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## **Keywords:**

VSS, troubleshoot, bad state, cannot enable vdiff

## **Situation:**

This solution details how to troubleshoot VSS errors.

Your backups may be failing due to Microsoft's VSS framework being in a bad state. This could have been caused by clashes between ShadowProtect and other programs that have attempted to use VSS, as only one writer can use VSS at any given time (See article on "[How VSS Works](#)"). Another possible cause for VSS errors is that the necessary system services have been mistakenly disabled.

## **Solution:**

If Microsoft's VSS framework and/or perhaps some of the VSS writers are in a bad state, you will need to clean things up before your backups will start working.

Step 1. Document the details of the backup jobs that you are currently running, (e.g. drive, schedule) as you will need to cancel any running services and delete all existing backup jobs you have in ShadowProtect. Next, you will need to make sure that the necessary services are enabled.

Step 2. Go to **Start | Run..** and enter "services.msc" - Click OK.

Navigate to **MS Software Shadow Copy Provider**. Startup Type should be set to "Manual" if it is not already.

Navigate to **Volume Shadow Copy**. Startup Type should be set to "Manual"

Navigate to **ShadowProtect Service**. Startup Type should be set to "Automatic"

Navigate to **StorageCraft Shadow Copy Provider**. Startup type should be set to "Automatic"

Step 3. Next, you will need to delete all non-present Storage Volume devices possibly left over from previous restores. To view hidden devices, see the [Hidden Devices](#) knowledgebase article. Once in Device Manager after following this article, you will need to navigate to "Storage Volumes" and right click on any greyed out devices, and click "uninstall."

Step 4. Next, go to **Start | Run..** and enter "cmd" - Click OK. From the command line run the following command: **vssadmin list writers**

This will show you the state of any VSS-aware applications. If any of them are in a bad state (a state other than Stable) then you will need to manually reset the writers' states.

To reset VSS writer states, run these commands on the command line:

```
net stop vss
cd %SystemRoot%\system32
regsvr32 ole32.dll
regsvr32 vss_ps.dll
Vssvc /Register
regsvr32 /i swprv.dll
regsvr32 /i eventcls.dll
regsvr32 es.dll
regsvr32 stdprov.dll
regsvr32 msxml.dll
regsvr32 msxml2.dll
regsvr32 msxml3.dll
regsvr32 msxml4.dll
```

If you are missing msxml4.dll or msxml4r.dll (they should be in your system32 directory), then you need to run Windows Update and update Explorer. Once you have done this, then you should re-run the regsvr32 command for these DLLs after they are in your system32 directory.

If you are using Server 2003, also run this command:

```
regsvr32 vssui.dll
```

#### Step 5. **Reboot.**

After you reboot you should go to **Start | Run..** and go "cmd" to run the following commands again:

```
C:\> vssadmin list writers
```

**(note: these services should all be in a Stable state)**

If you run this command, it should show no existing shadow copies:

```
C:\> vssadmin list shadows
```

At this point things should be cleaned up enough for you to start using ShadowProtect. Proper VSS interaction is a very complex affair and many backup products leave various components - especially VSS writers - in bad states, which can cause problems for other backup products. So if you are using any other backup products, it's very possible that they are messing up the states of various VSS components.

### **Notes:**

You should always ensure that ShadowProtect does not run at the same time as other backup software such as Backup Exec, Acronis, etc.

Related articles -

[Hidden Devices](#) - explains how to show and remove non-present devices in Device Manager.

[How VSS Works](#) - gives more basic information on what VSS is, how it works and what Operating Systems and applications are VSS aware.