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How to shrink a disk volume beyond the point where any unmovable files are located

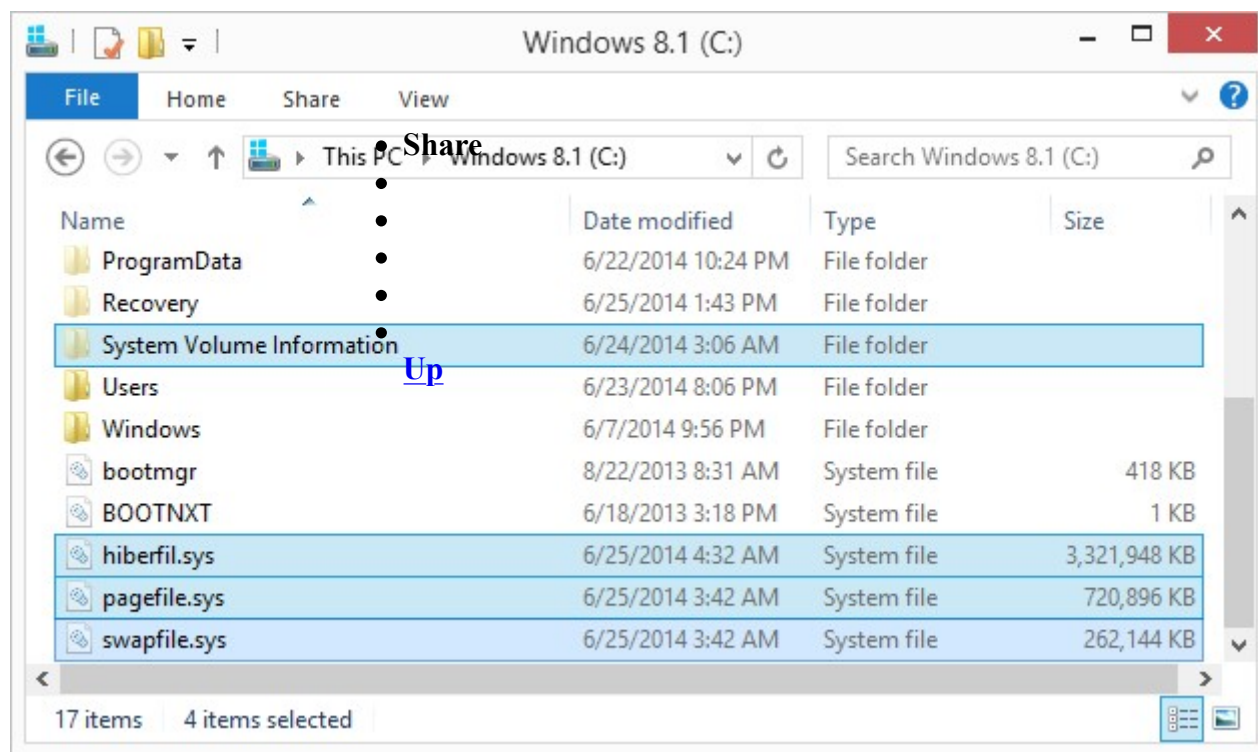# How to shrink a disk volume beyond the point where any unmovable files are located

by **Mihai Neacsu** on 25 June 2014 · 183893 views

If you came across the message "You cannot shrink a volume beyond the point where any unmovable files are located" when trying to shrink a partition on your disk using the Windows Disk Management tool, there's an easy fix to it. You'll need to disable Hibernation, Pagefile, and System protection as these files generated by Windows can't be automatically moved by the Disk Management tool so you are stuck at shrinking a partition down to where any of these system files are physically located. Other partition software (such as AOMEI Partition Assistant, EaseUS Partition Master, Paragon Partition Manager) can overcome this problem, but not Windows' Disk Management.

We explained before what hiberfil.sys, pagefile.sys, and swapfile.sys are and how to delete them, and also what System Protection is and how to enable/disable it in Windows 8, but we'll cover disabling all of them once more here, in an easier to follow tutorial. This will work for both Windows 8 and 10, but the screenshots below were taken in Windows 8.1.

First off, in order to actually see these files in Explorer, you need to uncheck **Hide protected operating system files (Recommended)** and check **Show hidden files, folders, and drives** in **Folder Options**, as shown in our tutorial How to show (or hide) hidden files, folders, and drives, as well as protected system files in Windows 8 Explorer.

Hibernation can be found in your Windows 8 partition, usually the C: partition, **C:\hiberfil.sys**. Pagefile is under **C:\pagefile.sys**. You'll also notice there a file called **swapfile.sys** - this file is used to suspend or resume Metro or Modern Windows 8 apps. System protection files are stored in the folder **System Volume Information** under the same Windows installation partition, in our case, C, as shown below.

Here's how to temporary disable each of them in Windows 8. Keep in mind that you'll need administrator privileges for this task. We recommend that you re-enable them after you shrink your partition.

Disable Hibernation

Step 1: Open an elevated command prompt by pressing **Win+X** and choose **Command Prompt (Admin)**. Click Yes if UAC pops up. (here are more ways to open an elevated command prompt in Windows 8)
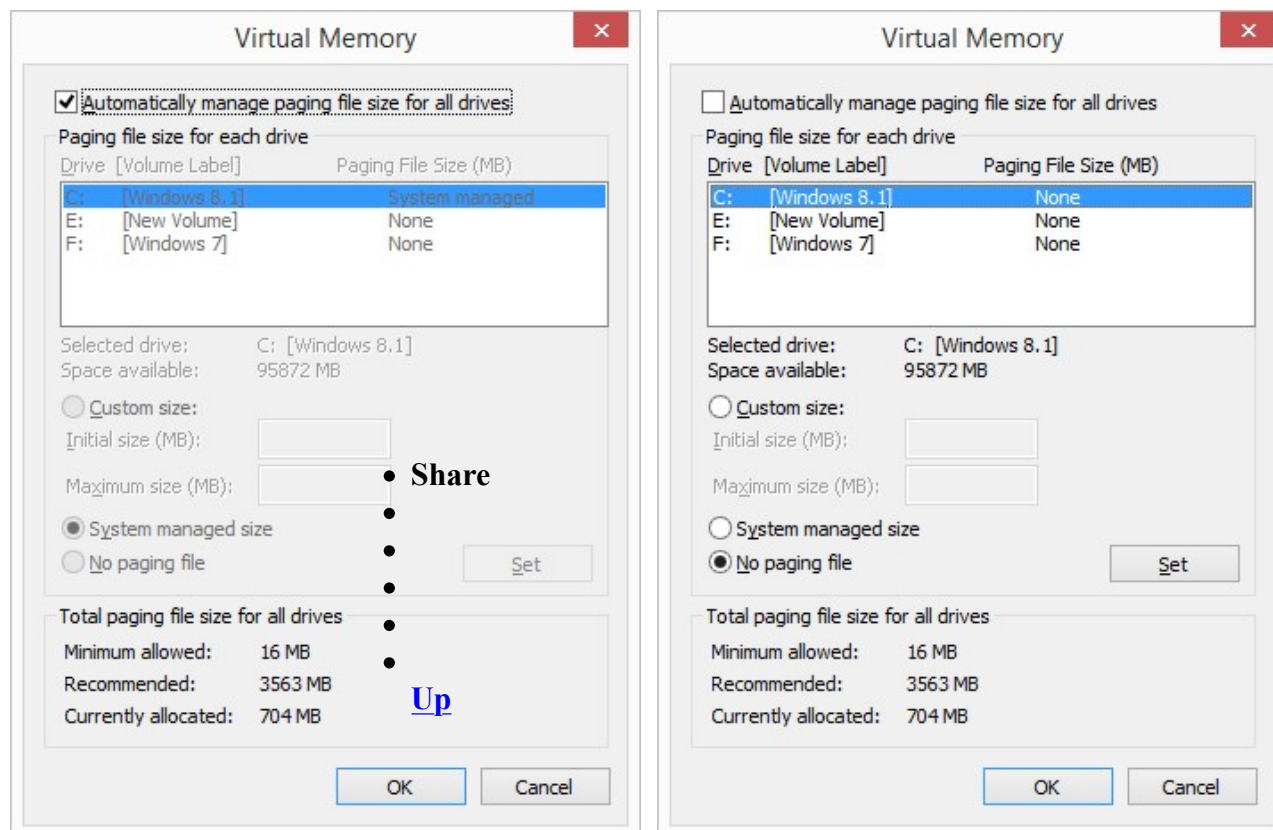
Step 2: Type **powercfg /h off**, press **Enter**. You won't get a success confirmation but you'll notice that hiberfil.sys is gone from your OS partition.

Step 3: **Restart**.

Note: You can postpone this restart until you have disabled pagefile and system protection as well, and do a single restart at the end.

Disable Pagefile

Follow steps 1 through 5 from the first tutorial here, and restart the PC. You are basically setting "no paging file" to the partition you wish to resize, as shown below, and restarting.

Initial Settings in the 1st image above and **Settings for disabling pagefile** in the 2nd image

Here is the same tutorial, summarized:

Step 1: Press **Win+R** (or Win+S), enter **SystemPropertiesPerformance.exe**, press **Enter**. Click the **Advanced** tab.

Step 2: Click **Change** under Virtual Memory and uncheck **Automatically manage paging file size for all drives**.

Step 3: Click on the partition you are trying to resize and set paging file size to **No paging file**. Click **Set**, then **Ok**.
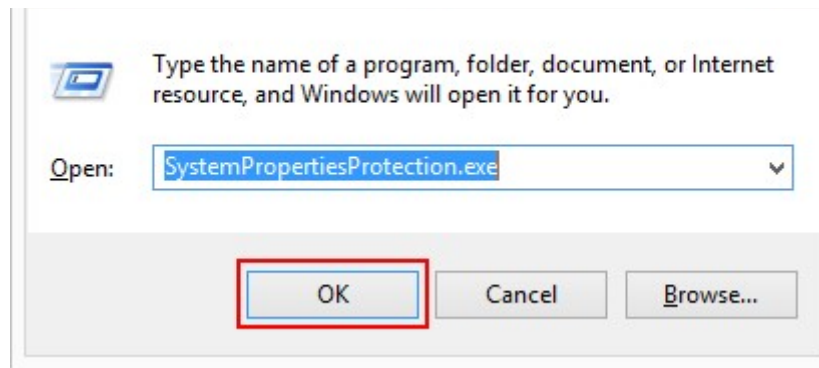
Step 4: **Restart**. You'll notice that both pagefile.sys and swapfile.sys are now gone from your disk. If you're still seeing pagefile.sys and swapfile.sys on your partition, try deleting them manually.

Note: You can postpone this restart until you have disabled system protection as well, and do a single restart at the end.
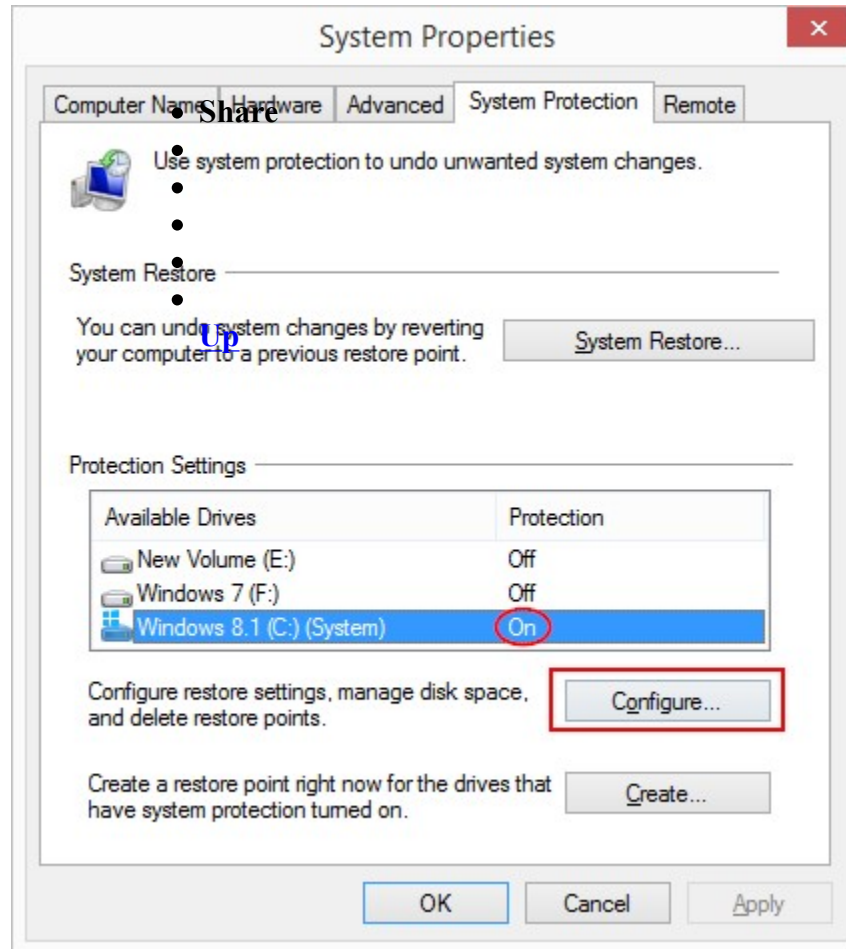
Disable System protection

Step 1: Open a command prompt by pressing **Win+R** and type **SystemPropertiesProtection.exe**, press **Enter**.
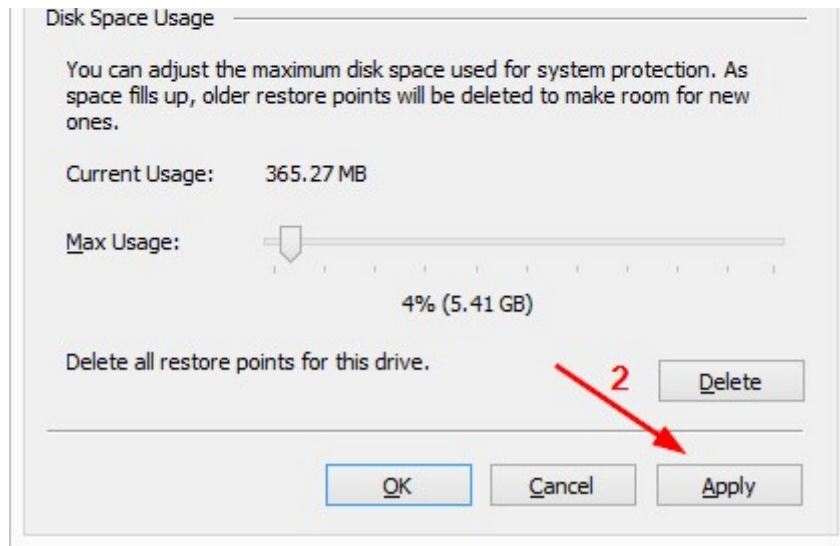
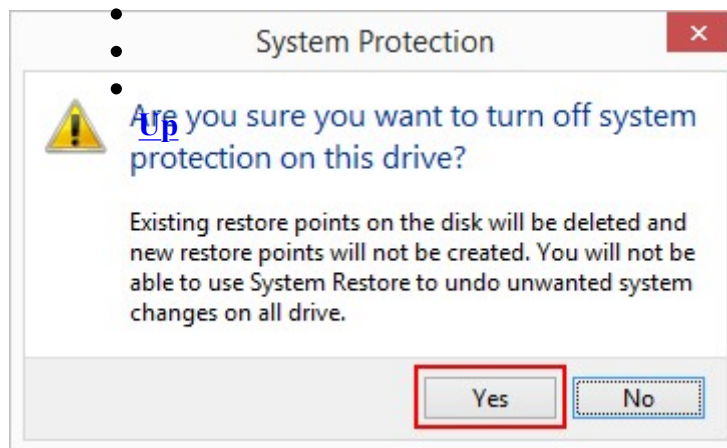**Step 2**: Click on the partition you need to resize, if it has Protection set to On. Click **Configure**.

Step 3: Select **Disable system protection** and click **Apply**.

Step 4: You'll be prompted with a warning informing you that current restore points will be deleted and future restore points won't be created. Click **Yes**.

Step 5: **Restart**, or postpone restart until the end of the tutorial.

That's it. You can now shrink your partition to the desired size. Afterwards, make sure to re-enable hibernation, pagefile, and system protection.

Extra step: Disable the kernel memory dump

Step 1: Press **Win+R** (or Win+S), enter **SystemPropertiesAdvanced.exe**, press **Enter**. This opens the Advanced tab of System Properties.
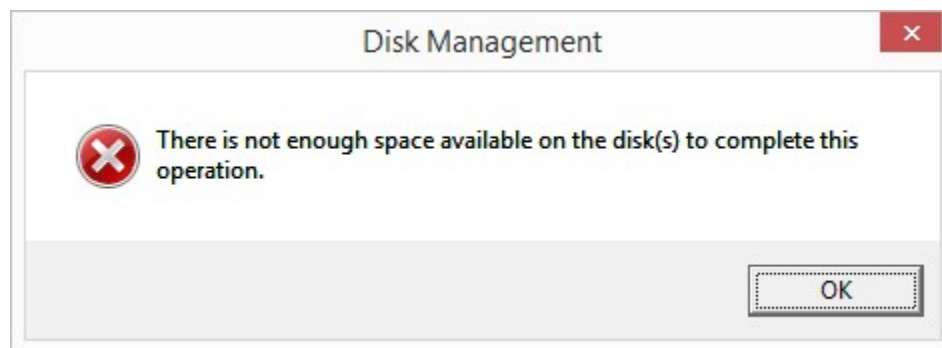
Step 2: Under **Startup and Recovery** click **Settings**.

Step 3: Under **System failure** > **Write debugging information**, pick **(none)** from that drop-down menu, which is set to Kernel memory dump by default. Click **Ok**.

Step 4: Restart.

One more Extra Tip

When resizing a partition, if you run into the error message "There is not enough space available on the disk(s) to complete this operation.", try running a defragmentation program such as [Defraggler](#) or Windows' own built-in defrag tool. This will re-locate file fragments which are physically located towards the end of your disk and which are preventing you to resize the partition. Then try resizing your partition again.

Re-enable Hibernation

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Step 1: Open an elevated command prompt by pressing **Win+X** and choose **Command Prompt (Admin)**. Click Yes if UAC pops up.

Step 2: Type **powercfg /h on**, press **Enter**. You won't get a success confirmation but you'll notice that hiberfil.sys is back on your OS partition.

Step 3: **Restart**, or postpone restart until the end of the tutorial.

Re-enable Pagefile

Step 1: Press **Win+R** (or Win+S), enter **SystemPropertiesPerformance.exe**, press **Enter**. Click the **Advanced** tab.

Step 2: Click **Change** under Virtual Memory and check **Automatically manage paging file size for all drives**.

Step 3: **Restart**. You'll notice that both pagefile.sys and swapfile.sys are now back on your OS partition. You can postpone the restart until the end of the tutorial if you wish.

Re-enable System protection

Step 1: Open a command prompt by pressing **Win+R** and type **SystemPropertiesProtection.exe**, press **Enter**.

Step 2: Click on the partition you just resized, the OS partition. Click **Configure**.

Step 3: Select **Turn on system protection** and click **Apply**, then **OK**.

Step 4: **Restart**, or postpone restart until the end of the tutorial.

Re-enable the kernel memory dump

Step 1: Press **Win+R** (or Win+S), enter **SystemPropertiesAdvanced.exe**, press **Enter**. This opens the Advanced tab of System Properties.

Step 2: Under **Startup and Recovery** click **Settings**.

Step 3: Under **System failure** > **Write debugging information**, pick **Kernel memory dump**, then click **Ok**.

Step 4: Restart.

That's it.

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Comments (8)

Any comments on the
article above?

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masterxilo on 19 Dec 2018
Report

https://www.download3

Nonsense. I could not care less about manually helping windows help me do something and knowing why. Use an out-of-the-box solution, for example the one described here: https://www.disk-partition.com/articles/shrink-volume-with-unmovable-files-4348.html

kshu on 22 Apr 2016
Report

https://www.download3

Hi adonle. What error are you getting now?

It seems that in the latest Windows 10 builds, the "System Volume Information" folder contains more data in it than in previous builds, so just disabling System Protection won't remove this hidden folder.

I found more info on these threads:

http://answers.microsoft.com/en-us/insider/forum/insider_wintp-insider_files/whats-wpsettingsdat-generated-by/e11bca97-8c76-4662-8897-774ea3d5691a

http://answers.microsoft.com/en-us/insider/forum/insider_wintp-insider_files/cannot-delete-system-volume-information-folder-in/0b80793f-4d9a-4df2-808c-59a24835709e

The safest way to go about resizing your system partition at this point would be to use a 3rd party tool. I'd try MiniTool Partition Wizard Free Edition or AOMEI Partition Assistant Standard Edition, also free.

If you wish to do some testing, you could try taking ownership of the "System Volume Information" folder and delete it from an elevated CMD. Then try to resize the partition. The steps would be:

1. Open an elevated cmd (admin cmd). Simply press Win key + X and choose "Command prompt (admin)"

2. Assuming C is te partition in question here, type the following 3 commands:

takeown /F "C:\System Volume Information" /R /A /D Y

icacls "C:\System Volume Information" /grant Administrators:F /T /C

rd /s /q "C:\System Volume Information"

3. Don't restart because restarting will just recreate the "System Volume Information" folder.

4. Try resizing the partition now.

I'm not sure it will work because I'm not getting the "You cannot shrink a volume beyond the point where any unmovable files are located" error on my Windows 10 PC so I can't test it myself.

After a restart, the "System Volume Information" folder comes back but I'm not 100% sure if all Windows functionality depending on it works as before. Most probably it does.

adonle on 22 Apr 2016

Report

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I followed the instructions. I did disk clean and defragment also. I still cannot shrink, although I have 75GB free space.

Moreover, the System Volume Information folder is still there (the three .sys files are gone). I use Windows 10. Any ideas?

kshu on 14 Jun 2015

Report

You're very much welcome, meselffff :).

meselffff on 13 Jun 2015

Report

OH THIS IS A LIFE SAVER! I have at least a hundred hours of struggles setting up my previous windows7 machine for dual boot and had hit a dead end on my new windows8.1 machine due to the way it handles product keys. But this one makes short clean work of shrinking the windows partition down to less than 100mb as required for dual boot. THANK YOU!

Show more comments

kshu on 22 Mar 2015

Report

You're welcome. I'm glad it helped :).

[joaoflach](#) on 21 Mar 2015
[Report](#)

https://www.download3
Helped a lot! Thank you :D

[microfouda](#) on 30 Dec 2014
[Report](#)

https://www.download3
Thank you. (Y)

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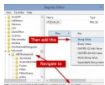[How to add an XP Mode Virtual Machine to Windows 10 (or 8) using Hyper-V](#)
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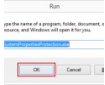on *6 April 2017*

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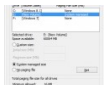on *19 April 2017*

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