

How to fix Windows

Some technicians may not know how to repair a Windows installation, but instead just choose to wipe the system and reinstall windows. They could care less about your data (documents and pictures).

Microsoft has a good selection of tools and procedures to repair a broken Windows installation.

One of these tools is the System File Checker.

SFC /SCANNOW

Just running SFC may not fix anything as there are some things you have to consider first.

SFC checks the integrity of Windows System Files. If it finds any corrupted files it replaces them. Where does it find these files?

Windows keeps a cache copy of all its system files in a system image.

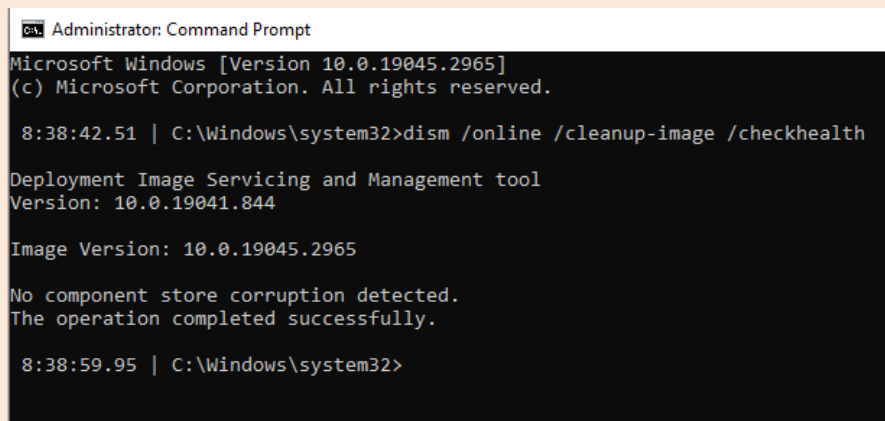
This system image may not be up to date or the cache copies may themselves be corrupted.

You need to check the cache system files first, making sure they are up to date by using the DISM Command.

Open the Command Prompt as Administrator and run the following command:

```
Dism /online /cleanup-image /checkhealth
```

Results:



```
Administrator: Command Prompt
Microsoft Windows [Version 10.0.19045.2965]
(c) Microsoft Corporation. All rights reserved.

8:38:42.51 | C:\Windows\system32>dism /online /cleanup-image /checkhealth

Deployment Image Servicing and Management tool
Version: 10.0.19041.844

Image Version: 10.0.19045.2965

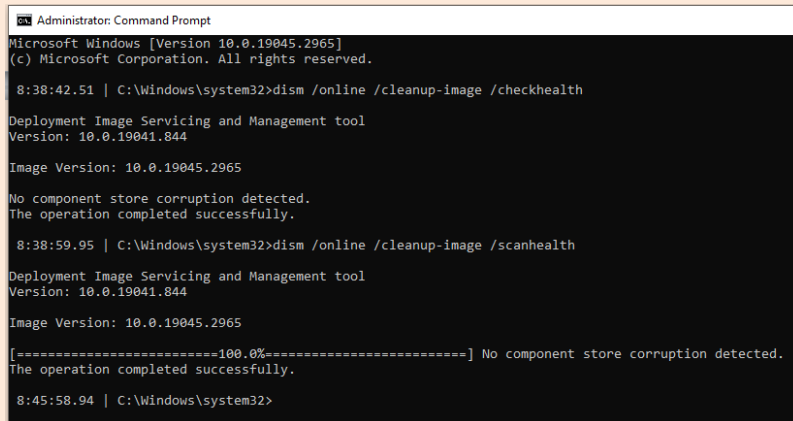
No component store corruption detected.
The operation completed successfully.

8:38:59.95 | C:\Windows\system32>
```

Another command to run that checks deeper:

```
Dism /online /cleanup-image /scanhealth
```

This takes a little longer but does a more thorough job of checking the files. Results of /scanhealth:



```
Administrator: Command Prompt
Microsoft Windows [Version 10.0.19045.2965]
(c) Microsoft Corporation. All rights reserved.

8:38:42.51 | C:\Windows\system32>dism /online /cleanup-image /checkhealth

Deployment Image Servicing and Management tool
Version: 10.0.19041.844

Image Version: 10.0.19045.2965

No component store corruption detected.
The operation completed successfully.

8:38:59.95 | C:\Windows\system32>dism /online /cleanup-image /scanhealth

Deployment Image Servicing and Management tool
Version: 10.0.19041.844

Image Version: 10.0.19045.2965

[=====100.0%=====] No component store corruption detected.
The operation completed successfully.

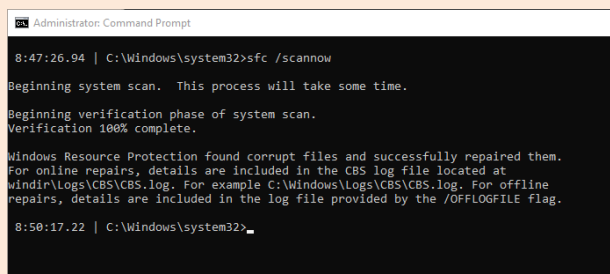
8:45:58.94 | C:\Windows\system32>
```

If it does find something then you need to run the command switch Restore Health:

```
Dism /online /cleanup-image /restorehealth
```

If /scanhealth comes back with no errors then you can run scf /scannow.

Results:



```
Administrator: Command Prompt

8:47:26.94 | C:\Windows\system32>sfc /scannow

Beginning system scan. This process will take some time.
Beginning verification phase of system scan.
Verification 100% complete.

Windows Resource Protection found corrupt files and successfully repaired them.
For online repairs, details are included in the CBS log file located at
windir\Logs\CBS\CBS.log. For example C:\Windows\Logs\CBS\CBS.log. For offline
repairs, details are included in the log file provided by the /OFFLOGFILE flag.

8:50:17.22 | C:\Windows\system32>
```

Reboot your PC if SFC finds and fixes a problem.

More advanced options:

If for whatever reason DISM /restorehealth can't fix the problem you need to tell DISM where to look for a good clean copy of the system files.

You have to download the Windows ISO using the Media Creation Tool.

Once you downloaded the ISO, click on it to mount it. This will create a Virtual Drive. Open this drive and go to the Sources Folder and notice the install.esd file or install.wsm file.

Now open the Command Prompt again and type this command:

```
Dism /online /cleanup-image /restorehealth /source:d:\sources\install.esd  
/limitaccess
```

This is assuming your virtual drive is the d: drive. Replace the drive letter to the correct drive in the DISM command.

\limitaccess keeps dism command from accessing windows update online.

After this is completed run the SFC /Scannow command.