Troubleshooting Microsoft VSS errors

Introduction

Macrium Reflect uses a Microsoft service called Volume Shadow Copy Service (VSS) to create disk images and backup files when in use.

VSS is a copy-on-write driver that intercepts disk writes before they actually happen. The contents of the disk are written to a shadow copy buffer before the write takes place. The disk image, therefore, represents an exact point-in-time and is not affected by disk write activity during image creation.

When VSS fails you are unable to create a disk image or backup open files with Macrium Reflect. Macrium Reflect cannot cause VSS to fail. Any failure is caused by other software or system configuration problems and will affect every program that uses VSS. Failures must be located and fixed for disk images and file backups to complete successfully.

VSS requires at least one New Technology File System (NTFS) to be present and online to operate. Otherwise, the error: E_PROVIDER_VETO shows.

1. When VSS fails there is usually an indication in the image or backup log file which shows in the Macrium Reflect log:

2. Alternatively, the main VSS log can be seen as an option under the log view:
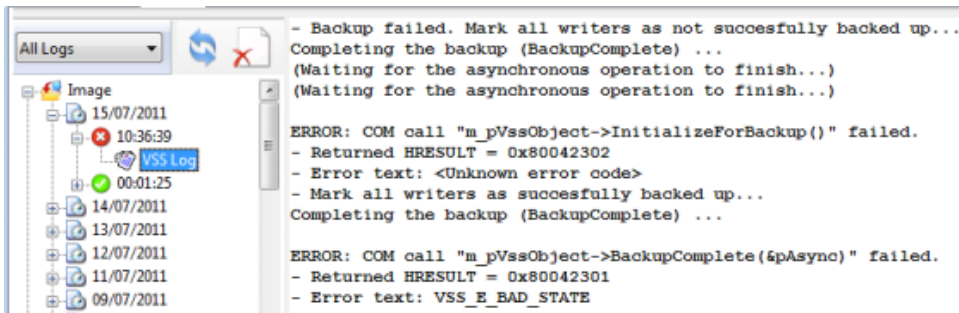
3. If required, and you are using the Macrium Reflect email component, you can send these logs via email. Right click the log entry.

4. select **Send backup logs via email**.

5. A common error is *Failed to Create Volume Snapshot* followed by a hex result code. The result code is an error code from VSS. Googling VSS + Result Code often comes up with a solution to the VSS problems

You may also see:

```
Backup aborted! - Unable to open file handle for '\\?\GLOBALROOT\Device\HarddiskVolumeShadowCopyxxx'
The process cannot access the file because it is being used by another process.
```

This may be associated with a 'VolSnap' error in your Windows logs.

VSS uses writer components to ensure that the file system is in a stable state when creating your disk image. For example, SQL database writers ensure that all transactions to databases are complete before allowing the shadow copy service to continue. Windows includes a VSS administration program that can list the status of all VSS Writers you have on your system.

Open a command prompt and type 'vssadmin list writers'. In Vista/7/8 and Servers 2008 and later, make sure you start the command prompt with elevated privileges. This will list all your VSS writers with their current state and last error. (Link to instructions on creating elevated command prompt at bottom of tutorial).

Typical output:

```
Microsoft Windows [Version 6.0.6001]
Copyright (c) 2006 Microsoft Corporation.  All rights reserved.

C:\Windows\system32>vssadmin list writers
vssadmin 1.1 - Volume Shadow Copy Service administrative command-line tool
(C) Copyright 2001-2005 Microsoft Corp.

Writer name: 'System Writer'
Writer Id: {e8132975-6f93-4464-a53e-1050253ae220}
Writer Instance Id: {4e66d2f2-136c-434b-9a67-234a3b5d38e6}
State: [1] Stable
Last error: Non-retryable error

Writer name: 'ASR Writer'
Writer Id: {be000cbe-11fe-4426-9c58-531aa6355fc4}
Writer Instance Id: {9c9a72d9-70f4-414d-88e2-9894fd7f13ca}
State: [1] Stable
Last error: No error

Writer name: 'IIS Metabase Writer'
Writer Id: {59b1f0cf-90ef-465f-9609-6ca8b2938366}
Writer Instance Id: {ac62d67f-bc4f-4ae0-90d1-9fc058a8880f}
State: [5] Waiting for completion
Last error: No error

Writer name: 'Shadow Copy Optimization Writer'
Writer Id: {4dc3bdd4-ab48-4d07-adb0-3bee2926fd7f}
Writer Instance Id: {0b6a11ac-b009-44ec-a9f2-f3b94de74c7d}
State: [1] Stable
Last error: No error

Writer name: 'MSSearch Service Writer'
Writer Id: {cd3f2362-8bef-46c7-9181-d62844cdc0b2}
Writer Instance Id: {f9626a21-0848-4fca-a7a0-287ce50ebec7}
State: [5] Waiting for completion
Last error: No error

Writer name: 'IIS Config Writer'
Writer Id: {2a40fd15-dfca-4aa8-a654-1f8c654603f6}
Writer Instance Id: {04a208b8-943b-425d-a694-6cc179ab6d46}
State: [5] Waiting for completion
Last error: No error

Writer name: 'Registry Writer'
Writer Id: {afbab4a2-367d-4d15-a586-71dbb18f8485}
Writer Instance Id: {6a4ffe24-b297-4602-b04b-0bf63caa5cd5}
State: [1] Stable
Last error: No error

Writer name: 'COM+ REGDB Writer'
Writer Id: {542da469-d3e1-473c-9f4f-7847f01fc64f}
Writer Instance Id: {894ebce3-7aec-4e9b-8b38-36d3eb624145}
State: [1] Stable
Last error: No error

Writer name: 'BITS Writer'
Writer Id: {4969d978-be47-48b0-b100-f328f07ac1e0}
Writer Instance Id: {dbe2fb09-898f-4b60-8539-3ca1e6cc4b67}
State: [1] Stable
Last error: No error

Writer name: 'WMI Writer'
Writer Id: {a6ad56c2-b509-4e6c-bb19-49d8f43532f0}
Writer Instance Id: {06504311-56ee-4f9e-82e6-1dc08ff7eb2c}
State: [5] Waiting for completion
Last error: No error
```

Writers with an error state or where the last error isn't 'No Error' are probably causing a problem.

Look for messages in your Windows logs.

When VSS fails you will always get a corresponding message in your Windows event log.

1. Right click on 'My computer'
2. Select 'Manage'
3. Expand the 'Event Viewer' node
4. Look in the 'Application' message node for error messages relating to 'VSS', 'Shadow Copy' or 'VolSnap'.
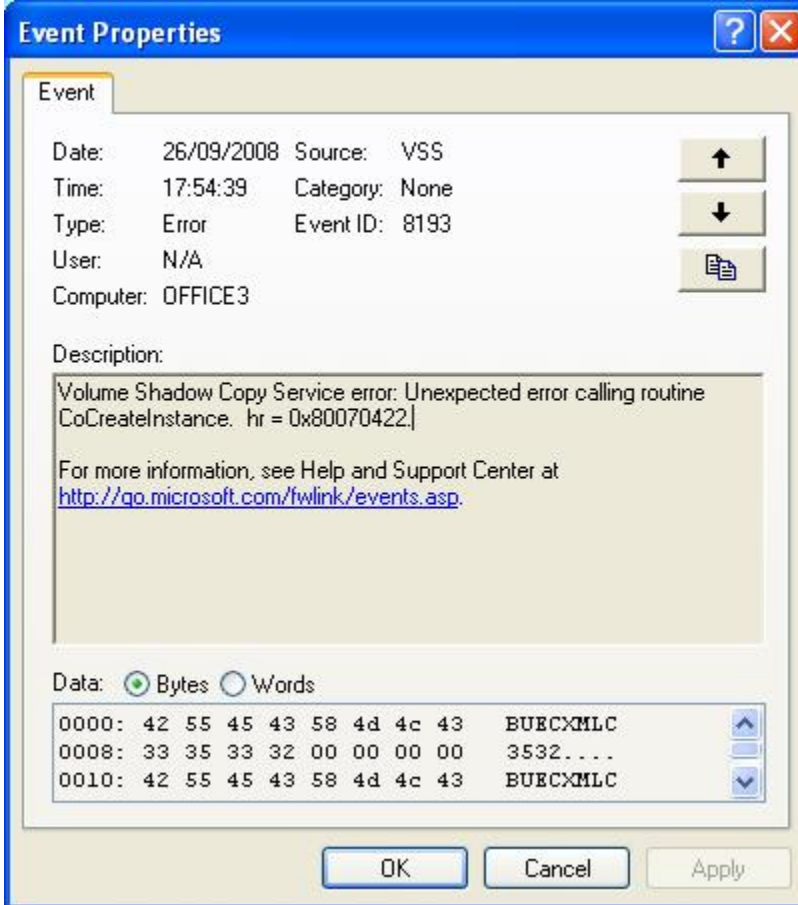

5. If you find any messages then these with give you an 'Event ID' and sometimes a 'Result Code' or 'hr'. These two pieces of information can generally pin point the cause of your VSS failure. Try Googling the Event ID(s) and Result Code(s) for more information.

Make sure that the VSS service isn't disabled

Changing the startup type of the VSS service and rebooting can often resolve issues.

1. Right click on 'My Computer'.
2. Select 'Manage'.
3. Select the 'Services' tree node.
4. Right click on 'Volume Shadow Copy'
5. Select Properties

6. Change the startup type to 'Automatic'
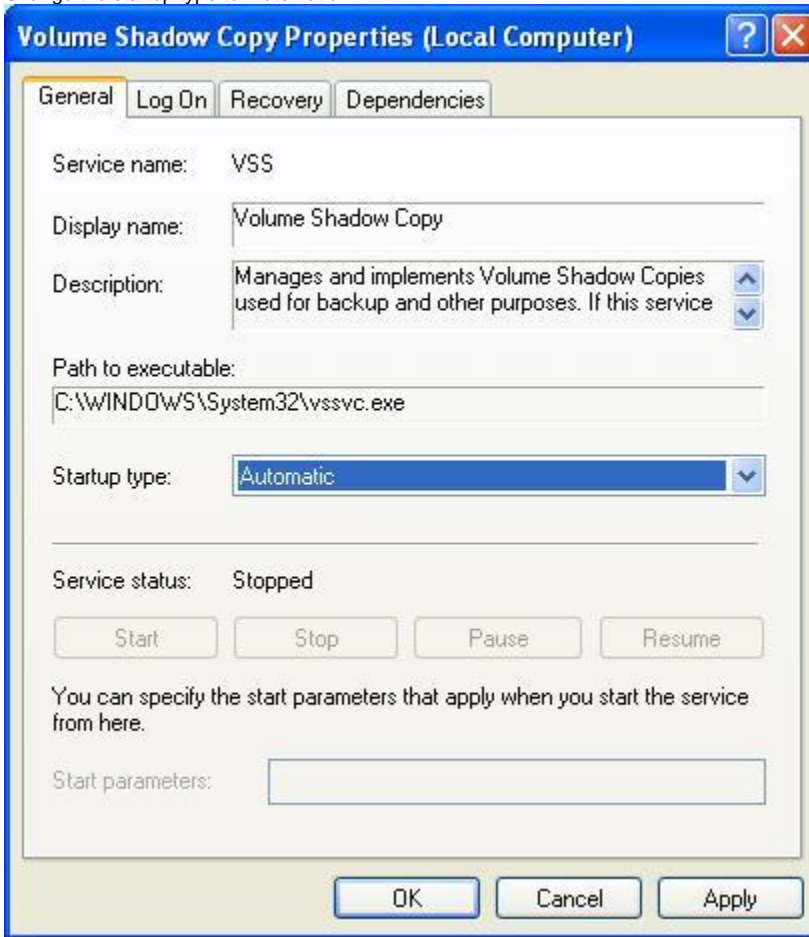
7. Reboot

Re-register the VSS components

Sometimes re-registering VSS core components can fix errors. Copy the following commands to Notepad and save the file with a '.bat' extension. Run the .bat file by opening a command prompt and entering the .bat file name.

```
cd /d %windir%\system32
net stop vss
net stop swprv
regsvr32 /s ole32.dll
regsvr32 /s oleaut32.dll
regsvr32 /s vss_ps.dll
vssvc /register
regsvr32 /s /i swprv.dll
regsvr32 /s /i eventcls.dll
regsvr32 /s es.dll
regsvr32 /s stdprov.dll
regsvr32 /s vssui.dll
regsvr32 /s msxml.dll
regsvr32 /s msxml3.dll
regsvr32 /s msxml4.dll
vssvc /register
net start swprv
net start vss
```

We also provide a program which will recreate the correct registry setting and re-register all VSS components. Please download one of the below programs to fix your problem:

VSSfix 32bit - download
VSSfix 64bit - download

Resources

http://en.wikipedia.org/wiki/Shadow_Copy
http://technet.microsoft.com/en-us/library/cc785914.aspx

VSS error articles:

- Identifying, diagnosing and reporting VSS errors
- Selected writer 'Microsoft Hyper-V VSS Writer' is in failed state
- 'SPSearch4 VSS Writer' is in failed state! (Result Code: 0x8000ffff)
- VSS Error: 0x8004230F
- VSS Error: 0x80042318 - Failed to Create Volume Snapshot
- VSS Error: 0x80042317: Failed to Create Volume Snapshot
- VSS Error: 0x8004231f - Failed to Create Volume Snapshot
- VSS Error - Backup aborted! - Failed To Create Volume Snapshot. Result Code: 0x8004230c
- VSS Error - ERROR: Selected writer 'Dhcp Jet Writer' is in failed state!
- VSS Error - ERROR: Selected writer 'NTDS' is in failed state!
- VSS Result Code 0x8004230f with Event ID 12293 on Windows Server 2008 R2 without BitLocker
- VSS fails due to disks with a non-standard sector size
- VSS Fails due to modification by 3rd party software
- VSS Error:0x8000ffff - Backup aborted! - Failed To Create Volume Snapshot.
- VSS Error: 0x800423f3 - Selected writer 'WMI Writer' is in failed state!
- VSS Error: 0x80042306 - VSS_E_PROVIDER_VETO - Volume Shadow Copy Error
- VSS Error - Selected writer 'Registry Writer' is in failed state!
- VSS error: VSS_E_SNAPSHOT_SET_IN_PROGRESS
- VSS Error - 8193 Unexpected error calling routine ConvertStringSidToSid

Footnote

It is very probable that others have had a similar problem to you, so use Google as much as you can to find potential solutions. If all else fails you should contact Microsoft support for a resolution.