

Microsoft VSS Troubleshooting

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Microsoft's Volume Shadow Copy is probably amongst the most complex functions of the Windows operating system; hence, if it breaks it's a time consuming process to repair.

Symptoms of a Volume Shadow Copy Malfunction

1. *Very long (or seemingly indefinite) VSS snapshot generation time with intensive hard drive activity.*
2. *VSS errors reported in the Event Viewer (click start and search Event Viewer in search box to open)*
3. *VSS errors reported by Microsoft's Volume Shadow Copy tool vssadmin*
4. *VSS fails to create snapshots.*

VSS Repair Strategy #1

Reboot. For some reason, servers that haven't been rebooted in a while cause VSS to malfunction. As all Microsoft veterans know, you need to reboot regularly as a preventive and cleanup measure for your system.

VSS Repair Strategy #2

You can try to re-register all VSS and COM components by following

For Windows XP and Win2003 ONLY:

Go to Start -> Run and type CMD to go to the command prompt.
Type CD %WINDIR%\System32

Now run each of these commands in order:

```
Net stop vss
Net stop swprv
regsvr32 ole32.dll
regsvr32 vss_ps.dll
Vssvc /Register
regsvr32 /i swprv.dll
regsvr32 /i eventcls.dll
regsvr32 es.dll
regsvr32 stdprov.dll
regsvr32 vssui.dll
regsvr32 msxml.dll
regsvr32 msxml3.dll
regsvr32 msxml4.dll
```

Once complete, close the command prompt and reboot your computer.

VSS Repair For Windows 7, Windows 8, Server 2008/R2, and Server 2012

Go to Start -> Run and type CMD to go to the command prompt.
Type CD %WINDIR%\System32

Run these commands in order:

```
net stop "System Event Notification Service"  
net stop "Background Intelligent Transfer Service"  
net stop "COM+ Event System"  
net stop "Microsoft Software Shadow Copy Provider"  
net stop "Volume Shadow Copy"  
cd /d %windir%\system32  
net stop vss  
net stop swprv  
regsvr32 /s ATL.DLL  
regsvr32 /s comsvcs.DLL  
regsvr32 /s creui.DLL  
regsvr32 /s CRYPTNET.DLL  
regsvr32 /s CRYPTUI.DLL  
regsvr32 /s dhcpcqec.DLL  
regsvr32 /s dssenh.DLL  
regsvr32 /s eapqec.DLL  
regsvr32 /s esscli.DLL  
regsvr32 /s FastProx.DLL  
regsvr32 /s FirewallAPI.DLL  
regsvr32 /s kmsvc.DLL  
regsvr32 /s lsmproxy.DLL  
regsvr32 /s MSCTF.DLL  
regsvr32 /s msi.DLL  
regsvr32 /s msxml3.DLL  
regsvr32 /s ncprov.DLL  
regsvr32 /s ole32.DLL  
regsvr32 /s OLEACC.DLL  
regsvr32 /s OLEAUT32.DLL  
regsvr32 /s PROPSYS.DLL  
regsvr32 /s QAgent.DLL  
regsvr32 /s qagentrt.DLL  
regsvr32 /s QUtil.DLL  
regsvr32 /s raschap.DLL  
regsvr32 /s RASQEC.DLL  
regsvr32 /s rastls.DLL  
regsvr32 /s repdrvfs.DLL  
regsvr32 /s RPCRT4.DLL  
regsvr32 /s rsaenh.DLL  
regsvr32 /s SHELL32.DLL  
regsvr32 /s shsvcs.DLL  
regsvr32 /s /i swprv.DLL  
regsvr32 /s tschannel.DLL  
regsvr32 /s USERENV.DLL  
regsvr32 /s vss_ps.DLL  
regsvr32 /s wbemcons.DLL  
regsvr32 /s wbemcore.DLL  
regsvr32 /s wbemess.DLL  
regsvr32 /s wbemsvc.DLL  
regsvr32 /s WINHTTP.DLL  
regsvr32 /s WINTRUST.DLL  
regsvr32 /s wmiprvsd.DLL  
regsvr32 /s wmisvc.DLL  
regsvr32 /s wmiutils.DLL  
regsvr32 /s wuaueng.DLL
```

```
sfc /SCANFILE=%windir%\system32\catsrv.DLL
sfc /SCANFILE=%windir%\system32\catsrvut.DLL
sfc /SCANFILE=%windir%\system32\CLBCatQ.DLL
net start "COM+ Event System"
```

Close the command prompt and reboot your system

VSS Repair Strategy #3

Uninstall all backup software on your computer, including Windows Backup if it's installed. You don't need to uninstall Steelgate because Steelgate doesn't contain or install any VSS writers; however, we have seen VSS writers of other backup software manufacturers cause system instability and errors.

After all other backup tools have been uninstalled, open the Registry Editor (regedit) as administrator and check the following branch:

```
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\services\VSS\Providers
```

Underneath that key you should only find Microsoft Software Shadow Copy Provider 1.0 and no other VSS writer. If you do find another, it may be a residue registry entry of a previous backup software installation. You can save the entry by exporting the entire registry to a file (right click and select Export) and then it's safe to delete the entire branch entry underneath

```
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\services\VSS\Provider.
```

Then reboot and try again running `vssadmin list writers` to confirm the problem has been resolved.

VSS Repair Strategy #4

On some systems, the command `vssadmin delete shadows` isn't available. In Windows XP that's okay because VSS snapshots can't be persistent on XP (a reboot will get rid of them); however, on Vista you need to delete old shadows using:

```
vssadmin Resize ShadowStorage /For=C: /On=C: /MaxSize=300MB
```

300MB is usually the smallest amount you can specify and will effectively delete any existing VSS snapshots on your system.

If you don't get any VSS writer errors when using `vssadmin list writers` but the system isn't able to create a new VSS snapshot (and you have deleted all existing snapshots), then you may have to actually increase the max shadow storage size on your system. Use the previous command with a greater number, such as 10GB:

```
vssadmin Resize ShadowStorage /For=C: /On=C: /MaxSize=10GB
```

Note that it is also possible to allocate shadow copy storage space on a different drive, as long as it's local:

```
vssadmin Resize ShadowStorage /For=C: /On=X: /MaxSize=200GB
```

VSS Repair Strategy #5

Open `vssadmin` from the command line (run `cmd` as administrator).

Enter `vssadmin delete shadows /all` to clean up any dead VSS snapshots. Some defect systems accumulate hundreds of VSS snapshots that persist in the system and cause Windows to become unresponsive.

Enter `vssadmin list writers` and check for errors. If you receive any errors for one VSS writer, you may need to fix that particular VSS writer. It is common to receive writer errors caused by Microsoft's Virtual Server 2005 VSS writer.

If you see a VSS writer error, try the following:

Restart the services:

- *COM System Application Service*
- *Distributed Transaction Coordinator Service*
- *Volume Shadow Copy Service*

and also restart the affected VSS writer service, for example Virtual Server 2005 VSS writer or Hyper-V VSS writer.

Check the Event Viewer for any additional error information logged by that VSS writer.

Run again `vssadmin list writers` to check if the above resolved the problem. If it didn't follow with the next strategy below:

VSS Repair Strategy #6

If the PC or server you are using is a virtual machine host, you need to install the latest VMware Tools (for VMware), Virtual Machine Additions (Virtual Server), on each virtual machine.

VSS Repair Strategy #7

Your computer may have a corrupt COM subscription information. Open the registry editor (`regedit`) and navigate to:

```
HKLM\Software\Microsoft\EventSystem\{26c409cc-ae86-11d1-b616-00805fc79216}
```

Then delete the **Subscriptions** key and reboot the machine.

A subsequent call in the command prompt should show no more errors: `vssadmin list writers`

This VSS repair strategy appears to work well when the System Writer is reporting an error. The Event Viewer may be reporting this or a similar error:

```
Writer Class Id: {e8132975-6f93-4464-a53e-1050253ae220}  
Writer Name: System Writer  
Writer Instance ID: {34162f4c-59ff-468e-848d-cb4b3d8dd7dc}
```

VSS Repair Strategy #8

Install the latest Service Packs and Updates through Windows Update.

Check Microsoft's Support for hot fixes and other updates to repair VSS.