

# "ERROR-CHECKING" TO RESOLVE BAD CLUSTERS FOR A HARD DRIVE

## HIGH-LEVEL EXECUTIVE SUMMARY

One or more newly-developed bad clusters on your C: drive can cause "Windows.." lockups . You can use the "Error-checking" applet of "Windows.." to resolve the problem.

## MORE DETAILED DESCRIPTION

When one or more bad clusters develop in the C: hard drive of a "Windows.." computer and these clusters are located in key "system files", you get "freezes" or "lockups". If you then perform "Error-checking" with "Scan for and attempt recovery of bad sectors", you can resolve the problem.

# STEP-BY-STEP PROCEDURE

Step 1:

If it is not already turned on, power on the "Windows" computer.

Step 2:

Click on the Windows "Start" button:



Step 1:

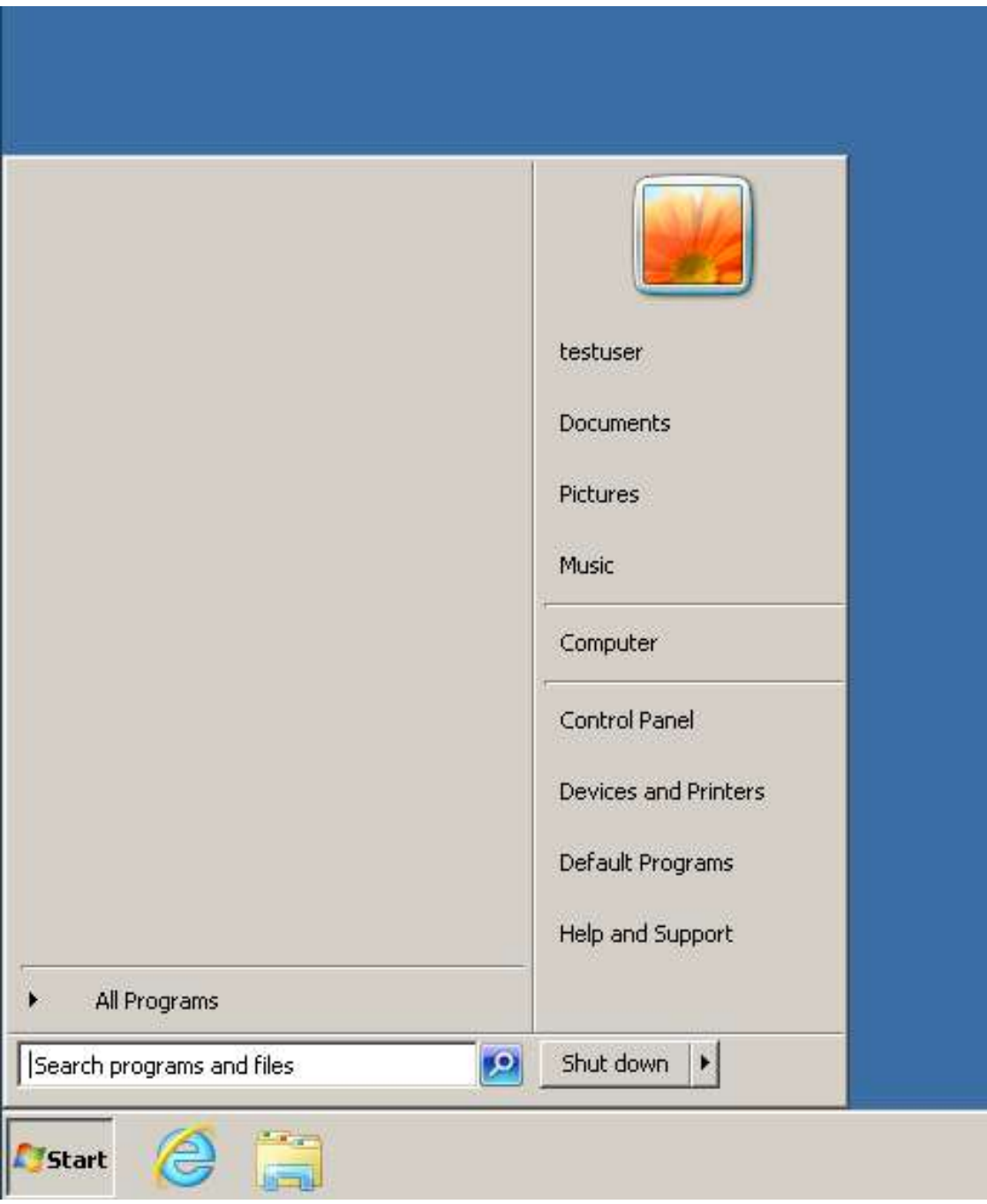
If it is not already turned on, power on the "Windows" computer.

Step 2:

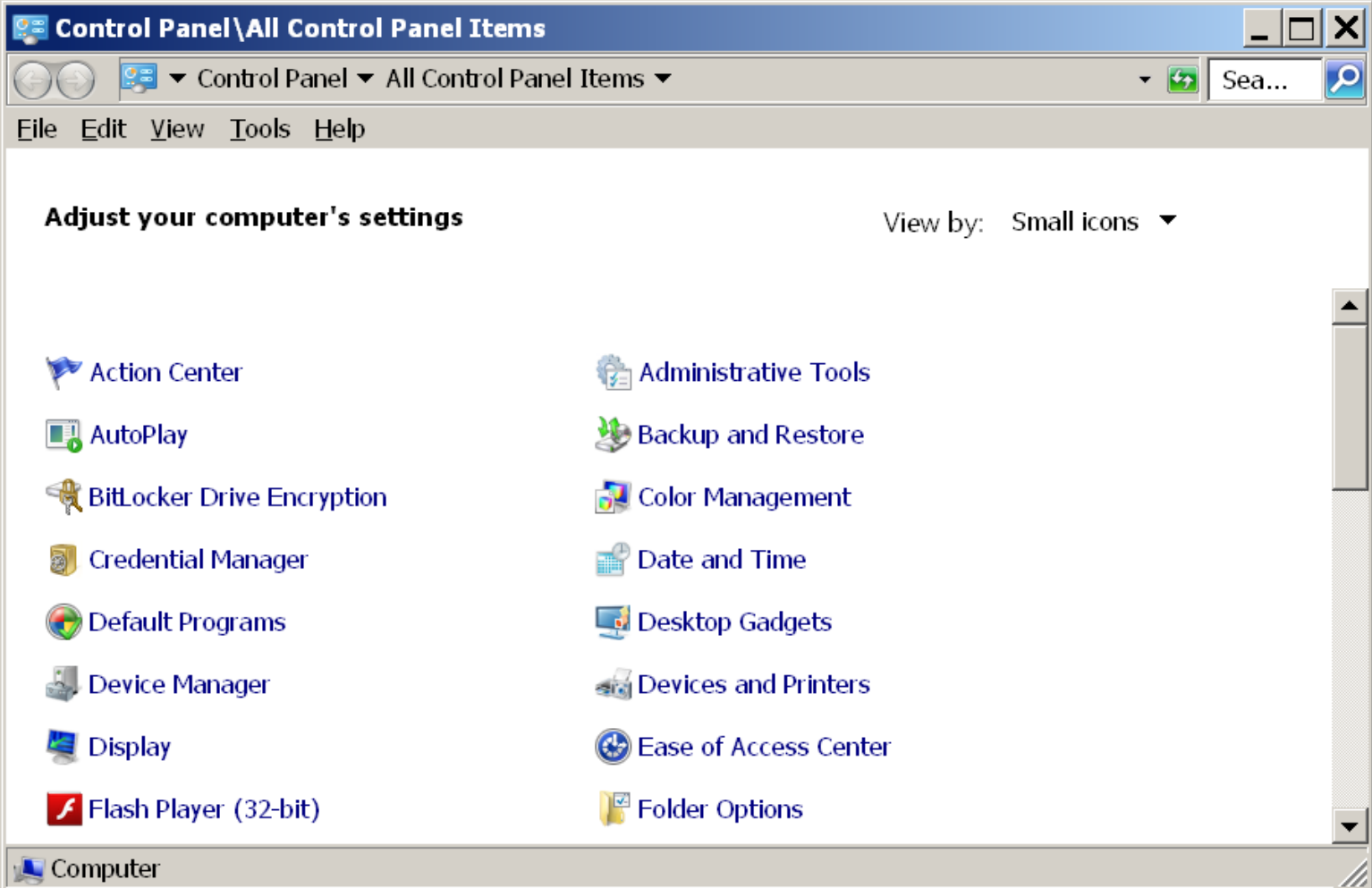
Click on the Windows "Start" button:



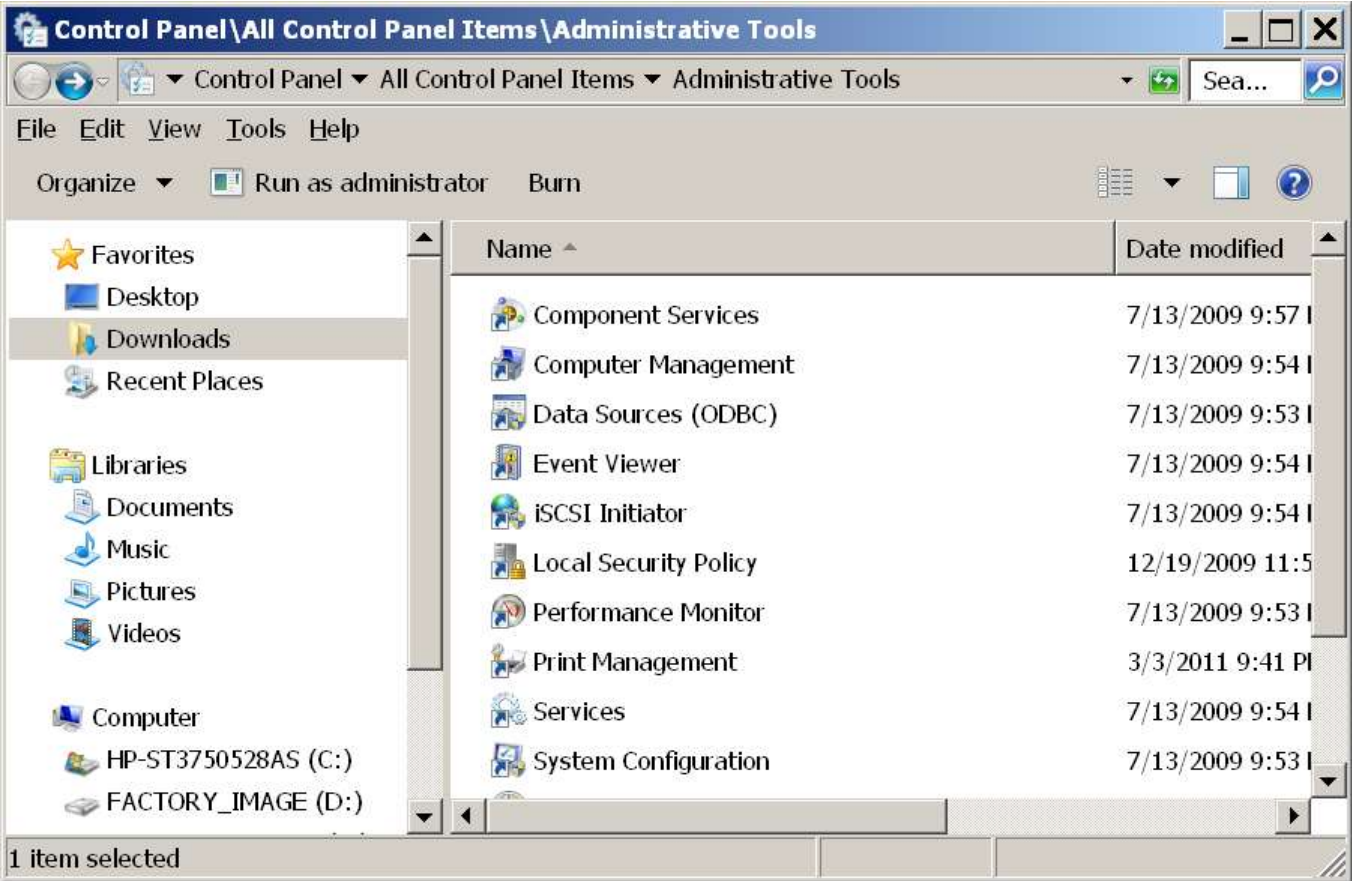
Step 3:  
Click on "Control Panel" in the "Start menu":



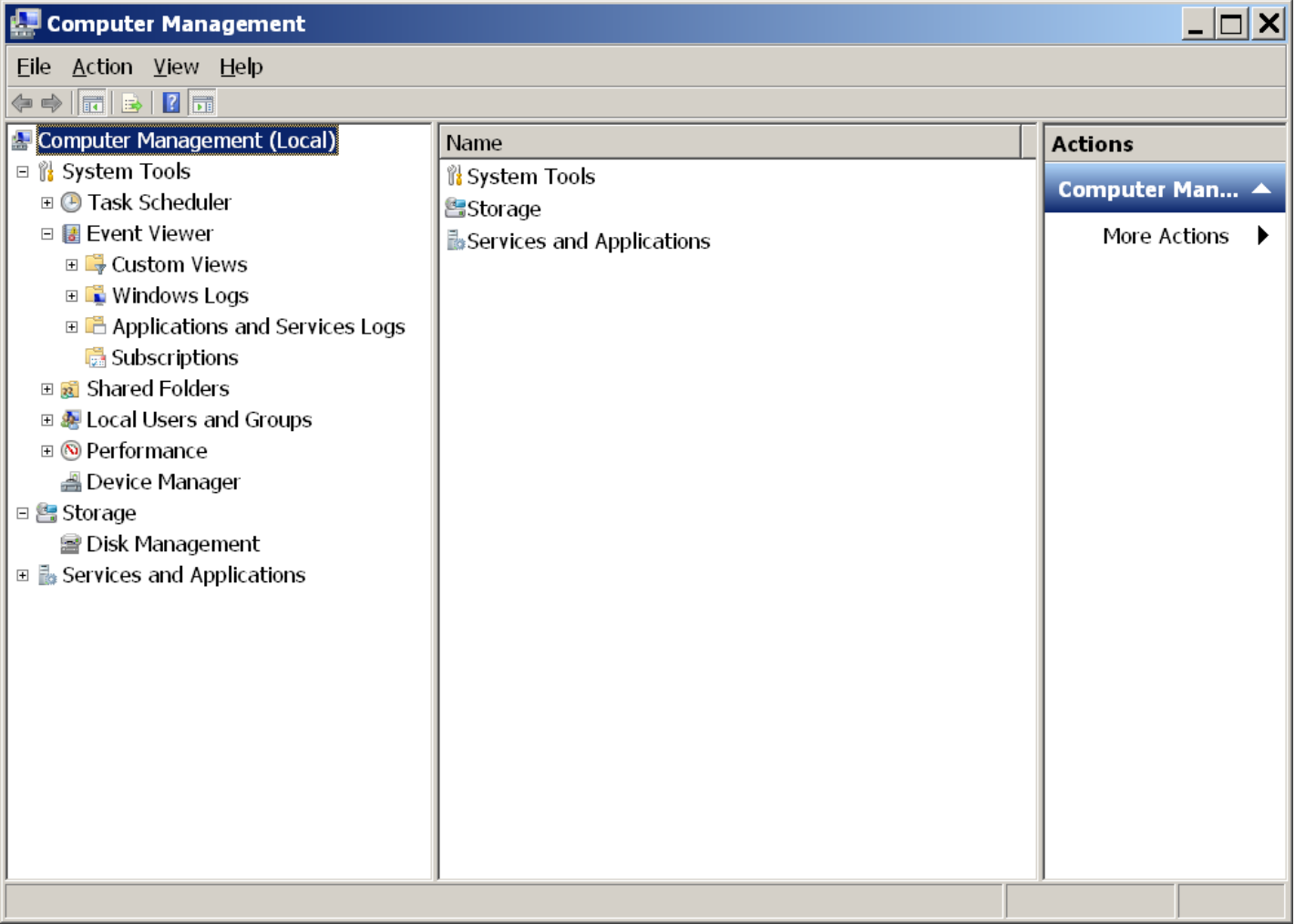
Step 4:  
Click on "Administrative Tools" in "Control Panel" window:



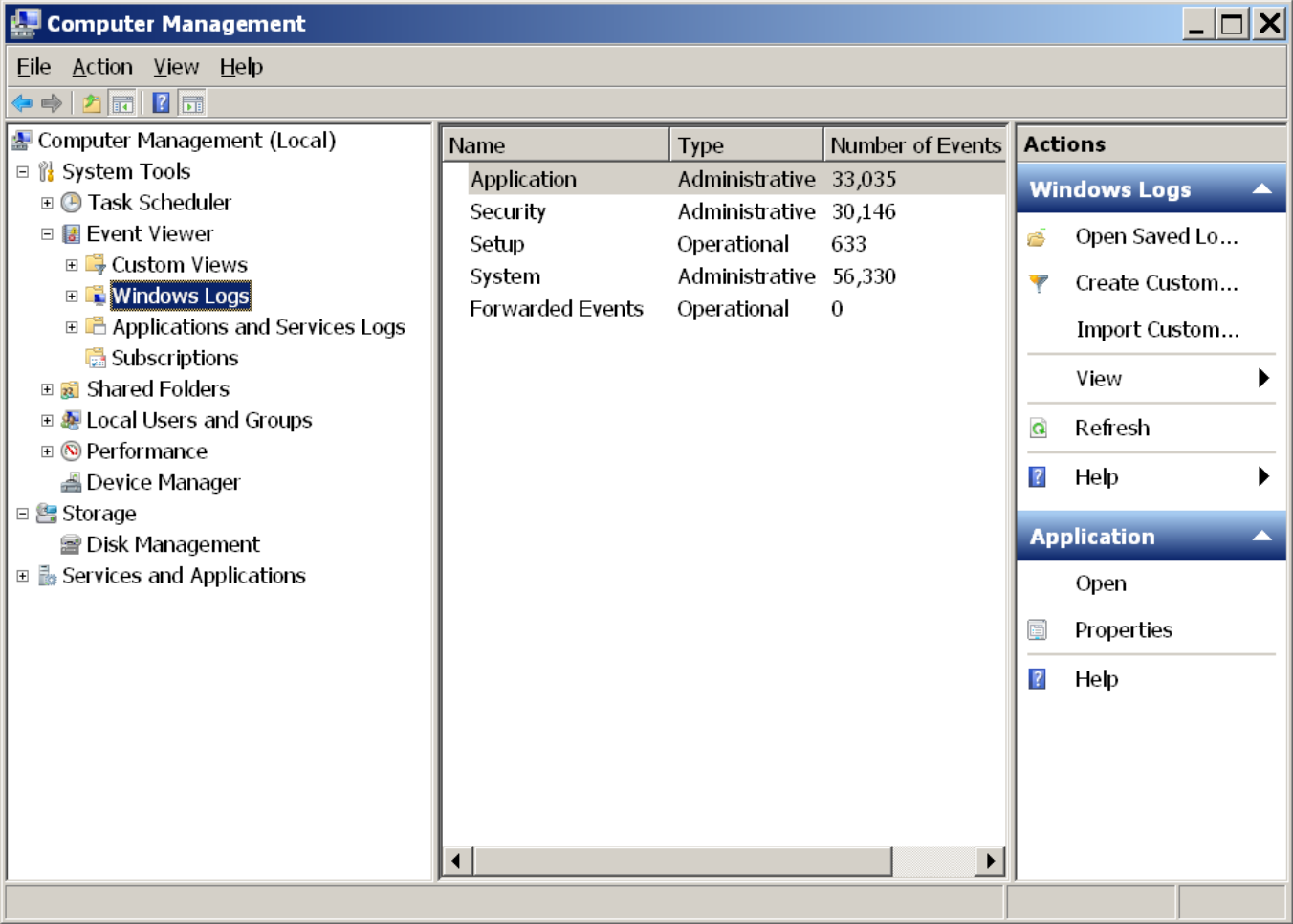
Step 5:  
Double-click on "Computer Management" in the "Administrative Tools" window:



Step 6:  
Click on the + Plus sign to the left of "Event Viewer" in the "Computer Management" window:



Step 7:  
Double-click on the "System" log in the "Name" column:



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Note that in our example, the "System" log reported 4 Disk Errors at the time that "Windows 7.." locked up.

Source	Date and Time	Category	Event ID	Level	Task Category
disk	8/17/2011 6:09:15 PM	Disk	15	Error	None
disk	8/17/2011 6:09:15 PM	Disk	15	Error	None
disk	8/17/2011 6:09:15 PM	Disk	15	Error	None
disk	8/17/2011 6:09:15 PM	Disk	15	Error	None
System	8/17/2011 6:09:11 PM	Kernel-Power	109	Information	(103)

Step 8:

Double-click on any errors that you find to get more information about them:

**Event Properties - Event 15, Disk**

General Details

The device, \Device\Harddisk1\DR1, is not ready for access yet.

Log Name:	System	Logged:	8/17/2011
Source:	Disk	Task Category:	None
Event:	15	Keywords:	Classic
Level:	Error	Computer:	e9280t
User:	N/A		
OpCode:			

More Information: [Event Log Online](#)

Copy Close

## Step 9:

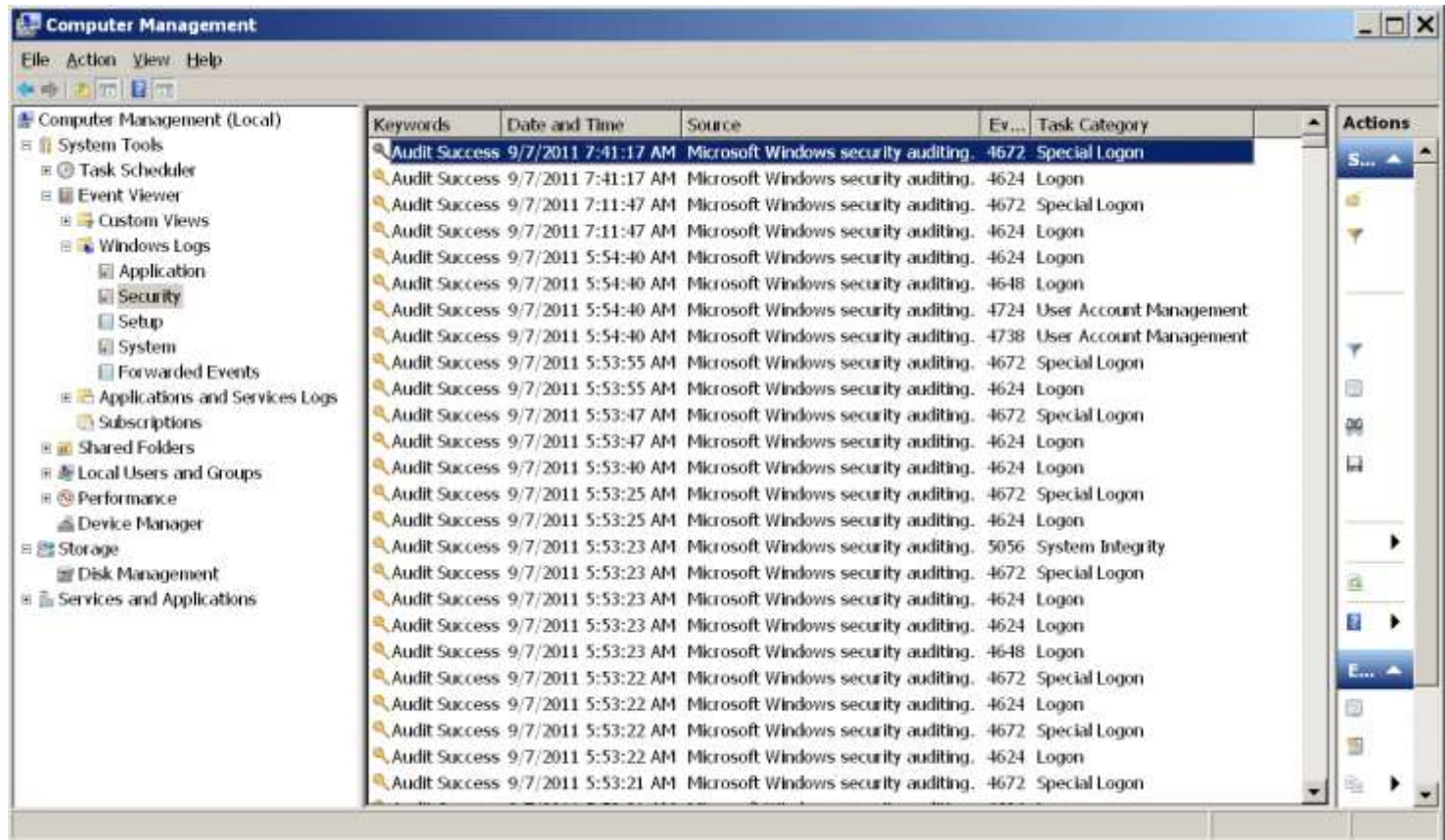
Go to the left pane of the "Computer Management" window and click on the "Application" log to see if shows any errors or information notices that are pertinent to the date and time when the "System" log showed disk errors:

The screenshot shows the Windows Computer Management console. The left pane displays the tree view with 'Application' selected under 'Windows Logs'. The main pane shows a list of events with the following columns: Level, Date and Time, Source, Ev..., and Task Category. The top event is highlighted.

Level	Date and Time	Source	Ev...	Task Category
Information	9/7/2011 7:41:49 AM	Security-SPP	903	None
Information	9/7/2011 7:36:47 AM	Security-SPP	902	None
Information	9/7/2011 7:36:47 AM	Security-SPP	1003	None
Information	9/7/2011 7:36:47 AM	Security-SPP	1066	None
Information	9/7/2011 7:36:46 AM	Security-SPP	900	None
Information	9/7/2011 7:32:14 AM	Office Software Protection Platform Service	1003	None
Information	9/7/2011 7:30:11 AM	Office Software Protection Platform Service	1003	None
Information	9/7/2011 7:25:21 AM	Office Software Protection Platform Service	1003	None
Information	9/7/2011 7:16:25 AM	Office Software Protection Platform Service	1003	None
Information	9/7/2011 7:16:24 AM	Office Software Protection Platform Service	902	None
Information	9/7/2011 7:16:24 AM	Office Software Protection Platform Service	1066	None
Information	9/7/2011 7:16:24 AM	Office Software Protection Platform Service	900	None
Information	9/7/2011 6:14:00 AM	LoadPerf	1000	None
Information	9/7/2011 6:13:34 AM	LoadPerf	1001	None
Information	9/7/2011 5:58:41 AM	Security-SPP	903	None
Information	9/7/2011 5:57:48 AM	LoadPerf	1000	None
Information	9/7/2011 5:57:48 AM	LoadPerf	1001	None
Information	9/7/2011 5:55:41 AM	SecurityCenter	1	None
Information	9/7/2011 5:53:59 AM	Search	1003	Search service
Information	9/7/2011 5:53:58 AM	ESENT	302	Logging/Recovery
Information	9/7/2011 5:53:56 AM	ESENT	301	Logging/Recovery
Information	9/7/2011 5:53:48 AM	ESENT	301	Logging/Recovery
Information	9/7/2011 5:53:48 AM	ESENT	300	Logging/Recovery
Information	9/7/2011 5:53:48 AM	ESENT	102	General
Information	9/7/2011 5:53:41 AM	Security-SPP	902	None

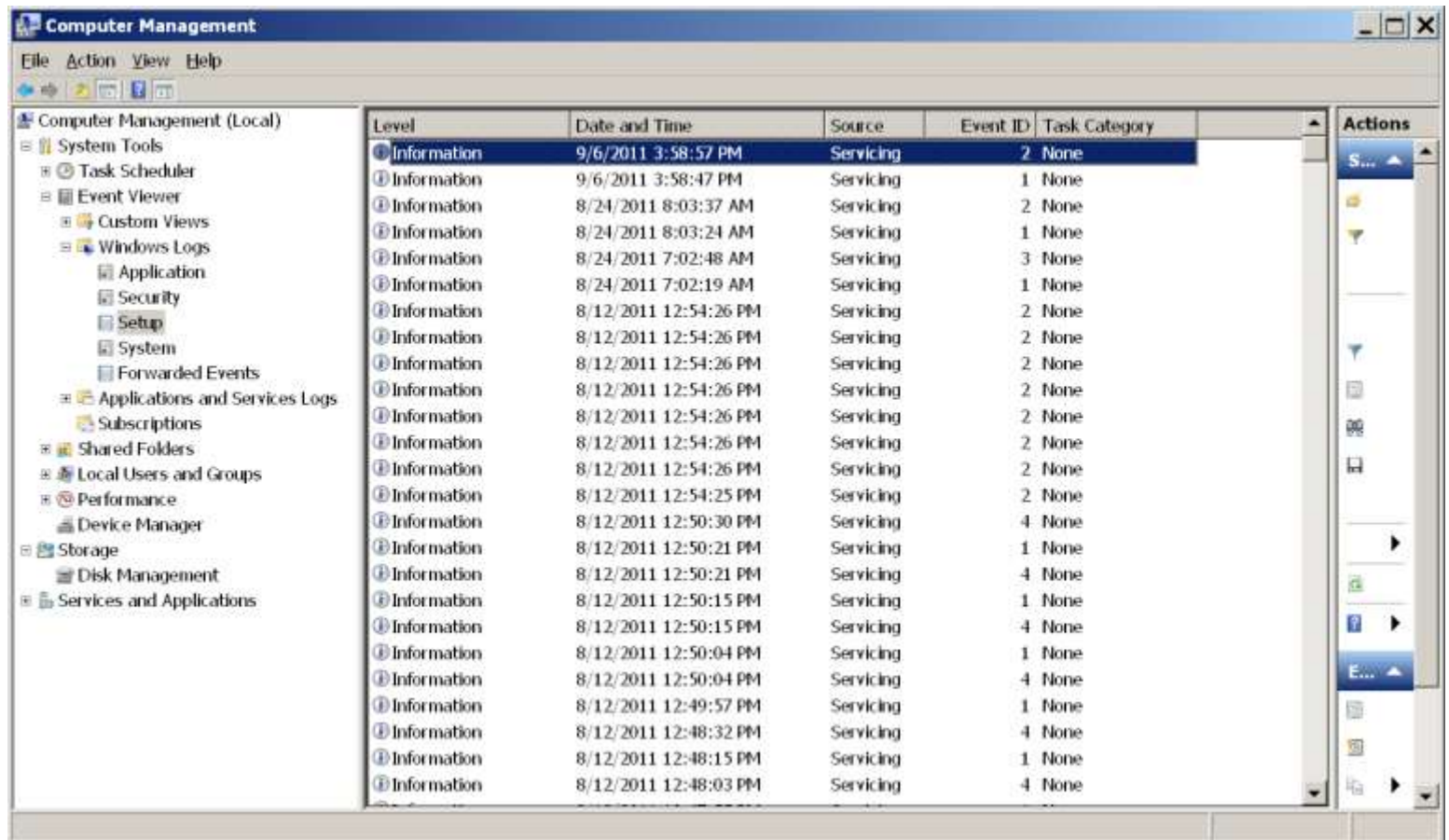
## Step 10:

Go to the left pane of the "Computer Management" window and click on the "Security" log to see if shows any errors or information notices that are pertinent to the date and time when the "System" log showed disk errors.



### Step 11:

Go to the left pane of the "Computer Management" window and click on the "Setup" log to see if shows any errors or information notices that are pertinent to the date and time when the "System" log showed disk errors.



### Step 12:

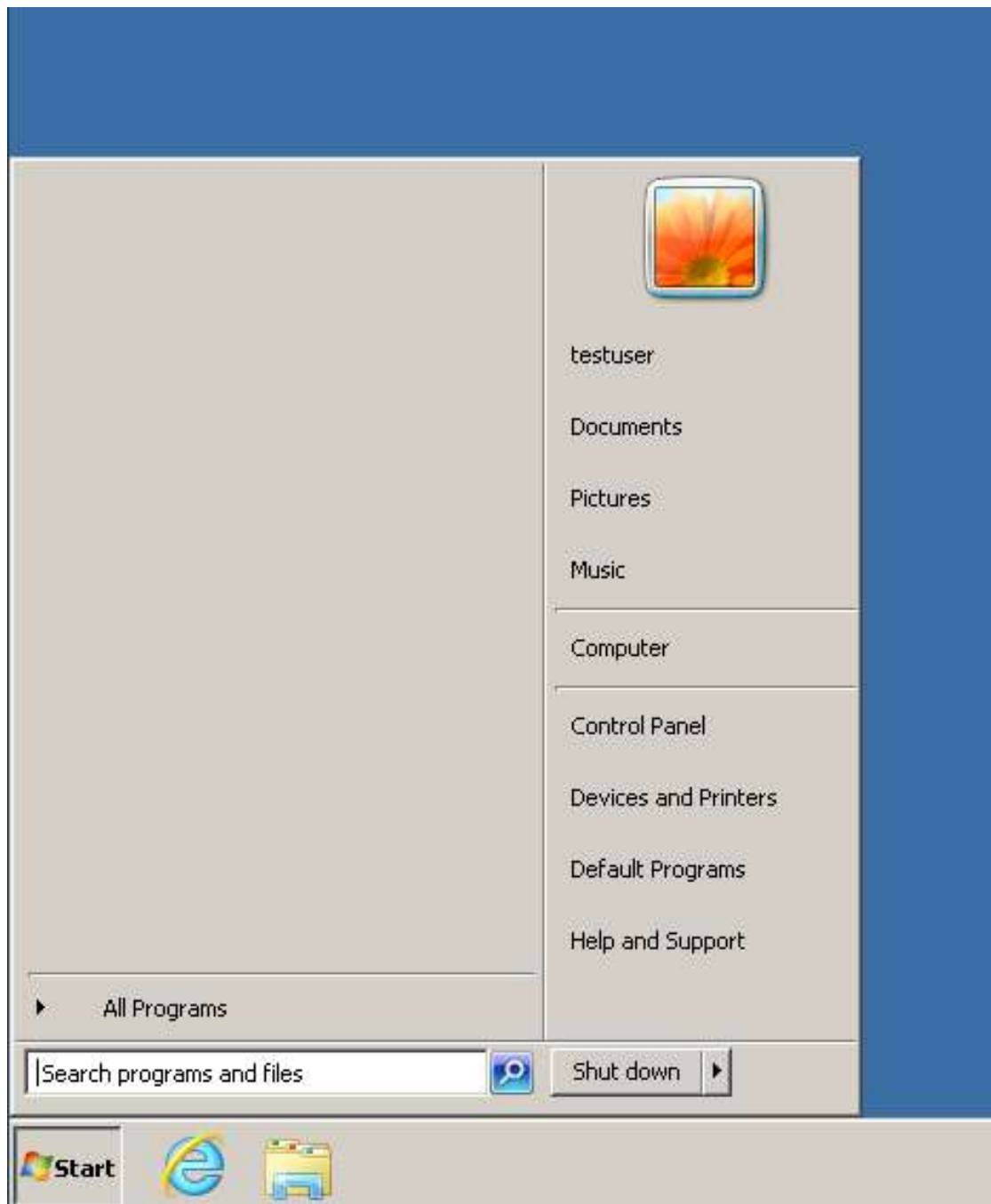
Close the "Computer Management" window by clicking on the "X" button in the upper right-hand corner.

Step 13:  
Click on the Windows "Start" button:

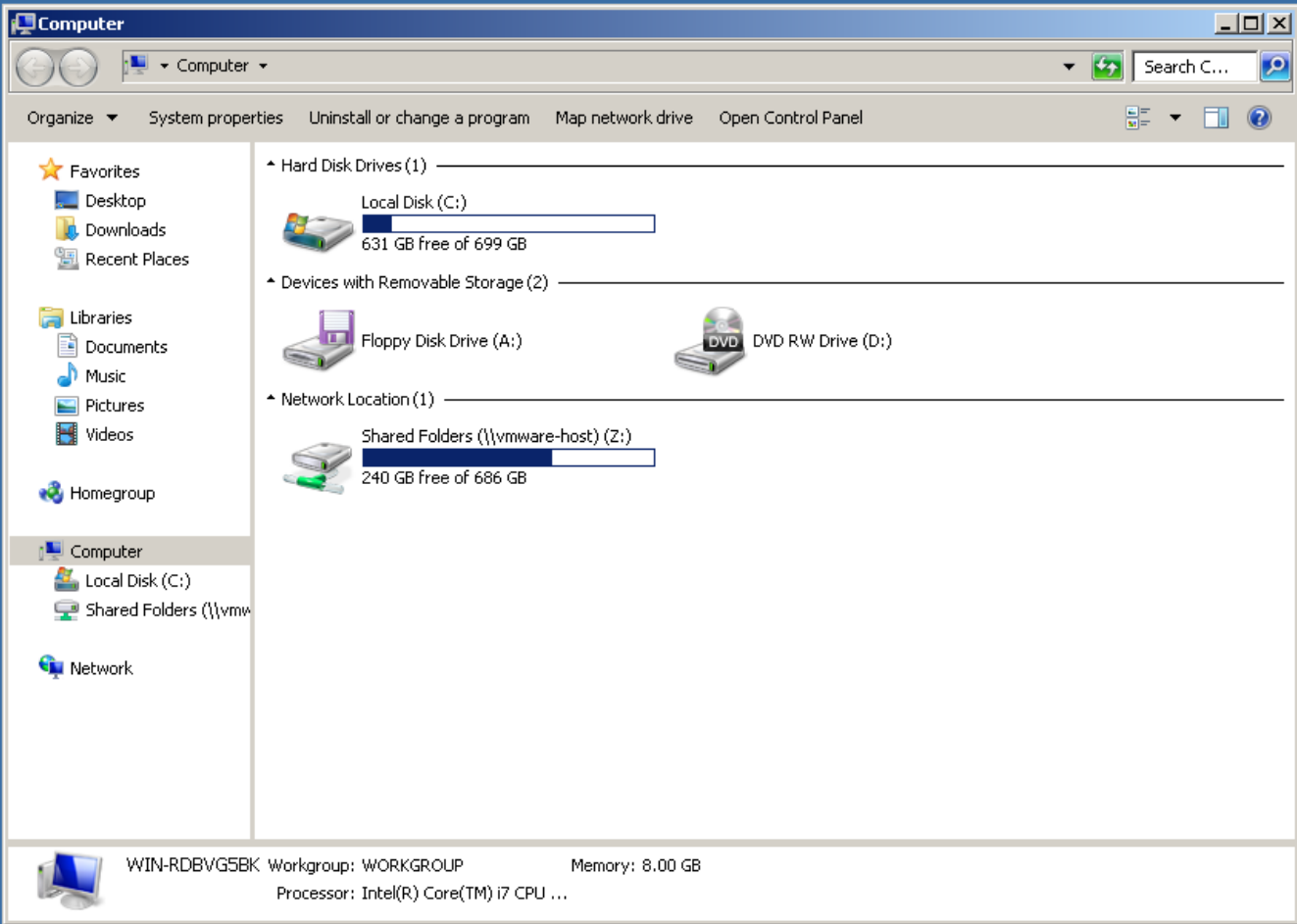


Step 14:

Click on "Computer" or "My Computer", or "Windows Explorer" in the "Start menu":

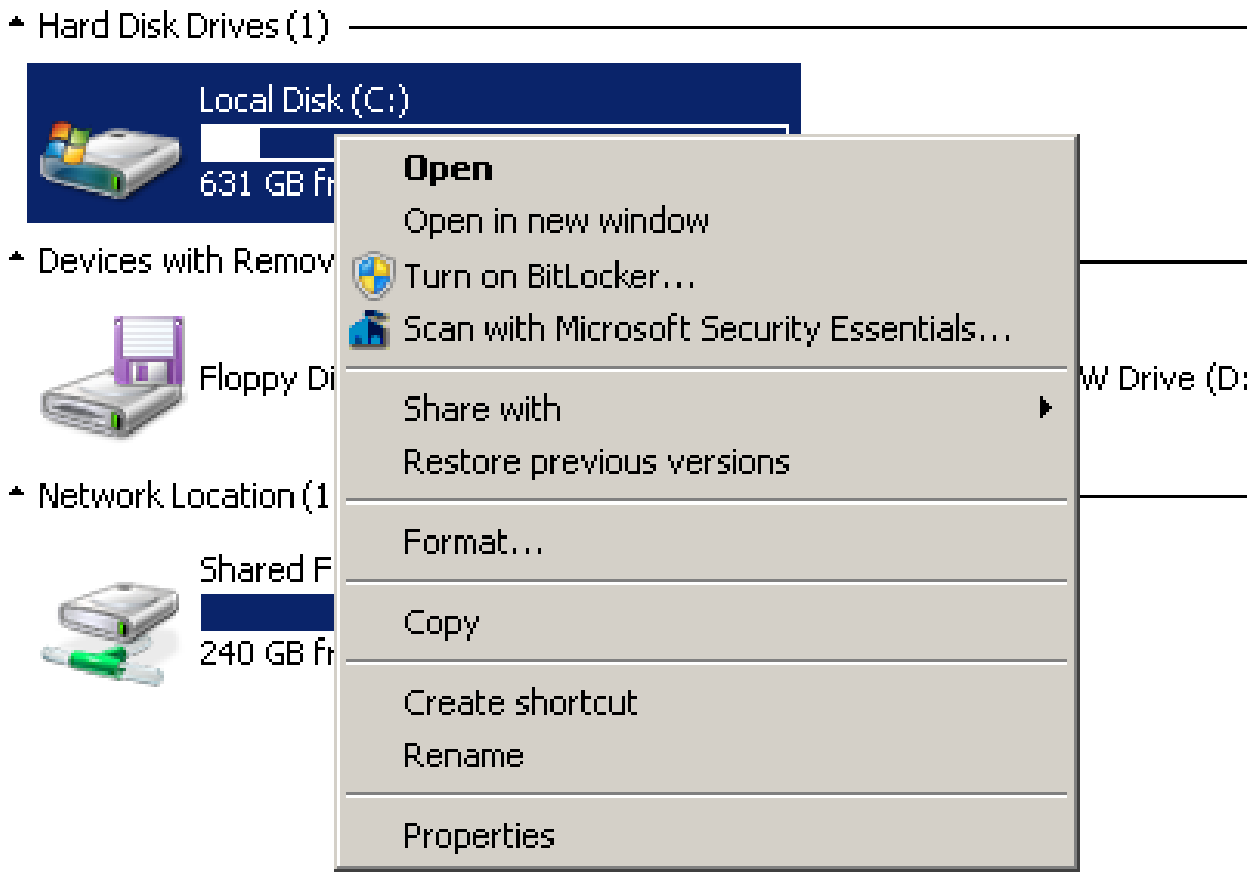


Step 15:  
A "Windows Explorer" window will be displayed:



Step 16:  
Use the right mouse button to click on the C: drive.

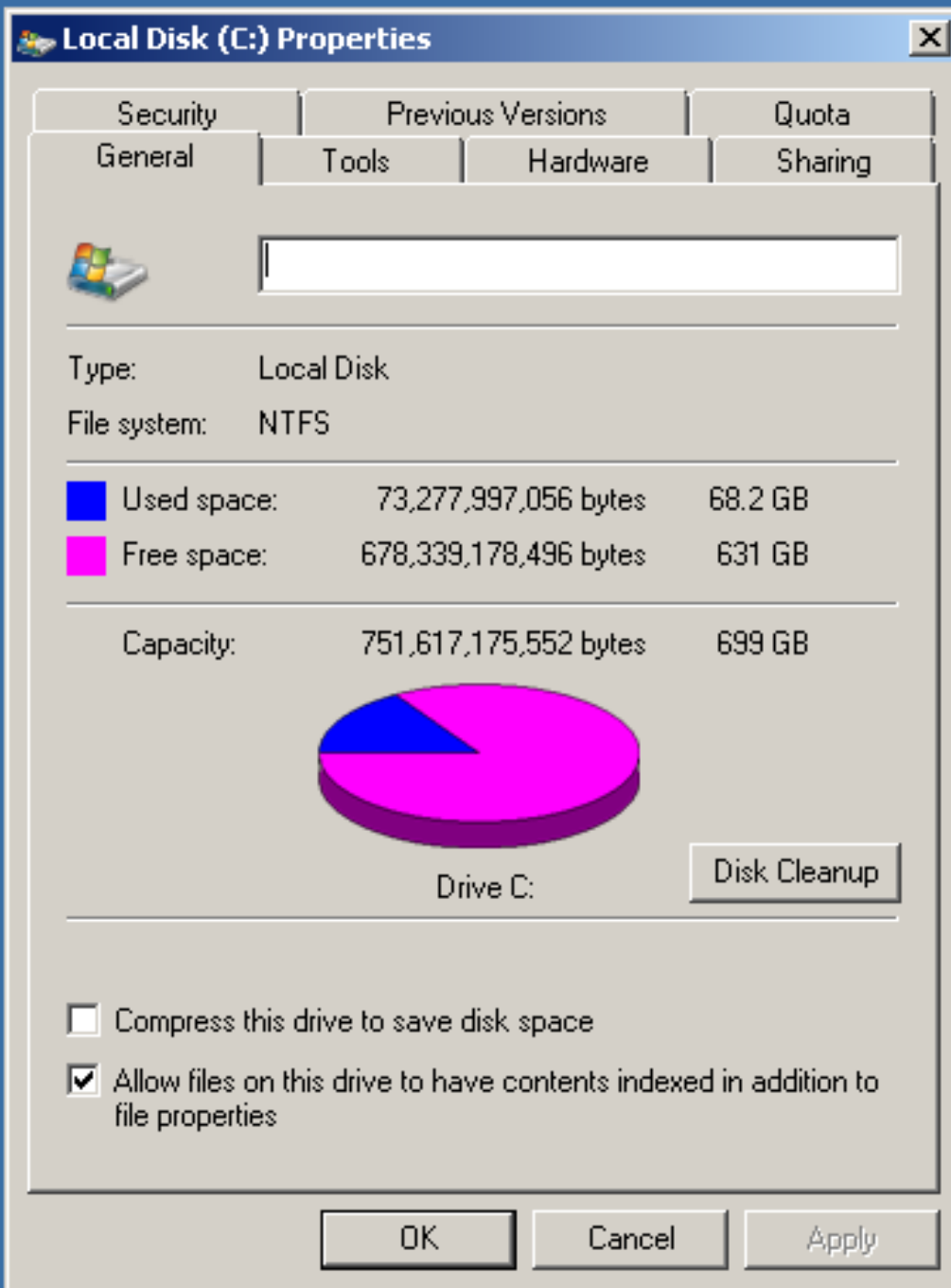
Step 17:  
A pop-up utility menu will be displayed:





Step 18:  
Click on "Properties" in the pop-up utility menu:

Step 19:  
A "Properties" box will be displayed:





Step 20:  
Click on the "Tools" tab:


The screenshot shows the 'Tools' tab of the 'HP-ST3750528AS (C:) Properties' dialog box. The 'Tools' tab is selected, and the 'Error-checking', 'Defragmentation', and 'Backup' sections are visible. Each section contains a description of the tool and a button to launch it.

**HP-ST3750528AS (C:) Properties**

Security | Previous Versions | Quota  
General | **Tools** | Hardware | Sharing

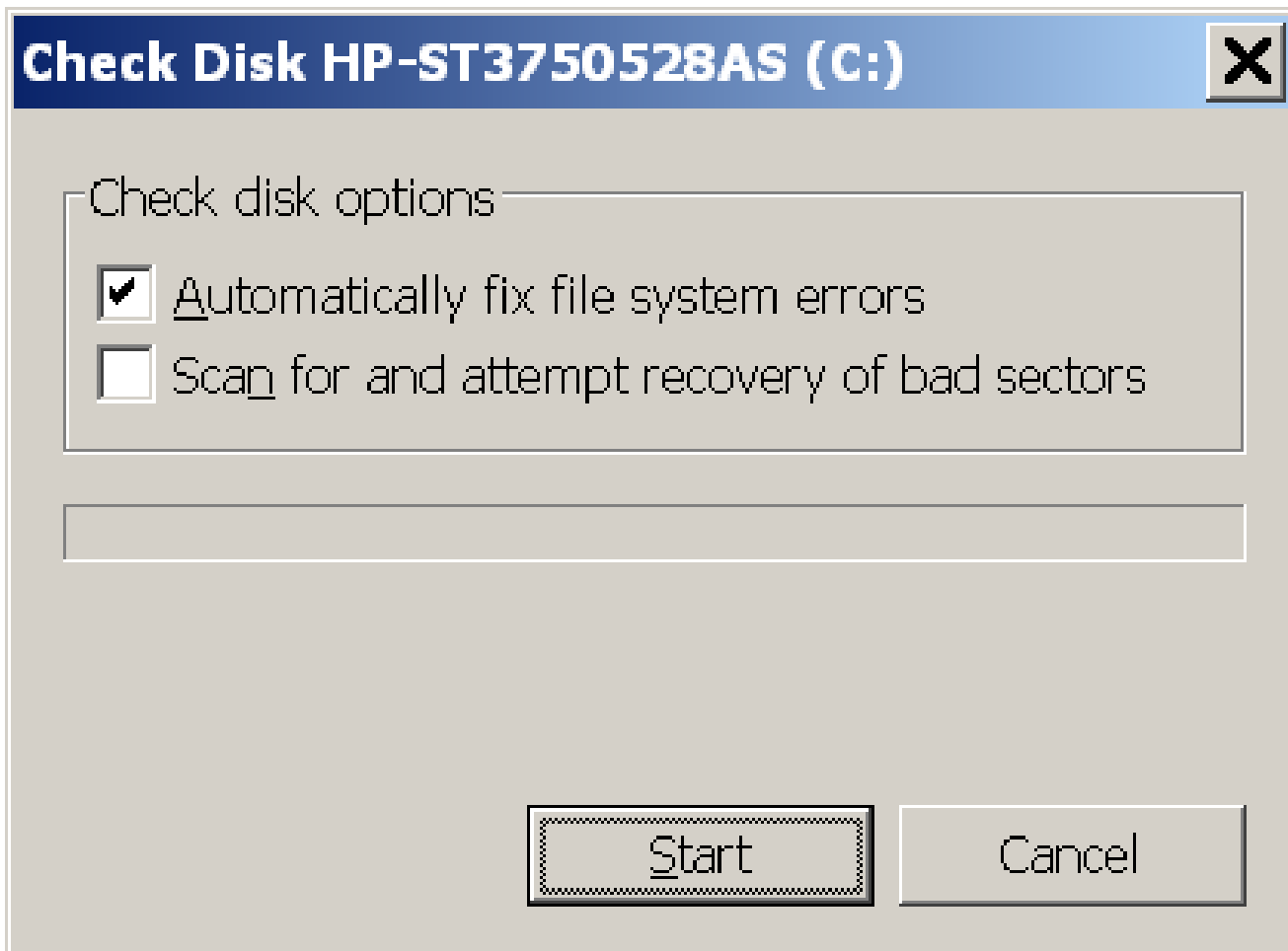
**Error-checking**  
This option will check the drive for errors.  


**Defragmentation**  
This option will defragment files on the drive.  


**Backup**  
This option will back up files on the drive.  


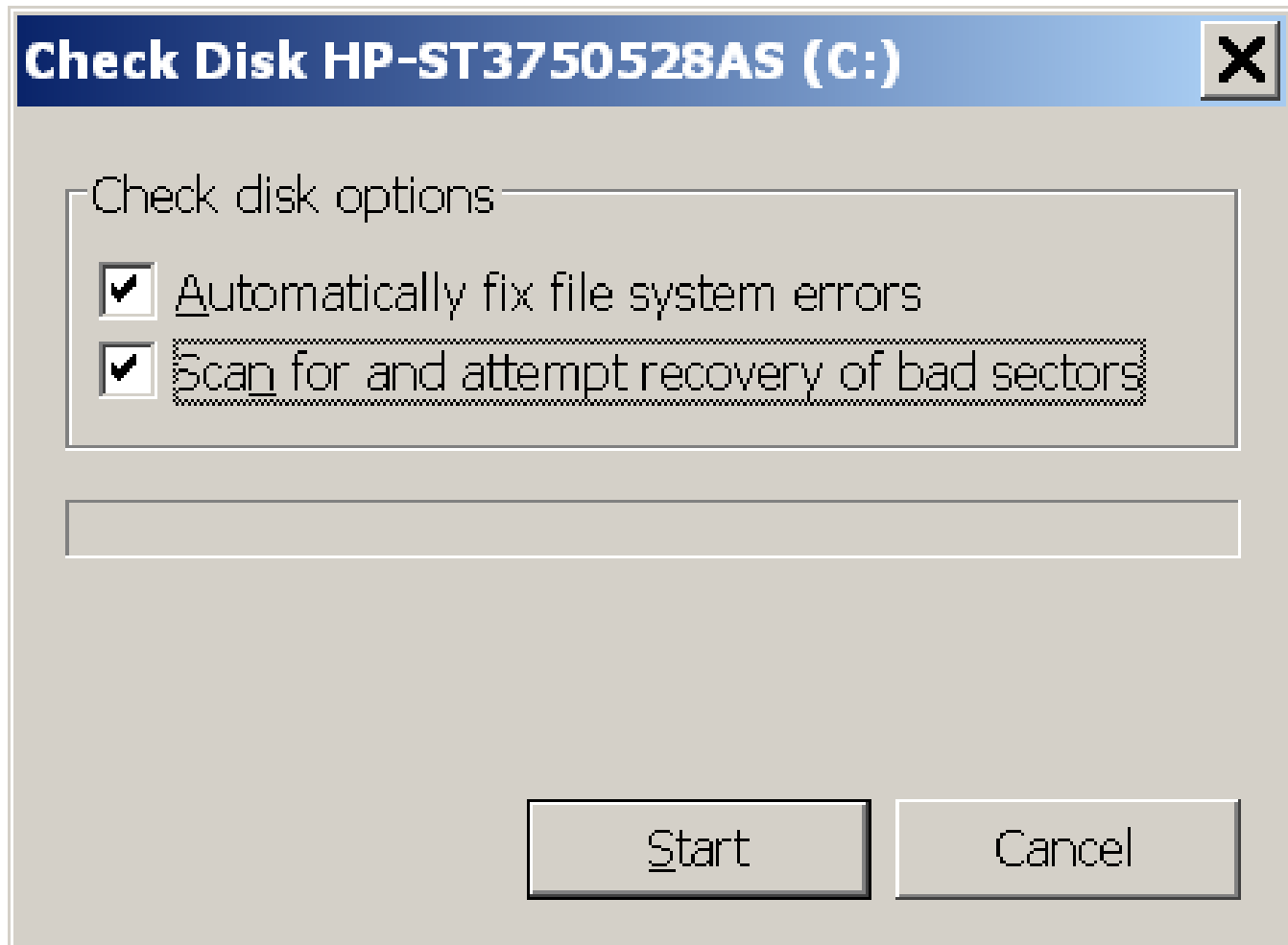
Step 21:  
Click on the "Check now.." button.

Step 22:  
A "Check Disk" box will be displayed:



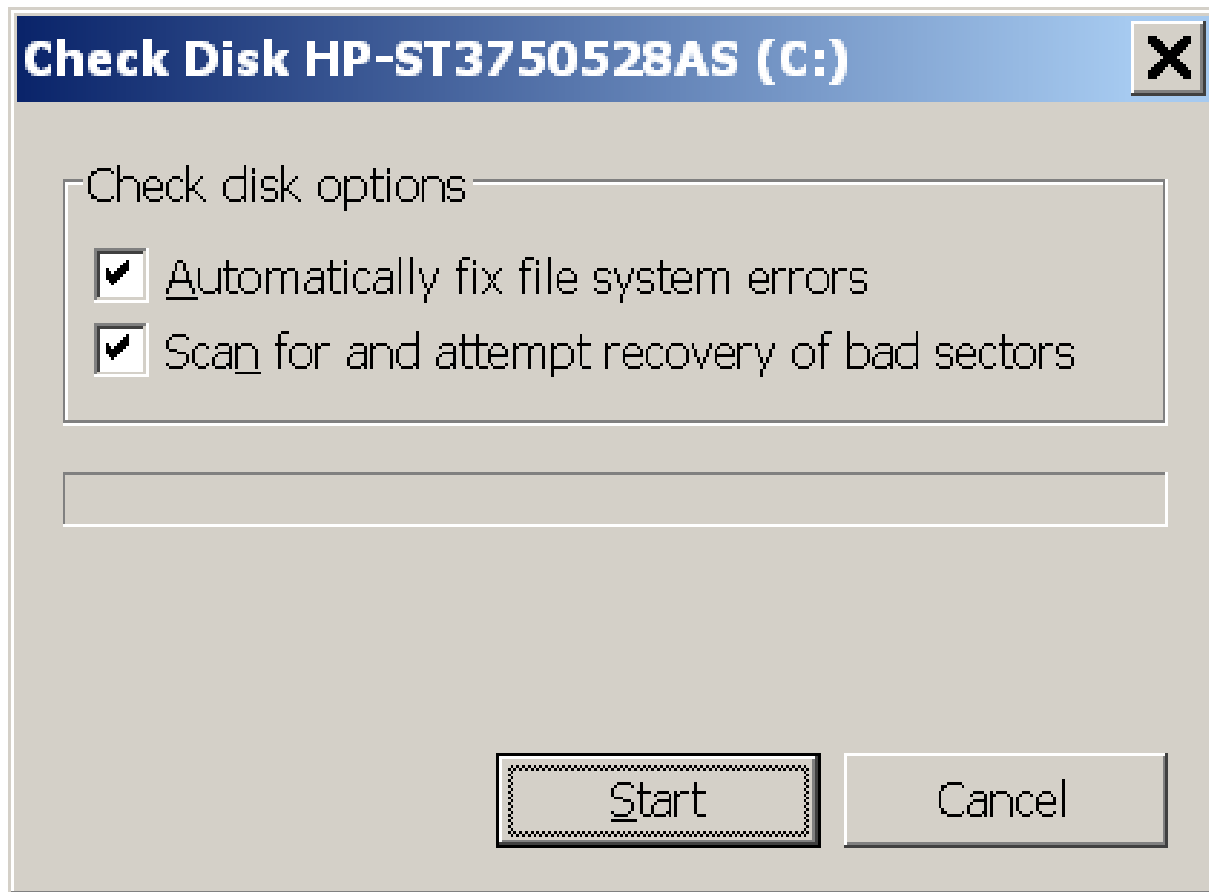
Step 23:

Place a checkmark in the box to the left of "Scan for and attempt recovery of bad sectors":



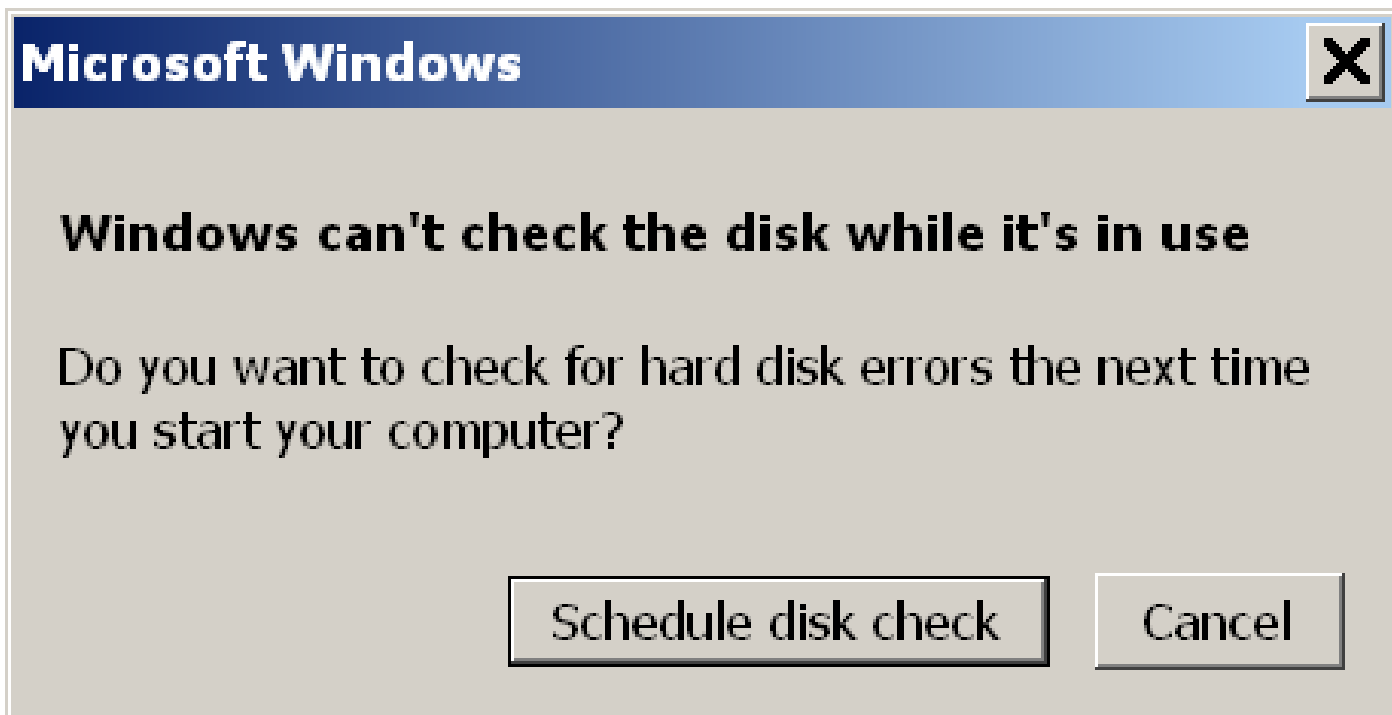
Step 24:

Click on the "Start" button:



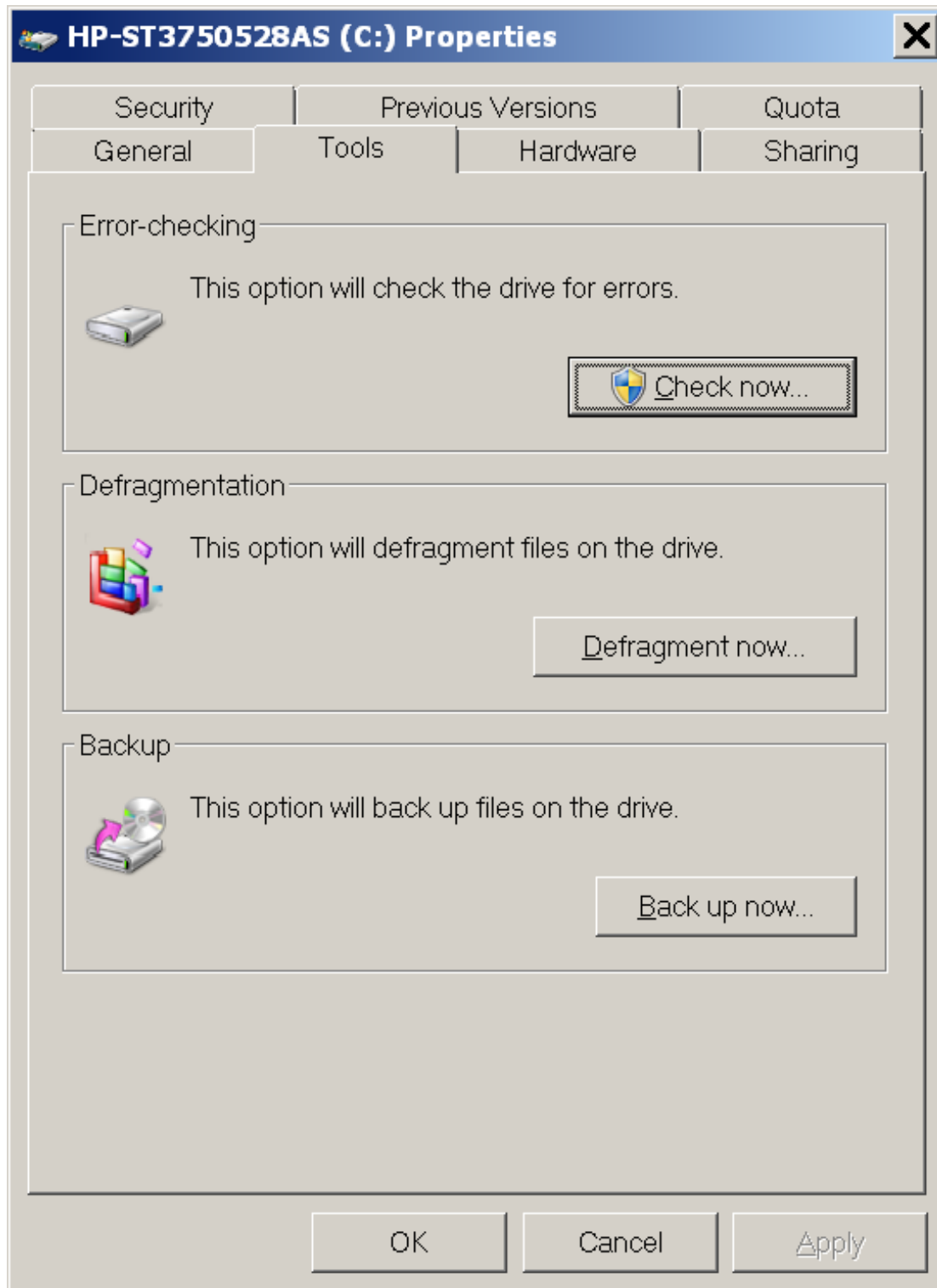
Step 25:

Click on the "Schedule disk check" button:



Step 26:

Close the "Properties" box by clicking on the "X" button in its upper right-hand corner:



Step 27:

Shutdown and restart the computer.

Step 28:

After the "Windows.." splash screen is displayed, a disk error check will start.

Note that in "Stage 4 of 5" it says that "Windows replaced bad clusters in file 15841 of name \pagefile.sys."

```
240384 file records processed.
File verification completed.
1236 large file records processed.
0 bad file records processed.
2 EA records processed.
75 reparse records processed.
CHKDSK is verifying indexes (stage 2 of 5)...
307738 index entries processed.
Index verification completed.
0 unindexed files scanned.
0 unindexed files recovered.
CHKDSK is verifying security descriptors (stage 3 of 5)...
240384 file SDs/SIDs processed.
Security descriptor verification completed.
33678 data files processed.
CHKDSK is verifying Usn Journal...
33887232 USN bytes processed.

Usn Journal verification completed.
CHKDSK is verifying file data (stage 4 of 5)...
windows replaced bad clusters in file 15841
of name \pagefile.sys.
13 percent complete. (42070 of 240368 files processed)
```

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```
CHKDSK is verifying free space (stage 5 of 5)...  
29768490 free clusters processed.
```

```
Free space verification is complete.  
Adding 1 bad clusters to the Bad Clusters File.  
Correcting errors in the Volume Bitmap.  
windows has made corrections to the file system.
```

```
719746044 KB total disk space.  
600190672 KB in 176211 files.  
116268 KB in 33679 indexes.  
4 KB in bad sectors.  
365140 KB in use by the system.  
65536 KB occupied by the log file.  
119073960 KB available on disk.
```

```
4096 bytes in each allocation unit.  
179936511 total allocation units on disk.  
29768490 allocation units available on disk.
```

```
windows has finished checking your disk.  
Please wait while your computer restarts.
```

Step 29:

After the "error check" completes, your "Windows Desktop" will load.