

## Imaging disks with bad sectors

A disk with bad sectors is permanently damaged and, if the bad sectors are in use by the file system, it is very likely that data in the damaged area is unrecoverable. This can signify that your hard drive is coming to the end of its life. It is possible, however, to manage the situation and create an Image for restoring or mounting and copying files and folders. See this Wikipedia article [http://en.wikipedia.org/wiki/Bad\\_sector](http://en.wikipedia.org/wiki/Bad_sector) for more information.

If a bad sector is encountered during image creation then you receive this error in your backup log:

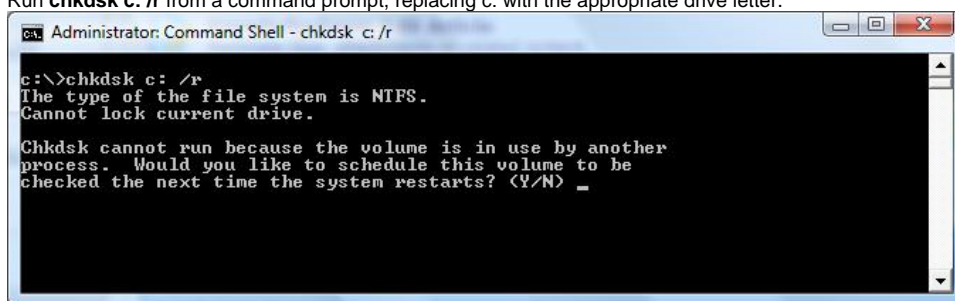
```
Backup aborted! Unable to read from disk - Error Code 23 - Data error (cyclic redundancy check).
```

This is considered a fatal condition because data cannot be read and the image aborts.

### Run **chkdsk** on the problem drive to reallocate file system clusters to undamaged disk sectors:

1. Open a command prompt with elevated privileges. See [Running an elevated command prompt](#) for help with this.

- a. Run **chkdsk c: /r** from a command prompt, replacing **c:** with the appropriate drive letter.



The **/r** switch is important and causes the entire file system to be checked for bad sectors. This requires a reboot to complete and may take some time.

This operation maps out any bad sectors in use by the file system.

2. Immediately create an Image of your drive. This ensures all file system clusters are located on good sectors.

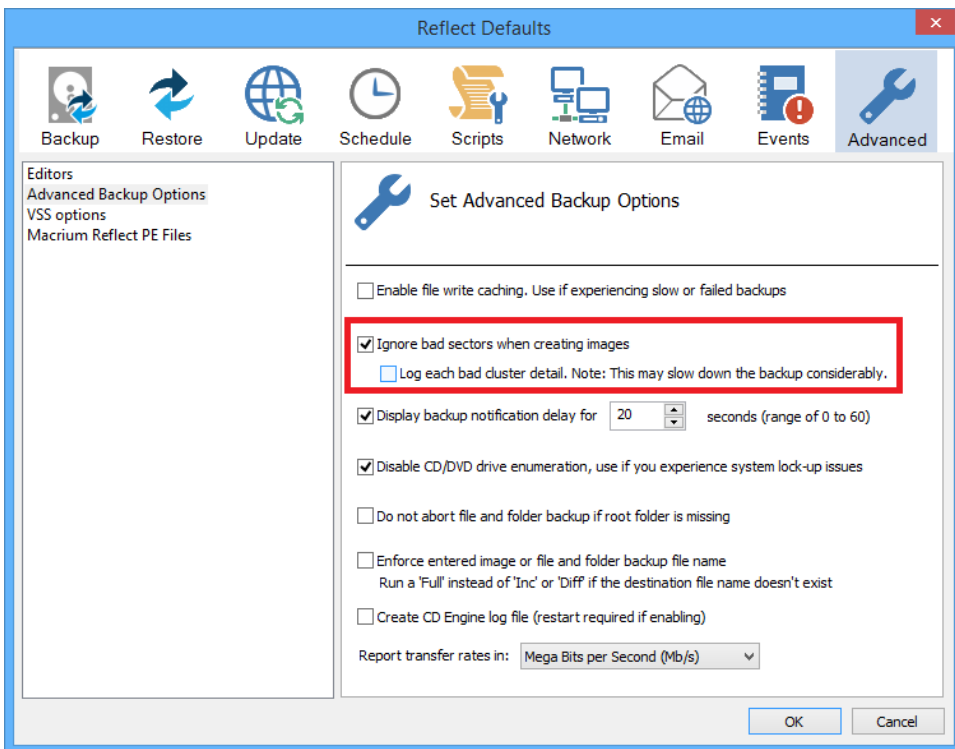
It's important to realize that you have lost data if clusters are relocated, as the data contained in them is unrecoverable. Consider replacing your disk.

3. If you receive **Error Code 23** in your log after running **chkdsk**, run **chkdsk** repeatedly until an image is created without error.
4. if you are running Windows Vista or later, after restoring an Image to a new disk, run **chkdsk c: /b** to re-evaluate all the bad clusters restored on your drive.  
If you are running Windows XP, Boot into the Windows PE rescue CD and run **chkdsk c: /b** to re-evaluate all the bad clusters restored on your drive.

### Set Macrium Reflect to ignore bad sectors when creating an image

If running **chkdsk** is unsuccessful, force Macrium Reflect to continue on Error 23.

1. Select *Other tasks > Edit defaults > Advanced*.
2. Select **Ignore bad sectors**.
3. Click **OK**.



If the option 'Log each bad cluster detail' selected then each sectors will be reported in the Image log, e.g:

**Read Error: Bad sector found in cluster 2353222**  
**Read Error: Bad sector found in cluster 2353223**

Otherwise a summary of bad clusters will be reported at the end.

**Bad Sectors: 112 Clusters located in bad sectors. Data may be lost**