

# Windows 10 Insider Preview Build 18234 Bug

We have been made aware of a problem with the C: drive NTFS file system that affects all installations of the **Windows 10 Insider Preview Build 18234**.

<https://blogs.windows.com/windowsexperience/2018/09/06/announcing-windows-10-insider-preview-build-18234/>

When imaging and verifying the System volume (Drive C:), the NTFS file system verification step will fail with **'Unknown error. - Error code = 9'**.

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## Starting Image - Friday, September 07, 2018 17:23:06

```

Initializing
Testing disk write speed
Write Method:          Using Direct Disk I/O
Destination Drive:    New Volume (e:) - Free Space 59.88 GB
Image Guardian:       Protected
Free space threshold: Delete oldest backup sets when free space is less than 5.00 GB
Creating Volume Snapshot - Please Wait
  
```

## Volume Snapshots Created

```

Analyzing file system on volume
Analyzing file system on volume
Analyzing file system on volume C:
Gathering Windows Events - Please Wait
  
```

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 **Unknown error. - Error code = 9**

**Note:** Do not turn off file system verification to complete the image. This will result in an incomplete backup.

## What's the problem?

**NTFS** contains a series of meta data file records that describe the layout and format of the file system. One of these records is named **\$BITMAP** and contains a series of 'Bits' in a data stream that indicate which clusters in the file system are in use and which are not. Each record has multiple **attributes** to further describe the record and location and size of data streams. The **\$FILE\_NAME** attribute contains the allocated and actual size of the data in the stream. **For the \$BITMAP record the \$FILE\_NAME attribute contains incorrect size information.** This would appear to be a problem with, or an undocumented change to, the NTFS driver shipped with the OS. This caused the file system to update the \$BITMAP record incorrectly at the time of installation.

For more information on NTFS, the Master File Table (MFT) and Attributes please see here:

<https://docs.microsoft.com/en-us/windows/desktop/devnotes/master-file-table>

## Why do other imaging product work correctly if this is a problem with Windows?

Unlike other imaging products **Macrium Reflect** uses the file system meta data described above to determine the location and size of key file system structures. There are Windows APIs that also retrieve this data but Macrium Reflect reads values directly from the file system meta data. The Windows API calls appear to be unaffected by this problem. We believe that for the \$BITMAP file the size is being calculated from information in the data stream attribute. Please note that this doesn't mean that other products have a better implementation, it simply means that they are unaffected by the problem.

## What's the solution?

It is very likely that this issue will be fixed by Microsoft before going live with this kernel. In the meantime, we have a hot-fix for Windows 10 Insider Preview customers that will ensure that Macrium Reflect is not affected by this attribute error.

Edition	Architecture	Download
Free	32 Bit	<a href="http://updates.macrium.com/reflect/v7/Win10_18234/patch7.1.3317-7.1.3570x8600.exe">http://updates.macrium.com/reflect/v7/Win10_18234/patch7.1.3317-7.1.3570x8600.exe</a>
Free	64 Bit	<a href="http://updates.macrium.com/reflect/v7/Win10_18234/patch7.1.3317-7.1.3570x6400.exe">http://updates.macrium.com/reflect/v7/Win10_18234/patch7.1.3317-7.1.3570x6400.exe</a>
Home	32 Bit	<a href="http://updates.macrium.com/reflect/v7/Win10_18234/patch7.1.3317-7.1.3570x8615.exe">http://updates.macrium.com/reflect/v7/Win10_18234/patch7.1.3317-7.1.3570x8615.exe</a>
Home	64 Bit	<a href="http://updates.macrium.com/reflect/v7/Win10_18234/patch7.1.3317-7.1.3570x6415.exe">http://updates.macrium.com/reflect/v7/Win10_18234/patch7.1.3317-7.1.3570x6415.exe</a>
Workstation	32 Bit	<a href="http://updates.macrium.com/reflect/v7/Win10_18234/patch7.1.3317-7.1.3570x8615.exe">http://updates.macrium.com/reflect/v7/Win10_18234/patch7.1.3317-7.1.3570x8615.exe</a>
Workstation	64 Bit	<a href="http://updates.macrium.com/reflect/v7/Win10_18234/patch7.1.3317-7.1.3570x6415.exe">http://updates.macrium.com/reflect/v7/Win10_18234/patch7.1.3317-7.1.3570x6415.exe</a>

Server	32 Bit	<a href="http://updates.macrium.com/reflect/v7/Win10_18234/patch7.1.3317-7.1.3570x8620.exe">http://updates.macrium.com/reflect/v7/Win10_18234/patch7.1.3317-7.1.3570x8620.exe</a>
Server	64 Bit	<a href="http://updates.macrium.com/reflect/v7/Win10_18234/patch7.1.3317-7.1.3570x6420.exe">http://updates.macrium.com/reflect/v7/Win10_18234/patch7.1.3317-7.1.3570x6420.exe</a>
Server Plus	32 Bit	<a href="http://updates.macrium.com/reflect/v7/Win10_18234/patch7.1.3317-7.1.3570x8625.exe">http://updates.macrium.com/reflect/v7/Win10_18234/patch7.1.3317-7.1.3570x8625.exe</a>
Server Plus	64 Bit	<a href="http://updates.macrium.com/reflect/v7/Win10_18234/patch7.1.3317-7.1.3570x6425.exe">http://updates.macrium.com/reflect/v7/Win10_18234/patch7.1.3317-7.1.3570x6425.exe</a>

Run the appropriate downloaded patch from any location on your PC to upgrade from v7.1.3317 to v7.1.3570.

**Note:** If you aren't currently running v7.1.3317 then please take the 'Other Tasks' > 'Check for updates' menu option in Macrium Reflect and update prior to running the patch.

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