# VSS fails due to disks with a non-standard sector size

## Error

```
ERROR: COM call "m_pVssObject->BackupComplete(&pAsync)" failed.
- Returned HRESULT = 0x80042301
- Error text: VSS_E_BAD_STATE

Backup aborted! - Failed to create volume snapshot error. Result Code: 0x8004230F
```

### Description

The windows snapshot component VSS will fail if a disk with a non standard sector size is attached to your system. This error will occur regardless of whether the disk is a backup source or target. This can be an internal disk or one connected by USB or eSata. The issue is actually caused by USB enclosures that modify the disk drive geometry in the USB to SATA bridge.

See also: VSS Fails due to modification by 3rd party software

**Applies To**
Windows XP,Vista, 7, Server 2003, 2008, 2008 R2.

### Extended error information

The extended VSS error information in the VSS log will be reported as below. Note the result code may be different, but the extended error will always be:

```
- Error text: VSS_E_UNEXPECTED_PROVIDER_ERROR
```

## Identification of disks with a non standard sector size

Run 'System Information' ('All Programs' > 'Accessories' > 'System Tools' > 'System Information').
Expand the Components->Storage->Disks node, and scroll down the list of disks, looking for any that have a Bytes/Sector value **not** equal to 512.

**Note**: Some Western Digital disks can be formatted for "Windows Vista Compatibility" using the supplied software.  This enables 512e in the firmware and adds support for VSS

## Solution

**Windows XP, Vista, 7**

Unfortunately, until Microsoft fix this issue, the only option is to remove this disk from your system. Read this Article for general information regarding Microsoft support for non-standard sector sizes.

**Windows Server 2003, 2008, 2008R2**

Whilst Microsoft's official position remains that disks with non-standard sector sizes are not supported, there is a possible workaround for **Windows Server** Operating Systems using a command line tool called **VSSAdmin.**

If you run the following command for **every** drive on your system (replace **X:** with the drive letter) , using a command prompt with elevated privileges then you may be able to successfully use VSS with a non-standard sector size disk attached:

```
vssadmin add shadowstorage /For=X: /On=X: /MaxSize=UNBOUNDED
```

Note this command should not be run unless you understand the implications for your system, please see here for the official documentation: http://technet.microsoft.com/en-us/library/cc788051.aspx

**Windows 8, 8.1, Server 2012, 2012R2**

These operating systems support disks that report a native sector size greater that 512 bytes.

More information on Windows support for disks with sector sizes greater than 512 bytes can be found here: http://support.microsoft.com/kb/2510009