IT Essentials 5.0

5.3.4.4 Lab - Hard Drive Maintenance in Windows XP

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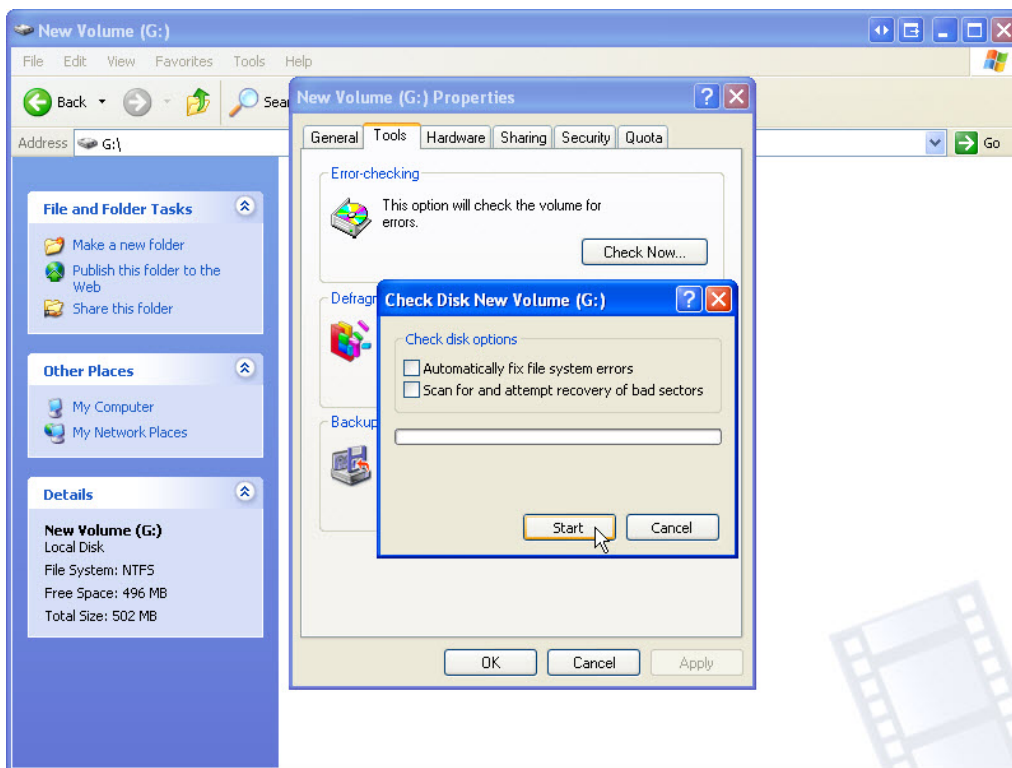The following equipment is required for this exercise:
- A computer running Windows XP Professional
- Two or more partitions on the hard drive.

Step 1

Log on to Windows as an administrator.

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

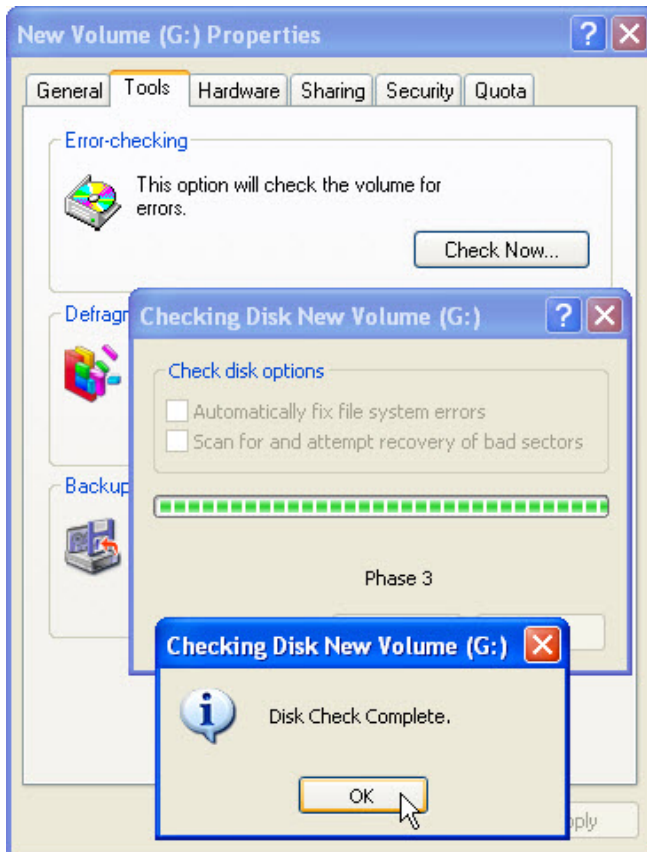**Note:** Substitute volume and drive (G:) for the letter used in your computer.

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.

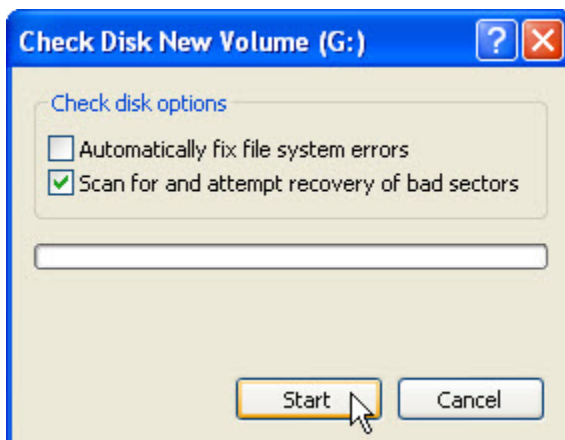Make sure none of the boxes are checked and then click **Start**.

The "Disk Check Complete" window opens.

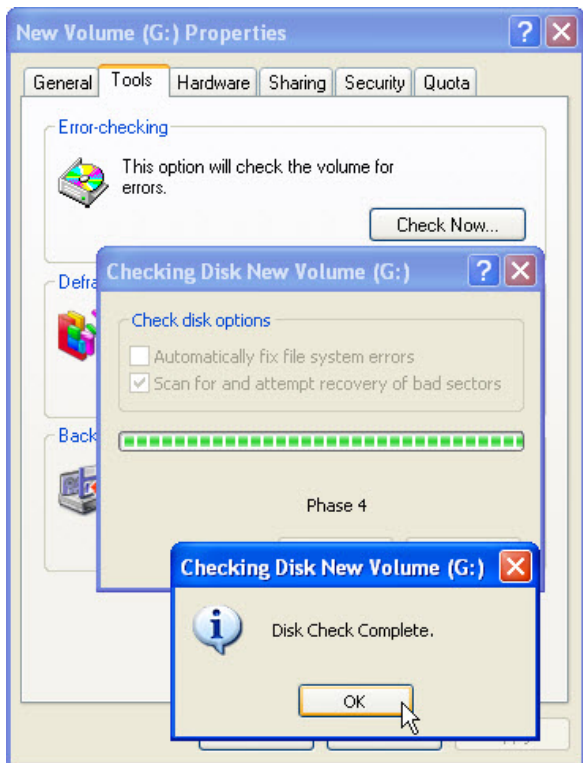How many phases were checked?

Click **OK**.

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

Place a check mark in the check box next to **Scan for and attempt recovery of bad sectors > Start**.
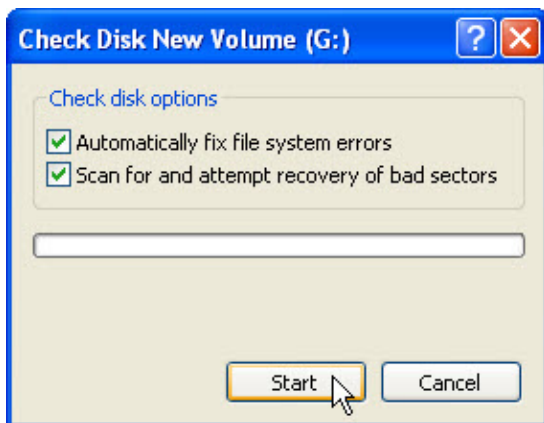
The "Disk Check Complete" window appears.

How many phases were checked?

Click **OK**.

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

Place a check mark in both check boxes and click **Start**.

An information window opens.
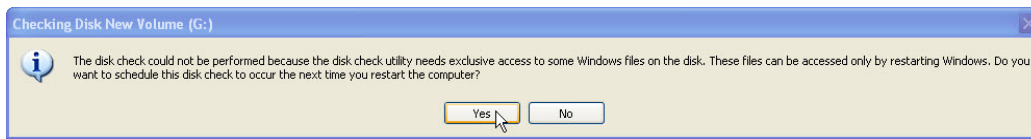
Why will CHKDSK not start?

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 **Yes** and then **OK** to close the "New Volume (G:) Properties" window.
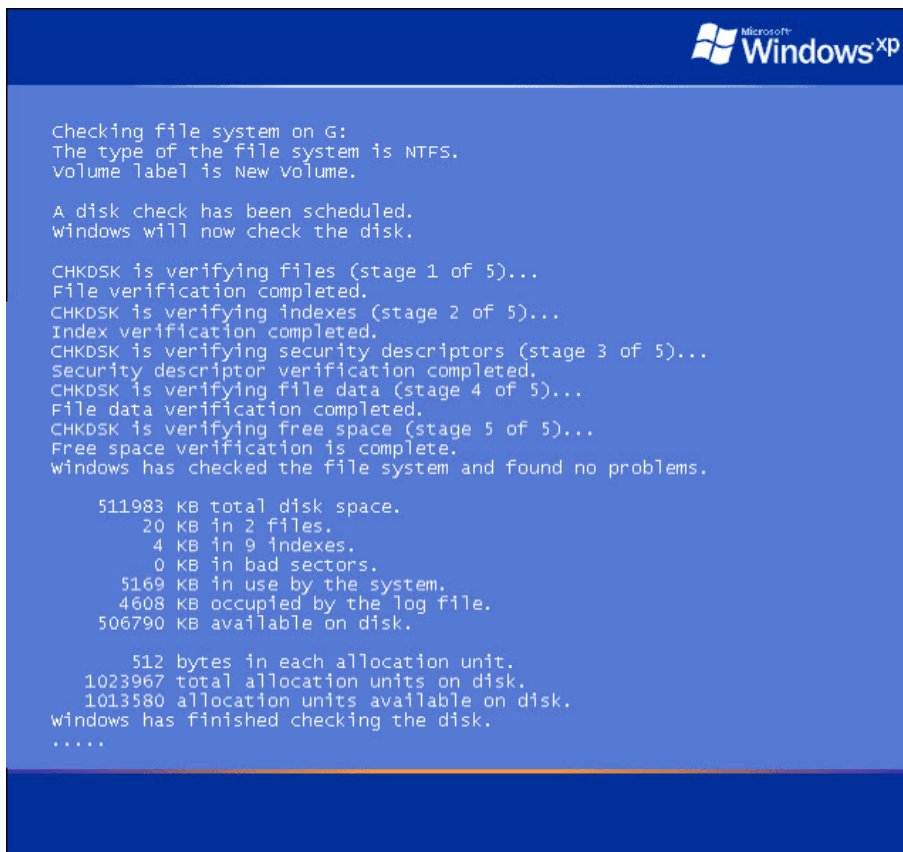
Make sure drive G: stays open.

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 > Shutdown > Restart**.

Step 2

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

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 > in the left pane select **Application**.
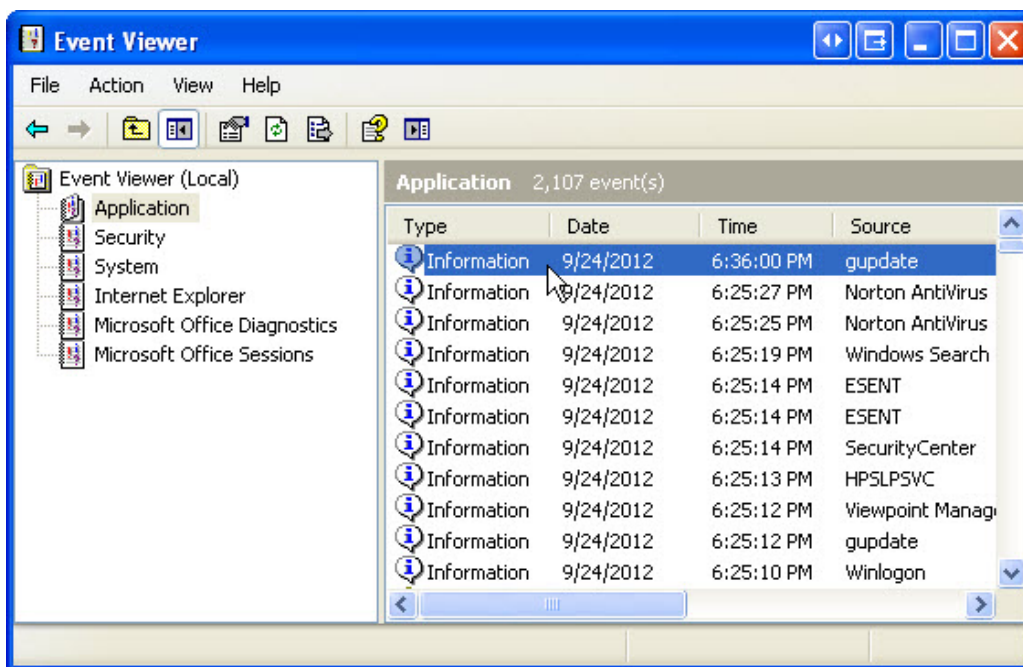
Double-click the top event in the right pane.

The "Event Properties" window opens.
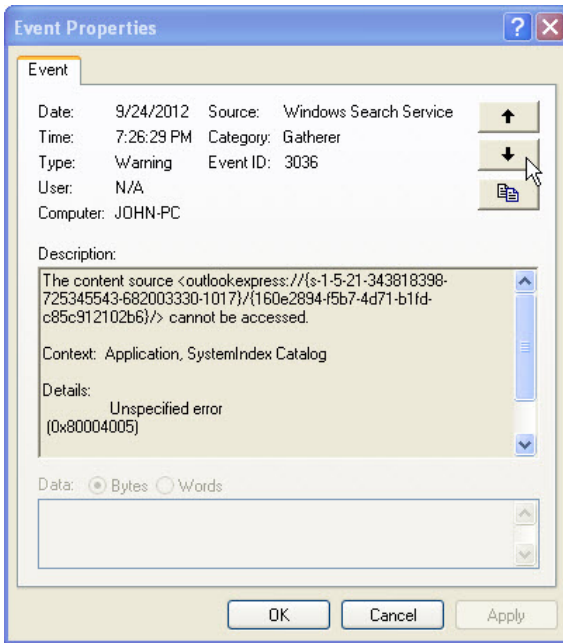
Click the black down arrow until the disk check event appears.
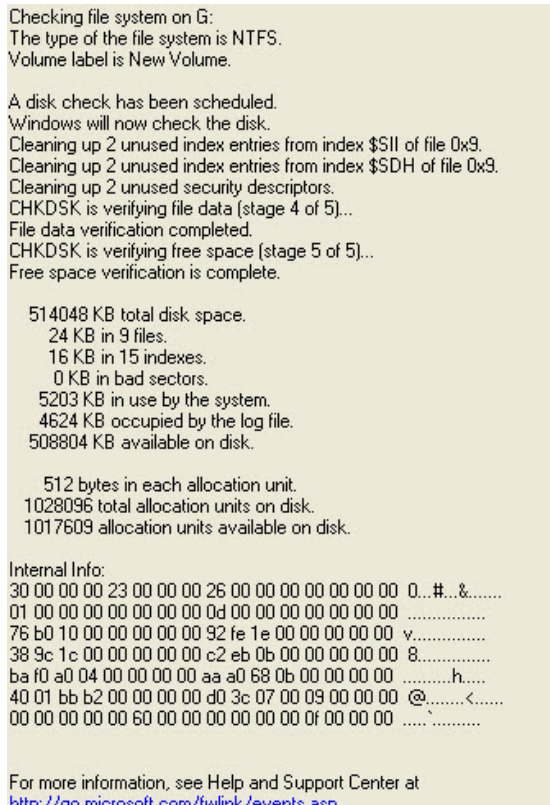
Which stages are shown as completed?

Close all open windows.

Step 4

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

The "Disk Defragmenter" window appears. Notice drive (C:) is selected.
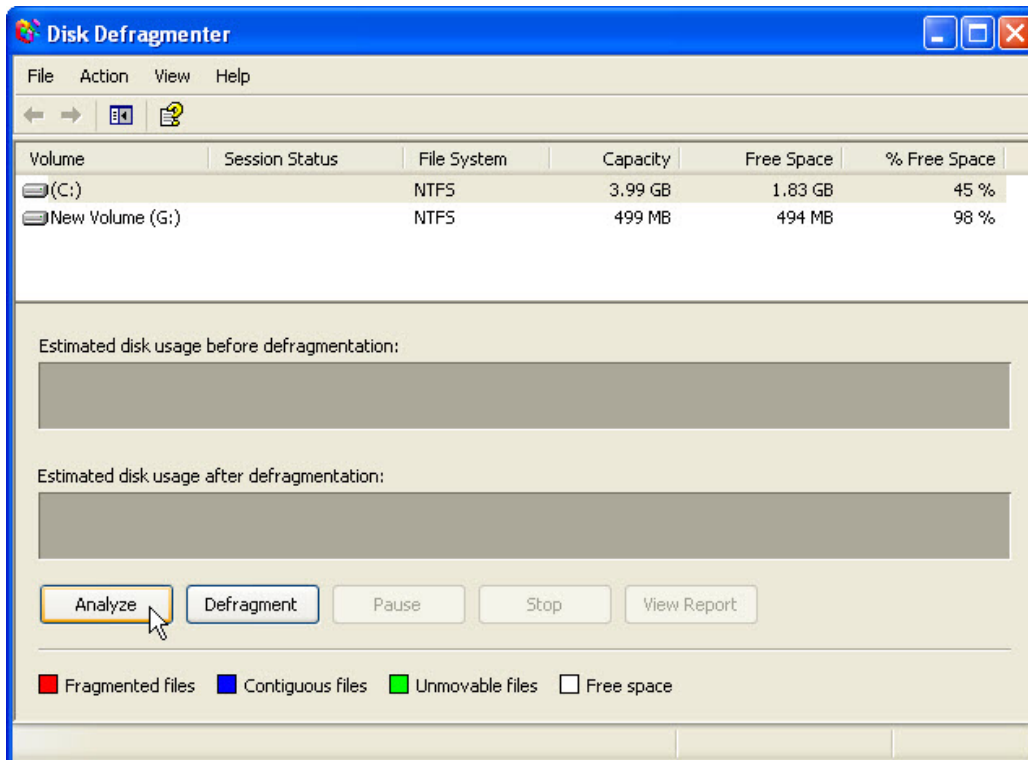
What are the file types and colors, grouped by Disk Defragmenter?

Click **Analyze**.

When the Analysis is complete for: (C:) window appears, click **View Report**.
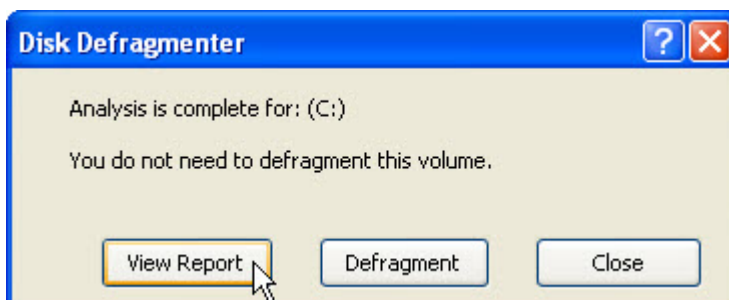
The "Analysis Report" window opens.

Analysis Report

Analysis is complete for: (C:)
You do not need to defragment this volume.

Volume information:

Volume (C:)
  Volume size   = 3.99 GB
  Cluster size   = 4 KB
  Used space   = 2.16 GB
  Free space   = 1.83 GB
  Percent free space   = 45 %
Volume fragmentation

Most fragmented files:

Fragments	File Size	File Name
112	11 MB	\Documents and Settings\Administrator\Loca.
103	6 MB	\Documents and Settings\Administrator\Loca.
67	704 KB	\Documents and Settings\Default User\Local .
63	1 KB	\WINDOWS\system32\config\system.LOG
60	249 KB	\WINDOWS\setupapi.log
51	3 MB	\Documents and Settings\Administrator\Loca.
48	8 MB	\Program Files\TechSmith\Snagit 9\SnagitEdi..
46	39 MB	\Documents and Settings\Administrator\Desk.

[Print...] [Save As...] [Defragment] [Close]

Does the volume need defragmenting?

Click on the scroll down bar to view volume information.

```
Volume  (C:)
    Volume size                              =    3.99 GB
    Cluster size                             =    4 KB
    Used space                               =    2.16 GB
    Free space                               =    1.83 GB
    Percent free space                       =    45 %
Volume fragmentation
    Total fragmentation                      =    10 %
    File fragmentation                       =    20 %
    Free space fragmentation                 =    0 %
File fragmentation
    Total files                              =    10,655
    Average file size                        =    246 KB
    Total fragmented files                   =    634
    Total excess fragments                   =    2,046
    Average fragments per file               =    1.19
Pagefile fragmentation
    Pagefile size                            =    768 MB
    Total fragments                          =    1
Folder fragmentation
    Total folders                            =    748
    Fragmented folders                       =    17
    Excess folder fragments                  =    118
Master File Table (MFT) fragmentation
    Total MFT size                           =    11 MB
    MFT record count                         =    11,420
    Percent MFT in use                       =    99
    Total MFT fragments                      =    2
```
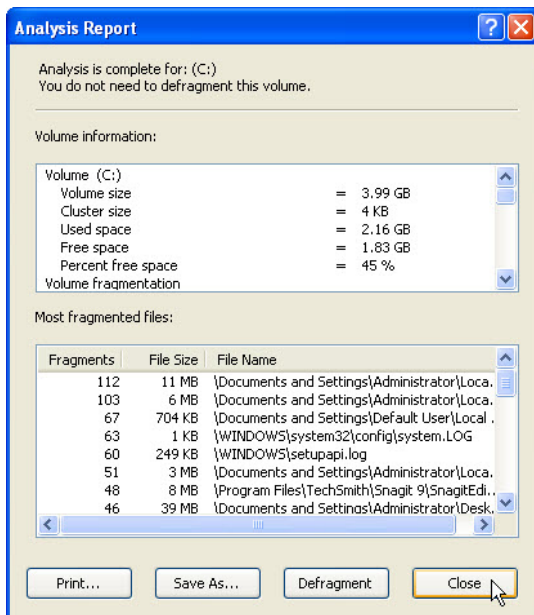
Analysis Report

Analysis is complete for: (C:)
You do not need to defragment this volume.

Volume information:

```
Volume  (C:)
    Volume size                    =    3.99 GB
    Cluster size                   =    4 KB
    Used space                     =    2.16 GB
    Free space                     =    1.83 GB
    Percent free space             =    45 %
Volume fragmentation
```
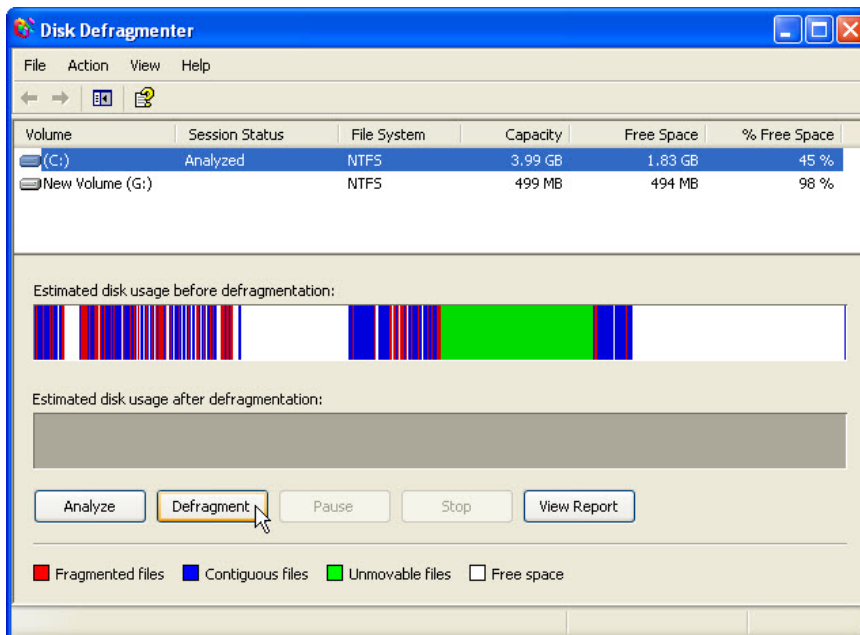
Most fragmented files:

Fragments	File Size	File Name
112	11 MB	\Documents and Settings\Administrator\Loca.
103	6 MB	\Documents and Settings\Administrator\Loca.
67	704 KB	\Documents and Settings\Default User\Local .
63	1 KB	\WINDOWS\system32\config\system.LOG
60	249 KB	\WINDOWS\setupapi.log
51	3 MB	\Documents and Settings\Administrator\Loca.
48	8 MB	\Program Files\TechSmith\Snagit 9\SnagitEdi..
46	39 MB	\Documents and Settings\Administrator\Desk.

Print...   Save As...   Defragment   Close

Click the **Close** button.

Drive (C:) has what percentage of free space?

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The "Disk Defragmenter" window opens.

Click the **Defragment** button.

The defragmenting process begins.

The "Defragmentation is complete for: (C:)" window appears.

Disk Defragmenter
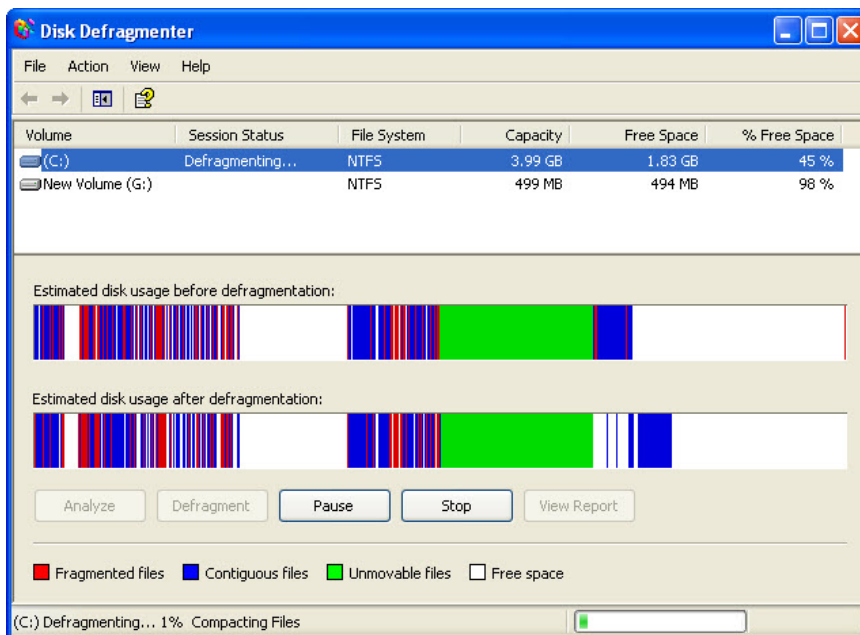
Defragmentation is complete for:
(C:)
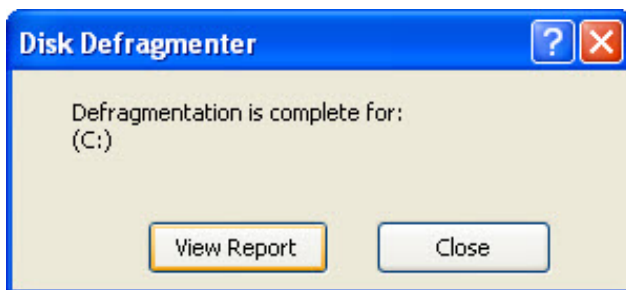
View Report   Close

Click **View Report**.

Click on the scroll down bar to view volume information.

```
Volume  (C:)
    Volume size                         =   3.99 GB
    Cluster size                        =   4 KB
    Used space                          =   2.15 GB
    Free space                          =   1.84 GB
    Percent free space                  =   46 %
Volume fragmentation
    Total fragmentation                 =   0 %
    File fragmentation                  =   0 %
    Free space fragmentation            =   0 %
File fragmentation
    Total files                         =   10,673
    Average file size                   =   245 KB
    Total fragmented files              =   0
    Total excess fragments              =   0
    Average fragments per file          =   1.00
Pagefile fragmentation
    Pagefile size                       =   768 MB
    Total fragments                     =   1
Folder fragmentation
    Total folders                       =   748
    Fragmented folders                  =   1
    Excess folder fragments             =   0
Master File Table (MFT) fragmentation
    Total MFT size                      =   11 MB
    MFT record count                    =   11,438
    Percent MFT in use                  =   99
    Total MFT fragments                 =   2
```

Volume (C:) has what percentage of free space?

Close all open windows.