

Error: One or more of the VSS writers required for backup have failed.

Symptoms

Backups fail with one of the following errors:

- One or more of the VSS Writers required for backup have failed. Please restart <service>.
- One or more of the VSS Writers required for System State have failed. Please reboot the system.
- One or more of the VSS Writers required for backup are currently in use by another process.



If this error appears during Differential or Incremental backups of databases, please review the following article:

[Info: How do databases handle backups from multiple different backup applications?](#)

The behavior described in that article accounts for an overwhelming majority of VSS Writer issues related to Microsoft SQL Server, Microsoft Exchange, and Microsoft SharePoint.

What's going on?

Zmanda Cloud Backup utilizes set of built-in Windows functions known as **Volume Shadowcopy Services**, or VSS, to create snapshots of data for backup.

Most backup types have a specific VSS Writer that is explicitly designed for backup and restore of that specific type of data. For example, there is a SQL Server Writer that is used for backup and restore of Microsoft SQL Server databases.

Some backup types have a single writer, while others have multiple writers. *Every* writer is controlled by a Windows Service.

The VSS Writers are used by many different applications. Nearly all Windows backup applications, ZCB included, interface with the VSS Writers, as will certain built in Windows features that are not necessarily backups. For example, the System Restore functionality in Windows uses VSS to create restore points so that users can roll back to a known good configuration.

If a writer has failed, all operations for all applications that rely on that writer will fail.

It is possible to check the state of all writers on the system using the `vssadmin list writers` command.

vssadmin list writers

The `vssadmin list writers` command will list all of the writers currently available on the machine as well as their current state. Run `vssadmin list writers` from an elevated (Run As Administrator) command prompt.

In most situations, each writer will be in one of these three states:

- A writer in the **Stable** state is ready and waiting to take a backup.
- Writers in the **Failed** or **Unstable** states have encountered a problem, and may need to be reset.
- Writers that are currently **Waiting for Completion** or **In-Progress** are in use by some process. Cancel any backup that is running, or wait for it to complete, before running a new backup.
 - If no backups are running, the writer should be reset like Failed or Unstable writers by restarting the controlling service.

Resolution

There are many possible reasons that a VSS Writer can fail. The writer must be brought back to the Stable state before backups can function.

In most cases, stabilizing a writer is as simple as restarting the service that controls the VSS Writer. In others, there is a well-known and understood issue that causes the VSS Writer to fail.

Additionally, most backup types have specific requirements that must be met. For example, Microsoft Exchange Server backups require that Circular Logging be disabled. If Circular Logging is not disabled, the VSS Writer will fail during Incremental and Differential backups.

All requirements are listed in the User Guide available at <http://help.zmanda.com>.

Verify that all requirements are met before moving on to the solutions below.

Solution #1: Restart the controlling service

Most failed VSS Writer issues can be fixed with a simple restart of the service that controls the writer. This usually brings the writer back to its stable, working state.

In many cases, the error shown in ZCB will tell you which service to restart. Otherwise, use `vssadmin list writers` to check which writers have failed. Compare the results with the list of writers and their controlling services at [Info: List of VSS Writers and Services](#).

Once you've discovered the controlling service, open the Windows Services panel, **Services.msc**. Locate the controlling service and restart it.



Some services cannot be restarted while the system is running. A reboot of the machine is required to reset the writers tied to services that cannot be restarted.

For example, the writers associated with **System State** backups usually cannot be restarted and thus require a reboot of the system.



Some VSS Writers are tied to services that directly impact the functionality of an application. For example, the Exchange VSS Writer is controlled by the Microsoft Exchange Information Store (MEIS) service. Exchange cannot send or receive email while the MEIS service is disabled. Therefore restarting MEIS will result in an interruption of email functionality.

In most cases, this interruption is brief.

Once the service has been restarted, run `vssadmin list writers` again to see if the writer is now **Stable**. If it is, attempt the backup again.

Should the backup still fail, or if the writer is still not **Stable**, please check our Knowledgebase for related articles and known VSS issues.

Solution #2: Check for known VSS issues

Certain specific VSS Writer failures are well understood. These failures are discussed in our Knowledgebase.

- [Info: How do databases handle backups from multiple different backup applications?](#)
- [System State Backups fail and Event ID 8194 is logged](#)
- [Troubleshooting SQL VSS Writer issues](#)
- [Error: Validation of Backupset failed. No VSS writer information about the data to be backed up is available. \[Sharepoint\]](#)
- [Error: Writer's status is not stable \[Oracle\]](#)

Solution #3: Verify that Windows and the application to be backed up are both fully up to date

Microsoft has released many updates, patches, and hotfixes for VSS-related issues. Although this applies to all versions of Windows, the updates are relevant to Windows Server 2003 most of all.

Some applications, such as Microsoft Exchange, may also have updates related to backup, restore and VSS.

Please ensure that the system is fully up to date.

Solution #4: Verify system health

VSS functionality can be compromised by failing hardware on the system. Problems with disk storage (such as full disks, failing disks, damaged RAID arrays, and the use of 4k drives on older systems) are particularly likely to cause VSS failures. However, hardware issues of any type can potentially impact the ability of the system to take snapshots using the VSS Writers.

If any problems are discovered, resolve them before attempting backups again.

Further troubleshooting

If none of the above information applies, the system and the VSS failures should be thoroughly investigated by the System Administrator for the system in question. The Windows Application Events and Windows System Events usually contain information about writer failures.

The VSS Writers are *Windows* functions. ZCB simply calls upon them at backup time. As such, the system administrator for the Windows system(s) involved should investigate further.