VSS errors — x360Recover

A map of x360Recover VSS errors: Causes, fixes and prevention | Last published September 15 2023

Error code	Potential cause(s)	How to fix	How to prevent
Agent disconnected	This issue can be caused by any number of network-related issues: The system locked up. The system lost internet connectivity. The agent service is not running. The agent and vault are not talking to each other.	Determine the source and nature of the connection issue Is the client's device powered down, or Is their internet disconnected?	Communicate to clients to keep their devices online so that backups can run
Backup integrity check on server has failed.	The snapshot was not mounted because a backup status check was in progress.	*This issue can be transient and may self-remediate in subsequent backup attempts.* **If the issue does not resolve:** Further diagnosis is needed to ascertain the cause of the problem. [Learn more about checking event logs and alerts, as well as opening a ticket with our support team and running our analysis tool.](#)	n/a

Backup operation sent while previous backup was still running.	The backup schedule is too frequent and the previous backup job was still running when the new one started.	Assign a backup policy to the protected system which has a schedule with less frequent backups.	When setting up protected systems in x360Recover, ensure that the assigned backup schedule is not too frequent for the available bandwidth.
Backup status check on appliance failed	This error indicates that a mount has failed and triggered a full backup. A few things can cause this: Invalid disk layout. Check disk failing. System file checker failing.	*This issue is transient and usually self-remediates in subsequent backup attempts.* **If the issue does not resolve:** Further diagnosis is needed to ascertain the cause of the problem. Learn more about checking event logs and alerts, as well as opening a ticket with our support team and running our analysis tool.	n/a
Could not open snapshot to continue backup.	This error indicates something filled up the protected system's Shadow Storage and Windows removed our data because another process wants to write to it. This usually occurs after a backup is paused and is resumed.	The backup will start over on its own from the beginning. Adjust the backup schedule to allow the backup to run for 24 hours per day in order to allow the backup to complete. It can also help to enable Quality of Service (QoS) on the system's router to allow it to prioritize the backup without interfering with other traffic.	n/a

Count of Volumes and snapshots do not match.	This occurs when x360Recover is not able to reconcile the same number of snapshots to volumes. E.g., there are three volumes and two snapshots. There should be a one for one. There are several potential causes for this issue	*This issue is often transient and usually self-remediates in subsequent backup attempts.*	Ensure adequate storage capacity is allotted for Shadow Copy Storage. Microsoft recommends at least 10%.
	This could happen on the initial volume creation but would self heal the next time the replication occurs.	***If a shadow copy storage issue:***	Ensure that multiple backup tools are not running simultaneously on the same protected system. Whitelist x360Recover in antivirus and firewall software
	There is not enough storage space allotted for Volume Shadow Copy services.	Reassess the amount of storage allotted for snapshots.	
	A third-party application failed it.	Delete stale snapshots. ***If related to interference from third-party software:*** If multiple backup tools are running on the system, configure their backup schedules so that they do not overlap. Ensure a firewall is not blocking x360Recover	
Data transmission lost server connection.	This error has a few potential causes:	***If a connection issue:***	Communicate to clients to keep their devices online so that backups can run Consider clients' connection speeds when determining backup schedules
	A storage node failed.	Determine the source and nature of the connection issue	

	Connectivity was lost.	Is the client's device powered down, or Is their internet disconnected?	
	The firewall configuration changed.	Is the internet connection slow? Adjust the backup schedule to accommodate longer upload times, or minimize other running processes to make more bandwidth available.	
		If related to firewall Ensure that x360Recover is whitelisted in the firewall on the protected system.	
efsvss code 2	x360Recover is Unable to read from the disk. This can be caused by:	If the volume is of a supported format and this error still occurs, it is likely the file system is damaged. Run CHKDSK (Windows) or FSCK (Linux) to attempt to diagnose additional file system errors	Ensure adequate storage capacity is allotted for Shadow Copy Storage. Microsoft recommends at least 10%.
	An issue opening or reading a file The Disk is an MFT partition The system's shadow copy storage is full A related error, to be determined by further diagnosis	***If a shadow copy storage issue:*** Reassess the amount of storage allotted for snapshots. Delete stale snapshots. ***If the issue persists*** Further diagnosis is needed to ascertain the cause of the problem	

		Learn more about checking event logs and alerts, as well as opening a ticket with our support team and running our analysis tool.	
efsvss code (other)	An error occurred which x360Recover is unable to diagnose.	More information will be needed to identify and resolve the issue. Contact support.	n/a
efsvss.exe binaries were not found.	This issue is caused by interference from other third-party security software, such as SentinelOne, GPO, or VA.	Ensure any antivirus or firewall software is not blocking x360Recover.	Whitelist x360Recover in antivirus and firewall software
efvss code 5	The VSS service isn't starting properly or is being prevented from starting. Our service doesn't have the proper permissions.	Check the VSS service to see if it's stuck or disabled; if so, try enabling it.

If multiple backup tools are running on the system, configure their backup schedules so that they do not overlap.

Ensure a firewall or antivirus is not blocking x360Recover. | Ensure that multiple backup tools are not running simultaneously on the same protected system. Whitelist x360Recover in antivirus and firewall software |
| **Error transmitting volume.** | Typically caused when the internet or network is down. Occasionally, the error may also be caused by Azure, which can cause issues with the NAT. | Determine the source and nature of the connection issue

Is the client's device powered down, or Is their internet disconnected? | n/a |

		Is the internet connection slow? Adjust the backup schedule to accommodate longer upload times, or minimize other running processes to make more bandwidth available.	
Failed on check snapshots after backup	This error occurs when, on the appliance, the check fails after the backup. It typically means that the file system (i.e. NTFS (Windows) or EXT4 (Linux)) is damaged.	Run FSCK (linux) or CHKDSK (Windows) to further diagnose the issue.	n/a
Failed to create bitmaps.	x360Recover, as part of its backup process, scans a system and creates a bitmap for comparison. When it can't create the bitmap, it means the backup failed somewhere in the middle of the process. In Windows, it means there's something wrong with the system that prevented the backup from completing, such as there not being enough space for the bitmap to be stored.	Try adjusting the size of the volume and re-attempting the backup scan. This issue has many potential causes, and further diagnosis is needed to ascertain the cause.	n/a

		Learn more about checking event logs and alerts, as well as opening a ticket with our support team and running our analysis tool.	
Failed to flush hash queue.	This is related to the storage pool on the appliance. It is often caused by issues with the device hardware.	Determine the piece of hardware which is causing the issue. Further diagnose and repair the issue, or replace the problematic hardware	Ensure that the protected system meets x360Recover's minimum system requirements
Failed to fully create snapshot. **Failed to create snapshot set** **Could not create snapshot**	These issues are typically caused when there is not enough space available for the Shadow Copy Service to run the backup. It could also be caused by a related VSS error	*If a shadow copy storage issue:* Reassess the amount of storage allotted for snapshots. Delete stale snapshots. *If the issue persists* This error can be caused by a separate error which precedes it - resolve that error, and this error will also resolve. Further diagnosis is needed to ascertain the cause of the problem.	Ensure adequate storage capacity is allotted for Shadow Copy Storage. Microsoft recommends at least 10%.

		Learn more about checking event logs and alerts, as well as opening a ticket with our support team and running our analysis tool.	
Failed to open local cache	If Local Cache won't open, there are a few potential causes:	***If an issue with credentials:***	Ensure adequate storage capacity is allotted for Shadow Copy Storage. Microsoft recommends at least 10%. Communicate to clients to keep their devices online so that backups can run Consider clients' connection speeds when determining backup schedule
	The credentials are invalid.	Input the correct credentials into x360Recover to access the local cache.	
	The Shadow Copy Storage is out of space.	***If a shadow copy storage issue:***	
	The network device was unavailable.	Reassess the amount of storage allotted for snapshots. Delete stale snapshots.	
	The connection can't be made because there are too many other connections.		
		If a connection issue: Determine the source and nature of the connection issue Is the client's device powered down, or Is their internet disconnected?	

		Is the internet connection slow? Adjust the backup schedule to accommodate longer upload times, or minimize other running processes to make more bandwidth available.	
Get queued completion failed.	This error is usually indicative of another error that has occurred in windows. It is often related to shadow copies being deleted or high I/O.	Check the event logs or aristos logs to determine the 0X code provided by Microsoft. Once you determine the error code, consult Windows' list of system error codes to learn the meaning of the code so you can troubleshoot further. ***If a shadow copy storage issue:*** Reassess the amount of storage allotted for snapshots. Delete stale snapshots.	Ensure adequate storage capacity is allotted for Shadow Copy Storage. Microsoft recommends at least 10%.
Get queued error 0, the operation completed successfully.	The asynchronous I/O operation failed to complete successfully. Error 0 means Windows was unable to identify the error or its source.	Further diagnosis is needed to ascertain the cause of the problem. Learn more about checking event logs and alerts, as well as opening a ticket with our support team and running our analysis tool.	n/a

Get queued error 1, incorrect function.	VSS thinks that the agent did something incompatible. Usually a result of another error occurring, as part of a non-critical process.	This error can be caused by a separate error which precedes it - resolve that error, and this error will also resolve. Further diagnosis is needed to ascertain the cause of the problem. [Learn more about checking event logs and alerts, as well as opening a ticket with our support team and running our analysis tool.](#)	n/a
Get queued error 2, the system cannot find the file specified.	x360Recover created a file, but something removed it. This can be caused by Windows, often because the shadow storage space is too small or the I/O is too high.	Reassess the amount of storage allotted for snapshots. Delete stale snapshots.	Ensure adequate storage capacity is allotted for Shadow Copy Storage. Microsoft recommends at least 10%.
Get queued error 21, the device is not ready.	The hard drive is not ready to create the snapshot. Its I/O bandwidth may be overloaded.	Review the I/O load while the backup is running.	n/a

		Check the Windows event logs. More information may be needed to further diagnose the issue.	
Get queued error 23, Data Error (cyclic redundancy check)	This error is typically caused by an issue with the hard drive, or by other hardware that is reading off of the hard drive.	Further diagnose and repair issues with the hard drive.	[Ensure that the protected system meets x360Recover's minimum system requirements](#)
		If the issue can't be fixed, the hard drive may need to be replaced.	[ ](#)
Get queued error 121, the semaphore timeout period has expired	This error is caused by a timeout due to network issues or system load, and may self-correct in the next backup attempt. If not, it may indicate an issue with something on the system itself, either hardware or network related.	*This issue is transient and usually self-remediates in subsequent backup attempts.*	[Ensure that the protected system meets x360Recover's minimum system requirements](#)
		If a hardware issue:	Communicate to clients to keep their devices online so that backups can run Consider clients' connection speeds when determining backup schedules
		Determine the piece of hardware which is causing the issue.	

		Further diagnose and repair the issue, or replace the problematic hardware ***If a connection issue:*** Determine the source and nature of the connection issue Is the client's device powered down, or Is their internet disconnected? Is the internet connection slow? Adjust the backup schedule to accommodate longer upload times, or minimize other running processes to make more bandwidth available.	
Get queued error 433, a device which does not exist was specified	The system is unable to open the specified disk/volume. This is an uncommon error which has mostly been known to occur when a protected system has been deleted.	If the protected system has not been deleted, ensure that the disk or volume is accessible where the agent is meant to be running. Contact the support team if you need assistance.	n/a
Get queued error 483, the request failed due to a fatal device hardware error	This error usually indicates a piece of faulty hardware on the protected system.	Determine the piece of hardware which is causing the issue. Further diagnose and repair the issue, or replace the problematic hardware	n/a

Get queued error 1117, the request could not be performed because of an I/O device error.	This is an issue that is typically caused by a piece of faulty hardware. Generally, the hard drive or the chipset.	Determine the piece of hardware which is causing the issue. Further diagnose and repair the issue, or replace the problematic hardware.	Ensure that the protected system meets x360Recover's minimum system requirements
Get queued error 1453, insufficient quota to complete the requested service.	This error can be triggered with the system runs out of memory or other resources (Disk, CPU, I/O). It can also occur if the disk has a quota configured (through the volume properties. This is an uncommon error which has mostly been known to occur when a protected system has been deleted.	***If a shadow copy storage issue:*** Reassess the amount of storage allotted for snapshots. Delete stale snapshots. ***If an issue with other system resources:*** Perform a cold boot of the system and retry the backup. Increase the system's memory or limit other tasks that are resource intensive while backups are running.	Ensure adequate storage capacity is allotted for Shadow Copy Storage. Microsoft recommends at least 10%. Ensure that the protected system meets x360Recover's minimum system requirements

		If the specified volume has a configured quota, increase the quota.	
Input/output.	This error is typically caused by a hardware issue involving the hard drive, driver, chipset, or something in between. It is occasionally a misdiagnosis with more context needed.	***If a hardware issue:***	Ensure that the protected system meets x360Recover's minimum system requirements
		Determine the piece of hardware which is causing the issue. Further diagnose and repair the issue, or replace the problematic hardware	ˍ
		If not a hardware issue: Further diagnosis is needed to ascertain the cause of the problem.	ˍ ˍ
		Learn more about checking event logs and alerts, as well as opening a ticket with our support team and running our analysis tool.	ˍ
Invalid exchange==>write/tank/admin	This error indicates a backup service is unable to write to the tank of the appliance. This is an uncommon error which has mostly been known to occur when the appliance has been deleted.	Ensure the appliance and its storage are healthy. Contact the support team if you need assistance.	n/a
No space left on device.	The appliance has run out of storage.	Adjust retention policies of protected systems to reduce the number of snapshots saved to the appliance.	Do not set retention policies to be higher than is needed

			Regularly monitor appliance storage to ensure it is not reaching capacity
Not all required snapshots present in system.	The Shadow Copy Service was looking to transfer a snapshot that does not exist, likely because something caused Windows to remove it. This can be caused by shadow copy storage being at maximum capacity, or by a third-party piece of software which overwrote the snapshot.	Check the Windows events about cleared shadow storage. Find out why the space is being eaten up and update the amount.	Ensure adequate storage capacity is allotted for Shadow Copy Storage. Microsoft recommends at least 10%.
		Can also be diagnosed with the RAT. ***If a shadow copy storage issue:*** Reassess the amount of storage allotted for snapshots. Delete stale snapshots. ***If related to interference from third-party software:*** If multiple backup tools are running on the system, configure their backup schedules so that they do not overlap. Ensure a firewall is not blocking x360Recover	Ensure that multiple backup tools are not running simultaneously on the same protected system. Whitelist x360Recover in antivirus and firewall software

Other	An error occurred which x360Recover is unable to diagnose.	More information will be needed to identify and resolve the issue. Contact support.	n/a
Server storage pool full.	This error can be caused by two issues:	Adjust retention policies of protected systems to reduce the number of snapshots saved to the appliance. If the storage is so full that settings can't be updated, it may not be fixable - Contact support.	Do not set retention policies to be higher than is needed
	The storage on the appliance is full	Review SLA alerts.	Regularly monitor appliance storage to ensure it is not reaching capacity
	If a USB drive or other external storage device is plugged into the protected system when a backup is run, the appliance may mistake it for an internal drive and attempt to back it up.	If the issue is related to an external drive, the drive will not be able to be removed from Replibit until it is past its set retention period without intervention from our support team.	
Snapshot creation for volumes failed	This issue is most often precipitated by a separate VSS issue that will require further diagnosis. It can also be caused by inadequate shadow storage capacity on the protected system.	***If a shadow copy storage issue:*** Reassess the amount of storage allotted for snapshots. Delete stale snapshots. ***If the issue does not resolve:*** Further diagnosis is needed to ascertain the cause of the problem.	Ensure adequate storage capacity is allotted for Shadow Copy Storage. Microsoft recommends at least 10%.

		[Learn more about checking event logs and alerts, as well as opening a ticket with our support team and running our analysis tool.](#)	
snapshotdetails .txt doesn't exist	This error is typically caused by a previous snapshot creation error. When the x360Recover agent tells VSS to create shadow copies, it creates the snapshotdetails.txt file. If there are issues when the snapshot is created, the .txt file will not be created.	Further diagnosis is needed to ascertain the cause of the problem

[Learn more about checking event logs and alerts, as well as opening a ticket with our support team and running our analysis tool.](#)
This issue can be transient and may self-remediate in subsequent backup attempts. | n/a |

Target snapshot wasn't found.	x360Recover created a file, but something removed it. This can be caused by Windows, often because the shadow storage space is too small or the I/O is too high.	Reassess the amount of storage allotted for snapshots. Delete stale snapshots.	Ensure adequate storage capacity is allotted for Shadow Copy Storage. Microsoft recommends at least 10%.
There aren't any snapshots in this system.	This error can be a catch-all for a number of different errors, and registers after something else has gone wrong. Potential causes: There is not enough space allotted for the Shadow Copy Storage. I/O issues have caused the deletion of all of the snapshots. Caused be another VSS error that occurred beforehand.	***If a shadow copy storage issue:*** Reassess the amount of storage allotted for snapshots. Delete stale snapshots. ***If the issue does not resolve:*** Further diagnosis is needed to ascertain the cause of the problem.	Ensure adequate storage capacity is allotted for Shadow Copy Storage. Microsoft recommends at least 10%.

		Learn more about checking event logs and alerts, as well as opening a ticket with our support team and running our analysis tool.	
Unable to open volume file.	This is an issue related to the appliance. The system has something plugged in that is unable to read, or the backup volume is empty and the system is trying to find it.	Determine if the volume that is causing the issue is one that needs to be backed up. If so, investigate what may be causing the volume to be blocked. This issue has many potential causes, and further diagnosis is needed to ascertain the cause. Learn more about checking event logs and alerts, as well as opening a ticket with our support team and running our analysis tool.	n/a
VSS_E_INSUFFIC IENT_STORAGE	This error indicates that there is not enough storage space allotted for Volume Shadow Copy services. The existing capacity has been exhausted, therefor there is insufficient storage available to create either the shadow copy storage file or other shadow copy data.	Reassess the amount of storage allotted for snapshots. Delete stale snapshots.	Ensure adequate storage capacity is allotted for Shadow Copy Storage. Microsoft recommends at least 10%.

		Reduce or eliminate throttling until initial backup completes, or remove time limits In the agent settings	
VSS_e_NESTED_VOLUME_LIMIT	The specified volume is nested too deeply to participate in the VSS operation. This occurs on a hyper-V host level backup where a VM's internal OS though disk manager has mounted a VHD/VHDX file directly that is part of storage the host OS is snapshotting.	Use hyper-V to connect the VHD to the VM from the host level. Exclude the deeply-nested directories which are causing the issue. How to exclude Universal Profile Disks	n/a
VSS_E_PROVIDER_NOT_rEGISTERED	This error indicates that the volume shadow copy provider is not registered in the system. The shadow copies tab on disk properties will also not load. Volume Shadow Service and providers are how Windows let us run backups - so when the provider is not registered, something is wrong with the system.	This issue can only be resolved by registry repair (to re-register the provider). Further instructions on how to do this can be found in our knowledgebase.	n/a
VSS_E_PROVIDER_VETO	A number of factors could cause this issue:	If multiple backup tools are running on the system, configure their backup schedules so that they do not overlap.	Ensure that multiple backup tools are not running simultaneously on the same protected system.

	Most commonly, it could be a conflict with another 3rd party backup solution	Ensure a firewall is not blocking x360Recover	Whitelist x360Recover in antivirus and firewall software
	There is an issue with the NAS (ISCSI Mount) or Hyper-V	Reassess the amount of storage allotted for snapshots.	Ensure that the operating system is up to date, and that the protected system meets x360Recover's minimum system requirements
	There is insufficient capacity available for the shadow copy storage	Delete stale snapshots. *This issue can be transient and may self-remediate in subsequent backup attempts.*	Ensure adequate storage capacity is allotted for Shadow Copy Storage. Microsoft recommends at least 10%.
VSS_E_SNAPSHOT_SET_IN_PROGRESS	This error can be caused by interference from third-party software, such as firewalls, antivirus, or another backup application. It means that another shadow copy creation was already in progress when the backup tried to run.	To test, disable the third-party service to see if the error continues or not. If multiple backup tools are running on the system, configure their backup schedules so that they do not overlap.	Ensure that multiple backup tools are not running simultaneously on the same protected system. Whitelist x360Recover in antivirus and firewall software

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		Ensure a firewall is not blocking x360Recover.	Set backup schedules that are appropriate for the client's bandwidth and processing power
		Ensure that backup frequency and bandwidth are not overwhelming for system resources.	
VSS_e_UNEXPECTED	This error occurs either when the VSS service has been disabled or a volume shadow copy service (VSS) component encountered an unexpected error. This error typically is associated with filesystem damage.	Set the VSS service to be automatic.	Ensure that the VSS service is set to automatic.
		Perform CHKDSK /F on impacted Windows volumes followed by SFC and DISM scans. Run FSCK on impacted Linux volumes.	
VSS_E_UNEXPECTED_PROVIDER_ERROR	The shadow copy provider had an unexpected error while trying to process the specified operation. This usually indicates the presence of non-Microsoft shadow providers.	If multiple backup tools are running on the system, configure their backup schedules so that they do not overlap.	Ensure that multiple backup tools are not running simultaneously on the same protected system.

		Sometimes the 3rd party tool is removed but there are still registry entries. Removal of 3rd party backup software products other than Unitrends will typically resolve this issue.	This is the provider we require:
		Related knowledgebase articles: How to remove an unwanted VSS provider Re-registering VSS-Admin - Writers not stable	**Provider name**: 'Microsoft Software Shadow Copy provider 1.0' Provider type: System **Provider Id**: {b5946137-7b9f-4925-af80-51abd60b20d5} **Version**: 1.0.0.7 Other providers will not affect our backup We suggest removing any 'non-standard' providers using VSS
VSS_E_VOLUME_NOT_SUPPORTED_BY_PROVIDER	The volume that is being backed up is not formatted in a supported file system. x360Recover supports NTFS (Windows) and EXT4 (Linux).	If a volume is not formatted as one of these supported formats, it cannot be backed up by x360Recover without being reformatted.	n/a