Chkdsk, click the black down arrow until the Chsdsk event appears.
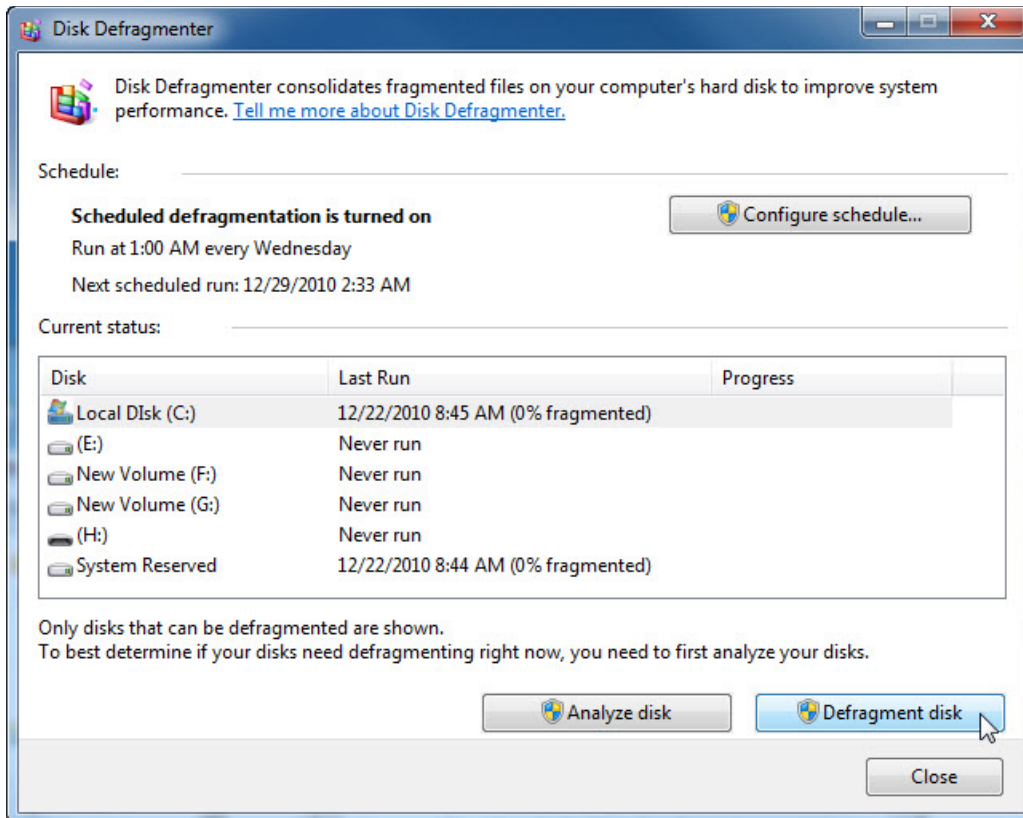

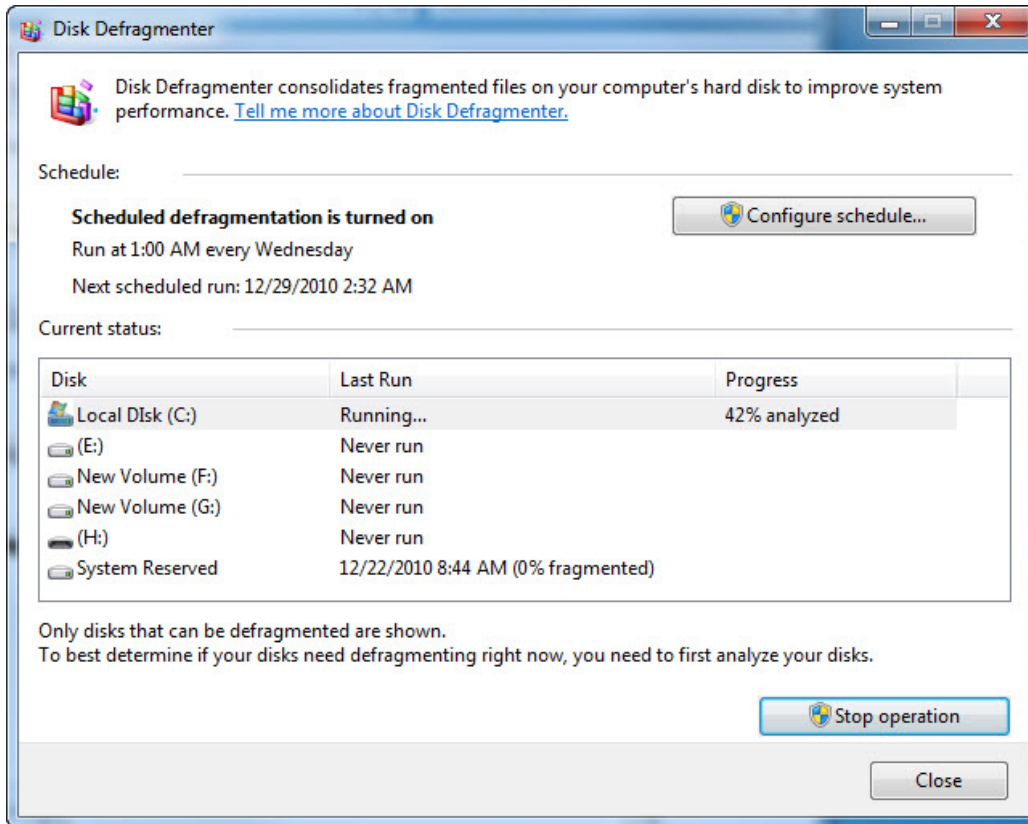Which stages are shown as completed?

Close all open windows.

Step 3

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

The "Disk Defragmenter" window opens.

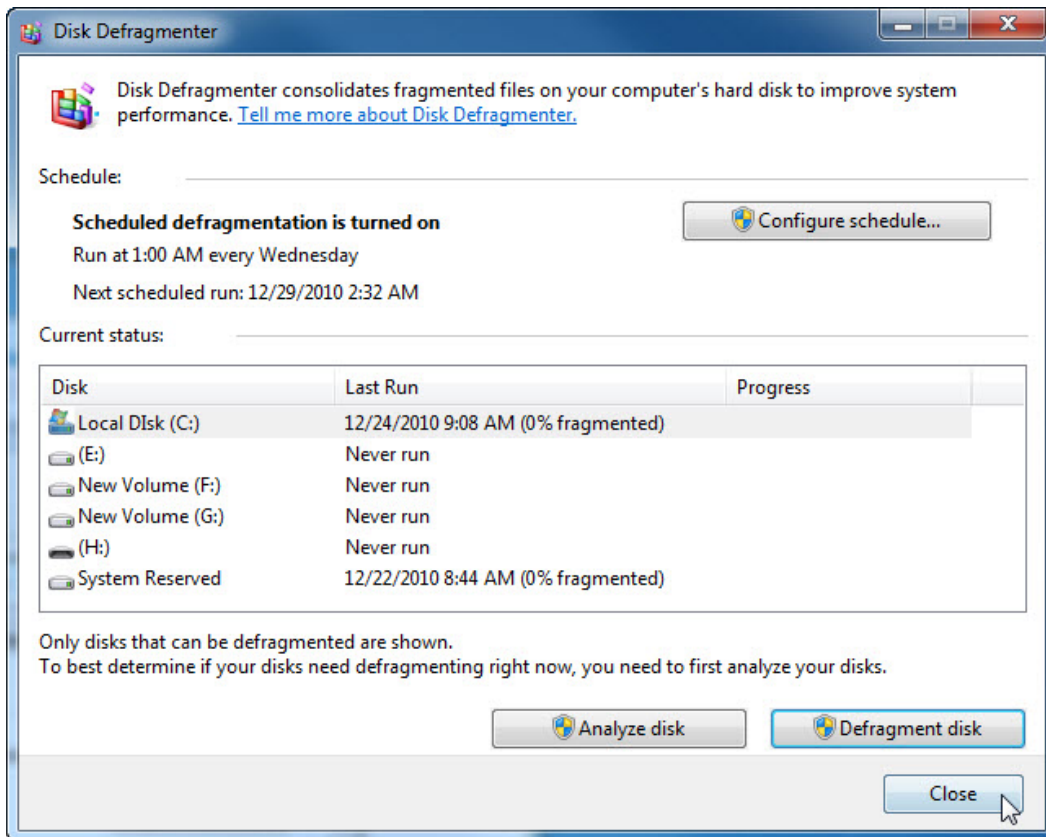Make sure drive C: is selected and then click **Defragment disk**.

Windows starts defragmenting hard drive (C:).

What is the first process during defragmenting (See "Progress" column)?

What are the three tasks performed for each Pass (See "Progress" column)?

How many passes did it take to defragment drive C:?

When defragmenting is completed click **Close**.

Close all windows.

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